

Southeastern Connecticut REGIONAL BIKE & PEDESTRIAN PLAN

**Southeastern Connecticut Council of Governments
September, 2019 (Draft)**



by:
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Less Road Traveled

SCCOG

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Southeastern Connecticut Regional Bike and Pedestrian Plan

Southeastern Connecticut Council of Governments (SCCOG)

by:
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Acknowledgements

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Executive Summary



The temporary two-way protected bike lane installed by the project team as part of a pop-up event in Norwich.

“People of all ages and abilities safely and conveniently walk and bike on a network of streets and trails that connect our communities and enhance our quality of life.”

Southeastern Connecticut Regional Bike and Pedestrian Plan's Vision

This study was undertaken to better understand how to include more facilities for biking and walking in southeastern Connecticut's regional transportation network and what improvements could be made to existing facilities. With effective planning, infrastructure, and policy, the potential to travel throughout the region using these modes becomes viable. With safer, more connected facilities biking and walking become means of travel, not just recreational activities. Easing

travel by active modes promotes sustainability in communities — environmentally, financially, and in regard to public health.

Public feedback was central to the development of the Plan. The study team and SCCOG staff engaged in project outreach by distributing surveys soliciting feedback at local events in the region, holding public meetings, and organizing pop-up events in Norwich, Groton, and Jewett City.

The Plan documents the

- existing facilities, programs, and policies for bicycling and walking in the region
- study's public involvement process and input received
- local, regional, and national trends in bicycle and pedestrian use, preferences and economics
- policies, plans, and practices that govern bicycle and pedestrian planning at all levels of government
- opportunities for multi-modal trips that are enabled by allowing bicycles on board trains, buses, and ferries in the region
- bicycle and pedestrian safety issues and trends

The Plan provides recommendations in the form of a “Toolkit” for each municipality, as well as a supplementary Recommendations chapter. The Plan culminates with a chapter on the performance measures that will chart the region's progress toward a safer and more connected street and trail system for bikes and pedestrians in the region.

Figure 0.1 Bicyclist at Norwich Pop-Up Event



Existing Facilities, Programs, and Policies

To gather information on existing facilities, programs, and policies the region was divided into smaller sections and each municipality was contacted individually. This strategy facilitated the collection of the most current data available regionwide. While the SCCOG region is not yet rich in bike facilities, there is a wealth of hiking and walking facilities all throughout the region.

Though the region is still lacking in bike facilities, there are many programs related to active transportation and focus on an array of topics from advocacy to public health. For example, the region is home to Mystic Community Bikes, the first bike share system in Connecticut in 2008. Donated bikes are refurbished and stationed at key locations across the Mystic area in both Groton and Stonington from May through October.

Through our outreach, we know many municipalities are beginning to draft complete streets policies that provide the guidance needed for future projects and development to take place.

Data Sources, Demographics, Survey Responses

Data analysis informs much of this plan and was taken from a variety of sources to complete a thorough analysis of the status of current facilities, amenities and programs in the region related to bicycles and pedestrians. The use of crash data, count data, Strava data, national and local survey data, and online crowd sourcing data (map.social) are the main sources of data used to help identify current levels of use and needs.

Understanding the region's demographics was vital to identifying recommendations. A comprehensive public survey that captured demographic information, respondents' mode use/needs, and project priorities was conducted throughout the duration of the planning process. The survey garnered 910 responses and was widely distributed via web link and at every outreach event for the project. The survey link was advertised at public meetings, town offices, the project and SCCOG websites, and via social media.

Of the individual responses gathered, 92% were from SCCOG residents and 8% of the responses

Figure 0.2 Jewett City Placemaking Tactical Engagement Event



were from people living outside of the region. The survey was primarily taken by residents who come from communities with an existing biking and walking culture. Colchester, Salem, New London, and Groton represent 51% of all responses. This is likely due to these towns being active communities with access to either more bicycle and walking facilities and trail networks (the Goodwin Trail in Salem and the Colchester spur from the Airline Trail) or denser urban centers.

There were several demographic discrepancies observed between the SCCOG survey and ACS findings including: language spoken at home, gender, race/ethnicity, age, household income, level of education, and vehicle access. One of the most obvious trends observed in the survey is that bicycling and walking are being used more as recreation than a mode of travel. Surveys conducted for this project also revealed that a lack of safe and connected networks of bicycle and pedestrian facilities hinder the likelihood of a mode shift to biking or walking.

Public Involvement

The plan engaged the public using a diversity of methods including:

- map.social (online crowd sourcing)
- Surveys
- Tactical Engagements
- Outreach Events and Public Meetings

SCCOG member municipalities have identified needed connections, amenities, and challenges for bicyclists and pedestrians in the region by using all platforms listed above to share extensive suggestions for improvement. The public engagement effort was intended to solicit feedback from a wide range of stakeholders ensuring that both current users were heard and programs and facilities that would attract a new audience were identified.

Recommendations

This Plan is intended to be used as a tool by both residents and municipalities to better understand how southeastern Connecticut's regional

Figure 0.3 Pedestrian Using the Air Line Trail



transportation network can provide and improve facilities for bicycling and walking.

The Plan's recommendations include:

- Strategies to Enhance Biking and Walking
- Bike and Pedestrian Facility Types
- Bike and Pedestrian Funding Sources
- Regional and Community Recommendations
- Municipal Toolkits For Action
- Performance Measures

The goal of this holistic set of recommendations is to inform and educate both motorists as well as non-motorized users on how their actions and municipal, state and federal actions can improve multi-modal travel in the region. The Plan also identifies specific regional and municipal projects that, if implemented, would create a connected network of facilities across the region.

Performance Measures

In addition to laying the groundwork for the creation of a network of bike and pedestrian facilities across the region, this Plan identifies performance measures that provide a roadmap for measuring progress made in improving conditions for bicyclists and pedestrians moving forward. Performance measures for this Plan are data-driven benchmarks or goals, typically assessed annually. Goals include building new facilities, expanding modeshare, improving safety, and increasing funding for bicycling and walking programs and projects. These measures are trackable over time. The success of the region in meeting these goals will demonstrate the progress made in implementing the Plan's recommendations.

When progress is quantified, it is possible to identify shortcomings, which should lead to altering strategies, or renewing focus, to reach targets. This information is useful to SCCOG and the region's municipalities when prioritizing bike and pedestrian transportation projects.

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Goals



A community member using the temporary two-way bike lane the project team installed in Norwich.

1. Purpose and Need

Walking and biking play an important role in southeast Connecticut's transportation system: they improve the quality and vibrancy of our neighborhoods and business districts, extend the range and usefulness of public transit, reduce motor vehicle trips, and promote the health of our communities.

Southeastern Connecticut Council of Governments (SCCOG), as the region's Metropolitan Planning Organization (MPO), is tasked with comprehensive transportation planning inclusive of bike and pedestrian amenities and consideration for safety and route continuity. Federal Legislation Title 23 U.S. Code Section 217 specifically states that bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each Metropolitan Planning Organization and State in accordance with sections 134 and 135, respectively. Sections 134 and 135 define the role and processes that both MPOs and State planning agencies follow. This planning document serves to expand upon the existing regional modal analysis provided in the Metropolitan Transportation Plan (previously referred to as the Long Range Transportation Plan). Furthermore, the plan builds upon the recently adopted SCCOG Plan of Conservation and Development which aims to improve bike and pedestrian accommodations, supporting a goal of SCCOG's member towns and the region.

The Regional Bike and Pedestrian Plan provides

- A comprehensive inventory of bike and pedestrian facilities and programs
- An analysis of gaps in the facilities and programs available within the region
- A prioritized recommendation of infrastructure and programmatic improvements
- Information on available and appropriate funding for recommendations

Planning at the regional level is necessary because state planning efforts do not adequately address:

- Americans with Disabilities Act (ADA) accommodations for access to transit systems
- Bike and pedestrian connections between and within towns
- The relationship of the regional system to regional economic drivers
- The disparities between the region's various user groups
- The lack of comprehensive systems data

Within the region, municipalities have varied capacity for bike and pedestrian planning. Local bike and pedestrian infrastructure has been built in densely developed areas, but there is a lack of comprehensive or inter-municipal planning. This plan:

- Provides all of the municipalities in the region with a basic level of bike and pedestrian planning and addresses connections between towns and to the region's points of interest.
- Creates a unified path of implementation for the region, where all towns can work collectively towards increased safety and connectivity for all users.
- Supports connection of people with places such as shopping, jobs, and recreation. Further, the plan provides a path forward for SCCOG to coordinate with adjacent COGs on facilities of statewide significance.

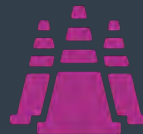
1.1. Goals

The following goals were identified as being critical for achieving the Plan's vision:



INFRASTRUCTURE

Goal 1: Engage and energize citizens and member towns, to enable both a state of good repair and the expansion of facilities and programs for people walking and biking.



SAFETY

Goal 2: Improve livability, mobility, access, healthy opportunity and economic vitality for citizens and member towns through safer and more convenient walking and biking.



SUPPORT

Goal 3: Support the varied needs of citizens and member towns in all phases of development of the system.



ECONOMIC DEVELOPMENT

Goal 4: Communicate the region's assets in a way that allows them to be an economic engine.



ENHANCE

Goal 5: Enhance SCCOG's capacity to provide technical support to our towns.

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Existing Conditions



Existing bike lane on Ocean Avenue in New London

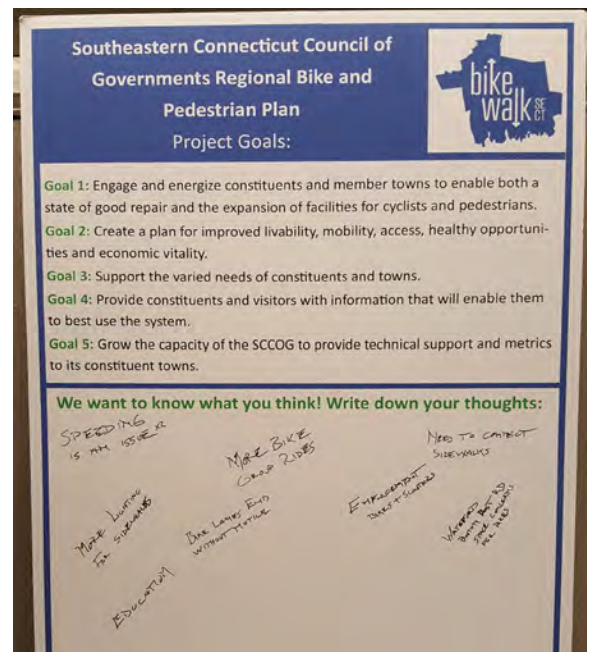
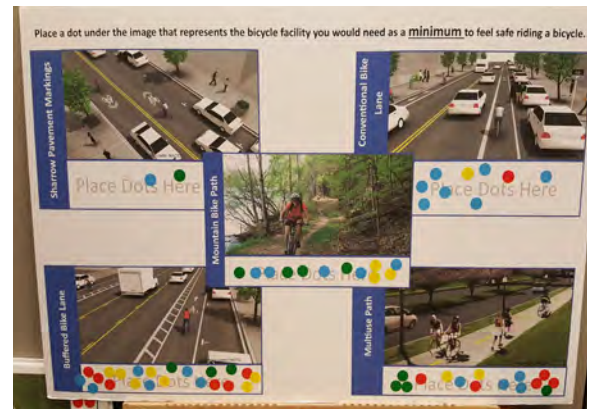
2. Public Engagement

To better understand existing needs and future desires for walking and biking in the region, extensive public engagement occurred throughout the planning process. This section summarizes public events, a public survey, and describes how map. social, an interactive mapping tool, was used to collect feedback on walking and biking in the region.

2.1. Public Events

To gain input from the public in the development of the Southeastern Connecticut Regional Bike and Pedestrian Plan, SCCOG used a variety of outreach methods to maximize participation. The project team sought feedback via an online survey. Section "2.2. Survey" on page 23 presents an analysis of survey results and "Appendix L Survey Results" provides a complete listing of survey results. Outreach efforts were conducted at several public events (the Agricultural Fair in Lebanon (August 11th, 2018) and the Taste of Italy in Norwich (September 8th, 2018)). The project team also held three tactical engagements (see "2.3. Tactical Engagement" on page 30) around the region. There were also two public meetings held to provide a forum for public feedback. The first meeting was held at Otis Public Library in Norwich on January 9th, 2019 and the final meeting to share this plan's findings with the public will be held after its release.

Figure 2.1 Goals/Values and Facility Preference Identified at the Taste of Italy



2.2. Survey

A comprehensive public survey that captured demographic information, respondents' mode use/needs, and project priorities was conducted throughout the planning process. The survey garnered 910 responses and was widely distributed via web link and at every outreach event for the project. The survey link was advertised at public meetings, town offices, the project and SCCOG websites, and via social media. The survey data, along with additional regional, state, and national geographic and demographic data, was vital to understanding the region's needs and developing this plan's recommendations.

Of the individual responses gathered, 92% of responses were from SCCOG residents and 8% of the responses were from people living outside of the region. As can be seen in Figure 2.2, the residence of the survey respondents does not

Primary concerns or issues raised by participants were related to the lack of a safe and connected network for walking and biking.

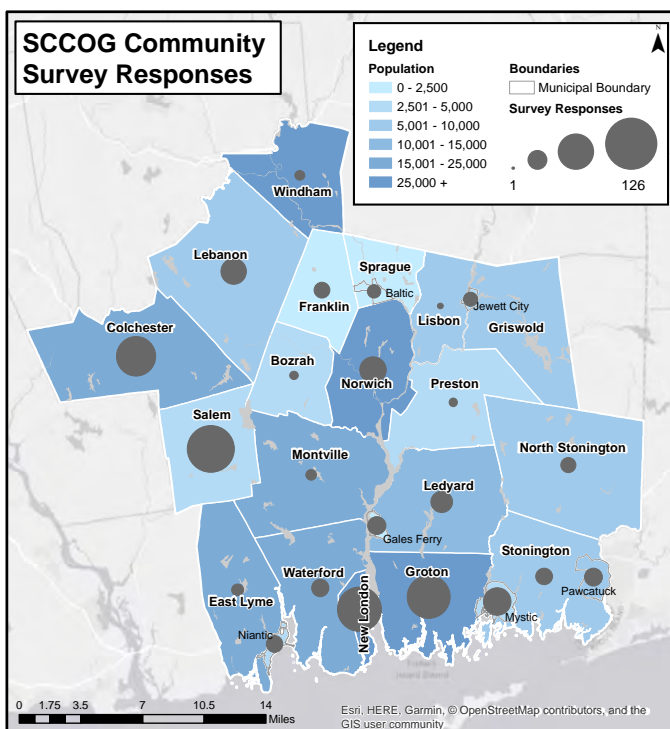
mirror the population distribution of the region. The survey was primarily taken by residents who come from communities with an existing biking and walking culture. Colchester, Salem, New London, and Groton represent 51% of all responses. This is likely due to these being active communities with access to more bike and walking facilities and trail networks such as the Goodwin Trail in Salem and the Colchester spur from the Airline Trail.

It should be noted that this survey could have possible bias or skew in the data because survey takers are self-selected and not a random sample. There were efforts made to engage the communities and stakeholders to receive diversified results. For the purpose of comparing survey results to the American Community Survey (ACS) conducted by the United States Census Bureau, only respondents who lived in the region were considered.

Demographics

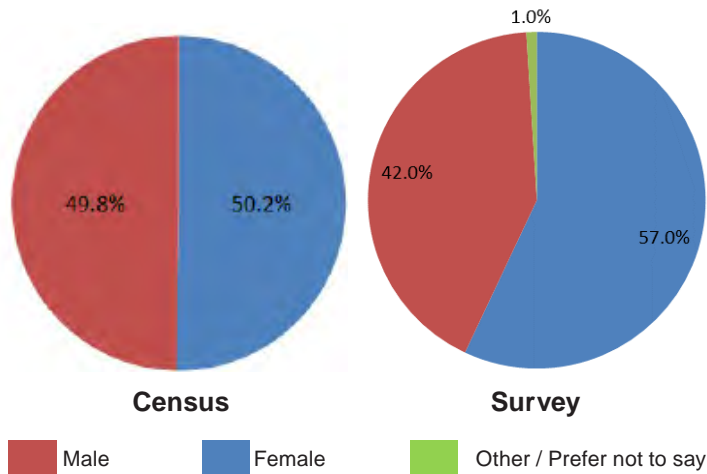
There were several demographic discrepancies seen between the SCCOG survey and ACS findings including language spoken at home, gender, race/ethnicity, age, household income, level of education, and vehicle access. The survey responses indicated that the majority of respondents spoke English at home, with only 2% speaking a different language. This is significantly less than the ACS data which

Figure 2.2 Survey Responses and Population



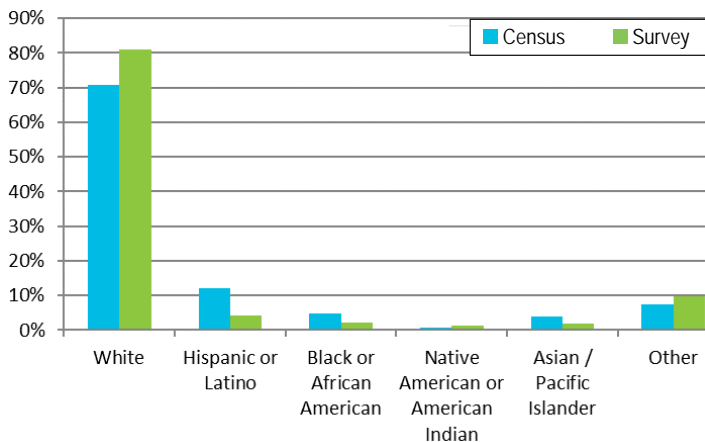
Source: Survey; 2010 Census

Figure 2.3 Survey Results and Census Data (Gender)



Source: Survey; 2017 ACS Census

Figure 2.4 Survey Results and Census Data (Ethnicity / Race)

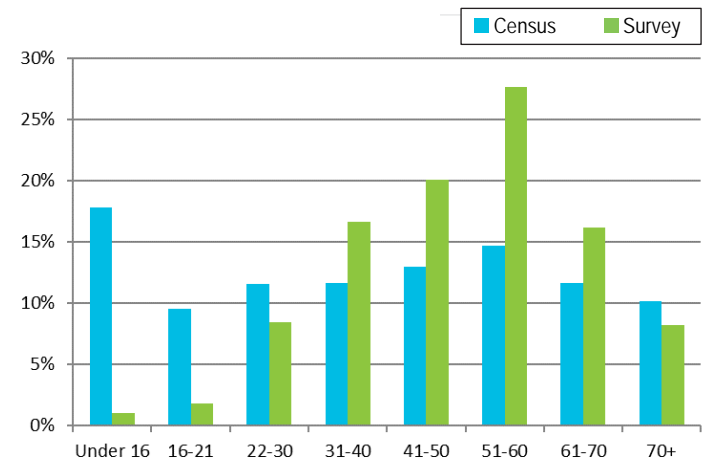


Source: Survey; 2017 ACS Census

indicates that 16% of SCCOG residents speak a language other than English at home.

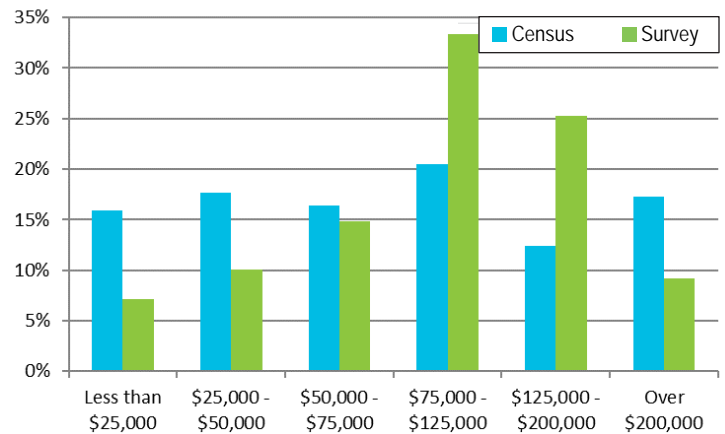
While ACS shows the gender split as almost 50/50, the majority of the SCCOG survey respondents are female, with a 60/40 split (Figure 2.3). The survey aligns somewhat well with ACS race/ethnicity percentages in this region but survey data shows that only 4% of respondents are Hispanic or Latino, which is an under-representation compared to ACS data that show 12% of the population is Hispanic or Latino (Figure 2.4). This is coupled

Figure 2.5 Survey Results and Census Data (Age)



Source: Survey; 2017 ACS Census

Figure 2.6 Survey Results and Census Data (Household Income)

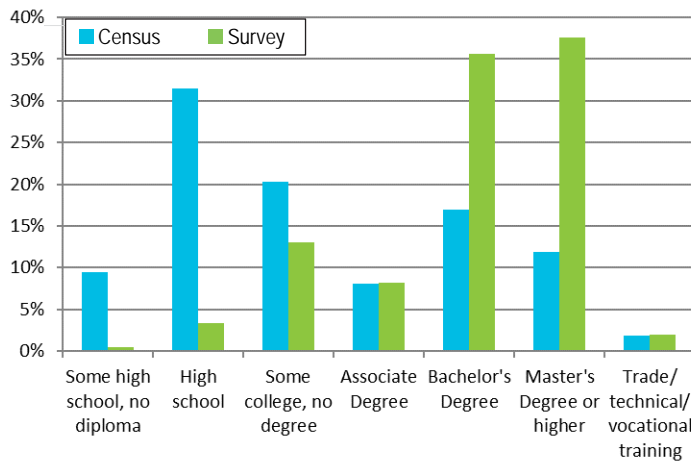


Source: Survey; 2017 ACS Census

with an over-representation of individuals in the survey who identify as white. It should be noted that in the survey individuals could select multiple races/ethnicities with which they identify.

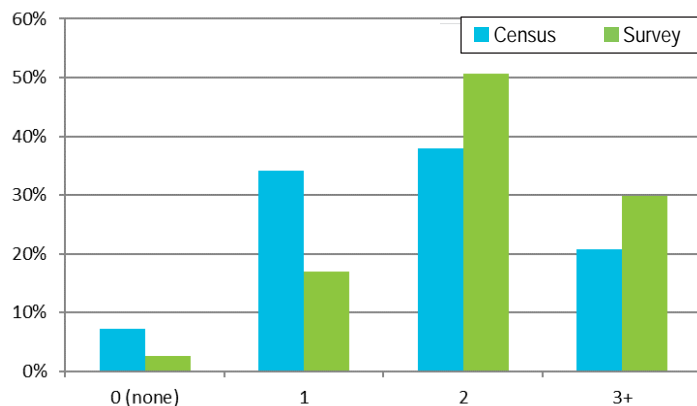
Survey respondents were generally older when compared to ACS data (Figure 2.5). Most respondents were between 31 and 70 years of age (81%), with the largest number of respondents between 51 and 60 years old (28%) as opposed to the ACS data where the largest cohort is 'Under 16' and the 31 to 70 age group represents 51% of the population.

Figure 2.7 Level of Education



Source: 2017 ACS Census: Education

Figure 2.8 Household Vehicle Access



Source: 2017 ACS Census: Vehicle Access

Income levels were higher among survey respondents than the region's population (Figure 2.6). Of the residents who responded to the survey, 70% indicated their household income was greater than \$75,000, compared to just 50% of the region's population. An individual's income level often determines their access to transportation resources; data shows this to be true in the SCCOG region. According to the statewide 2015 "Community Wellbeing" survey of residents conducted by DataHaven, 42% of respondents earning less than \$15,000 responded "yes" to the question, "In the past 12

months, did you stay home when you needed or wanted to go someplace because you had no access to reliable transportation?", nearly four times the rate of the Greater New London area¹ or state overall; respondents earning \$15,000 to \$30,000 were twice as likely to need to stay home.

Overall, survey respondents had a higher level of education compared to ACS data (Figure 2.7). The majority of respondents have earned college credits or completed a college degree (94%), compared to just 57% of the population.

There is not as wide of a discrepancy in vehicle access between the region and survey respondents (Figure 2.8), with 98% of respondents' households having access to at least one vehicle, compared to 94% of the total population's households having access to at least one vehicle. The greater discrepancy is in the number of vehicles, with only 58% of households having access to two or more cars, compared to 81% of survey respondents' households. However, according to the DataHaven survey data cited above, lower-income persons in Greater New London are much less likely to have access to any vehicle. About half of residents earning under \$15,000 annually drive themselves; one in five of these residents never or almost never have access to a car.

Norwich was underrepresented in the survey. Norwich made up 4% of respondents but contains over 14% of the region's population. It has a lower median household income, 29% less than the regional average. Relatedly, there are more households in Norwich with no car than there are in the region; 10% of households in

¹ DataHaven defines the Greater New London area as the following towns: East Lyme, Groton, Ledyard, Lyme, Montville, New London, North Stonington, Old Lyme, Stonington and Waterford.

Norwich do not own cars, compared to 7% of the region's households.

Many Norwich residents, 28%, work in “arts, entertainment, and recreation, and accommodation and food services”. Due to its proximity to two large casinos (Mohegan Sun and Foxwoods, two of the region's top employers), it is safe to assume that many Norwich residents work at either one of the casinos. The casinos are staffed with employees 24 hours per day, but public transit to the casinos is limited both in frequency and hours of operation (see Transit Integration chapter for more information). The Norwich area is a hot spot for both pedestrian and bike-related crashes (see Safety section). Norwich residents' needs are addressed in this plan despite their lack of representation in the public survey.

It is important to note the demographic discrepancies between the survey and ACS data

Figure 2.9 Survey Results: How Often People Bike or Walk in the SCCOG Region

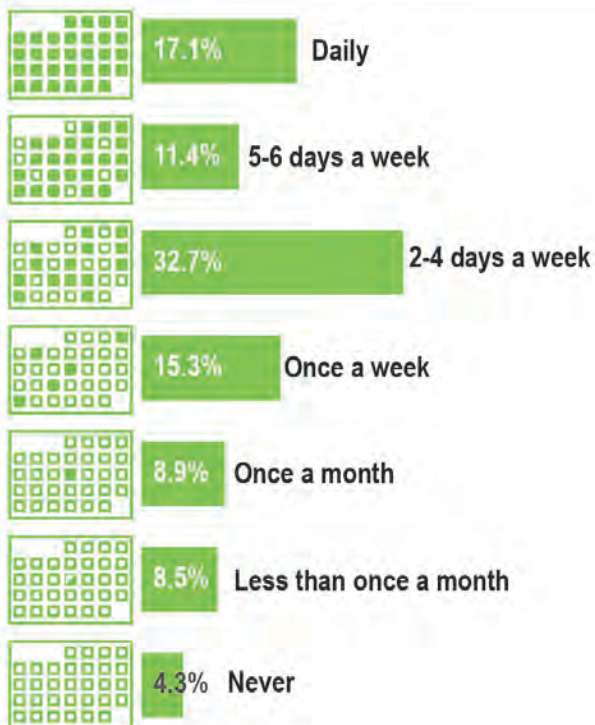


Figure 2.10 Survey Results: Why SCCOG Residents Bike and Walk



for the region. The region is more racially and economically diverse than it appears in the demographic results of the survey, meaning underserved communities, like Norwich, were not well represented. In the future, targeting outreach where people work and live, as well as through community organizations, could increase minority participation. It is also important that survey data supplement other important data sources including crash and demand data.

Figure 2.11 Survey Results: How Far SCCOG Residents Bike in One Week



Figure 2.12 Survey Results: How Far SCCOG Residents Walk in One Week

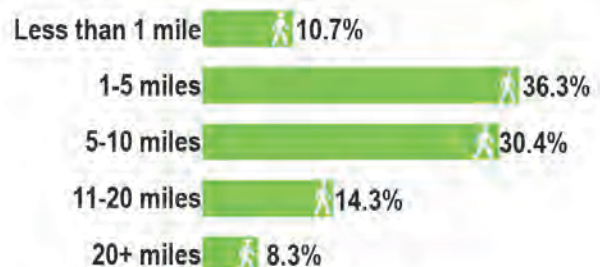


Figure 2.13 Survey Results: Initiatives Which Would Encourage More Walking and Biking



Figure 2.15 Survey Results: Why School Age Children Don't Walk or Bike to School

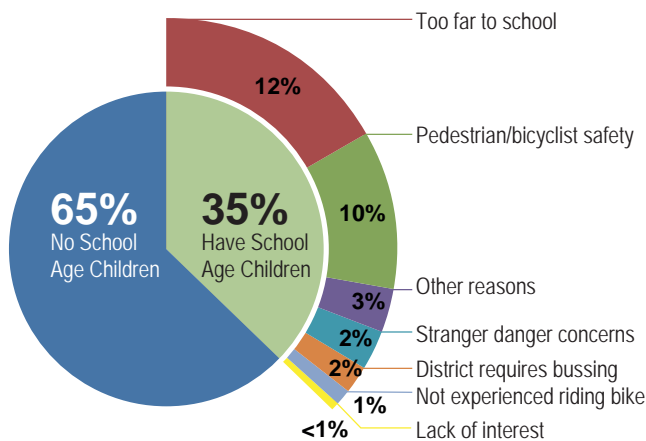


Figure 2.14 Survey Results: Places Residents Can Not Get to Without a Car



Mode Use/Needs

While 77% of respondents walk or bike at least once a week, these trips are overwhelmingly for recreation purposes. Among those that do walk, the majority (78%) walk less than two miles a day. Biking is much less prevalent in the region, as 64% bike less than one mile a day.

Survey respondents reported biking or walking to work/school at a higher rate (10%) than the average person. This is much greater than the national average (3.3%), state average (3.2%), and regional average (4.4%). These discrepancies may be due to selection bias in the survey results as most survey respondents are likely walking and biking. One-third of the survey respondents have school-aged children that do not walk to school; the primary reason is that they live too far from the school, followed by concerns about pedestrian and bicyclist safety.

While most respondents have access to at least one car per household, many would not be able to access the bare essentials such as getting to work (48.2%), going to the grocery store (54.3%), or healthcare facilities (55.5%) by either walking or bicycling. Safety and access are the primary

Figure 2.16 Survey Results: Top Three Priorities



road blocks to walking and bicycling as many respondents reported they would bike or walk more if more sidewalks and bike facilities were built, connected, and maintained.

Lastly, respondents would bike or walk more if more trails were built (58.7%), more sidewalks were accessible and connected (53%), and facilities were safer and more accommodating (33.7%). Fewer than 2% of respondents said they were not interested in walking or biking (Figure 2.13).

Priorities

Survey respondents prioritized bicycle and pedestrian projects focused on improving connectivity. Respondents indicated that completing missing pieces of the bike and pedestrian network should be the top priority when selecting bike and pedestrian improvement projects, followed by facilitating connections and increasing on-road bike facilities.

2.3 Map.Social

SCCOG member municipalities have identified needed connections, amenities, and challenges for bicyclist and pedestrians in the region by engaging online at map.social, a platform that allows people to add various points and lines to illustrate their ideas and concerns. The public engagement tool map.social is designed to allow for expansive suggestions for improvement; these suggestions will be vetted through this

planning process by towns to determine if they are appropriate and how they should be prioritized. The snapshot of the map.social results in downtown New London on page 29 illustrates how map.social data has been isolated geographically and interpreted for this plan. A complete record of map.social feedback and analysis received can be found in "Appendix E map.social Feedback".

In general, pedestrian desire lines (preferred connections) were identified where existing sidewalks were missing or not continuous along major corridors between residential, institutional, and commercial areas, as well as at major roadway and other crossings. Bike desire lines were identified where major regional trails terminated, or near major trip generators and destinations, such as public beaches, transit centers, ferry terminals, educational facilities, downtowns and employment centers.

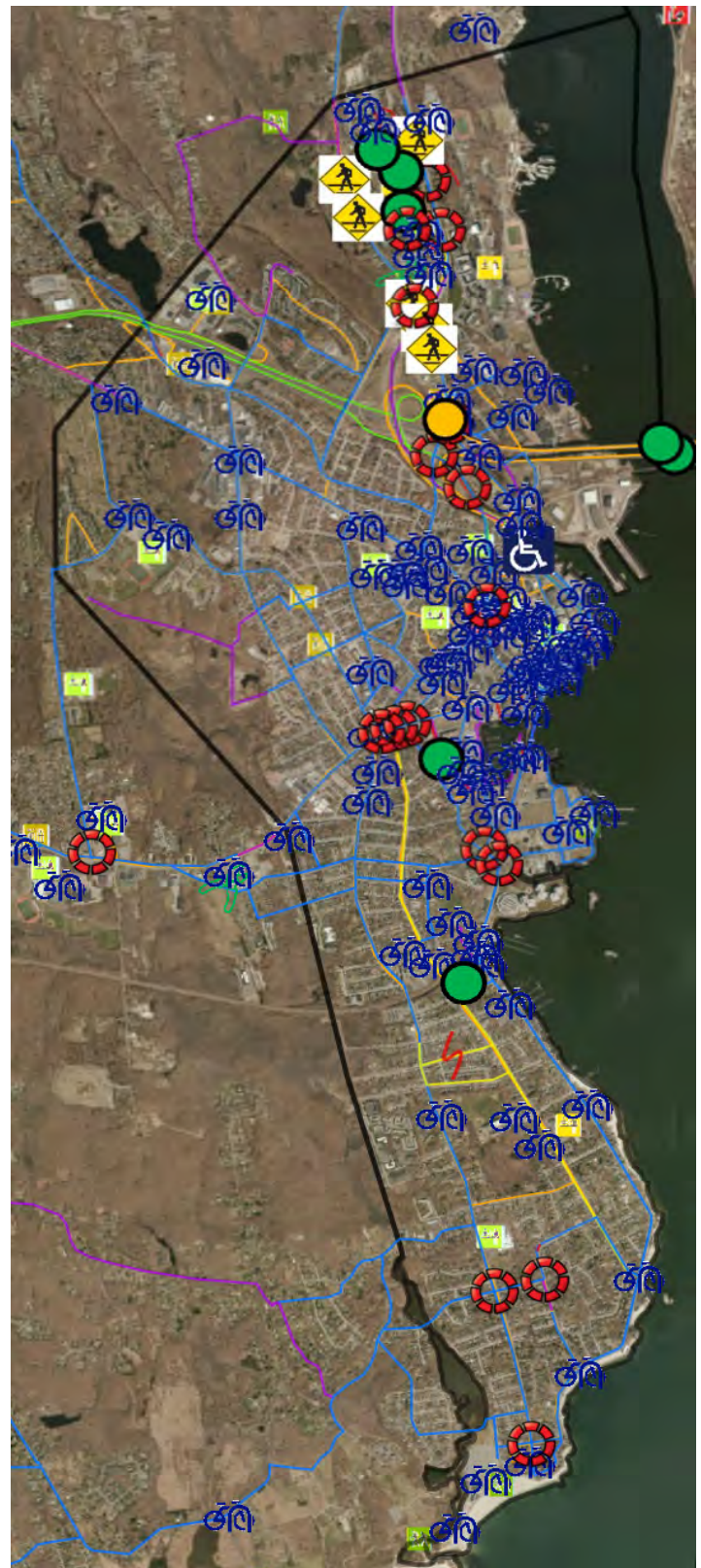
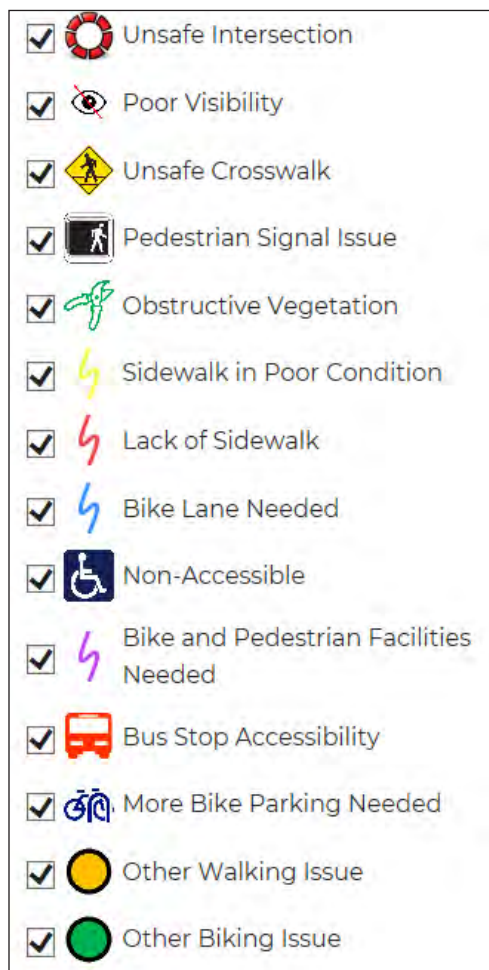
The following issues and desire lines for pedestrians and bicyclists were identified in the City of New London:

City of New London

- Vauxhall Street Extension, between I-95 overpass and Phillips Street – Missing sidewalk
- Mohegan Avenue Parkway (SR 32) corridor, between Connecticut Avenue and U.S. Coast Guard Academy – Lacks safe at-grade pedestrian crossings

- Lack of bike facilities connecting Connecticut College, U.S. Coast Guard Academy, New London Transportation Hub, ferry terminals, downtown New London, Lawrence & Memorial Hospital major parks, and beaches
- Lack of bike parking city-wide

Figure 2.17 City of New London — Map.Social



2.3. Tactical Engagement

Norwich Pop-Up Bike Lanes

Description

In partnership with the City of Norwich, pop-up 2-way separated bike lanes were installed along a largely commercial section of Central Avenue between 4th Street and 7th Street in the Greenville neighborhood. The existing condition includes a curb-to-curb width of over 40 feet, with parallel parking on both sides. Destinations along this stretch include a playground, a church, and several retail establishments. For two days (April 28-29, 2019), the parking lane on the west (southbound) side of Central Avenue was converted to two-way bike lanes. This was accomplished by adding a double yellow stripe (pavement tape) to mark the division between the bike lanes and the motor vehicle travel lane, orange traffic cones placed approximately every 15 feet atop the double yellow to serve as a vertical separating element. There was also a dashed center line (pavement tape) in the lane to separate northbound and southbound bicyclists.

At driveways and crossing streets the bike lanes were marked as green dashed lanes (tar paper, painted green with exterior latex paint, reflective glass beads applied to the paint while wet to create a reflective and grippy surface, secured to the pavement with black duct tape and white pavement tape). A bike marking was also applied to the roadway using white spray chalk and a large plastic stencil made specifically for marking bike facilities. Every effort was made to adhere as closely as possible to design guidelines found in the Manual of Uniform Traffic Control Devices. By installing the facility for a Sunday and Monday, the project team was able to observe its operation on a weekend day and a work day, with the intent of observing interactions with people headed to work as well as recreational users. The project team engaged the public on both days with conversations and intercept surveys, and recorded user count data.

Materials and Budget

Pavement tape: \$647

Cones: provided by City of Norwich for this project at no expense

Stencil: provided for this project at no expense

Spray chalk: \$13

Glass beads: \$38

Duct tape: \$15

Tar paper: \$18

Latex paint, roller, and pan: \$37

Bike stencil: \$150

Total: approximately \$918

Figure 2.18 Preparing Pop-up Bike Lane



Jewett City Placemaking

Description

Fanning Court (in the Borough of Jewett City) is an alley connecting a parking lot with Main Street (State Route 12) and running between the buildings housing the restaurants Uncle Kranky's and Mandarin Garden. In partnership with the Town of Griswold and the two building owners (who also own the alley), this project "activated" Fanning Court, making it a more appealing place to walk. Such a change was recommended in both the Jewett City Main Street Corridor & Streetscape Master Plan (2011) and a Route 12 road safety assessment (2017). Some improvements have been made already; the Town closed off motor vehicle access to the alley, built a sidewalk, closed off motor vehicle access to the alley, built a sidewalk across the mouth of the alley, and added several planters. Uncle Kranky's also added planters and installed some outdoor seating. To further activate the Fanning Court, this project added lighting (outdoor string lights with exposed-filament bulbs; Uncle Kranky's provided the electricity) and

flowering plants, created art with sidewalk chalk on the full length of the alley pavement, and placed a beanbag toss game along the alley's edge, to encourage people to enter, play, and stay. This installation was in place on May 4, to coincide with Griswold's annual Night Light Parade. The project team engaged the public with conversations and intercept surveys, and recorded pedestrian count data.

Materials and Budget

String lights & bulbs: provided for this project at no expense

Extension cords: provided for this project at no expense

Plants: \$49

Brackets to hang plants: \$15

Sidewalk chalk: \$22

Stencils for chalk art: provided for this project at no expense

Beanbag toss game: \$21

Total: approximately \$107

Figure 2.19 Community Member Using Beanbag Toss



Groton Pop-up Wayfinding Signage

Description

In the Town of Groton (and a small section of the City of Groton) there is a 2.4-mile route connecting the US Naval Submarine Base with the Gold Star Bridge pathway over the Thames River, which is 75% routed on shared-use paths. However, there is no signage directing bicyclists and walkers on how to reach these destinations, and it is not immediately apparent. For this project, the project team partnered with the Town of Groton to design and install temporary signs to inform bicyclists and walkers of the best route, including distance and time-to-destination (for cyclists) information. The team used the Town's recently-adopted Wayfinding Signage Master Plan to develop the design. This signage plan seeks to enhance the Town's "brand" by using

specific colors, typefaces, and a unique star graphic, all of which were incorporated into the design of the pop-up signs, as well as the Regional logo for this study. The signs were installed to mark each turn between the Submarine Base and the Gold Star Bridge in both directions, and confirmation signs were added where deemed appropriate. They were left in place for nearly two weeks, from May 11-24. The project team engaged the public on May 11 (6 hrs) and May 18 (7 hrs) with conversations and intercept surveys, and recorded user count data.

Materials and Budget

Corrugated plastic signs: \$220

Nylon cable ties: \$8

Total: approximately \$228

Figure 2.20 A Temporary Wayfinding Sign



Figure 2.21 Community Member Bicycling on Shared-use Path



3. Levels of Use

SCCOG used the following bike and pedestrian data to measure demand for active transportation in the region: 2013 – 2017 American Community Survey (ACS); 2009 National Household Travel Survey, 2012 National Survey of Bicyclist and Pedestrian Attitudes and Behaviors (2012 NSBPAB) and Strava (a program that works with smartphones and GPS watches that tracks bike and running trips). While national data is useful for showing the big picture and filling in local data gaps, it is important to consider that bicycling and walking have not been studied sufficiently in part because the Census, our largest sample of data, focuses on journeys to work. This excludes the vast majority of trips by bicycling and walking (as reported in the National Survey of Pedestrian and Bicyclist Attitudes and Behaviors studies, and as confirmed in our own).

Active transportation modes (bicycling and walking) are utilized by urban populations at more than double the rate of rural populations¹. In urban areas, 5.3% of individuals are likely to walk or bike as a means of transportation, as opposed to just 2.8% in the suburbs and 2.3% in rural communities. The higher rates in cities can likely be attributed to higher population densities, closeness of destinations, and greater prevalence of programs and infrastructures that support these modes. Figure 3.1 shows the Census tracts where the active mode share is greater than 2.3% (national average for rural communities), in relation to the population density and classification of community type. In the region, 29.2% of the area is considered urbanized according to the United States Census. The ACS 2013 – 2017 indicates that approximately 4.1% of commuters in the region walk to work and 0.7% of commuters in the region bike to work. New London, Groton, and Windham have the largest percentages of populations commuting by active modes with 10%, 11%, and 8% respectively (Figure 3.2). The single greatest density of individuals who walk to work is the Census tract encompassing the U.S. Naval Submarine Base New London, in Groton, with 54%, reflective of military housing in close proximity to and on the base. The largest percentage of individuals who commute by bike is 3.1%, in Groton around General Dynamics Electric Boat. The relatively higher mode share in these communities can be linked to factors including population density, topography,

1 ACS 2013-2017 Modes Less Traveled

Figure 3.1 Active Transportation — Commuting

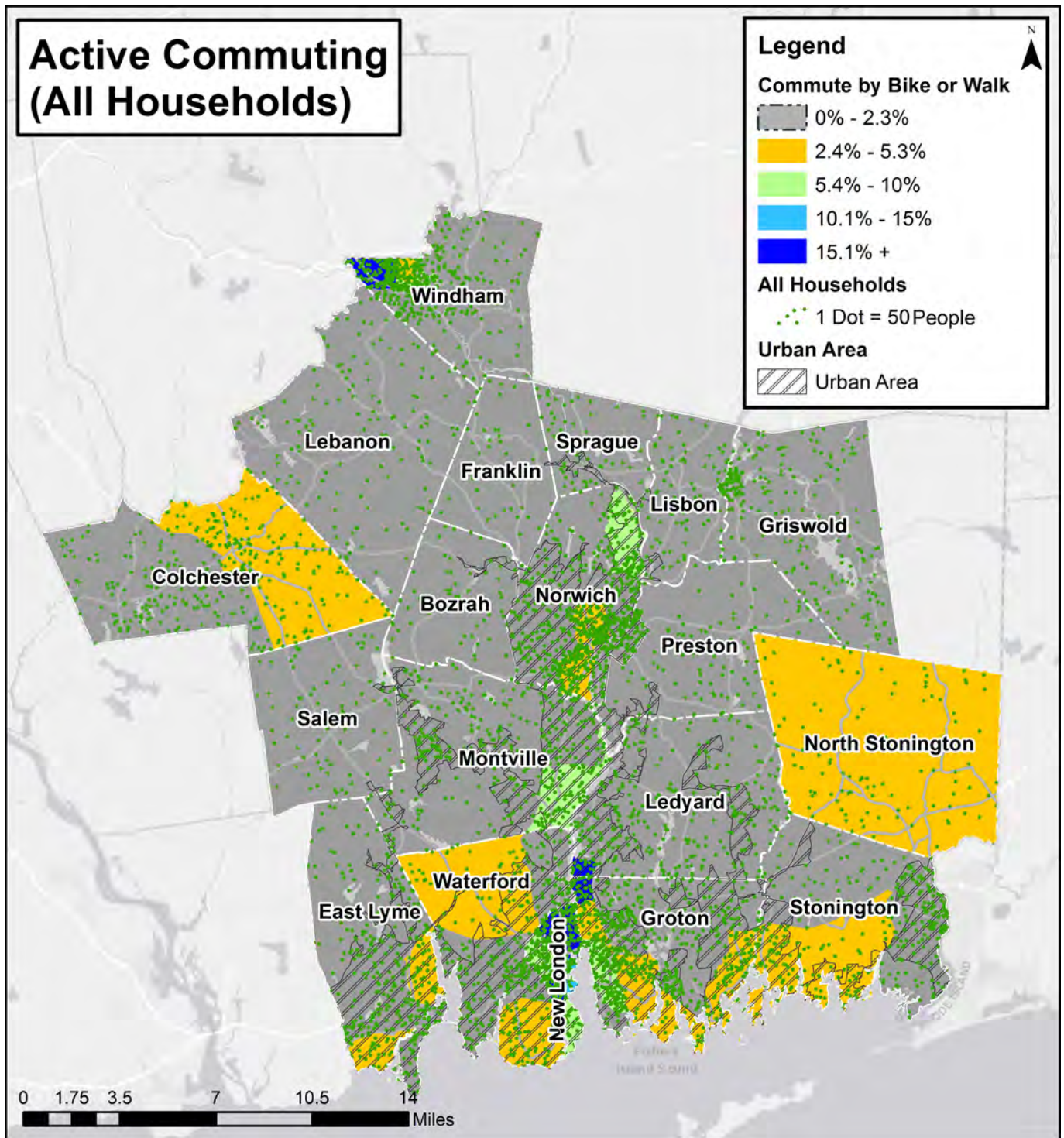
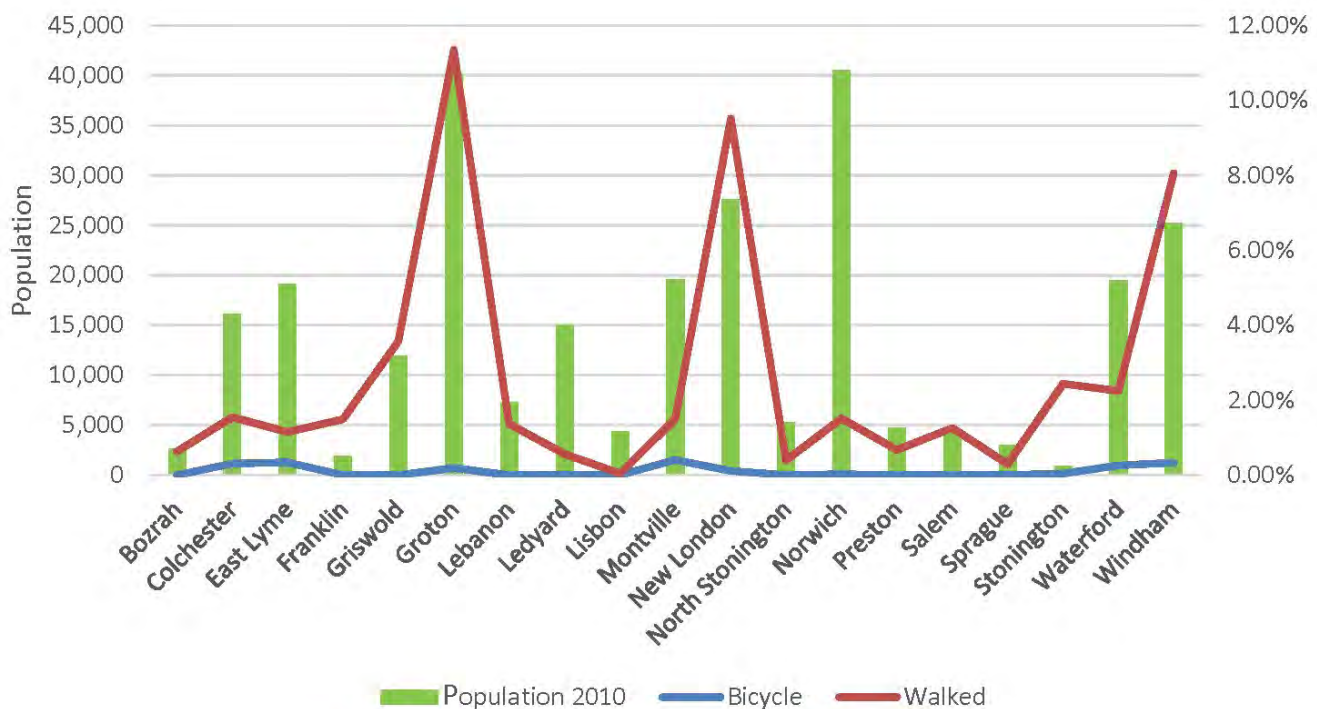


Figure 3.2 Population and Mode Share by Town



Source: 2016 ACS Journey To Work

land development patterns, and workforce demographics.

Younger individuals (16 to 24 years of age) had the highest rate of commuting by biking or walking, at 7.8%, double that of the 25 to 29 age group, the next largest cohort, at 3.9%. The higher percentage of the 16 to 24 age cohort using active transportation is likely due to lack of access to a vehicle, inability to drive, improved physical health, and lower income. As age increases, the prevalence of active commuting declines. This can be linked to factors such as having children and needing to make multiple stops along the commute, declining physical abilities with age, higher incomes that support automobile ownership, and residential location as urban areas tend to attract younger individuals. The region's trends are similar to that of the nation, where younger individuals have a higher

likelihood of biking to work than older individuals. However, within SCCOG member municipalities, individuals 16 to 24 years of age bike to work at a much higher average rate (~15% biking and ~2% walking) (Figure 3.3). The SCCOG region's combined average walking and biking rate is 8.5%, which is higher than the nationwide rate of 6.8%.

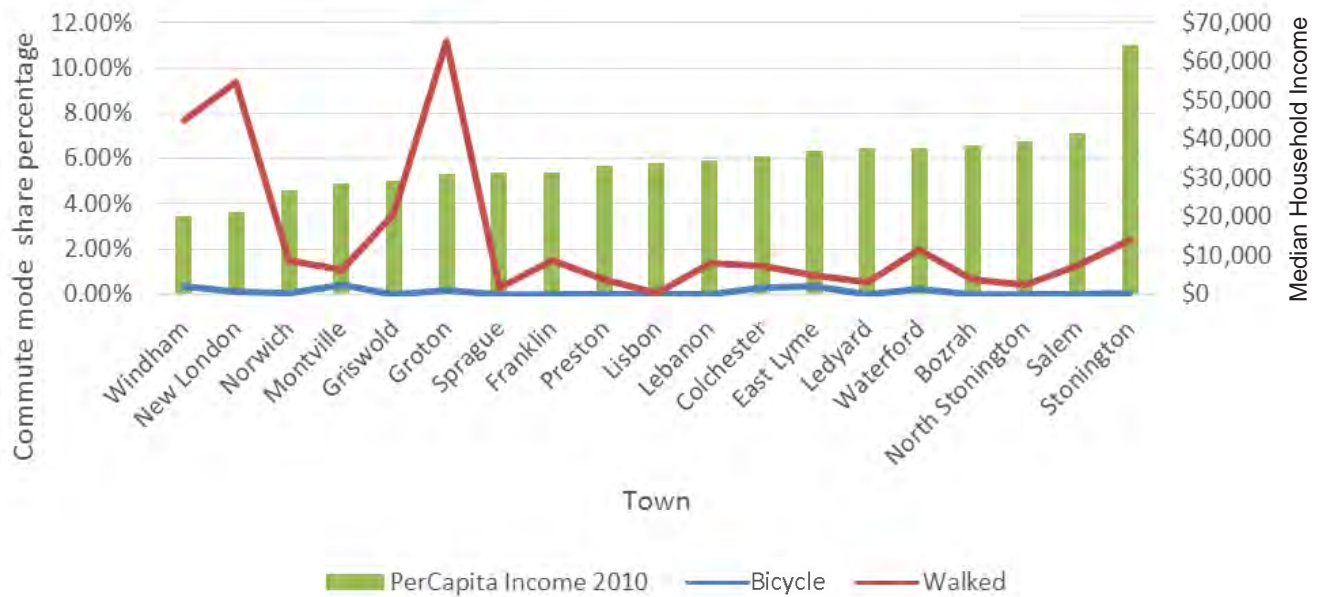
Low-income persons are more likely than high-income persons to walk or bike to work. While New London and Groton show the expected relationship, there are exceptions, such as Stonington, which has the highest per-capita income, the fourth highest rate of walking commuters, and eighth highest bike commute rate in the region (Figure 3.4). By gender, men are twice as likely to bicycle as women. However, men and women walk at almost equal rates.

Figure 3.3 Walking and Biking to Work by Age - SCCOG Region



Source: 2017 ACS Census

Figure 3.4 Income and Mode Share



Source: 2016 ACS Journey to Work

Table 3.1— Higher Education Institutions
Active Commute

College/University	Percent Walk	Percent Bike
Connecticut College	20.9%	0.1%
U.S. Coast Guard Academy	20.9%	0.1%
Mitchell College	6.3%	2.4%
Three Rivers Community College	2.4%	0%
Eastern Connecticut State University	27.3%	1.9%

Source: ACS data

College towns have among the highest level of people walking to work and school. This is particularly significant as the region is host to several institutions of higher learning, including Connecticut College, the U.S. Coast Guard Academy, Mitchell College, Three Rivers Community College, and Eastern Connecticut State University. All of these institutions are located in densely populated residential areas and have walking rates greater than both the regional average and national urban average (with the exception of Three Rivers Community College). Eastern Connecticut State University, located in Willimantic, an urbanized area of Windham, has the highest rate of walking (Table 3.1). Higher rates of commuting via bike are seen in the vicinity of Mitchell College and Eastern Connecticut State University.

Fewer people in Connecticut walk and bike to work compared to other states in the Northeast. According to the ACS 2008 - 2012 Modes Less Traveled, 2.0% to 2.9% of all Connecticut workers walk to work, the lowest among all states in the Northeast.² Connecticut residents also bike to work less with only 0.2% to 0.4% choosing this mode. Among states in the Northeast, Connecticut is tied with New Hampshire for the lowest rates; Vermont and Massachusetts have the highest at 0.5%. The ACS report also analyzed travel time to work, time of departure, vehicles available for workers in the household and workplace location in relation to commute rates; shorter travel time was strongly correlated with walking; departure times outside of the standard morning rush hour were correlated with bicycling. Access to a vehicle proved to be the most important predictor in determining whether or not someone walked or biked to work. Those

2 All New England States, New York, Pennsylvania, New Jersey, and Delaware, ACS 2008-2012 *Modes Less Traveled*

without access to a vehicle in the household are four times more likely to walk or bike to work than those with access to at least one vehicle, nationwide. A similar trend is found in the region, where areas with a higher share of households without a vehicle have more individuals commuting by bike or walking (Figure 3.5).

More commuters in the region (33%) have commutes under 15 minutes, compared to the national and state rate of 28%. Trips to work under 15 minutes are 5.8 times more likely to be made walking or bicycling than a trip that takes 15 to 20 minutes. Commutes of less than 15 minutes by car are, in theory, about eight miles or less and are considered within the range of a reasonable bike commute. The shorter trip distance in the region might account for the higher percentage of individuals who commute by biking or walking.

Figure 3.5 Active Commuting Relative to Vehicle Access

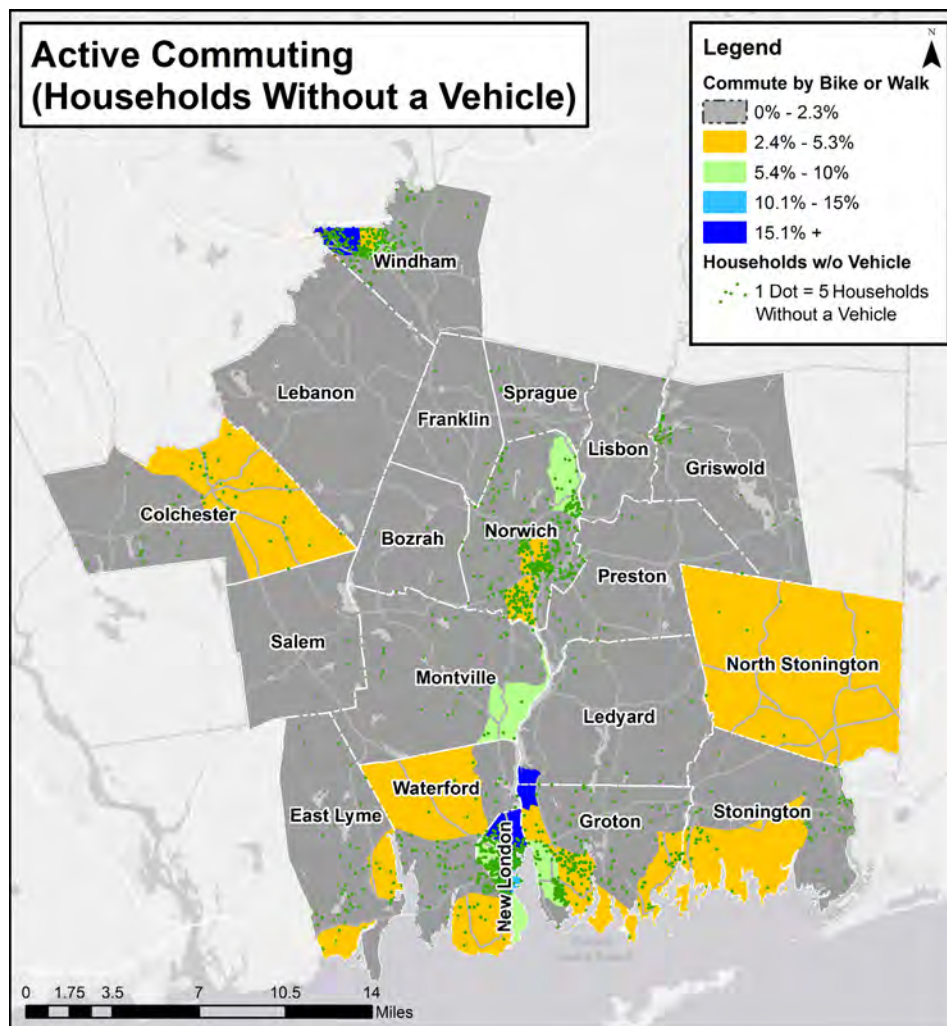


Figure 3.6 Bike Trip Purpose — 2009



Source: 2009 National Household Travel Survey

Because bicycling and walking make up a very small percentage of work commute trips, SCCOG looked to other sources of data to increase understanding of these modes as part of all trips taken (Figure 3.6, Figure 3.7 and Figure 3.8). Figure 3.6 and Figure 3.7 compare two sources of Bicycling Trip Purpose data, according to the National Household Travel Survey and the NSBPAB (National Survey of Bicyclist and Pedestrian Attitudes and Behavior). The 2009 National Household Travel Survey reported

higher rates of commuting by bike than what was found in the 2012 NSBPAB.

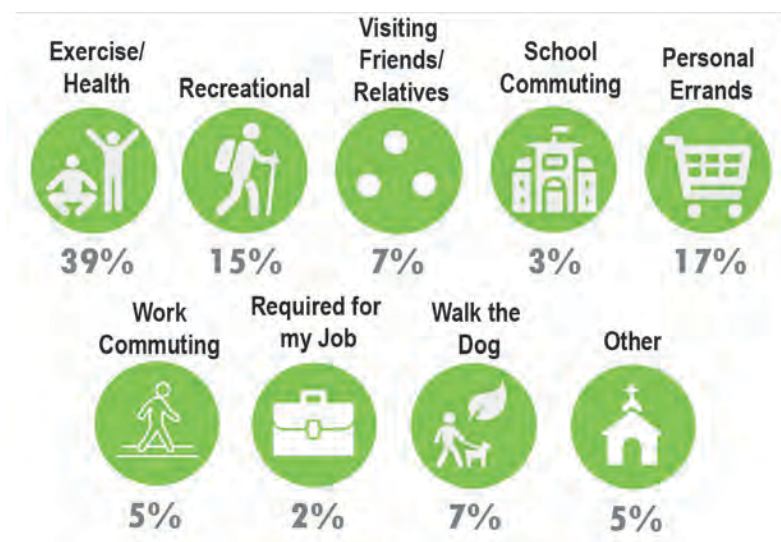
The 2012 NSBPAB is a decennial survey that is specific to biking and walking. The survey reported that discretionary trips, such as exercise, recreation and visiting friends and relatives, made up 61% of pedestrian trips (Figure 3.8). The 2012 NSBPAB survey also cataloged trip origin and destination, shown in Figure 3.9 and Figure 3.11, corroborating their findings that exercise and recreation make up a large share of trips. Multi-link trips, where additional modes of transportation are used such as bus or rail transit, are not well represented in this data. It is important to note that this survey looked at the first trip of the day; it is reasonable to assume that errands and social visits would be under-reported because those trip types are typically done later in the day. NSBPAB Pedestrian survey data

Figure 3.7 Bike Trip Purpose — 2012



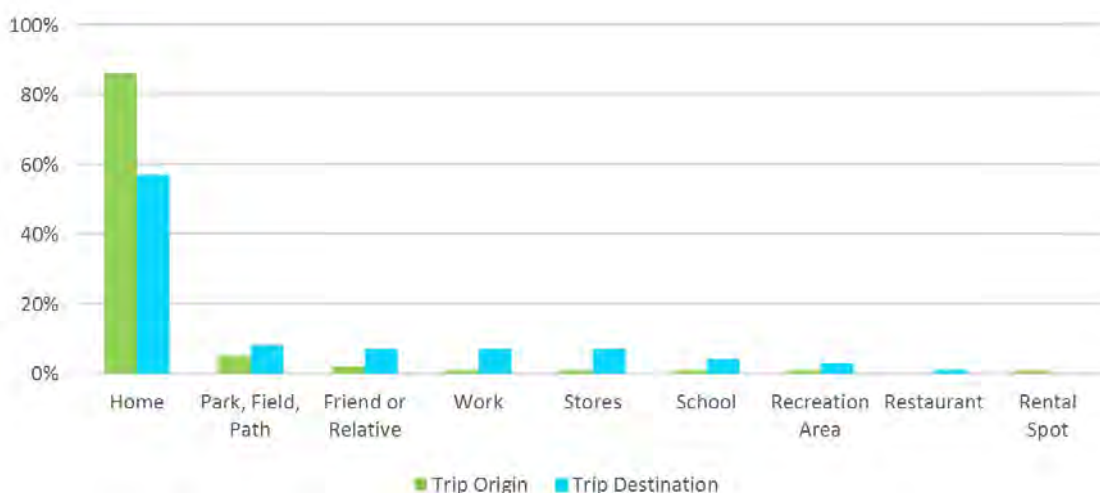
Source: National Survey of Bicyclist and Pedestrian Attitudes and Behaviors (2012)

Figure 3.8 Pedestrian Trip Purpose — 2012



Source: National Survey of Bicyclist and Pedestrian Attitudes and Behaviors (2012)

Figure 3.9 Bike Trip Origin and Destination — First Trip of the Day



Source: National Survey of Bicyclist and Pedestrian Attitudes and Behaviors (2012)

showed that the vast majority of survey respondents are walking (Figure 3.10). Among survey respondents, 70% walked in the last week. The purpose of trips are more varied among walkers, compared to bicyclists (Figure 3.7). The vast majority of trips are to and from home. However, combined with trip purpose data, it is evident that many trips are multi-purpose.

3.1. Regional and Local Statistics

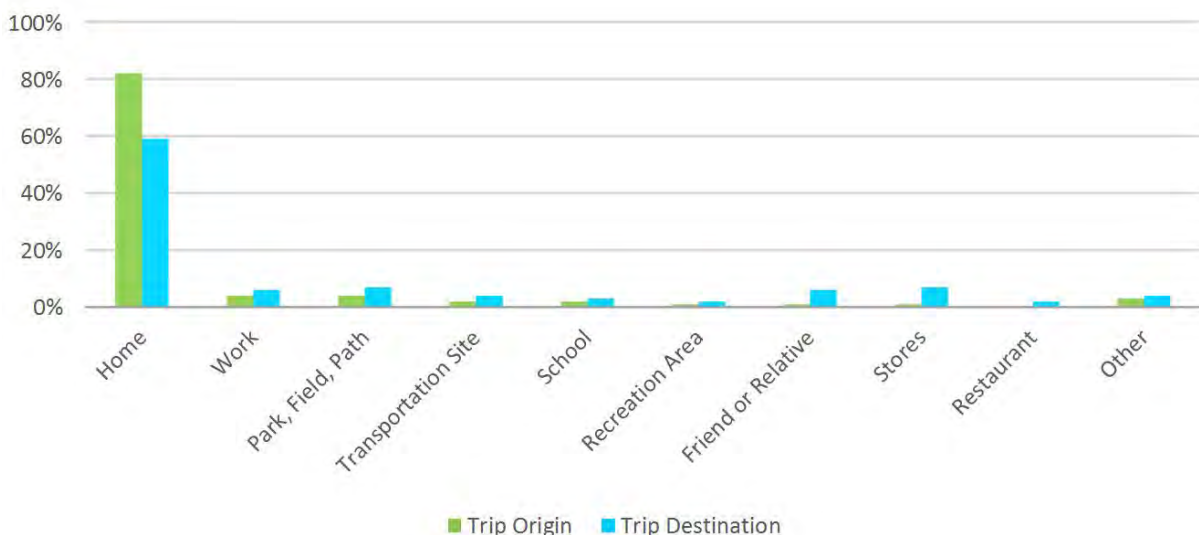
There are no routine public counting programs specific to this region for either biking or walking. Strava is currently the leading data supplier for bike and pedestrian “big data”. Strava is a mobile application marketed toward athletes and recreational users primarily interested in tracking their activities and comparing their activities with fellow athletes. The data is also sold to institutions and governments for planning purposes — data is disaggregated and individuals are not identified, but the public can view an

Figure 3.10 Walking Frequency



Source: National Survey of Bicyclist and Pedestrian Attitudes and Behaviors (2012)

Figure 3.11 Pedestrian Origin and Destination (First Trip of the Day)



Source: National Survey of Bicyclist and Pedestrian Attitudes and Behaviors (2012)

online interface³. Strava data illustrates the route choice of some cyclists and walkers the region; the application is used by a narrow segment of the population, mainly competitive runners and cyclists. Strava is currently the best source of route preference data the region has. Figure 3.12 shows the current aggregate of Strava bike and pedestrian trips taken in the region. Primary concentrations of activity exist along the shoreline as well as along the Air Line Trail in the towns of Colchester, Windham, and Lebanon.

DataHaven is a non-profit organization whose mission is to improve the quality of life for people by collecting, interpreting, and sharing public data for effective decision-making. DataHaven

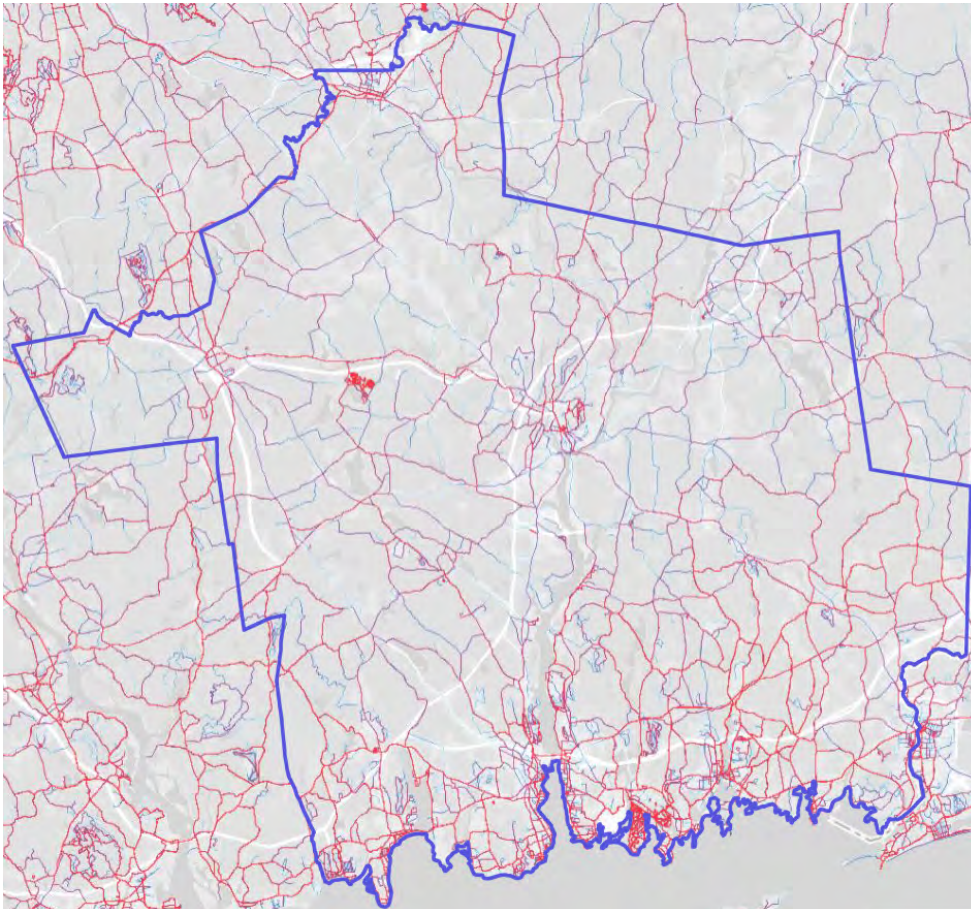
launched the statewide Community Wellbeing Survey in 2015. The data includes health, safety, mode, and recreation data. Key statistics for the Greater New London area from the 2018 survey include:

Community Wellbeing Survey:

- 74% of adults feel safe to walk at night in their neighborhood (3% higher than the Connecticut average)
- 55% of adults feel that there are safe sidewalks and crosswalks in their neighborhood
- 45% of adults believe there are many stores, banks, markets or places to go within easy walking distance of their homes

3 <https://www.Strava.com/heatmap#9.58/-72.94822/41.67301/hot/all>

Figure 3.12 Strava Data in SCCOG Region

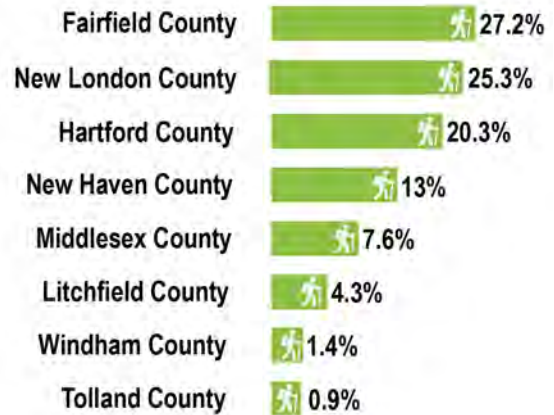


* Blue lines show less traveled roads, red lines show more traveled roads

- 57% of adults agree that there are places to bike in or near their neighborhood
- 12% transportation insecurity rate: percentage of people who have stayed home sometime in the last 12 months due to lack of reliable transportation (same as Connecticut average)
 - 42% of these people have stayed home from a doctor's appointment in the past year because of lack of access to reliable transportation
- 57% of adults believe they are in very good health or better
- 66% of adults are overweight or obese

Bicycling, running, and walking activity levels are highest in the region's major tourist destinations. The tourism industry is a major economic driver within the region. A 2015 study from the Connecticut Department of Community & Economic Development (DECD), "The Economic Impact of Travel in Connecticut", documents the potential economic impact of bicycling and walking on local economies through complementary services, hotel, restaurants, and sales tax revenues.

Figure 3.13 Total Traveler Spending in Connecticut by County



Source: *The Economic Impact of Travel in Connecticut*, DECD (2015)

The DECD conducts vision and tourism-intercept surveys throughout the state, including at casinos, beaches, parks, shopping destinations, arts venues, farms and markets, vineyards, and other tourist venues, every year since 2001. These surveys include questions about spending, demographics, and satisfaction.

According to the latest report published in 2015:

- Recreational spending represents nearly 31% of all traveler spending statewide and accounts for 68% in New London County.
- Recreational spending was held down by the decline in casino gaming.

Table 4.2— Tourism Industry Sales in New London County

New London County Tourism Industry Sales (millions)								
Year	Lodging	Food & Beverage	Retail	Recreation	Transport	Second Homes	Total	Growth Rate
2015	\$176.4	\$239.0	\$147.7	\$1,495.2	\$105.9	\$41.0	\$2,205.1	0.4%
2014	\$163.5	\$216.1	\$143.1	\$1,527.8	\$103.0	\$43.9	\$2,197.3	-2.4%
2013	\$160.0	\$201.1	\$133.6	\$1,620.1	\$94.6	\$41.9	\$2,251.2	-5.7%
2012	\$154.5	\$197.4	\$130.0	\$1,762.7	\$96.5	\$46.2	\$2,387.1	-3.8%
2011	\$149.8	\$188.2	\$126.6	\$1,874.8	\$94.9	\$47.6	\$2,481.8	

Source: *Tourism Industry Sales in New London County*, *The Economic Impact of Travel in Connecticut*, DECD (2015)

- New London County saw a 0.4% growth rate in tourism sales in 2015, which was the lowest increase compared to all other counties in the state, which had increases ranging from 2% to over 6%.
- Transportation spending growth was capped by the sharp decline in gas prices in 2015.

Department of Energy and Environmental Protection (DEEP) Statewide Comprehensive Outdoor Recreation Plan (SCORP), which concluded that non-paved and paved shared-use paths were the second and third most desired facilities (after picnic areas, playgrounds and shelters).

Both bicycling and running data for the entire state indicate that the highest rates of use are in areas that have existing linear recreational facilities, including the Farmington Canal Heritage Trail, Norwalk River Trail, Charter Oak Greenway, and Pequonnock River Trail. Not only do the facilities see higher use, but surrounding road networks and adjacent open space also benefit from the linear park system. Indeed, substantial shared-use path facilities act as regional and even statewide destinations. Demand for biking and walking as forms of recreation was documented in the 2011 - 2016 Connecticut

Figure 3.14 A Trail Head at Barn Island Wildlife Management Area



3.2. Bike, Pedestrian and Traffic Counts

The project team collected traffic counts during the third week of October, 2018. Count locations were selected in coordination with municipal support at key locations in the region that covered urban, suburban, and rural areas. Turning movement counts were completed for a three-hour peak period (4 pm – 7 pm) to identify traffic volumes as well as pedestrian and bike counts at the intersections. The majority of locations saw little pedestrian activity and no bikers (see Figure 3.15). Observed activity over a three-hour hour in the evening doesn't represent activity over a full day, for example, pedestrian and bike activity at most locations is expected to be higher during summer months. These locations should continue to be monitored for planning purposes. Copies of the raw count data are included in "Appendix D Bike, Pedestrian and Traffic Counts".

Mystic – Pearl Street and West Main Street (RT 1)

This intersection has significant pedestrian activity with an average of 133 pedestrians per hour in the PM peak period.

Mystic – Water Street and West Main Street (RT 1)

Similar to the Pearl Street intersection, the Water Street intersection with RT 1 also has heavy pedestrian activity with an average of 33 pedestrians crossing hourly in the PM period. There was only one biker total

counted at this location; however, it is one of only two locations where there was bicyclist activity.

Groton – Poquonnock Road and Mitchell Street/Benham Road/Chicago Avenue

Based on the traffic counts, pedestrian activity is not substantial, with an average of only 18 pedestrians per hour.

New London – Garfield Avenue and Blackhall Street/Connecticut Avenue

This location saw an average of 19 pedestrians per hour. This was one of the few locations where bikers were active with three total. This is likely the case because of dense residential neighborhoods located near the downtown.

New London – Montauk Avenue and Willetts Avenue

This location had one of higher volumes of pedestrians in the region with an average of 31 pedestrians per hour.

Norwich – Norwich Avenue and Jewett City Road

Only one pedestrian was seen at this location over the three-hour observation period.

Norwich – Norwich New London Turnpike and West Thames Street/Trading Cove Road

Only five pedestrians total were observed over the three-hour period.

Norwich – New London Turnpike and Holly Hill Drive

Eight pedestrians total were observed at this location over the 3 hour period.

Stonington – Spellman Drive and South Broad Street (RT 1)

Only six pedestrians (an average of two per hour) were observed at this location.

Waterford – Niantic River Road and Boston Post Road (RT 1)

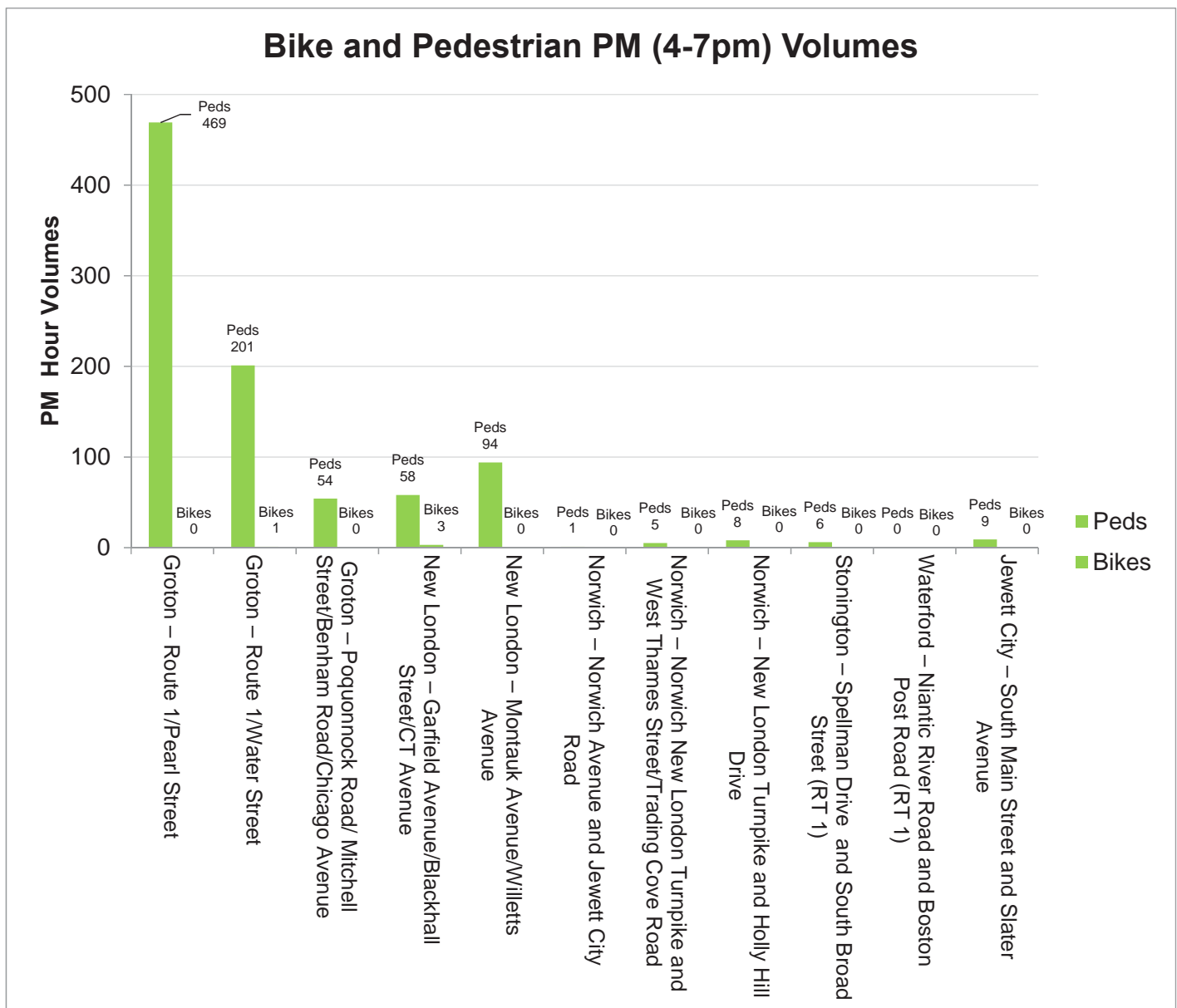
No pedestrian or bike activity was recorded

between 4-7pm when the traffic counts were taken.

Jewett City – South Main Street and Slater Avenue

A total of nine pedestrians were counted over the three-hour period.

Figure 3.15 Total Bike and Pedestrian Volumes PM Peak



4. Policies, Plans, and Practices

Over the past decade there have been efforts to improve walking and bicycling at the state, regional, and municipal levels of government. State and regional efforts have generally helped guide municipal efforts, given the lack of resources in smaller communities. Municipal efforts to improve walking and bicycling have varied by community in southeastern Connecticut and have generally been limited to zoning regulation requirements and inclusion of recommendations in Plans of Conservation and Development.

Municipalities are also the major providers and maintainers of the sidewalk networks, enacting policies which define where sidewalks are provided. The Town of Windham has more robust bike and pedestrian policies than most towns in the region. The town requires sidewalks on every street for incentive housing developments as well as covered bike racks for every ten units of housing, which is reviewed during the site plan review process. In addition, Windham also has bike parking requirements that mandate a minimum of one bike parking space for every 20 automobile spaces in the downtown business district zone.

On-street bike facilities are largely non-existent in the region. Existing bike facilities and signage are described in detail in Section 5 (Existing Infrastructure). While there are several plans to include more facilities, the region lacks any sort of “network” of facilities. Regions typically have no authority as entities to build infrastructure and rely on the State to construct trails as part of the State Park System and through Recreational Trails Grants made to towns and other eligible entities. Involvement by CTDOT has increased significantly in the last decade as they have focused their effort on completion of the East Coast Greenway which passes through the SCCOG region in Windham. The remainder of this region has not been served by the CTDOT’s trail program.

4.1. Federal

Planning, design, and construction of bike and pedestrian facilities as genuine components of the nation's road network began with the Inter-modal Surface Transportation Efficiency Act of 1991 (ISTEA). ISTEA was a major change to transportation planning and federal funding policy that provided a diversified and pluralistic approach to highway funding with collaborative requirements and targeted allocation of funds for bike and pedestrian projects. Many of ISTEA's collaborative planning requirements and targeted funding provisions were carried forward in subsequent federal transportation funding, including the Transportation Equity Act for the 21st Century (TEA-21) in 1998; Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005; Moving Ahead for Progress in the 21st Century (MAP-21) in 2012; and currently in Fixing America's Surface Transportation (FAST) Act in 2015. The FAST Act is a five-year funding bill.

FAST Act

The FAST Act provides flexibility to utilize many funding sources for non-motorized transportation facilities. This act includes specific funding for transportation alternatives including non-motorized facilities under the State Transportation Block Grant Transportation Alternatives Program (TAP) set-aside. While the federal eligibility is broader, these funds are primarily utilized for bike and pedestrian facilities in Connecticut.

Safe Routes to School

The Safe Routes to School program was funded through SAFETEA-LU and subsequent funding authorizations but has recently been defunded. This program funded educational and encouragement activities as well as infrastructure

projects benefiting school children in kindergarten to eighth grade. Infrastructure is still fundable through other programs such as TAP, Surface Transportation Block Grant, Local Transportation Capital Improvement Program (LOTICIP) and the Community Connectivity program.

U.S. Bicycle Route System

The U.S. Bicycle Route System¹ (USBRs) is a developing, national network of officially recognized, numbered, and signed bike routes. Currently, more than 40 states are working to designate route corridors as official U.S. Bicycle Routes to be approved by the American Association of State Highway and Transportation Officials (AASHTO). When complete, the U.S. Bicycle Route System will incorporate more than 50,000 miles of routes. In the spring of 2016, Connecticut and Massachusetts designated

1 <https://www.adventurecycling.org/routes-and-maps/us-bicycle-route-system/>

Figure 4.1 The East Coast Greenway Includes a Section in Windham



Source: greenway.org

USBR 7 which follows the Western New England Greenway². The national bike route designation USBR 1 follows the East Coast Greenway (Figure 4.1), which includes a section in Windham; it is not currently designated in Connecticut. This plan recommends establishment of a USBR 1A route that will branch off the current ECG routing in New Haven, following the coastline through the SCCOG region, then likely continue east into Rhode Island.

FHWA memo: Bicycle and Pedestrian Facility Design Flexibility, August 20, 2013

This memorandum expressed the Federal Highway Administration's (FHWA) support for taking a flexible approach to bike and pedestrian facility design. AASHTO bike and pedestrian design guides are the primary national resources for planning, designing, and operating bike and pedestrian facilities. The National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide and the Institute of Transportation Engineers (ITE) Designing Urban Walkable Thoroughfares guide build upon the flexibilities provided in the AASHTO guides, which can help communities plan and design safe and convenient facilities for pedestrians and bicyclists. FHWA supports the use of these resources to further develop non-motorized transportation networks, particularly in urban areas.

4.2. State

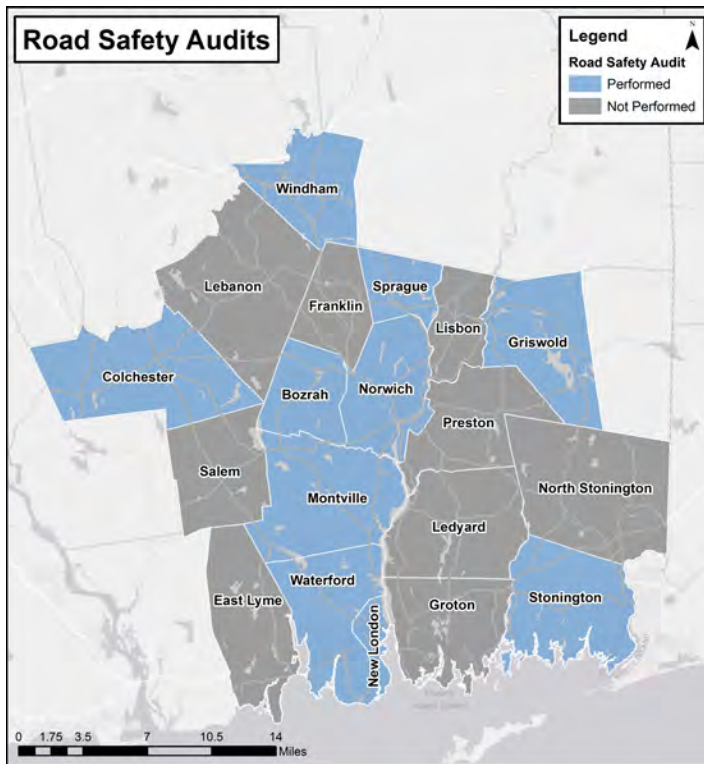
At the state level, there have been several plans to improve walking and biking. The latest effort is the CT Active Transportation Plan 2019 Update. In addition, the following statewide legislation has

been passed:

- An Act Improving Bicycle and Pedestrian Access (Public Act 09 - 154)
 - Established the Connecticut Bicycle and Pedestrian Advisory Board
 - Set minimum funding targets of 1% of all state transportation funds to be spent on bike and pedestrian projects.
 - Required bike, pedestrian, and transit needs to be considered in the planning, design, construction, and operation of all roads.
- Vulnerable User Law (Public Act 14 - 31)
 - Increased protection to bicyclists and pedestrians by defining them as vulnerable users. Fines are warranted for failure to comply with this law.
- Bicycle Safety Bill (Public Act 15 - 41)
 - Defined how cyclists should be riding. It specifically states: "[cyclists should ride] as far to the right side of the road as is safe, as judged by the cyclist."
 - Allowed motorists to legally cross double yellow lines to pass slower moving bicyclists when it is safe.
 - Allowed the implementation of two-way bike lanes, buffered bike lanes, and cycle tracks.
- Electric Bicycle Bill (Substitute House Bill No. 5485)
 - Assigned the rider of an electric bike the same rights and privileges and makes them subject to the same duties as the

² <http://wnegreenway.org/>

Figure 4.2 RSAs Performed in the SCCOG Region



Source: CTDOT RSA Program (June 2018)

rider of a bike. No person under the age of 16 shall ride a class 3³ electric bike.

- Established that no person shall ride a class 3 electric bike on a bike trail or path or multi-use trail or path.

The Connecticut Department of Transportation (CTDOT) has also completed the following plans, studies, and design guidance with sections relevant to improving walking and biking:

- CT Community Connectivity Program Roadway Safety Audits (RSA) (2016 – May 2019) (Figure 4.2)
 - Roadway safety audits completed in Stonington, New London, Waterford,

Montville, Bozrah, Norwich, Colchester, Sprague, Windham, and Griswold (see "Appendix B RSA Assessment Findings").

- CTDOT Connecticut On the Move: Strategic Long-Range Transportation Plan 2009 – 2035 (2009)
- CTDOT Highway Design Manual, 2003 (2013)
- CTDOT Strategic Highway Safety Plan (2010 – Updated in 2013)
- CTDOT 2015 Statewide Transportation Improvement Program – STIP (2015)

2017 Connecticut Active Transportation Plan



The Active Transportation Plan process defines the state's goals and policies, overall needs, and potential for bike and pedestrian improvements.

The plan identifies three goals to support the vision:

Goal 1 - Improve Pedestrian and Bicyclist Safety

Goal 2 - Enhance Mobility for Pedestrians and Bicyclists

Goal 3 - Utilize Resources to Achieve Meaningful Improvements

This new plan built upon the 2009 Connecticut Statewide Bicycle and Pedestrian Transportation Plan, which presented the state of bike and pedestrian planning in Connecticut, laid out a vision and goals for the future bike and pedestrian transportation system, and described how CTDOT could realize that vision.

3 An electric bike equipped with a motor that engages only when the rider operates the electric bike's foot pedals, and that ceases to engage when the electric bike reaches the speed of twenty-eight miles per hour

The Active Transportation Plan focused on priority road segments with high volumes of bike and pedestrian crashes. While no corridors within the region made the top 15 list for pedestrian crashes, three corridors did make the list for bike crashes; these corridors are located in Stonington, New London, and Norwich. Table 4.1 shows these corridors. Additionally, priority pedestrian and bike corridors have been identified and ranked.

The plan also identifies ten priority pedestrian and bike safety corridors throughout Connecticut. The only corridor identified in the region is a portion of RT 1 located in Stonington, ranking ninth on the list (see Table 4.2).

Let's Go CT

Let's GO CT represents a 30 - year vision for Connecticut's best-in-class transportation system. This bold vision has been drafted with extensive public outreach under a strategic planning process called Transform CT. Let's GO CT outlines the investments needed now to make the state's transportation system safer, more reliable, and more responsive to 21st century lifestyles, while capitalizing on the tremendous economic potential of transportation investments. Specific bike and pedestrian goals include:

- Livable and walkable communities through Complete Streets policies, and context-sensitive designs that respect community values

Table 4.1— State Roads Segments With High Crashes Involving Bicyclists (2012-2016)

Rank	Municipality	Route	Segment Begin	Segment End	On Bike Planning Network	Length (Mile)	Fatal / Severe Injury Crashes	Non-fatal/ non severe injury	Weighted Total
6	Stonington	1	0.2 Mi. North of Mellow Ct.	CT / RI State Line	Yes	1	0	12	12
9	New London	641	Jefferson Av.	Gov. Winthrop Blvd.	No	0.7	0	12	12
15	Norwich	82	N. High St.	Banes Ct.	No	0.9	1	5	8

Source: CTDOT Active Transportation Plan

Table 4.2— Top 10 Pedestrian and Bike Safety Corridors

Rank	Municipality	Route	Segment Begin	Segment End	Length (Feet)	Proposed Improvements	Total Cost
9	Stonington	1	May Flower Av.	CT/RI State Line	3,840	Sidewalk and ADA ramp upgrades Roadway resurfacing Road diet for bike lane Roundabout Selective full depth reconstruction	\$5,500,000

Source: CTDOT Active Transportation Plan

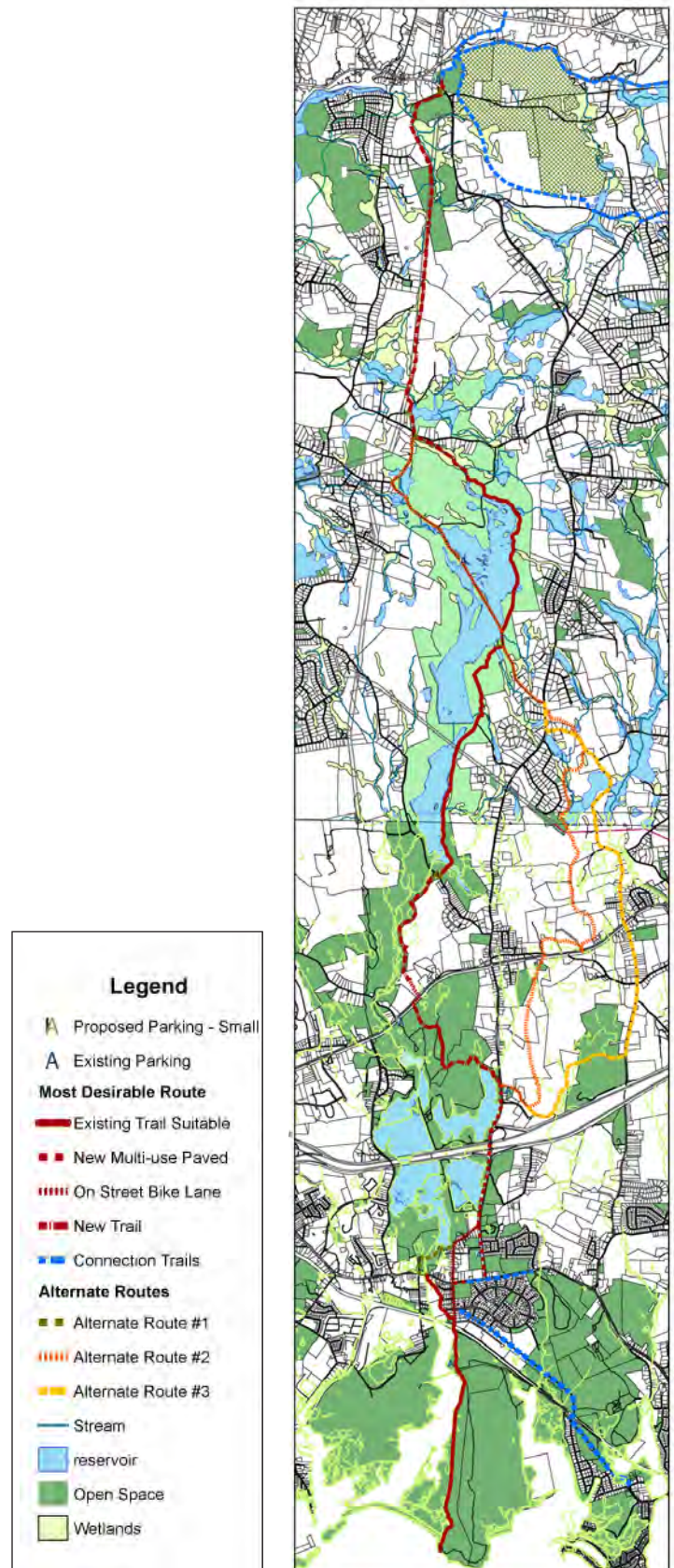
- Transit Oriented Design or Development (TOD)
- Complete gaps in the regional trail system
- Establish a program to support walkability and pedestrian urban centers

Over the 30-year plan it is anticipated that \$780 million will be spent on bike and pedestrian projects. Near-term goals are documented in the 5-Year Transportation Ramp-Up Plan. The \$2.8 billion plan builds upon the \$3.8 billion baseline plan for the Department of Transportation. Of the \$2.8 billion, eastern Connecticut, including all of the SCCOG region, will receive over \$374 million dollars' worth of investment. Of the \$2.8 billion, \$101 million will be spent on bike and pedestrian projects across the state using two funding sources: The Community Connectivity Program (also referred to as Urban Network Bike/Ped Connectivity) and the Expanded Trail/Alternative Mobility Program. The Expanded Trail/Alternative Mobility Program is committed to projects that support the completion of the East Coast Greenway. In southeastern Connecticut, funding from the Community Connectivity Program will likely make a greater impact than the Expanded Trail/Alternative Mobility Program. The Let's Go CT plan also includes investment in all other areas of transportation including highway, transit, freight and rail. These investments will have tangential impacts to the bike and pedestrian network.

4.3. Regional

The Tri-Town Trail Master Plan was prepared by the Bluff Point to Preston Trail Committee in 2009 (See Figure 4.3). This Plan focused on the development of the area's first regional, multi-use recreational trail, which would travel through Groton, Ledyard, and Preston. At approximately 17 miles, the trail would connect municipalities,

Figure 4.3 Tri-Town Trail Master Plan Map



Source: tritowntrail.com

economic centers, open spaces, and natural resources by providing a recreational resource as well as an alternate transportation corridor. The trail has not been implemented due to needed consensus on a preferred trail alignment and lack of funding. Liability concerns persist, despite 2011 legislation (Public Act No. 11-211) limiting liability for a municipality, political subdivision of the state, municipal corporation, special district or water or sewer district that permits recreation activities on their property without fee. Besides liability concerns, security concerns related to granting public access must be addressed.

4.4. Federal Funding

Fixing America's Surface Transportation (FAST) Act, adopted in 2015, is the current transportation funding law in effect. Key funding programs are:

- Surface Transportation Block Grant (STBG)
- Transportation Alternatives (TA) set aside
- The Recreational Trails Program (RTP)
- The Highway Safety Improvement Program (HISP)
- The Congestion Mitigation and Air Quality (CMAQ) Improvement Program
- The National Highway Performance Program (NHPP)
- Better Utilizing Investments to Leverage Development (BUILD), a discretionary grant program similar to its predecessor, Transportation Investment Generating Economic Recovery (TIGER)

The Federal Highway Administration has created a list of funding sources, categorized by project type. Applications include planning, construction,

safety enhancements, promotion, striping and stencils, street furniture and bike parking, data collection and monitoring, landscaping, wayfinding, and sidewalks. Some funding categories apply to recreational trails and to transit infrastructure as well.

4.5. State Funding

The Connecticut Department of Transportation (CTDOT), Connecticut Department of Energy & Environmental Protection (DEEP), and the Connecticut Office of Policy and Management (OPM) provide the most options for State funding for bike and pedestrian improvements. As of 2015, CTDOT developed and is implementing the Let's Go CT! funding program that outlines a first phase of \$101 million in a 5-year ramp up plan for bike and pedestrian investments. Overall, Let's Go CT! outlines a 30-year investment strategy for transportation investments. However, transportation funding beyond the five year investment plan has not been approved. DEEP administers Recreational Trail funding and provides funding to design, build, and maintain the trail systems. Recent Recreational Trails Grant awards in the SCCOG region appear in Table 4.3. OPM's Responsible Growth & Transit Oriented Development Program is a flexible grant program that allows for both planning and infrastructure improvements for bikes and pedestrians. The funding programs listed below help to plan and implement lower cost projects and ease the administrative burden of Federal funding sources:

- CTDOT:
 - Local Transportation Capital Improvement Program (LOTICIP)

- Community Connectivity Program
- Local Road Accident Reduction Program (LRARP)
- OPM:
 - Responsible Growth & Transit Oriented Development (RGTOd)
- DEEP:
 - The Recreational Trails Program

4.6. Local Funding

Municipalities often have jurisdictional control over most roadways in their communities and have the greatest potential to initiate bike and pedestrian facilities. Using existing maintenance programs to create or upgrade facilities is one of the easiest local funding sources to use as it is already established. Repaving and restriping roadways, repairing or constructing new sidewalks, and replacing and upgrading signage

and wayfinding are a few examples of what can be done through existing maintenance operations to improve pedestrian and bike transportation options.

Comprehensive and network based improvements require detailed analysis and a phased implementation. Many facilities will not be able to be built through routine maintenance operations and will require budgeting and bonding. Technical assistance may be hired or a municipality may utilize the Planning and Zoning Commission or a community organization. Fundraising for planning, design or construction of bike, pedestrian or place making facilities may be facilitated by a Conservation Commission (if enabled), Parks and Recreation Department (if enabled) or a neighborhood group.

4.7. Private/Non-Profit Funding

Other non-traditional funding can come from private or tribal agencies. The website Grants.gov

Table 4.3—CT DEEP Trails Grants in Southeast Connecticut 2015 - 2019

Applicant	Year	Project	Description	Award
<i>*data for 2017-2018 awards was not available</i>				
Colchester	2019	Cemetery Rd - Church St. Connection Trail	Construction of a link between the Goodwin Trail and the Air Line State Park Trail	\$47,776
CT Resource Conservation & Development	2019	Air Line State Park Trail 12 Town* Task Force	Master Plan to include resource inventory wayfinding, economic opportunities, bike to work assessment, increase safe routes to schools, maintenance plan.	\$188,522
New London	2019	Multi-use Trail	Completion of the waterfront shared-use path.	\$265,000
Colchester	2016	Design of Link Trail to Air Line State Park Trail (SPT)	Connection to the Goodwin trail in Babcock WMA then to the system of trails in Day Pond which in turn connects to the Air Line SPT	\$43,200
New London	2016	New London Multi-Use Path	structural engineering and survey to provide the project site plan, permits, land survey, and design work. One mile multi-use path connecting Waterfront	\$49,320

is a popular resource for finding grant makers which provide funding for development of bike and pedestrian infrastructure. Such resources can take the place of and/or supplement traditional funding from Federal and State resources.

4.8. Open Space

The terrain in this region can present some obstacles when trying to plan for optimal use of open space (Figure 4.4). Thirteen percent of land in the region is either open space or devoted to recreation. In its 2017 Regional Plan of Conservation and Development, SCCOG's vision for open space includes conservation or low-density development for 70% of the region's land (Figure 4.5). It recommends connecting bike and walking trails to open spaces and developing these facilities

Figure 4.4 Regional Topography

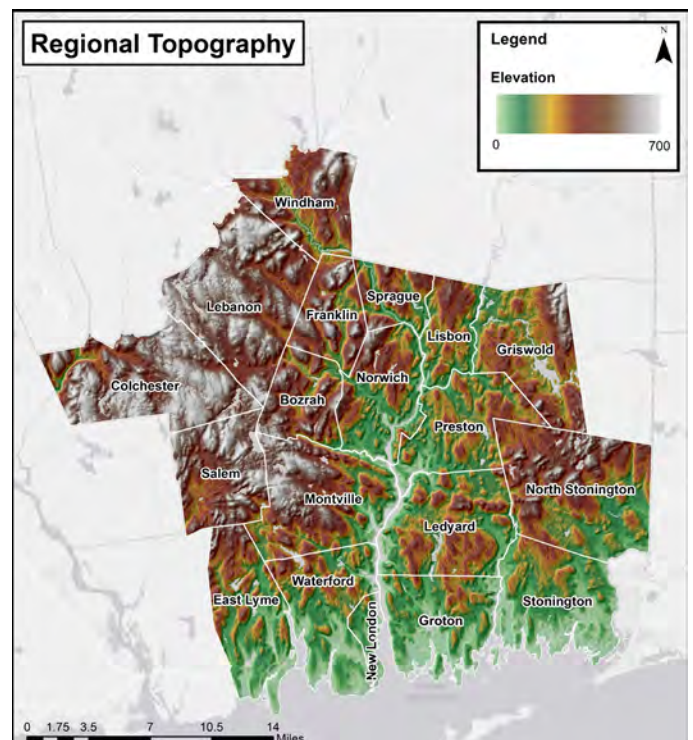
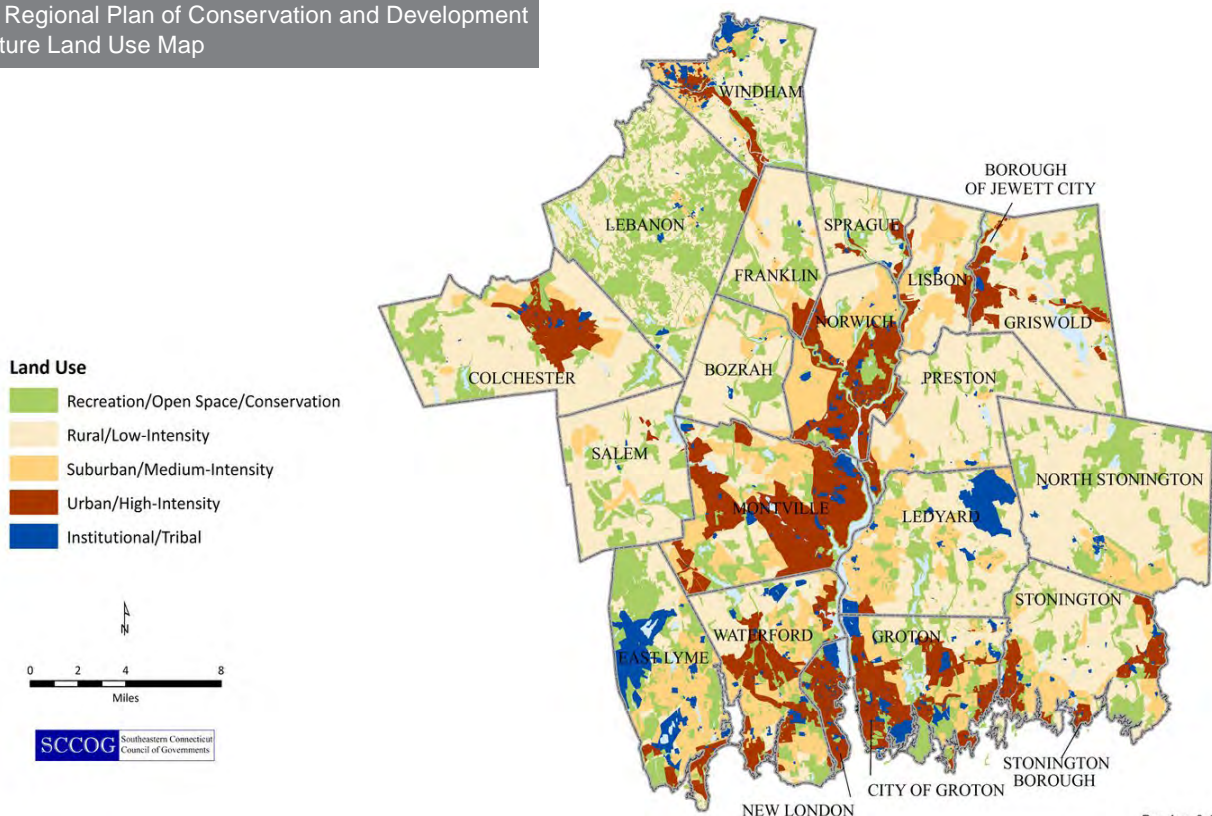


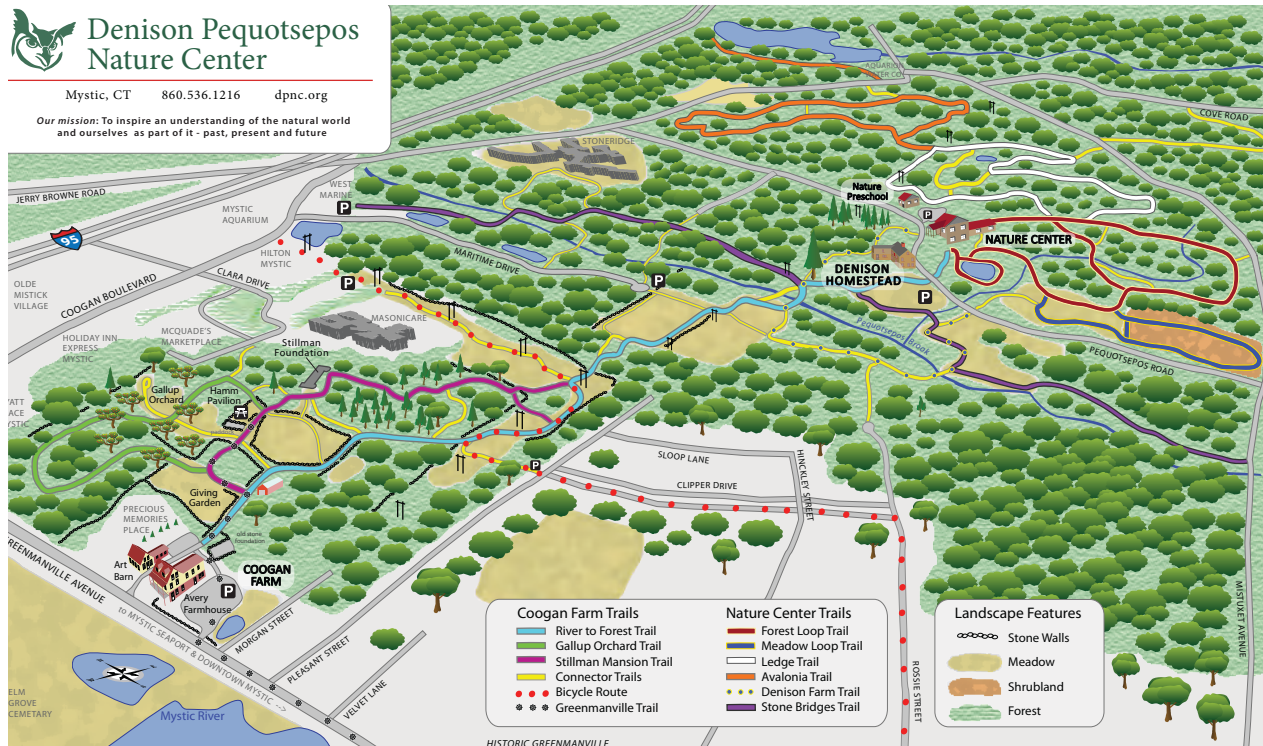
Figure 4.5 Regional Plan of Conservation and Development — 2017 Future Land Use Map



Source: SCCOG POCD (2017)

Rev. Aug. 8, 2017

Figure 4.6 DPNC, Avalonia Trust, Coogan Farm Trail Network Map



as recreational tourist assets.

There have been a few successful efforts in the region to link existing open space destinations with recreational trails. In Stonington, there is an expanding trail network connecting various regional attractions. The acquisition of Coogan Farm by the Trust for Public Land in 2012 presented the opportunity to link two of the region's open space assets that draw locals and tourists alike (Denison Pequotsepos Nature Center and the Avalonia Land Conservancy) to the Mystic River. As illustrated on Figure 4.6, the trail network that resulted from this acquisition connects amenities like the Nature Center, gardens, and the Aquarium. There is also potential to extend the trail to downtown Mystic, a major tourist destination.

Creating links between and through open space parcels maximizes the social and economic potential of open space. As mentioned in the

Increasing the visibility of open space assets is a major goal of this planning process.

Regional and Local Statistics section, more people in the state are engaging in active outdoor recreation in areas with multi-use trails; this was reflected in SCCOG's public survey results, with the zip codes in the region near the Airline Trail making up 32% of public survey respondents' residences, despite containing only 8% of the region's population. Nearly all of those respondents (93%) indicated that they biked or walked for recreation or exercise. The level of engagement in these communities underscores how linking open space and walking and biking facilities make outdoor recreation more attractive.

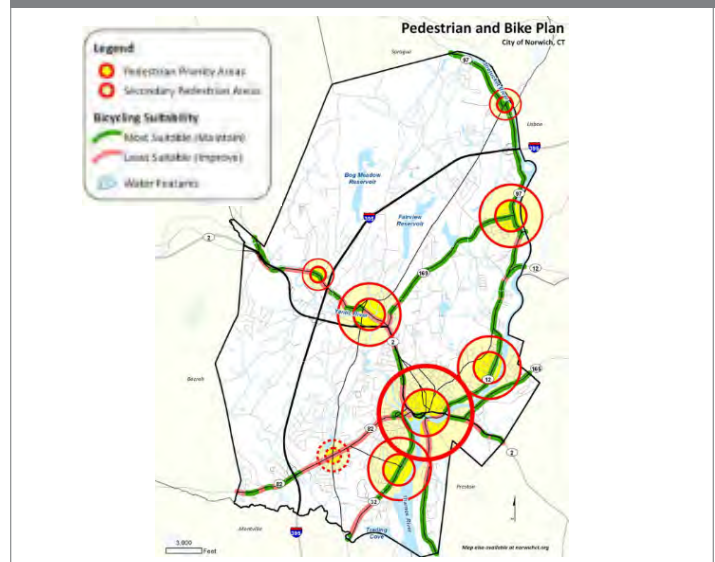
Ease of access to open space by modes other than vehicles should also be considered as the region continues to grow and expand its trail and hiking networks. Although many trails in Connecticut are difficult to access without a car, state residents are interested in using alternative modes of transportation to get to outdoor activities. Central Connecticut State University's Center for Public Policy and Social Research, in a 2017 statewide survey collecting data for the SCORP, found that while 88% of Connecticut residents drive to outdoor recreation facilities, alternative modes are also popular: 56% of residents walk, 25% bike and 16% use buses or trains to access outdoor recreation.

Another goal of this plan is to increase the visibility of open space assets and use them to drive economic activity, following the lead of other regions in the state. While there is an abundance of recreational open space in the region, it is not always easy to locate and trails are often not well-marked. While collecting feedback for its 2017 Comprehensive Economic Development Strategy, the Southeastern Connecticut Enterprise Region (seCTer) heard from stakeholders that lack of wayfinding resources on regional transportation facilities hinders both the resident and visitor experience.

4.9. Municipal

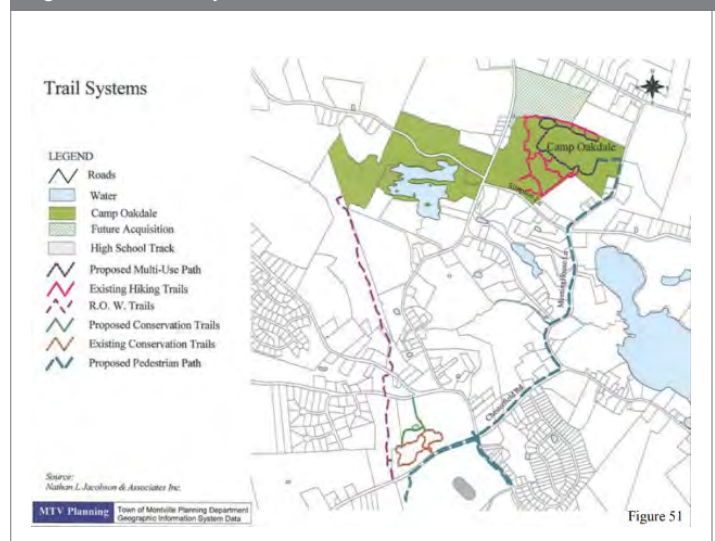
At the municipal level, plans, design standards, and policies can be put into place to improve walking and biking. "Appendix F Existing Related Plans" provides a summary of SCCOG member municipality efforts to date. In general, most but not all municipalities have broadly endorsed promoting walking and biking through their Plans of Conservation and Development (POCD). More populated municipalities, such as Groton, Stonington, and New London, have prepared more detailed recommendations and studies

Figure 4.7 Pedestrian and Bike Plan — Norwich



Source: Pedestrian and Bicycle Plan From City of Norwich Plan of Conservation and Development

Figure 4.8 Trail Systems — Montville

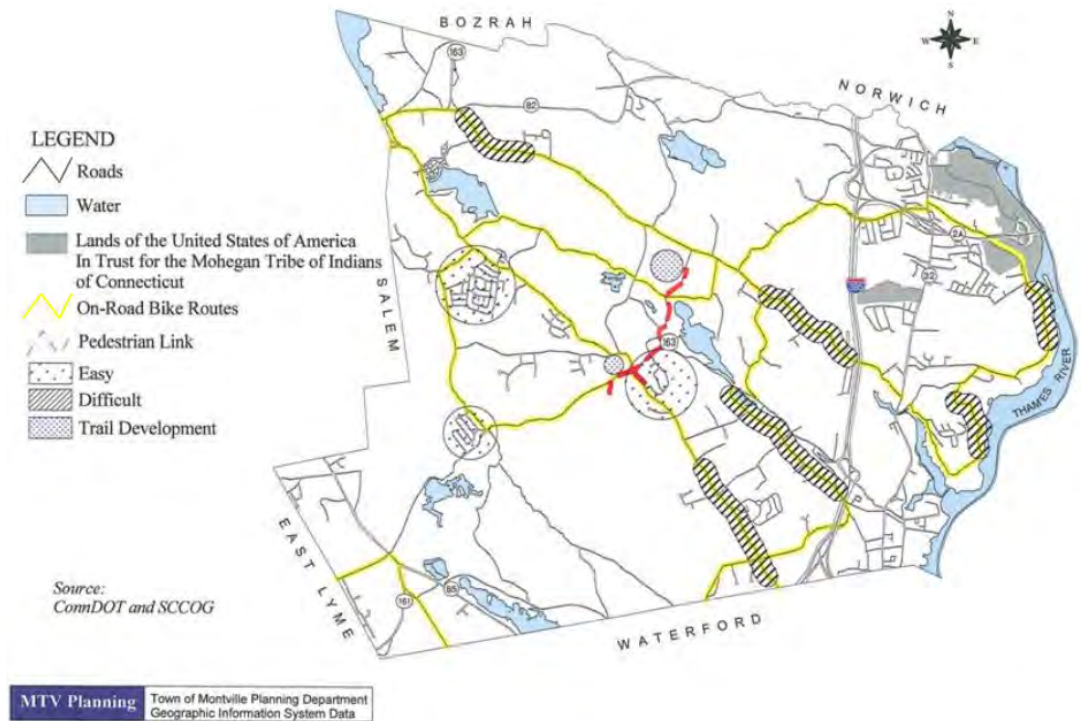


Source: Trail Systems From Town of Montville Plan of Conservation and Development

pertaining to pedestrians and bicyclists. Figure 4.7 to Figure 4.12 shows pedestrian and bike networks included in POCDs for Colchester, Groton, Montville, Norwich, and New London. The majority of recommendations from plans and studies have not been funded, designed, or implemented; however, they have been considered by the project team and will inform

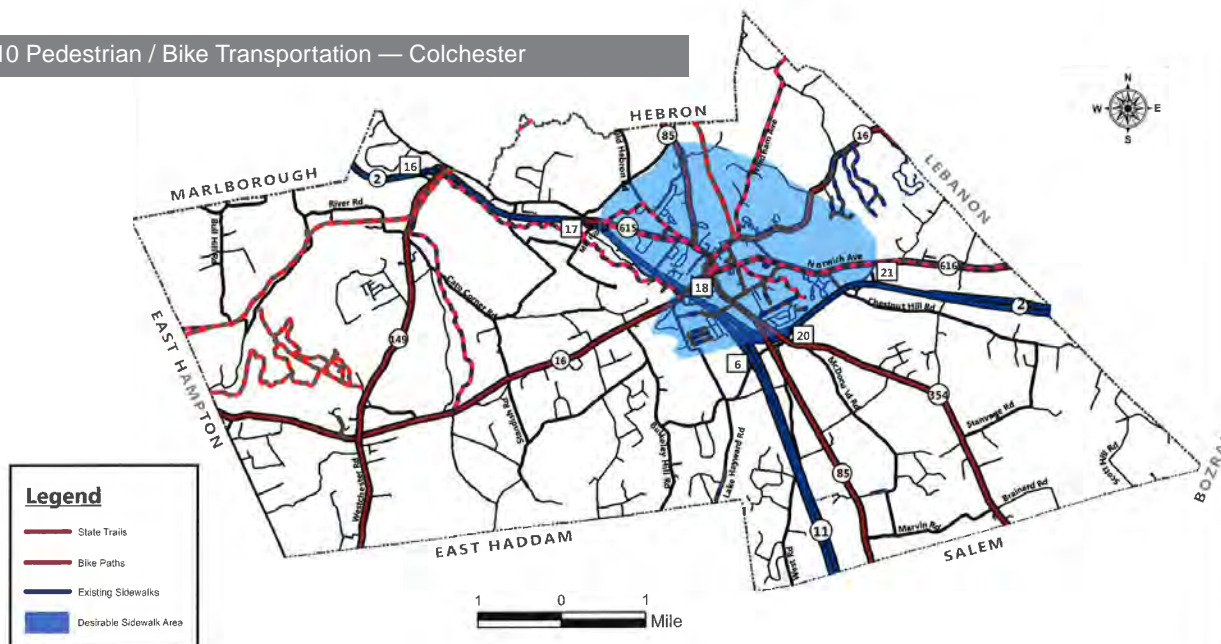
this plan's prioritized recommendations.

Figure 4.9 Recommended On-Road Bike Routes, Trails and Pedestrian Linkage — Montville



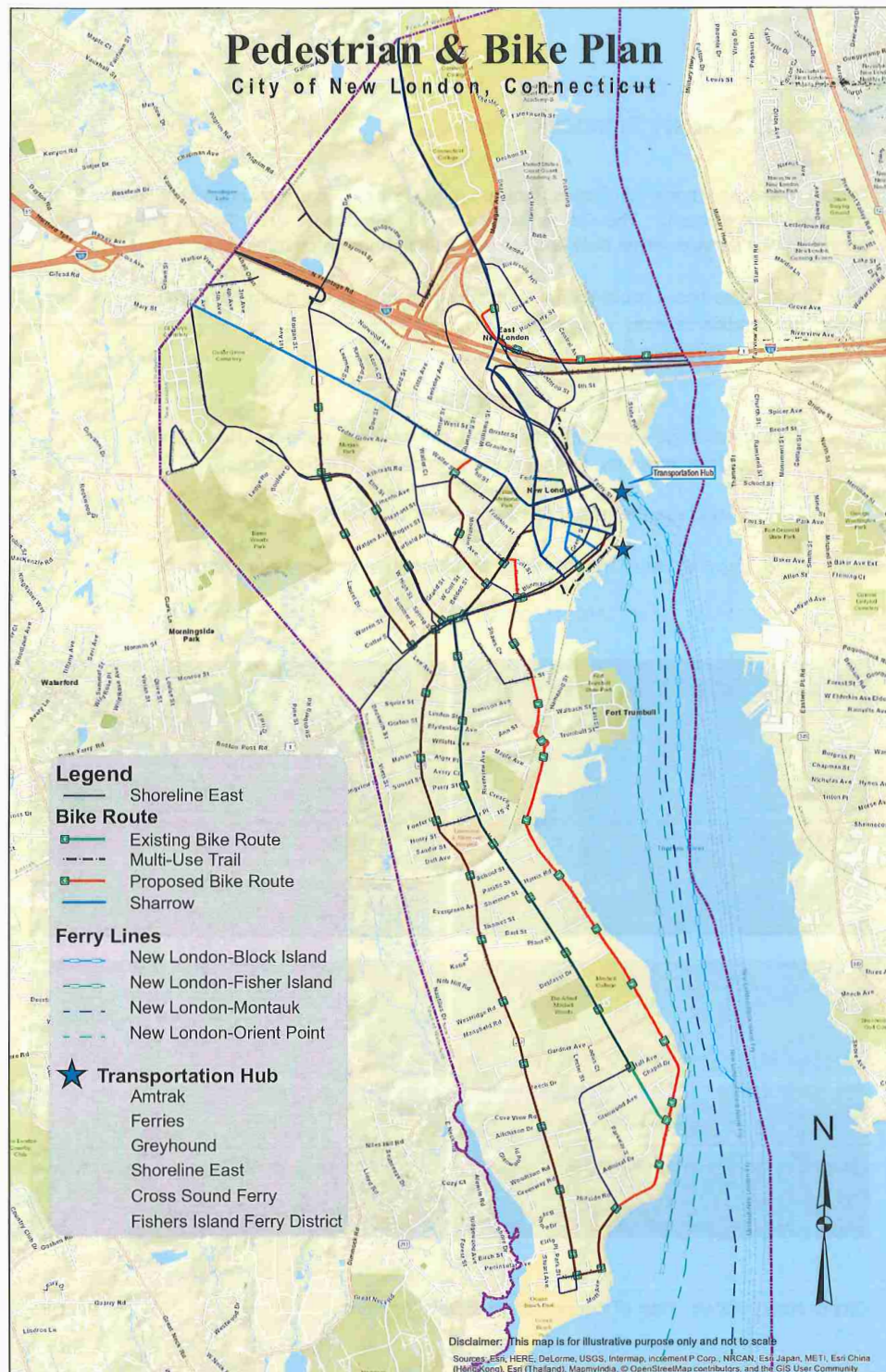
Source: Recommended On-Road Bike Routes, Trails, and Pedestrian Linkage From Town of Montville Plan of Conservation and Development

Figure 4.10 Pedestrian / Bike Transportation — Colchester



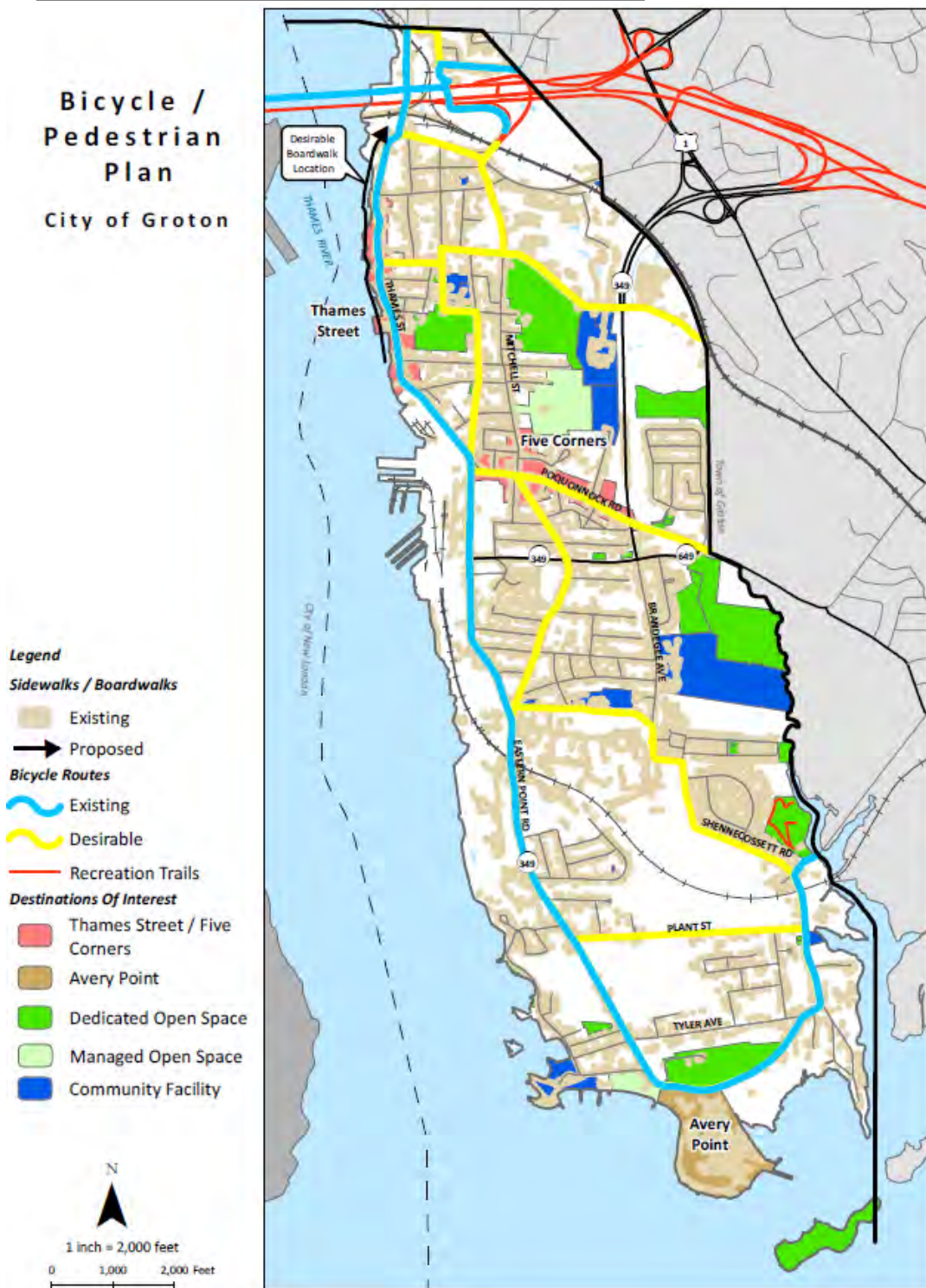
Source: Pedestrian and Bicycle Transportation Map
From Town of Colchester Plan of Conservation and Development

Figure 4.11 Pedestrian & Bike Plan for City of New London



Source: Pedestrian & Bike Plan for City of New London Plan of Conservation and Development Strategic Plan

Figure 4.12 Pedestrian & Bike Plan for City of Groton



Source: Pedestrian & Bike Plan for City of Groton Plan of Conservation And Development Plan

5. Existing Infrastructure

The Project Team compiled GIS data from existing regional sources and local municipalities. Figure 5.5 depicts the current bike facilities in the region. Strava data shows a cluster of users, primarily near the coast and rivers; relatively limited multi-use paths and bike lanes exist in southeastern Connecticut (Figure 3.13). Wayfinding signage is limited and is primarily the remnants of previous State signage projects in the late 20th century. The most recent signage that has been installed is located at the Gold Star Bridge which is maintained by the CTDOT.

5.1. Bike and Pedestrian Facilities

Bike facilities vary in complexity and their design characteristics vary based on the intended user. Comfort level, physical ability, and trip purpose are some of the more common variables that define each rider. Facilities need to be designed with a context-sensitive solution that gives the user a safe route to the intended destination. Common bike facility types that exist in the region are sharrows, standard bike lanes, multi-use trails, and mountain bike or hiking trails. Figure 5.1 to Figure 5.4 depict each of these facility types.

Figure 5.1 Sharrow (Bikes and Vehicles Share the Same Space)



Figure 5.2 Mountain Bike Trail

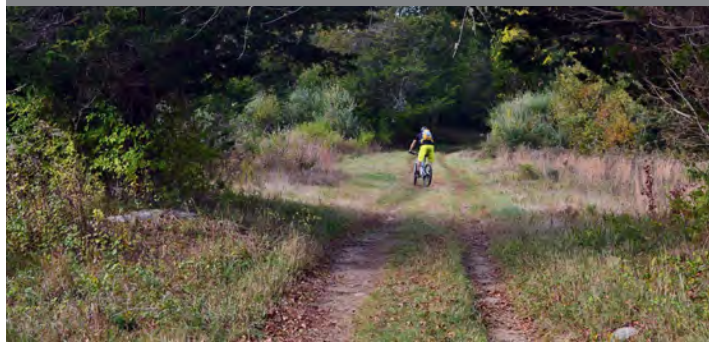


Figure 5.3 Standard Bike Lane



Figure 5.4 Multi-use Trail (Accessible by Many Modes, Including Those With Mobility Challenges)



Photo Credit: CTDEEP

Figure 5.5 SCCOG Existing Bike Facilities - Northwest

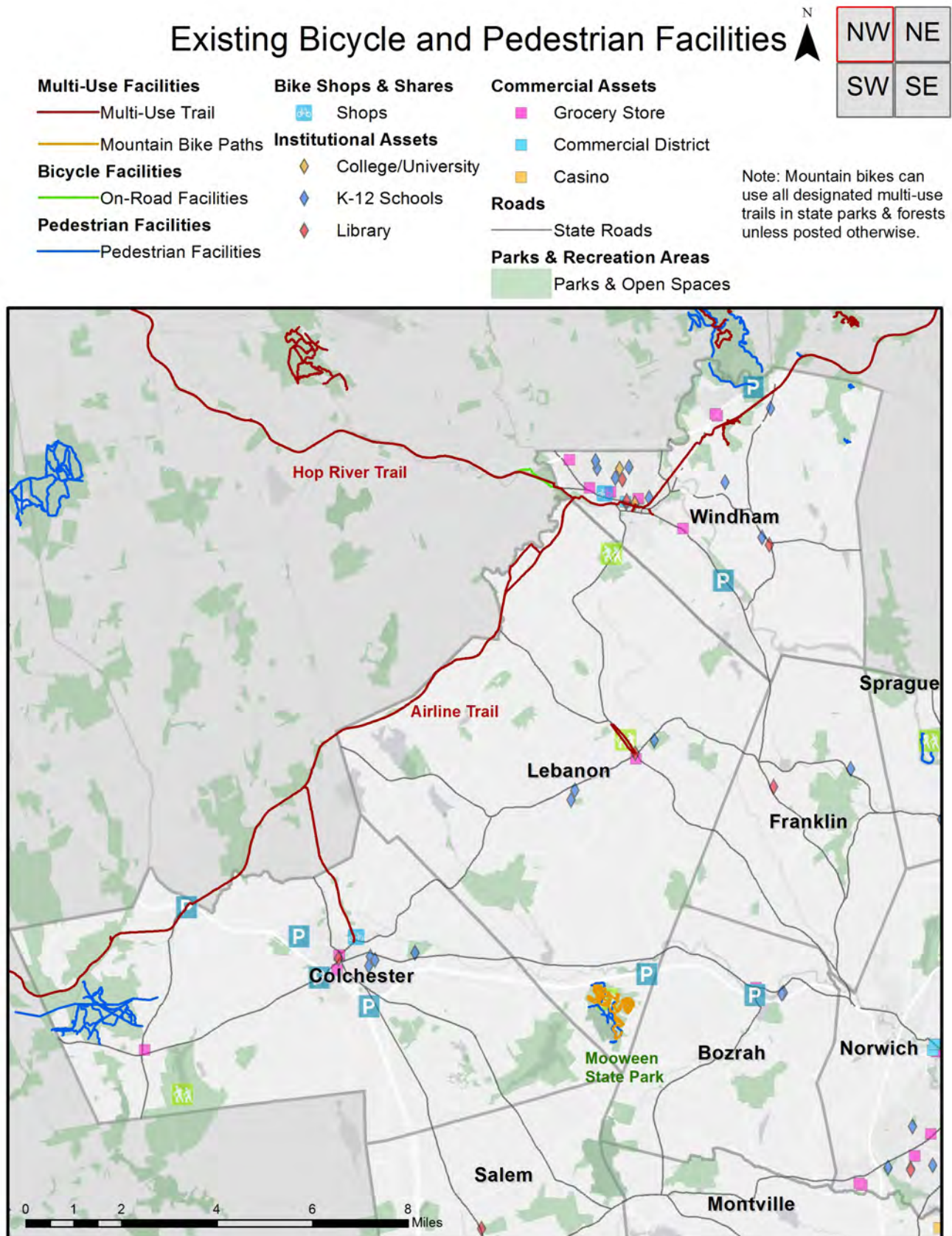


Figure 5.6 SCCOG Existing Bike Facilities - Northeast

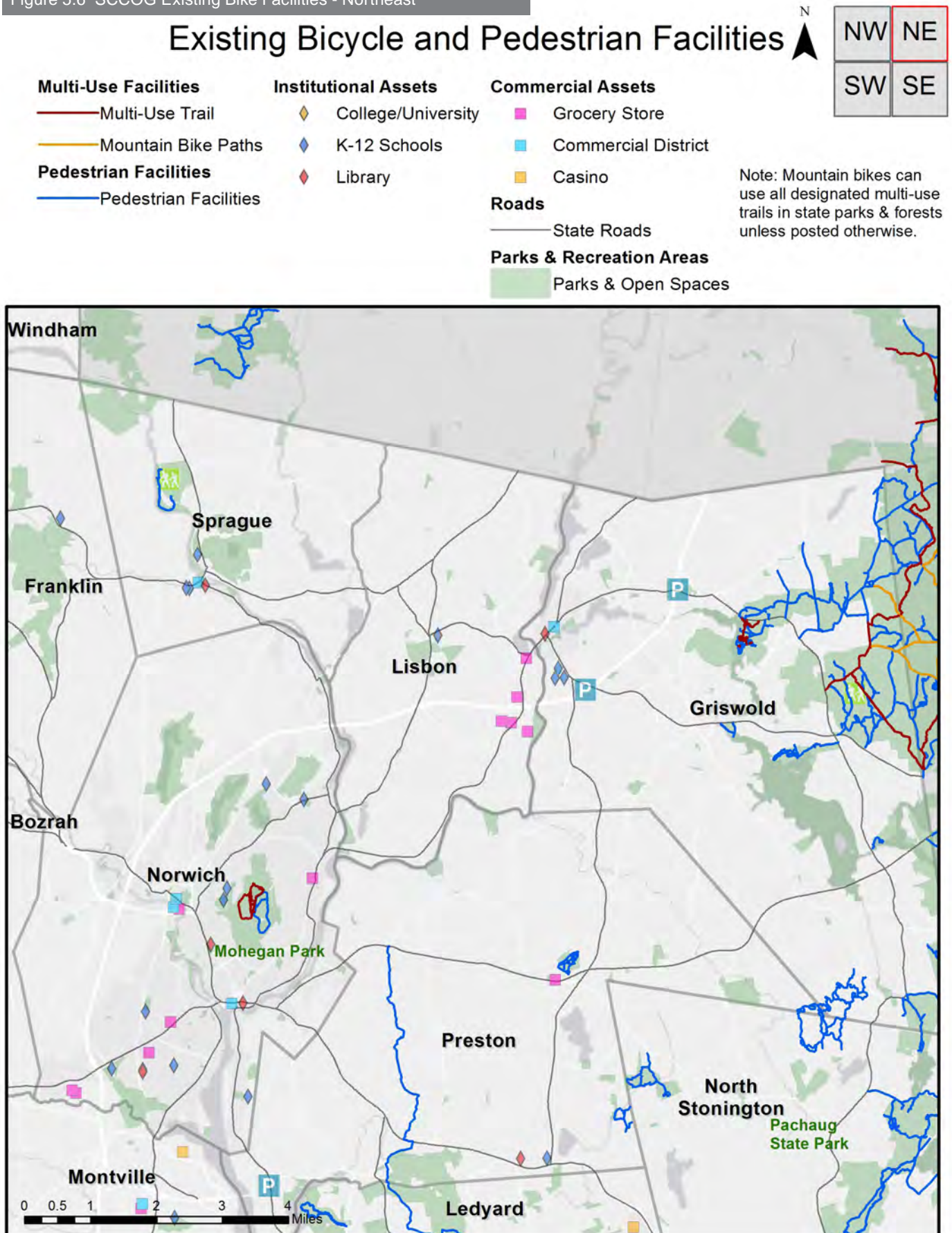


Figure 5.7 SCCOG Existing Bike Facilities - Southwest

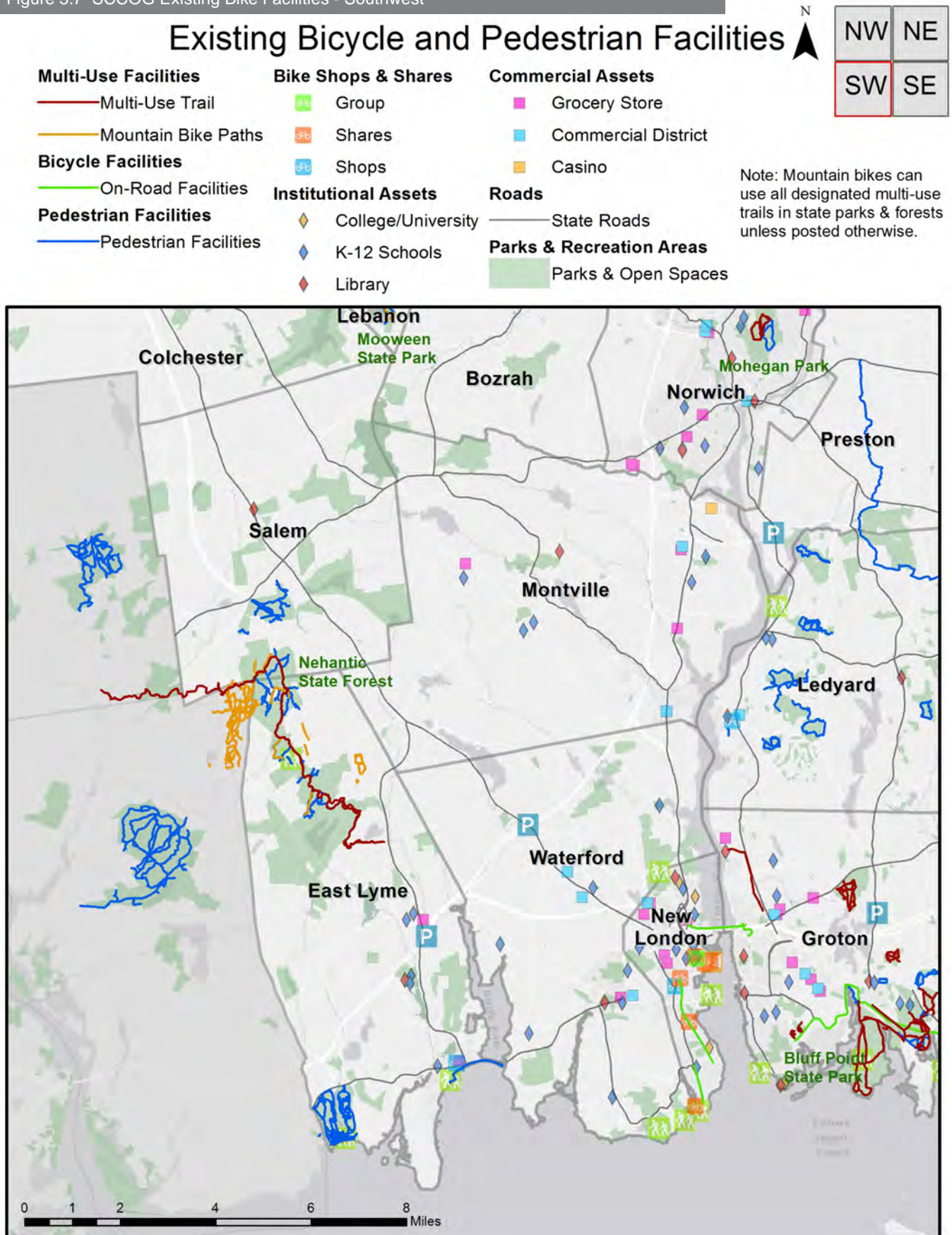
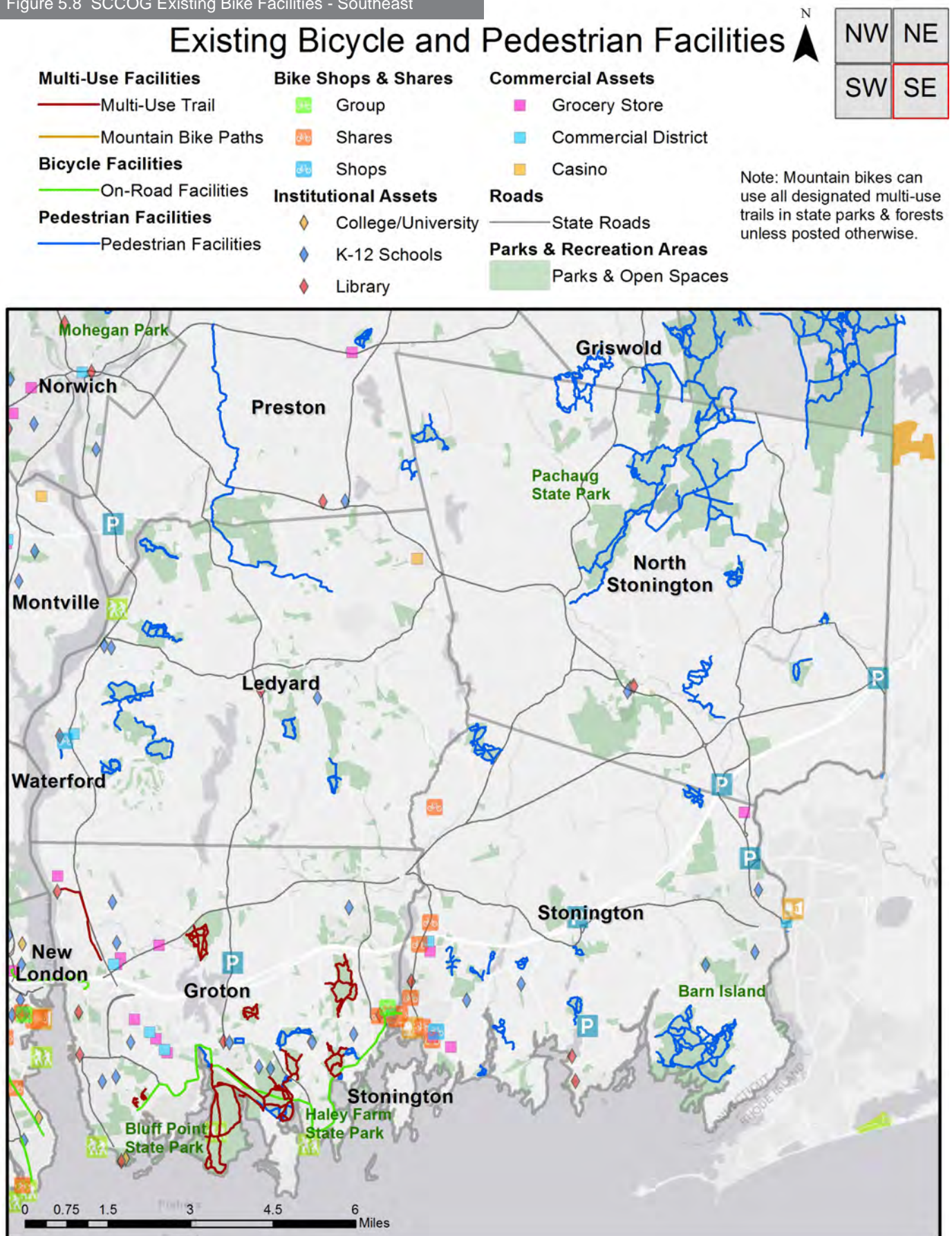


Figure 5.8 SCCOG Existing Bike Facilities - Southeast



Currently, the region's facilities primarily serve more experienced bicyclists who are comfortable bicycling on-road, with traffic. The region has a fair amount of existing shared-use paths and few on-road marked bike lanes. The region's facilities are not well marketed as a network or system of facilities; however, they are publicly accessible. The vast majority of the region's current facilities consist of paved shoulders that are not specifically marked for bike or pedestrian use. Although not specifically designated, they serve as a foundation for all facilities recommended in this plan.

Designated Bike Lanes and Marked Shared Streets:

- Montauk Avenue (New London) - bike lanes from Bank Street to Lower Boulevard.
- Ocean Avenue (New London) - bike lanes from CT RT 213 (Niles Hill Road) to Neptune Avenue.
- Riverside Drive (Windham) - bike lanes and sharrows markings from Bridge Street to Main Street.

Shared-Use Paths¹:

- Airline State Park Trail (Colchester, Lebanon, and Windham).
- Hop River Trail (Windham) - 20 mile long rail trail through the towns of Manchester, Vernon, Bolton, Coventry, Andover, and Colombia that connects with the Airline State Park Trail in Windham.
- Commons Hill Trail and Schalk Road Connector (Lebanon) - trail between CT RT

87 (Norwich Hartford Turnpike), Schalk Road, and CT RT 289 (Beaumont Highway).

- G&S Trail (Groton) - from Knoxville Court to Neptune Drive.
- I-95 Southbound Gold Star Bridge Pathway (New London / Groton City) - shared-use path across the Thames River with some associated bikeways at either end of the bridge with wayfinding on the street network.
- Heritage Riverfront Park Walkway (Norwich) - pedestrian only path from Monroe Street to Howard T. Brown Memorial Park across the Yantic River.
- East Lyme Boardwalk (East Lyme) - pedestrian only path from Cini Beach to Hole in The Wall Beach, with connections to McCook Park.
- Crystal Lake Road and RT 12 Pathway (Groton) - shared-use path from the Naval Submarine Base heading towards the Gold Star Bridge.

Figure 5.9 Heritage Riverfront Park Walkway



Photo Credit: Walknorwich.org

¹ Includes shared-use paths that are paved or surfaced with stone dust and have some degree of accessibility, typically the level of accessibility prescribed in Outdoor Recreation Trail Specifications or higher

5.2. Pedestrian Facilities Assessments

To assess the region's sidewalk network, 15 locations were chosen with municipal guidance. While a full regional network is not shown, the locations were chosen to represent the variety of development patterns in the region. These locations can be categorized into four (4) groups:

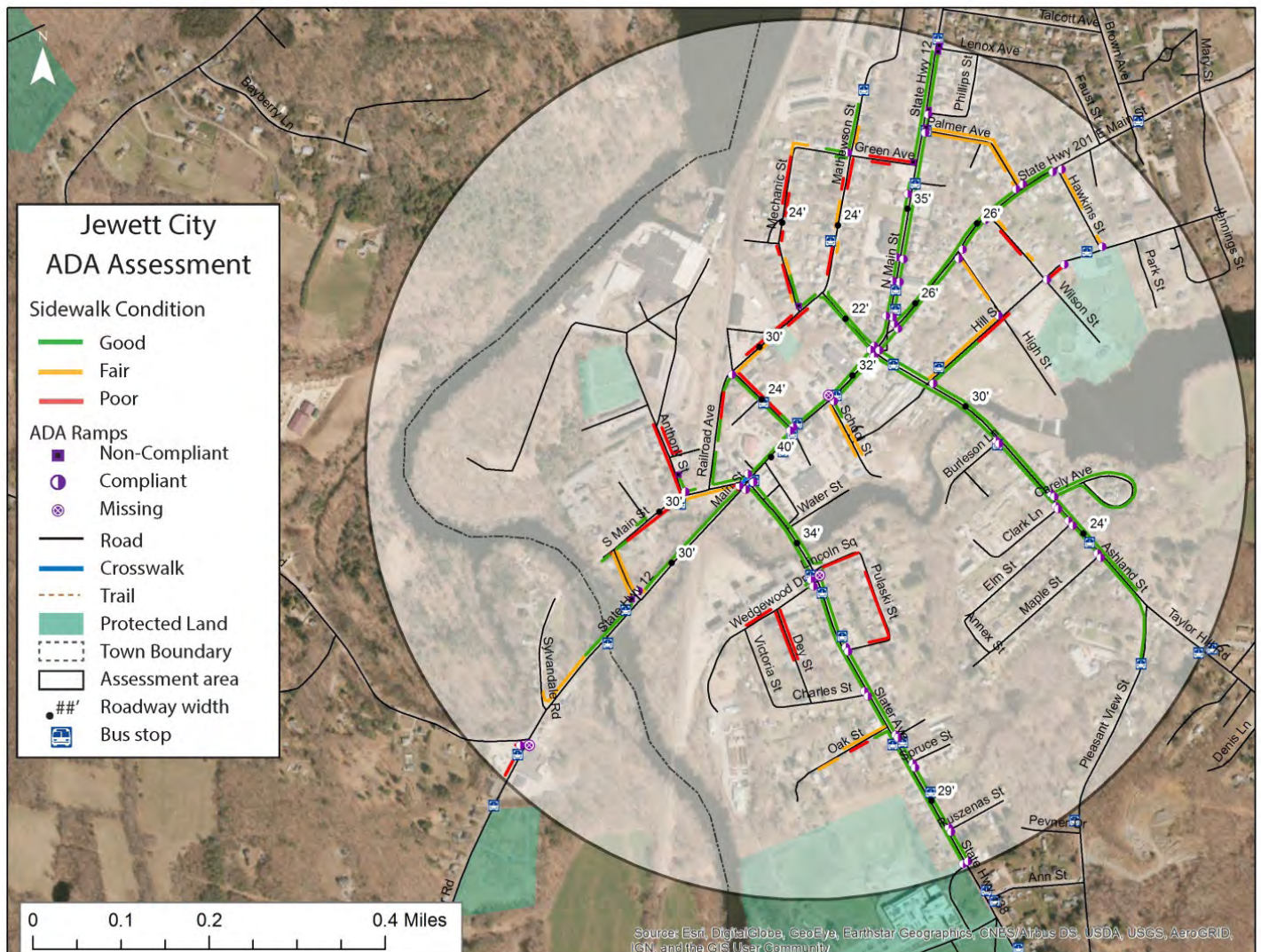
- Urban municipalities
- Village districts
- Developments or commercial properties

- Rural municipalities

The chosen locations were assessed using online platforms such as Google and Bing maps for pedestrian facilities and Americans with Disabilities Act (ADA) compliance. Each location was assessed for the following elements:

- Sidewalk location
- Sidewalk condition (good, fair, poor)
- Sidewalk ramps for ADA compliance
- Crosswalk locations
- Curb to curb measurement

Figure 5.10 Example of Pedestrian ADA Mapping



The Regional Bike and Pedestrian Plan provides ADA assessment for each of the 15 locations in "Appendix C ADA Assessment Findings". As seen in Figure 5.10, sidewalk and ramp condition as well as identification of intersection crossing status has been determined. This format provides a template for municipalities to continue ADA inventory of their towns. Generally, throughout the region, urban clusters provide the most complete pedestrian facilities. However, older sidewalks lack compliant ramps. Less urban areas often fail to provide a connected pedestrian path. Context-sensitive pedestrian accommodation includes a spectrum of facilities such as: sidewalks, multi-use paths, low volume local road shoulders, and level soft-shoulders. Providing convenient crossings, particularly of the major roadways, should be a focus of all municipalities.

In each of the ADA assessments, open space has been identified. These spaces often provide outdoor recreation as well as opportunities to create connections across areas not accessible

by a sidewalk. Landholders of open space in the region include: CT Department of Energy and Environmental Protection, Avalonia, The Nature Conservancy, educational institutions as well as municipalities.

5.3. Bike Parking

Every bike trip begins and ends with the need for a safe and secure place to park one's bike. A lack of adequate and secure parking discourages people from biking. Well-designed bike parking is required to promote and encourage more people to bike for transportation and recreation. Bike parking facilities should be provided at both trip origin and destination points and offer protection from theft, damage and inclement weather.

Types

Bike parking is divided into two types based on duration of use: short-term and long-term. These two types of parking serve different needs and require different levels of security.

Effective bike parking for short-term users depends on proximity to the destination and ease of use. Short-term parking is designed to meet the needs of people visiting businesses, institutions and others with similar needs—stops typically lasting up to two hours. Short-term users



Figure 5.11 Example of Short-Term Bike Parking (New London, CT)



Figure 5.12 Example of Long-Term Bike Parking Supplied by the Washington D.C. Area Metro



Photo Credit: bethesdamagazine.com

may be infrequent visitors to a location, so the parking installation needs to be readily visible and self-explanatory. Short-term racks may be located adjacent to the street, or may be placed near a business entrance as shown in Figure 5.11. Short-term parking may consist of individual racks holding one or two bikes. Bike lockers, as shown in Figure 5.12, offer long-term, secure storage and are becoming more widely available, particularly at transit hubs.

Users of long-term bike parking generally place high value on security and weather protection. Long-term parking is designed to meet the needs of employees, residents, public transit users, and others with similar needs. These users typically park either at home or at a routine destination such as a workplace or transit station. Protection from the elements and safety from theft and damage are imperative for long-term parking.

Long-term parking can take a variety of forms, including a room within a residential building or workplace, a secure enclosure within a parking garage, or a cluster of bike lockers at a transit hub. Some long-term parking is open to the public, such as a staffed secure enclosure at a transit hub, and some of it is on private property with access limited to employees, residents, or other defined user groups.

In more urban areas, intermodal transit points can support private bike parking which typically offer a host of services including: parking, repair, bike stands, bike components and bike share. Other amenities include showers or changing rooms in close proximity to the parking facility. Because cleanliness and security are paramount for both of these amenities, they are often offered to a select group of users, either employees or subscribers to private parking facilities.

Figure 5.13 Downtown New London Existing Bike Rack Locations (February 2017)



Secure bike parking is an important element of successful mode integration. Bike parking needs vary based on length of stay and location. Home bike parking is typically left to the individual homeowner; however, bike parking at multi-family housing may be codified in zoning regulations. Public, on-street, short-term parking should be easily and quickly accessible to public and commercial destinations. For commuters, all-day parking and employee parking requires more secure and enclosed facilities. Few employers within the region provide secure enclosed bike parking and related amenities such as showers and lockers. General Dynamics Electric Boat (New London) and Pfizer are examples of companies providing this type of amenity to their employees.

5.4. Existing Inventory

Both short-term and long-term bike facilities are generally lacking in SCCOG member municipalities. In the absence of bike racks, cyclists often lock their bikes to street signs, fences, and other structures out of necessity. There is no cohesive inventory of bike parking, but it is generally observed that there are a handful of short-term bike facilities scattered in the larger population centers of the region, such as in Mystic, Stonington Borough, Pawcatuck, New London, Groton, and Norwich. One of the few inventories of bike rack locations was completed as part of the *New London Downtown Transportation and Parking Study* (February 2017) and is shown in Figure 5.13.

5.5. Existing Plans, Regulations, and Design Guidelines

Most SCCOG member municipalities lack the plans, regulations, and design guidelines to ensure bike parking is considered in their planning, development, and transportation decisions. When major modifications have been made to the streetscape and the public right-of-way, or a new development is being reviewed, the need for bicyclists to have a safe and secure place to park has historically not been considered by most communities. The result is a general lack of bike parking as seen today. Table 5.1 shows current bike parking within the region. More information regarding bike parking by town can be found in "Appendix F Existing Related Plans". SCCOG is encouraging policy shifts for bike parking to be included for large multi-family residential complexes, commercial buildings and office spaces.

Table 5.1— Existing Bike Parking in the SCCOG Region

Town	Municipal buildings	Schools	Addressed in Zoning Code
Bozrah			
Colchester			
East Lyme			
Franklin			
Griswold			
Groton City			
Groton Town			
Lebanon			
Ledyard			
Lisbon			
Montville			
New London			
North Stonington			
Norwich			
Preston			
Salem			
Sprague			
Stonington			
Waterford			
Windham			

As of 2018, only the following southeastern Connecticut municipalities have plans, regulations, and design guidelines regarding bike parking:

- City of New London: The Choice for New London: Neighborhood Planning Strategy (2010) recommended streetscape improvements, such as planters, benches, and bike racks. *The Downtown New London Transportation and Parking Study* (2017)

recommended strategically locating secure bike parking throughout the downtown area and in proximity to key destinations.

- Town of Stonington: Zoning Regulations – Section 7.10.4.6² – Bicycle parking requirements
- Town of Windham: Zoning Regulations – Section 71.8.3 – Bicycle Access Design Standards³
- City of Norwich: Zoning – Chapter 5.1.3.1 Basic Standards – Bicycle Parking and Racks⁴
- City of Norwich: Village District Design Guidelines⁵

5.6. Identified Needs from map.social

Bike parking needs in SCCOG member municipalities were identified by members of the public on the map.social and at public outreach events. Generally, short-term bike parking needs were identified near public beaches, state parks, tourist destinations, grocery stores, schools, and village downtowns. Long-term bike parking needs were generally identified near transit centers, ferry terminals, employment centers, education facilities, and hotels.

While it is understood these needs were identified using map.social, some of these locations already have bike parking and the need for expansion or upgrading the current infrastructure

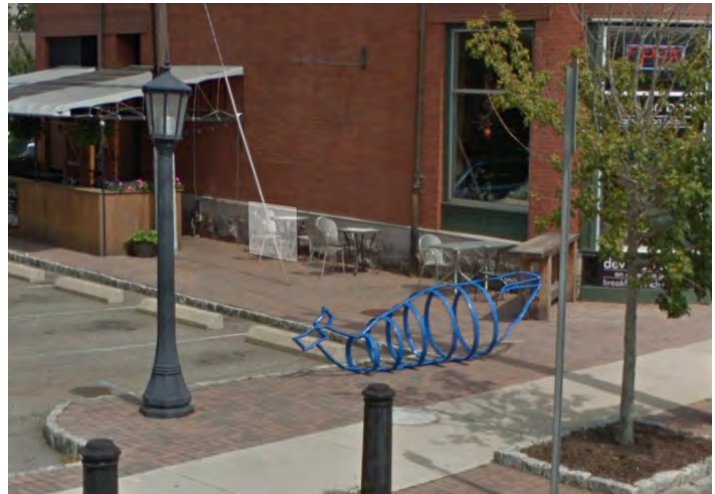
² http://www.stonington-ct.gov/sites/stoningtonct/files/file/file/pawcatuck_parking_study_final.pdf

³ http://www.windhamct.com/resources/z-regs_4-12-18_.pdf

⁴ <https://www.norwichct.org/DocumentCenter/View/3226/Zoning-Regulations-?bidId=>

⁵ <https://www.norwichct.org/DocumentCenter/View/4290/DESIGN-GUIDELINES-Effective-071618>

Figure 5.14 Bike Parking as Place-Making in New London



might be needed. Specifically, the following bike parking needs were identified for SCCOG member municipalities using map.social:

Town of East Lyme

- Short-term parking needed in Niantic Village (Frosty Treat, Dunkin Donuts, Gumdrops & Lollipops, Black Sheep Pub, and Bookstore), McCook Point Park, and Hole-in-the-Wall Beach

Town of Groton

- Short- and long-term parking needed at Aldi grocery store
- Long-term parking needed in Groton Estates residential community

City of New London

- Short-term and long-term parking needed at: Ocean Beach Park, Lawrence & Memorial Hospital, farmers market, Fort Trumbull State Park, water taxi, McGuirk Outpatient Clinic, all New London ferry terminals, New London Transportation Hub
- Short-term parking needed at Guthrie Beach, Mitchell College Beach, near Burr's Marina

and adjacent businesses, Ocean Avenue at Orchard Street, Greens Harbor Park and beach, Crocker's Boatyard and adjacent businesses, all grocery stores, Hempsted House, Old Town Mill, Riverside Park, throughout downtown New London, at public facilities, parks, tourist destinations, hotels, and retail corridors

- Long-term parking needed at Adult Education Center, all schools, throughout Connecticut College campus

Town of Waterford

- Short-term and long-term parking needed at Jordan Firehouse and adjacent businesses, Harkness Memorial State Park

The identification of bike parking needs will include all towns with input from regional, local, and consultant expertise. This analysis will be conducted during the recommendations phase of this plan.

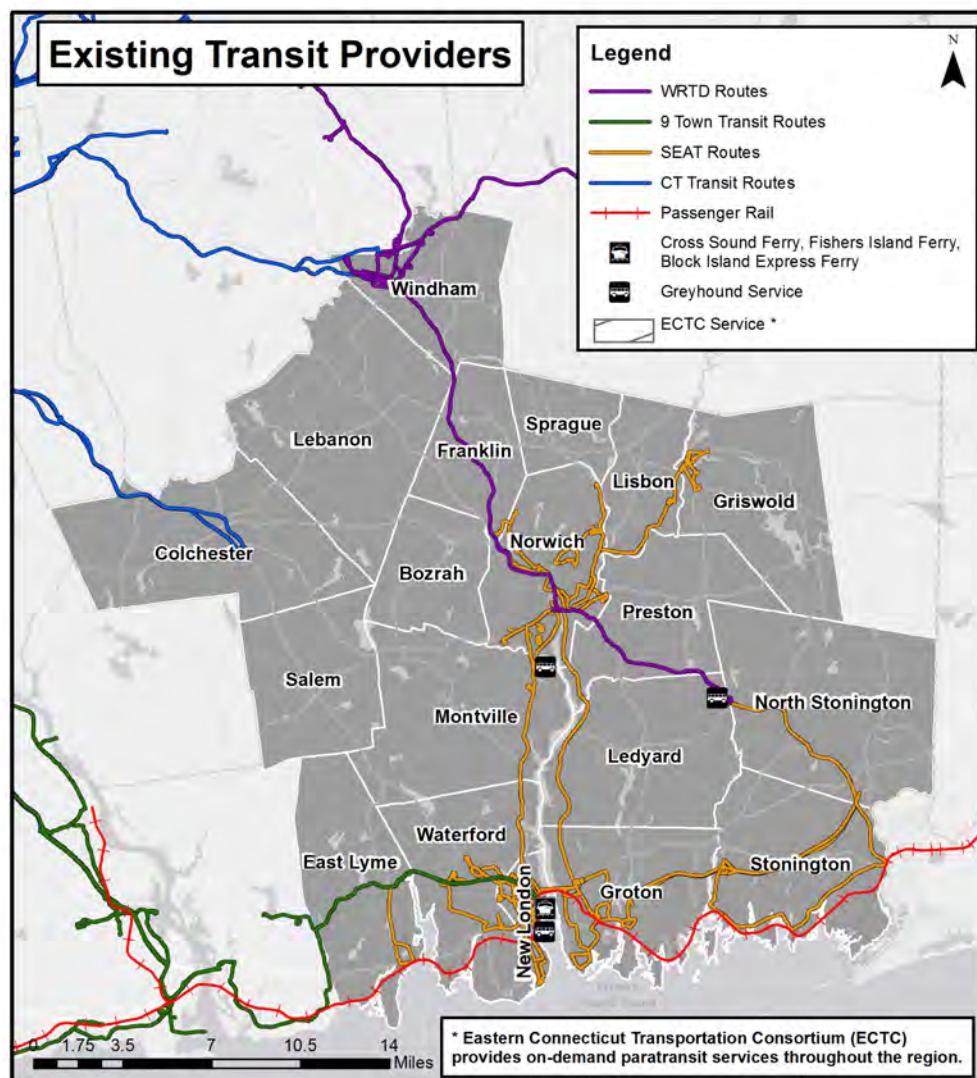
Specific bike parking requests, received through the map.social tool and consultant analysis are documented for each municipality in "Appendix E map.social Feedback".

6. Transit Integration

Transit service in the region connects with the existing bike and pedestrian network with varying degrees of efficiency and accessibility. Improving walking and biking conditions to transit stations is key to the success of a non-motorized network. An evaluation of current transit service conditions identified opportunities to improve the region's transit system for people accessing by bike and foot.

There are eleven different transit operators who provide services in southeastern Connecticut. These providers include bus, ferry, and rail transit services. An evaluation of the transit services follows and a map of existing major transit providers is shown in Figure 6.1.

Figure 6.1 SCCOG Major Transit Providers



Southeast Area Transit (SEAT)

SEAT provides public fixed-route bus service in the towns of East Lyme, Griswold, Groton, Lisbon, Montville, New London, Norwich, Stonington and Waterford. Trips generally run hourly on most routes from 6:00 am to 10:00 pm. Some routes operate only on weekdays or end early in the evening. Weekend service is limited compared to weekday service.

All vehicles in the SEAT fleet have front-mounted bike racks that can accommodate two bikes at a time. Only single seat, two-wheeled bikes fit in the racks. No tricycles, electric, tandem, or motorized bikes are permitted. Bikes are only permitted inside the bus if a bus is not equipped with a rack and there is sufficient space inside.

SEAT service is generally focused on the more urban areas of Norwich, New London, Groton, and surrounding communities. Service does not extend past the state border into Rhode Island, but one route (Route 10 – Stonington Local) does stop in Pawcatuck, a quarter-mile walk from the center of Westerly, Rhode Island. Transfers are accepted between SEAT, Estuary Transit District / 9 Town Transit (ETD), and Windham Region Transit District (WRTD) service providers, which allows more flexibility for users to get to their destinations.

Windham Region Transit District (WRTD)

WRTD provides fixed-route and dial-a-ride service in Windham, Lebanon, and towns to the north-west of SCCOG. They also operate a commuter bus that provides a connection to SEAT in Norwich and Willimantic-

Danielson fixed-route service that provides a connection to the Northeast CT Transit District in Brooklyn. Service operates on some routes from 6:00am until midnight (Figure 6.2). Route 674 Willimantic to Norwich operates six trips in both directions every day. The first trip to Norwich starts just before 6:00 am and the last trip back is just after midnight, operating roughly every two to three hours throughout the day.

WRTD vehicles that serve local routes (including Storrs-Willimantic and City Bus) are equipped with bike racks that can fit two bikes at a time. Commuter routes (including Willimantic-Norwich and Willimantic-Danielson), do not have bike racks. No motorized bikes are permitted.

Estuary Transit District / 9 Town Transit (ETD)

ETD provides fixed-route and dial-a-ride bus service in towns to the west of SCCOG with a connection to SEAT in New London and East Lyme. Service generally runs during the week from 7:00 am to 8:00 pm. The route that connects to New London (643 – Old Saybrook to New London) runs from 7:00 am to 6:00 pm and provides service every two hours. Passengers can transfer in Old Saybrook to other ETD buses

Figure 6.2 WRTD Schedule Example

Willimantic to Norwich – Daily						Norwich To Willimantic – Daily					
Windham Heights	Gateway Commons	Bridge St. Plaza	Norwich Business Park	Norwich Transportation Center	Foxwood Resort Casino (Arrive)	Foxwood Resort Casino	Norwich Transportation Center	Washington St. at Molhegan Rd.	Norwich Business Park	Bridge St. Plaza	Gateway Commons
1	2	3	4	5	6	6	5	7	4	3	2
5:47	6:02	6:07	By Request	6:38	6:55	7:00	7:17	7:21	By Request	–	–
7:52	8:07	8:12	By Request	8:43	9:00	9:05	9:22	9:26	By Request	Drop-off only	
11:04	11:19	11:24	By Request	11:55	12:12	12:17	12:34	12:38	By Request	Drop-off only	
2:20	2:35	2:40	By Request	3:11	3:28	3:33	4:00	4:04	By Request	Drop-off only	
4:55	5:10	5:15	By Request	5:46	6:03	6:08	6:25	6:34	By Request	Drop-off only	
10:42	10:57	11:02	By Request	11:33	11:50	12:10	12:27	12:31	By Request	Drop-off only	

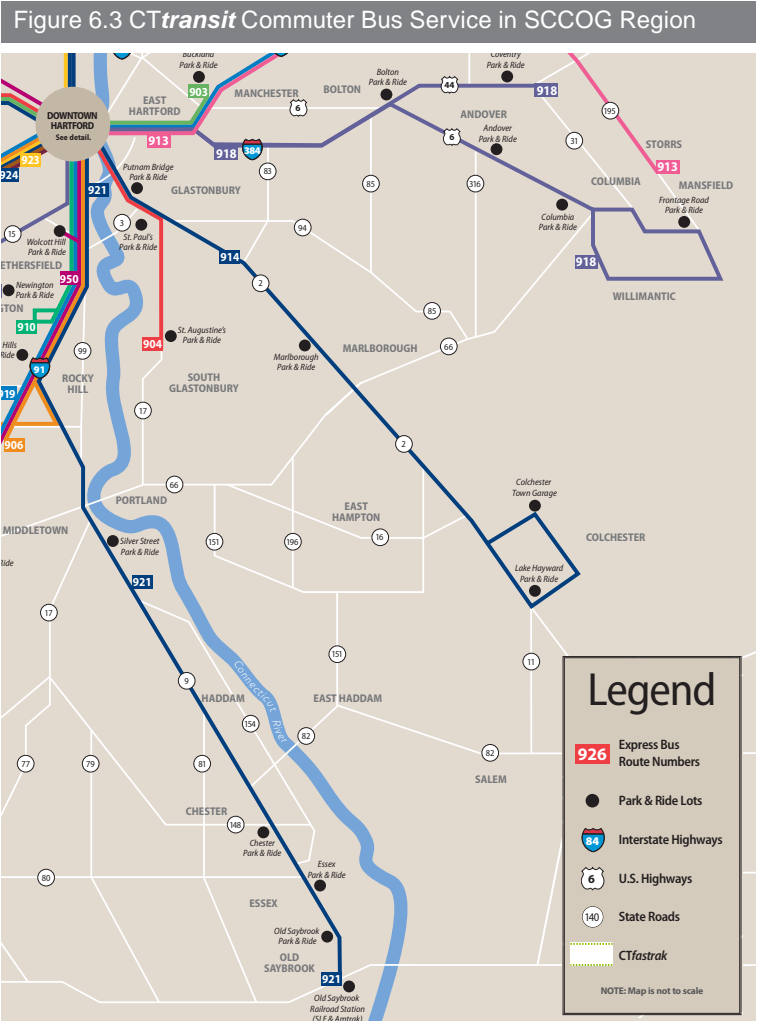
to make connections to Middletown and Madison with further transfers possible to Hartford and New Haven.

ETD vehicles are all equipped with bike racks for two bikes. Bikes are also permitted inside the vehicles as long as space allows. ETD's routes primarily serve the area between New London, Madison, and Middletown.

CTtransit

CTtransit provides commuter bus service between Hartford and the towns of Windham (Route 918), and Colchester (Route 914) in the SCCOG region and Old Saybrook (Route 921) outside the region. These routes operate weekdays, generally during peak commuting hours. They do not provide local circulation but are instead intended for people making the commute to Hartford on weekdays. Pricing is substantially higher than local routes. The CTtransit express routes have bike racks for two bikes.

The express routes do not serve Norwich or New London. CTtransit provides express service between Windham and Hartford during the morning peak hours and back to Windham in the afternoon and evening. The service provides four stops in the Windham/Willimantic area. Service to Colchester includes a stop at the town green and a Park & Ride, which offers some accessibility to pedestrians and bicyclists, but it is not an urban center like Willimantic. The Old Saybrook express service is reachable from southern SCCOG member municipalities via transfers on SEAT and ETD. As the service is intended for commutes into Hartford, no service is provided across state lines.



Shore Line East (SLE)

SLE provides rail service from New London to New Haven, with connections to Metro-North (New York City) and the New Haven-Hartford-Springfield Line (Springfield, MA). Two morning peak trains operate through New Haven on to West Haven, Bridgeport, and Stamford, without the need to transfer to Metro-North. One morning and two afternoon eastbound trains begin service in Stamford and operate through New Haven and continue eastbound. Service runs from 6:00 am until 10:20 pm every day, with most trains operating from Old Saybrook and less frequent service to and from New London. Roughly half of the SLE service operates on Amtrak trains and

are only available to monthly ticket holders. Many travelers, particularly from the region, would greatly benefit from additional train frequency as well as an expansion of SLE further east to Rhode Island. There are currently only eleven trains going into and out of New London on weekdays, compared to Old Saybrook's fifteen per day. Expansion of SLE towards Rhode Island would increase eastbound ridership and train frequency.

SLE allows bikes aboard trains operating between New Haven and New London. All bikes must be stored in a safe and secure manner to allow for emergency egress by passengers. The cyclist should remain in close proximity to the bike and must obey instructions of the train crew.

Connecting service on Metro-North in New Haven provides service to New York City. The bike policy on Metro-North allows for bikes on non-peak trains for individuals with a Bicycle Access Permit. On weekdays, the maximum number of bikes permitted on trains is four and eight on weekends. There are bike racks co-located in

handicap seating areas on new rail cars. Bringing a bike on Metro-North is at the discretion of the conductor and is secondary to the provision of ADA seating. This ambiguity in the bike policies adds uncertainty for travelers. A more consistent provision of bike racks located separately from ADA seating, access to peak trains, and raising the number of bikes allowed on trains would increase travelers' ability to navigate intermodal trips and utilize bikes for commutes.

Amtrak

Amtrak provides regional rail service along the coast, with stops in New London and Mystic, as well as nearby stops in Old Saybrook and Westerly. All Northeast Regional trains and some Acela Express trains provide direct service from New London to Boston, Providence, New York, Philadelphia, and Washington, D.C. seven days a week. There is train service every one to two hours.

Bicycles may be checked on overnight Northeast Regional trains, which have baggage cars, for an additional \$20. There is no carry-on option for full-size bikes. Foldable bikes that meet specific dimensions may be brought onboard in lieu of a carry-on bag. Bicycles may also be transported in boxes, checked as luggage on any train with a baggage car for a \$10 fee. The necessary boxes are sold for \$15 at selected stations.

Amtrak is a national service and provides connections to destinations across the country. It is not limited to state lines and the Northeast Regional provides direct service to cities in neighboring states.

Figure 6.4 Shoreline East and Amtrak Service Union Station in New London Connecting to Bus and Ferry Services



Figure 6.5 Cross Sound Ferry Docked in New London



Photo Credit: longislandferry.com

Eastern Connecticut Transportation Consortium (ECTC)

ECTC is a private non-profit that provides paratransit and senior service within three-quarters of a mile of SEAT fixed routes. Being that ECTC provides supplemental transportation for SEAT, its hours of operation and service area are the same. Bike racks are not typically available on ECTC vehicles.

Improving pedestrian connections from Pawtucket to downtown Westerly are particularly relevant to this service. ECTC does not cross state lines, so if passengers are traveling to downtown Westerly, their quarter-mile trip from the state line to the commercial center of Westerly is not covered by ECTC.

Cross Sound Ferry

Cross Sound Ferry provides a daily, year-round ferry connection between New London and Orient Point, Long Island. Service begins at 6:00 am and ends at 7:00 pm. Bikes are allowed onboard for a \$5 fee, each way.

Fishers Island Ferry

The Fishers Island Ferry provides a year-round ferry connection between New London and Fishers Island, New York. During the winter

season there are four trips each weekday with some additional trips on the weekends. On weekdays, the first trip departs New London at 7:00 am and the final trip departs at 6:15 pm, with a final return trip from Fishers Island at 7:00 pm. Bikes are allowed onboard. Passengers with bikes pay a \$55 roundtrip fare, the same rate as a passenger with a motorcycle.

Block Island Express Ferry

The Block Island Express Ferry provides a ferry connection from May through September between New London and Block Island, Rhode Island. There are three to five trips per day based on the season. The first trip departs New London at 8:30 am with the last trip at 6:30 pm and a final return trip from Block Island at 8:10 pm. Bikes are allowed onboard for \$10 each way.

Greyhound

Greyhound provides regional bus service from New London to Boston, New York, and Providence, and allows connections to travel nationwide. Service is also provided to Foxwoods and Mohegan Sun. Schedules vary and generally run throughout the week. Greyhound buses do not accommodate bikes except when treated as luggage and packed in a box or bag.

Greyhound's national service affords passengers the ability to connect to many major American cities, similar to air travel but on a much slower, more affordable scale. A trip from New London to New York costs about \$40 one-way and takes just under 4 hours with no transfer necessary. A trip to Washington, D.C. costs about \$50 - 70 one-way and takes under ten hours with one transfer. Passengers can select from other destinations nationwide on the company's website.

7. Safety

A goal of this plan is to improve livability, mobility, access, healthy opportunity and economic vitality for citizens and member towns through safer and more convenient walking and biking. Based on a review of existing data, bike and pedestrian crashes occur throughout the region but are clustered primarily in coastal communities and in denser municipalities. However, crashes are not limited to denser areas as conditions in some rural areas (such as lower vehicle volumes, lower visibility, lack of signalized intersections and wider travel lanes with no shoulder) mean they are also dangerous areas for biking and walking.

In the past ten years, there were 1,150 reported pedestrian and bicyclist crashes in southeastern Connecticut. Of the 1,150 crashes, 990 resulted in injury or fatality, with 404 bike and 555 pedestrian crashes resulting in injury, and two bike and 29 pedestrian fatalities. The remaining 160 crashes resulted in property damage only. The SCCOG region is similar to that of other regions in the state, as the lack of safe and connected networks of bike and pedestrian facilities continues to discourage non-motorized transportation and promote motor vehicle use. Crash maps for bikes (Figure 7.3), pedestrians (Figure 7.4), vehicles (Figure 7.5), roadway conditions (Figure 7.6), and lighting conditions (Figure 7.7) can be found on the following pages.

Bike and pedestrian crashes follow the same general pattern throughout the region. Crashes are clustered primarily along the coast line and in the denser municipalities of Norwich and Windham. While the clustering patterns are similar, it is worth noting that though vehicle volumes are lower in rural areas, there have been fatalities in the towns of Colchester, Preston, and North Stonington. These areas are likely to have less congestion, higher vehicle speeds, and narrower road shoulders; these are conditions that contribute to a higher potential for fatal crashes. While bike and pedestrian crashes are a small portion of overall crashes they are statistically more likely to result in injury or fatality. Bicyclist and pedestrians are more likely to be fair weather users which can be seen from the roadway conditions and lighting analysis conducted from the crash reports. Most crashes are happening with dry pavement conditions and in areas with adequate lighting. Bike and pedestrian crashes are a smaller proportion of crashes (a little over 1% of 2015 - 2017 crashes) compared with the ACS mode share average of 5% (2013 - 2017).

The existing system of safety data collection has inherent gaps when assessing the safety for bicyclists and pedestrians. Crashes reported must be with a vehicle and must be reported to the police at the location of the crash. Thus any bike-fixed object, bike-bike crashes, or milder injurious crashes are frequently not reported.

Safety projects within the region have primarily included rumble strips on state roads, which prevent wrong-way vehicle crashes when installed on the centerline and run-off-the-road accidents when installed on the fog line. Fog line rumble strips have an added benefit of defining space for cyclists if a sufficient shoulder exists. Other safety projects include the addition of pedestrian crossings, warning signs and pedestrian actuated signals.

7.1. Enforcement

For the Bicyclist

Bikes are considered vehicles under Connecticut state law. Cyclists must ride with traffic and must follow traffic laws. In darkness, lights must be used in the front and rear. Helmets must be worn by riders below the age of 16. Bicyclists may ride two abreast when conditions permit, but must revert to single file when sharing a lane with

vehicles. Bicyclists must yield to pedestrians in the crosswalk. State statute allows municipalities to define whether cyclists may ride on sidewalks. While towns have utilized this authority to permit or restrict cyclists, it is a best practice to encourage on-road bicycling because cyclists are less visible to turning vehicles when they are on the sidewalk.

For the Driver

Drivers must give a bicyclist three feet of clearance when passing. Drivers are legally allowed to cross the centerline or lane line to pass a cyclist, when safe to do so. Additionally, fines will be levied upon those who injure vulnerable users, inclusive of bikes, pedestrians, construction workers and equestrians. Vehicles must yield to pedestrians in the crosswalk.

For the Pedestrian

Pedestrians should cross at crosswalks, which are defined by the junction of two roads (marked by a crosswalk or unmarked) or a marked mid-block crossing. Pedestrians shall yield to vehicles at signalized intersections when opposing traffic has the right-of-way.

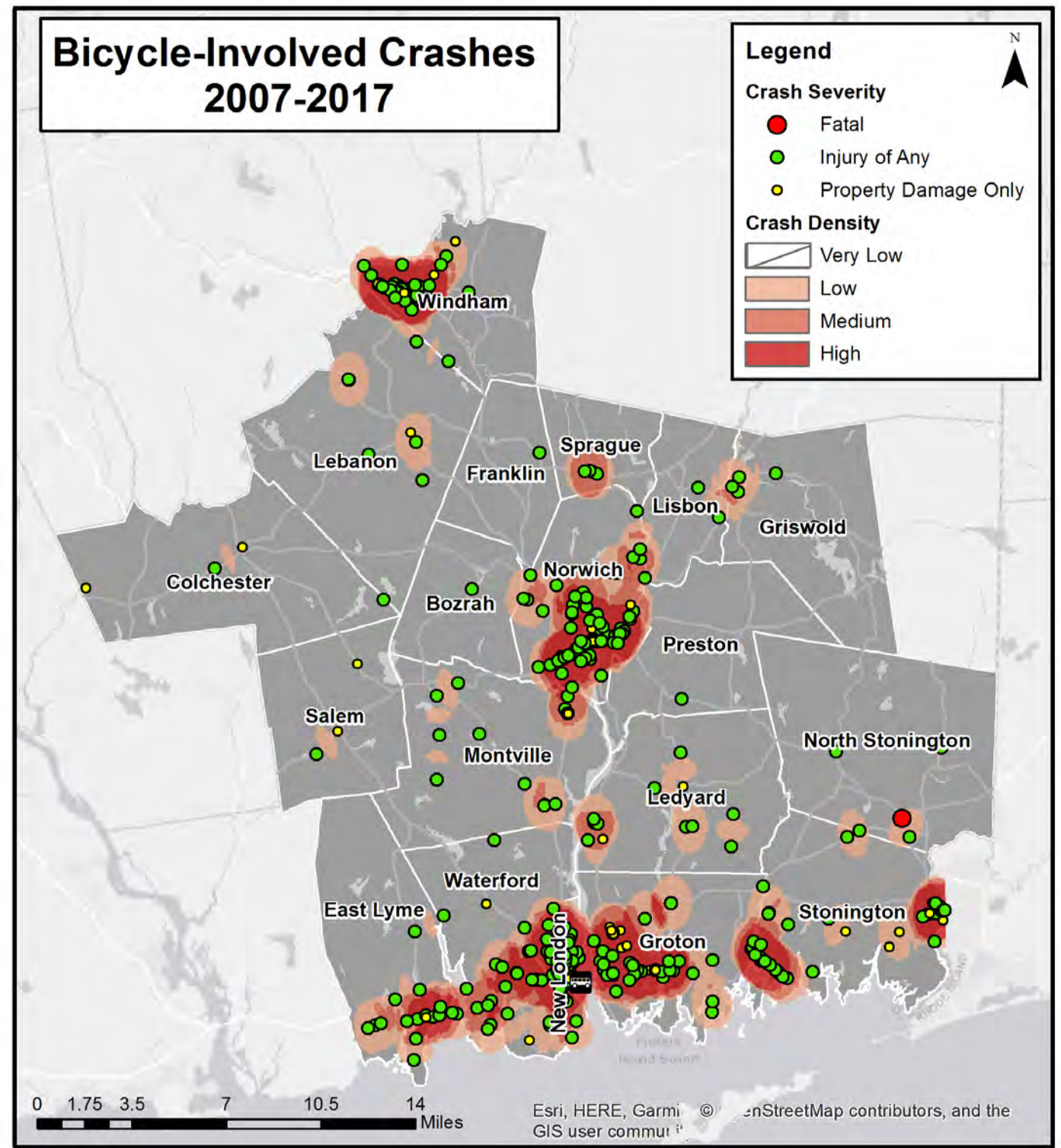
Figure 7.1 Bicyclists Riding Two Abreast



Figure 7.2 School Children On a Field Trip Using Crosswalks in Stonington

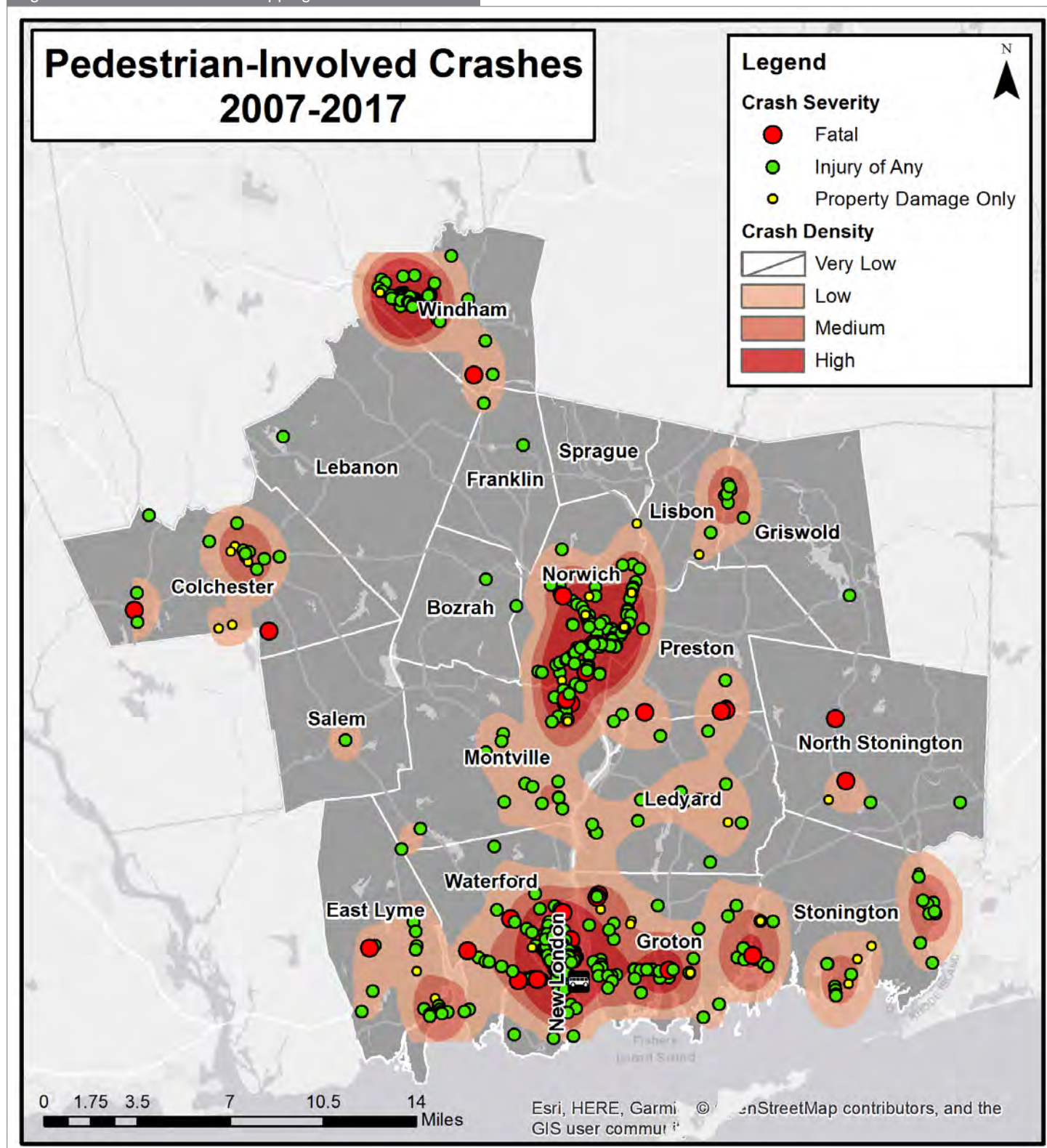


Figure 7.3 Bike Crash Mapping



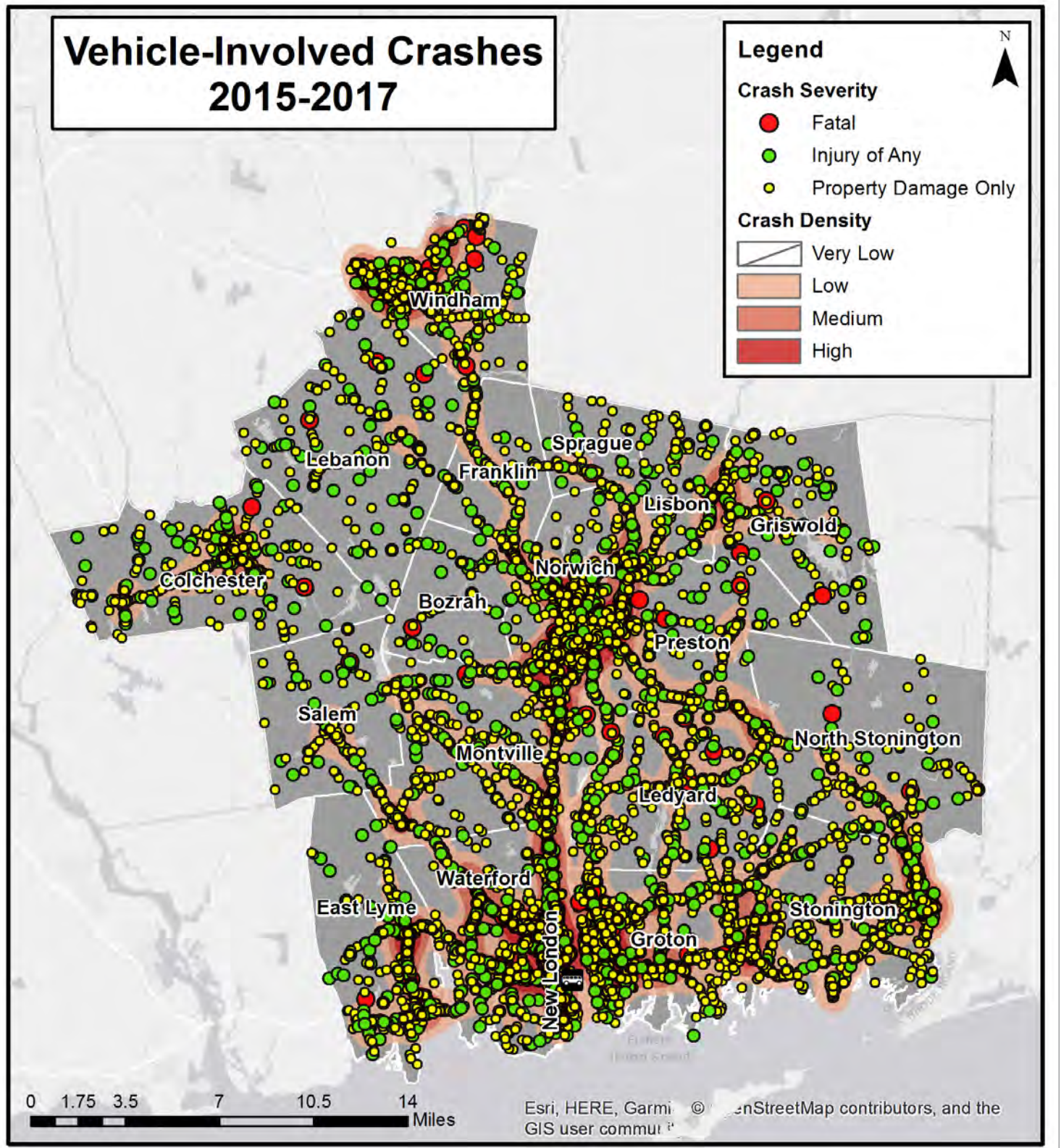
Source: CT Crash Data Repository

Figure 7.4 Pedestrian Crash Mapping



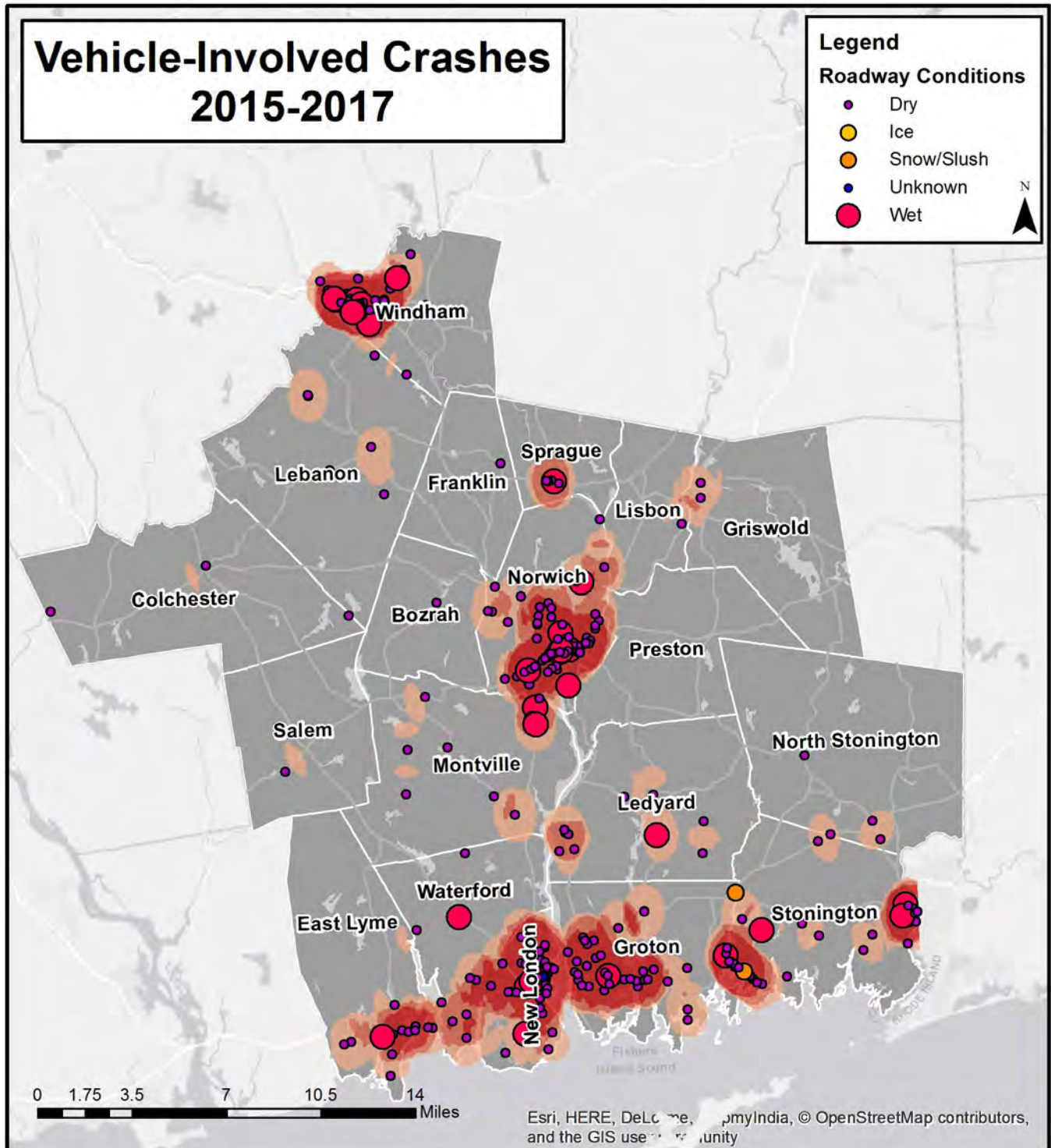
Source: CT Crash Data Repository

Figure 7.5 Vehicle Crash Mapping - All Crashes



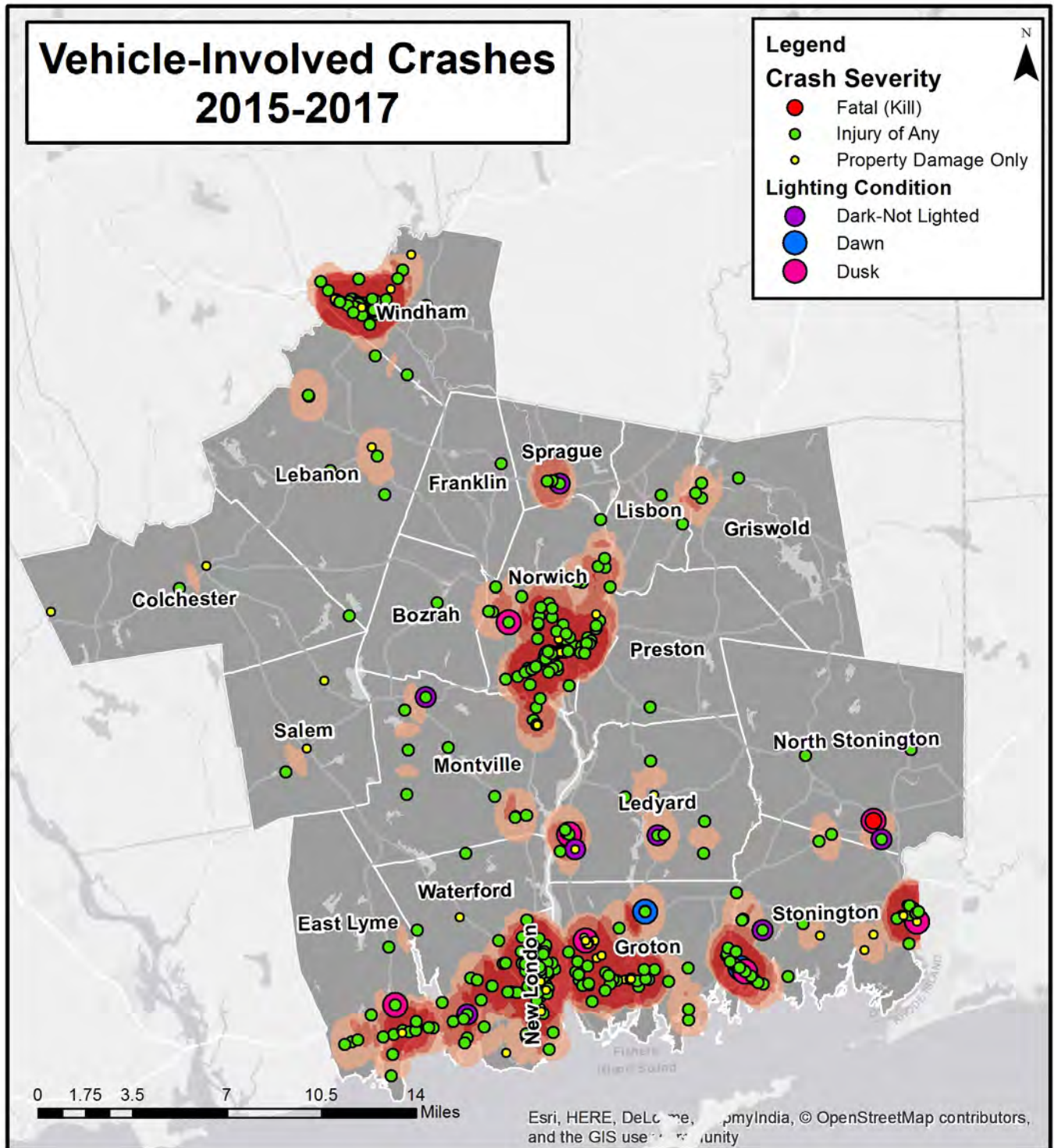
Source: CT Crash Data Repository

Figure 7.6 Vehicle Crash Mapping - Roadway Conditions



Source: CT Crash Data Repository

Figure 7.7 Vehicle Crash Mapping - Lighting Conditions



Source: CT Crash Data Repository

8. Programs

There are a variety of bike and walking programs available for southeastern Connecticut residents. They range in function providing educational, advocacy and social opportunities. Some programs are run by municipalities while others are offered through non-profits. These programs are crucial to the success of this plan as they encourage more of the region's population to engage in active transportation and advocate for better facilities.

8.1. Education

Programs that educate people about safe bicycling and walking, and educate motorists about safely sharing the road with bicyclists and walkers, exist at the state, regional, and municipal levels.

The Share the Road Campaign was launched after the passage of the 3 Feet Passing Law , effective October 1, 2008, requiring Connecticut motorists to allow at least three feet of separation when overtaking and passing cyclists. The campaign included a public education component with bus and radio public service announcements promoting the new law; road signage displaying the message: “Share the Road” installed in various appropriate locations; and promotional materials including posters, bumper stickers, and bike lights distributed by the CTDOT. This campaign is currently inactive.

In 2017, CTDOT launched statewide the **Watch for Me** program modeled after North Carolina’s successful program. From the Watch for Me website: <http://www.watchformect.org/>.

Watch for Me CT is a comprehensive program, run by the CTDOT, in partnership with Connecticut Children’s Injury Prevention Center, aimed at reducing the number of pedestrians and bicyclists injured in crashes with vehicles.



The Watch for Me CT program involves two key elements: 1) safety and educational messages directed toward drivers, pedestrians and bicyclists, and 2) enforcement efforts by area police to crack down on traffic safety violations. Local programs are typically led by municipal or Regional COGs' staff, with the involvement of others, including pedestrian and bike advocates, city planners, law enforcement agencies, engineers, public health professionals, elected officials, school administrators, and others.

Although municipal programs are limited in this region, some schools have a biking curriculum, with the support of the nationwide "Riding for Focus" program, and Ledyard Middle School employed a curriculum for safe biking and walking to encourage and educate their youth. All communities in Connecticut may, in fact, take advantage of Bike Walk CT's 4th grade bicycle education curriculum. See Recommendation 4 in the "Regional and Community Recommendations" Section.

8.2. Encouragement

Programs that promote bicycling and walking in southeastern Connecticut are primarily organized by municipal parks and recreation departments. Typically, parks and recreation provide classes, camps and events with various fitness-related themes. School systems support their work by including active transportation safety and healthy lifestyles into their curricula. Schools are also used as locations for many parks and recreation activities and backpack mailers are effective program marketing for parks and recreation. Public works departments generally maintain the public parks, sidewalks and roads. Towns may also install wayfinding and warning signage.

The Mayor's Fitness Initiative is a national program that promotes fitness and a healthy lifestyle at the town level. New London is participating in the program. This is a multi-departmental effort that harnesses the capacity of a town to improve health outcomes. The program offers classes and activities such as youth basketball leagues, dance classes, fitness classes, swimming classes, karate, and a youth marathon program.

The Connecticut Cycling Advancement Program promotes youth cycling events for middle and high school students. The CCAP's mission is to ensure that Connecticut's youth and their families have access and exposure to an organized state-wide youth cycling league. Ledyard Middle School is the only school in the region participating in the program. It has a successful CCAP mountain bike program and recently received a Specialized Bikes 'Riding for Focus School Program' grant. Ledyard High School has an active cycling club.



Girls on the Run is a nonprofit organization dedicated to creating a world where every girl knows and activates her limitless potential and is free to boldly pursue her dreams. Over the course of the ten-week program, girls in 3rd-8th grade develop essential skills to help them navigate their worlds and establish a lifetime appreciation for health and fitness. The program culminates with girls positively impacting their communities through a service project and being physically and emotionally prepared to complete

Figure 8.1 Sign Prohibiting E-Bikes in Toronto (2011)



Photo Credit: thestar.com

a celebratory 5K event. Girls on the Run of Southeastern Connecticut serves C.B. Jennings Elementary School, Claude Chester Elementary School, Cutler Middle School, Kelly Middle School, North Stonington Elementary School, Northeast Academy, Ocean Community YMCA Mystic Branch, Preston Veterans Memorial School, S.B. Butler Elementary, Stonington High School, Staton Elementary School, Stonington Community Center, and Winthrop STEM Elementary Magnet School with this program.

iCan Bike Camp is a week-long biking camp hosted by the Miracle League of Connecticut and the Town of East Lyme and is available to people with disabilities who are 8-years old or above.

8.3. Advocacy

Southeastern Connecticut has several advocacy organizations that provide support and assistance for projects, educate user groups, and work with towns to promote safer walking and biking.

Bike Walk CT serves as the primary pedestrian and bicycling advocacy organization in the state. Current priorities are:

1. Improving crosswalk law to require drivers yield to pedestrians “at” crosswalks. Current

law requires yield for “in” crosswalks.

2. Supporting partners in advocacy for safety, speed limit policy changes, "Complete Streets" policy adoption, and education campaigns.
3. Electric Bike (E-Bike) Legislation. A three-class e-bike law, similar to legislation enacted in nine other states, was enacted in 2018. The Connecticut law varies slightly from the other states because it prevents class 3 e-bikes (maximum speed ~28 mph and motor wattage of < 750 watts) on bike paths, and requires helmets for all e-bike users. The Connecticut act states, “Except where permitted by local ordinance, a class 1 or class 2 e-bike shall not be ridden on a bike trail or path or multi-use trail or path designated for non-motorized traffic if such trail or path has a natural surface tread made by clearing and grading the soil and no surfacing materials have been added”. Thus, class 1 and 2 e-bikes are allowed on paved or aggregate coated multi-use trails such as the Air Line Trail but not on public natural surface trails like those at Bluff Point and Pachaug Forest. Class 1, 2 and 3 e-bikes are allowed on roads and private lands (with landowner permission).

East Coast Greenway Alliance is the advocacy organization associated with the 3,000-mile route, from Calais, Maine to the Florida Keys, with 200 total miles through Connecticut. Within the region, the trail is co-branded with the Air Line and Hop River trails. The East Coast Greenway Alliance has an active Connecticut chapter whose current advocacy focus is on major maintenance of the Air Line Trail and other eastern trail sections.

The New England Mountain Bike Association creates a local presence in the region through its Southeastern Connecticut chapter. The chapter was formed in 2014 to work closely with local land managers, schools, and businesses to support, promote, and increase mountain biking activities and trail stewardship. The chapter holds monthly meetings and organizes group rides and events.

Bike New London is dedicated to making New London a more bike-friendly city. Besides advocacy activities, the organization operates Bike Share New London from the Water Street and Cornish parking garages.

Bike Stonington advocates for bike-friendly policies and roadway safety improvements in Stonington.

Walk Norwich promotes walking as the best way to appreciate the rich cultural heritage of the City and is a participant in the Norwich Heritage Groups. Walk Norwich has created four heritage trails marked with signage and maps.

Municipal Conservation Commissions are active and engaged in most towns to support bicycling and walking. Many municipalities have bicycling and walking identified as key components (see "Appendix F Existing Related Plans").

I Can Bike East Lyme uses adaptive training bicycles and a specialized program to teach people with special needs how to ride a two-wheeler and become independent riders.

8.4. Conservation

Conservation areas, including trails, parks, and other natural features, are among the most desirable places to walk and bike in the region. In addition to municipal conservation commissions, several conservation and trail groups in the region exist with a focus ranging from protecting a single site (e.g. Friends of Oswegatchie Hills) to a more regional approach (Avalonia Land Conservancy). They are composed of land trusts, trail boosters, a nature center, and watershed protection organizations:

- Avalonia Land Conservancy
- Denison Pequotsepos Nature Center/Coogan Farm (DPNC)
- Eightmile River Watershed
- Friends of Oswegatchie Hills
- Friends of Pachaug Forest (in Griswold)
- Groton Open Space Association (GOSA)
- Stonington Land Trust
- Tri-Town Trail Association
- The Nature Conservancy

8.5. Bike Share

Bike sharing is an innovative last-mile transportation solution, ideal for short- to medium-distance trips. Bike sharing provides users the ability to pick up a bike at any self-serve bike station and return it to another bike

Figure 8.2 Mystic Community Bike Station in Downtown Mystic



Photo Credit: thisismystic.com

station located within the system's service area. Bike share programs such as the 2018 pilot in Hartford use a dockless system and operate by using a mobile application to locate an available bike that is nearby using GPS. In the region, the following bike share programs exist:

Mystic Community Bikes founded the first bike share system in CT in 2008. Donated bikes are refurbished and stationed at key locations across the Mystic area in both Groton and Stonington from May through October. Bike rentals are free for a 24-hour period. The 80-bike fleet is maintained by volunteers and local businesses host the stations. The bikes are popular with visitors, especially hotel guests where several stations are located.

Bike New London operates a smaller fleet from two stations in downtown New London. In addition, a commercial bike share program is in the works.

Spokespeople at Connecticut College provide a bike share for the college community. Launched in 2011, the "CC Cruisers" program allows any student to check out a bike from in front of Shain Library to use for the day. Spokespeople maintains the bikes and provides helmets. Please see Table 3.2 on page 101, which lists bike share vendors that work with smaller communities.

8.6. Community Health

The 22 SCCOG member municipalities are served by four health districts and one local health department (Preston). The region's southern tier is served by Ledge Light Health District (East Lyme, Groton, Ledyard, New London, Stonington, Waterford). The central/northern tier is served by Uncas Health District

(Bozrah, Franklin, Griswold, Lebanon, Lisbon, Montville, Norwich, Salem, Sprague). Chatham Health District serves Colchester. Windham is served by the North Central District Health Department.

All health districts promote active lifestyles and programs that emphasize daily walking. SCCOG staff assists the Ledge Light Health District's efforts to define a healthy lifestyle vision and strategies that can be implemented across many organizations.

One example of a health district specifically addressing transportation issues is Uncas's Community Health Improvement Plan (CHIP). Ensuring access to care by increasing public transit routes and alternative transportation options to underserved areas by 2022 is a key component of their CHIP. Lebanon (9.8%), Norwich (9.5%), and Lisbon (9.0%) had the largest proportion of regional residents who used another mode of transportation to work, such as public transportation, walking, taking a cab or cycling, or working from home.

The Ledge Light Health District's Community Health Assessment (CHA) report outlines some access-to-care discrepancies in their region. The vast majority of residents, almost nine in ten, drive themselves as their primary means of transportation. But only about half of those earning the least, under \$15,000 per year, drive themselves, with one in five reporting never or almost never having access to a car. One in four low-income individuals report using buses as their primary means of transportation. Two in five residents earning less than \$15,000 per year reported having to stay home when they needed to go somewhere in the past 12 months, nearly four times the rate of the Greater New London

area¹ and the state overall.

Ledge Light Health District's CHA report, similar in nature to the CHIP report of the Uncas Health District, prioritizes access to care as a main goal to ensure equitable and quality health care for low-income populations. Their main objective is to increase the understanding of community needs and misalignments between local systems of care, transportation systems, and other factors impacting access.

Community health districts recognize that a transportation network that serves users of all modes is essential to ensuring all the region's residents have the opportunity to stay healthy through access to care and the chance to maintain an active lifestyle. With limited transit service in the region, few routes serving low-income populations, and limited bike and pedestrian connections to transit, health care facilities and other important destinations, non-driving regional residents currently face many challenges to stay healthy.

8.7. Bike and Running Clubs

A variety of cycling and running clubs exist across the region. While some clubs like Mystic Velo and Mohegan Striders focus on racing, they all perform educational activities for participants including bike maintenance, skills enhancement, and road safety. Regional clubs include:

- Pequot Cyclists
- Thread City Cyclers
- Mohegan Striders

- Mystic Velo

Social media fan pages exist for many local trails. Facebook, Twitter, Meetup, etc. offer a loose association of interested people a means of connecting for events, advocacy, education and other activities. The Ridin' or Hidin? Facebook group is one of the social media outlets based in the region. It is a mountain biking-oriented closed group. Group rides at regional trails and various bike-related topics are posted on the site.

¹ DataHaven defines the Greater New London area as the following towns: East Lyme, Groton, Ledyard, Lyme, Montville, New London, North Stonington, Old Lyme, Stonington and Waterford.

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Recommendations



SEAT bus picking up passenger next to pop-up bike lane in Norwich

9. Overview of Recommendations

This plan was prepared to assist the public in better understanding how southeastern Connecticut's regional transportation network can provide and improve facilities for bicycling and walking. With proper planning, infrastructure, and policy, these modes become viable alternatives for everyday transportation, not just for recreation. They allow communities to become more sustainable - environmentally, financially, and with regard to public health.

The SCCOG planning team sought public input through outreach and survey at a variety of venues including local events, public meetings, and pop-up events in Groton, Jewett City and Norwich.

This chapter is comprised of the following elements :

- Strategies to Enhance Biking and Walking
- Bike and Pedestrian Facility Types
- Bike and Pedestrian Funding Sources
- Regional and Community Recommendations
- Municipal Toolkits For Action
- Performance Measures

The first section begins with a description of innovative approaches to improve biking and walking conditions in the region, followed by a summary of the funding sources to available help implement them. For many communities, infrastructure treatments like bike boulevards or protected bike lanes may be aspirational, but many of the strategies touched on here are easily attainable and can be implemented in the short term.

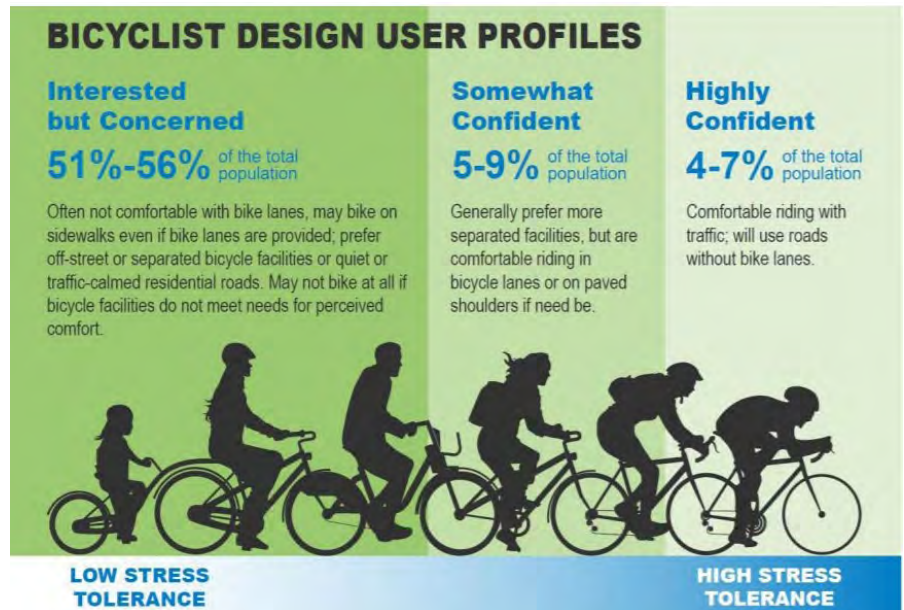
“People of all ages and abilities safely and conveniently walk and bike on a network of streets and trails that connect our communities and enhance our quality of life.”

SCCOG Regional Bike and Pedestrian Plan Vision

Following this high-level description, the plan presents the regional and community-specific recommendations that arose from this project's robust planning process. These recommendations take the form of "Toolkits" that have been tailored to each municipality, and provide concise, actionable opportunities to create better environments for biking and walking. An overview of these toolkits is described within the plan, with the individual toolkits located in "12. Municipal Toolkits" on page 111.

In addition to community-specific recommendations, this chapter provides performance measures for the region's Metropolitan Planning Organization to assess the implementation of better biking and walking conditions. These measures deal with safety, mode share, and extent of the bike and pedestrian network, in addition to several other categories.

Figure 9.2 Bike Design User Profiles



Source: FHWA Bikeway Selection Guide (2019)

Strategies to Enhance Biking and Walking

Beyond assessing existing conditions, it is essential to have an aspirational outlook for what best practices can be implemented in the region to encourage biking and walking – and potential funding sources. Presented below are key complete streets concepts, various programs that communities can participate in, and various funding sources that can support these efforts.

Complete Streets and “Next-Best” Facilities

Creation of Complete Streets involves designing and operating roads for all users, notably including pedestrians, cyclists, disabled citizens, and transit users. The CTDOT adopted Complete Streets principles in 2014, and has formalized it through policy, revisions to design manuals, and education of staff. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, signage, traffic signal enhancements, bus turn-outs, and appropriate landscaping.

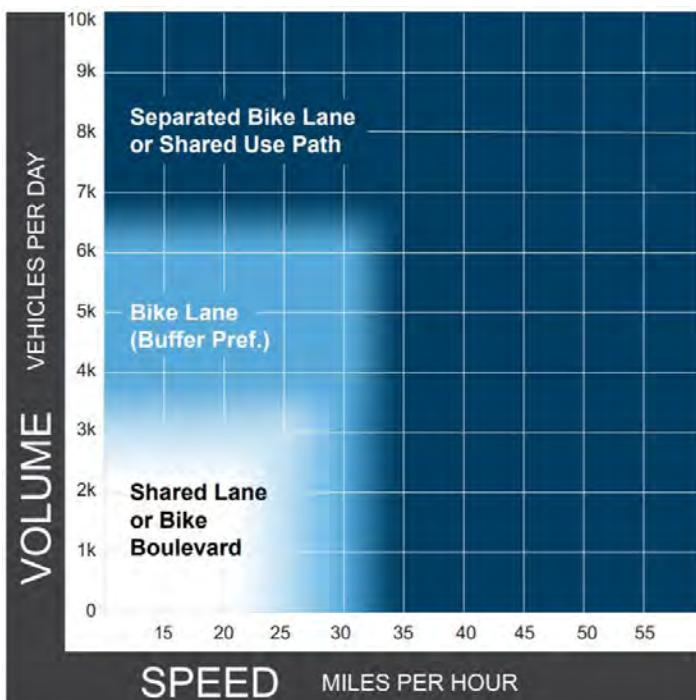
Figure 9.1 Inadequate Pedestrian Facility



Implementation does not mean an immediate retrofit of all streets, but rather incremental changes to the built environment resulting from a shift in everyday planning and engineering practices. Whenever construction on existing roads, reconstruction, or new construction are planned, accommodation of users of all transportation modes should be considered. Regardless of project type, the design should result in motor vehicle operating speeds that are safe for all users.

If the most preferable facility is not feasible due to right-of-way, physical barriers, and other constraints, the next-best facility should be considered, and traffic calming measures employed. It may ultimately be necessary to select a parallel route for bicyclists and pedestrians if there is no practical way to accommodate them safely.

Figure 9.3 Guides for Determining Appropriate Facility

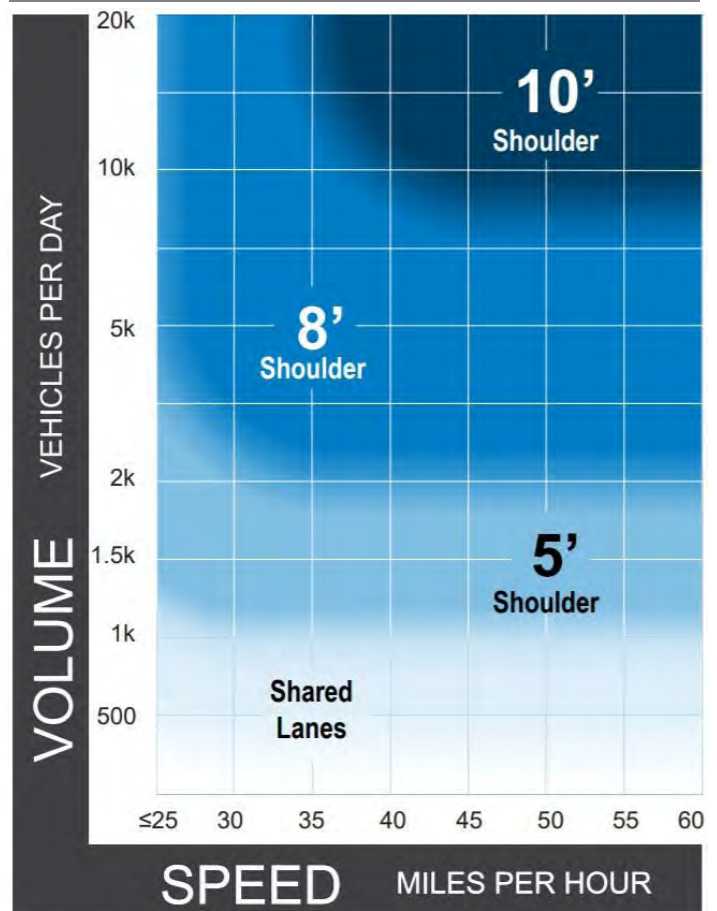


Source: FHWA Bikeway Selection Guide (2019)

Figure 9.2 shows profiles of bicyclist user types. These user profiles range from those who are "Interested but Concerned" to "Highly Confident." The Interested but Concerned group is the majority of the public – people who would like to bike more often, but have specific concerns preventing them from doing so. Most often these concerns are related to personal safety from automobiles.

If a community goal is to expand the audience for bicycling, it is important to consider the "Interested but Concerned" cyclist who may ride for transportation in addition to recreation. "8 to 80 Cities" is a similar concept useful for thinking about how to engage these Interested but Concerned riders. This concept is that our

Figure 9.4 Shoulder Width Recommendations



Source: FHWA Bikeway Selection Guide (2019)

communities and their roadways should be safe and comfortable for everyone, from an 8-year-old child to her 80-year-old grandmother.

A key way to realize this vision is through appropriate roadway design. Shoulder width recommendations for roadways that have both low volumes of traffic and low average vehicle speeds are shown in Figure 9.3 and Figure 9.4.

The toolkits for each town apply these principles, as well as guidance from the sources referenced in "12. Municipal Toolkits" on page 111, and are to intended to assist in evaluating what are the most applicable pedestrian and bike facilities for the local roadway segment chosen as an example.

10. Facility Types

The National Association of City Transportation Officials (NACTO) has produced a safety-oriented vision for bike infrastructure in its Urban Bikeway Design Guide. The following bike elements are outlined using the NACTO definitions.

Bike Lane

As described by NACTO, “Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and signage. The bike lane is located adjacent to motor vehicle travel lanes and flows in the same direction as motor vehicle traffic. Bike lanes are typically on the right side of the street, between the adjacent travel lane and curb, road edge, or parking lane.”

(<https://nacto.org/publication/urban-bikeway-design-guide/bike-lanes/conventional-bike-lanes/>).

Advisory Shoulder

The advisory shoulder treatment has a 10 to 18 foot two-way center travel lane and 6 foot wide advisory shoulders. Motorists can travel in both directions and share a center lane, encroaching into the advisory shoulders as needed to facilitate passing movements. This treatment is suggested on roads with less than 3,000 average daily vehicles (ADT) and with posted speeds not exceeding 25 miles per hour.

Figure 9.5 An Example of a Bike Lane



Figure 10.1 An Example of a Advisory Shoulder



Sidepaths

Also referred to as shared-use paths or multi-use trails, sidepaths provide a more appropriate facility for users of all ages and abilities than shoulders or mixed traffic facilities on roads with moderate or high traffic intensity. By definition, sidepaths run alongside roadways, typically sharing the same right-of-way; this differentiates them from other types of shared-use paths, such as rail-trails or canal paths which have their own rights-of-way.

Cycle Tracks

Cycle tracks are treatments more often used in urban areas. They are similar to side paths but are typically one-way and adjacent to sidewalks, delineating a clear pedestrian area and a clear bicyclist area. As described by NACTO: “Raised cycle tracks are bike facilities that are vertically separated from motor vehicle traffic. Many are paired with a furnishing zone between the cycle track and motor vehicle travel lane and/or pedestrian area. A raised cycle track may allow for one-way or two-way travel by bicyclists. Two-way cycle tracks have some different operational characteristics that merit additional consideration”. (<https://nacto.org/publication/urban-bikeway-design-guide/cycle-tracks/raised-cycle-tracks/>)

Figure 10.3 An Example of a Sidepath



Figure 10.2 An Example of a Cycle Track



Figure 10.5 An Example of a Bike Boulevard



Bike Boulevard

Bike boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bike travel priority. Bike Boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bike crossings of busy arterial streets.”

Rectangular Rapid Flashing Beacon

For non-signalized intersections with frequent pedestrian traffic, Rectangular Rapid Flashing Beacons (RRFBs) are an effective way to improve yield compliance by motorists. Typical applications are at trail crossings of roadways. As described by the Federal Highway Administration:

- RRFBs are user-actuated amber LEDs that supplement warning signs at unsignalized intersections or mid-block crosswalks. They can be activated by pedestrians manually by a push button or passively by a pedestrian detection system.

- RRFBs use an irregular flash pattern that is similar to emergency flashers on police vehicles.
- RRFBs may be installed on either two-lane or multi-lane roadways.

Figure 10.4 An Example of a Rectangular Rapid Flashing Beacon



11. Regional and Community Recommendations

The recommendations in this report are the result of months of efforts to engage the public, key stakeholders, and municipal staff. This input has been the primary driver of the recommendations contained below. Feedback was gathered from workshops at public meetings, via intercept surveys and online surveys, through an interactive online mapping tool, from sidewalk conversations during pop-up demonstration projects, and in conversations and email exchanges with municipal staff and stakeholder organizations in all of the region's cities and towns. The project team also collected and analyzed data from state agencies, the US Census, and Strava (a GPS-based tool used mostly by bicyclists and runners to track their activities) in order to create recommendations.

Specific outreach strategies included the following:

- **In-person Outreach:** Public meetings and workshops were held to engage the public and stakeholders face-to-face. For example, a public meeting was held at Otis Public Library in Norwich on January 9, 2019, and over 70 attendees participated. Workshops at the meeting included a map.social station at which meeting participants were invited to add information to an online map, including noting dangerous intersections, places where bike parking is needed, and best current routes for connecting to destinations. At other stations, participants were invited to draw on large maps to show which roads they'd like to see upgrades to in order to make them more conducive to walking and/or bicycling.
- **Digital Outreach:** The map.social web-based interactive map was launched in November 2018 and left open for public use until July 2019. During that time, 32 people registered as users. Information provided by these users included malfunctioning pedestrian signals, unsafe crosswalk locations, poor visibility, vegetation overgrowing sidewalks, poor or missing sidewalks, places where bike parking is needed, places where bike lanes are needed, and recommendations for where on-road bike facilities should be located. Over 800 individual pieces of information were gathered via this online tool.

- **Surveys:** A survey was also used to collect information, and over 900 people participated. This instrument was online but also distributed at events in the region. This survey collected information in several categories, including frequency of walking or biking, how many miles a person bikes in a week, for what reasons they walk or bike, and what changes would be needed to persuade them to bike or walk more often. By also requesting the respondents zip code, this plan was able to differentiate information gathered from SCCOG residents. Demographic information was also collected, so that data trends related to age, gender, household income, race, and education could be tracked as well.
- **Pop-up Demonstrations:** The project team also designed and implemented three “pop-up” demonstration projects, to inexpensively and temporarily show what infrastructure upgrades could look like, in Norwich, Jewett City, and Groton. Public engagement at these three demonstration projects included conversations with passersby and distribution of intercept surveys. By capturing information from passersby, the project team ensured that Plan recommendations are not solely based on interactions with people with the interest and time to attend public meetings.

The recommendations in this report have been developed based on this public feedback, in conjunction with experience and expertise from the project team. This section is broken down into regional recommendations and municipal recommendations. The regional recommendations are high-level, general recommendations that apply to either the whole region or all communities across the region. The municipal recommendations, which are presented as

packages of action items called Municipal Toolkits, apply to each municipality. The full listing of Municipal Toolkits can be found in Section 12 on page 111.

11.1. Region-wide Municipal Recommendations

There are several recommendations which generally apply to all municipalities in the region. In general, municipalities in the region should review codes, ordinances, and policies for opportunities to increase support for bike and pedestrian accommodations in municipal decision making. The following recommendations provide solutions that will augment that process with some visible and impactful projects that are implementable in a short timeframe and at low cost. The recommendations are organized into the categories of Infrastructure, Policy, Education, and Regional Bike Routes.

Infrastructure

Recommendation 1: Build bike infrastructure using existing budget lines and processes

- Identify opportunities during regular road maintenance to narrow travel lanes with “Road Diets.” This reallocation of space can accommodate bikes as part of routine resurfacing and restriping.
- The Federal Highway Administration's (FHWA) Workbook for Building On-Road Bike Networks through Routine Resurfacing Programs is an excellent resource for SCCOG municipalities.
- Incentivize or require new developments to include bike infrastructure as a part of their access and parking plans.

Recommendation 2: Deploy a municipal (or regional) bikeshare system

- Several bikeshare vendors are serving smaller, more rural markets – and there are bikeshare systems deployed in communities that share similar demographic and geographic profiles to communities in southeastern Connecticut. Norwalk, CT plans to have its bikeshare system in place late 2019/early 2020. As of this document's writing, vendors that work with small to mid-sized communities are listed in Table 3.2.

Policy

Recommendation 3: Adopt a Complete Streets policy

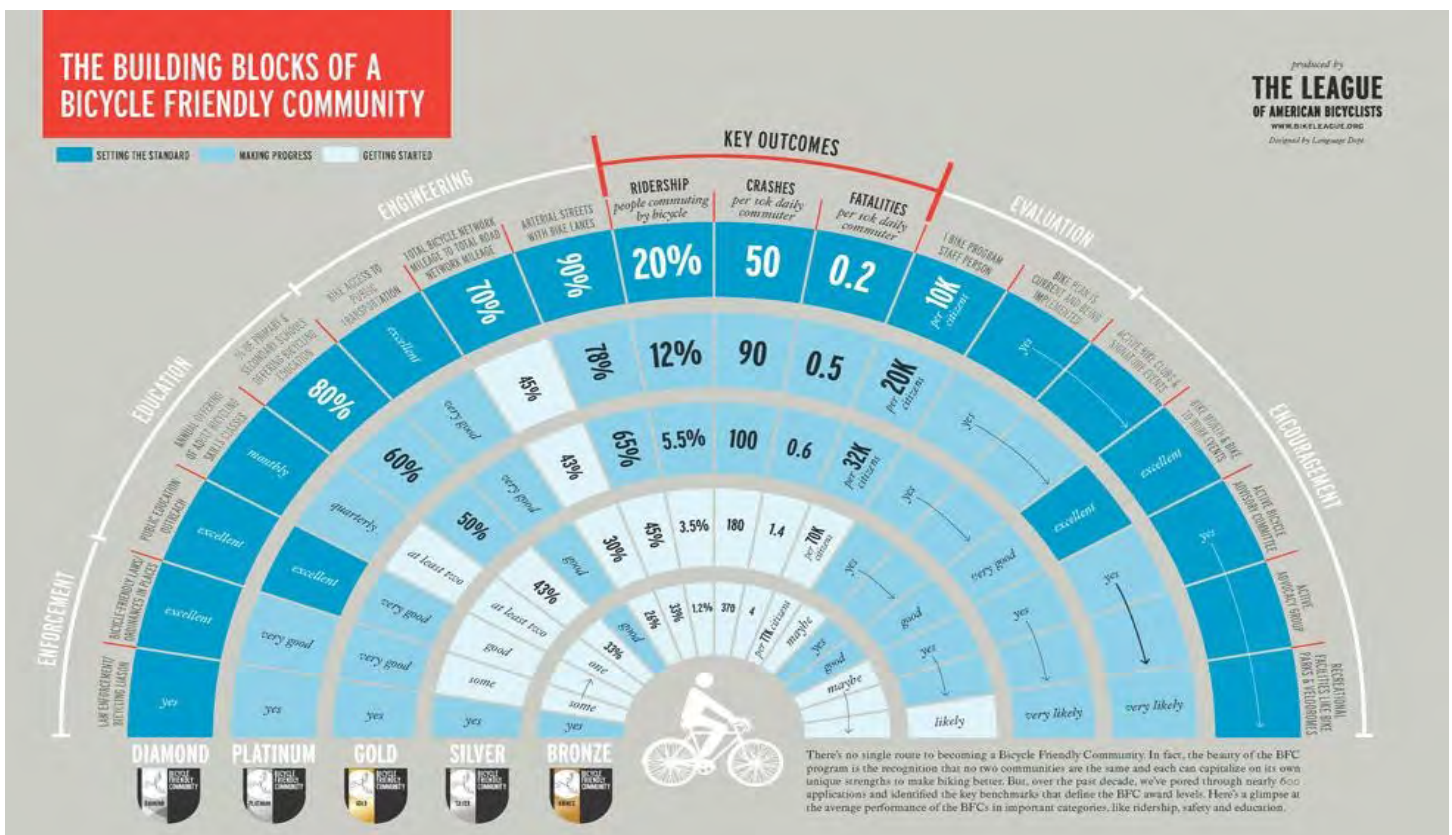
- "Complete Streets" involves designing and operating roads for all users, including pedestrians, bicyclists, disabled citizens,

Table 11.1— Regional Bikeshare Providers

Vendor	Website	Location(s)
P3GM	https://www.p3gm.com/	New Haven, CT / Norwalk, CT
Gotcha	https://ridegotcha.com/	Burlington, VT
Veoride	https://www.veoride.com/	Nashua, NH / Lowell, MA
Zagster	https://www.zagster.com/	Portsmouth, NH

transit users, and motorists. The Connecticut Department of Transportation adopted its Complete Streets Policy in 2014 and has formalized it through policy revisions to design

Figure 11.1 The League of American Bicyclists' Building Blocks of a Bicycle Friendly Community



manuals and education of staff. Madison and Fairfield, CT both made the list of “Top 10 Complete Streets Policies” in the US in 2018 as measured by Smart Growth America. Portland, CT’s policy provides an example of a rural community adopting Complete Streets principles.

- It is possible for Complete Streets policies with vague substance to be adopted. These policies make little concessions to alternative modes and ultimately still favor motor vehicle traffic. More thoughtful and rigorous Complete Streets policies can effect educational programs, and help unify goals across municipal and state departments (Senior Centers, Parks and Recreation, Public Works, Engineering, and Planning) to work collaboratively towards the implementation of education and infrastructure that serves all travel modes.
- For examples of effective Complete Streets policies in Connecticut municipalities that could guide those in the SCCOG region, see Stamford, Fairfield, and Portland Complete Streets policies in "Appendix G Complete Streets Policies".

Education

Recommendation 4: Encourage bike education programs

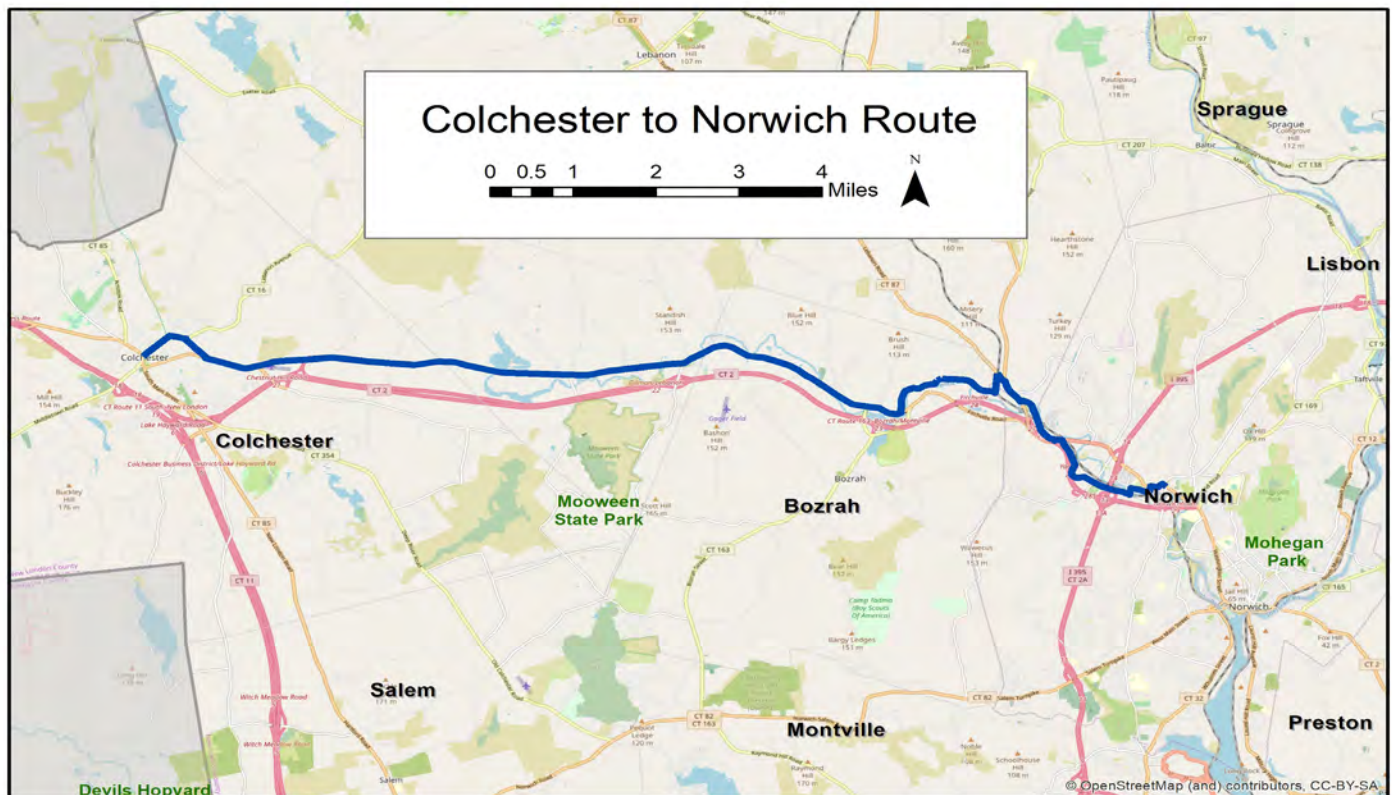
- Bike education is one of the pillars of encouraging bicycling in any community. Bike Walk CT, for example, has an elementary school program that provides bike education, with a goal in 2019 of teaching up to 600 students. The League of American Bicyclists provides tools for “League-Certified Instructors” to teach in-depth courses on bike safety. SCCOG municipalities should work with nonprofits and increase the capacity of

key local staff that are in a position to teach youth, including LAB certification of gym teachers and parks and recreation staff.

Recommendation 5: Apply to the League of American Bicyclists’ “Bicycle Friendly America” program

- The “Bicycle Friendly America” program provides a roadmap, hands-on assistance, and recognition for states, communities, universities and businesses to make bicycling a real transportation and recreation option for all people. Communities, businesses, and colleges/universities may apply. SCCOG may be able to act as facilitator for Bike Friendly Business/Community/University applications – keeping and updating information about its communities existing bike amenities.
- Achieving bronze-level (or higher) Bicycle Friendly Community status also adds points to a community’s Sustainable CT rating.

Figure 11.2 Routing for Bike Connection from Colchester to Norwich



11.2. Regional Bike Routes

This plan strongly recommends pursuing a regional bike route vision. The regional bike routes discussed below facilitate connectivity of both on- and off-road facilities in the region and provide opportunities for cross-jurisdictional collaboration. Each is mentioned in the Toolkit appropriate to the towns they pass through, but explained here in greater detail.

Norwich – Colchester Signed Bike Route

The Norwich-Colchester Signed Bike Route (Figure 87) would start at the Town Green in Colchester and end close to downtown Norwich.

In addition to providing connectivity through the region and setting precedent for cross-jurisdictional cooperation, this route formalizes a bike route already designated by the Town of Colchester, and well-used by local cyclists.

Twelve Town Air Line Trail Master Plan

Connecticut Resource Conservation and Development is planning to create a Twelve Town Air Line Trail Master Plan with their grant from the Connecticut Department of Energy and Environmental Protection (CT DEEP).

The money will help task force members from Thompson, Pomfret, Windham, Lebanon, Chaplin, Columbia, Hebron, Hampton, Colchester, East Hampton, and Portland

inventory natural resources, identify maintenance concerns, and promote eco-tourism along the 50-mile stretch of the state's linear state park.

The Air Line Trail stretches from Thompson east into Massachusetts and west into East Hampton, though there are several interrupted sections. Improvements to the trail are seen as a way to maximize opportunities for the towns the trail runs through.

With the popularity of rail trails for hiking and bike riding, an improved Air Line Trail has the potential to bring more visitors to the towns it passes through, including SCCOG member municipalities Colchester, Lebanon and Windham.

As the Plan continues to be implemented, better connections between village centers along the route should be considered. The trail surface should also be enhanced to better serve all users. Collaboration between towns with the Airline Trail and those with similar facilities should be continued to share best practices and regional efficiencies for maintenance.

Eastern Shoreline Path

This study proposes the Eastern Shoreline Path (Figure 11.3), a continuous bike-friendly corridor from the Rhode Island line in Pawcatuck to the Connecticut River I-95 Baldwin Bridge.

Stonington's segment includes a shared-use path through Barn Island Management Area and improvements to RT 1 from Greenhaven Road to downtown Mystic.

Tri-Town Trail

If implemented, the Tri-Town Trail would be the region's first multi-use recreational trail, traveling through Groton, Ledyard, and Preston. The Tri-Town Trail is planned to be 17 miles long

(Figure 4.3), connecting municipalities, economic centers, open spaces, and natural resources by providing a recreational resource as well as an alternate transportation corridor. The trail has not been implemented due to needed consensus on a preferred trail alignment and lack of funding. The municipalities and stakeholders in the region should continue to work together to implement the Tri-Town Trail.

Municipal-Level Bike and Pedestrian Recommendations

The recommendations in this Plan are the result of extensive outreach and analysis of existing plans and data. Analysis gaps of ADA compliance throughout the region (see "Appendix C ADA Assessment Findings") and potential bike and pedestrian facilities identified through outreach (see "Appendix E map.social Feedback") have been especially important in selecting the municipal-level recommendations found in the following section, "Municipal Toolkits" and listed in "Appendix A Recommendations Table".

Regional and Municipal Cost Estimates

A component of this study was to provide high level cost estimates for the most significant recommendations. All recommendations were assessed for local and regional importance as well as the need for connectivity and safety. Table 11.2 provides the lists of top projects and high level funding estimates.

Table 11.2—Priority Improvements Cost Estimate

Municipality	"Bicycle/Pedestrian oriented Improvement"	Facility Type	Length/ Quantity	Average Cost Per Mile/Unit	Project Cost	Construction Contingency (10%)	ROW Contingency (15%)	Total Project Cost
Bozrah	Fitchville Center: Provide sidewalks along Norwich-Colchester Tpk (Rt 608 from the Post Office to Haughton Road).	5ft Sidewalks on both sides of the road	0.7 Miles	\$210,672	\$147,470	\$14,747	\$22,121	\$184,338
Groton	Colonel Ledyard Hwy: Add bike lanes from Rt 184 to Ledyard border. Coordinate with Ledyard.	5ft Bike lanes on both sides of the road	0.6 Miles	\$151,814	\$91,088	\$9,109	\$13,663	\$113,860
Lisbon	Extend sidewalks along River Rd (Rt 12) north from Lisbon Landing entrance road to Jewett City.	5ft Sidewalks on both sides of the road	1.4 Miles	\$210,672	\$294,941	\$29,494	\$44,241	\$368,676
Montville	Provide shared use path on proposed second span of Mohegan-Pequot Bridge (Rt 2A), also provide pathway bridge access from adjacent roads to the north (Mohegan Sun) and south.	Shared use path	0.9 Miles	\$548,500	\$493,650	\$49,365	\$74,047	\$617,062
Montville	Rt 32: Infill gaps in sidewalk network	Sidewalk on east side of road	455 ft	\$210,672	\$18,118	\$1,812	\$2,718	\$22,647
New London	Add both short-term and long-term bicycle parking at the train station, with additional short-term bicycle parking in the surrounding business district.	Long and short term parking	"Long Term=10 Short Term= 20"	"Long Term=\$2,090 Short Term=\$660"	\$34,100	\$3,410	N/A	\$37,510
Waterford	Create Shared Use Path parallel to Rt 213 but separated by woodland buffer wherever possible on town land; cross Beach Park entry road and continue onto Harkness State Park land (bituminous permeable pavement recommended).	Shared use path	3.9 Miles	\$548,500	\$2,139,148	\$213,915	\$320,872	\$2,673,936
Windham	Air Line Trail Connector at Jackson St (Rt 32) and Main St (Rt 66) to Riverside Dr: Provide safe bike access through intersection - bike lanes or grade separated bike lanes (widen sidewalks).	Shared use path	0.6 Miles	\$548,500	\$329,100	\$32,910	\$49,365	\$411,375

Table 11.3— Colchester to Norwich Route Cost Estimate

Colchester to Norwich Route - 14.3 Miles

Municipality	"Bicycle/Pedestrian oriented Improvement"	Facility Type	Length/ Quantity	Average Cost Per Mile/Unit	Project Cost	Construction Contingency (10%)	ROW Contingency (15%)	Total Project Cost
Colchester	Create a signed bike route on Norwich Ave (Rt 616) from Town Green to Lebanon border (requires cross-jurisdictional cooperation with Lebanon).	5ft Bike lanes on both sides of the road	6.8 Miles	\$151,814	\$1,032,334	\$103,233	\$154,850	\$1,290,417
Bozrah	Create a signed bike route on Fitchville Road (State Route 616) from the border with Lebanon to Bozrah Road (Rt 163), to Gager Road, to Browning Road, to the Norwich border (requires cross-jurisdictional cooperation with Lebanon and Norwich).	5ft Bike lanes on both sides of the road	3.4 Miles	\$151,814	\$516,167	\$51,617	\$77,425	\$645,209
Bozrah	Stockhouse Road from Route 608/Fitchville Road to Route 87: Provide shared lane.	Shared use path	0.9 Miles	\$548,500	\$493,650	\$49,365	\$74,047	\$617,062
Norwich	Create signed bike route on Browning Road, culminating at West Town Street, enabling a signed bike route from Colchester to Norwich (requires cross-jurisdictional cooperation with Bozrah).	5ft Bike lanes on both sides of the road	3.2 Miles	\$151,814	\$485,804	\$48,580	\$72,871	\$607,255

Table 11.4— Eastern Shoreline Path Cost Estimate

Eastern Shoreline Path - 17.9 Miles

Municipality	"Bicycle/Pedestrian oriented Improvement"	Facility Type	Length/Quantity	Average Cost Per Mile/Unit	Project Cost	Construction Contingency (10%)	ROW Contingency (15%)	Total Project Cost
East Lyme	Niantic River Bridge (Rt 156) to Pennsylvania Ave (Rt 161): provide protected bi-directional bike lane on north side of Rt 156 to bridge; shift lanes south and widen existing bridge sidewalk to accommodate bi-directional bike lanes and pedestrians (requires cross-jurisdictional cooperation with Waterford); continue on north side of Main St and connect to existing boardwalk side path; continue bi-directional side path on widened sidewalk to Pennsylvania Ave (may require narrowing Main St to 11' lanes). Option: provide standard, marked bike lanes from Pennsylvania Avenue over the bridge into Waterford.	Protected bi-directional bike lanes	0.8 Miles	\$272,962	\$218,369	\$21,837	\$32,755	\$272,962
East Lyme	W Main St (Rt 156) from Pattagansett Rd. to Old Lyme Border: provide 4' wide min bike lanes both sides to Old Lyme border (approx. at intersection with 4 Mile River Rd), requires cross-jurisdictional cooperation with Old Lyme.	5ft Bike lanes on both sides of the road	3.7 Miles	\$151,814	\$561,711	\$56,171	\$84,257	\$702,139
Waterford	Rope Ferry Rd (Rt 156) to Niantic River Bridge – East Lyme border: provide protected bi-directional bike lane on north side of Rt 156 to bridge; shift lanes south and widen existing bridge sidewalk to accommodate bi-directional bike lanes and pedestrians (requires cross-jurisdictional cooperation with East Lyme).	Protected bi-directional bike lanes	5.8 Miles	\$272,962	\$1,583,177	\$158,318	\$237,477	\$1,978,972
New London	Preferred Option: Construct new protected Shared Use Path on Gold Star Bridge northbound span as part of bridge renovation project. Bridge path accessway would connect to Huntington St bike lanes and sidewalks.	Shared use path	4.9 Miles	\$548,500	\$1,337,512	\$133,751	\$200,627	\$1,671,890
New London	Extend Waterfront Pathway from Bank Street Connector to Sparyard Street.	Sharrows	480 ft	\$548,500	\$49,365	\$4,936	\$7,405	\$61,706
Groton	Construct G&S Trolley Trail Phase 2 within ROW and connecting the southeastern terminus of G & S Trolley Trail Phase 1 at Amtrak bike/ped bridge (kiosk/wayfinding point) to Neptune Avenue on Groton Long Point.	Shared use path	.7 Miles	\$548,500	\$383,950	\$38,395	\$57,592	\$479,937

Eastern Shoreline Path - 17.9 Miles (Cont.)

Municipality	"Bicycle/Pedestrian oriented Improvement"	Facility Type	Length/ Quantity	Average Cost Per Mile/Unit	Project Cost	Construction Contingency (10%)	ROW Contingency (15%)	Total Project Cost
Groton	From northern terminus of boardwalk (kiosk/wayfinding point), construct bi-directional protected bike lanes for approx. 360 lf on south side of Poquonnock Rd (Rt 1) to South Rd (8' min width recommended).	Bi-directional protected bike lanes	360 ft	\$272,962	\$19,107	\$1,911	\$2,866	\$23,884
Groton	(City) Extend Thomas Rd bike lanes south into Groton City turning south along Shennecossett Rd (Rt 349) continuing onto Eastern Point Rd. Provide sharrows and R4-11 "Bikes May Use Full Lane" signs where roadway cannot be widened.	Shared use path	1.1 Miles	\$548,500	\$603,350	\$60,335	\$90,502	\$754,187
Stonington	Route 1 Pawcatuck from Mayflower Ave to RI border: This corridor has been designated as a CTDOT Tier 1 Bike/ped improvement project to improve bike and pedestrian safety with pavement makings/signage, crosswalks, ped walk signals, etc.	Protected bike lanes	0.7 Miles	\$272,960	\$191,072	\$19,107	\$28,661	\$238,840

*Estimates are for planning purposes only, actual costs will vary based upon field conditions.

*Cost estimates were derived from the 2013 FHWA guide "Cost for Pedestrian and Bicyclist Infrastructure Improvements" and include a 14% increase for inflation.

Figure 11.3 Routing for Shoreline Bike Connection from Rhode Island Border to East Lyme /Old Lyme Border



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12. Municipal Toolkits

Specific recommendations for bike and pedestrian improvements in each municipality in the region are included in a “Municipal Toolkit” for each town or city. A full list of recommendations for the region can be found in "Appendix J Recommendations Map".

The toolkits include guidance on:

- Whom to contact – locally and regionally – regarding bike and pedestrian facilities that result in “Complete Streets”.
- Specific Recommendations for on- and off-road design treatments that are most likely applicable in each town or city, based on current best practices in engineering and planning, on the results of gap analysis, and from public feedback at meetings and events, from survey responses, and from the Map. Social online public feedback tool.
- References to funding sources and previous studies.

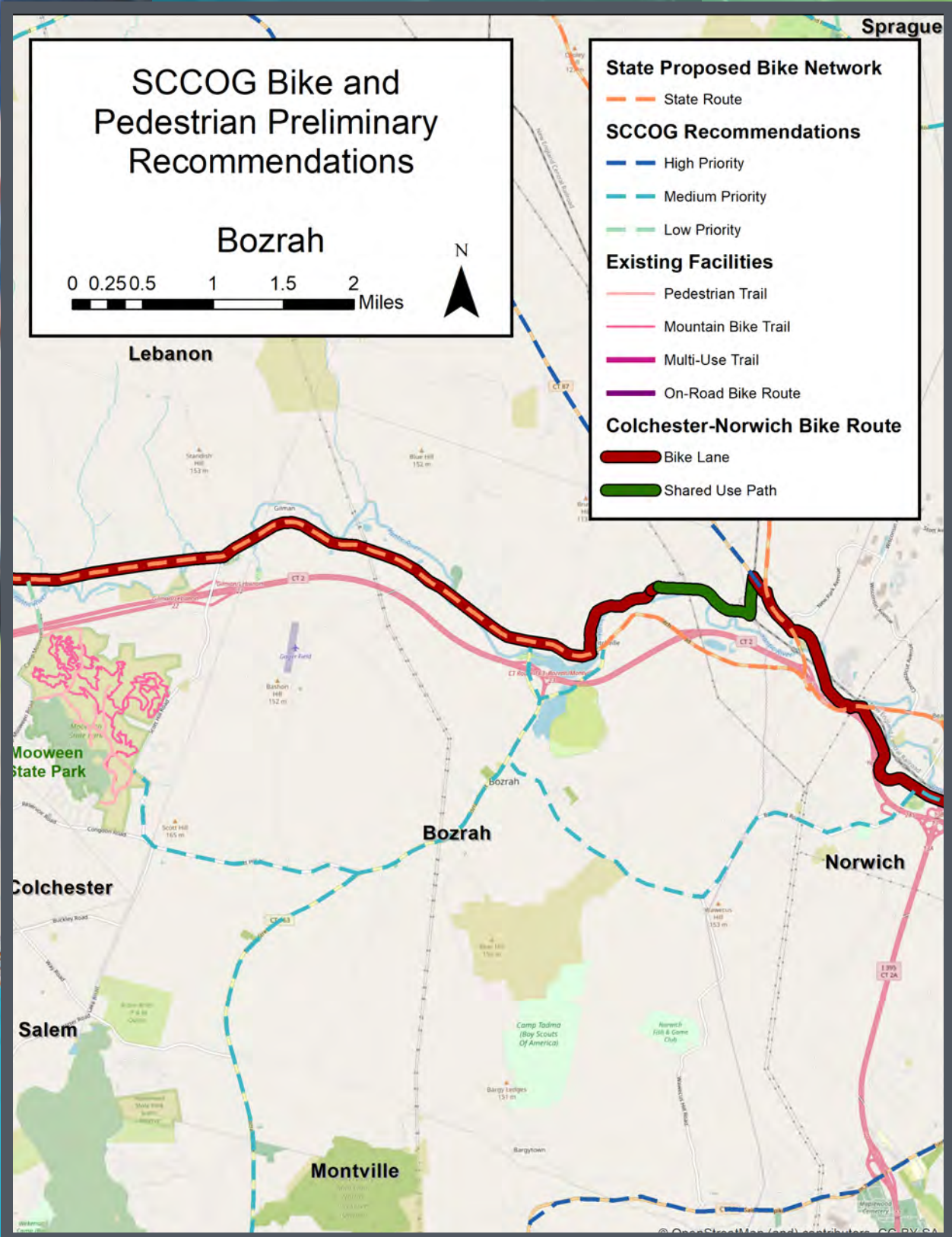
The purpose of the toolkits is to provide a package of action items for each municipality to undertake. These action items should complement the regional recommendations and will result in incremental improvements to the safety and usability of the pedestrian and bicyclist environment in the SCCOG area.

SCCOG



Bozrah

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users, and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Bozrah's first point of contact for bike and pedestrian issues is the Local Traffic Authority (LTA) – which is the designated role of the First Selectman.

Name	Address	Phone/Fax	Email
Glenn Pianka First Selectman	1 River Road Bozrah, CT 06334	Tel: (860) 889-2689 x1	firstselectman@bozrahct.org

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Lee Dunbar Eastern Connecticut Forest Landowners Association/ Wolf Den Land Trust	P.O. Box 404 Brooklyn, CT 06234	Tel: (860) 617-1152 leedunbarl@gmail.com	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Bozrah officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bike or pedestrian improvement are provided with the form. The First Selectman, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG's competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Bozrah were generated from public input received through the map.social site created for this report, as well as referencing the CT Statewide Active Transportation Plan's bike transportation network map. They are also based on a review of Strava data and the Average Daily Traffic (ADT) on Bozrah's roads.

The 2016 Road Safety Audit of Fitchville Road included some short- and a medium- term recommendations that will improve pedestrian safety. According to the SCCOG Regional Metropolitan Transportation Plan, sidewalk and intersection improvements are planned for Fitchville Road in the 2024-2028 timeframe.

According to Strava bicycling heatmaps, one of the most heavily traveled routes in Bozrah is Stockhouse Road, from Route 608/Fitchville Road to Route 87. Average Daily Traffic (ADT) volume is low, at 1700, making it a possible candidate for a shared bike lane, or a signed bike route. The southernmost end of Stockhouse Road is also near a school, campground, and mini-golf. Safely connecting these destinations for bicyclists and pedestrians could be instrumental in encouraging more active transportation in the area.

The installation of sidewalks along Fitchville Road from the Post Office to Haughton Road has been long desired, but the most recent request for funding was unsuccessful. This project would, however, tie in with the recommendation to create bike facilities along Stockhouse Road, so the recommendation is repeated here. It would create a route for pedestrians and cyclists of all ages within Fitchville, and safely connect walkable destinations to which people currently drive.

The creation of a signed bike route along Route 608/Fitchville Road, from the border with Lebanon to Route 163/Gager Road/Browning Road into Norwich assumes cross-jurisdictional cooperation with Lebanon and Norwich – as it is a state route that crosses through each community. This route would promote regional connectivity and cooperation, and could set positive precedent for both.

Federal transportation funding programs are available for eligible bike, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in of the SCCOG Regional Bike and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Bozrah. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements. In the long term, connecting them – with improvements along the length of Route 163 – will further the regional active transportation network.

Bike-Oriented Recommendations

- Create a signed bike route on Fitchville Rd (State Route 616) from the border with Lebanon to Bozrah Rd (Rt 163), to Gager Rd, to Browning Rd, to the Norwich border (requires cross-jurisdictional cooperation with Lebanon and Norwich).
- Stockhouse Road from Route 608/Fitchville Road to Route 87: Provide shared lane.

Pedestrian-Oriented Recommendations

- Fitchville Center: Provide sidewalks along Norwich-Colchester Tpk (Rt 608 from the Post Office to Haughton Road).

References

Recent reports referencing bicycle and pedestrian infrastructure in Bozrah include:

- Plan for Fitchville Road/Route 608 Sidewalk (from Fitchville Post Office on Fitchville Road to Haughton Road)
- Road Safety Audit: Fitchville Road (2016)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. Create a signed bicycle route from Norwich – Colchester on Fitchville Road (State Route 616) from the border with Lebanon to Bozrah Road, continuing to Gager Road and Browning Road – into Norwich (requires cross-jurisdictional coordination with Lebanon and Norwich)



2. Stockhouse Road from Route 608/Fitchville Road to Route 87: Provide Shared Bicycle Lane



3. Fitchville: Provide sidewalks along Route 608/Fitchville Road from the Post Office to Haughton Road

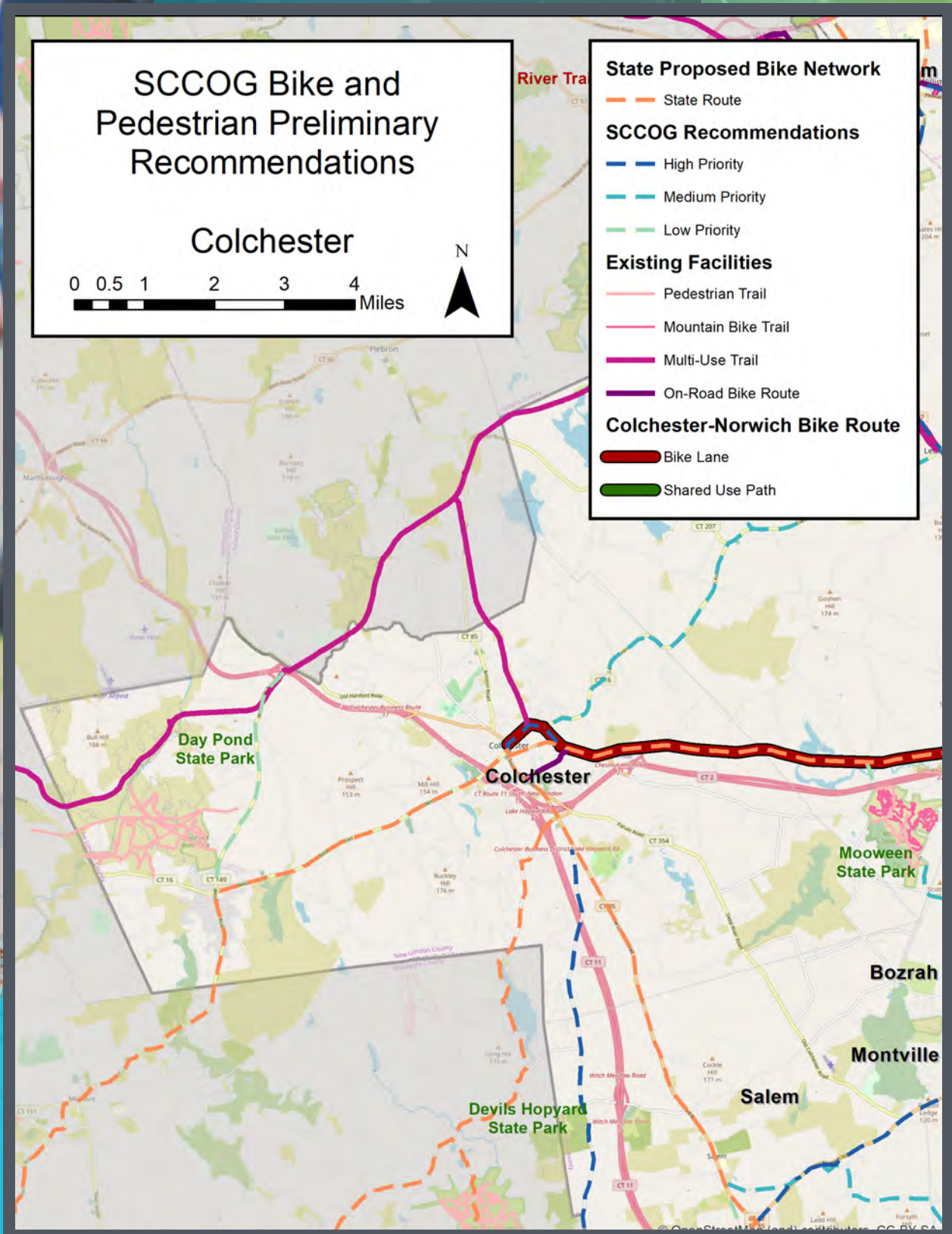


SCCOG



Colchester

Bike and Pedestrian Improvements Toolkit



SCCOG Bike and Pedestrian Preliminary Recommendations

Colchester

0 0.5 1 2 3 4 Miles



State Proposed Bike Network

State Route

SCCOG Recommendations

High Priority

Medium Priority

Low Priority

Existing Facilities

Pedestrian Trail

Mountain Bike Trail

Multi-Use Trail

On-Road Bike Route

Colchester-Norwich Bike Route

Bike Lane

Shared Use Path

Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized vehicle dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users, and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Colchester's first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the Town Engineer.

Contacts for bike and pedestrian issues in Colchester

Name	Address	Phone/Fax	Email
Salvatore Tassone Town Engineer	127 Norwich Avenue Colchester, CT 06415	Tel: (860) 537-7281 Fax: (860) 537-7287	townengineer@colchesterct.gov

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
(position currently vacant) Town Planner Town of Colchester	127 Norwich Avenue Colchester, CT 06415	Tel: (860) 537-7200	Local planning, Funding
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Lisa Hageman and Cathy Shea (co-presidents) Colchester Land Trust	P.O. Box 93 Colchester, CT 06415	Tel: 860-918-1537 lterrillhageman@comcast.net	Land Acquisition Issues, Funding

Colchester officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG's competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Colchester were generated from public input received through the map.social site created for this project, as well as referencing the state bicycle transportation network, and discussions with the staff of the Planning & Zoning Department.

Colchester has successfully brought in grant funding for several bicycle and pedestrian projects in the last few years and has more projects in the pipeline. It received \$47,776 in early 2019 from the State Department of Energy and Environmental Protection (DEEP) to connect the Air Line State Park Trail with

the Richard H. Goodwin Trail, for a total of about 90 continuous miles of trail.

It should be noted that an “Air Line State Park Trail 12 Town Task Force” has been funded by a 2019 DEEP Trails Grant, as well. Colchester will be part of the Task Force that will guide a Master Plan for the Air Line Trail.

Colchester also received \$397,030 in Community Connectivity Grant funding to implement Town Green Bicycle and Pedestrian Improvements. According to the Regional Metropolitan Transportation Plan, Halls Hill Road reconstruction and bike lanes are planned between South Main Street and Norwich Avenue, in the 2018-2023 timeframe. Funding for this project comes from the Local Transportation Capital Improvement Program (LOTICIP). In the 2029-2045 timeframe, a multi-use path from the Air Line Trail to Main Street is proposed.

Creating a signed bike route along Norwich Avenue (State Route 616) from the Town Green to the Lebanon town line is representative of a treatment applicable to Colchester that will benefit the municipality and the region. It assumes cross-jurisdictional cooperation with Lebanon, Bozrah and Norwich – as it is a State Route that crosses through each of them. For the CTDOT to approve bike route signage on Route 616 in Colchester, the project must be supported in all communities. This recommendation is discussed in detail in the Recommendations Chapter of the SCCOG Regional Bicycle and Pedestrian Plan.

This recommended project formalizes a route already used by cyclists in the region. It helps put Colchester on the path to a successful bid for “Bicycle Friendly Community” status, as designated by the League of American Bicyclists, and stands to have significant positive impact on the local economy by attracting more bicycle-related tourism.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Colchester. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Create a signed bike route on Norwich Ave (Rt 616) from Town Green to Lebanon border (requires cross-jurisdictional cooperation with Lebanon).
- Improve connections and wayfinding to Airline Trail.
- Interconnect various off-road shared use trails on open space parcels with on-road bike lanes or shoulders (e.g. Colchester village to Day Pond State Park).

Pedestrian-Oriented Recommendations

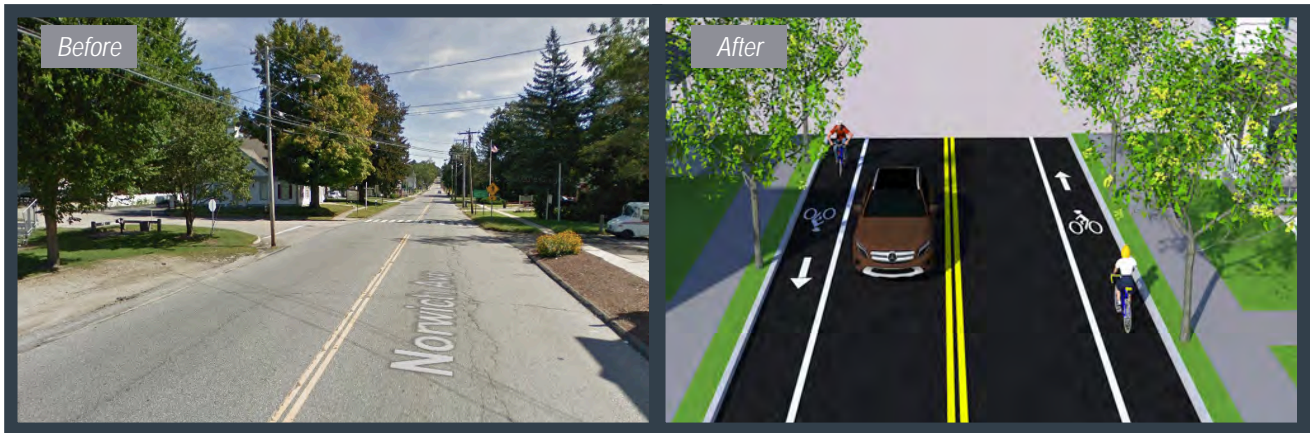
- Infill sidewalk gaps in Colchester Village, especially on Main St and Broadway.
- Colchester village: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan’s ADA Mapping. See "Appendix K ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list.

References

Recent reports referencing bicycle and pedestrian infrastructure in Colchester include:

- Road Safety Audit: Halls Hill Road (2016)
- Plan of Conservation and Development (2015)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. Create a signed bike route on Norwich Avenue (Route 616) from Town Green to Lebanon border (requires cross-jurisdictional cooperation with Lebanon).



2. Improve connections and wayfinding to Air Line Trail.



3. Interconnect various off-road shared use trails on open space parcels with on-road bike lanes or shoulders (e.g. Colchester village to Day Pond State Park).

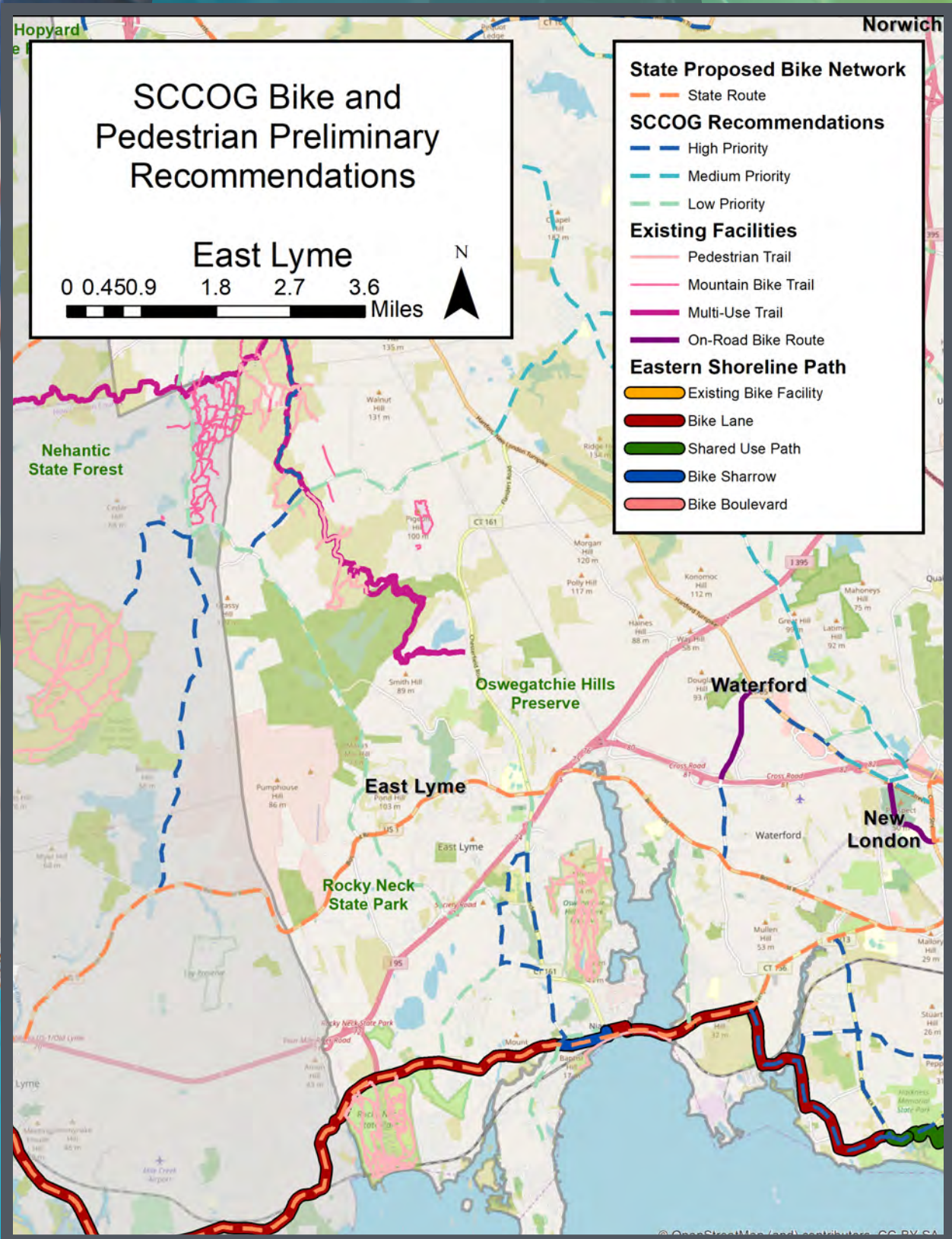


SCCOG



East Lyme

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized vehicle dependent society. The concept of "Complete Streets" planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users, and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

East Lyme's first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is the designated role of the Police Chief.

Contacts for bike and pedestrian issues in East Lyme

Name	Address	Phone/Fax	Email
Mr. Michael Finkelstein Chief of Police	108 Pennsylvania Ave. Niantic, CT 06357	Tel: (860) 739-7007 Fax: (860) 739-0337	mfinkelstein@eastlymepolice.com

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Gary A. Goeschel II Director of Planning Town of East Lyme	108 Pennsylvania Ave. Niantic, CT 06357	Tel: (860) 691-4114 ggoeschel@eltownhall.com	Local planning
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Chuck Toal Avalonia Land Conservancy, Inc.	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 c.toal@avalonialc.org	Land Acquisition Issues, Funding
Ronald Luich East Lyme & Niantic Land Conservation Trust, Inc.	13 Enid Lane (physical) East Lyme, CT 06333 P.O. Box 831 (mailing) East Lyme, CT 06333	Tel: (860) 739-3127 Luichr@ earthlink.net	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

East Lyme officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG's competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for East Lyme were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map. They were also guided by local knowledge.

These recommendations encourage bicycle and pedestrian-friendly improvements in appropriate locations throughout the town and specifically to Routes 1 and 156, also identified on CTDOT's Active Transportation Plan bike map. Some recommendations continue into adjoining towns. This study proposes the Eastern Shoreline Path, a continuous bike-friendly corridor from the Rhode Island line in Pawcatuck to the Connecticut River I-95 Chapman Bridge. East Lyme's segment includes improvements to Route 156.

According to the Regional Metropolitan Transportation Plan a bike lane is planned for Route 161, from Route 1 to the Montville town line, in the 2024-2028 timeframe.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to East Lyme. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Boston Post Rd (Rt 1) from Flanders 4-Corners to Old Lyme border: widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder (requires cross-jurisdictional cooperation with Old Lyme).
- Flanders Rd/Pennsylvania Ave (Rt 161) from East Lyme High School to Main St. widen roadway where needed for bike-safe shoulders or bike lanes and at intersections with turn lanes to provide continuous shoulder. Consider alternative N/S route with improvements on E Pattagansett, Roxbury, and Riverview to Industrial Park Rd.
Eastern Shoreline Path (ESP) Recommendations (east to west)
- Provide "Eastern Shoreline Path Bikeway" (ESP) and wayfinding signs at intervals throughout the route.
- Niantic River Bridge (Rt 156) to Pennsylvania Ave (Rt 161): provide protected bi-directional bike lane on north side of Rt 156 to bridge; shift lanes south and widen existing bridge sidewalk to accommodate bi-directional bike lanes and pedestrians (requires cross-jurisdictional cooperation with Waterford); continue on north side of Main St and connect to existing boardwalk side path; continue bi-directional side path on widened sidewalk to Pennsylvania Ave (may require narrowing Main St to 11' lanes). Option 1: end bi-directional bike lanes on Main St at Smith Ave and direct cyclists onto Smith Ave to Grand Street and create Bicycle Boulevard on Grand St from Smith Ave to Pennsylvania Ave. Option 2: provide standard, marked bike lanes from Niantic River bridge to Pennsylvania Avenue (requires cross-jurisdictional cooperation with Waterford)
- Main St (Rt 156) Niantic village (kiosk/wayfinding point): provide sharrows and R4-11 "Bikes May Use Full Lane" signs from Pennsylvania Ave to East Pattagansett Rd.
- W Main St (Rt 156) from Pattagansett Rd. to Old Lyme Border: provide 4' wide min bike lanes both sides to Old Lyme border (approx. at intersection with 4 Mile River Rd), requires cross-jurisdictional cooperation with Old Lyme.

Pedestrian-Oriented Recommendations

- Infill gaps in sidewalk network especially in the Flanders district and along Flanders Rd (Rt 161) to Niantic Village.

References

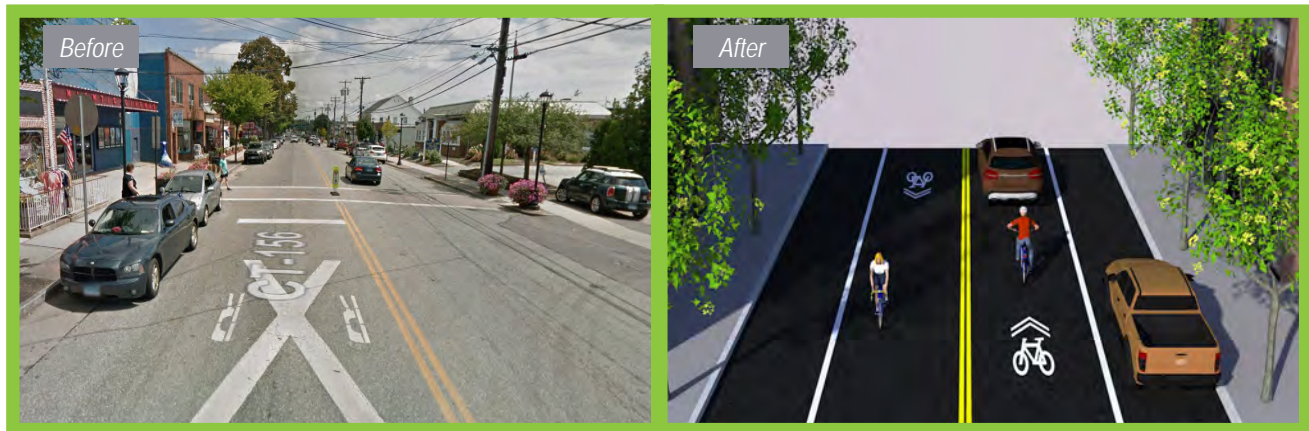
Recent reports referencing bicycle and pedestrian infrastructure in East Lyme include:

- Plan of Conservation and Development (2009)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. **Niantic River Bridge (Route 156) to Pennsylvania Avenue (Route 161):** provide protected bi-directional bike lane on north side of Route 156 to bridge; shift lanes south and widen existing bridge sidewalk to accommodate bi-directional bike lanes and pedestrians (requires cross-jurisdictional cooperation with Waterford); continue on north side of Main Street and connect to existing boardwalk side path; continue bi-directional side path on widened sidewalk to Pennsylvania Avenue (may require narrowing Main Street to 11' lanes). Option 1: end bi-directional bike lanes on Main St at Smith Ave and direct cyclists onto Smith Ave to Grand Street and create Bicycle Boulevard on Grand St from Smith Ave to Pennsylvania Ave. Option 2: provide standard, marked bike lanes from Niantic River bridge to Pennsylvania Avenue (requires cross-jurisdictional cooperation with Waterford)



2. **Main Street (Route 156) Niantic Village (kiosk/wayfinding point):** provide sharrows and R4-11

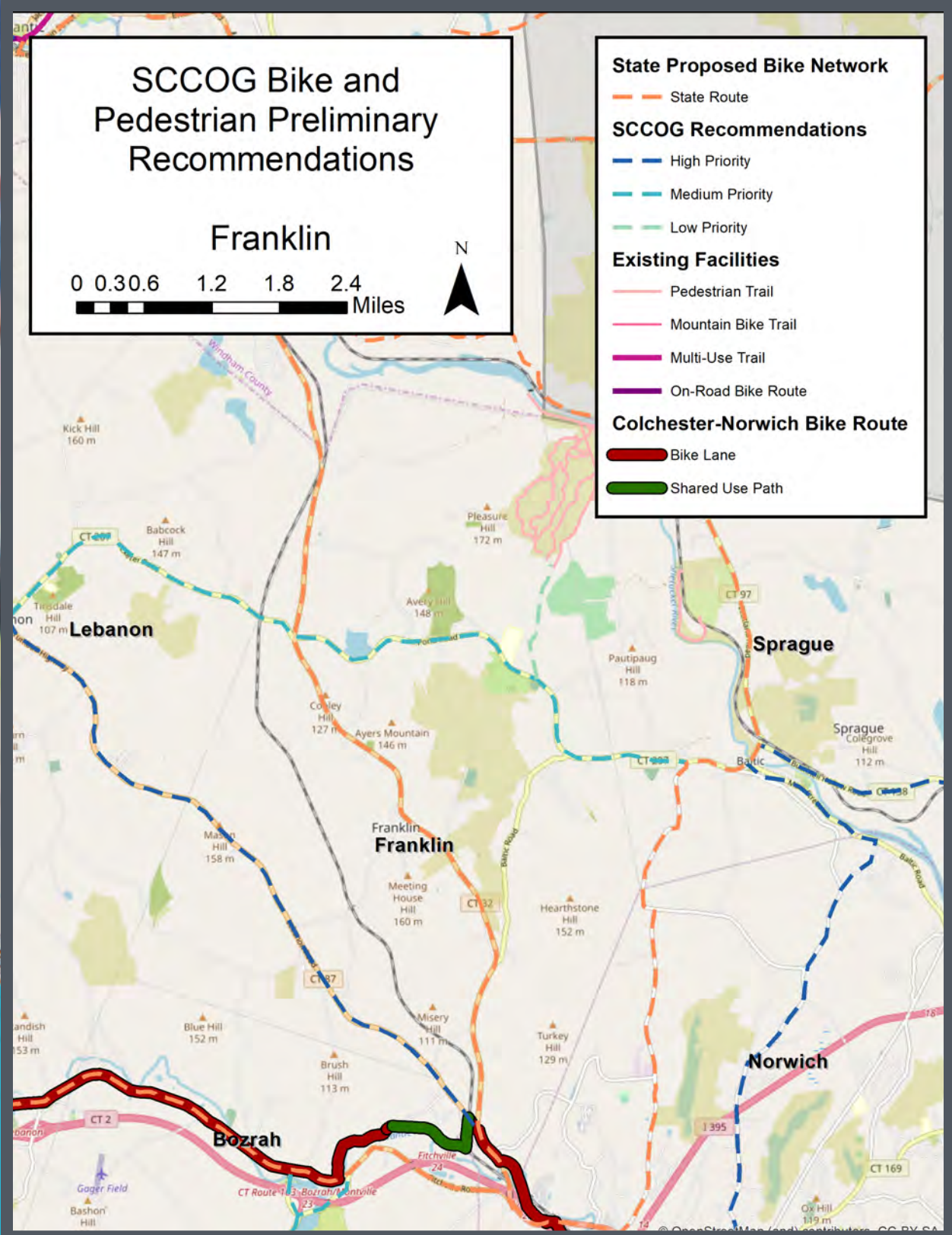


3. **“Bikes May Use Full Lane” signs from Pennsylvania Avenue to East Pattagansett Road**
West Main Street (Route 156) from Pattagansett Road to Old Lyme Border: provide minimum 4' wide bike lanes on both sides to Old Lyme border (approximately at the intersection with Four Mile River Road), requires cross-jurisdictional cooperation with Old Lyme.



Franklin

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of "Complete Streets" planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Franklin's first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the First Selectman.

Contacts for bike and pedestrian issues in Franklin

Name	Address	Phone/Fax	Email
Mr. Charles W. Grant III First Selectman	7 Meetinghouse Hill Rd. Franklin, CT 06254	Tel: (860) 642-6055 x16 Fax: (860) 642-6606	franklin@99main.com

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Sue Sutherland Greenway Land Trust of Southeastern CT, Inc.	P.O. Box 93 Colchester, CT 06415	Tel: (860) 574-5111 greenwaylandtrust@gmail. com	Land Acquisition Issues, Funding
Chuck Toal Avalonia Land Conservancy, Inc.	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 c.toal@avalonialc.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Franklin officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG's competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Franklin were generated from referencing the CT Statewide Active Transportation Plan's bicycle transportation network map. They are also based on a review of Strava heatmap data.

These recommendations encourage bicycle- and pedestrian-friendly improvements in appropriate locations throughout the town, and specifically for bike-safety improvements to Lebanon Road (Route 87) and sidewalks on Franklin Turnpike (Route 32) from Old Route 32 to Baltic Road (Route 610). Lebanon Road serves as an appropriate bike route that connects to the Lebanon town green and downtown Willimantic.

Route 87 was recommended as a bike route connecting to Lebanon and Windham, as an alternative to the Statewide Active Transportation Plan's recommendation to designate Route 32 as a North/South Route. Strava heat maps shows use by bicyclists on Route 87. Route 32 experiences high traffic volumes.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Franklin. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Create a signed bike route on Norwich Lebanon Road (Rt 87) from the border with Lebanon to Norwich border (requires cross-jurisdictional cooperation with Norwich and Lebanon).

Pedestrian-Oriented Recommendations

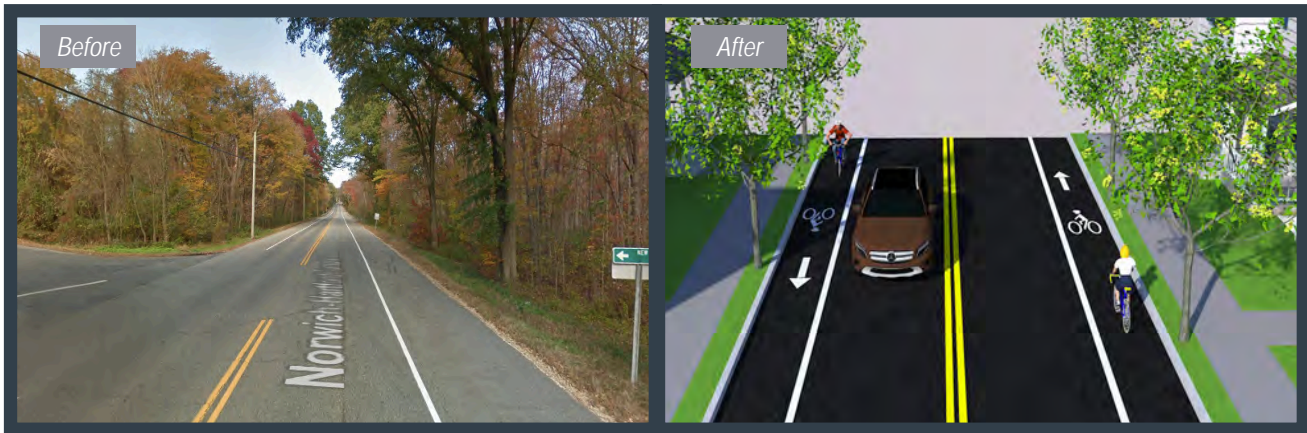
- Franklin Tpk (Rt 32): Add sidewalks from Old Rt 32 to Baltic Rd (Rt 610).
- Provide a new pedestrian only bridge on Yantic Road over the Yantic River.

References

Recent reports referencing bicycle and pedestrian infrastructure in Franklin include:

- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. Create a signed bike route on Norwich Lebanon Road (Rt 87) from the border with Lebanon to Norwich border (requires cross-jurisdictional cooperation with Norwich and Lebanon).



2. Franklin Tpk (Rt 32): Add sidewalks from Old Rt 32 to Baltic Rd (Rt 610).

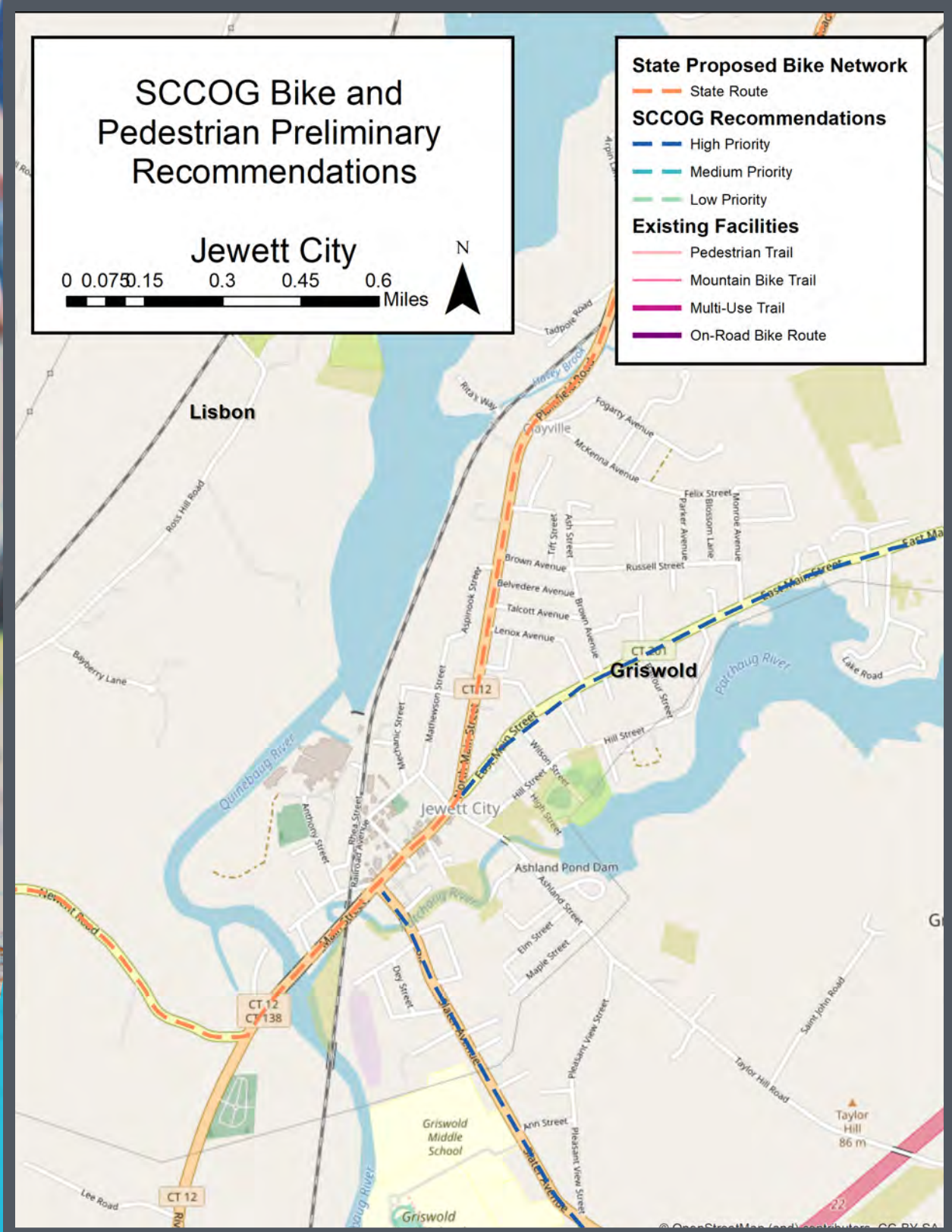


SCCOG



Griswold / Jewett City

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of "Complete Streets" planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Franklin's first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the First Selectman.

Contacts for bike and pedestrian issues in Griswold/Jewett City

Name	Address	Phone/Fax	Email
Mr. Todd Babbitt First Selectman	28 Main Street Jewett City, CT 06351	Tel: (860) 376-7060 x2201 Fax: (860) 376-7109	firstselectman@griswold-ct.org

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Mario J. Tristany, Jr. Town Planner	28 Main Street Jewett City, CT 06351	Tel: (860) 376-7060 x2111 townplanner@griswold-ct.org	Local planning
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Sue Sutherland Greenway Land Trust of Southeastern CT, Inc.	P.O. Box 93 Colchester, CT 06415	Tel: (860) 574-5111 greenwaylandtrust@gmail.com	Land Acquisition Issues, Funding
Dennis Main Avalonia Land Conservancy, Inc.	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 president@avalonialc.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG's competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Griswold/Jewett City were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map. They were also guided by local knowledge of the area. Improvements to the pedestrian landscape in Griswold/Jewett City have been mentioned in both the 2016 Road Safety Audit of Main Street-North Main Street between Newent Road and Green Avenue, and the 2017 Plan of Conservation and Development (POCD). The POCD specifically requests "Support [for] the Capital Improvement Plan for targeted sidewalk construction and maintenance," and "Expand and maintain sidewalks in Jewett City and Pachaug, and to establish sidewalks in areas of commercial development and municipal buildings." According to the Regional Metropolitan Transportation Plan, sidewalks are proposed for the intersection of 138/164 in Jewett City in the 2024-2028 timeframe.

The Road Safety Audit also proposes a new shared-use path alongside the Quinebaug River from the Griswold High School football field to the end of Wedgewood Drive. This project benefits both cyclists and pedestrians. Sharrows on Jewett City Main Street (Route 12 & 201) will improve the awareness that cyclists may share the road. This could also be augmented by signage that indicates that "Bicycles may use full lane."

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Griswold/Jewett City. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Provide shared-use path from Griswold High School football field along Quinebaug River to Wedgewood Drive terminus. (Quinebaug River Greenway Extension)
- Jewett City Main St (Rt 12 & 201) from Slater Ave to Ashland Ave: provide sharrows and R4-11 "Bikes May Use Full Lane" signs.
- Route 201 from Main St Jewett City to N Stonington border: Widen roadway for bike-safe shoulders where needed & provide Bike Route signage (requires cross-jurisdictional cooperation with N Stonington).

Pedestrian-Oriented Recommendations

- Install a mid-block crossing of Main Street at the south corner of Soule Street near Fanning Court and Soule Street, including curb extensions in front of the fire hydrant at Soule/Main and opposite it at the mouth of Fanning Court.
- Implement curb extensions and streetscape improvements on Main St as recommended in the 2011 Jewett City Main Street Corridor Master Plan and the 2016 Road Safety Audit.
- Jewett City: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See "Appendix K ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list.

References

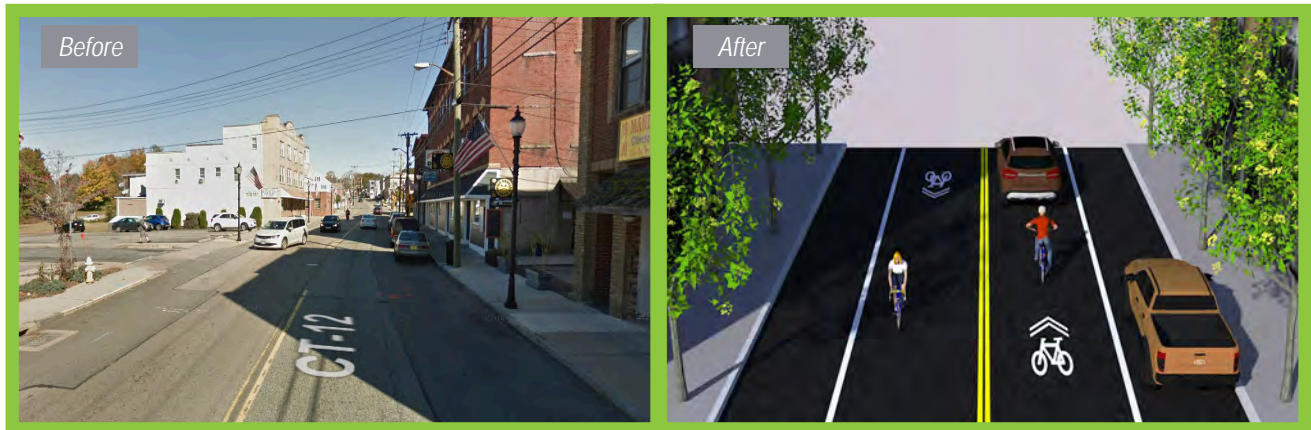
Recent reports referencing bicycle and pedestrian infrastructure in Griswold/Jewett City include:

- Jewett City Main Street Corridor and Streetscape Improvement Master Plan (2011)
- Road Safety Audit: Main Street-North Main Street (State Route 12) between Newent Road and Green Avenue (2016)
- Plan of Conservation and Development 2017 – 2027
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

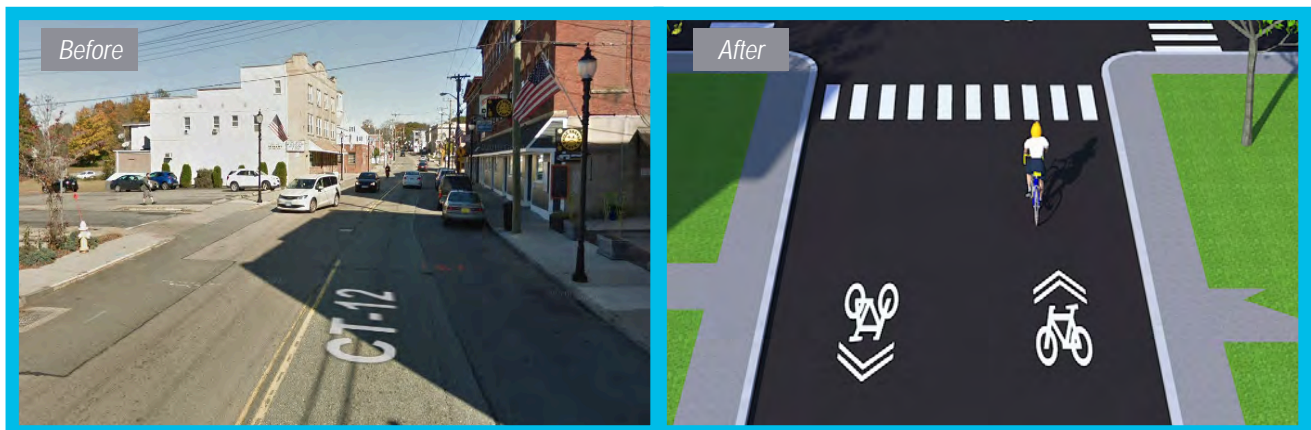
1. Provide shared-use path from Griswold High School football field along the Quinebaug River to the Wedgewood Drive terminus



2. Jewett City Main Street (Route 12 & 201) from Slater Avenue to Ashland Avenue: provide sharrows and R4-11 "Bikes May Use Full Lane" signs



3. Implement curb extensions and streetscape improvements on Main Street as recommended in the 2011 Jewett City Main Street Corridor Master Plan and the 2016 Road Safety Audit.

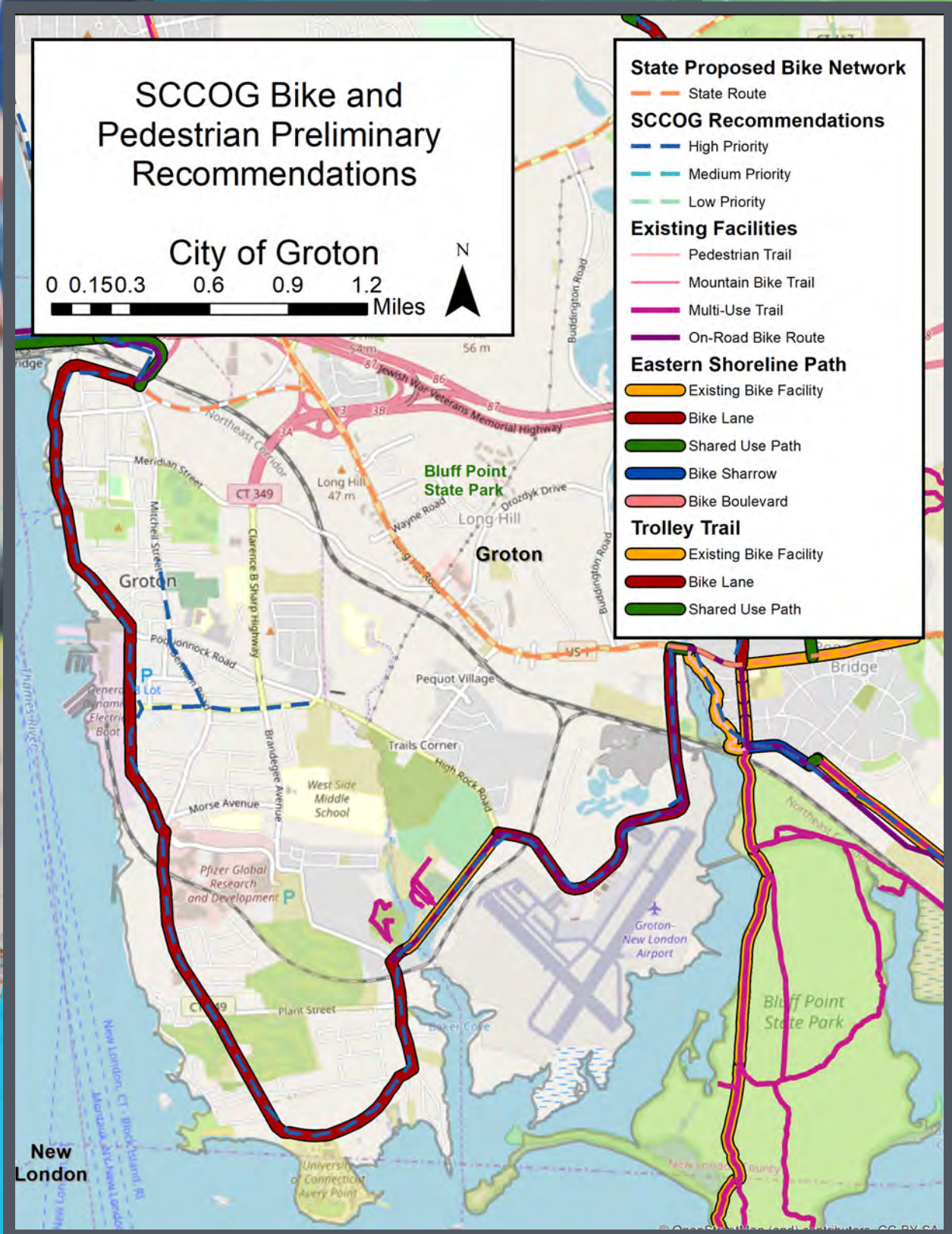


SCCOG



City of Groton

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized vehicle dependent society. The concept of "Complete Streets" planning was adopted by the Connecticut Department of Transportation in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the shift from conventional planning and engineering practices occurs.

Government Structure and Engagement Process

The first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA). In the City of Groton, LTA is the designated role of the Mayor.

Contacts for bike and pedestrian issues in City of Groton

Name	Address	Phone/Fax	Email
Mr. Keith Hedrick Mayor of Groton	295 Meridian Street Groton, CT 06340	Tel: (860) 446-4101 Fax: (860) 445-4058	mayor@cityofgroton-ct.gov

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Dennis G. Goderre ASLA, AICP CUD City Planner City of Groton	295 Meridian Street Groton, CT 06340	Tel: 860-446-4169 goderred@cityofgroton-ct.gov	Regional planning projects, funding, inter-town and inter-state (CT/RI) coordination, Nat'l Park Service Technical Assistance
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Chuck Toal Avalonia Land Conservancy	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 c.toal@avalonialc.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Officials of the City of Groton are encouraged to use the Form in "Appendix M" of this report to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee will review all proposals and submit to SCCOG for funding if the proposal is deemed viable and is approved through the local planning process.

Background

The recommendations for the City of Groton were generated from public input received through the map. social site created for this project, as well as referencing the state bicycle transportation network, and local knowledge of the area. Improvements to Shennecossett Road make Pfizer's campus more accessible by active transportation means. Creation of a Bicycle Boulevard on Smith St from Meridian Street to Thames Street extends the network being developed along Thames Street and is a low-cost and viable solution for downtown bicycle access, given the low traffic speeds.

The City Planning and Zoning Commission endorsed the Town of Groton's 2005 Bicycle, Pedestrian and Trails Master Plan. The City's current Plan of Conservation and Development (POCD) states that "the City should continue to refer to this Plan and act on opportunities to implement its recommendations. The City intends to establish, maintain and enhance an overall pedestrian / bicycle network in the City. The eventual goal is to interconnect all of elements (sidewalks, paths, trails, bikeways, etc.) into a cohesive overall system. This includes the establishment of a boardwalk or other pedestrian access along the Thames River, where feasible."

The POCD further states that "The City intends to consider adopting a "complete streets" philosophy where existing streets, as feasible and appropriate, will be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for walkers, runners, cyclists, and other users of all ages and abilities in addition to the traditional focus on people driving automobiles." It will accomplish this goal by:

- closing gaps in the current sidewalk system,
- adding sidewalks and connections in key areas,
- extending sidewalks to serve key destinations,
- replacing existing sidewalks that have deteriorated.

The "Fixing America's Surface Transportation Act" or "FAST Act," passed in 2015 has made funding for bicycle, pedestrian, and transit projects more flexible than federal funding sources were in the past. The Southeast CT Council of Governments (SCCOG) staff are responsible for advising on available funding sources (see table on page 2). A full explanation of State and Federal funding sources for bicycle and pedestrian infrastructure projects is included in the SCCOG Regional Bicycle and Pedestrian Plan,

Additional funding sources for local match include: Groton's Private Land Trusts, Fundraising through the Boy/Girl Scouts – and other local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to City of Groton. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Provide bike lanes along High Rock Rd and Rainville Rd to Eastern Point Rd
- Smith St from Meridian St to Thames St: Create Bicycle Boulevard.

Eastern Shoreline Path (ESP) Recommendations (east to west)

- Extend Thomas Rd bike lanes south into Groton City turning south along Shennecossett Rd (Rt 349) continuing onto Eastern Point Rd. Provide sharrows and R4-11 "Bikes May Use Full Lane" signs where roadway cannot be widened.
- Thames St: Designate Bike Route w/ sharrows, R4-11 "Bikes May Use Full Lane" signs and wayfinding signs.
- Improve the Gold Star Bridge shared use access pathway: widen pavement, lessen steep grade, add lighting and wayfinding signs (kiosk/wayfinding point). Note: Existing bridge path has sub-standard width with hazardous conditions for pedestrians and bicyclists, especially at sign foundation choke points, common use of path by motorized scooters, and limited sight lines on the west side curve.
- Preferred Option: Construct new protected Shared Use Path on Gold Star Bridge northbound span as part of bridge renovation project. Bridge path accessway would connect to Bridge Street.

Pedestrian-Oriented Recommendations

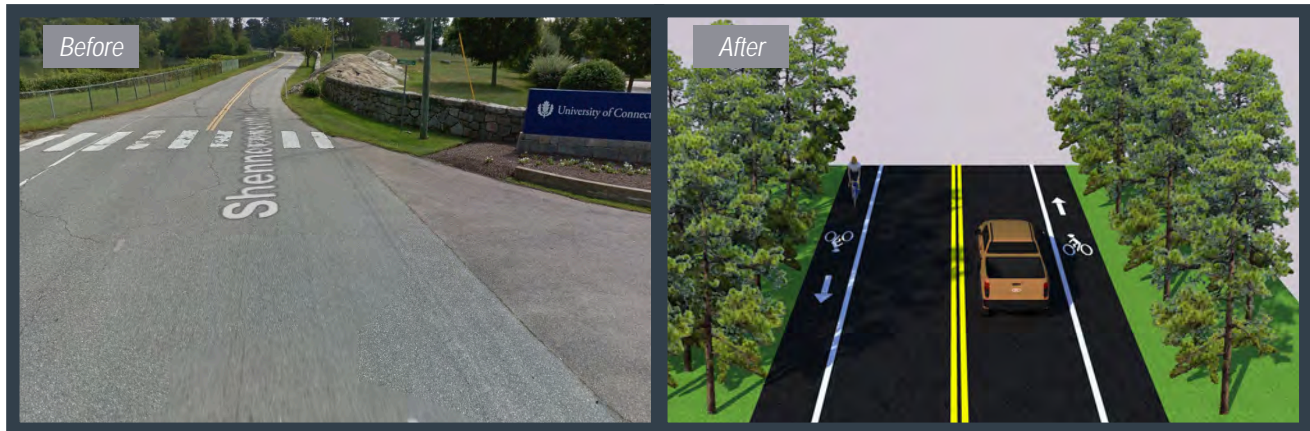
- Shennecossett Rd: Add sidewalks.
- Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See "Appendix K ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list.

References

Recent reports referencing bicycle and pedestrian infrastructure in the City of Groton include:

- Groton Bicycle, Pedestrian, and Trails Master Plan (2005)
- City of Groton Plan of Conservation and Development
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. **Extend Thomas Rd bike lanes south into Groton City along Shennecossett Rd (Rt 349) and Eastern Point Rd. to Thames Street.**



2. **Improve the Gold Star Bridge shared use access path: widen pavement, lessen steep grade, add lighting and wayfinding signs.**

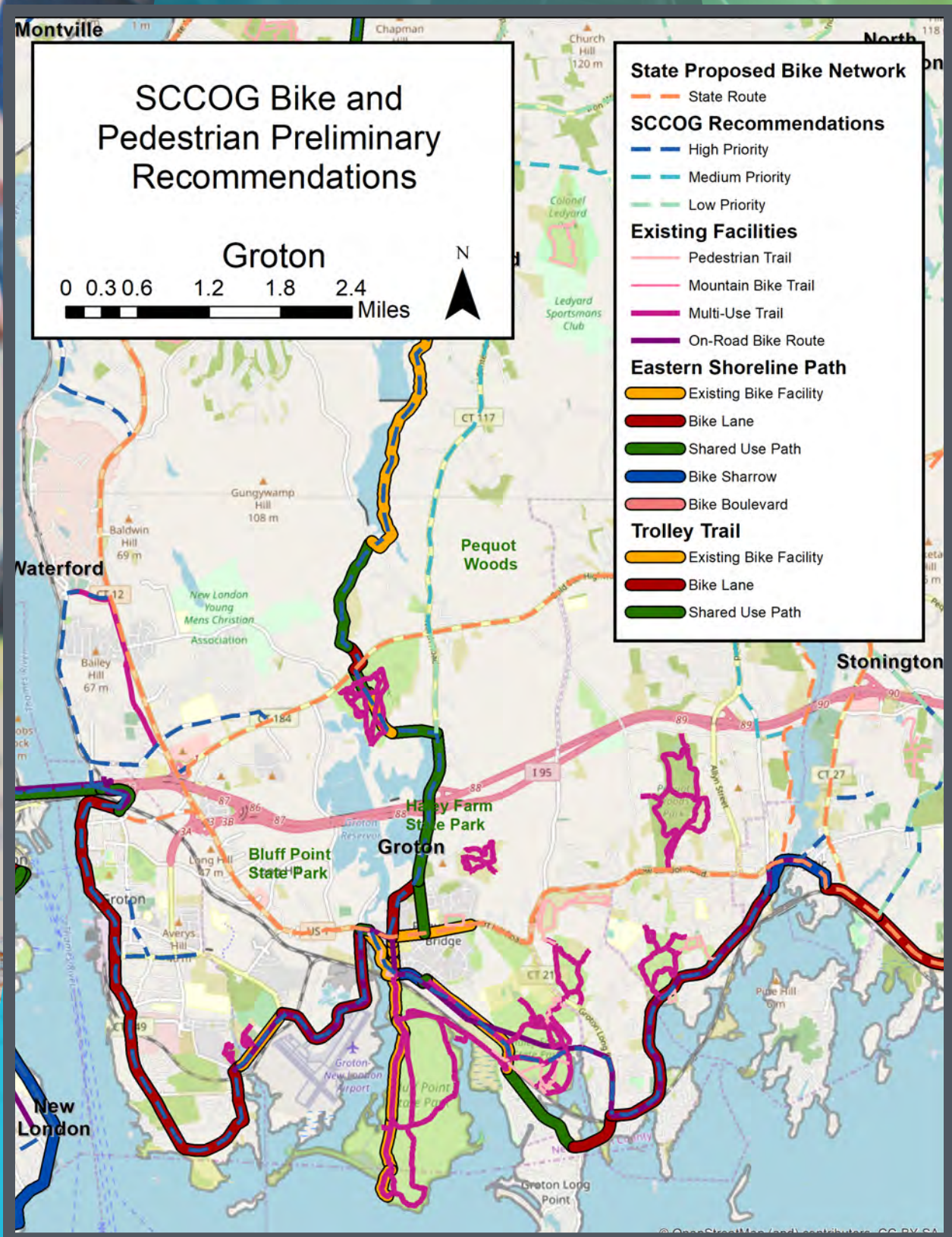


3. **Smith St from Meridian St to Thames St: Create Bicycle Boulevard**



Town of Groton

Bike and Pedestrian Improvements Toolkit



Introduction

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Government Structure and Engagement Process

The first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA). In the Town of Groton, and in Long Point, the Chief of Police acts as LTA.

Contacts for bike and pedestrian issues in Town of Groton

Name	Address	Phone/Fax	Email
Mr. Louis J. Fusaro Chief of Police Town of Groton	45 Fort Hill Road Groton, CT 06340	Tel: (860) 441-6712	lfusaro@groton-ct.gov
Mr. David P. Knowles Chief of Police Groton Long Point	3 Atlantic Avenue Groton, CT 06340	Tel: (860) 536-4921	dknowles@glppd.org

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Jonathan J. Reiner, AICP, Director of Planning, Town of Groton	134 Groton Long Point Road Groton, CT 06340	Tel: (860) 446-5970 Fax: (860) 448-4094 jreiner@groton-ct.gov	Local planning, Funding
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Joan Smith Groton Open Space Association, Inc.	P.O. Box 9187 Groton, CT 06340	Tel: (860) 536-9811 Dsmith0705@sbcglobal.net	Land acquisition, open space
Chuck Toal Avalonia Land Conservancy, Inc.	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 c.toal@avalonialc.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP - Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Groton officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG's competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for the Town of Groton were generated from public input received through the map, social site created for the SCCOG Regional Bicycle & Pedestrian Plan, as well as the CT Statewide Active Transportation Plan's bicycle transportation network map. They are also based on local knowledge of the area. These recommendations encourage bicycle and pedestrian-friendly improvements in appropriate locations throughout the town and specifically to routes 1, 184, 215, and on local roads and trails. Some of the state route improvements continue into adjoining towns.

This study proposes the Eastern Shoreline Path, a continuous bike-friendly corridor from the Rhode Island line in Pawcatuck to the Connecticut River I-95 Chapman Bridge. Groton's segment includes improvements to Route 1 in downtown Mystic and Poquonnock, Route 215, the G & S Trail, South Road and continuing through the City to the Gold Star Bridge.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to the Town of Groton. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Route 184 from intersection with King's Hwy to Stonington border: Narrow lanes and provide minor widening where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.
- Route 1 from Grasso Tech/Sutton Park entrance to Walker Hill Rd/Toll Gate Rd: Infill sidewalk gaps, provide bike lanes, widen roadway where needed and at intersections with turn lanes to provide continuous bike lanes.
- Route 12 from I-95 to Ledyard border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.
- Crystal Lake Rd/Rt 12/Pleasant Valley Rd S/Walker Hill Rd multi-use path: add wayfinding signage directing users to Navy base and Gold Star Bridge.
- River Road: Convert existing two-lane roadway into single center lane with Advisory Shoulders (aka Advisory Bike Lanes) if feasible.
- Haley Farm Shared Use Path: Improve surfacing for safe commuter bike use (permeable bituminous recommended).
- Implement the town's section of Tri-Town Trail.
- Colonel Ledyard Hwy: Add bike lanes from Rt 184 to Ledyard border. Coordinate with Ledyard.

Eastern Shoreline Path (ESP) Recommendations (east to west)

- Provide "Eastern Shoreline Path Bikeway" (ESP) and wayfinding signs at intervals throughout the route.
- Provide sharrows, R4-11 "Bikes May Use Full Lane" signs on W Main St (US Rt 1) from Mystic River bridge to Water St (Rt 215); continuing along Water St to intersection with High St/Latham St and Fort Rachel Pl; continuing on Noank Rd (Rt 215, currently a CTDOT signed "Bike Route") with travel lanes narrowed to 10' and/or widen roadway to provide 4' wide min bike lanes both sides to intersection with Prospect Hill Rd; continue on Rt 215 to intersection with Groton Long Point Rd; continuing south on GLP Rd providing bike lanes to junction with southern terminus of Groton Utilities/City of Groton/Town

of Groton former trolley line ROW.

- Construct Shared Use Path (G&S Trolley Trail Phase 2) within ROW and connect to southeastern terminus of G & S Trolley Trail Phase 1 at Amtrak bike/ped bridge (kiosk/wayfinding point).
- Construct Shared Use Path connection from Northwestern G&S Trail terminus at Knoxville Ct to Industrial Dr; and continue across Depot Rd to southern terminus of Poquonnock River Boardwalk.
- From northern terminus of boardwalk (kiosk/wayfinding point), construct bi-directional protected bike lanes for approx. 360 ft on south side of Poquonnock Rd (Rt 1) to South Rd (8' min width recommended).
- Continuing onto South Rd (Rt 649, currently a CTDOT signed "Bike Route"); with travel lanes narrowed to 10' and/or widen roadway to provide 4' wide min bike lanes both sides to intersection with Thomas Rd.
- Extend existing Thomas Rd bike lanes along Tower Ave and South Rd (Rt 649) to Rt 1.

Pedestrian-Oriented Recommendations

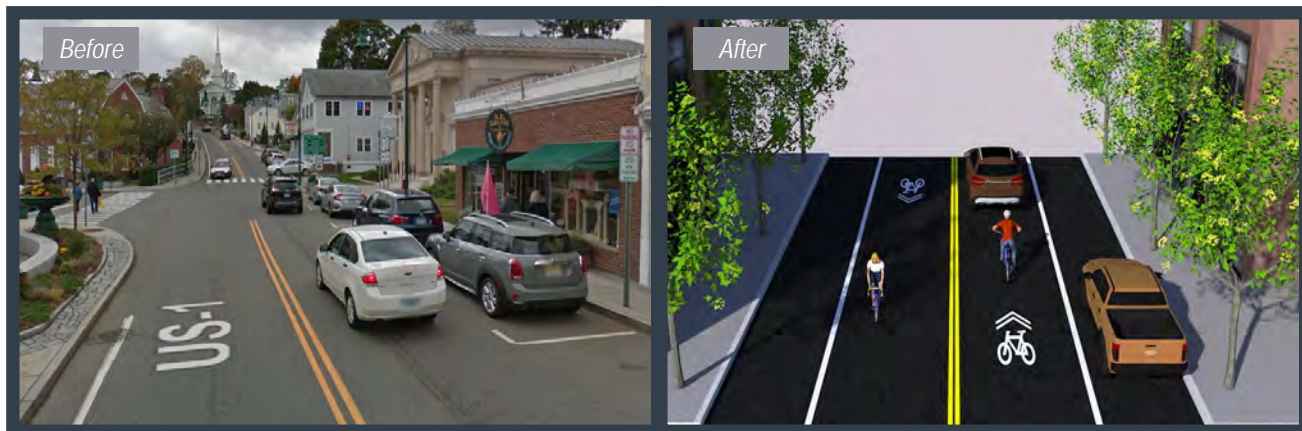
- Route 1 from Grasso Tech/Sutton Park to Walker Hill Rd/Toll Gate Rd: Infill sidewalk gaps
- Route 1 from Judson Ave to Groton Long Point Rd: Infill sidewalk gaps.
- Route 1 from Grasso Tech/Sutton Park entrance to Rt 12 Walker Hill Rd/Toll Gate Rd intersection: Infill sidewalk gaps.
- Route 1/Poquonnock district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See "Appendix K ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list.

References

Recent reports referencing bicycle and pedestrian infrastructure in Groton include:

- Groton Plan of Conservation and Development
- Groton Plan of Conservation and Development/ Municipal Coastal Program Update
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

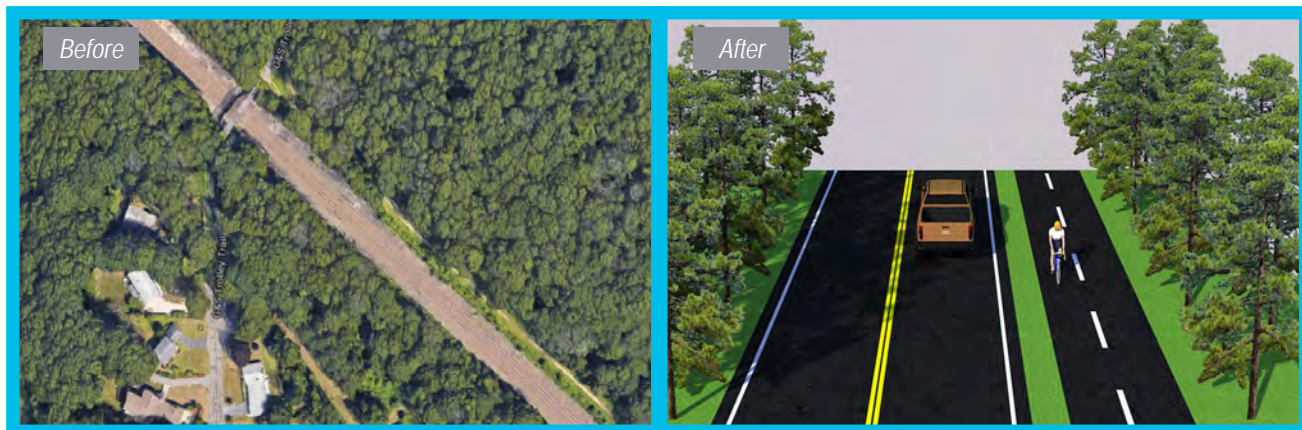
1. **Route 1 West Main Street Mystic, onto Water Street (Route 215) to High Street: Provide sharrows and “Bikes May Use Full Lane” signage**



2. **Noank Road (Route 215) from High Street to Groton Long Point Road: Widen roadway &/or narrow lanes to 10' to provide bike-safe shoulders and shift sidewalks within ROW. Install sharrows and “Bikes May Use Full Lane” signage through narrow 25 mph Noank segment**



3. **Construct Shared Use Path (G&S Trolley Trail Phase 2) within ROW and connect to southeastern terminus of G & S Trolley Trail Phase 1 at Amtrak bike/ped bridge (kiosk/wayfinding point).**

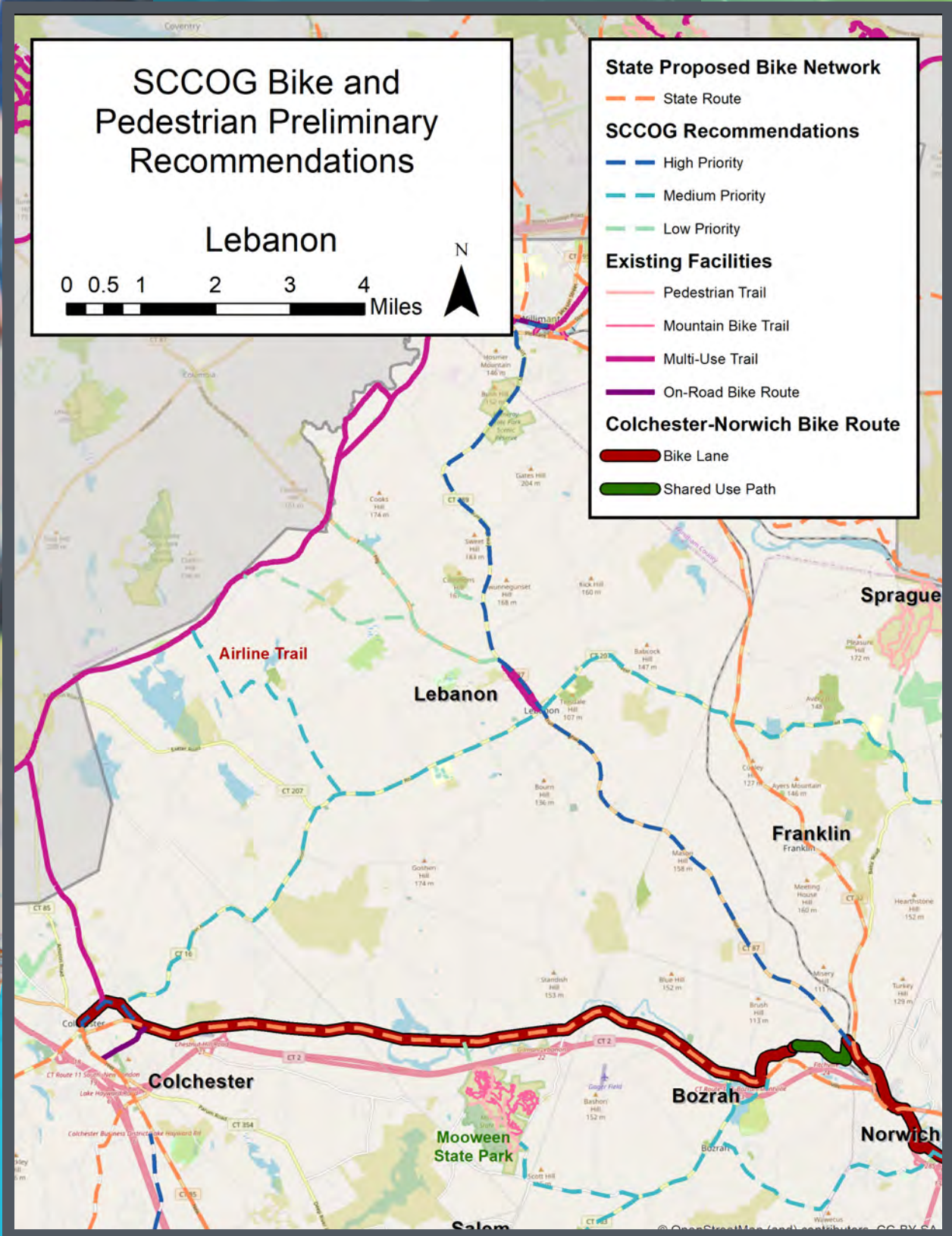


SCCOG



Lebanon

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Lebanon’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the First Selectman.

Contacts for bike and pedestrian issues in Lebanon

Name	Address	Phone/Fax	Email
Ms. Betsy Petrie First Selectman	579 Exeter Road Lebanon, CT 06249	Tel: (860) 642-6100 Fax: (860) 642-7716	bpetrie@lebanonct.gov

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Philip Chester, AICP Town Planner Town of Lebanon	579 Exeter Road Lebanon, CT 06249	Tel: (860) 642-2006 pchester@lebanonct.gov	Local planning, funding
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Michael Hveem Joshua’s Tract Conservation & Historic Trust, Inc.	P.O. Box 4 Mansfield Center, CT 06250	Tel: (860) 429-9023 michael.hveem@joshuastrust.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Lebanon officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The Town of Lebanon maintains the following properties that contain recreational trails:

- 1.6-mile stone-dust pedestrian path around Lebanon Town Green, which is heavily used by both Lebanon and regional residents

- 7.5 miles of the Air Line State Park Trail, which is heavily used by bicyclists and pedestrians
- Commons Hill and Five-Mile Rock Trails

In addition to the above trails, the New England Bike Association is in the process of developing mountain bike trails at Mooween State Park. The “Air Line State Park Trail 12 Town Task Force” has been funded by a 2019 State of Connecticut Department of Energy and Environmental Protection Trails Grant. Lebanon will be part of the Task Force that will guide a Master Plan for the Air Line Trail.

Lebanon’s Plan of Conservation and Development states that “The Town should petition Connecticut DOT to include the installation of bicycle lanes where feasible when resurfacing Routes 87, 207 and 289.

The recommendations for the Town of Lebanon were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan’s bicycle transportation network map. They were also guided by discussions with planning staff in Lebanon and Colchester. A signed bike route along State Route 616 (Norwich-Colchester Turnpike) in Lebanon requires cross-jurisdictional cooperation with Bozrah, Colchester and Norwich – as it is a state route that crosses through each of them. For the CTDOT to approve bike route signage on Route 616 in Colchester, the project must be supported in all communities. This project provides connectivity throughout the region, and sets important precedent for collaboration across municipalities. A map and description of the route are provided in the Recommendations Chapter of this plan.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Lebanon. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Create a signed bike route on Norwich Ave (State Route 616) from the border with Colchester to the border with Bozrah (requires cross-jurisdictional cooperation with Colchester and Bozrah).
- Create a signed bike route on Beaumont Hwy (Rt 289)/Trumbull Hwy (Rt 87) from the border with Windham to the Franklin border (requires cross-jurisdictional cooperation with Windham and Franklin).
- Camp Moween Rd from Norwich-Colchester Tpk (Rt 616) to Moween State Park trail head: Provide shared lane.

Pedestrian-Oriented Recommendations

- Town Green: Provide sidewalks on the south end of the green connecting Town Hall, Library, Community Center, and post office.
- Extend sidewalks along River Rd (Rt 12) north from Lisbon Landing entrance road to Jewett City.

References

Recent reports referencing bicycle and pedestrian infrastructure in Lebanon include:

- Lebanon Plan of Conservation and Development (2010)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. Create a signed bike route on Norwich Avenue (State Route 616) from the border with Colchester to the border with Bozrah (requires cross-jurisdictional cooperation with Colchester and Bozrah).



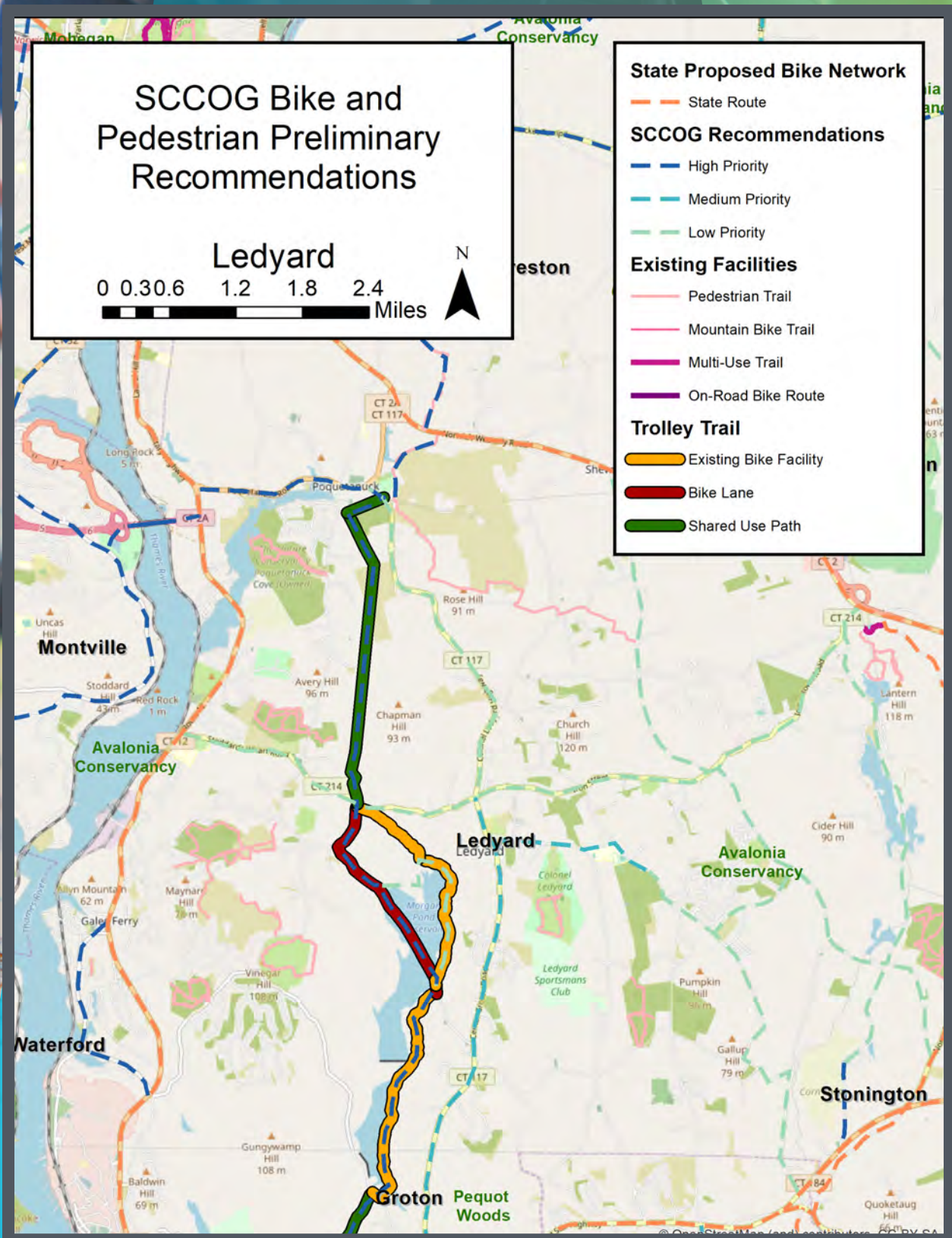
2. Create a signed bike route on Beaumont Highway (Route 289)/Trumbull Highway (Route 87) from the border with Windham to the Franklin border (requires cross-jurisdictional cooperation with Windham and Franklin)



3. Camp Moween Rd from Norwich-Colchester Turnpike (Rt 616) to Moween State Park trail head: Provide shared lane.



Ledyard Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Ledyard’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the Police Chief.

Contacts for bike and pedestrian issues in Ledyard

Name	Address	Phone/Fax	Email
Mr. John J. Rich Chief of Police	11 Lorenz Parkway Ledyard, CT 06339	Tel: (860) 464-6400 Fax: (860) 464-8455	chief.rich@ledyardct.org

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Elizabeth Burdick Planning Director Town of Ledyard	Planning & Development Dept., 741 Colonel Ledyard Hwy., Ledyard, CT 06339	Tel: (860) 464-3215 Fax: (860) 464-1126 planner@ledyardct.org	Local planning
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
FHWA Office of Tribal Transportation (OTT)	https://flh.fhwa.dot.gov/ programs/ttp/		Administers the Tribal Transportation Program, provides oversight of direct funding agreements with recognized Tribes, supports FHWA activities affecting tribal transportation - including grants awarded to Tribes, and the transfer of funds from States and local governments to Tribes.
Dennis Main Avalonia Land Conservancy, Inc.	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 president@avalonialc.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP - Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG's competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Ledyard were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map, and local knowledge of the area.

Ledyard's 2017 Responsible Growth and Transit-Oriented Development (TOD) Program, Phase I recommendations were to make highway improvements along the Colonel Ledyard Highway (Route 117) to Gallup Hill Road.

This project will modify the roadway width to accommodate full bike lanes in both directions. A 5' wide concrete sidewalk will be built along the north side of the roadway, where the High School, businesses and Ledyard Center are accessed. New ADA crosswalks will be added at all intersections to facilitate safe passage. This is the first phase of a multi-phase project, which will extend the bike lanes and sidewalk south connecting additional neighborhoods – eventually to the Town of Groton. The recommendations shown in this Toolkit acknowledge and build on the Responsible Growth and TOD Program's Phase I recommendations. They will encourage bicycle and pedestrian-friendly improvements in appropriate locations throughout the town and specifically to Gallup Hill Road, Ledyard Center, Route 12 in Gales Ferry, and the Tri-Town Trail.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Ledyard. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Colonel Ledyard Hwy: Add bike lanes from Groton border, past Ledyard High School to Rt 117. Coordinate with Groton.
- Ledyard Center - Route 117: Remove north-bound right-turn lane onto Rt 214 and replace with bike-safe shoulders.
- Route 12 from Groton border to Preston border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.
- Implement the town's section of Tri-Town Trail.
- Interconnect various off-road shared use trails on open space parcels with on-road bike lanes or shoulders.

Pedestrian-Oriented Recommendations

- Route 117 in Ledyard Center: Infill gaps in sidewalk network.
- Colonel Ledyard Hwy: Add sidewalks from High School to Rt 117.
- Route 12 Gales Ferry: Expand sidewalk network to commercial developments.

References

Recent reports referencing bicycle and pedestrian infrastructure in Ledyard include:

- Plan of Conservation and Development (2005)
- Responsible Growth and Transit Oriented Development Program (2017)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. **Colonel Ledyard Highway: Add bike lanes from Groton border, past Ledyard High School to Route 117. Requires cross-jurisdictional coordination with Groton.**



2. **Ledyard Center - Route 117: Remove north-bound right-turn lane onto Route 214 and replace with bike-safe shoulders.**

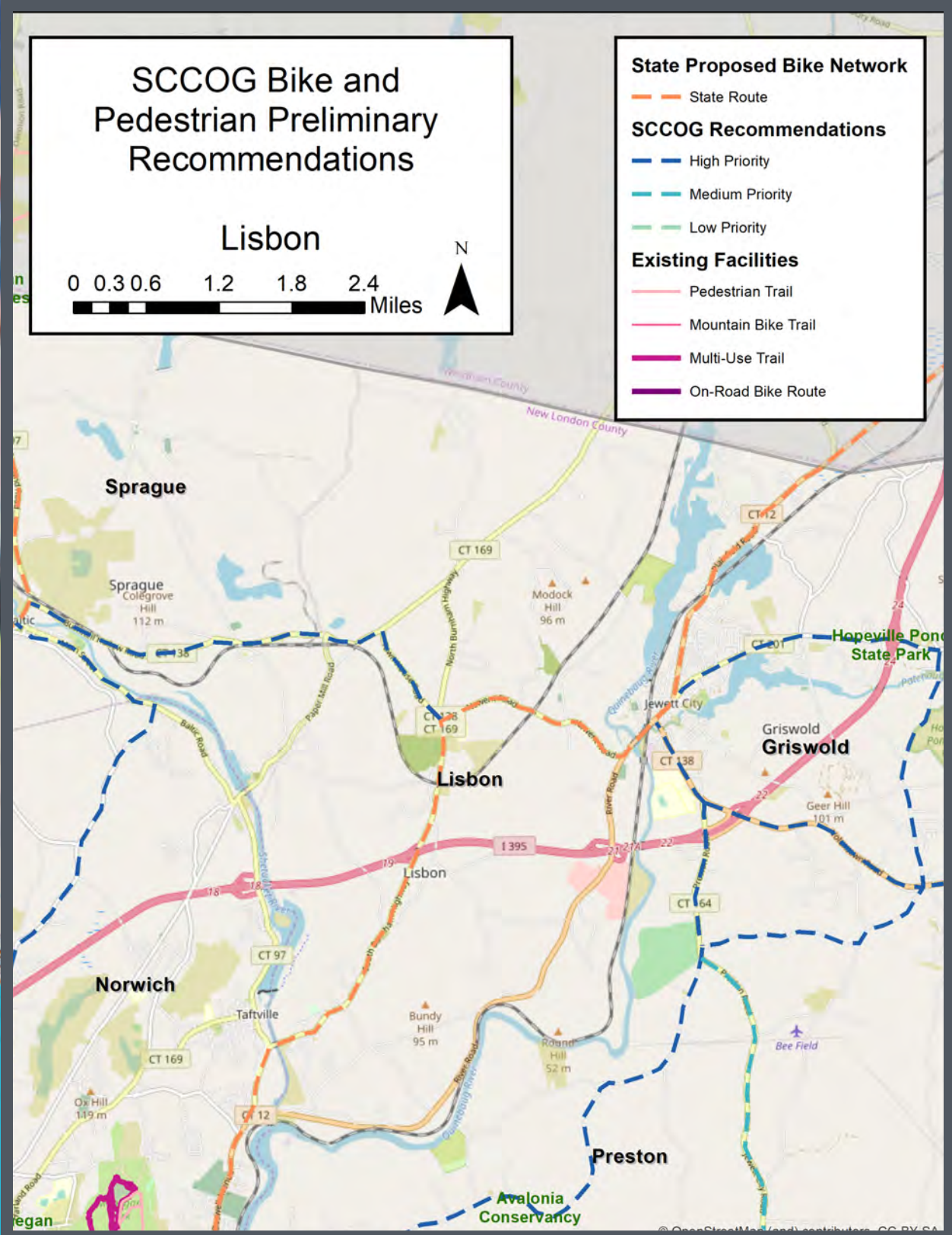


3. **Route 12 from Groton border to Preston border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder**



Lisbon

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Lisbon’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the First Selectman.

Contacts for bike and pedestrian issues in Lisbon

Name	Address	Phone/Fax	Email
Mr. Thomas W. Sparkman First Selectman	1 Newent Road Lisbon, CT 06351	Tel: (860) 376-3400 Fax: (860) 376-6545	tsparkman@lisbonct.com

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Lee Dunbar Eastern Connecticut Forest Landowners Association/ Wolf Den Land Trust	P.O. Box 404 Brooklyn, CT 06234	Tel: (860) 617-1152 leedunbarl@gmail.com	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP - Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Lisbon officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Lisbon were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map.

Lisbon has consistently mentioned establishment of “safe and efficient village access with the addition of sidewalks” as a goal in their Plans of Conservation and Development. The Newent village center is comprised of municipal facilities and the Lisbon Central School – all located within walking distance of each other. A sidewalk system to connect these facilities could improve safety for pedestrians – including school children. Southeastern Connecticut's Long Range Regional Transportation Plan (LRTP) for 2011-2040 also identifies proposed bike and pedestrian accommodation, based on roadway sections with relatively low traffic volumes and/or shoulders or sidewalks. Among the recommendations in the LRTP are:

- sidewalks on Route 169 from Preston Allen Road to Kendall Road (east) to Route 169 (north) to Route 138 (Newent Road) to Jewett City, and
- a River Road sidewalk extension on Route 12.

Southeastern Connecticut's Metropolitan Transportation Plan 2019-2045 also shows the River Road sidewalk extension on Route 12 – slated for the 2024-2028 timeframe.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Lisbon. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Rt 138 from Sprague border to Rt 12: Widen roadway where needed for bike-safe shoulders.

Pedestrian-Oriented Recommendations

- Add sidewalks along Newent Rd and S Burnham Hwy (Rt 169) in vicinity of Lisbon Central School.
- Extend sidewalks along River Rd (Rt 12) north and south from Lisbon Landing entrance road to adjacent commercial developments.

References

Recent reports referencing bicycle and pedestrian infrastructure in Lisbon include:

- Plan of Conservation and Development (2016)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. Route 138 from Sprague border to Route 12: Widen roadway where needed for bike-safe shoulders.



2. Add sidewalks along Newent Road (Route 138) and South Burnham Highway (Route 169) in the vicinity of Lisbon Central School.



3. Extend sidewalks along River Road (Route 12) north and south from Lisbon Landing entrance road to adjacent commercial developments

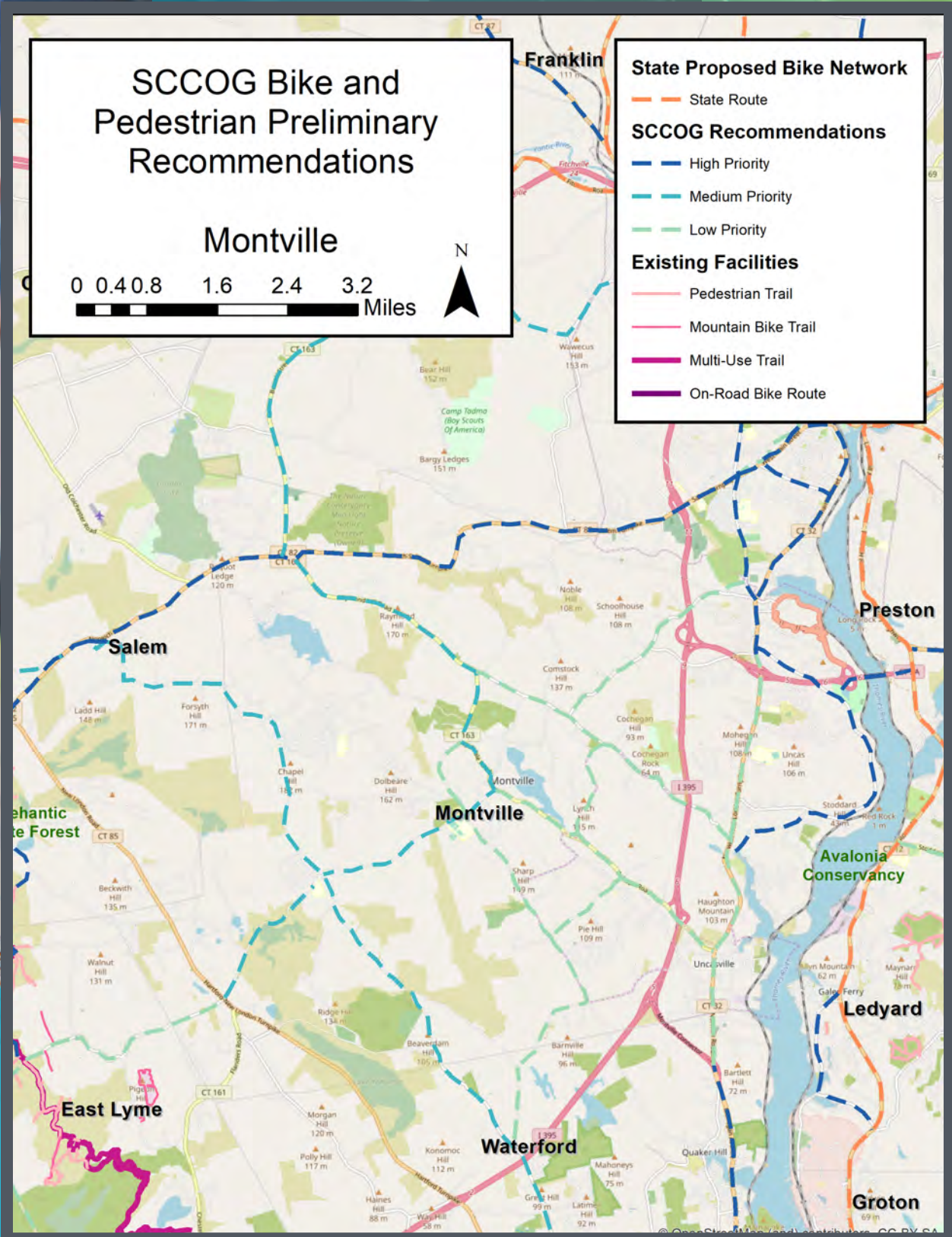


SCCOG



Montville

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Montville’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the Mayor.

Contacts for bike and pedestrian issues in Montville

Name	Address	Phone/Fax	Email
Mr. Ron McDaniel Mayor of Montville	310 Norwich-New London Turnpike Montville, CT 06382	Tel: (860) 848-3030 x301 Fax: (860) 848-4534	rmcdaniel@montville-ct.org

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Marcia A. Vlaun Town Planner	310 Norwich-New London Turnpike Montville, CT 06382	Tel: 860.848.6779 Fax: 860.848.2354 planningdept@montville-ct.org	Local planning
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
FHWA Office of Tribal Transportation (OTT)	https://flh.fhwa.dot.gov/ programs/ttp/		Administers the Tribal Transportation Program, provides oversight of direct funding agreements with recognized Tribes, supports FHWA activities affecting tribal transportation - including grants awarded to Tribes, and the transfer of funds from States and local governments to Tribes.
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Waterford Land Trust	P.O. Box 926 Waterford, CT 06385	info@waterfordlandtrust.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Montville officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG's competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Montville were generated from public input received through the map.social site created for this project, and from referencing the CT Statewide Active Transportation Plan's bicycle transportation network map and the 2019 Southeastern CT Metropolitan Transportation Plan.

Improvements to the bicycle and pedestrian landscape in Montville have been mentioned in the 2010 Plan of Conservation and Development (POCD). The POCD specifically states "Within this context, the Town has ample opportunity to develop a low cost system of on-and-off road bike and pedestrian trails" and describes the Chesterfield Road/Meetinghouse Lane connection: "Meetinghouse Lane is the corridor that links these facilities from Camp Oakdale to the high school. This connection appears safe for pedestrian and cyclists". Opportunities for on road bike routes and shared use trails are mapped in the POCD. The 2016 Road safety audit on Route 32 recommended pedestrian safety measures including sidewalk extensions and crossing upgrades between Red Cedar Avenue and Trading Cove Road/Fitch Hill Road.

These recommendations encourage bicycle and pedestrian-friendly improvements in appropriate locations throughout the town and specifically to Route 82, Massapeag Road corridor, future connections to the proposed Mohegan-Pequot Bridge parallel span, and the Meetinghouse Lane corridor.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Montville. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Create signed north/south bike route on Derry Hill Rd/Massapeag Side Rd/Fort Shantok Rd (Rt 433)
- Chesterfield Rd and Meetinghouse Ln from Montville High School to Raymond Hill Rd: widen roadway for bike-safe shoulders.
- Provide shared use path on proposed second span of Mohegan-Pequot Bridge (Rt 2A), also provide pathway bridge access from adjacent roads to the north (Mohegan Sun) and south.
- Norwich Salem Tpk (Route 82) from Salem border to Norwich border: widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder (requires cross-jurisdictional cooperation with Salem and Norwich).

Pedestrian-Oriented Recommendations

- Rt 32: Infill gaps in sidewalk network
- Chesterfield Rd and Meetinghouse Ln from Montville High School to Raymond Hill Rd: provide

sidewalk on north side.

- Uncasville district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See "Appendix K ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list
- Rt 32 north of Rt2A district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See "Appendix K ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list

References

Recent reports referencing bicycle and pedestrian infrastructure in Montville include:

- Plan of Conservation and Development (2010)
- Norwich-New London Turnpike (Route 32) Road Safety Audit (2016)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

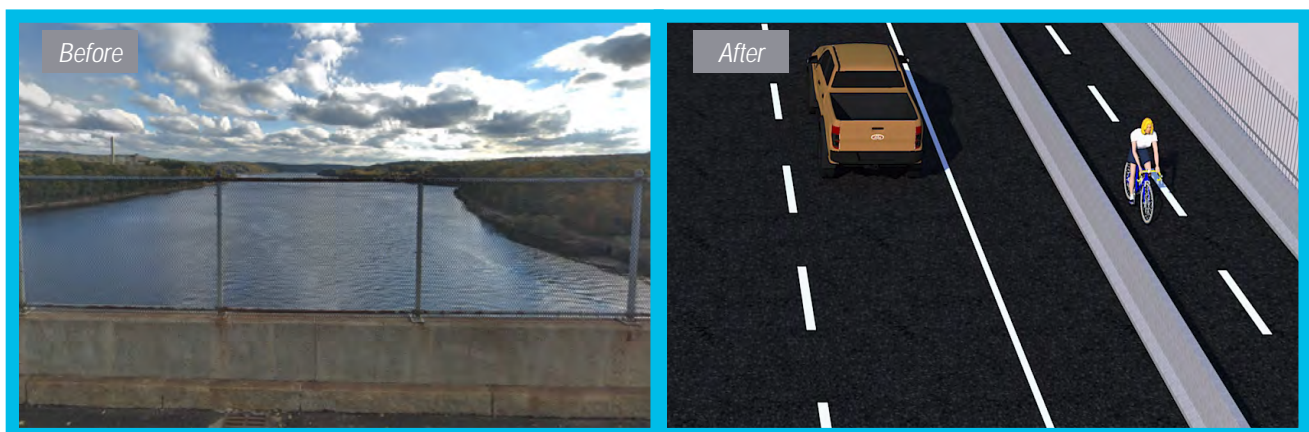
1. Create signed north/south bike route on Derry Hill Road/Massapeag Side Road/Fort Shantok Road (Route 433)



2. Chesterfield Road and Meetinghouse Lane from Montville High School to Raymond Hill Rd: widen roadway for bike-safe shoulders

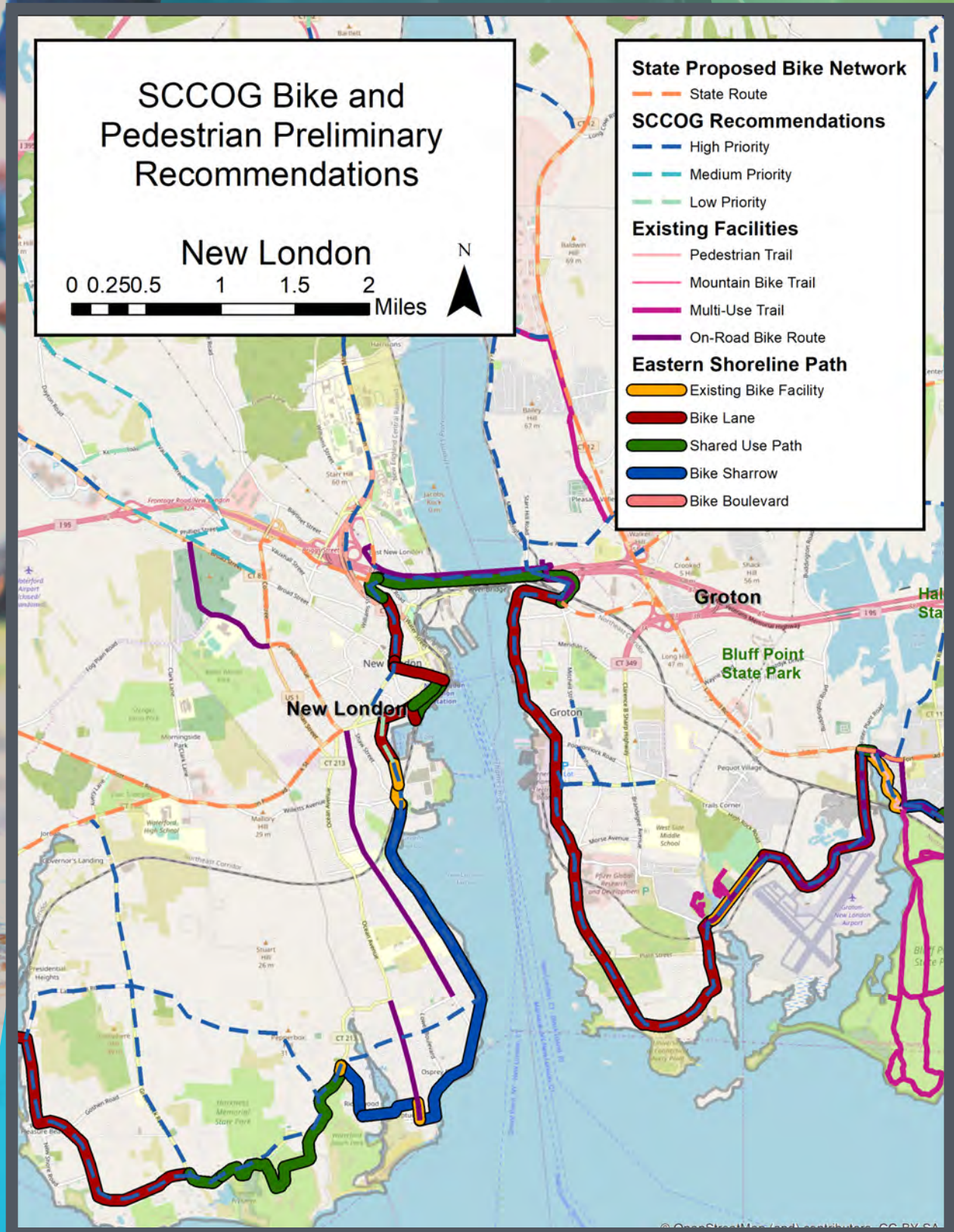


3. Provide shared-use path on proposed second span of Mohegan-Pequot Bridge (Route 2A), also provide pathway bridge access from adjacent roads to the north (Mohegan Sun) and south



New London

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

New London’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the Police Chief.

Contacts for bike and pedestrian issues in New London

Name	Address	Phone/Fax	Email
Peter G Reichard Chief of Police	5 Governor Winthrop Boulevard New London, CT 06320	Tel: (860) 447-5262 Fax: (860) 701-3474	preichard@ci.new-london. ct.us

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Sybil Tetteh City Planner	City Hall, 2nd Floor 181 State Street New London, CT 06320	(860) 437-6380 stetteh@ci.new-london.ct.us	Local planning
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Chuck Toal Avalonia Land Conservancy, Inc.	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 c.toal@avalonialc.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

City of New London officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, city staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for New London were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map, a project workshop held at Otis Library, and local knowledge.

In 2018 New London was notified that it was successful in its bid for a Community Connectivity Grant for "Connectivity Improvements at Governor Winthrop Boulevard, Water Street, and Ferry Street." The \$399,901 was designated for signals, sidewalks, and crosswalks. The following year, New London successfully brought in \$265,000 in State Department of Energy and Environmental Planning (DEEP) Trails Grant funding for the completion of its waterfront Multi-use Trail. These projects stand to have significant positive impact on public health and the local economy by encouraging more active transportation and attracting more bicycle-related tourism.

According to the Regional Metropolitan Transportation Plan, pedestrian improvements are planned on Eugene O'Neill Drive, and pedestrian and bike improvements are planned for Williams Street, in the 2018-2023 timeframe.

This study proposes the Eastern Shoreline Path, a continuous bike-friendly corridor from the Rhode Island line in Pawcatuck to the Connecticut River I-95 Chapman Bridge. New London's segment includes bike lanes on Williams Street, Huntington Street (Route 641), and wayfinding signage on streets designated as City bikeways including Bank, Howard, and Pequot Avenue.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to New London. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Huntington Street (Rt 641) from Williams Street to Federal Street: Add bike lanes or protected bi-directional bike lane.
- Williams Street (Rt 635 partial) from Broad St to Waterford border: Add protected bike lanes.
- Highland Avenue from Pequot Avenue to East Neck Road (Rt 213) Waterford: Create Bicycle Boulevard (requires cross-jurisdictional cooperation with Waterford).
- Add both short-term and long-term bicycle parking at the train station, with additional short-term bicycle parking in the surrounding business district.

Eastern Shoreline Path (ESP) Recommendations (east to west)

- Provide "Eastern Shoreline Path Bikeway" (ESP) and wayfinding signs at intervals throughout the route.
- Provide kiosk/wayfinding point at beginning of Gold Star Bridge Bike/Ped Path. Note: Existing bridge path has sub-standard width with hazardous conditions for pedestrians and bicyclist, especially at sign foundation choke points, common use of path by motorized scooters, and limited sight lines on the west side curve.
- Preferred Option: Construct new protected Shared Use Path on Gold Star Bridge northbound span as part of bridge renovation project. Bridge path accessway would connect to Huntington Street bike

lanes and sidewalks.

- Connect Eastern Shoreline Path route from either Williams Street or Huntington Street (depending on Gold Star Bridge Path outcome). Follow the signed New London Bike Route to Bank Street, Howard Street and Pequot Avenue. From Pequot Avenue near Ocean Beach Park turn left (west) onto Neptune Avenue for one block, turn right (north) onto Ocean Avenue for one block, turn left (west) onto Highland Avenue and continue to the Waterford border at the bridge over Alewife Cove. Create Bicycle Boulevard on Highland Avenue (requires cross-jurisdictional cooperation with Waterford).

Pedestrian-Oriented Recommendations

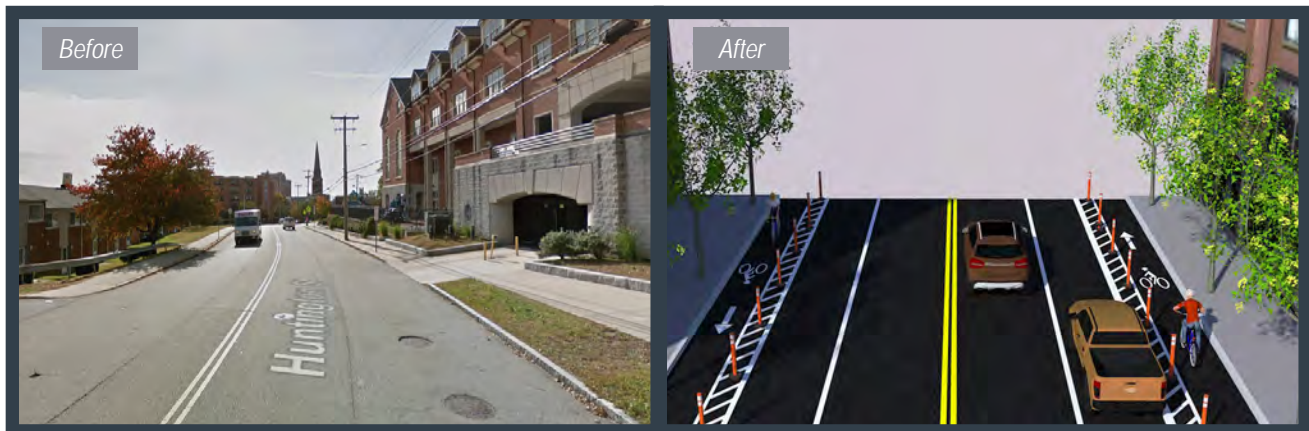
- Extend Waterfront Pathway to Shaw's Cove and Ft Trumbull area.
- Rt 32 from Williams St to Benham Ave: implement traffic calming measures including improved sidewalks, crossings, lighting, and landscaping.
- Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See "Appendix K ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list.

References

Recent reports referencing bicycle and pedestrian infrastructure in New London include:

- Road Safety Audit: Route 32 (2016/2018)
- Plan of Conservation and Development (2017)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. Add bike lanes on Huntington Street (Route 641) from Williams Street to Federal Street



2. Add bike lanes on Williams Street (Route 635 partial) from Broad Street to the Waterford border



3. Highland Avenue from Pequot Avenue to East Neck Road (Route 213) Waterford: Create Bicycle Boulevard (requires cross-jurisdictional cooperation with Waterford)

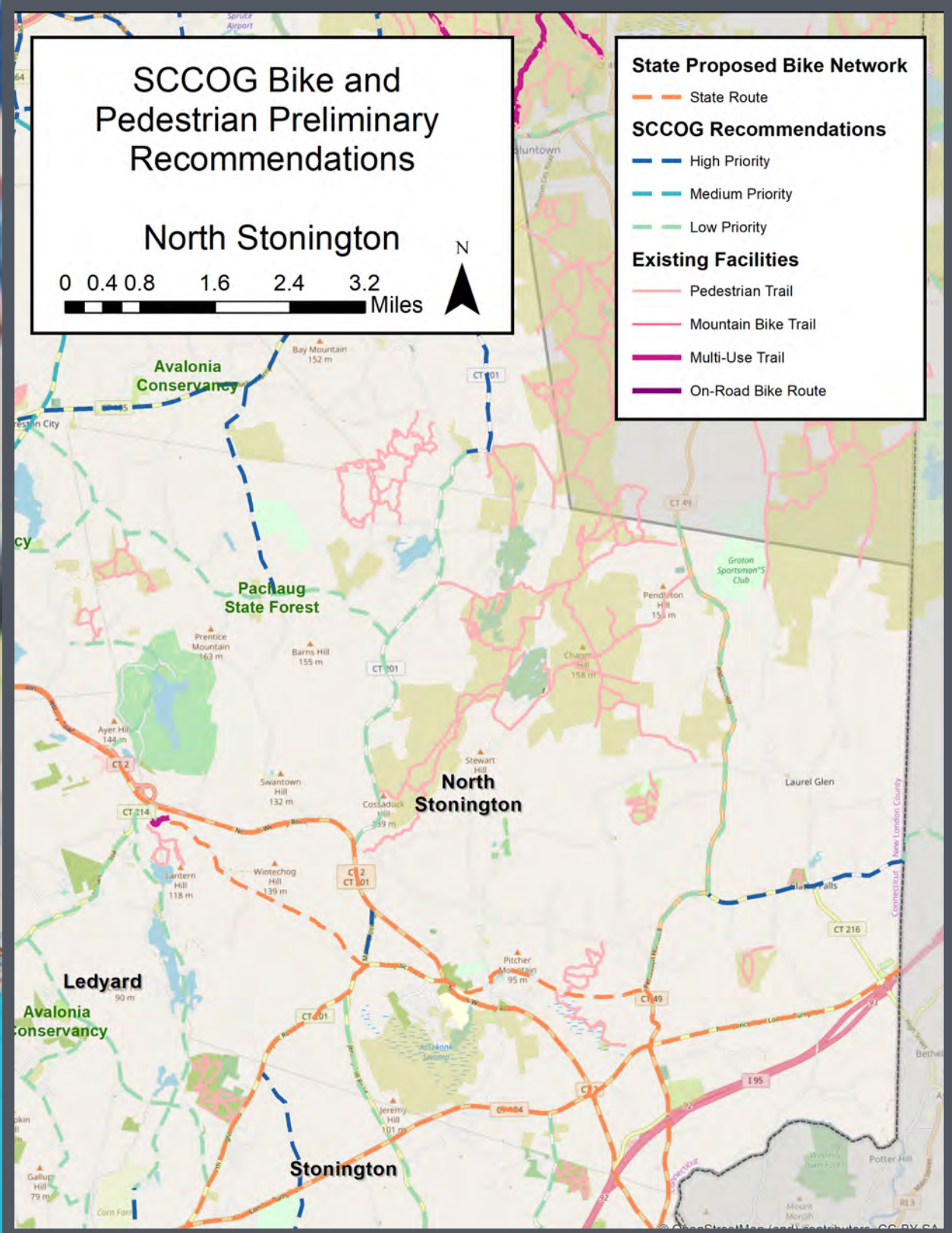


SCCOG



North Stonington

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

North Stonington’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the First Selectman.

Contacts for bike and pedestrian issues in North Stonington

Name	Address	Phone/Fax	Email
Mr. Shawn P. Murphy First Selectman Town of North Stonington	40 Main Street North Stonington, CT 06359	Tel: (860) 535-2877 x12 Fax: (860) 535-4554	selectmen@northstoningtonct.gov

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Dennis Main Avalonia Land Conservancy, Inc.	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 president@avalonialc.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

North Stonington officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for North Stonington were generated from public input received through the map, social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map, and local knowledge of the area.

These recommendations encourage bicycle and pedestrian-friendly improvements in appropriate locations throughout the town and specifically to the village center and Route 201.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to North Stonington. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Route 201 from Stonington border to Route 2: Widen roadway for bike-safe shoulders where needed & provide Bike Route signage; continue on Rt 2/Rt 201 to Cossaduck Hill Rd (requires cross-jurisdictional cooperation with Stonington).
- Route 201 from Route 2 to Griswold border: Widen roadway for bike-safe shoulders where needed & continue Bike Route signage (requires cross-jurisdictional cooperation with Griswold).
- Create a shared use path from Raven Wood Dr around the school field area to the school buildings and existing pedestrian tunnel. Provide bike parking at each school. Create a signal-controlled crossing over Rt 2 for bikes and pedestrians. Connect path to Library. Investigate use of old trolley ROW & river edge land now in private ownership for shared-use path alignment to reach village center/Town Hall.

Pedestrian-Oriented Recommendations

- Infill sidewalk gaps in North Stonington village.

References

Recent reports referencing bicycle and pedestrian infrastructure in North Stonington include:

- Plan of Conservation and Development (2013)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

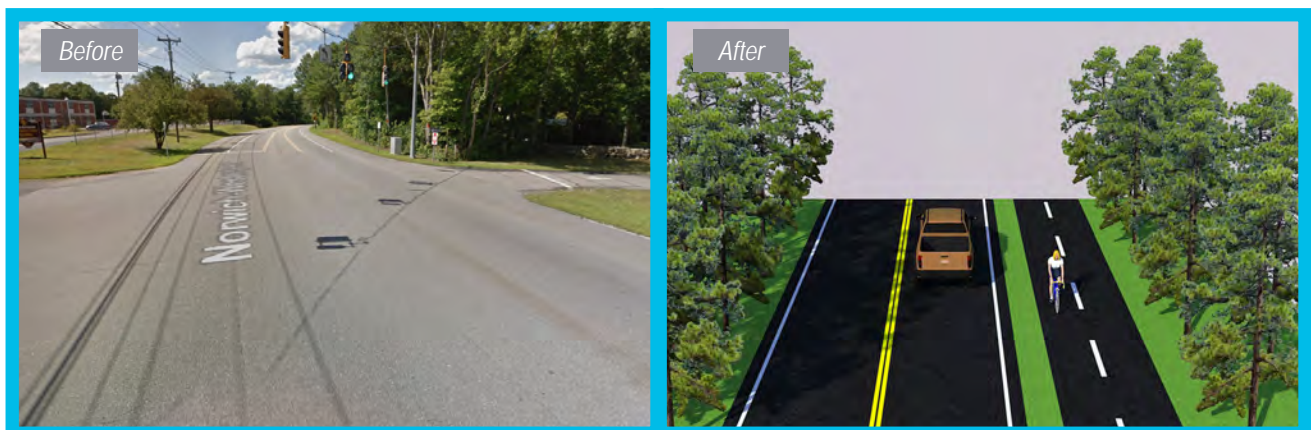
1. Route 201 from Stonington border to Route 2: Widen roadway for bike-safe shoulders where needed and provide Bike Route signage; continue on Route 2/Route 201 to Cossaduck Hill Road (requires cross-jurisdictional cooperation with Stonington)



2. Route 201 from Route 2 to Griswold border: Widen roadway for bike-safe shoulders where needed and continue Bike Route signage (requires cross-jurisdictional cooperation with Griswold)

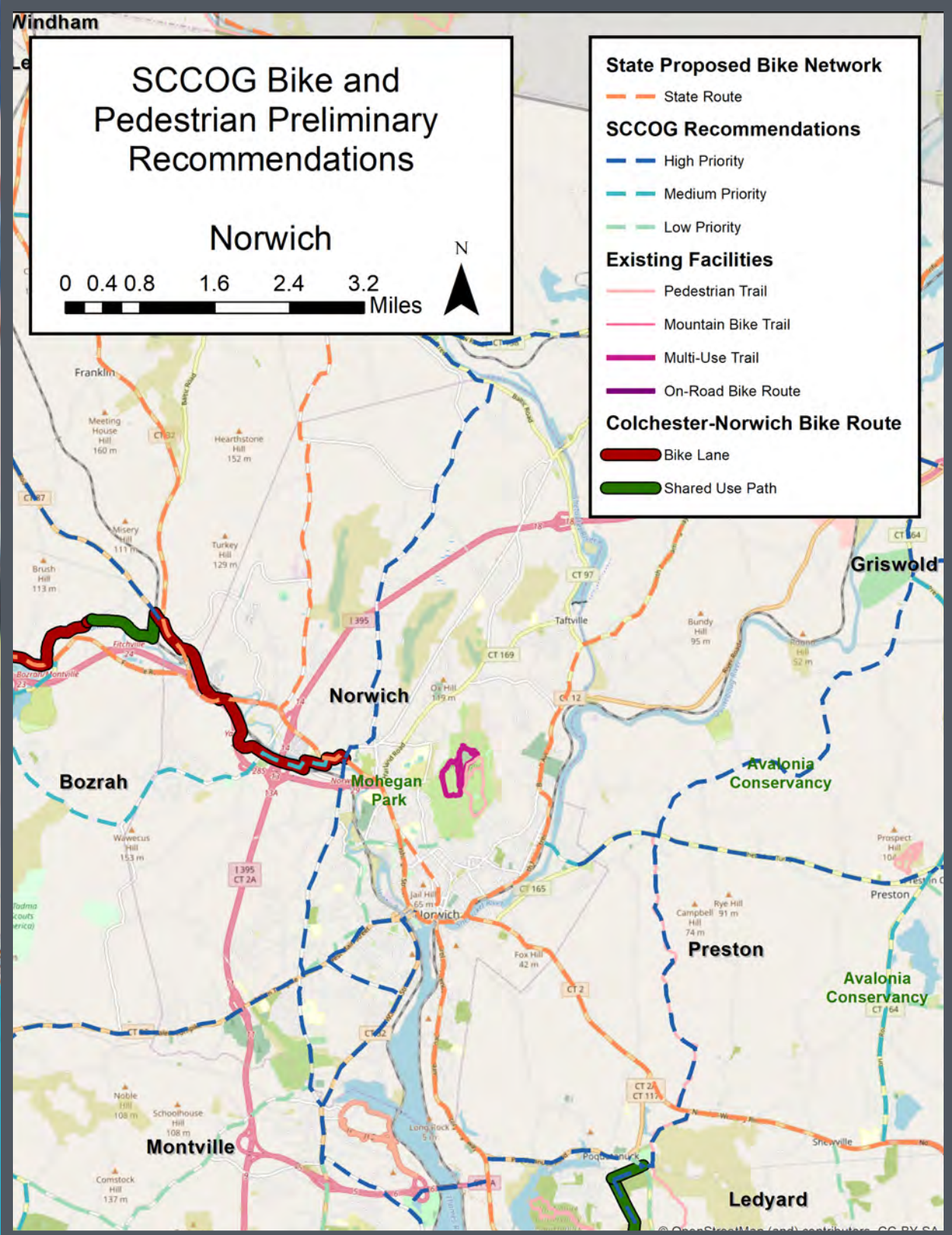


3. Create a shared use path from Raven Wood Drive around the school field area to the school buildings and existing pedestrian tunnel. Provide bike parking at each school. Create a signal-controlled crossing over Route 2 for bikes and pedestrians. Connect the path to the Library. Investigate use of old trolley right-of-way and river edge land now in private ownership for shared-use path alignment to reach the village center and Town Hall



Norwich

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Norwich’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the Police Chief.

Contacts for bike and pedestrian issues in Norwich

Name	Address	Phone/Fax	Email
Patrick J. Daley Chief of Police Norwich Police Department	70 Thames Street Norwich, CT 06360	Tel: (860) 886-5561 x3142	agomes@cityofnorwich.org

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Deanna Rhodes City Planner	23 Union St. Norwich, CT 06360	Tel: (860) 823-3745 drhodes@cityofnorwich.org	Local planning
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Susan E. Allen Friends of the Shetucket River Valley	P.O. Box 677 Baltic, CT 06330	Tel: 860-642-6976 seakonow@aol.com	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

City of Norwich officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, city staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Norwich were generated from public input received through the map.social site created for this project, a project workshop held at Otis Library, and from referencing the CT Statewide Active Transportation Plan’s bicycle transportation network map and the 2019 Southeastern CT Metropolitan Transportation Plan.

The town's 2013 POCD states, "Provide for a balanced transportation system which addresses pedestrian needs, bicycle needs, vehicular needs, and transit needs" and "Seek to transform existing streets to "complete streets" with greater provision for pedestrians, cyclists, street trees, onstreet parking (where appropriate), and transit/bus shelters in order to provide safe access for all users, regardless of age or ability."

These recommendations will help the process of "completer" street design by encouraging bicycle and pedestrian-friendly improvements throughout Norwich – with a focus on Dunham Street, Boswell Avenue, and Talman Street. Pedestrian safety improvements should be focused on Route 82 from Old Salem Plaza to Fairmont Street.

Creating a signed bike route along Norwich Avenue (State Route 616) from the Town Green in Colchester into downtown Norwich will benefit the municipality and the region. It assumes cross-jurisdictional cooperation with Bozrah for signage consistency/standardization. This recommendation – including the specific route – is discussed in detail in the Recommendations Chapter of the SCCOG Regional Bicycle and Pedestrian Plan.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Norwich. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Boswell Ave: Bicycle boulevard connecting N Main St to Franklin Ave.
- Dunham St from Rt 82 to Rt 32: add bike lanes.
- Talman St: Two-way advisory bike lanes (1/2 of Talman is one-way) or bicycle boulevard.
- Central Ave: Bike lanes or bi-directional bike lanes.
- Route 12 from Water St (Rt 2) to Preston border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder. Provide sharrows and R4-11 "Bikes May Use Full Lane" signs in Laurel Hill section if widening is not feasible.
- Create signed bike route on Browning Road, culminating at West Town Street, enabling a signed bike route from Colchester to Norwich (requires cross-jurisdictional cooperation with Bozrah).
- Downtown streets: provide bike lanes, sharrows and R4-11 "Bikes May Use Full Lane" signs where feasible.
- Add both short-term and long-term bicycle parking at the transportation center, with additional short-term bicycle parking in the downtown business district.

Pedestrian-Oriented Recommendations

- Implement safety improvements on Rt 82 from Old Salem Plaza to Fairmont St including improved sidewalks, crossings, lighting, and landscaping.
- Greenville district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See "Appendix K ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list
- Taftville district: Repair, replace or construct sidewalks and/or accessory improvements

where needed as indicated by the Plan's ADA Mapping. See "Appendix K
ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list

References

Recent reports referencing bicycle and pedestrian infrastructure in Norwich include:

- Plan of Conservation and Development (2013)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

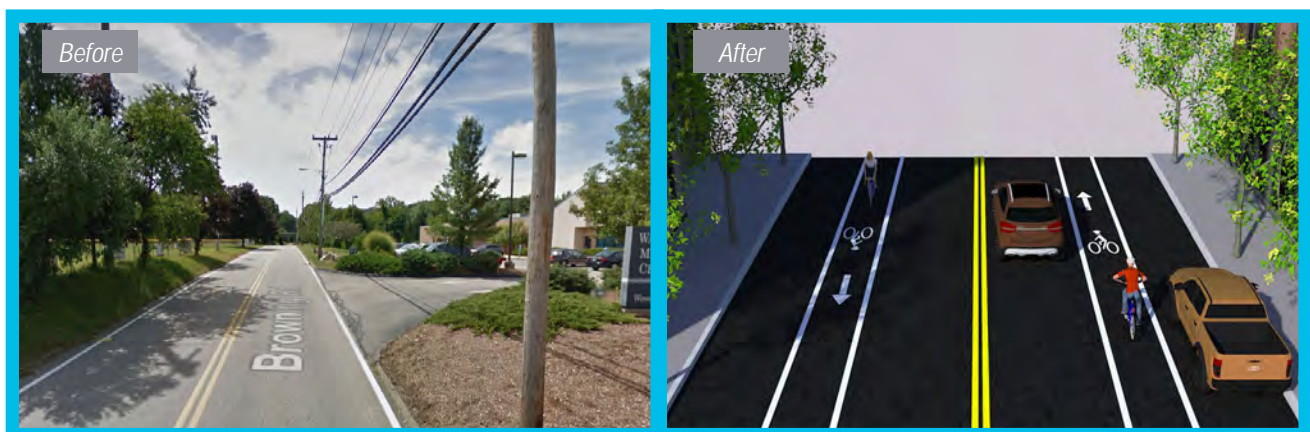
1. Boswell Avenue: Bicycle boulevard connecting North Main Street to Franklin Avenue



2. Talman Street: Two-way advisory bike lanes (1/2 of Talman is one-way) or bicycle boulevard

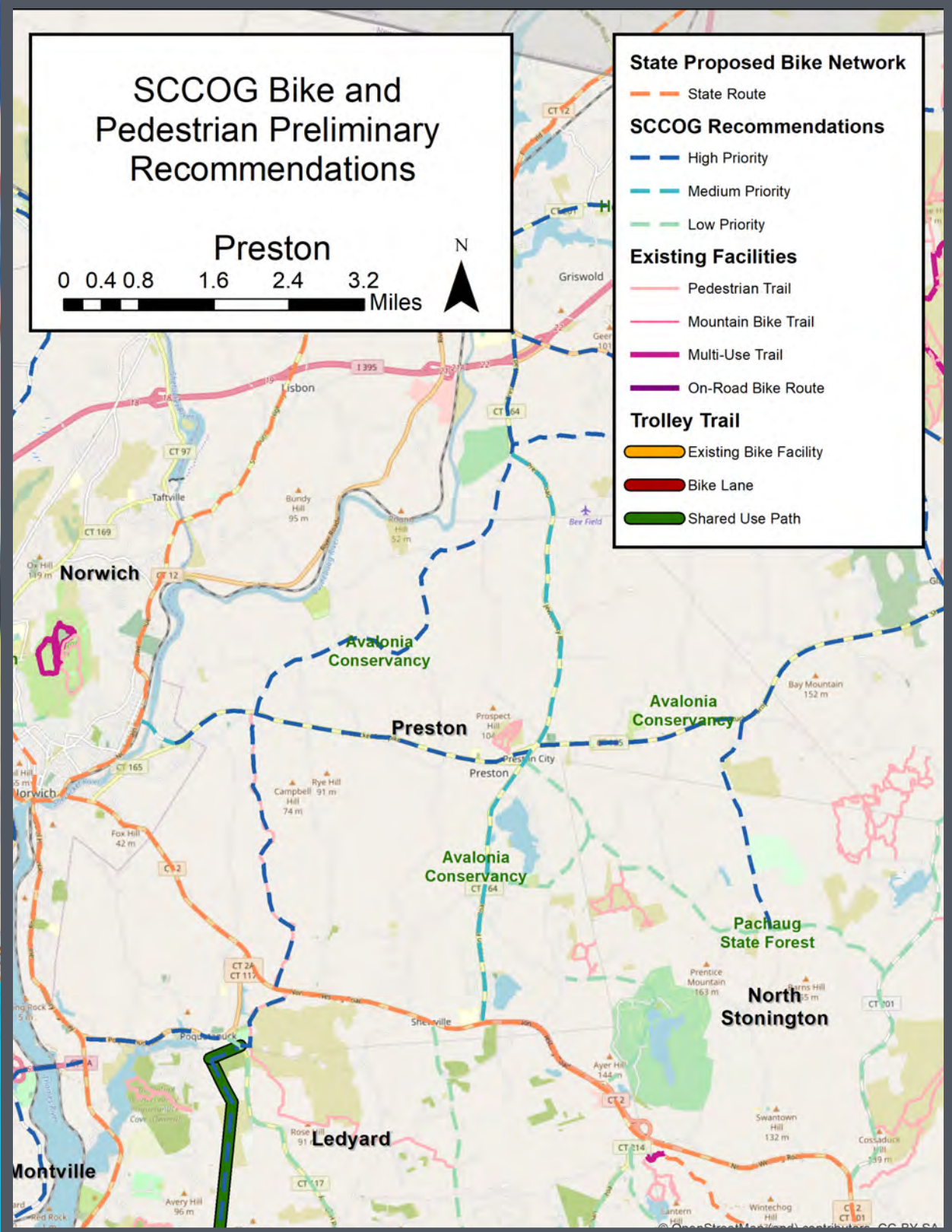


3. Create a signed bike route on Browning Road, culminating at West Town Street, enabling a signed bike route from Colchester to Norwich (requires cross-jurisdictional cooperation with Bozrah)



Preston

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Preston’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the First Selectman.

Contacts for bike and pedestrian issues in Preston

Name	Address	Phone/Fax	Email
Mr. Robert Congdon First Selectman Town of Preston	389 Route 2 Preston, CT 06365	Tel: (860) 887-5581 x1 Fax: (860) 885-1905	congdon@preston-ct.org

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Kathy B. Warzecha Town Planner	389 Route 2 Preston, CT 06365	Tel: (860) 887-5581, ext. 109 kwarzecha@preston-ct.org	Local planning
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Dennis Main Avalonia Land Conservancy, Inc.	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 president@avalonialc.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Preston officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Preston were generated from public input received through the map.social site created for this project, and from referencing the CT Statewide Active Transportation Plan’s bicycle

transportation network map and the 2019 Southeastern CT Metropolitan Transportation Plan.

These recommendations encourage bicycle and pedestrian-friendly improvements in appropriate locations throughout the town and specifically for bike safety improvements to Route 2A from the Mohegan-Pequot Bridge through Poquetanuck to Preston Plains Park.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Preston. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Poquetanuck Rd (Rt 2A) from Laurel Hill Rd (Rt 12) to Norwich-Westerly Rd (Rt 2): Widen roadway where needed for bike-safe shoulders or bike lanes. Extend shoulders/bike lanes on Rt 117 to Tri-Town Trail.
- Route 12 from Ledyard border to Norwich border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.
- Provide shared use path on proposed second span of Mohegan-Pequot Bridge (Rt 2A), also provide access path to bridge from Rt 12.
- Continue Tri-Town Trail onto historic trolley line ROW with potential connections to Mathewson Mill Rd, Shewville Rd and Rt 2 (requires cross-jurisdictional cooperation with Ledyard).

Pedestrian-Oriented Recommendations

- Implement pedestrian safety measure including sidewalks, crossings, lighting, and landscaping along Routes 2A within the Poquetanuck Village historic district and connecting to Milton Green Park and future Tri-Town Trail northern terminus.

References

Recent reports referencing bicycle and pedestrian infrastructure in Preston include:

- Plan of Conservation and Development (2014)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

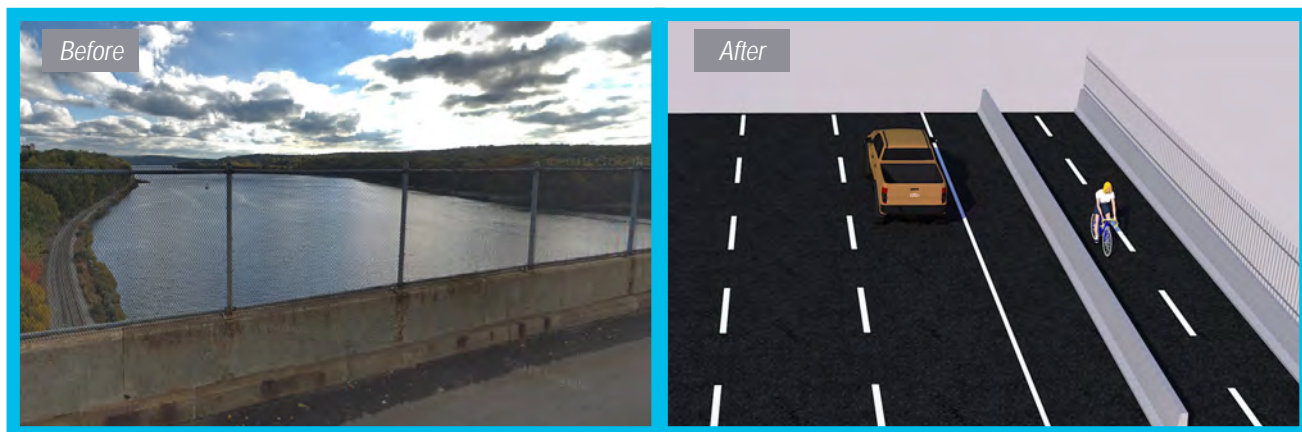
1. Poquetanuck Road (Route 2A) from Laurel Hill Road (Route 12) to Norwich-Westerly Road (Route 2): Widen roadway where needed for bike-safe shoulders or bike lanes. Extend shoulders/bike lanes on Route 117 to Tri-Town Trail



2. Route 12 from Ledyard border to Norwich border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder



3. Provide shared use path on proposed second span of Mohegan-Pequot Bridge (Route 2A), also provide access path to bridge from Route 12.

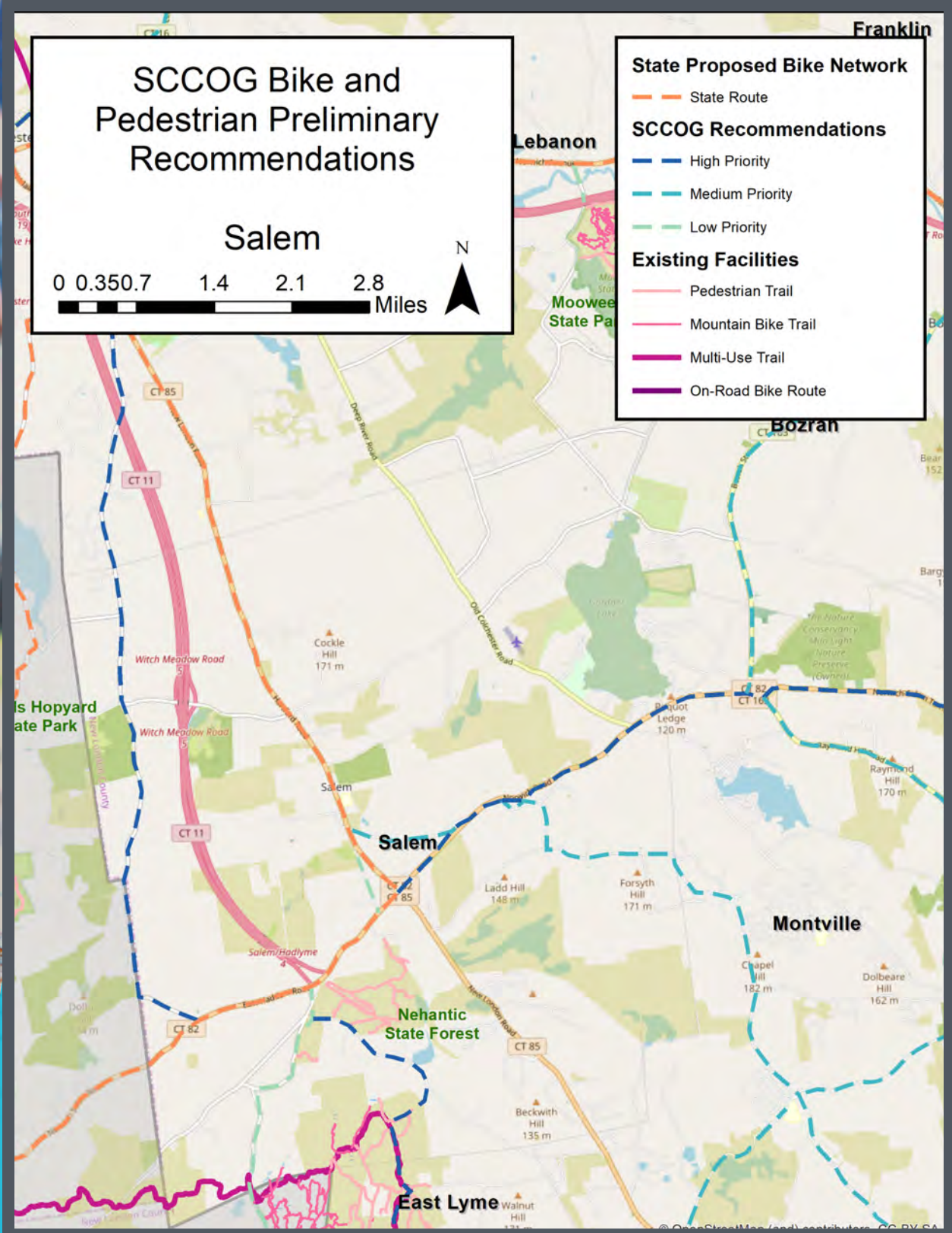


SCCOG



Salem

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Salem’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the First Selectman.

Contacts for bike and pedestrian issues in Salem

Name	Address	Phone/Fax	Email
Mr. Kevin T. Lyden First Selectman Town of Salem	270 Hartford Road Salem, CT 06420	Tel: (860) 859-3873 Fax: (860) 859-1184	kevin.lyden@salemct.gov

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Linda Schroeder Salem Land Trust	P.O. Box 2133 Salem, CT 06420	Tel: (860) 859-3520 lschroeder@snet.net	Land Acquisition Issues, Funding
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Salem officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG's competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Salem were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map and the 2019 Southeastern Connecticut Metropolitan Transportation Plan. The Town of Salem's 2012 Plan of Conservation and Development (POCD) states the following, to

demonstrate its alignment with the Conservation and Development Policies Plan for Connecticut 2005-2010 Growth Management Principle #3: Concentrate Development Around Transportation Nodes and Along Major Transportation Corridors to Support the Viability of Transportation Options

- Emphasize clustering of mixed-use, mixed-income development in pedestrian friendly villages to reduce the number of automobile trips, especially in Rural Community Centers where public transportation may not be available.
- Provide a network of pedestrian and bicycle paths and greenways that are safe and provide convenient access to the transit system. Wherever possible, the transit system should try to accommodate bike transport or provide appropriate storage facilities at the station.

The Town of Salem's POCD "...encourages mixed-use development in designated zones (13.1.4); recommends a network of pedestrian and bicycle paths and greenways (9.1.1-2; 9.2.1-4; 9.3.1-2); and recommends the establishment of a historic district to slow down traffic on Rte 85 in the village center (4.4.1)."

Bike safety improvements to Norwich Road (Route 82) and pedestrian safety improvements on Route 85 will begin fulfilling those goals.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Salem. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Norwich Rd (Rt 82) from Lyme border to Montville border: widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.
- Interconnect various off-road shared use trails on open space parcels with on-road bike lanes or shoulders.
- Goodwin Trail: Cooperate with East Lyme, Lyme and Eightmile River Wild & Scenic Watershed to improve access and wayfinding to the trail.

Pedestrian-Oriented Recommendations

- Complete the sidewalk gap along Rt 85 between Salem School and Rt 82.

References

Recent reports referencing bicycle and pedestrian infrastructure in Salem include:

- Plan of Conservation and Development (2012)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. **Norwich Road (Route 82) from Lyme border to Montville border: widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder**



2. **Interconnect various off-road shared use trails on open space parcels with on-road bike lanes or shoulders**



3. **Complete the sidewalk gap along Route 85 between Salem School and Route 82**

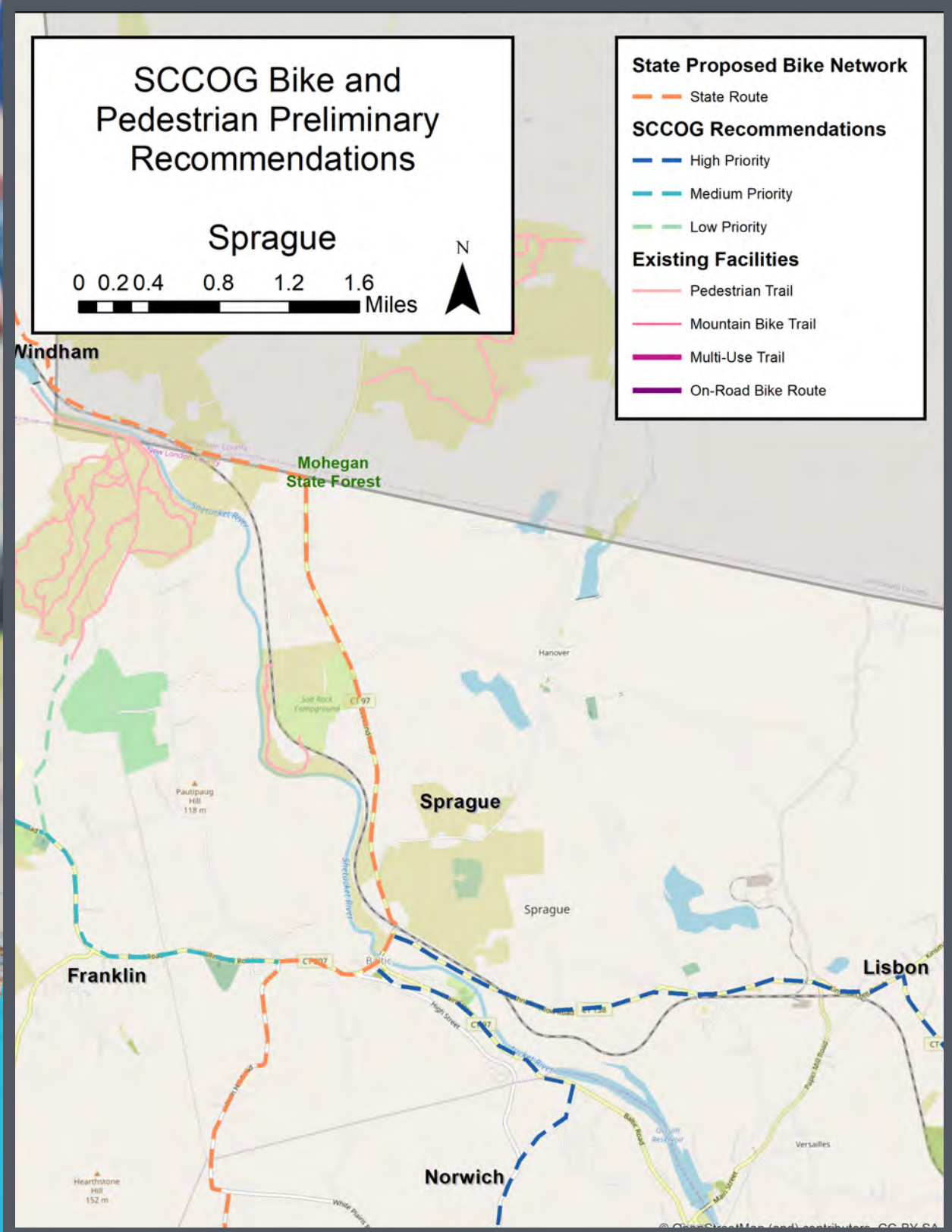


SCCOG



Sprague

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Sprague’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the First Selectman - but is currently carried out by the Resident State Trooper.

Contacts for bike and pedestrian issues in Sprague

Name	Address	Phone/Fax	Email
Mr. Brian Sumner Resident State Trooper Town of Sprague	1 Main Street Baltic, CT 06330	Tel: (860) 822-3000 x207 Fax: (860) 822-3013	bsumner@sbcglobal.net

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Donald Boushee Sprague Land Preserve	Holton Road (Physical) Franklin, CT 06254 P.O. Box 677 (Mailing) Baltic, CT 06330	Tel: (860)-822-9808 donaldboushee@sbcglobal. net	Land Acquisition Issues, Funding
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Laurie Giannotti CT DEEP - Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Sprague officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Sprague were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map.

These recommendations will encourage bicycle- and pedestrian-friendly improvements in appropriate locations throughout the town and specifically for bike safety improvements to Route 138 and Route 97 in Baltic village, as well as pedestrian improvements along Route 207 in Baltic village.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Sprague. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Bushnell Hollow Rd (Rt 138) from intersection with North Main St (Rt 97) to Paper Mill Rd (Lisbon border): Widen roadway where needed for bike-safe shoulders.
- Baltic Village: Provide bike safety improvements including bike lanes and/or sharrows and R4-11 "Bikes May Use Full Lane" signs on Main St/ N Main St (Rt 97), and Bushnell Hollow Rd (Rt 138).

Pedestrian-Oriented Recommendations

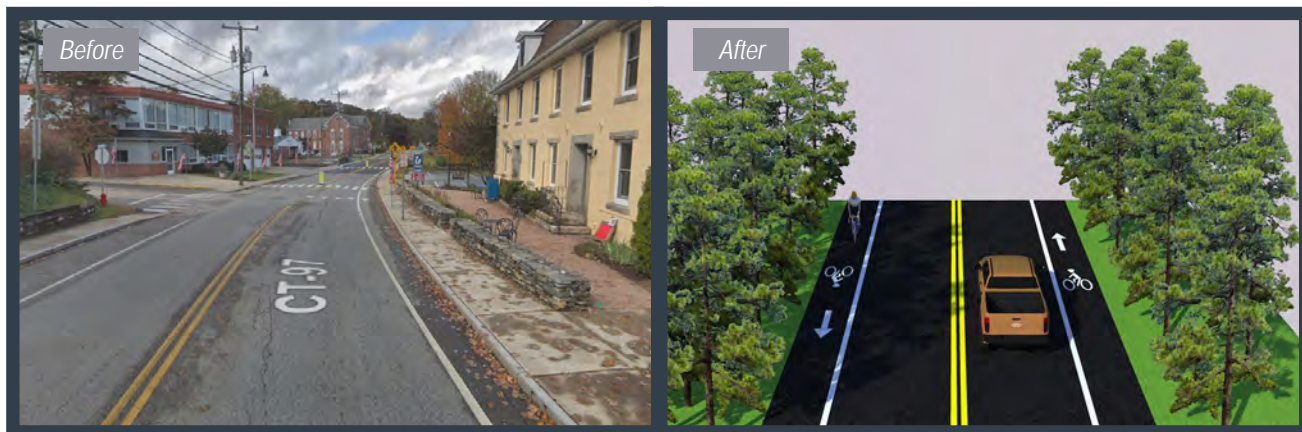
- Add sidewalks along West Main St (Rt 207) from Chelsea Groton Bank near Plain Hill Rd to bridge over Beaver Brook near School Hill Rd, Baltic.

References

Recent reports referencing bicycle and pedestrian infrastructure in Sprague include:

- Plan of Conservation and Development (2018)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. **Bushnell Hollow Rd (Rt 138) from intersection with North Main St (Rt 97) to Paper Mill Rd (Lisbon border):** Widen roadway where needed for bike-safe shoulders.



2. **Baltic village:** Provide bike-safety improvements, including bike lanes and/or sharrows and R4-11 "Bikes May Use Full Lane" signs on Main St/North Main St (Rt 97), and Bushnell Hollow Rd (Rt 138).

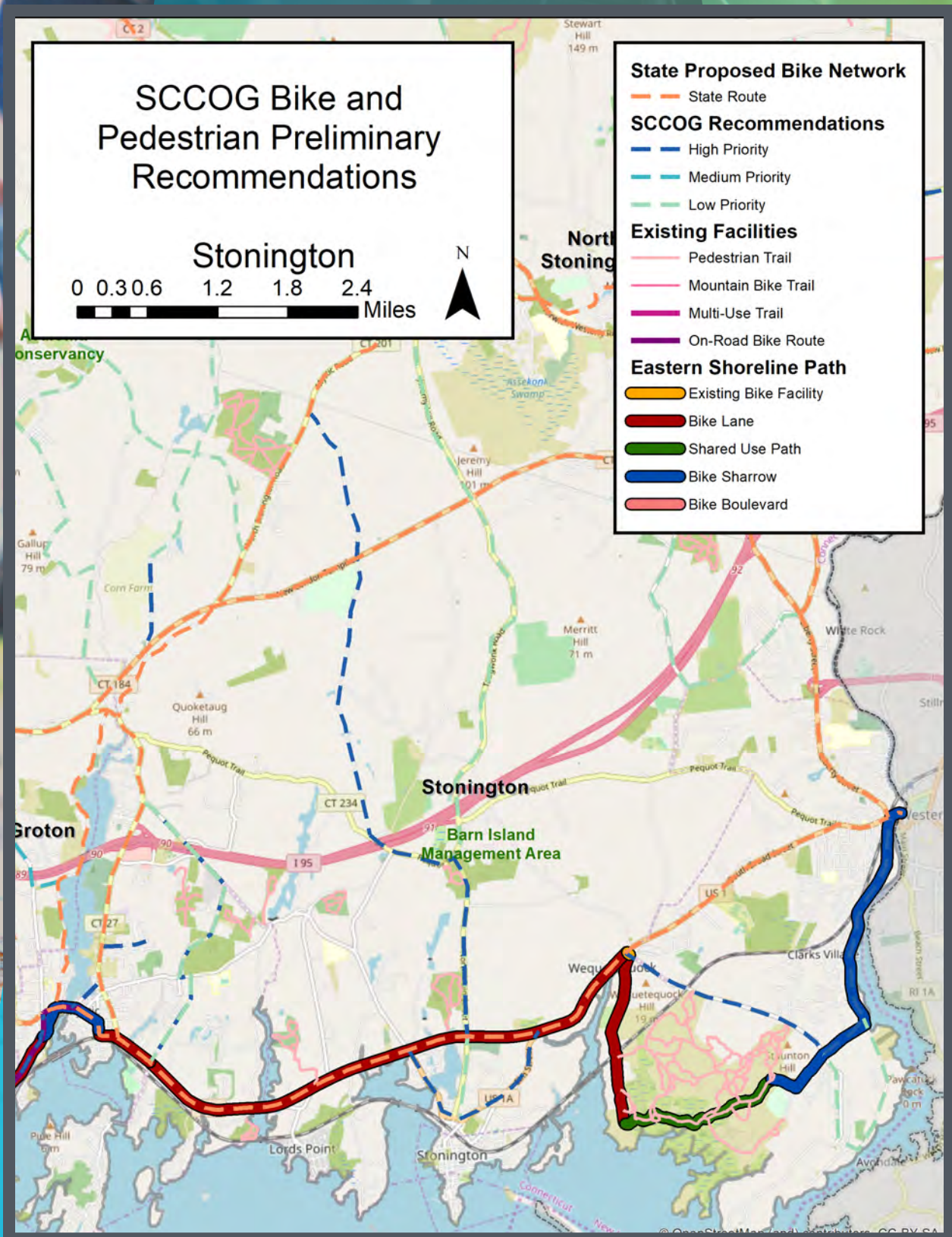


3. **Add sidewalks along West Main Street (Route 207), from Chelsea Groton Bank near Plain Hill Road to bridge over Beaver Brook near School Hill Road, Baltic**



Town and Borough of Stonington

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Stonington/Borough of Stonington’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the Police Chief.

Contacts for bike and pedestrian issues in Stonington

Name	Address	Phone/Fax	Email
J. Darren Stewart Chief of Police	173 South Broad Street Pawcatuck, CT 06379	Tel: (860) 599-7501 Fax: (860) 599-7533	dstewart@stonington-ct.gov

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Jason Vincent, AICP Director of Planning	152 Elm Street, Stonington, CT 06378	Tel: (860) 535.5095	Local planning
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Stanton Simm Stonington Land Trust	Contact Information P.O. Box 812 Stonington, CT 06378	stantonsimm549@gmail.com	Land Acquisition Issues, Funding
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Chuck Toal Avalonia Land Conservancy, Inc.	P.O. Box 49 Old Mystic, CT 06372	Tel: (860) 884-3500 c.toal@avalonialc.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP - Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Stonington/Borough of Stonington were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map, and local knowledge of the area.

These recommendations encourage bicycle and pedestrian-friendly improvements in appropriate locations throughout the town and specifically for bike safety improvements to routes 1, 184, 201, and for pedestrian improvements on Route 1 in Mystic and Pawcatuck, and in the "Golden Triangle" district. Improvements are also recommended to Route 1A, Alpha Avenue, Water and Main Streets in the Borough of Stonington.

This study proposes the Eastern Shoreline Path, a continuous bike-friendly corridor from the Rhode Island line in Pawcatuck to the Connecticut River I-95 Chapman Bridge. Stonington's segment includes a shared use path through Barn Island Management Area and improvements to Route 1 from Greenhaven Road to downtown Mystic.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Stonington. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Route 1 Pawcatuck from Mayflower Ave to RI border: This corridor has been designated as a CTDOT Tier 1 Bike/ped improvement project to improve bike and pedestrian safety with pavement makings/ signage, crosswalks, ped walk signals, etc.
- Create a signed bike route on Route 201 from Old Mystic to N Stonington border (requires cross-jurisdictional cooperation with North Stonington).
- Create a signed bike route on Rt 184 from Groton border to N. Stonington border; widen roadway where shoulder is too narrow and at intersections w/ turn lanes to provide continuous shoulder (requires cross-jurisdictional cooperation with North Stonington).
- Route 1A side loop into Stonington Borough: Designate Alternate Bike Route w/ signage, widen roadway where shoulder is too narrow. Add sharrows and R4-11 "Bikes May Use Full Lane" signs to Cutler St and Elm St sections where roadway width is constrained.
- Construct pedestrian bridge over Pawcatuck River just south of Amtrak bridge (end of Coggswell St) to downtown Westerly.
- (Stonington Borough) Alpha Ave: provide bike lanes on viaduct; Water St & Main St: provide sharrows and R4-11 "Bikes May Use Full Lane" signs.
- Add both short-term and long-term bicycle parking at the Mystic train station, with additional short-term bicycle parking in the surrounding business district.

Eastern Shoreline Path (ESP) Recommendations (east to west)

- Provide "Eastern Shoreline Path Bikeway" (ESP) and wayfinding signs at intervals throughout the route.
- Provide sharrows, R4-11 "Bikes May Use Full Lane" signs on W Broad St from Pawcatuck River bridge to Mechanic St; continuing along Mechanic St to River Rd; continuing on River Rd to Mary Hall Ave; continuing on Mary Hall to Greenhaven Rd; crossing Greenhaven onto Stewart Rd/Brucker Pkwy;

turning onto Barn Island Southeast Parking driveway.

- Barn Island Management Area section (bituminous permeable pavement recommended for all bike facilities): Resurface Barn Island Southeast Parking driveway to accommodate bikes; Improve parking area (kiosk/wayfinding point); upgrade trail from parking area thru Barn Island Mgt Area to Palmer Neck Rd to accommodate bi-directional bike and pedestrian use (10' width recommended).
- Provide R4-11 "Bikes May Use Full Lane" signs on Palmer Neck Rd to Greenhaven Rd.
- Widen approx. 150 ft of south side of Greenhaven Rd to Stonington Rd/S Broad St (Rt 1) to accommodate bi-directional protected bike lanes on west side of Greenhaven Rd (8' min width).
- Provide bi-directional protected bike lanes on south side of Rt 1 from Greenhaven Rd to intersection with Mason Island Rd, Mystic (10' width recommended).
- Narrow travel lanes to 10' and provide buffered bike lanes both sides of Williams Ave (Rt 1) from Mason Is Rd to intersection with Washington St; provide sharrows and R4-11 "Bikes May Use Full Lane" signs on Rt 1 to Mystic River drawbridge/Groton town line.

Pedestrian-Oriented Recommendations

- Route 1 from Broadway to Big-Y grocery store: Infill sidewalk gaps.
- Route 1 in Pawcatuck: Complete sidewalk on south side of road from high school to Mayflower Ave. (this has been a high priority Town-proposed project for several years).
- Provide sidewalks in the "Golden Triangle" district including Whitehall Ave (Rt 27), Coogan Blvd, and Jerry Brown Rd.
- Pawcatuck district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See "Appendix K ADA Gap Analysis Mapping" for a map and sidewalk inventory rating list.

References

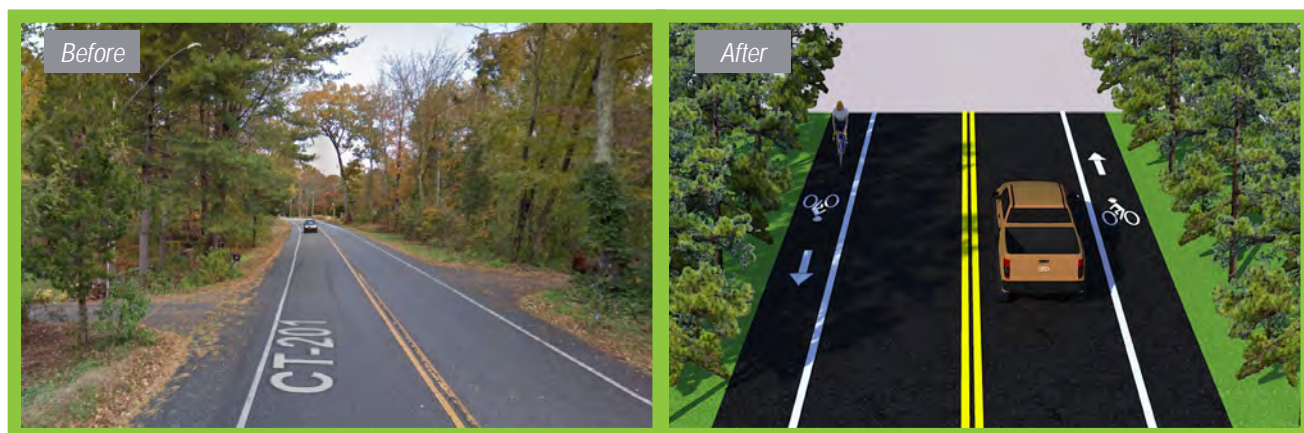
Recent reports referencing bicycle and pedestrian infrastructure in Stonington/Borough of Stonington include:

- Road Safety Audit: Route 27 (2016)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

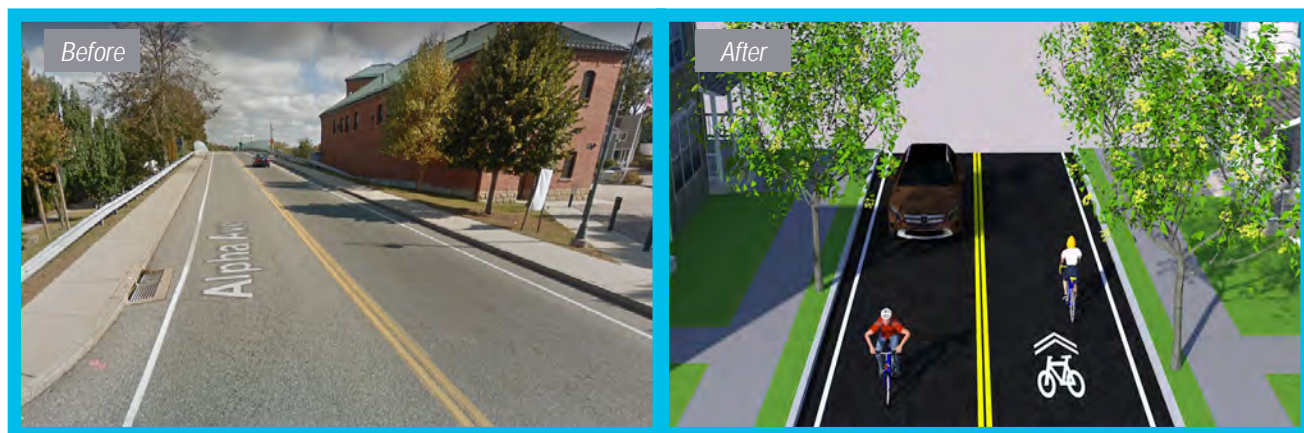
1. **Route 1 Pawcatuck from Mayflower Ave to RI border:** This corridor has been designated as a CTDOT Tier 1 Bike/Ped improvement project to improve bike and pedestrian safety with pavement makings/signage, crosswalks, ped walk signals, etc.



2. **Create a signed bike route on Route 201 from Old Mystic to North Stonington border (requires cross-jurisdictional cooperation with North Stonington)**

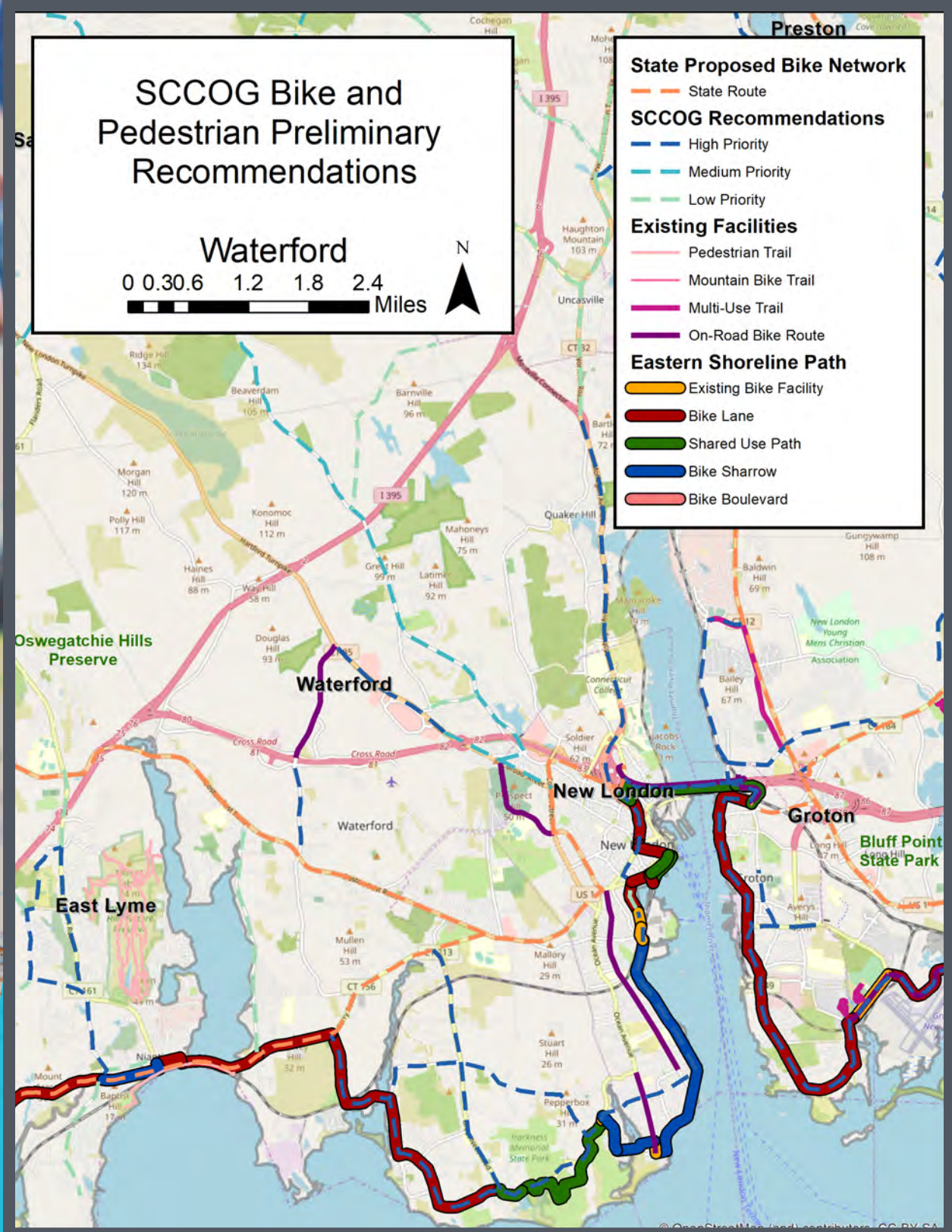


3. **(Stonington Borough) Alpha Avenue:** provide bike lanes on viaduct; Water Street & Main Street: provide sharrows and R4-11 "Bikes May Use Full Lane" signs



Waterford

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Waterford’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the roles of the Chief of Police.

Contacts for bike and pedestrian issues in Waterford

Name	Address	Phone/Fax	Email
Mr. Brett Mahoney Chief of Police Waterford Police	41 Avery Lane Waterford, CT 06385	Tel: (860) 442-3603 Fax: (860) 442-2557	bmahoney@waterfordct.org

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Abby Piersall, AICP Planning Director	15 Rope Ferry Road Waterford, CT 06385	Tel: (860) 444-5813	Local planning
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Waterford Land Trust	P.O. Box 926 Waterford, CT 06385	info@waterfordlandtrust.org	Land Acquisition Issues, Funding
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Waterford officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Waterford were generated from public input received through the map.social site created for this project, as well as referencing the CT Statewide Active Transportation Plan's bicycle transportation network map, and local knowledge of the area.

Waterford's Plan of Conservation and Development (POCD) includes a map of priority pedestrian connections. Discussions about improving bicycle and pedestrian conditions in the town center area are ongoing. The town is rebuilding sidewalks along Route 156/Rope Ferry Road from Avery Lane to B Lane. Priority areas for improvements include the town center area/Civic Triangle, Route 85, the Route 1 commercial area (and connecting this to the Civic Triangle), and developing better bike lanes to connect from East Lyme to Harkness Memorial State Park and the town center. Most priorities involve state routes.

These recommendations encourage bicycle and pedestrian-friendly improvements in appropriate locations throughout the town and specifically for bike safety improvements to Rope Ferry Road (Route 156) and pedestrian safety improvements to Routes 1, 85, and 156.

This study proposes the Eastern Shoreline Path, a continuous bike-friendly corridor from the Rhode Island line in Pawcatuck to the Connecticut River I-95 Chapman Bridge. Waterford's segment includes improvements to Route 213, Shore Road, Jordan Cove Road, Gardeners Wood Road, and Route 156 to the East Lyme border.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Waterford. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Rope Ferry Rd (Rt 156) from Avery Ln to East Lyme border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder (requires cross-jurisdictional cooperation with East Lyme).
- Rope Ferry Rd (Rt 156) from Rt 1 to Avery Ln: Add bike lanes

Eastern Shoreline Path (ESP) Recommendations (east to west)

- Provide "Eastern Shoreline Path Bikeway" (ESP) and wayfinding signs at intervals throughout the route.
- From New London border at Highland Avenue bridge over Alewife Cove, continue on Peninsular Avenue* to Ridgewood Avenue and continue north to intersection with Great Neck Road (Rt 213). Turn onto Great Neck Road (Rt 213) heading south; realign Rt 213 to the west within existing ROW to allow for protected bi-directional bike lane on east side for approximately 500'; align bike lane onto Waterford town land at this point.
*Create Bicycle Boulevard on Peninsular Avenue (requires cross-jurisdictional cooperation with New London).
- Create Shared Use Path parallel to Rt 213 but separated by woodland buffer wherever possible on town land; cross Beach Park entry road and continue onto Harkness State Park land (bituminous permeable pavement recommended).

- Harkness State Park section (bituminous permeable pavement recommended for all bike facilities): Design a Shared Use Path to traverse the park; alignment could utilize some existing driveways and/or new pathways to be determined (kiosk/wayfinding point); continue path along Rt 213 roadside at Goshen Cove and rejoin Rt 213 ROW at western end of State land.
- Transition from Shared Use Path to bike lanes onto Rt 213 and continue bike lanes onto Shore Rd; provide bike lanes or consider Advisory Bike Shoulder conversion; or provide sharrows and R4-11 “Bikes May Use Full Lane” signs; continue to Jordan Cove Rd.
- Jordan Cove Rd to Gardners Wood Rd to Rope Ferry Rd (Rt 156): provide bike lanes.
- Rope Ferry Rd (Rt 156) to Niantic River Bridge – East Lyme border: provide protected bi-directional bike lane on north side of Rt 156 to bridge; shift lanes south and widen existing bridge sidewalk to accommodate bi-directional bike lanes and pedestrians (requires cross-jurisdictional cooperation with East Lyme).

Pedestrian-Oriented Recommendations

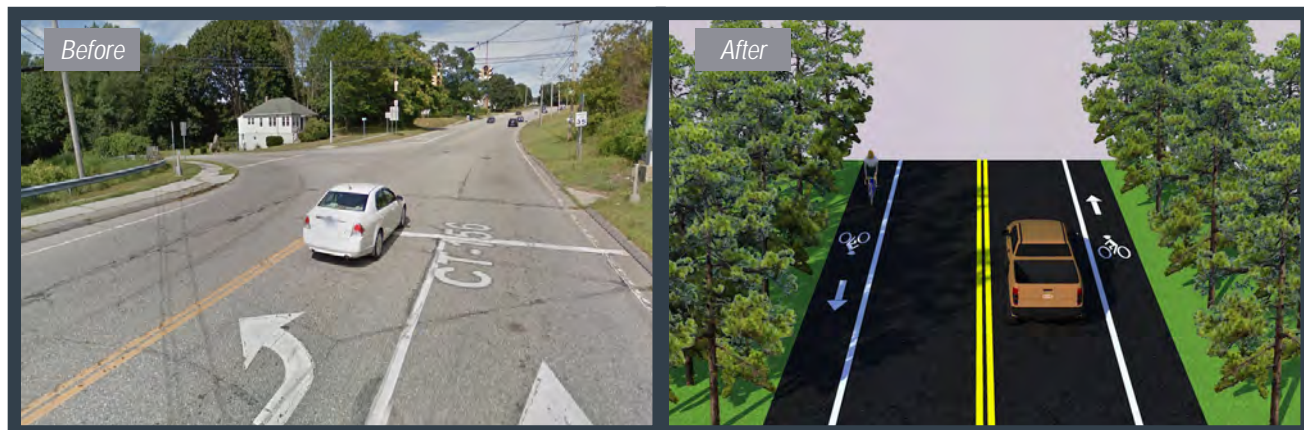
- Hartford Tpk (Rt 85) from I-95 to Cross Rd: implement pedestrian safety measures including sidewalks, crossings, lighting and landscaping.
- Rope Ferry Rd (Rt 156) from Rt 1 to Jordan Village: implement pedestrian safety measures including sidewalks, crossings, lighting and landscaping.
- Boston Post Rd (Rt 1) from Avery Ln to New London border: implement pedestrian safety measures including sidewalks, crossings, lighting and landscaping.
- Town center/Civic triangle area: Infill gaps in sidewalk network.

References

Recent reports referencing bicycle and pedestrian infrastructure in Waterford include:

- Plan of Conservation and Development (2012)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

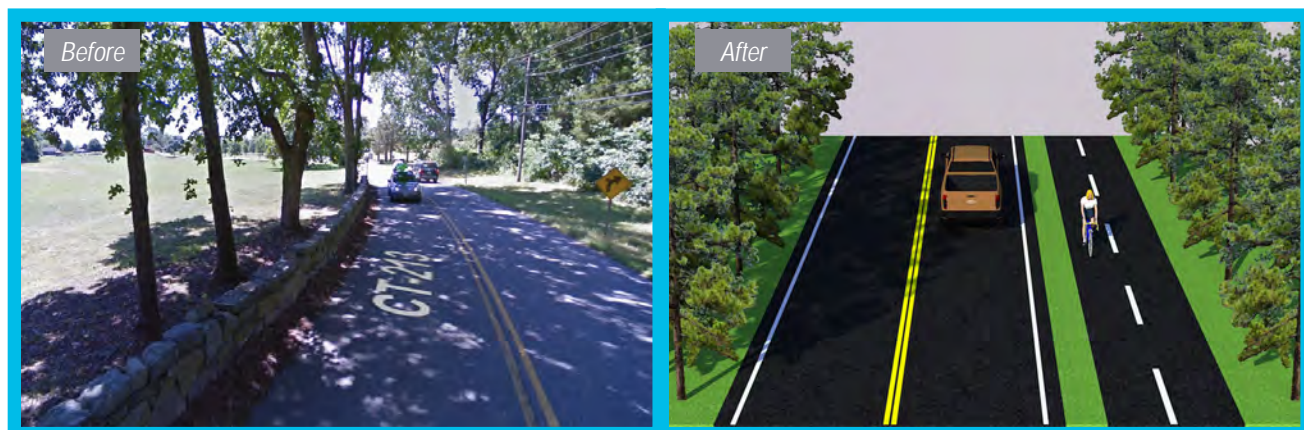
1. Rope Ferry Rd (Route 156) from Avery Lane to East Lyme border: widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder (requires cross-jurisdictional cooperation with East Lyme)



2. Rope Ferry Road (Route 156) from Route 1 to Avery Lane: Add bike lanes



3. Create Shared Use Path parallel to Route 213 but separated by woodland buffer wherever possible on town land; cross Beach Park entry road and continue onto Harkness State Park land (bituminous permeable pavement recommended)

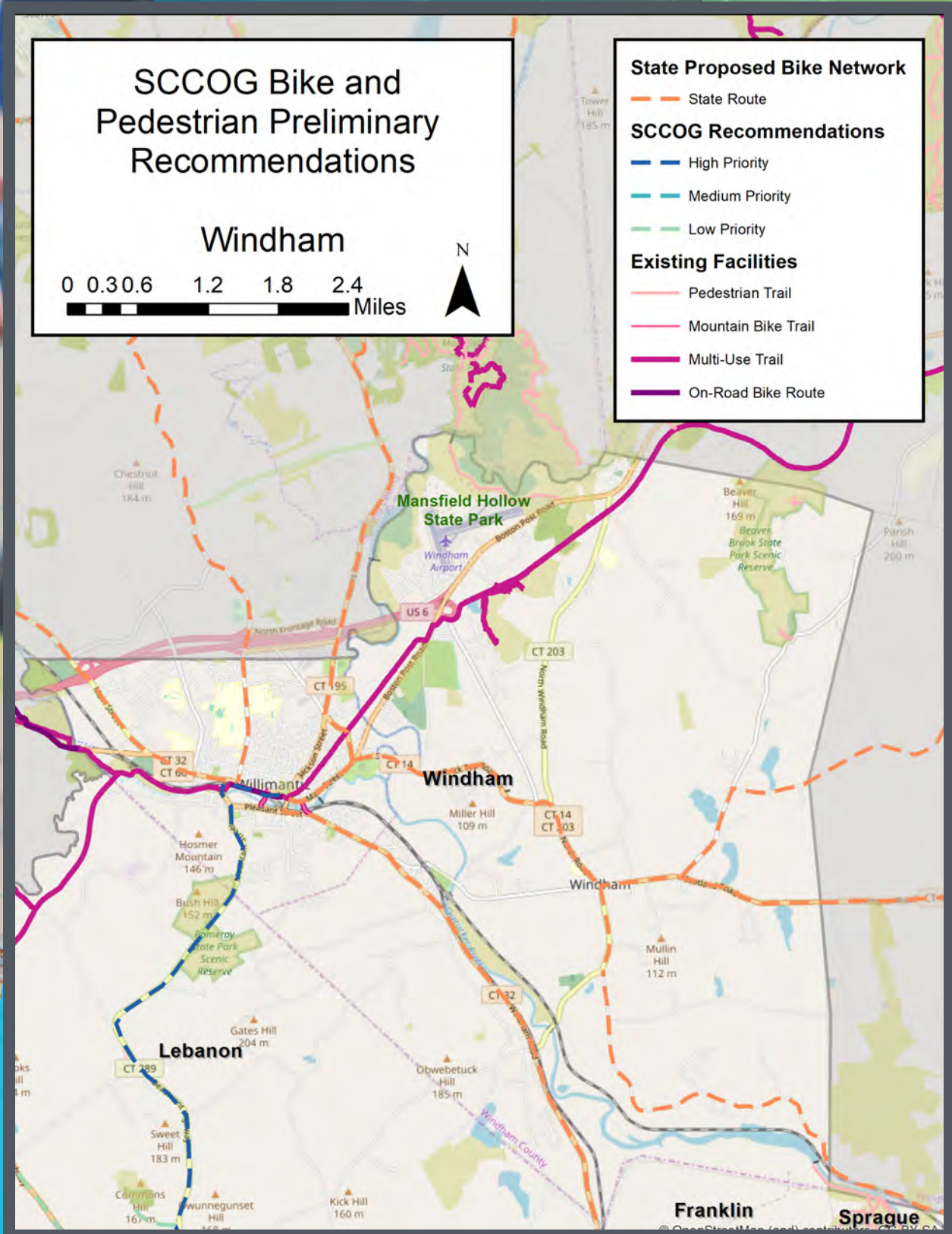


SCCOG



Windham

Bike and Pedestrian Improvements Toolkit



Introduction

Motor vehicle users have historically been the prime consideration for designers, which has created a motorized-vehicle-dependent society. The concept of “Complete Streets” planning was adopted by the Connecticut Department of Transportation (CTDOT) in 2014. Complete Streets involves designing and operating roads for all users: pedestrians, cyclists, disabled citizens, transit users and motorists. Examples of Complete Streets provisions include sidewalks, bike lanes, wider shoulders, pavement markings, and signs. Changes to the built environment will happen incrementally as the CTDOT shifts its planning and engineering practices. Communities can reinforce and accelerate this process by adopting a local Complete Streets policy, as New Haven, West Hartford, Fairfield, Madison, Portland, and Stamford have.

Government Structure and Engagement Process

Windham’s first point of contact for bicycle and pedestrian issues is the Local Traffic Authority (LTA) – which is one of the designated roles of the Town Engineer.

Contacts for bike and pedestrian issues in Windham

Name	Address	Phone/Fax	Email
Joe Gardner Town Engineer Town of Windham	979 Main Street Willimantic, CT 06226	Tel: (860) 465-3043 Fax: (860) 465-3039	jgardner@windhamct.com

Staff that support and augment the work of the LTA in planning, funding land-use and coordination between towns include:

Name	Address	Phone/Email	Issue/Area
Kate Rattan, AICP Principal Transportation Planner, SCCOG	5 Connecticut Avenue, Norwich, CT 06360	Tel: (860) 889-2324 krattan@seccog.org	Local and Regional Planning, Projects, Funding, Inter-town coordination
Thread City Development	P.O. Box 1257 Willimantic, CT 06226	860-455-4673 www.willimanticdowntown.org	Revitalization and management of Willimantic's downtown
Robert E. Obey, P.E. District Engineer CTDOT – District 2	171 Salem Turnpike, Norwich, CT 06360	Tel: (860) 823-3204 robert.obey@ct.gov	Encroachment Issues
Michael Hveem Joshua's Tract Conservation & Historic Trust, Inc.	P.O. Box 4 Mansfield Center, CT 06250	Tel: (860) 429-9023 michael.hveem@joshuastrust.org	Land Acquisition Issues, Funding
Laurie Giannotti CT DEEP – Recreational Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails

Town of Windham officials are encouraged to use the Form in "Appendix M" to propose a specific improvement to a roadway or intersection. A list of the principles to be considered in developing a bicycle or pedestrian improvement are provided with the form. The LTA, or designee, will review all proposals and determine whether the project is feasible and warranted. If the proposal meets those criteria, town staff will assist with identification of funding. Projects may be submitted through SCCOG’s competitive solicitation for grant programs. The SCCOG staff may provide assistance determining eligibility for Federal or State funding.

Background

The recommendations for Windham were generated from public input received through the map.social site created for this project, as well as the CT Statewide Active Transportation Plan’s bicycle transportation network map, and discussions with the Town staff.

In the Implementation section of Windham's 2017 Plan of Conservation and Development (POCD), the following strategies – aligned with this Toolkit's recommendations – are listed:

- Complete Air Line Trail / East Coast Greenway connection between Bridge and Jackson Streets, along Riverside Drive, up Railroad Avenue, to the North side of Main Street. Include signage along trail to direct users to restaurants and businesses.
- Coordinate with CT DEEP and others to provide maintenance on the Air Line Trail and East Coast Greenway, including litter removal.
- Seek funding for a trail connection in North Windham, from Air Line Trail to Mansfield Hollow Recreational Areas.

These strategies will help establish connectivity between outdoor recreational facilities and other important destinations. The POCD also states that, "Where space constraints make full bike lanes infeasible, consider painting "sharrows" to remind drivers to share the road with bicyclists."

The Air Line State Park Trail 12 Town Task Force received funding through a 2019 Connecticut Department of Energy and Environmental Protection (DEEP) Trails Grant, as well. Windham will be part of the Task Force that will guide a Master Plan for the Air Line Trail.

Federal transportation funding programs are available for eligible bicycle, pedestrian and transit projects in addition to traditional highway projects. The SCCOG staff can provide funding guidance and technical support to towns applying for those funds, which are explained in Section 4 (Policies, Plans and Practices) of the SCCOG Regional Bicycle and Pedestrian Plan.

Additional funding sources for local match include:

[Private Land Trusts](#), fundraising through local not-for-profit entities, the Land and Water Conservation Fund, and the Volkswagen Settlement Fund.

Recommendations

The recommendations map on the front page shows routes identified in the regional network specific to Windham. The blue line (State identified Route) at the top and green line (Regional identified Route) at the bottom of this map are routes prioritized for bicycle and pedestrian improvements.

Bike-Oriented Recommendations

- Willimantic Main Street (Rt 66): Bike Route w/ sharrows and R4-11 "Bikes May Use Full Lane" signs.
- Provide a continuous bike and pedestrian-safe facility for the Air Line Trail running west from the intersection of Jackson and Union Street, west on Main St, turning onto Riverside Drive, crossing Bridge Street and continuing west on the south side of the rail line to join the Airline Trail.
- Valley St from High St to Airline Trail: Create Bicycle Blvd.
- High St from Eastern University and Windham High School to Main St: Provide sharrows and R4-11 "Bikes May Use Full Lane" signs.
- Create a signed bike route on Bridge St (Rt 32) at the Riverside Dr intersection onto Mountain St (Rt 289) to the border with Lebanon (requires cross-jurisdictional cooperation with Lebanon).
- Add short-term bicycle parking (bike racks) within the business district.

Pedestrian-Oriented Recommendations

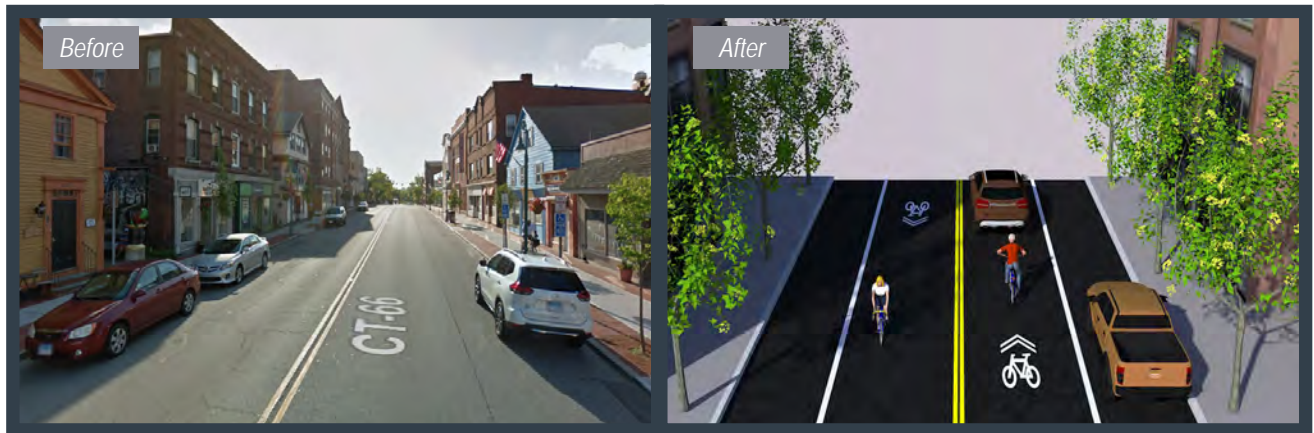
- Main St (Rt 66): Provide curb extensions on Main St crossings between Bridge St and Jackson St.
- Infill gaps in sidewalk network, especially roads connecting to Windham Recreation Park such as Brick Top Rd (Rt 14).

References

Recent reports referencing bicycle and pedestrian infrastructure in Windham include:

- Windham Main Street (Route 66) – Road Safety Audit (2016)
- Plan of Conservation and Development (2017)
- Southeastern CT Metropolitan Transportation Plan (2019-2045)

1. Willimantic Main Street (Route 66): Bike Route with sharrows and R4-11 “Bikes May Use Full Lane” signs



2. Air Line Trail Connector at Jackson Street (Route 32) and Main Street (Route 66) to Riverside Drive: provide safe bike access through intersection - bike lanes or grade separated bike lanes (widen sidewalks)



3. Valley Street from High Street to Air Line Trail: Create Bicycle Boulevard



13. Performance Measures

MPOs, including SCCOG, establish and use a performance-based approach to transportation planning and programming in conformity to federal law. Tracking progress toward goals enables MPOs to prioritize infrastructure, programs, and policies which have a high likelihood of improving performance. Performance measures include national performance benchmarks but may also include additional measures.

Performance measures for this Plan are data-driven benchmarks, typically assessed annually, related to bicycling and walking goals for the SCCOG region. Goals include building of new facilities, expanding modeshare, improving safety, and increasing funding for bicycling programs and projects. These measures are trackable over time, so that the performance of the region against these goals will demonstrate the success level of the plan's implementation.

Just as there is a broad range of ways that performance can be measured, there is a broad range of methods for data collection. Sources include police databases, Geographic Information System databases, and municipal, regional, and state agencies. Some data can be acquired only via intercept surveys, observation, or automated trail counters such as those used in the Connecticut Trail Census program.

Tracking performance allows for determination of what goals are not being reached, which should lead to altering strategies, or renewing focus, to reach targets. This information can also be used by SCCOG and the region's municipalities as a factor when prioritizing bike and pedestrian transportation projects.

This report uses the Federal Highway Administration's Guidebook for Developing Pedestrian & Bicycle Performance Measures as its base for framing and formulating performance measures. Community goals listed in the Guidebook are connectivity, economics, environment, equity, health, livability, and safety. Performance measures provided in this report are all related to those goals. Some performance measures relate to more than one community goal.

Tracking performance measures can be a substantial investment of time and resources. This plan recommends using interns from local high schools or colleges to collect and analyze annual performance measures data.

The appendices to this report include tables with pertinent data already collected, forming a baseline for future evaluation of the performance measures, following plan adoption and implementation. Performance measures listed on the following pages are all recommended. The highest priority performance measures are shown in bold type.

Safety

Injury and fatality rates

Injury and fatality rates for bicyclists and pedestrians have increased in the U.S. in recent years, so it is important to know if changes made in response to this plan have an impact on that trend.

- Number of reported bike crashes
- **Number of reported bike crashes, bicyclist killed or seriously injured (KSI)**
- Number of reported pedestrian crashes
- **Number of reported pedestrian crashes, pedestrian (KSI)**

User Counts

A representation of total users of particular bike and pedestrian facilities, separate from modeshare (see below) which measures percentages of trips made using different transportation modes

- Baseline count locations: Crystal Lake Dr sidepath, Groton; Gold Star Bridge access path, Groton; Central Ave, Norwich
- **Future count location: G&S Trolley Trail, Groton; Air Line Trail North, Windham**

System & Network

These metrics represent the SCCOG region's ability to connect people with services, resources,

employment, and each other.

- Miles of shared-use paths
- Miles of mountain bike paths
- Miles of bike lanes
- Miles of advisory bike lanes
- Miles of bike boulevards
- Miles of on-road bike facilities
- **Miles of all bike facilities**
- Miles of bike facilities in urbanized areas
- Miles of routes marked with sharrows (but no traffic calming measures)
- Miles of walking paths (does not include sidewalks)
- Number of connection nodes between bikeway types
- Number of short-term bike parking spaces at New London Union Station
- Number of long-term bike parking spaces at New London Union Station
- Number of short-term bike parking spaces at Mystic Station
- Number of long-term bike parking spaces at Mystic Station

Access

Important as a measure of distribution of facilities across the region, concentration of facilities where the most people live, and ability of the disabled to reach resources in the region.

- Miles of bikeways in environmental justice and low-income areas
- Percentage of SCCOG region population

living within 1 mile of a shared-use path

- **Percentage of SCCOG region population living within 1 mile of a shared-use path or other bikeway (all types)**

Funding

Most recommendations found in this plan rely on funding from the State of Connecticut and/or municipalities of the SCCOG region in order to be implemented. The State does not currently track bike and pedestrian project funding by COG region, so there is not any baseline information yet. It is recommended that the State begin doing so.

- Per capita regional TIP funding for bike and pedestrian projects
- Percentage of total TIP funding allocated to bike and pedestrian projects
- Per capita TIP funding allocated to bike and pedestrian projects as compared to neighboring COG regions: NECCOG, Valley COG, CRCOG, and Rhode Island Division of Planning
- Per capita TIP funding allocated to bike and pedestrian projects as compared to CT statewide figures

Modeshare

A measurement of what percentage of overall trips are made by different transportation modes (walking, biking, public transit, cars, etc.), important to track, as it allows us to see trends in relation to project and program implementation. These figures are drawn from the American Community Survey, produced every five years.

- **Percentage of regional trips taken by bike**
- **Percentage of regional trips taken on foot**

Local support/encouragement

While this Plan sets a direction and proposes programs and projects that will be impactful, it is often up to the municipality to enact the programs and get the projects built. These measures are expressions of a municipality's encouragement of and support for walking and bicycling.

- **Number of towns with Complete Streets policies or ordinances**
- Number of towns, businesses, and colleges designated as Bicycle Friendly by the League of American Bicyclists

Equity

These measures help us to determine if efforts are being felt in all parts of the region; sometimes the neighborhoods that have lowest levels of car ownership (and therefore have greater need for good walking and biking conditions) are the neighborhoods most underserved by government infrastructure spending.

- **Miles of bicycling facilities in Environmental Justice and low-income areas**
- Miles of walking paths (excepting sidewalks) in Environmental Justice and low-income areas

Economics

These measures help evaluate the local and regional economy as it relates to active transportation

- Average spending per week by bike or on foot, per Plan intercept surveys
- Trail-related spending, per CT Trail Census intercept surveys
- Number of bike shops in the region

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Appendix A

Recommendations Table

SITE-SPECIFIC RECOMMENDATIONS FOR BICYCLE AND PEDESTRIAN FACILITIES

	Municipality	Bicycle-oriented Improvement	Pedestrian-oriented Improvement
1	Bozrah	<p>1. Create a signed bike route on Fitchville Road (State Route 616) from the border with Lebanon to Bozrah Road (Rt 163), to Gager Road, to Browning Road, to the Norwich border (requires cross-jurisdictional cooperation with Lebanon and Norwich).</p> <p>2. Stockhouse Road from Route 608/Fitchville Road to Route 87: Provide shared lane.</p>	<p>1. Fitchville Center: Provide sidewalks along Norwich-Colchester Tpk (Rt 608 from the Post Office to Haughton Road).</p>
2	Colchester	<p>1. Create a signed bike route on Norwich Avenue (Rt 616) from Town Green to Lebanon border (requires cross-jurisdictional cooperation with Lebanon).</p> <p>2. Improve connections and wayfinding to Airline Trail.</p> <p>3. Interconnect various off-road shared use trails on open space parcels with on-road bike lanes or shoulders (e.g. Colchester village to Day Pond State Park).</p>	<p>1. Infill sidewalk gaps in Colchester Villager, especially on Main Street and Broadway.</p> <p>2. Colchester village: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See Appendix K for a map and sidewalk inventory rating list.</p>
3	East Lyme	<p>1. Boston Post Road (Rt 1) from Flanders 4-Corners to Old Lyme border: widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder (requires cross-jurisdictional cooperation with Old Lyme).</p> <p>2. Flanders Road/Pennsylvania Avenue (Rt 161) from East Lyme High School to Main Street. widen roadway where needed for bike-safe shoulders or bike lanes and at intersections with turn lanes to provide continuous shoulder. Consider alternative N/S</p>	<p>1. Infill gaps in sidewalk network especially in the Flanders district and along Flanders Road (Rt 161) to Niantic Village.</p>

	<p>route with improvements on E Pattagansett, Roxbury, and Riverview to Industrial Park Road.</p> <p>Eastern Shoreline Path (ESP) Recommendations (east to west)</p> <p>3. Provide “Eastern Shoreline Trail Bikeway” (EST) and wayfinding signs at intervals throughout the route.</p> <p>4. Niantic River Bridge (Rt 156) to Pennsylvania Avenue (Rt 161): provide protected bi-directional bike lane on north side of Rt 156 to bridge; shift lanes south and widen existing bridge sidewalk to accommodate bi-directional bike lanes and pedestrians (requires cross-jurisdictional cooperation with Waterford); continue on north side of Main Street and connect to existing boardwalk side path; continue bi-directional side path on widened sidewalk to Pennsylvania Avenue (may require narrowing Main Street to 10’ or 11’ lanes). Option 1: end bi-directional bike lanes on Main Street at Smith Avenue and direct cyclists onto Smith Avenue to Grand Street and create Bicycle Boulevard on Grand Street from Smith Avenue to Pennsylvania Avenue. Option 2: provide standard, marked bike lanes from Niantic River bridge to Pennsylvania Avenue (requires cross-jurisdictional cooperation with Waterford)</p> <p>5. Main Street (Rt 156) Niantic village (kiosk/wayfinding point): provide sharrows and R4-11 “Bikes May Use Full Lane” signs from Pennsylvania Avenue to East Pattagansett Road.</p> <p>6. W Main Street (Rt 156) from Pattagansett Road. to Old Lyme Border: provide 4’ wide min bike lanes both sides to Old Lyme border (approx. at intersection with 4 Mile River Road), requires cross-jurisdictional cooperation with Old Lyme.</p>	
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4	Franklin	1. Create a signed bike route on Norwich Lebanon Road (Rt 87) from the border with Lebanon to Norwich border (requires cross-jurisdictional cooperation with Norwich and Lebanon).	1. Franklin Tpk (Rt 32): Add sidewalks from Old Rt 32 to Baltic Road (Rt 610).
5	Griswold	<p>1. Provide shared-use path from Griswold High School football field along Quinebaug River to Wedgewood Drive terminus. (Quinebaug River Greenway Extension)</p> <p>2. Jewett City Main Street (Rt 12 & 201) from Slater Avenue to Ashland Avenue: provide sharrows and R4-11 “Bikes May Use Full Lane” signs.</p> <p>3. Route 201 from Main Street Jewett City to N Stonington border: Widen roadway for bike-safe shoulders where needed & provide Bike Route signage (requires cross-jurisdictional cooperation with N Stonington).</p>	<p>1. Install a mid-block crossing of Main Street at the south corner of Soule Street near Fanning Court and Soule Street, including curb extensions in front of the fire hydrant at Soule/Main and opposite it at the mouth of Fanning Court.</p> <p>2. Implement curb extensions and streetscape improvements on Main Street as recommended in the 2011 Jewett City Main Street Corridor Master Plan and the 2016 Road Safety Audit.</p> <p>3. Jewett City: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan’s ADA Mapping. See Appendix K for a map and sidewalk inventory rating list.</p>
6	Groton (TOWN)	<p>1. Route 184 from intersection with King's Hwy to Stonington border: Narrow lanes and provide minor widening where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.</p> <p>2. Route 1 from Grasso Tech/Sutton Park entrance to Walker Hill Road/Toll Gate Road: Infill sidewalk gaps, provide bike lanes, widen roadway where needed and at intersections with turn lanes to provide continuous bike lanes.</p> <p>3. Crystal Lake Road/Rt 12/Pleasant Valley Road S/Walker Hill Road multi-use path: add wayfinding signage directing users to Navy base and Gold Star Bridge.</p>	<p>1. Route 1 from Grasso Tech/Sutton Park to Walker Hill Road/Toll Gate Road: Infill sidewalk gaps</p> <p>2. Route 1 from Judson Avenue to Groton Long Point Road: Infill sidewalk gaps.</p> <p>3. (City) Shennecossett Road: Add sidewalks.</p> <p>4. Route 1 from Grasso Tech/Sutton Park entrance to Rt 12 Walker Hill Road/Toll Gate Road intersection: Infill sidewalk gaps.</p> <p>5. Route 1/Poquonnock district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan’s ADA Mapping. See Appendix K for a map and sidewalk inventory rating list.</p>

	<p>4. River Road (Mystic): Convert existing two-lane roadway into single center lane with Advisory Shoulders (aka Advisory Bike Lanes) if feasible.</p> <p>5. Haley Farm Shared Use Path: Improve surfacing for safe commuter bike use (permeable bituminous recommended).</p> <p>6. Implement the town's section of Tri-Town Trail.</p> <p>7. Colonel Ledyard Hwy: Add bike lanes from Rt 184 to Ledyard border. Coordinate with Ledyard.</p> <p>Eastern Shoreline Path (ESP) Recommendations (east to west)</p> <p>8. Provide "Eastern Shoreline Trail Bikeway" (EST) and wayfinding signs at intervals throughout the route.</p> <p>9. Provide sharrows, R4-11 "Bikes May Use Full Lane" signs on W Main Street (US Rt 1) from Mystic River bridge to Water Street (Rt 215); continuing along Water Street to intersection with High Street/Latham Street and Fort Rachel Pl; continuing on Noank Road (Rt 215, currently a CTDOT signed "Bike Route") with travel lanes narrowed to 10' and/or widen roadway to provide 4' wide min bike lanes both sides to intersection with Prospect Hill Road; continue on Rt 215 to intersection with Groton Long Point Road; continuing south on GLP Road providing bike lanes to junction with southern terminus of Groton Utilities/City of Groton/Town of Groton former trolley line ROW.</p> <p>10. Construct Shared Use Path (G&S Trolley Trail Phase 2) within ROW and connect to southeastern terminus of G & S Trolley Trail Phase 1 at Amtrak bike/ped bridge (kiosk/wayfinding point).</p>	<p>6. City: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See Appendix K for a map and sidewalk inventory rating list.</p>
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		<p>11. Construct Shared Use Path connection from Northwestern G & S Trail terminus at Knoxville Ct to Industrial Dr; and continue across Depot Road to southern terminus of Poquonnock River Boardwalk.</p> <p>12. From northern terminus of boardwalk (kiosk/wayfinding point), construct bi-directional protected bike lanes for approx. 360 lf on south side of Poquonnock Road (Rt 1) to South Road (8' min width recommended).</p> <p>13. Continuing onto South Road (Rt 649, currently a CTDOT signed "Bike Route"); with travel lanes narrowed to 10' and/or widen roadway to provide 4' wide min bike lanes both sides to intersection with Thomas Road.</p> <p>14. Extend existing Thomas Road bike lanes along Tower Avenue and South Road (Rt 649) to Rt 1.</p>	
	Groton (CITY)	<p>1. Provide bike lanes along High Rock Road and Rainville Road to Eastern Point Road</p> <p>2. Smith Street from Meridian Street to Thames Street: Create Bicycle Boulevard.</p> <p>Eastern Shoreline Path (ESP) Recommendations (east to west)</p> <p>3. Extend Thomas Road bike lanes south into Groton City turning south along Shennecossett Road (Rt 349) continuing onto Eastern Point Road. Provide sharrows and R4-11 "Bikes May Use Full Lane" signs where roadway cannot be widened.</p> <p>4. Thames Street: Designate Bike Route w/ sharrows, R4-11 "Bikes May Use Full Lane" signs and wayfinding signs.</p>	

		<p>5. Improve the Gold Star Bridge shared use access pathway: widen pavement, lessen steep grade, add lighting and wayfinding signs (kiosk/wayfinding point). Note: Existing bridge path has sub-standard width with hazardous conditions for pedestrians and bicyclists, especially at sign foundation choke points, common use of path by motorized scooters, and limited sight lines on the west side curve.</p> <p>6. Preferred Option: Construct new protected Shared Use Path on Gold Star Bridge northbound span as part of bridge renovation project. Bridge path accessway would connect to Bridge Street.</p>	
7	Lebanon	<p>1. Create a signed bike route on Norwich Avenue (State Route 616) from the border with Colchester to the border with Bozrah (requires cross-jurisdictional cooperation with Colchester and Bozrah).</p> <p>2. Create a signed bike route on Beaumont Hwy (Rt 289)/Trumbull Hwy (Rt 87) from the border with Windham to the Franklin border (requires cross-jurisdictional cooperation with Windham and Franklin).</p> <p>3. Camp Moween Road from Norwich-Colchester Tpk (Rt 616) to Moween State Park trail head: Provide shared lane.</p>	<p>1. Town Green: Provide sidewalks on the south end of the green connecting Town Hall, Library, Community Center, and post office.</p>
8	Ledyard	<p>1. Colonel Ledyard Hwy: Add bike lanes from Groton border, past Ledyard High School to Rt 117. Coordinate with Groton.</p> <p>2. Ledyard Center - Route 117: Remove north-bound right-turn lane onto Rt 214 and replace with bike-safe shoulders.</p>	<p>1. Route 117 in Ledyard Center: Infill gaps in sidewalk network.</p> <p>2. Colonel Ledyard Hwy: Add sidewalks from High School to Rt 117.</p> <p>3. Route 12 Gales Ferry: Expand sidewalk network to commercial developments.</p>

		<p>3. Route 12 from Groton border to Preston border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.</p> <p>4. Implement the town's section of Tri-Town Trail.</p> <p>5. Interconnect various off-road shared use trails on open space parcels with on-road bike lanes or shoulders.</p>	
9	Lisbon	<p>1. Rt 138 from Sprague border to Rt 12: Widen roadway where needed for bike-safe shoulders.</p>	<p>1. Add sidewalks along Newent Road and S Burnham Hwy (Rt 169) in vicinity of Lisbon Central School.</p> <p>2. Extend sidewalks along River Road (Rt 12) north from Lisbon Landing entrance road to Jewett City.</p>
10	Montville	<p>1. Create signed north/south bike route on Derry Hill Road/Massapeag Side Road/Fort Shantok Road (Rt 433).</p> <p>2. Chesterfield Road and Meetinghouse Ln from Montville High School to Raymond Hill Road: widen roadway for bike-safe shoulders.</p> <p>3. Provide shared use path on proposed second span of Mohegan-Pequot Bridge (Rt 2A), also provide pathway bridge access from adjacent roads to the north (Mohegan Sun) and south.</p> <p>4. Norwich Salem Tpk (Route 82) from Salem border to Norwich border: widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder (requires cross-jurisdictional cooperation with Salem and Norwich).</p>	<p>1. Provide continuous sidewalks along both sides of RT 32 centering on Mohegan Sun Blvd and going north to the intersection of West Thames Street and south to intersection with Briarwood Park.</p> <p>2. Chesterfield Road and Meetinghouse Ln from Montville High School to Raymond Hill Road: provide sidewalk on north side.</p> <p>3. Uncasville district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See Appendix K for a map and sidewalk inventory rating list</p> <p>4. Rt 32 north of Rt2A district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See Appendix K for a map and sidewalk inventory rating list</p>

11	New London	<p>1. Huntington Street (Rt 641) from Williams Street to Federal Street: Add bike lanes or protected bi-directional bike lane.</p> <p>2. Williams Street (Rt 635 partial) from Broad Street to Waterford border: Add protected bike lanes.</p> <p>3. Add both short-term and long-term bicycle parking at the train station, with additional short-term bicycle parking in the surrounding business district.</p> <p>Eastern Shoreline Path (ESP) Recommendations (east to west)</p> <p>4. Provide “Eastern Shoreline Trail Bikeway” (EST) and wayfinding signs at intervals throughout the route.</p> <p>5. Provide kiosk/wayfinding point at beginning of Gold Star Bridge Bike/Ped Path. Note: Existing bridge path has sub-standard width with hazardous conditions for pedestrians and bicyclist, especially at sign foundation choke points, common use of path by motorized scooters, and limited sight lines on the west side curve.</p> <p>6. Preferred Option: Construct new protected Shared Use Path on Gold Star Bridge northbound span as part of bridge renovation project. Bridge path accessway would connect to Huntington Street bike lanes and sidewalks.</p> <p>7. Connect Eastern Shoreline Trail route from either Williams Street or Huntington Street (depending on Gold Star Bridge Path outcome). Follow the signed New London Bike Route to Bank Street, Howard Street and Pequot Avenue. From Pequot Avenue near Ocean Beach Park turn left (west) onto Neptune Avenue for one block, turn right (north) onto Ocean Avenue for one block, turn left (west) onto Highland Avenue and continue to the Waterford border at the bridge over Alewife</p>	<p>1. Extend Waterfront Pathway to Shaw’s Cove and Ft Trumbull area.</p> <p>2. Rt 32 from Williams Street to Benham Avenue: implement traffic calming measures including improved sidewalks, crossings, lighting, and landscaping.</p> <p>3. Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan’s ADA Mapping. See Appendix K for a map and sidewalk inventory rating list.</p>
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		Cove. Create Bicycle Boulevard on Highland Avenue (requires cross-jurisdictional cooperation with Waterford).	
12	North Stonington	<p>1. Route 201 from Stonington border to Route 2: Widen roadway for bike-safe shoulders where needed & provide Bike Route signage; continue on Rt 2/Rt 201 to Cossaduck Hill Road (requires cross-jurisdictional cooperation with Stonington).</p> <p>2. Route 201 from Route 2 to Griswold border: Widen roadway for bike-safe shoulders where needed & continue Bike Route signage (requires cross-jurisdictional cooperation with Griswold).</p> <p>3. Create a shared use path from Raven Wood Dr around the school field area to the school buildings and existing pedestrian tunnel. Provide bike parking at each school. Create a signal-controlled crossing over Rt 2 for bikes and pedestrians. Connect path to Library. Investigate use of old trolley ROW & river edge land now in private ownership for shared-use path alignment to reach village center/Town Hall.</p>	1. Infill sidewalk gaps in North Stonington village.
13	Norwich	<p>1. Boswell Avenue: Bicycle boulevard connecting N Main Street to Franklin Avenue.</p> <p>2. Dunham Street from Rt 82 to Rt 32: add bike lanes.</p> <p>3. Talman Street: Two-way advisory bike lanes (1/2 of Talman is one-way) or bicycle boulevard.</p> <p>4. Central Avenue: Bike lanes or bi-directional bike lanes.</p> <p>5. Route 12 from Water Street (Rt 2) to Preston border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.</p>	<p>1. Implement safety improvements on Rt 82 from Old Salem Plaza to Fairmont Street including improved sidewalks, crossings, lighting, and landscaping.</p> <p>2. Greenville district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See Appendix K for a map and sidewalk inventory rating list</p> <p>3. Taftville district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan's ADA Mapping. See Appendix K for a map and sidewalk inventory rating list.</p>

		<p>Provide sharrows and R4-11 “Bikes May Use Full Lane” signs in Laurel Hill section if widening is not feasible.</p> <p>6. Create signed bike route on Browning Road, culminating at West Town Street, enabling a signed bike route from Colchester to Norwich (requires cross-jurisdictional cooperation with Bozrah).</p> <p>7. Downtown streets: provide bike lanes, sharrows and R4-11 “Bikes May Use Full Lane” signs where feasible.</p> <p>8. Add both short-term and long-term bicycle parking at the transportation center, with additional short-term bicycle parking in the downtown business district.</p>	
14	Preston	<p>1. Poquetanuck Road (Rt 2A) from Laurel Hill Road (Rt 12) to Norwich-Westerly Road (Rt 2): Widen roadway where needed for bike-safe shoulders or bike lanes. Extend shoulders/bike lanes on Rt 117 to Tri-Town Trail.</p> <p>2. Route 12 from Ledyard border to Norwich border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.</p> <p>3. Provide shared use path on proposed second span of Mohegan-Pequot Bridge (Rt 2A), also provide access path to bridge from Rt 12.</p> <p>4. Continue Tri-Town Trail onto historic trolley line ROW with potential connections to Mathewson Mill Road, Shewville Road and Rt 2 (requires cross-jurisdictional cooperation with Ledyard).</p>	<p>1. Implement pedestrian safety measure including sidewalks, crossings, lighting, and landscaping along Routes 2A within the Poquetanuck Village historic district and connecting to Milton Green Park and future Tri Town Trail northern terminus.</p>

15	Salem	<p>1. Norwich Road (Rt 82) from Lyme border to Montville border: widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder.</p> <p>2. Interconnect various off-road shared use trails on open space parcels with on-road bike lanes or shoulders.</p> <p>3. Goodwin Trail: Cooperate with East Lyme, Lyme and Eightmile River Wild & Scenic Watershed to improve access and wayfinding to the trail.</p>	<p>1. Complete the sidewalk gap along Rt 85 between Salem School and Rt 82.</p>
16	Sprague	<p>1. Bushnell Hollow Road (Rt 138) from intersection with North Main Street (Rt 97) to Paper Mill Road (Lisbon border): Widen roadway where needed for bike-safe shoulders.</p> <p>2. Baltic Village: Provide bike safety improvements including bike lanes and/or sharrows and R4-11 “Bikes May Use Full Lane” signs on Main Street/ N Main Street (Rt 97), and Bushnell Hollow Road (Rt 138).</p>	<p>1. Add sidewalks along West Main Street (Rt 207) from Chelsea Groton Bank near Plain Hill Road to bridge over Beaver Brook near School Hill Road, Baltic.</p>
17	Stonington	<p>1. Route 1 Pawcatuck from Mayflower Avenue to RI border: This corridor has been designated as a CTDOT Tier 1 Bike/ped improvement project to improve bike and pedestrian safety with pavement makings/signage, crosswalks, ped walk signals, etc.</p> <p>2. Create a signed bike route on Route 201 from Old Mystic to N Stonington border (requires cross-jurisdictional cooperation with North Stonington).</p> <p>3. Create a signed bike route on Rt 184 from Groton border to N. Stonington border; widen roadway where shoulder is too narrow and at intersections w/ turn lanes to provide continuous shoulder (requires cross-jurisdictional cooperation with North Stonington).</p>	<p>1. Route 1 from Broadway to Big-Y grocery store: Infill sidewalk gaps.</p> <p>2. Route 1 in Pawcatuck: Complete sidewalk on south side of road from high school to Mayflower Avenue. (this has been a high priority Town-proposed project for several years).</p> <p>3. Provide sidewalks in the “Golden Triangle” district including Whitehall Avenue (Rt 27), Coogan Blvd, and Jerry Brown Road.</p> <p>4. Pawcatuck district: Repair, replace or construct sidewalks and/or accessory improvements where needed as indicated by the Plan’s ADA Mapping. See Appendix K for a map and sidewalk inventory rating list.</p>

		<p>4. Route 1A side loop into Stonington Borough: Designate Alternate Bike Route w/ signage, widen roadway where shoulder is too narrow. Add sharrows and R4-11 “Bikes May Use Full Lane” signs to Cutler Street and Elm Street sections where roadway width is constrained.</p> <p>5. Construct pedestrian bridge over Pawcatuck River just south of Amtrak bridge (end of Coggswell Street) to downtown Westerly.</p> <p>6. (Stonington Borough) Alpha Avenue: provide bike lanes on viaduct; Water Street & Main Street: provide sharrows and R4-11 “Bikes May Use Full Lane” signs.</p> <p>7. Add both short-term and long-term bicycle parking at the Mystic train station, with additional short-term bicycle parking in the surrounding business district.</p> <p>Eastern Shoreline Path (ESP) Recommendations (east to west)</p> <p>8. Provide “Eastern Shoreline Trail Bikeway” (EST) and wayfinding signs at intervals throughout the route.</p> <p>9. Provide sharrows, R4-11 “Bikes May Use Full Lane” signs on W Broad Street from Pawcatuck River bridge to Mechanic Street; continuing along Mechanic Street to River Road; continuing on River Road to Mary Hall Avenue; continuing on Mary Hall to Greenhaven Road; crossing Greenhaven onto Stewart Road/Brucker Pkwy; turning onto Barn Island Southeast Parking driveway.</p> <p>10. Barn Island Management Area section (bituminous permeable pavement recommended for all bike facilities): Resurface Barn Island Southeast Parking driveway to</p>	
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		<p>accommodate bikes; Improve parking area (kiosk/wayfinding point); upgrade trail from parking area thru Barn Island Mgt Area to Palmer Neck Road to accommodate bi-directional bike and pedestrian use (10' width recommended).</p> <p>11. Provide R4-11 "Bikes May Use Full Lane" signs on Palmer Neck Road from Barn Island trail head to Greenhaven Road.</p> <p>12. Widen approx. 150 lf of south side of Greenhaven Road to Stonington Road/S Broad Street (Rt 1) to accommodate bi-directional protected bike lanes on west side of Greenhaven Road (8' min width).</p> <p>13. Provide bi-directional protected bike lanes on south side of Rt 1 from Greenhaven Road to intersection with Mason Island Road, Mystic (10' width recommended).</p> <p>14. Narrow travel lanes to 10' and provide buffered bike lanes both sides of Williams Avenue (Rt 1) from Mason Is Road to intersection with Washington Street; provide sharrows and R4-11 "Bikes May Use Full Lane" signs on Rt 1 from Washington Street to Mystic River drawbridge/Groton town line.</p>	
18	Waterford	<p>1. Rope Ferry Road (Rt 156) from Avery Ln to East Lyme border: Widen roadway where needed for bike-safe shoulders and at intersections with turn lanes to provide continuous shoulder (requires cross-jurisdictional cooperation with East Lyme).</p> <p>2. Rope Ferry Road (Rt 156) from Rt 1 to Avery Ln: Add bike lanes</p> <p>Eastern Shoreline Path (ESP) Recommendations (east to west)</p>	<p>1. Hartford Tpk (Rt 85) from I-95 to Cross Road: implement pedestrian safety measures including sidewalks, crossings, lighting and landscaping.</p> <p>2. Rope Ferry Road (Rt 156) from Rt 1 to Jordan Village: implement pedestrian safety measures including sidewalks, crossings, lighting and landscaping.</p> <p>3. Boston Post Road (Rt 1) from Avery Ln to New London border: implement pedestrian safety measures including sidewalks, crossings, lighting and landscaping.</p>

	<p>3. Provide “Eastern Shoreline Trail Bikeway” (EST) and wayfinding signs at intervals throughout the route.</p> <p>4. From New London border at Highland Avenue bridge over Alewife Cove, continue on Peninsular Avenue* to Ridgewood Avenue and continue north to intersection with Great Neck Road (Rt 213). Turn onto Great Neck Road (Rt 213) heading south; realign Rt 213 to the west within existing ROW to allow for protected bi-directional bike lane on east side for approximately 500’; align bike lane onto Waterford town land at this point.</p> <p>*Create Bicycle Boulevard on Peninsular Avenue (requires cross-jurisdictional cooperation with New London).</p> <p>5. Create Shared Use Path parallel to Rt 213 but separated by woodland buffer wherever possible on town land; cross Beach Park entry road and continue onto Harkness State Park land (bituminous permeable pavement recommended).</p> <p>6. Harkness State Park section (bituminous permeable pavement recommended for all bike facilities): Design a Shared Use Path to traverse the park; alignment could utilize some existing driveways and/or new pathways to be determined (kiosk/wayfinding point); continue path along Rt 213 roadside at Goshen Cove and rejoin Rt 213 ROW at western end of State land.</p> <p>7. Transition from Shared Use Path to bike lanes onto Rt 213 and continue bike lanes onto Shore Road; provide bike lanes or consider Advisory Bike Shoulder conversion; or provide sharrows and R4-11 “Bikes May Use Full Lane” signs; continue to Jordan Cove Road.</p>	<p>4. Town center/Civic triangle area: Infill gaps in sidewalk network.</p>
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		<p>8. Jordan Cove Road to Gardners Wood Road to Rope Ferry Road (Rt 156): provide bike lanes.</p> <p>9. Rope Ferry Road (Rt 156) to Niantic River Bridge – East Lyme border: provide protected bi-directional bike lane on north side of Rt 156 to bridge; shift lanes south and widen existing bridge sidewalk to accommodate bi-directional bike lanes and pedestrians (requires cross-jurisdictional cooperation with East Lyme).</p>	
19	Windham	<p>1. Willimantic Main Street (Rt 66): Bike Route w/ sharrows and R4-11 “Bikes May Use Full Lane” signs.</p> <p>2. Provide a continuous bike and pedestrian-safe facility for the Air Line Trail running west from the intersection of Jackson and Union Street, west on Main Street, turning onto Riverside Drive, crossing Bridge Street and continuing west on the south side of the rail line to join the Airline Trail.</p> <p>3. Valley Street from High Street to Airline Trail: Create Bicycle Blvd.</p> <p>4. High Street from Eastern University and Windham High School to Main Street: Provide sharrows and R4-11 “Bikes May Use Full Lane” signs.</p> <p>5. Create a signed bike route on Bridge Street (Rt 32) at the Riverside Dr intersection onto Mountain Street (Rt 289) to the border with Lebanon (requires cross-jurisdictional cooperation with Lebanon).</p> <p>6. Add short-term bicycle parking (bike racks) within the business district.</p>	<p>1. Main Street (Rt 66): Provide curb extensions on Main Street crossings between Bridge Street and Jackson Street.</p> <p>2. Infill gaps in sidewalk network, especially roads connecting to Windham Recreation Park such as Brick Top Road (Rt 14).</p>

Appendix B

RSA Assessment Findings

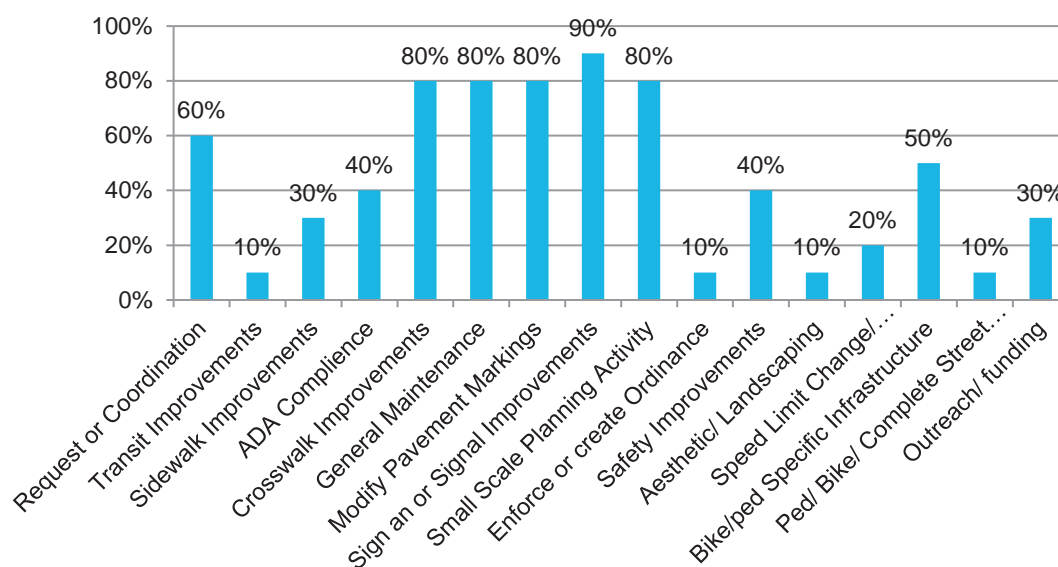
Appendix B

Roadway Safety Audit (RSA) Assessment Findings

*RSA data for the Community Connectivity Program was collected from 2016-May 2019 by CTDOT. Audits were completed in Stonington, New London, Waterford, Montville, Bozrah, Norwich, Colchester, Sprague, Windham, and Griswold. [To see full RSA reports visit: http://ctconnectivity.com/rsa-reports/](http://ctconnectivity.com/rsa-reports/)

B.1

Recommendation Frequency: Short-Term

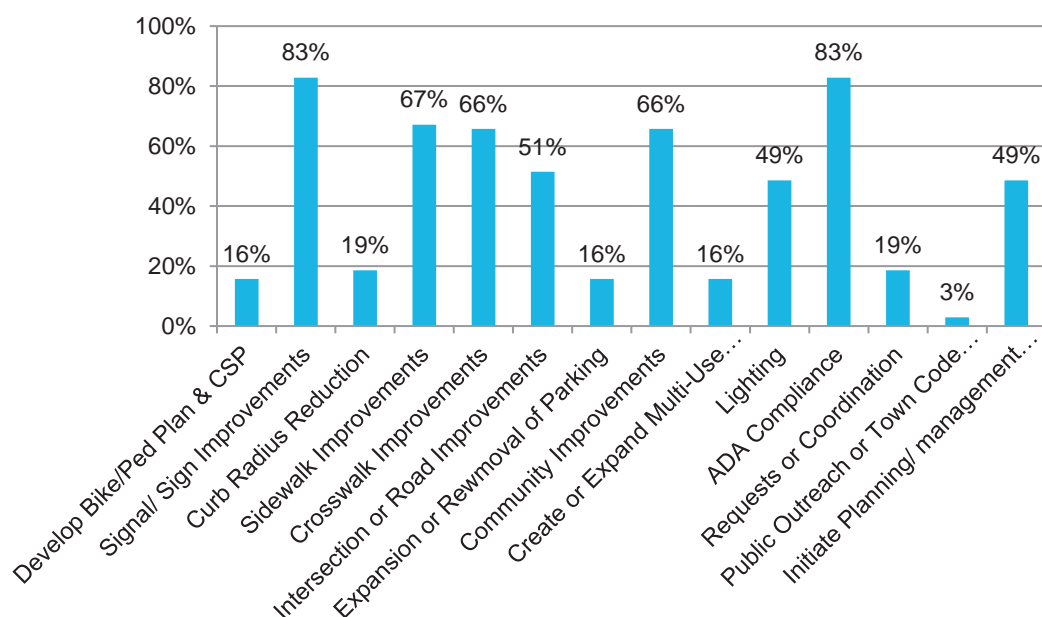


Signing, minor signal improvements, modification of pavement markings, cross walk improvements, and general maintenance were most often included in short-term recommendations (6 to 12 months). These are activities that can have a large impact without the need for substantial investment in new infrastructure or time, such as repainting a faded crosswalk to increase visibility of pedestrian facilities for clarity and right of way purposes. Just over 83% of all RSA's conducted consisted of state roadway facilities.

When assessing State vs. Local road short term recommendations, the frequency of recommendations is relatively consistent. Three recommendations stand out for local roads: Sign and Signal Improvements, Bike/Ped Infrastructure, and Speed Limit Change/Enforcement. These three recommendations offer low cost solutions to increase safety by providing access to non-motorized user in lower vehicle traveled areas and provide clarity for all users to navigate to destinations.

B.2

Recommendation Frequency: Medium-Term

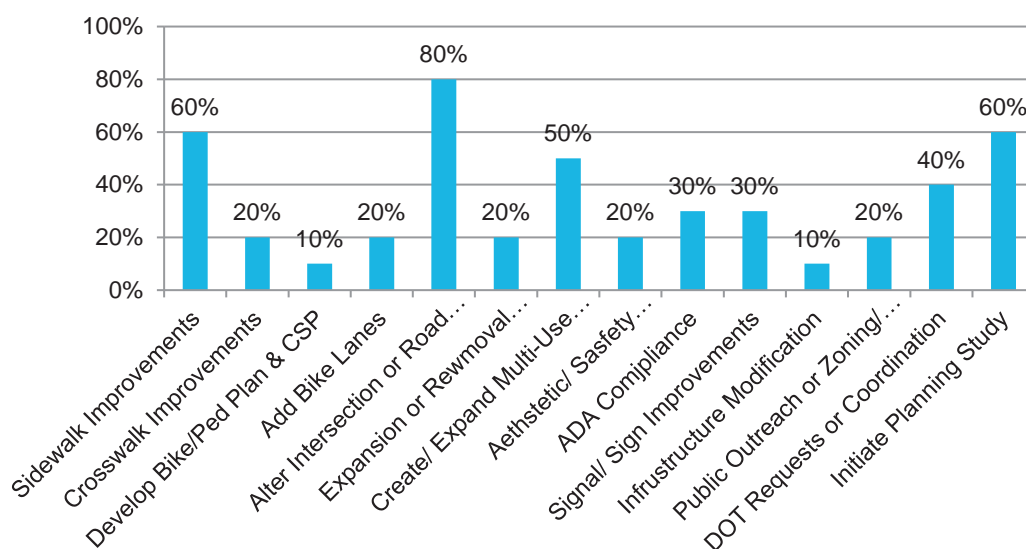


The most recommended categories for medium-term recommendations (18 months to 2 years) were signal and sign improvements, sidewalk (expansion or improvement), crosswalk realignment, expansion or removal; minor alteration, expansion or improvement to roadways or intersections; and Americans with Disabilities Act (ADA) compliance efforts.

When assessing State vs. Local road mid-term recommendations, the frequency of recommendations is relatively consistent. The recommendations that stand out for State roads are the requests for coordination from the CTDOT relating mostly to intersection and road improvements. These three recommendations offer low cost solutions to increase safety by providing access to non-motorized user in lower vehicle traveled areas and provide clarity for all users to navigate to destinations.

B.3

Recommendation Frequency: Long-Term

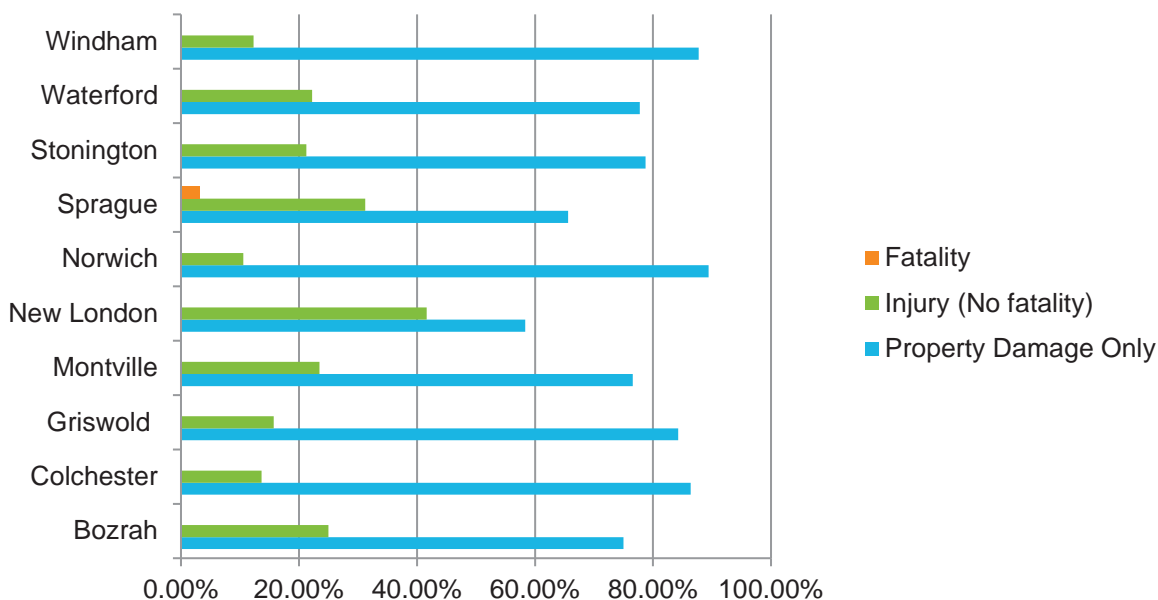


The most prominent recommendations for long-term recommendations (2+ years) are sidewalk repair, expansion or improvement; significant alterations to intersections or roads. Many of the identified tasks also involved acquisition of right of way. These recommendations require robust planning and engineering in order to be implemented and have a high anticipated monetary cost. The majority of the locations audited required facilities to be upgraded, expanded, or repaired and municipalities are asking for assistance initiating projects.

When assessing State vs. Local road mid-term recommendations, the frequency of recommendations is relatively consistent with the exception that municipalities are requesting coordination with the CTDOT, almost double compared to local requests, to progress recommendations such as intersection and road designs or to initiate planning studies. Recommendations to initiate planning studies and alter intersections or road designs rise to the top as they are directly linked in various ways. These recommendations offer higher cost solutions to increase safety and will require time and context sensitive designs to accommodate all users.

B.4

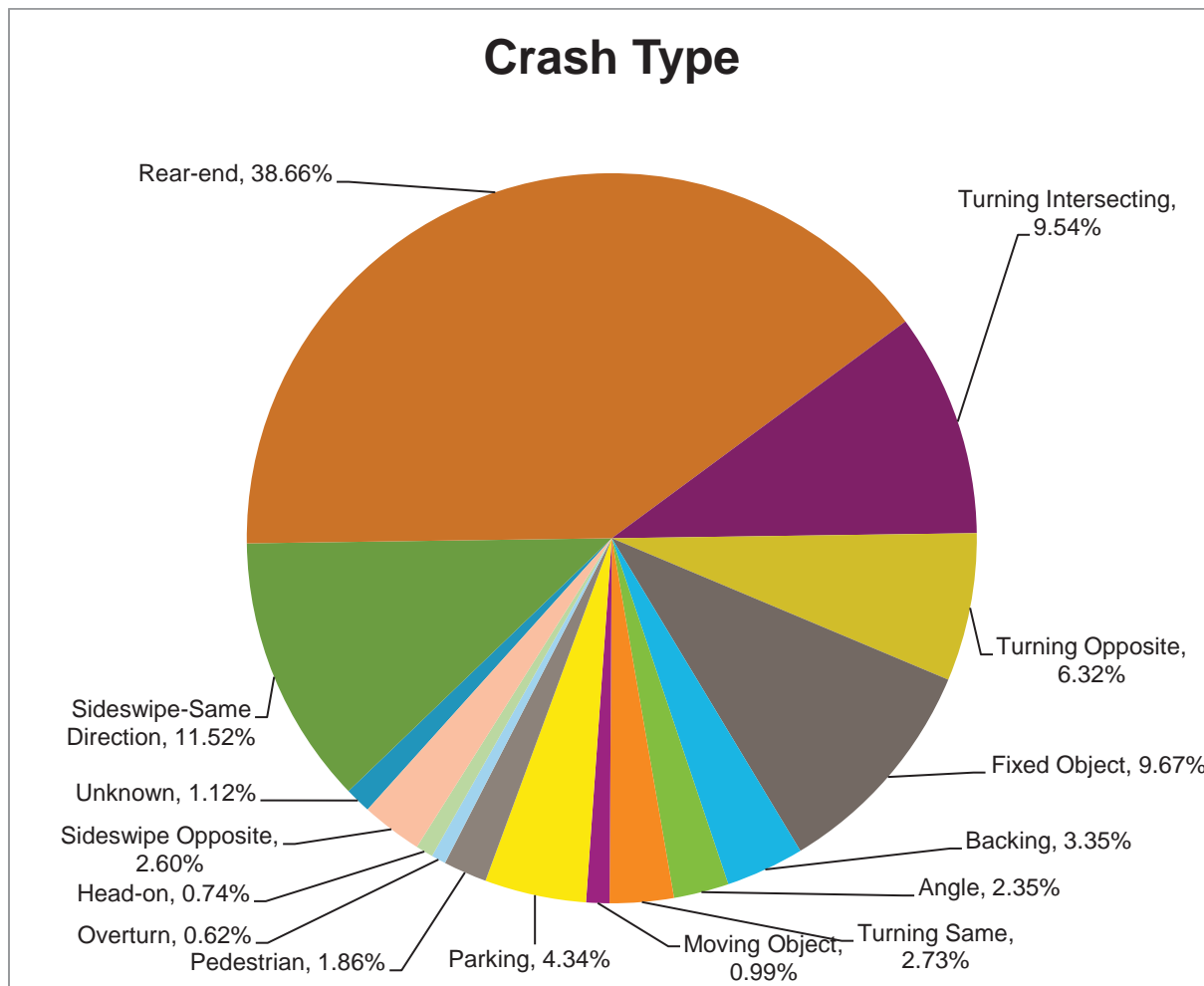
Crash Severity



*The crash data gathered for the Community Connectivity Program was derived from the UCONN Connecticut Crash Data Repository and contains three years of data for the period of 2012 to 2014, in addition to data from 2015 that is geo-located. [To see full RSA reports visit: http://ctconnectivity.com/rsa-reports/](http://ctconnectivity.com/rsa-reports/)

In general, there was a very low instance of fatal crashes on any of the roads under audit. In most cases the crash severity extended to property damage only, with non-fatal injuries typically occurring between 12% and 25% of the time. Overall, this would suggest that crashes within the RSA boundaries are occurring at lower speeds, near or around intersections and in generally more built-up areas.

70% of all crash data collected involved accidents at intersections, a percent almost identical to the rate of intersection improvement recommendations. This correlation is a good indication that all participating municipalities consider intersections as a point of emphasis when proceeding with planning and construction efforts.



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Appendix C

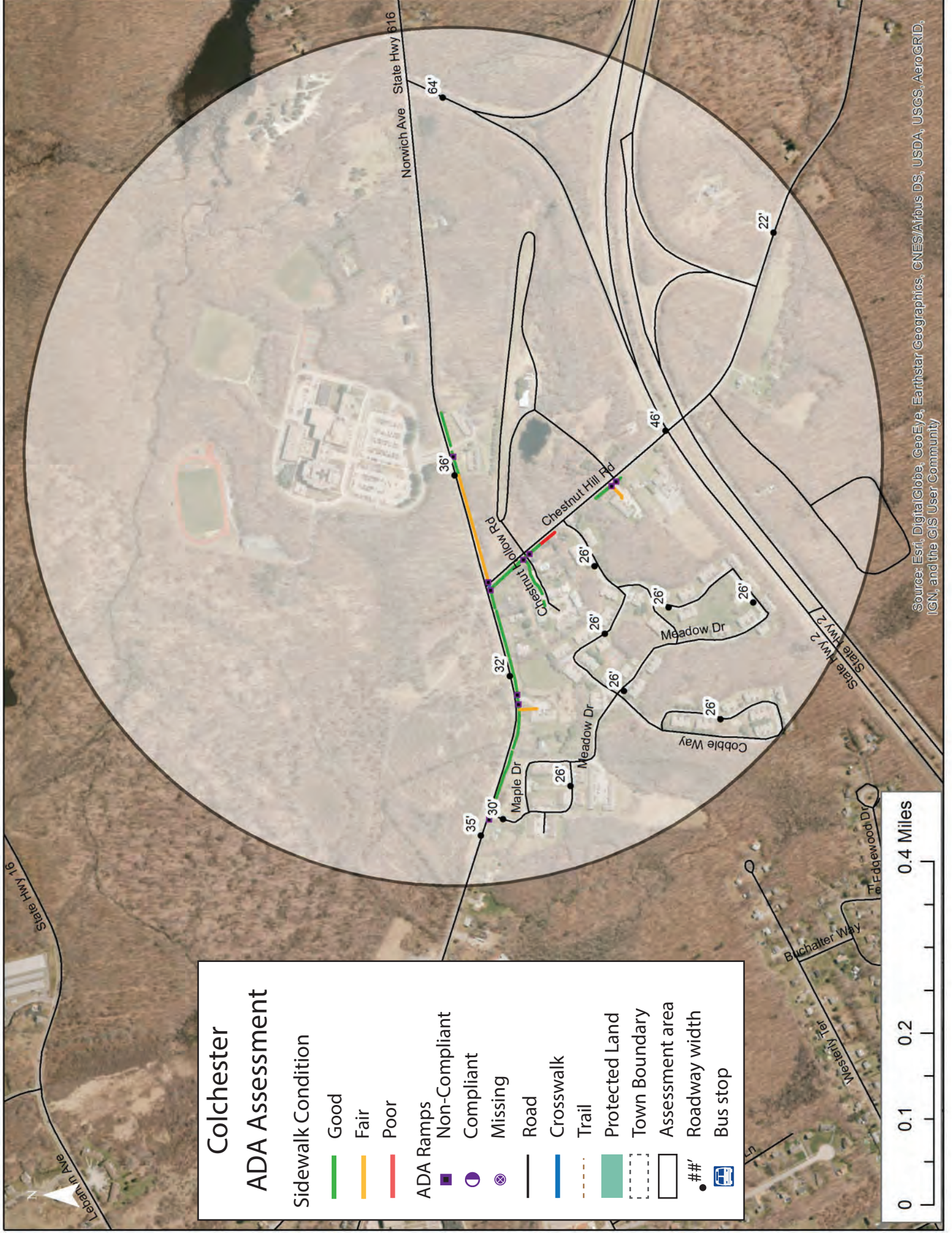
ADA Assessment Findings

Appendix C

ADA Assessment Findings

Community	Summary
Colchester	The Colchester assessment area included Bacon Academy and a residential neighborhood. A minimal amount of sidewalk is provided on Norwich Avenue and Chestnut Hill Road. The sidewalks that are present are in generally good condition; however, there is a sizeable sidewalk gap on Chestnut Hill Road, bordering an entrance to the residential neighborhood. There are no sidewalks on the s of the residential neighborhood. Where the sidewalks are present, the ramps are not ADA-compliant.
New London, Downtown	The Downtown New London assessment area has excellent sidewalk coverage, with varying sidewalk quality. While there are many ADA-compliant ramps, particularly at intersections like the Williams Street-Granite Street intersection, the majority of ramps throughout this area are not ADA-compliant.
Griswold, Jewett City	The Jewett City assessment area features varying sidewalk coverage and condition. Most intersections along Main Street have ADA-compliant ramps. Sidewalks on main roads like Main Street, Ashland Street, and Slater Avenue are in generally good condition; however, many residential roads and important connector roads to Main Street are in poor quality and have a significant number of gaps.
Groton, City of	The assessment area in Groton included Electric Boat and many surrounding residential neighborhoods. Also included is the so-called “Five Corners” located on Poquonnock Road, a heavily travelled intersection in Groton. Sidewalks are present and in good condition in the majority of the assessment area, excluding a length of Thames in poor condition. Most ramps are not ADA compliant, and in some locations are entirely missing, such as at the Five Corners. The ramps that are ADA-compliant are clustered, primarily on School and Thames Street.
Groton, Town Poquonnock Bridge	The Poquonnock Bridge assessment area is bisected by Route 1 running east-west. Sidewalks that meet Route 1, like North Road, Depot Road, and South road have poor condition, fair condition, or no sidewalks. Buddington Road, however, has a good sidewalk along its western side. Only three ramps in this area are ADA-compliant.
Montville (2 ADA locations)	The assessment area in Montville depicts two ADA locations. Many residents in this area have no access to a vehicle and thus rely on public transportation, walking and biking to get around. This is made difficult due to the overall lack of sidewalks and compliance to ADA regulations. There is a large gap in sidewalk from New London Turnpike to Norwich New London Turnpike, and both roads only have sidewalks on their east side, which are in good condition. Most ramps, particularly along State Highway 32, are not ADA-compliant, or are missing. Pedestrian access to Mohegan sun is also lacking.
Montville, Uncasville	The Uncasville assessment area has three small stretches of sidewalk, of varying conditions. None of the crosswalks in this area are ADA-compliant. All bus stops are located along State Highway 32, which has a road width ranging from 38’-46’ in this assessment area.
New London / Waterford	The New London / Waterford boundary bisects this assessment area, with Waterford to the west and New London to the east and there are large gaps in sidewalk along Broad Street, which leads to downtown New London. Most of the area lacks sidewalk access. Additionally, most ramps are not ADA-compliant, or are missing ramps.

North Stonington	The North Stonington assessment area is largely rural and protected land, with nearly no sidewalk access. All bus stops are located along State Highway 2, which has a short stretch of sidewalk near the middle school. All ramps are either missing or not ADA-compliant.
Norwich, Taftville	The Taftville assessment area has relatively low sidewalk coverage. Existing sidewalks are mostly in the downtown area and feature mostly fair or poor quality sidewalks. In addition, nearly all sidewalks are missing ramps, and the few existing ramps are not ADA-compliant.
Norwich, Greenville	The Greenville assessment area featured sidewalks in most areas served by transit stops. However, Mohegan Park Road and North has little to no sidewalk area, despite a number of transit stop locations. This creates difficulty for the first/last mile of travel. In addition, the conditions of the existing sidewalks are frequently poor with mostly non-ADA-compliant ramps.
Pawcatuck	The Pawcatuck assessment area has fairly good sidewalk coverage, with most sidewalks in good condition. Intersection crosswalks along Route 1 feature either ADA non-compliant or missing ramps. ADA-compliant ramps are inconsistently strewn throughout the area.
Preston	The Preston assessment area has no sidewalks. Bus stops are located along State Highway 12 and State Highway 2A. This can lead to poor pedestrian behavior as transit options are available with no access.
Waterford	The Waterford assessment area has few sidewalks. Existing sidewalks along State Highway 213, State Highway 156, and North Road are mostly of poor or fair quality. The majority of ramps in this area are not ADA-compliant. This area has no bus stops.



Colchester

ADA Assessment

Sidewalk Condition

- Good
- Fair
- Poor

ADA Ramps

- Non-Compliant
- Compliant
- Missing

Road

Crosswalk

Trail

Protected Land

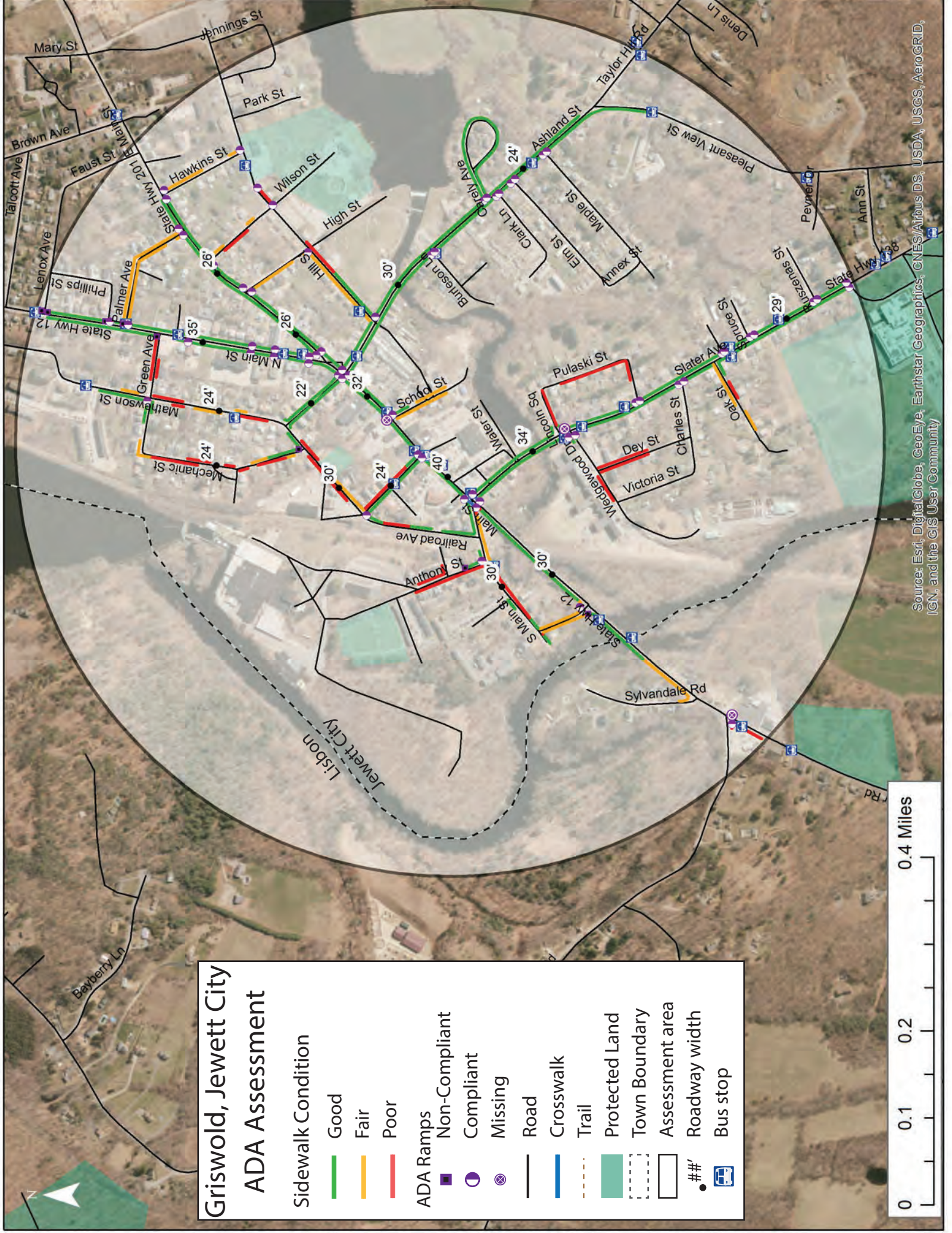
Town Boundary

Assessment area

Roadway width

Bus stop

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Griswold, Jewett City ADA Assessment

Sidewalk Condition

- Good
- Fair
- Poor

ADA Ramps

- Non-Compliant
- Compliant
- Missing

Road

Crosswalk

Trail

Protected Land

Town Boundary

Assessment area

Roadway width

Bus stop

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community





Montville ADA Assessment

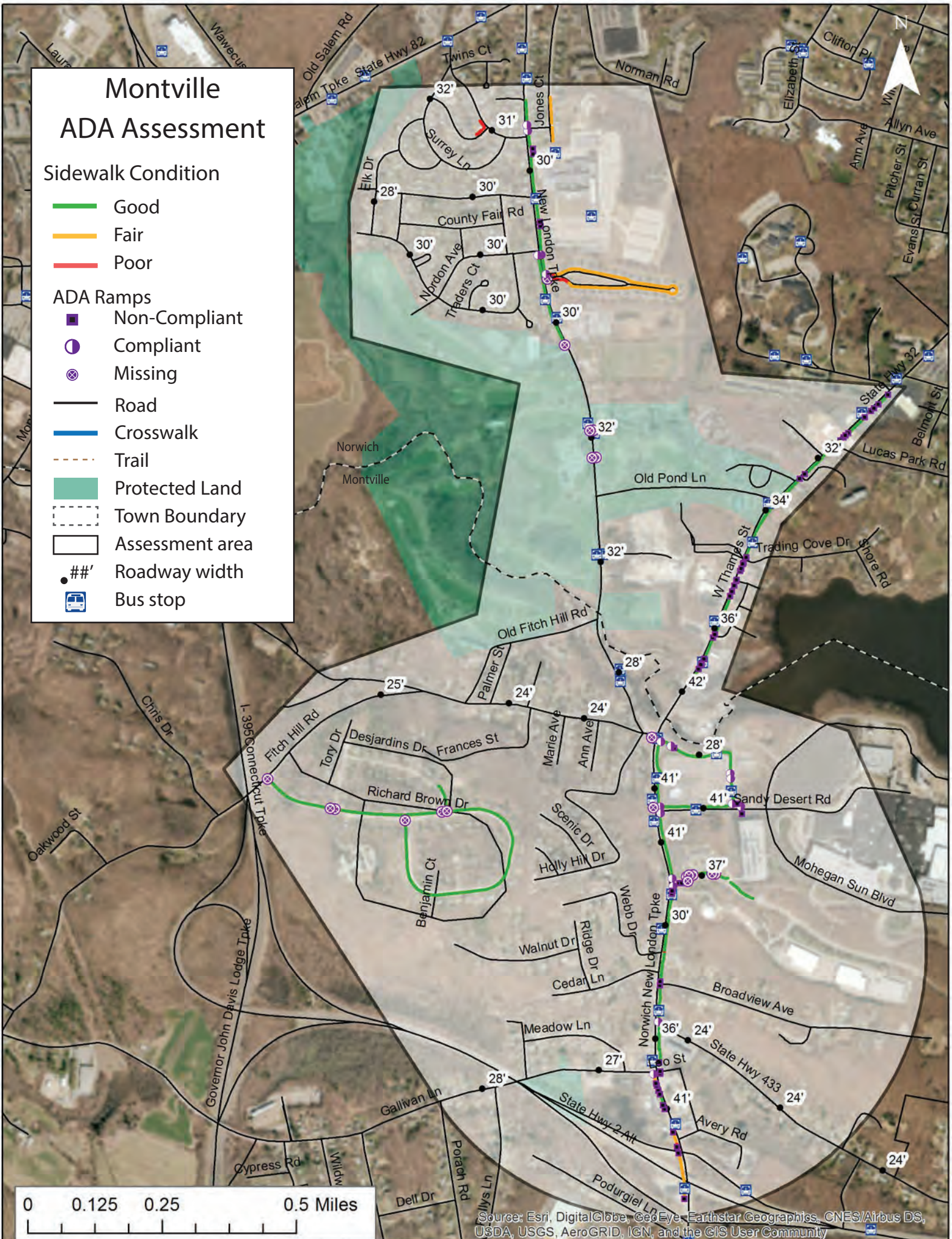
Sidewalk Condition

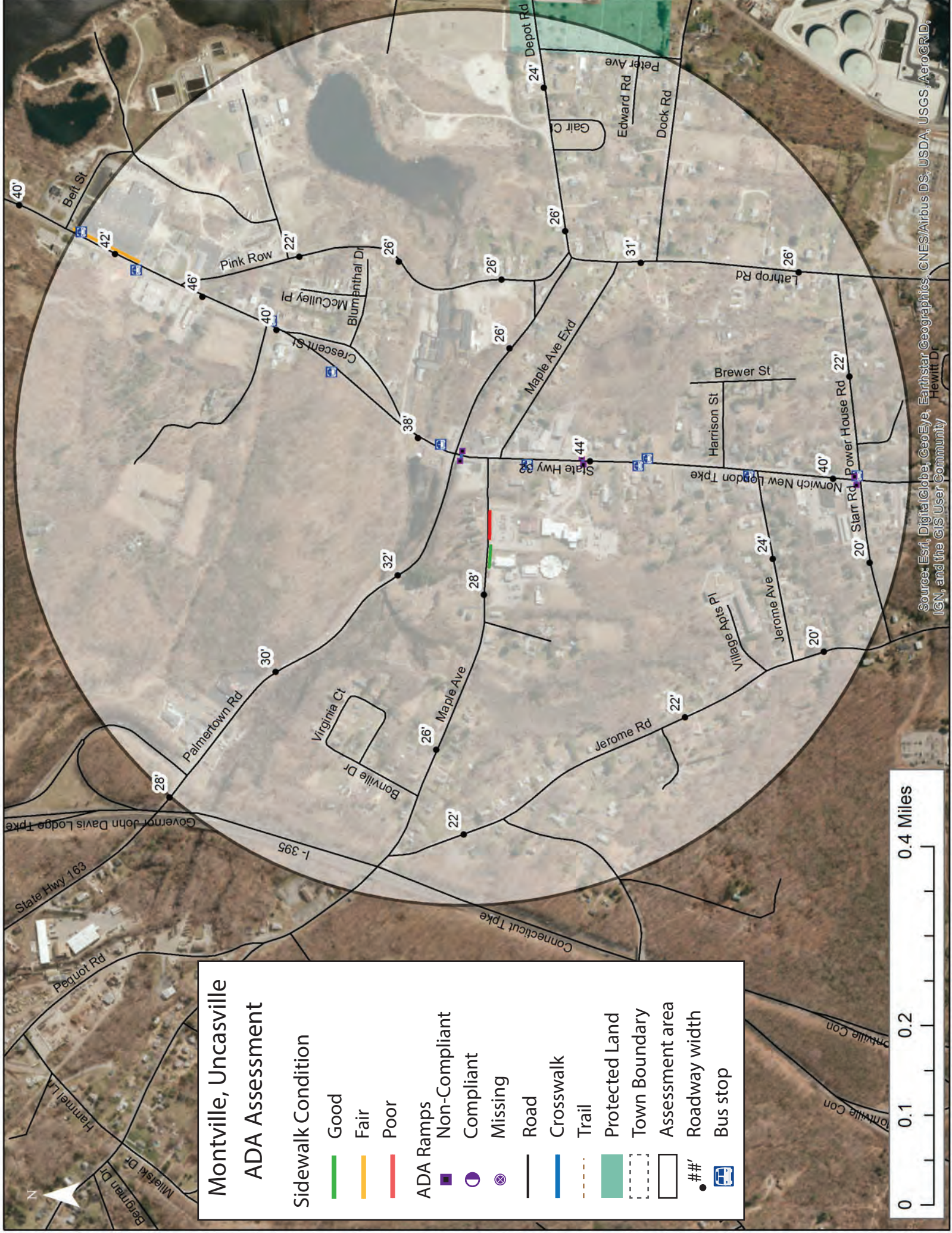
- Good
- Fair
- Poor

ADA Ramps

- Non-Compliant
- Compliant
- ⊗ Missing

- Road
- Crosswalk
- - - Trail
- Protected Land
- - - Town Boundary
- Assessment area
- ##' Roadway width
- Bus stop





Montville, Uncasville

ADA Assessment

Sidewalk Condition

- Good
- Fair
- Poor

ADA Ramps

- Non-Compliant
- Compliant
- Missing

Road

- Crosswalk
- Trail

Protected Land

- Town Boundary
- Assessment area

Roadway width

- Bus stop

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



New London, Downtown ADA Assessment

Sidewalk Condition

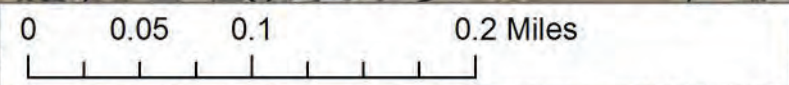
- Good
- Fair
- Poor

ADA Ramps

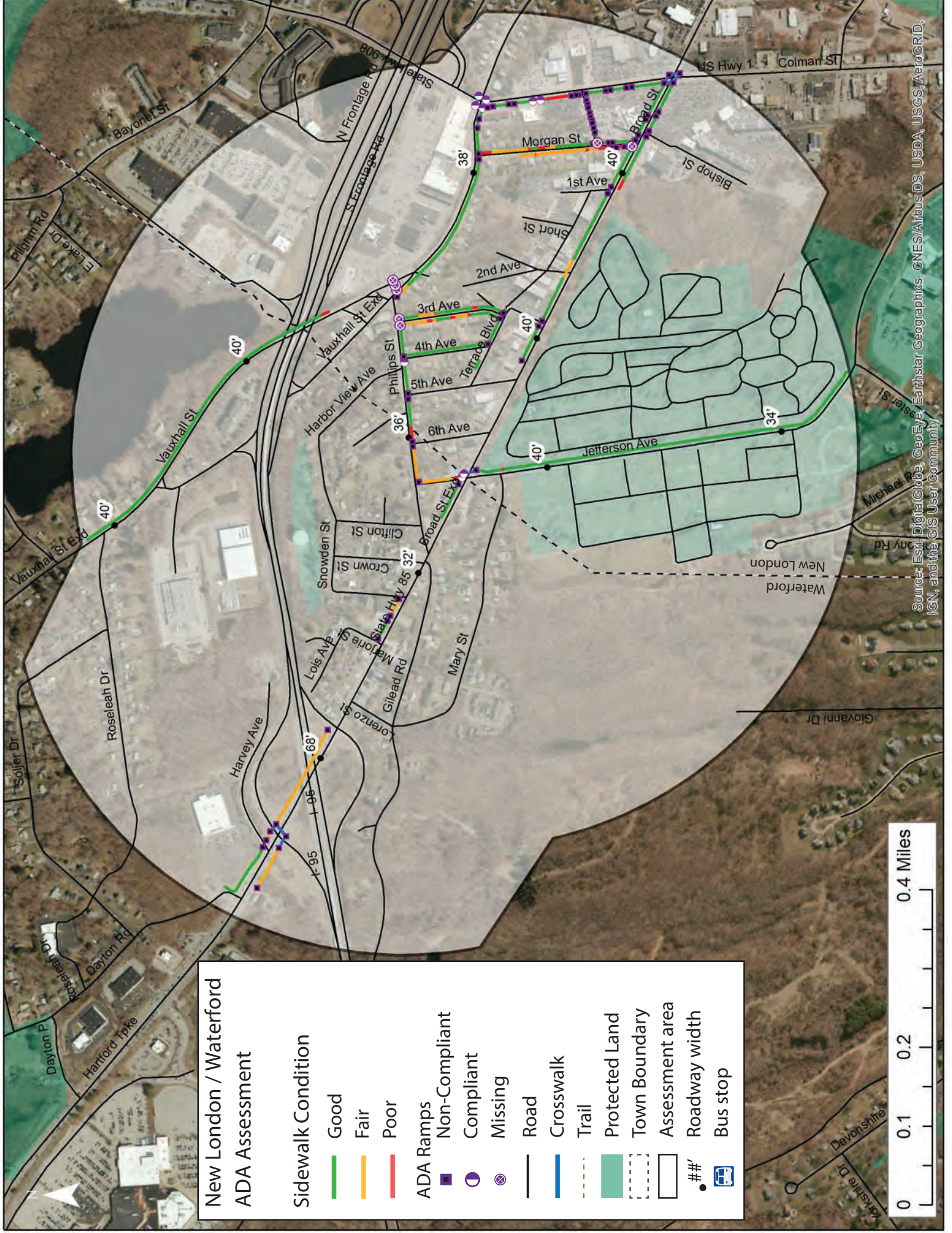
- Non-Compliant
- Compliant
- Missing

Legend

- Road
- Crosswalk
- Trail
- Protected Land
- Town Boundary
- Assessment area
- Roadway width (##')
- Bus stop



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



New London / Waterford ADA Assessment

Sidewalk Condition

- Good
- Fair
- Poor

ADA Ramps

- Non-Compliant
- Compliant
- Missing

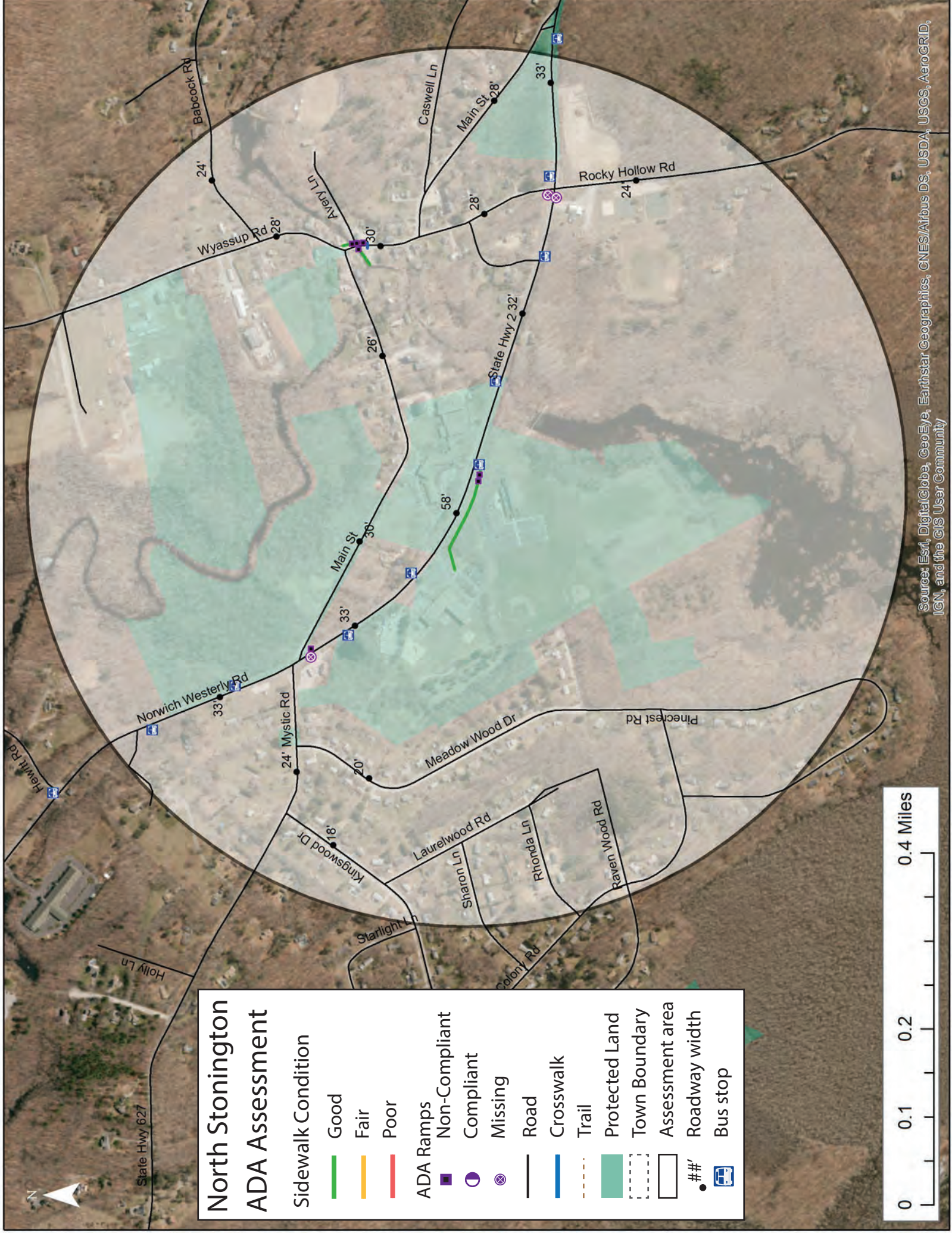
Roadway

- Road
- Crosswalk
- Trail
- Protected Land
- Town Boundary
- Assessment area

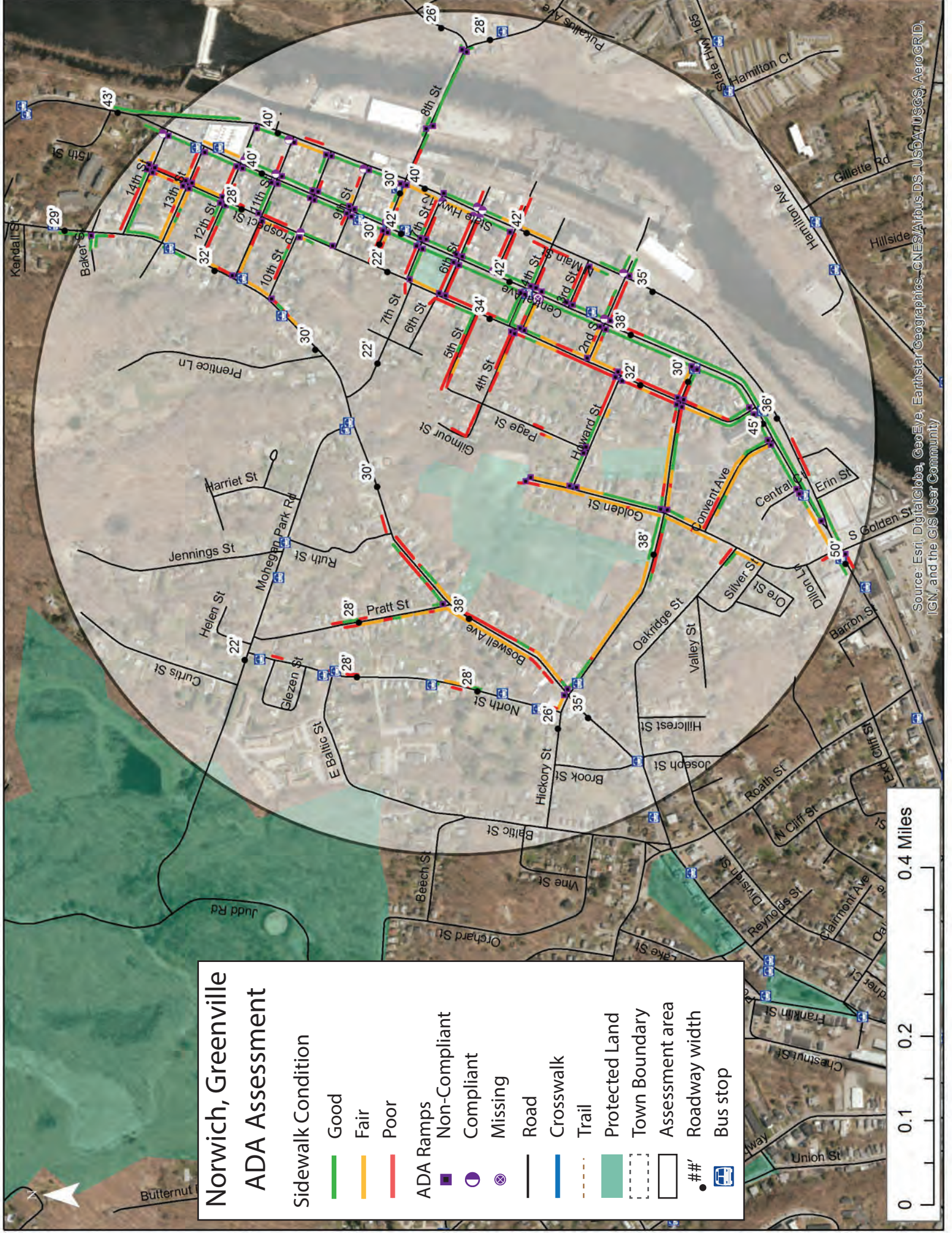
Other

- ##
- Bus stop

Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Norwich, Greenville ADA Assessment

Sidewalk Condition

- Good
- Fair
- Poor

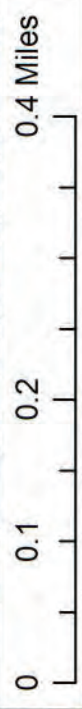
ADA Ramps

- Non-Compliant
- Compliant
- Missing

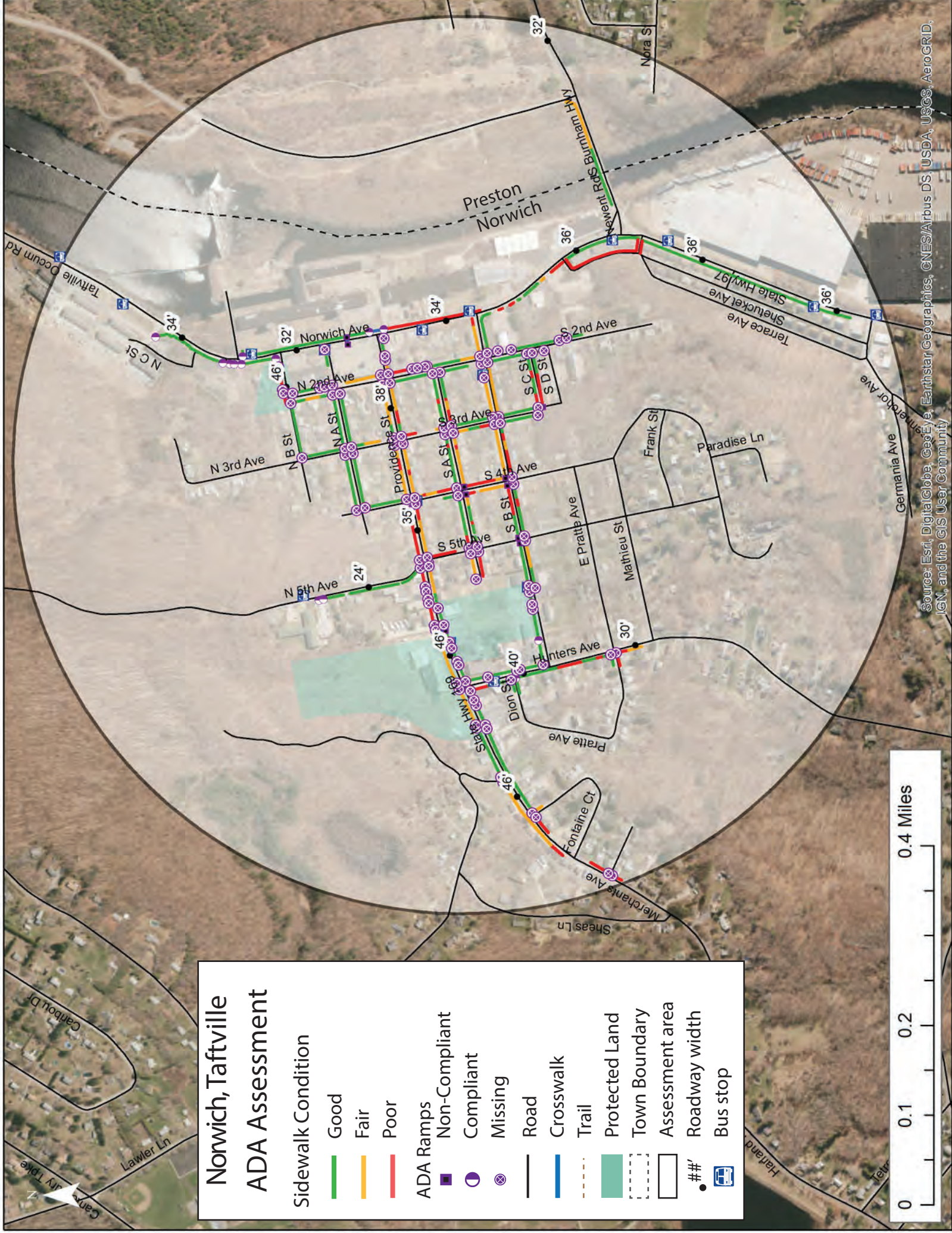
- Road
- Crosswalk
- Trail

- Protected Land
- Town Boundary
- Assessment area

- ##
- Bus stop



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA/USGS, AeroGRID, IGN, and the GIS User Community



Norwich, Taftville ADA Assessment

Sidewalk Condition

- Good
- Fair
- Poor

ADA Ramps

- Non-Compliant
- Compliant
- Missing

Road

- Crosswalk
- Trail

Protected Land

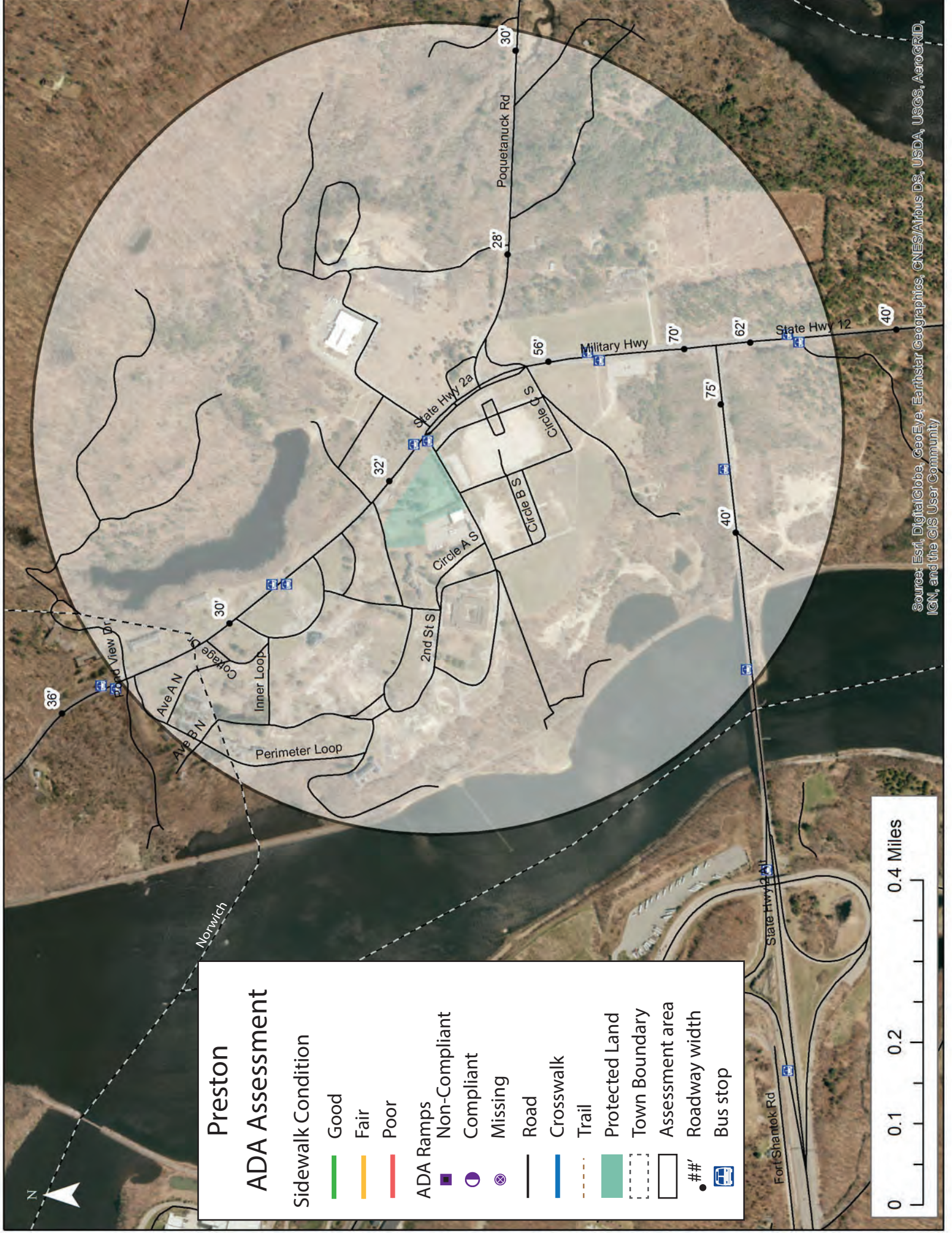
- Town Boundary
- Assessment area

Roadway width

- Bus stop



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Preston

ADA Assessment

Sidewalk Condition

- Good
- Fair
- Poor

ADA Ramps

- Non-Compliant
- Compliant
- Missing

Road

- Crosswalk
- Trail

Protected Land

Town Boundary

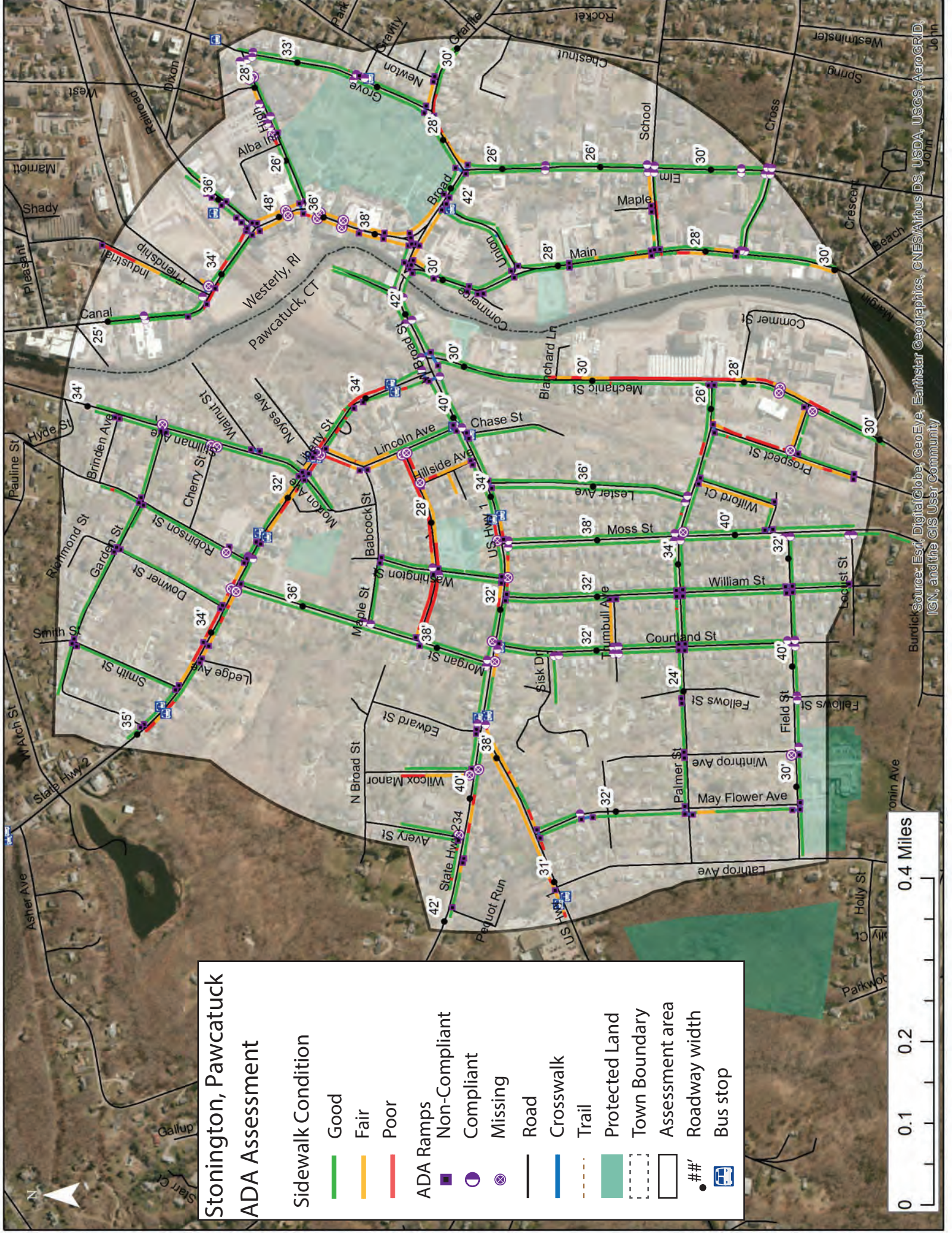
Assessment area

##'

Roadway width

Bus stop

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Stonington, Pawcatuck ADA Assessment

Sidewalk Condition

- Good
- Fair
- Poor

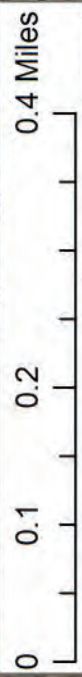
ADA Ramps

- Non-Compliant
- Compliant
- Missing

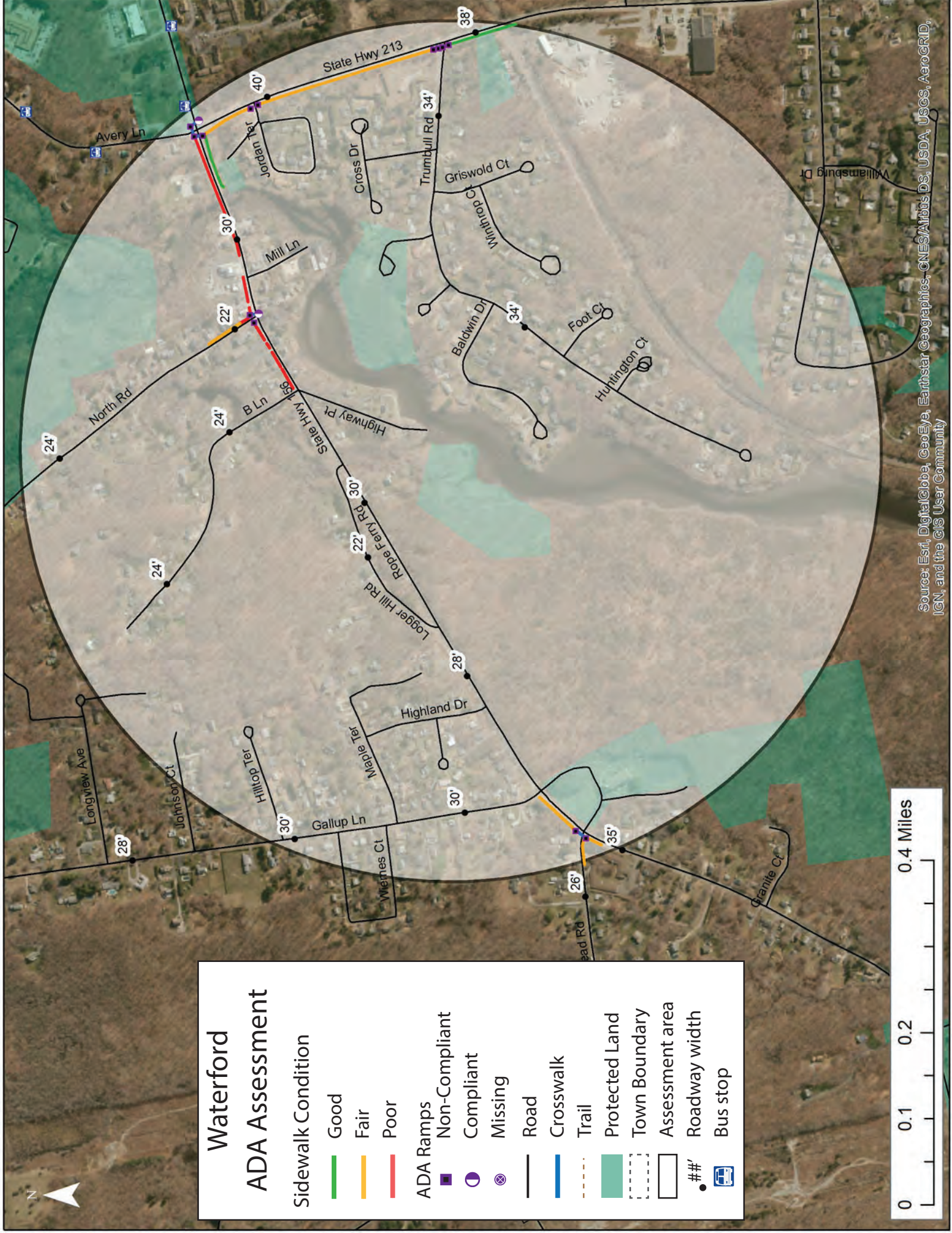
- Road
- Crosswalk
- Trail

- Protected Land
- Town Boundary
- Assessment area

- Roadway width
- Bus stop



Burdick Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Waterford

ADA Assessment

Sidewalk Condition

- Good
- Fair
- Poor

ADA Ramps

- Non-Compliant
- Compliant
- Missing

Road

Crosswalk

Trail

Protected Land

Town Boundary

Assessment area

Roadway width

Bus stop

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Appendix D

Bike, Pedestrian and Traffic Counts

Count Locations

Location	Page
Route 1 at Pearl Street, Mystic	D-3
Route 1 at Water Street, Mystic	D-4
Route 1 at Niantic River Road, Waterford	D-5
Trading Cove Rd at W. Thames/Norwich Tpk, Norwich	D-6
New London Tpk at Holly Hill Drive, Norwich	D-7
Jewett City Road at Norwich Avenue, Norwich	D-8
Main Street at S. Main Street/Slater Ave, Jewett City	D-9
Route 1 at Spellman Dr/Private Drive, Stonington	D-10
Montauk Avenue at Willets Avenue, New London	D-11
Connecticut/Garfield/Blackhall Ave, New London	D-12
Poquonock at Mitchell/Benham/Chicago, Groton	D-13

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Route 1 at Pearl Street
Mystic, Connecticut

File Name : 17994
Site Code : 17994
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	Pearl Street From North				Route 1 From East				Route 1 From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	9	3	17	29	7	115	35	157	116	6	0	122	308
04:15 PM	5	6	15	26	3	106	24	133	110	8	1	119	278
04:30 PM	5	7	32	44	8	116	23	147	110	7	2	119	310
04:45 PM	10	3	11	24	6	115	19	140	108	10	0	118	282
Total	29	19	75	123	24	452	101	577	444	31	3	478	1178
05:00 PM	7	4	23	34	7	143	21	171	118	5	0	123	328
05:15 PM	13	13	22	48	17	122	21	160	126	12	0	138	346
05:30 PM	7	7	16	30	7	110	22	139	122	13	0	135	304
05:45 PM	7	6	21	34	6	95	32	133	103	10	1	114	281
Total	34	30	82	146	37	470	96	603	469	40	1	510	1259
06:00 PM	9	8	6	23	6	118	19	143	101	2	2	105	271
06:15 PM	6	5	9	20	4	98	16	118	96	7	5	108	246
06:30 PM	10	5	7	22	5	98	33	136	71	5	0	76	234
06:45 PM	5	5	4	14	5	109	10	124	85	5	0	90	228
Total	30	23	26	79	20	423	78	521	353	19	7	379	979
Grand Total	93	72	183	348	81	1345	275	1701	1266	90	11	1367	3416
Apprch %	26.7	20.7	52.6		4.8	79.1	16.2		92.6	6.6	0.8		
Total %	2.7	2.1	5.4	10.2	2.4	39.4	8.1	49.8	37.1	2.6	0.3	40	
Lights	92	71	0	163	81	1334	0	1415	1251	90	0	1341	2919
% Lights	98.9	98.6	0	46.8	100	99.2	0	83.2	98.8	100	0	98.1	85.5
Buses	1	0	0	1	0	3	0	3	1	0	0	1	5
% Buses	1.1	0	0	0.3	0	0.2	0	0.2	0.1	0	0	0.1	0.1
Trucks	0	1	0	1	0	8	0	8	14	0	0	14	23
% Trucks	0	1.4	0	0.3	0	0.6	0	0.5	1.1	0	0	1	0.7
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	183	183	0	0	275	275	0	0	11	11	469
% Pedestrians	0	0	100	52.6	0	0	100	16.2	0	0	100	0.8	13.7

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Route 1 at Water Street
Mystic, Connecticut

File Name : 17995
Site Code : 17995
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	Route 1 From East				Water Street From South				Route 1 From West				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
04:00 PM	80	43	2	125	52	7	7	66	12	75	6	93	284
04:15 PM	76	41	1	118	47	2	6	55	8	64	3	75	248
04:30 PM	68	49	3	120	55	9	17	81	11	61	16	88	289
04:45 PM	76	53	2	131	43	4	6	53	11	75	6	92	276
Total	300	186	8	494	197	22	36	255	42	275	31	348	1097
05:00 PM	100	48	0	148	59	10	8	77	13	65	13	91	316
05:15 PM	88	46	0	134	56	7	2	65	12	88	5	105	304
05:30 PM	76	38	0	114	45	12	6	63	22	85	7	114	291
05:45 PM	64	40	0	104	39	11	5	55	9	73	6	88	247
Total	328	172	0	500	199	40	21	260	56	311	31	398	1158
06:00 PM	81	44	0	125	34	11	12	57	13	62	9	84	266
06:15 PM	52	43	0	95	33	6	5	44	14	72	7	93	232
06:30 PM	63	48	0	111	24	7	8	39	17	54	16	87	237
06:45 PM	82	30	0	112	28	12	5	45	18	55	13	86	243
Total	278	165	0	443	119	36	30	185	62	243	45	350	978
Grand Total	906	523	8	1437	515	98	87	700	160	829	107	1096	3233
Apprch %	63	36.4	0.6		73.6	14	12.4		14.6	75.6	9.8		
Total %	28	16.2	0.2	44.4	15.9	3	2.7	21.7	4.9	25.6	3.3	33.9	
Lights	897	522	0	1419	509	97	0	606	160	825	0	985	3010
% Lights	99	99.8	0	98.7	98.8	99	0	86.6	100	99.5	0	89.9	93.1
Buses	4	0	0	4	0	0	0	0	0	0	0	0	4
% Buses	0.4	0	0	0.3	0	0	0	0	0	0	0	0	0.1
Trucks	5	1	0	6	6	1	0	7	0	4	0	4	17
% Trucks	0.6	0.2	0	0.4	1.2	1	0	1	0	0.5	0	0.4	0.5
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	1	1	1
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0.9	0.1	0
Pedestrians	0	0	8	8	0	0	87	87	0	0	106	106	201
% Pedestrians	0	0	100	0.6	0	0	100	12.4	0	0	99.1	9.7	6.2

[illegible]

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Trading Cove Rd at W. Thames/Norwich Tpk
Norwich, Connecticut

File Name : 17997
Site Code : 17997
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	W. Thames Street From North					Trading Cove Road From East					Norwich New London TPK From South					Norwich New London TPK From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	35	123	16	0	174	24	17	1	0	42	4	74	70	0	148	81	14	17	0	112	476
04:15 PM	30	92	14	0	136	16	18	3	1	38	0	77	89	0	166	63	17	19	0	99	439
04:30 PM	35	127	11	0	173	25	27	4	2	58	2	67	70	0	139	70	15	17	0	102	472
04:45 PM	29	81	18	0	128	24	16	3	0	43	4	62	95	0	161	86	16	17	0	119	451
Total	129	423	59	0	611	89	78	11	3	181	10	280	324	0	614	300	62	70	0	432	1838
05:00 PM	30	97	12	0	139	17	25	10	0	52	1	59	79	1	140	74	9	8	0	91	422
05:15 PM	19	59	13	0	91	18	12	6	1	37	1	60	77	0	138	94	19	19	0	132	398
05:30 PM	24	62	6	0	92	14	15	4	0	33	6	53	58	0	117	66	12	17	0	95	337
05:45 PM	11	52	8	0	71	8	9	2	0	19	1	69	65	0	135	70	12	16	0	98	323
Total	84	270	39	0	393	57	61	22	1	141	9	241	279	1	530	304	52	60	0	416	1480
06:00 PM	23	43	6	0	72	12	17	2	0	31	5	56	61	0	122	78	5	12	0	95	320
06:15 PM	19	48	13	0	80	16	11	3	0	30	2	63	72	0	137	92	10	14	0	116	363
06:30 PM	16	40	6	0	62	10	21	5	0	36	2	41	45	0	88	53	15	18	0	86	272
06:45 PM	11	49	5	0	65	9	11	3	0	23	4	44	38	0	86	39	5	17	0	61	235
Total	69	180	30	0	279	47	60	13	0	120	13	204	216	0	433	262	35	61	0	358	1190
Grand Total	282	873	128	0	1283	193	199	46	4	442	32	725	819	1	1577	866	149	191	0	1206	4508
Apprch %	22	68	10	0		43.7	45	10.4	0.9		2	46	51.9	0.1		71.8	12.4	15.8	0		
Total %	6.3	19.4	2.8	0	28.5	4.3	4.4	1	0.1	9.8	0.7	16.1	18.2	0	35	19.2	3.3	4.2	0	26.8	
Lights	280	861	123	0	1264	192	198	45	0	435	29	705	805	0	1539	854	144	185	0	1183	4421
% Lights	99.3	98.6	96.1	0	98.5	99.5	99.5	97.8	0	98.4	90.6	97.2	98.3	0	97.6	98.6	96.6	96.9	0	98.1	98.1
Buses	1	3	5	0	9	1	1	0	0	2	3	5	8	0	16	7	4	4	0	15	42
% Buses	0.4	0.3	3.9	0	0.7	0.5	0.5	0	0	0.5	9.4	0.7	1	0	1	0.8	2.7	2.1	0	1.2	0.9
Trucks	1	9	0	0	10	0	0	1	0	1	0	15	6	0	21	5	1	2	0	8	40
% Trucks	0.4	1	0	0	0.8	0	0	2.2	0	0.2	0	2.1	0.7	0	1.3	0.6	0.7	1	0	0.7	0.9
Bicycles on Crosswalk																					
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	4	4	0	0	0	1	1	0	0	0	0	0	5
% Pedestrians	0	0	0	0	0	0	0	0	100	0.9	0	0	0	100	0.1	0	0	0	0	0	0.1

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

New London Tpk at Holly Hill Drive
Norwich, Connecticut

File Name : 17998
Site Code : 17998
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	New London Tpk From East				Holly Hill Dr From South				New London Tpk From West				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
04:00 PM	106	25	0	131	29	2	2	33	3	75	0	78	242
04:15 PM	108	21	0	129	24	1	0	25	3	74	0	77	231
04:30 PM	99	38	0	137	20	2	0	22	5	71	0	76	235
04:45 PM	93	42	0	135	34	1	1	36	2	76	0	78	249
Total	406	126	0	532	107	6	3	116	13	296	0	309	957
05:00 PM	84	44	0	128	24	2	2	28	5	70	0	75	231
05:15 PM	84	35	0	119	29	2	0	31	1	103	0	104	254
05:30 PM	73	28	0	101	16	2	0	18	3	78	0	81	200
05:45 PM	60	21	0	81	30	4	0	34	3	66	0	69	184
Total	301	128	0	429	99	10	2	111	12	317	0	329	869
06:00 PM	71	28	0	99	17	0	0	17	2	92	0	94	210
06:15 PM	79	30	1	110	27	0	1	28	3	78	0	81	219
06:30 PM	58	23	0	81	17	1	1	19	3	72	0	75	175
06:45 PM	47	19	0	66	16	3	0	19	3	46	0	49	134
Total	255	100	1	356	77	4	2	83	11	288	0	299	738
Grand Total	962	354	1	1317	283	20	7	310	36	901	0	937	2564
Apprch %	73	26.9	0.1		91.3	6.5	2.3		3.8	96.2	0		
Total %	37.5	13.8	0	51.4	11	0.8	0.3	12.1	1.4	35.1	0	36.5	
Lights	951	349	0	1300	278	20	0	298	35	887	0	922	2520
% Lights	98.9	98.6	0	98.7	98.2	100	0	96.1	97.2	98.4	0	98.4	98.3
Buses	9	1	0	10	2	0	0	2	1	12	0	13	25
% Buses	0.9	0.3	0	0.8	0.7	0	0	0.6	2.8	1.3	0	1.4	1
Trucks	2	4	0	6	3	0	0	3	0	2	0	2	11
% Trucks	0.2	1.1	0	0.5	1.1	0	0	1	0	0.2	0	0.2	0.4
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	1	1	0	0	7	7	0	0	0	0	8
% Pedestrians	0	0	100	0.1	0	0	100	2.3	0	0	0	0	0.3

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Jewett City Road at Norwich Avenue
Norwich, Connecticut

File Name : 17999
Site Code : 17999
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	Norwich Ave From North				Jewett City Road From East				Norwich Ave From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	89	2	0	91	2	35	0	37	91	75	0	166	294
04:15 PM	69	0	0	69	2	63	0	65	95	59	1	155	289
04:30 PM	72	2	0	74	4	60	0	64	90	75	0	165	303
04:45 PM	77	2	0	79	2	60	0	62	80	75	0	155	296
Total	307	6	0	313	10	218	0	228	356	284	1	641	1182
05:00 PM	49	3	0	52	7	62	0	69	83	63	0	146	267
05:15 PM	42	4	0	46	4	55	0	59	69	55	0	124	229
05:30 PM	55	1	0	56	3	42	0	45	93	66	0	159	260
05:45 PM	47	1	0	48	4	44	0	48	72	64	0	136	232
Total	193	9	0	202	18	203	0	221	317	248	0	565	988
06:00 PM	37	1	0	38	11	38	0	49	40	50	0	90	177
06:15 PM	49	5	0	54	6	37	0	43	44	48	0	92	189
06:30 PM	43	0	0	43	5	31	0	36	51	46	0	97	176
06:45 PM	40	1	0	41	2	34	0	36	35	49	0	84	161
Total	169	7	0	176	24	140	0	164	170	193	0	363	703
Grand Total	669	22	0	691	52	561	0	613	843	725	1	1569	2873
Apprch %	96.8	3.2	0		8.5	91.5	0		53.7	46.2	0.1		
Total %	23.3	0.8	0	24.1	1.8	19.5	0	21.3	29.3	25.2	0	54.6	
Lights	652	13	0	665	24	539	0	563	739	700	0	1439	2667
% Lights	97.5	59.1	0	96.2	46.2	96.1	0	91.8	87.7	96.6	0	91.7	92.8
Buses	12	1	0	13	0	16	0	16	95	12	0	107	136
% Buses	1.8	4.5	0	1.9	0	2.9	0	2.6	11.3	1.7	0	6.8	4.7
Trucks	5	8	0	13	28	6	0	34	9	13	0	22	69
% Trucks	0.7	36.4	0	1.9	53.8	1.1	0	5.5	1.1	1.8	0	1.4	2.4
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	1	1	1
% Pedestrians	0	0	0	0	0	0	0	0	0	0	100	0.1	0

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Main Street at S. Main Street/Slater Ave
Jewett City, Connecticut

File Name : 18000
Site Code : 18000
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	Main Street From North					Slater Avenue From East					Main Street From South					S. Main Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	8	76	27	0	111	34	2	29	0	65	15	98	0	0	113	0	0	1	1	2	291
04:15 PM	6	75	28	0	109	24	2	23	0	49	23	98	0	0	121	1	2	1	2	6	285
04:30 PM	1	80	21	0	102	32	7	29	0	68	15	92	0	0	107	0	4	3	1	8	285
04:45 PM	3	62	21	0	86	18	3	36	0	57	30	91	0	0	121	0	1	0	0	1	265
Total	18	293	97	0	408	108	14	117	0	239	83	379	0	0	462	1	7	5	4	17	1126
05:00 PM	2	81	21	0	104	31	6	34	0	71	43	75	0	0	118	0	2	1	0	3	296
05:15 PM	3	72	20	1	96	23	3	37	0	63	36	79	0	0	115	0	1	1	0	2	276
05:30 PM	1	76	20	1	98	17	3	31	0	51	29	97	0	0	126	0	0	0	0	0	275
05:45 PM	4	48	19	0	71	23	4	23	0	50	21	72	0	0	93	0	2	0	0	2	216
Total	10	277	80	2	369	94	16	125	0	235	129	323	0	0	452	0	5	2	0	7	1063
06:00 PM	4	62	18	0	84	22	0	25	0	47	14	79	0	0	93	0	0	3	0	3	227
06:15 PM	3	43	19	0	65	19	3	18	0	40	17	73	0	0	90	0	2	1	0	3	198
06:30 PM	2	53	22	0	77	22	2	35	0	59	26	66	0	0	92	0	1	2	0	3	231
06:45 PM	2	41	18	2	63	29	2	24	0	55	18	65	1	0	84	0	0	2	1	3	205
Total	11	199	77	2	289	92	7	102	0	201	75	283	1	0	359	0	3	8	1	12	861
Grand Total	39	769	254	4	1066	294	37	344	0	675	287	985	1	0	1273	1	15	15	5	36	3050
Apprch %	3.7	72.1	23.8	0.4		43.6	5.5	51	0		22.5	77.4	0.1	0		2.8	41.7	41.7	13.9		
Total %	1.3	25.2	8.3	0.1	35	9.6	1.2	11.3	0	22.1	9.4	32.3	0	0	41.7	0	0.5	0.5	0.2	1.2	
Lights	39	745	252	0	1036	279	37	340	0	656	284	957	1	0	1242	1	15	15	0	31	2965
% Lights	100	96.9	99.2	0	97.2	94.9	100	98.8	0	97.2	99	97.2	100	0	97.6	100	100	100	0	86.1	97.2
Buses	0	0	0	0	0	5	0	3	0	8	1	0	0	0	1	0	0	0	0	0	9
% Buses	0	0	0	0	0	1.7	0	0.9	0	1.2	0.3	0	0	0	0.1	0	0	0	0	0	0.3
Trucks	0	24	2	0	26	10	0	1	0	11	2	28	0	0	30	0	0	0	0	0	67
% Trucks	0	3.1	0.8	0	2.4	3.4	0	0.3	0	1.6	0.7	2.8	0	0	2.4	0	0	0	0	0	2.2
Bicycles on Crosswalk																					
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	9
% Pedestrians	0	0	0	100	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	100	13.9	0.3

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Route 1 at Spellman Dr/Private Drive
Stonington, Connecticut

File Name : 18001
Site Code : 18001
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	Private Drive From North					S. Broad St From East					Spellman Drive From South					S. Broad St From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	8	0	4	0	12	6	83	9	1	99	17	0	15	0	32	12	102	4	0	118	261
04:15 PM	5	0	3	0	8	1	76	15	0	92	19	1	5	0	25	19	93	1	0	113	238
04:30 PM	7	1	2	0	10	2	73	11	0	86	5	0	9	0	14	22	108	4	0	134	244
04:45 PM	10	1	10	0	21	4	83	21	0	108	13	1	15	0	29	31	95	5	0	131	289
Total	30	2	19	0	51	13	315	56	1	385	54	2	44	0	100	84	398	14	0	496	1032
05:00 PM	11	1	14	0	26	4	78	11	3	96	12	1	13	0	26	32	92	1	0	125	273
05:15 PM	15	0	5	0	20	7	63	21	0	91	7	1	12	0	20	18	88	2	0	108	239
05:30 PM	4	2	8	0	14	4	69	8	0	81	10	0	15	1	26	17	80	2	0	99	220
05:45 PM	3	2	6	0	11	3	69	16	0	88	24	3	40	1	68	22	83	2	0	107	274
Total	33	5	33	0	71	18	279	56	3	356	53	5	80	2	140	89	343	7	0	439	1006
06:00 PM	1	1	4	0	6	0	60	12	0	72	18	0	21	0	39	16	75	1	0	92	209
06:15 PM	1	0	3	0	4	3	61	21	0	85	32	0	42	0	74	39	62	3	0	104	267
06:30 PM	0	0	1	0	1	7	75	21	0	103	13	0	12	0	25	19	45	10	0	74	203
06:45 PM	1	0	5	0	6	0	49	20	0	69	14	1	15	0	30	18	42	12	0	72	177
Total	3	1	13	0	17	10	245	74	0	329	77	1	90	0	168	92	224	26	0	342	856
Grand Total	66	8	65	0	139	41	839	186	4	1070	184	8	214	2	408	265	965	47	0	1277	2894
Apprch %	47.5	5.8	46.8	0		3.8	78.4	17.4	0.4		45.1	2	52.5	0.5		20.8	75.6	3.7	0		
Total %	2.3	0.3	2.2	0	4.8	1.4	29	6.4	0.1	37	6.4	0.3	7.4	0.1	14.1	9.2	33.3	1.6	0	44.1	
Lights	63	8	65	0	136	39	824	185	0	1048	182	8	210	0	400	258	948	46	0	1252	2836
% Lights	95.5	100	100	0	97.8	95.1	98.2	99.5	0	97.9	98.9	100	98.1	0	98	97.4	98.2	97.9	0	98	98
Buses	0	0	0	0	0	0	9	1	0	10	2	0	4	0	6	7	5	0	0	12	28
% Buses	0	0	0	0	0	0	1.1	0.5	0	0.9	1.1	0	1.9	0	1.5	2.6	0.5	0	0	0.9	1
Trucks	3	0	0	0	3	2	6	0	0	8	0	0	0	0	0	0	12	1	0	13	24
% Trucks	4.5	0	0	0	2.2	4.9	0.7	0	0	0.7	0	0	0	0	0	0	1.2	2.1	0	1	0.8
Bicycles on Crosswalk																					
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	4	4	0	0	0	2	2	0	0	0	0	0	6
% Pedestrians	0	0	0	0	0	0	0	0	100	0.4	0	0	0	100	0.5	0	0	0	0	0	0.2

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Montauk Avenue at Willets Avenue
New London, Connecticut

File Name : 18002
Site Code : 18002
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	Montauk Ave From North					Willets Ave From East					Montauk Ave From South					Willets Ave From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	7	20	5	2	34	15	56	5	0	76	8	61	8	3	80	4	88	17	1	110	300
04:15 PM	16	13	9	0	38	13	61	6	1	81	15	53	4	0	72	5	63	17	3	88	279
04:30 PM	9	10	8	1	28	12	57	4	0	73	6	45	9	4	64	3	67	10	1	81	246
04:45 PM	12	19	7	2	40	11	57	3	1	72	8	40	10	5	63	3	61	9	3	76	251
Total	44	62	29	5	140	51	231	18	2	302	37	199	31	12	279	15	279	53	8	355	1076
05:00 PM	14	15	6	5	40	11	38	4	2	55	7	37	9	1	54	10	65	17	0	92	241
05:15 PM	11	15	14	2	42	17	58	4	0	79	6	42	11	1	60	5	53	10	0	68	249
05:30 PM	6	20	4	3	33	9	49	10	3	71	8	26	4	1	39	8	63	13	2	86	229
05:45 PM	9	16	11	2	38	10	49	2	5	66	12	30	4	5	51	5	54	8	2	69	224
Total	40	66	35	12	153	47	194	20	10	271	33	135	28	8	204	28	235	48	4	315	943
06:00 PM	7	13	5	3	28	20	59	9	1	89	3	9	3	3	18	4	43	5	3	55	190
06:15 PM	8	10	6	4	28	12	52	2	0	66	11	17	5	2	35	7	57	6	0	70	199
06:30 PM	7	13	3	4	27	11	49	8	0	68	9	14	4	4	31	1	47	9	2	59	185
06:45 PM	7	6	7	4	24	6	42	1	4	53	7	14	6	1	28	5	37	9	1	52	157
Total	29	42	21	15	107	49	202	20	5	276	30	54	18	10	112	17	184	29	6	236	731
Grand Total	113	170	85	32	400	147	627	58	17	849	100	388	77	30	595	60	698	130	18	906	2750
Apprch %	28.2	42.5	21.2	8		17.3	73.9	6.8	2		16.8	65.2	12.9	5		6.6	77	14.3	2		
Total %	4.1	6.2	3.1	1.2	14.5	5.3	22.8	2.1	0.6	30.9	3.6	14.1	2.8	1.1	21.6	2.2	25.4	4.7	0.7	32.9	
Lights	112	169	85	0	366	146	614	58	0	818	96	381	77	0	554	58	684	130	0	872	2610
% Lights	99.1	99.4	100	0	91.5	99.3	97.9	100	0	96.3	96	98.2	100	0	93.1	96.7	98	100	0	96.2	94.9
Buses	1	0	0	0	1	1	5	0	0	6	3	7	0	0	10	0	6	0	0	6	23
% Buses	0.9	0	0	0	0.2	0.7	0.8	0	0	0.7	3	1.8	0	0	1.7	0	0.9	0	0	0.7	0.8
Trucks	0	1	0	0	1	0	8	0	0	8	1	0	0	0	1	2	8	0	0	10	20
% Trucks	0	0.6	0	0	0.2	0	1.3	0	0	0.9	1	0	0	0	0.2	3.3	1.1	0	0	1.1	0.7
Bicycles on Crosswalk																					
% Bicycles on Crosswalk	0	0	0	3.1	0.2	0	0	0	0	0	0	0	0	3.3	0.2	0	0	0	5.6	0.1	0.1
Pedestrians	0	0	0	31	31	0	0	0	17	17	0	0	0	29	29	0	0	0	17	17	94
% Pedestrians	0	0	0	96.9	7.8	0	0	0	100	2	0	0	0	96.7	4.9	0	0	0	94.4	1.9	3.4

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Connecticut/Garfield/Blackhall Ave
New London, Connecticut

File Name : 18003
Site Code : 18003
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	Blackhall Ave From North						Garfield Ave From East						Blackhall St From Southeast						Connecticut Ave From South						Garfield Ave From West						
Start Time	Right	Thru	Bear Left	Left	Peds	App. Total	Right	Thru	Left	Hard Left	Peds	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Right	Bear Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	12	6	18	6	0	42	4	21	0	0	1	26	0	19	3	0	2	24	2	2	6	1	3	14	5	2	25	5	1	38	144
04:15 PM	11	5	27	7	1	51	1	15	3	2	2	23	1	24	8	0	0	33	0	2	12	0	5	19	1	13	26	5	0	45	171
04:30 PM	11	15	21	3	2	52	3	10	5	2	0	20	0	30	10	0	0	40	1	0	5	2	0	8	0	6	30	10	2	48	168
04:45 PM	7	10	19	5	1	42	2	24	4	1	0	31	0	40	10	0	0	50	2	3	11	1	0	17	2	5	35	8	2	52	192
Total	41	36	85	21	4	187	10	70	12	5	3	100	1	113	31	0	2	147	5	7	34	4	8	58	8	26	116	28	5	183	675
05:00 PM	6	9	16	5	0	36	1	19	3	0	0	23	1	36	6	1	1	45	2	4	7	3	2	18	4	7	32	2	2	47	169
05:15 PM	7	6	20	1	0	34	3	21	2	2	1	29	1	21	4	0	0	26	0	8	9	1	0	18	4	8	25	2	2	41	148
05:30 PM	5	7	23	5	0	40	1	12	5	1	3	22	0	17	6	1	1	25	0	1	8	0	0	9	0	6	18	10	0	34	130
05:45 PM	13	5	16	2	1	37	1	22	1	1	3	28	1	23	7	0	1	32	2	0	4	0	0	6	2	12	19	5	4	42	145
Total	31	27	75	13	1	147	6	74	11	4	7	102	3	97	23	2	3	128	4	13	28	4	2	51	10	33	94	19	8	164	592
06:00 PM	10	6	19	2	0	37	3	17	3	1	3	27	1	14	3	3	0	21	1	3	11	3	0	18	1	7	20	9	0	37	140
06:15 PM	11	5	13	2	0	31	4	15	2	0	0	21	2	16	4	1	0	23	0	4	10	1	0	15	2	10	24	3	0	39	129
06:30 PM	7	7	13	2	2	31	2	10	3	1	2	18	1	19	3	0	1	24	0	2	12	0	2	16	1	8	16	3	0	28	117
06:45 PM	5	6	7	3	1	22	3	11	1	0	2	17	1	16	7	0	4	28	0	2	3	0	1	6	2	8	13	2	0	25	98
Total	33	24	52	9	3	121	12	53	9	2	7	83	5	65	17	4	5	96	1	11	36	4	3	55	6	33	73	17	0	129	484
Grand Total	105	87	212	43	8	455	28	197	32	11	17	285	9	275	71	6	10	371	10	31	98	12	13	164	24	92	283	64	13	476	1751
Apprch %	23.1	19.1	46.6	9.5	1.8		9.8	69.1	11.2	3.9	6		2.4	74.1	19.1	1.6	2.7		6.1	18.9	59.8	7.3	7.9		5	19.3	59.5	13.4	2.7		
Total %	6	5	12.1	2.5	0.5	26	1.6	11.3	1.8	0.6	1	16.3	0.5	15.7	4.1	0.3	0.6	21.2	0.6	1.8	5.6	0.7	0.7	9.4	1.4	5.3	16.2	3.7	0.7	27.2	
Lights	105	85	204	41	0	435	28	194	30	10	0	262	9	272	71	6	0	358	10	31	97	12	0	150	23	90	278	63	0	454	1659
% Lights	100	97.7	96.2	95.3	0	95.6	100	98.5	93.8	90.9	0	91.9	100	98.9	100	100	0	96.5	100	100	99	100	0	91.5	95.8	97.8	98.2	98.4	0	95.4	94.7
Buses	0	2	4	1	0	7	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	2	0	0	3	11
% Buses	0	2.3	1.9	2.3	0	1.5	0	0	0	0	0	0	0	0.4	0	0	0	0.3	0	0	0	0	0	0	0	1.1	0.7	0	0	0.6	0.6
Trucks	0	0	4	1	0	5	0	3	2	1	0	6	0	2	0	0	0	2	0	0	1	0	0	1	1	1	3	1	0	6	20
% Trucks	0	0	1.9	2.3	0	1.1	0	1.5	6.2	9.1	0	2.1	0	0.7	0	0	0	0.5	0	0	1	0	0	0.6	4.2	1.1	1.1	1.6	0	1.3	1.1
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	3
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	5.9	0.4	0	0	0	0	0	0	0	0	0	0	7.7	0.6	0	0	0	0	7.7	0.2	0.2
Pedestrians	0	0	0	0	8	8	0	0	0	0	16	16	0	0	0	0	10	10	0	0	0	0	12	12	0	0	0	0	12	12	58
% Pedestrians	0	0	0	0	100	1.8	0	0	0	0	94.1	5.6	0	0	0	0	100	2.7	0	0	0	0	92.3	7.3	0	0	0	0	92.3	2.5	3.3

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Poquonock at Mitchell/Benham/Chicago
Groton, Connecticut

File Name : 18004
Site Code : 18004
Start Date : 10/18/2018
Page No : 1

Groups Printed- Lights - Buses - Trucks - Bicycles on Crosswalk - Pedestrians

	Mitchell St From North						Poquonock Rd From East						Benham Road From Southeast						Chicago Ave From South						Poquonock Rd From West						
Start Time	Right	Thru	Bear Left	Left	Peds	App. Total	Right	Thru	Left	Hard Left	Peds	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total	Right	Bear Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	4	15	45	27	0	91	36	7	0	5	1	49	2	99	5	1	1	108	0	1	54	1	1	57	2	9	17	28	1	57	362
04:15 PM	6	6	40	29	0	81	33	7	1	5	0	46	6	54	3	0	1	64	1	3	49	3	0	56	3	3	15	34	4	59	306
04:30 PM	7	12	36	34	0	89	41	5	1	3	0	50	1	67	1	0	0	69	0	2	47	0	1	50	3	6	14	36	0	59	317
04:45 PM	2	18	35	30	0	85	36	7	0	2	1	46	3	62	4	1	0	70	0	2	51	2	0	55	2	5	10	31	0	48	304
Total	19	51	156	120	0	346	146	26	2	15	2	191	12	282	13	2	2	311	1	8	201	6	2	218	10	23	56	129	5	223	1289
05:00 PM	6	14	34	22	0	76	33	9	2	3	1	48	2	62	0	0	0	64	0	0	43	1	0	44	1	4	17	34	0	56	288
05:15 PM	3	11	45	29	0	88	19	9	1	3	0	32	4	53	0	0	3	60	0	1	35	3	3	42	0	3	7	25	0	35	257
05:30 PM	1	6	58	19	0	84	30	7	3	3	1	44	1	45	2	0	4	52	0	1	24	0	3	28	1	3	5	19	0	28	236
05:45 PM	1	7	39	26	1	74	23	5	1	2	2	33	2	34	1	0	0	37	0	1	19	0	0	20	0	5	5	10	0	20	184
Total	11	38	176	96	1	322	105	30	7	11	4	157	9	194	3	0	7	213	0	3	121	4	6	134	2	15	34	88	0	139	965
06:00 PM	4	8	26	18	0	56	15	3	0	2	1	21	3	42	0	0	4	49	0	0	15	1	3	19	0	0	4	11	0	15	160
06:15 PM	2	15	31	16	0	64	16	7	1	1	1	26	5	31	0	0	0	36	0	0	17	0	7	24	1	3	4	6	0	14	164
06:30 PM	2	8	31	8	0	49	16	2	0	2	0	20	0	40	0	0	4	44	0	0	14	1	4	19	1	2	8	8	0	19	151
06:45 PM	3	4	29	15	0	51	17	2	1	2	0	22	1	28	0	0	0	29	0	0	5	0	1	6	3	0	4	14	0	21	129
Total	11	35	117	57	0	220	64	14	2	7	2	89	9	141	0	0	8	158	0	0	51	2	15	68	5	5	20	39	0	69	604
Grand Total	41	124	449	273	1	888	315	70	11	33	8	437	30	617	16	2	17	682	1	11	373	12	23	420	17	43	110	256	5	431	2858
Apprch %	4.6	14	50.6	30.7	0.1		72.1	16	2.5	7.6	1.8		4.4	90.5	2.3	0.3	2.5		0.2	2.6	88.8	2.9	5.5		3.9	10	25.5	59.4	1.2		
Total %	1.4	4.3	15.7	9.6	0	31.1	11	2.4	0.4	1.2	0.3	15.3	1	21.6	0.6	0.1	0.6	23.9	0	0.4	13.1	0.4	0.8	14.7	0.6	1.5	3.8	9	0.2	15.1	
Lights	41	124	445	263	0	873	309	70	11	32	0	422	30	611	15	2	0	658	1	11	373	12	0	397	17	41	108	255	0	421	2771
% Lights	100	100	99.1	96.3	0	98.3	98.1	100	100	97	0	96.6	100	99	93.8	100	0	96.5	100	100	100	100	0	94.5	100	95.3	98.2	99.6	0	97.7	97
Buses	0	0	2	7	0	9	2	0	0	1	0	3	0	5	1	0	0	6	0	0	0	0	0	0	0	2	1	0	0	3	21
% Buses	0	0	0.4	2.6	0	1	0.6	0	0	3	0	0.7	0	0.8	6.2	0	0	0.9	0	0	0	0	0	0	0	4.7	0.9	0	0	0.7	0.7
Trucks	0	0	2	3	0	5	4	0	0	0	0	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	2	12
% Trucks	0	0	0.4	1.1	0	0.6	1.3	0	0	0	0	0.9	0	0.2	0	0	0	0.1	0	0	0	0	0	0	0	0	0.9	0.4	0	0.5	0.4
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	1	1	0	0	0	0	8	8	0	0	0	0	17	17	0	0	0	0	23	23	0	0	0	0	5	5	54
% Pedestrians	0	0	0	0	100	0.1	0	0	0	0	100	1.8	0	0	0	0	100	2.5	0	0	0	0	100	5.5	0	0	0	0	100	1.2	1.9

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Appendix E

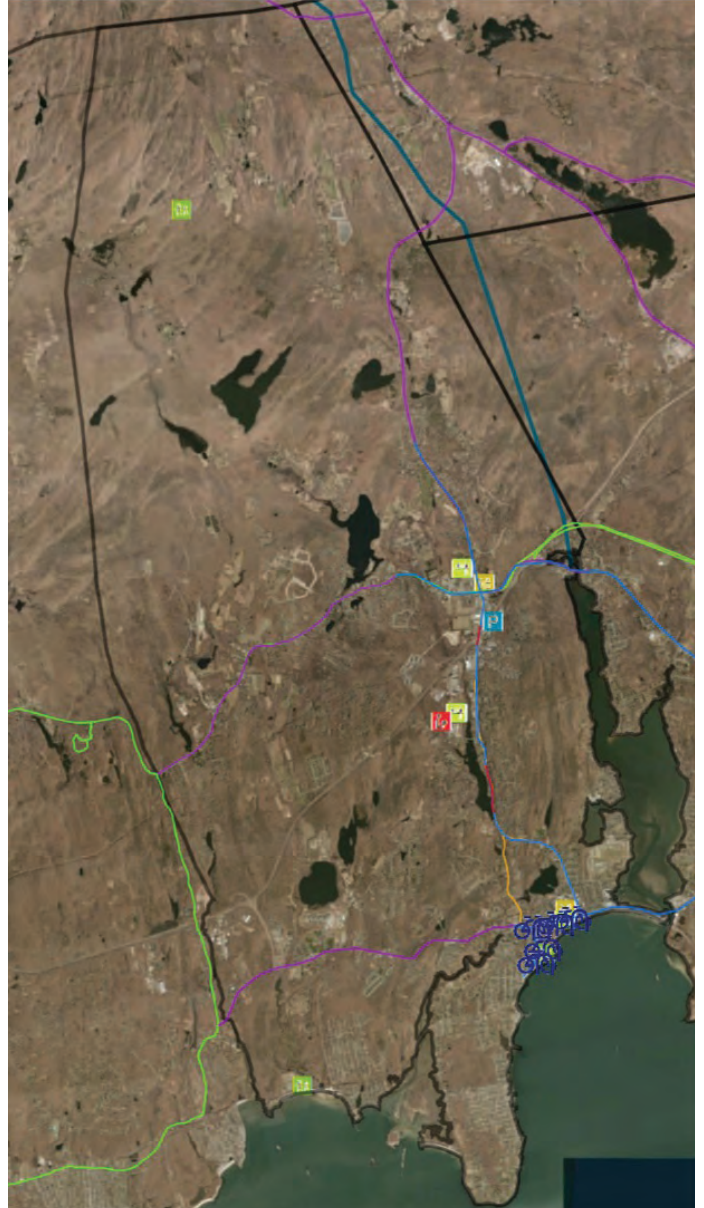
map.social Feedback

Town of Colchester



- Route 85 (Amston Road), between Village Court and Broadway – Missing sidewalk
- Route 354 (Parum Road), between Chestnut Drive and South Main Street – Missing sidewalk
- Between Air Line Trail Spur, Colchester Green, and Route 354 – Lack of bicycle facilities
- Route 85, between Route 354 and Town of Salem – Lack of bicycle facilities

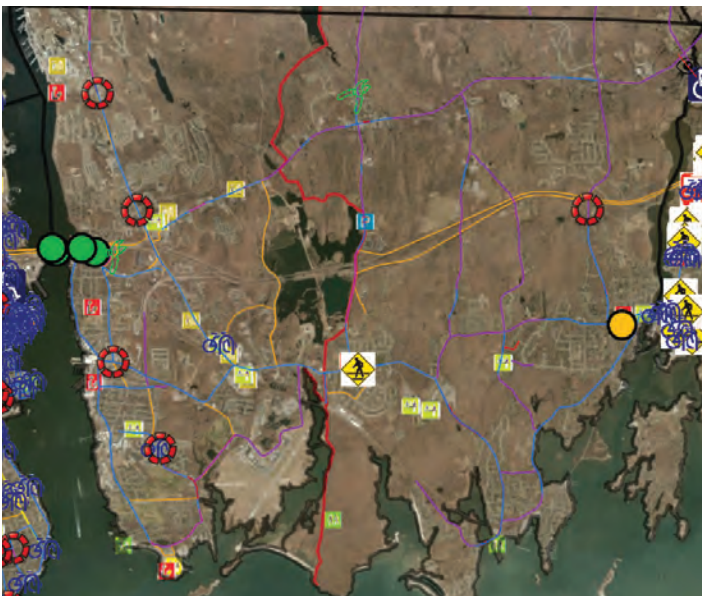
Town of East Lyme



- Route 161 (Chesterfield Road), between Flanders Road and Village Drive – Missing sidewalk
- Exit 74 Overpass over I-95, between Route 1 and King Arthur Drive – Missing sidewalk and bicycle facilities

- Route 161 (Flanders Road), between Oak Hill Drive and Society Road – Missing sidewalk
- Route 161, between King Arthur Drive and Niantic Village center – Lack of bicycle facilities
- Route 161, between Route 1 and Town of Montville
- Route 156, between Town of Waterford, Niantic Village center, Hole-in-the-Wall Beach, and McCooks Point Beach – Missing bicycle facilities
- Route 156, between Niantic Village and Rocky Neck State Park and Lyme (RiverCOG region)
- Route 1, between Route 161 and Old Lyme (RiverCOG region)
- Route 184, between Toll Gate Road and Buddington Road – Missing sidewalk
- Flanders Road, between Route 1 and Ensign Drive – Missing sidewalk
- Rhonda Drive, between Farmstead Avenue and Fishtown Road (Carl C Cutler Middle School) – Missing sidewalk
- Route 215, between Route 1 and Duryea Drive – Missing sidewalks and access to Esker Point Beach
- Shennecossett Road, between Branford Avenue and Plant Street – Missing sidewalk
- Route 12 at Walker Hill Road and Toll Gate Road – Missing crosswalks and safe pedestrian crossings

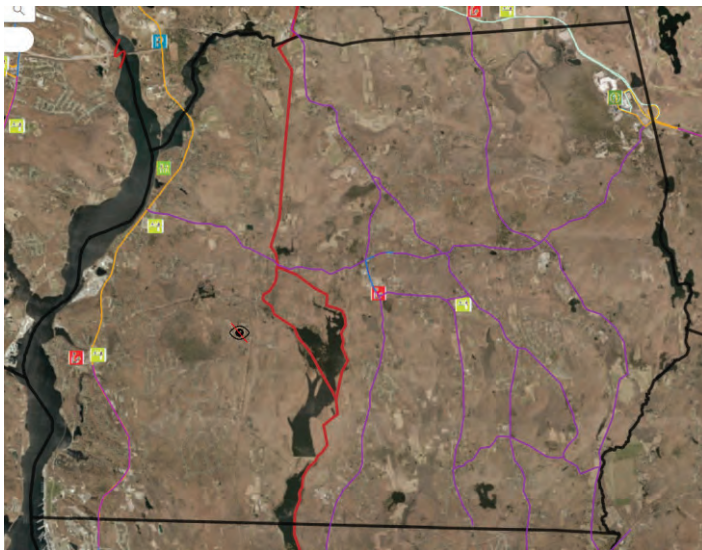
Town of Groton



- Allyn Street, between Whitehall Lane and Edgecomb Street (Mystic Village) – Missing sidewalk
- Route 184, between Orchard Drive and Route 117 – Missing sidewalk
- Route 12 at Crystal Lake Road (Naval Submarine Base New London) – Missing crosswalks and safe pedestrian crossings (a multi-use path is currently being constructed in this location)
- Gold Star Memorial Bridge – Steep ramp on Groton approach and substandard, narrow multi-use path on bridge
- Mystic village center and West Mystic – lack of bicycle facilities
- Route 12, between Gales Ferry and Naval Submarine Base New London – lack of bicycle facilities
- Route 12, between Groton Square and Naval Submarine Base New London – lack of bicycle facilities
- Route 1, between Groton Square and West Mystic – lack of bicycle facilities
- Route 215, between West Mystic and Noank – lack of bicycle facilities

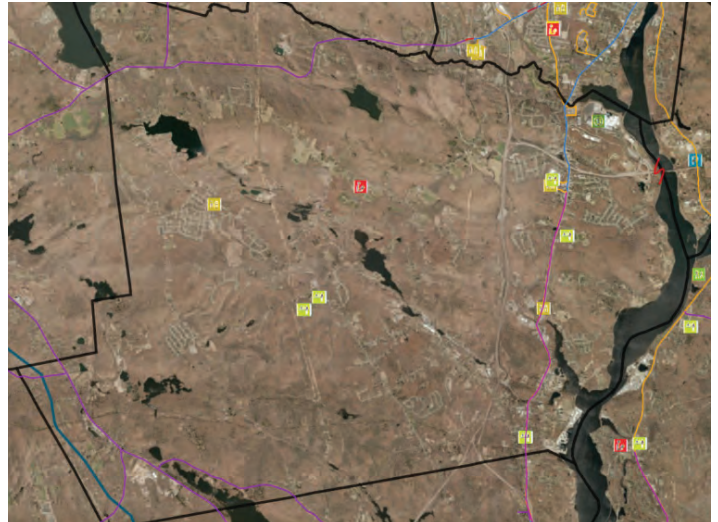
- Eastern Point Road and Thames Street, between UConn Avery Point, Pfizer, General Dynamics, Groton City, Gold Star Memorial Bridge, and Groton Square – lack of bicycle facilities
- Poquonnock Road, between General Dynamics and Route 1 – lack of bicycle facilities

Town of Ledyard



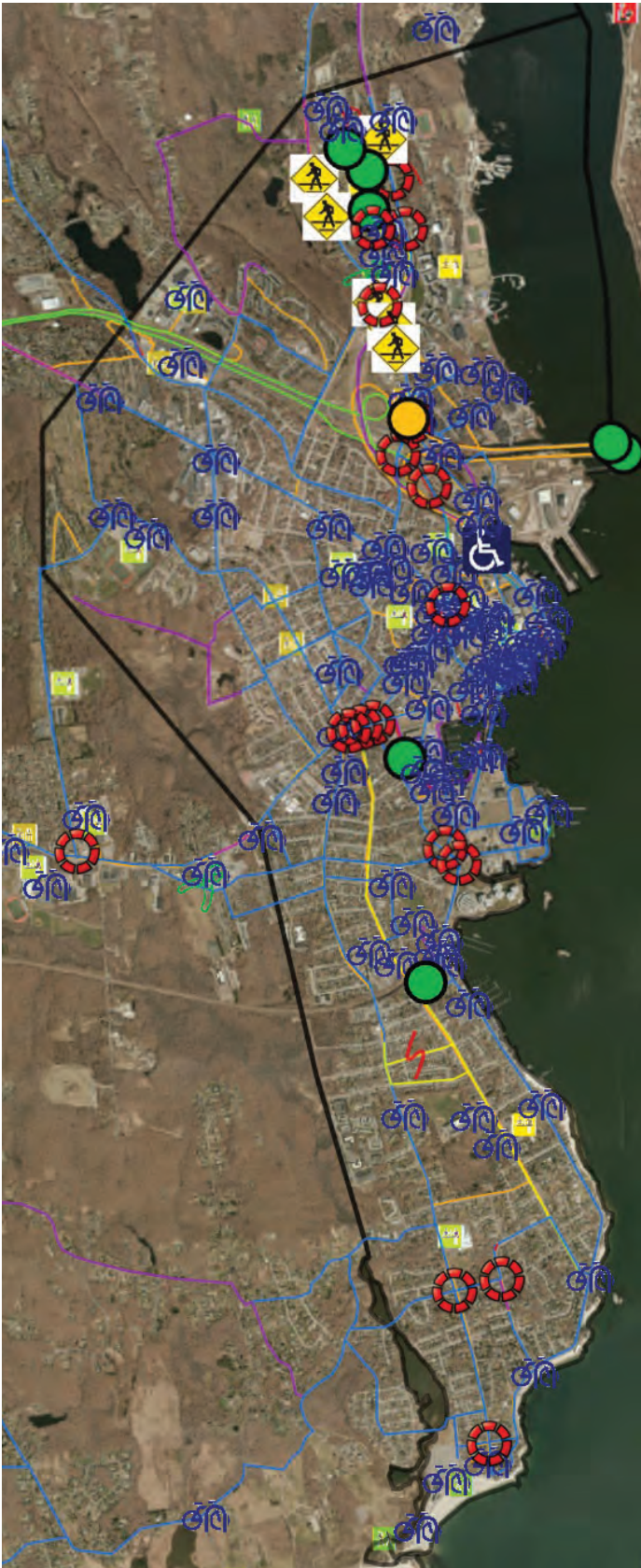
- Village of Ledyard Center, on Route 117 and Route 214 – lack of bicycle facilities
- Route 12, between Gales Ferry and Naval Submarine Base New London – lack of bicycle facilities

Town of Montville



- Route 2A Bridge over the Thames River – Missing sidewalk
- Route 85, between Town of Waterford and Town of Salem – Lack of bicycle facilities
- Route 32, between Norwich Village Center, Mohegan Sun & Mohegan Reservation, and Uncasville – Lack of bicycle facilities
- Route 32, Uncasville to Mohegan Reservation – Lack of sidewalks

City of New London



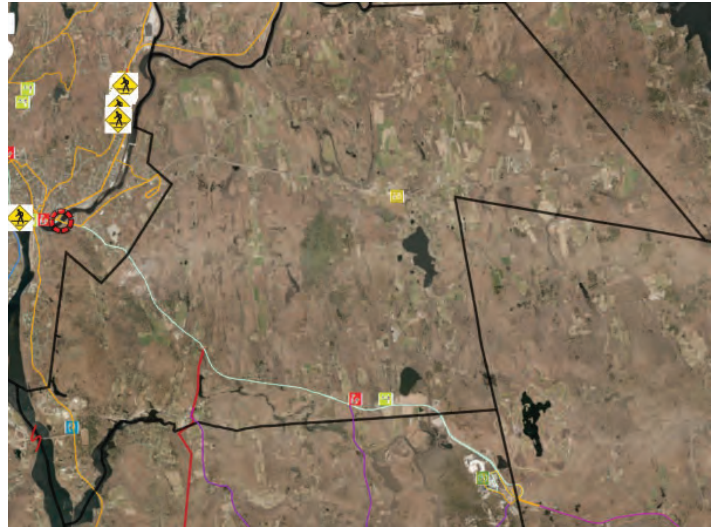
- Vauxhall Street Extension, between I-95 overpass and Phillips Street – Missing sidewalk
- Willams Street, between Lyman Allyn Art Museum and Gordon Court – Missing sidewalk and no pedestrian crossing
- Mohegan Avenue Parkway corridor, between Connecticut Avenue and US Coast Guard Academy – Lacks safe at-grade pedestrian crossings
- Lack of bicycle facilities connecting Connecticut College, US Coast Guard Academy, New London Transportation Hub, ferry terminals, downtown New London, Lawrence & Memorial Hospital major parks, and beaches
- Lack of bike parking city-wide

City of Norwich



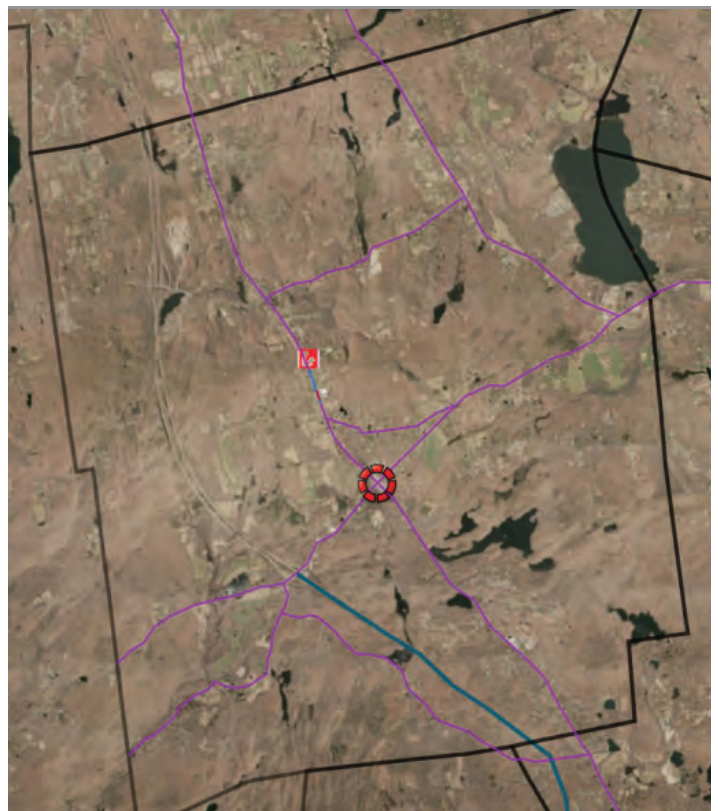
- Route 82, between New Concord Drive and Briar Lane (Walmart) – Missing sidewalk
- Route 82, between Norwich Village Center and Briar Lane (Walmart) – Lack of bicycle facilities
- Route 32, between Norwich Village Center and Mohegan Sun & Mohegan Reservation – Lack of bicycle facilities

Town of Preston



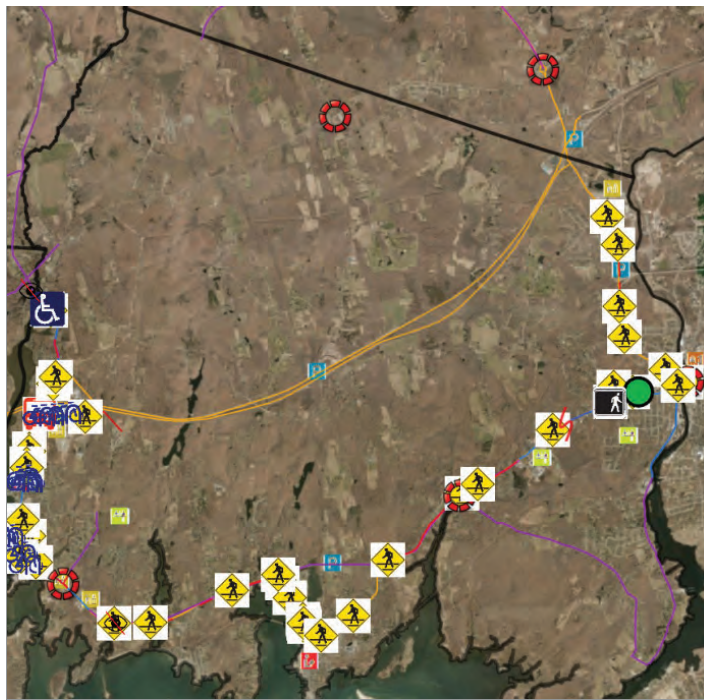
- Route 2A Bridge over the Thames River – Missing sidewalk

Town of Salem



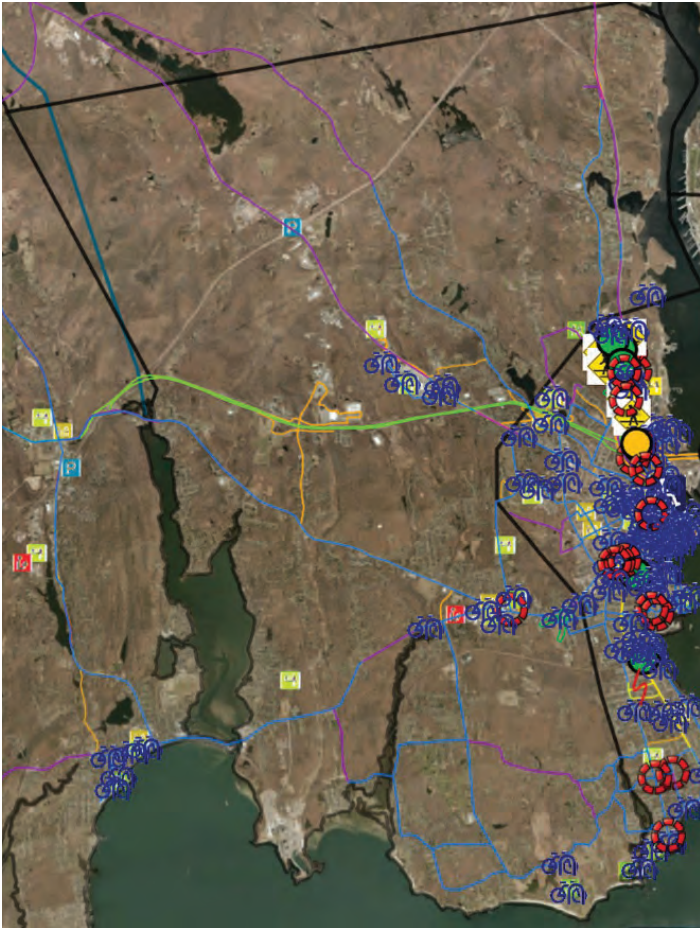
- Route 85 (Hartford Road), between Morgan Road (Salem Elementary School) and Round Hill Road – Missing sidewalk
- Route 85, between Town of Waterford and Town of Colchester – Lack of bicycle facilities
- Route 82, between Town of Waterford and Salem Four Corners – Lack of bicycle facilities

Town of Stonington



- Village of Mystic –Stonington Westerly Road, between Hewitt Road and Long Wharf Drive – Missing sidewalk
- Old Mystic- Mystic Aquarium- Mystic village center – lack of bicycle facilities in corridor
- Mystic village center and West Mystic – lack of bicycle facilities
- Route 1, between Wequetequock and Village of Mystic
- Village of Pawcatuck - Route 1 (South Broad Street) between Wequetequock and Pawcatuck – Missing sidewalk and bicycle facilities
- Village of Pawcatuck – Mechanic Street, between Route 1 and Clark Street – Lack of bicycle facilities
- Village of Mystic – Coogan Boulevard and Jerry Browne Road, between Mystic Aquarium and Avalon Health Center – Missing sidewalk and bicycle facilities

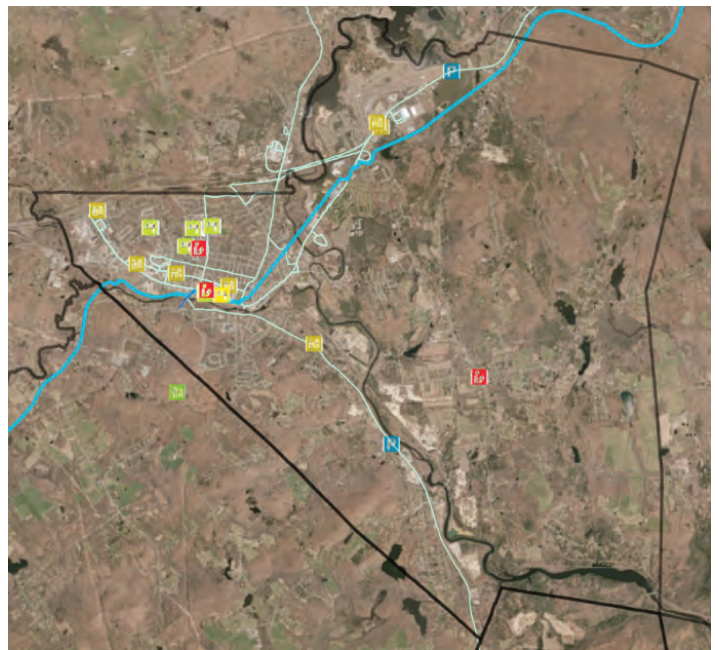
Town of Waterford



- Route 32, between Quaker Hill and Mohegan Sun – Lack of bicycle facilities
- Route 1, between Clark Lane and Vivian Street (Waterford High School and Friendship School) – Unsafe pedestrian crossings
- Route 1, between City of New London and Town of East Lyme – Lack of bicycle facilities
- Route 156, between Route 1 and Town of East Lyme (Niantic Village) – Lack of bicycle facilities
- Route 213, between Route 156 and City of New London – Lack of bicycle facilities

- Shore Road and Gardiners Wood Road, between Route 156 and Route 213 – Lack of bicycle facilities
- Vauxhall Street Extension, between I-95 overpass and Phillips Street – Missing sidewalk and bicycle facilities
- Vauxhall Street, between I-95 overpass and Town of Montville – Lack of bicycle facilities
- Route 85, between City of New London and Town of Montville – Lack of bicycle facilities
- Route 32 and Old Norwich Road, between City of New London and Uncasville – Lack of bicycle facilities

Town of Windham



- Bridge Street, between Pleasant Street and Riverside Drive – Lack of bicycle facilities

Appendix F

Existing Related Plans



Community	Document	Year	Summary
Bozrah	--	--	--
Colchester	Plan of Conservation and Development	2015	Sets goal of enhancing bicycle and pedestrian travel including more sidewalks, trails, and bikeways. Provides map of desired sidewalk area and potential bike routes.
	Zoning Regulations	--	Provides pedestrian and bicycle access design standards.
East Lyme	Plan of Conservation and Development	2009	Calls for developing policies and regulations to improve recreational opportunities to link the community together, specifically bike paths, walking trails, and greenways. Promotes minimizing reliance on automobiles by implementing pedestrian, bicycle, and transit improvements. Plan recommends bike racks at strategic points around town and developing long-range plan to accommodate and promote recreational bicycling.
Franklin	--	--	--
Griswold	--	--	--

Community	Document	Year	Summary
Town of Groton	Bicycle, Trails & Pedestrian Master Plan	2005	Established the following goals for all forms of non-motorized transportation in Groton: (1) interconnect neighborhoods; (2) develop commuter routes; (3) develop recreational trails that provide access to open space; and (4) build facilities that are safe and attractive.
	Mystic Multi-Modal Transportation Study	2011	Recommended transportation improvement options include implementation of Mystic Trolley Bus circulator system, expansion of the Mystic Seaport Water Shuttle Service, improvements to wayfinding signage throughout the Mystic area, enhancements to pedestrian and non-vehicular transit linkages, and traffic intersection improvements to promote pedestrian safety and improve traffic flow. Improvements include development of complete streets concepts, bicycle path upgrades and streetscape improvements to sidewalks for better maintenance and accessibility.
	Plan of Conservation and Development		Recommends reviewing and updating Groton Bicycle, Pedestrian & Trails Master Plan. When practical, add bike lanes, adjacent multi-use paths, and sidewalks when rebuilding local roadways. Emphasizes a context sensitive Complete Streets approach to roadway design. Notes the SCCOG Long Range Transportation Plan, 2015-2040 recommends two additional pedestrian/bike routes through Groton: (1) Pleasant Valley Road to Lestertown Road to Military Highway to Fairview Avenue #2 to Bridge Street #1 to Mitchell Street to Benham to Eastern Point Road to Shennecossett Road around Avery Point to Plant Street to Shennecossett Road to Thomas Road to Tower to South Road to Route 1 to Route 215 either to Mystic Village, or West Mystic Avenue to Allyn Street to Mystic Street to Cow Hill Road to Route 184 (east) to Route 27 to River Road to Mystic Village; and (2) Gungywamp Road to Route 184 to Stonington.

Community	Document	Year	Summary
City of Groton	Subdivision Regulations	2016	Five-foot (5 feet) wide concrete sidewalks are required along both sides of streets except that, on a temporary cul-de-sac street, a sidewalk shall not be required on the area of the temporary turnaround.
	Plan of Conservation and Development	2018	The City intends to establish, maintain and enhance an overall pedestrian / bicycle network in the City. The eventual goal is to interconnect all of elements (sidewalks, paths, trails, bikeways, etc.) into a cohesive overall system. This includes the establishment of a boardwalk or other pedestrian access along the Thames River, where feasible. The City intends to consider adopting a "complete streets" philosophy where existing streets, as feasible and appropriate, will be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for walkers, runners, cyclists, and other users of all ages and abilities in addition to the traditional focus on people driving automobiles. In addition, the City intends to look at ways to develop a better network of pedestrian and bicycle trails in open space and greenbelt areas.
Borough of Jewett City	--	--	--
Lebanon	Plan of Conservation and Development	2010	Proposes petitioning CTDOT to include the installation of bicycle lanes where feasible when resurfacing Routes 87, 207 and 289.
Ledyard	Plan of Conservation and Development	2003	Sets goal of enhancing pedestrian and bicycle mobility and safety. The Plan recommends pursuing design improvements to existing roadways that support bicycle routes including: improved signage and pavement markings for designated bicycle routes; "bicycle friendly" storm drain grates; improved roadway shoulder maintenance; and widened shoulders to accommodate designated bike lanes having a 4' minimum width. Recommends completion of sidewalk network in Ledyard town center.

Community	Document	Year	Summary
Lisbon	Plan of Conservation and Development	2016	<p>Notes the Long Range Regional Transportation Plan FY 2011-2040 for Southeastern Connecticut also identifies proposed bike and pedestrian trails. Routes were chosen based on roadway sections that have comparatively low volumes of traffic and/or shoulders or sidewalks that can accommodate cyclists and pedestrians:</p> <p>(1) From Occum (Sprague) to Kendall Road to Preston Allen Road (north) to Kinsman Hill Road to Route 169 (north) to Kimball Road to Sullivan Road to Westminster Road (south).</p> <p>(2) Route 169 to Preston Allen Road to Kendall Road (east) to Route 169 (north) to Route 138 (Newent Road) to Jewett City.</p> <p>(3) The River Road Sidewalk extension on Route 12 is also a proposed project for the next 4-10 years</p>
Montville	Plan of Conservation and Development	2010	Recommends bicycle, pedestrian, and trail network.
New London	The Choice for New London: Neighborhood Planning Strategy	2010	Provides streetscape design and transportation recommendations for a section of downtown.
	Plan of Conservation and Development: Strategic Plan	2017	Support and expand Complete Streets principles. Recommends creating a more walkable and bike-able downtown and City. Recommends creating a balanced transportation system for all roadway users. Identify priority areas in the City for sidewalk and curb repairs. Establishes citywide pedestrian and bicycle plan.
	New London Transportation and Parking Study	2017	Recommends fine-grain multimodal improvements to downtown streets.
North Stonington	--	--	--

Community	Document	Year	Summary
Norwich	Zoning Regulations	--	Provides bicycle parking design standards.
	Plan of Conservation and Development	2013	Recommends enhancing provisions for pedestrians and bicyclists, improving pedestrian connections and addressing issues on Route 82. Provides Pedestrian and Bicycle network plan.
	City of Norwich: Village District Design Guidelines	2018	Provides bicycle parking design guidance
Preston	Plan of Conservation and Development	2014	Sets goal to have compact, transit accessible, pedestrian-oriented mixed use development patterns and land reuse where feasible. Notes the long range regional transportation plan for FY 2011-2040 for southeastern Connecticut recommends bicycle and pedestrian routes in Preston: (1) From Norwich: Roosevelt Avenue to Old Jewett City Road to River Road to Old Jewett City Road to Krug Road to Route 164 to Route 165 (west) to Benjamin Road to Branch Hill Road to Ross Road to Route 2 (east) to Shewville Road; and (2) From Griswold: Route 201 to Route 165 to Route 164 to Route 2 to Shewville Road to Ledyard.
Salem	Plan of Conservation and Development	2012	Add bicycle lanes to road reconstruction and Public Works maintenance projects where possible and feasible, and provide a network of pedestrian and bicycle paths and greenways that are safe and provide convenient access to the transit system.
Sprague	Plan of Conservation and Development	2018	Provide bicycle route way-finding to the Sprague Land Preserve and Baltic Reservoir from Baltic Village. Provide a safe pedestrian link between the Sayles School and Baltic Village.

Community	Document	Year	Summary
Stonington	Zoning Regulations	--	Provides bicycle parking design standards.
	Mystic Mobility Study	2011	Recommended short- and long-term recommendations for bike lanes, road improvements, tourist oriented mobility centers, trolley services, water taxi services and aesthetic improvements were made. Recommended a series of strategically located mobility hubs connected by a free trolley service and an expanded water taxi service.
	Plan of Conservation and Development	2015	Promotes creating opportunities for bike paths and trails linking residential and commercial areas and between neighboring open space. Promotes making town more bike friendly and recommends a Bicycle Task Force to develop a more comprehensive plan. Recommends (1) requiring road improvement projects to consider bicycle accommodations in their design; (2) site development projects to consider bicycle accommodations in their design; (3) adopting initial bikeway plan on Route 1; and (4) providing bicycle racks in commercial and tourist areas. Recommends implementing the Town's Complete Streets Resolution which balances vehicular transportation with pedestrian and bicycle transportation needs in road design and/or reconstruction projects. Recommends adopting the State's Safe Routes to School Program to improve the safety of students walking and biking to school.
Stonington Borough	Plan of Conservation and Development	2012	Recommends keeping pedestrian areas safe and attractive, and providing public amenities to encourage a pedestrian environment.
Waterford	Plan of Conservation and Development	2012	Support a more walkable village-type town center. Provide for the transportation and mobility needs of the community, including pedestrians, bicyclists, vehicles, and transit.

Community	Document	Year	Summary
Windham	Plan of Conservation and Development	2017	Promotes safe and efficient movements of all roadway users through a network of roads, sidewalks, bike ways, and trails.
	Traffic Calming Ordinance	2009	Promotes slower vehicle speeds with traffic calming devices, and established Traffic Calming Committee.
	Zoning Regulations	2011	Provides pedestrian and bicycle access design standards

Appendix G

Complete Streets Policies



APPENDIX G: Complete Streets Policies

Although none of these three examples of municipal Complete Streets plans are from towns in the SCCOG region, Stamford, Fairfield and Portland, Connecticut's plans offer language or policies that may be helpful when crafting a new policy for a Southeastern Connecticut municipality.

Stamford, Connecticut Complete Streets Policy:

ARTICLE XII. - COMPLETE STREETS

Sec. 231-78. - Title.

This Article shall be entitled the Complete Streets Ordinance.

Sec. 231-79. - Definitions

As used in this Article, the following terms shall have the meanings indicated:

Complete Streets. Roadways that are designed and operated to provide safe and convenient access to all Users.

Users. Are all people that use roadways, including pedestrians, bicyclists, public transportation riders, and motorists and includes people of all ages and abilities, including children, seniors and individuals with disabilities.

Transportation Improvement Project. Any public or private investment within the public right-of-way, regardless of funding source, including, but not limited to, new construction, reconstruction, alteration and maintenance inclusive of road resurfacing, except that a Transportation Improvement Project shall not include routine upkeep such as cleaning, sweeping, plowing or spot repair.

Sec. 231-80. - Implementation

This Article shall require the implementation of Complete Streets in appropriate locations within the City of Stamford by the Office of Operations, as follows:

- (a) The Office of Operations shall review all Transportation Improvement Projects being designed for implementation within the City limits and explore opportunities to meet the needs of all Users, including but not limited to motorists, pedestrians, bicyclists, and transit vehicles.
- (b) All Transportation Improvement Projects located within 1,000 feet of a school, commercial center, or bus stop shall include infrastructure designed to accommodate pedestrians.
- (c) The requirements of this Article shall not apply to Transportation Improvement Projects:
 - (1) where specific users are prohibited by law (e.g. interstate highways or pedestrian-only paths); or
 - (2) where the cost of the accommodations necessary to implement Complete Streets is excessively disproportionate to the need or probable use; provided, however, that the Director of Operations must document the rationale for exemption from the Complete Streets Ordinance in such cases.

Sec. 231-81. - Complete Streets Manual.

A Complete Streets Manual, detailing the steps to be taken to implement this Ordinance, shall be adopted by the Office of Operations and approved by the Board of Representatives.

Portland, Connecticut Complete Streets Policy:

INTRODUCTION

PORTLAND COMPLETE STREETS POLICY

The purpose of the Portland Complete Streets (CS) Policy is to guide a transition from traditional automobile-focused transportation planning to a more comprehensive approach that accounts for all users including children and seniors, persons with disabilities, and those that travel by foot, bicycle, and transit. The Policy was developed through an extensive public process spearheaded by the Portland Complete Streets Group with input from elected officials, town staff (including EMS), business owners and residents.

In addition to the policy, a set of three maps graphically illustrates desirable outcomes of the policy. Map One indicates the Complete Streets Priority Area - predominantly the center village district and all streets within walking distance to Portland public schools. Map Two indicates gaps in the sidewalk network and suggests areas of improvement. Map Three depicts favorable bike routes, the path of the Air Line Trail and possible connection between the trail and the center district.

The Policy provides guidance in seven related areas:

- Principles: The rationale for the CS Policy is explained by emphasizing that it addresses all users and modes of travel, all transportation projects, a comprehensive network approach, Connecticut state law, jurisdiction, design standards, exceptions, land use context, and performance standards.
- Users and Modes: All users of the transportation system shall be considered in planning and design.
- Procedures: All transportation projects shall follow a path from concept to implementation that considers Complete Streets options.
- Jurisdiction and Network Connectivity: Town-owned streets are the focus of the Policy but the State of Connecticut shall be encouraged to follow both the Town's and State's CS Policies on state right-of-ways. A priority of the Policy shall be to facilitate the completion of gaps in the sidewalk and trail network with emphasis on streets near schools and the Air Line Trail.
- Design Guidance and Performance Standards: The most current design guidance provided by authoritative organizations such as AASHTO and FHWA shall be referenced in the formulation of projects.
- Inclusions and Exceptions: The Policy addresses all transportation improvements but allows for exceptions where specific criteria prevent implementation of CS improvements.
- Policy Implementation and Performance Measurement: The progress of CS improvements shall be measured and reported on a periodic basis.

Implementation of the Policy is expected to be gradual as new projects, repairs and major maintenance take place. Certain projects may be eligible for State or Federal grant programs.

TOWN OF PORTLAND, CONNECTICUT COMPLETE STREETS POLICY

I. VISION, GOALS & PRINCIPLES

VISION

To improve the streets of Portland making them safer and more accessible for all users including pedestrians, cyclists, people with mobility challenges, transit users, and motorists. To encourage non-motorized modes of transportation and a Complete Streets culture that promotes healthy living.

GOALS

The overarching goal of this policy is to gradually transform Portland from a community that disproportionately encourages automobile travel to one that invests in transportation infrastructure equitably across all modes to the benefit of all citizens. Specific goals are the following:

1. Make Portland roads safer by increasing the capacity for various uses while decreasing the rate and severity of vehicle, pedestrian and bicycle crashes;
2. Enable healthier lifestyle choices by providing an expanding variety of walking and bicycling options;
3. Promote a Complete Streets culture in Portland through education and events,
4. Encourage private sector economic development that will benefit from, and contribute to, a more livable community;
5. Expand the network of safe walking and bicycling routes to schools;
6. Connect with other town/citizen's action groups in Portland that have goals related to Complete Streets.

PRINCIPLES

The National Complete Streets Coalition states: "By planning, designing, and constructing Complete Streets, communities of all sizes – whether rural hamlets, small towns, or booming metropolises – are able to provide the quality access to jobs, health care, shops, and schools their residents deserve, while also achieving greater economic, environmental, and public health benefits." Application of Complete Streets policy is not a one size fits all process. Some streets are more adaptable to change than others. The following principles shall guide the planning and implementation of all Complete Street improvements:

- All Users and All Modes: All users and all modes should benefit from Complete Streets improvements;
- All Projects & Phases: All transportation projects shall incorporate Complete Streets improvements – from new construction to maintenance, it is anticipated that most complete streets improvements will be planned and completed concurrently with other scheduled roadway projects, but some complete streets improvements may be implemented independently of other road improvements and maintenance. Priority or special consideration shall be given to locations/improvements identified in the Complete Streets Policy Maps discussed in more detail in Section III;

- Network: Complete Streets policy should encourage a network understanding/approach to the town's transportation system;
- State law: Public Act 09-154 states: "From funds received by the department or any municipality for the construction, restoration, rehabilitation or relocation of highways, roads or streets, a reasonable amount shall be expended to provide facilities for all users, including, but not limited to, bikeways and sidewalks with appropriate curb cuts and ramps. On and after October 1, 2010 not less than one percent of the total amount of any such funds received in any fiscal year shall be so expended."
- Jurisdiction: Complete Streets policy shall address all agencies involved in transportation: Department of Public Works (DPW), Emergency Management Services (EMS), CT Department of Transportation (CTDOT), Middletown Area Transit (MAT);
- Design: Standards and guidelines shall refer to latest editions of guidance documents published by American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration (FHWA), Institute of Transportation Engineers (ITE), American Planning Association (APA), National Association of City Transportation Officials (NACTO), and the U.S. Access Board;
- Exceptions: Shall be made according to clear criteria and authorization stipulated within this policy document;
- Context Sensitivity: Land use context and flexibility shall be considered relative to potential Complete Streets improvements;
- Performance Standards: Performance standards shall be established with measurable outcomes.

II. USERS AND MODES

This transportation system shall be designed and operated in ways that improve the safety, comfort and convenience of pedestrians, bicyclists, public transit users, assistive mobility device users, motorists, emergency management services, freight providers, and users of other common modes of transportation.

When there is conflicting needs among users and modes, the following prioritization will apply:

1. Safety is the highest priority, followed by mobility;
2. Among modes, pedestrian needs shall receive priority, followed by the next most vulnerable user in each case;
3. Strive for balance among all modes involved in each case. It is recognized that all modes cannot receive state of the art accommodation within every right-of-way (ROW – the publicly owned transportation corridor), but the overall goal is that all users of varying ability can safely and conveniently use the transportation network.

III. PROCEDURES

The Town of Portland commits to applying Complete Streets principles at the outset of all transportation improvement projects. Each project shall be approached as an opportunity to improve the safety and accessibility of the street/ROW for all users. Projects may include, but not be limited to, subdivision, new development, new construction, major maintenance (such as resurfacing, storm drainage, curb repair, etc.), and privately-funded projects. Improvements through planning, programming, design, and ROW acquisition shall be considered. Examples of such projects may be specific such as sidewalks and crosswalks or general such as traffic calming, enhanced traffic enforcement, and 'Road Diets'. Priority or special consideration shall be given to locations/improvements identified in Complete Streets Policy Maps:

1. Complete Streets Priority Areas (attached as pdf file "Complete Streets Map final 6-23-16")
2. Existing & Possible Sidewalks (attached as pdf file "Sidewalks Map Final 6-21-16")
3. Possible Bike Routes & Multi-Use Paths (attached as pdf file "Bike Routes Map final 6-21-16")

The following procedural guidelines shall be followed:

1. A new project is identified and brought to the attention of the First Selectman / Board of Selectmen;
2. Input is gathered from relevant stakeholders - The CSG, Town Engineer, Planning, Public Safety and Public Works departments - regarding current Complete Streets needs in the area of the project;
3. Planning, Public Works, and Finance departments will develop a project budget to include recommended Complete Streets improvements and present for approval to the Board of Selectmen.

IV. JURISDICTION & NETWORK CONNECTIVITY

This Policy shall apply to all Town owned streets and land within public ROWs. Additionally, the State of Connecticut controls three principal transportation corridors that traverse the town including routes, 66, 17, and 17A. The Town shall work cooperatively with Connecticut Department of Transportation to plan and implement Complete Streets improvements within these ROWs. At a minimum, PA 09-154 An Act Improving Bicycle and Pedestrian Access and the Connecticut Complete Streets Policy EX.0.-31, shall be applied to all planning, design, construction and major maintenance within state controlled ROWs. Wherever possible, the Town's Complete Street policy shall be considered, especially where a state ROW provides Complete Streets network connectivity identified in the Town's Plan of Conservation and Development. Owners of privately owned streets and ways shall also be encouraged to adhere to the policy.

Private utility companies operate within Town and State ROWs. Their planning, construction, and major maintenance can create both opportunities and barriers to Complete Streets improvements. The Town

shall coordinate with the private utilities to ensure that utilities projects and Complete Streets improvements are coordinated wherever possible.

The Portland School District encourages students to walk to school and has established standards that stipulate the distance a student can be expected to walk if sidewalks and safe crossings are provided. The Town shall coordinate Complete Streets improvements to ensure safe routes to schools including sidewalks, road crossings and multi-use routes that encourage walking and bicycling to school.

The Town shall also coordinate Complete Streets planning and construction with Middletown Area Transit, River COG (Council of Governments), and adjacent municipalities to facilitate effective application of resources.

NETWORK CONNECTIVITY

The Town shall identify gaps in the sidewalk and trail network that upon completion will improve connectivity and facilitate completion of a Complete Streets network. Ideally there should be non-motorized ways to get to key areas in Portland including the recreational areas, the economic development areas, and schools. Connections between the Village District/Town Center and Riverfront Recreation area are specifically mentioned in the town's 2016 POCD. These improvements are considered high priority projects.

Existing pedestrian crossings shall be evaluated for safety and functionality. The expansion of the sidewalk network will require the implementation of new crossings. All new crossings shall be determined based on accepted standards related to speed limit, site lines, stopping distance, etc.

The Air Line Trail (ALT) will provide unprecedented connectivity across the southern part of town for bicyclists and pedestrians. Additional multi-use pathways shall be investigated that connect to the ALT such as the existing north-south utility corridors. Town and State open space areas shall also be evaluated for potential multi-use trail connectivity.

V. DESIGN GUIDANCE & PERFORMANCE STANDARDS

All Complete Streets improvements within public ROWs shall conform to the following standards. Of the following list, AASHTO and MUTCD are considered the definitive design guides for changes within the State ROW. Because Complete Streets design is an evolving field, the latest edition of these standards shall be referenced for design guidance:

American Association of State Highway and Transportation Officials (AASHTO)

- A Policy on Geometric Design of Highways and Streets

- Guide for the Development of Bicycle Facilities

- Guide for the Planning, Design and Operations of Pedestrian Facilities

American Planning Association (APA)

- Complete Streets: Best Policy and Implementation Practices

- U.S. Traffic Calming Manual

Federal Highway Administration (FHWA)

- Manual of Uniform Traffic Control Devices (MUTCD)

- PEDSAFE: Pedestrian Safety Guide and Countermeasures Selection System

Institute of Transportation Engineers (ITE)

Designing Walkable Urban Thoroughfares: A Context Sensitive Approach

National Association of City Transportation Officials (NACTO)

Urban Bikeway Design Guide

Urban Street Design Guide

U.S. Access Board

Accessible Public Rights-of-Way: Planning and Designing for Alterations

VI. INCLUSION & EXCEPTIONS

The Town of Portland commits to applying Complete Streets principles at the outset of all transportation improvement projects. Each project shall be approached as an opportunity to improve the safety and accessibility of the street/right of way for all users.

Exceptions shall be made if the following criteria render Complete Streets improvements unworkable:

1. Where specific users are prohibited by law from using the ROW (i.e. pedestrians and bicyclists within a limited access highway);
2. Cost is disproportionate to the current need or projected future need for Complete Streets improvements or funding is not available;
3. There is an absence of current and future need (i.e. a rural road that carries low Average Daily Traffic (ADT) and is remote from neighborhoods, schools, or points of interest);
4. Emergency repairs within Town ROWs (pre-existing Complete Streets elements impacted by these repairs must be restored to their original condition).

Protocol - Exceptions shall be granted according to the following:

The town shall issue Request for Exceptions (RFE) at the earliest project phase by posting the RFE on Town website and distribute to stakeholders including Complete Streets Group. Allow a 14 day public comment period and record comments as an Exhibit to the RFE.

Decisions regarding exceptions shall be decided by the First Selectman (Local Traffic Authority) in consultation with other Selectmen, a designated Complete Streets Group member, Directors of Public Works and Planning, and considering public input. A determination of exception will conform to one or more of the four allowable exceptions listed above.

VII. POLICY IMPLEMENTATION AND PERFORMANCE MEASUREMENT

Implementation of Complete Streets improvements represents a continuum that will require periodic and sustained evaluation to measure progress and effectiveness. To facilitate that regular evaluation, the Director of Public Works shall provide a written report to the Board of Selectmen on an annual basis by the first of February on the progress and effectiveness of the Complete Streets policy and any exceptions granted during the previous calendar year. If requested, CSG can work with the Public Works Department, to help create a form that can be used to provide the annual written report. The measurement of all Complete Streets Improvements for the previous calendar year are to include the following:

I. Funding:

Total dollar amount spent on Complete Streets Improvements

- a. Town funds
- b. Grant funds
- c. Other funds

II. Sidewalks/Pedestrian/Transit Improvements:

1. Lineal feet of sidewalks and other pedestrian accommodations built or improved
 - a. Within ½ miles of schools
 - b. Outside ½ miles of schools
2. Number and description of crosswalks installed or improved
3. Number and description of Americans with Disabilities Act (ADA) accommodations installed or improved
4. Number and description of public or private transit accessibility improvements installed or improved by type and number

III. Bicycling Improvements:

1. Lineal feet of bicycle lanes, routes, or trails built by width and type
2. Number and description of bicycle parking facilities installed

IV. Traffic Calming:

1. Number and description of traffic calming measures implemented
2. Number of new traffic control signs/signals installed that assist with the town's Complete Streets policies
3. Number of street trees planted

V. Maintenance Activities:

Description of Maintenance Activities of existing Complete Streets Facilities

VI. User & Crash Data:

1. Bicycle and pedestrian traffic counts
2. Motor vehicle, bicycle and pedestrian accident data

VII. Exceptions:

Number of Request for Exceptions requested and approved, including dates and committee members

END

Fairfield, Connecticut Complete Streets Policy (Excerpts)

Town of Fairfield Complete Streets Policy

Prepared by the Fairfield Bicycle and Pedestrian Committee
Endorsed by the Board of Selectmen on September 26, 2018

Background

In March of 2010, the Town of Fairfield created the Fairfield Bicycle and Pedestrian Plan Advisory Committee under former First Selectman Kenneth Flatto. This committee was then restructured in April of 2012 by First Selectman Michael Tetreau. With technical assistance from the Greater Bridgeport Regional Council, this committee developed the Fairfield Bicycle and Pedestrian Master Plan. The Plan was endorsed by the Board of Selectmen on June 19, 2013.

The Fairfield Bicycle and Pedestrian Master Plan indicated several recommendations including the formation of a standing Bicycle and Pedestrian Committee, and the development of a Complete Streets Policy. In November of 2014, the Town appointed the initial Fairfield Bicycle and Pedestrian Committee, which consists of 9 citizens and several Town staff advisors. In December of 2015, a subcommittee was formed to develop the Fairfield Complete Streets Policy.

Executive Summary

Complete Streets by definition are streets, highways, roadways, travel ways and corridors that are designed and operated to enable safe and comfortable access for all users. All users include pedestrians, bicyclists, public transit riders, and people of all abilities, cars, trucks, buses, and other modes of transportation.

Any future transportation project to which this policy is applicable should be sensitive to the context of the surrounding neighborhood and community, as there is not a one size fits all approach to Complete Streets design and implementation. The policy for Fairfield reflects this understanding.

The Fairfield Complete Streets Policy is based upon research and guidelines provided by the National Complete Streets Coalition, a division of Smart Growth America.

The National Complete Streets Coalition Steering Committee consists of: AARP, AECOM, America Walks, American Public Transportation Association, American Society of Landscape Architects, Association of Pedestrian and Bicycle Professionals, Institute of Transportation Engineers, MIG | SvR, National Association of City Transportation Officials, National Association of REALTORS®, Nelson\Nygaard Consulting Associates Inc., Smart Growth America, SRAM, Stantec, VHB, Voices for Healthy Kids, and the Washington State Department of Transportation.

The following list of items describes background information and many of the benefits of Complete Streets:

Complete Streets Saves Lives

Streets that, where appropriate, include sidewalks, better bus stop placement, traffic calming measures, treatments for disabled users, children and the elderly, save lives. From 2005-2014, 376 people were killed while walking in CT. The most threatened populations are children and older adults (info from Smart Growth America).

There is little or no cost associated with developing a Complete Streets Policy

The policy requires transportation planners to consider all users at the onset of transportation projects. Exceptions and exemptions are noted for projects where expected users would not include pedestrians, bicyclists, or public transit users, and considerations where costs would be too prohibitive.

Complete Streets Policies are expanding locally and nationally

Over 1,200 policies are now in place nationwide, and growing, including over 950 municipalities. Several CT municipalities have developed policies, including West Hartford, Middletown, Portland, Enfield, South Windsor, Hartford, Stamford and New Haven.

A Complete Streets Policy reinforces existing regulations

Zoning regulations require sidewalks in certain new construction and renovation projects as well as considerations for pedestrians and bicyclists. Regulations also require development of a bicycle and pedestrian plan as part of the Site Plan review process. The 2016 Fairfield Plan of Conservation and Development recommends a significant number of implementation measures to improve biking and walking in town. A Complete Streets Policy will support existing regulations and guidelines.

Complete Streets are the law in Connecticut

Complete Streets Law enacted in 2009 (CGS §13a-153f and §13b-13a) requires nearly all highway, road, and street programs and projects in Connecticut to accommodate pedestrians, bicyclists, and transit riders. The Connecticut Department of Transportation adopted a Complete Streets Policy in 2014 and encourages municipalities to do the same.

Complete Streets benefit the local economy

Many communities throughout the country that have completed Complete Streets designed projects saw an increase in private development creating the potential to revitalize neighborhoods and corridors. Complete Streets projects are supportive of new businesses and show increases in property values.

A Complete Streets Policy can lead to more funding

Funding for transportation projects that include Federal and/ or State funds usually require considerations for all users of the roadways and a Complete Streets design approach. Without a policy in place, Fairfield could be at a disadvantage when competing with other municipalities in the State for funding of transportation or infrastructure projects.

Complete Streets are flexible

Complete Streets improvements can be achieved in urban, suburban, and even rural areas. In a rural area, consideration can be made to have a paved shoulder for walking and biking as opposed to a sidewalk or other infrastructure. The policy promotes a balance of safety and convenience for everyone on the road.

View the entire Complete Streets Plan at:

https://www.fairfieldct.org/filestorage/10726/10994/15957/73404/Complete_Streets_Policy.pdf

Appendix H

Trail Contacts

APPENDIX H Contacts at the state and regional levels for support of trails projects

Name	Address	Phone/Email	Issue Area
CT DEEP – State Parks Division	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3200 deep.stateparks@ct.gov	Maintenance and general information about state parks and forests
Laurie Giannotti CT DEEP – Rec. Trails	79 Elm Street, Hartford, CT 06106	Tel: (860) 424-3578 laurie.giannotti@ct.gov	General information about the state recreational trails
Susan Smith, Exec. Dir. Bike Walk CT	PO Box 270149 West Hartford, CT 06127	susan@bikewalkct.org	Advocacy, education, legislative issue support
Southeast Connecticut Chapter, New England Mountain Bike Assoc.		nembasect@gmail.com	Advocacy, funding, and volunteer support for trail building and maintenance
Avalonia Land Conservancy	PO Box 49 Old Mystic, CT 06372	avalonialc@yahoo.com	Advocacy, open space preservation, trail building and maintenance
The Nature Conservancy	55 Church Street, Floor 3 New Haven, CT 06510-3029	ct@tnc.org	Advocacy, policy development, open space preservation, resource monitoring

Appendix I

References & Guides

Appendix I: References & Guides

The references most relevant for planning bicycle and pedestrian facilities in Southeastern Connecticut include recent planning studies or reports, as included in each community's toolkit:

- State of CT DOT Road Safety Audits
- A City or Town's Plan of Conservation and Development
- [Southeastern CT Metropolitan Transportation Plan](#) (2019-2045)

The following Guides and Manuals should be consulted to plan for bicycle and pedestrian infrastructure:

- [AASHTO](#) Bicycle Facilities Guide (2012)

Description: This guide provides information on how to accommodate bicycle travel and operations in most riding environments. It is intended to present sound guidelines that result in facilities that meet the needs of bicyclists and other highway users. Sufficient flexibility is permitted to encourage designs that are sensitive to local context and incorporate the needs of bicyclists, pedestrians, and motorists.

- [FHWA Small Town and Rural Multimodal Networks](#) (excluding Norwich, New London, Groton)

Description: This guide is intended to provide design information on bicycle and pedestrian facilities specifically applicable to small towns and rural communities.

- [CT Department of Transportation Highway Design Manual](#)

Description: The Connecticut Highway Design Manual has been developed to provide uniform design practices for preparing roadway plans. The Manual presents most of the information normally required in the design of a typical highway project. The highway designer should attempt to meet all criteria presented in the Manual; however, the Manual should not be considered a standard that must be met regardless of impacts. The highway designer must consider the social, economic or environmental impacts that result from the design values selected. The highway designer should develop solutions that meet the Department's operational and safety requirements while preserving the aesthetic, historic or cultural resources of an area.

- [NACTO](#) Urban Bikeway Design Guide (for Norwich, New London, Groton and Windham)

Description: The NACTO Urban Bikeway Design Guide is based on the experience of the best cycling cities in the world. The designs in this document were developed by cities for cities, since unique urban streets require innovative solutions. Most of these treatments are not directly referenced in the current version of the AASHTO Guide to Bikeway Facilities, although they are virtually all (with two exceptions) permitted under the Manual on Uniform Traffic Control Devices (MUTCD).

- [MUTCD](#) The Manual on Uniform Traffic Control Devices defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public travel. It is important to note that although the MUTCD has strict requirements, it is possible to ask for an exception by submitting a "request to experiment."

Appendix J

Recommendations Map

Bike and Pedestrian Preliminary Recommendations

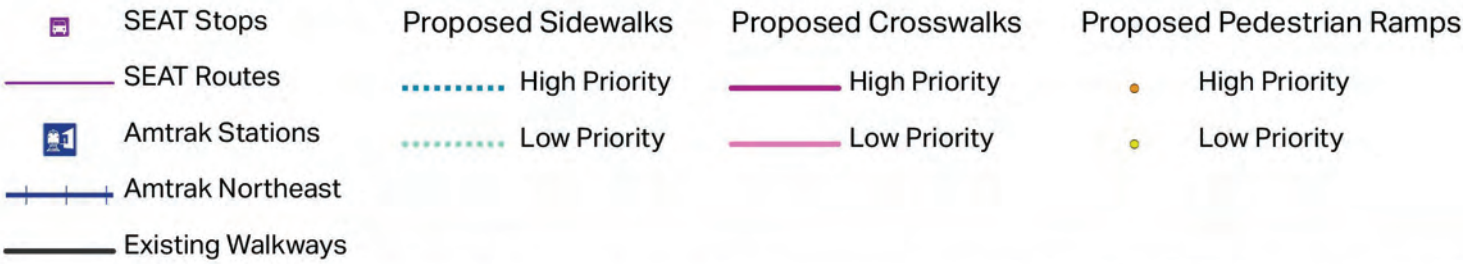


Note: The Southeastern Connecticut Council of Governments does not make any warranty, expressed or implied, and does not assume any legal liability or responsibility for the accuracy, completeness, or usefulness of the data provided herein. Areas depicted are approximate, are for illustration purposes only and do not take the place of a professional survey. The data are not necessarily accurate to mapping, survey, or engineering standards. Areas depicted are not suitable for site-specific decision-making and have no legal bearing on the true shape, size, location, or existence of a geographic feature, property line, or political boundary line representation. This map may contain errors and omissions and should not be referenced or incorporated in any manner in legal documents or proceedings. This data (map) is for general reference only.

Appendix K

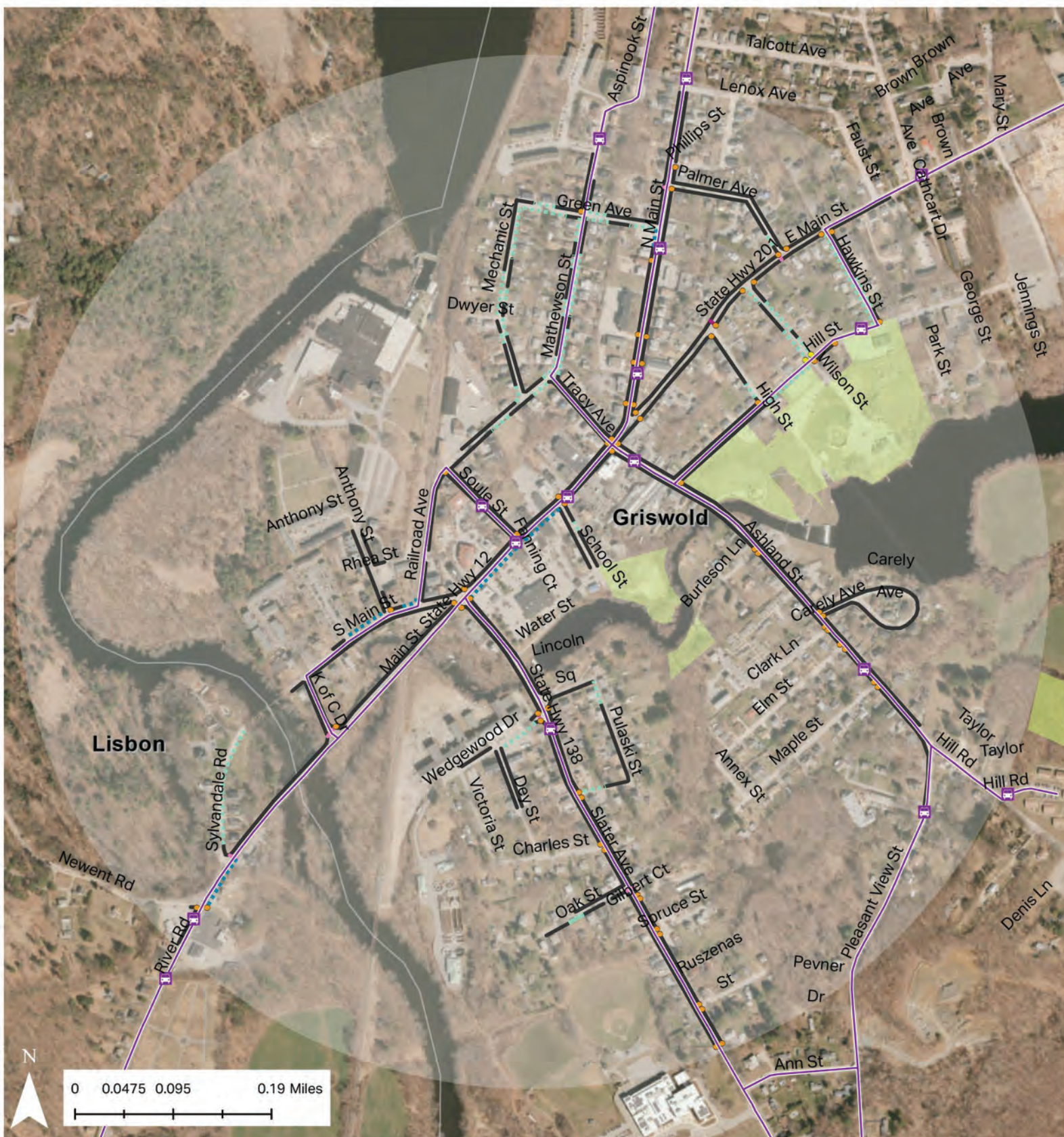
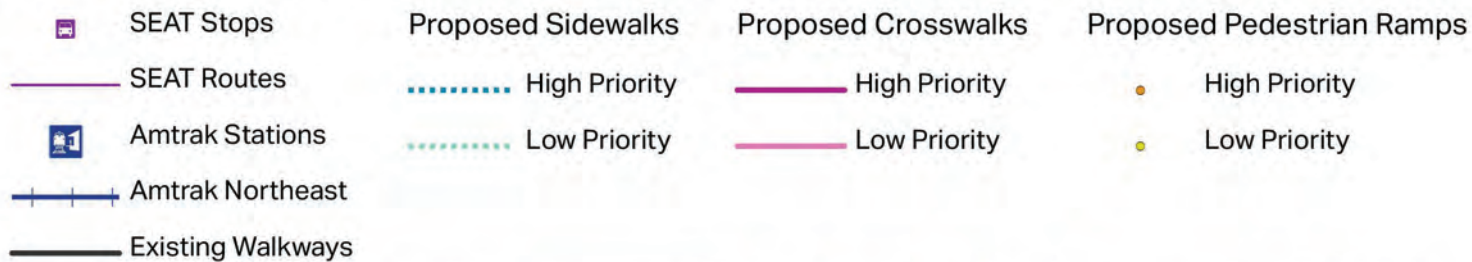
ADA Gap Analysis Mapping

Colchester Pedestrian Facilities





Griswold, Jewett City Pedestrian Facilities


K-3





Groton Pedestrian Facilities


-  SEAT Stops


 SEAT Routes


 Amtrak Stations


 Amtrak Northeast


 Existing Walkways
- Proposed Sidewalks


 High Priority

 Low Priority
- Proposed Crosswalks

 High Priority

 Low Priority
- Proposed Pedestrian Ramps

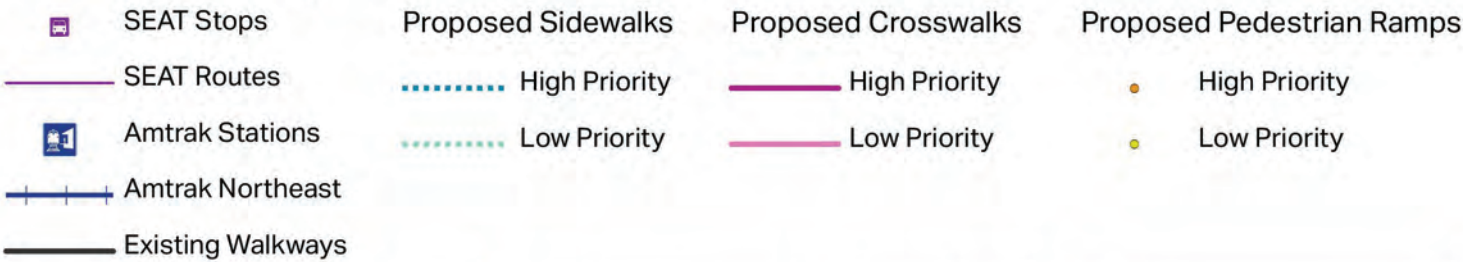
 High Priority

 Low Priority



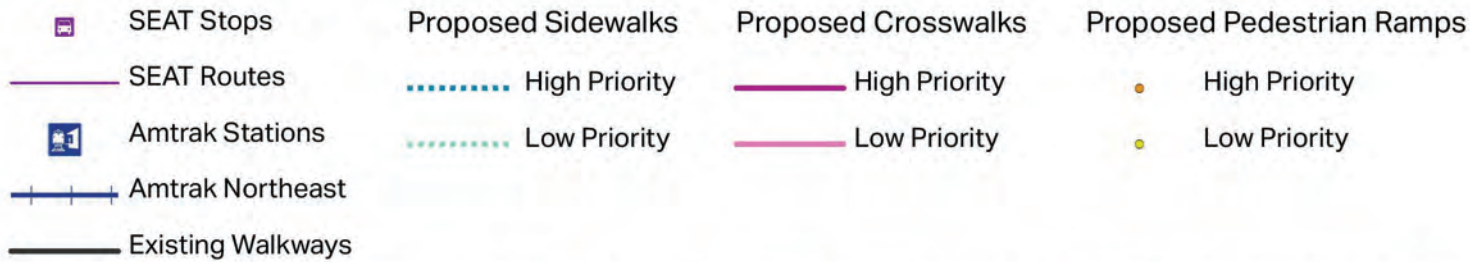
Groton, Poquonnock Bridge Pedestrian Facilities

K-5




Montville Pedestrian Facilities


K-6





Montville, Uncasville Pedestrian Facilities


K-7


-  SEAT Stops


 SEAT Routes


 Amtrak Stations


 Amtrak Northeast


 Existing Walkways
- Proposed Sidewalks


 High Priority

 Low Priority
- Proposed Crosswalks

 High Priority

 Low Priority
- Proposed Pedestrian Ramps

 High Priority

 Low Priority





K-8





New London / Waterford Pedestrian Facilities



K-9



-  SEAT Stops



 SEAT Routes


 Amtrak Stations

 Amtrak Northeast

 Existing Walkways
-  Proposed Sidewalks
High Priority

 Proposed Sidewalks
Low Priority
-  Proposed Crosswalks
High Priority

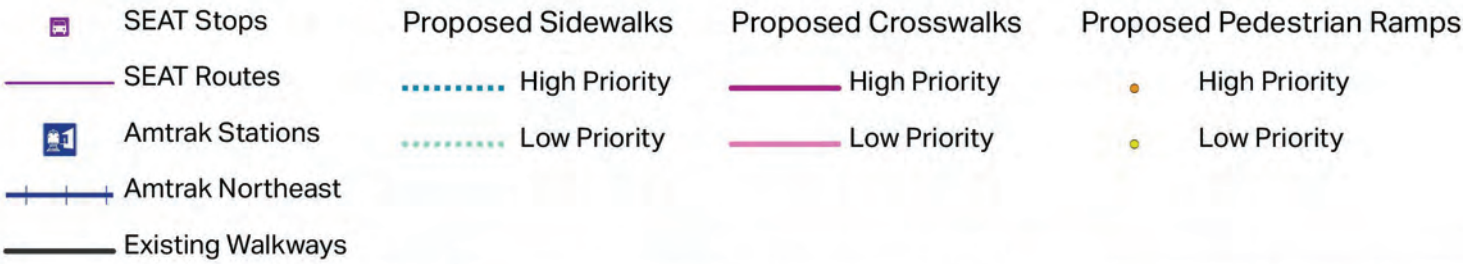
 Proposed Crosswalks
Low Priority
-  Proposed Pedestrian Ramps
High Priority

 Proposed Pedestrian Ramps
Low Priority

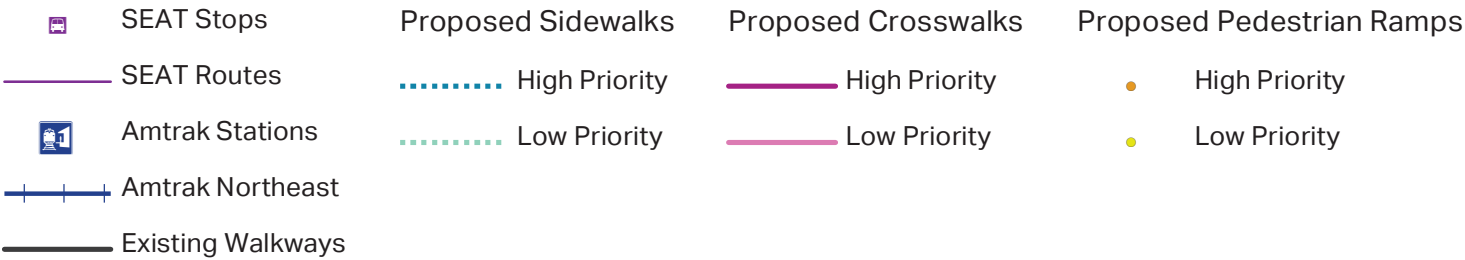


North Stonington Pedestrian Facilities

K-10





Norwich, Greenville Pedestrian Facilities





Norwich, Taftville Pedestrian Facilities



K-12



-  SEAT Stops



 SEAT Routes


 Amtrak Stations

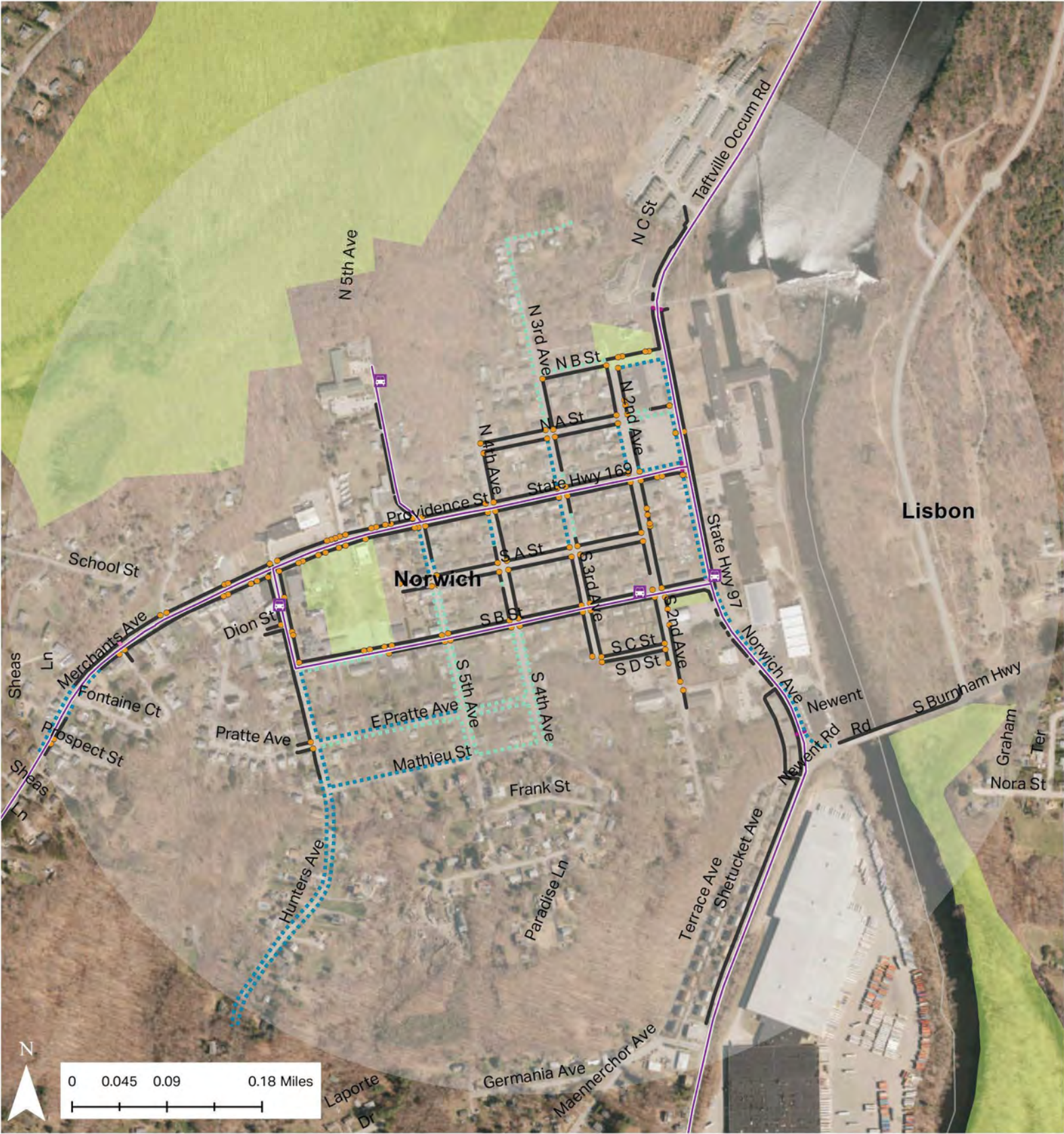
 Amtrak Northeast

 Existing Walkways
-  Proposed Sidewalks
High Priority

 Proposed Sidewalks
Low Priority
-  Proposed Crosswalks
High Priority

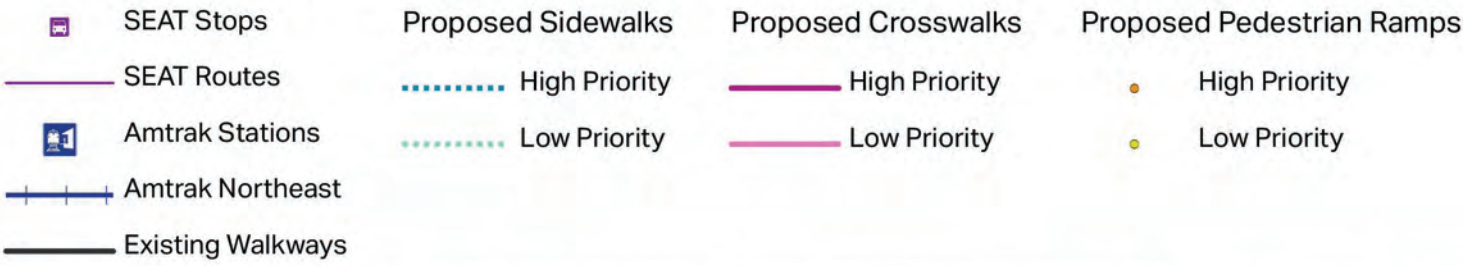
 Proposed Crosswalks
Low Priority
-  Proposed Pedestrian Ramps
High Priority

 Proposed Pedestrian Ramps
Low Priority



Preston Pedestrian Facilities

K-13

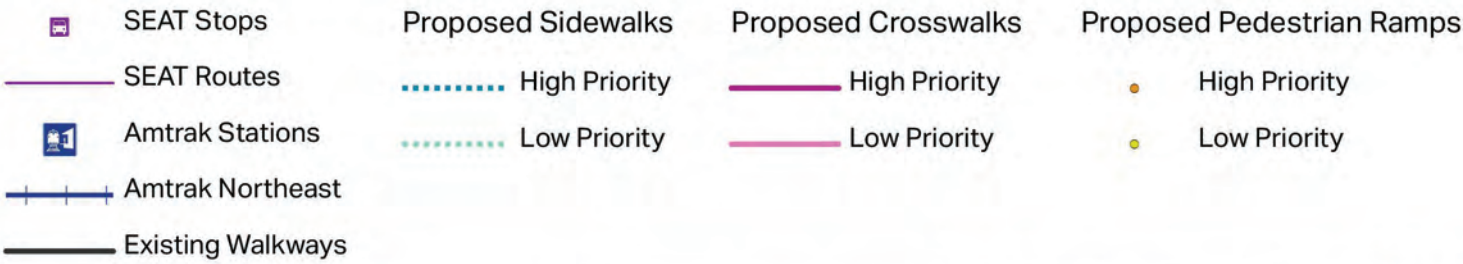


K-14



Waterford Pedestrian Facilities

K-15



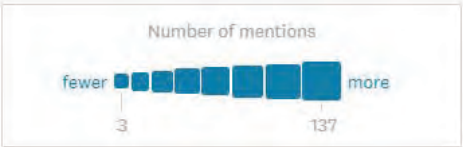
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Appendix L

Survey Results

Q1 My Zip Code is:

Answered: 904 Skipped: 26



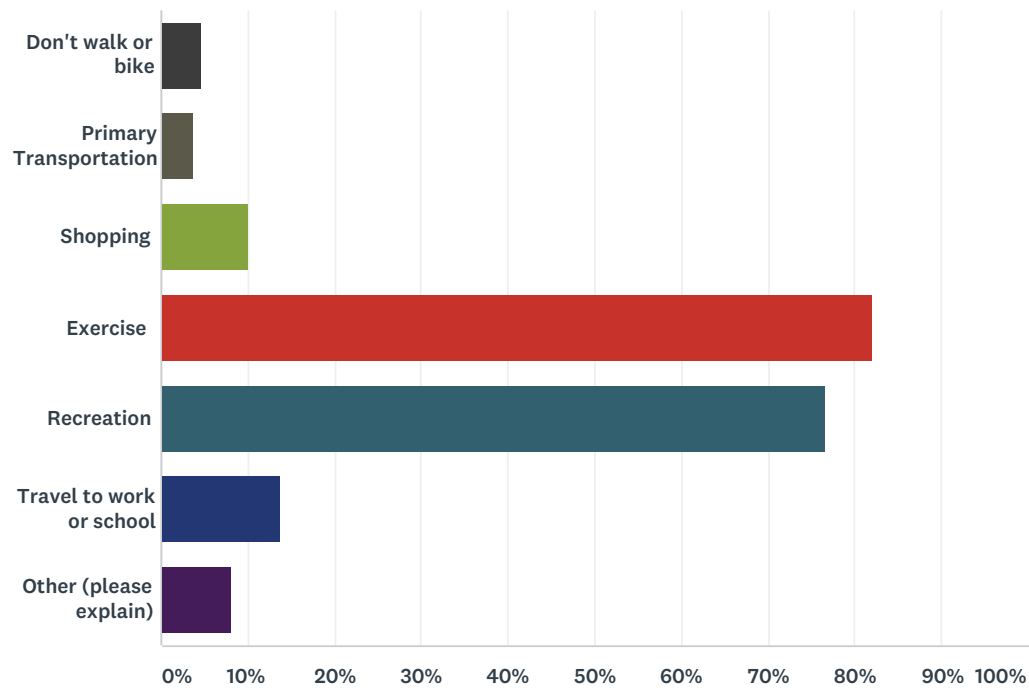
Q2 I don't know my zip code, I live in (city/town name) (Skip this question if you answered Question 1)

Answered: 62 Skipped: 868



Q3 I bike or walk for the following reasons:

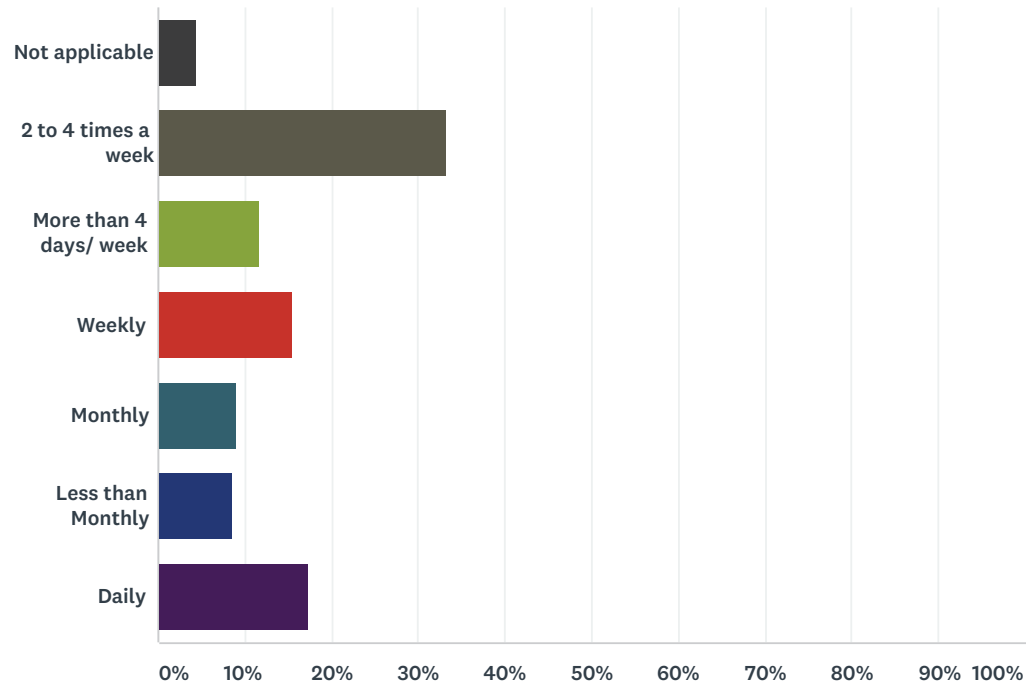
Answered: 887 Skipped: 43



ANSWER CHOICES	RESPONSES	
Don't walk or bike	4.62%	41
Primary Transportation	3.72%	33
Shopping	10.03%	89
Exercise	82.07%	728
Recreation	76.55%	679
Travel to work or school	13.87%	123
Other (please explain)	8.12%	72
Total Respondents: 887		

Q4 I bike or walk this often:

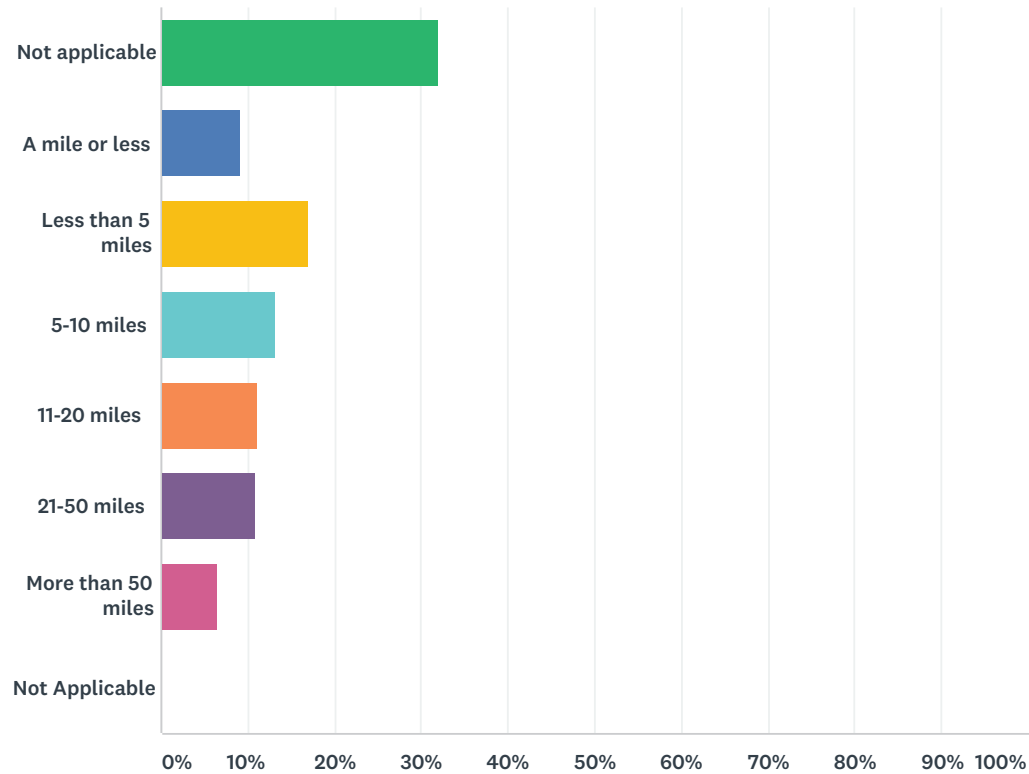
Answered: 894 Skipped: 36



ANSWER CHOICES	RESPONSES	
Not applicable	4.36%	39
2 to 4 times a week	33.33%	298
More than 4 days/ week	11.63%	104
Weekly	15.55%	139
Monthly	9.06%	81
Less than Monthly	8.61%	77
Daily	17.45%	156
TOTAL		894

Q5 On average, I bike this much in a week:

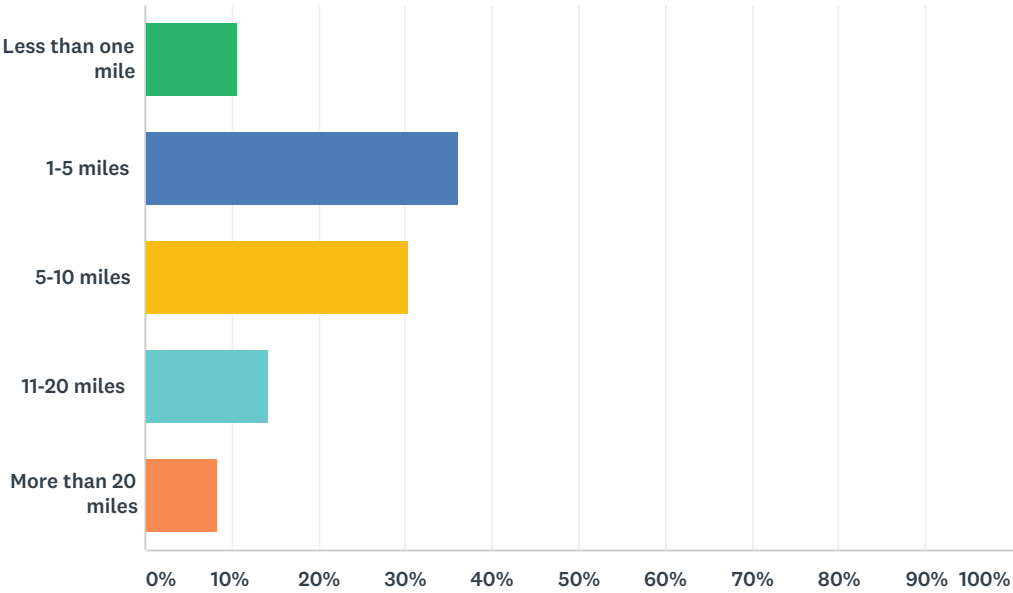
Answered: 886 Skipped: 44



ANSWER CHOICES	RESPONSES	
Not applicable	31.94%	283
A mile or less	9.14%	81
Less than 5 miles	17.04%	151
5-10 miles	13.21%	117
11-20 miles	11.17%	99
21-50 miles	10.95%	97
More than 50 miles	6.55%	58
Not Applicable	0.00%	0
TOTAL		886

Q6 On average, I walk or run this much in a week:

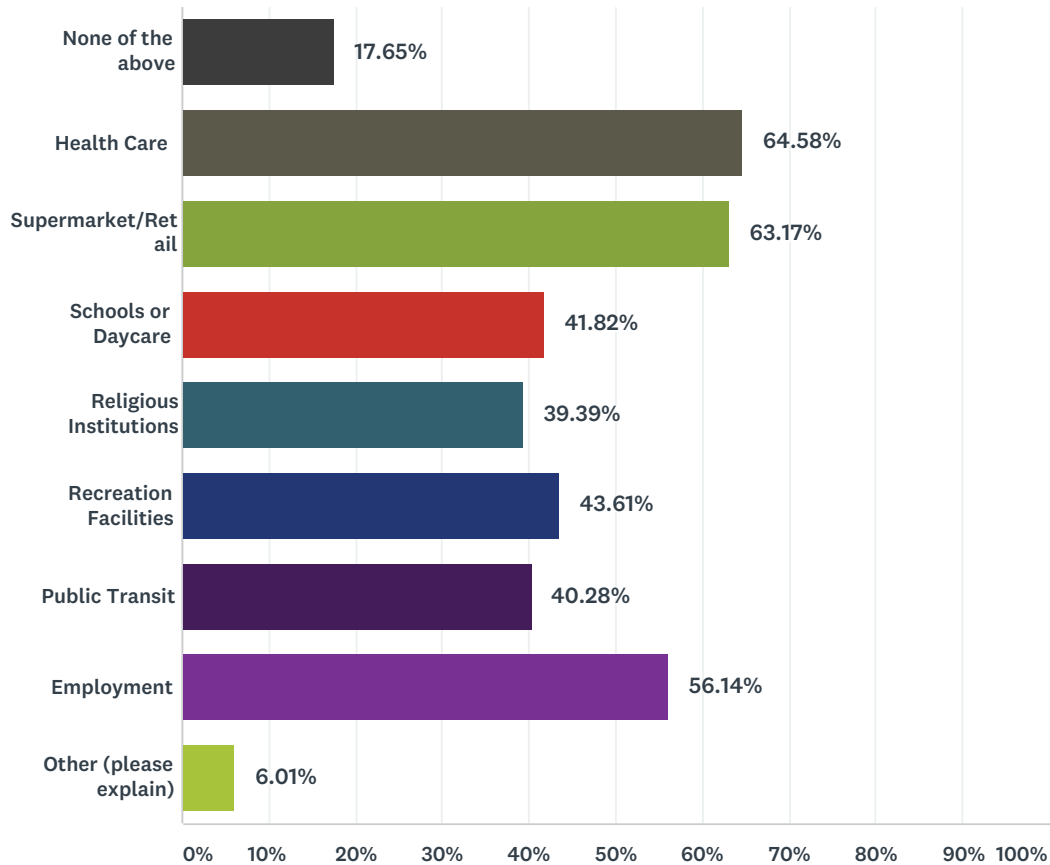
Answered: 783 Skipped: 147



ANSWER CHOICES	RESPONSES	
Less than one mile	10.73%	84
1-5 miles	36.27%	284
5-10 miles	30.40%	238
11-20 miles	14.30%	112
More than 20 miles	8.30%	65
TOTAL		783

Q7 Without a car, I would not be able to get to the following from where I live (check all that apply):

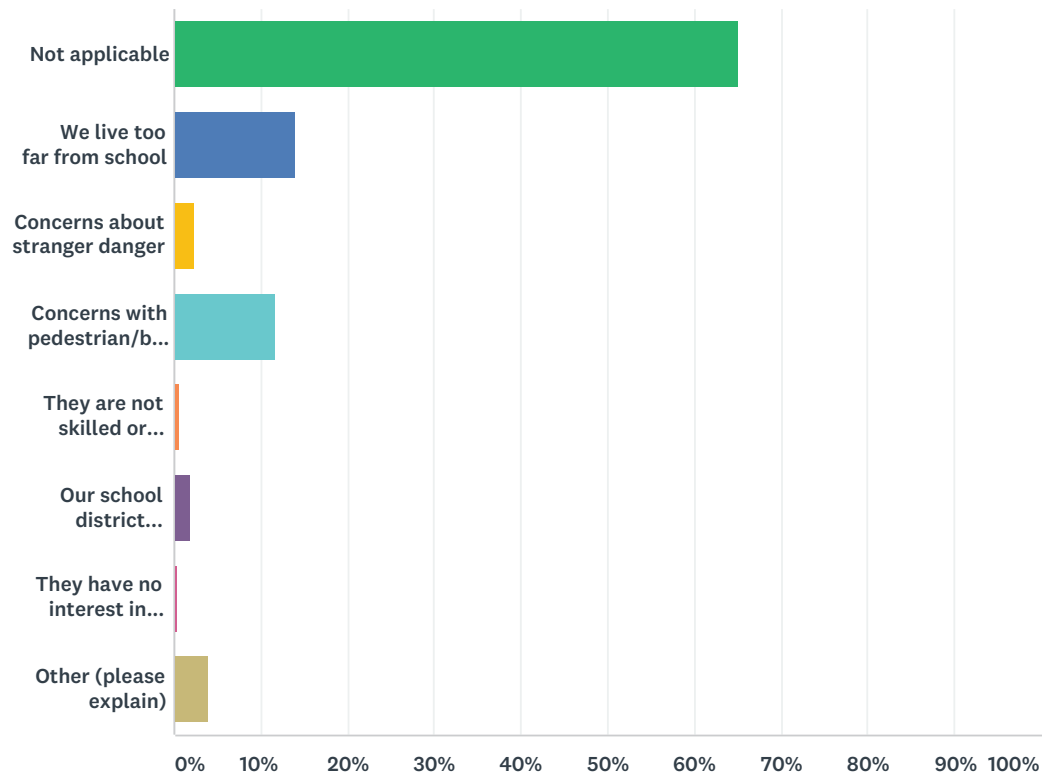
Answered: 782 Skipped: 148



ANSWER CHOICES	RESPONSES	
None of the above	17.65%	138
Health Care	64.58%	505
Supermarket/Retail	63.17%	494
Schools or Daycare	41.82%	327
Religious Institutions	39.39%	308
Recreation Facilities	43.61%	341
Public Transit	40.28%	315
Employment	56.14%	439
Other (please explain)	6.01%	47
Total Respondents: 782		

Q8 I have a school-age child living in this region who doesn't walk or bike to school because:

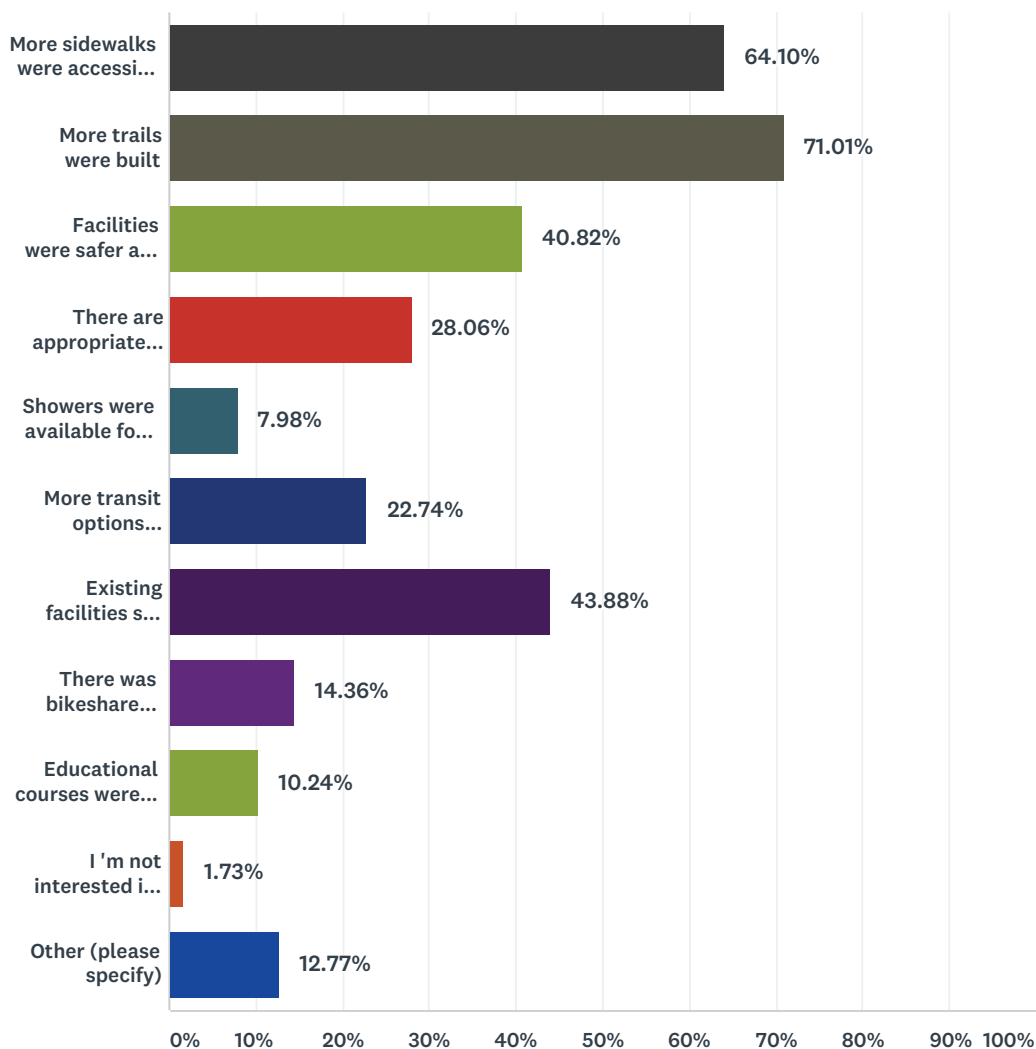
Answered: 768 Skipped: 162



ANSWER CHOICES	RESPONSES	
Not applicable	64.97%	499
We live too far from school	14.06%	108
Concerns about stranger danger	2.34%	18
Concerns with pedestrian/bicyclist safety	11.72%	90
They are not skilled or comfortable enough on a bike	0.65%	5
Our school district requires bussing	1.82%	14
They have no interest in doing so	0.52%	4
Other (please explain)	3.91%	30
TOTAL		768

Q9 I would bike or walk more, if (check all that apply):

Answered: 752 Skipped: 178



ANSWER CHOICES	RESPONSES	
More sidewalks were accessible to me and connected	64.10%	482
More trails were built	71.01%	534
Facilities were safer and more accommodating	40.82%	307
There are appropriate places to lock up my bike	28.06%	211
Showers were available for use at my destination	7.98%	60
More transit options (Bus/rail) offered more accommodations to support first and last mile connections	22.74%	171
Existing facilities such as sidewalks/bike lanes/etc. were better maintained	43.88%	330
There was bikeshare (fleet of shared bikes – like Mystic's "Community Bikes") for me to use	14.36%	108
Educational courses were offered to better understand the rules of the road for bicyclist and pedestrians	10.24%	77
I'm not interested in walking or biking	1.73%	13

Other (please specify)

12.77%

96

Total Respondents: 752

Q10 What factors should be used to prioritize bicycle and pedestrian improvement projects? Please rank your top 3 answers.

1. Increase on-road bike facilities
2. Address safety issues by improving locations where crashes have occurred
3. Complete missing pieces – create longer continuous walking and bicycling facilities
4. Improve ADA access
5. Facilitate connections to shopping, restaurants and other services
6. Improve bicycle and pedestrian facilities throughout the region to better accommodate people of all ages, incomes, and abilities
7. Increase easy walking & bicycling access to buses, trains & ferries (& allowing bikes on buses + trains)
8. Maintain existing pedestrian facilities
9. Provide bicycle parking and pedestrian amenities in public and commercial space

Answered: 735 Skipped: 195

ANSWER CHOICES	RESPONSES
First Priority (type in number from list above)	100.00% 735
Second Priority (type in number from list above)	97.82% 719
Third Priority (type in number from list above)	95.92% 705

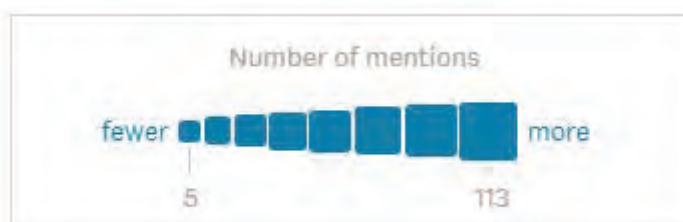
#	FIRST PRIORITY (TYPE IN NUMBER FROM LIST ABOVE)	DATE
1	1	6/17/2019 11:35 AM
2	5	6/17/2019 11:31 AM
3	6	6/17/2019 11:27 AM
4	2	6/17/2019 11:21 AM
5	1	6/3/2019 6:17 PM
6	3	6/3/2019 4:52 PM
7	3 - Create bike paths or sidewalks!	6/3/2019 12:04 PM
8	2	5/23/2019 9:50 AM
9	5	5/22/2019 2:40 PM
10	5	5/20/2019 4:12 PM
11	3	5/20/2019 4:03 PM
12	3	5/20/2019 3:53 PM
13	3	5/20/2019 3:51 PM
14	1	5/20/2019 3:43 PM
15	1	5/20/2019 3:40 PM
16	8	5/20/2019 3:37 PM
17	3	5/20/2019 3:33 PM
18	2	5/20/2019 3:31 PM
19	3	5/20/2019 3:29 PM

Q11 List specific locations that need better pedestrian or bicycle accommodations. Include nearest intersection or landmark.

Answered: 562 Skipped: 368

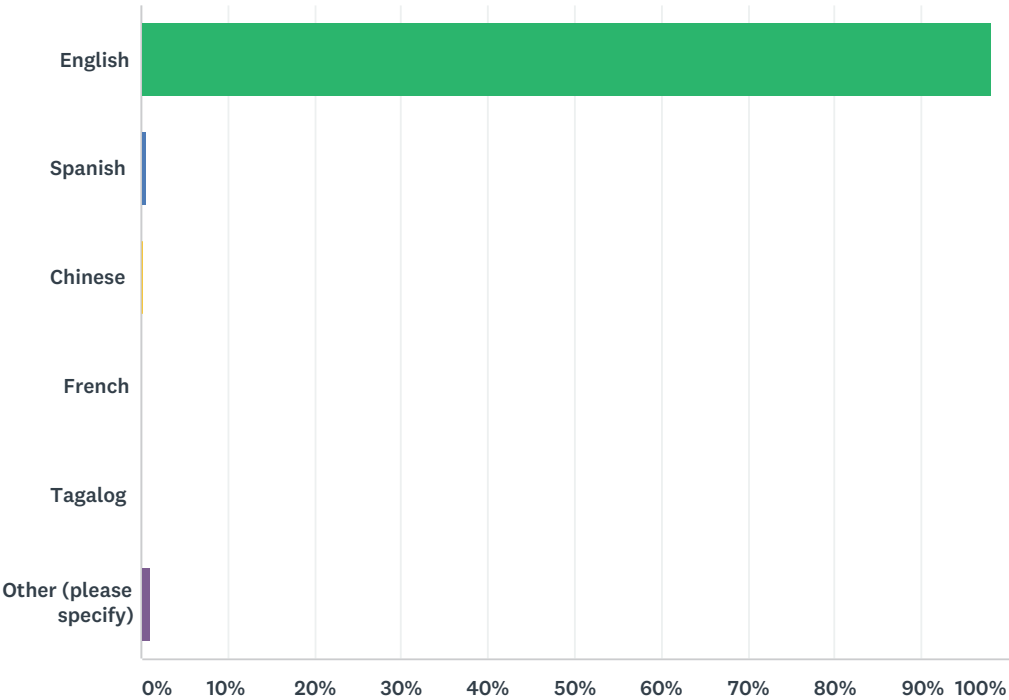
Q11 List specific locations that need better pedestrian or bicycle accommodations. Include nearest intersection or landmark.

path North Stonington city access Pawcatuck south Route Groton Broad Street lane Many
 Gold Star Bridge Lebanon shoulders Route South CT Boston Post Road park Pequot Ave
 Downtown New London section Bank Street traffic pedestrians safe
 connect Ocean Beach along narrow bridge Downtown Mystic
 intersection Groton Long Point street bike walk trails bike path Rd
 Airline Trail needs Rt Rt bike lanes State
 New London around bike places sidewalks side
 road Waterford Route people area Bank St Rt entire
 Groton Street New London town crossing Mystic
 Shennecossett road Colchester going Salem see Rte N
 Norwich main roads near everywhere downtown Stonington walking
 Jefferson Way Ledyard dangerous Connecticut College routes Williams Street
 Salem corners Hodges Square Ave connection cars Main st St Westerly Ocean Ave
 Groton Estates better Corners schools town hall shopping one West center



Q12 At home, I speak:

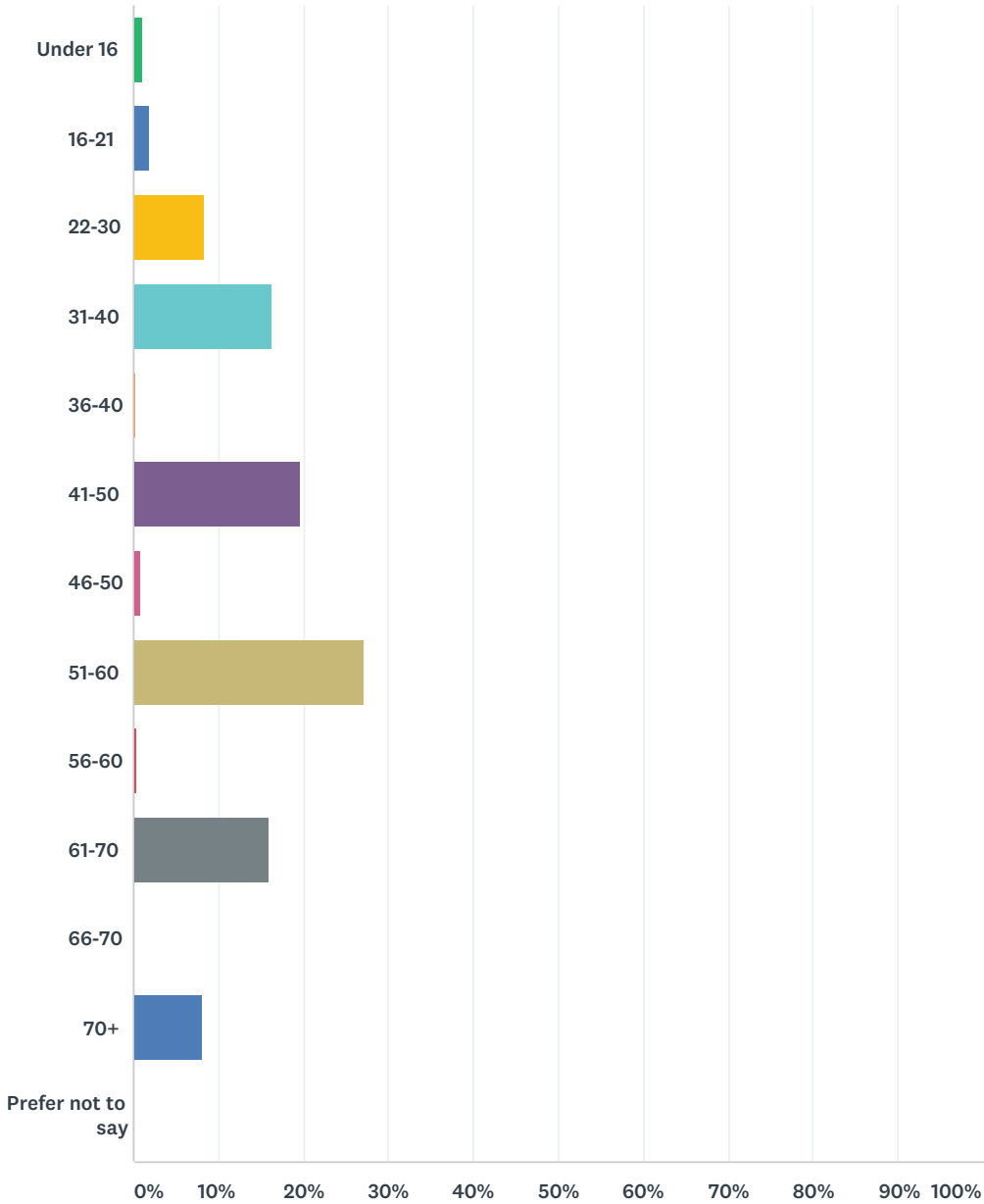
Answered: 751 Skipped: 179



ANSWER CHOICES	RESPONSES	
English	98.14%	737
Spanish	0.67%	5
Chinese	0.13%	1
French	0.00%	0
Tagalog	0.00%	0
Other (please specify)	1.07%	8
TOTAL		751

Q13 My age is:

Answered: 780 Skipped: 150

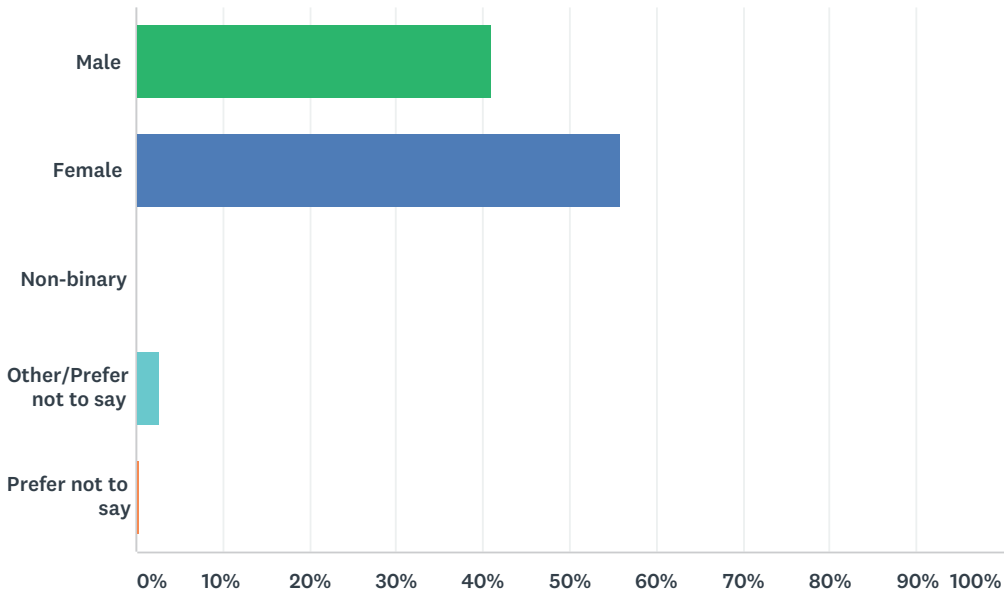


ANSWER CHOICES	RESPONSES	
Under 16	1.03%	8
16-21	1.79%	14
22-30	8.33%	65
31-40	16.41%	128
36-40	0.26%	2
41-50	19.74%	154

46-50	0.90%	7
51-60	27.18%	212
56-60	0.38%	3
61-70	15.90%	124
66-70	0.00%	0
70+	8.08%	63
Prefer not to say	0.00%	0
TOTAL		780

Q14 I identify as:

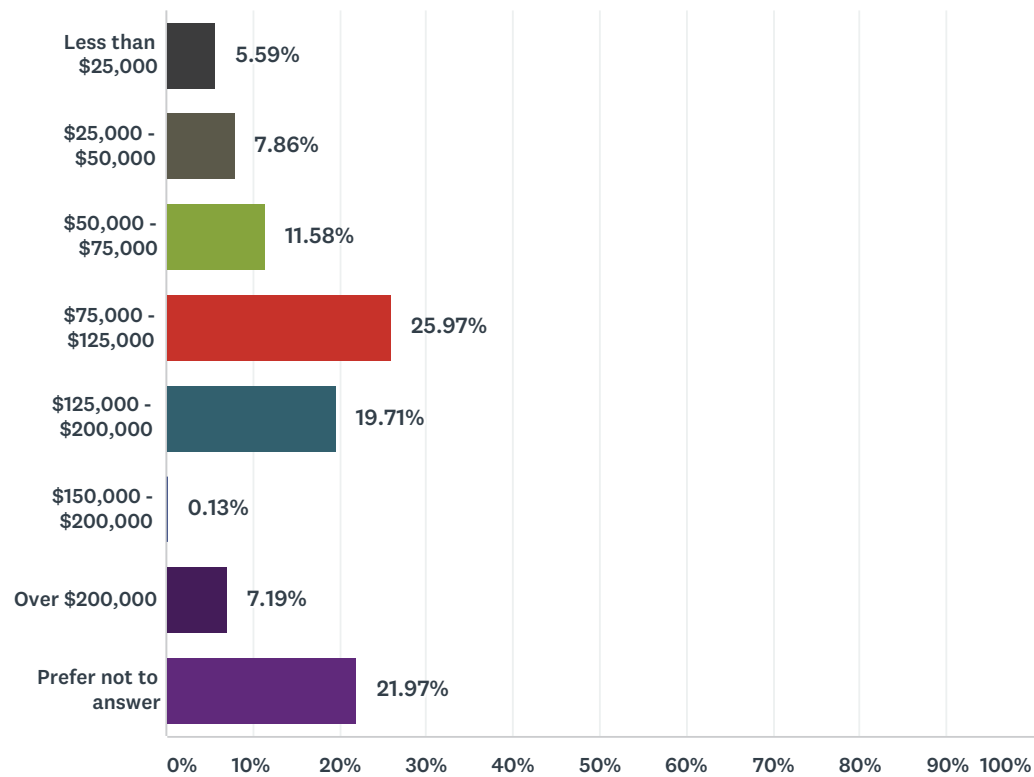
Answered: 783 Skipped: 147



ANSWER CHOICES		RESPONSES	
Male		41.00%	321
Female		55.81%	437
Non-binary		0.00%	0
Other/Prefer not to say		2.68%	21
Prefer not to say		0.51%	4
TOTAL			783

Q15 My household's income is:

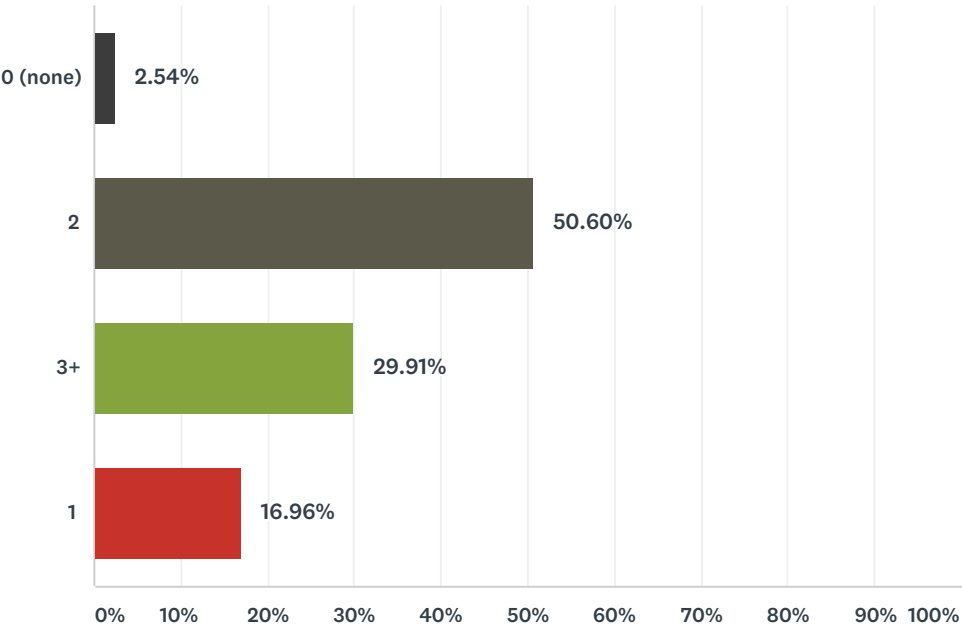
Answered: 751 Skipped: 179



ANSWER CHOICES	RESPONSES	
Less than \$25,000	5.59%	42
\$25,000 - \$50,000	7.86%	59
\$50,000 - \$75,000	11.58%	87
\$75,000 - \$125,000	25.97%	195
\$125,000 - \$200,000	19.71%	148
\$150,000 - \$200,000	0.13%	1
Over \$200,000	7.19%	54
Prefer not to answer	21.97%	165
TOTAL		751

Q16 How many vehicles does your household have access to?

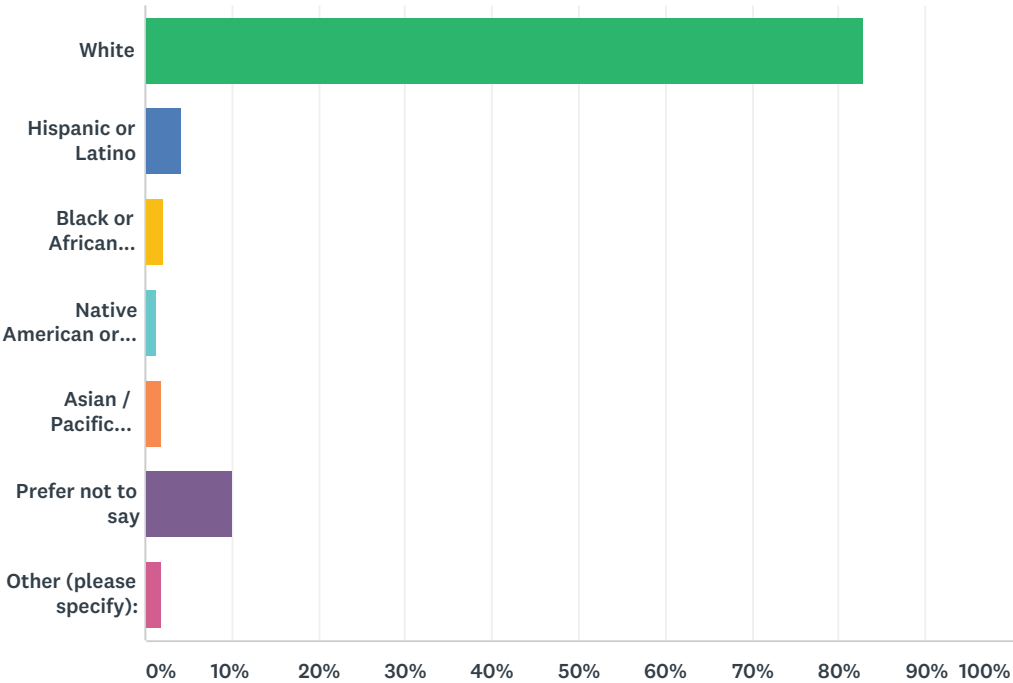
Answered: 749 Skipped: 181



ANSWER CHOICES	RESPONSES	
0 (none)	2.54%	19
2	50.60%	379
3+	29.91%	224
1	16.96%	127
TOTAL		749

Q17 My race and/or ethnicity is (check all that apply):

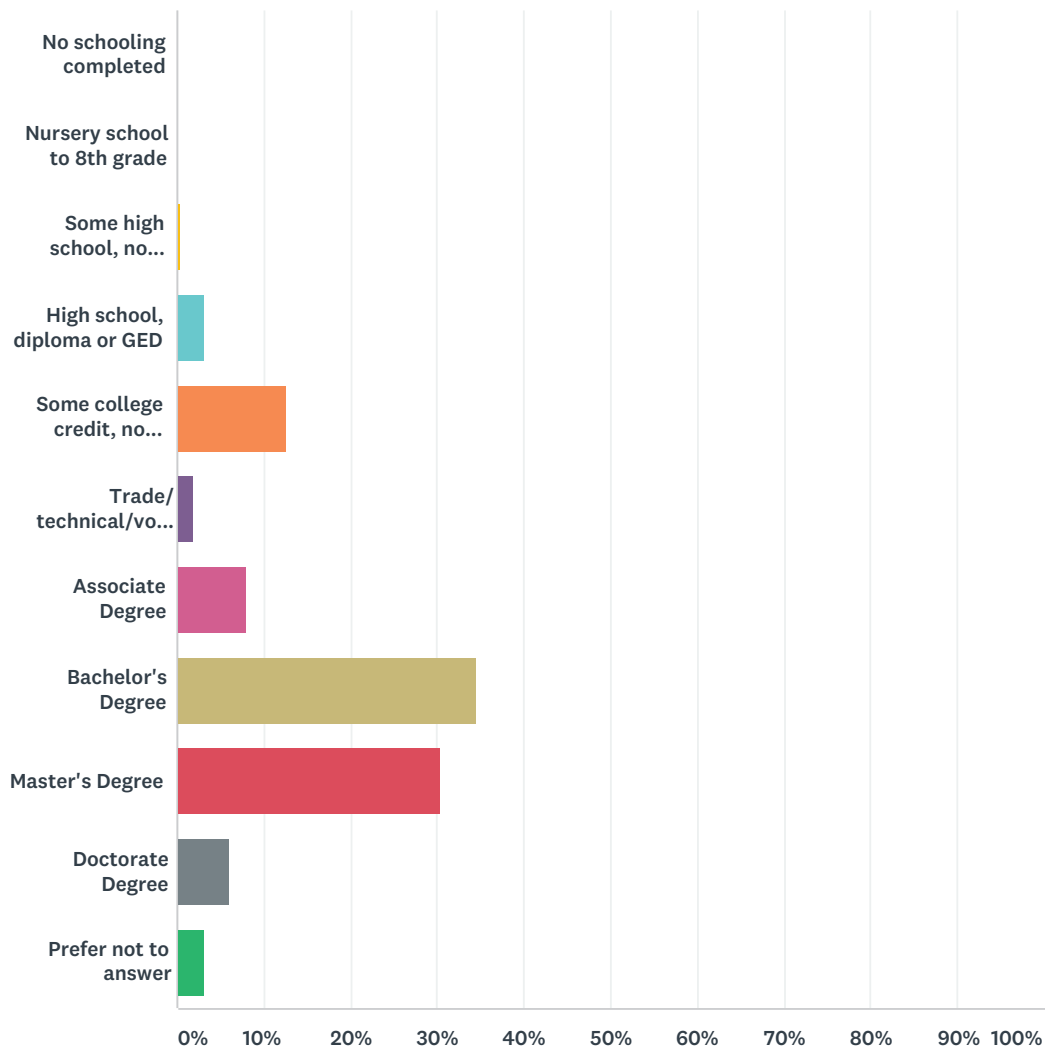
Answered: 751 Skipped: 179



ANSWER CHOICES	RESPONSES	
White	82.82%	622
Hispanic or Latino	4.26%	32
Black or African American	2.13%	16
Native American or American Indian	1.20%	9
Asian / Pacific Islander	1.86%	14
Prefer not to say	9.99%	75
Other (please specify):	1.86%	14
Total Respondents: 751		

Q18 The highest level of education I have completed currently is:

Answered: 748 Skipped: 182



ANSWER CHOICES	RESPONSES	
No schooling completed	0.00%	0
Nursery school to 8th grade	0.00%	0
Some high school, no diploma	0.40%	3
High school, diploma or GED	3.21%	24
Some college credit, no degree	12.57%	94
Trade/ technical/vocational training	1.87%	14
Associate Degree	7.89%	59
Bachelor's Degree	34.49%	258
Master's Degree	30.35%	227
Doctorate Degree	6.02%	45

Prefer not to answer	3.21%	24
TOTAL		748

Q19 Other comments:

Answered: 263 Skipped: 667

Q20 Please provide your contact information if you would like to be entered into a raffle for an Amazon Gift Card, or to receive project information. Your responses will remain anonymous.

Answered: 422 Skipped: 508

ANSWER CHOICES	RESPONSES	
Email address	99.53%	420
Phone Number	89.81%	379
Name	97.39%	411

Appendix M

Bike and Pedestrian Project Request Form



SOUTHEASTERN CT BIKE AND PEDESTRIAN PROJECT REQUEST FORM

Town/City of: _____

Submit this form to your local planning staff/conservation
commission (identify who within the town would accept the form)
for consideration



Project Name
Project Location and Limits
Contact
Potential Sponsors and Stakeholders
Brief Description of Project
Project Impetus
Project Goals
Estimated Cost of Project (if known)
Funding Sources (if known)
Describe project context, including adjacent land uses, neighborhood character, and existing transportation system
Classification of affected street(s) (See CT.gov/DOT functional class mapping)

CONSISTENCY WITH COMPLETE STREETS POLICY & GUIDING PRINCIPLES

Describe how the proposed project supports Guiding Principles for Complete Streets. See the last page of this form for descriptions of each principle.

Safety and slow vehicle speeds
Connectivity
Human health
Livability
Context
Equity
Aesthetics
Economic development
Environment

COMPLETE STREETS GUIDING PRINCIPLES

Safety and Slow Vehicle Speeds

Traffic injuries and fatalities are predictable and often preventable, and there is a direct correlation between vehicle speeds and injury/fatality rates. Streets should be designed with safety of all users as a priority, and vehicle speeds limited, with the goal of reducing injuries and fatalities.

Connectivity

Connectivity is essential if non-motorized transportation is to be a viable and desirable option. Streets should be designed to provide connectivity that satisfies travel needs with redundant routes in an intact network system.

Human Health

Streets should be designed to increase opportunities for active transportation (walking, cycling, etc.) and to decrease air pollution and particulate levels caused by motor vehicles.

Livability

Livable cities are characterized by a built environment that enhances quality of life, strengthens community ties, encourages civic engagement, and promotes health. Public spaces (streets) should be designed with livability in mind, with the goal of enhancing quality of life in our city.

Context

Streets should be designed to respect and enhance the distinctive identity of our town/city, its character, and its cultural and historical context.

Equity

Public spaces such as streets should embody the democratic ideals of equality, freedom, individual rights and responsibilities, protection of minorities, transparency, accountability and the rule of law. Streets should be designed to provide for the needs and safety of all users, particularly people with disabilities, the elderly, children, and people who cannot afford a private vehicle.

Aesthetics

Aesthetically pleasing surroundings – such as public art, well-maintained landscaping, and human-scale architecture – enhance the experience of using a street and make it a place where people want to be. Streets should be designed with consideration for aesthetic elements, including materials, lighting, landscaping, street furniture, and maintenance.

Economic Development

Well-designed streets support economic vitality by drawing customers to businesses and providing access and transportation options for reaching businesses. Streets should be designed to support a framework for current and future development and contribute to the town or city's economic vibrancy.

Environment

Streets should be designed to support and encourage non-motorized transport, thereby decreasing vehicle miles travelled (VMT), leading to reductions in both air pollution and carbon emissions and better management of storm water runoff.