

# RiverCOG Bicycle and Pedestrian Plan COG/MPO Board Presentation

April 27th, 2022



# What is a Regional Plan?

- Connect across municipalities
- Technical assistance
- Funding opportunities
- Economic opportunities
- Tourism
- Health
- Quality of Life



Priority Implementation Tiers

- Tier I Improvements
- Tier II Improvements
- Tier III Improvements

# The Plan's Steering Committee

- Carrie Allen - Clinton Bicycle and Pedestrian Alliance
- Martin Anderson – Durham Complete Streets Committee
- Beth Emery – Middletown Complete Streets Committee
- John Hall – Jonah Center for Earth and Art, Middletown
- Janice Ehlemeyer, Sam Gold, Rob Haramut – RiverCOG

# The Plan's Vision and Goals

1

The LCRV provides safe and inviting routes used by cyclists and pedestrians. They are assets that improve regional connectivity, promote public health, and are economic drivers.

2

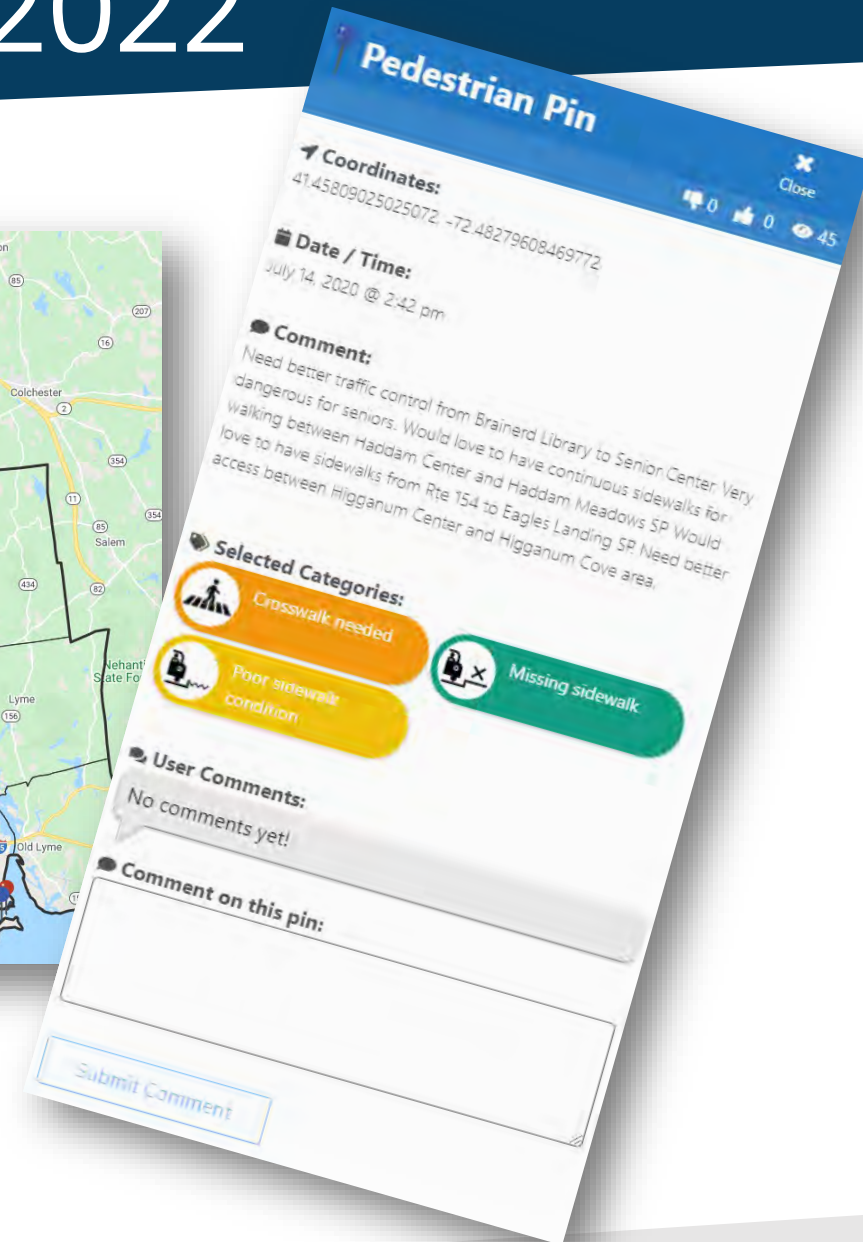
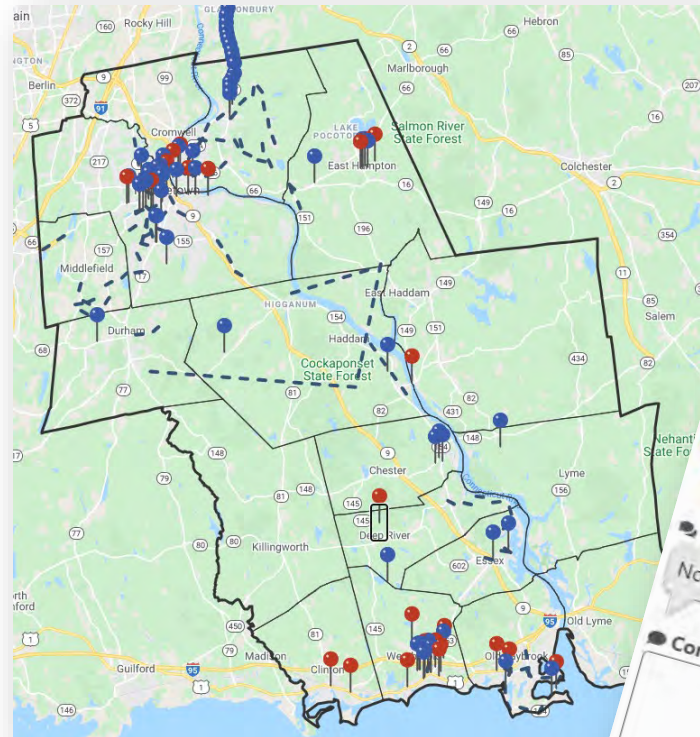
The LCRV has an equitable network of bicycle and pedestrian amenities that are accessible to users across the Region.

3

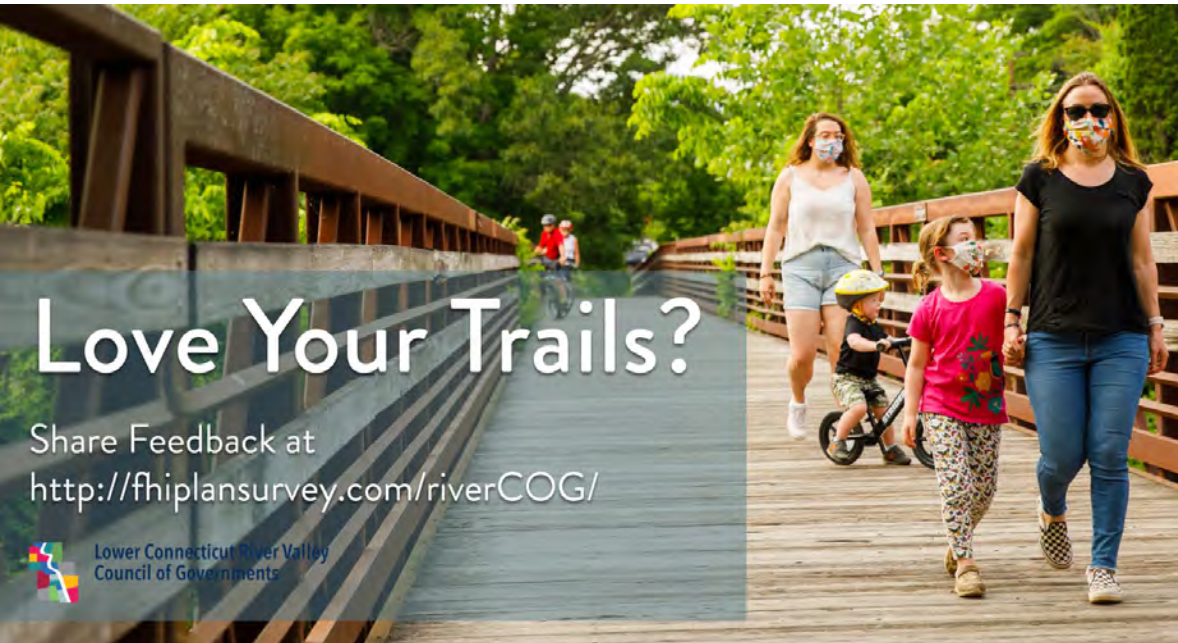
The LCRV provides bicycle and pedestrian facilities that connect village centers and nodes as well as the open space resources that are so valued across the Region.

# Public Involvement – 2020 - 2022

- Online Mapping Tool open to public
- Facebook Advertisements
- Municipal Highlights Survey
- Steering Committee Meetings (4)
- Public Meeting (1)
- Presentation to RPC (1)

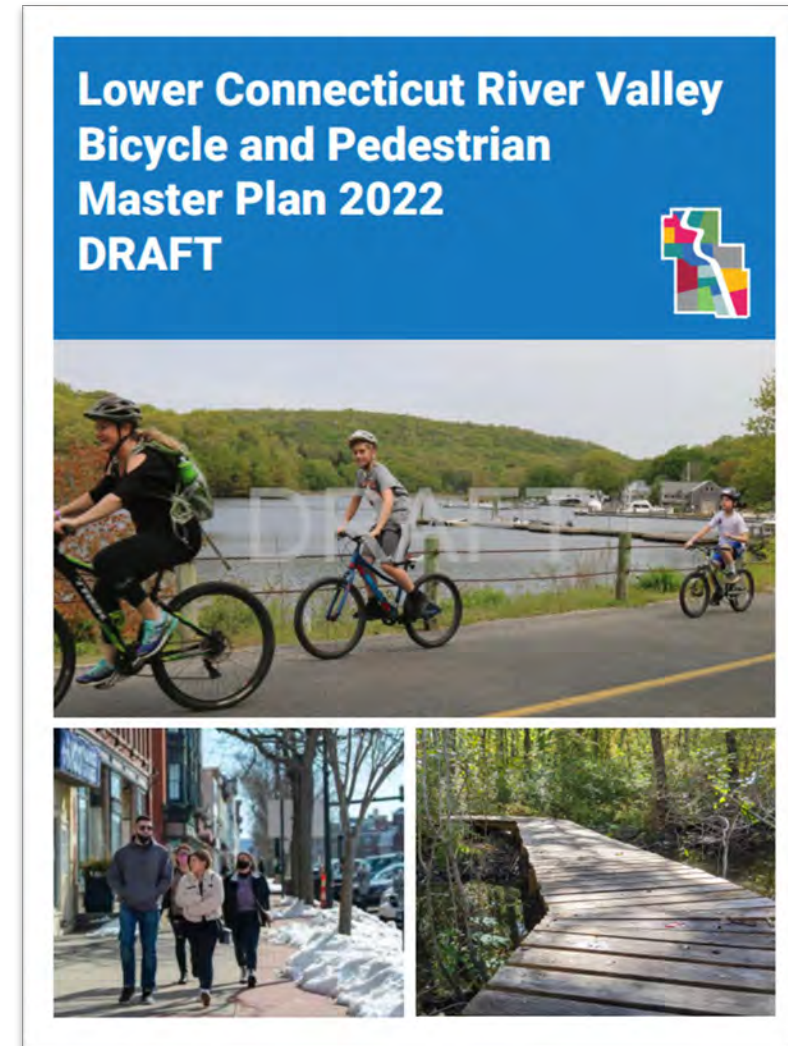


# Public Involvement - 2020



# Draft Plan Highlights

- Draft Plan includes:
  - Existing Conditions Overview
  - Municipal Overview
  - Design Guidelines
  - Recommendations
  - Implementation Plan and Funding Sources



# Existing Conditions Overview

- Existing Conditions includes:
  - About the Plan
  - Goals of the Plan
  - Review of past work efforts
  - Crash analysis
  - Strava/Streetlight findings
  - Sustainable CT Fellows highlights

## What are the Benefits of a Regional Bicycle and Pedestrian Plan?

The Plan will help the LCRV Region to:

### Connect across municipalities

Taking a holistic look across the Region, this Plan helps to identify regional connections and linkages to nodes and destination points. These nodes are transfer points that provide users with the ability to connect to other nodes through bicycle and pedestrian facilities.



### Technical assistance

The Plan identifies goals and strategies for implementing multi-modal facilities.



### Funding opportunities

It identifies the most recent funding sources available to fund multi-modal projects related to bicycle and pedestrian accommodations.



### Tourism and Economic Opportunities

The bicycle and pedestrian enhancements recommended by this Plan will directly support the LCRV Region as a tourist destination.



### Health

The bicycle and pedestrian accommodations and facilities recommended in this Plan are part of promoting a healthy and active lifestyle across the Region.



### Quality of Life

The LCRV has a high quality of life supported by the natural environmental, small New England towns, and community attributes, such as good schools and attractive downtowns. This Plan strives foster this quality of life by providing further recreational and transportation assets to the Region.



## The Plan's Steering Committee

A steering committee was formed that included representatives from bicycle and pedestrian advocacy groups across the LCRV Region as well as RiverCOG Staff. The committee met at key intervals during the planning process to provide input regarding the Region's assets, needs and issues, and opportunities. The steering committee worked together to establish the following vision and goals that guide the Plan:

### Goals of the Plan

- 1** The LCRV Region will provide safe and inviting routes used by cyclists and pedestrians. They are assets that improve regional connectivity, promote public health, and are economic drivers.
- 2** The LCRV Region has an equitable network of bicycle and pedestrian amenities that are accessible to users across the Region.
- 3** The LCRV Region provides bicycle and pedestrian facilities that connect village centers and nodes as well as the open space resources that are so valued across the Region.



# Municipal Overviews

- Highlights from each municipality
  - Recent accomplishments
  - Issues and concerns
  - Opportunities – influenced recommendations

## DEEP RIVER

The Town of Deep River is located on the west side of the Connecticut River, north of the shoreline. Deep River is one of the region's riverside communities, with recreational destination amenities such as marinas and the Essex Steam Train and riverboat stop located at Deep River Landing.

Deep River's transportation network includes State Highway Route 9, and State Routes 154, 145, 602, and 80.

Once known as the "Queen of the Valley", Deep River has a rich industrial past rooted in the piano key manufacturing business and the Piano Works factory. Factory worker homes were built in close proximity to the Downtown, creating a dense pattern on residential development that is still prevalent today. Most of the residential neighborhoods in the Downtown are connected by sidewalks. Land uses in Deep River consist of a mix of local businesses and restaurants, residential neighborhoods, industrial businesses, and wooded areas and open space.

Deep River had a population of 4,480 in 2019<sup>1</sup>, and a population density of 329 persons per square mile. Roughly 0.5% of workers age 16 and over did not have access to a vehicle. Approximately 1.3% of workers utilized public transportation, 3.4% walked to work and 0.3% bicycled to work. Approximately 3.1% of Deep River's workers worked from home. The majority of workers (84%) drove alone to work.<sup>2</sup> Public transportation in Deep River includes 9 Town Transit (two routes have stops in Deep River). The CTTransit Express bus to Middletown and Hartford stops in the neighboring Towns of Essex and Chester.



### Recent Accomplishments

A sidewalk expansion project is planned that will extend the existing sidewalk on River Street (currently ends at River Lane) down to the Deep River Landing. This location is a regional destination as it is a stop for the Essex Steam Train and Riverboat. The completion of this sidewalk network will provide a pedestrian link between the Connecticut River and Downtown.



Location of sidewalk extension project planned for River Street  
Source: FHI Studio

### Issues and Concerns

Speeding, particularly in the downtown has been a concern for many residents. Route 154 (Main Street) runs directly through Deep River's commercial business center. Deep River Elementary School students who reside on the neighboring streets are often walk between the school and the various businesses and the downtown (ice cream shop, coffee shop, Town Library). The safety of students and residents is a priority for the Town. There is a crosswalk on Main Street, but due to the presence of vehicles parked on street, drivers often do not see pedestrians attempting to cross until they are well into the roadway.

Speeding on Route 80 and 145 is also a concern. Posted speeds are as high as 50 mph on the State Roadways and shoulders tend to be narrow. Vegetation encroachment limits visibility of riders in many locations. Despite high vehicular speeds, these roadways are common cyclist routes that connects Deep River to Killingworth, Chester and points further west and north.



Sidewalk and on-street parking lane in Downtown Deep River  
Source: FHI Studio

### Opportunities

Opportunities exist to enhance the bicycle and pedestrian network in Deep River, these include:

- Install dynamic speed feedback signs along CT-80 and 154 to discourage speeding
- Restrict on-street parking within the vicinity of midblock pedestrian crossings to enhance visibility.
- Consider the implementation of rectangular rapid flashing beacons (RRFBs) or pedestrian hybrid beacons (PHBs) in the village center.



Narrow shoulders on Route 80 in Deep River  
Source: Google Maps



Crossing with sidewalk bump-out on Route 154 in Deep River  
Source: FHI Studio

# Design Guidelines

- Facility selection guide
  - Sidewalks
  - Pedestrian Lanes
  - Shared Roadway
  - Bike Lane
  - Buffered Bike Lane
  - Separated Bike Lane
  - Advisory Shoulder
  - Sidepath
  - Shared-Use Path/ Greenways

## Advisory Shoulder Lane

### Description

Advisory shoulder lanes create usable shoulders for bicyclists on a roadway that is otherwise too narrow to accommodate one. The shoulder is delineated by pavement marking and optional pavement color. Motorists may only enter the shoulder when no bicyclists are present and must overtake these users with caution due to potential oncoming traffic.

Note: Advisory shoulders are a new treatment type in the United States and no performance data has yet been collected to compare to a substantial body of international experience. In order to install advisory shoulders, an approved Request to Experiment is required as detailed in Section 1A.10 of the MUTCD. FHWA is also accepting requests for experimentation with a similar treatment called "dashed bicycle lanes."

### Application & Design Guidance

Advisory lanes are appropriate for streets with low to moderate traffic volumes. The recommended application range for advisory lanes is on collector roadways that see under 3,000 vehicles per day and with motor vehicle operating speeds under 25 miles per hour. Advisory lanes also have been shown to work on roadways with volumes as high as 6,000 vehicles per day with operating speeds under 35 miles per hour. They are best utilized between, and within built up areas with bicycle and pedestrian demand and limited available paved roadway surfaces.

### Standards

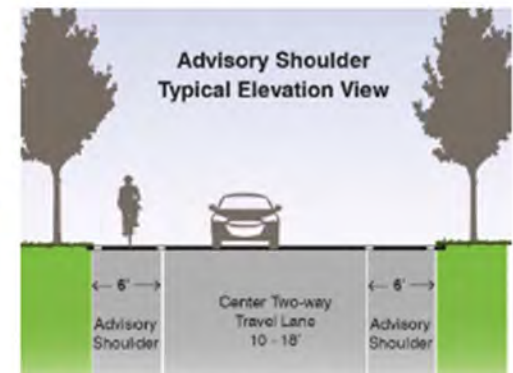
Unlike a conventional shoulder, an advisory shoulder is a part of the traveled way, and it is expected that vehicles will regularly encounter meeting or passing situations where driving in the advisory shoulder is necessary and safe.

The advisory shoulder space is a visually distinct area on the edge of the roadway, offering a prioritized space for people to bicycle and walk.

The preferred width of the advisory shoulder space is 6 ft (2.0 m). Absolute minimum width is 4 ft (1.2 m) when no curb and gutter is present.

### Advisory Shoulder Lanes Application Guidance

Traffic Volume	Recommended	3,000 ADT
	Acceptable	6,000 ADT
85th Percentile Speeds	Recommended	0-25 mph
	Acceptable	0-35 mph



Elevation view of a 6 foot advisory shoulder lane



Advisory shoulder in Burlington, Vermont  
Source: Alta Planning

# Design Guidelines

- Bicyclist design user profiles
- Facility user matrix
- All ages and abilities
  - Safe
  - Comfortable
  - Equitable
- Environmental benefits
- Health and wellness
- Signage guideline
- Infrastructure and amenities



**Table 9: Facility User Matrix of Options**

	Shared Roadway	Bike Lane	Buffered Bike Lane	Separated Bike Lane	Advisory Shoulder Lane	Sidepath	Shared-Use Path
Highly Confident Bicyclist	✓	✓	✓	✓	✓	✓	✓
Somewhat Confident Bicyclist		✓	✓	✓		✓	✓
Interested but Concerned Bicyclist			✓	✓		✓	✓

## Children

School-age children face unique risks because they are smaller and less visible from the driver's seat than adults. They often have less ability to detect risks or navigate conflicts with vehicles.



## Women

Women are consistently under-represented as a share of total bicyclists, but the share of women riding increases in correlation to better riding facilities. Safety in numbers has additional significance for female bicyclists.



## People of Color

While Black and Hispanic bicyclists make up a rapidly growing segment of the riding population, a recent study found that fewer than 20% of adult Black and Hispanic bicyclists and non-bicyclists feel comfortable in conventional bicycle lanes.



## People with Disabilities

People with disabilities may use adaptive bicycles including tricycles and recumbent handcycles, which often operate at lower speeds, are lower to the ground, or have a wider envelope than other bicycles.



## Seniors

People aged 65 and over are the fastest growing population group in the US, and the only group with a growing number of car-free households. Seniors can make more trips and have increased mobility if safe riding networks are available.



## Bike Share Riders

Riders often use bike share to link to other transit, or make one-way trips. Bike share users range widely in stress tolerance, but overwhelmingly prefer to ride in high-quality facilities. All Ages & Abilities networks are essential to bike share system viability.



## Low-Income Riders

Low-income bicyclists rely extensively on bicycles for basic transportation needs like getting to work. In addition, basic infrastructure is often deficient in low-income neighborhoods, exacerbating safety concerns.



## Confident Cyclists

Confident cyclists are very experienced and comfortable riding in mixed motor vehicle traffic conditions are also accommodated by, and often prefer, All Ages & Abilities facilities, though they may still choose to ride in mixed traffic.



# Recommendations

- Village Center
- Recommendations
  - Focused on village centers and nodes
  - In rural communities- Lyme and Killingworth, recommendations target open space resources



## Village District Nodes



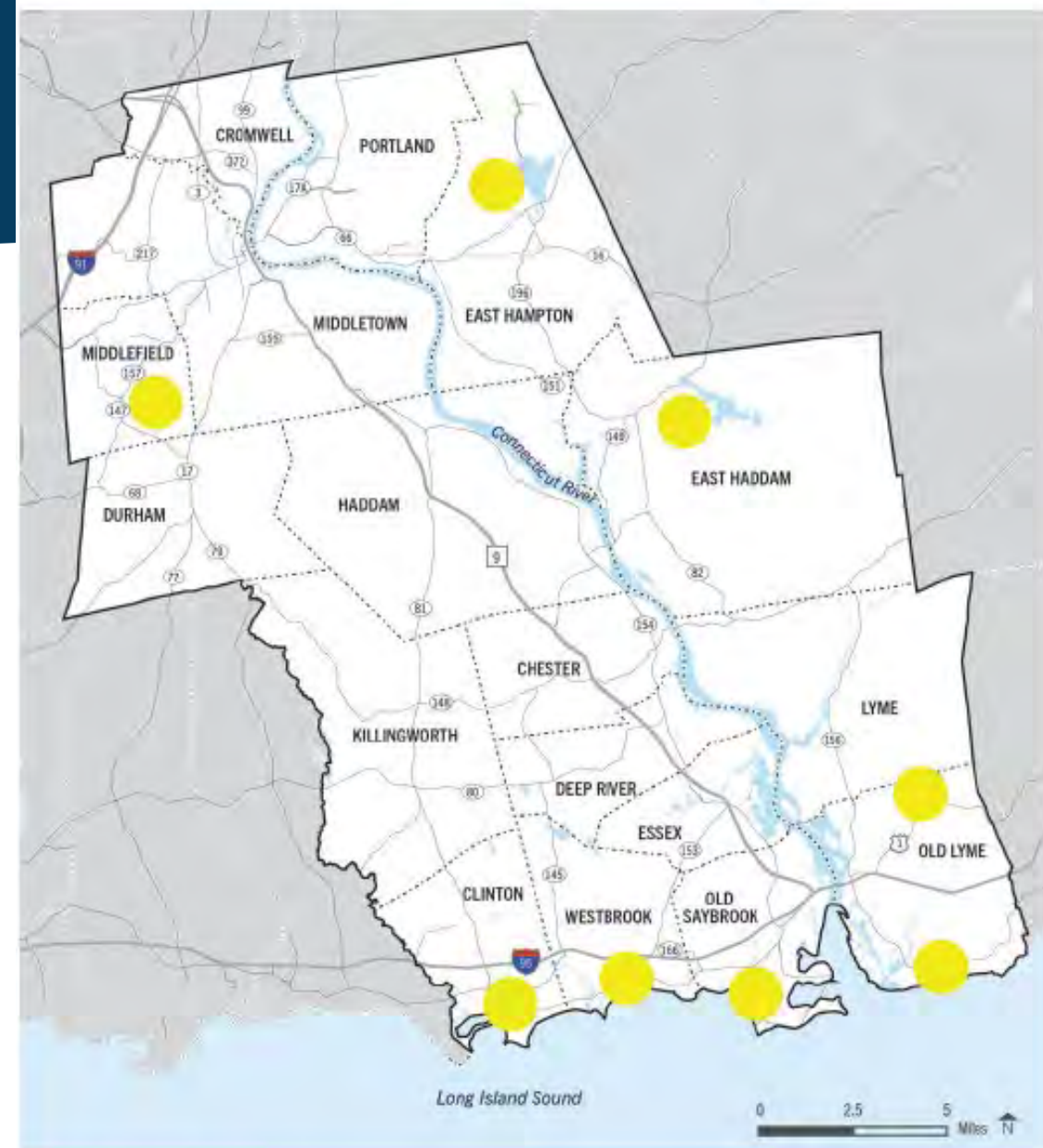
Village District Nodes



Open Space/ Recreation Nodes

# Recommendations

- Beach Community Recommendations
  - Focused on improving safety in densely populated beach/lake neighborhoods



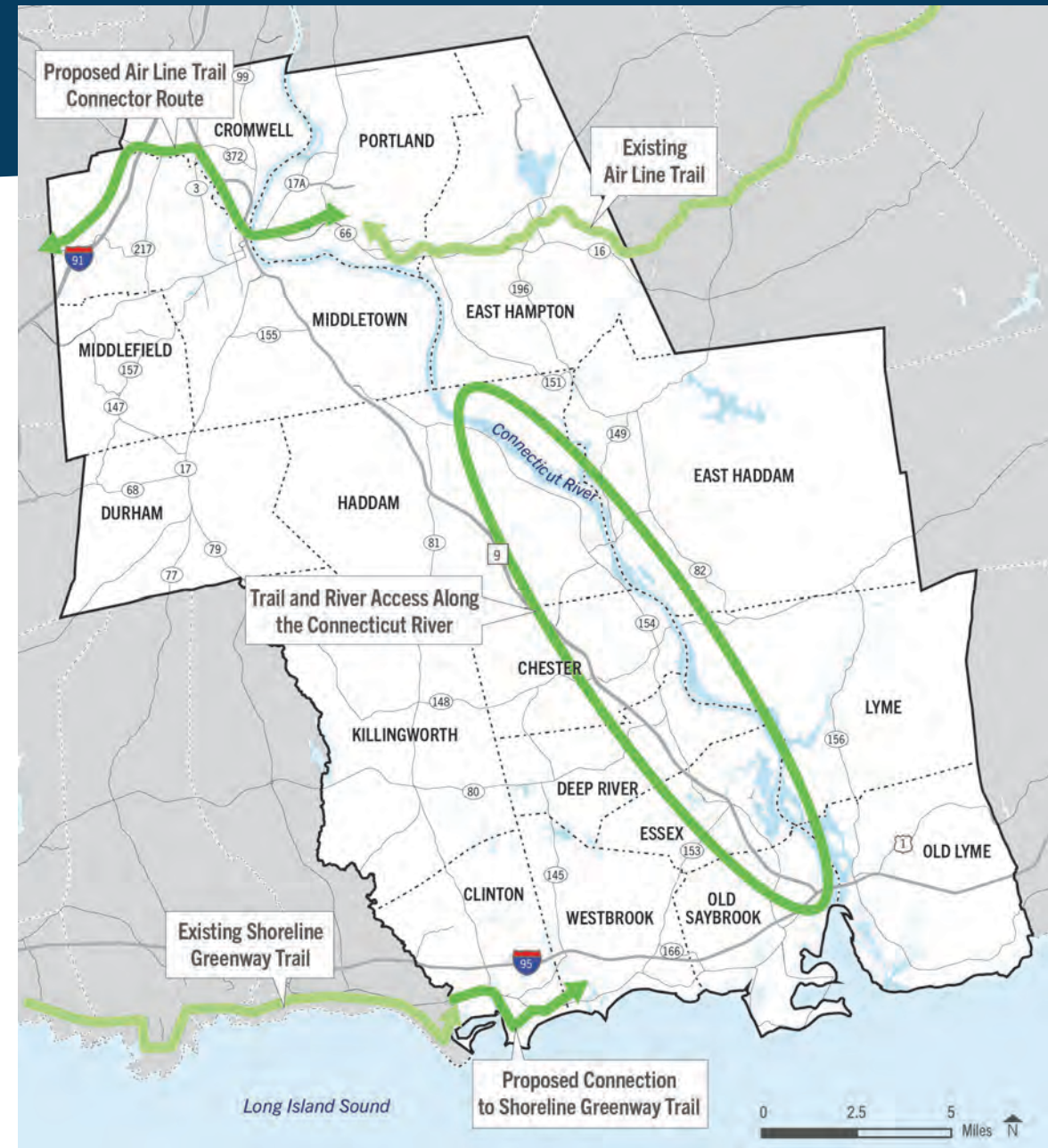
## Beach Communities

● Beach Community Locations\*

\* Inland communities include Lake Neighborhoods such as Rogers Lake, Bashan Lake, Lake Pocotopaug, and Lake Beseck

# Recommendations

- Greenway and Trail Recommendations
  - Focused on regional connections to open space resources



A triangular arrangement of small squares. The top row has 1 square, the second row has 2 squares, the third row has 3 squares, and so on, down to the tenth row which has 10 squares. The total number of squares is 100, forming a right-angled triangle.

- State Route Commercial Node Recommendations
  - Focused on recommendations in commercial areas of RT 1, RT 17, RT 66, and RT 154



# Recommendations

- Policy Recommendations
  - Complete Streets
  - Health and Wellness
- Actions:
  - Education and training
  - Bicycle and pedestrian counts
  - Road Safety Audits
  - ADA-Compliant facility assessment
  - Support of Bicycle and Pedestrian Advocacy Groups



*Ribbon-Cutting Ceremony for the Portland Air Line Trail held on June 3, 2018*

*Source: The Jonah Center for Earth and Art. <https://thejonahcenter.org/>*



*Discussion during a RSA recently conducted in Litchfield, CT*

*Source: FHI Studio*

# Recommendations

- Recommendations by municipality
  - High level recommendations by Town
  - Based on discussions with Steering Committee, existing conditions findings, and municipal survey results from across the Region

Municipality	Village District Recommendations	Beach Community Recommendations	Regional Connections Greenways and Trail Recommendations	State Route Commercial Node Recommendations
Old Lyme	<ul style="list-style-type: none"> <li>• Consider creating a Bicycle and Pedestrian Plan</li> <li>• Expand sidewalk network in the downtown to residential neighborhoods to provide connections to the High School</li> </ul>	<ul style="list-style-type: none"> <li>• Explore opportunities to re-stripe primary beach roads with advisory shoulders or sharrows</li> <li>• Consider the use of speed humps at locations where vehicle speeds are an issue</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance connections to active recreational areas</li> <li>• Acquire and expand open space connections and linkages</li> </ul>	<ul style="list-style-type: none"> <li>• Pursue opportunities to conduct an RSA</li> <li>• Create a sidewalk and street scape plan for Halls Road (Route 1)</li> </ul>
Old Saybrook	<ul style="list-style-type: none"> <li>• TOD/Town Center bike and pedestrian improvements to support economic development and more affordable housing development</li> <li>• Consider installing RRFB or HAWK lighting on Main Street to optimize crosswalk safety</li> </ul>	<ul style="list-style-type: none"> <li>• Explore opportunities to re-stripe primary beach roads with advisory shoulders or sharrows</li> <li>• Consider the use of speed humps at locations where vehicle speeds are an issue</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a regional bikeway along the railroad spur that leads from the train station to the Preserve, Essex and beyond</li> <li>• Explore the possibility of a walkway over the CT River along the current railroad bridge or enhance access over Baldwin Bridge into Old Lyme</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to close gaps in the sidewalk network on Route 1</li> <li>• Incorporate access management where feasible</li> <li>• Pursue opportunities to conduct an RSA</li> </ul>
Portland	<ul style="list-style-type: none"> <li>• Traffic calming measures should be implemented to slow traffic on Main Street</li> <li>• Pedestrian improvements should be considered near the approach to the Arrigoni Bridge</li> </ul>		<ul style="list-style-type: none"> <li>• Enhance connections to active recreational areas</li> <li>• Expand the Air Line trail west across the Connecticut River, creating a connection to the Farmington Canal Trail</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporate access management where feasible on Route 66</li> <li>• Advocate for bicycle facilities such as bike lanes and shared roadways when state and local roads are planned for reconstruction or improvement</li> </ul>
Westbrook	<ul style="list-style-type: none"> <li>• Improve pedestrian access between the train station and the Downtown</li> <li>• Strategically close existing gaps in the sidewalk system</li> </ul>	<ul style="list-style-type: none"> <li>• Explore opportunities to re-stripe primary beach roads with advisory shoulders or sharrows</li> <li>• Consider the use of speed humps at locations where vehicle speeds are an issue</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance connections to active recreational areas</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporate access management where feasible on Route 1</li> <li>• Pursue opportunities to conduct an RSA</li> </ul>

# Implementation

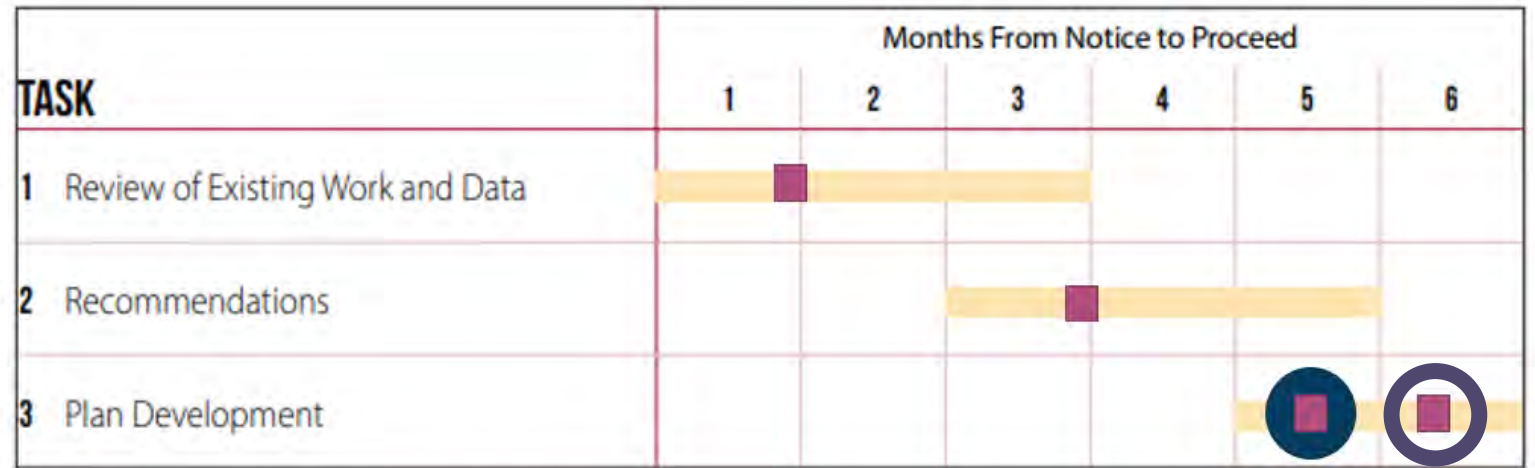
- Implementation Summary
  - Recommendations based on timeframe: short, medium, and long term
  - Goal(s) achieved for each recommendations identified

Table 11: Implementation by Length

Type of Recommendation	Short-term >2 Years	Medium-term 2 - 5 Years
<b>Village District Recommendations</b>	<ul style="list-style-type: none"> <li>• Encourage municipalities to complete individual bicycle and pedestrian plans and or sidewalk plans. <b>1+2</b></li> <li>• Explore opportunities to apply for CTDOT's Community Connectivity Program's Road Safety Audits. <b>1+2</b></li> <li>• Further promote open space and trail resources; provide parking, maintenance, wayfinding, and branding and marketing where appropriate. <b>1+3</b></li> </ul>	<ul style="list-style-type: none"> <li>• Encourage bicycle and pedestrian links between neighborhoods, employment centers, schools, parks and other destinations. <b>3</b></li> <li>• Look for ways to enhance pedestrian connections and amenities through additional facilities, sidewalk maintenance and improvements, crosswalk expansion, lighting, wayfinding, etc. <b>1+3</b></li> </ul>
<b>Beach Community Recommendations</b>	<ul style="list-style-type: none"> <li>• Consider the use of speed humps at locations where vehicle speeds are an issue. <b>1</b></li> <li>• Provide signage directing pedestrians to walk facing traffic. <b>1+3</b></li> </ul>	<ul style="list-style-type: none"> <li>• Explore opportunities to re-stripe primary beach roads with advisory shoulders (traditional shoulders appropriate on roads at least 28' wide). <b>1</b></li> </ul>
<b>Regional Connections Greenways and Trail Recommendations</b>	<ul style="list-style-type: none"> <li>• Support bicycle-based tourism. <b>1</b></li> <li>• Support and expand existing trail networks and improve trail head amenities. <b>3</b></li> <li>• Connect public parks to trails and pathways and other pedestrian or bicycle networks where feasible to provide linkages and connectivity between recreational uses. <b>1+3</b></li> </ul>	<ul style="list-style-type: none"> <li>• Support efforts to connect the Air Line Trail and Farmington Canal Trail. <b>1+3</b></li> <li>• Extend the Shore Line Greenway from Hammonasset Beach to Clinton and points further east where feasible. <b>1+3</b></li> </ul>
<b>State Route Commercial Node Recommendations</b>	<ul style="list-style-type: none"> <li>• Pursue funding and assistance for Complete Streets planning for sidewalk planning and construction, with the regional goal of linking dense population clusters within the towns. <b>3</b></li> <li>• Encourage bicycle links between neighborhoods, employment centers, schools, parks and other destinations. <b>1+3</b></li> </ul>	<ul style="list-style-type: none"> <li>• Improve walkability by encouraging pedestrian-oriented design of public and private projects in areas where higher levels of pedestrian activity are present or desired. <b>3</b></li> </ul>

# Next Steps

- Presentation to the COG Board – TODAY!
- Incorporate comments and finalize plan



■ Steering Committee Meetings

● Public Presentation

○ Presentation to RiverCOG MPO Board

# Discussion

- Questions?
- Thank you for your involvement!



*Durham Bicycle Lanes, Installed in 2021*

*Source: Durham Complete Streets Committee, Martin Anderson*