



Route 146

CORRIDOR MANAGEMENT PLAN



Corridor Working Group Meeting #5

Branford Fire Headquarters | 45 North Main Street, Branford, CT 06405

September 21, 2023 | 2:30pm

Route 146 Corridor Management Plan (CMP) Corridor Working Group Meeting Agenda

- Welcome
- Review of Summer Project Work
 - Data Collection and Field Work
 - Contextual Information
 - Stakeholder Interviews
 - Online Feedback Map
 - Existing Road Sections Diagrams
- Upcoming Public Outreach
 - Next Public Information Meeting
 - Public Survey – Strategies
- Future Strategies
 - Overview
 - Priorities from Bob Yaro
 - Potential Strategies List
 - Discussion



Route 146 CMP – Summer Project Work

- Field Work
- Context-sensitive mapping
- Additional Traffic Data Collection
- Stakeholder interviews
- Online Feedback Map



Route 146 CMP – Data Collection & Field Work

- Field Work
 - Locations of key features
 - Guiderail
 - Catch basins
 - Culverts
 - Signs
 - Crosswalks
 - Additional Traffic Data Collection
- Mapped data demonstration



Route 146 CMP – Data Collection & Field Work

- Additional Traffic Data Collection
 - More traffic counts conducted in late August
 - Two new locations counted:
 - Route 146 at 710 Leetes Island Road/Medlyn Farms (Branford)
 - Route 146 at 444 Leetes Island Road (Guilford) (site of Nov. 2022 bicycle crash)
 - Overall takeaways:
 - Higher traffic than previous counts (February 2023)
 - Volume of traffic closer to July 2019 counts, but a little lower
 - Traffic speeds similar to those collected in February
 - Speeds at new locations show significant speeding – confirms police department comments



Route 146 CMP – Data Collection & Field Work

Existing Weekday Average Daily Traffic Volume Summary August Update

Location	Time Period	Weekday ADT	Weekday Morning Peak Hour	Weekday Evening Peak Hour
Route 146, south of Sybil Creek Place	Aug 2023	7,962	270	393
	Feb 2023	4,799	228	251
	July 2019	9,400	269	528
Route 146, east of Pine Tree Drive	Aug 2023	2,552	88	147
	Feb 2023	1,523	71	77
	July 2019	2,800	79	181
Route 146, east of School Street	Aug 2023	3,387	128	179
	Feb 2023	2,202	118	106
Route 146, at 710 Leetes Island Rd (Branford)	Aug 2023	2,677	102	138
Route 146, east of Moose Hill Road	Aug 2023	2,984	110	161
	Feb 2023	1,810	67	97
	July 2019	3,200	131	188
444 Leetes Island Rd, Guilford	Aug 2023	2,925	104	159

Route 146 CMP – Data Collection & Field Work

Updated Vehicle Speed Summary (Data from 2019-2023)

Location	Posted Speed Limit (mph)	Eastbound		Westbound		
		Average Speed (mph)	85 th % Speed (mph)	Average Speed (mph)	85 th % Speed (mph)	
Branford						
Route 146, south of Sybil Creek Place ¹	25	31 NB	35 NB	31 SB	35 SB	
Route 146, south of Sybil Creek Place ²	25	32 NB	36 NB	31 SB	34 SB	
Route 146, east of Pine Tree Drive ¹	25	33	38	31	35	
Route 146, east of Pine Tree Drive ²	25	33	36	31	34	
Route 146, east of School Street ¹	25	30	34	29	34	
Route 146, east of School Street ²	25	29	34	28	32	
Route 146, at 710 Leetes Island Road ²	25	34	38	35	39	
Guilford						
Route 146, east of Moose Hill Road ¹	35	38	44	38	44	
Route 146, east of Moose Hill Road ²	35	33	38	31	38	
Route 146, at 444 Leetes Island Road ²	35	40	44	43	48	

¹ Based on ATR counts conducted in February 2023

² Based on ATR counts conducted in August 2023

Speeds in orange are >= 10 mph above speed limit

Contextual Information

Corridor Characteristics

- Scenic Roadway
- Shoreline Corridor
- Intrinsic Benefits
- Historical Context
- Estuary Vistas
- Undulating Curves
- Roadside Development



Stakeholder Interviews

Conducted 8 stakeholder interviews over the spring and summer

- Active Transportation
- Economic Development
- Emergency Management
- Environmental Issues
- Environmental Justice
- Historic & Cultural Resources
- Transportation Safety
- Water-Flooding Issues



Date: Wednesday, July 12, 2023
3:00 pm – 3:45 pm

Place: Remotely Conducted (MS Teams) Re: CTDOT Project No.: 0175-1608
Route 146 Corridor Management Plan
Emergency Management/Hazard Mitigation Stakeholder Meeting

Project No.: 42441.08

ATTENDEES:

Name	Affiliation
Kevin Magee	Guilford Hazard Mitigation Commission
Steve Kops	Guilford Hazard Mitigation Commission
Peter Hentschel	Branford Coastal Vulnerability Ad Hoc Working Group
Thomas Mahoney	Branford Emergency Management
Michael Shove	Guilford Fire Department
David Elder	CTDOT
Daniel Amstutz	VHB

NOTES:

- › Daniel Amstutz opened the meeting. Participants introduced themselves and talked about their organizational affiliation and their interest in the subject of emergency management/hazard mitigation around Route 146. Amstutz gave a brief presentation about the Corridor Management Plan (CMP) project and asked for information about emergency management/hazard mitigation issues to be aware of around Route 146, and where major areas of concern are.
 - David Elder added that while this is a state facility, it serves local purposes. After seeing Route 146 for himself he understood the local opposition to the proposed replacement of the crabbing bridge, as it did not fit in with the nature of the roadway. The CMP will give CTDOT an idea of what governing principles they should use for how to approach road improvements, how to minimize impacts to historic structures, and meet the needs of the communities. The approach is meant to be context-sensitive, minimizing negative aesthetic impacts that result from projects. Flooding and sea level rise are important, and how to address not just flooding at the crabbing bridge but other areas as well; they want to understand the severity of flooding and how long certain areas may be inundated with water.
- › Peter Hentschel noted that coastal flooding and places with "nuisance flooding", combined with sea level rise, may exaggerate flooding in 2050. In places not on state roads, Branford is considering putting in low tide walls to protect low lying areas from general flooding, not necessarily protection from hurricanes or major storms.
 - Hentschel asked – what metric of flooding are you planning for? What scenario? Elder said CTDOT hydraulic engineers use Atlas 14 for rainfall and sea level rise, and factor in addition to that, sea level rise projections from UConn (for 2050). However, they are also designing to an asset design life that may be beyond 2050 (such as a

Stakeholder Interviews

Summary and Takeaways from Stakeholder Meetings:

- Need to engage with Amtrak on constraints of their bridges
- Bicycle/pedestrian safety concerns from most stakeholder groups
- Primary intersections of concern for safety:
 - Main Street & Cedar Street (Branford)
 - S. Montowese at Linden Ave (Lenny's and other restaurants in the area) (Branford)
 - S. Montowese St and Meadow Street (Branford)
 - Leetes Island Road and Moose Hill Road (Guilford)
 - Route 146/Route 77 intersection (Guilford)



Stakeholder Interviews

Summary and Takeaways from Stakeholder Meetings:

- Speeding concerns from many stakeholders
- Flooding – issue with Route 146 as evacuation route; tension of hardening vs. retreating from road, etc.
- Recreational aspects, not just hiking, walking and biking, but also fishing and boating
- Concern about maintenance/visibility/width of paved shoulders for biking and walking, general safety
- Tension between preserving historic qualities vs. changes for safety, address flooding, development pressure



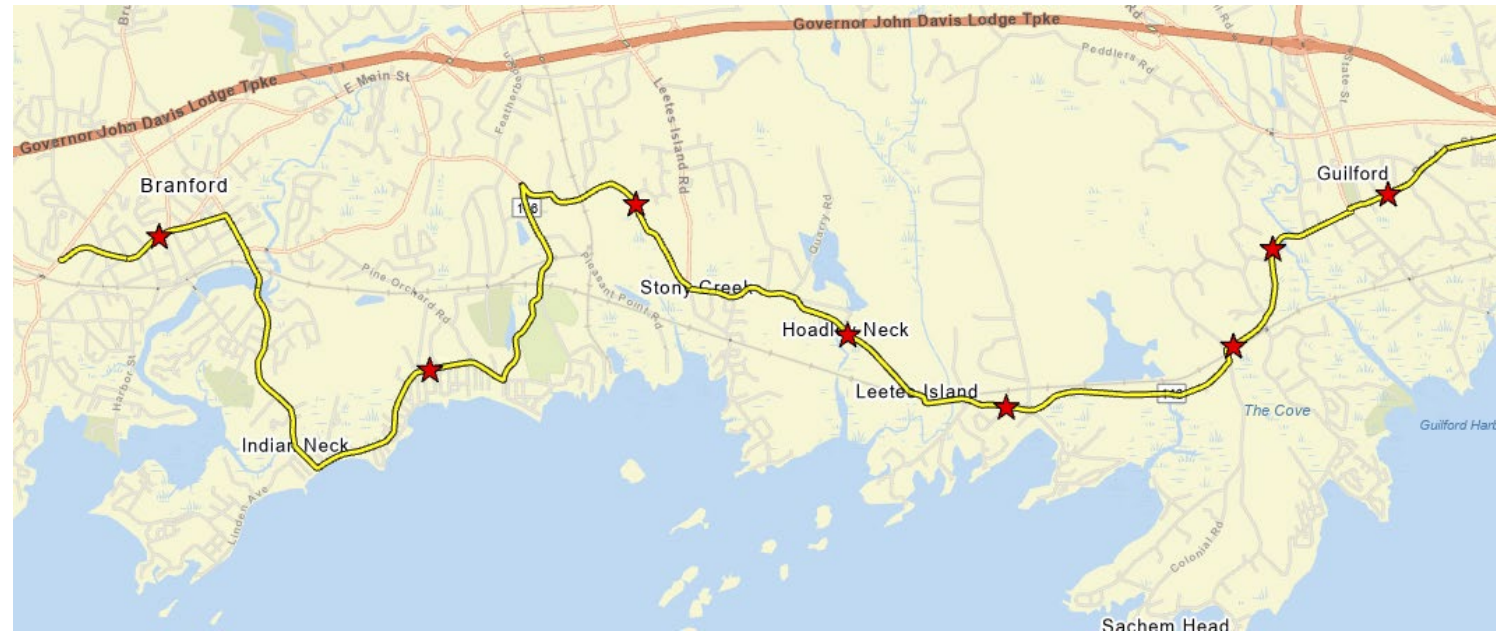
Online Feedback Map

- 20 comments from stakeholders
- Themes
 - Bicycle & Pedestrian access & safety
 - Flooding
 - Speeding
 - Sightline issues
 - Intersection safety
 - Boston St at Route 1 (Guilford)
 - Boston St at Union St/S. Union St (Guilford)
 - Route 146 at Route 77 (Guilford)
 - Main St at Cedar St (Branford)



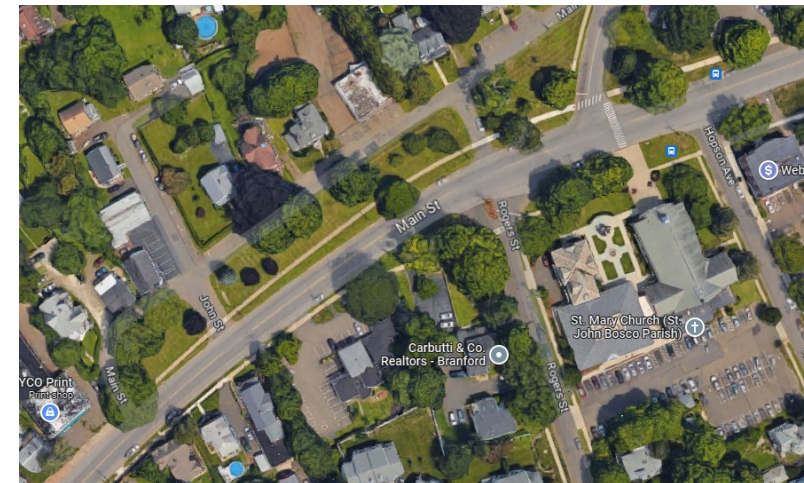
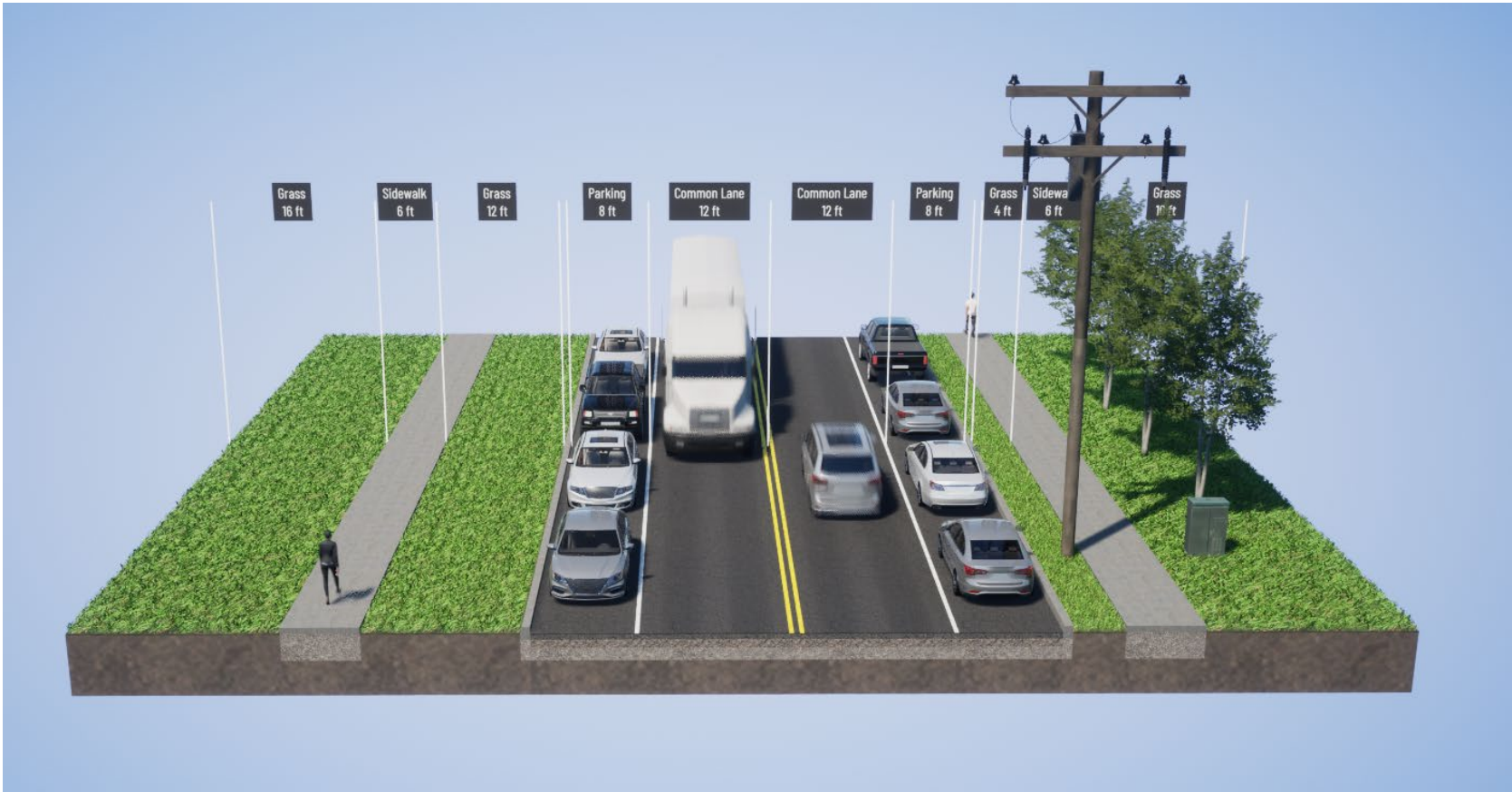
Existing Road Sections Diagrams

- Cross-section diagrams showing Existing Conditions
- Show constraints at 8 Locations:
 - Critical corridor locations (4 per Town)
 - Vegetation
 - Slopes
 - Walls
 - Shoulder widths
 - ROW
- Diversity of conditions along the corridor



Existing Road Sections Diagrams

- Diagram: existing section at Route 146 between John St and Rogers St (Branford)



Upcoming Public Outreach

- Second Public Information Meeting:
 - Thursday November 9 or Tuesday November 14
 - Guilford Community Center?
- Fall Public Survey on Strategies
 - Present potential strategies for the Corridor Management Plan
 - Receive feedback on strategies and any additional strategies we may have missed
 - Have open in time for public meeting and through end of the year



Future Strategies: Overview

- What are “strategies”?
 - “A plan of action or policy to achieve a major or overall aim”
 - A way to approach future projects so they incorporate specific goals and considerations
 - Not meant to advance specific projects, but guide how potential projects may develop
 - Strategies may involve ways to address existing and future conditions



Future Strategies: Overview

Strategies for corridor management plan to preserve corridor while enhancing safety

Compared to corridor study improvements – to address deficiencies

- Potential strategies for the group to consider – preliminary!
- Conceived as a result of field work, interviews, discussions with CTDOT, professional judgment
- Combined everything to develop initial strategies for CWG discussion

Future Strategies: Potential List

- Strategy Themes:
 - Stormwater & Sea Level Rise Management
 - Bicycle/Pedestrian Access & Safety
 - Speed Management
 - Roadside Safety
 - Railroad Bridges
 - Intersection Safety
 - Maintenance
- Anything missing here?
 - Overarching goal/value of preservation of intrinsic qualities



Future Strategies

Stormwater & Sea Level Rise Management:

- Covers three main issues:
 - Drainage
 - Flooding
 - Sea Level Rise
- Address management of existing flooding issues vs. additional impacts from sea level rise
- Review tolerable flooding occurrences (“nuisance”) vs. intolerable flooding
- Different situations would call for different approaches
 - Identify likely cause(s) of flooding at each location of concern, such as drainage, precipitation, storm surge, high tides; add future sea level rise scenarios
 - Identify site constraints – may be right of way, elevation, land features
 - ROW, elevation, adjacent land features (natural and manmade)
 - Some locations also have different engineering strategies based on constraints



Future Strategies

Stormwater & Sea Level Rise Management (cont'd):

- Potential Strategies for addressing flooding:
 - Review flooding area locations for site-specific context
 - Raise road sections or bridge over frequent flooding areas
 - Pumping stations
 - Find ways to get around flooding – such as better north/south access to Route 1 (for both evacuation and re-routing)
 - Retreat from road or cut off road to through traffic in certain areas where flooding is continuous problem and expected to become worse

Future Strategies

Bicycle/Pedestrian Access & Safety:

- Variety of land uses and demand
- Different parts of the road call for different strategies
- Town greens/built up areas will have different needs than low-density areas
 - Identify specific issues and contextual elements at each area of concern
 - Identify constraints such as ROW, slopes, sightlines, environmental assets, historical assets



Future Strategies

Bicycle/Pedestrian Access & Safety (cont'd):

- Potential Strategies for bicyclists and pedestrians:
 - Improve pavement/shoulder space available to provide space for biking and walking
 - Improve access for bicyclists and pedestrians
 - Review connectivity for walking and biking
 - Slow speed of automobiles (see Speed Management section)
 - Review alternative routes for most constrained segments for bicycle/pedestrian access



Future Strategies

Speed Management:

- Office of the State Traffic Administration (OSTA) process for setting speed limits
 - The Local Traffic Authority (LTA) requests revision to speed limit
 - OSTA conducts investigation and makes recommendation
 - LTA agrees or disagrees with recommendation; OSTA produces Traffic Investigation Report (TIR)
- OSTA process being updated to also look at contextual and land use elements for target speed setting
- Traffic calming devices being tested on state roads (such as raised crosswalks)
- Automated speed enforcement – new legislation allows in some instances



Future Strategies

Speed Management (cont'd):

- Potential Strategies for speed management:
 - Work with Local Traffic Authority (LTA) on speed limit revisions to submit to OSTA
 - Review applicability of automated speed enforcement
 - Review applicability of traffic calming devices for locations of concern



Future Strategies

Roadside Safety:

- Much existing barrier protection does not meet current standards and would not stand up to a crash
- Local weather conditions degrade materials quickly – salty and damp air
- Merritt Parkway rail designed only for that roadway; would not hold up under coastal conditions
 - Local municipality would have to install and maintain at their own expense



Future Strategies

Roadside Safety (cont'd):

- Potential Strategy: Review barrier protection options
- Alternative types of guiderail for scenic roads:
 - Box beam
 - Used widely by New York State DOT
 - CTDOT Recent Installations
 - Constrained by site conditions
 - Cable guiderail with steel posts
 - Potential use on Route 146 with available ROW for 12 foot deflection - constraint
 - Expensive to maintain
 - Other Alternatives?



Future Strategies

Railroad Bridges:

- Limited options for addressing low vertical and horizontal clearances in the near term
- Look back to stormwater management strategies to understand how to address this at bridges
- Potential Strategy:
 - Work with Amtrak on long-term improvements to bridge structures



Future Strategies

Intersection Safety:

- CTDOT Traffic to be involved
- Identify issues with crossings, sightlines, speed
- Some cross-over with Speed Management
- Potential Strategy:
 - Review intersection sightlines, crossing distances, origins and destinations for people walking and biking at key intersections



Future Strategies

Maintenance Enhancements:

- Mowing along the roadway twice a year
- Cannot conduct invasive plant management under their permit for general maintenance
- Larger projects could involve invasive plant management
- Potential Strategies:
 - Establish ROW boundary lines for corridor to determine extent of CTDOT property for maintenance and other potential projects
 - Review potential for maintenance enhancements for mowing, plant management, sweeping shoulders, in conjunction with CTDOT District



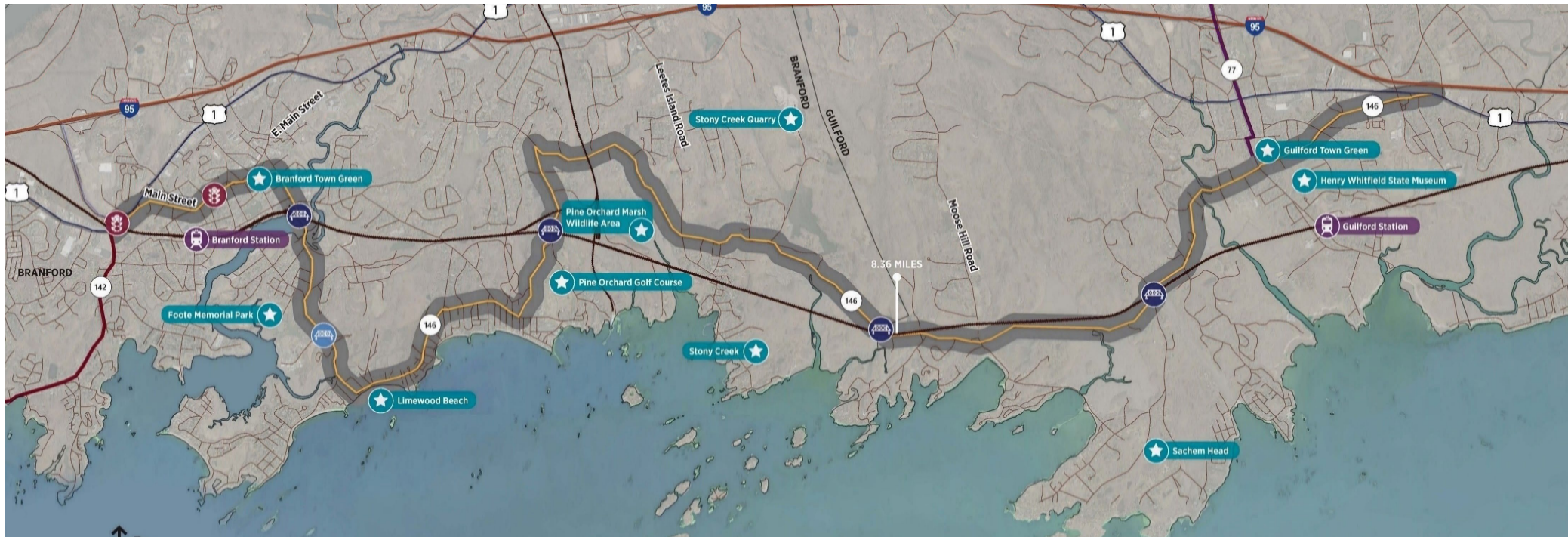
Future Strategies: Discussion

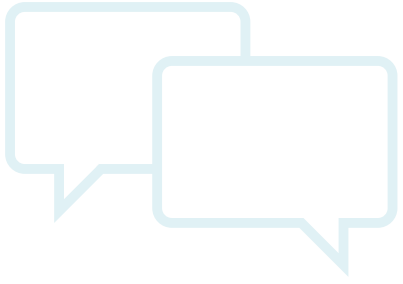
- Other Strategies?
- Questions about the strategies?
- Presentation of strategies to the public?
- Additional discussion/vetting of Strategies



Route 146 Corridor Management Plan – Next Steps


- **Next Public Information Meeting:** November 2023
- **Public Survey:** Fall 2023 (November-December 2023]
- **Next CWG Meeting:** TBD





Discussion/Action Items

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