

Eastern Connecticut Corridor Rail and Transit Feasibility Study (ECRTS)

Appendix C: Previous Report Review

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CT*rail* **Strategies** EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

Table of Contents

1.	Intro	duction	3	
2.	Review of Existing Relevant Rail Studies			
	2.1	New Haven Line Capacity and Speed Analysis	4	
	2.2	TIME FOR CT	5	
	2.3	NEC FUTURE	5	
	2.4	Connect NEC 2035 (C35)	5	
3.	Review of Existing Relevant Bus Studies			
	3.1	Connecticut Statewide Bus Study	6	
	3.2	Connecticut Locally Coordinated Human Services Transportation Plan	6	
	3.3	SEAT Bus Study	8	
	3.4	Lower CT River Valley Transit Study		
	3.5	Transit Forward RI 2040	9	
	3.6	RIPTA Mobility-on-Demand Zone Assessment	9	
4.	Review of Existing Relevant Regional Studies			
	4.1	SCCOG Metropolitan Transportation Plan	9	
	4.2	Rhode Island Long Range Transportation Plan	10	
	4.3	Connecticut's Statewide Long Range Multimodal Transportation Plan	12	
	4.4	Connecticut Statewide Freight Plan	12	
	4.5	RI State Rail Plan	13	
	4.6	SCCOG Bicycle and Pedestrian Plan	13	
	4.7	Rhode Island Statewide Bicycle Mobility Plan	13	
	4.8	SCCOG 2017 Comprehensive Economic Development Strategy	14	
5.	Review of Relevant Plans of Conservation and Development14			
	5.1	SCCOG Plan of Conservation and Development	14	
	5.2	Bozrah	15	
	5.3	Town of Groton	16	
	5.4	City of Groton	16	
	5.5	Ledyard	17	
	5.6	Montville	17	
	5.7	New London	17	
	5.8	Norwich	18	
	5.9	Preston		



EASTERN C	ONNECTIO	CUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY	
	5.10	Stonington	18
	5.11	Stonington Borough	19
	5.12	Waterford	20
	5.13	Westerly	20
6.	Review of Existing Other Relevant Municipal Plans		
	6.1	Downtown Mystic Parking Study	21
	6.2	SUBASE New London Joint Land Use Study	22
	6.3	Groton Parking Management Plan	23
	6.4	New London Downtown Transportation and Parking Study	23
	6.5	Historic Downtown Norwich Parking Report	24
	6.6	Downtown Pawcatuck Parking Study	24
	6.7	City of Groton Economic Development Strategy and Action Plan	24
	6.8	Thames River Innovation Place – Thames Street Promenade Study	24
	6.9	Regional Intermodal Transportation Center Master Plan and Efficiency Study	25
	6.10	Mystic Multi-Modal Transportation Study	26
	6.11	Stonington Design Review Guidelines	26
7.	Key Fir	ndings2	26

Figures

Figure 1. Study Area Regional Context	. 3
Figure 2. Mobility Manager Regions in Connecticut	
Figure 3. SEAT Bus Study Plan A Improvements	
Figure 4. Downtown Mystic Parking Study Area	



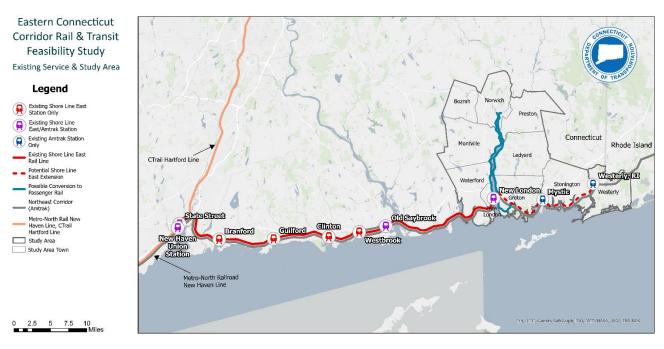
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1. Introduction

The Connecticut Legislature has directed the Connecticut Department of Transportation (CTDOT) to conduct a feasibility study for expanding passenger rail service and ground transportation options in southeast Connecticut¹ via the Eastern Connecticut Corridor Rail and Transit Feasibility Study (ECRTS). ECRTS is investigating the feasibility of and market for the following transportation improvements (Figure 1):

- Extending the Shore Line East rail line to the State of Rhode Island
- Establishing a new passenger rail service from the City of New London to the City of Norwich
- Establishing a new passenger train station in the Town of Groton and the Borough of Stonington
- Extending other ground transportation systems in the eastern region of the state and providing improved connectivity between such systems and rail lines

Figure 1. Study Area Regional Context



A feasibility study is the first step in evaluating the viability of service in a corridor. This feasibility study will consider existing and future market and environmental conditions, equity and environmental justice issues, preliminary engineering considerations, ridership levels, service operations, equipment needs and system requirements, and preliminary costs and revenue forecasts within the ECRTS study area. As a result of the findings of these investigations, more detailed studies may follow.

This report reviews and summarizes recently completed reports and studies relevant to the ECRTS, by topic area:

- Rail Service and Infrastructure Studies
- Bus Service and Infrastructure Studies
- Regional Plans

¹ Substitute House Bill No. 6484, Public Act 21-175, Section 20



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- Municipal Plans of Conservation and Development
- Other Municipal Plans

2. Review of Existing Relevant Rail Studies

The following studies are recently completed rail studies that actively discuss Shore Line East (SLE) services or discusses services that interface with SLE.

2.1 New Haven Line Capacity and Speed Analysis

The New Haven Line (NHL) Capacity and Speed Analysis, conducted between 2017 and 2021, is a detailed assessment of the infrastructure, service and fleet needs of the New Haven Line as well as an overview of the branchlines (New Canaan, Danbury and Waterbury). The report sets the stage for follow-on work that examines the complete rail network in Connecticut. Some of the findings of the NHL Capacity and Speed Analysis inform the ECRTS. Key findings from the analysis are as follows:

- **Capacity and Speed are Constrained by Legacy Infrastructure:** The condition of rail bridges throughout the Connecticut system have been an ongoing concern for upcoming maintenance/rehabilitation needs as well as ongoing slow orders due to deteriorating conditions. Bridges along the Shore Line East (Amtrak's Northeast Corridor line from New Haven to New London) also require replacement (such as the Connecticut River Bridge in Old Saybrook).
- Track Geometry and Slow Orders Contribute to Reduced Speeds: Sharp curves limit operating speeds along the line, which produce significant fluctuation in maximum allowable speeds (MAS) and limit the system's average speed. This constraint is difficult to address, given that straightening the alignment is cost prohibitive. In addition to constrained MAS, slow orders further restrict speeds. Of significant concern is the drainage of the railbed. Poor drainage can damage the rail ties, ballast, and track.
- State of Good Repair and Normal Replacement Improvements Impact Speed: The train density on the NHL makes it difficult to address large capital improvements without impacting service; because of this, much of the four-track alignment operates with only three tracks to accommodate the maintenance backlog. The impacts of a track being out of service radiate throughout the system and can/do lead to reduced operating speeds and increased dwell times at stations. Similar constraints exist on the SLE, which is predominantly a two-track line.
- Aging Diesel-Hauled Fleet Limits Capacity: The varied and aging Connecticut fleet impacts the performance and reliability of the State's rail systems, particularly on the branchlines (NCL, DBL, and WBL), Hartford Line, and until recently, Shore Line East, which rely on the diesel-hauled equipment. (Electrified equipment began service on the SLE in 2022 when M8s were deployed on the line between New Haven and New London).
- Service Can Be Optimized to Improve Trip Times: The NHL operates using an intricate zone-scheduling system that optimizes travel time for trips into NYC. However, increased service demand within the Connecticut system has led to increased travel times and reduced reliability. Passengers wishing to transfer between NHL stations and the branchlines, Shore Line East, or the Hartford Line.



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2.2 TIME FOR CT

TIME FOR CT is the actionable rail vision resulting from the work of the New Haven Line Capacity and Speed Analysis. The vision addresses improvements to rail service, new investments in infrastructure and a new rail fleet. The vision covers all of the Connecticut rail system, with the initial focus on improving travel times between New York and New Haven, CT. By 2035 the plan articulates 6-minute savings between New Haven and Bridgeport, 12-minutes between Bridgeport and Stamford, and 7-minutes between Stamford and New York City. The addition of seven new trains on the Waterbury Line was also implemented in the summer 2022, as well as new electrified service on the Shore Line East as mentioned previously.

2.3 NEC FUTURE

Northeast Corridor (NEC) FUTURE proposed the development and investment program of an integrated passenger rail solution for the Northeast to meet transportation needs of the region's economy. The NEC runs from Boston to Washington, D.C. and accommodates over 2,000 passenger trains and 70 freight trains per day while facing serious issues such as outdated infrastructure and insufficient capacity to reliably meet demand. The Preferred Alternative prioritized a commitment to improving the existing NEC over expansion to off-corridor routing, included an increase of service on the Hartford/Springfield Line, detailed investments that would support reliable operations, and incorporated the Grow Vision that was included in Alternative 2 of the Tier 1 Draft EIS. NEC FUTURE involved extensive public involvement and ultimately consisted of four components:

- **Improve Rail Service:** Corridor-wide service and performance objectives for frequency, travel time, design speed, and passenger convenience.
- **Modernize NEC Infrastructure:** Corridor-wide repair, replacement, and rehabilitation of the existing NEC to bring the corridor into a state of good repair and increase reliability.
- **Expand Rail Capacity:** Additional infrastructure between Washington, D.C., and New Haven, CT, and between Providence, RI, and Boston, MA, as needed to achieve the service and performance objectives, including investments that add capacity, increase speeds, and eliminate chokepoints.
- **Study New Haven to Providence Capacity:** Planning study in Connecticut and Rhode Island to identify additional on- and off-corridor infrastructure as needed to achieve the service and performance objectives.

2.4 Connect NEC 2035 (C35)

C35 is a reinvestment program for Northeast Corridor rail infrastructure that is a collaboration working through the NEC Commission between state governments, the federal government, commuter rail agencies, and Amtrak. The plan addresses a significant state of good repair backlog while improving service and travel-time gains. The plan emphasizes the role of the corridor as an economic backbone of the region (between Washington, D.C. and Boston). The C35 plan includes track improvements between New Haven and Boston to increase the percentage of 160 mph rated track, one-seat ride into NYC from New London, as well additional express service in the CONNECT NEC 2035 is a once-in-a-generation opportunity to replace aging bridges and tunnels, add rail capacity, improve performance, and enhance customer experience in the corridor

same direction. Implementation of Connect NEC 2035 is expected to result in "modern, resilient railroad with safe, reliable, more frequent service; connections to new markets; and reduced travel times between communities." The NEC Commission is now working on NEC 2037 (C37).



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3. Review of Existing Relevant Bus Studies

3.1 Connecticut Statewide Bus Study

In 2018, CTDOT conducted a statewide bus study as part of Let's GO CT, the Governor's plan for \$100 billion investment in transportation over 30 years. The Connecticut Statewide Bus Study assesses travel needs, evaluates current transit services and performance, develops bus service guidelines, analyzes needs, and develops recommendation to better align bus transit in the state with the needs of the residents. Key findings from the study that would impact transit service in the ECRTS study area are as follows:

- Norwich, New London, and Groton were found to have a high demand for transit service through the propensity analysis
- By 2025, all transit agencies in the state should have real-time information on their systems
- On-time performance was low for the majority of SEAT routes
- Passenger trips per hour varied greatly on SEAT routes, with the highest being those that provide service in Norwich
- All transit systems should develop passenger advisory committees
- Create a single, statewide fare policy across all systems
- Systems should collect and report data in a consistent format and level of detail
- Bus stop guidelines are needed
- Planning goals for regions should align with those of the state
- Improve system and fare connectivity between rail and bus networks
- A 2005 Southeastern Connecticut Council of Governments (SCCOG) study on intermodal connections needed in the southeast region of the state suggested the following routes were needed:
 - New London to Mohegan Sun express
 - New London to Foxwoods express
 - Foxwoods to Mystic local service
 - Express from Mohegan Sun to Foxwoods

3.2 Connecticut Locally Coordinated Human Services Transportation Plan

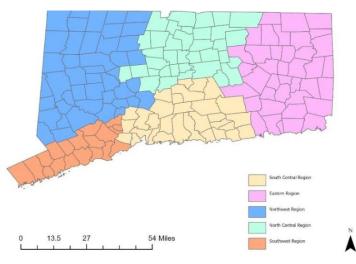
In 2021, CTDOT updated the statewide Locally Coordinated Human Services Transportation plan to help identify gaps in transportation that impact individuals with disabilities, elderly individuals, and low-income individuals and families. Key findings from the study relative to the ECRTS area are as follows:



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- The state is broken down into five mobility manager regions, the study area is in the East Region (Error! Reference source not f ound.)
- Lack of information and promotion of ADA/Paratransit services in the East Region
- 82 percent of survey respondents in the East Region did not believe there is sufficient transportation in the region
- Desire for services outside traditional hours, on weekends, and to other municipalities
- Expanded volunteer driver program is needed
- First mile/last mile programs are needed

Figure 2. Mobility Manager Regions in Connecticut



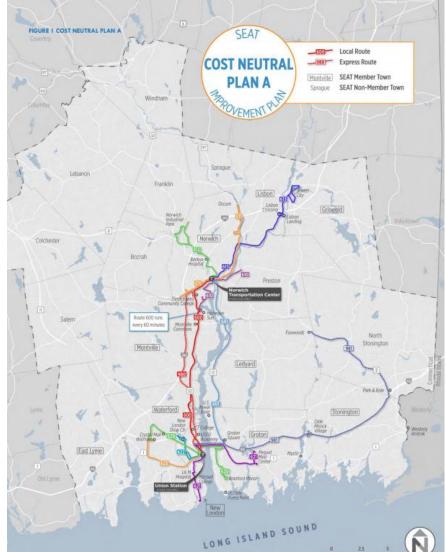


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3.3 SEAT Bus Study

The SEAT Bus Study, conducted in 2015, is a comprehensive operations analysis of SEAT services. It was conducted in order to identify cost neutral service improvements that would improve efficiency, better serve existing riders and attract more riders. The redesigned service would make routes more efficient, more direct, faster, and more reliable in addition to improving service delivery, upgrading bus stops, streamlining fares, upgrading assets, and pursuing roadway modifications. Two cost-neutral plans were developed. Key recommendations from the SEAT Bus Study are as follows:

- Streamline the Routes 1 and 2 connecting Norwich to New London with more direct service (this has been implemented)
- Discontinue the Route 10 with low ridership in Stonington that serves Mystic
- Create an express route from Norwich to New London
- Discontinue the flag stop system and create bus stops
- Improve the New London Union Station Hub by enhancing pedestrian access, signage and adding stop amenities
- Create a mini hub at Groton Square



- Create a Bus Rapid Transit (BRT) light service between New London and Norwich by adding transit signal priority, queue jumps, and a branded service
- Eliminate the multi-zone fare structure and create a single fare structure with multiple pass options (this has been implemented)

In addition to a cost neutral redesign, priority actions for future expansion were identified. These include adding more trips on the express route from Norwich to New London, implementing three new routes (seasonal Mystic shuttle, Norwich to Foxwoods Express, Avery Point to US Naval Base), expanding Sunday service from four to eight routes, and expanding service hours on weekdays and Saturdays.

3.4 Lower CT River Valley Transit Study



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The Lower Connecticut River Valley Transit Study examined what would be needed to merge 9 Town Transit and the Middletown Transit District into one service provider in order to enhance efficiency and better meet the needs of local residents, workers and visitors. This was implemented in 2022. Key recommendations from the study that would impact communities in the ECRTS study area are as follows:

- Convert the Route 643 from Old Saybrook to New London from deviated fixed route to fixed route. This would require adding ADA complementary service within ³/₄ mile of the entire Route 643
- Improve speed and reliability on the Route 643 by realigning it to operate on I-95 but still making stops at the Old Lyme Marketplace, Neck Road and 4 Mile River Road park and rides, and Flanders/East Lyme. The current deviation to Rogers Lake/North Old Lyme would be eliminated.
- Add weekend service on the Route 643 from 9 AM to 5 PM
- Provide hourly service on the Route 643

3.5 Transit Forward RI 2040

Transit Forward RI is Rhode Island's Transit Master Plan. The goals of the plan are to make transit attractive, connect people to where they need to go, grow the economy, improve quality of life and ensure financial and environmental sustainability. The final plan calls for a major investment in transit services, by substantially increasing the level of service statewide and investing in \$1.9 to \$3.1B in capital improvements over the next 20 years. Key recommendations from the study that would impact communities in the ECRTS study area are as follows:

- Implement a new fixed route Westerly to Bradford
- Create a community mobility hub in Westerly

3.6 **RIPTA Mobility-on-Demand Zone Assessment**

The RIPTA Mobility Zone Assessment is a study that looks at ten different potential zones, including Westerly, for Mobility-on-Demand (MOD) service. MOD is the ability to leverage technologies such as real-time data, trip panning, and mobile ticketing to deliver service. A detailed analysis was conducted on seven zones and three were recommended for pilot MOD service. The Westerly Zone (encompasses the entire community) was one of the three identified for a pilot service because of the substantial in-zone demand identified and strong estimated latent demand. MOD service is recommended for weekdays from 7 AM to 4 PM. This study informs the ECRTS about the viability of Mobility-on-Demand services in the region.

4. Review of Existing Relevant Regional Studies

4.1 SCCOG Metropolitan Transportation Plan

The 2019 to 2045 Metropolitan Transportation Plan produced by the Southeastern Connecticut Council of Governments (SCCOG) is an update to their 2015 Long Range Transportation Plan. The goal of the document is to outline the region's short and long-term transportation needs and act as a general policy guide for the allocation of future resources to create an integrated intermodal transportation system. Key findings from the study relevant to the ECRTS study area are as follows:

• Due to the region's proximity to Rhode Island (RI) and Massachusetts (MA), one of SCCOG's greatest priorities is to link to the Massachusetts Bay Transportation Authority (MBTA) commuter rail network in RI.



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- There is a need for more trains, extended service hours, and infrastructure upgrades to portions of the SLE service/line
- Population and growth have been dispersed throughout the region leading to land use patterns not conducive to transit. Distributed employment, retail, and services make fixed-route public transit less economical.
- Industry clusters in the region include shipbuilding, pharmaceuticals, tourism, and casino gaming
- The Genesee & Wyoming Railroad Company completed a \$10 million upgrade to the New England Central (NECR) freight rail line in eastern Connecticut and Massachusetts, accommodating 286,000 lb weight for standard freight rail cars. This upgrade provides heavy axle rail connectivity to Palmer Massachusetts, a major freight hub.
- General Dynamics Electric Boat in Groton is expanding, bringing in thousands of additional jobs to the region
- There is renewed appreciation for non-motorized transportation and interest in developing and improving sidewalk and trail networks; this is expected to continue
- Providing transit that meets the region's needs is a key strategy. This would include supporting transit districts, supporting ride sharing, integrating emerging technologies, assisting towns with human service transportation programs and grants, encouraging transit ready growth, prioritizing growth on transit corridors, ensuring development is transit accessible, encouraging transit signal priority, and improving the customer experience.
- Since 1992, Foxwoods Casino has had a significant impact on traffic in the region from both an employee and patron perspective. The facility attracts an average of more than 25,000 vehicles per day. This has caused significant traffic along Routes 2 and 2A.
- The high-speed Amtrak Acela service stops in New London but not in Mystic
- Parking capacity at rail stations needs improvement. Parking for New London is at the Water Street Garage with 250 spaces. In Mystic there is a 40-space surface lot adjacent to the station that is shared with nearby commercial properties.
- The Mystic Station is not ADA accessible
- SLE service levels are constrained due to bridge constraints
- Proposed recommendations relevant to ECRTS include the following:
 - Expand SLE hours of service, number of trains and extend to Wickford Junction in RI
 - Study the feasibility of a station in Groton
 - Implement express bus service from Norwich to New London via I-395 and Route 32 along with a local route along Route 32. Upgrade signals along the routes to provide bus priority.

4.2 Rhode Island Long Range Transportation Plan

The Rhode Island Long Range Transportation Plan (LRTP) published in 2017 aimed to set a direction for state transportation policy and action, complementing land use, economic development, greenspace and greenways, and other topics. The LRTP provided an assessment of needs across modes and proposed financing options, evaluated high-level environmental mitigation strategies, incorporated a land use scenario analysis, and presented recommendations for the following facets of planning: Bicycle, Design, Economic Development, Emergency Response, Environment, Equity, Finance, Highway, Intermodal, Land Use Corridors, Pedestrian,



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

Planning, Safety, and Transit. The recommended goals, which were accompanied by objectives, policies, strategies, and performance measures, included:

- Maintain and expand an integrated statewide network of on-road and off-road bicycle routes to provide a safe means of travel for commuting, recreation and tourism in order to improve public health and reduce auto congestion and dependency
- Strive for excellence in design of transportation projects to enhance safety, security, mobility, environmental stewardship, aesthetic quality, and community livability
- Support a vigorous economy by facilitating the multi-modal movement of freight and passengers within Rhode Island and the northeast region
- Recognize, protect, and enhance the quality of the state's environmental resources and the livability of its communities through well-designed transportation projects and effective operation of the transportation system
- Ensure that the transportation system equitably serves all Rhode Islanders regardless of race, ethnic origin, income, age, mobility impairment, or geographic location
- Maintain the highway and bridge network in a safe, attractive, and less congested condition to carry
 passenger vehicles, commercial vehicles, government vehicles, and transit vehicles, as well as bicycles and
 pedestrians. Recognize roadways as vital public spaces that accommodate travel, commerce, community
 activities, and utility infrastructure.
- Provide convenient intermodal facilities and services offering seamless connections for passengers and freight
- Create and maintain safe and attractive walkable communities to encourage more walking trips, enhance transit usage, improve public health, and reduce auto congestion and dependency
- Conduct a comprehensive, cooperative, and continuing planning process that responds to public interests and concerns, strives to meet the needs of underserved communities, and fosters productive relationships with elected and appointed officials from all levels of government and the private sector
- Provide a safe, robust, and convenient network of transit and shared ride services with seamless intermodal connections in support of increased employment opportunities, improved environmental quality, and reduced congestion and auto dependency



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4.3 Connecticut's Statewide Long Range Multimodal Transportation Plan

The 2018 Statewide Long Range Multimodal Transportation Plan is the state's 32-year plan to improve all modes of transportation in the state. It identifies \$100 billion in funding needs and various policies and recommendations for improving and maintaining the transportation system. Key findings from the study relevant to the ECRTS study area are as follows:

- Need for improved connectivity between regional centers
- All decisions are performance-based and data driven
- The focus should be to invest in transportation in existing population and employment centers
- Improved intermodal connectivity is needed
- Expansion of the existing transit system is needed and make it cheaper and faster than using single occupancy vehicles in dense, mixed-use areas
- Encourage TOD around transportation hubs
- First mile-last mile connections to transit are needed

Specific relevant new recommendations and policies not included in other plans include:

- Provide shuttles between commuter parking lots or satellite parking lots and transit stations
- Provide express bus service in cities and town centers that lack bus and commuter rail service
- Accelerate and monitor TOD plan implementations to improve the attractiveness of central development areas
- Incentivize TOD that concentrates mixed uses around transportation nodes and along major transportation corridors through infrastructure grants, planning programs and improved transit. The infrastructure could be implemented through funding tied to transit tax increment funding (TIF) or value capture programs.

4.4 Connecticut Statewide Freight Plan

The Connecticut Statewide Freight Plan reviews the states interconnected freight system with recommendations for policies, technologies and investments that will help it thrive over the next 25 years. Key findings from the study that impact rail and transit service in the ECRTS study area are as follows:

- CTDOT can authorize up to \$7.5 million in General Obligation bonds annually to provide competitive matching grants for commercial freight rail lines operating in Connecticut. Grant funds must be used to improve, repair, and modernize existing rails, rail beds, and related facilities. Preference is given to projects that improve at-grade crossings to eliminate hazards or increase safety, and that connect to major freight generators.
- The Naval Submarine Base in Groton is a key generator of Class 7 radioactive materials, which are transported by rail
- Forecasts for freight rail demand show an increase in demand (tonnage) along the Thames River Corridor and east of New London along the Northeast Corridor



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4.5 RI State Rail Plan

The 2014 Rhode Island State Rail Plan addressed the state's passenger and freight rail needs over 20 years, based on public participation and state/federal agency collaboration. The plan details the Class I, Class II, and Class III railroads in Rhode Island, along with the state's freight rail lines and abandoned, inactive, or discontinued lines. Proposed rail services and the economic, environmental, energy, and land use impacts of rail were summarized. The following recommendations were made:

- Configuration improvements and crossing grade rehabilitations
- Investigation of feasibility and ridership of a new station/service in Pawtucket, Providence, Aquidneck Island, and Blackstone Valley
- Capacity improvements and the addition of connectors
- Development of a Transit Safety Plan, creation of incident response protocol, and a partnership with law enforcement to prioritize security
- Continued participation in the Northeast Corridor Infrastructure and Operations Commission
- Identification of conflicts and bottlenecks on shared use tracks
- Utilization of rail investments to support community economic development

4.6 SCCOG Bicycle and Pedestrian Plan

The 2019 SCCOG Regional Bike & Pedestrian Plan expanded on existing regional modal analysis in the Metropolitan Transportation Plan and built on the SCCOG Plan of Conservation and Development by providing the following:

- a comprehensive inventory of bike/pedestrian facilities and programs
- an analysis of gaps in the facilities and programs in the region
- a prioritized list of recommendations for infrastructure and programmatic improvements
- information on available and appropriate sources of funding for recommendations in order to improve infrastructure, safety, economic development, public engagement, and member governments' towns

The recommendations included regional bike routes, a push toward greater education, a regional bikeshare system, the adoption of a Complete Streets policy, and a Municipal Toolkit, which detailed recommendations for cities/towns within the SCCOG region.

4.7 Rhode Island Statewide Bicycle Mobility Plan

The 2020 Rhode Island Moving Forward: Statewide Bicycle Mobility Plan (BMP) aims to expand the bicycle network strategically and to connect people and places safely and efficiently for bicyclists in Rhode Island. The plan identifies candidate corridors and supporting policies and programs and was developed through collaboration and extensive outreach. The BMP vision is that riding a bicycle will be safe, fun, and practical in the Ocean State, and eight goals were established within the BMP to achieve this vision:

- Connect and expand the state's bicycle network
- Integrate bicycles within transit and other modes of transportation
- Develop stronger statewide bicycle transportation policies
- Promote equity in bicycle planning and funding



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

- Increase bicycle safety with policies and programs
- Leverage bicycle transportation to promote economic development
- Improve public health through bicycling
- Promote bicycle transportation for state employees

In addition to the aforementioned goals, the BMP encouraged a revision of the RIDOT Highway Design Manual, strengthening the state's Complete Streets Policies, promotion of municipal Complete Streets ordinances, and consideration of bicycle accommodations in RIDOT's Project Scoping Process. Program recommendations included: revise the RI Driver's Manual, improve enforcement of laws related to bicycle and safe road sharing, strengthen the Safe Routes to School program, expand State Transportation Improvement Program (STIP) funding for bicycle and trail projects, and implement Toward Zero Deaths policies statewide and locally.

4.8 SCCOG 2017 Comprehensive Economic Development Strategy

The 2017 SCCOG Comprehensive Economic Development Strategy (CEDS) provided a framework for the region to utilize the region's advantages to maximize economic opportunity for residents by evaluating opportunities, analyzing the economy, establishing goals, identifying priorities, and providing a roadmap to diversify and strengthen regional economies. The recommendations included the creation of a culture of collaboration and coordination, reduction of barriers/uncertainty for developers, building social capital, increasing political presence to ensure equity and improve influence, creating a regional environment that supports economic mobility, and providing access to resources that will facilitate self-reinforcing personal and economic resilience. Additionally, it was recommended that a map of all businesses within key commercial corridors be created, that greater advocacy / assistance with commercial development be implemented, that municipalities adopt a Business Recovery Plan, that conflicts between built environment and the ecosystem be reduced, that an outreach process should be developed, and that access and mobility across demographics be addressed.

5. Review of Relevant Plans of Conservation and Development

A Plan of Conservation and Development (POCD) is a document required by the State of Connecticut to be developed by each municipality every ten years. The document serves to provide a snapshot of existing land use/development, transportation assets/infrastructure and then provide a future vision for where the community would like to move over the coming decade, including identifying key projects, new goals and community priorities.

5.1 SCCOG Plan of Conservation and Development

SCCOG updated their POCD in 2017. It focuses on identifying strategies to address issues such as an aging population, reliance on a few key industries (casino gaming and defense), and fragmented land use development. Key findings, identified needs and goals from the plan include:

- Land use development patterns are dispersed, making it difficult to expand public transportation
- One in 5 residents commute via carpools walking, transit, or some other means
- Transit that meets the needs of the region, especially businesses, low-income workers and aging residents is needed



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

- Complete streets that encourage transit use, biking, and walking should be promoted and built
- Coordinated transportation that makes use of new technologies to improve mobility is needed
- Job growth in the region is expected to increase at a faster rate than the number of adults entering the workforce, which could mean more commuters will travel from outside the region to access jobs
- The two SEAT routes with the highest ridership serve Mohegan Sun
- Rail traffic to New London is limited by capacity on the Niantic River Rail Bridge, which must open and close multiple times per day to permit boat crossings

Plan recommendations relevant to the ECRTS study area include:

- Coordinate public and private providers of transit service (SEAT, Windham Regional Transit District, RIPTA, 9 Town Transit, Pfizer, Electric Boat, Eastern CT State University, Casinos). Produce coordinated map/schedule information.
- Implement Transportation Demand Management and Transportation Systems Management
- Implement the SEAT Bus Study Cost Neutral Plan B recommendations for route alignments to reallocating resources from low-ridership routes to increase frequencies in high-demand corridors
- Install signage & shelters along bus routes and address pedestrian barriers
- Publicize real-time arrival information and market transit service opportunities to attract additional riders
- Construct a BRT route connecting New London and Norwich
- Expand bus service by 25 percent
- Pursue more frequent Shore Line East service to New London and evaluate opportunities for additional rail service locations, including commuter rail service to Westerly, RI
- Develop a plan to protect Amtrak coastal tracks from interruptions caused by seal level rise and storm damage
- Revive passenger rail service along the Worcester and Vermont Lines
- Support high-speed rail on the Northeast Corridor
- Make improvements to passenger rail infrastructure that would permit service to Westerly and increase capacity for Shore Line East service
- Expand state investment in transportation, including the widening of I-95, improvement of rail facilities, expansion of bus service, and the State Pier
- Enhance New London's Union Station as an intermodal transportation hub
- Improve freight rail capacity

5.2 Bozrah

Bozrah updated their POCD in 2015. It focuses on how the town should grow and what would be needed to support growth. Key findings from the plan include:

- Amongst southeast Connecticut communities, Bozrah had the second highest population growth rate from 2000-2010. They had the highest growth rate for new residential developments (15.5 percent). Growth is expected to continue.
- Commercial growth should be focused on Route 82



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

5.3 Town of Groton

Groton updated their POCD in 2016. It focuses on incorporating energy and sustainability throughout the entire plan. Key findings from the plan include:

- The Town contains rail lines (the NEC and a P&W freight line), but they do not have a direct station access
- Sections of the Amtrak rail line floods under certain sea level rises and storm flooding scenarios
- The Town supports rail service improvements, but only if negative impacts to residents and businesses are minimized
- 1,000 people commute between Westerly and Groton
- Amtrak has a maintenance yard on Industrial Drive in Groton and has plans for expansion
- Transit Oriented Development (TOD) may become more appropriate in the future if transit access is expanded, especially in the downtown Groton area

Plan recommendations relevant to the ECRTS study area include:

- Study the feasibility of commuter rail, multi-use transportation hub, and TOD for downtown Groton
- Work with Providence and Worcester (now GWI) to determine upgrades, needs and growth plans for the freight line
- Support a robust water taxi service on the Mystic River and the development of a seasonal water shuttle on the Thames River between tourist sites
- Create a passenger rail platform in Downtown Groton
- Support the extension of SLE to Rhode Island to link with Massachusetts commuter rail

5.4 City of Groton

The City of Groton is a subdivision of the Town of Groton with its own POCD and set of zoning regulations. The City of Groton is defined as the area south of I-95, located along Thames River. Key findings are as follows:

- Pfizer and General Dynamics Electric Boat are the major employers in the City
- The City wants to strengthen and enhance the Five Corners area to promote compact, transit accessible, pedestrian oriented, mixed-use development
- The Town of Groton operates a dial-a-ride service for elderly and disabled. It is open to all Groton (City and Town) eligible residents.
- There is a water taxi on the Thames River connecting New London to the City of Groton in the summer
- The City supports the maintenance and expansion of local and regional public transit services (such as SEAT) to help meet the needs of City residents and businesses
- The City supports rail service improvements provided that negative impacts to local residents and businesses are minimized
- The City has implemented a TIF District and the NEC runs along the edge of it



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

5.5 Ledyard

The Town of Ledyard last updated their POCD in 2020 with goals, in part, to improve streetscapes, infrastructure and walkability, and develop alternatives to single-occupancy vehicle transportation. Foxwoods Casino has been cited as a major reason for an increase in traffic. The POCD articulates a need to:

- Support innovative modes of transportation
- Improve and enhance the provision of public mass transportation
- Evaluate existing bus service and routing while considering increasing service
- Enhance pedestrian and bicycle mobility and safety

5.6 Montville

Montville just completed and updated their POCD. It focuses coordinated development in feasible areas that are compact, transit accessible, pedestrian oriented, mixed use, and have potential for redevelopment. Key findings from the plan include:

- The Town wants to promote infill development
- The northern end of Route 32 has higher traffic levels then the southern end, likely due to Mohegan Sun
- Route 2A traffic volumes are linked to Mohegan Sun. This will likely grow when the former Norwich Hospital Property is redeveloped.
- Route 32 requires improvements to better accommodate the pedestrian and bicycle network
- The Mohegan Sun Casino has contributed significantly to changing the character of the community
- There are very few sidewalks in Montville
- Rail infrastructure is inadequate to operate at speeds to attract regular passenger users if passenger service was provided but upgrades were not made
- There have been recent upgrades to the rail line for freight traffic
- The rail bridge crosses the mouth of the river on a fixed span bridge, it would need to be replaced with a new moveable structure for additional dredging

5.7 New London

New London updated their POCD in 2017. The document focuses on building on existing transportation, recreational, and community assets. It emphasizes the diversity of the City's neighborhoods as a strength. The multi-modal center links bus, rail, ferry, and water taxi services. The POCD articulates a need for:

- Increased rail service between New London and New York City, as well as towards Providence and Boston
- Increased use of ferry and water taxi services
- Expanded freight rail network as an alternative to truck freight
- Creation of new opportunities for green spaces and pedestrian and bike paths with a more walkable/bikeable downtown
- Expansion of the waterfront development zone



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

- Capitalizing on the multi-modal transportation systems, promoting the various modes and creating easy access
- Improving infrastructure should be designed to embrace TOD

5.8 Norwich

The City of Norwich last updated their POCD in 2013 with a goal, in part, to address transportation and mobility needs. The document proposes to do this through mode-specific focus areas:

- Establish and Maintain a Balanced Transportation System: The primary goal of this focus area is to create a transportation system that balances the need of multiple user groups by transforming existing streets to complete streets
- Address Specific Roadway Needs
- Enhance Provisions for Pedestrian and Bicycles: This focus area emphasizes increasing opportunities for bike and pedestrian improvements to solidify them as 'viable' transportation choices. To accompany this goal, they have identified key areas throughout their community as 'Pedestrian Priority Areas'.
- Enhance Transit Services: Beyond the expansion of bus service in their community, they also note continued support for rail improvements, passenger and freight, although no further detail was provided

5.9 Preston

Preston updated their POCD in 2014. It focuses on how to maintain its rural community characteristics, prepare for anticipated growth with the development of the Preston Riverwalk, and sustainably grow in the future. Key findings from the plan include:

- Preston Riverwalk is a planned redevelopment of the Norwich Hospital site and is accessible via rail. Clean up and environmental mitigation is still needed. The redevelopment of this site is the highest priority for economic development in Preston.
- At-grade crossings in the vicinity of Preston Riverwalk need to be upgraded/replaced
- The rail line is an opportunity for mass transit and new freight opportunities
- The Town expressed concern over increased traffic with the future redevelopment of Preston Riverwalk. The redevelopment would cause an increase in traffic, particularly the Route 2A bridge over the Thames River. The existing bridge has limited capacity for additional trips.
- The Town should consider a ferry service across the Thames River to Mohegan Sun from the Riverwalk
- Improvements to transit along the Thames River Corridor are needed to connect Norwich, New London, and Preston. This could be via express bus, improving the SEAT Route 2 service, or expanding Shore Line East Service.

5.10 Stonington

The Town of Stonington last updated their POCD in 2015. The plan outlined the need to preserve environmental and historic resources, protect the community character, diversify the economy, and encourage appropriate economic development. The overall vision for Stonington is to provide sustainable development, strengthen the villages, and promote low impact commercial and residential development. Relevant key findings from the plan include:

• The community is aging, population growth stabilizing, and housing costs are becoming less affordable



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

- The area's tourist attractions would benefit from being better integrated and more easily navigable via different forms of transportation such as bicycles, sidewalks, public transportation, and water taxis
- Villages are generally well served with sidewalks
- Foot traffic is vital to businesses in a village and can be enhanced with greater accessibility and support for bicycles, pedestrians, and mass transit visitors
- There are no off-road bike trails, marked on-road bike lanes or "share the road" signs
- Public transportation in Stonington is limited but functional
- The Mystic Mobility Study (2011) recommended mobility hubs with a free trolley service and water taxi. The intent was to encourage tourists out of their cars.
- Peter Pan used to operate intercity bus service from Mystic to Boston, Providence and New York; service was discontinued in December 2013
- The Eastern Connecticut Transportation Consortium (ECTC) provides dial-a-ride medical transport for the disabled and seniors
- Pawcatuck Neighborhood Center operates a senior dial-a-ride transportation program. Demand for this service has grown significantly from 400 to 1,200 trips monthly. The service includes free door-to-door transportation to residents 55+ of Stonington, Mystic, North Stonington and Westerly using a 12-passenger lift-equipped bus.

Plan recommendations relevant to the ECRTS include:

- Encourage transportation policies that reduce automobile dependence
- Encourage re-use of mills and other underutilized commercial and industrial sites
- Develop and implement bicycle and pedestrian paths along Route 1
- Implement the recommendations in the Mystic Mobility Study
- Explore creation of a water taxi seasonal service
- Promote bus transportation
- Promote improved Amtrak service to Mystic and the expansion of SLE to Mystic and Westerly

5.11 Stonington Borough

The Borough of Stonington is a separate and distinct political jurisdiction from Stonington with its own POCD. Key findings are as follows:

- The Borough has its own zoning regulations
- The number of full-time residents and household size is shrinking while the average resident age is increasing
- Twenty percent of the housing units are seasonal
- The Commission must be sensitive to future development that would increase traffic in the Borough
- Suitable sites for off-street parking in the commercial zones should be reviewed and the feasibility of additional parking should be explored



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

5.12 Waterford

Waterford last updated their POCD in 2015. The plan outlined the need to respond to evolving land use needs, preserve scenic resources, protect historic resources, create a town center, promote economic development, and concentrate development in the Mago Point area. Relevant findings from the plan include:

- The Norwich Line goes through a sensitive cove/embankment at Smith Cove
- The Town wants to provide for mobility needs for all in the community including transit, vehicles, bicyclists, and pedestrians
- Rail crossings should be grade separated for public safety
- Waterford supports having a station on the Amtrak mainline
- The Town promotes "smarter growth" and new mixed-use village type areas in locations served by transit
- Waterford wants to maintain and expand transit services to the extent feasible
- The Town promotes providing more dial-a-ride and other on-demand transit

5.13 Westerly

Rhode Island communities are required to develop comprehensive plans per state legislation; plan content is similar to that of a POCD in a Connecticut community. The Westerly Comprehensive Community plan was updated in 2020. The plan focuses on achieving an appropriate balance between conservation and development. Key findings from the plan include:

- A core value of the plan is to limit auto traffic through support of public transit
- Promote alternative transportation modes such as walking, biking, public transit, and water taxis
- Ridership at the station increased steadily from 2013 to 2018, increasing by 16.5 percent over the five-year period
- The town would like to see both SLE and the MBTA commuter rail extended to Westerly
- There is high walkability and density surrounding the train station, making it a great candidate for TOD
- The Westerly Station is currently undergoing construction of an ADA accessible tunnel

Plan recommendations relevant to the ECRTS include:

- Require multi-modal transportation analysis for development projects that include public transportation
- Improve the area around the train station by evaluating parking, safe access and redevelopment potential
- A study is needed to assess ridership projections regarding commuter rail extensions
- Collect and monitor Amtrak statistics
- Promote Amtrak service as a travel option for residents and visitors
- Support the development and implementation of changes that allow for TOD at or near the train station
- Support the development and implementation of a downtown parking strategy and zoning ordinance changes to expand parking availability while also protecting the character and charm of Westerly
- Pursue, with RIPTA, the opportunity for a transit mobility hub, the expansion of the flex-bus service, the inclusion of Misquamicut State Beach on the existing seasonal bus service



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

- Review and revise off-street parking regulations in the Zoning Ordinance to incorporate automobile parking maximums based on need, the inclusion of bicycle parking minimum, and access to transit
- Pursue a public-private partnership to provide high-quality redevelopment, and revitalization within a halfmile radius of Westerly Station that is vibrant, compact, and pedestrian-oriented

6. Review of Existing Other Relevant Municipal Plans

This section contains additional relevant municipal plans such as parking studies, economic development strategies, neighborhood plans, design guidelines, local bike and pedestrian plans, and corridor studies.

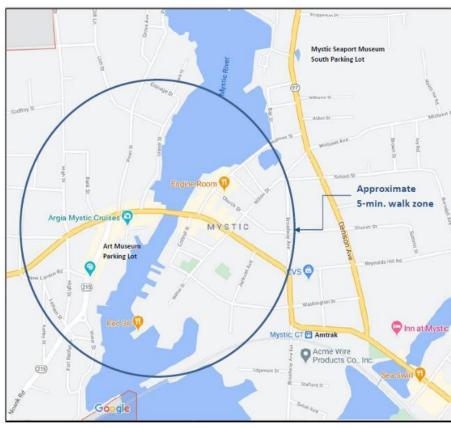
6.1 Downtown Mystic Parking Study

A parking study for downtown Mystic was completed in 2021. The study was commissioned due to the "unique parking challenges" of downtown Mystic. As Mystic is not a municipality, but rather a census designated place (CDP) encompassing parts of the Town of Groton and the Town of Stonington, each of the aforementioned towns manage their own parking regulations within the boundaries of downtown Mystic. The parking study area included a quarter mile radius (or 5-minute walk) of downtown Mystic, with additional consideration of nearby residential streets impacted by parking demand. Key findings from the study include:

- Parking requirements, fees, and fines are different in each town
- Parking demand is summer seasonal with high tourism use on weekends both onand off-season
- On-street parking on nearby residential streets is free and unregulated and makes up the bulk of on-street parking supply in the study area
- Free 2-hour parking is available in downtown Mystic, but reaches maximum capacity on weekday and Saturday afternoons, making it difficult to find parking near one's destination
- Compliance with 2-hour time limits is low, resulting in poor turnover of parking spaces which can negatively impact retail sales
- Nearly all available off-street public parking is privately owned and operated by the Mystic Art Museum in Groton



Figure 4. Downtown Mystic Parking Study Area



Appendix C: PREVIOUS REPORT REVIEW

EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

- Parking rates by the Mystic Art Museum are inconsistent with comparable New England coastal towns, with high hourly and daily rates, but low annual permit rates. The waiting list for annual passes is over 300.
- Parking at the Art Museum routinely exceeds capacity on weekends, with parking inventories as high as 116% capacity on an offseason Saturday afternoon
- Parking enforcement in both towns is seasonal, with off-season enforcement being complaint-driven

Plan recommendations relevant to ECRTS include:

- Install parking meters for on-street parking and increase enforcement to improve parking turnover
- Increase off-street public parking through expansion of existing public facilities, leasing or purchasing private parking, and implementation of shared-lot agreements
- Create an off-street employee parking permit system to reduce employee parking in 2-hour on-street spaces and in nearby residential neighborhoods
- Implement demand-based pricing with lower prices in lower demand areas and higher prices in higher demand areas, thereby increasing on-street parking turnover and making rates comparable to nearby coastal towns
- Consider implementing a seasonal shuttle service between remote parking areas, hotels, attractions, and Mystic Train Station to reduce parking demand in and improve access to downtown Mystic

6.2 SUBASE New London Joint Land Use Study

The Joint Land Use Study (JLUS) for the Submarine Base (SUBASE) New London area was published in December 2017. According to the report, the JLUS is "a cooperative land use planning effort between local governments and military installations. It seeks to ensure the lasting compatibility of military installations and their neighboring communities." In conjunction with stakeholders, committees and members of the public, the JLUS identified four categories of concern to guide recommendations of the report: Transportation, Thames River, Land Use and Development, and Coordination and Cost Sharing. Key findings and relevant recommendations included:

- Congestion from the main SUBASE entrance, particularly at peak morning hours, backs up onto Route 12 affecting local traffic patterns. A traffic management plan can help address congestion caused by gate closures, security threats, and SUBASE events.
- Poor conditions for biking and walking to the SUBASE discourages alternate modes of travel. Improvement of pedestrian and bicycle infrastructure and installation of bike-share stations at the SUBASE and General Dynamics Electric Boat would be more attractive for non-motorized traffic.
- Creation of a 'mobility hub' on Crystal Lake Road would improve multi-modal access to the SUBASE by providing a bus stop, a pick-up/drop-off point for car service and private vehicles, and a bike-share station
- Shuttle service between SUBASE New London, off-base housing, and Electric Boat would decrease private vehicles traveling to the SUBASE, as well as reducing parking demand
- Compatible development on Crystal Lake Road is desired, however, permitted uses and design criteria in the Nautilus Memorial Design District are unclear and unwelcoming to developers. Implementation of clear zoning guidance in the Nautilus Memorial Design District would encourage compatible development such as restaurants, hotels, and multi-family housing.
- Fluctuating housing needs at SUBASE New London and Electric Boat affect local transportation, housing, services, and the overall economy. Creation of additional housing opportunities near these destinations can reduce traffic congestion and provide economic benefits.



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

A second report, the SUBASE New London JLUS Implementation Project, was published in October 2019 and detailed the regional impacts of increased submarine-building activity in the Groton/New London area. Key findings and recommendations are listed below:

- Employment growth at Electric Boat is projected to help mitigate recent regional population declines and increase regional employment
- An increased demand for housing is projected to increase local home values and support demand for building additional housing, however, housing affordability issues will continue to be of grave concern
- The impacts of employment growth on transportation infrastructure are manageable with minor recommended improvements and the continuance of existing planned transportation projects
- Additionally recommended transportation projects include a SUBASE Access & Circulation Study, Groton Transit Hub creation, Five Corners reconstruction, Route 12 improvements, and a pedestrian safety improvement project for Eastern Point Road/Mumford Avenue

6.3 Groton Parking Management Plan

The City of Groton Parking Management Plan was undertaken at the recommendation of the SUBASE New London Joint Land Use Study (JLUS). The study was intended to determine if parking capacity in Groton is sufficient for a projected increase in employment at General Dynamics Electric Boat of 5,000 additional employees. At this time, the study is still underway, however Chapter 1 (Existing Conditions) has been released. Key findings from Chapter 1 are below:

- Only 6 percent of off-street parking spaces are publicly accessible; the other 9,412 off-street spaces are restricted access
- Eleven percent of all parking spaces and 43 percent of on-street parking spaces fall under residential permit parking (RPP zones)
- On- and off-street parking spaces are most utilized between 10 AM and 12 PM, when 42 percent of the total spaces are occupied

6.4 New London Downtown Transportation and Parking Study

The City of New London commissioned a transportation and parking study of the downtown area in 2017. The stated mission of the study was "to assess and plan for current and future needs of motorists and non-motorists." Key findings and recommendations are as follows:

- Accommodation and safety of bicycle and pedestrian traffic greatly varies from street to street
- Downtown parking assets can be better utilized through the use of shared parking and public access to private parking areas
- Strategic parking pricing and upgraded parking equipment can improve turnover of prime parking space to accommodate more users
- Zoning regulations regarding parking should be modified to be in keeping with the City's redevelopment goals of infill development and building reuse
- Incentivizing and providing public transit and non-motorized transportation alternatives decreases downtown traffic and parking demand
- Additional parking can be added to the existing supply by expanding Water Street Garage or through new construction



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

6.5 Historic Downtown Norwich Parking Report

The Historic Downtown Norwich Parking Report is a published draft report detailing many industry best practices for parking management that may be applicable to downtown Norwich. Some of the findings of the draft report are listed below:

- Downtown Norwich has more than 3,000 parking spaces, of which approximately 1,800 are public spaces
- The City of Norwich leases approximately 700 parking spaces to other agencies
- Available parking needs to "feel clean, safe and comfortable" to combat perceptions of parking problems
- Wayfinding and signage are also important elements of effective parking management

6.6 Downtown Pawcatuck Parking Study

The 2007 Downtown Pawcatuck Parking Study was conducted to examine the existing parking supply and usage and ability to meet future parking demand. Key findings and recommendations include:

- Parking is generally underutilized, which may be partially attributed to building vacancies
- Parking areas nearest the bridge had the highest usage due to the accessibility of nearby mixed-use development
- Shared parking is not currently feasible due to costs of application and relevant deed restrictions. The study recommended modification of zoning regulations to incentivize shared parking and reduce minimum parking requirements.

6.7 City of Groton Economic Development Strategy and Action Plan

The City of Groton Economic Development Strategy and Action Plan holistically approached the economics of the City, recognizing the need for an adaptable economy that promotes diverse opportunities and continuously monitors and adjusts accordingly. The plan encouraged the City to diversify, modernize, and grow the housing stock, enhance access to amenities and recreational opportunities, grow alternative transportation options, address parking in economic nodes, connect with students to help them with local career opportunities, strengthen connections with existing business communities, align the workforce needs to support existing and emerging opportunities, and educate the public on economic development.

6.8 Thames River Innovation Place – Thames Street Promenade Study

The goal of this study was to produce a high-level, policy-oriented document to guide future action in the Thames Street Promenade in Groton and Hodges Square Neighborhood in New London, providing conceptual-level strategies for strengthening the sense of place and vitality in the areas to outline real estate and physical improvement recommendations. The key findings from the study are listed below:

- There are a variety of uses and range of parcel sizes along Thames and Bridge Streets
- Vacant and underutilized parcels are concentrated around the intersection of Upper Thames and Bridge Streets
- Environmental factors impact the feasibility of redevelopment along portions of the Thames River



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

- The economy is recovering steadily with moderate growth
- Demography creates challenges to driving growth
- For commercial development, it is cheaper to buy than build
- Residential housing values and rents have improved and there is a limited available supply
- Adequate parking exists but it is often privately owned, not always visible, or lacks immediate proximity to visitors' destinations

Some of the strategies from the study included:

- Leverage Thames Center to maximize its value due to a walkable historic coastal village feel
- Enhance the waterfront to become an amenity that can draw people to Thames Street
- Concentrate denser development at Upper Thames Street/Bridge Street to take advantage of the topography, parcel sizes, and limited flood zones
- Create a buffer zone around Electric Boat to enhance security and create potential expansion zone for suppliers and Electric Boat itself

6.9 Regional Intermodal Transportation Center Master Plan and Efficiency Study

In 2010 SCCOG commissioned a study of transportation facilities in downtown New London that focused on the Union Station area. Union Station is the confluence for rail, ferry, local bus, intercity bus, taxi service, and private bus shuttles but actual connections (physical conditions, wayfinding, and information) between services could be improved. The study developed a plan for improving linkages between modes and services, pedestrian access to the station, traffic circulation, and parking. Key findings and relevant recommendations are listed below:

- Pedestrian facilities need improvements to ensure safe and convenient access between travel modes and to and from the parking facilities, particularly to/from the Water Street Garage and Julian surface lot
- The SEAT bus stop is minimal and consists of a simple shelter and several outdoor benches. There is no indoor waiting area. It needs improvement.
- Lighting and wayfinding signage is lacking
- To connect between Amtrak southbound and the docks for Fishers Island requires crossing the tracks. A pedestrian bridge is needed.
- If SEAT were to increase route frequency or add routes, there is insufficient space at the existing stop for vehicles to layover
- Water Street should be relocated 50 feet west to create a new combined SEAT and Greyhound bus terminal on the east side
- The sidewalk from the existing bus stop on Water Street to Governor Winthrop Boulevard should be widened to 8 feet
- The plan recommends a new combined bus terminal for Greyhound and SEAT on the east side of Water Street. The terminal should have designated bus bays. A new building would be constructed with indoor waiting space for passengers. Outdoors there would be canopies to provide shelter for those waiting.



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

6.10 Mystic Multi-Modal Transportation Study

This study identified and analyzed traffic patterns into and around historic Mystic, analyzed on- and off-street parking space utilization, reviewed past and current mass transit and non-vehicular options, identified peak hours of parking, traffic, and commuter flows, identified deficiencies in the current system, and recommended actions to eliminate deficiencies. The study found that the greatest number of inter-area vehicular movements occurred between 4 PM and 8 PM. A lack of funding for mass transit, summertime regional traffic congestion, downtown Mystic congestion, and a lack of coordinated parking efforts were identified as weaknesses in the study area. The study recommended the following actions:

- Improve efficiency of vehicle movements through utilization of alternate modes of transportation
- Improve the Route 1/Route 27 Intersection using access management control
- Improve directional signage throughout the Mystic region
- Reduce vehicle congestion while maintaining pedestrian accessibility throughout the downtown

It was determined that the entire area of Mystic could be walkable if connectivity was improved. Furthermore, the need for area-wide parking coordination and transit as well as the reinstitution of the Mystic shuttle bus service were identified as opportunities for improvement. The study suggested an expansion of the Mystic Seaport Water Shuttle Service and the creation of a transit center near the I-95/Route 27 Interchange.

6.11 Stonington Design Review Guidelines

Stonington's Design Review Guidelines aim to maintain the well-defined character of the Town by promoting development projects that are in harmony with the Town's architectural heritage, encourage better design and site planning, and improve communication among developers, neighbors, and the Town early in the design and siting of new development. Design review is not required for single-family, duplex, and triplex residential units, but is required for new commercial, institutional, multi-family, and mixed-used construction or structures that replace 25 percent or more of the structure's exterior façade. The guidelines outline that projects must be compatible with historic scale of surrounding development and provide a sensitive transition to nearby, less intensive zoning districts, using sensitive topographic transitions (such as terrace walls), articulating perceived heights differently than actual heights, and avoiding flat roofs. On-site parking for new development must be placed to the rear or sides of buildings, and the ultimate goal is to promote architectural legacy while revitalizing the Town.

7. Key Findings

A high-level summary of key findings relevant to ECRTS include:

- Existing rail infrastructure conditions on the Northeast Corridor place significant constraints on speed and capacity
- TIME FOR CT is the actionable rail vision addressing service and infrastructure improvements throughout the state of Connecticut, with an emphasis on improving trip times by 2035
- Connect NEC 2035 is a collaborative reinvestment program addressing state of good repair backlog and improved service and travel-time goals



EASTERN CONNECTICUT CORRIDOR RAIL AND TRANSIT FEASIBILITY STUDY

- Southeast Area Transit District (SEAT) Bus Study, SCCOG Long-Range Metropolitan Transportation Plan, and SCCOG POCD set the goal of express bus service or Bus Rapid Transit light service from New London to Norwich to improve inter-regional connectivity
- Transit service reliability and efficiency, improvements to system and fare connectivity between rail and bus networks, and improvements to address gaps in transportation are needed
- Strategies encouraging complete streets and coordinated accessible transportation should be promoted, particularly in ways that meet the needs of the region and its communities

