Executive Summary

Regional Intermodal Transportation Center Master Plan and Efficiency Study

Southeastern Connecticut Council of Governments

March 2010







TranSystems

EXPERIENCE Transportation

Acknowledgements

This study was prepared in cooperation with the Connecticut Department of Transportation. The opinions, findings and conclusions expressed in this publication are those of the Southeastern Connecticut Council of Governments and do not necessarily reflect the official views or policies of the Connecticut Department of Transportation.

This study was sponsored by the Southeastern Connecticut Council of Governments. The project was managed by SCCOG Executive Director James S. Butler, AICP. Also involved in the management of the study was SCCOG Assistant Director S. Richard Guggenheim.

This study was funded by a grant from the Connecticut Department of Transportation. The Connecticut DOT Project Manager was Andrew H. Davis. Other Connecticut DOT staff made significant contributions to the study and served on the Stakeholder Steering Committee, including Deputy Commissioner Albert Martin; Grayson Wright of the Bureau of Policy and Planning; and Eugene Colonese, Craig Bordiere and Jon Foster of the Rail Office.

SCCOG and the consultant team would like to acknowledge members of the *Stakeholder Steering Committee* and the interested study participants listed in alphabetical order below:

Martin	Berliner	SCCOG, City of New London City Manager
Kip	Bochain	Parking Commission Chairman
Ella	Bowman	SEAT General Manager
John	Brooks	New London Development Corporation
Karen	Bryant	City Center District
Michael	Carey	Suisman, Shapiro, Wool, Brennan, and Gray
Kevin	Cavanagh	City of New London
Joseph	Celli	Water Street Garage
Sandra	Chalk	New London Landmarks, Executive Director
Jenny	Contois	Congressman Joe Courtney, District Director
William	Cornish	Cornish Parking
Charles	Curtin	Curtin Transportation
Chris	DuPont	Fishers Island Ferry (invited)
Dick	Guggenheim	SCCOG
Charlotte	Hennigan	Thames River Greenery (invited)
Rep. Ernest	Hewett	State Representative
Bruce	Hyde	City of New London, Director of Planning and Development (early in study)
Rev. Wade	Hyslop, Jr.	City of New London
Joseph	Jaskiewicz	Mayor, Town of Montville, SCCOG Chairman (beginning of study)
Chris	Jennings	Mystic Coast and Country (early in study)
Michael	Joplin	New London Development Corporation, President
Dan	Karp	Daniels Dairy Downtown
John	Markowicz	seCTer, Executive Director
Jim	Martin	SEAT Chairman (at time of study)
Molly	McKay	(invited)

Frank	McLaughlin	New London Main Street, President
Stan	Mickus	Cross Sound Ferry
Rep. Edward	Moukawsher	State Representative
Jeffrey	Nelson	Governor's Eastern Office
Todd	O'Donnell	Union Station
Penny	Parsekian	New London Main Street, Chief Executive Officer
Kevin	Regan	Amtrak
Frederick	Riese	Connecticut DEP
Rep. Betsy	Ritter	State Rep. 38th District
William	Satti	Mashantucket Pequot Tribe (invited)
Tony	Sheridan	Chamber of Commerce of Eastern Connecticut, President
Peter	Simmons	CT Department of Economic and Community Development
Donna	Simpson	Eastern CT Tourism District, Executive Director
Harry	Smith	City of New London, City Planner
Joe	Smith	Mohegan Tribe (invited)
Dan	Steward	SCCOG, First Selectman, Town of Waterford
Sen. Andrea	Stillman	State Sen. 20th District
Tom	Stone	Greyhound

Southeastern Connecticut Council of Governments

Bozrah	William Ballinger	First Selectman
Colchester	Gregg Schuster	First Selectman
East Lyme	Paul Formica	First Selectman
Franklin	Richard Matters	First Selectman, SCCOG Chairman
Griswold	Philip Anthony	First Selectman
Groton City	Dennis Popp	Mayor
Groton Town	James Streeter	Mayor
	Mark Oefinger	Town Manager
Ledyard	Fred Allyn	Mayor
Lisbon	Thomas Sparkman	First Selectman
Montville	Joseph Jaskiewicz	Mayor
New London	Rob Pero	Mayor
	Martin Berliner	City Manager
North Stonington	Nicholas Mullane	First Selectman
Norwich	Peter Nystrom	Mayor
	Alan Bergren	City Manager
Preston	Robert Congdon	First Selectman
Salem	Kevin Lyden	First Selectman
Sprague	Catherine Osten	First Selectman
Stonington Borough	Donald Maranell	Warden
Stonington Town	Ed Haberek	First Selectman
Voluntown	Ronald Millovitsch	First Selectman
Waterford	Dan Steward	First Selectman

The Consultant Team

The consultant team was led by TranSystems with Larry Englisher as Project Manager. The other members of the consultant team were Crosby Schlessinger Smallridge, LLC; Fitzgerald & Halliday, Inc.; Basil Baumann Prost and Associates, LLC; and URS Corporation. Individuals from these firms who contributed to the study are listed below:

TranSystems

Larry Englisher	Vice President, Project Manager
James Wensley	Senior Transportation Planner
Shruti Rathore	Transportation Planner
Jeremy Mendelson	Transportation Planner

Crosby Schlessinger Smallridge, LLC

Skip Smallridge	Principal
Chris Riale	Planner/Urban Designer

Fitzgerald & Halliday, Inc.

Jill Barrett	Principal Planner
Sam Eisenbeiser, AICP	Principal Planner
Paul Stanton	Principal Planner
Carla Tillery	Principal Planner/Engineer

Basil Baumann Prost and Associates, LLC

Jim Prost	Principal
David Starnes	Vice President
Autumn Calder	Associate

URS Corporation

Paul F. Schmidt, PE	Senior Transportation Engineer
Stuart Popper, AICP	Principal Planner

1. Introduction

1.1 Background

Downtown New London is the confluence of various modes of transportation serving the entire southeastern Connecticut region. Today, the collection of several individual transportation terminals and facilities located in close proximity to each other in downtown New London constitutes the Regional Intermodal Transportation Center (RITC). At the center of the RITC is Union Station, an historic, architecturally-significant and imposing structure designed by H.H. Richardson and built in 1888. This privately owned building serves as the region's train station for Amtrak intercity rail (Acela Express and Regional trains operating on the busy Northeast Corridor) and Connecticut DOT's Shore Line East commuter rail service (its easternmost terminal). Located alongside Union Station are the Amtrak-owned tracks used by passenger and freight rail services.

Union Station is also the site of New London's intercity bus terminal and the New London hub of the region's bus transit system. The Greyhound intercity bus station is located in a separate brick structure on Union Station property just north of the station's old baggage shed. The local transit system, Southeast Area Transit (SEAT), has a curbside bus stop with a simple shelter on Water Street, north of the building and the Greyhound station. This bus stop serves as its New London hub.



Union Station

Space for the transportation uses at Union Station is currently leased from the private owners by the operators of rail (Amtrak) and intercity bus service (Greyhound). The private owners of Union Station, who acquired the building in order to preserve it, have been exploring alternative uses for the building which includes considerable vacant space.

Various ferry services operate from the adjacent waterfront area to points in New York State and Rhode Island, although seasonal cruise ships dock at the Admiral Shear State Pier, beyond walk distance from the site. Private bus operators serving the two casino resorts in the region connect with passenger ferries. Local travel is also provided by three taxi companies which have a taxi stand in front of Union Station. There are two parking garages and several surface lots in the area serving patrons of the RITC and the local street network connects travelers to I-95 and the rest of the interstate highway network. Across Water Street, the City of New London operates parking garage with over 900 spaces providing parking for downtown needs as well as for the transportation terminal, particularly ferry and rail users.

Despite the general proximity of the modes, the actual connections between services could be improved in terms of physical conditions, directness, wayfinding, information and other factors. This Master Plan and Efficiency Study, commissioned by the Southeastern Connecticut Council of Governments (SCCOG) and funded with a grant from the Connecticut Department of Transportation, was undertaken to determine how the intermodal hub can be improved. The study was conducted by a team of consultants led by TranSystems, including Basile, Baumann Prost & Cole LLC, Crosby, Schlessinger, Smallridge LLC, Fitzgerald & Halliday, Inc., and URS Corporation.

1.2 Study Purpose and Objectives

The purpose of the Master Plan and Efficiency Study has been to develop a seamless regional transportation hub to meet regional transportation needs that also supports the revitalization of downtown New London. SCCOG and the City sought to ensure that a vital transportation hub is maintained with enhanced functionality for all transportation connections. These transportation assets are seen as key to New London's future development. The City of New London, a key stakeholder, wishes to promote development in downtown New London near the hub in a manner that will provide economic benefits, build on the transportation features as well as the waterfront and historic and architectural assets, and correct some past urban redevelopment decisions that have not contributed to the vitality of downtown.

The study contained the following specific objectives:

1. Determine if the Regional Intermodal Transportation Center (RITC) should remain at this site or be relocated to an alternate site
2. Conduct a physical inventory of RITC component facilities
3. Evaluate existing and future operational needs for each mode at the RITC
4. Analyze market potential for transit-oriented development at or near the RITC
5. Identify and evaluate potential improvements for the short and long term
6. Evaluate costs and economic impacts
7. Evaluate environmental conditions and implications
8. Develop a master plan including recommended actions

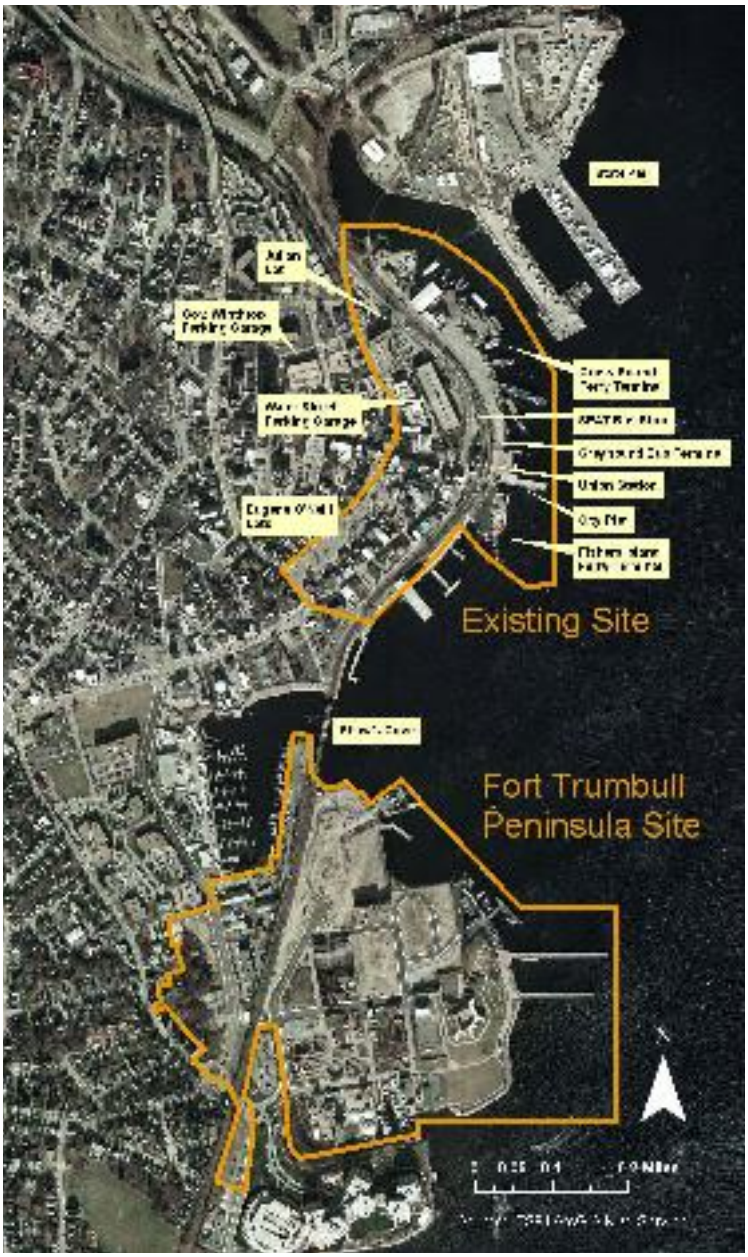
In addition to the technical objectives listed above, reaching public consensus was an important objective. There was ongoing stakeholder and public involvement and agency coordination throughout the study. This included two public meetings and six meetings of a Stakeholder Steering Committee including representatives of transportation providers, property owners, downtown business and other interest groups, and representatives of City and State agencies. (The public process is documented in Appendix F including meeting minutes.) Individual meetings were also held with key stakeholders. A study webpage was maintained on the SCCOG website (www.seccog.org) and fact sheets were prepared and distributed. Finally, passenger surveys conducted early in the study (in summer 2008) were a means of outreach to travelers.

This Executive Summary provides a brief description of each major step of the study with the emphasis on providing a summary of the recommended master plan. Each step is more fully documented in the final report.

2. Confirmation of Site Selection

A comparison of alternative sites was requested by Connecticut DOT, the agency funding the study, to serve the purposes of an alternatives analysis (as far as site location) for any subsequent NEPA documentation. The site for the future improved Regional Intermodal Transportation Center (RITC) was selected based on a comparison of two pre-selected alternative sites for the RITC - the existing site located in downtown New London along Water Street and the Fort Trumbull peninsula, a redevelopment site in the City of New London. (Fort Trumbull was cited as a place with visitor interest – due to the presence of Fort Trumbull State Park -- and a possible site for cruise ships to dock. It also is along the railroad right-of-way.) Figure ES-1 shows the location of the two sites.

Figure ES-1: Location of the Two Candidate Sites



Specific criteria for use in the evaluation included:

- Capacity for Operations - Landside
- Capacity for Operations - Maritime
- Compatibility with Other Existing/Potential Uses
- Environmental Sensitivity
- Parking Capacity (for all modes)
- Pedestrian Access (for all modes)
- Vehicular Access (for all modes)
- Traffic Impacts (for all modes)
- Capital Cost (for all modes)
- Economic Development Opportunity
- Likely Public Support
- Capacity to Accommodate the Entire Package of Modes

The recommendation of consulting team was that the RITC be maintained at the downtown site based on the following reasons:

1. There is widespread and firm desire among stakeholders interviewed, including the transportation operators, to keep the RITC at their current sites to support and serve downtown. There are perceived advantages to retaining the downtown location for each mode of transportation.
2. Only the cruise ships which currently dock at the Admiral Shear State Pier would really benefit from being at Fort Trumbull (it was one of the major considerations of ConnDOT in their suggesting Fort Trumbull as the alternative candidate site for the RITC). Moving the cruise ships to Fort Trumbull might enhance the attractiveness of New London to cruise ship operators and passengers, but it is not functionally necessary to move them and it is certain to be costly and, after thorough consideration, was deemed infeasible due to landside access constraints and marine operational factors.
3. Many transportation operators would face constraints at the Fort Trumbull site, such as the limited and circuitous access to the site, parking requirements and the need to dredge to create ferry terminal.
4. The existing RITC sites offer the needed capacity and opportunities for improvements, some of which are underway.
5. There is existing support for enhanced development around the existing sites and there are some sites for such development.

The Stakeholder Steering Committee reached a clear consensus agreeing with the consultant recommendation. With the concurrence of the SCCOG, the current site became the focus of the remaining tasks of the Master Plan and Efficiency Study, which developed a plan for creating an improved RITC at the selected site.

3. Transportation Services at the RITC

The following long distance modes are provided at the existing RITC:

- Amtrak intercity rail service, with a ticket office and waiting area in Union Station
- Shore Line East (SLE) commuter rail service, operated for Connecticut DOT by Amtrak and currently limited to one roundtrip per day at New London but expected to expand soon to six roundtrips per weekday
- Greyhound intercity bus service (operating from sawtooth bays and its leased terminal building just north of Union Station)
- Cross Sound Ferry (located on property east of the railroad tracks with vehicular access from the Governor Winthrop Boulevard crossing)
    - Auto ferry service to/from Orient Point, NY (Long Island)
    - Sea Jet passenger-only ferry service to/from Orient Point, NY (Long Island)
    - Block Island Express passenger-only ferry service
- Fishers Island auto ferry service (owned by the municipal government of Southold, NY and operating from a fairly new terminal building located east of the railroad tracks at State Street near City Pier)

In addition there are several local access modes, including:

- SEAT bus transit service (seven routes which pulse on an hourly basis) operating from a curbside location on the east side of Water Street just north of the Greyhound bus area (except for the route to Foxwoods which operates from directly in front of Union Station)
- Casino coaches (which meet Sea Jet passenger ferries on Cross Sound Ferry property)
- Taxis, which stand in front of Union Station
- Automobile parking, including the City-owned Water Street Garage, Cross Sound Ferry on-site parking (partially on land leased from the City), Governor Winthrop Garage, City-owned Eugene O'Neill Drive lots, and the Julian lot (open on summer weekends)

4. Existing Facilities at the RITC

The existing physical conditions of the transportation facilities located in downtown New London that make up the Regional Intermodal Transportation Center (RITC) were inventoried. These include the rail station, bus facilities, ferry facilities, parking facilities, taxi stand, vehicular and pedestrian network, and the City Pier area, shown in the aerial photo below in Figure ES-2.

Figure ES-1: Existing Transportation Facilities in Downtown New London



Most of the physical facilities are in good or very good condition, although some deficiencies were identified through observations of the consultant team and information from user surveys and interviews. The most notable deficiencies were the poor pedestrian connections, lack of amenities and comfort at the rail and bus facilities, conditions of elevators and stairways as well as deterioration of the concrete at the two garages,

inadequate security systems at parking facilities, and lack of wayfinding signage between transportation modes.

Current pedestrian facilities need improvements to ensure safe and convenient access between travel modes and to and from the parking facilities. The most notable deficiencies are between Cross Sound Ferry and the other facilities. Improvements are also needed to and from the Water Street Garage and Julian surface lot and the various transportation services. The Parade Project, for which construction is now nearly completed, will improve pedestrian safety in the vicinity of Union Station through enhanced crosswalks, sightlines and traffic calming. However, there are other needed improvements.

Union Station has had renovations to the lobby and roof, and the station platforms are in good condition. The Greyhound terminal, leased from the owners of Union Station, is in sound condition but is very basic and has not undergone renovations to enhance its appearance. The SEAT bus stop is minimal as a passenger facility, consisting of a simple shelter and several outdoor benches. It would benefit from improvements to enhance passenger comfort or relocation to a location which could provide indoor waiting areas and other amenities. Bus and rail users surveyed indicated particular concerns about amenities (e.g., lack of food services, newsstand and clean restroom facilities) and comfort at the rail and bus facilities.

Fishers Island Ferry has a new (3-year old) terminal facility that is in very good condition. The Cross Sound Ferry facilities are in good condition. Some of the parking areas in use at Cross Sound Ferry are unpaved. Users of the Cross Sound ferry facilities indicated concerns about lack of amenities and sufficient convenient parking.

The Water Street Garage and Governor Winthrop Garage show evidence of deferred maintenance (in particular, deteriorating concrete), although some repairs are now underway at the Water Street Garage addressing elevators, security, lighting and signage and others are planned. In addition, the elevators at the Water Street Garage need repairs. (A new tower is being constructed at the south end of the garage with a new elevator as part of the Parade Project.) Surveys of users of the parking facilities conducted as part of this study indicated the most dissatisfaction was with the stairways and elevators at the garages, as well as handicapped access. Another concern expressed in the surveys at the parking facilities was about security features. There is a lack of security systems in the garages and parking lots, including closed-circuit TV and blue light call boxes. The Water Street Garage will have security cameras installed as part of upcoming renovations.

Overall, the transportation facilities are not providing adequate access for persons with disabilities, based a field assessment conducted as part of this study in late 2008. Handicapped access in the Water Street Garage was considered to be a problem in the user survey. This may largely be due to the fact that the elevators were out of order. This will be corrected with the installation of a new elevator at the south end as part of the Parade Project.

Additional improvements to the remaining elements are warranted. Lighting and wayfinding signage are lacking. Although many of the survey respondents did not identify that lighting was poor or deficient, lower level pedestrian fixtures will both improve aesthetics and also provide a stronger sense of security. While survey respondents generally identified ease of access as being good; there was less satisfaction with signage. In general, wayfinding signage throughout the city street network is lacking; the existing signage doesn't provide clear and concise messages nor are the signs strategically placed. Better than 30% of the respondents indicated that signage was below average at the Cross Sound Ferry Lot location.

Finally, while there is a large "Welcome to New London" sign on the Water Street Garage (in letters along the face of the garage near the roofline), more needs to be done to attract the visitor in terms of restaurants, shopping, etc. that can be seen by visitors arriving at the RITC, particularly for those arriving at the Cross Sound Ferry Terminal, Greyhound Bus Terminal or SEAT bus stop. The railroad right-of-way area was found to be unattractive and did not appear to be well-maintained during the field review in late 2008. However, over the course of the study, several improvements have been made. The Parade Project has been constructed and is nearing completion. It is improving the area to the south of the Water Street Garage by opening up views and creating an attractive pedestrian plaza. The City has been installing new steel post fencing along the west side of the railroad right-of-way. (The decision to use steel post fencing rather than cyclone fencing was influenced by this study's recommendations.) New London Main Street has installed some new wayfinding signage and is installing "gateway" signage at strategic locations. Despite this progress, there is a need to take additional actions to create a more pedestrian- and tourist-friendly area around the RITC.

5. Existing and Future Transportation Needs

The study identified elements of the transportation center that are working well and should be maintained, as well as many elements that are in need of improvement. Future ridership increases, expansion of services, growth in tourism, and new development in New London will likely create new needs that must be addressed in the future. Each of these areas is summarized below.

5.1 Current Needs

For the most part, each individual transportation provider's operation is working fairly well. Amtrak operates smoothly through New London. Buses come and go with minimal delays from local traffic on most days. Ferry operations run smoothly. Parking facilities fill on only a few days each year.

Several key connections between modes were identified. Where these key connections are good, they should be maintained. Good connections are close together, on good surfaces, esthetically pleasing, weather protected and free from obstructions and delays. The good key connections that should be maintained include:

- Greyhound to/from SEAT
- SEAT's Foxwoods Route (#108) to/from Amtrak southbound (northbound requires crossing the tracks)
- Greyhound to/from taxis and pick-up/drop-off
- Amtrak to/from taxis and pick-up/drop-off (although some may have to cross the tracks)
- Amtrak northbound to Fishers Island (southbound requires crossing the tracks)
- SeaJet high-speed passenger ferry to/from the casino shuttles
- Amtrak southbound, Greyhound, and SEAT to/from the Parade and downtown
- Roadway access to the Long Island Auto Ferry and to the two garages

There are also several other good quality connections that are made less frequently and thus not deemed key connections. While less critical, these should also be maintained if at all possible.

Bus Facilities - Bus facilities and operations are most in need of improvement. Greyhound's ticketing and waiting area is antiquated and there is no outdoor waiting area or outdoor seating. The existing saw-tooth bus bays are not configured as Greyhound prefers and create possible safety concerns when buses need to back up into traffic. Greyhound also desires access to a third bay. SEAT would prefer a location closer to the train station and would like an indoor facility for both passengers and operations personnel. SEAT's passenger facilities are minimal and need improvement.

Ferry Facilities - While both ferry operators have adequate indoor ticketing facilities for the vehicle ferries, indoor waiting areas are limited. The Block Island passenger ferry has no indoor waiting area and no restroom. A more substantial passenger ferry terminal building is needed.

Traffic - Traffic issues focus on the two railroad crossings. The crossings at State Street and Governor Winthrop Boulevard are frequently closed by incoming and outgoing trains at the station, impacting the ability of pedestrians and vehicles to access both ferry terminals. Downtown festivals and events also cause general traffic problems affecting bus and ferry operations. The area in front of Union Station, even after Parade construction is complete, may be too small for efficient use by the taxis and private vehicles picking up and dropping off passengers.

Parking - Parking facilities are located a distance from the ferry terminals. The parking capacity is adequate for current needs unless existing surface parking at Cross Sound Ferry and the Julian lot (an office building parking lot adjacent to the Water Street Garage that has been open on summer weekends to meet peak parking demands created by the ferry) become unavailable. Security, signage and elevators at the parking facilities are poor. Many passengers using the Block Island Ferry must park in the garages and walk a few blocks and across the tracks. Wayfinding signage and access routes from the garages to the ferry terminals are poor.

Connectivity and Information Needs - Several key connections between facilities were identified as deficient. The most difficult key connections to make are those that involve crossing the railroad tracks and accessing the ferry terminals. The major obstacles are the distances involved, level changes, wayfinding signage, condition of the pathways and delays and safety at the two railroad crossings. The key connections identified as deficient include:

- Greyhound to/from the Long Island Ferry
- Amtrak to/from the Long Island Ferry and the Block Island Ferry
- Water Street and Governor Winthrop garages to/from the Block Island Ferry
- Union Station and southbound rail platform from the Fishers Island Ferry
- Taxis and Water Street Garage to/from the Fishers Island Ferry
- Downtown to/from the Long Island Ferry and the Block Island Ferry

Other less than optimal connections result from pedestrians and vehicles needing to cross the railroad tracks at State Street. Trains in the station can cause delays and pedestrian areas are not clearly distinguished from the roadway. These include:

- Amtrak/SLE northbound platform to/from the Water Street Garage, SEAT 108 and taxis
- Amtrak/SLE northbound platform to Union Station lobby and ticket counter
- Fishers Island Ferry roadway access

Schedules are not generally coordinated to facilitate intermodal connections and real time status information is generally not shared among operators. Joint marketing and ticketing among New London

operators is minimal and schedule information and information on how to connect to other modes is lacking both pre-trip and on-site. Wayfinding signage is minimal, non-existent or misleading. Little information on downtown New London is available through the transportation operators. Performance of the RITC as a transportation center could be improved by more joint marketing and ticketing efforts and improved pre-trip and on-site information on how to make connections. A centralized system to provide real time connection information in all terminals may be beneficial. Downtown New London could benefit from more information on downtown attractions and activities being provided in advance, both on vehicles and in the station area.

Amenities and Commercial Needs - The deficiency that was mentioned most often by passengers at the RITC surveyed during this study was the general lack of amenities in each of the facilities. The Union Station area lacks any retail amenities or food concessions. Restroom facilities are locked and in need of accessibility improvements. SEAT passengers have no restrooms. While the rail station has a substantial waiting area, the Greyhound waiting area is cramped and antiquated. SEAT has only a single standard outdoor bus shelter and a few benches. While there is a single food concession at the Long Island Ferry terminal, there are no other retail or food concessions at either ferry terminal.

5.2 Future Needs

Two future transportation scenarios were developed, reflecting assumptions based on past trends and input from the operators. These were developed for the purpose of setting reasonable upper and lower bounds for decision-making concerning the RITC facility and should not be taken as projections of future travel. Both scenarios would result in increased demand for transportation services at the RITC. Ridership and parking demand was assessed for both 2015 and 2030 under each scenario.

Parking and Traffic - The demand for parking is a key element in determining future facility needs. If the Cross Sound parking lot is needed for auto ferry staging, and the Julian lot (open on summer weekends) is developed without public replacement parking, existing demand would create an immediate need for additional parking. Otherwise, under either scenario, additional parking may not be needed before 2015 but would certainly be needed well before 2030. By 2030, in the low demand scenario, peak summer weekend demand would be near the total capacity of all downtown parking facilities, while in the high scenario, higher growth rates and expanded ferry services would increase demand to well over total parking capacity. RITC parkers alone would take up all of the available capacity in the high scenario, leaving no room for other users. If RITC parkers were limited to the three closest facilities, they would nearly fill the facilities, even in the low demand scenario. It is also likely that additional space will be needed for taxis and for passenger pick-up/drop-off, possibly through the creation of an off-site taxi holding area. Increased traffic at the Water Street intersection with Governor Winthrop Boulevard may result in unacceptable traffic levels of service that would also need to be addressed.

Rail Facilities - Ridership and service under the future scenarios will likely require some additional or enhanced facilities. While current rail facilities appear to be adequate to meet future demand, it was determined late in the study that Shore Line East service when expanded will be shifted to Track 6 (the freight track) at Amtrak's request. Connecticut DOT will modify the existing platform and may consider construction of an additional platform in the future to the east side of Track 6.

Bus Facilities - Bus facilities may need to be expanded and enhanced. Greyhound may need access to a third bay. Greyhound's ticketing and waiting area would likely need to be enhanced and expanded. For SEAT, increased corridor route frequency in either scenario will create a need to layover an additional bus and any new routes would further increase space requirements. The increase in frequency in the high

scenario would result in much more SEAT activity visible at the RITC bus stop. This increase in vehicles using the facility and the accompanying increase in ridership would make the case for an enhanced facility with an enclosed waiting area, additional amenities and an indoor facility for operating personnel. Finally, the proposed but unfunded tourist transit system included in the high scenario would also create additional need for bus facilities, both close to downtown and accessible to the Cross Sound Ferry terminal. (At Cross Sound Ferry, the tourist transit buses would replace the casino shuttles using the same, or preferably enhanced, facilities.)

Ferry Facilities - Ferry operators may also need to add facilities to accommodate the expanded services reflected in the high scenario. Cross Sound Ferry may wish to construct a new high-speed passenger ferry terminal at the site of the Block Island ticket office and dock, serving the Block Island Ferry, SeaJet and any new passenger ferry services. Fishers Island would need a new ferry slip if they begin operation of a passenger-only ferry.

Current and future operational and facility needs for all modes, the need for improved connections between modes, the need for additional parking and the need for improved amenities all played a key role in developing proposed improvements to the Regional Intermodal Transportation Center

6. Potential Transit Oriented Development (TOD)

The enhancement of the RTIC is envisioned to serve as a catalyst for transit oriented development (TOD), that is, concentrated development within walk distance of the RITC that builds on the advantages of convenient public transportation access and in turn generates passengers that will use the RITC. A market analysis was conducted to assess the development potential at and in the general area around Union Station (i.e., downtown New London). Through a demographic and economic overview of the RITC site area, as well as analyses examining the residential, office and retail market development potential of the station and surrounding areas, this market analysis considered the land uses and services that can complement the RITC. This analysis was prepared using an industry standard research process, taking into consideration emerging demographic and economic factors, transit oriented development factors, and public/private development opportunities. The result was projections for residential, retail and office development in the succeeding ten year period. This was followed by an evaluation of transit oriented development (TOD) sites and the development of some general TOD scenarios.

6.1 Summary of Strengths, Challenges and Opportunities

Strengths, challenges, and opportunities for potential development in downtown New London's Historic Waterfront District were identified as a result of site visits, interviews with stakeholders, and market analysis conducted during the study.

- *Strengths*
  - historic downtown with unique characteristics
  - national trends of residential, office and retail shifts into urban centers
  - growth in key industries (professional/scientific, maritime, and creative arts and technology)
  - large regional tourist industry
  - existing demand for market rate downtown residential space
  - eclectic niche of retailers and restaurants

- entertainment and arts venues
- local and regional metropolitan connections (Boston, New Haven, Stamford, New York, Philadelphia, and Washington)
- a historic multimodal transportation center in downtown serving as an origin or destination for 1.8 million passengers annually

- *Challenges*
  - difficult/expensive renovations
  - obsolete retail spaces
  - perception of crime
  - low traffic counts
  - national economic downturn
  - difficult pedestrian environment connecting the train station, ferries and downtown
  - low occupancy of existing commercial space
  - predominantly lower income population in the city
  - small downtown residential population
  - a relatively small downtown worker population

- *Opportunities*
  - build on local economic and demographic trends with an expanded residential presence downtown for empty nesters and young professionals
  - attract businesses in key employment industries
  - encourage more tourist visits to the area
  - encourage niche retailers
  - bolster downtown entertainment/arts/cultural events
  - improve streetscape to attract public transportation users to the downtown
  - implement a marketing/branding program of downtown and the RITC to capture a larger share of the "culture class" emerging in the new economy and visitors who use the various transportation modes

6.2 Projections for the Next Ten Year Period

The market analysis projected that downtown New London can support modest additional retail, office and residential space over the next ten-year period. However, development will stall in the short term as the nation-wide economic downturn negatively influences market conditions that support growth. It is expected that the supportable square feet and units can be phased in throughout the ten year period, but the majority of the development will occur in the later years. The market analysis for office, residential and retail suggested the following potential projected development program:

Table ES-1 Downtown Development Program over a Ten-Year Period

	Low	Mid	High
Office	20,215 SF	39,000 SF	66,616 SF
Retail	19,422 SF	40,675 SF	62,460 SF
Residential Units	93 (93,000 SF)	211 (211,000 SF)	347 (347,000 SF)
Total Square Footage	130,707	288,262	473,181

While there is potential for new office and retail development, the greatest potential is for residential development. The level of development in downtown New London depends on the market conditions, available space, micro and macro economic trends, public policy incentives and proactive marketing programs. Any combination of these factors will influence the development potential of downtown New London. Taking into consideration the current economic downturn, downtown New London is not projected to see rapid growth in the near term years. As businesses and households begin to recover, they will look for new business, tourist, and retail opportunities. The City of New London, and other organizations aiming to make downtown a more attractive option for office locations, residential living and retail shopping and restaurants, have the near term to foster incentives and develop a marketing campaign to reach out to potential office and retail space users, tourists, residents and other groups potentially spending money in downtown.

Over the longer term (in ten years), the total estimated fiscal impacts from the RITC induced development program are over $1.6 million in property tax, $1.2 million in income tax and $600,000 in sales tax annually. The induced economic impacts are 317 new downtown residents and 356 new employees (209 office employees and 156 retail employees).

6.3 Development Scenarios

The market analysis projected three conceptual development programs which included a low, mid and high scenario. Significant rehabilitation of existing buildings along Bank and State Streets as well as the development of several small infill sites within the downtown would accommodate the Low Scenario downtown development program (consisting of 20,215 SF office, 19,422 SF of retail, and 93,000 SF of housing, i.e., 93 units). In combination with the rehab/development under the Low Scenario, the development of larger development parcels, including the Eugene O'Neill Drive parking lots would accommodate the Mid Scenario downtown development program (consisting of 39,000 SF of office, 40,675 SF of retail, and 211,000 SF of housing, i.e., 211 units). Lastly, in combination with all of the above, the redevelopment of large potential redevelopment sites on Atlantic Street, Eugene O'Neill Drive, Union Street, and Governor Winthrop Boulevard would accommodate the High Scenario downtown development program (consisting of 66,616 SF of office, 62,460 SF of retail, and 347,000 SF of housing, i.e., 347 units).

Sites that could potentially accommodate TOD range from small infill parcels to large, long-term redevelopment opportunities. Presently, there are very few undeveloped sites and, consequently, most of the major opportunities for TOD around the RITC are long term (20 or 30 years). The most immediate opportunities lie in the vacant storefronts on Bank and State Streets, and small infill parcels identified above. Although it is conceivable that these sites could be rehabilitated/developed within the short range, they are too small to achieve a significant portion of the future land use program identified in the market analysis. In addition, achievable as-of-right development densities may not be great enough to make it worth the investment for developers.

If there is a decision to raze and replace the Water Street Garage in the future (e.g., 20 or 30 years from now), consideration should be given to redeveloping the "superblock" bound by Water Street, State Street, Eugene O'Neill Drive, and Governor Winthrop Boulevard. This 235,000 sq. ft. site (5.4 acres) represents an opportunity to use the site more efficiently, create a new "face" for downtown New London fronting on Water Street and create a lively, pedestrian-friendly interior street pattern linking Bank and State Streets to the new multi-use district.

Developing the identified sites with well-designed, higher density, mixed-use development (with an emphasis on residential development) could potentially improve connections between the RITC and the downtown, increase transit ridership, and help transform the RITC and downtown New London into a vibrant, pedestrian-friendly, self-supporting district. The realization of this TOD potential will require public/private partnerships and community support.

7. Development and Evaluation of Improvement Options

To guide the development of options for the master plan and the screening evaluation of those options, the following guiding principles were developed to reflect the goals of SCCOG, the City and the Stakeholder Steering Committee.

Table ES-2: Guiding Principles

1. Emphasize short term improvements that are specific, low cost, and easy to implement, that address identified deficiencies and that work towards, or at least are not incompatible with the desired long term vision(s)
2. Include one or more long term visions, which should be more general and allow for some flexibility so that the City can respond to private developer proposals
3. Identify possible phasing of improvements
4. Preserve and enhance the viability and growth of the transportation operators and local businesses
5. Make transfers between modes safe and convenient
6. Capitalize on the synergies of transportation services and development
7. Balance the space needs of transportation services and development
8. Maximize opportunities for those types of development that are likely given the character and advantages of New London
9. Avoid schemes that would involve land takings / focus instead on opportunities for public-private cooperation
10. Consider the goals of private businesses/property owners as well as public goals
11. Create an attractive gateway for New London and the region and encourage travelers to visit New London

7.1 Short Term Alternatives

Several options were identified for short term, lower cost improvements for the RITC. These improvements were designed to enhance the traveler and visitor experience, particularly as a pedestrian. These improvements would be implementable in a relatively short time frame, through cooperative arrangements among the City and the major property owners. The improvements would not require major redevelopment or reconstruction efforts; however, they would make significant progress in addressing identified issues, including pedestrian safety, unclear connections, amenities, image, aesthetics, etc. The potential improvements are compatible with the longer term visions.

For all practical purposes, the locations of the auto ferry terminals and rail station are fixed. The location of the major parking facilities serving the RITC are also fixed at least for the short term. It should also be

noted that the Parade Project which is under construction and nearing completion was assumed to need to remain in place without modification (or incur only very minor impacts).

The most flexible components of the RITC are the Greyhound Bus Terminal, the SEAT pulse-point bus hub, the taxi stand, the pick-up/drop-off areas at Union Station, the location of the high speed passenger ferry docks, and the allocation of staging versus parking space on the Cross Sound Ferry site. Also subject to possible new uses are the area in front of the Water Street Garage and some areas on the Cross Sound Ferry property. (Cross Sound Ferry has identified the potential removal of some existing buildings to allow for additional parking and staging areas.)

The most urgent needs to address were (in no particular order):

- Pedestrian Safety Improvements
- Enhancing the Pedestrian Environment
- Facilitating Transfers Between Modes
- Improving Wayfinding
- Enhancing Bus Passenger Amenities
- Enhancing the Aesthetic Appearance and Welcoming Visitors
- Encouraging Transportation Uses at Union Station.

Improvements Common to All Short Term Alternatives

Among the components of the short term improvement are several that are common among all the short term alternatives. These are:

- Enhanced pedestrian crosswalks and pathways including ADA compliance
- Enhanced pedestrian scale lighting
- Wayfinding signage between all components of the RITC
- Enhanced traveler information through signage, information kiosks, information center
- Aesthetic improvements to the façade of the Water Street Garage and the railroad right-of-way, that is, new fencing and landscape improvements, events banners and welcome signage on Water Street Garage façade
- Use of Union Station as a gateway to New London
- Extend taxi stand along State Street between Bank Street and South Water Street

The most critical focus areas for short range pedestrian and aesthetic improvements in the RITC area are at the two intersections where streets cross the railroad and that provide pedestrian and vehicular access to the waterfront, ferry services, City Pier, and Union Station. Another focus for pedestrian improvements is along the waterfront. These short term pedestrian and aesthetic improvements will create a higher-quality pedestrian environment and will tie together the transportation modes. Together, they will create a safer and more secure and attractive RITC area for residents, tourists, and transit and ferry patrons.

Improvements Specific to Particular Short Term Alternatives

The short term alternatives differ primarily in what changes are assumed to occur in the location and configuration of the bus facilities. Specifically, the differences are related to whether one or both of the two bus operations are retained in their current locations or relocated to the space now available in front of the

Water Street Garage. In either case, there should be upgrades to the customer facilities for the bus services.

As a result of the bus facility alternatives, there are options as to how the curb space along the east side of Water Street is used if the buses are moved from their current location and how the space in front of the Water Street Garage is used if the buses remain in their current location. Improved taxi stand and vehicle pick-up/drop-off areas at Union Station would be made in all options but in different locations depending on the location of the bus facilities.

The four primary alternatives for the bus facilities studied were as follows:

1. Enhance both facilities in place on the east side of Water Street
2. Move both facilities across the street to the off-street space in front of the Water Street Garage
3. Move only SEAT to the space in front of the Water Street Garage and leave Greyhound at the current site with some possible reconfiguration
4. Move only Greyhound to the space in front of the Water Street Garage and extend SEAT southward to include the former Greyhound site

Within these basic alternatives, some variants were identified.

Besides the location of bus facilities, another potential major difference between alternatives could be how Cross Sound Ferry uses its space. After discussion with Cross Sound Ferry, however, it was concluded that the current configuration of the passenger ferries works best even if Cross Sound Ferry removes some buildings to expand and reconfigure its auto ferry staging area. As a result, short term alternatives did not include options for reconfiguring the Cross Sound Ferry area.

Options considered but not included in the original set of Short Term Alternatives were:

- Bringing SEAT into Union Station
- Moving the Greyhound Terminal Farther North on Water Street and SEAT Closer to Union Station
- Removing a Travel Lane to Extend a Wider Sidewalk on the East Side of Water Street to Governor Winthrop Boulevard
- Shifting Taxi, Bus or Auto Pick-up/Drop-off to the East of the Railroad Right-of-Way
- Including a Pedestrian Bridge in Short Term Options

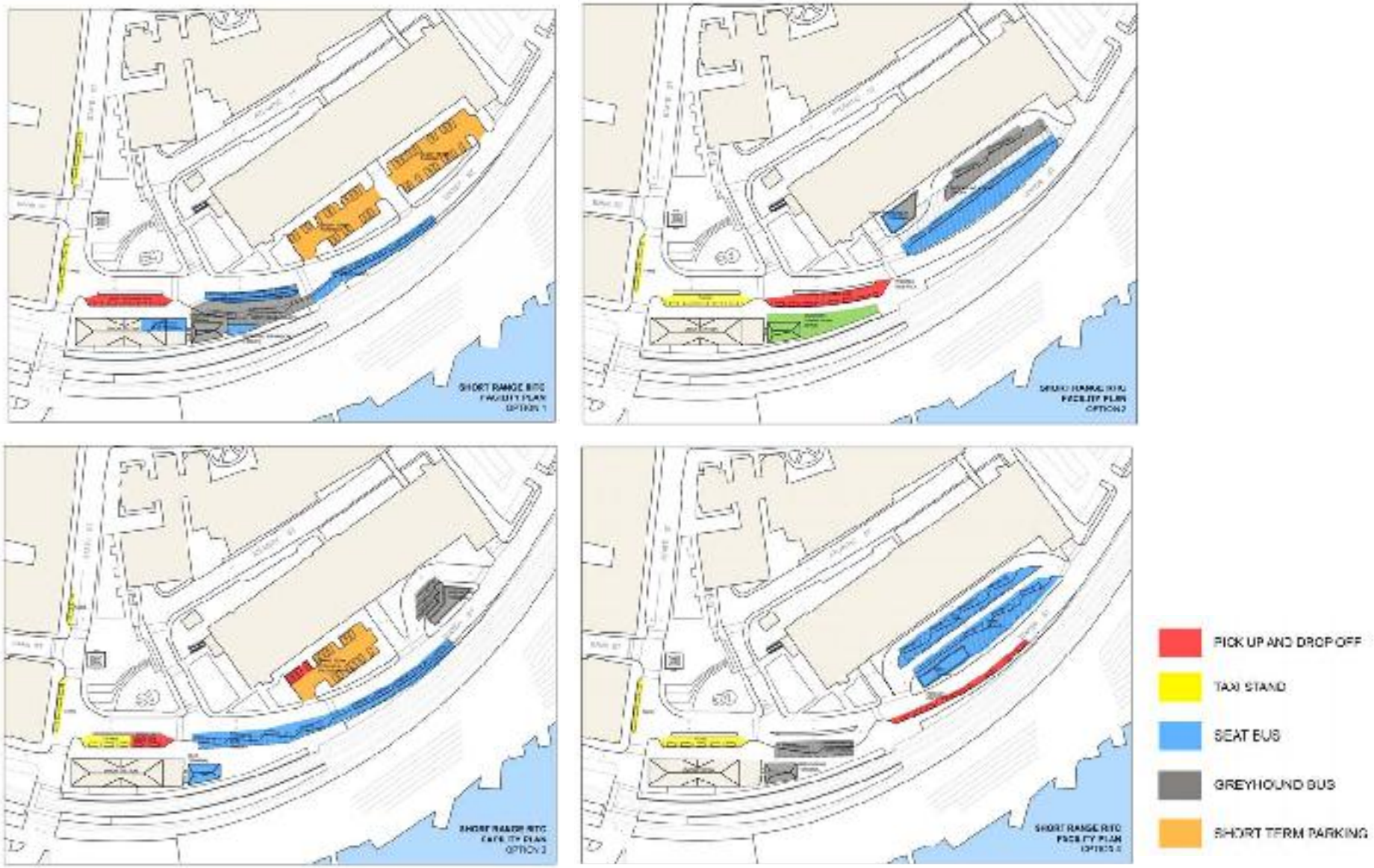
Note that as the Short Term Alternatives were refined in the Master Plan, a pedestrian bridge was included in the Short Term Preferred Alternative and utilization of Union Station for bus terminal space requirements was included in the Fallback Minimum Construction Alternative. A wider sidewalk on Water Street was also included in the Preferred Alternative, but this was made possible by relocating Water Street rather than removing a travel lane.

The four alternatives considered are summarized in Table ES-3. The plan representation of these options is shown in Figure ES-3.

Table ES-3: Primary Short Term Alternatives

Alternative	Name	Description	Greyhound	SEAT	Water Street Garage	Other
1	Both SEAT and Greyhound Stay on East Side of Water Street	One new expanded terminal building and canopy along curb (or SEAT terminal in Union Station)	2 sawtooth bays in current location	4 parallel to Greyhound, 5 north of Greyhound	Short term parking/pickup-drop-off (and/or public event space)	Need to Relocate Parade Crosswalk
2	Both SEAT and Greyhound Move to West Side of Water Street (off street)	New Free-Standing Passenger Terminal	2 sawtooth bays	7 parallel bays	Bus terminal with building; need to relocate center entrance	Reuse east side space for Pickup-Drop-off and plaza; Reuse Greyhound building for café; Need to Relocate Parade Crosswalk
3	Only Greyhound Moves to West Side of Water Street (off street)	SEAT relocated to Greyhound area	3 sawtooth bays and new terminal building	9 bays (4 sawtooth and 5 parallel); terminal at renovated old Greyhound building	Greyhound terminal and some short term parking and pickup-drop-off	Can't use FTA funds for exclusive Greyhound Terminal; Need to Relocate Parade Crosswalk
4	Only SEAT Moves to West Side of Water Street (off street)		2 sawtooth bays	7 sawtooth (or 9 parallel) bays, new terminal building	SEAT bus terminal with building; need to relocate center entrance	Need to Relocate Parade Crosswalk

Figure ES-3: Short Term Alternatives



7.2 Long Term Vision Concepts

The long term vision concepts are necessarily less specific than the short term alternatives. They are designed to identify alternative visions for the RITC area beyond the year 2030 when the Water Street Garage and some other facilities and properties are due for reconstruction or redevelopment. The Master Plan does not propose one single long term vision concept, but rather includes several alternative visions that can be followed as the opportunity arises

The concepts reflect two primary decisions that will have to be made:

1. Should the RITC be concentrated at the immediate Union Station area near the intersection of State Street and Water Street, or should the RITC be extended to include the area from State Street to Governor Winthrop Boulevard in the Water Street corridor?

2. Should the parking facilities for the RITC be concentrated, thereby dispersing potential transit-oriented development (to multiple small sites within walk distance of the RITC)? Or should the parking be dispersed over a wider area (but within walk distance of the RITC) thereby allowing more concentrated transit-oriented development near the RITC, taking maximum advantage of the waterfront location as well as the proximity to the RITC? Note that given the scale of downtown New London and the desire to protect the character of the city, it was deemed infeasible to concentrate both parking and development near Union Station.

Table ES-4 summarizes the resulting concepts. Figure ES-4 illustrates the concepts. Note the concepts generally can include a Pedestrian Bridge or rely on surface connections.

Options considered but not included in the Long Term Concepts due to either a lack of feasibility or other disadvantages were:

- Building a Deck over the Railroad Right-of-Way
- Building a Tunnel Under the Railroad Right-of-Way[1]

[1] Disadvantages of a tunnel with respect to security, maintenance, disruption to rail traffic, de-watering and a connection to the Water Street Garage, make this a less desirable option than the pedestrian bridge structure which has the ability to connect the garage, station, and ferry terminal less expensively with improved security and less maintenance requirements.

Table ES-4: Four Long Term Concepts

A: Concentrated Transportation Center
(Concentrated Parking / Dispersed Development)

- Transportation facilities concentrated near Union Station
- Expanded parking as close to Union Station as possible
- Parking/transportation facilities limit development opportunities near the waterfront
- Large development opportunities are far from the Parade and Union Station

B: Concentrated Transportation Center with Parking Facilities along Water Street
(Concentrated Parking / Dispersed Development)

- Transportation facilities concentrated near Union Station
- Expanded parking on sites along Water Street closer to Governor Winthrop Blvd.
- Parking/transportation facilities limit development opportunities near the waterfront
- Large development opportunities are far from the Parade and Union Station

C: Concentrated Transportation Center with Relocated Parking Facilities and New Water Street Development
(Dispersed Parking / Concentrated Development)

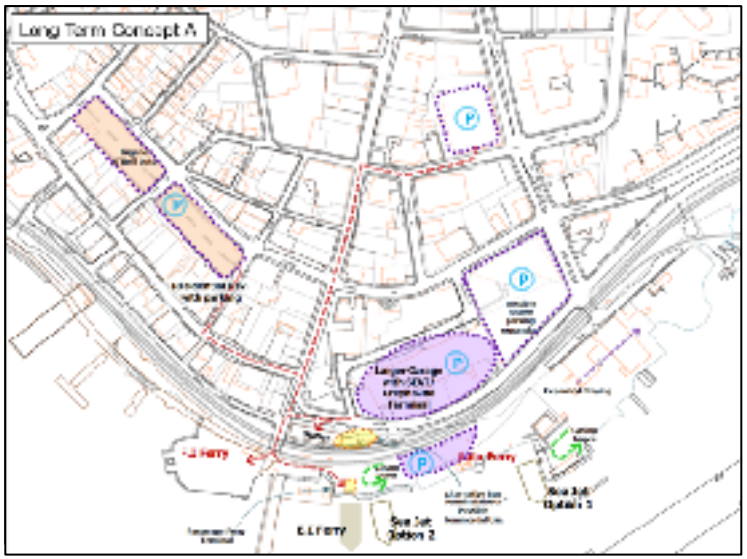
- Transportation facilities concentrated near Union Station
- Some parking relocated from Water Street to sites along Governor Winthrop Blvd.
- Relocation of parking facilities increases development opportunities near the waterfront and Union Station

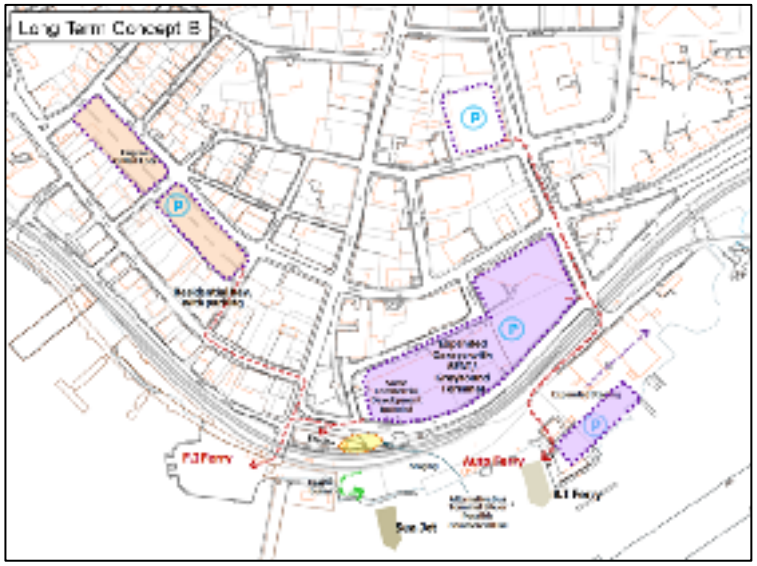
D: Extended Transportation Center with Relocated Parking Facilities and New Water Street Development
(Dispersed Parking / Concentrated Development)

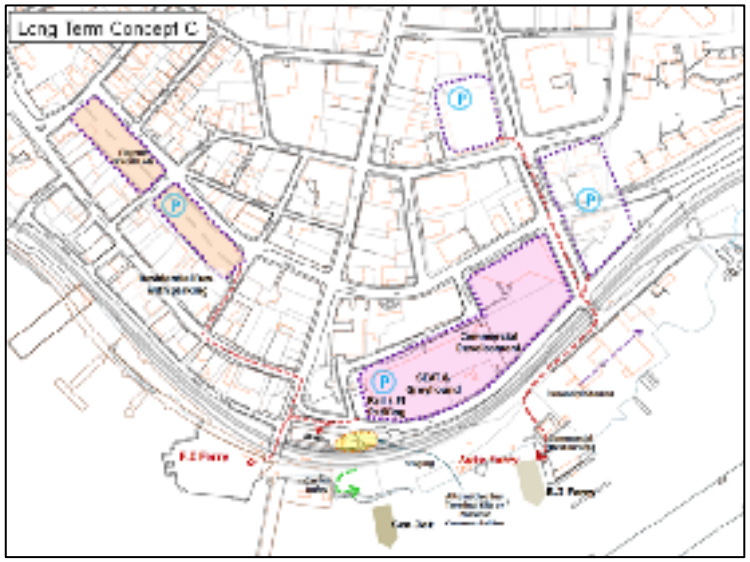
- Some transportation facilities relocated along Governor Winthrop Blvd.
- Some parking relocated from Water Street to sites along Governor Winthrop Blvd.
- Relocation of parking/transportation facilities increases development opportunities near the waterfront and Union Station

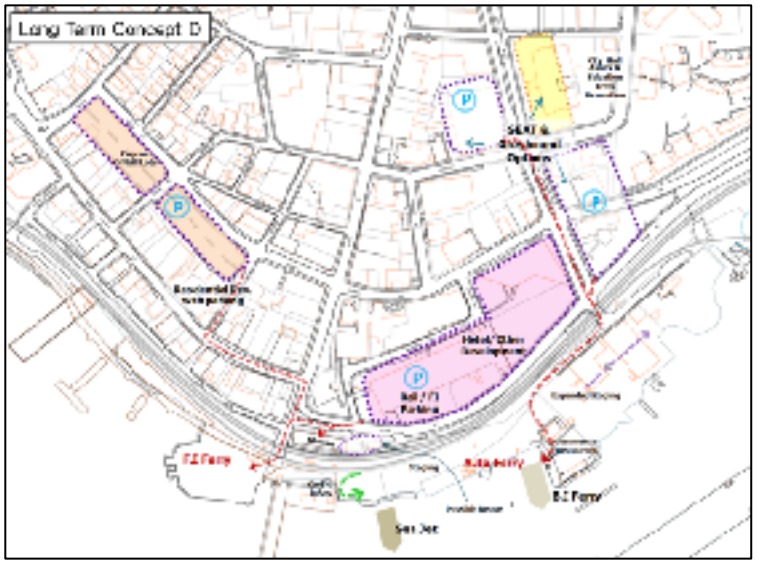
Figure ES-4: Long Term Vision Concepts

(Note that Concepts A, C and D were also examined with a Pedestrian Bridge)









7.3 Evaluation and Stakeholder Input

Screening evaluation criteria, as listed in Table ES-5, were used to evaluate the Short Term Alternatives and Long Term Concepts. The results, documented in the final report, were presented to the stakeholders, identifying the many trade-offs.

Table ES-5: Screening Evaluation Criteria

Common Criteria

- Low Cost
- Improves Safety and Convenience for Transfers
- Enhances Pedestrian Safety
- Enhances Wayfinding/Information
- Has Sufficient Capacity (Operations in Short Term, Demand and Growth for Public Transportation Modes and Parking in the Long Term)
- Enhances Attraction of Visitors
- Minimal Environmental Issues
- Minimal Property Issues
- Potential for Public Private or Grant Funding (for the Transportation Improvements in the Short Term)

Short Term Criteria

- Easy to Implement
- Adaptable to Future Changes in Operating Needs
- Flexible to Accommodate Long Term Commercial Development
- Compatibility with Bus Terminal Long Term Concepts
- Maintains or Enhances Traffic Operation/Safety

Long Term Criteria

- Ease of Project Development
- Ease of Phasing
- Improves Convenience for Parking Access
- Enhances Pedestrian Environment
- Promotes Likely Development/Local Economy
- Capitalized on Synergies between Transportation & Development
- Balances Need for Transportation & Development

The stakeholders had considerable suggestions and comments on the identification and evaluation of the short term alternatives and long term vision concepts presented at a Stakeholder Steering Committee meeting held in early summer 2009. TranSystems proceeded to examine the feasibility of some of the stakeholder suggestions such as introducing another railroad crossing between the two current crossings, shifting rail platforms northward to allow surface crossing while trains were in the station, relocating or removing the freight siding, etc. The consultant team was redirected by SCCOG to respond to the stakeholder consensus that emerged and to develop revised short term alternatives. The direction was to 1) develop alternatives for bus terminal facilities located on the east side of Water Street adjacent to Union Station, incorporating use of the building currently used by Greyhound, and shifting Water Street to the west, if needed, to provide adequate space to meet the bus operator needs, and 2) to include an up-and-

over pedestrian bridge or tunnel in the short term alternatives that would enable passengers to cross the tracks when trains are in the station (as required by Connecticut DOT) and which could include additional spans to connect to the Water Street Garage and the waterfront. This is reflected in the Preferred Alternative of the Master Plan described in the next section.

With regard to the long term concepts, there was no clear consensus on a specific vision for the future. There was agreement that the replacement of the Water Street Garage would not occur for many years considering the investment the City was making to repair the facility. The sentiment of the Stakeholder Steering Committee was that the alternative visions would be helpful in the future but the Master Plan should focus on the short term alternatives including immediate actions. As a result, the long term visions were not carried forward into the Master Plan. The most important long term consideration will be to continue to keep options open to respond to development opportunities in the future and to continue discussion on the long term vision.

8. Master Plan

The Master Plan includes a Preferred Alternative and a Fallback Minimum Construction Alternative. Both of these are short term alternatives and the Preferred Alternative includes an immediate action and short term component. Long term vision concepts were prepared during the study and are described in the Final Report but no single long term concept was advanced into the Master Plan.

The Master Plan does not represent a detailed design, but rather provides a conceptual design of the suggested improvements to the RITC.

8.1 The Preferred Alternative

The Preferred Alternative consists of the following major elements reflecting the input from the stakeholders and the direction from SCCOG and Connecticut DOT:

- Water Street Relocation
- Pedestrian Bridge
- Other Pedestrian Improvements
- Wayfinding Improvements
- New Combined Bus Terminal on the East Side of Water Street
- Rail Facilities
- Other Modal Improvements

Water Street Relocation

To provide the necessary space on the east side of Water Street for the bus terminal, pedestrian bridge vertical circulation (elevator and stairs) and pedestrian circulation, the plan envisions the relocation of Water Street to the west, utilizing part of the City-owned land in front of the Water Street Garage. The relocation of Water Street would at its maximum point extend about 50 feet west and would have some impacts on the Parade Project improvements (i.e., pavement, landscape and crosswalks) north of Atlantic Street. It was designed not to impact the Parade itself (south of Atlantic Street), the Julian property or the functioning of the Water Street Garage. The relocation plan preserves two travel lanes on Water Street parallel to the bus stop and continues to provide a 500-foot long right lane on Water Street approaching

Governor Winthrop Boulevard (for right turns and through movements). Travel lanes are narrowed slightly to 11 foot lanes with a total cartway width of 35 feet. Finally, although the City-owned parcels in front of the Water Street Garage are reduced in size by the relocation, 27 short-term parking spaces can be accommodated there, essentially preserving all the parking spaces currently provided there.

Pedestrian Bridge

After an evaluation of bridge and tunnel options, a pedestrian bridge was selected as the preferred means of providing direct unimpeded crossing of the railroad tracks. A tunnel would cause more disruption to rail traffic during construction, would require ongoing dewatering, would be impractical to extend to the Water Street Garage and would have greater security issues than a pedestrian bridge. Connecticut DOT required that a bridge or tunnel over the primary tracks be included in the short term plan and stated that no additional at-grade crossings could be introduced. Extensions of the pedestrian bridge westward to Water Street Garage (over Water Street) and eastward to the Cross Sound Ferry property (over the freight track) are optional and could be added in a phased manner. Thus, the pedestrian bridge is conceived as a mandatory center section and two optional extensions.

The mandatory central section would connect from the southbound platform area and bus terminal area on the east side of Water Street spanning the Amtrak tracks to the northbound platform. The bottom of the bridge would need to be about 30 feet above the tracks and would reach to an elevation of about 55 feet. At the west end of the center section, the elevator and stairway would be incorporated into the proposed new bus terminal building. At the east end of the center section, the elevator and stairs would be located at the end of the northbound platform accompanied by a short northward extension of that platform. The location of the bridge is largely fixed by the need to serve the northbound platform at its northern end since the space between the two tracks is not wide enough to accommodate vertical circulation elements and a rail platform. (Although stakeholders also suggested considering a location at Union Station or south of Union Station, such options have disadvantages such as greater impacts on the historic structure, impacts on South Water Street, requiring passengers to cross State Street, and eliminating the potential to directly connect to the Water Street Garage.)

The optional extension to the Water Street Garage would not require new vertical circulation at the western (garage) end but could instead rely on the stairs and new elevator at the south side of the garage. Optionally, the existing unused elevator shaft located in the southeast corner of the garage could be rehabilitated. The pedestrian bridge would connect to the top floor of the garage. (The final design should consider how the bridge structure can remain intact while accommodating an eventual replacement of the garage with a new structure.)

The optional extension to the Cross Sound Ferry area could be integrated with a new passenger ferry terminal. Such a terminal was previously proposed by Cross Sound Ferry but has not been advanced. For the purposes of the Master Plan, the bridge extension has been assumed to extend to the location identified on such prior plans but the vertical circulation to ground level is assumed to be part the bridge extension. At the request of Cross Sound Ferry, to accommodate the large number of Block Island Express passengers disembarking at once, an escalator is included at this location as well as an elevator and stairs. While no specific design of the bridge structure is proposed in the Master Plan, it has been assumed that a more transparent style bridge would reduce visual impacts. Nevertheless, the height of the bridge (elevation from about 36 to 55 feet) would result in visual impacts. Three dimensional visualizations have been prepared to convey the impacts for the center section of the bridge and for a full bridge with both extensions.

Other Pedestrian Improvements

Besides the Pedestrian Bridge described above, a wide variety of other pedestrian improvements are proposed as part of the Master Plan's Preferred Alternative. These include:

- Sidewalks/pathways on both sides of railroad right-of-way including:
    - An 8-foot wide sidewalk on the east side of Water Street from the current bus stop to Governor Winthrop Boulevard and beyond to the park at Crystal Street
    - A widened sidewalk on the west side of Water Street to Governor Winthrop Boulevard
    - Pedestrian pathways from City Pier through the Cross Sound Ferry area
- Use of pavers to unify the RITC bus terminal area with Union Station
- Quad gates/ rubber surfaces at the two railroad crossings at State Street and Governor Winthrop Boulevard including wider clearly delineated crosswalks and sidewalks
- Steel post fencing along the railroad right-of-way (Note the City has already installed this on the west side of the right-of-way along Water Street.)
- Landscaping along Water Street and the waterfront
- Gateway structures to delineate the waterfront area (located at opposite ends of the Cross Sound Ferry area)
- Pedestrian scale lighting throughout, similar to that used in the Parade Project
- Canopies with lighting for bus passengers at the Greyhound and SEAT boarding areas.

The pedestrian plan is shown in Figure ES-5. It assumes that Water Street is relocated and the bus terminal and pedestrian bridge are constructed. Similar pedestrian improvements could be made even if those improvements are not constructed. Improvements at the two railroad crossings and east of the railroad right-of-way can be implemented immediately, if funding is available, while other improvements along Water Street would need to wait until Water Street is relocated and the bus terminal and pedestrian bridge are constructed or they would have to be redone.

Wayfinding Improvements

The Master Plan includes a plan for wayfinding improvements. This includes 17 locations where signage would be erected to direct pedestrians and vehicles to transportation functions and to downtown business districts. The plan also includes recommendations that wayfinding maps be erected at three locations (Union Station, Bus Terminal and Water Street Garage) to help orient pedestrians. Specific examples of signage and information to be included on signs are shown in the Master Plan section of the Final Report. Note that recently New London Main Street has erected new wayfinding signage of a similar design at selected locations and is erecting "gateway" signs to encourage visitation to downtown New London.

New Combined Bus Terminal on the East Side of Water Street

The Master Plan includes a new combined bus terminal for Greyhound and SEAT located on the east side of Water Street made possible by the relocation of Water Street. The relocation of Water Street makes it possible to create two parallel bus boarding areas along Water Street while also accommodating the vertical circulation elements (stairway and elevator) for the pedestrian bridge over the railroad tracks and sidewalks for pedestrian circulation. However, even with the relocation of Water Street the space is constrained and the sidewalk would be only about 11 feet wide at its narrowest point. With the two parallel

Figure ES-5: Pedestrian Improvement Plan in the Preferred Alternative



bus boarding areas, the bus bays desired by the bus operators can be accommodated. The existing Greyhound building would be re-used for some bus terminal functions with interior modifications to the building. However, to provide the most functional space for the passenger waiting area and ticket/information counters, a new building addition with a glass front is proposed just north of the existing Greyhound building. This new building will allow bus passengers to have a view of the buses and the staff at the counter to view the passenger waiting area and the buses. Interior waiting space would allow for 50 SEAT passengers and 25 Greyhound passengers, consistent with the minimum requirements expressed by the bus operators. Canopies would be provided to provide shelter for passengers boarding buses or waiting outdoors. These canopies would extend from the new terminal building along the Water Street east side sidewalk curb line and along a 15-foot wide SEAT passenger boarding island. The design also allows for some ancillary curbside space for Greyhound freight pick-up/drop-off and SEAT maintenance vehicles. Figure ES-6 shows the layout of the bus terminal, and pedestrian bridge and the relocation of Water Street.

It should be noted that the plan envisions using currently privately-owned property (Union Station) and therefore would require negotiation for purchase or long term leasing of this property.

While the plan accomplishes the goals identified, it is a fairly tight fit and has some drawbacks. Among these are the constrained sidewalk width, the long and narrow building shape leading to less efficient use of space, and the fact that the new terminal tends to create a barrier between Water Street and the rail platform.

Figure ES-7 depicts a conceptual interior floor plan, whose purpose is primarily to show that it is feasible to accommodate the space required. A final floor plan would be part of the building design to be undertaken in a future implementation step.

Rail Facilities

The Master Plan has not identified the need for additional facilities for Amtrak rail operations although enhanced amenities for passengers at Union Station would be desirable and minor adjustments are needed for ADA compliance. At the outset of the study, it appeared that Shore Line East would continue to operate from the current platform and that its primary need was commuter parking which could be accommodated at the Water Street Garage. However, late in the study, it became clear that Amtrak desires expanded Shore Line East service to operate from the freight track (Track 6), the track farthest from Union Station. Connecticut DOT is therefore examining immediate modifications to the northbound platform to enable it to be used to access Track 6. In the longer term, Connecticut DOT may consider a new platform for Track 6 located on the east side of the track adjacent to City Pier and Cross Sound Ferry. This was not examined in this study. However, it would have an impact on the proposed pedestrian bridge, requiring extension of the center section of the bridge and either requiring additional vertical circulation for the new platform or consolidation of the vertical circulation at the east side of the optional extension to the Cross Sound Ferry area with vertical circulation for this platform.

Other Modal Improvements

Taxis and Automobile Pick-up/Drop-off - Taxi and automobile pick-up and drop-off are critically important access modes for the train service at Union Station and are expected to grow in importance with the increased presence of Shore Line East at the station. However, the space available for taxi and automobile pick-up and drop-off at the rail station and bus terminal is already constrained by the limited space on Water Street and strong competition for uses. The proposed relocation of Water Street and the

Figure ES-6: Combined Greyhound and SEAT Terminal Site Plan in the Preferred Alternative

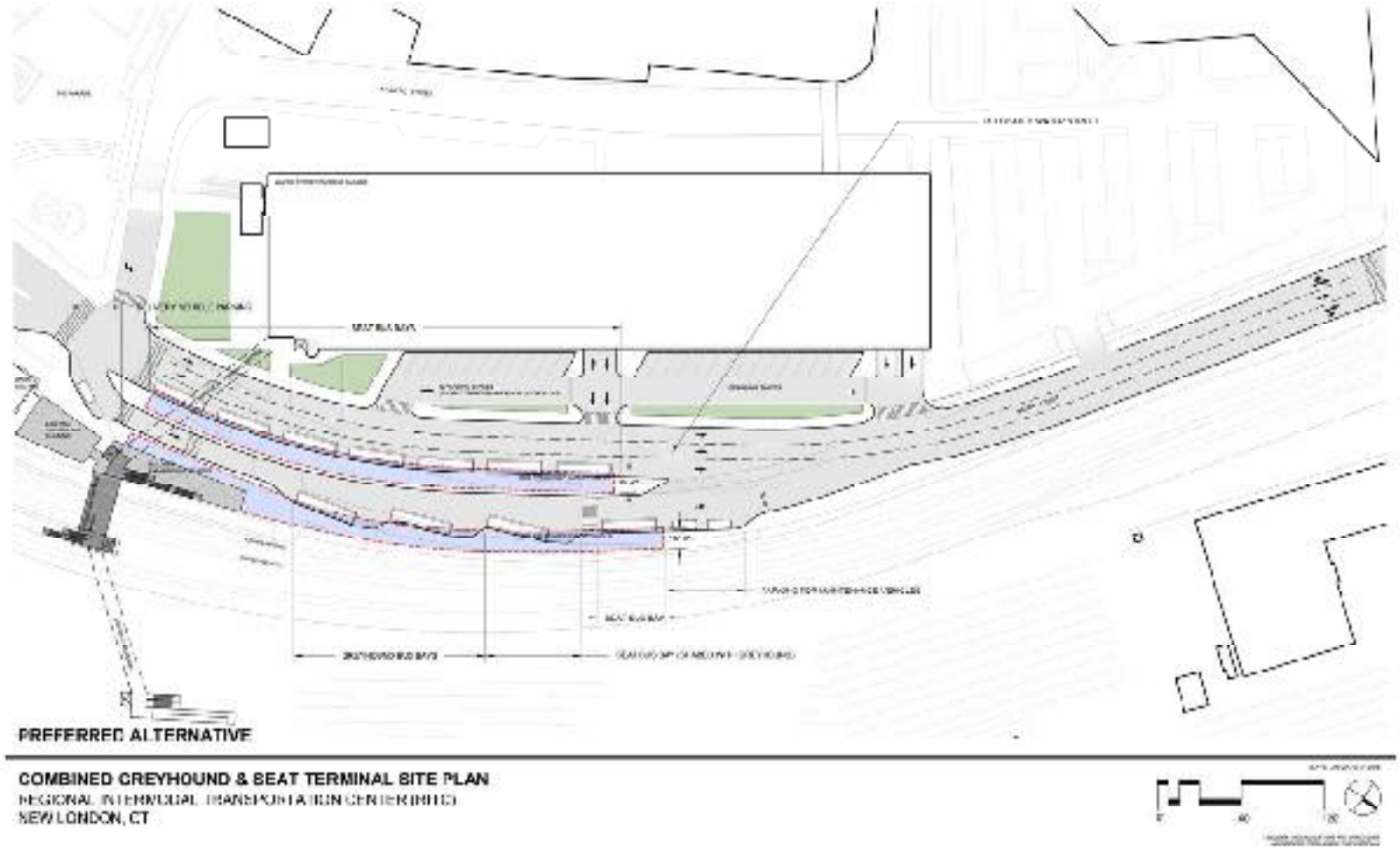
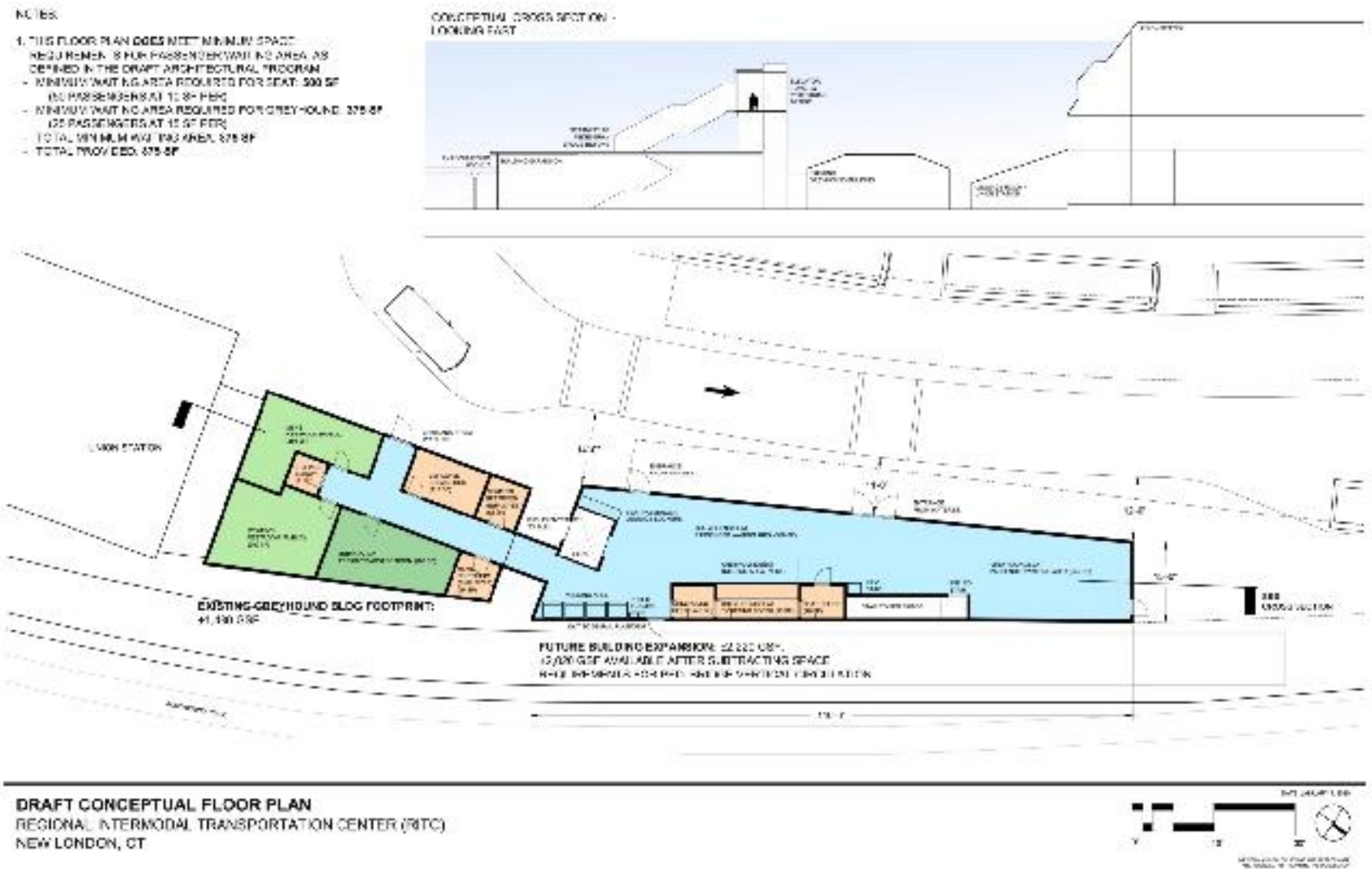


Figure ES-7: Draft Conceptual Floor Plan of the Bus Terminal in the Preferred Alternative



plan for the Bus Terminal and Pedestrian Bridge does not negatively impact any of the existing designated auto or taxi pick-up, drop-off, queuing or parking spaces. It is envisioned that taxis would continue to pick-up and drop-off passengers directly in front of Union Station and that auto passengers would at least be dropped off in front of Union Station as well. It is suggested that the available short term parking spaces in front of the Water Street Garage be used for automobile passenger pick-up so that automobile standing in front of Union Station is limited to the short time needed for actual unloading. It is also recommended that the first block of State Street (that is, between South Water Street and Bank Street) be used for taxi queuing so that taxis wait there in an orderly queue and then can pull up in turn to pick up passengers at two designated spaces in front of Union Station nearest the State Street corner. The remaining three spaces in front of Union Station would be designated for passenger drop-off for automobiles and taxis. The final operational arrangements will need to be worked out with the taxi operators.

Car Rental - There may be opportunities to locate a car rental counter in Union Station provided nearby parking for rental cars can be arranged. A ZipCar space or two could be located in the Water Street Garage or in front of the Garage.

Bicycle Accommodations - A bike rental business might be located in Union Station. Bike racks should be provided at the station. Possible locations include at City Pier, in front of the Water Street Garage or in the current Amtrak parking spaces on South Water Street if these parking spaces can be relocated to another nearby location.

Visualization

Figures ES-8 and ES-9 show the view from the Parade of the RITC bus terminal and pedestrian bridge with the mandatory central section of the pedestrian bridge and with the full bridge with the optional extensions to the Water Street Garage and to the Cross Sound Ferry area, respectively.

8.2 The Fallback Minimum Construction Alternative

The Master Plan includes a second alternative, called the Fallback Minimum Construction Alternative (hereafter called the Fallback Alternative for short). This alternative has been included, at the City's request, to identify an option that could be exercised to meet needs in the short term if the funding cannot be obtained to construct the Preferred Alternative or if there are other reasons not to pursue the Preferred Alternative. Since one primary reason for including it is the lack of funds, it is assumed to exclude the Pedestrian Bridge that is included in the Preferred Alternative; however, if funding can be obtained for the Pedestrian Bridge, it is compatible with the Fallback Alternative.

The Fallback Alternative differs from the Preferred Alternative in the following aspects:

- Water Street remains in its current location
- Bus loading areas remain in the their current locations
- The Pedestrian Bridge and new bus terminal building addition are not included
- Indoor bus passenger facilities are located in existing structures.

The pedestrian improvements other than the Pedestrian Bridge would be assumed to be included in the Fallback Alternative although the design would be revised to accommodate the current street configuration.

Figure ES-8: Preferred Alternative with Center Section of Pedestrian Bridge
View from the Parade



=

Figure ES-9: Preferred Alternative with Full Pedestrian Bridge Including Extensions
View from the Parade



The Fallback Alternative, like the Preferred Alternative, keeps all the public transportation services on the east side of Water Street. However, it does not involve construction of new bus terminal building and it does not involve the relocation of Water Street or the creation of two parallel set of bus boarding areas. As a result, it cannot provide expanded capacity for buses, though it does accommodate the current needs. It utilizes existing buildings including both the Greyhound Building and Union Station itself for the bus terminal facilities, requiring interior modifications and the construction of a connection between the two buildings. Figure ES-10 shows the configuration of the bus terminal area and Figure ES-11 shows a Conceptual Floor Plan within the existing buildings (for the purposes of a feasibility assessment and not a final design).

The major drawback of the Fallback Plan is the fact that the indoor waiting area would be located considerably farther from the SEAT buses than in the Preferred Alternative. Experience suggests that bus passengers prefer to wait near their buses. Canopies are provided at the bus boarding areas as in the Preferred Alternative. To accommodate winter and other poor weather circumstance, a large bus shelter is incorporated closer to the SEAT buses to address this drawback. However the Floor Plan shows the same indoor waiting area in the Greyhound Building as proposed for the new bus terminal building addition in the Preferred Alternative.

It should be noted that the Fallback Plan, like the Preferred Plan, envisions use of privately owned property (Union Station property) and that arrangement to purchase or lease the required property would need to be negotiated.

8.3 Estimated Costs

Costs to construct the Preferred Alternative and the Fallback Alternative were estimated in 2012 dollars (except the immediate pedestrian improvements which are in 2011 dollars.)

Immediate pedestrian improvements that are not dependent on the relocation of Water Street or the Pedestrian Bridge were estimated to cost $5.5 M including those on both public and Cross Sound Ferry property (or $4.7M excluding improvements solely on Cross Sound Ferry property).

The cost for the remaining short term improvements in the Preferred Alternative, including the center section of the Pedestrian Bridge, Water Street relocation and the bus terminal and canopies is $9.9 M. Note that this excludes any costs associated with the purchasing or leasing the Union Station property which would be required (and also any cost of purchasing or leasing the Water Street Garage property if that is also desired to be a part of purchased RITC property, as noted in a later section of this Executive Summary). It also excludes any repairs underway or needed to be made at Union Station or the Water Street Garage. Repair costs, based on prior studies, appear to be in the range of $1.6 M for Union Station and $2.6 M for the Water Street Garage. (Some repairs at the Water Street Garage are underway.) These costs represent additional costs that would need to be taken into account, meaning that the total cost of immediate and short term improvements with the center section of the pedestrian bridge excluding purchase or lease would be nearly $20 M.

ConnDOT is currently preparing cost estimates for immediate improvements to allow Shore Line East to use Track 6 from the platform currently used for Track 2. These costs or the costs for a new platform are not included.

Figure ES-10: Fallback Alternative Site Plan

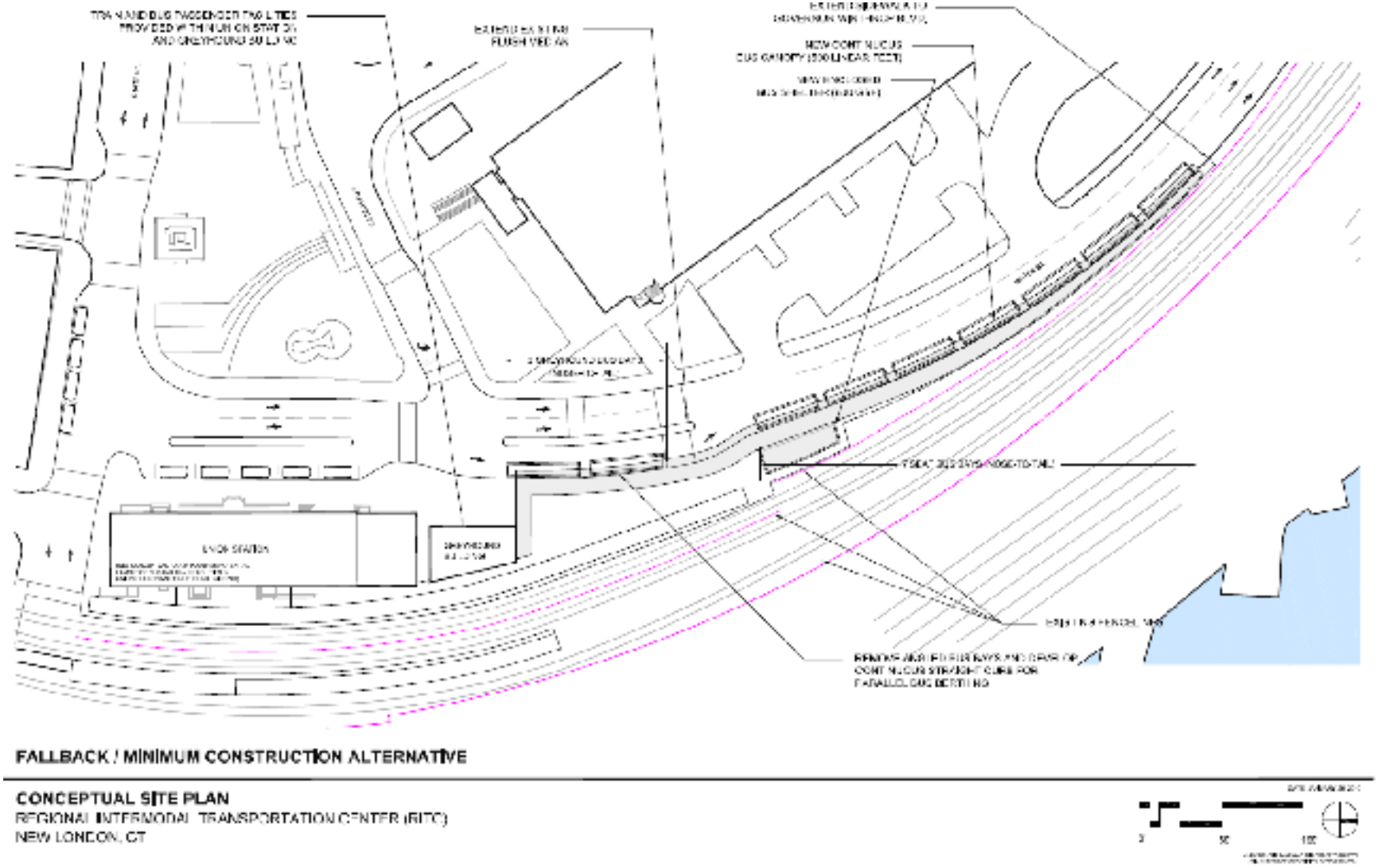
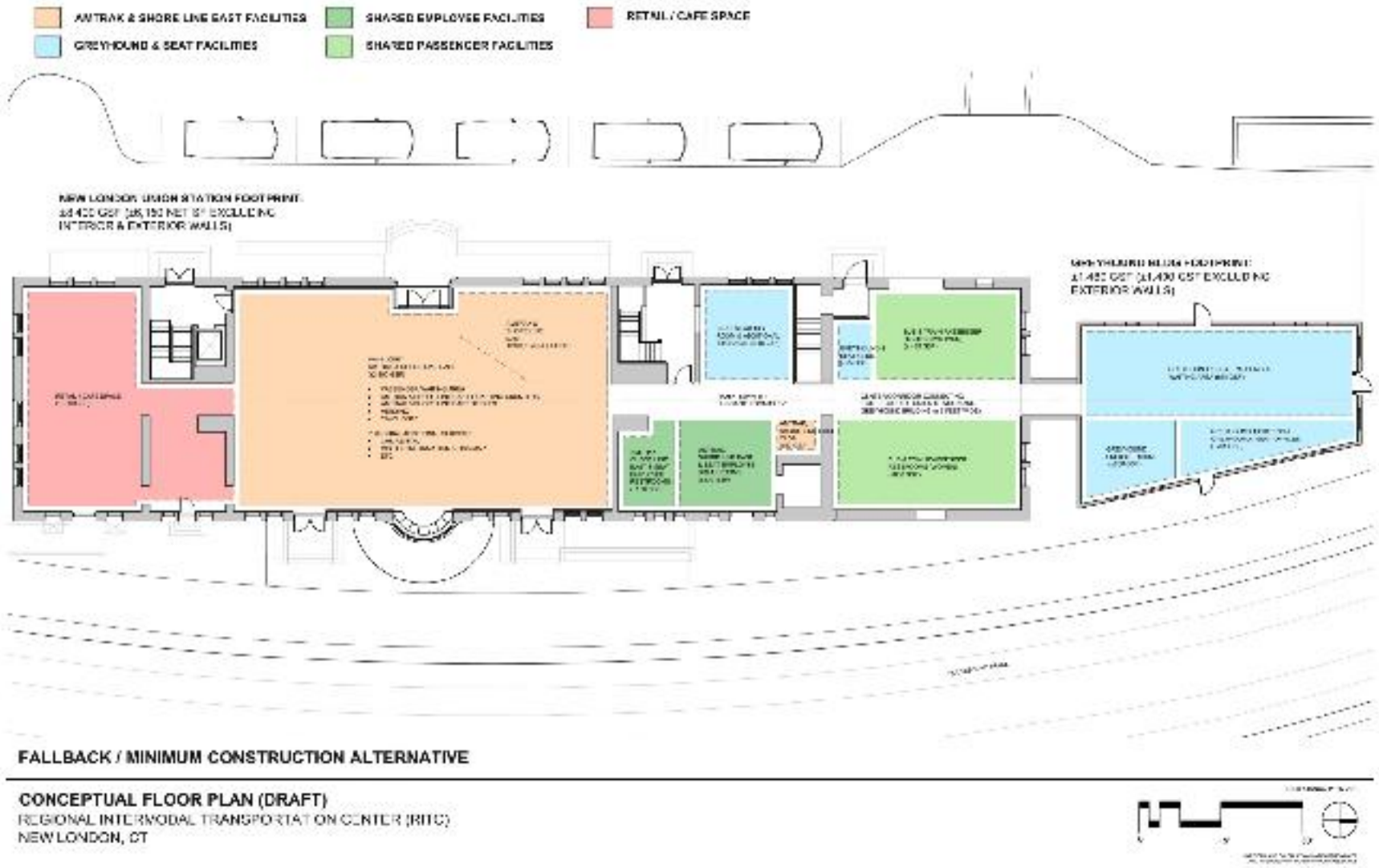


Figure ES-11: Fallback Alternative Conceptual Floor Plan



The center section of the pedestrian bridge constitutes approximately $4.9 M (including engineering inspection, contingency and escalation) of the estimated $9.9 million in short term improvements. The additional costs for the optional extensions to the pedestrian bridge are $1.4 M for the extension to the Water Street Garage and $4.9 M for the extension to the ferry area with the needed stairways, elevator and escalators (including engineering inspection, contingency and escalation).

Annual operating and maintenance costs for the bus terminal and pedestrian bridge are estimated at $0.3-$0.4 M per year. (This cost does not include the effect of any Greyhound lease revenue.) Operating costs for Union Station (approximately $0.3 M) and Water Street Garage (approximately $0.4 M) are additional; each of these facilities has revenue sources that cover some or all operating costs.

The Fallback Alternative would include the same $5.5 M in immediate pedestrian improvements plus $3.0 M for the bus terminal facilities. There would be additional costs to purchase or lease the Union Station (and possibly Water Street Garage) property and to make necessary repairs as in the Preferred Alternative.

8.4 Use of Union Station for Non-Transportation Functions

Union Station is the core of the existing and future RITC. This study has identified how Union Station property can be used to create an enhanced intermodal center. The Master Plan contained in this report continues the current use of the Union Station lobby for rail passenger facilities and the use of the Greyhound building for bus facilities. The plan proposes that outdoor space included in the property be used for expansion of bus facilities, the pedestrian bridge and passenger pickup and drop-off space. Incorporation of these transportation facilities, however, leaves some space inside the building available for other uses.

The TOD market analysis conducted in this study addressed the potential demand for residential, office and retail development within walking distance of the RITC. The analysis considered the potential for development over a ten year period within ½ mile walking distance around Union Station. Union Station represents just one key resource that could be positioned to serve some of this demand. Although residential demand was found to have the greatest potential in New London, the Union Station building is more suited to office development with possible first floor retail uses.

To date, however, the Union Station property has not been redeveloped to its full potential. Recently, the interior space in the Union Station building, both on the ground floor and the upper floors, has been underutilized. In the past, the upper floors were occupied office space and there are still some limited office uses there today. A restaurant occupied the second floor and some first floor space in the past. However, even before the current economic downturn, much of this space remained vacant.

Given the recently announced departure of Pfizer from Fort Trumbull and the overall economic downturn combined with the previously weak position of New London as an office market, the market for office space is severely depressed in the short term. Union Station faces competition from other downtown building spaces and the newly vacant first class office space at Fort Trumbull. However, looking several years into the future, one can envision Union Station being better positioned as a result of proposed transportation and other downtown improvements, improving economic activity nationally, and a series of policy decisions designed to promote downtown New London as a transportation center and a site for TOD. It will be critical

to take advantage of this time to develop a comprehensive TOD plan for the Historic Waterfront District, including Union Station, and to make policy decisions that support that plan, while also keeping options open to take advantage of arising opportunities.

While a comprehensive TOD strategy is needed, the strategy for Union Station could be one of incremental improvements. It may not be reasonable to attract full time retail tenants into the ground floor until a market can be developed. An incremental approach could mean bringing kiosks for retail uses in summer and holiday seasons and introducing part time cafes and later evolving to full time retail and restaurant space. However, part-time uses should only be introduced for a limited time with the understanding that they will eventually be replaced by full-time uses.

8.5 Implementation Considerations

To move the project forward, consideration will need to be given to environmental issues and to the appropriate lead agency, as well as funding.

Environmental Considerations

Clearly there are visual impacts associated with the Preferred Alternative. The newly reconfigured Parade area now allows for direct views of the Thames River along a line of sight to the north of existing Union Station and the Greyhound Terminal Building. The bus terminal and pedestrian bridge obstruct some of the view, so the RITC project conflicts with the Parade Project in this respect.

Approval of the State Historic Preservation Officer will be required given that the project is located in an historic district listed on the National Register of Historic Places and given that Union Station is individually listed. If federal funds are used, Section 106 of the Historic Preservation Act applies as does Section 4(f) of the 1966 Department of Transportation Act. The latter prohibits use of historic property unless there is no feasible and prudent alternative and all possible planning has been done to minimize harm to the historic resources. View shed impacts will have to be thoroughly examined.

Since this is an already built environmental, natural resources are not likely to be major constraints. Connecticut Department of Environmental Protection (CTDEP) permits will be required since the project is within the coastal boundary area and there are shorelands and coastal flood hazard areas that are impacted. In addition to triggering the need for a Connecticut Coastal Consistency Review, the proposed undertaking may also trigger the need for a local (City of New London) Coastal Site Plan Review. Because a portion of the site is located within the 100-year floodplain as designated by the Federal Emergency Management Agency (FEMA), a Flood Management Certification may need to be filed with the CTDEP for the RITC project.

Since the project area has a history of former industrial uses which has been well-documented during this study, there is some potential for hazardous materials. Testing of the soil should be undertaken as part of the environmental assessment in the next phase of design studies.

Finally local building permits and City Council approval would be required.

Funding, Leadership and Governance

The project as proposed requires substantial funding and a lead agency that could own and build the project. ConnDOT has previously submitted a request for a Congressional earmark for improvements at Union Station in the amount of $7. Transportation Enhancement Funding once reauthorized may be another source. Federal funds will require local match and the State looks to municipal entities to supply local shares.

While some elements of the RITC would continue to be owned, managed and operated by individual entities, there will likely be a need for coordination between the various transportation operators and shared funding of some elements. The study examined the governance of other intermodal transportation centers and developed a recommendation that the State take the lead role in owning and building the project. Based on its role in Shore Line East, rail stations and transit systems in the state, and its requirement that a pedestrian overpass or underpass be included in the short term plan, the Master Plan recommends that the State manage the rail station, the bus terminal and the pedestrian bridge. This would be accomplished through negotiation with the private owner to purchase or entering into a long term lease for the Union Station property (or a lease could be limited to the ground floor of Union Station, the Greyhound building and the land needed for the bus facilities and the pedestrian bridge). Connecticut DOT has indicated that this may need to include purchase or lease of the Water Street Garage to insure a revenue stream to cover operating costs. Negotiations with the private owner and the City would be needed.

In addition to acquiring Union Station, Connecticut DOT would also be responsible for building the SEAT bus terminal (which would then be leased to SEAT) and would be responsible for building the pedestrian bridge.

The consultant team also recommends that an RITC Association be formed to continue to involve the key stakeholders. The principal membership of this Association would be the transportation providers, the City and Connecticut DOT and any private owner if private property is involved. Responsibilities of this association would likely include arrangements for ongoing operational coordination (e.g., schedule coordination, information sharing, joint marketing and ticketing, etc.), sharing of maintenances responsibilities for intermodal linkages and longer term planning for the RITC. Members could be asked to contribute funding to this Association to cover expenses. Formation of this group may be an important first step toward implementation of the Master Plan.

9. Conclusions and Next Steps

This *Master Plan and Efficiency Study* has confirmed that the existing site is the preferable site for the enhanced Regional Intermodal Transportation Center. The study has identified the physical and operational needs of the Regional Intermodal Transportation Center at the current site and developed conceptual alternatives. The Master Plan includes a Preferred Alternative, comprised of both immediate and short term improvements, as well as a Fallback Minimum Construction Alternative that would be less costly. The capital and operating/maintenance costs associated with the two alternatives have been estimated as well as the costs for some optional elements. Environmental issues have been identified. The Master Plan recommends that the State take a lead role in managing the RITC and building the new facilities with the support and ongoing guidance of an association of key stakeholders including the City of New London and

the transportation providers at a minimum. Finally, an ongoing public process, including an active Stakeholder Steering Committee, has been carried out throughout the study to obtain stakeholder input.

The next steps to advance the project include the following:

- obtain City endorsement of study recommendation
- coordinate with the Connecticut Department of Transportation
- form an association to continue key stakeholder involvement
- pursue funding opportunities
- negotiate with the property owners to acquire or lease the necessary properties
- develop more detailed facility designs and conduct required environmental studies.



Boston Office
38 Chauncy Street
Suite 200
Boston, MA 02111
(857) 453-5450
Fax (857) 453-5451

Final Report

Regional Intermodal Transportation Center Master Plan and Efficiency Study

Southeastern Connecticut
Council of Governments

March 2010







TranSystems

EXPERIENCE Transportation

Acknowledgements

This study was prepared in cooperation with the Connecticut Department of Transportation. The opinions, findings and conclusions expressed in this publication are those of the Southeastern Connecticut Council of Governments and do not necessarily reflect the official views or policies of the Connecticut Department of Transportation.

This study was sponsored by the Southeastern Connecticut Council of Governments. The project was managed by SCCOG Executive Director James S. Butler, AICP. Also involved in the management of the study was SCCOG Assistant Director S. Richard Guggenheim.

This study was funded by a grant from the Connecticut Department of Transportation. The Connecticut DOT Project Manager was Andrew H. Davis. Other Connecticut DOT staff made significant contributions to the study and served on the Stakeholder Steering Committee, including Deputy Commissioner Albert Martin; Grayson Wright of the Bureau of Policy and Planning; and Eugene Colonese, Craig Bordiere and Jon Foster of the Rail Office.

SCCOG and the consultant team would like to acknowledge members of the *Stakeholder Steering Committee* and the interested study participants listed in alphabetical order below:

Martin	Berliner	SCCOG, City of New London City Manager
Kip	Bochain	Parking Commission Chairman
Ella	Bowman	SEAT General Manager
John	Brooks	New London Development Corporation
Karen	Bryant	City Center District
Michael	Carey	Suisman, Shapiro, Wool, Brennan, and Gray
Kevin	Cavanagh	City of New London
Joseph	Celli	Water Street Garage
Sandra	Chalk	New London Landmarks, Executive Director
Jenny	Contois	Congressman Joe Courtney, District Director
William	Cornish	Cornish Parking
Charles	Curtin	Curtin Transportation
Chris	DuPont	Fishers Island Ferry (invited)
Dick	Guggenheim	SCCOG
Charlotte	Hennigan	Thames River Greenery (invited)
Rep. Ernest	Hewett	State Representative
Bruce	Hyde	City of New London, Director of Planning and Development (early in study)
Rev. Wade	Hyslop, Jr.	City of New London
Joseph	Jaskiewicz	Mayor, Town of Montville, SCCOG Chairman (beginning of study)
Chris	Jennings	Mystic Coast and Country (early in study)
Michael	Joplin	New London Development Corporation, President
Dan	Karp	Daniels Dairy Downtown
John	Markowicz	seCTer, Executive Director
Jim	Martin	SEAT Chairman (at time of study)
Molly	McKay	(invited)

Frank	McLaughlin	New London Main Street, President
Stan	Mickus	Cross Sound Ferry
Rep. Edward	Moukawsher	State Representative
Jeffrey	Nelson	Governor's Eastern Office
Todd	O'Donnell	Union Station
Penny	Parsekian	New London Main Street, Chief Executive Officer
Kevin	Regan	Amtrak
Frederick	Riese	Connecticut DEP
Rep. Betsy	Ritter	State Rep. 38th District
William	Satti	Mashantucket Pequot Tribe (invited)
Tony	Sheridan	Chamber of Commerce of Eastern Connecticut, President
Peter	Simmons	CT Department of Economic and Community Development
Donna	Simpson	Eastern CT Tourism District, Executive Director
Harry	Smith	City of New London, City Planner
Joe	Smith	Mohegan Tribe (invited)
Dan	Steward	SCCOG, First Selectman, Town of Waterford
Sen. Andrea	Stillman	State Sen. 20th District
Tom	Stone	Greyhound

Southeastern Connecticut Council of Governments

Bozrah	William Ballinger	First Selectman
Colchester	Gregg Schuster	First Selectman
East Lyme	Paul Formica	First Selectman
Franklin	Richard Matters	First Selectman, SCCOG Chairman
Griswold	Philip Anthony	First Selectman
Groton City	Dennis Popp	Mayor
Groton Town	James Streeter	Mayor
	Mark Oefinger	Town Manager
Ledyard	Fred Allyn	Mayor
Lisbon	Thomas Sparkman	First Selectman
Montville	Joseph Jaskiewicz	Mayor
New London	Rob Pero	Mayor
	Martin Berliner	City Manager
North Stonington	Nicholas Mullane	First Selectman
Norwich	Peter Nystrom	Mayor
	Alan Bergren	City Manager
Preston	Robert Congdon	First Selectman
Salem	Kevin Lyden	First Selectman
Sprague	Catherine Osten	First Selectman
Stonington Borough	Donald Maranell	Warden
Stonington Town	Ed Haberek	First Selectman
Voluntown	Ronald Millovitsch	First Selectman
Waterford	Dan Steward	First Selectman

The Consultant Team

The consultant team was led by TranSystems with Larry Englisher as Project Manager. The other members of the consultant team were Crosby Schlessinger Smallridge, LLC; Fitzgerald & Halliday, Inc.; Basil Baumann Prost and Associates, LLC; and URS Corporation. Individuals from these firms who contributed to the study are listed below:

TranSystems

Larry Englisher	Vice President, Project Manager
James Wensley	Senior Transportation Planner
Shruti Rathore	Transportation Planner
Jeremy Mendelson	Transportation Planner

Crosby Schlessinger Smallridge, LLC

Skip Smallridge	Principal
Chris Riale	Planner/Urban Designer

Fitzgerald & Halliday, Inc.

Jill Barrett	Principal Planner
Sam Eisenbeiser, AICP	Principal Planner
Paul Stanton	Principal Planner
Carla Tillery	Principal Planner/Engineer

Basil Baumann Prost and Associates, LLC

Jim Prost	Principal
David Starnes	Vice President
Autumn Calder	Associate

URS Corporation

Paul F. Schmidt, PE	Senior Transportation Engineer
Stuart Popper, AICP	Principal Planner

Table of Contents

Executive Summary

1. Confirmation of Site Selection
2. Existing Physical Facilities
3. Transportation Modes at the Regional Intermodal Transportation Center
4. Market Analysis
5. Transit Oriented Development / Downtown Development Opportunities
6. Development of Potential Improvement Options
7. Proposed Master Plan Improvements
8. Costs and Economic Impacts of the Short Term Improvement Plan
9. Environmental Issues
10. Implementation Issues

Appendices

A. Fort Trumbull Municipal Development Plan, Section 3.5, Environmental Conditions
B. ADA Compliance
C. List of Interviewees
D. Detailed Table of Advantages and Disadvantages of Short Term Alternatives
E. Detailed Table of Advantages and Disadvantages of Long Term Concepts
F. Public Involvement
G. Investigation of Several Stakeholder Suggestions Raised in July 2009
H. Alternative Bus Terminal Configuration
I. Economic and Fiscal Impacts of the Short Term Improvement Plan
J. Contamination Findings
K. Governance Research

1. Introduction

1.1 Background

Downtown New London is the confluence of various modes of transportation serving the entire southeastern Connecticut region. Today, the collection of several individual transportation terminals and facilities located in close proximity to each other in downtown New London constitutes the Regional Intermodal Transportation Center (RITC). At the center of the RITC is Union Station, an historic, architecturally-significant and imposing structure designed by H.H. Richardson and built in 1888. This privately owned building serves as the region's train station for Amtrak intercity rail (Acela Express and Regional trains operating on the busy Northeast Corridor) and Connecticut DOT's Shore Line East commuter rail service (its easternmost terminal). Located alongside Union Station are the Amtrak-owned tracks used by passenger and freight rail services.

Union Station is also the site of New London's intercity bus terminal and the New London hub of the region's bus transit system. The Greyhound intercity bus station is located in a separate brick structure on Union Station property just north of the station's old baggage shed. The local transit system, Southeast Area Transit (SEAT), has a curbside bus stop with a simple shelter on Water Street, north of the building and the Greyhound station. This bus stop serves as its New London hub.



Union Station

Space for the transportation uses at Union Station is currently leased from the private owners by the operators of rail (Amtrak) and intercity bus service (Greyhound). The private owners of Union Station, who acquired the building in order to preserve it, have been exploring alternative uses for the building which includes considerable vacant space.

Various ferry services operate from the adjacent waterfront area to points in New York State and Rhode Island, although seasonal cruise ships dock at the Admiral Shear State Pier, beyond walk distance from the site. Private bus operators serving the two casino resorts in the region connect with passenger ferries. Local travel is also provided by three taxi companies which have a taxi stand in front of Union Station. There are two parking garages and several surface lots in the area serving patrons of the RITC and the local street network connects travelers to I-95 and the rest of the interstate highway network. Across Water Street, the City of New London operates parking garage with over 900 spaces providing parking for downtown needs as well as for the transportation terminal, particularly ferry and rail users.

Despite the general proximity of the modes, the actual connections between services could be improved in terms of physical conditions, directness, wayfinding, information and other factors. This Master Plan and Efficiency Study, commissioned by the Southeastern Connecticut Council of Governments (SCCOG) and funded with a grant from the Connecticut Department of Transportation, was undertaken to determine how the intermodal hub can be improved. The study was conducted by a team of consultants led by TranSystems, including Basile, Baumann Prost & Cole LLC, Crosby, Schlessinger, Smallridge LLC, Fitzgerald & Halliday, Inc., and URS Corporation.

1.2 Study Purpose and Objectives

The purpose of the Master Plan and Efficiency Study has been to develop a seamless regional transportation hub to meet regional transportation needs that also supports the revitalization of downtown New London. SCCOG and the City sought to ensure that a vital transportation hub is maintained with enhanced functionality for all transportation connections. These transportation assets are seen as key to New London's future development. The City of New London, a key stakeholder, wishes to promote development in downtown New London near the hub in a manner that will provide economic benefits, build on the transportation features as well as the waterfront and historic and architectural assets, and correct some past urban redevelopment decisions that have not contributed to the vitality of downtown.

The study contained the following specific objectives:

1. Determine if the Regional Intermodal Transportation Center (RITC) should remain at this site or be relocated to an alternate site
2. Conduct a physical inventory of RITC component facilities
3. Evaluate existing and future operational needs for each mode at the RITC
4. Analyze market potential for transit-oriented development at or near the RITC
5. Identify and evaluate potential improvements for the short and long term
6. Evaluate costs and economic impacts
7. Evaluate environmental conditions and implications
8. Develop a master plan including recommended actions

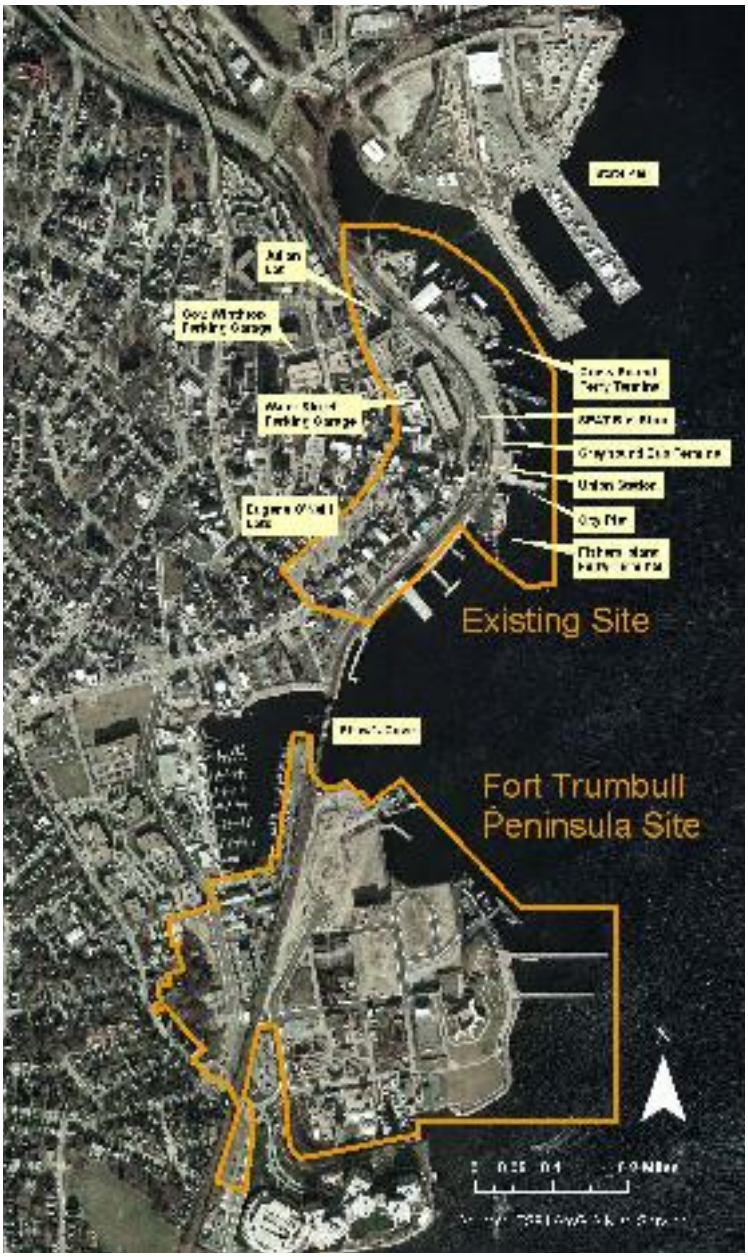
In addition to the technical objectives listed above, reaching public consensus was an important objective. There was ongoing stakeholder and public involvement and agency coordination throughout the study. This included two public meetings and six meetings of a Stakeholder Steering Committee including representatives of transportation providers, property owners, downtown business and other interest groups, and representatives of City and State agencies. (The public process is documented in Appendix F including meeting minutes.) Individual meetings were also held with key stakeholders. A study webpage was maintained on the SCCOG website (www.seccog.org) and fact sheets were prepared and distributed. Finally, passenger surveys conducted early in the study (in summer 2008) were a means of outreach to travelers.

This Executive Summary provides a brief description of each major step of the study with the emphasis on providing a summary of the recommended master plan. Each step is more fully documented in the final report.

2. Confirmation of Site Selection

A comparison of alternative sites was requested by Connecticut DOT, the agency funding the study, to serve the purposes of an alternatives analysis (as far as site location) for any subsequent NEPA documentation. The site for the future improved Regional Intermodal Transportation Center (RITC) was selected based on a comparison of two pre-selected alternative sites for the RITC - the existing site located in downtown New London along Water Street and the Fort Trumbull peninsula, a redevelopment site in the City of New London. (Fort Trumbull was cited as a place with visitor interest – due to the presence of Fort Trumbull State Park -- and a possible site for cruise ships to dock. It also is along the railroad right-of-way.) Figure ES-1 shows the location of the two sites.

Figure ES-1: Location of the Two Candidate Sites



Specific criteria for use in the evaluation included:

- Capacity for Operations - Landside
- Capacity for Operations - Maritime
- Compatibility with Other Existing/Potential Uses
- Environmental Sensitivity
- Parking Capacity (for all modes)
- Pedestrian Access (for all modes)
- Vehicular Access (for all modes)
- Traffic Impacts (for all modes)
- Capital Cost (for all modes)
- Economic Development Opportunity
- Likely Public Support
- Capacity to Accommodate the Entire Package of Modes

The recommendation of consulting team was that the RITC be maintained at the downtown site based on the following reasons:

1. There is widespread and firm desire among stakeholders interviewed, including the transportation operators, to keep the RITC at their current sites to support and serve downtown. There are perceived advantages to retaining the downtown location for each mode of transportation.
2. Only the cruise ships which currently dock at the Admiral Shear State Pier would really benefit from being at Fort Trumbull (it was one of the major considerations of ConnDOT in their suggesting Fort Trumbull as the alternative candidate site for the RITC). Moving the cruise ships to Fort Trumbull might enhance the attractiveness of New London to cruise ship operators and passengers, but it is not functionally necessary to move them and it is certain to be costly and, after thorough consideration, was deemed infeasible due to landside access constraints and marine operational factors.
3. Many transportation operators would face constraints at the Fort Trumbull site, such as the limited and circuitous access to the site, parking requirements and the need to dredge to create ferry terminal.
4. The existing RITC sites offer the needed capacity and opportunities for improvements, some of which are underway.
5. There is existing support for enhanced development around the existing sites and there are some sites for such development.

The Stakeholder Steering Committee reached a clear consensus agreeing with the consultant recommendation. With the concurrence of the SCCOG, the current site became the focus of the remaining tasks of the Master Plan and Efficiency Study, which developed a plan for creating an improved RITC at the selected site.

3. Transportation Services at the RITC

The following long distance modes are provided at the existing RITC:

- Amtrak intercity rail service, with a ticket office and waiting area in Union Station
- Shore Line East (SLE) commuter rail service, operated for Connecticut DOT by Amtrak and currently limited to one roundtrip per day at New London but expected to expand soon to six roundtrips per weekday
- Greyhound intercity bus service (operating from sawtooth bays and its leased terminal building just north of Union Station)
- Cross Sound Ferry (located on property east of the railroad tracks with vehicular access from the Governor Winthrop Boulevard crossing)
    - Auto ferry service to/from Orient Point, NY (Long Island)
    - Sea Jet passenger-only ferry service to/from Orient Point, NY (Long Island)
    - Block Island Express passenger-only ferry service
- Fishers Island auto ferry service (owned by the municipal government of Southold, NY and operating from a fairly new terminal building located east of the railroad tracks at State Street near City Pier)

In addition there are several local access modes, including:

- SEAT bus transit service (seven routes which pulse on an hourly basis) operating from a curbside location on the east side of Water Street just north of the Greyhound bus area (except for the route to Foxwoods which operates from directly in front of Union Station)
- Casino coaches (which meet Sea Jet passenger ferries on Cross Sound Ferry property)
- Taxis, which stand in front of Union Station
- Automobile parking, including the City-owned Water Street Garage, Cross Sound Ferry on-site parking (partially on land leased from the City), Governor Winthrop Garage, City-owned Eugene O'Neill Drive lots, and the Julian lot (open on summer weekends)

4. Existing Facilities at the RITC

The existing physical conditions of the transportation facilities located in downtown New London that make up the Regional Intermodal Transportation Center (RITC) were inventoried. These include the rail station, bus facilities, ferry facilities, parking facilities, taxi stand, vehicular and pedestrian network, and the City Pier area, shown in the aerial photo below in Figure ES-2.

Figure ES-1: Existing Transportation Facilities in Downtown New London



Most of the physical facilities are in good or very good condition, although some deficiencies were identified through observations of the consultant team and information from user surveys and interviews. The most notable deficiencies were the poor pedestrian connections, lack of amenities and comfort at the rail and bus facilities, conditions of elevators and stairways as well as deterioration of the concrete at the two garages,

inadequate security systems at parking facilities, and lack of wayfinding signage between transportation modes.

Current pedestrian facilities need improvements to ensure safe and convenient access between travel modes and to and from the parking facilities. The most notable deficiencies are between Cross Sound Ferry and the other facilities. Improvements are also needed to and from the Water Street Garage and Julian surface lot and the various transportation services. The Parade Project, for which construction is now nearly completed, will improve pedestrian safety in the vicinity of Union Station through enhanced crosswalks, sightlines and traffic calming. However, there are other needed improvements.

Union Station has had renovations to the lobby and roof, and the station platforms are in good condition. The Greyhound terminal, leased from the owners of Union Station, is in sound condition but is very basic and has not undergone renovations to enhance its appearance. The SEAT bus stop is minimal as a passenger facility, consisting of a simple shelter and several outdoor benches. It would benefit from improvements to enhance passenger comfort or relocation to a location which could provide indoor waiting areas and other amenities. Bus and rail users surveyed indicated particular concerns about amenities (e.g., lack of food services, newsstand and clean restroom facilities) and comfort at the rail and bus facilities.

Fishers Island Ferry has a new (3-year old) terminal facility that is in very good condition. The Cross Sound Ferry facilities are in good condition. Some of the parking areas in use at Cross Sound Ferry are unpaved. Users of the Cross Sound ferry facilities indicated concerns about lack of amenities and sufficient convenient parking.

The Water Street Garage and Governor Winthrop Garage show evidence of deferred maintenance (in particular, deteriorating concrete), although some repairs are now underway at the Water Street Garage addressing elevators, security, lighting and signage and others are planned. In addition, the elevators at the Water Street Garage need repairs. (A new tower is being constructed at the south end of the garage with a new elevator as part of the Parade Project.) Surveys of users of the parking facilities conducted as part of this study indicated the most dissatisfaction was with the stairways and elevators at the garages, as well as handicapped access. Another concern expressed in the surveys at the parking facilities was about security features. There is a lack of security systems in the garages and parking lots, including closed-circuit TV and blue light call boxes. The Water Street Garage will have security cameras installed as part of upcoming renovations.

Overall, the transportation facilities are not providing adequate access for persons with disabilities, based a field assessment conducted as part of this study in late 2008. Handicapped access in the Water Street Garage was considered to be a problem in the user survey. This may largely be due to the fact that the elevators were out of order. This will be corrected with the installation of a new elevator at the south end as part of the Parade Project.

Additional improvements to the remaining elements are warranted. Lighting and wayfinding signage are lacking. Although many of the survey respondents did not identify that lighting was poor or deficient, lower level pedestrian fixtures will both improve aesthetics and also provide a stronger sense of security. While survey respondents generally identified ease of access as being good; there was less satisfaction with signage. In general, wayfinding signage throughout the city street network is lacking; the existing signage doesn't provide clear and concise messages nor are the signs strategically placed. Better than 30% of the respondents indicated that signage was below average at the Cross Sound Ferry Lot location.

Finally, while there is a large "Welcome to New London" sign on the Water Street Garage (in letters along the face of the garage near the roofline), more needs to be done to attract the visitor in terms of restaurants, shopping, etc. that can be seen by visitors arriving at the RITC, particularly for those arriving at the Cross Sound Ferry Terminal, Greyhound Bus Terminal or SEAT bus stop. The railroad right-of-way area was found to be unattractive and did not appear to be well-maintained during the field review in late 2008. However, over the course of the study, several improvements have been made. The Parade Project has been constructed and is nearing completion. It is improving the area to the south of the Water Street Garage by opening up views and creating an attractive pedestrian plaza. The City has been installing new steel post fencing along the west side of the railroad right-of-way. (The decision to use steel post fencing rather than cyclone fencing was influenced by this study's recommendations.) New London Main Street has installed some new wayfinding signage and is installing "gateway" signage at strategic locations. Despite this progress, there is a need to take additional actions to create a more pedestrian- and tourist-friendly area around the RITC.

5. Existing and Future Transportation Needs

The study identified elements of the transportation center that are working well and should be maintained, as well as many elements that are in need of improvement. Future ridership increases, expansion of services, growth in tourism, and new development in New London will likely create new needs that must be addressed in the future. Each of these areas is summarized below.

5.1 Current Needs

For the most part, each individual transportation provider's operation is working fairly well. Amtrak operates smoothly through New London. Buses come and go with minimal delays from local traffic on most days. Ferry operations run smoothly. Parking facilities fill on only a few days each year.

Several key connections between modes were identified. Where these key connections are good, they should be maintained. Good connections are close together, on good surfaces, esthetically pleasing, weather protected and free from obstructions and delays. The good key connections that should be maintained include:

- Greyhound to/from SEAT
- SEAT's Foxwoods Route (#108) to/from Amtrak southbound (northbound requires crossing the tracks)
- Greyhound to/from taxis and pick-up/drop-off
- Amtrak to/from taxis and pick-up/drop-off (although some may have to cross the tracks)
- Amtrak northbound to Fishers Island (southbound requires crossing the tracks)
- SeaJet high-speed passenger ferry to/from the casino shuttles
- Amtrak southbound, Greyhound, and SEAT to/from the Parade and downtown
- Roadway access to the Long Island Auto Ferry and to the two garages

There are also several other good quality connections that are made less frequently and thus not deemed key connections. While less critical, these should also be maintained if at all possible.

Bus Facilities - Bus facilities and operations are most in need of improvement. Greyhound's ticketing and waiting area is antiquated and there is no outdoor waiting area or outdoor seating. The existing saw-tooth bus bays are not configured as Greyhound prefers and create possible safety concerns when buses need to back up into traffic. Greyhound also desires access to a third bay. SEAT would prefer a location closer to the train station and would like an indoor facility for both passengers and operations personnel. SEAT's passenger facilities are minimal and need improvement.

Ferry Facilities - While both ferry operators have adequate indoor ticketing facilities for the vehicle ferries, indoor waiting areas are limited. The Block Island passenger ferry has no indoor waiting area and no restroom. A more substantial passenger ferry terminal building is needed.

Traffic - Traffic issues focus on the two railroad crossings. The crossings at State Street and Governor Winthrop Boulevard are frequently closed by incoming and outgoing trains at the station, impacting the ability of pedestrians and vehicles to access both ferry terminals. Downtown festivals and events also cause general traffic problems affecting bus and ferry operations. The area in front of Union Station, even after Parade construction is complete, may be too small for efficient use by the taxis and private vehicles picking up and dropping off passengers.

Parking - Parking facilities are located a distance from the ferry terminals. The parking capacity is adequate for current needs unless existing surface parking at Cross Sound Ferry and the Julian lot (an office building parking lot adjacent to the Water Street Garage that has been open on summer weekends to meet peak parking demands created by the ferry) become unavailable. Security, signage and elevators at the parking facilities are poor. Many passengers using the Block Island Ferry must park in the garages and walk a few blocks and across the tracks. Wayfinding signage and access routes from the garages to the ferry terminals are poor.

Connectivity and Information Needs - Several key connections between facilities were identified as deficient. The most difficult key connections to make are those that involve crossing the railroad tracks and accessing the ferry terminals. The major obstacles are the distances involved, level changes, wayfinding signage, condition of the pathways and delays and safety at the two railroad crossings. The key connections identified as deficient include:

- Greyhound to/from the Long Island Ferry
- Amtrak to/from the Long Island Ferry and the Block Island Ferry
- Water Street and Governor Winthrop garages to/from the Block Island Ferry
- Union Station and southbound rail platform from the Fishers Island Ferry
- Taxis and Water Street Garage to/from the Fishers Island Ferry
- Downtown to/from the Long Island Ferry and the Block Island Ferry

Other less than optimal connections result from pedestrians and vehicles needing to cross the railroad tracks at State Street. Trains in the station can cause delays and pedestrian areas are not clearly distinguished from the roadway. These include:

- Amtrak/SLE northbound platform to/from the Water Street Garage, SEAT 108 and taxis
- Amtrak/SLE northbound platform to Union Station lobby and ticket counter
- Fishers Island Ferry roadway access

Schedules are not generally coordinated to facilitate intermodal connections and real time status information is generally not shared among operators. Joint marketing and ticketing among New London

operators is minimal and schedule information and information on how to connect to other modes is lacking both pre-trip and on-site. Wayfinding signage is minimal, non-existent or misleading. Little information on downtown New London is available through the transportation operators. Performance of the RITC as a transportation center could be improved by more joint marketing and ticketing efforts and improved pre-trip and on-site information on how to make connections. A centralized system to provide real time connection information in all terminals may be beneficial. Downtown New London could benefit from more information on downtown attractions and activities being provided in advance, both on vehicles and in the station area.

Amenities and Commercial Needs - The deficiency that was mentioned most often by passengers at the RITC surveyed during this study was the general lack of amenities in each of the facilities. The Union Station area lacks any retail amenities or food concessions. Restroom facilities are locked and in need of accessibility improvements. SEAT passengers have no restrooms. While the rail station has a substantial waiting area, the Greyhound waiting area is cramped and antiquated. SEAT has only a single standard outdoor bus shelter and a few benches. While there is a single food concession at the Long Island Ferry terminal, there are no other retail or food concessions at either ferry terminal.

5.2 Future Needs

Two future transportation scenarios were developed, reflecting assumptions based on past trends and input from the operators. These were developed for the purpose of setting reasonable upper and lower bounds for decision-making concerning the RITC facility and should not be taken as projections of future travel. Both scenarios would result in increased demand for transportation services at the RITC. Ridership and parking demand was assessed for both 2015 and 2030 under each scenario.

Parking and Traffic - The demand for parking is a key element in determining future facility needs. If the Cross Sound parking lot is needed for auto ferry staging, and the Julian lot (open on summer weekends) is developed without public replacement parking, existing demand would create an immediate need for additional parking. Otherwise, under either scenario, additional parking may not be needed before 2015 but would certainly be needed well before 2030. By 2030, in the low demand scenario, peak summer weekend demand would be near the total capacity of all downtown parking facilities, while in the high scenario, higher growth rates and expanded ferry services would increase demand to well over total parking capacity. RITC parkers alone would take up all of the available capacity in the high scenario, leaving no room for other users. If RITC parkers were limited to the three closest facilities, they would nearly fill the facilities, even in the low demand scenario. It is also likely that additional space will be needed for taxis and for passenger pick-up/drop-off, possibly through the creation of an off-site taxi holding area. Increased traffic at the Water Street intersection with Governor Winthrop Boulevard may result in unacceptable traffic levels of service that would also need to be addressed.

Rail Facilities - Ridership and service under the future scenarios will likely require some additional or enhanced facilities. While current rail facilities appear to be adequate to meet future demand, it was determined late in the study that Shore Line East service when expanded will be shifted to Track 6 (the freight track) at Amtrak's request. Connecticut DOT will modify the existing platform and may consider construction of an additional platform in the future to the east side of Track 6.

Bus Facilities - Bus facilities may need to be expanded and enhanced. Greyhound may need access to a third bay. Greyhound's ticketing and waiting area would likely need to be enhanced and expanded. For SEAT, increased corridor route frequency in either scenario will create a need to layover an additional bus and any new routes would further increase space requirements. The increase in frequency in the high

scenario would result in much more SEAT activity visible at the RITC bus stop. This increase in vehicles using the facility and the accompanying increase in ridership would make the case for an enhanced facility with an enclosed waiting area, additional amenities and an indoor facility for operating personnel. Finally, the proposed but unfunded tourist transit system included in the high scenario would also create additional need for bus facilities, both close to downtown and accessible to the Cross Sound Ferry terminal. (At Cross Sound Ferry, the tourist transit buses would replace the casino shuttles using the same, or preferably enhanced, facilities.)

Ferry Facilities - Ferry operators may also need to add facilities to accommodate the expanded services reflected in the high scenario. Cross Sound Ferry may wish to construct a new high-speed passenger ferry terminal at the site of the Block Island ticket office and dock, serving the Block Island Ferry, SeaJet and any new passenger ferry services. Fishers Island would need a new ferry slip if they begin operation of a passenger-only ferry.

Current and future operational and facility needs for all modes, the need for improved connections between modes, the need for additional parking and the need for improved amenities all played a key role in developing proposed improvements to the Regional Intermodal Transportation Center

6. Potential Transit Oriented Development (TOD)

The enhancement of the RTIC is envisioned to serve as a catalyst for transit oriented development (TOD), that is, concentrated development within walk distance of the RITC that builds on the advantages of convenient public transportation access and in turn generates passengers that will use the RITC. A market analysis was conducted to assess the development potential at and in the general area around Union Station (i.e., downtown New London). Through a demographic and economic overview of the RITC site area, as well as analyses examining the residential, office and retail market development potential of the station and surrounding areas, this market analysis considered the land uses and services that can complement the RITC. This analysis was prepared using an industry standard research process, taking into consideration emerging demographic and economic factors, transit oriented development factors, and public/private development opportunities. The result was projections for residential, retail and office development in the succeeding ten year period. This was followed by an evaluation of transit oriented development (TOD) sites and the development of some general TOD scenarios.

6.1 Summary of Strengths, Challenges and Opportunities

Strengths, challenges, and opportunities for potential development in downtown New London's Historic Waterfront District were identified as a result of site visits, interviews with stakeholders, and market analysis conducted during the study.

- *Strengths*
  - historic downtown with unique characteristics
  - national trends of residential, office and retail shifts into urban centers
  - growth in key industries (professional/scientific, maritime, and creative arts and technology)
  - large regional tourist industry
  - existing demand for market rate downtown residential space
  - eclectic niche of retailers and restaurants

- entertainment and arts venues
- local and regional metropolitan connections (Boston, New Haven, Stamford, New York, Philadelphia, and Washington)
- a historic multimodal transportation center in downtown serving as an origin or destination for 1.8 million passengers annually

- *Challenges*
  - difficult/expensive renovations
  - obsolete retail spaces
  - perception of crime
  - low traffic counts
  - national economic downturn
  - difficult pedestrian environment connecting the train station, ferries and downtown
  - low occupancy of existing commercial space
  - predominantly lower income population in the city
  - small downtown residential population
  - a relatively small downtown worker population

- *Opportunities*
  - build on local economic and demographic trends with an expanded residential presence downtown for empty nesters and young professionals
  - attract businesses in key employment industries
  - encourage more tourist visits to the area
  - encourage niche retailers
  - bolster downtown entertainment/arts/cultural events
  - improve streetscape to attract public transportation users to the downtown
  - implement a marketing/branding program of downtown and the RITC to capture a larger share of the "culture class" emerging in the new economy and visitors who use the various transportation modes

6.2 Projections for the Next Ten Year Period

The market analysis projected that downtown New London can support modest additional retail, office and residential space over the next ten-year period. However, development will stall in the short term as the nation-wide economic downturn negatively influences market conditions that support growth. It is expected that the supportable square feet and units can be phased in throughout the ten year period, but the majority of the development will occur in the later years. The market analysis for office, residential and retail suggested the following potential projected development program:

Table ES-1 Downtown Development Program over a Ten-Year Period

	Low	Mid	High
Office	20,215 SF	39,000 SF	66,616 SF
Retail	19,422 SF	40,675 SF	62,460 SF
Residential Units	93 (93,000 SF)	211 (211,000 SF)	347 (347,000 SF)
Total Square Footage	130,707	288,262	473,181

While there is potential for new office and retail development, the greatest potential is for residential development. The level of development in downtown New London depends on the market conditions, available space, micro and macro economic trends, public policy incentives and proactive marketing programs. Any combination of these factors will influence the development potential of downtown New London. Taking into consideration the current economic downturn, downtown New London is not projected to see rapid growth in the near term years. As businesses and households begin to recover, they will look for new business, tourist, and retail opportunities. The City of New London, and other organizations aiming to make downtown a more attractive option for office locations, residential living and retail shopping and restaurants, have the near term to foster incentives and develop a marketing campaign to reach out to potential office and retail space users, tourists, residents and other groups potentially spending money in downtown.

Over the longer term (in ten years), the total estimated fiscal impacts from the RITC induced development program are over $1.6 million in property tax, $1.2 million in income tax and $600,000 in sales tax annually. The induced economic impacts are 317 new downtown residents and 356 new employees (209 office employees and 156 retail employees).

6.3 Development Scenarios

The market analysis projected three conceptual development programs which included a low, mid and high scenario. Significant rehabilitation of existing buildings along Bank and State Streets as well as the development of several small infill sites within the downtown would accommodate the Low Scenario downtown development program (consisting of 20,215 SF office, 19,422 SF of retail, and 93,000 SF of housing, i.e., 93 units). In combination with the rehab/development under the Low Scenario, the development of larger development parcels, including the Eugene O'Neill Drive parking lots would accommodate the Mid Scenario downtown development program (consisting of 39,000 SF of office, 40,675 SF of retail, and 211,000 SF of housing, i.e., 211 units). Lastly, in combination with all of the above, the redevelopment of large potential redevelopment sites on Atlantic Street, Eugene O'Neill Drive, Union Street, and Governor Winthrop Boulevard would accommodate the High Scenario downtown development program (consisting of 66,616 SF of office, 62,460 SF of retail, and 347,000 SF of housing, i.e., 347 units).

Sites that could potentially accommodate TOD range from small infill parcels to large, long-term redevelopment opportunities. Presently, there are very few undeveloped sites and, consequently, most of the major opportunities for TOD around the RITC are long term (20 or 30 years). The most immediate opportunities lie in the vacant storefronts on Bank and State Streets, and small infill parcels identified above. Although it is conceivable that these sites could be rehabilitated/developed within the short range, they are too small to achieve a significant portion of the future land use program identified in the market analysis. In addition, achievable as-of-right development densities may not be great enough to make it worth the investment for developers.

If there is a decision to raze and replace the Water Street Garage in the future (e.g., 20 or 30 years from now), consideration should be given to redeveloping the "superblock" bound by Water Street, State Street, Eugene O'Neill Drive, and Governor Winthrop Boulevard. This 235,000 sq. ft. site (5.4 acres) represents an opportunity to use the site more efficiently, create a new "face" for downtown New London fronting on Water Street and create a lively, pedestrian-friendly interior street pattern linking Bank and State Streets to the new multi-use district.

Developing the identified sites with well-designed, higher density, mixed-use development (with an emphasis on residential development) could potentially improve connections between the RITC and the downtown, increase transit ridership, and help transform the RITC and downtown New London into a vibrant, pedestrian-friendly, self-supporting district. The realization of this TOD potential will require public/private partnerships and community support.

7. Development and Evaluation of Improvement Options

To guide the development of options for the master plan and the screening evaluation of those options, the following guiding principles were developed to reflect the goals of SCCOG, the City and the Stakeholder Steering Committee.

Table ES-2: Guiding Principles

1. Emphasize short term improvements that are specific, low cost, and easy to implement, that address identified deficiencies and that work towards, or at least are not incompatible with the desired long term vision(s)
2. Include one or more long term visions, which should be more general and allow for some flexibility so that the City can respond to private developer proposals
3. Identify possible phasing of improvements
4. Preserve and enhance the viability and growth of the transportation operators and local businesses
5. Make transfers between modes safe and convenient
6. Capitalize on the synergies of transportation services and development
7. Balance the space needs of transportation services and development
8. Maximize opportunities for those types of development that are likely given the character and advantages of New London
9. Avoid schemes that would involve land takings / focus instead on opportunities for public-private cooperation
10. Consider the goals of private businesses/property owners as well as public goals
11. Create an attractive gateway for New London and the region and encourage travelers to visit New London

7.1 Short Term Alternatives

Several options were identified for short term, lower cost improvements for the RITC. These improvements were designed to enhance the traveler and visitor experience, particularly as a pedestrian. These improvements would be implementable in a relatively short time frame, through cooperative arrangements among the City and the major property owners. The improvements would not require major redevelopment or reconstruction efforts; however, they would make significant progress in addressing identified issues, including pedestrian safety, unclear connections, amenities, image, aesthetics, etc. The potential improvements are compatible with the longer term visions.

For all practical purposes, the locations of the auto ferry terminals and rail station are fixed. The location of the major parking facilities serving the RITC are also fixed at least for the short term. It should also be

noted that the Parade Project which is under construction and nearing completion was assumed to need to remain in place without modification (or incur only very minor impacts).

The most flexible components of the RITC are the Greyhound Bus Terminal, the SEAT pulse-point bus hub, the taxi stand, the pick-up/drop-off areas at Union Station, the location of the high speed passenger ferry docks, and the allocation of staging versus parking space on the Cross Sound Ferry site. Also subject to possible new uses are the area in front of the Water Street Garage and some areas on the Cross Sound Ferry property. (Cross Sound Ferry has identified the potential removal of some existing buildings to allow for additional parking and staging areas.)

The most urgent needs to address were (in no particular order):

- Pedestrian Safety Improvements
- Enhancing the Pedestrian Environment
- Facilitating Transfers Between Modes
- Improving Wayfinding
- Enhancing Bus Passenger Amenities
- Enhancing the Aesthetic Appearance and Welcoming Visitors
- Encouraging Transportation Uses at Union Station.

Improvements Common to All Short Term Alternatives

Among the components of the short term improvement are several that are common among all the short term alternatives. These are:

- Enhanced pedestrian crosswalks and pathways including ADA compliance
- Enhanced pedestrian scale lighting
- Wayfinding signage between all components of the RITC
- Enhanced traveler information through signage, information kiosks, information center
- Aesthetic improvements to the façade of the Water Street Garage and the railroad right-of-way, that is, new fencing and landscape improvements, events banners and welcome signage on Water Street Garage façade
- Use of Union Station as a gateway to New London
- Extend taxi stand along State Street between Bank Street and South Water Street

The most critical focus areas for short range pedestrian and aesthetic improvements in the RITC area are at the two intersections where streets cross the railroad and that provide pedestrian and vehicular access to the waterfront, ferry services, City Pier, and Union Station. Another focus for pedestrian improvements is along the waterfront. These short term pedestrian and aesthetic improvements will create a higher-quality pedestrian environment and will tie together the transportation modes. Together, they will create a safer and more secure and attractive RITC area for residents, tourists, and transit and ferry patrons.

Improvements Specific to Particular Short Term Alternatives

The short term alternatives differ primarily in what changes are assumed to occur in the location and configuration of the bus facilities. Specifically, the differences are related to whether one or both of the two bus operations are retained in their current locations or relocated to the space now available in front of the

Water Street Garage. In either case, there should be upgrades to the customer facilities for the bus services.

As a result of the bus facility alternatives, there are options as to how the curb space along the east side of Water Street is used if the buses are moved from their current location and how the space in front of the Water Street Garage is used if the buses remain in their current location. Improved taxi stand and vehicle pick-up/drop-off areas at Union Station would be made in all options but in different locations depending on the location of the bus facilities.

The four primary alternatives for the bus facilities studied were as follows:

1. Enhance both facilities in place on the east side of Water Street
2. Move both facilities across the street to the off-street space in front of the Water Street Garage
3. Move only SEAT to the space in front of the Water Street Garage and leave Greyhound at the current site with some possible reconfiguration
4. Move only Greyhound to the space in front of the Water Street Garage and extend SEAT southward to include the former Greyhound site

Within these basic alternatives, some variants were identified.

Besides the location of bus facilities, another potential major difference between alternatives could be how Cross Sound Ferry uses its space. After discussion with Cross Sound Ferry, however, it was concluded that the current configuration of the passenger ferries works best even if Cross Sound Ferry removes some buildings to expand and reconfigure its auto ferry staging area. As a result, short term alternatives did not include options for reconfiguring the Cross Sound Ferry area.

Options considered but not included in the original set of Short Term Alternatives were:

- Bringing SEAT into Union Station
- Moving the Greyhound Terminal Farther North on Water Street and SEAT Closer to Union Station
- Removing a Travel Lane to Extend a Wider Sidewalk on the East Side of Water Street to Governor Winthrop Boulevard
- Shifting Taxi, Bus or Auto Pick-up/Drop-off to the East of the Railroad Right-of-Way
- Including a Pedestrian Bridge in Short Term Options

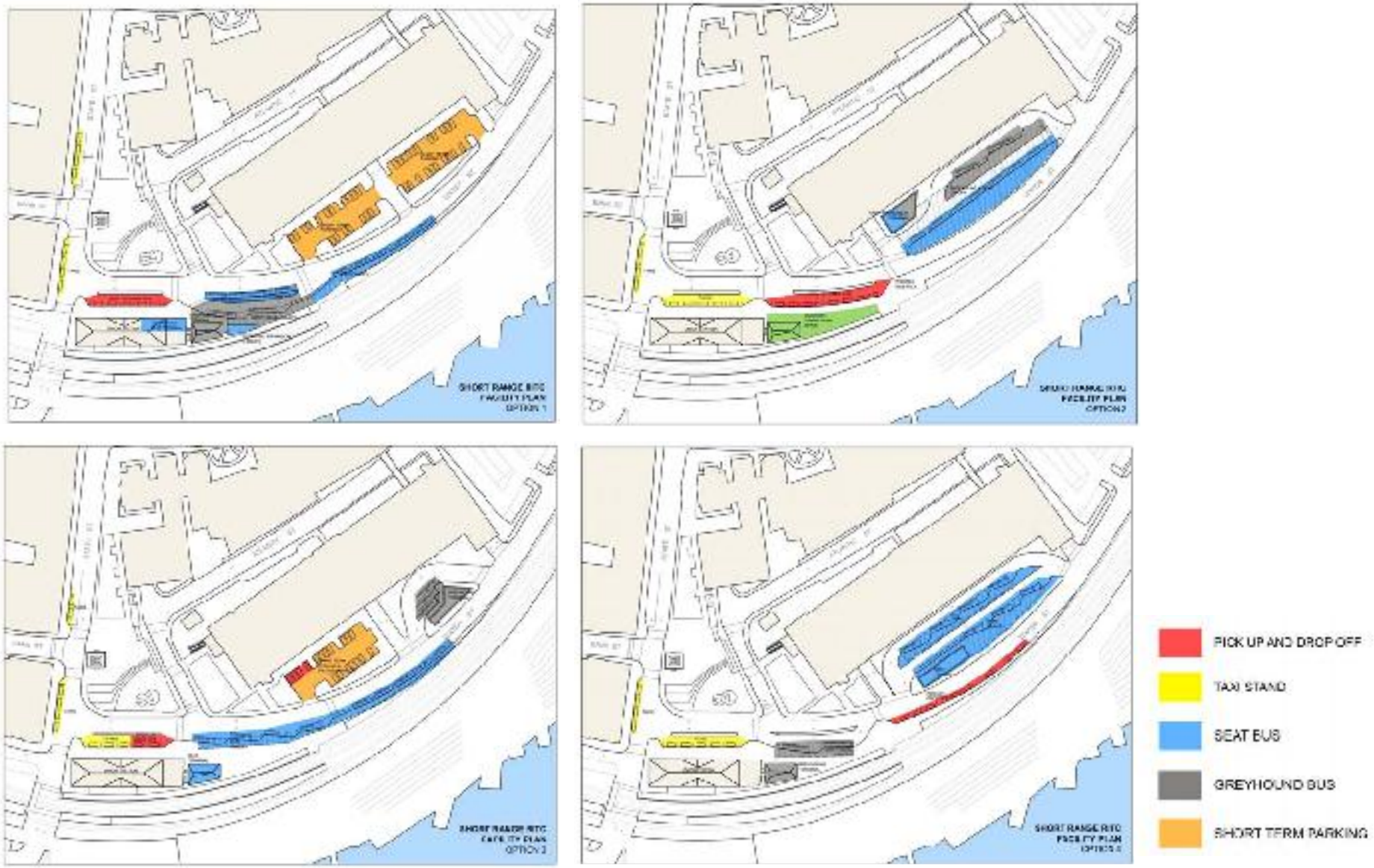
Note that as the Short Term Alternatives were refined in the Master Plan, a pedestrian bridge was included in the Short Term Preferred Alternative and utilization of Union Station for bus terminal space requirements was included in the Fallback Minimum Construction Alternative. A wider sidewalk on Water Street was also included in the Preferred Alternative, but this was made possible by relocating Water Street rather than removing a travel lane.

The four alternatives considered are summarized in Table ES-3. The plan representation of these options is shown in Figure ES-3.

Table ES-3: Primary Short Term Alternatives

Alternative	Name	Description	Greyhound	SEAT	Water Street Garage	Other
1	Both SEAT and Greyhound Stay on East Side of Water Street	One new expanded terminal building and canopy along curb (or SEAT terminal in Union Station)	2 sawtooth bays in current location	4 parallel to Greyhound, 5 north of Greyhound	Short term parking/pickup-drop-off (and/or public event space)	Need to Relocate Parade Crosswalk
2	Both SEAT and Greyhound Move to West Side of Water Street (off street)	New Free-Standing Passenger Terminal	2 sawtooth bays	7 parallel bays	Bus terminal with building; need to relocate center entrance	Reuse east side space for Pickup-Drop-off and plaza; Reuse Greyhound building for café; Need to Relocate Parade Crosswalk
3	Only Greyhound Moves to West Side of Water Street (off street)	SEAT relocated to Greyhound area	3 sawtooth bays and new terminal building	9 bays (4 sawtooth and 5 parallel); terminal at renovated old Greyhound building	Greyhound terminal and some short term parking and pickup-drop-off	Can't use FTA funds for exclusive Greyhound Terminal; Need to Relocate Parade Crosswalk
4	Only SEAT Moves to West Side of Water Street (off street)		2 sawtooth bays	7 sawtooth (or 9 parallel) bays, new terminal building	SEAT bus terminal with building; need to relocate center entrance	Need to Relocate Parade Crosswalk

Figure ES-3: Short Term Alternatives



7.2 Long Term Vision Concepts

The long term vision concepts are necessarily less specific than the short term alternatives. They are designed to identify alternative visions for the RITC area beyond the year 2030 when the Water Street Garage and some other facilities and properties are due for reconstruction or redevelopment. The Master Plan does not propose one single long term vision concept, but rather includes several alternative visions that can be followed as the opportunity arises

The concepts reflect two primary decisions that will have to be made:

1. Should the RITC be concentrated at the immediate Union Station area near the intersection of State Street and Water Street, or should the RITC be extended to include the area from State Street to Governor Winthrop Boulevard in the Water Street corridor?

2. Should the parking facilities for the RITC be concentrated, thereby dispersing potential transit-oriented development (to multiple small sites within walk distance of the RITC)? Or should the parking be dispersed over a wider area (but within walk distance of the RITC) thereby allowing more concentrated transit-oriented development near the RITC, taking maximum advantage of the waterfront location as well as the proximity to the RITC? Note that given the scale of downtown New London and the desire to protect the character of the city, it was deemed infeasible to concentrate both parking and development near Union Station.

Table ES-4 summarizes the resulting concepts. Figure ES-4 illustrates the concepts. Note the concepts generally can include a Pedestrian Bridge or rely on surface connections.

Options considered but not included in the Long Term Concepts due to either a lack of feasibility or other disadvantages were:

- Building a Deck over the Railroad Right-of-Way
- Building a Tunnel Under the Railroad Right-of-Way[1]

[1] Disadvantages of a tunnel with respect to security, maintenance, disruption to rail traffic, de-watering and a connection to the Water Street Garage, make this a less desirable option than the pedestrian bridge structure which has the ability to connect the garage, station, and ferry terminal less expensively with improved security and less maintenance requirements.

Table ES-4: Four Long Term Concepts

A: Concentrated Transportation Center
(Concentrated Parking / Dispersed Development)

- Transportation facilities concentrated near Union Station
- Expanded parking as close to Union Station as possible
- Parking/transportation facilities limit development opportunities near the waterfront
- Large development opportunities are far from the Parade and Union Station

B: Concentrated Transportation Center with Parking Facilities along Water Street
(Concentrated Parking / Dispersed Development)

- Transportation facilities concentrated near Union Station
- Expanded parking on sites along Water Street closer to Governor Winthrop Blvd.
- Parking/transportation facilities limit development opportunities near the waterfront
- Large development opportunities are far from the Parade and Union Station

C: Concentrated Transportation Center with Relocated Parking Facilities and New Water Street Development
(Dispersed Parking / Concentrated Development)

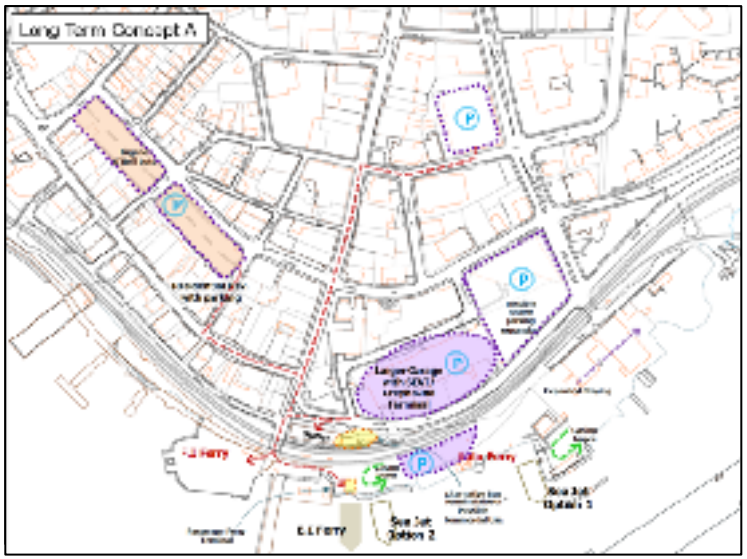
- Transportation facilities concentrated near Union Station
- Some parking relocated from Water Street to sites along Governor Winthrop Blvd.
- Relocation of parking facilities increases development opportunities near the waterfront and Union Station

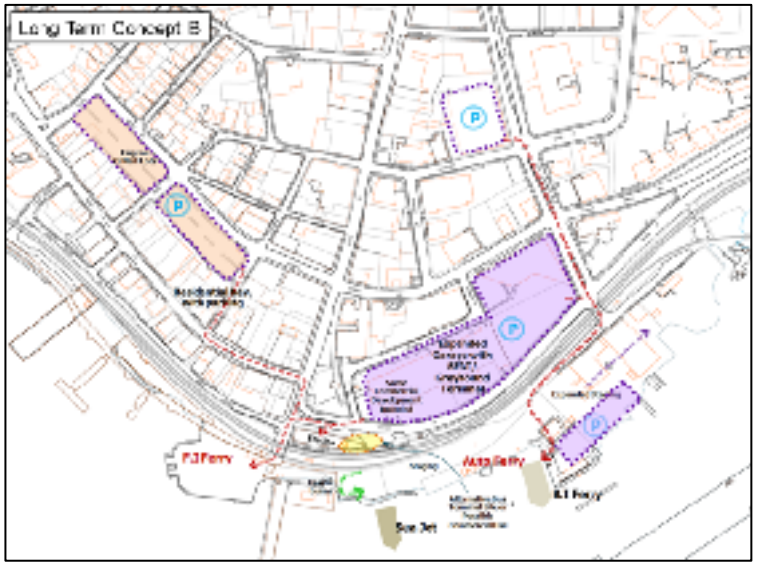
D: Extended Transportation Center with Relocated Parking Facilities and New Water Street Development
(Dispersed Parking / Concentrated Development)

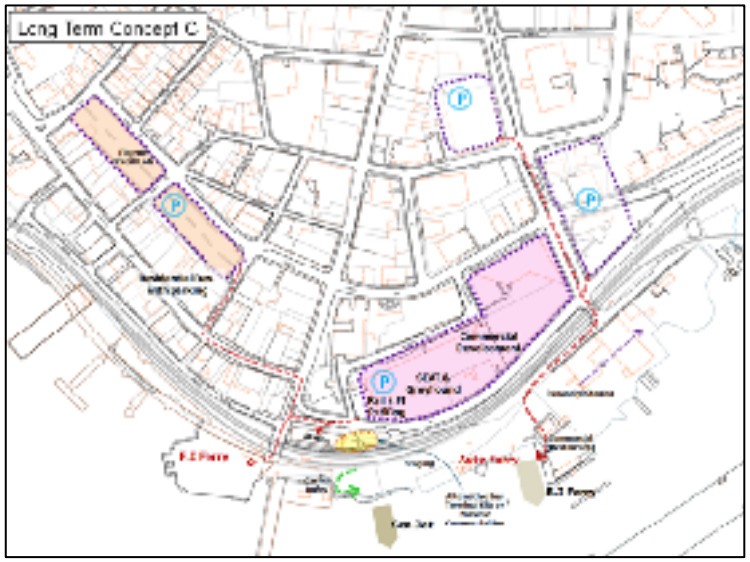
- Some transportation facilities relocated along Governor Winthrop Blvd.
- Some parking relocated from Water Street to sites along Governor Winthrop Blvd.
- Relocation of parking/transportation facilities increases development opportunities near the waterfront and Union Station

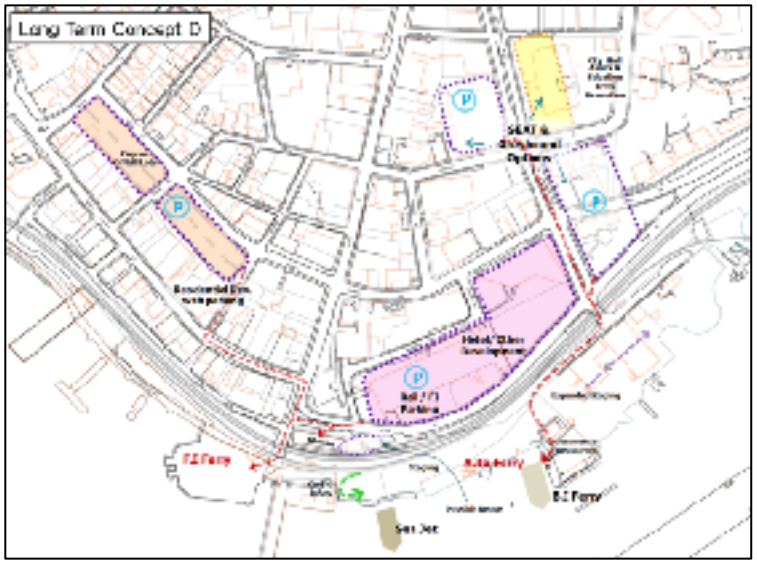
Figure ES-4: Long Term Vision Concepts

(Note that Concepts A, C and D were also examined with a Pedestrian Bridge)









7.3 Evaluation and Stakeholder Input

Screening evaluation criteria, as listed in Table ES-5, were used to evaluate the Short Term Alternatives and Long Term Concepts. The results, documented in the final report, were presented to the stakeholders, identifying the many trade-offs.

Table ES-5: Screening Evaluation Criteria

Common Criteria

- Low Cost
- Improves Safety and Convenience for Transfers
- Enhances Pedestrian Safety
- Enhances Wayfinding/Information
- Has Sufficient Capacity (Operations in Short Term, Demand and Growth for Public Transportation Modes and Parking in the Long Term)
- Enhances Attraction of Visitors
- Minimal Environmental Issues
- Minimal Property Issues
- Potential for Public Private or Grant Funding (for the Transportation Improvements in the Short Term)

Short Term Criteria

- Easy to Implement
- Adaptable to Future Changes in Operating Needs
- Flexible to Accommodate Long Term Commercial Development
- Compatibility with Bus Terminal Long Term Concepts
- Maintains or Enhances Traffic Operation/Safety

Long Term Criteria

- Ease of Project Development
- Ease of Phasing
- Improves Convenience for Parking Access
- Enhances Pedestrian Environment
- Promotes Likely Development/Local Economy
- Capitalized on Synergies between Transportation & Development
- Balances Need for Transportation & Development

The stakeholders had considerable suggestions and comments on the identification and evaluation of the short term alternatives and long term vision concepts presented at a Stakeholder Steering Committee meeting held in early summer 2009. TranSystems proceeded to examine the feasibility of some of the stakeholder suggestions such as introducing another railroad crossing between the two current crossings, shifting rail platforms northward to allow surface crossing while trains were in the station, relocating or removing the freight siding, etc. The consultant team was redirected by SCCOG to respond to the stakeholder consensus that emerged and to develop revised short term alternatives. The direction was to 1) develop alternatives for bus terminal facilities located on the east side of Water Street adjacent to Union Station, incorporating use of the building currently used by Greyhound, and shifting Water Street to the west, if needed, to provide adequate space to meet the bus operator needs, and 2) to include an up-and-

over pedestrian bridge or tunnel in the short term alternatives that would enable passengers to cross the tracks when trains are in the station (as required by Connecticut DOT) and which could include additional spans to connect to the Water Street Garage and the waterfront. This is reflected in the Preferred Alternative of the Master Plan described in the next section.

With regard to the long term concepts, there was no clear consensus on a specific vision for the future. There was agreement that the replacement of the Water Street Garage would not occur for many years considering the investment the City was making to repair the facility. The sentiment of the Stakeholder Steering Committee was that the alternative visions would be helpful in the future but the Master Plan should focus on the short term alternatives including immediate actions. As a result, the long term visions were not carried forward into the Master Plan. The most important long term consideration will be to continue to keep options open to respond to development opportunities in the future and to continue discussion on the long term vision.

8. Master Plan

The Master Plan includes a Preferred Alternative and a Fallback Minimum Construction Alternative. Both of these are short term alternatives and the Preferred Alternative includes an immediate action and short term component. Long term vision concepts were prepared during the study and are described in the Final Report but no single long term concept was advanced into the Master Plan.

The Master Plan does not represent a detailed design, but rather provides a conceptual design of the suggested improvements to the RITC.

8.1 The Preferred Alternative

The Preferred Alternative consists of the following major elements reflecting the input from the stakeholders and the direction from SCCOG and Connecticut DOT:

- Water Street Relocation
- Pedestrian Bridge
- Other Pedestrian Improvements
- Wayfinding Improvements
- New Combined Bus Terminal on the East Side of Water Street
- Rail Facilities
- Other Modal Improvements

Water Street Relocation

To provide the necessary space on the east side of Water Street for the bus terminal, pedestrian bridge vertical circulation (elevator and stairs) and pedestrian circulation, the plan envisions the relocation of Water Street to the west, utilizing part of the City-owned land in front of the Water Street Garage. The relocation of Water Street would at its maximum point extend about 50 feet west and would have some impacts on the Parade Project improvements (i.e., pavement, landscape and crosswalks) north of Atlantic Street. It was designed not to impact the Parade itself (south of Atlantic Street), the Julian property or the functioning of the Water Street Garage. The relocation plan preserves two travel lanes on Water Street parallel to the bus stop and continues to provide a 500-foot long right lane on Water Street approaching

Governor Winthrop Boulevard (for right turns and through movements). Travel lanes are narrowed slightly to 11 foot lanes with a total cartway width of 35 feet. Finally, although the City-owned parcels in front of the Water Street Garage are reduced in size by the relocation, 27 short-term parking spaces can be accommodated there, essentially preserving all the parking spaces currently provided there.

Pedestrian Bridge

After an evaluation of bridge and tunnel options, a pedestrian bridge was selected as the preferred means of providing direct unimpeded crossing of the railroad tracks. A tunnel would cause more disruption to rail traffic during construction, would require ongoing dewatering, would be impractical to extend to the Water Street Garage and would have greater security issues than a pedestrian bridge. Connecticut DOT required that a bridge or tunnel over the primary tracks be included in the short term plan and stated that no additional at-grade crossings could be introduced. Extensions of the pedestrian bridge westward to Water Street Garage (over Water Street) and eastward to the Cross Sound Ferry property (over the freight track) are optional and could be added in a phased manner. Thus, the pedestrian bridge is conceived as a mandatory center section and two optional extensions.

The mandatory central section would connect from the southbound platform area and bus terminal area on the east side of Water Street spanning the Amtrak tracks to the northbound platform. The bottom of the bridge would need to be about 30 feet above the tracks and would reach to an elevation of about 55 feet. At the west end of the center section, the elevator and stairway would be incorporated into the proposed new bus terminal building. At the east end of the center section, the elevator and stairs would be located at the end of the northbound platform accompanied by a short northward extension of that platform. The location of the bridge is largely fixed by the need to serve the northbound platform at its northern end since the space between the two tracks is not wide enough to accommodate vertical circulation elements and a rail platform. (Although stakeholders also suggested considering a location at Union Station or south of Union Station, such options have disadvantages such as greater impacts on the historic structure, impacts on South Water Street, requiring passengers to cross State Street, and eliminating the potential to directly connect to the Water Street Garage.)

The optional extension to the Water Street Garage would not require new vertical circulation at the western (garage) end but could instead rely on the stairs and new elevator at the south side of the garage. Optionally, the existing unused elevator shaft located in the southeast corner of the garage could be rehabilitated. The pedestrian bridge would connect to the top floor of the garage. (The final design should consider how the bridge structure can remain intact while accommodating an eventual replacement of the garage with a new structure.)

The optional extension to the Cross Sound Ferry area could be integrated with a new passenger ferry terminal. Such a terminal was previously proposed by Cross Sound Ferry but has not been advanced. For the purposes of the Master Plan, the bridge extension has been assumed to extend to the location identified on such prior plans but the vertical circulation to ground level is assumed to be part the bridge extension. At the request of Cross Sound Ferry, to accommodate the large number of Block Island Express passengers disembarking at once, an escalator is included at this location as well as an elevator and stairs. While no specific design of the bridge structure is proposed in the Master Plan, it has been assumed that a more transparent style bridge would reduce visual impacts. Nevertheless, the height of the bridge (elevation from about 36 to 55 feet) would result in visual impacts. Three dimensional visualizations have been prepared to convey the impacts for the center section of the bridge and for a full bridge with both extensions.

Other Pedestrian Improvements

Besides the Pedestrian Bridge described above, a wide variety of other pedestrian improvements are proposed as part of the Master Plan's Preferred Alternative. These include:

- Sidewalks/pathways on both sides of railroad right-of-way including:
    - An 8-foot wide sidewalk on the east side of Water Street from the current bus stop to Governor Winthrop Boulevard and beyond to the park at Crystal Street
    - A widened sidewalk on the west side of Water Street to Governor Winthrop Boulevard
    - Pedestrian pathways from City Pier through the Cross Sound Ferry area
- Use of pavers to unify the RITC bus terminal area with Union Station
- Quad gates/ rubber surfaces at the two railroad crossings at State Street and Governor Winthrop Boulevard including wider clearly delineated crosswalks and sidewalks
- Steel post fencing along the railroad right-of-way (Note the City has already installed this on the west side of the right-of-way along Water Street.)
- Landscaping along Water Street and the waterfront
- Gateway structures to delineate the waterfront area (located at opposite ends of the Cross Sound Ferry area)
- Pedestrian scale lighting throughout, similar to that used in the Parade Project
- Canopies with lighting for bus passengers at the Greyhound and SEAT boarding areas.

The pedestrian plan is shown in Figure ES-5. It assumes that Water Street is relocated and the bus terminal and pedestrian bridge are constructed. Similar pedestrian improvements could be made even if those improvements are not constructed. Improvements at the two railroad crossings and east of the railroad right-of-way can be implemented immediately, if funding is available, while other improvements along Water Street would need to wait until Water Street is relocated and the bus terminal and pedestrian bridge are constructed or they would have to be redone.

Wayfinding Improvements

The Master Plan includes a plan for wayfinding improvements. This includes 17 locations where signage would be erected to direct pedestrians and vehicles to transportation functions and to downtown business districts. The plan also includes recommendations that wayfinding maps be erected at three locations (Union Station, Bus Terminal and Water Street Garage) to help orient pedestrians. Specific examples of signage and information to be included on signs are shown in the Master Plan section of the Final Report. Note that recently New London Main Street has erected new wayfinding signage of a similar design at selected locations and is erecting "gateway" signs to encourage visitation to downtown New London.

New Combined Bus Terminal on the East Side of Water Street

The Master Plan includes a new combined bus terminal for Greyhound and SEAT located on the east side of Water Street made possible by the relocation of Water Street. The relocation of Water Street makes it possible to create two parallel bus boarding areas along Water Street while also accommodating the vertical circulation elements (stairway and elevator) for the pedestrian bridge over the railroad tracks and sidewalks for pedestrian circulation. However, even with the relocation of Water Street the space is constrained and the sidewalk would be only about 11 feet wide at its narrowest point. With the two parallel

Figure ES-5: Pedestrian Improvement Plan in the Preferred Alternative



bus boarding areas, the bus bays desired by the bus operators can be accommodated. The existing Greyhound building would be re-used for some bus terminal functions with interior modifications to the building. However, to provide the most functional space for the passenger waiting area and ticket/information counters, a new building addition with a glass front is proposed just north of the existing Greyhound building. This new building will allow bus passengers to have a view of the buses and the staff at the counter to view the passenger waiting area and the buses. Interior waiting space would allow for 50 SEAT passengers and 25 Greyhound passengers, consistent with the minimum requirements expressed by the bus operators. Canopies would be provided to provide shelter for passengers boarding buses or waiting outdoors. These canopies would extend from the new terminal building along the Water Street east side sidewalk curb line and along a 15-foot wide SEAT passenger boarding island. The design also allows for some ancillary curbside space for Greyhound freight pick-up/drop-off and SEAT maintenance vehicles. Figure ES-6 shows the layout of the bus terminal, and pedestrian bridge and the relocation of Water Street.

It should be noted that the plan envisions using currently privately-owned property (Union Station) and therefore would require negotiation for purchase or long term leasing of this property.

While the plan accomplishes the goals identified, it is a fairly tight fit and has some drawbacks. Among these are the constrained sidewalk width, the long and narrow building shape leading to less efficient use of space, and the fact that the new terminal tends to create a barrier between Water Street and the rail platform.

Figure ES-7 depicts a conceptual interior floor plan, whose purpose is primarily to show that it is feasible to accommodate the space required. A final floor plan would be part of the building design to be undertaken in a future implementation step.

Rail Facilities

The Master Plan has not identified the need for additional facilities for Amtrak rail operations although enhanced amenities for passengers at Union Station would be desirable and minor adjustments are needed for ADA compliance. At the outset of the study, it appeared that Shore Line East would continue to operate from the current platform and that its primary need was commuter parking which could be accommodated at the Water Street Garage. However, late in the study, it became clear that Amtrak desires expanded Shore Line East service to operate from the freight track (Track 6), the track farthest from Union Station. Connecticut DOT is therefore examining immediate modifications to the northbound platform to enable it to be used to access Track 6. In the longer term, Connecticut DOT may consider a new platform for Track 6 located on the east side of the track adjacent to City Pier and Cross Sound Ferry. This was not examined in this study. However, it would have an impact on the proposed pedestrian bridge, requiring extension of the center section of the bridge and either requiring additional vertical circulation for the new platform or consolidation of the vertical circulation at the east side of the optional extension to the Cross Sound Ferry area with vertical circulation for this platform.

Other Modal Improvements

Taxis and Automobile Pick-up/Drop-off - Taxi and automobile pick-up and drop-off are critically important access modes for the train service at Union Station and are expected to grow in importance with the increased presence of Shore Line East at the station. However, the space available for taxi and automobile pick-up and drop-off at the rail station and bus terminal is already constrained by the limited space on Water Street and strong competition for uses. The proposed relocation of Water Street and the

Figure ES-6: Combined Greyhound and SEAT Terminal Site Plan in the Preferred Alternative

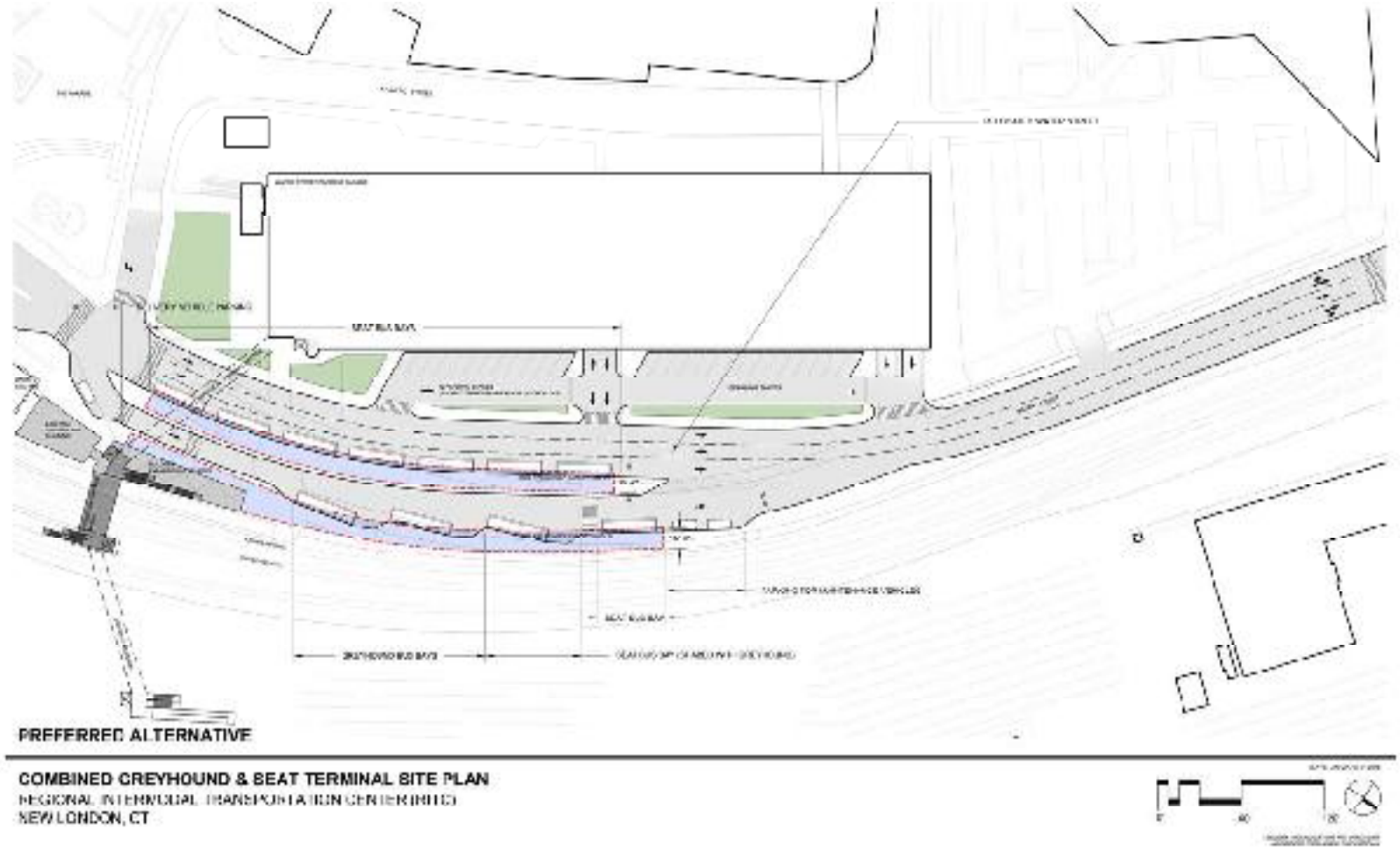
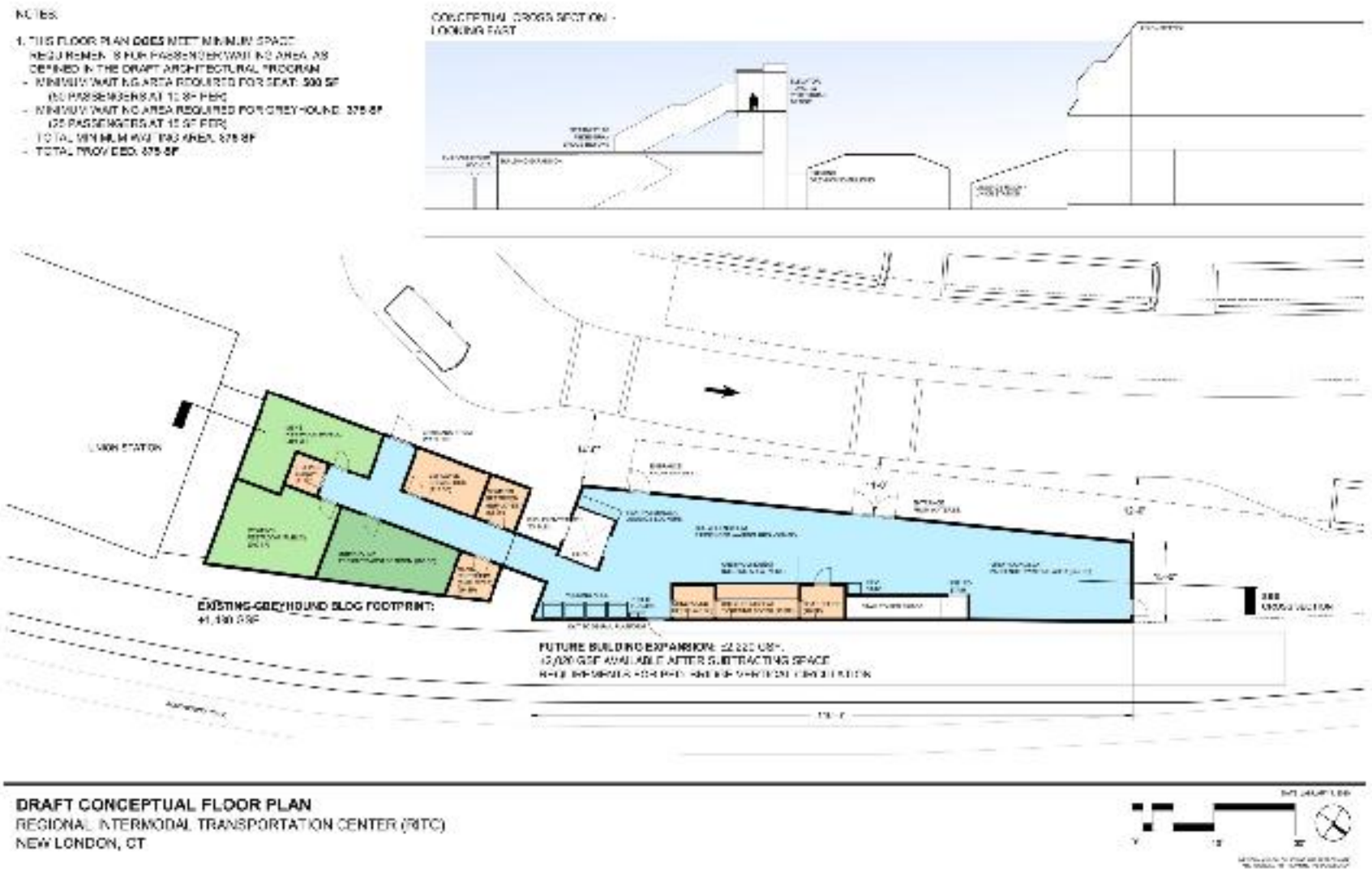


Figure ES-7: Draft Conceptual Floor Plan of the Bus Terminal in the Preferred Alternative



plan for the Bus Terminal and Pedestrian Bridge does not negatively impact any of the existing designated auto or taxi pick-up, drop-off, queuing or parking spaces. It is envisioned that taxis would continue to pick-up and drop-off passengers directly in front of Union Station and that auto passengers would at least be dropped off in front of Union Station as well. It is suggested that the available short term parking spaces in front of the Water Street Garage be used for automobile passenger pick-up so that automobile standing in front of Union Station is limited to the short time needed for actual unloading. It is also recommended that the first block of State Street (that is, between South Water Street and Bank Street) be used for taxi queuing so that taxis wait there in an orderly queue and then can pull up in turn to pick up passengers at two designated spaces in front of Union Station nearest the State Street corner. The remaining three spaces in front of Union Station would be designated for passenger drop-off for automobiles and taxis. The final operational arrangements will need to be worked out with the taxi operators.

Car Rental - There may be opportunities to locate a car rental counter in Union Station provided nearby parking for rental cars can be arranged. A ZipCar space or two could be located in the Water Street Garage or in front of the Garage.

Bicycle Accommodations - A bike rental business might be located in Union Station. Bike racks should be provided at the station. Possible locations include at City Pier, in front of the Water Street Garage or in the current Amtrak parking spaces on South Water Street if these parking spaces can be relocated to another nearby location.

Visualization

Figures ES-8 and ES-9 show the view from the Parade of the RITC bus terminal and pedestrian bridge with the mandatory central section of the pedestrian bridge and with the full bridge with the optional extensions to the Water Street Garage and to the Cross Sound Ferry area, respectively.

8.2 The Fallback Minimum Construction Alternative

The Master Plan includes a second alternative, called the Fallback Minimum Construction Alternative (hereafter called the Fallback Alternative for short). This alternative has been included, at the City's request, to identify an option that could be exercised to meet needs in the short term if the funding cannot be obtained to construct the Preferred Alternative or if there are other reasons not to pursue the Preferred Alternative. Since one primary reason for including it is the lack of funds, it is assumed to exclude the Pedestrian Bridge that is included in the Preferred Alternative; however, if funding can be obtained for the Pedestrian Bridge, it is compatible with the Fallback Alternative.

The Fallback Alternative differs from the Preferred Alternative in the following aspects:

- Water Street remains in its current location
- Bus loading areas remain in the their current locations
- The Pedestrian Bridge and new bus terminal building addition are not included
- Indoor bus passenger facilities are located in existing structures.

The pedestrian improvements other than the Pedestrian Bridge would be assumed to be included in the Fallback Alternative although the design would be revised to accommodate the current street configuration.

Figure ES-8: Preferred Alternative with Center Section of Pedestrian Bridge
View from the Parade



=

Figure ES-9: Preferred Alternative with Full Pedestrian Bridge Including Extensions
View from the Parade



The Fallback Alternative, like the Preferred Alternative, keeps all the public transportation services on the east side of Water Street. However, it does not involve construction of new bus terminal building and it does not involve the relocation of Water Street or the creation of two parallel set of bus boarding areas. As a result, it cannot provide expanded capacity for buses, though it does accommodate the current needs. It utilizes existing buildings including both the Greyhound Building and Union Station itself for the bus terminal facilities, requiring interior modifications and the construction of a connection between the two buildings. Figure ES-10 shows the configuration of the bus terminal area and Figure ES-11 shows a Conceptual Floor Plan within the existing buildings (for the purposes of a feasibility assessment and not a final design).

The major drawback of the Fallback Plan is the fact that the indoor waiting area would be located considerably farther from the SEAT buses than in the Preferred Alternative. Experience suggests that bus passengers prefer to wait near their buses. Canopies are provided at the bus boarding areas as in the Preferred Alternative. To accommodate winter and other poor weather circumstance, a large bus shelter is incorporated closer to the SEAT buses to address this drawback. However the Floor Plan shows the same indoor waiting area in the Greyhound Building as proposed for the new bus terminal building addition in the Preferred Alternative.

It should be noted that the Fallback Plan, like the Preferred Plan, envisions use of privately owned property (Union Station property) and that arrangement to purchase or lease the required property would need to be negotiated.

8.3 Estimated Costs

Costs to construct the Preferred Alternative and the Fallback Alternative were estimated in 2012 dollars (except the immediate pedestrian improvements which are in 2011 dollars.)

Immediate pedestrian improvements that are not dependent on the relocation of Water Street or the Pedestrian Bridge were estimated to cost $5.5 M including those on both public and Cross Sound Ferry property (or $4.7M excluding improvements solely on Cross Sound Ferry property).

The cost for the remaining short term improvements in the Preferred Alternative, including the center section of the Pedestrian Bridge, Water Street relocation and the bus terminal and canopies is $9.9 M. Note that this excludes any costs associated with the purchasing or leasing the Union Station property which would be required (and also any cost of purchasing or leasing the Water Street Garage property if that is also desired to be a part of purchased RITC property, as noted in a later section of this Executive Summary). It also excludes any repairs underway or needed to be made at Union Station or the Water Street Garage. Repair costs, based on prior studies, appear to be in the range of $1.6 M for Union Station and $2.6 M for the Water Street Garage. (Some repairs at the Water Street Garage are underway.) These costs represent additional costs that would need to be taken into account, meaning that the total cost of immediate and short term improvements with the center section of the pedestrian bridge excluding purchase or lease would be nearly $20 M.

ConnDOT is currently preparing cost estimates for immediate improvements to allow Shore Line East to use Track 6 from the platform currently used for Track 2. These costs or the costs for a new platform are not included.

Figure ES-10: Fallback Alternative Site Plan

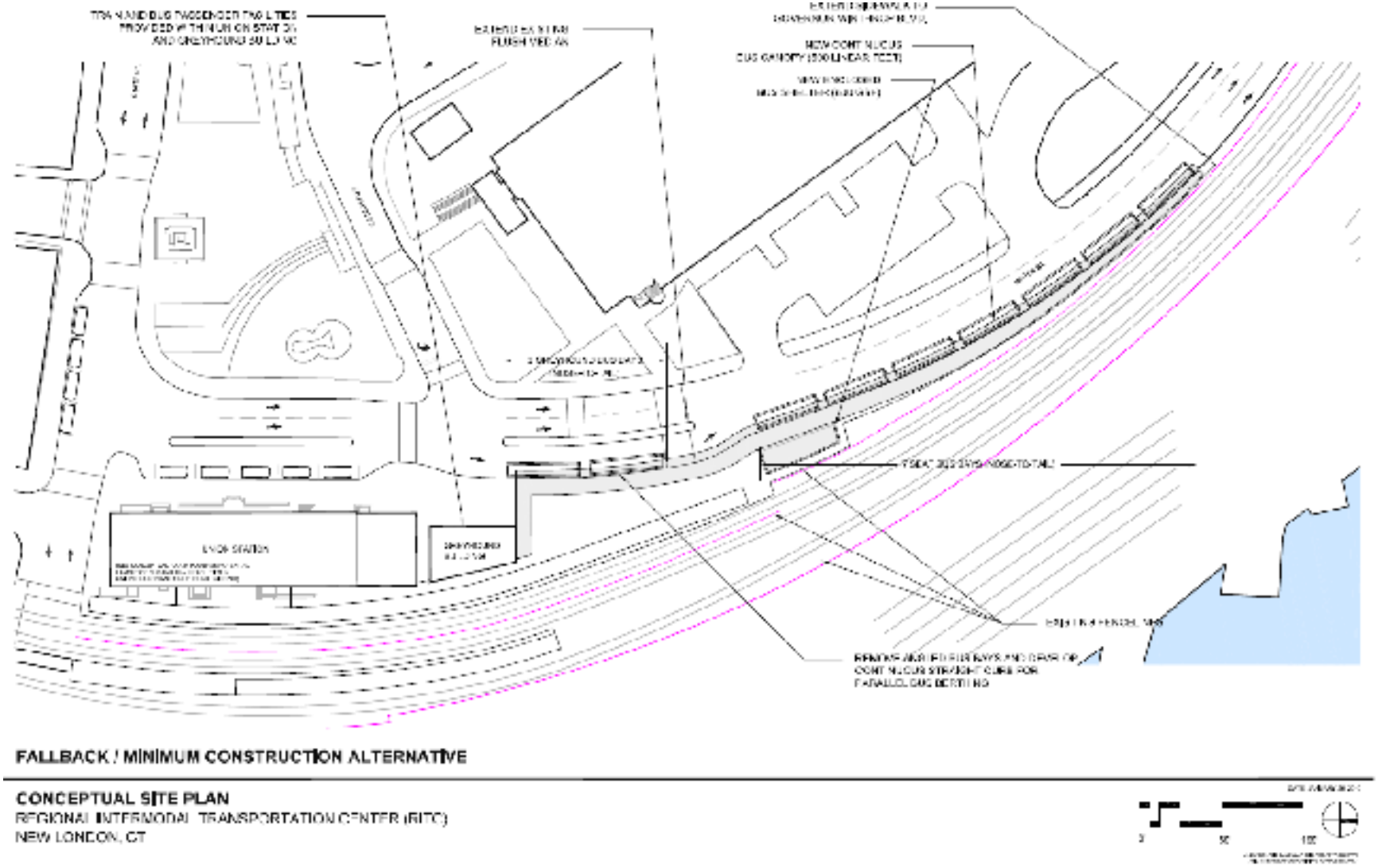
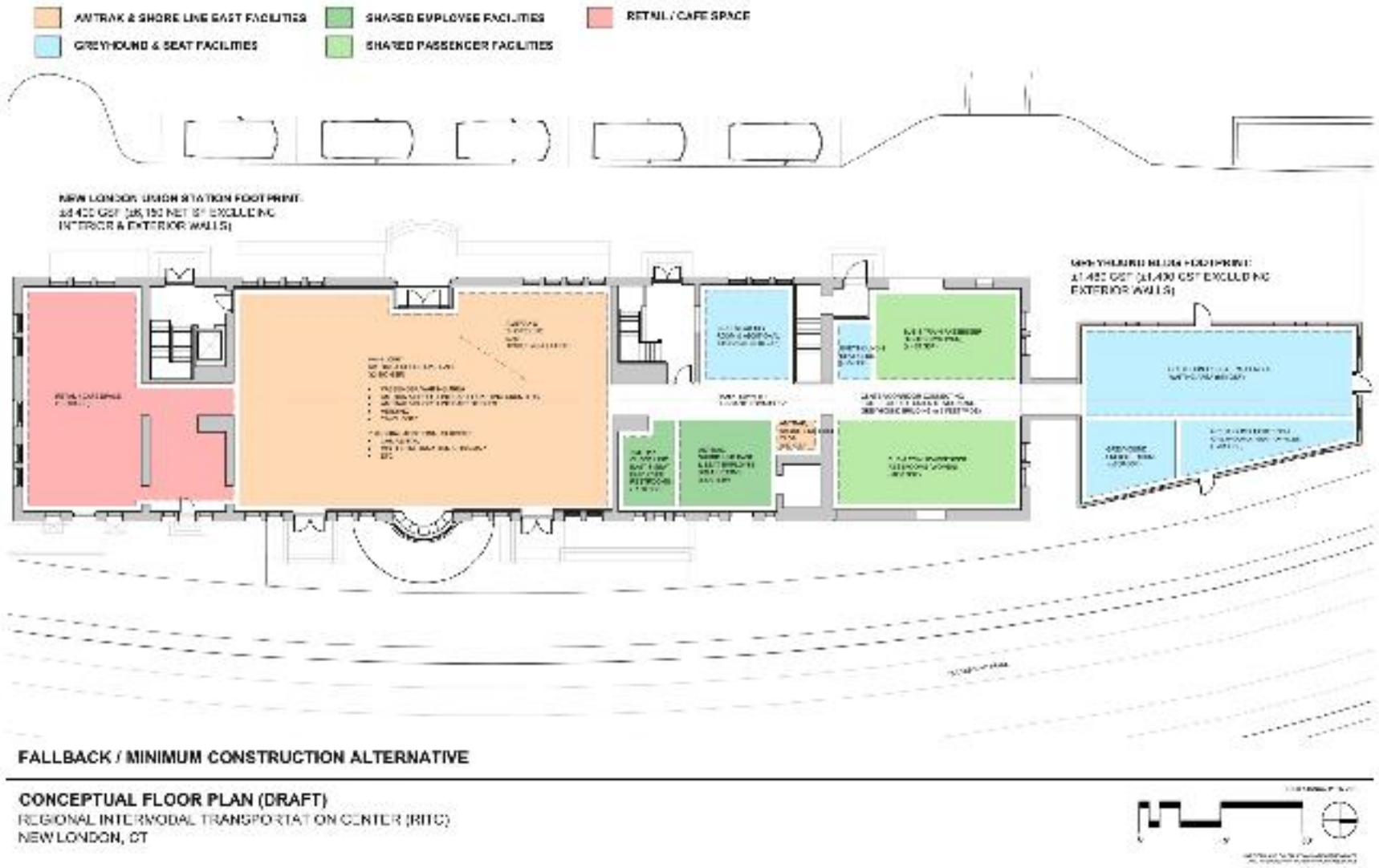


Figure ES-11: Fallback Alternative Conceptual Floor Plan



The center section of the pedestrian bridge constitutes approximately $4.9 M (including engineering inspection, contingency and escalation) of the estimated $9.9 million in short term improvements. The additional costs for the optional extensions to the pedestrian bridge are $1.4 M for the extension to the Water Street Garage and $4.9 M for the extension to the ferry area with the needed stairways, elevator and escalators (including engineering inspection, contingency and escalation).

Annual operating and maintenance costs for the bus terminal and pedestrian bridge are estimated at $0.3-$0.4 M per year. (This cost does not include the effect of any Greyhound lease revenue.) Operating costs for Union Station (approximately $0.3 M) and Water Street Garage (approximately $0.4 M) are additional; each of these facilities has revenue sources that cover some or all operating costs.

The Fallback Alternative would include the same $5.5 M in immediate pedestrian improvements plus $3.0 M for the bus terminal facilities. There would be additional costs to purchase or lease the Union Station (and possibly Water Street Garage) property and to make necessary repairs as in the Preferred Alternative.

8.4 Use of Union Station for Non-Transportation Functions

Union Station is the core of the existing and future RITC. This study has identified how Union Station property can be used to create an enhanced intermodal center. The Master Plan contained in this report continues the current use of the Union Station lobby for rail passenger facilities and the use of the Greyhound building for bus facilities. The plan proposes that outdoor space included in the property be used for expansion of bus facilities, the pedestrian bridge and passenger pickup and drop-off space. Incorporation of these transportation facilities, however, leaves some space inside the building available for other uses.

The TOD market analysis conducted in this study addressed the potential demand for residential, office and retail development within walking distance of the RITC. The analysis considered the potential for development over a ten year period within ½ mile walking distance around Union Station. Union Station represents just one key resource that could be positioned to serve some of this demand. Although residential demand was found to have the greatest potential in New London, the Union Station building is more suited to office development with possible first floor retail uses.

To date, however, the Union Station property has not been redeveloped to its full potential. Recently, the interior space in the Union Station building, both on the ground floor and the upper floors, has been underutilized. In the past, the upper floors were occupied office space and there are still some limited office uses there today. A restaurant occupied the second floor and some first floor space in the past. However, even before the current economic downturn, much of this space remained vacant.

Given the recently announced departure of Pfizer from Fort Trumbull and the overall economic downturn combined with the previously weak position of New London as an office market, the market for office space is severely depressed in the short term. Union Station faces competition from other downtown building spaces and the newly vacant first class office space at Fort Trumbull. However, looking several years into the future, one can envision Union Station being better positioned as a result of proposed transportation and other downtown improvements, improving economic activity nationally, and a series of policy decisions designed to promote downtown New London as a transportation center and a site for TOD. It will be critical

to take advantage of this time to develop a comprehensive TOD plan for the Historic Waterfront District, including Union Station, and to make policy decisions that support that plan, while also keeping options open to take advantage of arising opportunities.

While a comprehensive TOD strategy is needed, the strategy for Union Station could be one of incremental improvements. It may not be reasonable to attract full time retail tenants into the ground floor until a market can be developed. An incremental approach could mean bringing kiosks for retail uses in summer and holiday seasons and introducing part time cafes and later evolving to full time retail and restaurant space. However, part-time uses should only be introduced for a limited time with the understanding that they will eventually be replaced by full-time uses.

8.5 Implementation Considerations

To move the project forward, consideration will need to be given to environmental issues and to the appropriate lead agency, as well as funding.

Environmental Considerations

Clearly there are visual impacts associated with the Preferred Alternative. The newly reconfigured Parade area now allows for direct views of the Thames River along a line of sight to the north of existing Union Station and the Greyhound Terminal Building. The bus terminal and pedestrian bridge obstruct some of the view, so the RITC project conflicts with the Parade Project in this respect.

Approval of the State Historic Preservation Officer will be required given that the project is located in an historic district listed on the National Register of Historic Places and given that Union Station is individually listed. If federal funds are used, Section 106 of the Historic Preservation Act applies as does Section 4(f) of the 1966 Department of Transportation Act. The latter prohibits use of historic property unless there is no feasible and prudent alternative and all possible planning has been done to minimize harm to the historic resources. View shed impacts will have to be thoroughly examined.

Since this is an already built environmental, natural resources are not likely to be major constraints. Connecticut Department of Environmental Protection (CTDEP) permits will be required since the project is within the coastal boundary area and there are shorelands and coastal flood hazard areas that are impacted. In addition to triggering the need for a Connecticut Coastal Consistency Review, the proposed undertaking may also trigger the need for a local (City of New London) Coastal Site Plan Review. Because a portion of the site is located within the 100-year floodplain as designated by the Federal Emergency Management Agency (FEMA), a Flood Management Certification may need to be filed with the CTDEP for the RITC project.

Since the project area has a history of former industrial uses which has been well-documented during this study, there is some potential for hazardous materials. Testing of the soil should be undertaken as part of the environmental assessment in the next phase of design studies.

Finally local building permits and City Council approval would be required.

Funding, Leadership and Governance

The project as proposed requires substantial funding and a lead agency that could own and build the project. ConnDOT has previously submitted a request for a Congressional earmark for improvements at Union Station in the amount of $7. Transportation Enhancement Funding once reauthorized may be another source. Federal funds will require local match and the State looks to municipal entities to supply local shares.

While some elements of the RITC would continue to be owned, managed and operated by individual entities, there will likely be a need for coordination between the various transportation operators and shared funding of some elements. The study examined the governance of other intermodal transportation centers and developed a recommendation that the State take the lead role in owning and building the project. Based on its role in Shore Line East, rail stations and transit systems in the state, and its requirement that a pedestrian overpass or underpass be included in the short term plan, the Master Plan recommends that the State manage the rail station, the bus terminal and the pedestrian bridge. This would be accomplished through negotiation with the private owner to purchase or entering into a long term lease for the Union Station property (or a lease could be limited to the ground floor of Union Station, the Greyhound building and the land needed for the bus facilities and the pedestrian bridge). Connecticut DOT has indicated that this may need to include purchase or lease of the Water Street Garage to insure a revenue stream to cover operating costs. Negotiations with the private owner and the City would be needed.

In addition to acquiring Union Station, Connecticut DOT would also be responsible for building the SEAT bus terminal (which would then be leased to SEAT) and would be responsible for building the pedestrian bridge.

The consultant team also recommends that an RITC Association be formed to continue to involve the key stakeholders. The principal membership of this Association would be the transportation providers, the City and Connecticut DOT and any private owner if private property is involved. Responsibilities of this association would likely include arrangements for ongoing operational coordination (e.g., schedule coordination, information sharing, joint marketing and ticketing, etc.), sharing of maintenances responsibilities for intermodal linkages and longer term planning for the RITC. Members could be asked to contribute funding to this Association to cover expenses. Formation of this group may be an important first step toward implementation of the Master Plan.

9. Conclusions and Next Steps

This *Master Plan and Efficiency Study* has confirmed that the existing site is the preferable site for the enhanced Regional Intermodal Transportation Center. The study has identified the physical and operational needs of the Regional Intermodal Transportation Center at the current site and developed conceptual alternatives. The Master Plan includes a Preferred Alternative, comprised of both immediate and short term improvements, as well as a Fallback Minimum Construction Alternative that would be less costly. The capital and operating/maintenance costs associated with the two alternatives have been estimated as well as the costs for some optional elements. Environmental issues have been identified. The Master Plan recommends that the State take a lead role in managing the RITC and building the new facilities with the support and ongoing guidance of an association of key stakeholders including the City of New London and

the transportation providers at a minimum. Finally, an ongoing public process, including an active Stakeholder Steering Committee, has been carried out throughout the study to obtain stakeholder input.

The next steps to advance the project include the following:

- obtain City endorsement of study recommendation
- coordinate with the Connecticut Department of Transportation
- form an association to continue key stakeholder involvement
- pursue funding opportunities
- negotiate with the property owners to acquire or lease the necessary properties
- develop more detailed facility designs and conduct required environmental studies.

Table of Contents

1. Confirmation of Site Selection 1-1

1.1 Introduction 1-1
1.1.1. Purpose of this Document 1-1
1.1.2. Selection of Two Candidate Sites 1-1
1.1.3. Goals for the Study and for the RITC 1-1
1.1.4. Criteria and Methodology for Site Evaluation 1-3
1.1.5. Overview of the Chapter 1-4
1.2 Existing Conditions- Downtown Site Facilities and Modes 1-5
1.2.1. Overview of Modes and the Intermodal Connections 1-5
1.2.2. Environmental Conditions – Contamination Issues 1-32
1.3 Existing Conditions- Fort Trumbull Peninsula Site 1-37
1.3.1. NLDC Plan for Redevelopment and the Status of Development Parcels 1-38
1.3.2. Fort Trumbull Historic Site, Park and Visitor Center 1-41
1.3.3. Coast Guard Facilities 1-42
1.3.4. Existing Piers 1-43
1.3.5. Pfizer Facility 1-44
1.3.6. Wastewater Treatment Plant 1-45
1.3.7. Roadway Access, Traffic Conditions and Parking 1-46
1.3.8. Pedestrian Conditions 1-48
1.3.9. Environmental Conditions – Contamination Issues 1-48
1.3.10. Development Potential 1-57
1.3.11. Key Intermodal Connections 1-59
1.4 Desirability of Each Site for Each Mode 1-62
1.4.1. Introduction/Overview 1-62
1.4.2. Rail Station 1-62
1.4.3. Ferry Facilities 1-64
1.4.4. Intercity Bus 1-66
1.4.5. SEAT Bus 1-67
1.4.6. Casino and Shuttle Buses 1-68
1.4.7. Parking 1-69
1.4.8. Cruise Ships 1-70
1.4.9. Summary 1-71
1.5 Feasibility 1-72
1.5.1. Introduction/Overview 1-72
1.5.2. Summary 1-84
1.6 Comparison of a Feasible RITC at Fort Trumbull with an Improved RITC Downtown 1-89
1.6.1. Likely Package of Modes that Could be Located at Fort Trumbull 1-89
Comparative Evaluation of Two Sites for Likely Package of Modes 1-89
1.6.2. 1-89
1.6.3. Summary 1-94
1.7 Recommendation 1-95

List of Figures

Figure 1-1: Location of the Two Candidate Sites for the RITC 1-2
Figure 1-2: Aerial View of the Existing RITC Site 1-6
Figure 1-3: Aerial View of the Existing Cruise Ship Site 1-7
Figure 1-4: View of Union Station 1-8
Figure 1-5: View of Rail Platforms at Union Station 1-9
Figure 1-6: Cross Sound Ferry Terminal 1-10
Figure 1-7: Cross Sound Ferry Loading 1-10
Figure 1-8: Aerial View of Fishers Island Ferry Facility 1-12
Figure 1-9: Photograph of the State Pier 1-14
Figure 1-10: The Greyhound Bus Terminal 1-14
Figure 1-11: The SEAT Hub 1-17
Figure 1-12: The SEAT Hub at Pulse Time (viewed from the Ferry Terminal) 1-17
Figure 1-13: Full Implementation Tourist Transit System 1-19
Figure 1-14: Proposed Pilot Tourist Transit System 1-20
Figure 1-15: Existing Parking Facilities near the RITC 1-22
Figure 1-16: Level of Service Summary (January 2007 Weekday Existing Conditions) 1-25
Figure 1-17: Level of Service Summary (August 2008 Saturday Existing Conditions) 1-27
Figure 1-18: A Model of the Parade Project 1-28
Figure 1-19: A Layout of the Project Showing Pedestrian Improvements 1-29
Figure 1-20: Key Downtown Development Sites 1-30
Figure 1-21: Likely Contamination at the Existing RITC Site 1-33
Figure 1-22: Aerial View of Fort Trumbull Peninsula 1-38
Figure 1-23: NLDC Municipal Development Plan for the Fort Trumbull Redevelopment Site 1-40
Figure 1-24: Aerial View of Fort Trumbull 1-41
Figure 1-25: Fort Trumbull and the Visitor Center 1-42
Figure 1-26: Aerial View of Coast Guard Station 1-42
Figure 1-27: Photograph of Coast Guard Station 1-42
Figure 1-28: Aerial View of Existing Piers at Fort Trumbull 1-43
Figure 1-29: Photograph of Existing Piers at Fort Trumbull 1-44
Figure 1-30: Pfizer Facility and Wastewater Treatment Facility at Fort Trumbull 1-45
Figure 1-31: Level of Service Summary 1998 Base Conditions and 2003 Future Conditions 1-47
Figure 1-32: Historic and Community Resources 1-51
Figure 1-33: Environmental Data: Wetlands, Floodplains and Soils 1-52
Figure 1-34: Environmental Data: Hurricane Inundation Areas and Other Designated Facilities 1-53
Figure 1-35: Summary Matrix of Key Connections 1-61
Figure 1-36: Rail Station Layout with All Surface Parking 1-73
Figure 1-37: Rail Station Layout with Structured Parking 1-74
Figure 1-38: Columbia Cove Navigation Chart and Access 1-76
Figure 1-39: Possible Layout of Ferry Facilities at Fort Trumbull Columbia Cove 1-78
Figure 1-40: Pier 7 Berthing of a Modern Cruise Ship 1-82
Figure 1-41: Possible Reconfiguration of Pier 7 1-82

List of Tables

Table 1-1: Parking Occupancy Conditions on Saturday August 2, 2008 1-22
Table 1-2: Parking Occupancy Adjusted to Reflect Average Good Weather Saturday Conditions 1-23
Table 1-3: Level of Service and Delay Summary 1-24
Table 1-4: Level of Service and Delay Summary 1-26
Table 1-5: Level of Service Summary 1-46
Table 1-6: Evaluation Summary 1-85
Table 1-7: Summary Evaluation of the Two Sites 1-94

1. Confirmation of Site Selection

1.1 Introduction

1.1.1. Purpose of this Document

The purpose of this chapter is to document the selection of the site for the future improved Regional Intermodal Transportation Center (RITC), the subject of this Master Plan and Efficiency Study, conducted by the Southeastern Connecticut Council of Governments (SCCOG) with grant funding from the Connecticut Department of Transportation (ConnDOT). This chapter compares two alternative sites for the RITC and makes a recommendation for the selection of a site for the RITC. This comparison of alternative sites was requested by ConnDOT. This chapter is intended to serve the purposes of an alternatives analysis (as far as site location) for any subsequent NEPA documentation.

1.1.2. Selection of Two Candidate Sites

Two sites had been identified by SCCOG for examination as the first task of the RITC Master Plan and Efficiency Study. These sites are the existing site located in downtown New London along Water Street and the Fort Trumbull peninsula, a redevelopment site in the City of New London located about ¾ of a mile to the south of the current site. As requested by ConnDOT, SCCOG directed the consultant to evaluate the Fort Trumbull peninsula as the alternative to the existing site. Figure 1-1 shows the location of the two sites.

1.1.3. Goals for the Study and for the RITC

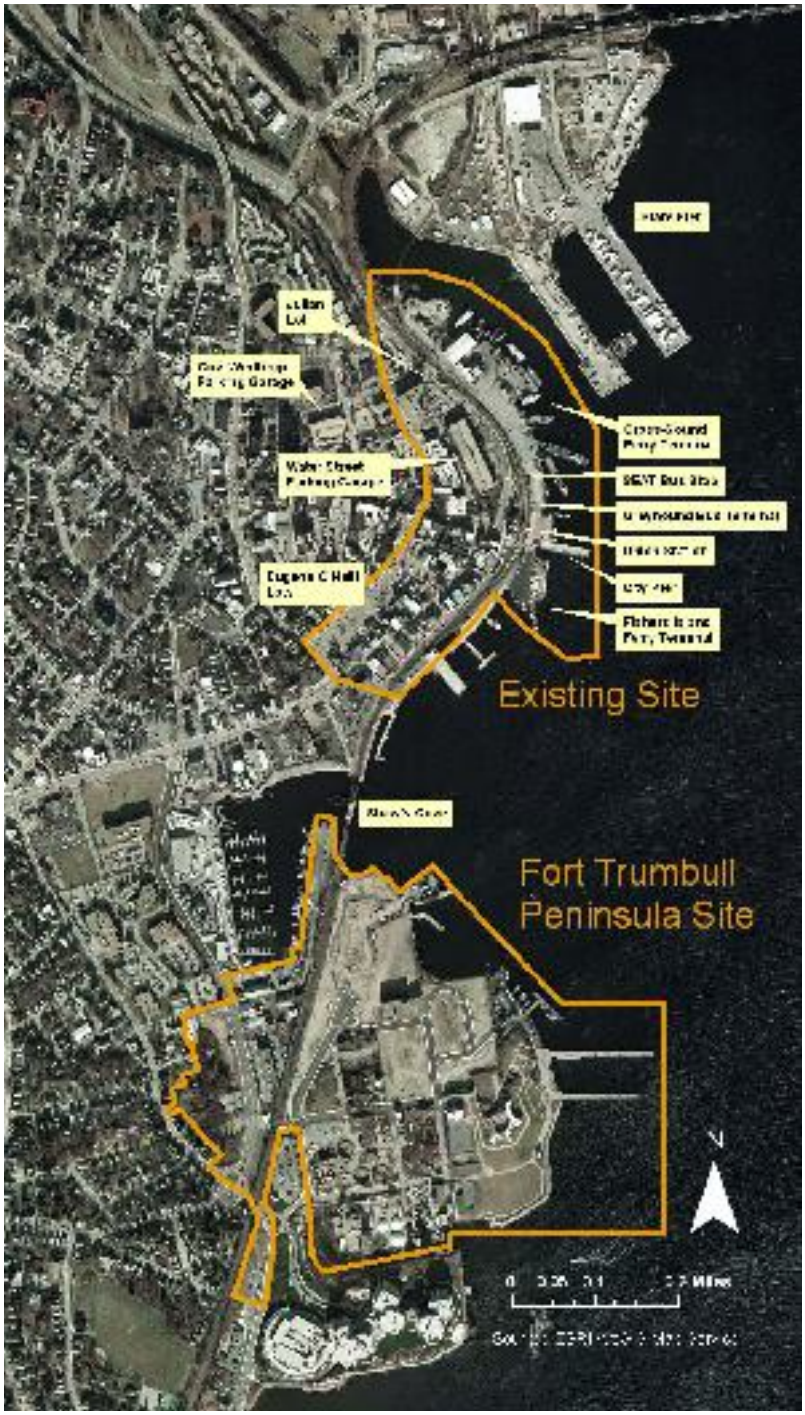
The ultimate purpose of this study is to create a plan that sustains and enhances a regional intermodal transportation center in New London, improving the link between the operations of the various transportation providers/facilities in the region including Cross Sound Ferry, Fishers Island Ferry, Amtrak, Shore Line East, Greyhound, South East Area Transit (SEAT), cruise ships, taxi and livery services, and parking garages and surface parking lots, while maximizing opportunities for transit oriented development.

Specific study objectives include:

- Perform an existing conditions survey identifying physical conditions and impediments to connections between the providers and services.
- Analyze the operational connections between the transportation providers named above to identify any inefficiency in scheduling, facility needs, etc. and suggest ways to improve these operational connections.
- Determine the current level of service for each transportation provider and identify and report planned future levels of service, suggesting what future levels of service might be, based on projected demand.
- Determine the impact level that planned and possible future levels of service might have on current infrastructure and operations.

- Prepare a market analysis to determine the development potential for land uses and service that would complement the intermodal transportation center and that examines the opportunity to promote smart growth.

Figure 1-1: Location of the Two Candidate Sites for the RITC



- Identify any other transit oriented development opportunities in the vicinity of the RITC.
- Identify the factors that make the existing conglomeration of transportation services optimal and summarize any costs and obstacles associated with relocating them to other sites in New London.
- Provide a generalized economic analysis of the impact any recommended improvements would have on the economy of the city and region.
- Prepare a master plan that describes the improvements needed to both physical and operational connections to allow for increased coordination and seamless transfers between the various transportation providers.
- Gather sufficient environmental data to allow a general review of the existing environmental sensitivity of the Regional Intermodal Transportation Center sites and potential impacts of any alternatives being studied.
- Fulfill the "Alternative Site" requirements of NEPA/CEPA by documenting the choice of sites.

Goals for the RITC itself include:

1. Enhance the intermodal connections between the modes serving the New London region and beyond including rail, intercity bus, local bus, ferries, cruise ships, automobiles and taxis.
2. Enhance existing functionality and operations of each individual mode and have positive rather than negative impacts on the operators.
3. Provide adequate capacity for the existing and future operations of each of the various modes, including landside and maritime operations.
4. Provide enhanced access by automobile and pedestrian traffic.
5. Be located proximate and accessible to major destinations for visitors.
6. Be compatible with other existing/potential uses.
7. Have minimal or no negative environmental impacts.
8. Have minimal or no negative traffic impacts.
9. Require reasonable levels of capital investment.
10. Support the businesses in downtown/New London and region including the tourist industry.
11. Enhance the opportunities for economic development opportunity (Transit Oriented Development) including residential and commercial development.
12. Be likely to win broad public support.

1.1.4. Criteria and Methodology for Site Evaluation

The methodology used in the site evaluation consisted of the following steps:

1. Identify physical feasibility of shifting each mode from its present site to the Fort Trumbull peninsula site.
2. Contrast advantages/disadvantages of each site for each individual mode (regardless of feasibility).
3. Examine the entire package of modes that could theoretically be located at each site (that is, have no fatal flaw) and evaluate the site capacity.
4. Identify the most likely package of services that could move to Fort Trumbull given feasibility and capacity and compare the advantages/disadvantages of that alternative to the current site alternative assuming also a reasonable level of improvement (although not specific plans) at the existing site.

5. Consolidate evaluation findings into a recommendation, considering feasibility, capacity, cost and other advantages.

Specific criteria for use in the evaluation include:

- Capacity for Operations - Landside
    - Rail (Amtrak and Shore Line East)
    - Inter-City Bus
    - Casino Buses
    - Proposed Shuttle Buses
    - SEAT
    - Multi-Modal
- Capacity for Operations - Maritime
    - Cruise Ships
    - Ferries
- Compatibility with Other Existing/Potential Uses
- Environmental Sensitivity
    - Natural
    - Cultural
    - Contamination
- Parking Capacity (for all modes)
- Pedestrian Access (for all modes)
- Vehicular Access (for all modes)
- Traffic Impacts (for all modes)
- Capital Cost (for all modes)
- Economic Development Opportunity (TOD)
- Likely Public Support
- Capacity to Accommodate the Entire Package of Modes

1.1.5. Overview of the Chapter

The remainder of this chapter is organized as follows:

- Section 1.2 and 1.3 summarize existing conditions at each site.
- Section 1.4 describes the evaluation of the advantages and disadvantages of each site for each mode that would potentially be included in the RITC.
- Section 1.5 describes the physical feasibility of locating each mode at the alternative site versus improving the facilities at the existing site.
- Section 1.6 examines the likely combination of modes that could be served at an RITC at either site and compares the two alternative sites with respect to all the evaluation criteria.
- Section 1.7 summarizes the recommendation of the study team with regard to site selection.

1.2 Existing Conditions- Downtown Site Facilities and Modes

1.2.1. Overview of Modes and the Intermodal Connections

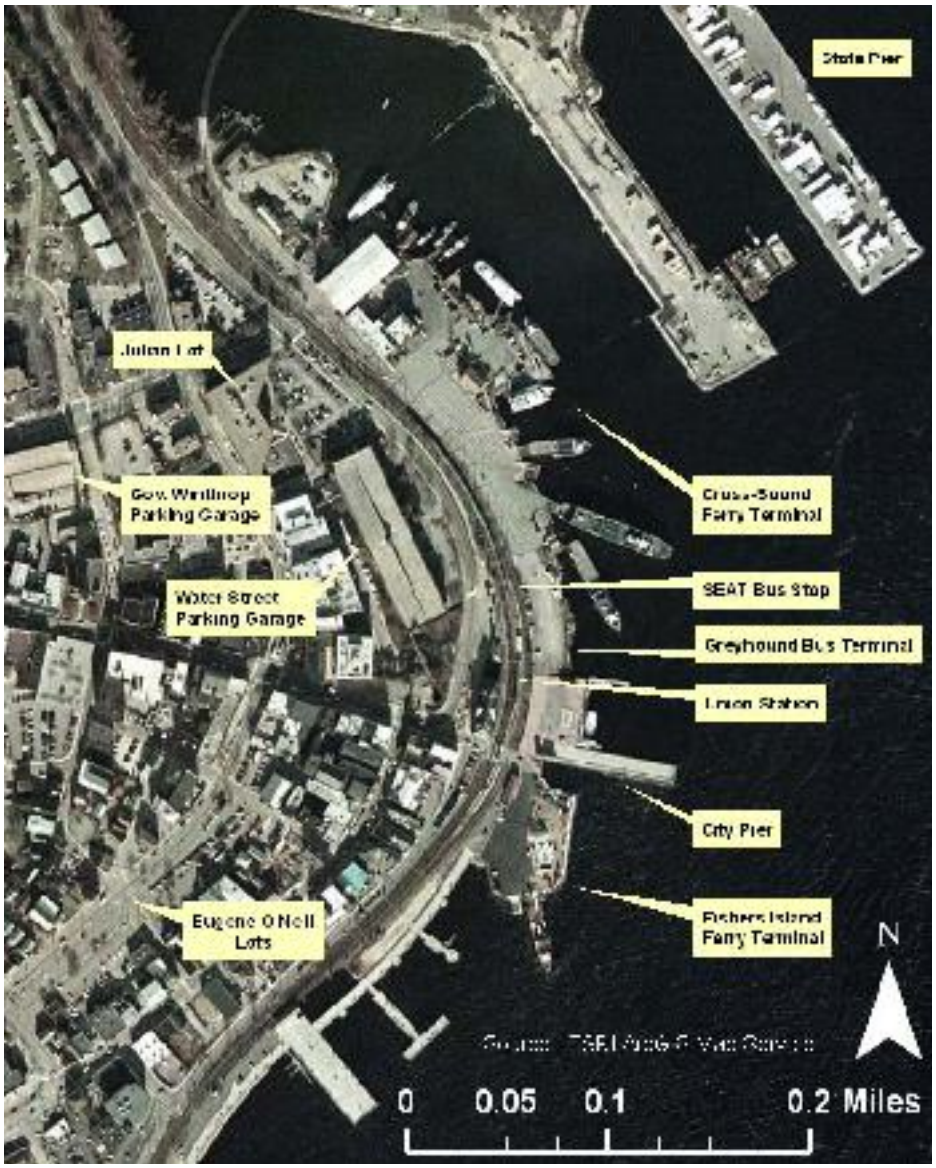
The current site of the Regional Intermodal Transportation Center is located on Water Street between State Street and Governor Winthrop Boulevard in New London. The RITC is currently a set of adjacent sites surrounding Union Station including parcels along the waterfront east of Water Street and parking facilities west of Water Street. The RITC hosts several local and intercity transportation modes, including:

- Rail
  - Amtrak intercity rail service including Acela Express and Regional service
  - Shore Line East commuter rail service (currently limited to one round trip per weekday)
- Ferry/Maritime Service
  - Ferry Service operated by Cross Sound Ferry
    - To Block Island, RI (passenger ferry service only)
    - To Orient Point, NY (auto and high speed passenger ferries)
    - To Montauk, NY (auto ferry; one round trip per week in summer months operated by Viking Fleet from Cross Sound Ferry site)
  - Ferry Service (auto ferry) to Fishers Island
  - City Pier, located directly east of Union Station across the rail right of way, provides additional facilities for docking of boats and small cruise ships (it also serves as public space between the Fishers Island and Cross Sound Ferry properties and as the focal point of the City's newly reconstructed waterfront park and Captain's Walk.)
- Bus Service
  - Intercity bus service operated by Greyhound
  - Casino shuttle bus service to each casino resort meeting passenger ferries
  - Local and regional bus service operated by SEAT
- Taxi service operated by local taxi companies (Port City Taxi, Harry's Cab, Curtin Transportation Group and Yellow Cab) from a taxi stand in front of the station
- Parking facilities operated by the City of New London, Cornish Parking and Julian Parking

There are currently no auto rental offices or facilities provided at the RITC.

Figure 1-2 shows the existing RITC site in downtown New London.

Figure 1-2: Aerial View of the Existing RITC Site



Cruise ships that dock in New London periodically over the year use the Admiral Shear State Pier which is located on a peninsula about one quarter mile (direct air distance) northeast of the Cross Sound Ferry docks. Actual walking distance between Union Station and the State Pier is about one mile, as is driving which takes about 4 minutes.

Figure 1-3 shows the existing cruise ship site at the State Pier.

Figure 1-3: Aerial View of the Existing Cruise Ship Site



Each of the modes and facilities is described in more detail below:

Union Station and Rail Services

Historic Union Station, designed by notable American architect Henry Hobson Richardson, is located at 27 Water Street in downtown New London. It was built in 1888 and renovated in the 1970's, and again, beginning in 2002. The 26,000 square foot +\- station and adjoining 1,000 square foot building on 0.54 acres are privately owned and operated. The original private ownership was undertaken to preserve the building, saving it from demolition and restoring the building. The current partnership was formed in 2002, 25 years later, and led to restoration of the lobby and the slate roof as part of a larger restoration plan. According to the owners, further restoration work was placed on hold as this study selected between the existing and alternate sites and addressed the development of a Master Plan for the RITC.

The station contains an Amtrak office for ticket sales and general information and includes a large waiting area, restrooms and general tourist information and an ATM. The station is open 5:30 am to 12:00 am, seven days a week.

The adjoining building to the north contains the Greyhound Bus Station. SEAT bus shelters are located along the north curb line of Water Street, to the north of the Greyhound building and the Greyhound Bus loading area.

Amtrak passenger rail services, Acela Express and Regional Service, provide service at the Station with a total of two daily express round trips and nine regional round trips. In addition, ConnDOT's Shore Line East commuter passenger rail service currently provides limited service, one to two daily round trips to the New London Station.

Figures 1-4 and 1-5 show Union Station.

Figure 1-4: View of Union Station



Figure 1-5: View of Rail Platforms at Union Station



Ferry Facilities and Downtown Waterfront

Cross Sound Ferry is located at 2 Water Street in downtown New London, abutting Union Station to the northeast and directly east of the rail road track. The company operates out of a 5.34 acre site which contains: 1) a 22,000 square foot office building/warehouse, 2) a 20,000 square foot warehouse with adjacent repair facilities, 3) a 7,000 square foot office/ticket/restroom building and several smaller seasonal out buildings; 4) 130 parking spaces for Ferry customers and limited parking for employees. Access to the site is from Governor Winthrop Boulevard and Water Street. Figure 1-6 shows an aerial view of the Cross Sound Ferry site. Figure 1-7 shows a photograph of the ferry loading.

Figure 1-6: Cross Sound Ferry Terminal



Figure 1-7: Cross Sound Ferry Loading



Cross Sound Ferry has a fleet of nine vessels; seven of these (used for the service to Orient Point, NY) can accommodate autos, trucks, motor homes and buses along with passengers. The capacity of these vessels ranges from 22 to 120 cars and 130 to 1,000 passengers. The two high speed ferries include the 400 passenger Sea Jet to Orient Point and the 530 passenger Jessica W. to Block Island (RI).

The following services are offered: 1) Seasonal high speed passenger service to Block Island; 2) High speed (Sea Jet) passenger service to Orient Point; 3) Regular (auto & passenger) ferry service to Orient Point, LI. At the height of the season on peak days, Cross Sound operates 22 round trips on the auto ferry to Orient Point, 6 round trips on the Sea Jet to Orient Point and 4 round trips to Block Island.

Cross Sound provides limited on-site parking (130 spaces) at the New London ferry terminal at $10 per day on a first come first served basis. Cross Sound also advertises to its customers that additional parking is available at the Water Street Parking Garage directly across the street from the ferry terminal. The Water Street parking garage rates are $6 per day Monday through Thursday and $15 per day on Fridays, Saturdays, Sundays and holidays. The Julian lot (186 spaces) has also been open on weekends in recent years providing supplementary parking.

The Fishers Island Ferry is located at State Street immediately south of the City Pier. The 0.78 acre site contains a 6,000 square foot brick office/ticket/maintenance building built in 2005 at a cost of about $15 million. There is a paved parking lot providing limited parking for staff and the drop-off and pickup (but not parking) of customers. Ferry Service is offered daily to Fishers Island with two vessels accommodating autos, trucks and passengers. A substantial part of their business is freight. The ferry carries daily commuters and contractors and students who attend a magnet school on the island. Ferry passengers reportedly park in New London or transfer to the rail service. Fishers Island considers itself part of the southeastern Connecticut community. Its passengers patronize local downtown businesses. One ferry carries 21 cars and 210 people and the other carries 28 cars and 250 people. Figure 1-8 shows an aerial view of the Fishers Island Ferry site.

Figure 1-8: Aerial View of Fishers Island Ferry Facility



The New London Waterfront Park is located at north of the Swing Bridge and east of the railroad tracks extending northward to City Pier. The Waterfront Park opened in 2001 and cost $19 million to construct. The park is actually in two sections. City Pier is located south of the Cross Sound Ferry property and north of Fishers Island Ferry property. The remainder of the park is located south of the Fishers Island Ferry property and north of the Swing Bridge. The Park contains:

- City Pier, which is located behind Union Station and is 264 feet long and 35 feet wide, provides docking facilities to the public.
- The Children's Discovery Pier is located south of the Fishers Island Ferry property.
- The Amistad Pier is located south of the Children's Pier and is a T-shaped pier, the first portion being 143 feet long and 25 feet wide. The end of the T is 210 feet long and 24 feet wide. The public is allowed to dock at the pier.
- Custom House Pier is south of Amistad Pier and is the site of the Custom House which contains public rest rooms, a laundry facility, and a Police Sub-Station.
- Fisherman's Pier is south of the Custom House and is 287 feet long and 19 feet wide and is part of the 700 foot long walkway extending south towards the Swing Bridge.
- The Park offers berthing for large and small vessels and public moorings.

Cruise Ship Docking

The cruise ships visiting New London currently dock at the Admiral Harold E. Shear State Pier located immediately south of I-95, in the upper portion of New London Harbor. The State Pier has two berths alongside the 1,000 foot long concrete pier. The cruise ships use the east side of the pier. The area around the State Pier contains 5+/- acres and is fenced and gated to provide security for normal day to day cargo operations. The State Pier primarily accommodates commercial shipping, which is not an ideal mix with passenger cruise ships. Figure 1-9 shows the State Pier.

The Connecticut Cruise Ship Task Force (CCSTF) serves as the recruitment authority to bring and coordinate cruise ship visits to ports within the State of Connecticut. This organization acts as the link between private and public interests to promote the development of cruise ship passenger visits to the State.

The CCSTF, a tax exempt 501 (c) (6) organization, facilitates positive relationships between cruise lines and the State of Connecticut. This Task Force works with the cruise industry and port-related federal, state and local government agencies to promote the development of cruise ship visits to the State of Connecticut.

It is the aim of the CCSTF to increase tourism by cruise ship passengers while in port, encourage return visits and positive word-of-mouth promotion of the State of Connecticut through port-calls in the state and to educate all interested parties who may benefit from these visits.

New London is not a home port for the cruise ships but a port call on New England cruises. One of the cruise ships visiting New London is the ms Maasdam which is 720 feet long. Although new cruise ships are longer, the cruise lines tend to keep smaller ships on the New England routes.

During the cruise ship visits, the CCSTF and its volunteer members, the City of New London and the local Downtown Main Street Program, New London Business organizations and downtown merchants have successfully transported cruise ship passengers from the State Pier to Union Station in downtown New London and from there to points all around the region.

Figure 1-9: Photograph of the State Pier



Intercity Bus

The intercity bus terminal in New London is located adjacent to Union Station in an adjacent brick building on the east side of Water Street (on the north side of the station itself and directly west of the rail right of way). Figure 1-10 shows a photo of the terminal.

Figure 1-10: The Greyhound Bus Terminal



The Greyhound building is not part of the original Union Station structure. The 1,100-square foot terminal building and the saw-tooth style bus berths are leased from the private owner of Union Station by Greyhound. The terminal building consists of the following (area estimates are approximate):

- An 8 foot by 16 foot (128 sq. ft.) area which is used for ticket sales and customer information.
- An 8 foot by 10 foot (80 sq. ft.) freight storage area; their freight business has been growing and is about 5-6 pieces per day consisting of larger items that UPS does not accept.
- A 6 foot by 6 foot (36 sq. ft.) checkout room
- A 30 foot by 20 foot (600 sq. ft.) storeroom/office
- A 40 foot by 40 foot (1600 sq. ft.) waiting area plus restrooms

The bus station is open and staffed seven days a week from 8 am to 7 pm. The lease is on a month-to-month basis. There are two full-sized bus bays and two shorter bays to park in front of the terminal building. A third full-sized bay would be preferred by the operator. While terminal upgrades have been completed or are in progress at many Greyhound locations, such improvements have not been scheduled for New London due the uncertainty of its terminal location.

Greyhound (owned by First Group since October 2007) is the bus operator. Bus service includes service to Boston, Providence, Mohegan Sun and Foxwoods to the north and New Haven, Bridgeport, Stamford, White Plains and New York City to the south. New London is an intermediate stop on these through trips; no service originates here. Greyhound reports that about half of the customers are coming from or going to the local New London area and that a substantial number use SEAT buses for access. Buses spend about 15 minutes or less at the terminal and there are typically no more than two buses there at a time, unless a delay occurs or extra service is operated. Approximately 4-5 roundtrips per weekday use the facility. Service varies by day of week. On Sundays, the busiest day, there are 12 southbound and 9 northbound trips. Friday and Saturday there are 9 and 7 round trips, respectively.

While this task was underway, Greyhound reported that it would prefer to stay at its current location but had examined some nearby alternatives such as locating the ticketing office across Water Street at the Garage/former bank site and moving to the east side of the tracks to be closer to the ferry facility.

SEAT Local Bus

Local bus service in the Southeastern region of Connecticut is provided by SEAT (South East Area Transit). The service has been in operation since 1980. SEAT is a multi-municipal public agency created by the local municipalities enacting ordinances similar to the Southeastern Connecticut Council of Governments. SEAT consists of nine member towns: East Lyme, Griswold, Groton, Ledyard, Montville, New London, Norwich, Stonington and Waterford. All SEAT fixed assets and land are owned by the State of Connecticut and are leased to SEAT. SEAT's current operations, maintenance and administrative facility is located in Preston City but the agency is examining relocation alternatives. SEAT has contracted with the Mashantucket Pequot Tribe and Foxwoods Resort and Casino to support their mass transportation system by transporting people on SEAT buses on and off the reservation. First Transit, a private contractor, manages the service.

SEAT's website lists the following as its goals and mission statement:

Goals - It is the goal of the South East Area Transit to plan and operate a continuous, comprehensive, and coordinated bus transit system that meets the mobility needs of the residents and businesses in Southeastern Connecticut at the least possible cost to users, the cities and towns which comprise the transit district, and the State of Connecticut.

Mission Statement - The mission of South East Area Transit is to operate a safe, effective and outstanding regional public transportation system, linked to intermodal resources. This will enhance the quality of life for all that work, live and visit in Southeastern Connecticut. It will promote and support regional growth for the present and future transportation needs. It must meet the needs generated by future regional growth in Southeastern Connecticut.

Eight SEAT bus routes serve New London including "corridor" routes and local routes as follows:

Corridor Routes

- 1/101: New London to Norwich via Route 32
- 2: New London to Groton and Norwich via:
- Routes 117 and 184 (midday)
- Route 12 (first and last trips)
- 3: Niantic-New London-Groton via Routes 161 and 1
- 108: New London-Groton-Mistick Village-Foxwoods express (also an Amtrak Thruway Motor Coach route under contract to Amtrak)

Local Routes

- 12: Broad Street/Jefferson Avenue
- 13: Montauk Avenue/Ocean Avenue
- 14: Crystal Avenue/Colman Street
- 15: Jefferson Avenue/Colman Street (late nights and Sundays only)

All of the above routes serve the Union Station area. Route 108 serves the front door of Union Station and provides "through" connecting services to Foxwoods for Amtrak passengers who can purchase their bus fare on a single Amtrak ticket with their rail fare.

All the other routes serve the SEAT bus stop located on the east side of Water Street about 200 feet north of Union Station and immediately north of the Greyhound facility. The Water Street bus stop is the hub in New London. The bus stop has a simple shelter and five benches (outside the shelter) located on the sidewalk which is along the fenced rail right of way. Figures 1-11 and 1-12 show the current hub.

The Water Street stop in New London serves as a pulse point for SEAT so that New London routes come together on the hour at this location to provide for transfers between buses; some routes operate every two hours so that all routes are not part of the pulse.

Another major hub is in Norwich, where a new intermodal center is being constructed. All route schedules are keyed to the main regional transfer points for corridor and local service.

All SEAT buses are fully ADA compliant and are 30, 35 and 40 feet long and 102 inches wide. The latest buses were purchased in 2005. Local routes charge a fare of $1.25. Inter-zone trips cost $1.75 and $2.25 for the Foxwoods route. One free transfer is included in the fare.

Figure 1-11: The SEAT Hub



Figure 1-12: The SEAT Hub at Pulse Time (viewed from the Ferry Terminal)



Casino Buses and Shuttle Buses

Currently, coach buses connect each of the two casino resorts and the Cross Sound Ferry high speed passenger ferry service, timed to meet each ferry. This service is provided free to the passengers as part

of their Cross Sound Ferry – Casino package. Cross Sound Ferry coordinates with the coach bus dispatcher to arrange for sufficient bus capacity for incoming passengers. Dispatchers at the casino resort bus terminal facilities handle the return trip. The casino coach buses load and unload passengers on the Cross Sound Ferry property where they can directly embark and disembark.

SCCOG commissioned a study in 2003 to study the development of an intermodal connection between the RITC and various attractions in the region including the two casino resorts (Foxwoods and Mohegan Sun) and Mystic. The study recommended that a tourist circulator be provided operating between New London, Mystic and the two casino resorts. The proposed tourist circulator system, when fully implemented, would ultimately subsume the direct connections between the two casino resorts and the high speed passenger ferries, preserving the direct shuttle nature of this service. In addition, the plan envisioned future linkages between the circulator bus stops and other destinations. Each route is described briefly below.

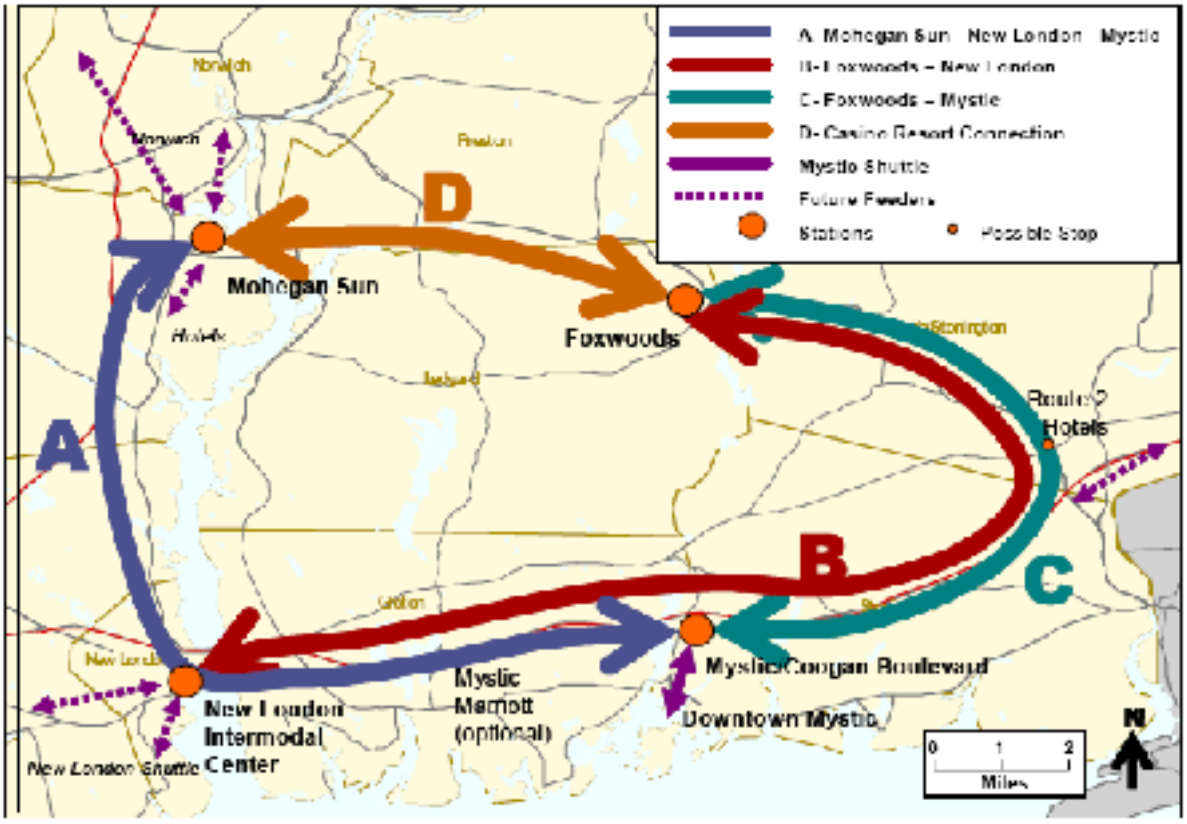
The full implementation system plan envisioned four regional routes:

- Route A: Mohegan Sun – New London – Mystic
- Route B: Foxwoods – New London
- Route C: Foxwoods – Mystic
- Route D: Mohegan Sun – Foxwoods

Only Routes A and B would serve New London.

These routes would be complemented by feeder services including a Mystic Shuttle service linking the regional route bus stop with various Mystic attractions. Figure 1-13 shows the proposed full implementation route system.

Figure 1-13: Full Implementation Tourist Transit System



Service would operate from 9 am to midnight on most days with service extending to 2 am on Friday and Saturday night. Frequencies would vary by season and by time of day. The most frequent service would operate during weekend peak hours in the summer season. At this time the frequency would be as follows in the two demand scenarios:

ROUTE	LOW DEMAND SCENARIO	HIGH DEMAND SCENARIO
Route A:	4 per hour	6 per hour
Route B:	2 per hour	2 per hour
Route C:	4 per hour	10 per hour
Route D:	5 per hour	10 per hour
Mystic Shuttle:	4 per hour	10 per hour

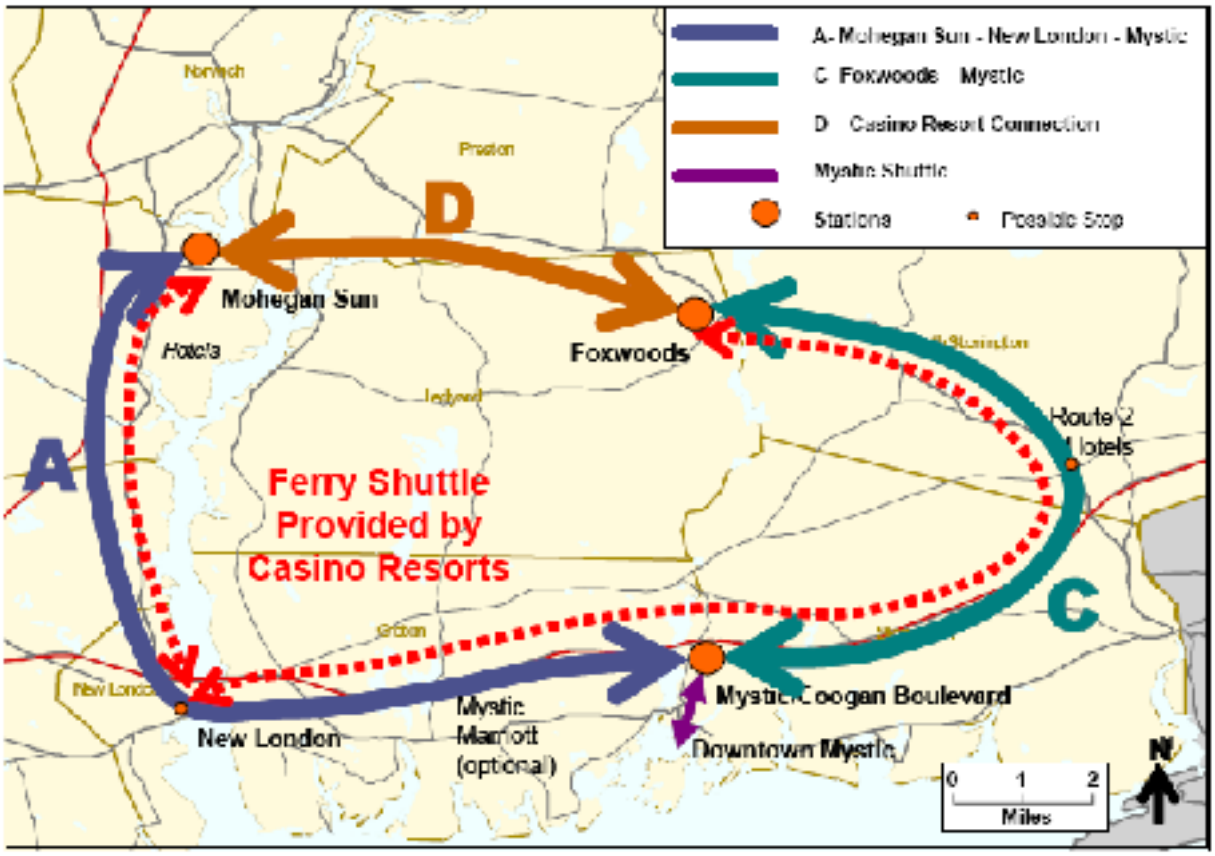
In the full implementation system, it was envisioned that there would be super-stops or transit centers at two locations in New London – at the RITC and at the Ferry Terminal. The latter was envisioned to serve the arriving and departing ferry passengers for the direct casino connections and because planning for an improved RITC had not yet begun.

The implementation of the tourist circulator was envisioned to begin with a pilot system. The Pilot System was envisioned to consist of three regional routes as follows:

- Route A: Mohegan Sun – New London- Mystic
- Route C: Foxwoods – Mystic
- Route D: Mohegan Sun – Foxwoods

In addition, the Mystic Shuttle would be operated. Figure 1-14 shows the Pilot System.

Figure 1-14: Proposed Pilot Tourist Transit System



In the pilot system, it is assumed that the current casino coach service would be maintained to connect to the high speed passenger ferries. During the peak weekend in the summer season, the following frequency of service was envisioned in the pilot system:

ROUTE	FREQUENCY
Route A:	4 per hour
Route C:	4 per hour
Route D:	5 per hour
Mystic Shuttle:	4 per hour

Only Route A would serve New London, meaning buses operating every 15 minutes in each direction. It was envisioned that the bus stop at the RITC in New London would be equipped with an enhanced shelter,

lighting, one medium and one enhanced dynamic sign with lighting, an electrical hook up and a trash receptacle.

The tourist circulator system has not yet been implemented and funding has not been secured, although a grant-in-aid to partially fund the pilot system was appropriated from the State DOT, provided the grant is equally matched from non-state sources. SCCOG was not successful in pursuing this other funding for the pilot system and the state funding is no longer available.

Taxis

There are a number of taxi and car services operating in downtown New London. These include Harry's Cab Service, Port City Taxi, Yellow Cab and the Curtin Transportation Group. A taxi staging area is located at curb side in front of Union Station, as shown in Figure 4 on the section describing Union Station.

Parking Facilities

Existing parking facilities in downtown New London include the following:

City Owned:
1) Water Street Garage – 975 spaces
2) Eugene O'Neill Surface Lot 1 – 125 spaces
3) Eugene O'Neill Surface Lot 2 – 130 spaces

Privately Owned:
1) Governor Winthrop Garage – 400 spaces
2) Julian Surface Lot – 186 spaces
3) Cross Sound Ferry Lot – 130 spaces

Figure 1-15 shows a map of the existing parking facilities.

Figure 1-15: Existing Parking Facilities near the RITC

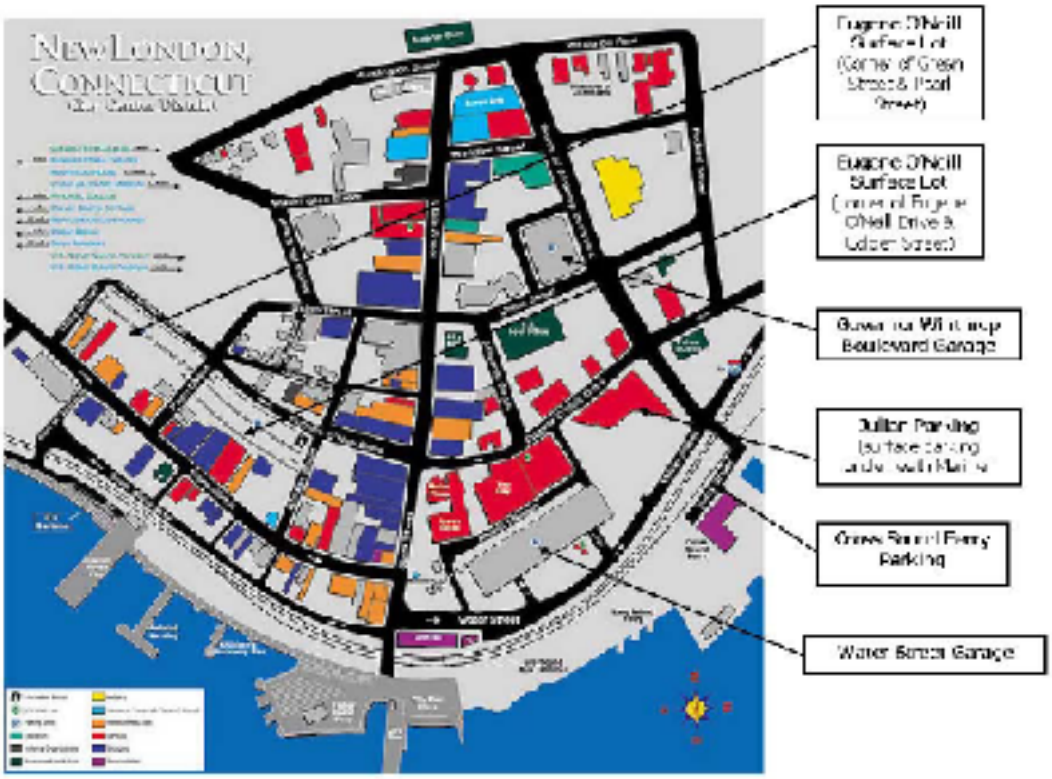


Table 1-1 shows the occupancy conditions of each parking facility based on study team surveys conducted on Saturday August 2, 2008.

Table 1-1: Parking Occupancy Conditions on Saturday August 2, 2008

	Total Spaces	Peak Occupancy	Peak % Occupied	Time of Day for Highest Occupancy	Lowest Occupancy	Lowest % Occupied	Time of Lowest Occupancy
Water Street Garage	975	479	49%	12:00 - 1:00 pm	370	38%	7:30 - 8:00 am
Governor Winthrop Garage	400	130	33%	3:00 - 4:00 pm	97	24%	7:30 - 8:00 am
Eugene O'Neill Surface Lot (1)	137	101	69%	6:30 - 7:00 pm	28	20%	7:00 - 7:30 am 8:00 - 8:30 am
Eugene O'Neill Surface Lot (2)	130	28	22%	6:30 - 7:00 pm	16	12%	1:30 - 2:00 pm
Julian Surface Lot	167	77	41%	8:00 - 8:30 am	56	30%	7:00 - 7:30 am
Cross Sound Ferry	130	142	109%	8:00 - 8:30 am	97	75%	7:30 - 7:30 am

(1) Eugene O'Neill Surface Lot (corner of Eugene O'Neill Drive and Golden Street)
(2) Eugene O'Neill Surface Lot (corner of Green Street & Pearl Street)

Since August 2nd parking occupancy was believed to be affected by rainy conditions in the afternoon, the counts were adjusted to reflect conditions on sunny summer Saturdays that better reflect peak conditions. Block Island Ferry ridership information provided by Cross Sound Ferry was used to determine that the average of four mid-summer Saturdays had 82% more ferry riders. This combined with information from the parking surveys undertaken on August 2nd was used to factor up the portion of the parking demand related

to ferry usage. No comparable data existed to consider any similar impacts on non-ferry parkers. Table 1-2 shows adjusted occupancy conditions. Note that the parking facilities are still not full, with overall occupancy at 69% and Water Street Garage occupancy at 77%.

Table 1-2: Parking Occupancy Adjusted to Reflect Average Good Weather Saturday Conditions

	Total Spaces	Peak Occupancy	Peak % Occupied	Time of Day for Highest Occupancy	Lowest Occupancy	Lowest % Occupied	Time of Lowest Occupancy
Water Street Garage	975	747	77%	12:00 - 1:00 pm	370	38%	7:00 - 8:00 am
Governor Winthrop Garage	400	150	38%	3:00 - 4:00 pm	97	24%	7:00 - 8:00 am
Eugene O'Neill Surface Lot (1)	125	125	100%	6:30 - 7:00 pm	28	22%	7:00 - 7:30 am 8:00 - 8:30 am
Eugene O'Neill Surface Lot (2)	130	35	27%	6:30 - 7:00 pm	15	12%	1:30 - 3:00 pm
Julian Surface Lot	186	142	76%	8:00 - 8:30 am	56	30%	7:00 - 7:30 am
Cross Sound Ferry	130	142	109%	8:00 - 8:30 am	97	75%	7:00 - 7:30 am
Total	1946	1341	69%		663	34%	

(1) Eugene O'Neill Surface Lot (corner of Eugene O'Neill Drive and Golden Street)
(2) Eugene O'Neill Surface Lot (corner of Green Street & Pearl Street)

Traffic Conditions

The existing RITC is located in downtown New London off Water Street in the east central portion of the city and is close to three major regional access roads - Interstate 95 (I-95) and State Route 32 from the north and Route 1 from the east. Downtown New London is bordered by the Thames River on the east, Huntington Street on the west, Tilley Street on the south and Federal Street on the north. The existing traffic network system in downtown New London consists of many one-way streets and a limited number of two-way streets. Though one-way street patterns improve overall capacity and safety and reduce the number of conflicts, they can confuse drivers who are not familiar with the area. There are a number of public and private parking facilities and on-street parking is provided.

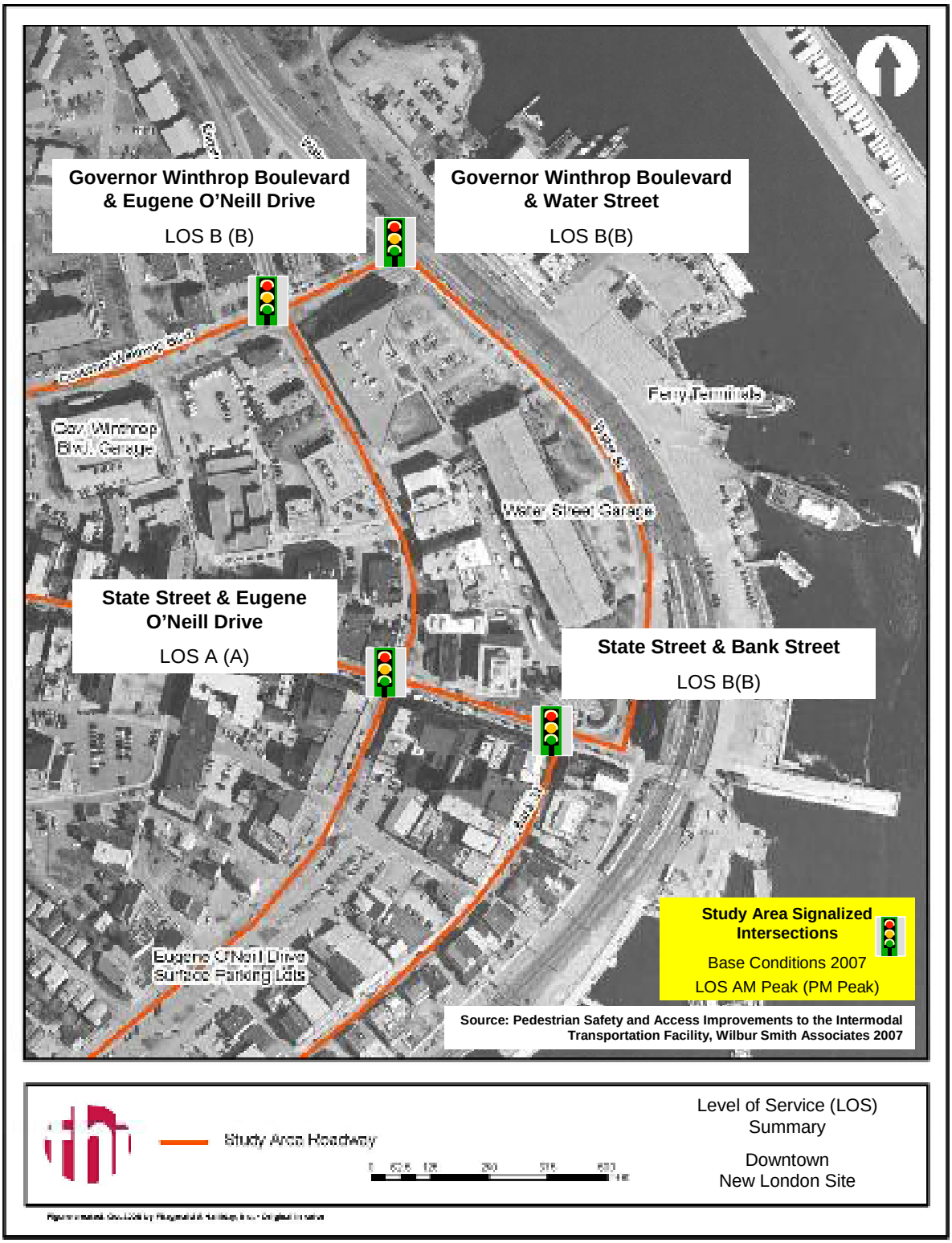
Based on traffic information documented in the *Pedestrian Safety and Access Improvements to the Intermodal Transportation Facility, Wilbur Smith Associates 2007,* vehicular access and traffic operations on the roadways and intersections, in general, are good. That study's project limits were defined by Governor Winthrop Boulevard to the north, State Street to the south, Water Street to the east, and Eugene O'Neill Drive to the west. A study of the capacity was conducted to determine the roadways and intersections ability to accommodate traffic under various level of service. Level of Service (LOS) is a qualitative measure of the effect of a number of factors including intersection geometrics, speed, travel delay, freedom to maneuver, and safety. Level-of-Service provides an index to the operational qualities of an intersection. Six levels-of-service are defined by letter designations ranging from A to F, with LOS A representing the best operating conditions and LOS F representing the worst. Generally, LOS D is considered acceptable. Results from the capacity analysis during the morning (AM) and afternoon (PM) commuting peak hours under 2007 (winter time) base conditions indicate that all signalized intersections within the project's limits operate well with an overall intersection LOS A or LOS B during both peak hours. Table 1-3 provides a summary of the LOS results. Figure 1-16 illustrates the LOS conditions in the vicinity of the existing RITC.

Table 1-3: Level of Service and Delay Summary
2007 Existing Conditions (January 2007 Weekday Conditions)

Signalized Intersection	AM Peak Hour Overall Intersection LOS (Delay in seconds)	PM Peak Hour Overall Intersection LOS (Delay in seconds)
State Street and Eugene O'Neill Drive	A (5.7)	A (8.2)
State Street and Bank Street	B (11.2)	B (17.7)
Governor Winthrop Boulevard and Eugene O'Neill Drive	B (14.3)	B (14.5)
Governor Winthrop Boulevard and Water Street	B (12.1)	B (15.5)

Source: Pedestrian Safety and Access Improvements to the Intermodal Transportation Facility, Wilbur Smith Associates, 2007

Figure 1-16: Level of Service Summary (January 2007 Weekday Existing Conditions)



To understand traffic operations during a summer Saturday, turning movement count data was collected on Saturday, August 2, 2008 during the morning (7:00 AM – 9:00 AM), mid day (11:00 AM – 1:00 PM), and afternoon (4:00 PM – 6:00 PM) peak periods at the following intersections.

- State Street and Bank Street
- State Street and Water Street
- Governor Winthrop Boulevard and Ferry Street
- Governor Winthrop Boulevard and Water Street

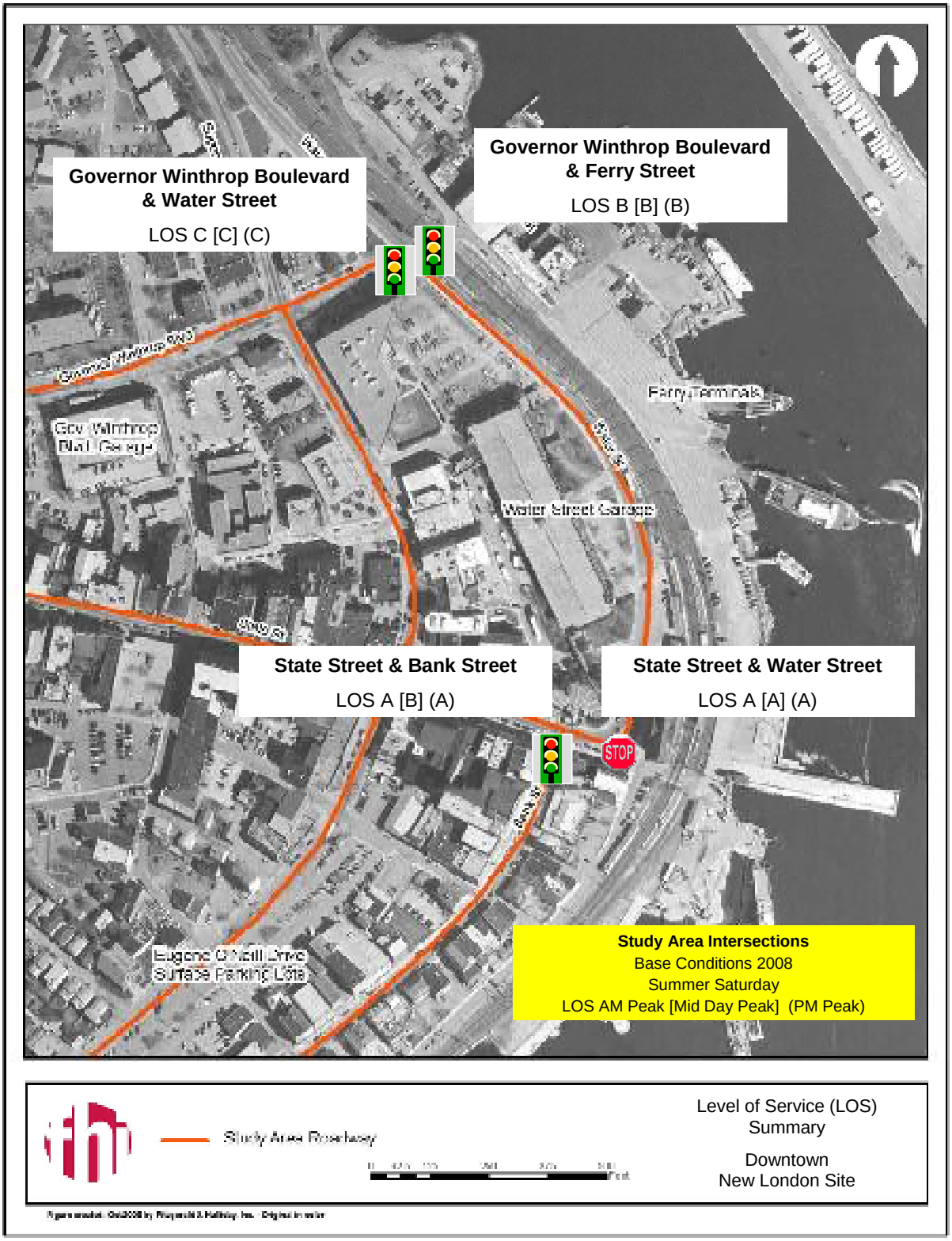
The summer Saturday peak hourly volumes were used to conduct the LOS analysis. Results from the capacity analysis during the morning (AM), mid day, and afternoon (PM) under 2008 (summer time) Saturday base conditions indicate that all signalized and stop-controlled intersections operate well with an overall intersection LOS C or better during all peak hours. Table 1-4 provides a summary of the LOS results. Figure 17 illustrates the LOS conditions.

Table 1-4: Level of Service and Delay Summary
Existing Conditions (August 2008 Saturday Conditions)

	AM Peak Hour	Mid Day Peak Hour	PM Peak Hour
Signalized Intersection	Overall Intersection LOS (Delay in seconds)	Overall Intersection LOS (Delay in seconds)	Overall Intersection LOS (Delay in seconds)
State Street and Bank Street	A (8.3)	B (10.4)	A (9.8)
State Street and Water Street*	A (7.4)	A (7.4)	A (7.3)
Governor Winthrop Boulevard and Ferry Street	B (16.9)	B (18.2)	B (10.8)
Governor Winthrop Boulevard and Water Street	C (20.1)	C (24.5)	C(27.4)

* An overall LOS is not calculated for stop-controlled intersections. The LOS and delay noted represent the critical movement with the highest delay.

Figure 1-17: Level of Service Summary (August 2008 Saturday Existing Conditions)



Pedestrian Connections

Typical pedestrian amenities are provided in downtown. These include sidewalks, marked crosswalks, and handicap ramps. Pedestrian signals are provided at some of the major signalized intersections. Pedestrian activity is low to moderate in downtown. Concentrations of pedestrians are most likely to occur at the municipal parking garages and surface lots. Pedestrian walkways are provided from upper levels of the garages to the adjacent streets and buildings. There is no pedestrian overhead walkway to Union Station, the intercity bus terminal, the SEAT bus stop or any of the ferry terminals, although one was proposed several years ago and the project was aborted for several reasons. Instead the Parade Project, now nearing completion, provides traffic calming and improved pedestrian crossings as well as an exterior elevator on the west side of the garage replacing the current pedestrian bridge to the Parade. This project, which had been in the planning stages for three years, was approved in August 2008 by the City Council and cost $10.8 million to complete.

Figure 1-18 and 1-19 shows the Parade Project and key pedestrian crossings and facilities proposed as part of the Parade project.

Figure 1-18: A Model of the Parade Project



Source: The Day

Figure 1-19: A Layout of the Project Showing Pedestrian Improvements



Source: Presentation- Pedestrian Safety and Access Improvements to the Intermodal Transportation Facility, September 19, 2007

Downtown Area Development

This section describes the development climate in the downtown area at and near the existing RITC site. The discussion addresses development opportunity sites, market conditions and potential, public policies/funding/tax revenue impacts, transportation/access/parking/infrastructure factors, and attractions/amenities.

Development Opportunity Sites

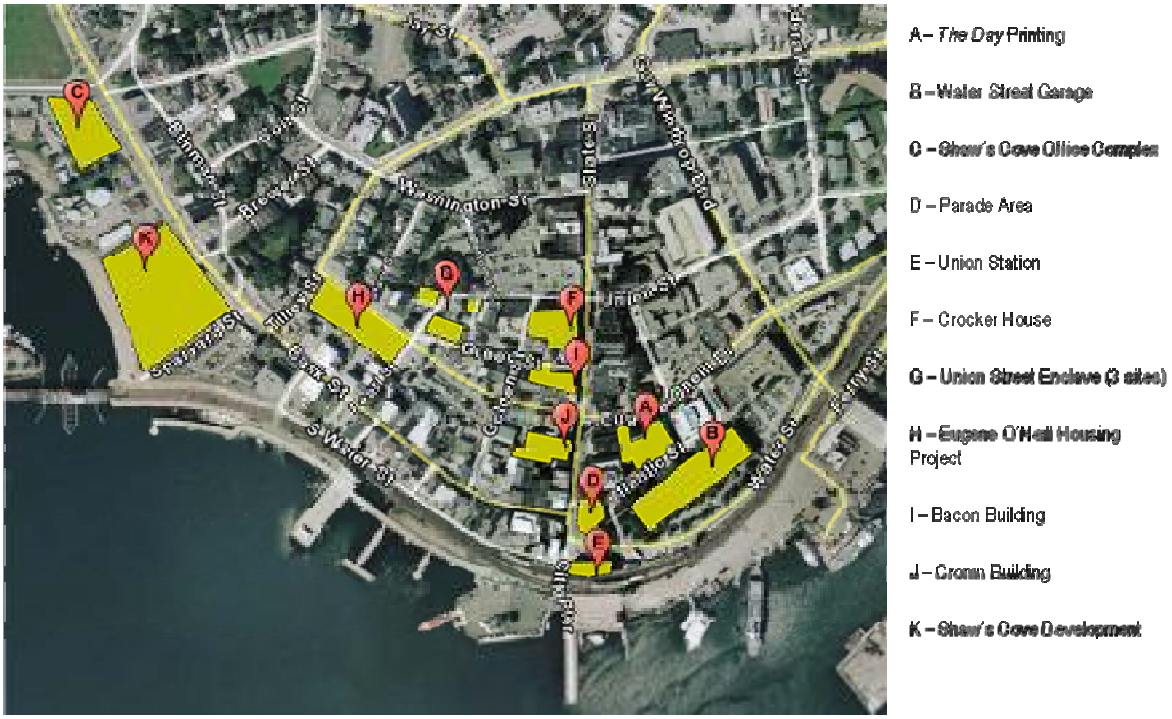
- Approximately 230,000 square feet of vacant commercial space in downtown available (141,750 square feet of retail and 88,805 square feet of office) – potential opportunity to attract high quality retail/office and residential in selected locations [1]
- The Day printing operation may close its location adjacent to the Water Street Garage. This closure may open potential for (re)development of site
- A 3.23 acre lot in Shaw's Cove Office Park at the corner of Bank Street and Howard Street
- Reconstruction of Parade area may make some land available adjacent to existing Water Street garage for (re)development

[1] The vacant square footage was found using data from the New London Main Street Program's database of downtown properties.

- Union Station owners are interested in keeping the Regional Intermodal Transportation Center (RITC) downtown and enhancing the existing facility with additional supportive uses within the terminal
- Recent and potential (re)development opportunities associated with seven development opportunities identified in the Downtown Master Plan:
  - Crocker House: part of the House is currently under study to become the Coast Guard Museum; the upper floors are filled with residential space and the ground floor holds retail
  - Union Street Enclave: some of the buildings are being rehabilitated
  - The Parade: redevelopment of the Parade is under construction and is expected to be completed September 2009; the pedestrian overpass project was cancelled
  - Eugene O'Neill Housing Project: has not proceeded but is available for redevelopment
  - The Bacon Building: underwent renovations to create 21 residential units
  - The Cronin Building: condemned
  - Shaw's Cove: completed, and its 220 units are at 75% occupancy

Figure 1-20 shows the key development sites.

Figure 1-20: Key Downtown Development Sites



Sources: Google Earth, The Day's New London Empty Storefronts Map, New London Downtown Master Plan (1998)

Market Conditions/Potential

- Positive housing market potential - downtown housing stock nearly doubled in the last ten years to approximately 500 market-rate condos and apartments (excludes the 145 subsidized apartments in

the Mohican building). 200 new units were constructed over the last five years and rough estimates put about 1000 people living in downtown[2]

- Downtown buildings have been / are being renovated into residential condos and apartments:
  - 2003 Crocker House rented first phase of its 80 apartments
  - Former SNET Building renovated into 28 apartments
  - 9 loft-style apartments in mixed-use, 19 unit building at 13 Washington Street
  - Shaw's Landing on Bank Street, 35 luxury condos; asking price >$300,000
  - Bacon Building converted into 21 apartments which range from $800-$1000/month at full occupancy
  - Many market rate upper floor new apartments rent at or above $1,000 (owners report full occupancy)
  - Renovated 475 square foot studio for $750/month and 900 square foot for $950/month at full occupancy
- Higher vacancy rates represent opportunities to attract quality tenants to downtown storefronts. The New London Main Street Program found that 37% of the retail space in downtown is vacant and 21% of the office space is vacant

Public Policies/Funding/Tax Revenue Impacts

- Various plans to support continued development and enhancement of downtown area (e.g. New London Downtown Action Agenda, New London New Vision, New London Downtown Master Plan, Plan of Conservation and Development for New London)
- Active Main Street program to support local business growth in downtown area
- Business incentive programs in place to support downtown development include: revolving loan fund, building rehabilitation program, façade improvement program, tax break for owners who improve their properties (see next bullet) and a rent subsidy program
- The City's Enterprise Zone Program offers a seven-year tax abatement for landlords on improvements made to commercial and residential properties. Should the RITC be located downtown, the taxable value of property improvements that may not otherwise have happened will not be contributed to the local government for seven years.

Transportation/Access/Parking/Infrastructure

- Existing pedestrian oriented infrastructure and downtown environment
- All modes (except the cruise ships) already located in close proximity
- Existing parking facilities can meet peak weekend/seasonal demand and also downtown needs
- Poor existing pedestrian connections between various transportation modes (ferry, bus, rail, etc.)
- Excellent vehicular access to major highways
- Rail access to cruise ship dock; could be beneficial if New London becomes a home port
- Both Cross Sound Ferry and Fishers Island Ferry have recent investment at current locations in downtown

[2] Dale, K. The Day. *…And The Rentals Downtown Don't Stay Vacant Long*. September 2008. Retrieved on September 15, 2008 from http://www.theday.com/re.aspx?re=0ef49ca9-b152-4d50-8d8f-648c8948613b

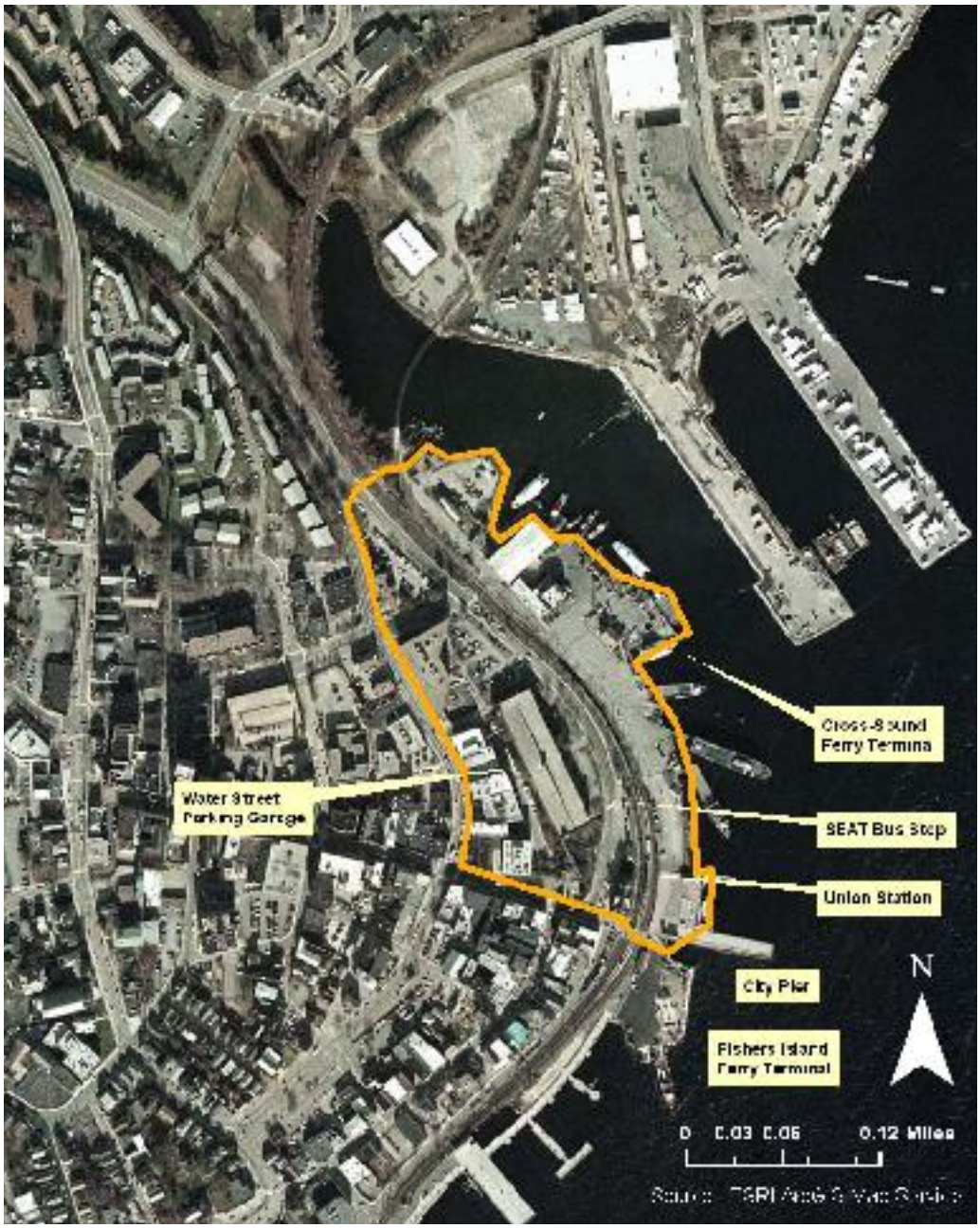
Attractions/Amenities

- Downtown New London area within walking distance of intermodal center
- Parade Project will improve some pedestrian and image issues at the current site
- Numerous historic buildings are located throughout downtown
- The Garde Arts Center provides performance space for cultural events
- Shopping and dining establishments are available for tourists, residents and downtown workers

1.2.2. Environmental Conditions – Contamination Issues

Existing development along the ferry terminus and railroad parcels have a history of uses which could yield potential for site contamination. A detailed site inventory was conducted as part of the current study and is documented in Chapter 9. Figure 1-21 shows likely contamination locations at the existing site.

Figure 1-21: Likely Contamination at the Existing RITC Site



Environmental Conditions – Natural and Cultural Issues

This section documents the findings of a preliminary screening of natural environmental and cultural resources at the existing RITC site and the greater southeastern Connecticut region as a whole. A preliminary environmental screening was conducted through the following means:

- Review of Connecticut Department of Environmental Protection (CTDEP) Geographical Information Systems (GIS) data and other CTDEP environmental publications.
- Review of National Register of Historic Places data.

- Field reconnaissance that involved a windshield survey of environmental resources in the area of both candidate sites.

The following natural, cultural, and community resources and issues areas were considered:

- Section 106 Resources
- Section 4(f) Resources
- Section 6(f) Resources
- Coastal Resources
- Wetlands
- Floodplains and Stream Channel Encroachment Lines
- Surface Water Resources
- Groundwater Resources
- Public Water Supply Reservoirs
- Fish, Shellfish, and Wildlife Habitats
- Rare, Threatened, or Endangered Species and Significant Natural Communities
- Active Farmland and Farmland Soils
- Wild and Scenic Rivers
- Hurricane Inundation Areas
- Noise Sensitive Areas

A brief summary of findings is presented below for each of the aforementioned resource categories and/or issue areas. In addition, Figures 1-32, 1-33 and 1-34 depict natural environmental and cultural resources at each of the two candidate sites. (They are found in Section 1.3.9)

Section 106 Resources

The National Register of Historic Places (NRHP) is the nation's official list of cultural resources worthy of preservation. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. Information on the NRHP website and information contained in various reports prepared for the City of New London were consulted for this section. Some of the historic sites and districts discussed below are depicted graphically in Figure 1-28.

Union Station (National Register - 1971) and most of downtown New London are either National Register listed or eligible for listing. The station is the largest railroad station designed by H.H. Richardson and one of his two most important buildings in the State of Connecticut. Thus, any work conducted at this location will have to be carefully orchestrated with the Connecticut State Historic Preservation Office to ensure full compliance with Section 106 of the Historic Preservation Act.

Section 4(f) Resources

Section 4(f) of the 1966 Department of Transportation Act (49 USC 303) prohibits use of land from any public park, recreation area, wildlife or waterfowl refuge, or historic property listed on or eligible for the NRHP unless there is no feasible or prudent alternative to the use of the land and the project includes all possible planning to minimize harm. Section 4(f) also applies to archaeological sites listed on or eligible for the NRHP that are determined important for in-situ preservation. Section 4(f) does not apply to

archaeological sites that are determined important chiefly for their informational value and have minimal value for preservation in place.

Because the H.H. Richardson-designed Union Station is listed on the National Register of Historic Places, it qualifies for protection as a Section 4(f) resource. The public recreational walkway along the shoreline beginning behind the railroad station and running southward to the Swing Bridge and Shaw's Cove, may also qualify as a Section 4(f) resource.

Section 6(f) Resources

Section 6(f) of the Land and Water Conservation Fund Act (1965) provides funds for acquisition, maintenance, and enhancement of public recreational open space by municipalities. There are no public recreational properties or facilities funded and protected under Section 6(f) on or near the existing site.

Coastal Resources

The existing site is located along the western shoreline of the Thames River within Connecticut's designated Coastal Zone. Thus, Coastal Consistency Review will be required for work planned at this site to ensure full compliance with the coastal resource and use policies designated in Connecticut's Coastal Management Act. Coastal resources in the vicinity of the site include Shorelands and Coastal Flood Hazard Areas. Shorelands are essentially any developed areas within the coastal zone that are not subject to coastal flood hazards. Coastal Flood Hazard Areas are lower elevation areas that may be impacted by coastal flooding attributed to 100-year storms.

The existing site is located entirely within a Coastal Flood Hazard Area (CFHA). Developed areas just west of the site and at higher elevations are designated as Shorelands.

Wetlands

A review of CTDEP GIS data reveals that there are no hydric soils (i.e. poorly drained or very poorly drained soils) that would indicate the presence of wetlands on or adjacent to the existing site. Subsequent field reconnaissance confirmed the GIS data, as the existing site is fully developed and part of a larger urban area located along the western shoreline of the Thames River. Thus, there are no inland wetlands or tidal wetlands on or adjacent to the existing site.

Floodplains and Stream Channel Encroachment Lines

There are no Stream Channel Encroachment Lines (SCEL) associated with the Thames River in the vicinity of the existing site. A review of CTDEP GIS data reveals that the existing site (i.e., Union Station and its immediate surroundings) falls within the 100-year floodplain as designated by the Federal Emergency Management Agency (FEMA). Points along the immediate shoreline, including docks, piers, and an existing public recreational walkway are within the 100-year floodplain and may be subject to wave action during 100-year storm events. Floodplain resources in the vicinity of the existing site are depicted on Figure 29.

Surface Water Resources

The only surface water resource in the vicinity of the existing site is the Thames River, which is located directly to the east. The river, which is tidally influenced in the vicinity of the existing site, is designated by the CTDEP as a Class SC/SB water resource with respect to water quality. The SC/SB classification means coastal waters (S) with a current water quality classification of C and a water quality goal of B. Designated uses of SC waters are for fish, shellfish, and wildlife habitat, certain aquaculture operations,

recreational uses, industrial, and other legitimate uses, including navigation, but the C classification means that the water is presently not meeting all Water Quality Criteria due to pollution. Class SB designated uses include SC uses plus shellfish harvesting for transfer to a depuration plant or relay (transplant) to approved areas for purification prior to human consumption.

Groundwater Resources

Aquifer protection areas, commonly referred to as wellhead protection areas, represent the area of groundwater contribution for active public water supply wells. A review of CTDEP data revealed that there are no aquifer protection areas or public water supply wells in the vicinity of the existing site. Groundwater in the project area is designated by CTDEP as Class GB. This groundwater can be used for industrial processes, but it is not suitable for human consumption without treatment.

Public Water Supply Reservoirs

There are no public water supply reservoirs on or adjacent to the existing site. Drinking water is supplied to the site by the City of New London's public water system.

Fish, Shellfish, and Wildlife Habitats

The existing site is a built-out urban area with constant pedestrian, vehicular, and train activity. Wildlife habitat is non-existent. Vegetation is sparse and is limited to a row of mature trees along Water Street in front of the Water Street parking garage. There are also several small areas of mowed/maintained grass along Water Street and adjacent to the Northeast Corridor fence line. There is limited landscaping west of Union Station associated with an area known as the Parade (currently undergoing construction). Due to a significant amount of industrial land use along the Thames River and the presence of marinas and ferry terminals in the vicinity of the existing site, shell-fishing in the Thames River is prohibited. Recreational fishing occurs at public access points along the shore of the Thames River near the existing site.

Rare, Threatened or Endangered Species and Significant Natural Communities

The CTDEP Natural Diversity Data Base (NDDB) was consulted to obtain a preliminary understanding as to whether or not any rare, threatened or endangered plant and animal species or significant natural communities exist in the project area. The NDDB contains information on the status of more than 1,000 rare species of plant and animals, including invertebrates, and 45 significant natural communities. Figure 30 depicts CTDEP NDDB sites located in the vicinity of the existing site (as well as the other candidate site).

There are no rare, threatened or endangered plant or animal species or significant natural communities on or adjacent to the existing site.

Active Farmland and Farmland Soils

The area surrounding the existing site is developed with roads, buildings and other man-made infrastructure. There are no prime or statewide important farmland soils or active farmlands on or adjacent to the existing site.

Wild and Scenic Rivers

There are no Wild and Scenic River resources at the existing site or in the project study area.

Hurricane Inundation Areas

The existing site resides within coastal areas that could potentially become inundated during Category 1 or 2 hurricanes.

Noise Sensitive Areas

Noise-sensitive land uses include: a) residences, hotels, and other buildings where people sleep; b) institutional resources such as churches, schools, hospitals, and libraries; and c) various tracts of land where quiet is an essential element of the land's intended purpose.

The existing site is located at the foot of State Street along the western bank of the Thames River. Surrounding land uses include ferry terminals, public parking, and commercial businesses among others. The area is a very active transportation center with trains, buses, taxis, ferries, and pedestrian activity at all hours of the day. There are no noise sensitive land uses on or immediately adjacent to the existing site.

1.3 Existing Conditions- Fort Trumbull Peninsula Site

The Fort Trumbull peninsula has been the site of a major redevelopment project for the City of New London consisting of 92 acres of waterfront land adjacent the Northeast Corridor Rail Right of Way. The following describes the redevelopment plan developed by the New London Development Corporation, the status of the development and a description of existing facilities. Figure 1-22 shows an aerial view of the Fort Trumbull site.

Figure 1-22: Aerial View of Fort Trumbull Peninsula



1.3.1. NLDC Plan for Redevelopment and the Status of Development Parcels

The Fort Trumbull Peninsula is defined by water on three sides and by Amtrak's Northeast Corridor mainline on the west. It is characterized by its steep topography and its mix of existing public facilities and cleared parcels slated for future private mixed use, residential, and hotel/conference center development. The recently opened Fort Trumbull State Park occupies 16 acres at the eastern edge bound by the United

States Coast Guard Station to the north. The USCG station includes the unique museum of the Naval Undersea Warfare Center. The USCG also occupies the recently renovated four story 80,000 square foot office building on the Municipal Development Plan (MDP) Parcel 3A. A newly constructed parking lot on the southern end of Parcel 1B serves the Coast Guard office building.

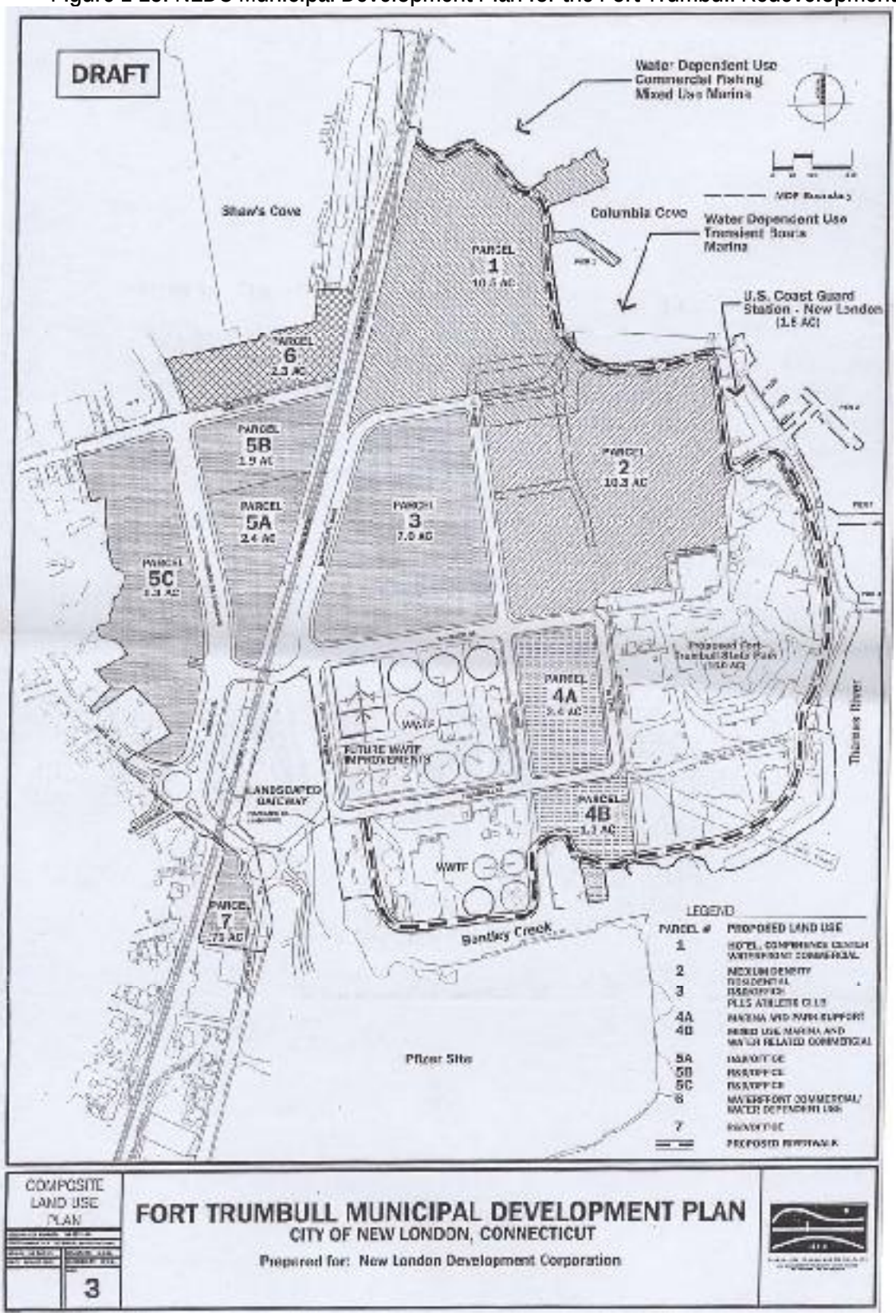
The New London Development Corporation prepared the Fort Trumbull Municipal Development Plan (MDP) in 1999 – 2000. Its goals are four-fold:

- To create a world-class development that will complement the undertakings of Pfizer, Inc. and set a standard for development in New London;
- To create an economic asset for the City of New London that will create jobs, generate tax revenue, and result in spin-off economic activity;
- To maximize public access to the waterfront and, in doing so, encourage uses which are water dependent or which will be enhanced by water access and views; and
- To develop a project which will help build momentum for the revitalization of downtown New London and the balance of the city to the benefit of the City's residents and visitors.

Most of the parcels have been cleared, and new streets constructed (Chelsea Street, East Street and the Nameaug Street extension). Parcels 2A, B and C (four acres) are designated for residential use: Parcels 3A, B and C for office (Parcel 3A is currently occupied by the Coast Guard office building and Parcels 3B and 3C are permitted for 100,000 square feet of office space each); and Parcel 4A (2.5 acres) for mixed use development. At the north end of the site Parcel 1A has been designated for the Coast Guard Museum and Parcel 1B for a hotel/conference center of up to 250 rooms. The Corcoran Jennison Company had been the designated developer for the hotel/conference center and a housing complex on Parcel 2, but their designation has been recently rescinded. The peninsula has many assets (water views, waterfront access, Fort Trumbull State Park among others) and it is reasonable to expect that development will proceed in the future.

Figure 1-23 shows the NLDC MDP for the redevelopment site.

Figure 1-23: NLDC Municipal Development Plan for the Fort Trumbull Redevelopment Site



1.3.2. Fort Trumbull Historic Site, Park and Visitor Center

This State Park is situated on a commanding site overlooking New London Harbor and the mouth of the Thames River. The park features a visitor center with interactive exhibits; a fishing pier; grassy grounds available for picnics; restrooms and walking trails and a spectacular view of New London Harbor.

Built between 1839 and 1852, the fortification is one of a group of 42 forts which were constructed for the defense of the coast of the United States, and for defense of the harbors they guarded. Fort Trumbull is unique because of the Egyptian Revival features incorporated in the architectural design. The Fort is a wonderful example of its era, a masterpiece in stonework and masonry. The Fort contains informative markers and displays and the fort interior features 19th Century restored living quarters, a mock laboratory, and a 1950's era office furnished to resemble the naval underwater research and development lab formerly located at the facility. The public also has access to the ramparts for a spectacular view of the New London Harbor.

The Visitor Center contains state of the art multimedia theaters, computer touch screen interactive exhibits, 3-D models, and extensive graphics and text panels. The one of a kind center depicts over 225 years of military history and technological advances from the Revolutionary War to the Cold War. Some of the main themes of the Visitor Center are the September 6, 1781 attack by the British under the command of Benedict Arnold, the U-boat menace during World War II, and the anti-submarine efforts during the Cold War. Figure 1-24 shows an aerial view of Fort Trumbull and Figure 1-25 shows photographs of the fort and the visitor center.

Figure 1-24: Aerial View of Fort Trumbull



Source: Google Earth, TeleAtlas, Digital Globe

Figure 1-25: Fort Trumbull and the Visitor Center



1.3.3. Coast Guard Facilities

The Coast Guard facilities are contained on what is identified as Parcel C of the Fort Trumbull Municipal Development Plan and the Environmental Assessment Disposal and Reuse of Naval Undersea Warfare Center, New London, Connecticut Report. Parcel C contains 1.6 acres located south of Shaw's Cove and a separate 0.1 acre site south of Pier 4. The 1.6 acre site contains Piers 2 and 6 and three buildings identified as #12, #45, and #86. The 0.1 acre site contains building #109, the Navy's Magnetic Silencing Facility. Figure 1-26 shows an aerial view of the Coast Guard facilities and Figure 1-27 shows a photograph of the facility.

Figure 1-26: Aerial View of Coast Guard Station



Source: Google Earth, TeleAtlas, Digital Globe

Figure 1-27: Photograph of Coast Guard Station



1.3.4. Existing Piers

Fort Trumbull contains a number of existing piers. Pier 1 located on Parcel A and is currently used by a private fishing company. Piers 2 and 6 are part of the Coast Guard facility. Piers 4 and 7 are part of Fort Trumbull State Park. Pier 4 has been rebuilt as public fishing pier. Pier 7 is currently used to provide dockage for public recreational, educational, and military vessels. Pier 7 is roughly 654 feet long and 30 feet wide. It was designed and constructed during in the mid 1960's when Fort Trumbull was home to the U.S. Navy Undersea Sound Laboratory.

Figure 1-28 shows an aerial view of the existing piers and Figure 1-29 shows a photograph of the piers.

Figure 1-28: Aerial View of Existing Piers at Fort Trumbull



Source: Google Earth, TeleAtlas, Digital Globe

Figure 1-29: Photograph of Existing Piers at Fort Trumbull



1.3.5. Pfizer Facility

The 780,000–square–foot Pfizer Global Research Facility opened in 2001, successfully transforming a former brownfield site to a modern 24-acre corporate office facility. The facility occupies the southernmost parcel on the Fort Trumbull peninsula, east of Pequot Avenue and just south of the channel that separates it from the rest of the peninsula. The facility, which consists of three six-story office buildings, is headquarters for the company's cutting-edge medical research programs involving more than 12,000 Pfizer researchers around the world. The world-class $294 million Pfizer Research and Development Headquarters includes a child care facility; a cafeteria seating 550; a credit union and fitness center, parking garage for 1,790 cars, helipad, and ferry dock for employees commuting between Pfizer's Groton laboratories and the New London R&D headquarters. Two thousand (2,000) members of the Pfizer global development team are employed at the site. As part of the 22-acre environmental remediation, Pfizer, working with non-profit and educational groups, has restored Bentley Creek which is adjacent to the peninsula. Once a repository for run-off from a neighboring scrap metal yard, the creek today is a viable habitat for aquatic wildlife. Pfizer is now the largest taxpayer in New London, assessed nearly $31 million dollars in 2006. *Unfortunately, by the time of completion of this Final Report, Pfizer has announced its intention to leave the Fort Trumbull site and consolidate regional operations in Groton.*

Figure 1-30 shows an aerial photo of the Pfizer facility.

Figure 1-30: Pfizer Facility and Wastewater Treatment Facility at Fort Trumbull



Source: Google Earth, TeleAtlas, Digital Globe

1.3.6. Wastewater Treatment Plant

A wastewater treatment plant owned by the City of New London is located along Trumbull Street (at 100 Trumbull Street). It occupies the 1.58 acre parcel south of Trumbull Street and just north of Bentley Creek and the Pfizer site across the creek; on the east, it is bounded by a small marina. In addition, a vacant 5.64 acre parcel for a future improved wastewater facility is located north of Trumbull Street (bounded by Nameaug Street on the west, Smith Street on the east and Walbach Street on the north). Parking is current located on the northern parcel as well as on a third parcel on the west of Nameaug Street, which may be associated with the plant. The City contracts out operation, maintenance, and management of its water and wastewater treatment systems. Figure 1-30 shows an aerial view of the Wastewater Treatment Plant.

1.3.7. Roadway Access, Traffic Conditions and Parking

Roadway Access and Traffic Conditions

The site can be accessed from downtown New London via Howard Street and Shaw Street both of which intersects with Bank Street in downtown New London. Access to the area is constrained by the railroad and its natural geography as a peninsula. Two railroad underpasses allow access to the area; the underpass to the north (at Walbach Street near its intersection with Howard Street) features a more stringent height constraint, limiting access by larger vehicles such as trucks and buses. There are two roundabouts controlling traffic flow on either side of the southerly railroad underpass at Shaw Street / Pequot Street, facilitating traffic flow between Howard Street and the Pfizer office complex. The site is also accessible from the south along the Thames River; Pequot Avenue provides a connection to the shoreline neighborhoods to the south from the roundabout east of the railroad underpass at Shaw Street / Pequot Street. A series of local roadways in a compact grid configuration provides access to the various facilities within the peninsula. Current traffic generators at the site include Fort Trumbull State Park and a wastewater treatment plant, in addition to a number of waterfront facilities including a marina and a U.S. Coast Guard station. In addition, the Pfizer office complex, a much larger traffic generator, is located on the south end of the peninsula. Currently, a number of parcels in the area remain undeveloped but are programmed for development in the MDP. The programmed developments include office, hotel, museum and residential uses.

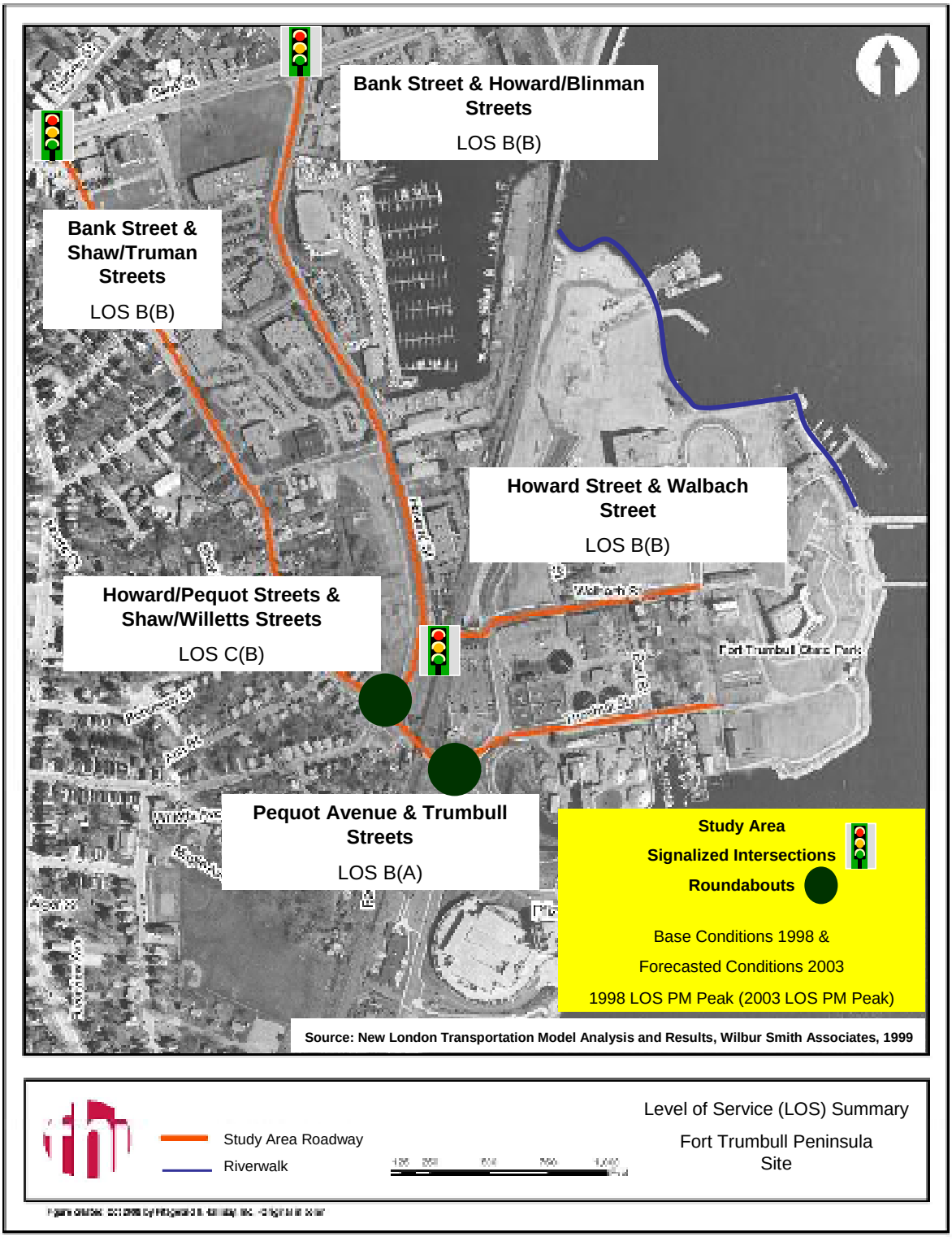
Though available traffic data in the Fort Trumbull area are outdated (data are over three years old), traffic information documented in the *New London Transportation Model Analysis and Results, Wilbur Smith Associates, 1999,* indicates the roadway network can handle the baseline 1998 traffic demand and is anticipated to handle future traffic from future development originally forecasted for the year 2003 without significant capacity problems. This study assessed existing conditions (1998) and a future five year condition (2003) which consisted of future developments (Pfizer Global Development Center, the Fort Trumbull Municipal Development Plan (MDP), Bank Street developments, Downtown developments, and additional developments). Five signalized intersections in the Fort Trumbull area and recommended intersection improvements for the Fort Trumbull MDP were considered in the evaluation. Results from the capacity analysis during the afternoon (PM) commuting peak hour under 1998 base conditions indicate that all five signalized intersections operate at an acceptable level (LOS D or better) during both peak hours. Additionally, with the Fort Trumbull MDP improvements, it is anticipated that the five signalized intersections will operate at an acceptable level (LOS D or better). Table 1-5 and Figure 1-31 provide a summary of the LOS results.

Table 1-5: Level of Service Summary
1998 Base Conditions and 2003 Future Conditions*

	1998 Base Conditions	2003 Future Conditions (with Fort Trumbull MDP Improvements)
Signalized Intersection	PM Peak Hour	PM Peak Hour
Bank Street and Shaw/Truman Streets	B	B
Bank Street and Howard/Blinman Streets	B	B
Howard Street and Walbach Street	B	B
Howard/Pequot Streets and Shaw/Willetts Streets	C	B
Pequot Avenue and Trumbull Street	B	A

Source: New London Transportation Model Analysis and Results, Wilbur Smith Associates, 1999
Note: AM peak hour capacity analysis results were not available.
*Future conditions are as projected in 1999

Figure 1-31: Level of Service Summary
1998 Base Conditions and 2003 Future Conditions



Parking

There is a small parking lot at the site of the historic fort adjacent to the visitor center; vehicular access to the historic Fort site is gate-controlled. Parking is permitted on the west side of Shaw Street. In addition, the Pfizer office complex features a large parking structure. A new parking lot (220 spaces) has been constructed just east of the railroad right-of-way and west of Nameaug Street for use by tenants of the office building on Parcel 3A.

1.3.8. Pedestrian Conditions

Most streets on the Fort Trumbull site feature sidewalks on one or both sides. There is an extensive series of pedestrian pathways in the vicinity of the Fort structure, providing access for tourists to the historic site as well as to the piers at the waterfront (the latter involves some stairs or pathways on a grade due to the topography). In addition, there is a pedestrian network surrounding the Pfizer office complex.

1.3.9. Environmental Conditions – Contamination Issues

The report titled, "Environmental Assessment Disposal and Reuse of the Naval Undersea Warfare Center, New London, Connecticut dated August 1999" states that a Preliminary Assessment (PA) (NEESA, March 1988) identified no hazardous waste disposal sites or releases at NUWC New London and recommended no further action, as all hazardous wastes were disposed off-site. Since 1990, a number of areas of concern (AOC's) have been identified and characterized and cleanup at most of the AOC's requiring remediation has been completed.

Section 3.5 Environmental Conditions of the Fort Trumbull Municipal Development Plan – Revised Administrative Draft (August 1999) states:

"An area wide Phase I Environmental Site Assessment of the MDP area was performed in order to assess the environmental risk associated with the redevelopment of properties." The Conclusion states: "The area wide Phase I environmental assessment has been completed for the MDP area. Based on conditions encountered it is believed that environmental contamination of soils and groundwater exists within the project area. The likely contaminant/waste types expected to be encountered during the investigation and remediation of the properties within the MDP area generally include:

- Petroleum products (gasoline, heating oil, waste oils, lubricating oils) associated with a gasoline station, several auto and marine repair facilities, several current and former underground tanks and a former oil terminal.
- Commercial industrial solvents (decreasing, dry cleaning, auto body and painting) associated with auto and marine repair facilities, former dry cleaning operations, wood furniture refinishers and auto body/painting operations.
- Metal-containing wastes associated with former foundry operations and a junkyard.
- Polychlorinated Biphenyls (PCB's) associated with a former junkyard, a railroad maintenance facility and a former barrel storage facility.

Further investigations will be required to confirm and define contamination sources, possibly including:

- Soil gas analysis to screen for areas of contamination in soils and groundwater;
- A ground penetrating radar survey (GPR) on certain sites where unidentified USTs are suspected;
- Collection of surface soil or waste samples to determine if surfacial soils are contaminated form operations spillage or disposal;
- Installation of borings and samplings of subsurface soils to determine if USTs have leaked and to determine sources and extent of groundwater contamination;
- Sampling of waste and debris piles, abandoned and unidentified drums and containers;
- Asbestos surveys
- Survey buildings for lead paint using x-ray fluorescence;
- Sampling of stained or potentially contaminated building surfaces."

Section 3.5 notes that Phase II Environmental Site Assessments were performed on the15 locations in the project area indicated on "Table 3-5, Recommended Phase II ESA "l. The report notes that parcels not included were the former NUWC site, two privately owned parcels and the Regional Water Pollution Control Facility. The other parcels are considered low risk residential, commercial or undeveloped properties.

Current Status

The New London Development Corporation (NLDC) has indicated that the Phase I for the entire MDP area (including privately owned parcels) was completed and approved by the Connecticut DEP. The NLDC has provided the following summary of the environmental status (by parcel) of the Fort Trumbull area properties.

- Parcel 1A/B – Pollutant Mobility Criteria (PMC) remediation complete. Direct Exposure Criteria (DEC) remediation complete for pre-development (parking lots and buildings will complete). Final interim soil Remedial Action Report (RAR) approved.
- Parcels 2A/B/C - All PMC and DEC soil remediation complete. Soil RAR approved. Environmental Land Use Restriction (ELUR)
- Parcel 3A - Remediation completed. Developed. ELUR
- Parcel 3B - All PMC and DEC soil remediation complete. Soil RAR approved. ELUR
- Parcel 3C - All PMC remediation complete. DEC remediation pending final development plan.
- Parcel 4A - Not investigated, yet. No PMC issues expected (formerly residential); some slag noted (expected DEC).
- Parcel 4B - Privately owned. Issues warranting investigation noted in Phase I.
- Parcel 5A – Privately owned. Environmental insurance in place.
- Parcel 5B – Privately owned. Issues warranting investigation noted in Phase I.
- Parcel 5C - Not investigated, yet. Application in place for Municipal Brownfields Pilot Program (DECD). PMC issues may exist; widespread DEC issues expected (historic urban fill).
- Parcel 6 - Privately owned. Issues warranting investigation noted in Phase I.
- Parcel 7 - Clean (Pfizer owned).
- Parcels 8A/B/C - River walk (now City owned); fully PMC/DEC remediated.

Figure 1-28 shows the location of the above referenced parcels (Parcel 8ABC is not shown, but is located along the Columbia Cove waterfront along Parcel 1 extending southward from the swing bridge). A complete copy of Section 3.5 of the MDP is attached to this report as Appendix A.

Environmental Conditions – Natural and Cultural Factors

This section documents the findings of a preliminary screening of natural environmental and cultural resources at the Fort Trumbull site.

This preliminary environmental screening was conducted through the following means:

- Review of Connecticut Department of Environmental Protection (CTDEP) Geographical Information Systems (GIS) data and other CTDEP environmental publications.
- Review of National Register of Historic Places data and other documents prepared for the Fort Trumbull area, which contain information related to historic resources.
- Field reconnaissance that involved a windshield survey of environmental resources in the area of both candidate sites.

The following natural, cultural, and community resources and issues areas were considered (as in the case of the existing site):

- Coastal Resources
- Wetlands
- Floodplains and Stream Channel Encroachment Lines
- Surface Water Resources
- Groundwater Resources
- Public Water Supply Reservoirs
- Fish, Shellfish, and Wildlife Habitats
- Rare, Threatened, or Endangered Species and Significant Natural Communities
- Active Farmland and Farmland Soils
- Wild and Scenic Rivers
- Hurricane Inundation Areas
- Noise Sensitive Areas
- Section 106 Resources
- Section 4(f) Resources
- Section 6(f) Resources

A brief summary of findings is presented below for each of the aforementioned resource categories and/or issue areas. In addition, Figures 1-32, 1-33 and 1-34 depict natural environmental and cultural resources at the Fort Trumbull peninsula site as well as the existing site.

Figure 1-32: Historic and Community Resources

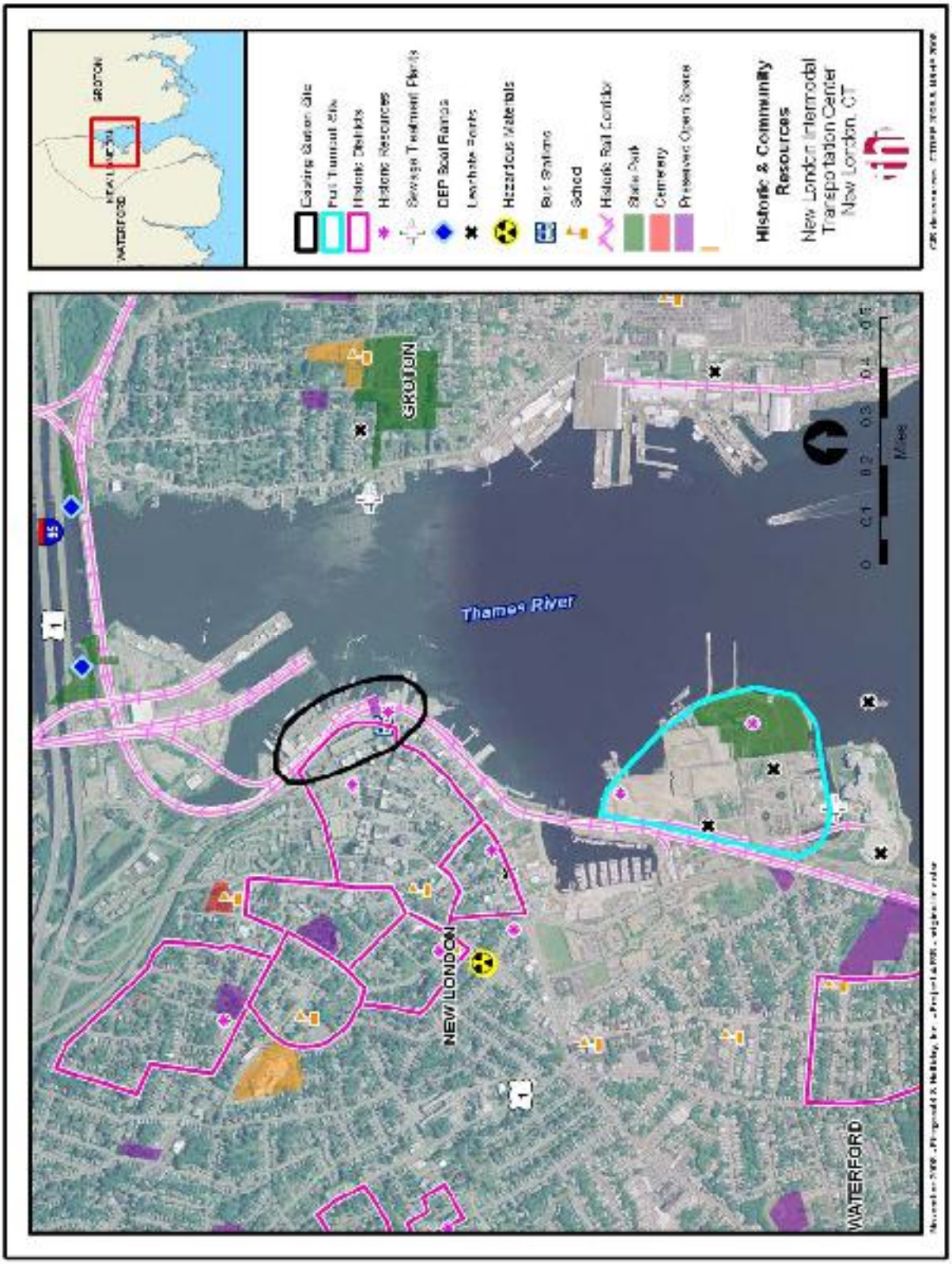


Figure 1-33: Environmental Data: Wetlands, Floodplains and Soils

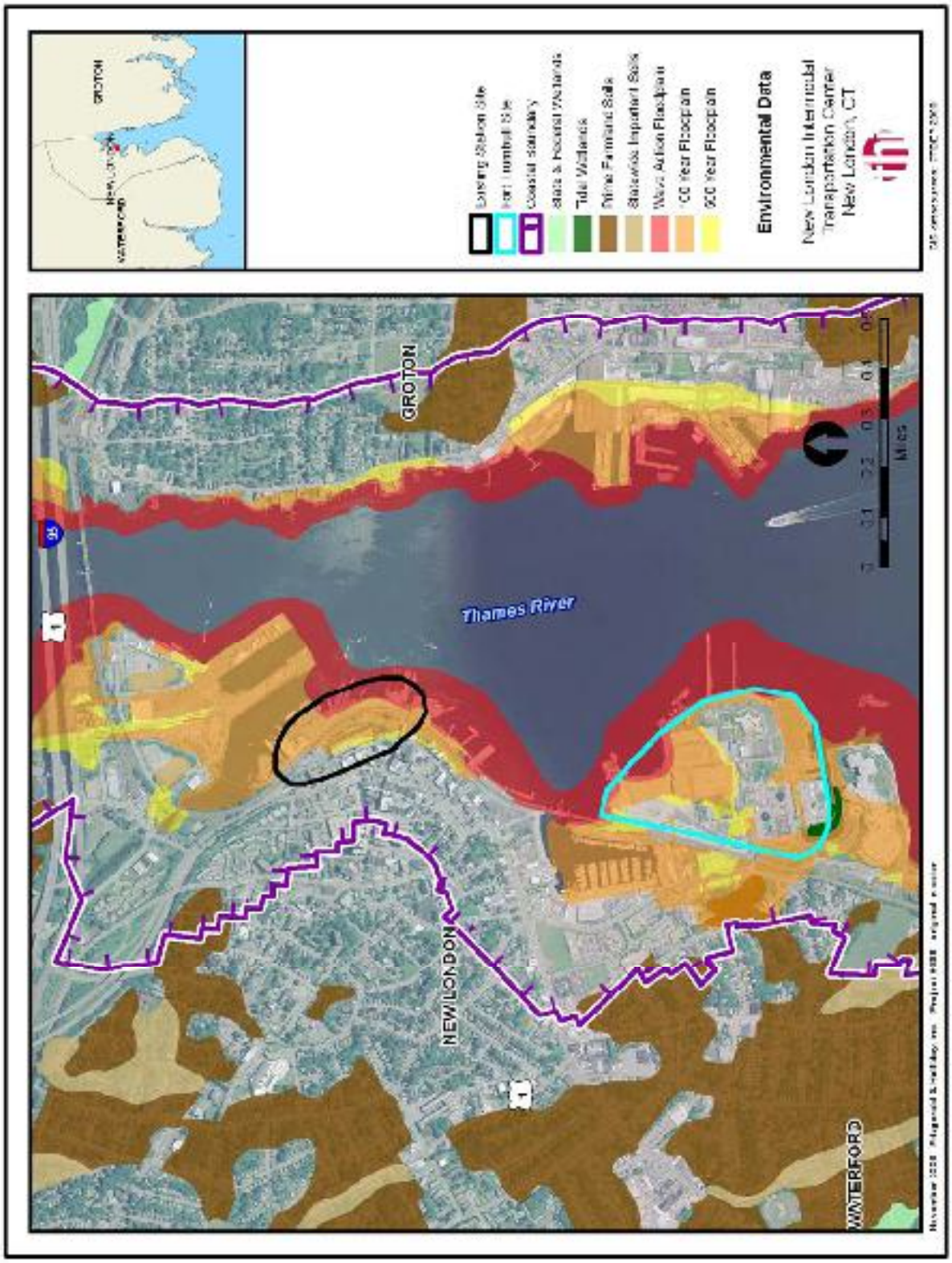
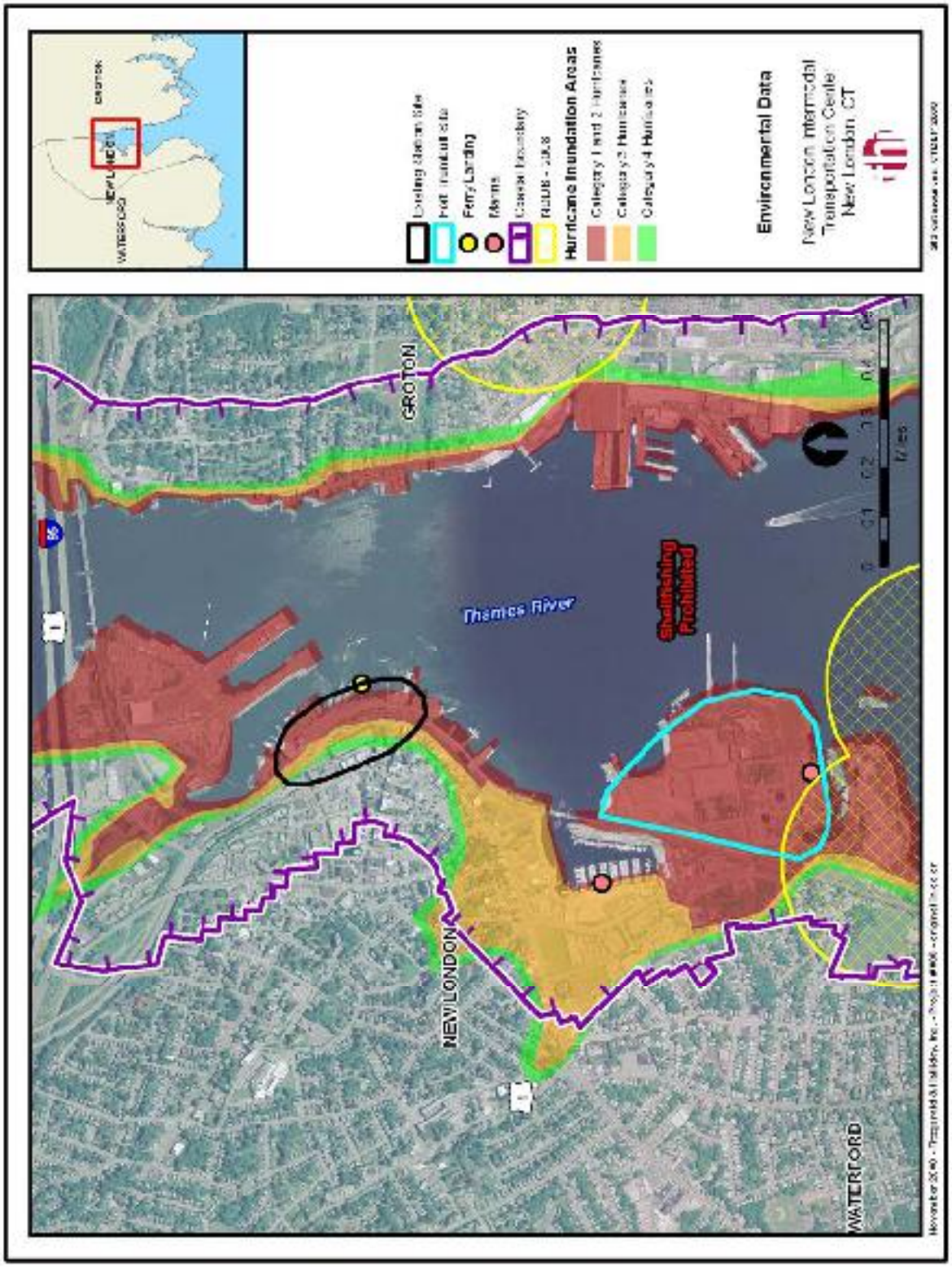


Figure 1-34: Environmental Data: Hurricane Inundation Areas and Other Designated Facilities



Section 106 Resources

As noted in the earlier section on the existing site, the National Register of Historic Places (NRHP) is the nation's official list of cultural resources worthy of preservation. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. Information on the NRHP website and information contained in various reports prepared for the City of New London and the Fort Trumbull area were consulted for this section. Some of the historic sites and districts discussed below are depicted graphically in Figure 1-32.

Part of the flattest area adjacent to the tracks (former Amtrak/Conrail/NYNH&HRR site), north of Walbach Street and west of Nameaug Street, is the location of the remains of one of the earliest locomotive shops in the country and is designated as a State Archaeological Preserve. During the archaeological work, free flowing oil was discovered, requiring full suit hazmat protection to conduct work in the area. Near the archaeological preserve site is the National Register-eligible Italian Dramatic Club, one of the only buildings not to be demolished as part of the New London Development Corporation's (NLDC) redevelopment plan for the peninsula. The area of the Pfizer research facility site was found to be made up of a landfill that included World War II PT boats. Fort Trumbull State Park and the park piers were considered National Register-eligible as well. The northern section of the peninsula was used by the Navy for testing and was the site of a shipyard, and still houses the Coast Guard Station. The former navy site is also quite low in terms of elevation, which is another impediment to further development.

The area immediately west of the tracks is also part of the NLDC MDP area. The complex along Hamilton Street has been identified as National Register-eligible (it includes a mid 19th century forge complex that has a building supported by laminated wood arches). In the 1999 MDP EIS, the entire area between the former NUWC site and the railroad tracks was identified as archaeologically sensitive. However, subsequent work by Historical Perspectives, Inc. (HPI) for the NLDC proved those earlier findings groundless.

NLDC conducted all necessary mitigation for the entire peninsular site to be reused according to their master plan, including purchasing the land adjacent to the eastern side of the tracks that is designated as a State Archaeological Preserve.

Section 4(f) Resources

As noted earlier in the section on the existing site, Section 4(f) of the 1966 Department of Transportation Act (49 USC 303) prohibits use of land from any public park, recreation area, wildlife or waterfowl refuge, or historic property listed on or eligible for the NRHP unless there is no feasible or prudent alternative to the use of the land and the project includes all possible planning to minimize harm. Section 4(f) also applies to archaeological sites listed on or eligible for the NRHP that are determined important for in-situ preservation. Section 4(f) does not apply to archaeological sites that are determined important chiefly for their informational value and have minimal value for preservation in place.

There are several Section 4(f) historic resources located on the Fort Trumbull peninsula as identified under the Section 106 Section of this memorandum. They include Fort Trumbull State Park, the Italian Dramatic Club, the State Archaeological Preserve located just east of the railroad tracks, and the Hamilton Road complex located west of the tracks. There is also a public recreational walkway extending from Fort Trumbull State Park north along the shoreline to Shaw's Cove. This walkway is intended to connect to the

northern segment that leads to the Amtrak Railroad Station. It is likely that this walkway may also qualify as a Section 4(f) resource.

Section 6(f) Resources

As noted earlier in the section on the existing site, Section 6(f) of the Land and Water Conservation Fund Act (1965) provides funds for acquisition, maintenance, and enhancement of public recreational open space by municipalities. There are no public recreational properties or facilities funded and protected under Section 6(f) on or near the Fort Trumbull site.

Coastal Resources

The Fort Trumbull site is located along the western shoreline of the Thames River within Connecticut's designated Coastal Zone. Thus, Coastal Consistency Review will be required for work planned at the site to ensure full compliance with the coastal resource and use policies designated in Connecticut's Coastal Management Act. Coastal resources in the vicinity of the site include Shorelands and Coastal Flood Hazard Areas. Shorelands are essentially any developed areas within the coastal zone that are not subject to coastal flood hazards. Coastal Flood Hazard Areas are lower elevation areas that may be impacted by coastal flooding attributed to 100-year storms.

Much of the Fort Trumbull peninsula lies within a Coastal Flood Hazard Area (CFHA). Only the higher elevation areas of the peninsula, namely the area surrounding Fort Trumbull itself and extending west to an existing waste water treatment plant, and land immediately adjacent to the railroad tracks, fall outside of the CFHA. These areas are designated as Shorelands.

Wetlands

A review of CTDEP GIS data reveals that there are no hydric soils (i.e. poorly drained or very poorly drained soils) that would indicate the presence of wetlands on the northernmost portion of the Fort Trumbull peninsula. Field reconnaissance determined that this northern portion of the Fort Trumbull peninsula is undergoing substantial redevelopment. Virtually all of the former buildings and residences that once occupied the area have been demolished and the landscape is significantly disturbed. No inland wetlands were found to exist on the site, thus confirming the GIS data. The CTDEP GIS data does identify a narrow band of tidal wetlands located just to the north of the new Pfizer facility and south of an existing waste water treatment plant; however, this tidal wetland is not in a location that could support a potential intermodal center. This narrow band of tidal wetlands is depicted in dark green on Figure 1-29.

Floodplains and Stream Channel Encroachment Lines

There are no Stream Channel Encroachment Lines (SCEL) associated with the Thames River in the vicinity of the Fort Trumbull peninsula. A review of CTDEP GIS data reveals that a substantial portion of the Fort Trumbull peninsula falls within the 100-year floodplain as designated by FEMA (refer to Figure 1-29). From the Shaw's Cove inlet, the 100-year floodplain extends south into lower elevation areas of the peninsula to a point just north of the existing waste water treatment plant. The area immediately adjacent to and east of the railroad tracks, Fort Trumbull itself, the existing waste water treatment plant, and portions of the new Pfizer development are the only areas of the peninsula that do not reside within the 100-year floodplain. Much of the land south of Shaw's Cove and abutting the western side of the railroad tracks also resides within the 100-year floodplain.

Surface Water Resources
The Fort Trumbull peninsula extends eastward into the Thames River. To the northwest of the peninsula is Shaw's Cove. Both water bodies have been designated as Class SC/SB by the CTDEP with respect to water quality.

Groundwater Resources
There are no aquifer protection areas or public water supply wells in the vicinity of the Fort Trumbull peninsula, and the quality of the groundwater underlying the peninsula is designated by the CTDEP Class GB.

Public Water Supply Reservoirs
There are no public water supply reservoirs on or adjacent to the Fort Trumbull site. Drinking water is supplied to the site by the City of New London's public water system.

Fish, Shellfish, and Wildlife Habitats
The redevelopment project being undertaken by the New London Development Corporation on the Fort Trumbull peninsula has eliminated not only the former buildings and residences that once graced the landscape, but also much of the mature vegetation. What remains are a few pockets of mature trees and larger areas of grasses and low growing shrubs that occupy spaces between the existing roadway network and the adjacent rail corridor to the west. The new Pfizer development on the southern side of the peninsula is a professionally landscaped development. There is also a new office building and associated parking lots located slightly northwest of historic Fort Trumbull. The historic fort itself is surrounded by expansive lawns that are regularly mowed and maintained. Overall, wildlife habitat on the peninsula is minimal. As previously mentioned, the Thames River is prohibited to shellfishing and recreational fisherman can often be seen along the banks of the river at public access points.

Rare, Threatened or Endangered Species and Significant Natural Communities
The CTDEP Natural Diversity Data Base (NDDB) was consulted to obtain a preliminary understanding as to whether or not any rare, threatened or endangered plant and animal species or significant natural communities exist in the area of the site. The NDDB contains information on the status of more than 1,000 rare species of plant and animals, including invertebrates, and 45 significant natural communities. Figure 1-30 depicts CTDEP NDDB sites located in the vicinity of the Fort Trumbull peninsula site as well as the existing site.

There are no rare, threatened or endangered plant or animal species or significant natural communities on or adjacent to the Fort Trumbull peninsula site.

Active Farmland and Farmland Soils
The Fort Trumbull peninsula was at one time completely developed with roads, buildings and other man-made infrastructure. Currently, the majority of the buildings have been demolished and removed from the peninsula as part of a large redevelopment project. What remains is a substantially altered soil profile. As such, there are no prime or statewide important farmland soils or active farmlands on the Fort Trumbull peninsula.

Wild and Scenic Rivers
There are no Wild and Scenic River resources at or near the Fort Trumbull peninsula site.

Hurricane Inundation Areas

The Fort Trumbull peninsula resides within coastal areas that could potentially become inundated during Category 1 or 2 hurricanes.

Noise Sensitive Areas

Noise-sensitive land uses include: a) residences, hotels, and other buildings where people sleep; b) institutional resources such as churches, schools, hospitals, and libraries; and c) various tracts of land where quiet is an essential element of the land's intended purpose.

As previously mentioned, the Fort Trumbull peninsula is going through an active redevelopment phase. Virtually all of the buildings and residences that once occupied the landscape have since been demolished. The southern part of the peninsula is now occupied by a Pfizer research facility and there is a new office building located just northwest of the historic Fort Trumbull. Presently, there are no noise sensitive areas on the Fort Trumbull peninsula.

Summary of Environmental Issues at Fort Trumbull

Given the presence of a State Archaeological Preserve to the east of the railroad tracks, as well as potentially eligible National Register historic resources to the west in the Hamilton Street area, obtaining approvals to construct a railroad station to serve as the hub for a new regional intermodal center on the Fort Trumbull peninsula would be subject to expensive permitting and regulatory negotiation under section Section 4(f) of the Department of Transportation Act of 1966; that section explicitly disallows the construction of a transportation project that impacts archaeological resource preserves or National Register properties unless it can be definitively shown that there are no other feasible and prudent alternatives to the proposed action. Since there is an existing railroad station located at the eastern end of State Street that, by virtue of its proximity to ferry operations and other transportation modes, is considered by most to be an intermodal facility by default; the argument that no other feasible alternatives exist cannot be made.

Another factor that severely precludes the viability of the Fort Trumbull site for a relocated RITC has to do with relocating Cross Sound Ferry and Fishers Island Ferry operations to Columbia Cove, and the cruise ships to Pier 7. This would require extensive dredging of the Thames River in this area (the River is only 8 to 14 feet deep) as well as construction of structures such as docks and piers below the high tide line. Because Cross Sound Ferry, Fishers Island Ferry, and the State Pier are already equipped with the necessary docks, piers and other in-water facilities and the channel is already dredged to appropriate depths in these locations to accommodate all ferry and cruise ship operations, it is unlikely that the CTDEP Office of Long Island Sound Programs or the U.S Army Corps of Engineers would ever grant the necessary permits and approvals to allow relocation of these facilities to Fort Trumbull to proceed.

1.3.10. Development Potential

This section describes the development climate in the area at and near the Fort Trumbull candidate site. The discussion addresses development opportunity sites, market conditions and potential, public policies/funding/tax revenue impacts, transportation/access/parking/infrastructure factors, and attractions/amenities.

Development Opportunity Sites

- The Fort Trumbull Municipal Development Project - 90 acres, plans for 90,000 square foot industrial building, 109-room hotel and conference center, 80 housing units, six office/research/waterfront commercial sites. There has been no development activity to date on the Project. Figure 1-28 referenced earlier in section 1.3.9 shows the development parcels in the MDP.

Market Conditions/Potential

- At this time, there are no recent or under construction private sector active developments projects in the Fort Trumbull area
- High technology cluster could be realized due to the linkage to the Pfizer Center, but at this time there are no recent or under construction research and development projects (Note: At the time of completion of this Final Report, Pfizer had announced its intention to leave the Fort Trumbull Site).

Public Policies/Funding/Tax Revenue Impacts

- Infrastructure is in place for the Fort Trumbull Municipal Development Project
- State of Connecticut investment in Fort Trumbull Municipal Development Project is $78 million, the City of New London's investment is $4 million and federal EDA funding is $2 million, State and local funds for the wastewater treatment plant is $11.2 million[3]
- The City and Town Development Act created a special tax exemption program that would apply to a major development project at Fort Trumbull.

Transportation/Access/Parking/Infrastructure

- Highway access is poor, not convenient to major roadways and limited by low clearance bridges
- Poor connections to downtown – limited by waterfront walkway/bikeway
- Parking and space requirements may conflict with development goals for Fort Trumbull peninsula
- Limited space on the Fort Trumbull site for parking to support rail, ferry and other transportation functions
- Unlikely that the ferry facilities located at downtown site could be accommodated at Fort Trumbull
- Feasibility of docking cruise ships at site is questionable due to potential costs associated with inadequate pier length, water depth, wind load and poor access to Fort Trumbull peninsula

Attractions/Amenities

- Proximity to Pfizer Center, Fort Trumbull State Park, and the proposed National U.S. Coast Guard Museum

[3] Affordable Housing Institute: US. March 2005. Eminent Domain, The Wrong Fight: Part 3. Retrieved on September 15, 2008 from http://affordablehousinginstitute.org/blogs/us/2005/03/eminent_domain_3.html

- Limited amenities and attractors (e.g. restaurants, shopping, etc.) within walking distance of proposed site

1.3.11. Key Intermodal Connections

The various transportation modes serving downtown New London constitute a hub of transportation activity which provides unique synergies. Passengers can make transfers between a wide variety of local, regional and intercity, ground and maritime transportation services in the heart of downtown New London. While there is need for improvements to facilitate the interfaces between modes to make the transfers more convenient, there is clearly great transportation value to their coming together in one location. To date, the connections that have been noted as particularly valuable include:

- *Auto (Parking and Pick Up/Drop Off) -- Block Island Ferry* – This passenger only ferry requires access by other modes of which automobile access is the primary mode. Block Island is a tourist/leisure destination. Passengers use on-site parking at Cross Sound Ferry and the Water Street garage for access. The recent surveys indicated that 91% used a parked vehicle and 7% were dropped off.
- *Auto (Parking and Pick Up/Drop Off) – Amtrak Rail* – Acela Express and Regional service connects New London with major cities such as New York and Boston which are key business and recreational destinations. There is substantial disincentive for travelers with automobiles to drive to these cities and the station in New London has a wide catchment area. As a result, automobile access is critically important. Amtrak has an agreement with the City of New London to provide 200-300 parking spaces at the Water Street Garage that cannot be rented to monthly renters but must be offered on a first-come/first-serve basis to ensure adequate parking for Amtrak riders. The recent surveys on a weekday indicated that 24% used a parked vehicle for access and 42% were dropped. On Saturday a larger share was dropped off and a smaller share parked.
- *Auto (Drive On) - Long Island Ferry* – Cross Sound Ferry service to and from Long Island serves as a bridge between eastern Long Island and New England for auto travelers and truck traffic. The recent surveys indicated that 28% parked and 11% were dropped off.
- *Auto (Parking and Pick Up/Drop Off) – Shore Line East Rail* – Although currently only one Shore Line East round trip is offered on weekdays at New London, the second phase of Shore Line East improvements calls for all SLE trains to operate to New London. Given the parking constraints at Old Saybrook station (the current eastern terminus of most SLE service), it is expected that this will generate additional auto access and parking demand at Union Station for passengers residing in the New London area.
- *Greyhound – SEAT* – Due to the nature of the intercity bus market, which tends toward lower income travelers in comparison with the Amtrak market, the connection with local transit system (SEAT) was noted as the primary connection for Greyhound travelers. The recent surveys indicated that 22% of Greyhound passengers used SEAT to arrive at the terminal.
- *Auto (Parking and Pick Up/Drop Off) – Greyhound* - This was identified by Greyhound as a second key means of access to intercity bus service to New York and Boston. The recent surveys indicated that 11% parked and 44% were dropped off.
- *Greyhound – LI Ferry* – Greyhound and Cross Sound Ferry report that there is a niche market for this connection consisting of students whose home is on Long Island but who attend college in Boston and other New England locations and are dropped off at Orient Point and use the ferry to access Greyhound service. This was identified by Greyhound as its third most important means of

access. The recent surveys indicated that 6% of LI Ferry users arrived by Greyhound and 11% of Greyhound users arrived by ferry.

- *Rail – Fishers Island Ferry* – Fishers Island is a higher income community for which the Amtrak service to Manhattan is important. Summer homeowners on Fishers Island use Amtrak to connect to the ferry which is adjacent to the train station. The recent surveys indicated that 16% of rail users arrived by ferry (the particular ferry not specified.)
- *Shuttle - LI (High-Speed Passenger) Ferry* - Currently coach buses from each casino resort drop off and pick up passengers from the high-speed passenger ferries whose primary market is Long Island based casino visitors who leave their cars parked at Orient Point. The improved tourist shuttle bus system proposed for southeastern Connecticut should enhance the market for visitors who do not drive to the region.
- *Shuttle - Cruise Ships* – Cruise ship passengers arriving in New London (at the State Pier) currently have the choice of purchasing coach bus excursions offered through the cruise ship operator or they are transported by shuttle bus to Union Station where they can spend the day in the city on their own or take another shuttle bus to selected sites such as Fort Trumbull. It is reported that over 20 coach buses line up to serve the arriving cruise ships.
- *Taxi – Rail* – Business travelers arriving in New London destined to locations other than the immediate downtown make use of taxi service. On the recent weekday survey, 16% of rail passengers indicated that they used a taxi to get to Union Station. On weekends, the share dropped to 12%.
- *Shuttle – Rail* – Rail passengers have not to date used SEAT service to any great extent for access or egress. The tourist circulator is envisioned to enhance the visibility and convenience of connections between Amtrak and the visitor attractions in the area. On the recent Saturday survey of rail passengers, 3% indicated that they used SEAT for access to Union Station; on weekdays, there were none.

Figure 1-35 provides a summary matrix which identifies these key connections:

Figure 1-35: Summary Matrix of Key Connections

	Auto Drive On	Auto Parking	Auto Pickup/Drop Off	Amtrak Rail	Shore Line East Rail	Cruise Ships	Block Island Ferry	Long Island Ferry	LI Sea Jet Ferry	Fishers Island Ferry	Greyhound Bus	SEAT Bus	Taxis	Proposed Shuttle Bus
Auto Drive On	NA							■						
Auto Parking		NA		■	■		■				■			
Auto Pickup/Drop Off			NA	■	■		■				■			
Amtrak Rail				NA						■			■	■
Shore Line East Rail					NA					■			■	■
Cruise Ships						NA								■
Block Island Ferry							NA							
Long Island Ferry								NA			■			
LI Sea Jet Ferry									NA					■
Fishers Island Ferry										NA				
Greyhound Bus											NA	■		
SEAT Bus												NA		
Taxis													NA	
Proposed Shuttle Bus														NA

1.4 Desirability of Each Site for Each Mode

1.4.1. Introduction/Overview

This section contrasts the two candidate sites with respect to their desirability for each of the major transportation modes. This description is focused on desirability without addressing feasibility which is addressed in Section 1.5. In contrasting the desirability of the two sites, the potential for improvement of the existing site is taken into account, although specific proposals for such improvements are not evaluated at this stage. As a result, the criteria addressed are:

- *Vehicular Access, Parking Capacity and Traffic Impacts* - This criterion addresses whether the location of the mode and its facilities at the site would provide adequate vehicular access and parking.
- *Traffic Impacts* - This criterion addresses whether negative impacts on traffic would result.
- *Pedestrian Access* - This criterion addresses whether the location of the mode and its facilities at the site would provide adequate access for pedestrians.
- *Capacity for Operations* - This criterion addresses whether the location of the mode and its facilities at the site would provide desirable levels of capacity. (If the capacity represents a severe constraint influencing the feasibility of locating the facility at the site, it is addressed in the feasibility assessment described in Section 1.5.)
- *Compatibility with Other Land Uses* – This criterion addresses whether the location of the mode and its facilities at the site would be incompatible with current and continuing land use at the site or a future planned or programmed land use.
- *Public Support* – This criterion addresses whether the location of the mode and its facilities at the site would garner public support or face substantial opposition. Consideration is given to the various stakeholder interests. At this time, public outreach has not taken place so that factor cannot be taken into account definitively.

An additional criterion related to desirability is *Economic Development Opportunity.* This criterion addresses whether the location of the mode and its facilities at the site would promote economic development at the site, as well as economic development at the site that is not selected. Each of the two sites was evaluated based on the following economic development / transit oriented development (TOD) criteria: (1) development opportunity sites; (2) market conditions/potential: (3) public policies/funding: (4) transportation/access/parking/infrastructure; and (5) attractions/amenities. Consideration is given to the tax revenue impacts on the City of New London. Since this criterion is best examined for the entire RITC, it is discussed in Section 1.5.

The following summarizes the findings for each mode/modal facility:

1.4.2. Rail Station

Existing Site

Perhaps, the biggest advantage of the existing rail station located downtown is that it exists and functions without requiring a large capital investment. The other big advantage is its location at the core of downtown

with easy access for pedestrians and for vehicles. Interestingly, only 8% of the (105) respondents to the surveys conducted this summer said they walked to the station (3% on Thursday and 11% on Saturdays). Drop-off was the predominant mode of access (42% on Thursday and 49% on Saturday). The location has easy access from the interstate highway system (I-95) and Route 32. The location provides intermodal access to the Greyhound and SEAT buses, ferry operations, taxis, and surface and structured parking. The Water Street garage provides the most convenient parking and, under an agreement with Amtrak, 200-300 spaces are reserved for first-come/first-serve use so as ensure parking for Amtrak. Eight (8) percent of Saturday rail passengers and 24% of Thursday rail passengers indicated that they parked their car as a means of access. Of course, if the RITC were shifted elsewhere, some or all of the intermodal features could be shifted to the new site. The current station also provides surface pedestrian crossings of the track. The drawback of the current crossing is the inability to cross from the southwest side to the northeast side of the track when a train is present. Another drawback has been the lack of convenient pedestrian connections to the Cross Sound Ferry and to the parking facilities. The Parade Project will provide improved pedestrian crossings and traffic calming that will enhance pedestrian access to the Water Street Garage. The Water Street Garage will also have elevators repaired and security cameras installed. The originally proposed pedestrian overpass that would have improved pedestrian connections between the Water Street Garage, Rail Station, Bus Terminal and Cross Sound Ferry was aborted. The current study will address improving intermodal connections including pedestrian connections to Cross Sound Ferry.

There appears to be strong public support as evidenced by comments made by the members on the Steering Committee that the rail station, the heart of the RITC, remain at Union Station. The owner of Union Station also supports the rail station remaining there.

Fort Trumbull Site

The physical location of the existing rail line through Fort Trumbull limits the possible location of any future station. Any future station would be located farther from the potential location on the waterfront for ferry services.

Fort Trumbull also has very limited area for parking which might constrain the parking capacity. Vehicular access would be constrained as well. There are only two points of access to Fort Trumbull and both are under railroad bridges and only one of the bridges is high enough to allow access by trucks and buses. This would limit access to Fort Trumbull for Greyhound and SEAT buses. The distance from I-95 and Route 32 would also present a disadvantage for both bus operations and private vehicles, increasing mileage (by about 1.5 miles each way) and time to and from the station.

Despite these drawbacks, there is no overall compatibility problem with current or planned land uses at Fort Trumbull, since the railroad already passes through the redevelopment site. The location of a railroad station (with parking) there would require devoting more land to transportation uses and could reduce the land available for office and other development.

A new rail station at Fort Trumbull would involve substantial cost. It is likely the cost would be at least $30 million including 200 parking spaces and a bus drop off area. Note that the Old Saybrook station cost over $20 million and provides platforms, a pedestrian overpass and only 40 parking spaces.

Public support would likely be a problem since the rail station would be located farther from downtown and downtown businesses. The Steering Committee members representing transportation mode operators, business and economic development interests, and other interest groups have overwhelmingly expressed opposition.

Amtrak was contacted but has not rendered an official opinion on the RITC site selection.

1.4.3. Ferry Facilities

Existing Site

Both Cross Sound Ferry and Fishers Island Ferry identified a strong preference for the existing site due to its proximity to rail, buses and Interstate 95. Note that the driving time to Fort Trumbull from the I-95 exit is about five minutes longer than the driving time to the existing ferry site.

Fishers Island Ferry identified the importance of the rail connection to their customers, as well as the parking facilities. They noted the fact that the downtown businesses were important to their customers. Finally, they noted their recent $15 million investment in a new terminal.

According to Cross Sound Ferry, the ferry's appeal to consumers is highly dependent on the level of convenience provided relative to alternative ferry and roadway options. The following elaborates on the advantages of the existing site:

The current downtown site provides for easy access to and from I-95 for cars and trucks, to downtown and to parking. Cross Sound indicated that Fort Trumbull has none of those attributes (as described in the section on the Fort Trumbull site below). Despite the proximity of the current site to the roadway system, improvement to the access to the current ferry site across the railroad right of way is a critical need to be addressed in the study.

Providing the necessary vehicular access and managing the queuing of cars has been a challenge at the existing site due to the railroad right-of-way that cuts off access. (Note that the car ferries carry about 100 cars each.) Nevertheless, Cross Sound Ferry has made this work. As improvements and changes are considered at the existing site, it is critically important to Cross Sound Ferry that vehicular access at the Governor Winthrop Boulevard rail crossing and the current signal timing there be preserved. Both Amtrak and P&W freight trains have impacts on Cross Sound Ferry operations as they cut off vehicular and pedestrian access many times during the day. Because the Amtrak trains move quickly they don't cut off access for substantial periods. In contrast, the freight trains which use the area to switch tracks to turn around and go back north close off vehicular and pedestrian access for extended periods of time.

At the existing site, Cross Sound Ferry is able to provide on-site parking for its customers and employees. In addition the nearby Water Street parking garage serves as an important parking resource for Cross Sound Ferry that it advertises to prospective customers. Since the Long Island ferry is primarily auto ferry and since the Sea Jet High Speed passenger ferry primarily serves travelers originating on the Long Island side, the passenger parking is primarily important for serving the passengers for Block Island Passenger Ferry service. Cross Sound Ferry has plans to create a new High Speed Ferry terminal which would

displace 100 parking spaces from the Cross Sound Ferry site. These customers would then be likely to park in the Water Street garage.

There are serious problems with the existing site in terms of pedestrian access. This is not because the downtown and the other modes are not nearby but because the conditions are so poor. Cross Sound Ferry indicated that this is a critical need. It is for this reason that Cross Sound Ferry pushed for a bridge to provide a direct pedestrian connection from the Water Street garage, a project that was planned several years ago and then aborted. Cross Sound Ferry believes that there is still a pressing need for such a connection.

Another factor is the intermodal access to other modes, such as rail, intercity buses and cruise ships.

The current site provides a convenient connection between ferry and rail services. Cross Sound Ferry indicated there are passengers connecting between the ferries and the rail service, however the numbers of users are few per trip. The recent surveys identified that no one boarding the three Cross Sound ferry services arrived by rail but that 11% of Saturday and 16% of Thursday rail passengers arrived by ferry. This may reflect the effect of the Fishers Island Ferry which is reported to have a stronger connection with the rail mode. Cross Sound Ferry expressed the opinion that the numbers will likely grow in the future. Recognizing the importance of this connection, Cross Sound Ferry did joint ticketing with Amtrak beginning in 1995 but it is not active now. Cross Sound Ferry noted more students from Long Island use the ferry to connect to rail to Boston. Rail is important enough to the ferry service that the ferries wait if a train is late in arriving, although coordinating schedules with Amtrak proved difficult. (They also wait if the train blocks pedestrian access.)

About 11% of Greyhound passengers surveyed reported arriving by ferry while 6-8% of Cross Sound Ferry passengers surveyed indicating arriving by intercity bus. Cross Sound Ferry staff mentioned the student market which may also be a source of the ferry-Greyhound transfers. The current site provides a connection between these services.

The existing site does not accommodate the cruise ships although the State Pier where the cruise ships dock is not far away, although not within walking distance. However, there is little interaction between ferries and cruise ships now and Cross Sound Ferry believes that this would be unlikely to change unless the cruise ships were to stay in New London longer. As a result, the location of the cruise ships is not a significant determinant of an advantageous location for the ferries.

Finally, another advantage of the existing location is the access provided to support services with Cross Sound Ferry's shipyard and tug service at the existing location. If these were to be moved to the Fort Trumbull site as well it would require additional square footage and waterfront space. Being farther up the river at the downtown site reportedly provides better protection against storms than at Fort Trumbull.

Fort Trumbull Site

Cross Sound indicated that Fort Trumbull has none of the advantageous attributes of the existing site. In fact, they noted that they moved to the existing site thirty years ago from their previous site located near the Pfizer facility on Fort Trumbull peninsula in order to obtain these advantages. Fort Trumbull is less conveniently located to the interstate highway system and access is limited to two underpasses (under the

railroad tracks). While the underpasses provide unimpeded access across the tracks, both have height restrictions (only one underpass is high enough for buses).

With regard to intermodal access to other modes:

If the rail station were moved to Fort Trumbull along with the Cross Sound Ferry, the advantages of being adjacent to the rail station would be preserved, provided that the two are located in close proximity, which is less likely given the geography of the Fort Trumbull peninsula.

If the cruise ships and Cross Sound Ferry services were located at the Fort Trumbull site, it could increase the convenience of the intermodal connection between them. However, there is little interaction between ferries and cruise ships now and Cross Sound Ferry believes that this would be unlikely to change unless the cruise ships were to stay in New London longer. As a result, the location of the cruise ships is not a significant determinant of an advantageous location for the ferries.

If Cross Sound Ferry's shipyard and tug service were to be moved to the Fort Trumbull site as well, it would preserve this advantage of the existing site but it would require additional square footage and waterfront space.

The Fort Trumbull site is somewhat more exposed to storms than the existing site upriver, according to Cross Sound Ferry. While it is slightly closer to ferry destinations and slightly reduce sailing time, the increased access distance would more than eliminate any time savings.

1.4.4. Intercity Bus

Existing Site

The biggest advantage of the existing intercity bus terminal site is the easy access from the interstate highway system (I-95) and Route 32. New London is an intermediate point on the Greyhound bus service so quick access from and to the highway network is critical to minimizing the delay to through passengers. The easy access to and from the highway network also serves to keep travel times short, keeping operating costs to a minimum. Intercity buses must negotiate some city traffic on downtown streets to access the terminal, but Water Street provides an easy (i.e., 2 minute) connection back to the highway network.

The most important current means of access to intercity buses are SEAT buses and auto access, including both drop-off and parking. A key advantage of the existing location is its position adjacent to the hub of the SEAT local bus network in New London, providing access to intercity bus service by residents of much of New London and parts of the entire region. The ample surface and structured parking in the area is also an advantage and the proximity to the highway network makes auto access convenient. A drawback, however, has been the lack of convenient pedestrian connections to the Cross Sound Ferry. An overpass or underpass crossing the tracks north of the bus terminal and an improved pedestrian walkway to the ferries could provide a much improved pedestrian route that Greyhound feels could attract additional riders in the Long Island to Boston market. Relocating the intercity bus terminal to the other side of the tracks could also improve this connection, but delays crossing the tracks caused by passing trains and possibly less convenient connections to parking and SEAT make this less attractive than an overpass or underpass.

The existing site includes two bus bays and an additional pick-up/drop-off and employee parking area that are leased from Union Station for the exclusive use of Greyhound. The two bays are considered adequate for current service levels although Greyhound would prefer a third bay to accommodate peak travel periods and possible future expanded service.

There appears to be strong public support as evidenced by comments made by the members on the Steering Committee (at two public Steering Committee meetings and in individual interviews) that the RITC remain downtown, which suggests a preference that intercity buses remain at or near the rail station.

Fort Trumbull Site

Vehicular access to Fort Trumbull involves a much longer and time-consuming trip through city traffic (about 5-10 minutes extra depending on traffic conditions). This would negatively impact Greyhound operating costs as well as increasing the delay for through riders, which would in turn impact Greyhound's competitive position. There are only two points of access to Fort Trumbull and both are under railroad bridges and only one of the bridges is high enough to allow access by trucks and buses.

The distance from I-95 and Route 32 would also inhibit access for private vehicles dropping off passengers or parking, further reducing the attractiveness of using Greyhound buses. The additional distance traveled would add bus and auto traffic to local streets. Fort Trumbull also has a very limited area for parking (considering the municipal development plan) which might constrain the parking capacity. Relocating all of SEAT's eight New London bus routes to Fort Trumbull would maintain the good connection between SEAT and Greyhound. However, the negative impacts of such a relocation on SEAT service and operations are discussed below. It may be possible to create a better connection between ferries and intercity buses at a newly designed RITC at Fort Trumbull that is better than what is currently available at the existing site, but with limited options for a new ferry terminal location, this may not be possible.

There is no significant compatibility issue of locating an intercity bus terminal at the site.

Public support would likely be a problem since the intercity bus terminal would be located farther from the most commonly used access routes and might have fewer SEAT connecting services. The Steering Committee members representing transportation mode operators, business and economic development interests, and other interest groups have overwhelmingly expressed opposition to relocating the RITC to Fort Trumbull.

1.4.5. SEAT Bus

Existing Site

The biggest advantage of the existing SEAT hub site along Water Street is its proximity to bus riders' downtown destinations. SEAT brings people to downtown New London as well as bringing New London residents to other important destinations in the region such as Norwich, Mystic, Mohegan Sun and Foxwoods. Having the transfer point for these services near the downtown area optimizes the efficiency of bus operations. The easy access from the interstate highway system (I-95) and Route 32 also minimizes the travel time and therefore the cost of providing service to these regional destinations.

SEAT buses provide access to intercity buses and trains for New London and other area residents. The proximity of the SEAT hub to the intercity bus terminal and, to a lesser extent, the rail station is an advantage of the existing site. SEAT would prefer to be even closer to Union Station, not only to provide its passengers with better pedestrian access to the rail station, but also to offer a nearby attractive indoor facility for ticketing, passenger waiting, and restroom facilities.

The existing site includes a single bus shelter and approximately 400' of curb space to accommodate the eight buses occupying the space during some of the hourly pulse times. Current service expansion plans would require space for eight buses every hour, but there are no plans for additional space needs.

While SEAT would like their bus stop to be closer to Union Station and their customer information and waiting area to be inside Union Station, the owner of Union Station would like to see SEAT buses moved farther away from their current site near Union Station. Broader public opinion is unknown. Riders who responded to surveys seemed more concerned about routes, schedules and reliability of service than the bus stop itself.

Fort Trumbull Site

To serve Fort Trumbull, three SEAT regional routes would have to be extended a minimum of 2.6 miles per round trip, and possibly more, depending on the location of a bus facility within the Fort Trumbull site. This would increase SEAT operating costs and require additional public funding. The four SEAT local routes already come somewhat closer to Fort Trumbull. Routes 12 and 14 come as close as the intersection of Bank and Shaw Streets, about a minimum 1.2 mile round trip diversion. Routes 13 and 15 pass even closer. However, SEAT runs a pulse system (where buses converge at the same time at the hub location), with hourly service on all New London local routes. Adding time to any of these routes could make it impossible to complete a round trip every hour forcing a reduction in service to other parts of the city or substantial increases in operating costs. It may be that only a subset of routes can be extended without increased cost or service reductions in other areas.

Public support would likely be a problem since service to other areas may need to be modified in order to serve Fort Trumbull. The Steering Committee members representing transportation mode operators, business and economic development interests, and other interest groups have overwhelmingly expressed opposition to moving the RITC to Fort Trumbull.

1.4.6. Casino and Shuttle Buses

Existing Site

The casino buses are used to transport passengers from the high speed passenger ferries to the two casino resorts. They are therefore tied directly to the Cross Sound Ferry location described above. Even in the full proposed tourist shuttle bus system, it was envisioned that the buses providing the express connection to the casino resorts would stop at the ferry terminal. Of course at that time there was no clear plan for an improved RITC.

The proposed tourist shuttle system (in both the pilot and full system) was designed to enable tourists to visit the major venues in the region including the two casino resorts, downtown New London and Mystic. A frequent regularly scheduled circulator route was designed to make these connections. Union Station was the proposed downtown bus stop for the shuttle recognizing its role both as a transportation terminal and as

a convenient location for tourists visiting downtown New London. It was envisioned that feeder shuttles would connect with the tourist circulator and that a Fort Trumbull to Union Station shuttle might be provided so that tourists could make that connection.

Fort Trumbull Site

If the RITC were moved to the Fort Trumbull site, the proposed shuttle bus route might need to be adjusted. To enable the regularly scheduled tourist shuttle bus to connect with the transportation modes at the RITC, a stop at Fort Trumbull would be needed. Given the importance of Fort Trumbull as a visitor site combined with its new role as the RITC site, and given the continued importance of downtown New London as a destination for tourists, it would be logical to include both Fort Trumbull and downtown on the proposed tourist circulator route rather than require any transfer to a feeder shuttle. This would also enable tourists to make a direct connection to Fort Trumbull. It would however lengthen the routes on Route A and B of the proposed shuttle services in the full system and Route A of the pilot system. This would lengthen trip time and affect the operations but eliminate the need for a separate feeder bus.

At the Fort Trumbull site, while it should not be a problem to accommodate the proposed shuttle bus, it may be necessary to make more than one stop since there may be considerable distance between the Fort Trumbull Visitor Center, the location of a relocated rail station, and the location of a relocated ferry terminal.

The 30-foot transit buses proposed for the shuttle service would be able to use only the southerly underpass at Shaw Street and Pequot Avenue. There is no other significant compatibility issue.

1.4.7. Parking

Existing Site

Public surface and structural parking are well within the typical 600 feet desirable walk radius of the center. There is sufficient public parking downtown to meet the current needs; current occupancy ranges on peak summer Saturdays in 2008 was estimated at 69%, however, Block Island Ferry ridership (the major ferry service generating parking demand) was considerably lower than in prior years (Cross Sound Ferry reported August daily demand in 2008 was about 25% lower than that in 2005). Future parking demand would need to consider greater ferry demand, extension of all Shore Line East to New London and other transportation and downtown needs.

The Parade Project will improve pedestrian access to the Water Street Garage by installing a very visible, ground level entrance and adding a new elevator to the west side of the building. The City is soliciting proposals for the repair of the existing elevator and expects that to be completed by the winter of 2009. The City is soliciting proposals for the installation of 36 security cameras in the Water Street Garage and expects those to be installed by the winter of 2009.

Over the years the City has taken steps to improve the parking situation downtown. These improvements include the ongoing maintenance improvements to the Water Street Garage, the hiring of staff to increase the effectiveness of parking regulations enforcement and the addition of new signage to improve access to the municipal parking facilities.

One advantage of the downtown location is that the parking resources can be shared among several uses including downtown offices, entertainment venues, passenger ferries, Amtrak, Shore Line East and intercity

bus. To some extent, the peak times of these uses are complementary. Ferry use is highest on summer weekends while office uses are highest on weekdays during the year.

Fort Trumbull Site

The Fort Trumbull Municipal Development Plan outlines the proposed development for each parcel. A new parking lot was recently constructed adjacent to the railroad right-of-way on a portion of Parcels 1 and 3. This parking lot was designed to service an existing renovated office building and the future development on Parcels 1 and 3. To serve a relocated train station with or without a full intermodal center, additional parking would need to be configured.

It is possible that the parking resources for proposed office uses and for RITC uses could be shared in the same manner as in the downtown. However, at the Fort Trumbull site, the proposed office uses have not moved forward, and there would likely be more distance between the rail station and ferry terminals which might limit the sharing of parking resources.

The construction of sufficient parking to support an RITC at the Fort Trumbull site would detract from available development acreage at Fort Trumbull and also reduce the efficiency of the facilities downtown. (Revenue would be lost at current facilities although some parking could be used to support other redevelopment downtown.)

1.4.8. Cruise Ships

Existing State Pier Site

City Pier at the downtown site of the RITC does not now and cannot accommodate cruise ships.

The current berthing of cruise ships north of the RITC at the Admiral Shear State Pier works, although it requires some schedule coordination with freight shipments and the current facility does not provide pedestrian access to downtown. The State Pier is suitable for the berthing of the large ships and the surrounding land area is large enough to handle the process of unloading the passengers and moving them to downtown and other locations. Currently, as many as 22 buses are used to transport the passengers. Passengers are transported by coach bus to Union Station where they can make connections to other locations such as Fort Trumbull and Mystic by special coach bus. While functional, the State Pier is an industrial facility and is not the ideal place to dock a passenger ship, from an aesthetic perspective. The site has good vehicular access to downtown. Direct walk access to the downtown area via a pedestrian bridge would be desirable, as had been in place temporarily for Op Sail 2000. A permanent bridge may not be possible in that location.

Fort Trumbull Site

Fort Trumbull has been cited by the cruise lines as an ideal location to berth a cruise ship since the Fort, visitor center and the park are located there and the site would be very attractive to tourists. Despite these advantages, there are a number of drawbacks related to the site configuration, topography, access, pier adequacy and current uses:

- To support use of the site by cruise ships at the most logical location – Pier 7- it would be necessary to dredge. There is currently inadequate depth at the west end of the pier. Pier reconstruction would be necessary to provide adequate length and strength (to address wind load issues). The existing Pier #7 is adjacent to the Thames River navigational channel. The expansion of Pier #7 into the channel would be extremely difficult, not only would the extended Pier be further into the channel but any vessel berthed at the Pier would encroach even further into the channel. Our experience has shown that this type of expansion would be extremely difficult to permit and would require extensive documentation and design data for approval by the Army Corp of Engineers and the United States Coast Guard. In addition, other issues may arise given the extensive use of the channel by United States Navy vessels.
- The site configuration, topography and uses limit opportunities for landside access to the pier.
- On the north side, access is impeded by the Coast Guard Station. It is understood that the Coast Guard Station is permanent and that security issues would prevent any access through Coast Guard property.
- NLDC suggested that coach bus access to the Pier would need to be located at the current bus location at the Visitor Center. However, the current pedestrian pathway from the visitor center and park leading to the pier is on a slope and would not be suitable for the cruise passengers due to the grade and in some cases due to the distance since many passengers are senior citizens.
- Provision of adequate access could only be achieved with severe impacts on the park. The only path that would be suitable for vehicles is the path located to the south of the Fort which is currently designed for pedestrians and is part of the park.
- Providing vehicular access to the ship for passengers would require a large staging area near the pier. The available space is limited and does not appear sufficient to accommodate the number of coach buses that are currently used to transport passengers to and from the visiting cruise ships. While as many as 22 coach buses are currently used, it is possible that fewer could be used at the Fort Trumbull site if many passengers were to spend the day at the Fort. If the southerly path were used for access and egress, buses would need to turn around and the space limitation is even more constraining.

1.4.9. Summary

The above describes the desirability of locating each mode at the two sites. This can be essentially summarized as follows:

The existing site is highly desirable for all modes although the current use by cruise ships of the State Pier is only moderately desirable. The desirability of moving the various modes to the Fort Trumbull peninsula is as follows:

- Cruise Ships - desirable but has drawbacks
- Rail Station – not desirable
- Ferry Facilities – not desirable
- Intercity Bus – not desirable
- SEAT Bus – not desirable
- Casino and Shuttle Buses – not desirable as a replacement for the downtown stop; desirable as an additional location

- Parking – would be desirable as a substitute for the current parking facilities located at the downtown RITC but this is therefore dependent on the desirability of other modes moving to the site. Parking at the Fort Trumbull site is only desirable as an ancillary use related to economic development of the Fort Trumbull redevelopment area.

1.5 Feasibility

1.5.1. Introduction/Overview

This section focuses on the feasibility of locating the modes at each site. Since all but the cruise ships are currently located at the current downtown site, the discussion addresses the feasibility of shifting each mode from its present site to the Fort Trumbull peninsula site in contrast to the feasibility of improving the current site. The criteria used for this evaluation are:

- *Capacity for Operations*– This criterion addresses where capacity considerations make the location of the mode at the site infeasible or of questionable feasibility.
- *Capital Cost* –This criterion addresses whether capital costs of the facilities or improvements needed makes the location infeasible or of questionable feasibility.

An additional criterion is *Environmental Issues* – This criterion addresses whether environmental sensitivity of the site or contamination makes the location of the mode and its facilities at the site infeasible or of questionable feasibility. These issues are largely applicable to all modes and are discussed in Section 1.6. Where individual modes have special environmental issues they are discussed in this section.

Rail Station

The physical location of the existing rail line through Fort Trumbull limits the possible location of any future station. There are only four parcels at the Fort Trumbull site located adjacent to the railroad tracks. Parcels 1 and 3 are located on the east side of the railroad tracks. Parcels 1 is designated for a future Hotel/Conference Center/Health Club/Marina/Open Space uses. Parcel 3 is designated for future office use. Parcels 5A and 5B are located on the west side of the tracks and are designated for future office use. The Fort Trumbull Redevelopment Plan would have to be amended to allow for a variety of different uses at the site. The Fort Trumbull site also has very limited space for parking.

To replicate the current downtown rail station at the Fort Trumbull site would require extensive construction of platforms, bridges and crossings and access over the tracks requiring a minimum of 4 acres of land, including 300 parking spaces and the bus areas. Figures 1-36 and 1-37 show two possible layouts of a train station. It includes the standard 1,150 foot platform to meet Amtrak/ConnDOT requirements and 300 parking spaces and areas for SEAT and Greyhound bus operations as well as taxis and private vehicle pick up and drop off. Figure 1-36 shows the surface parking scheme consumes 4 acres of land (not including the existing roadway and existing surface parking spaces). Figure 1-37 shows a garage of 5 stories on the current location of a 220-space parking lot for the Coast Guard office building. This garage could accommodate the 300 parking spaces needed for the RITC as well as the replacement parking for the office building. While construction of a garage is more costly than providing only surface parking, it

consumes less land in the designated redevelopment area, only 3 acres (not including the existing roadway and extra surface parking spaces south of the garage).

Figure 1-36: Rail Station Layout with All Surface Parking

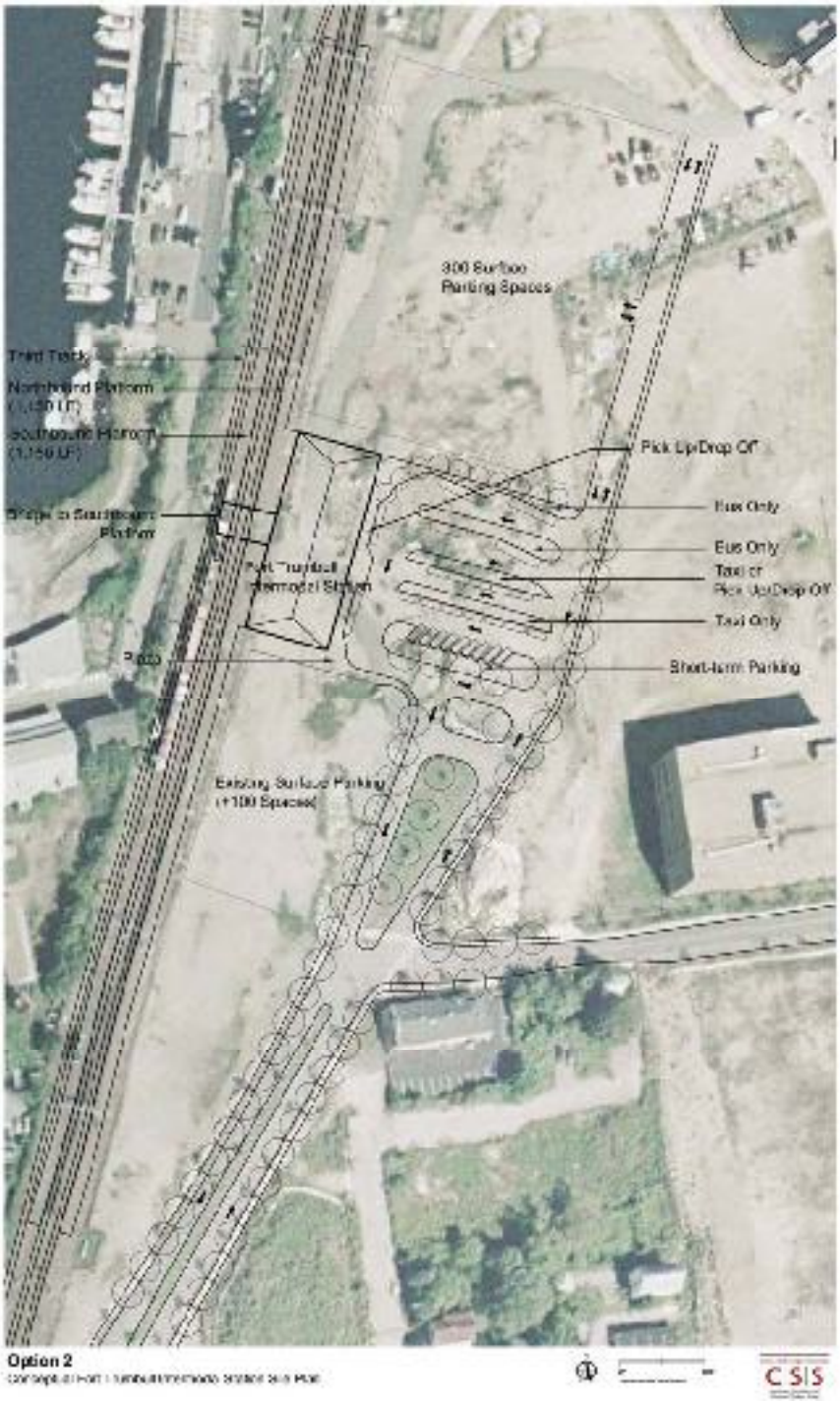
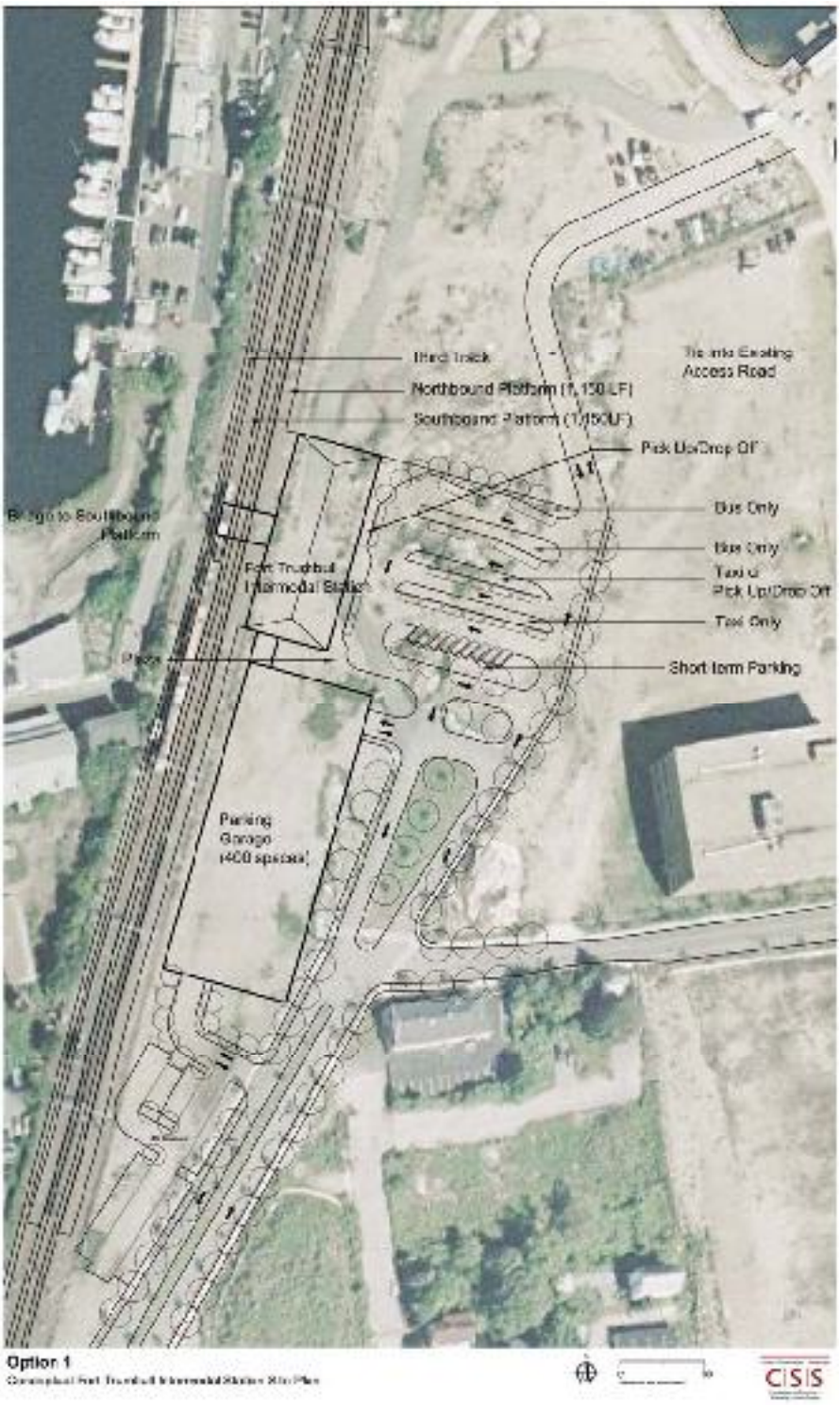


Figure 1-37: Rail Station Layout with Structured Parking



It should be noted that the above garage scheme may not be feasible because of the State Archaeological Preserve located east of the railroad tracks. This preserve is underneath the existing parking lot but it has a couple of feet of minimally-compacted fill serving as a protection for the site. To build there one would have

design the garage foundation to avoid the entire site and then get permission from SHPO. Alternatively, a garage might be located farther north on Parcel 1.

Given the presence of a State Archaeological Preserve to the east of the railroad tracks, as well as potentially eligible National Register historic resources to the west in the Hamilton Street area, obtaining approvals to construct a railroad station to serve as the hub for a new regional intermodal center on the Fort Trumbull peninsula would be subject to expensive permitting and regulatory negotiation under Section 4(f) of the Department of Transportation Act of 1966; that section explicitly disallows the construction of a transportation project that impacts archaeological resource preserves or National Register properties unless it can be definitively shown that there are no other feasible and prudent alternatives to the proposed action. Since there is an existing railroad station located at the eastern end of State Street that, by virtue of its proximity to ferry operations and other transportation modes, is considered by most to be an intermodal facility by default; the argument that no other feasible alternatives exist cannot be made.

Finally, the cost of construction of a new train station with the associated parking and connections to the other forms of transportation would be high, at least $30 million in the case of a surface parking scheme and at least $36 million in the garage scheme, excluding land costs and replacement parking. The high cost suggests that the relocation would be of questionable feasibility. This is in addition to the fact that it is not desirable to incur large capital expenditures if there is no real advantage to moving the station to Fort Trumbull. As noted previously, the convenient pedestrian access to the core of downtown New London would be lost if the Fort Trumbull site was chosen. In addition, the convenience of connections to immediately adjacent bus and ferry transportation modes would be lost unless they could be replicated at the Fort Trumbull site.

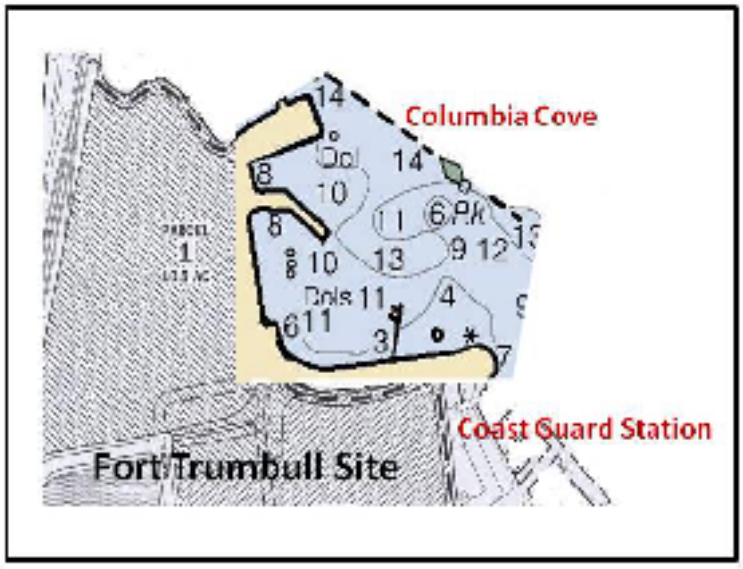
Ferry Facilities

Feasibility is a critical issue to consider in thinking about shifting ferry facilities from their current location to the Fort Trumbull site. These relate to the available space to provide the needed capacity and the cost of relocation.

Cross Sound Ferry – Cross Sound Ferry currently occupies 5.34 acres of space along the downtown waterfront. The Fort Trumbull waterfront is currently occupied by the State Park, the Coast Guard Station, a small marina and a small fishing business. The only area with sufficient vacant land near the waterfront is in the northeast portion of the Fort Trumbull site known as Columbia Cove where the water depth ranges from eight feet to fourteen feet. Use of Columbia Cove for the Cross Sound Ferry would require dredging a new channel and, removing the fishing business and piers. The upland queuing and circulation would use much of the land that is currently programmed for a future hotel, residential, and for the Coast Guard Museum. This area, known as Parcel 1, has the potential to have high economic value to the community.

Figure 1-38 shows the site and current NOAA navigation chart for the area. It depicts the road access and the existing piers that are currently used for commercial fishing and small vessels at the north of the cove as well as existing depth in the cove. The NOAA chart indicates that the bottom is rocky and may have old piles, dolphins and other structures. This combination would make demolition of the existing piers and dredging a new channel potentially expensive.

Figure 1-38: Columbia Cove Navigation Chart and Access



To access Fort Trumbull Parcel 1 vehicles would have to proceed south to the Shaw Street /Pequot Street underpass and then back north on Nameaug Street. The approach to Parcel 1 from Route 32 and I-95 (the major approaches used by automobiles, trucks, and casino buses) is also circuitous. The high cost of relocating the ferry operation (described further below) including parking and auto staging areas would have to be borne by the project proponents, as the ferry operator has stated that they have no wish to move. Dredging, permitting and mitigation would be required. Given the availability of an existing alternative site, construction approval would not be likely under the EPA Section 404(b)1. Given these conditions, it would have to be deemed infeasible.

Fishers Island Ferry – Although Fishers Island Ferry is a smaller operation, it would face similar drawbacks to those identified above for Cross Sound Ferry. Currently, Fishers Island Ferry occupies 0.78 acres of space adjacent to Union Station. Fishers Island Ferry constructed and opened a new terminal in 2005 at a cost of approximately $15 million. The high cost of moving the facility to Fort Trumbull including the costs dredging needed at the site (described further below) would be prohibitive. The same EPA permit issue described above for Cross Sound Ferry would apply. Based on the above, it would have to be deemed infeasible.

Dredging and Construction Cost of Relocating the Ferry Facilities – As stated above, relocating Cross Sound Ferry and Fishers Island Ferry operations to Columbia Cove (Parcel 1 of the Fort Trumbull Development Area) would require extensive dredging over a 4.6 acre area of submerged lands in the Thames River, as well as construction of structures such as docks and piers below the high tide line. Since the vessels currently in use require approximately 13 feet of draft plus another 3 feet of allowance for sedimentation, a total dredged depth of 16 feet would be recommended for this site. The average depth in the area of the proposed terminal is between eight and twelve feet below mean lower low water. To create a clear and safe mooring basing for the ferries, significant debris removal and demolition of old dolphins and other obstructions would be required. A shallow area with rock is shown on the NOAA navigation chart. It is assumed that any dredged basin can avoid this obstruction.

Calculations based on 2003 NOAA navigation chart soundings estimate the total dredging to be about 41,000 cubic yards. Since this would be new dredging, it is unlikely that it would be permitted for the aquatic disposal sites. Therefore, upland disposal is the only remaining option. Recent bids for new dredging at the State Pier were $192/cubic yard to dredge contaminated material and dispose of it in a designated upland site[i]. Maintenance dredging with aquatic disposal would cost significantly less, at about $30/cubic yard. Dredging costs of non-contaminated material, with truck-away disposal, range from $50 to $100 per cubic yard. Assuming that half of the dredged material is contaminated and must go to a designated site, and the other half is clean and can be used as capping or fill, then the dredging costs for a ferry terminal at this Fort Trumbull site would be approximately $5 million. This is a very rough estimate based on broad assumptions. The cost could range from less than $2 million to over $8 million, depending on actual levels of contamination and availability of upland sites. Given more detailed site information, the dredged basin design could be value engineered, potentially reducing the total quantity of dredged material. Incorporating a contingency of approximately $500,000 for removal and disposal of debris, the total dredging and disposal cost is estimated at $5.5 million.

Because Cross Sound Ferry and Fishers Island Ferry are already equipped with the necessary docks, piers and other in-water facilities and the channel is already dredged to appropriate depths in these locations to accommodate all ferry operations, it is unlikely that the CTDEP Office of Long Island Sound Programs or the U.S Army Corps of Engineers would ever grant the necessary permits and approvals to allow relocation to Fort Trumbull to proceed.

The total estimated cost of the ferry terminal would be $23 million as shown below:

Dredging and Disposal	$5,500,000
Buildings	$8,000,000
Paving and Site Work	$2,000,000
Bulkhead and Backfill	$5,000,000
Utilities and Lighting	$1,000,000
Wharf Improvements	$500,000
Landscaping	$500,000
Demolition	$500,000
Total:	$23,000,000

Figure 1-39 shows the possible layout of the ferry facilities at the Columbia Cove site on Fort Trumbull peninsula.

Figure 1-39: Possible Layout of Ferry Facilities at Fort Trumbull Columbia Cove



Intercity Bus

Unlike the rail station or ferry terminals, bus facilities could be located almost anywhere within the Fort Trumbull peninsula. The Fort Trumbull Redevelopment Plan would have to be amended to allow for a bus terminal at the site, but several parcels are still vacant. There are only two points of access under the railroad bridges at Fort Trumbull and only one of the bridges is high enough to allow access by buses. While this limits the access route for buses to Fort Trumbull, it does not preclude the location of an intercity bus terminal on any of the parcels.

To replicate the current downtown intercity bus terminal at the Fort Trumbull site would require construction of three bus bays, some pick-up/drop-off parking spaces and a building housing office space, a waiting area, restrooms and a ticketing and freight handling facility. (Some of these functions could be included in a new facility shared with other modes and operators.) A parking facility could be shared with Amtrak and other operators. Convenient pedestrian connections to the SEAT stop, the parking facility, rail station and Cross Sound Ferry would also be needed and would limit the choice of locations for the intercity bus terminal. All of these facilities, with the exception of the pedestrian connection to Cross Sound Ferry, already exist in some form at the existing downtown site, although many of them could be upgraded. A pedestrian bridge connecting the existing downtown bus terminal to the parking garage and ferry terminal has been previously designed and is considered feasible.

The cost of construction of a new bus terminal with the needed parking and connections to the other forms of transportation would likely be much higher than improvements to existing facilities. Nevertheless, it appears that if relocation of the intercity bus terminal were deemed to be desirable, it would be feasible to relocate the terminal to Fort Trumbull provided that the relocation of other facilities leaves a suitable parcel available.

SEAT Bus

SEAT bus facilities could be located almost anywhere within the Fort Trumbull peninsula. If the transfer hub is relocated to Fort Trumbull the facility would require space for eight buses to load simultaneously. If the transfer hub remains at Water Street then the various local New London bus routes, due to the different routings, would arrive at Fort Trumbull at different times and so could use a single bus length on-street bus stop. Spaces still might need to be provided for multiple SEAT “corridor” route buses, so overall a space larger than a single bus stop may be needed. Nevertheless, the space requirements would be small provided that the transfer hub is not relocated. There may be a need for multiple bus stops if rail, intercity bus and ferry terminals are not close together.

If the hub were to be relocated to the Fort Trumbull site, there are a number of vacant parcels available but the Fort Trumbull Municipal Development Plan would have to be amended to allow for a SEAT bus terminal instead of the currently planned uses. To replicate the full current downtown SEAT transfer hub at the Fort Trumbull site would require construction of space for eight buses. It would be desirable to also construct a waiting area, restrooms and a ticketing facility that could be shared with other modes. Without a transfer hub, one or more single, probably on-street, bus stops with shelters would be adequate. Convenient pedestrian connections to the intercity bus terminal and rail station would also be needed from either a new SEAT bus transfer hub or local bus stops.

Given the overall flexibility of bus operations, it should be possible to identify bus stop locations at Fort Trumbull providing the necessary connections. A new local bus transfer hub with the needed connections to the other forms of transportation would be more costly, but would be feasible provided that the relocation of other facilities leaves a suitable parcel available. The desired amenities for such a facility (a waiting area, restrooms and a ticketing facility) do not exist at the current site and there would therefore be a cost for such facilities at either site.

Casino and Shuttle Buses

There are no major feasibility issues associated with operating casino buses or shuttle buses to Fort Trumbull. The issues are essentially similar to those discussed for Greyhound and SEAT.

Parking

The location of any or all RITC modes at Fort Trumbull would require the replication of the parking supply currently located at the downtown site. It is not infeasible to do so but it might impact the feasibility of other development at Fort Trumbull. Surface parking would consume land proposed for other development. Structured parking would increase the costs for the RITC and the other development. The construction of sufficient parking to accommodate just the current train and ferry needs (approximately 500 spaces or 5 acres if surface parking) would therefore detract from available development acreage at Fort Trumbull and also reduce the efficiency of the facilities downtown.

Cruise Ships

There are a number of structural and navigational issues which in the past have precluded the use of Pier 7 at Fort Trumbull for the berthing of Cruise Ships. The major restriction was the fact that Pier 7 does not have the physical capacity to handle the potential wave and wind loads associated with docking of a vessel the size of a cruise ship. The limitations are explained in detail below.

The New London Cruise Ship Commission began as a grass roots initiative to bring major cruise lines to the Port of New London. The Connecticut Department of Environmental (DEP) was invited to participate in these efforts due to its docking facilities at Pier 7 and its potential use as cruise ship destination. The DEP was asked by the Cruise Ship Committee to receive the ms Maasdam in New London as a port of call on May 14, 2004. As a result of this request DEP began to investigate the potential for docking, receiving passengers and hosting of tours at Fort Trumbull State Park.

The first step in the process was to investigate the feasibility of providing docking for a cruise ship at Pier 7. The DEP hired a professional engineering firm to conduct the study, which included depth verification, pier stability, and load capacities of the pier with respect to large cruise ships. The DEP hired the Maguire Group to prepare an analysis titled, “Cruise Ship Berthing Analysis at Pier 7 Fort Trumbull State Park”, dated March 3, 2004.

The analysis summary stated:

> “The intended berth is the north side of Pier 7. Pier 7 is roughly 654 feet long and 30 feet wide. It was designed and constructed during in the mid 1960’s when Fort Trumbull was home to the U.S. Navy Undersea Sound Laboratory. Notes on the pier construction drawings indicate a 5,600 ton design vessel. The design dredge depth at the pier was 32 feet, mean low water datum.

Information provided by Moran Shipping, an agent for Holland America Lines, indicates a tonnage of 24,965 for the ms Maasdam. The vessel has an overall length of 720 feet and drafts 25 feet.

A lead line survey conducted by Maguire on February 11, 2004 indicated that there was insufficient depth to berth this vessel for the first 100+ feet as measured from shore. Unless this area is dredged, the ms Maasdam could not be brought in close to shore and therefore, when moored, the bow of the vessel will extend roughly 170 feet beyond the end of the pier. If the area is dredged, the bow will extend out roughly 70 feet beyond the pier."

The analysis conclusion stated:

"The analysis results indicate that several dock fittings would be loaded beyond their rated capacity if the ms Maasdam remains moored during a weather event having a one year return period. For a two year event, all utilized deck fittings are loaded beyond their rated capacity, some as many as 5 times their 30 ton load rating. Such loadings would surely result in the failure of the deck fittings.

The average lateral load on the pier during a two year event is 1,847 pounds per linear foot. As stated earlier, general notes on the pier construction drawings list the pier lateral load as 1,500 pounds per linear foot. This excessive loading may result in damage to the pier. Because the analysis identified the deck fittings as the critical elements, and because the magnitude of the mooring reactions, (due to what would be considered a minimal weather event) further evaluation of the pier structure was not conducted.

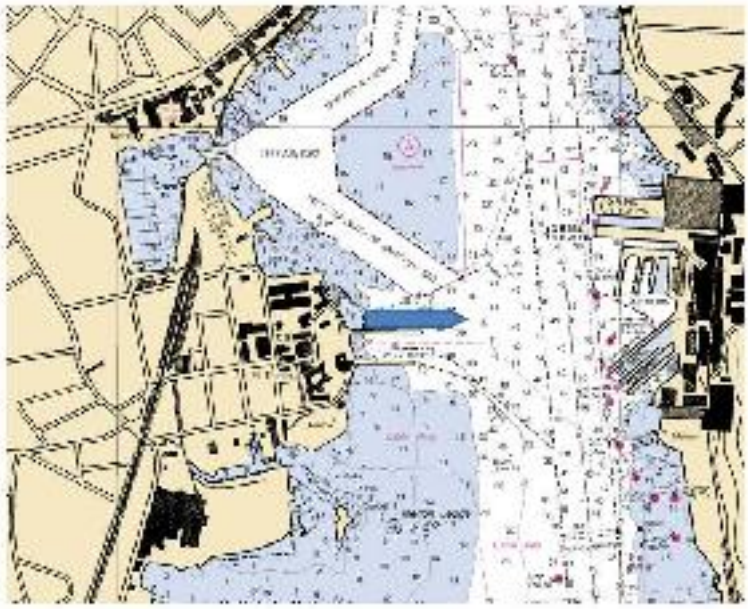
A mooring buoy can be shown to be effective, but only under specific load conditions. The anchorage requirements for the buoy may prove to be a navigational hazard and restrict other uses at Pier 7.

Maguire Group Inc. therefore recommends that Pier 7 not be utilized to berth the ms Maasdam and that DEP seek alternate berthing arrangements."

As a result of the study findings, DEP worked with the DOT to expedite the transition for the berthing of cruise ships from Fort Trumbull to the State Pier.

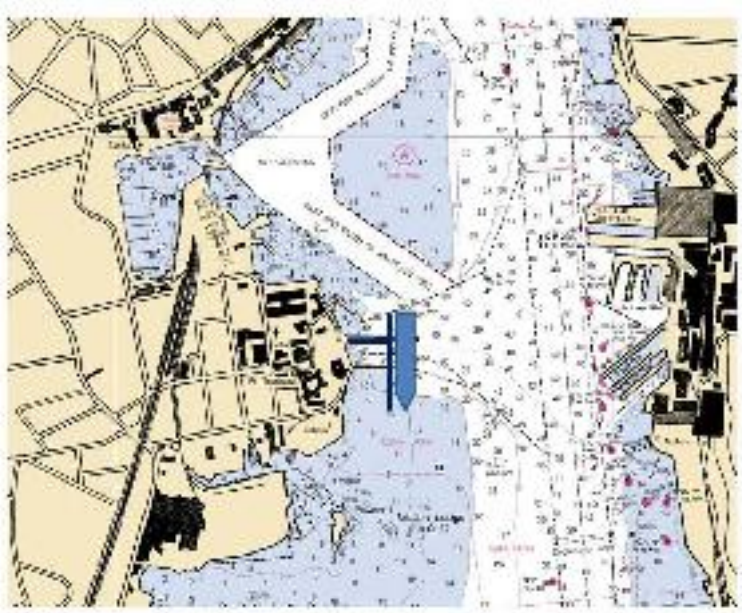
As the Maasdam represents an older and smaller vessel than is currently employed in the U.S. Atlantic services (Caribbean, Maritime Provinces and World Itinerary), Pier 7 would be even less suitable today than in 2004. Additionally, there are several dredged channels, including the federal channel in the vicinity of Pier 7 that would be restricted by the presence of a large vessel. Figure 1-40 was derived from a NOAA navigation chart and shows how a modern, 900-foot cruise ship would appear if berthed at Pier 7.

Figure 1-40: Pier 7 Berthing of a Modern Cruise Ship



In addition, newer cruise ships of 100,000 gross registered tons (GRT) have a displacement in the range of 35,000 -50,000 tons, as well as windage (wind loading on the superstructure) that is higher than that of the Maasdam. This would generate greater reaction loads than those discussed in the Maguire Group study. We understand that Pier 7 had been originally designed for berthing submarines, vessels that have virtually no windage and do not generate weather induced berthing loads in the way a cruise ship does. Therefore, Pier 7 would require significant modification or re-construction to safely berth most cruise ships. A possible reconfiguration of the Pier 7 to accommodate large cruise vessels is shown in Figure 1-41, below.

Figure 1-41: Possible Reconfiguration of Pier 7



This pier reconfiguration would include a new "T" wharf as well as replacement of the existing pier to provide a secure cruise ship berth that could accommodate the largest vessels currently in service. In addition, this pier would need to allow direct access for emergency vehicles as well as vessel service vehicles. For a 900-foot long vessel, it is anticipated that a pier of approximately 600-700 feet in length and 40 feet in width with a mooring dolphin would be needed. Minimal utility services on this pier are assumed since it would not be classified as a home berth.

However, reconfiguration of Pier 7 would require demolition of the existing structures, dredging of the berthing area and construction of structures such as docks and piers below the high tide line. Permits would be required for the construction of the new pier and for dredging. Because the State Pier is already equipped with the necessary docks, piers and other in-water facilities and the channel is already dredged to appropriate depths in that location to accommodate all cruise ship operations, it is unlikely that the CTDEP Office of Long Island Sound Programs or the U.S Army Corps of Engineers would ever grant the necessary permits and approvals required under EPA Section 404(b)1 to allow relocation of the cruise ship dock to Fort Trumbull to proceed.

Nevertheless, an order-of-magnitude cost has been estimated for the pier reconfiguration and associated dredging. This type of ship would typically require a depth of 30 feet at mean low water. Based on the most recent navigational charts, it is estimated that about 66,600 cubic yards of material would have to be dredged to provide the necessary depth. If the material were clean and to be disposed on land, the cost per cubic yard could range from $50-$100. If the material were contaminated, the cost could be $192 per cubic yard based on the recent information from the State Pier. For this site, we assumed 25% of the material is contaminated. The remainder was assumed clean and we assumed the cost would be $50 per cubic yard. Thus the total cost for dredging and disposal would be about $6 million, although it could range from $3 million to $13 million.

A rough estimate of the costs for such a pier including dredging, access roadway costs and service buildings and facilities is shown below.

Dredging and Disposal	$ 6,000,000
Pier Construction and Demolition	$12,000,000
Access Roadway	$ 500,000
Service Building and Facilities	$ 4,000,000
Total	$22,500,000

The number of cruise ship calls at New London would probably not justify these construction costs. Vessel calls at New London are mostly ships in transit between the Maritime Provinces and the Caribbean or larger World Itinerary vessels such as the Queen Mary II. This market is not growing rapidly, although an improved terminal would probably attract a somewhat larger market share. Home port operations have been discussed for New London. However, three conditions must be met to attract a home operator:

- A terminal with facilities for passenger ticketing, queuing and secure baggage handling (potential construction cost: $50m to $80m).
- A desirable foreign destination (such as Bermuda) within one to two day's sailing time of the terminal
- A major airport or a large local population base (preferably both)

Considering the mature home port terminal operations in New York City and Boston, there are few opportunities to attract northeast passengers to New London. Additionally, New London does not have airport capacity to support a broader market for home port vessels. Finally, calls at Bermuda are currently saturated by vessels originating elsewhere and there are no other attractive destinations within reasonable sailing time. For these reasons, it is unlikely that the construction cost could be justified by the cruise traffic. Therefore, this report concludes that a home port is not presently feasible in New London and it is not economically feasible to use Fort Trumbull for the transiting cruise ships that are currently calling.

1.5.2. Summary

The above describes the feasibility of locating each mode at the two sites. Table 1-6 summarizes the conclusions for each mode. The results can be essentially summarized as follows:

All modes are feasible at the current downtown site except for the cruise ships (which use the State Pier) and the ferry facilities. Keeping the cruise ships at the State Pier is feasible and improvements at that site also appear to be feasible. Improvements to the existing set of downtown sites are believed to be feasible.

The feasibility of moving the various modes to the Fort Trumbull peninsula is as follows:

- Cruise Ships - not feasible
- Ferry Facilities – not feasible
- Rail Station – feasible at substantial cost
- Intercity Bus - feasible
- SEAT Bus - feasible
- Casino and Shuttle Buses - feasible
- Parking – feasible at substantial cost

Table 1-6: Evaluation Summary

	Existing Site		Alternative Fort Trumbull Site
Capacity for Operations - Ground Modes			
Rail - Amtrak and Shore Line East	There is sufficient capacity at the existing site for operations and related parking. The existing site has advantages for pedestrian access and a disadvantage in that the northbound platform is inaccessible when a train is in the station.		A potential relocated rail station at the Fort Trumbull site would consume land planned for other uses including a current parking facility for the office building. If all the parking were in surface lots, the land required for the rail station (including the bus terminal, parking and auto pick-up/drop-off) would be a minimum of 4 acres; if structured parking were built, the land area needed would be about 3 acres. The cost of the rail station facility is estimated to be approximately $30 million in the surface scheme and at least $36 million in the garage scheme, excluding land costs. The station and related facilities would have to be designed to avoid impacting the archaeological site located near the railroad right-of-way. The rail station would also be located farther from the potential site of maritime modes (although these have been deemed infeasible) than in the case of the existing site.
Inter-City Bus	The existing site provides two full size bus bays which are sufficient although three full size bays would be desirable. The existing site offers quick, convenient (2 minute) access to the highway system which is an important advantage. Other advantages are the pedestrian access and convenience of connections to other modes, particularly SEAT.		The Fort Trumbull site would be farther away from the highway system adding travel time for the intermediate stop made in New London. Buses would need to follow a circuitous path since they can only use the southerly underpass under the railroad tracks. The Fort Trumbull site would not provide the pedestrian access that the existing site provides.
Casino Buses	The casino buses from both casino resorts directly meet the passenger ferries at the Cross Sound Ferry terminal. They access Cross Sound Ferry via the Gov. Winthrop Boulevard intersection.		If Cross Sound Ferry were at Fort Trumbull, the casino buses would operate there and the travel time would be somewhat longer. Casino buses would need to follow a circuitous path since they can only use the southerly underpass under the railroad tracks.
Proposed Shuttle Bus System	The proposed tourist shuttle bus system would serve the downtown location to provide access to both downtown and to the RITC.		If the RITC were at Fort Trumbull, the proposed route structure would need to be changed to allow the routes to serve both downtown and Fort Trumbull and this would increase travel time and affect operating costs.
SEAT	SEAT has sufficient curbside space to accommodate its pulsed operation downtown. The pedestrian access at the existing site is an important advantage. Convenient connections to other modes including the intercity bus terminal are another important advantage. SEAT does not need additional space but would prefer access to the indoor facility at Union Station for its passengers.		Shifting the RITC to Fort Trumbull would not eliminate the downtown bus stop but would require buses to make an additional stop. For some routes to serve both locations would add at least 2.6 miles round trip. Note that the SEAT buses would travel a circuitous route because they can only use the southerly underpass under the railroad tracks. Because of the scheduling needs of a pulse system, either all routes would not be able to serve Fort Trumbull or some routes would have to shorten their routes elsewhere.
Multi-Modal	The existing site provides for the adjacency of all modes other than the cruise ships.		Given that the maritime modes are deemed to be infeasible at the Fort Trumbull site, the convenient connections between ground and maritime modes would be lost.

Table 1-6: Evaluation Summary (continued)

	Existing Site		Alternative Fort Trumbull Site
Capacity for Operations - Maritime Modes Cruise Ships	The cruise ships cannot be accommodated at the existing site (City Pier) but can remain at the nearby State Pier (beyond walking distance). There are several improvements to the existing State Pier site that would be desirable.		The cruise ships cannot be accommodated the current Pier 7 at Fort Trumbull due to length, depth and strength issues. Pier 7 would need to be completely rebuilt most likely in a T-shape to avoid interference with the shipping channel. The EPA permit needed for such construction and associated dredging would be very difficult to obtain given the existing alternatives. The cost of constructing the needed facility and associated dredging and disposal would be very high, estimated to be in excess of $22 million, excluding land costs. The landside operations capacity and access would be constrained by the topography, the parkland and the Coast Guard. Pedestrian access uphill to the Fort Trumbull visitor center would be difficult for many cruise ship passengers in terms of distance and grade. The overall conclusion is that a cruise ship terminal at Fort Trumbull is not feasible.
Ferries	The ferries include a 5.34 acre Cross Sound Ferry site and a 0.78 acre Fishers Island Ferry site. The nearby Water Street Garage and Julian surface lot provide overflow parking for Cross Sound Ferry's Block Island Express passenger ferry. Despite the railroad crossings, both operators have been able to conduct their operations at the existing sites and believe it has advantages. These include access to the other modes, parking, downtown and to the highway system (for passenger cars, trucks and buses). Cross Sound Ferry believes travel and access are key to its positioning vs. alternative modes. The Fishers Island Ferry recently constructed a new $15 million facility. Serious pedestrian issues at the existing Cross Sound Ferry site need to be addressed.		The only site at Fort Trumbull where a ferry terminal could be considered is Columbia Cove. The cove is very shallow and would require dredging, which would require permits that would likely be very difficult to obtain given the existing alternatives. The cost would be very high to construct new docks, terminals and parking facilities, estimated to be in excess of $23 million, excluding land costs. The parking and auto staging areas would require 2-3 acres of land proposed for other uses in the Fort Trumbull Municipal Development Plan. The access would less convenient adding about 5-10 minutes from the highway. The overall conclusion is that relocating the ferry operation to Fort Trumbull is not feasible.
Compatibility with Other Existing/Potential Uses	The maintenance and improvement of the RITC at the existing site is compatible with existing uses, supporting activity in the downtown area and given the downtown's dense transit-oriented development.		The cruise ship terminal would be compatible with the Fort Trumbull tourist site except that the landside operations would not be compatible with the existing Coast Guard facility or the parkland uses. The ferry docks would displace the existing fishing uses and the proposed hotel and other uses at Parcel 1. The rail station, bus terminal and parking would be compatible with other proposed uses except that the facilities would reduce the land available for private development proposed in the Municipal Development Plan.
Environmental Sensitivity - natural	No major natural environmental issues.		No major natural environmental issues, besides the dredging issues identified above for the maritime facilities.
Environmental Sensitivity - cultural	Existing site's Union Station is on the National Register of Historic Places and adjacent to downtown historic districts.		The Fort Trumbull site has several historic and archaeological concerns, including the State Designated Archaeological Preserve located directly east of the most logical location for an RITC (rail station). Other concerns are the Fort Trumbull State Park (Section 4f), the nearby Italian Dramatic Club and Hamilton Street Complex (Section 106 issues). The parkland is a major issue for a potential cruise ship terminal.
Environmental Sensitivity - contamination	The existing site has likelihood of contamination. It is likely that the improvements to the existing site would not have major environmental impacts.		The Fort Trumbull site also has contaminated areas although many parcels have been remediated. Contamination issues are not likely to be a deciding factor comparing the two sites.

Table 1-6: Evaluation Summary (continued)

	Existing Site		Alternative Fort Trumbull Site
Parking Capacity	There is sufficient existing parking capacity at the existing site. The existing site could accommodate some growth including increased weekday demand for Shore Line East. At the existing site, parking serves multiple uses with different peaking characteristics.		New parking facilities would need to be provided for the RITC if located at the Fort Trumbull site. There is vacant land available at Fort Trumbull peninsula but the land is programmed to support other uses. At least 3 acres of surface parking and automobile staging areas would be required. In addition, the most likely site for the rail station already has a new parking lot for the office building.
Pedestrian Access	The existing RITC provides pedestrian access from downtown and includes various modes and parking within close proximity. There are however important pedestrian safety and convenience issues that need to be addressed including access to and from the parking facilities and access across the railroad tracks to the ferries. The Parade reconstruction project (now underway) will address some of these problems.		At the present time, the Fort Trumbull site is relatively underdeveloped and there is little pedestrian access that it offers. If the cruise ships were feasible at Fort Trumbull, it would be near the Fort Trumbull State Park but the distance and grade create access problems. If the maritime modes were feasible, they would not be in close proximity to the ground modes. The downtown is beyond convenient walk distance from the candidate site for the relocated rail station/bus terminal.
Vehicular Access	Vehicular access to the existing RITC is good with a short distance to/from the interstate highway ramps. Access to the ferries is somewhat impeded by rail operations, particularly freight trains.		Vehicular access to the Fort Trumbull site is not as convenient as to the existing site. An additional 5-10 minutes depending on traffic would be required to reach the ferries from the interstate highway ramp for example. Vehicles would be able to pass under the railroad tracks using one of two underpasses, however, one (the northerly one located closer to the RITC site) is height restricted and could not be used for trucks and buses.
Traffic Impacts	Traffic conditions are good at the existing site intersections based on 2007 winter weekday conditions (LOS A or B) and 2008 summer Saturday conditions (LOS A, B or C).		Traffic conditions at Fort Trumbull projected for 2003 with the MDP improvements were good (LOS A or B).
Capital Cost	Capital costs associated with improving the existing site, though not yet estimated, are likely to be considerably lower than building a new transportation center at the Fort Trumbull site.		Capital costs to build a new transportation center at Fort Trumbull are likely to be quite high. A new rail station with surface parking and a bus terminal will likely cost over $30 million, excluding land costs. Cost estimates of the cruise ship and ferry terminal each exceed $22 million, excluding land costs.
Economic Development Opportunity (TOD)	The existing site has higher potential for transit-oriented economic development (TOD) given its strong pedestrian oriented infrastructure and nearby supportive uses. There are a number of sites near the RITC that can be developed and for which the existing hub of transportation modes provides a benefit.		The Fort Trumbull site is a relatively untested market even though it offers many vacant sites. The Fort Trumbull site's economic development potential would be adversely affected by reducing the land available for development if the RITC was located there. While the downtown waterfront would have high potential for development if the RITC, including the ferries, were moved to Fort Trumbull, this is not deemed feasible; as a result, a shift of the RITC to Fort Trumbull would leave the ferries in place at the downtown waterfront and would not free up significant waterfront property for development. There would be adverse tax revenue impacts of devoting more land at Fort Trumbull to public uses.
Likely Public Support	Strong stakeholder support for maintaining existing site.		Strong stakeholder opposition to moving to the Fort Trumbull site including business interests and transportation operators.
Capacity to Accommodate All the Modes	All modes except Cruise Ships can be accommodated at the existing downtown site.		All ground modes can be accommodated; maritime modes cannot.

1.6 Comparison of a Feasible RITC at Fort Trumbull with an Improved RITC Downtown

This section compares the most likely feasible RITC at Fort Trumbull with an improved RITC at the existing downtown site. Section 1.4 described which site was most desirable for each mode individually without addressing whether it was really feasible to move each mode to the Fort Trumbull site. Section 1.5 described whether it was feasible to move the mode to Fort Trumbull without regard to whether it was really desirable. In this section, we combine the assessment of feasibility and desirability for each mode individually and consider the capacity of the Fort Trumbull site to accommodate the modes that are feasible there, taking into account the desirability assessment as well to identify the most likely RITC alternative at Fort Trumbull. This alternative is then compared with the existing site, assuming improvements were made, in order to evaluate the two site alternatives. It is also in this section that we consider economic impacts and environmental issues which were not addressed on a mode by mode basis in the earlier sections. Additionally, we consider a final criterion – the ability to offer a consolidated RITC with all relevant transportation modes.

1.6.1. Likely Package of Modes that Could be Located at Fort Trumbull

Sections 1.4 and 1.5 identified the following conclusions about relocating each mode to Fort Trumbull:

- Cruise Ships - desirable but with drawbacks and not feasible
- Ferry Facilities – not desirable and not feasible
- Rail Station – not desirable and feasible only at substantial cost
- Intercity Bus – not desirable but feasible
- SEAT Bus – not desirable but feasible
- Casino and Shuttle Buses –not desirable but feasible
- Parking – desirable as needed to support other modes and feasible

All modes except the cruise ships can be accommodated at the existing site and it is desirable to do so. As a result, the most likely set of modes that could be accommodated at Fort Trumbull, regardless of cost, would include:

1. Intercity buses (Greyhound)
2. Local transit buses (SEAT)Shuttle buses
3. Intercity and commuter rail (Amtrak and Shore Line East)
4. Parking
5. Taxis

1.6.2. Comparative Evaluation of Two Sites for Likely Package of Modes

Capacity for Operations

Both sites have sufficient capacity to accommodate the train and bus operations (assuming the Fort Trumbull Municipal Development Plan could be amended and the currently planned uses relocated). It is not envisioned that the rail, intercity bus or regional bus service will need to increase capacity to meet demand in the near future, although it is envisioned that Shore Line East trains currently operating only as far east as Old Saybrook would be extended to New London. This would have an impact on the station,

most significantly, more parking and pick-up/drop-off demand, however, the existing site has the needed excess capacity on weekdays.

The Fort Trumbull site would likely require the rail station to be located on or near the site of a newly constructed parking lot for the office building and the relocation of that parking to another available parcel might be required. Assuming this can be done, there is no capacity constraint at the Fort Trumbull site.

Vehicular Access, Parking Capacity, Traffic Impacts

A qualitative assessment of the desirability of the sites relative to traffic connections indicated that, in general, the existing downtown site presents a higher level of desirability compared to the Fort Trumbull site based on the following:

- Vehicular access to the downtown site is better
- The downtown site offers better proximity and ease of access to businesses and communities
- Improvements needed to the roadway and pedestrian facilities to accommodate future travel demand are not anticipated to be significant.

The current access to Union Station, the Water Street parking garage and other parking facilities, the intercity bus terminal and the SEAT bus stop is better than the potential site at Fort Trumbull since the location is closer to the major roadways and does not involve crossing the railroad tracks. At Fort Trumbull, the roadway access is more circuitous and, as currently configured is limited for buses and trucks to using only one of the two underpasses across the railroad tracks, to reach the east side of the tracks which is the most likely location of the rail and bus intermodal center due to small parcel size, limited access and poor drainage issues on the west side of the tracks. One of these underpasses is too low to accommodate buses and trucks. Alternatively, a more expensive train station could be built on air-rights over the tracks using land on both the west and east sides where buses could stop on the west side and the parking could be on the east side. However, such a configuration may not permit a design that could create a single unified ticketing and waiting area for all modes.

Traffic levels of service are good at both locations. Though the City of New London has approved roadway and pedestrian circulation improvements as well as parking facilities as part of the Fort Trumbull Municipal Development Plan, additional improvements to the roadway and pedestrian networks in the Fort Trumbull area may be needed to accommodate demand (automobiles, buses, and pedestrians) associated with an intermodal center in this area. Additionally, access from Downtown New London to the intermodal facilities in this location will be limited due to its location and physical and geometrical constraints.

While the existing parking facilities have more than enough parking capacity for the RITC downtown, the Fort Trumbull site would need to provide parking for the RITC if relocated there.

Pedestrian Access

Pedestrian access is superior at the downtown location due to the proximity of the location to downtown businesses and residences. While the existing crossings between the rail and bus boarding locations and the parking facilities have deficiencies, the Parade project is expected to improve convenience and safety of pedestrian crossings and restore elevator service to the Water Street garage. An RITC Master Plan at the existing site could also include additional pedestrian improvements. The Fort Trumbull site is in a

redevelopment area which as it develops would be expected to have further pedestrian improvements in addition to those already in place as a result of past and ongoing developments. However, the Fort Trumbull site is located a substantial distance (about one mile walking distance) from the core of downtown and there are not many destinations within convenient walk distance. The railroad station and bus terminal would most likely be located on the east side of the railroad right-of-way due to land availability; this would require facilities for pedestrians to cross the tracks.

Capital Cost

The major cost of creating an RITC for rail, intercity bus, and regional bus, with associated parking and access services at Fort Trumbull would be the cost of the rail station and parking facility. This would be in excess of $30 million. The cost of the bus facilities would be considerably less. The cost of any improvements to the existing facility would likely be much less.

Compatibility with Other Land Uses

Neither site is incompatible with an intermodal center, although the downtown site may be more compatible with public transportation services since it contains denser concentrations of transit oriented development such as retail, offices and multifamily housing. In addition, the development of a rail-bus RITC at Fort Trumbull would consume some land that has been slated for other development uses.

Perhaps most importantly, if the ferry modes cannot be shifted to Fort Trumbull and would remain at their current locations, the existing site has the unique advantage of consolidating the ground and maritime modes in a single location. This makes the existing site much better in terms of compatibility. It would be counter to one of the main goals of this study, that is, to better link and coordinate the operations of existing transportation services, if only some of the transportation modes were moved to another site located a significant distance away, resulting in a fractured RITC.

Environmental Issues

Contamination Issues

Contamination issues do not seem to be a deciding factor in distinguishing the two sites, as both sites have some contaminated areas.

Natural and Cultural Issues

Based on a review of natural and cultural resources in the vicinity of the two candidate sites, the existing site location is better suited to accommodate an intermodal center. In terms of natural resource constraints, which are quite limited, the two sites are very similar. They both exist within the coastal zone and are subject to 100-year coastal flood events. There are no wetlands at either site and no known surface or groundwater issues of concern. Wildlife habitat is extremely limited at both sites due to the urbanized nature of the existing site and the active redevelopment that is occurring on the Fort Trumbull peninsula. There are also no known rare, threatened or endangered species or significant natural communities on or adjacent to either site location.

The major difference has to do with Section 106 and Section 4(f) resources. Although the existing site is centered on the National Register-listed HH Richardson railroad station and is adjacent to historic districts associated with downtown New London, the Fort Trumbull site has several historic and archaeological concerns, foremost of which is the State Designated Archaeological Preserve located directly east of and adjacent to the railroad tracks. This location would be the most logical spot for a planned intermodal center were it to take full advantage of rail access. The presence of Fort Trumbull State Park, the nearby Italian Dramatic Club, and the Hamilton Street complex are also concerns. As stated earlier in this report, due to the presence of a State Archaeological Preserve to the east of the railroad tracks, as well as potentially eligible National Register historic resources to the west in the Hamilton Street area, obtaining approvals to construct a railroad station to serve as the hub for a new regional intermodal center on the Fort Trumbull peninsula would be subject to expensive permitting and regulatory negotiation under section Section 4(f) of the Department of Transportation Act of 1966; that section explicitly disallows the construction of a transportation project that impacts archaeological resource preserves or National Register properties unless it can be definitively shown that there are no other feasible and prudent alternatives to the proposed action. Since there is an existing railroad station located at the eastern end of State Street that, by virtue of its proximity to ferry operations and other transportation modes, is considered by most to be an intermodal facility by default; the argument that no other feasible alternatives exist cannot be made.

Economic Development Opportunity

Assuming that improvements are made at the present site, the downtown site has the strongest potential to attract related transit oriented economic development.

Located in the downtown area, the site has a strong existing pedestrian oriented infrastructure / network with nearby supportive uses and development opportunities relative to the Fort Trumbull site which has poor connectivity and limited access to the surrounding areas. The downtown site has the strongest potential to capture the momentum of people living, working and visiting in downtown New London. There is an existing and growing residential base in the downtown area to support transit oriented development while the Fort Trumbull site does not have an existing residential base (most of the workers at the adjacent Pfizer facility commute from other locations).

There are numerous potential opportunity sites that can be (re)developed in the downtown area, including attracting high quality retail and office tenants to vacant space. On the other hand, the Fort Trumbull site is an untested market given the lack of prior development and planned development associated with the Fort Trumbull Municipal Development Plan that has not yet occurred, including residential development (except for the 700,000 square foot Pfizer Global Research and Development Center which opened in 2001). It is possible that the Pfizer development could attract a high technology cluster to Fort Trumbull, but at this time the area has not seen any additional businesses taking advantage of the proximity.

In terms of transportation, multiple modes of transport are already located in downtown; these modes include: car, bike, train, ferry, pedestrian and bus while the Fort Trumbull site does not have any existing facilities for an intermodal transportation center. The cultural and historic interests of downtown are pervasive (historic sites and walking tours, restaurants and shopping, and arts center) and make the downtown area an attractive visitor destination. While Fort Trumbull has historic and cultural interests, they appear to be isolated with poor connectivity to downtown and other nearby areas.

If all the transportation modes are shifted to Fort Trumbull, and the RITC were located there, opportunities for economic development would increase minimally; due to the lack of physical space at the Fort Trumbull site, the land available for any additional complementary development would be reduced substantially. On the other hand, enhancement of the current RITC in downtown would enable substantial opportunities for economic development that take advantage of the accessibility of all modes; however, the RITC would occupy a considerable amount of waterfront property. Relocating the RITC to Fort Trumbull would allow for development of the downtown waterfront property but would not capture the opportunities associated with access to all modes of transportation.

With only the bus and rail modes shifted to Fort Trumbull, the land available for economic development at Fort Trumbull would not be as severely reduced. None of the downtown waterfront property would be freed up by moving only these modes, although the Union Station building would become available for re-use.

The existing site downtown has the advantageous location of excellent highway access compared to Fort Trumbull. Parking is also available and can be potentially expanded in downtown New London to handle the additional need arising from the RITC. Conversely the parking and space requirement needs for an intermodal center may conflict with the development goals for the Fort Trumbull peninsula. Parking needs and bus pickup/drop off at Fort Trumbull will be difficult to accommodate because of limited space, low clearance under the railroad bridge and difficult topography near the dock.

The presence of a multimodal transportation center generates economic (e.g. jobs, payroll) and fiscal impacts (e.g. taxes) to the state and local jurisdictions. Location and private ownership of the existing rail station in downtown generates positive tax revenue to the City through property tax and other related tax revenue. In addition, maintaining the RITC in its current downtown location will further create positive spin-off tax benefits in terms of enhanced downtown development and revitalization of existing and future retail, office, and residential uses. Moving the RITC to Fort Trumbull has the potential to create less of the positive tax impact since the future RITC would be publically owned and operated (and therefore not taxable) and could potentially take up land that could be programmed for private tax revenue generating uses. In addition, the lack of existing private tax revenue generating uses adjacent to a potential Fort Trumbull RITC location would challenge the enhanced future development potential compared to the downtown location which already has an established retail, office and residential market.

Public Support

There is a lack of support among the stakeholders for moving the RITC to the Fort Trumbull site. It is likely that there would be even less support among the stakeholders and the public for relocating the rail and bus modes while leaving the ferry and cruise ship modes at their current locations.

1.6.3. Summary

Table 1-7 below provides a summary of the evaluation of the two sites for the RITC given the set of modes that could feasibly be provided there:

Table 1-7: Summary Evaluation of the Two Sites

	Current Site	Fort Trumbull Site
Capacity for Operations	○	◒
Vehicular Access	○	●
Parking Capacity	○	◒
Traffic Impacts	○	○
Pedestrian Access	○	◒
Capital Cost	○	●
Environmental (Contamination)	◒	◒
Environmental Sensitivity (Natural)	○	○
Environmental Sensitivity (Cultural)	◒	●
Compatibility with Other Land Uses	○	◒
Economic Development Opportunity	○	◒
Public Support	○	●
Consolidated RITC	○	●

Key:
- ○ Minor Issues/High rating
- ◒ Moderate Issues/Medium rating
- ● Major Issues/Low rating

1.7 Recommendation

The strong recommendation of consulting team was that the RITC be maintained at the downtown site based on the following reasons:

1. There is widespread and firm desire among stakeholders interviewed, including the transportation operators, to keep the RITC at their current sites to support and serve downtown. There are perceived advantages to retaining the downtown location for each mode of transportation.

    - The Union Station owners would like to see the transportation terminal remain on the lobby level of Union Station.
    - Greyhound sees strong advantages to the downtown site, including good highway access.
    - SEAT is not interested in moving its hub to the Fort Trumbull site. SEAT prefers the downtown location, and is interested in improving the current hub and perhaps using Union Station itself.
    - Cross Sound Ferry, the major ferry operator, is opposed to moving to Fort Trumbull, which is near the site they previously occupied. It has made a substantial investment in the current location which has distinct advantages, including easy access to I-95 for cars and trucks, immediately adjacent ground transportation and parking, and better protection from wind and currents.
    - Fisher Island Ferry has invested $15M in a new facility at its existing site, which has an ideal location near the rail station and downtown parking, services which many of its passengers use.

2. Only the cruise ships would really benefit from being at Fort Trumbull (it was one of the major considerations of ConnDOT in their suggesting Fort Trumbull as the alternative candidate site for the RITC). Moving the cruise ships to Fort Trumbull might enhance the attractiveness of New London to cruise ship operators and passengers, but it is not functionally necessary to move them and it is certain to be costly and, after thorough consideration, is deemed infeasible.

    - The cruise ships are able to function where they are. Several improvements could be made at the existing State Pier site to enhance their operation. Currently, busing passengers to Union Station works well to provide passengers a central point for local side trips from the cruise ships.
    - The cruise ships currently come to New London infrequently and do not use New London as a home port. Thus the cruise ships play a small role now in the tourist economy of New London. In fact, access to the rail, ferry, intercity bus and local bus services is not critically important to the current cruise ship operation. As a result, it would be hard to justify making the site selection for the RITC revolve around the cruise ship operation as currently configured.
    - The existing piers at Fort Trumbull cannot handle cruise ships and would require reconstruction, including dredging. Cruise ships would likely interfere with the federal shipping channel and the General Dynamics Electric Boat shipyard across the river unless Pier 7 was completely rebuilt and reoriented.
    - Landside access to a docking pier at Fort Trumbull would be very difficult due to the topography. There is a lack of space for loading/unloading immediately near the pier -- currently about 22 buses are needed to unload the cruise ships. Both the existing Coast

Guard facility and the existing parkland at the Fort Trumbull site impede vehicular access. Buses would likely need to load/unload at the existing visitor center bus stop which is up the hill and a considerable distance from the pier. It would be very difficult to get approval to do any alterations that would negatively impact the existing parkland that covers most of the area closer to the pier.

- If New London were to become a home port for the cruise ships, there would be greater advantages to having rail access directly to the cruise ship docking site. However, this would require relocating the rail station at considerable cost and disruptive impact on the existing transportation network. Also the transfer from rail service to the cruise ships at Fort Trumbull would not be seamless due to the distance and grade that passengers would have to traverse.

3. Many transportation operators would face constraints at the Fort Trumbull site.

    - Low railroad bridge clearance limits access to the Fort Trumbull site, particularly for buses and trucks. Only the Shaw Street / Pequot Street underpass could be used by buses and trucks.
    - There is limited space at the Fort Trumbull site for the parking needed to support rail, ferry and other transportation functions without impacting other planned development. A paved lot near the railroad right of way is allocated to the office building on Parcel 3A and the adjacent sites on Parcel 1 are allocated to a future hotel development. Unless land could be swapped, this would impede the development of a rail station. Parcels 5A, 5B and 6 on the west side of the tracks were noted by NLDC as the only sites that are really vacant and available for an intermodal transportation center, but they are small and have access and drainage issues. Parcel 3B and 3C are slated for office/R&D space although they have no active projects. If it were feasible to locate the ferry terminal on Fort Trumbull, it would require use of Parcel 1 which is programmed for a hotel and the Coast Guard Museum.
    - It would be difficult, if not impossible, to relocate the ferry facilities that are currently located at the downtown site to a new site at Fort Trumbull. Landside space needs, access and waterfront requirements and the current location of the parkland and Coast Guard facilities all present formidable challenges. In addition to the cost, it is also deemed infeasible since the required dredging would activate EPA Section 404(b)1 permit issues, which could kill the project or at least seriously delay it.

4. The existing RITC sites offer the needed capacity and opportunities for improvements, some of which are underway.

    - The existing garage/surface parking facilities at the current intermodal sites have the capacity to serve additional rail (including Shore Line East) and ferry passengers. (The Water Street Garage is about three-quarters full at the peak of a summer Saturday (with Cross Sound Ferry fully utilizing its own parking.) The City of New London has funding available that it plans to use to enhance the existing Water Street Garage facility. Functioning Elevators and installation of security cameras are sorely needed to improve the functioning of the facility and are programmed.
    - The general sentiment is that the Parade Project, currently under construction, will improve some of the pedestrian and image issues at the existing site. But there remains great interest among stakeholders in improving pedestrian access around the existing sites, along the waterfront and possibly extending to the State Pier.

5. There is existing support for enhanced development around the existing sites and there are some sites for such development.

    - At the existing Water Street garage, there is existing space available for transit oriented development to serve visitors and/or to provide for intercity buses.
    - The possible departure of The Day printing operation, located on the north side of Atlantic Street adjacent to the Water Street garage, could open up additional area for development.
    - Enhancing the RITC at the existing site would make the surrounding area more marketable as the City strives to create a vibrant downtown.
    - Enhancing the functional connections and the scope of transportation and ancillary services at the existing sites has the potential to increase the existing positive tax impact. Relocating the RITC to Fort Trumbull has the potential to diminish the positive tax impact of the existing sites and to reduce the potential revenue from private development at Fort Trumbull.

The Stakeholder Steering Committee reached a clear consensus agreeing with the consultant recommendation. With the concurrence of the SCCOG, the current site became the focus of the remaining tasks of the Master Plan and Efficiency Study, which developed a plan for creating an improved RITC at the selected site.

[i] Per telephone conversation with Dave Rossiter, ConnDOT Harbor Liaison at the Admiral Shear State Pier.

Table of Contents

2. Existing Physical Facilities 2-1

2.1 Roadway and Pedestrian Facilities 2-3
2.1.1. Roadway Network 2-3
2.1.2. Pedestrian Network 2-3
2.1.3. Roadways and Sidewalks Adjacent to the RITC 2-6
2.2 Rail and Bus Facilities 2-8
2.2.1. Union Station 2-8
2.2.2. The Greyhound Bus Terminal 2-18
2.2.3. South East Area Transit (SEAT) Transfer Point 2-23
2.2.5. Taxi Stand 2-27
2.3 Ferry Facilities 2-29
2.3.1. Cross Sound Ferry 2-29
2.3.2. Fishers Island Ferry 2-39
2.4 Parking Facilities 2-42
2.4.1. Water Street Garage 2-42
2.4.2. Governor Winthrop Garage 2-50
2.4.3. Eugene O'Neill Drive Surface Lots 2-58
2.4.4. Julian Surface Lot 2-65
2.5 New London Waterfront Park/City Pier 2-67
2.6 Utilities 2-69
2.7 Signage and Wayfinding 2-70
2.7.1. Wayfinding for Vehicles 2-70
2.7.2. Wayfinding from the Water Street Garage 2-71
2.7.3. Wayfinding from Union Station 2-76
2.7.4. Wayfinding from the Cross Sound Ferry Terminal 2-80
2.7.5. Wayfinding from the Fishers Island Ferry 2-83
2.7.6. Wayfinding Signage from the Greyhound Bus Terminal 2-83
2.7.7. Wayfinding Signage from the SEAT Bus Stop 2-84
2.8 Summary of Deficiencies 2-85

List of Figures

Figure 2-1: Existing Transportation Facilities in Downtown New London 2-1
Figure 2-2: RITC Parcels and Surrounding Environs 2-2
Figure 2-3: A Model of the Parade Project 2-4
Figure 2-4: A Layout of the Project Showing Pedestrian Improvements 2-5
Figure 2-5: Sidewalk on East Side of Water Street North of Bus Shelter 2-7
Figure 2-6: Same Sidewalk Narrowing to Unpaved Path Approaching Governor Winthrop Boulevard 2-7
Figure 2-7: Union Station Complex 2-9
Figure 2-8: Front View of Union Station facing Water Street 2-10
Figure 2-9: Rear View of Union Station Building and Railroad Platform Looking North 2-10
Figure 2-10: Union Station Lobby 2-11
Figure 2-11: Union Station Ticketing Office 2-11
Figure 2-12: Women's Bathroom at Union Station Showing Non-ADA Compliant Mirror Height 2-12
Figure 2-13: View of Southbound Platform and Rear of Union Station Showing Missing Panels 2-14
Figure 2-14: Stairway Entrances from Southbound Platform to the Rear of Union Station 2-14
Figure 2-15: Handicapped Access to the Rear of Union Station at the Low Level Southbound Platform North of State Street 2-15
Figure 2-16: High Level Northbound Platform at Union Station North of State Street 2-15
Figure 2-17: High Level Southbound Platform at Union Station South of State Street 2-16
Figure 2-18: View of High Level Platform on the South Side of State Street from Waterfront Park 2-16
Figure 2-19: Ratings of Facilities by Rail Survey Respondents 2-17
Figure 2-20: Improvements Suggested by Rail Survey Respondents 2-18
Figure 2-21: Greyhound Bus Terminal Building 2-20
Figure 2-22: Passenger Seated on the Ground Outside the Greyhound Bus Terminal Building 2-20
Figure 2-23: Combined Rail/Bus Platform and Canopy 2-21
Figure 2-24: Greyhound Terminal Women's Bathroom Showing Non-ADA Compliant Dispenser Height 2-22
Figure 2-25: Ratings of Facilities by Greyhound Bus Survey Respondents 2-23
Figure 2-26: SEAT Shelter on Water Street 2-24
Figure 2-27 : Broken Bench at SEAT Shelter 2-25
Figure 2-28: Missing Schedule at SEAT Shelter 2-25
Figure 2-29: Ratings of Facilities by SEAT Bus Survey Respondents 2-26
Figure 2-30: Improvements Suggested by SEAT Bus Survey Respondents 2-27
Figure 2-31: Taxi Stand at Union Station 2-28
Figure 2-32: Fishers Island Ferry Terminal Entrance Ramp Grade 2-30
Figure 2-33: Cross Sound Ferry Ticket Building 2-31
Figure 2-34: Cross Sound Deli Snack Stand 2-32
Figure 2-35: Cross Sound Ferry Auto Ferry to Orient Point, NY 2-32
Figure 2-36: Sea Jet Dock 2-33
Figure 2-37: Block Island Dock 2-34
Figure 2-38: Cross Sound Ferry Terminal Counter 2-35
Figure 2-39: Ratings of Facilities by Block Island Ferry Survey Respondents 2-36
Figure 2-40: Ratings of Amenities by Long Island Ferry Survey Respondents 2-37
Figure 2-41: Ratings of Facilities by Sea Jet Survey Respondents 2-38
Figure 2-42: Ratings of Conditions at the Cross Sound Ferry Lot 2-39
Figure 2-43: Fishers Island Ferry Terminal 2-40
Figure 2-44: Fishers Island Ferry Terminal Entrance Ramp Grade 2-41
Figure 2-45: Water Street Garage 2-43

Figure 2-46: Interior View of Water Street Garage....2-44
Figure 2-47: Water Street Garage – Water Street Entrance....2-44
Figure 2-48: Water Street Garage – Atlantic Street Entrance/Exit....2-45
Figure 2-49: Water Street Garage - Rear Pedestrian Entrance....2-46
Figure 2-50: Pedestrian Bridge Across Atlantic Street to READCO Building....2-46
Figure 2-51: Elevator at Water Street Garage....2-46
Figure 2-52: Water Street Garage Pedestrian Walkway....2-47
Figure 2-53: Concrete Spalling at Water Street Garage....2-48
Figure 2-54: Concrete Spalling at Water Street Garage....2-49
Figure 2-55: Ratings of Conditions at the Water Street Garage....2-50
Figure 2-56: Governor Winthrop Garage....2-51
Figure 2-57: Governor Winthrop Garage (2 views)....2-52
Figure 2-58: Signage at Governor Winthrop Garage....2-53
Figure 2-59: Pedestrian Bridge to Governor Winthrop Garage....2-53
Figure 2-60: Concrete Spalling at Governor Winthrop Garage....2-55
Figure 2-61: Concrete Spalling at Governor Winthrop Garage....2-55
Figure 2-62: Decking Reinforcement at Governor Winthrop Garage....2-56
Figure 2-63: Temporary Shoring Supports at Governor Winthrop Garage....2-56
Figure 2-64: Governor Winthrop Garage Elevator....2-57
Figure 2-65: Ratings of Conditions at the Governor Winthrop Garage....2-58
Figure 2-66: Eugene O'Neill Surface Lot North....2-59
Figure 2-67: Eugene O'Neill Drive Surface Lot (North)....2-60
Figure 2-68: Eugene O'Neill Surface Lot South....2-61
Figure 2-69: Eugene O'Neill Drive Surface Lot (South)....2-62
Figure 2-70: Eugene O'Neill Drive Surface Lot (South) Striping Conditions....2-62
Figure 2-71: Eugene O'Neill Drive Surface Lot (South) Pedestrian Access Conditions....2-63
Figure 2-72: Ratings of Conditions at the Eugene O'Neill North Lot....2-64
Figure 2-73: Ratings of Conditions at the Eugene O'Neill South Lot....2-64
Figure 2-74: Julian Surface Lot....2-65
Figure 2-75: Julian Surface Lot Sidewalk....2-66
Figure 2-76: Waterfront Park and City Pier....2-67
Figure 2-77: City Pier Park and Plaza....2-68
Figure 2-78: Signs to Parking - On East Side of Water Street....2-70
Figure 2-79: Signs to Parking- On West side of Water Street....2-71
Figure 2-80: Signage in Front of Union Station at Water Street and State Street*....2-71
Figure 2-81: Signage in the Water Street Garage Directing Travelers to Ferries....2-72
Figure 2-82: Pedestrians Traversing City Pier Plaza Going from Union Station to Cross Sound Ferries....2-73
Figure 2-83: Sign Prohibiting Pedestrians on the East Side of Water Street North of SEAT Bus Stop....2-74
Figure 2-84: Pedestrian Path from the Water Street Garage to Ferries....2-75
Figure 2-85: Wayfinding Signs on the Southbound Platform....2-76
Figure 2-86: Rear Door of the Bus Terminal....2-77
Figure 2-87: Views of the Block Island Ferry Terminal from the Northbound Platform....2-78
Figure 2-88: View of the Fishers Island Ferry Terminal from the Northbound Platform....2-79
Figure 2-89: Taxi Stand Signage....2-79
Figure 2-90: Signage Directing Cross Sound Ferry Pedestrians to Water Street Garage....2-80
Figure 2-91: Looking from Cross Sound Ferry Property toward the Governor Winthrop Boulevard....2-81
Figure 2-92: Looking from Cross Sound Ferry toward the Governor Winthrop Boulevard Intersection....2-81
Figure 2-93: View of SEAT Bus Stop from Cross Sound Ferry Property....2-82

Figure 2-94: View of Water Street Garage that Faces Cross Sound Ferry 2-83
Figure 2-95: View of Union Station and Greyhound Bus Terminal from the SEAT Bus Stop 2-84
Figure 2-96: View Toward the Cross Sound Ferry Site from the SEAT Bus Stop 2-85

List of Tables

Table 2-1: Percentage of Rail Survey Respondents Giving a Rating of Poor or Very Poor 2-18
Table 2-2: Percentage of Greyhound Bus Survey Respondents Giving a Rating of Poor or Very Poor ... 2-23
Table 2-3: Percentage of SEAT Bus Survey Respondents Giving a Rating of Poor or Very Poor 2-27
Table 2-4: Percentage of Block Island Ferry Survey Respondents Giving a Rating of Poor or Very Poor 2-37
Table 2-5: Percentage of Long Island Ferry Survey Respondents Giving a Rating of Poor or Very Poor 2-38

2. Existing Physical Facilities

This chapter presents an overview of the existing physical conditions at the time of writing this final report of the transportation facilities located in downtown New London that make up the Regional Intermodal Transportation Center (RITC). Results from passenger surveys conducted as part of the study are also included to present customer ratings about transportation facilities and amenities at RITC. These include the rail station, bus facilities, ferry facilities, parking facilities, taxi stand, vehicular and pedestrian network, and the City Pier area, shown in the aerial photo below as Figure 2-1. Figure 2-2 shows the land parcels based on City Assessor information.

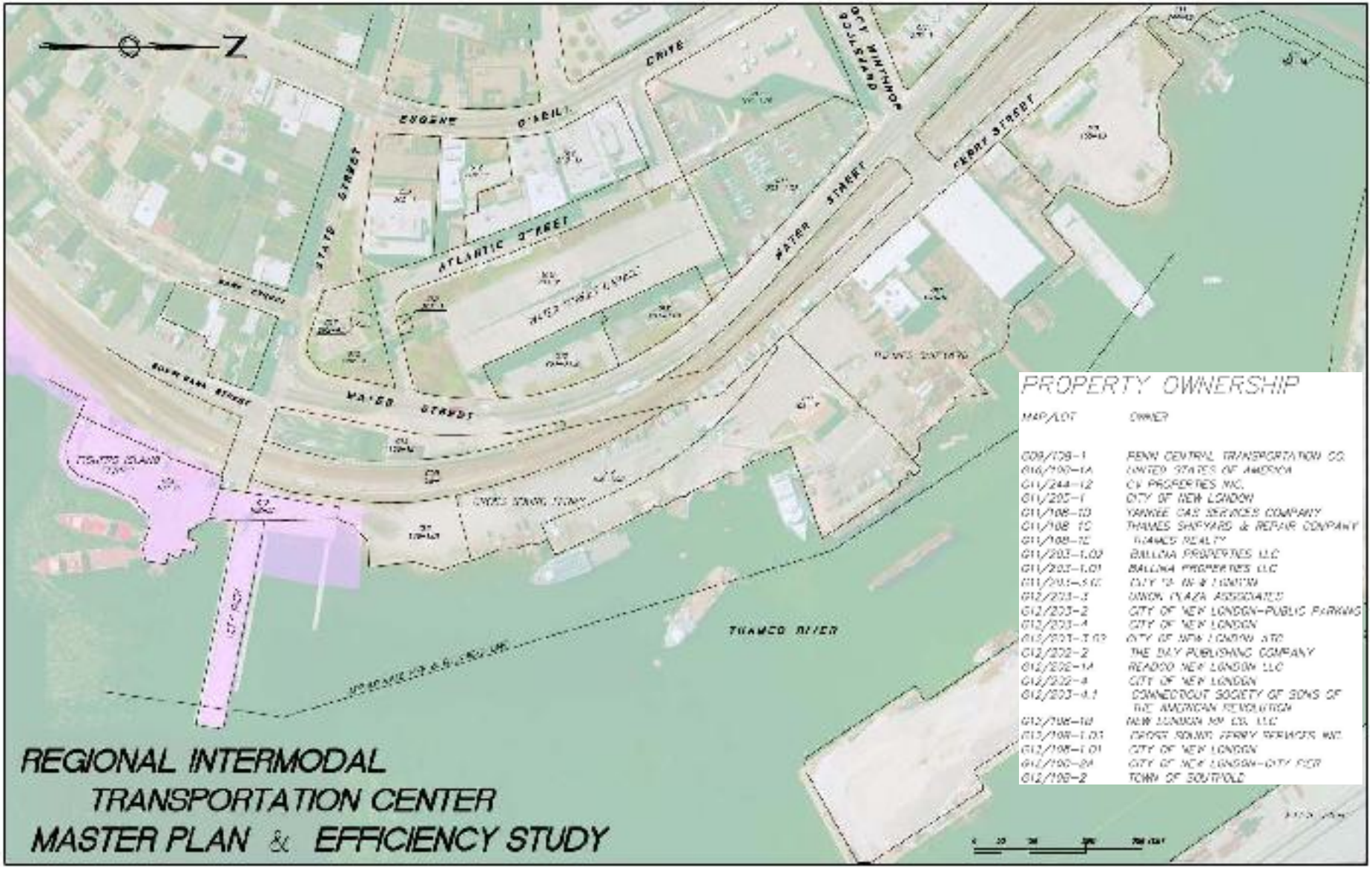
This chapter is presented in eight sections as follows:

- Roadway and Pedestrian Facilities
- Rail and Bus Facilities, including Taxi Stand
- Ferry Facilities
- Parking Facilities
- New London Waterfront Park/City Pier
- Utilities
- Signage and Wayfinding
- Summary of Deficiencies

Figure 2-1: Existing Transportation Facilities in Downtown New London



Figure 2-2: RITC Parcels and Surrounding Environs



Source: City of New London Assessor

2.1 Roadway and Pedestrian Facilities

2.1.1. Roadway Network

The existing RITC is located in downtown New London off Water Street in the east central portion of the city and is close to three major regional access roads - Interstate 95 (I-95) and State Route 32 from the north and Route 1 from the east. Downtown New London is bordered by the Thames River on the east, Huntington Street on the west, Tilley Street on the south and Federal Street on the north. The existing traffic network system in downtown New London consists of many one-way streets and a limited number of two-way streets. Though one-way street patterns improve overall capacity and safety and reduce the number of conflicts, they sometimes confuse drivers who are not familiar with the area. There are a number of public and private parking facilities and on-street parking is provided.

2.1.2. Pedestrian Network

Typical downtown pedestrian amenities are provided at most locations in downtown New London. These include sidewalks, marked crosswalks, and handicap ramps. Pedestrian signals are provided at some of the major signalized intersections. Daily pedestrian activity is low to moderate in downtown, however, major events held during the course of the year greatly increase pedestrian activity in the downtown. Concentrations of pedestrians are most likely to occur at the municipal parking garages and surface lots. Pedestrian walkways are provided from upper levels of the garages to the adjacent streets and buildings. There is currently no pedestrian overhead walkway from the City-owned Water Street Garage to Union Station, the intercity bus terminal, the SEAT bus stop or any of the ferry terminals, although one was proposed several years ago and the project was aborted was for several reasons. Instead the Parade Project will be making some improvements to the pedestrian network in the vicinity of the RITC as described below.

The Parade Project

The Parade Project is changing and impacting the area near the transportation facilities. The Parade Project will improve pedestrian safety and increase pedestrian access between the Union Station transportation center and downtown New London. The project removes the landscaped berm located between the Water Street Garage and State Street as well as the pedestrian bridge connecting the plaza to the Water Street Garage. It will provide traffic calming and improved pedestrian crossings as well as a new exterior elevator on the southwest side of the garage replacing the current pedestrian bridge to the Parade. (An inoperable elevator on the north side of the garage is also being repaired; the remaining two elevators on the southwest and southeast sides of the garage will remain closed.) The completed project, which will include exhibits, sculpture and public art and serve as space for public events and festivals, will restore the lower State Street area to its former prominence as the central public space in downtown and will provide an unencumbered view up State Street from the RITC. Construction on the approximately $10.8 million Parade Project started in September 2008 and was scheduled to be completed by the end of 2009.

Figure 2-3 and Figure 2-4 show the Parade Project and key pedestrian crossings and facilities proposed as part of the Parade Project.

Figure 2-3: A Model of the Parade Project



Source: The Day

Figure 2-4: A Layout of the Project Showing Pedestrian Improvements



Source: Presentation- Pedestrian Safety and Access Improvements to the Intermodal Transportation Facility, September 19, 2007

2.1.3. Roadways and Sidewalks Adjacent to the RITC

Union Station, the Greyhound Bus Terminal, and the SEAT transfer point all lie along Water Street. Water Street operates as a two-lane, one-way facility in the northbound direction. It widens in several places to accommodate parked taxis, intercity buses and SEAT buses. North of the SEAT bus stop, approaching Governor Winthrop Boulevard, Water Street becomes a 3-lane facility. Sidewalks are provided along the west side of Water Street and along the east side only as far as the northern end of the SEAT bus stop (See Figure 2-5 and Figure 2-6 below). Despite the lack of a sidewalk north of the SEAT bus stop, pedestrians continue to walk along the east side of Water Street using the unpaved area along the railroad right-of-way. Note the condition and esthetics of the railroad right-of-way and fence in Figure 5.

One crosswalk is currently provided across Water Street, connecting the entrance to the Water Street Garage to a point between the intercity and SEAT bus terminals. Plans for the Parade Project, presented above, however, show three new crosswalks: one at State Street, one at the main Union Station entrance, and one at Atlantic Street.

State Street extends – noted on some maps as City Pier/Railroad Avenue[1], along the south side of the Union Station building and crosses the railroad tracks. This provides vehicular access to the Fishers Island Ferry as well as pedestrian access to City Pier, Cross Sound Ferry, and the rail platforms. The sidewalk on the north (Union Station) side of the street provides a level connection between the Water Street sidewalk in front of the building and the southbound rail platform behind the building. The sidewalk does not continue across the tracks but resumes in the City Pier Park. The sidewalk on the south side of the street ends at South Water Street and does not continue across the street or across the tracks. There is currently a crosswalk across at the front of the Station (east side of Water Street). Parade Project plans also show a new crosswalk across South Water Street at State Street and a new sidewalk between South Water Street and the tracks.

[1] For simplicity, this will be referred to as State Street.

Figure 2-5: Sidewalk on East Side of Water Street North of Bus Shelter



Figure 2-6: Same Sidewalk Narrowing to Unpaved Path
Approaching Governor Winthrop Boulevard
(at Entrance to Cross Sound Ferry)



2.2 Rail and Bus Facilities

Union Station at 27 Water Street and the adjacent Greyhound Bus Terminal and SEAT Bus Stop are all located in the Historic Waterfront District (the central business district). The 0.54 acre site is located on the east side of Water Street and is bounded to the north by rail road tracks, to the south by State Street and to the east by the railroad tracks. The property is privately owned and operated by the New London Railroad Company LLC.

Figure 2-7 shows the railroad station building and Greyhound Bus Terminal building located at Union Station. Each is discussed below, as well as the rail platforms and the SEAT Bus Stop.

2.2.1. Union Station

The Union Station Building

The 26,892 square foot, 2.75-story, brick, historic building was built in 1888 and renovated in the 1970's, and again, beginning in 2002 (see Figure 2-8 below). Union Station was designed in 1885 by noted American architect Henry Hobson Richardson. This was the last of many railroad stations design by Richardson before his death in 1887, though numerous others (including Boston's South Station) were designed by his students. Union Station is particularly large for a Richardson train station and stands out as the only station not built in the style of Trinity Church, Boston. With its multi-faceted roof, prominent arched entrance, and elegant brickwork, this building features many of Richardson's characteristic motifs.

Union Station in New London features a similar layout to the station in Old Saybrook, Connecticut. There is one island platform and a side platform, both of which are high level, not only to allow handicapped accessibility but also because the Acela Express requires high platforms in order to serve a station. Like most railroad stations along the Connecticut coast, the station was originally built for the New York, New Haven and Hartford Railroad in 1888, and has been on the National Register of Historic Places since 1971.

There is a center entrance accessed by a stairway on the front (Water Street side) of the building. There are two other entrances on the front; the one closer to State Street provides an accessible entrance to the first floor lobby. There are two entrances to the back of the building from the rail platform; both are accessed by stairs (see Figure 2-9). The first floor of the station building contains an Amtrak office for ticket sales and general information, a large waiting area, restrooms and an ATM (see Figure 2-10 and Figure 2-11). There is also a large unused space on the first floor at the northern end of the building which was previously used as a baggage room and as part of the restaurant also located on the second floor (which closed by 1984). In the lobby there are some brochures and SEAT schedules but at present, there is very limited general tourist information. The station is open 5:30 am to 12:00 midnight, seven days a week.

Figure 2-7: Union Station Complex

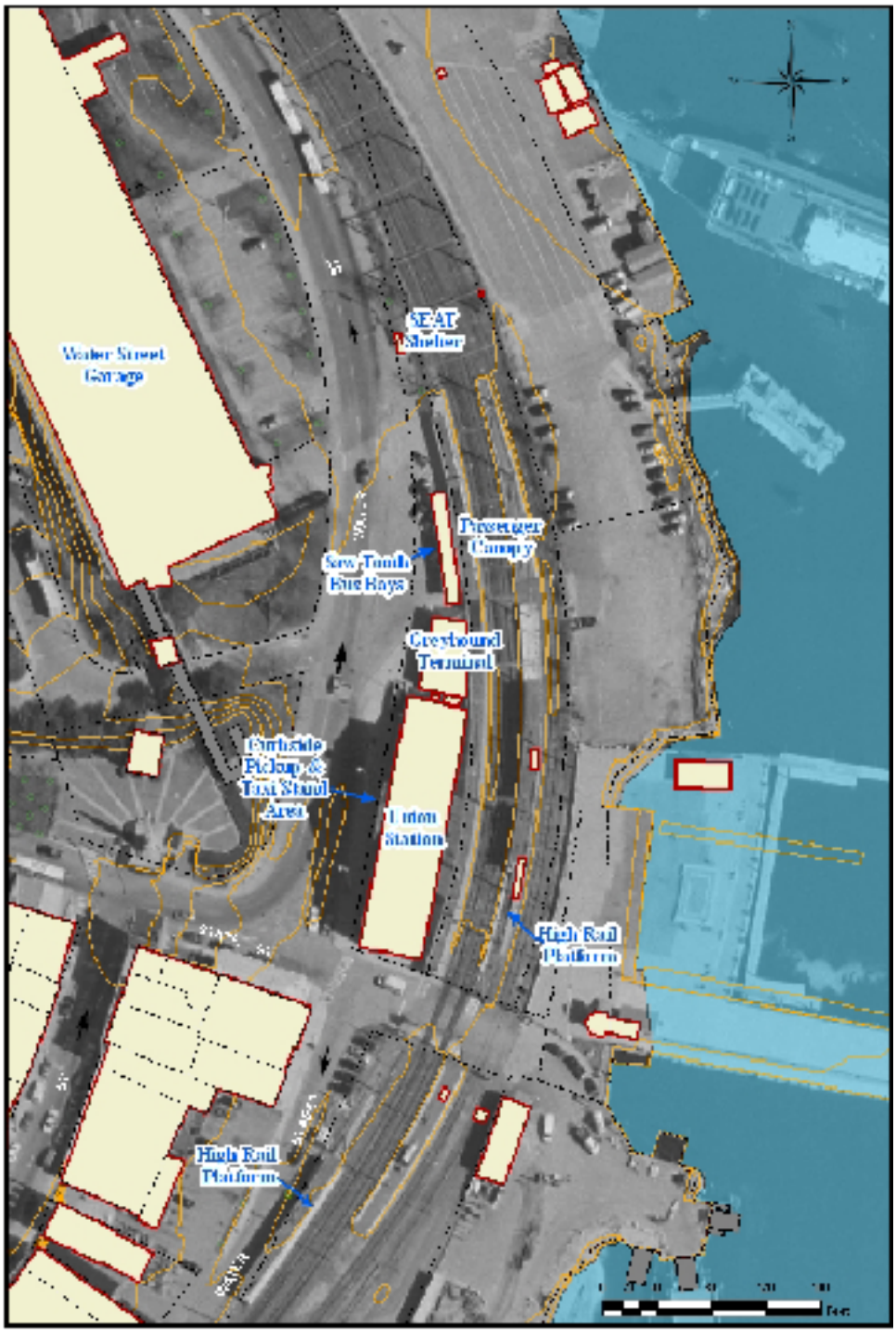


Figure 2-8: Front View of Union Station facing Water Street



Figure 2-9: Rear View of Union Station Building and Railroad Platform Looking North



Figure 2-10: Union Station Lobby



Figure 2-11: Union Station Ticketing Office



The second and third floors of the building have been used for office space but currently about 80% of the square footage in the building excluding the lobby is vacant. The second and third floors have been partially remodeled with sheet rock walls and ceilings. There is elevator access to the upper levels.

The condition of the building was inspected and it was noted that the exterior of the three-level, circa 1888, structure appears to be in reasonably good condition having experienced renovations within the last ten years. The only exception being that the glass canopy in the rear of the building is missing several panels. The roof was replaced in 2002.

A survey of ADA compliance at Union Station was conducted during the week of December 22, 2008. The full survey of the Union Station is attached as Appendix B. The areas of non-compliance include the height of the mirrors in both restrooms and the lack of handicapped employee parking, an accessible route to and from existing employee parking to the building, and appropriate signage for the parking (see Figure 2-12).

Figure 2-12: Women's Bathroom at Union Station Showing Non-ADA Compliant Mirror Height



Railroad Tracks and Platforms at Union Station

There are three sets of railroad tracks located to the rear of the building. The two sets of railroad tracks located closest to the building are for passenger service, primarily Amtrak Northeast Corridor service that operates between Boston and Washington. Trains on these tracks are powered through an overhead catenary. The third set of railroad tracks located to the east of the others is for freight service. The freight track does not have a catenary for electric power. The freight track joins the center track about 800 feet

south of State Street. There is a crossover to the center track about 1,000 north of State Street. North of that point, the freight track diverges and becomes the New England Central Railroad line to Massachusetts and Vermont.

There are paved, passenger boarding "platforms" on both sides of the pair of passenger rail tracks with metal canopies providing shelter for passengers. Both the northbound and southbound platforms extend on both sides of State Street (which is about 40 feet wide). Each has a portion that is at-grade and a portion that is a high-level platform designed to offer level boarding for the Acela Express. According to the station owners, the existing platforms are adequate for the Acela Express.

The at-grade platform for the southbound track, closest to the station building, begins at a point about 420 feet north of State Street (about 150 feet north of the station building) and extends along the back of the station building to State Street at ground level. The section north of the station extends out and blends into the intercity bus loading area and the sidewalk on Water Street (see Figure 3-7 in Section 3.2.). A canopy extends over the entire length of the rail platform north of State Street. A glass extension of the canopy provides covered access to the rear entrances to the station building. Currently, there are some glass panels missing (see Figure 2-13 and Figure 2-14.) Stairways and ramps provide access to the station (see Figure 2-13, Figure 2-14 and Figure 2-15).

The platform for the northbound track lies between the northbound track and the freight track. A low-level platform begins at a point about 140 feet south of State Street and extends across the street to a point 90 feet north of State Street where a high-level platform extends northward for an additional 200 feet (see Figure 2-7and Figure 2-16.) Beyond this point there is an abandoned section of low-level platform that is not accessible. The northbound platform south of State Street contains a double-length standard bus shelter but otherwise lacks cover. North of State Street, approximately 130 feet of the high-level northbound platform is covered.

Both the northbound and southbound high-level platforms are accessed by a ramp and a stairway at only one end (see Figure 2-16 and Figure 2-17).

There is a gap in the southbound platform south of State Street then an additional canopied high-level platform begins at a point 100 feet south of the State Street crossing and extends southward for approximately 120 feet (see Figure 2-18).

The platform paving and the paving in the surrounding areas is generally in good condition as are the canopied waiting/boarding areas. Lighting could be enhanced through supplemental low level lighting.

Figure 2-13: View of Southbound Platform and Rear of Union Station Showing Missing Panels



Figure 2-14: Stairway Entrances from Southbound Platform to the Rear of Union Station



Figure 2-15: Handicapped Access to the Rear of Union Station at the Low Level Southbound Platform North of State Street



Figure 2-16: High Level Northbound Platform at Union Station North of State Street



Figure 2-17: High Level Southbound Platform at Union Station South of State Street



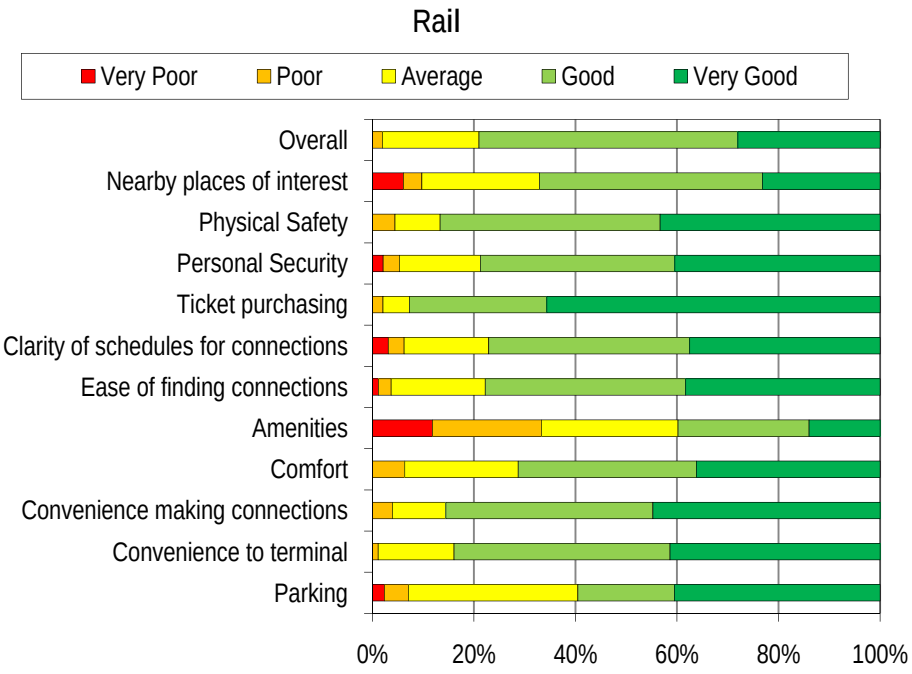
Figure 2-18: View of High Level Platform on the South Side of State Street from Waterfront Park



User Ratings of Conditions at the Rail Station

Surveys of rail users at Union Station were conducted on a Thursday and Saturday in August 2008 and yielded a total of 107 responses. The survey asked the respondents to rate the facilities at the terminal locations based on a list of criteria on a scale from 1 to 5 where 1 was very poor, 2 was poor, 3 was average, 4 was good and 5 was very good. The results are shown in the Figure 2-19. A stacked bar is used to represent the range of responses (as a percent) for each characteristic.

Figure 2-19: Ratings of Facilities by Rail Survey Respondents



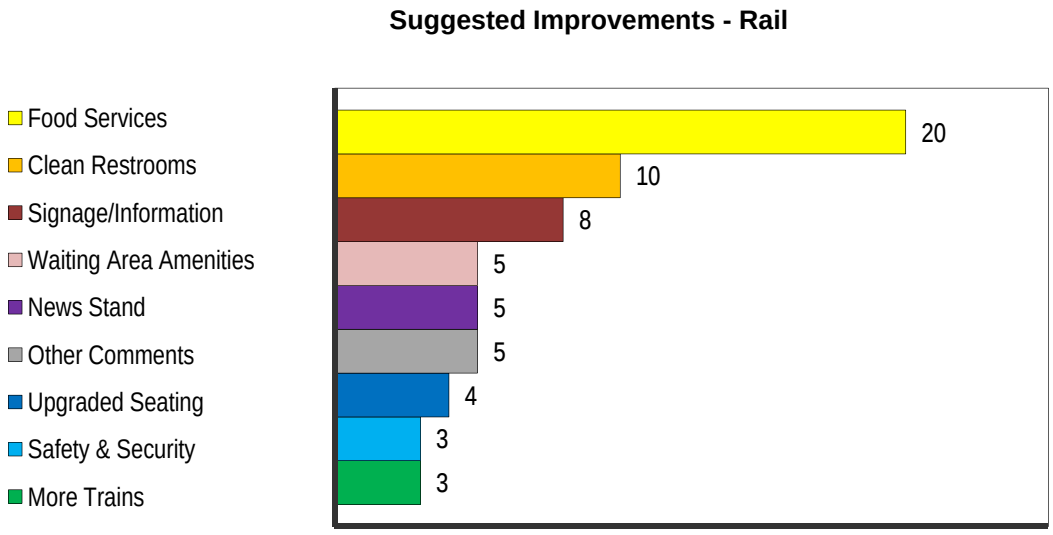
As can be seen in the figure, the majority of respondents rated the facility as good or very good. There were some who rated certain characteristics as poor or very poor. The most notable characteristic with poor or very poor ratings was amenities. Note that only 13% of rail users responding to the survey actually used the parking but some of those who did not use the parking provided a rating for parking. The parking lot users provided a somewhat better rating of the parking, perhaps suggesting that the impression or prior experience with the parking influenced the access mode choice of some of the rail users. Table 2-1shows the percentage who rated the characteristics as poor or very poor.

Rail survey respondents were asked to identify suggested improvements. The Figure 2-20 shows the results. Sixty three suggestions were made. Twenty of the 63 responses were for food services. The next most popular suggestions were clean restrooms (10 responses) and signage/information (8 responses).

Table 2-1: Percentage of Rail Survey Respondents Giving a Rating of Poor or Very Poor

Amenities at the terminal/station (food services, restrooms, news stand)	33%
Nearby places of interest	10%
Parking	7%
Comfort at the terminal/station (seating, climate control)	6%
Clearly-marked schedules for all transportation modes	6%
Personal Security at the terminal/station	5%
Convenience making connections with the transit service	4%
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	4%
Physical Safety at the terminal/station (and while making connections)	4%
Purchasing tickets	2%
Overall Rating	2%
Convenience getting to/from the terminal/station	1%

Figure 2-20: Improvements Suggested by Rail Survey Respondents



2.2.2. The Greyhound Bus Terminal

Physical Conditions

The Greyhound Bus Terminal is located north of the original Union Station in a 1,144-square foot, one story, brick addition to the station building which was built in 1890. The exterior appears to be in reasonably good condition (see

Figure 2-21). The interior contains an area for ticket sales and general information, a freight storage area, a checkout room, passenger restrooms, an office/storeroom and a small indoor waiting area with seating for about 25 people. There is no outdoor seating and some riders have been observed sitting on the ground (see

Figure 2-22). There is a street-level entrance facing Water Street. A rear entrance from the rail platform is closed to the public. A Greyhound schedule is posted inside the building. SEAT paper schedules were also available inside the building.

Figure 2-21: Greyhound Bus Terminal Building



Figure 2-22: Passenger Seated on the Ground outside the Greyhound Bus Terminal Building



Outside, there are two, approximately 45-foot intercity bus bays and two shorter bays to allow other vehicles to park next to the terminal building. There is a dumpster in one of the shorter bays. The bays extend directly off Water Street at about a 30 degree angle. Buses sometime park parallel to the curb instead of using the angle bays; if they use the angled bays, they sometimes need to back out a short distance into Water Street to depart from the terminal. This is not optimal and it is preferable to avoid this for safety reasons.

The angled bus bays cause the wide sidewalk in front of the main station building to narrow in front of the bus terminal building and the sidewalk essentially merges with the rail platform north of the building. At this point adjacent to the bus bays the rail platform canopy is widened to provide shelter for intercity bus riders (see Figure 2-23). Beyond the four bus bays the sidewalk/platform widens again to about 50 feet where a crosswalk across Water Street provides pedestrian access to the Water Street Garage. Beyond the crosswalk the sidewalk becomes the SEAT bus stop.

The bus canopy and the bus waiting areas could be enhanced and upgraded by adding low level lighting, additional architectural treatment and signage.

A survey of ADA compliance at Greyhound Bus Terminal was conducted during the week of December 22, 2008. The full survey of the bus terminal is attached as Appendix B. The areas of non-compliance include the height of the customer service counter, the height of the towel dispensers in both restrooms and the employee access route to the workroom (see Figure 2-24).

Figure 2-23: Combined Rail/Bus Platform and Canopy



Figure 2-24: Greyhound Terminal Women's Bathroom
Showing Non-ADA Compliant Dispenser Height



User Ratings of Conditions at the Greyhound Bus Terminal

Surveys of Greyhound users conducted in August 2008 yielded only 18 responses. *Note this is a very small sample and caution should be exercised in interpreting results.* The survey asked the respondents to rate the facilities at the terminal locations based on a list of criteria on a scale from 1 to 5 where 1 was very poor, 2 was poor, 3 was average, 4 was good and 5 was very good. The results are shown in Figure 2-25. A stacked bar is used to represent the range of responses (as a percent) for each characteristic.

As can be seen in the figure, the majority of respondents rated the facility as good to very good. However, there were a number of respondents giving ratings of poor to very poor, primarily to amenities, comfort and schedules for connections. Note that only two respondents actually used the parking on this trip but that others did rate the parking characteristics; the two respondents that used the parking rated were not dissatisfied. The dissatisfaction registered with parking was from those who used other means of access. Table 2-2 below shows the percentage of the 18 respondents who gave ratings of poor or very poor sorted by the percentage.

Figure 2-25: Ratings of Facilities by Greyhound Bus Survey Respondents

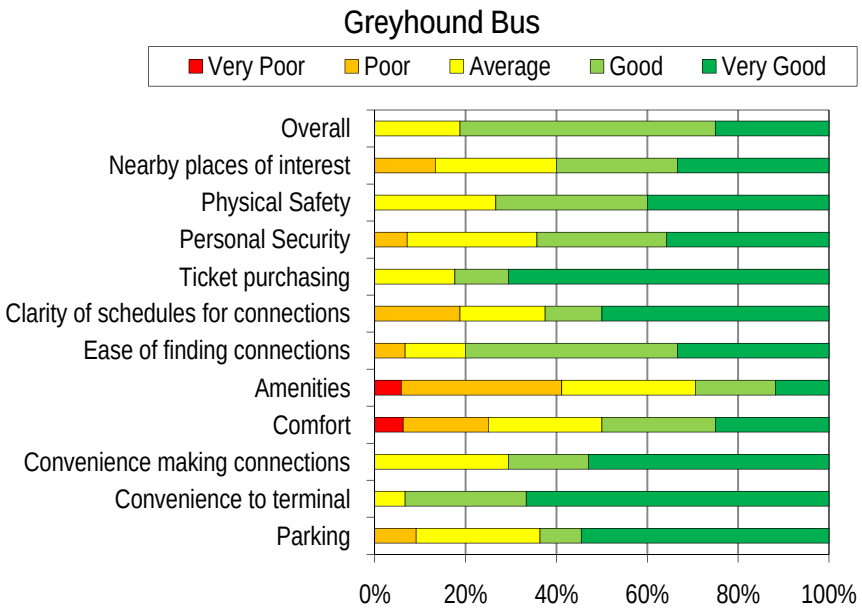


Table 2-2: Percentage of Greyhound Bus Survey Respondents Giving a Rating of Poor or Very Poor

Amenities at the terminal/station (food services, restrooms, newsstand)	41%
Comfort at the terminal/station (seating, climate control)	25%
Clearly-marked schedules for all transportation modes	19%
Nearby places of interest	13%
Parking	9%
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	7%
Personal Security at the terminal/station	7%
Convenience getting to/from the terminal/station	0%
Convenience making connections with the transit service	0%
Purchasing tickets	0%
Physical Safety at the terminal/station (and while making connections)	0%
Overall	0%

Greyhound respondents were asked to identify the most improvement needed to the facilities (as an open-ended question). The number of Greyhound responses was very small but a better waiting area was the most frequently cited improvement among these responses.

2.2.3. South East Area Transit (SEAT) Transfer Point

Physical Conditions

South East Area Transit (SEAT) provides local and regional bus service in the southeastern region of Connecticut. SEAT operates an on-street bus stop serving all New London routes on Water Street just north of the intercity bus facility. Water Street widens to accommodate parked buses, in addition to the two lanes of traffic, beginning at the northern end of both the Greyhound Bus Terminal and the southbound rail platform. Passengers use the sidewalk sandwiched between Water Street and the fencing along the

railroad tracks to wait for buses and to transfer between buses. Near the Greyhound Bus Terminal, the sidewalk is over 20 feet wide. It extends northward along Water Street for approximately 300 feet, narrowing as it goes along. At the point where the sidewalk ends, there is a sign prohibiting pedestrians beyond that point and Water Street becomes three lanes with no shoulder or parking lane. SEAT can park seven to eight buses at a time along Water Street.

The SEAT bus shelter, approximately 50 feet north of the end of the rail platform, 220 feet from the Greyhound Bus Terminal building and 380 feet from the entrance to the main Union Station building entrance, is a typical steel and plexi-glass bus shelter structure (see Figure 2-26). Although limited in capacity, the structure is in fair condition and provides some protection for several people from the weather. There are also four wooden benches outside of the shelter, two on either side. At least one bench is broken (see Figure 2-27). The fence separating passengers from the tracks is bent and broken in places. (Note that at the conclusion of this study, the City of New London was in the process of replacing the old cyclone fence with new steel post fencing). Signage, SEAT bus informational routing maps and other important wayfinding information is lacking (see Figure 2-28). High level traditional street lighting is provided via cobra head luminaries. There is no low level pedestrian lighting.

The bus stop is ADA compliant, based on a review of the conditions in December 2008.

Figure 2-26: SEAT Shelter on Water Street



Figure 2-27 : Broken Bench at SEAT Shelter



Figure 2-28: Missing Schedule at SEAT Shelter



User Ratings of Conditions at the SEAT Bus Stop

Surveys of SEAT users conducted in August 2008 yielded 85 responses. The survey asked the respondents to rate the facilities at the terminal locations based on a list of criteria on a scale from 1 to 5 where 1 was very poor, 2 was poor, 3 was average, 4 was good and 5 was very good. The results are shown in Figure 2-29. A stacked bar is used to represent the range of responses (as a percent) for each characteristic.

As is evident in the figure, the majority of riders rated the facility characteristics as good. Nevertheless, there were a significant number of riders rating certain attributes as poor or very poor, as summarized in Table 2-3 , sorted by the percentages. The lowest rating was given to amenities at the bus stop followed by comfort. Note that only one SEAT respondent had used the parking facility even though several provided responses about parking; those who responded rated parking very good.

SEAT bus survey respondents were asked to identify the most improvement that needed to be made to the facilities (asked as an open-ended question) and were asked to offer general comments. The following figure shows the results, grouping responses into categories. Eighty two improvement suggestions were made. Forty eight of the 82 responses were about more routes and buses, which is a service rather than facility issue. As can be seen in the figure, only a few comments were related to facilities. Nine suggestions (the next largest number) were about better waiting facilities.

Figure 2-29: Ratings of Facilities by SEAT Bus Survey Respondents

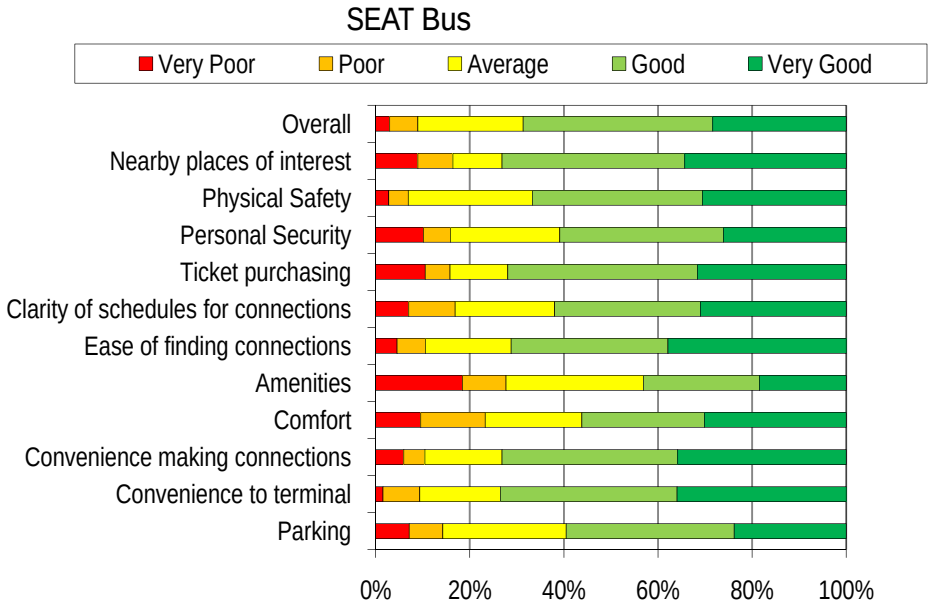
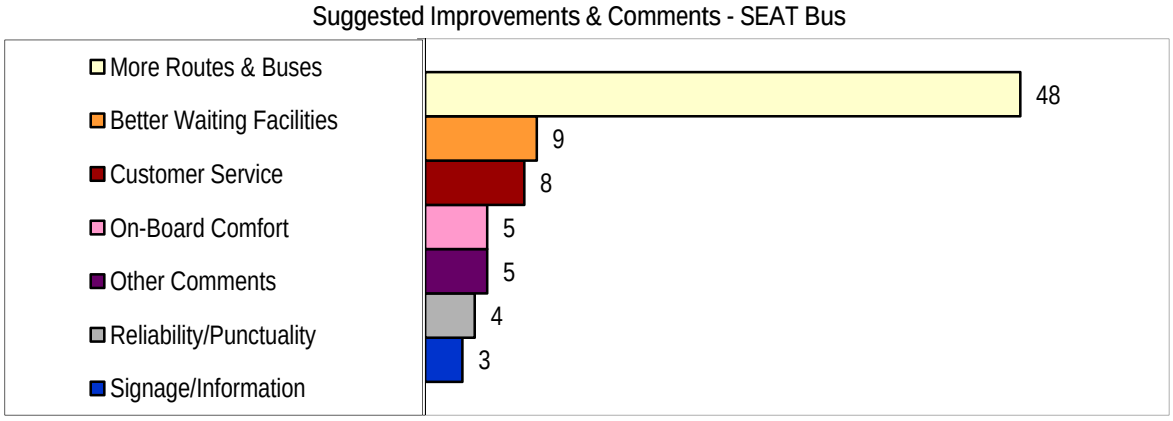


Table 2-3: Percentage of SEAT Bus Survey Respondents Giving a Rating of Poor or Very Poor

Amenities at the terminal/station (food services, restrooms, newsstand)	28%
Comfort at the terminal/station (seating, climate control)	23%
Clearly-marked schedules for all transportation modes	17%
Purchasing tickets	16%
Personal security at the terminal/station	16%
Nearby places of interest	16%
Parking	14%
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	11%
Convenience making connections with the transit service	2.2.4. 10%
Convenience getting to/from the terminal/station	9%
Overall	9%
Physical safety at the terminal/station (and while making connections)	7%

Figure 2-30: Improvements Suggested by SEAT Bus Survey Respondents



2.2.5. Taxi Stand

Taxi service is provided by a number of operators. The taxi stand is located on Water Street at the front entrance to Union Station (see Figure 2-31). There is space for approximately eight taxis although the curbside space in front of the building is also used by the SEAT bus to Foxwoods and for passenger pick-up and drop-off and they sometimes interfere with one other. The Union Station owners identified conflicts when buses stop in front of the station, when taxis park (stand) there to wait for business, and when automobiles are also there to either drop-off or pick-up passengers.

Figure 2-31: Taxi Stand at Union Station



2.3 Ferry Facilities

2.3.1. Cross Sound Ferry

Physical Conditions

The Cross Sound Ferry facilities are located at 2 Water Street (see Figure 2-32). The 5.34 acre parcel is located on the east side of Water Street and is bounded on the north by property owned by the Yankee Gas Services Company, by the City Pier Park to the south, the Thames River to the east and the railroad tracks and Water Street to the west. Vehicular access is provided via an at-grade railroad crossing at Governor Winthrop Boulevard onto Ferry Street. Emergency vehicle and pedestrian access is possible from State Street through the City Pier Park. The Cross Sound Ferry facilities are owned and operated by Cross Sound Ferry Services Inc.

The facilities include:

- A 22,048 square foot, two story, brick, office/warehouse building built in 1900
- A 2,350 square foot, single story, brick, warehouse building built in 1900
- A 20,000 square foot, steel, warehouse building built in 1977 with adjacent repair facilities
- A 7,000 square foot, two story, wood frame, handicapped accessible, office/ticket/restroom building built in 1988 (see Figure 2-33), a 560 square foot, single story wood frame, snack stand building built in 1990 (Figure 2-34) and several small, wood frame out buildings
- 130 parking spaces for ferry customers and limited parking for employees
- Four auto ferry slips
- One permanent passenger ferry slip
- One temporary passenger ferry slip

In addition, Cross Sound Ferry leases a 2,500 square foot, single story, concrete block building built in 1964 on the Yankee Gas Services Company property to the north. Cross Sound Ferry also leases an unpaved .49 acre site to the south of its site, owned by the City of New London, which Cross Sound Ferry leases and uses for parking.

Except for the operational facilities and a small 'quick-food' facility, the entire 'public' area is paved and, for the most part, appears to be in generally good condition. The four auto ferry docking access ramps have also been recently rebuilt and appear in very good condition (see Figure 2-35, Figure 2-36 and Figure 2-37).

Vehicular access to the site is provided by the City-owned Ferry Street which is accessible by crossing the railroad tracks at the intersection of Water Street and Governor Winthrop Boulevard. Emergency vehicle access is provided via a 20-foot wide easement running south from the ferry site across City Pier Park onto State Street.

Figure 2-32: Fishers Island Ferry Terminal Entrance Ramp Grade

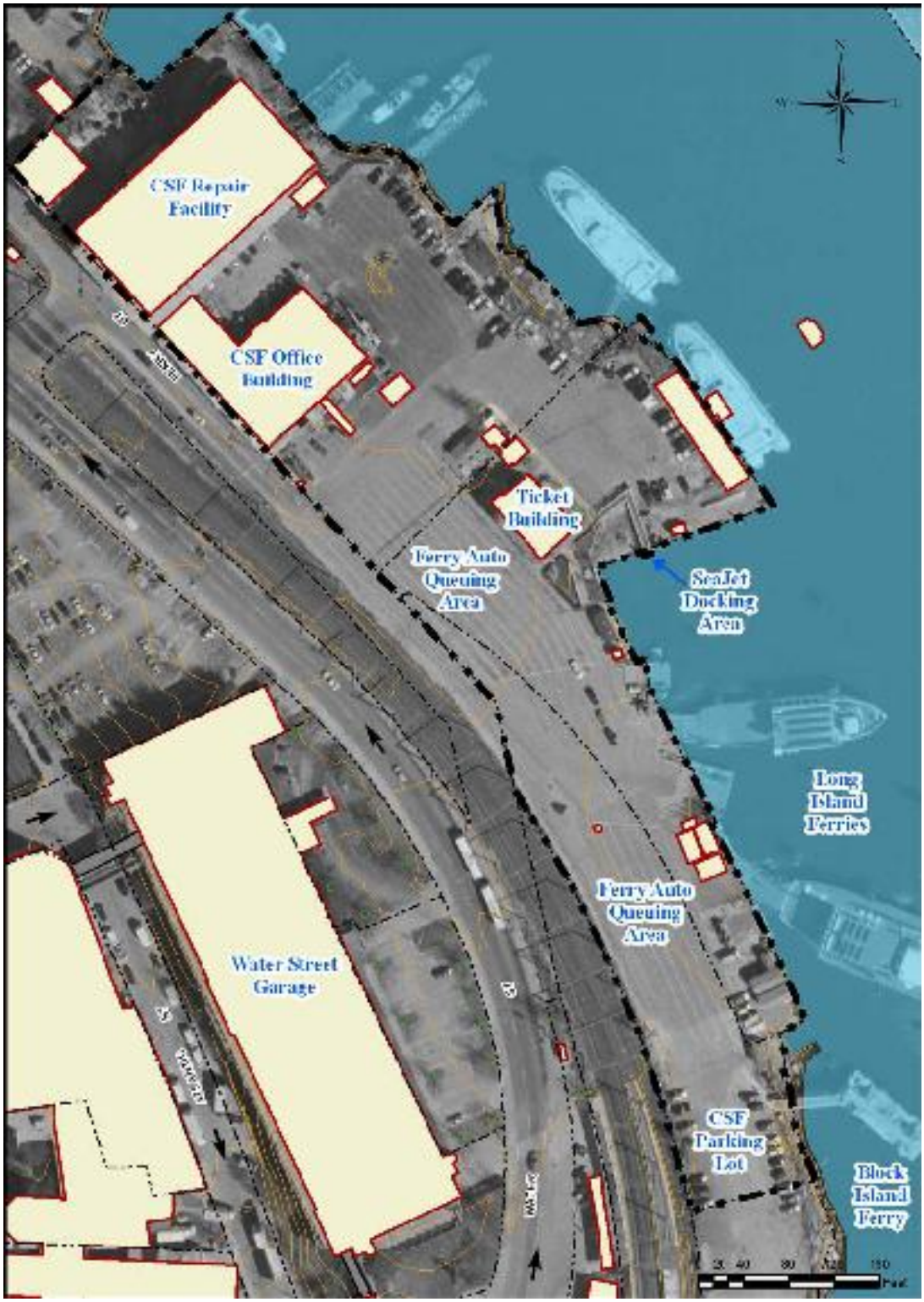


Figure 2-33: Cross Sound Ferry Ticket Building



Figure 2-34: Cross Sound Deli Snack Stand



Figure 2-35: Cross Sound Ferry Auto Ferry to Orient Point, NY





Figure 2-36: Sea Jet Dock



Figure 2-37: Block Island Dock



Pedestrian access to the Cross Sound Ferry facilities is from two points. The first access point is via the existing sidewalk on the south side of Governor Winthrop Boulevard. There, a crosswalk provides access across Water Street but pedestrians must then cross Ferry Street to reach a sidewalk leading into the ferry property. The existing Ferry Street sidewalk needs improvement and there are some curbs without handicap ramps (e.g., the southwest corner of Water Street and Governor Winthrop Boulevard). To reach Governor Winthrop Boulevard from the Water Street Garage, pedestrians can use the sidewalk along the west side of Water Street. Entrance from the Union Station (east) side of Water Street is discouraged as the paved sidewalk ends and narrows to a dirt path (this path is marked with a "no pedestrians" sign). The second pedestrian access point is from State Street across the railroad tracks, north through the City Pier Park and through the unpaved city-owned lot onto the ferry site. Upon entering the site from either point, pedestrians must cross a wide expanse of pavement to reach either of the two ticket buildings, without any clear markings or signage to show the way.

A survey of ADA compliance at the Cross Sound Ferry site was conducted during the week of December 22, 2008. The full survey of the site is contained in Appendix B. The areas of non-compliance include the lack of handicapped accessible routes to and from the building entrance and the lack of designated handicapped parking spaces. Other issues include the height of the customer service counter in the ticket building, the height of the mirrors in both restrooms and the lack of handrails on the handicapped ramp to the ticket building (see Figure 2-38).

Figure 2-38: Cross Sound Ferry Terminal Counter



User Ratings of Conditions at the Cross Sound Ferry Terminal

Surveys of Cross Sound Ferry users conducted in August 2008 yielded 259 responses including 126 on the Block Island Express Ferry (passenger only ferry), 117 on the Long Island Orient Point (auto) Ferry and 16 on the Sea Jet high speed passenger ferry to Long Island. The survey asked the respondents to rate the

facilities at the terminal locations based on a list of criteria on a scale from 1 to 5 where 1 was very poor, 2 was poor, 3 was average, 4 was good and 5 was very good. The results are shown in the following figures for each service separately. *Caution should be exercised in drawing conclusions from the small Sea Jet Ferry sample.*

Block Island Express Ferry User Ratings

As shown in Figure 2-39 below, most Block Island Express ferry respondents rate the facilities as good or very good. There were a significant number of respondents who rated certain characteristics as poor or very poor. These characteristics included amenities, comfort, nearby places of interest and parking. Note that Block Island Express riders do typically park in New London before boarding the ferry at either the Cross Sound Ferry lot, the Water Street Garage or the Julian lot. Note also that those who did park rated the parking facilities better than those who used another means of access, perhaps suggested that their impression or past experience had some impact on the their choice of access mode. Table 2-4 below shows the percentage rated each characteristic as poor or very poor, sorted by percentage.

Figure 2-39: Ratings of Facilities by Block Island Ferry Survey Respondents

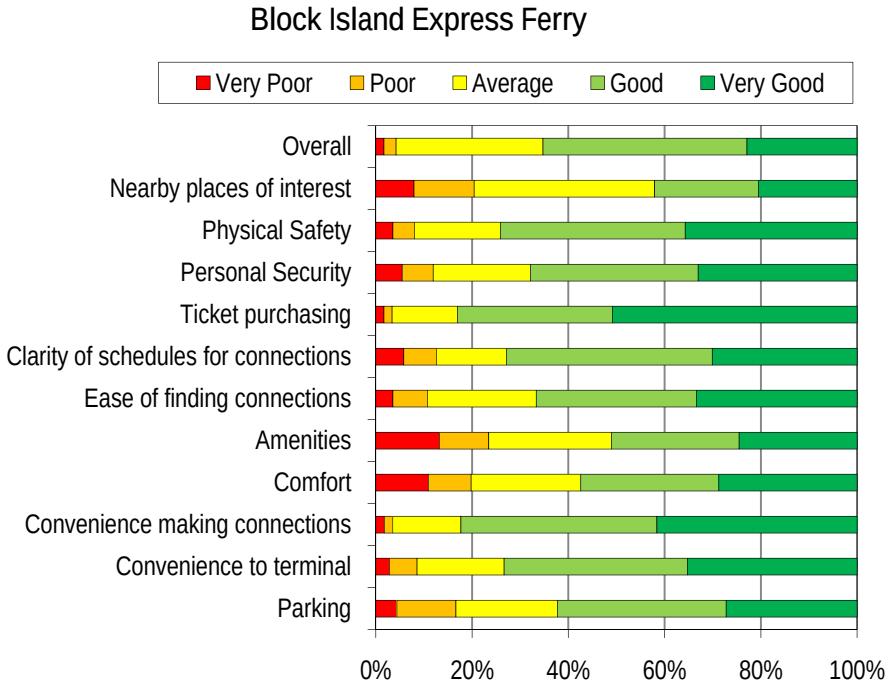


Table 2-4: Percentage of Block Island Ferry Survey Respondents Giving a Rating of Poor or Very Poor

Amenities at the terminal/station (food services, restrooms, newsstand)	23%
Nearby places of interest	20%
Comfort at the terminal/station (seating, climate control)	20%
Parking	17%
Clearly-marked schedules for all transportation modes	13%
Personal Security at the terminal/station	12%
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	11%
Convenience getting to/from the terminal/station	9%
Physical Safety at the terminal/station (and while making connections)	8%
Overall	4%
Convenience making connections with the transit service	4%
Purchasing tickets	3%

Long Island Auto Ferry User Ratings

Figure 2-40 below shows the ratings of facilities by the Long Island Ferry survey respondents. Again, the majority of respondents rated the facilities as good or very good; however, there was a small number of respondents who rated certain characteristics as poor or very poor. The characteristics most frequently cited as poor or very poor were amenities and parking. Note that parking may not be an important factor for many auto ferry users since many take their cars on the ferry and few of those who park would park on the New London side. Those who used the parking in New London (about one in five) were somewhat less likely to rate the parking as poor or very poor than those that did not use it (the vast majority). Table 2-5 below shows the percentage rating each characteristic as poor or very poor sorted by the percentage.

Figure 2-40: Ratings of Amenities by Long Island Ferry Survey Respondents

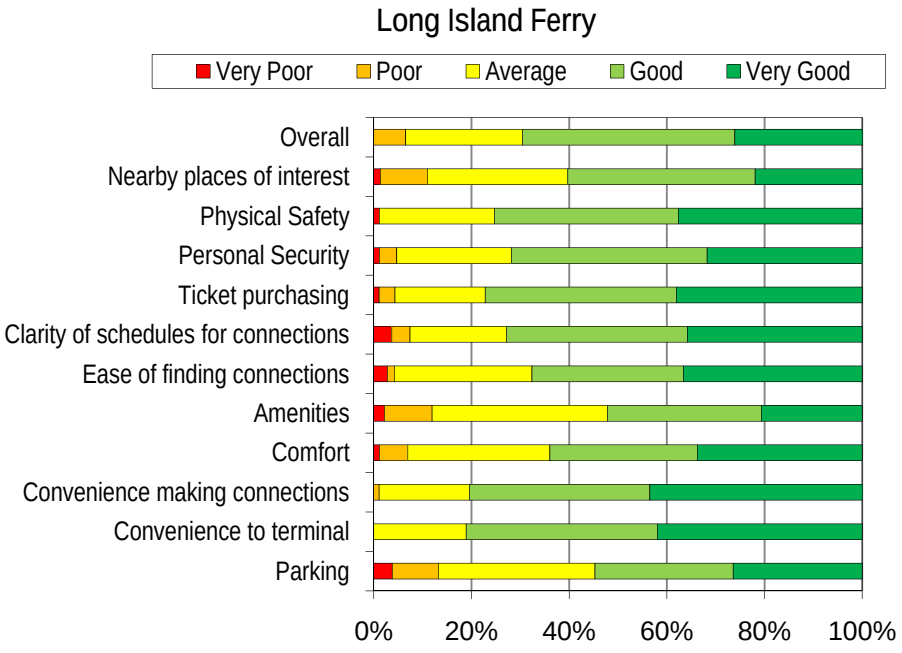


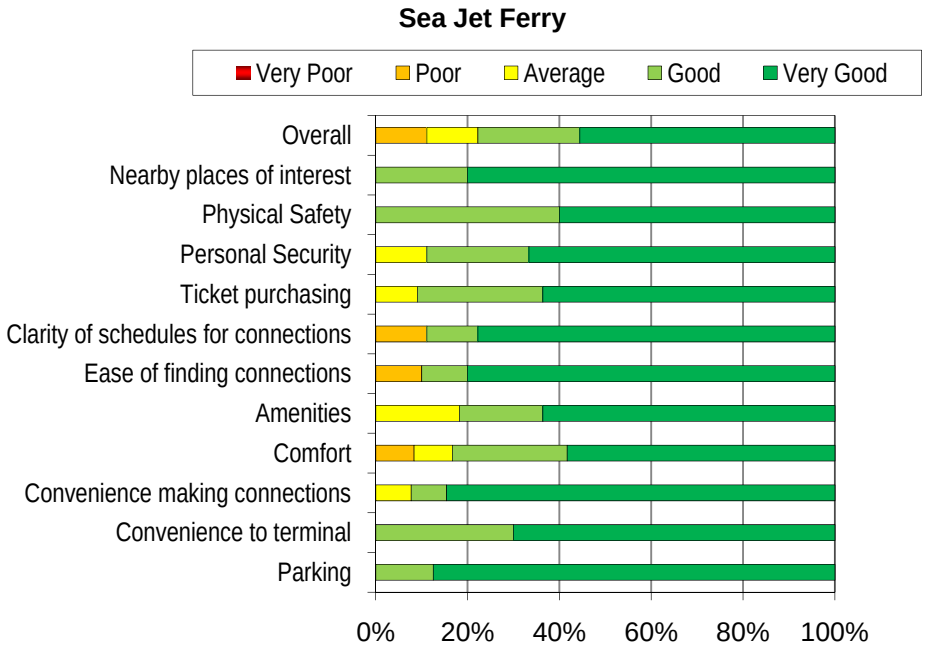
Table 2-5: Percentage of Long Island Ferry Survey Respondents Giving a Rating of Poor or Very Poor

Parking	13%
Amenities at the terminal/station (food services, restrooms, newsstand)	12%
Nearby places of interest	11%
Comfort at the terminal/station (seating, climate control)	7%
Clearly-marked schedules for all transportation modes	7%
Overall	7%
Personal Security at the terminal/station	5%
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	4%
Purchasing tickets	4%
Convenience making connections with the transit service	1%
Physical Safety at the terminal/station (and while making connections)	1%
Convenience getting to/from the terminal/station	0%

Sea Jet Passenger Ferry User Ratings

Figure 2-41 shows the ratings of facilities by the Sea Jet Survey respondents. Note again that there were few responses in this sample and it would be difficult to attribute any statistical validity to the results in terms of representing the universe of Sea Jet riders. The results below are provided for informational purposes only. Again most rated the facilities as good or very good and one response rating certain characteristics as poor was obtained. Note that none of the Sea Jet users actually responding used the parking in New London even though some provided a rating for this characteristic.

Figure 2-41: Ratings of Facilities by Sea Jet Survey Respondents

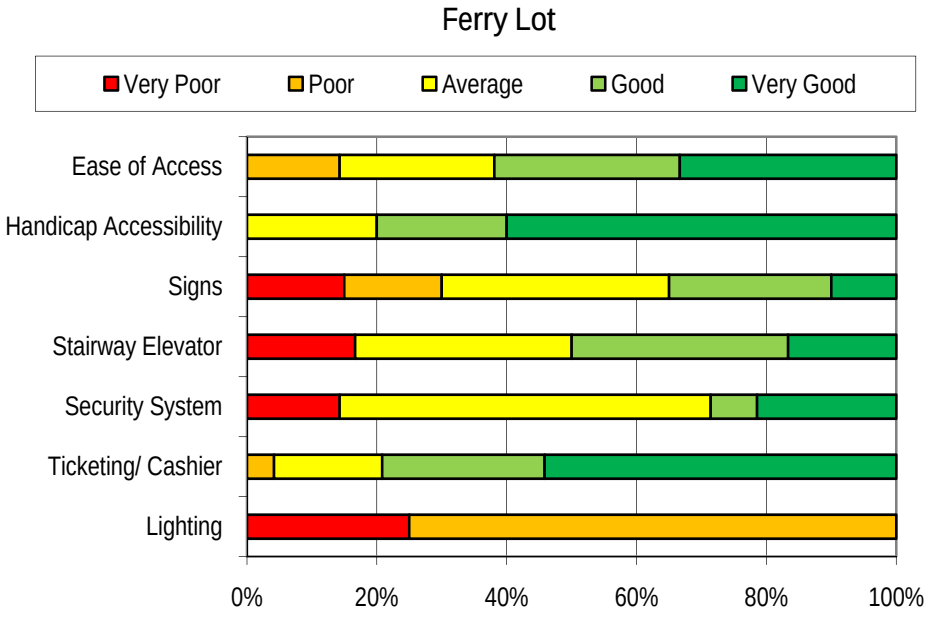


User Ratings of Conditions at the Cross Sound Ferry Parking Lot

Surveys of the Cross Sound Ferry parking facility users conducted on a Thursday and Saturday in August 2008 yielded a total of 24 responses. Respondents were asked to rate the condition of the parking facility using a scale of 1-5, where 5 is very good, 4 is good, 3 is average, 2 is poor and 1 is very poor.

Figure 2-42 shows the ratings of conditions at the Cross Sound Ferry Lot. Overall, this lot exhibited the least dissatisfaction comparing across facilities. However, lighting seemed to be a major problem in that no one was satisfied with this characteristic; all rated lighting as either "Poor" or "Very Poor." The characteristic with the next most dissatisfaction was Signs followed by Stairway/Elevator and Security System. It is not clear what respondents were referring to with the response to Stairway/Elevator since this is a surface parking lot.

Figure 2-42: Ratings of Conditions at the Cross Sound Ferry Lot



2.3.2. Fishers Island Ferry

The Fishers Island Ferry facility is located at the eastern end of State Street. The 0.78 acre parcel is bounded to the north by the City Pier, to the west by Waterfront Park and to south and east by the Thames River. This entire pier was recently rebuilt and appears in very good condition. The Fishers Island Ferry facility is owned and operated by the Town of Southold, New York.

The facilities include a 6,210 square foot, two story, concrete, cinderblock, handicapped accessible, building built in 2005 (see Figure 2-43). The building contains a ticket counter, rest rooms, and office space, and storage and maintenance areas. The building appears to be in very good condition.

There is a large paved area providing for queuing of vehicles as well as a limited number of parking spaces for staff and area for drop-off and pick-up (but not parking) of customers. There are two auto ferry slips.

Vehicular access to the site is provided by a driveway into the site from State Street. Pedestrians can access the site from State Street, City Pier and Waterfront Park.

A survey of ADA compliance at Fishers Island Ferry Terminal was conducted during the week of December 22, 2008. The full survey of the ferry terminal is included in Appendix B. The areas of non-compliance include the lack of a passenger loading zone and a change in sidewalk elevation at the entrance. Other issues include the height of the customer service counter and the fact that the entrance ramp grade is about 1% too steep and lacks handrails (see Figure 2-44).

Figure 2-43: Fishers Island Ferry Terminal



Figure 2-44: Fishers Island Ferry Terminal Entrance Ramp Grade



2.4 Parking Facilities

2.4.1. Water Street Garage

Physical Conditions

The Water Street Garage, located at 160 Water Street is owned by the City of New London and is operated by Pro-Park.

The 2.19 acre garage site is located on the west side of Water Street and is bounded to the north by the Julian surface parking lot, to the south by the Parade site and to the west by Atlantic Street (see Figure 2-45). There are two parcels located between the garage and Water Street, to the northeast is the 0.30 acre site of a former drive-up bank structure now owned by the City. To the southeast is a 0.39 acre paved parking area owned by the City of New London Redevelopment Agency (per the City Assessor records).

The garage is a 286,500+/- square foot (roughly123 feet wide by 477 feet long), five-level, concrete parking structure with 975 spaces and a 675 square foot office on the first floor. The two upper levels were added in the mid-1980s. The facility is a two-bay camelback helix, with one-way traffic flow. The structure is composed of 9-foot wide precast concrete, single tee deck elements with a 3.5 inch thick cast-in-place concrete topping (see Figure 2-46). Exterior spandrel beams typically span 27 feet between support columns, although the tees are supported independently on columns spaced at 9 feet on center. [2]

The garage has two main vehicular points of access, one from Atlantic Street at the northwest corner (accessing the second level) and one (a double entry) from Water Street on the first level (see Figure 2-47). The main exit location is at the northeast corner onto Water Street, however, the second level Atlantic Street entry has been converted into a reversible entry/exit area.

Pedestrian access to the garage is from the ground floor on Water Street and from State Street (the Parade) via a pedestrian bridge which is being removed as part of the Parade Project. There is also access to Atlantic Street at grade and across Atlantic Street via a second pedestrian bridge to the READCO property. (See Figure 2-49 and Figure 2-50.) Pedestrian access between levels is provided by four stair towers located at the northwest, southwest, and southeast corners as well as at the center of the facility. The corner stairways are enclosed and are not exposed to the elements, while the center stairway is only protected by being within the garage footprint.

The garage includes three elevators; however at the time of this study, none of the original elevators were functioning (see Figure 2-51). The original elevator on the northwest corner of the building is being repaired. A new elevator will be installed on the southwest corner of the garage as part of the Parade Project. The existing elevator at the north end of the garage will be repaired; the remaining inoperable elevators are to remain closed.

A survey of ADA compliance at the Water Street Garage was conducted during the week of December 22, 2008. The full survey of the garage is attached as an addendum. Among the key issues are: Twenty handicapped spaces are required by code, including 3 van accessible spaces; however only sixteen

[2] "Condition Appraisal (Reevaluation), Water Street Garage, New London, Connecticut, prepared for the City of New London Office of Development and Planning by Desman Associates, Rocky Hill, Connecticut, Project #40-071117.00-2, October 2007.

handicapped spaces are provided and only 13 of these are in full compliance, none of which are van accessible. Three van accessible spaces should be added along with the appropriate signage. The access aisles, curb ramps and the handrails in the stairwells are not compliant (see Figure 2-52). At the time of the survey, the elevators were not operating, even though one is currently under repair. The employee area lacks a curb ramp which is required for access to the workroom.

Figure 2-45: Water Street Garage

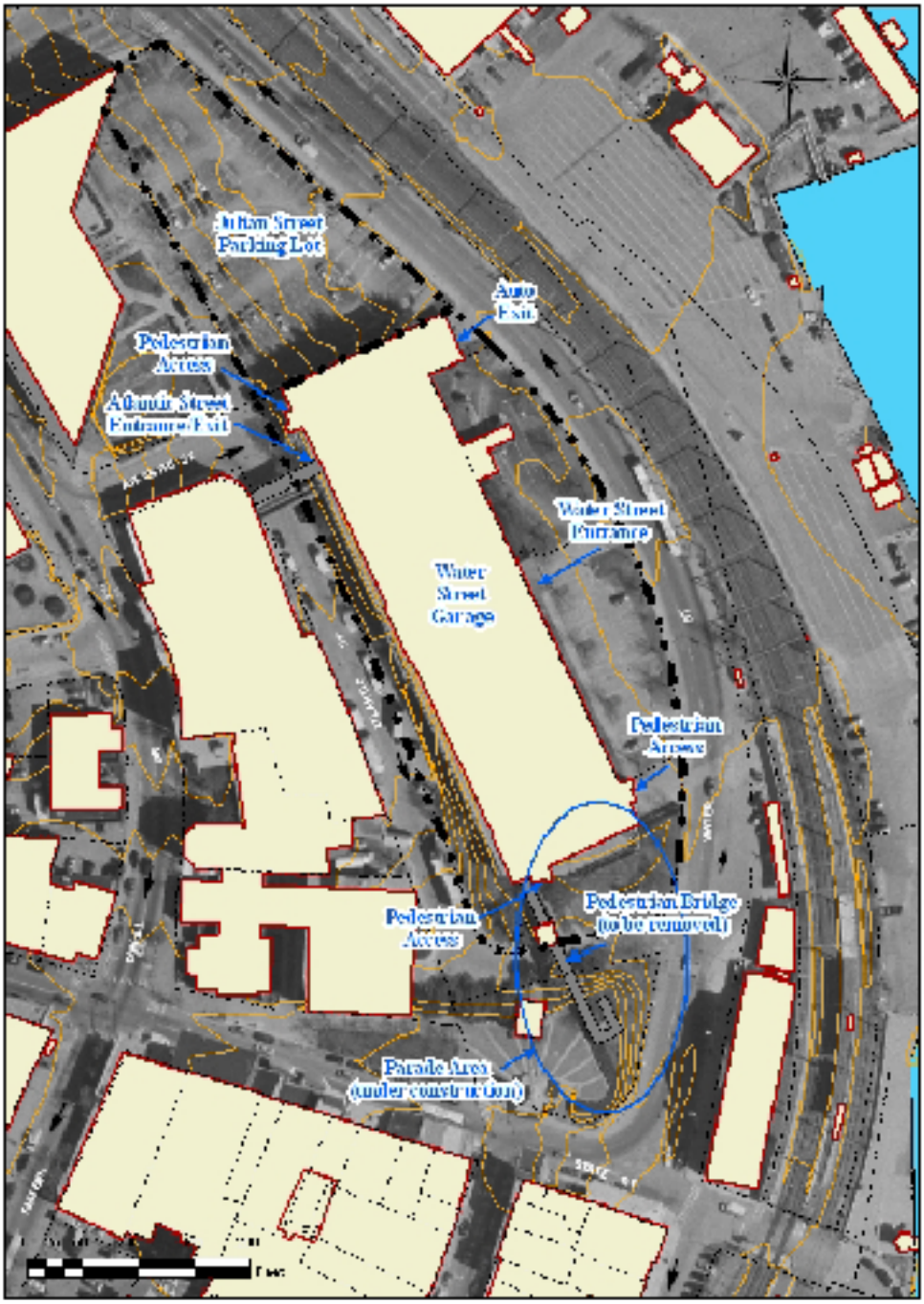


Figure 2-46: Interior View of Water Street Garage



Figure 2-47: Water Street Garage – Water Street Entrance



Figure 2-48: Water Street Garage – Atlantic Street Entrance/Exit



Figure 2-49: Water Street Garage - Rear Pedestrian Entrance



Figure 2-50: Pedestrian Bridge Across Atlantic Street to READCO Building



Figure 2-51: Elevator at Water Street Garage



Figure 2-52: Water Street Garage Pedestrian Walkway



This multi-level concrete structure appears to be in sound condition. However, some spalling of the concrete deck surfaces is evident on certain levels and expansion joints require repairs in a number of locations (see Figure 2-53 and Figure 2-54). Lighting levels could be improved in areas of concentrated pedestrian activity and in general a painting of markings and highlighting of the hardware and amenities would provide a fresh look. The parking survey indicated a lack of security features.

A study of the physical conditions at the Water Street Garage was prepared by Desman Associates for the City's office of Development and Planning in October 2007.[3] The study sought to review existing design documents and drawings; investigate the site; conduct field and laboratory testing; analyze and review assessment data; perform value engineering; and prepare a report.

The key findings of the report were, "The current structural condition of the Water Street Garage is considered to be good, though some conditions still exist that present potential liabilities due to falling debris, trip and fall hazards and water leakage onto patron's vehicles parked within the garage. Steps should be taken to alleviate these conditions to assure the continued safe usage and long-term durability of the Water Street Parking Garage."

The report recommended implementing a five-year, phased repair program beginning in 2008. The program would include the following three phases:

- Priority I Repairs
    - Estimated cost of $1.5 million

[3] Ibid.

    - To be completed in the next 12 to 24 months
    - Work includes: concrete overlay repair, handicapped access repairs, electrical and plumbing repair, elevator repair and replacement, waterproofing repair and painting.
- Priority II Repairs
    - Estimated cost of $330,000
    - To be completed over the next 24 to 48 months
    - Work includes: more concrete overlay repair, electrical and plumbing repair, waterproofing repair and painting.
- Priority III Repairs
    - Estimated cost of $685,000
    - To be completed over the next 48 to 60 months
    - Work includes handicapped access repairs, electrical and plumbing repair and waterproofing repair.

The City of New London issued an RFP during the winter of 2009 for an engineering company to prepare the construction documents for the repairs.

Figure 2-53: Concrete Spalling at Water Street Garage



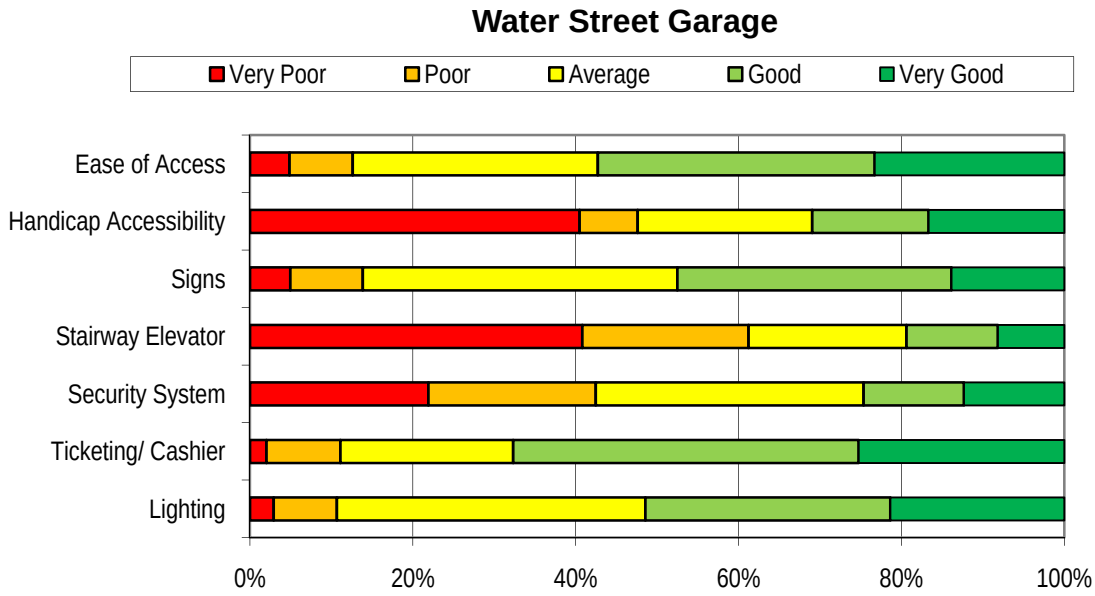
Figure 2-54: Concrete Spalling at Water Street Garage



User Ratings of Conditions at the Water Street Garage

Surveys of the parking facility users conducted on a Thursday and Saturday in August 2008 yielded a total of 106 responses. Figure 2-55 below shows the ratings for the Water Street Garage. A stacked bar is used to represent the range of responses (as a percent) for each characteristic. The greatest dissatisfaction at the Water Street Garage was with the Stairway/Elevator, the Handicap Accessibility and the Security System. Over 40% rated the Stairway/Elevator and Handicap Accessibility as Very Poor. Note that none of the elevators were functioning at the time of the surveys. There was some dissatisfaction expressed with Ease of Access, Signs, Ticketing/Cashier and Lighting by about 10% of respondents.

Figure 2-55: Ratings of Conditions at the Water Street Garage



2.4.2. Governor Winthrop Garage

Physical Conditions

The Governor Winthrop Garage is located at the corner of Governor Winthrop Boulevard and Union Street. The garage is currently owned and operated by Cornish Parking LLC, although it had been City-owned through 2006.

The 1.02 acre site is located on the south side of Governor Winthrop Boulevard and is bounded to the east by Union Street, to the west by a charter school/office building and to the south by the First Church of Christ of New London (see Figure 2-56).

Built in 1970, the Governor Winthrop Garage is a 161,736 square foot, four-story, concrete parking structure that provides 400 parking spaces (see Figure 2-57). The facility is roughly 180 feet wide and 230 feet long and has a total floor area of 132, 700 square feet. The facility is a three bay, double-threaded helix with two sloped parking bays and one flat or horizontal bay adjacent and parallel to Church Street. The structure is comprised of 9 foot wide by 3 foot deep, precast/prestressed concrete single tee deck elements with a 3.5 inch thick cast-in–place concrete topping. Exterior spandrel beams typically span 27 feet between support columns.

Vehicular access to the garage is provided at the center bay of the west end of the structure. This entrance is accessed from Meridian Street, formerly a city street now a driveway, off of Governor Winthrop Boulevard, and from Union Street (see entry signage shown in Figure 2-58). Vehicles also exit at the west end of the garage. There is a pedestrian bridge on the south side of the garage from the third level to the commercial businesses that front on State Street (see Figure 2-59). Pedestrian access to the garage is also provided from the ground floor on Governor Winthrop Boulevard, Union Street and the driveway entrance.

Figure 2-56: Governor Winthrop Garage



Figure 2-57: Governor Winthrop Garage (2 views)



Figure 2-58: Signage at Governor Winthrop Garage



Figure 2-59: Pedestrian Bridge to Governor Winthrop Garage



Desman Associates conducted a condition appraisal of the Governor Winthrop Garage for the City of New London in October 2001[4]. The purpose was to perform a reassessment of the facility and update the review it conducted in late 1995 (as reported in its Condition Appraisal Report dated February 1996). The objectives were to review existing design documents and drawings, investigate the site, conduct field and laboratory testing, analyze and review assessment data, conduct value engineering and prepare a report.

[4] Desman Associates, Condition Appraisal of the Governor Winthrop Parking Garage, prepared for the City of New London Office of Development and Planning, October 2001.

The key findings of the report were, "The structural condition of the Governor Winthrop Parking Garage (Church Street Municipal Parking Garage) should be considered as poor, particularly as it relates to the condition of the exterior spandrel beams and certain portions of the parking deck itself. The roof deck and cast-in-place concrete curbs on this level are experiencing extensive freeze-thaw damage, likely exacerbated by an adverse alkaline/aggregate reaction. Certain conditions identified present liability due to falling debris, trip and fall hazards and water leakage onto patron's vehicles parked within the garage. Steps need to taken to alleviate these conditions in the near future to assure the continued safe usage and long-term durability of the Governor Winthrop Parking Garage." The report added that "continued deterioration and eventual catastrophic structural failure can be expected unless steps are taken to immediately correct conditions identified …" The report noted that " Though the facilities' spandrel beams have been temporarily shored, … Desman is concerned by the temporary nature of this remedial solution …." It was also noted that there was no emergency lighting system and that the original emergency intercom system was no longer operational nor were the two elevators. Finally, the report also noted that the facility "was constructed with little or no consideration given to handicap accessibility."

The report recommended implementing a phased repair program beginning in the spring of 2002. The program would include the following two phases:

- Phase 1 Repairs
    - Estimated cost of $1,474,000 million
    - To be completed in the next 0 to 12 months
    - Work includes: concrete overlay, concrete stairs and landings, concrete spandrels, concrete guardrails, concrete curbs, handicapped ramp installation, miscellaneous masonry, waterproofing, door and window replacements, elevator repair/replacement, electrical systems, and plumbing and mechanical repairs and painting.
- Phase II Repairs
    - Estimated cost of $731,000
    - To be completed over the next 12 to 36 months
    - Work includes: concrete surface sealer application on the roof level, intercom installation, revenue control system improvements and pressurized garage wash down facilities.

Members of the study team conducted field visits to observe conditions. The problems noted in the Desman Associates report appear to still exist.

Cornish LLC indicated that the following repairs have been made since they acquired the garage:

- Extensive repair work has been completed on the masonry on the roof level;
- Lighting pole fixtures have been installed on the roof level;
- Security cameras have been installed throughout the garage;
- Various areas of the garage have been painted and more areas will be painted this year.

Some spalling of the concrete surfaces is evident in the stairways on certain levels and repairs are required in a number of locations (see Figure 2-60 and Figure 2-61). The deck has been reinforced as shown in Figure 2-62. The temporary shoring supports are shown in Figure 2-63.

Figure 2-60: Concrete Spalling at Governor Winthrop Garage



Figure 2-61: Concrete Spalling at Governor Winthrop Garage



Figure 2-62: Decking Reinforcement at Governor Winthrop Garage



Figure 2-63: Temporary Shoring Supports at Governor Winthrop Garage



A survey of the ADA compliance was conducted at the Governor Winthrop Parking Garage during the week of December 22, 2008. The full survey of the garage is attached as Appendix B. The key findings of the ADA survey were that: Eight handicapped spaces are required including one van accessible space, however only seven handicapped spaces are provided none of which are in compliance. The signage and the handrails in the stairwells are not compliant. Access aisles and curb ramps are not compliant. Neither of the two elevators is in working order (see Figure 2-64).

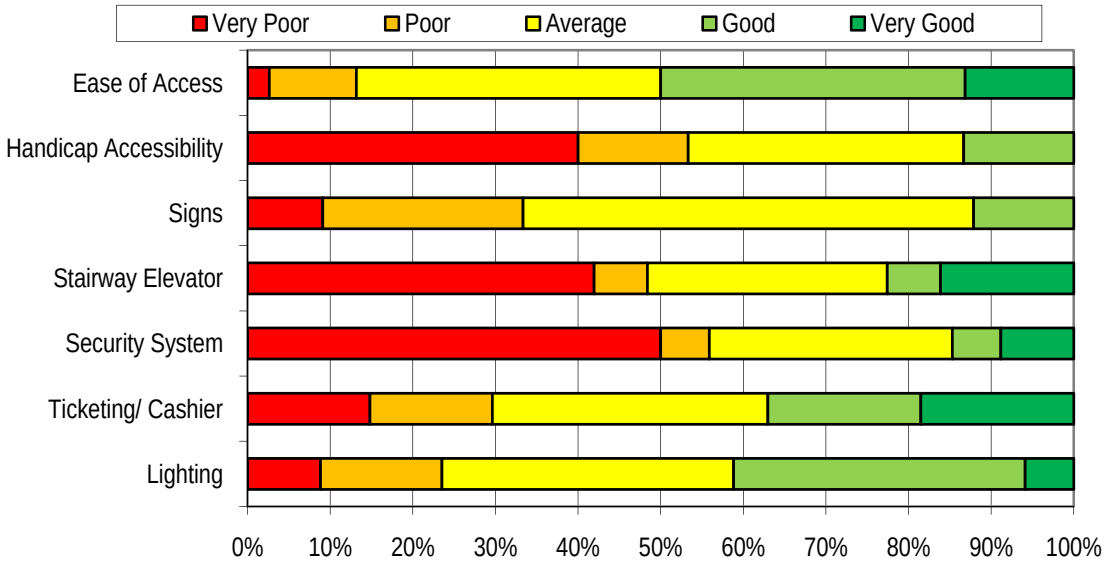
Figure 2-64: Governor Winthrop Garage Elevator



User Ratings of Conditions at the Governor Winthrop Garage

Surveys of the parking facility users conducted on a Thursday and Saturday in August 2008 yielded a total of 36 responses. Figure 65 below shows the ratings of conditions at the Governor Winthrop Garage. A stacked bar is used to represent the range of responses (as a percent) for each characteristic. The users of the Governor Winthrop Garage appear somewhat more dissatisfied than Water Street Garage users. Forty (40%) or more rated the Security System, Stairway/Elevator and Handicap Accessibility as "Very Poor". About half or more of all respondents rated these at least as "Poor." There was also some dissatisfaction with Signs Ticketing/Cashier, Lighting and Ease of Access. Over 30% were dissatisfied with signs, rating that factor as "Poor" or "Very Poor."

Figure 2-65: Ratings of Conditions at the Governor Winthrop Garage



2.4.3. Eugene O'Neill Drive Surface Lots

Physical Conditions

Figure 2-66 and Figure 2-68 show the location of the two surface lots on Eugene O'Neill Drive. Parking at each of these lots is free, but there is an enforced two hour limit on weekdays for those without monthly permits. There is no limit on the weekends. Monthly parking permits cost $25.00 per month and are sold by Pro-Park at its Water Street Garage office. There are designated areas for permit parkers.

Eugene O'Neill Drive Surface Lot (North)

The Eugene O'Neill Drive surface lot (North) is located at the corner of Eugene O'Neill Drive and Golden Street (see Figure 2-66). The 0.23 acre site is paved and contains 125 parking spaces. This lot contains a minor slope down to Pearl Street at its southerly end It has two egress points to Pearl Street. It also slopes down gently to the north to two egress points at Golden Street at the northerly end. Vehicular and pedestrian access is from Pearl and Golden Streets. The lot is owned by the City of New London Redevelopment Agency (per the City Assessor records), although the Agency was dissolved by City Council action in June 2008. Pro-Park, the operator of the Water Street Garage, is also the operator of the unattended surface lots on Eugene O'Neill Drive and sells monthly parking permits for the two surface lots at a price of $25.00 per month.

In general, the bituminous paving is in fair condition with some minor areas in need of repair. The existing lighting at the lot is provided by cobra head fixtures mounted on telephone poles, (as shown in Figure 2-67) and is adequate.

Wayfinding in general is lacking. There are numerous out-of-date signs and abandoned sign poles located around the North Lot. There are no existing directional or identification signs for the lot. The Downtown

New London Wayfinding Signage Program to be initiated over the next year will provide directional and identification signs for the North Lot and other parking facilities.

Figure 2-66: Eugene O'Neill Surface Lot North



Figure 2-67: Eugene O'Neill Drive Surface Lot (North)



A survey of ADA compliance at the Eugene O'Neill North Parking Lot was conducted during the week of December 22, 2008. The full survey of the lot is attached as Appendix B. Eight handicapped spaces including one van space are required, however only two handicapped spaces are provided and there is no van accessible space. In addition, there is no accessible route provided for the existing handicapped spaces and the handicapped access aisles and handicapped parking signage are not compliant.

Eugene O'Neill Drive Surface Lot (South)

The Eugene O'Neill Drive surface lot (South) is located between Tilley Street and Pearl Street along Green Street in the Central Business District Zone (see Figure 2-68). The 0.97 acre site is paved and contains 130 parking spaces. This lot contains a 4'-6' slope down to Tilley Street at its southerly end and has two egress points to Tilley Street. The lot also slopes 2'-4' down from a 'crown' near the lot mid-point to two egress points at Pearl Street at the northerly end. Vehicular and pedestrian access is from Pearl and Tilley Streets. The lot is owned by the City of New London. Pro-Park, the operator of the Water Street Garage, is also the operator of the unattended surface lots on Eugene O'Neill Drive and sells monthly parking permits for the two surface lots at a price of $25.00 per month.

The existing lighting at the lot is provided by cobra head fixtures mounted on telephone poles, (as shown in Figure 2-69) and is adequate. The bituminous paving appears to be in fair condition. As can be seen in Figure 2-70, the striping is faded.

There are numerous out-of-date signs and abandoned sign poles located around the South Lot. There are no existing directional or identification signs for the lot. The Downtown New London Wayfinding Signage

Program to be initiated over the next year will provide directional and identification signs for the South Lot, as well as other parking facilities.

Figure 2-68: Eugene O'Neill Surface Lot South



A survey of ADA compliance at the Eugene O'Neill South Parking Lot was conducted during the week of December 22, 2008. The full survey of the lot is attached as Appendix B. Eight handicapped spaces including one van space are required, however only four handicapped spaces are provided, and there is no van accessible space. In addition, there is no accessible route provided for the existing handicapped spaces, and the handicapped access aisles and handicapped parking signage are not compliant (see Figure 2-71).

Figure 2-69: Eugene O'Neill Drive Surface Lot (South)



Figure 2-70: Eugene O'Neill Drive Surface Lot (South) Striping Conditions



Figure 2-71: Eugene O'Neill Drive Surface Lot (South) Pedestrian Access Conditions



User Ratings of Conditions at the Eugene O'Neill Drive Surface Lots

Surveys of the parking facility users conducted on a Thursday and Saturday in August 2008 yielded a total of 22 responses for the north lot and 6 for the south lot. There were few responses from the Eugene O'Neill Drive Surface Lots so caution should be exercised in interpreting results, particularly for the south lot. The results are provided below with that caveat. Figure 2-72 and Figure 2-73 show the survey respondents' ratings of conditions at the Eugene O'Neill Drive Surface Lots. A stacked bar is used to represent the range of responses (as a percent) for each characteristic.

At the north lot, respondents were most dissatisfied with the Security System, Signs and Stairway/Elevator. The most significant issues appears to be security; while this is an open surface lot that may be considered safer than a garage by some people, since no daily parking fees are charged at the site (monthly parking permits are sold by ProPark), it is unattended. It is also not clear why there was dissatisfaction noted for Stairway/Elevator in a surface lot. There was also some dissatisfaction with other characteristics, largely with Ticketing/Cashier and Lighting. Since fees are not collected at the site, Ticketing/Cashier could have been interpreted by survey respondents to mean ticketing of vehicles that are parked overtime and have no permit for long term parking, but this is uncertain. At the south lot, dissatisfaction was noted by the few respondents primarily with Signs, Security System, Stairway/Elevator and Ticketing/Cashier. At both of these surface lots, Ease of Access and Handicap Accessibility were generally rated well.

Figure 2-72: Ratings of Conditions at the Eugene O'Neill North Lot

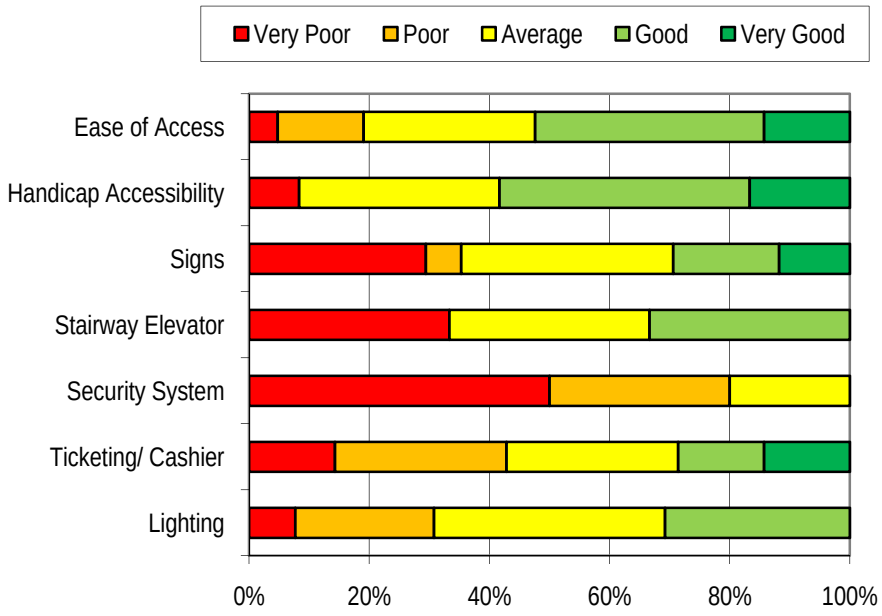
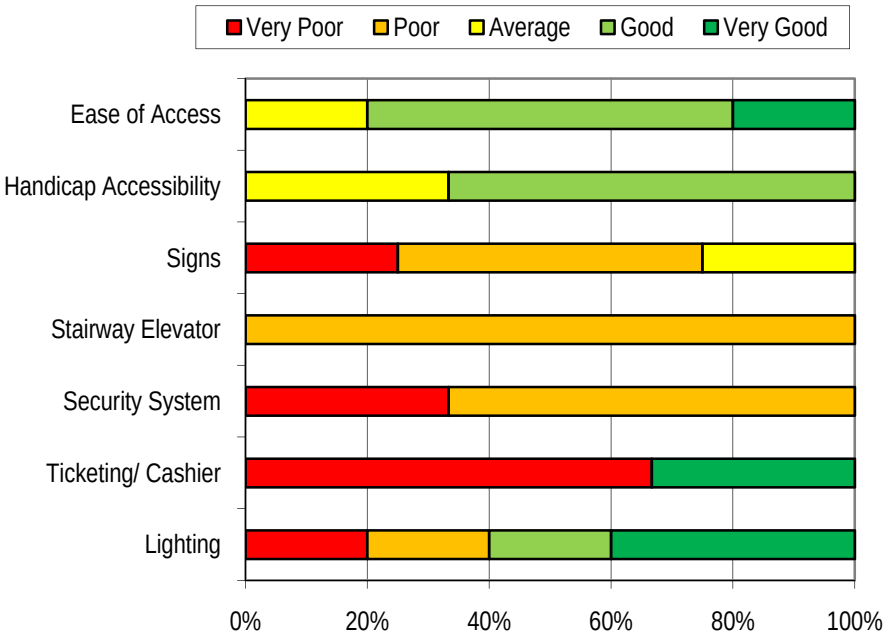


Figure 2-73: Ratings of Conditions at the Eugene O'Neill South Lot



2.4.4. Julian Surface Lot

The Julian Surface Lot (see Figure 2-74 and Figure 2-75) is located at the corner of Water Street and Governor Winthrop Boulevard. The 1.02 acre site is paved and contains 186 parking spaces, and it appears to be in good condition. These spaces serve the Mariner Square office building on weekdays, however, the lot has been opened on summer weekends in recent years for public pay parking. Vehicular access is from Water and Atlantic Streets. Pedestrian access is from Water and Atlantic Streets and Governor Winthrop Boulevard. The site is owned and operated by Ballina Properties LLC.

Observations regarding ADA issues at this lot were made during the week of December 22, 2008. The full survey of the lot is attached as Appendix B. Eight handicapped spaces including one van space are required, however only five handicapped spaces are provided, and there is no van accessible space. There is no accessible route provided for pedestrians in wheelchairs to the existing handicapped spaces. The handicapped access aisles are not compliant nor are the walking surfaces.

Figure 2-74: Julian Surface Lot



Figure 2-75: Julian Surface Lot Sidewalk



2.5 New London Waterfront Park/City Pier

The City of New London Waterfront Park is located east of the railroad tracks extending from the Swing Bridge northward to City Pier, just south of the 0.49 acre City-owned parcel leased to Cross Sound Ferry.

The park is comprised of two sections. The City Pier section of the park (including the public plaza located north of the pier itself) is a 0.44 acre parcel is located south of the Cross Sound Ferry property, north of the Fishers Island Ferry property and east of Union Station. It contains the City Pier which is 264 feet long and 35 feet wide and provides docking facilities to the public (see Figure 2-76). The public is allowed to dock at City Pier for short-term stays (up to four hours) at no charge. The public is allowed to dock overnight at the City Pier but must acquire a permit from the City's Waterfront Coordinator.

Immediately north of the Pier is a brick-paved and lighted public plaza which includes a pavilion for special events (see Figure 2-77). A small wood frame snack building built in 1950 is also located on the public plaza.

Figure 2-76: Waterfront Park and City Pier



Figure 2-77: City Pier Park and Plaza



The remainder of the park is located on a 1.48 acre parcel located south of the Fishers Island Ferry property, north of the Amtrak Swing Bridge and east of the railroad tracks. Waterfront Park opened in 2001 and contains:

- The Children's Discovery Pier is located south of the Fishers Island Ferry property.
- The Amistad Pier is located south of the Children's Pier and is a T-shaped pier, the first portion being 143 feet long and 25 feet wide. The end of the T-shaped pier is 210 feet long and 24 feet wide. It is used for large vessels, i.e. tall ships that can accommodate themselves to a permanent pier.
- Custom House Pier is south of Amistad Pier and is located east of the Custom House which contains public rest rooms, a laundry facility (for use by boaters at the Custom House Pier), and a Police Sub-Station.
- Fisherman's Pier is south of the Custom House and is 287 feet long and 19 feet wide and is part of the 700 foot long walkway extending south towards the Swing Bridge.

All facilities and the pier appear to be in very good condition. Fishing and recreational boat docking are allowed.

A survey of ADA compliance at the City Pier and adjacent park area and the Customs House at Waterfront Park was conducted during the week of December 22, 2008. The full survey of the lot is attached as Appendix B. The City Pier and adjacent park area, as well as the Customs House and Waterfront Park are compliant.

2.6 Utilities

The existing RITC in New London consists of both public and private facilities and is served by the regional public and private utility companies as follows:

- Water and Sewer – City of New London Public Utilities, Water Department
- Electric Power – Connecticut Light and Power (CL&P) (a subsidiary of Northeast Utility Service Company)
- Natural Gas – Yankee Gas Service Company (a subsidiary of Northeast Utility Service Company)
- Communications
    - Telephone/Broadband Communication – Fiber Technologies Networks, LLC and AT&T
    - Digital Cable TV/Phone & High Speed Broadband Internet – Metrocast Communications of Connecticut LLC[5]

Each of these providers offers sufficient capacity to accommodate existing development. All services are provided through existing underground infrastructure. The location of utility infrastructure is shown on a project base map prepared by the study team and supplied under separate cover. Further information on specific utilities is summarized below:

The sanitary sewer service for downtown New London is provided by the City of New London. The sanitary sewer service is maintained and operated by the Veolia Company, (a privately owned Engineering Company) for the City of New London. The main sanitary treatment facility is the Thomas E. Piacenti Regional Water Pollution Control Facility located on the Fort Trumbull peninsula. The treatment facility, originally built in the 1930's, has been updated over the years.[6]

The water service for downtown New London is provided by the City of New London. The water utilities are also maintained and operated by the Veolia Company, for the City of New London. The main water supply is Lake Konomoc, a surface reservoir located in Waterford and Montville. At the time of this report, the City of New London was preparing The Water Supply Plan required by the Connecticut Department of Health[7] to address future need and demand.

According to the City's Public Utilities representative, the design capacity of the sanitary sewer treatment facility is 10 million gallons per day and the average daily flow is currently 7 million gallons per day. There are peak times when the system's capacity is reached. The age of the water and sewer system downtown varies by location. The existing water system in the vicinity of the intermodal facilities dates back to the 1880s. Various components of the sanitary sewer system have been reconstructed since the 1970s. The Water Street Garage site also accommodates the location of one of the City's major waste water pumping stations (Pump Station #4) which services approximately one-third of the city (the northern third). Pump Station #4 is being relocated inside the Water Street Garage, as part of the Parade Project.

Future users of each utility in the downtown area would have to evaluate the utility service requirements on a project-specific basis.

[5] Information available from the New London area office located at 61 Myrock Avenue in Waterford, or at http://www.metrocastcablevision.com.
[6] Information on the water and sewer utilities was provided by New London Public Utilities, 860-447-5222.
[7] Ibid.

2.7 Signage and Wayfinding

2.7.1. Wayfinding for Vehicles

Approaching downtown New London from Route 32 (from the north) and I-95 (from the east) along Eugene O'Neill Drive (heading south), there are signs to the Regional Intermodal Transportation Center. These signs have no logo but are plain directional signs. At the intersection of Eugene O'Neill Drive and Governor Winthrop Boulevard, there are also signs with the red Block Island Ferry logo directing travelers to parking at the Water Street Garage for the ferry and also white parking signs for ferry and train parking. These signs lead to the Atlantic Street entrance to the garage. On Water Street, there are signs directing travelers to parking in the Water Street Garage (Water Street entrance). (See Figure 2-78 and Figure 2-79).

A directional sign at the corner of State Street and Water Street directs vehicles to the Fishers Island ferry eastward down State Street (across the tracks) and to the Orient Point and Block Island ferries northward on Water Street towards Governor Winthrop Boulevard (See Figure 2-80). This may be confusing to pedestrians crossing Water Street from the Water Street Garage in the Parade area since the signage in the Garage directs them toward the southeastern exit from the garage which lead them toward Union Station.

Figure 2-78: Signs to Parking - On East Side of Water Street



Figure 2-79: Signs to Parking- On West side of Water Street



Figure 2-80: Signage in Front of Union Station at Water Street and State Street*





*Note that this picture taken on November 13, 2008 also shows temporary signage indicating that pick-up and drop-off has been shifted to the parking garage due to construction at the Parade site which has reduced the number of lanes on Water Street.

2.7.2. Wayfinding from the Water Street Garage

Water Street Garage users (pedestrians) are directed by signs in the Garage toward the southeastern garage exit for "trains and ferries". These red signs (see Figure 2-81) include the Block Island Express logo, the passenger-only ferry whose users are most likely to need parking in New London. Note that the Orient Point auto ferry and Sea Jet passenger ferry users are less likely to park in New London than the Block Island Ferry passengers. The Sea Jet primarily brings Long Island travelers into the region to access the Casino Resorts; these travelers park at Orient Point. Many travelers on the auto ferry drive their cars onto the ferry although some could carpool and park.

Figure 2-81: Signage in the Water Street Garage Directing Travelers to Ferries



As the pedestrians leave the southeastern exit of the Garage, they can easily see the Block Island Ferry terminal across the tracks. However, it is not very clear how to get there. There is a crosswalk at this location which is the logical path to take; it leads to the east sidewalk of Water Street which includes the Greyhound Bus loading area and provides access to the southbound rail platform and Union Station. There is no continuing signage from this point directing the passengers to the Block Island Ferry. The shortest route to the Block Island terminal from this point is to walk south to the State Street railroad crossing and then once across the tracks to walk northward through the City Pier area and the unpaved parking lot areas owned by the City and the Cross Sound Ferry (see Figure 2-82). The pedestrian can walk to the State Street railroad crossing either in front of or behind Union Station. If the pedestrian chose to head south along the southbound train platform at the back of Union Station, and they turn around and look behind them, they might notice signs directing them to walk north (away from the State Street railroad crossing) to access the ferries. If they walk in front of Union Station, there are no additional signs that are visible. If rather than using the crosswalk at the garage exit, they instead proceed south to State Street by walking on the west side of Water Street, they would see the signage directing vehicular traffic from State Street to proceed north up Water Street to access the Block Island and Orient Point ferries and would be inclined to turn back. Thus the current signage is somewhat confusing in first directing people leaving the Garage southward towards Union Station and then having two different types of signs directing people to the north.

Figure 2-82: Pedestrians Traversing City Pier Plaza Going from Union Station to Cross Sound Ferries



Note that while vehicles should proceed north to enter the Cross Sound Ferry terminal, pedestrians who proceed north on the east sidewalk of Water Street will find that the sidewalk ends at the northern end of the SEAT bus stop and a sign prohibits pedestrians beyond this point (See Figure 2-83); at this point they would either need to ignore the sign and proceed on an unpaved narrow area alongside the railroad tracks and fence or cross mid-block (jay walk) to the west sidewalk to arrive at the Governor Winthrop Boulevard intersection.

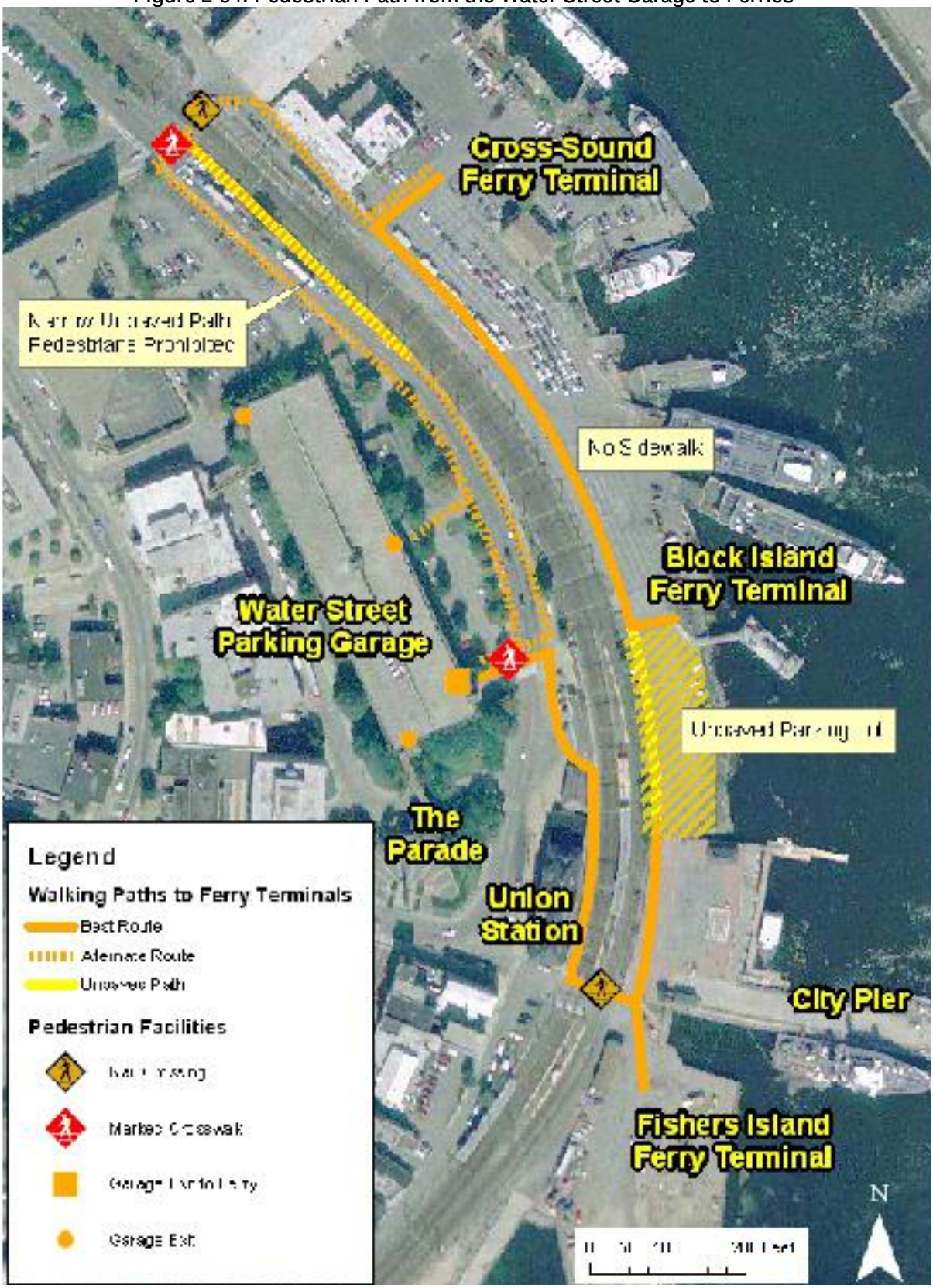
The shortest and safest path to this intersection and entrance to the Cross Sound Ferry would be stay on the west sidewalk along the Water Street Garage, although it should be noted that there is no ramp at the southwest corner of Water Street and Governor Winthrop Boulevard.

Figure 2-84 shows the pedestrian paths described above.

Figure 2-83: Sign Prohibiting Pedestrians on the East Side of Water Street North of SEAT Bus Stop



Figure 2-84: Pedestrian Path from the Water Street Garage to Ferries



2.7.3. Wayfinding from Union Station

There are wayfinding signs on the at-grade southbound platform directing travelers to proceed south to the "station" and directing travelers to proceed north along the platform (behind the station building and the bus terminal building) to ferries, buses and parking (see Figure 2-85 and Figure 2-86). (Note that, as shown in Figure 2-86, there is an unmarked rear door to the Greyhound terminal that directly faces the platform but it is locked and blocked by seating).

Figure 2-85: Wayfinding Signs on the Southbound Platform

Looking south:



Looking north:





Figure 2-86: Rear Door of the Bus Terminal



While travelers who follow these directions can easily then find the crosswalk to the Water Street Garage and either intercity or local buses since both are located at the north end of the platform, it is less clear how to get to the ferries.

As noted earlier, pedestrians who proceed north on the east sidewalk of Water Street will find that the sidewalk ends at the northern end of the SEAT bus stop and a sign is posted saying no pedestrians beyond this point; at this point they would either need to ignore the sign and proceed on an unpaved narrow area alongside the railroad tracks and fence or cross mid-block (jay walk) to the west sidewalk to arrive at the Governor Winthrop Boulevard intersection. It should be noted that there is no ramp at the southwest corner of Water Street and Governor Winthrop Boulevard. There is also signage indicating that Foxwoods SEAT bus users should proceed south to the other end (State Street end) of the platform since the Foxwoods SEAT bus has its official bus stop in front of Union Station near State Street. However, during the construction of the Parade Project, the Foxwoods SEAT bus stop was temporarily located at the SEAT bus stop farther north on Water Street and was more easily accessed from the north end of the platform.

A shorter and easier route to get to the Cross Sound Ferries (particularly the Block Island Ferry which located at the southernmost point on the Cross Sound Ferry property) is to proceed south to the State Street railroad crossing and then once across the tracks, northward across the City Pier plaza and the unpaved parking lots owned by the City and the Cross Sound Ferry. The only logical path to the Fishers Island Ferry is also via the State Street railroad crossing. The Fishers Island Ferry Terminal is very close to Union Station and can be seen easily from the train platforms.

On the northbound platform, it is very easy to see the Cross Sound Ferry property located just across the third (freight track) (see Figure 2-87).The logical path is again to proceed south to the State Street railroad

crossing and then once across the tracks, northward across the City Pier and the unpaved parking lots owned by the City and the Cross Sound Ferry. It is easy to see the Fishers Island Ferry terminal and how to get there. (See Figure 2-88) There is no signage on this platform.

A taxi stand is located immediately in front of Union Station and is marked by curbside sign (see Figure 2-89).

Figure 2-87: Views of the Block Island Ferry Terminal from the Northbound Platform





Figure 2-88: View of the Fishers Island Ferry Terminal from the Northbound Platform



Figure 2-89: Taxi Stand Signage



2.7.4. Wayfinding from the Cross Sound Ferry Terminal

Passengers departing from the Cross Sound Ferry terminal (from Orient Point auto ferries, Sea Jet passenger ferries and Block Island passenger ferries) have no wayfinding signage. Block Island riders are undoubtedly people making return trips and they may need little wayfinding. However, other travelers could require wayfinding signage. The lack of wayfinding signage may have several impacts. It could cause inconvenience and confusion for travelers, as well as reduce the likelihood of visits to nearby areas. The auto traveler departing an auto ferry will naturally follow the automobiles to the exit from the Cross Sound Ferry property at the intersection of Ferry Street and Governor Winthrop Boulevard. The northwest corner of this intersection has been selected by the Main Street program and the City of New London for one of several "Gateway" signs to encourage visits to the Historic Waterfront district.

The pedestrian disembarking from a ferry at the Cross Sound Ferry property has no permanent or highly visible wayfinding signage to the train, intercity buses, local buses, parking garages or Bank Street and State Street retail districts. There is some temporary style signage as shown in Figure 2-90.

Figure 2-90: Signage Directing Cross Sound Ferry Pedestrians to Water Street Garage



Union Station and the adjacent Greyhound Bus Terminal, the SEAT bus stop, the Water Street Garage and the Julian surface parking lot are all viewable across the railroad tracks from the Cross Sound Ferry property. However, it is not very clear how to access these locations across the fenced railroad right-of-way from the ferry property – whether to turn right or left to find the nearest railroad crossing. Most travelers would be inclined to turn left toward the visible Union Station area although Julian lot parkers and some Water Street Garage parkers may be inclined to turn right to the Governor Winthrop crossing (see Figure 2-91).

Figure 2-91: Looking from Cross Sound Ferry Property toward the Governor Winthrop Boulevard



Note that there is a sidewalk on the right hand side of Ferry Street, as shown below in Figure 2-92.

Figure 2-92: Looking from Cross Sound Ferry toward the Governor Winthrop Boulevard Intersection



Those who walk to Union Station have no clear pedestrian path through the Cross Sound Ferry property which is largely marked for auto queuing. While there is no pedestrian sidewalk, a designated dog walking area is provided along the railroad tracks. To get to City Pier and Union Station and then to the Water Street Garage, pedestrians must walk through a parking area that is unpaved. As shown in Figure 2-91 and Figure 2-92 above, temporary signage is placed on the unpaved area to indicate the recommended pedestrian route.

The bus station area is not highly visible unless buses are in the area. The SEAT bus stop has a simple unmarked shelter and a few outdoor benches and the signage along the curb designating the bus stop parking regulations is too small to read from the Cross Sound Ferry site (see Figure 2-93).

Figure 2-93: View of SEAT Bus Stop from Cross Sound Ferry Property



While there is a large “Welcome to New London” sign on the Water Street Garage (in letters along the face of the garage near the roofline), there is nothing that looks inviting to the visitor in terms of restaurants, shopping, etc. that can be seen from this vantage point (see Figure 2-94). Cross Sound Ferry has its own deli on the premises which is the closest location for food, as well as a ticket office with some tourist information and restrooms. In addition, the railroad right-of-way area is unattractive and does not appear well maintained.

Figure 2-94: View of Water Street Garage that Faces Cross Sound Ferry



2.7.5. Wayfinding from the Fishers Island Ferry

While there is no wayfinding signage, travelers arriving on the Fishers Island Ferry can easily see Union Station and the Bank Street and State Street shopping areas. Travelers departing the terminal and seeking other travel modes would naturally head to Union Station. People trying to access other ferries can easily see the other ferries located along the waterfront across the City Pier plaza and would naturally follow this path. Travelers heading to Union Station would be able to easily locate the parking at Water Street Garage as well as the Greyhound terminal and the SEAT bus. Unlike the Cross Sound Ferry, the travelers on the Fishers Island Ferry are either island residents who are frequent users or New London area residents making a return trip. These travelers have less need for wayfinding signage.

2.7.6. Wayfinding Signage from the Greyhound Bus Terminal

From Greyhound Bus Terminal, the location of Union Station rail services, the SEAT bus stop and the Water Street Parking Garage is very clear. The location of the ferry facilities is somewhat less clear to the disembarking Greyhound passenger. Since the Greyhound Terminal is part of the Union Station complex, the wayfinding from Union Station discussed above applies.

2.7.7. Wayfinding Signage from the SEAT Bus Stop

There is no wayfinding signage at the SEAT bus stop. However, from the SEAT bus stop, the traveler can easily see Union Station, the Greyhound Bus Terminal, and the Cross Sound Ferry site across the tracks. Union Station obscures the view of the Fishers Island Ferry terminal (see Figure 2-95). It may not be clear to the traveler headed to the Cross Sound Ferry terminal what the shortest path would be. If they head north toward the Governor Winthrop Boulevard intersection, they face the end of the sidewalk and the sign indicating no pedestrians beyond this point (see Figure 2-96) If they head south to the train station, they may encounter signs suggesting they should head north to the ferries. Currently there are few passenger transfers between the ferries and SEAT.

Figure 2-95: View of Union Station and Greyhound Bus Terminal from the SEAT Bus Stop



Figure 2-96: View Toward the Cross Sound Ferry Site from the SEAT Bus Stop



2.8 Summary of Deficiencies

Most of the physical facilities are in good or very good condition, although some deficiencies were identified through observations of the consultant team and information from user surveys and interviews. The most notable deficiencies were the pedestrian connections, amenities and comfort at the rail and bus facilities, conditions of elevators and stairways as well as concrete spalling at the two garages, inadequate security systems at parking facilities, and wayfinding signage between transportation modes.

Current pedestrian facilities need improvements to ensure safe and convenient access between travel modes and to and from the parking facilities. The most notable deficiencies are between Cross Sound Ferry and the other facilities. Improvements are also needed to and from the Water Street Garage and Julian surface lot and the various transportation services; the Parade Project now under construction will improve pedestrian safety in the vicinity of Union Station through enhanced crosswalks, sightlines and traffic calming.

Union Station has had renovations to the lobby and roof, and the station platforms are in good condition. The Greyhound terminal, leased from the owners of Union Station, is in sound condition but is very basic and has not undergone renovations to enhance its appearance. The SEAT bus stop is minimal as a passenger facility, consisting of a simple shelter and several outdoor benches. It would benefit from improvements to enhance passenger comfort or relocation to Union Station which could provide indoor waiting areas and other amenities. Bus and rail users surveyed indicated particular concerns about

amenities (e.g., food services, newsstand and clean restroom facilities) and comfort at the rail and bus facilities.

Fishers Island Ferry has a new (3-year old) terminal facility that is in very good condition. The Cross Sound Ferry facilities are in good condition. Some of the parking areas in use at Cross Sound Ferry are unpaved. Users of the Cross Sound ferry facilities indicated some concerns about amenities and parking.

The Water Street Garage and Governor Winthrop Garage show evidence of deferred maintenance. In particular, the concrete is spalling. In addition, the elevators at the Water Street Garage need repairs. (A new tower is being constructed at the south end of the garage with a new elevator as part of the Parade Project.) Surveys of users of the parking facilities indicated the most dissatisfaction was with the stairways and elevators at the garages, as well as handicapped access. Another concern expressed in the surveys at the parking facilities was about security features. There is a lack of security systems in the garages and parking lots, including closed-circuit TV and blue light call boxes. The Water Street Garage will have security cameras installed as part of upcoming renovations.

Overall, the transportation facilities are not providing adequate access for the handicapped. Handicapped access in the Water Street Garage was considered to be a problem in the user survey. This may largely be due to the fact that the elevators were out of order. This will be corrected with the installation of a new elevator at the south end as part of the Parade Project. Other deficiencies with ADA compliance include:

- Union Station: height of the mirrors in both restrooms, the lack of handicapped employee parking, the lack of an accessible route to and from existing employee parking to the building and the lack of appropriate signage for the parking.
- Greyhound Bus Terminal: height of the customer service counter, height of the towel dispensers in both restrooms and the employee access route to the workroom.
- Cross Sound Ferry: lack of handicapped accessible routes to and from the building entrance, lack of designated handicapped parking spaces, height of the customer service counter in the ticket building, height of the mirrors in both restrooms, lack of handrails on the handicapped ramp to the ticket building.
- Fishers Island Ferry Terminal: lack of a passenger loading zone, a change in sidewalk elevation at the entrance, height of the customer service counter, steep entrance ramp grade and lack of handrails.
- Water Street Garage: insufficient number of compliant handicapped parking spaces (and appropriate signage), non-compliant access aisles curb ramps and handrails in the stairwells, lack of a curb ramp to the employee area workroom.
- Governor Winthrop Garage: insufficient number of compliant handicapped parking spaces, non compliant signage, handrails in the stairwells, access aisles and curb ramps, inoperable elevators.
- Eugene O'Neill Parking Lots (both): insufficient number of handicapped spaces, lack of accessible route to existing handicapped spaces, non complaint access aisles and signage.
- Julian Parking Lot: Insufficient handicapped parking spaces, lack of accessible route to existing handicapped spaces, non-compliant access aisles and walking surface.
- Intermodal Connections: There are a number of missing curbcuts and inaccessible pathways. Customer information (visual and audio) and wayfinding signage need improvement to be ADA compliant.

Additional improvements to the remaining elements are warranted. Lighting and wayfinding signage are lacking. Although many of the survey respondents did not identify that lighting was poor or deficient, lower level pedestrian fixtures will both improve aesthetics and also provide a stronger sense of security. While survey respondents generally identified ease of access as being good; there was less satisfaction with signage. In general, wayfinding signage throughout the city street network is lacking; the existing signage doesn't provide clear and concise messages nor are the signs strategically placed. Better than 30% of the respondents indicated that signage was below average at the Cross Sound Ferry Lot location.

Finally, while there is a large "Welcome to New London" sign on the Water Street Garage (in letters along the face of the garage near the roofline), there is nothing that looks inviting to the visitor in terms of restaurants, shopping, etc. that can be seen by visitors arriving at the RITC particularly for those arriving at the Cross Sound Ferry Terminal, Greyhound Bus Terminal or SEAT bus stop. The railroad right-of-way area is unattractive and does not appear to be well maintained. The Parade Project will improve the area to the south of the Water Street Garage but there is a need to create a more pedestrian- and tourist-friendly area around the RITC.

3. Transportation Modes at the Regional Intermodal Transportation Center 3-1

3.1 Rail Services 3-1
3.1.1. Operations and Services 3-1
3.1.1. Utilization of Services 3-3
3.1.2. Current Operational Needs 3-7
3.1.3. Future Operational Needs 3-8
3.2 Intercity Bus (Greyhound) 3-10
3.2.1. Operations and Services 3-10
3.2.1. Utilization of Services 3-12
3.2.2. Current Operational Needs 3-13
3.2.3. Future Operational Needs 3-14
3.3 Cross Sound Ferry 3-14
3.3.1. Operations and Services 3-14
3.3.2. Utilization of Services 3-18
3.3.3. Current Operational Needs 3-21
3.3.4. Future Operational Needs 3-22
3.4 Fishers Island Ferry 3-22
3.4.1. Operations and Services 3-22
3.4.2. Utilization of Services 3-24
3.4.3. Current Operational Needs 3-26
3.4.4. Future Operational Needs 3-27
3.5 Casino Shuttle Bus 3-27
3.5.1. Operations and Services 3-27
3.5.2. Utilization of Services 3-27
3.5.3. Current Operational Needs 3-28
3.5.4. Future Operational Needs 3-28
3.6 SEAT Local Bus Service 3-31
3.6.1. Operations and Services 3-31
3.6.1. Utilization of Services 3-33
3.6.2. Current Operational Needs 3-35
3.6.3. Future Operational Needs 3-36
3.7 Taxis and Other For-Hire Services 3-36
3.7.1. Operations and Services 3-36
3.7.2. Utilization of Services 3-37
3.7.3. Current Operational Needs 3-37
3.7.4. Future Operational Needs 3-38
3.8 Automotive Traffic 3-38
3.8.1. Operations 3-38
3.8.1. Utilization of Facilities 3-40
3.8.2. Current Operational Needs 3-43
3.8.3. Future Operational Needs 3-43
3.9 Parking 3-44
3.9.1. Parking Facility Operations 3-44
3.9.2. Utilization of Facilities 3-45
3.9.3. Current Operational Needs 3-48
3.9.4. Future Operational Needs 3-49

3.10 Summary of Deficiencies and Needs for the Transportation Modes 3-50
3.11 Interconnectivity of the Modes at the Transportation Center 3-51
3.11.1. Pedestrian Access and Connections 3-51
3.11.2. Access to/from Downtown 3-56
3.11.3. Good Connections to Maintain 3-57
3.11.4. Deficiencies in Current Connections 3-57
3.11.5. Potential Future Deficiencies 3-58
3.12 Marketing, Ticketing, Information and Wayfinding 3-58
3.12.1. Joint Marketing and Ticketing 3-58
3.12.2. Availability of Connection Information 3-59
3.12.3. Wayfinding in the RITC 3-59
3.12.4. Information on Downtown New London 3-59
3.12.5. Deficiencies in Marketing, Ticketing, Information and Wayfinding 3-60
3.13 Amenities and Commercial Services 3-60
3.13.1. Current Amenities in the RITC 3-60
3.13.2. Current Commercial Services in the RITC 3-61
3.13.3. Potential for Additional Amenities and Commercial Services 3-61
3.14 Future Ridership and Service Scenarios and Impacts 3-62
3.14.1. Ridership and Service Scenarios 3-62
3.14.2. Impacts on the RITC 3-67
3.15 Summary of Operational and Service Needs 3-78
3.15.1. Current Elements to be Maintained 3-78
3.15.2. Current Deficiencies and Needs 3-79
3.15.3. Future Operational and Service Needs 3-80

List of Figures

Figure 3-1: Union Station Rail Platforms....3-1
Figure 3-2: Union Station Ticket Counter....3-2
Figure 3-3: Amtrak Annual Ridership at New London....3-4
Figure 3-4: Amtrak FY2008 Monthly Ridership at New London....3-5
Figure 3-5: Amtrak Average Daily Ridership at New London....3-5
Figure 3-6: How Amtrak Passengers Arrived at the Station....3-7
Figure 3-7: Greyhound Bus Loading Area....3-10
Figure 3-8: Cross Sound Ferry Terminal....3-16
Figure 3-9: Long Island Ferry 2004 Monthly Volumes....3-19
Figure 3-10: How Cross Sound Ferry Passengers Arrived at the Terminal....3-21
Figure 3-11: Fishers Island Ferry 2008 Monthly Volumes....3-25
Figure 3-12: Fishers Island Ferry Average Weekday Passenger Volumes....3-25
Figure 3-13: Fishers Island Ferry Average Weekday Vehicle Volumes....3-26
Figure 3-14: Casino Bus Loading Area....3-27
Figure 3-15: Full Implementation Tourist Transit System....3-29
Figure 3-16: Proposed Pilot Tourist Transit System....3-30
Figure 3-17: SEAT New London Hub....3-31
Figure 3-18: How SEAT Passengers Arrived at the Terminal....3-35
Figure 3-19: Union Station Taxi Stand....3-37
Figure 3-20: State Street Railroad Crossing....3-40
Figure 3-21: Peak Hour Traffic Volumes (2008 Existing Conditions)....3-41
Figure 3-22: Level of Service Summary (2008 Existing Conditions)....3-42
Figure 3-23: Water Street Garage....3-44
Figure 3-24: Water Street Garage Average Daily Revenue for Day Rate Parkers....3-45
Figure 3-25: Access Routes to Union Station....3-52
Figure 3-26: Access Route to Cross Sound Ferry....3-53
Figure 3-27: Union Station Waiting Area....3-60
Figure 3-28: Cross Sound Ferry Ticket Offices....3-61
Figure 3-29: Cross Sound Ferry Food Concession....3-61
Figure 3-30: Future Scenario Peak Summer Sunday Ridership....3-70
Figure 3-31: Potential Parking Impacts- Peak Summer Saturday....3-73
Figure 3-32: Peak Hour Traffic Volumes (2030 High Scenario Conditions)....3-76
Figure 3-33: Level of Service Summary (2030 High Scenario Conditions)....3-77

List of Tables

Table 3-1: Amtrak Service to/from New London 3-4
Table 3-2: Shore Line East Service to/from New London 3-4
Table 3-3: Greyhound Service to/from New London 3-12
Table 3-4: Cross Sound Ferry Boats 3-15
Table 3-5: Long Island Vehicle Ferry Summer Schedule 3-17
Table 3-6: SeaJet Passenger Ferry Schedule 3-18
Table 3-7: Block Island Passenger Ferry Summer Schedule 3-18
Table 3-8: Typical Daily Cross Sound Ferry Ridership (2004/2005) 3-19
Table 3-9: Estimated Daily Cross Sound Ferry Ridership (2008) 3-19
Table 3-10: Fishers Island Ferry Summer Schedule 3-24
Table 3-11: Proposed Tourist Transit System Service Frequency 3-29
Table 3-12: Proposed Tourist Transit System Pilot Service Frequency 3-30
Table 3-13: SEAT Bus Services 3-33
Table 3-14: New London SEAT Schedule 3-34
Table 3-15: Schedule of All Trains Passing through New London 3-39
Table 3-16: Water Street Garage Monthly Parking Revenue 3-45
Table 3-17: Estimated Peak Summer Saturday Parking Utilization 3-47
Table 3-18: Parking Survey Responses Received 3-48
Table 3-19: Reasons for Parking 3-48
Table 3-20: Key Connections between Services 3-52
Table 3-21: RITC Future Ridership Scenarios 3-63
Table 3-22: RITC Future Service Scenarios 3-65
Table 3-23: Future Scenario Ridership Growth Assumptions 3-68
Table 3-24: Future Scenario Annual Ridership 3-68
Table 3-25: Future Scenario Weekend Ridership 3-70
Table 3-26: Future Scenario Weekday Ridership 3-71
Table 3-27: Future Peak Summer Weekend Parking Demand 3-73

3. Transportation Modes at the Regional Intermodal Transportation Center

The New London Regional Intermodal Transportation Center (RITC) is a collection of several transportation terminals and facilities. At the center of the RITC is the historic Union Station. Passenger and freight rail services stop at and/or pass through the station area. Intercity bus services also use the RITC and ferry operators provide service to points in New York State and Rhode Island. Transportation to other parts of the southeastern Connecticut region is provided by the SEAT public transit system and by private bus operators serving the two casino resorts. Local travel within New London is provided by three taxi companies. There are two parking garages and several surface lots in the area serving patrons of the RITC and the local street network connects travelers to I-95 and the rest of the interstate highway network.

Each of these services is discussed below.[1] For each service the discussion includes a description of current operations and services, the utilization of current services, current operational needs and future operational needs. This chapter addresses transportation and terminal operations. Chapter 2 addressed the current condition of the facilities and identifies deficiencies, including deficiencies in accessibility.

3.1 Rail Services

3.1.1. Operations and Services

Passenger Operations

New London is served by Amtrak's Northeast Corridor intercity rail passenger service stopping immediately behind Union Station. Service is provided by both Northeast Regional and Acela Express trains. Both services are operated with electric locomotives. Trains on both services originate at Boston and serve New London en route to New Haven, New York and Washington DC. Some Northeast Regional trains continue to Richmond and Newport News, VA. Shore Line East (SLE), one of Connecticut's two commuter rail services, operates primarily between Old Saybrook and New Haven, with a few trains extending beyond New Haven to Stamford. ConnDOT contracts with Amtrak to operate this service. SLE service is provided using diesel locomotives. One SLE round trip on weekday evenings extends beyond Old Saybrook to and from New London. In addition, three weekday Amtrak intercity trains in each direction honor SLE multi-ride tickets for commuter service between New London and New Haven.

Figure 3-1: Union Station Rail Platforms



In New London, the passenger rail platforms are located adjacent to the Union Station building (Figure 3-1). The platforms extend on both sides of the at-grade crossing of State Street so trains block State Street when they are stopped at the station. This blocks vehicular and pedestrian traffic to City Pier and the Fishers Island Ferry. The at-grade crossing of Governor Winthrop Boulevard also briefly stops vehicular and pedestrian traffic to and from Cross Sound Ferry when passenger trains pass through, although this intersection is clear when trains are stopped at the station.

[1] Because cruise ships dock at the State Pier, which is not part of the RITC, cruise ship operations are not included in this document, except to the extent that shuttle buses to the cruise ships use the RITC.

Passenger rail ticketing and other services are performed inside the main Union Station building (Figure 3-2). The ground level of the station building, open each day from 5:30 AM to 11:20 PM, provides basic facilities that include an Amtrak office, ticket sales counter, a large waiting area, restrooms and an ATM. The station is generally staffed with two ticket agents although this could change with an expected increase in electronic ticketing. Shore Line East shares these facilities. The station is described in greater detail in Chapter 2.

Figure 3-2: Union Station Ticket Counter



Amtrak passengers can purchase tickets online, via PDA, by phone, at the station, or through a travel agent. At Union Station, there are automated kiosks for purchasing tickets and Amtrak agents are also available during all hours the station is open; however, there is no checked baggage service in New London. Shore Line East tickets are sold at the Amtrak ticket counter. Amtrak tickets purchased in advance can be mailed so that passengers can report directly to the train without the need to enter the station building. Online ticket purchases can also be picked up at kiosks in the station or at the ticket counter. Passengers with tickets can access the rail platforms from the ferries, bus terminals or parking facilities without entering the station building.

Freight Rail Operations

Freight rail service in this section of the Northeast Corridor is operated by the Providence and Worcester Railroad (P&W). P&W is the only freight operator with trackage rights on this section of the corridor. Currently P&W operates one train daily in each direction through New London. The trains do not stop, but because the trains range in length from between ¼ mile to one mile, they can block the State Street and Governor Winthrop Boulevard grade crossings for up to five minutes.

The New England Central Railroad (NECR) owns tracks that parallel the west side of the Thames River. A single track enters the Amtrak right-of-way just north of Governor Winthrop Boulevard and parallels the electrified passenger rail tracks through the station area before merging onto the Main Line just south of Union Station. North of the station, the NECR track leaves the Amtrak-owned right-of-way and extends north to Norwich and beyond. This connection between P&W and NECR is not currently in use.

P&W trains did connect with the NECR in New London prior to June of 2008, but that connection has since been moved to Willimantic. When the New London connection was active, P&W trains would switch onto the NECR track south of Union Station. The crossover has a 10 mph restriction so a one mile train would block both nearby grade crossings for up to 12 minutes as the train moved through the station area along the NECR freight track. P&W trains from the east would have to pass through downtown New London and across the Shaws Cove Bridge before reversing direction to switch to the NECR track. Thus, they would block the grade crossings for several minutes traveling westbound, the gates would then open while the train waited approximately 10 minutes for the signal to reverse direction, and then the gates would close again for as long as 12 minutes while the train switched to the NECR track and proceeded north. Note that this connection is no longer being operated but P&W has indicated that they could resume this operation at any time.

Thus, while Amtrak trains pass through the grade crossings in a short amount of time, the time during which the crossing remains blocked by freight trains can be significant enough to adversely impact normal vehicular and pedestrian traffic to and from the two ferry terminals, as well as rail passengers walking between the northbound platform and the station.

Service Levels

AMTRAK trains serve New London year round. The Amtrak schedule (current at the time of this analysis) is shown in Table 3-1. All nine daily Northeast Regional trains serving Boston stop at New London in both directions. The earliest train is in the northbound direction at 5:52 AM, and the last train is in the southbound direction at 11:25 PM. Most Acela Express trains pass through the New London station without stopping but on weekdays two northbound trains and one southbound train stop at the station. The southbound Acela train is scheduled to stop in New London at 6:30 AM, while the northbound trains are at 8:37 AM and 9:08 PM.

While Shore Line East currently operates seven days a week as far as Old Saybrook, at the time of this study, the service to New London operated only on weekdays. SLE service to New London is illustrated in Table 3-2. (Note that, although the Northeast Corridor runs largely north-south, it runs east-west in the state of Connecticut. Thus, while Amtrak lists trains as northbound and southbound, SLE lists them as eastbound and westbound. Amtrak's northbound trains are operating eastbound through Connecticut in the same direction as SLE's eastbound trains.) There are four trains offering SLE commuter service operated in each direction on weekdays, three of which are Amtrak intercity trains open to passengers with the SLE multi-ride tickets. The service is designed for commuting westbound in the morning and returning eastbound in the evening; while one can return from New London in the evening, there is no morning service to New London.

In the westbound direction there are three morning Amtrak/SLE trains and one evening SLE train while in the eastbound direction all four trips operate in the evening. While the SLE train serves intermediate stops en route from New Haven, the Amtrak trains serve only New London, Old Saybrook, New Haven and Stamford.

P&W indicated that they operate one freight train per day in each direction through New London.

3.1.1. Utilization of Services

Ridership

Amtrak annual ridership figures for New London for FY1999 through FY2008 are presented below in Figure 3-3. Ridership, which includes both boardings and alightings, has been consistently increasing in New London; however the annual increase has varied from as little as 1% to as much as 18% in FY2004. Annual growth averaged just under 6% during this nine year time period, yielding a total increase of 61%. New London was the third highest ridership Amtrak station in Connecticut in 2007 (the last year for which comparative data was available) with 161,658 boardings and alightings, following New Haven (640,281) and Stamford (339,932).

Daily ridership data for New London was obtained for FY2008. This was used to calculate monthly ridership shown in Figure 3-4. The figure shows that July and August were clearly the highest ridership

Table 3-1: Amtrak Service to/from New London

Weekday		Weekend	
Southbound	Northbound	Southbound	Northbound
6:30 AM (Acela)	5:52 AM	8:16 AM	5:52 AM
7:51 AM	8:37 AM (Acela)	10:20 AM	9:23 AM
9:54 AM	9:20 AM	11:14 AM	11:23 AM
11:16 AM	10:55 AM	1:17 PM	12:31 PM
12:46 PM	1:32 PM	3:19 PM	3:26 PM
3:17 PM	2:56 PM	4:50 PM	4:26 PM (Sat only)
4:53 PM	4:27 PM	6:17 PM	5:28 PM
7:15 PM	6:22 PM	8:18 PM	7:23 PM
8:19 PM	8:25 PM	11:25 PM	9:26 PM
11:25 PM	9:08 PM (Acela)		10:20 PM (Sun only)
	10:20 PM		
10 Trips	11 Trips	9 Trips	9 Trips

Note: Unless otherwise noted, all trains are Northeast Regional

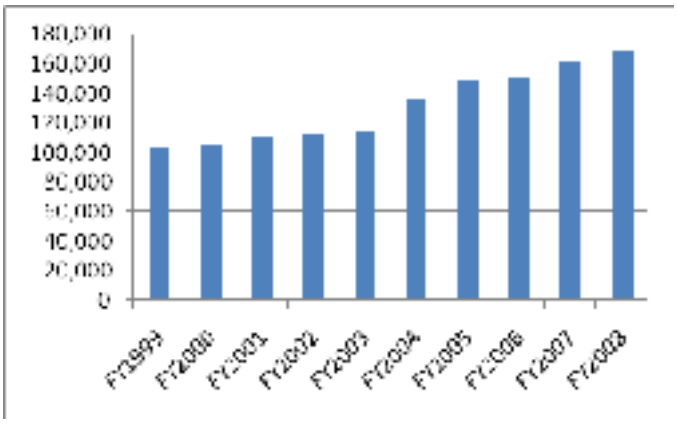
Table 3-2: Shore Line East Service to/from New London

Weekdays	
Westbound Departure	Eastbound Arrival
6:30 AM (AE)	6:22 PM (NR)
7:51 AM (NR)	7:43 PM (SLE)
11:16 AM (NR)	8:25 PM (NR)
7:55 PM (SLE)	10:20 PM (NR)
4 Trips	4 Trips

Note: Service operated through AE (Acela Express); NR (Northeast Regional) and SLE (Shore Line East)

Figure 3-3: Amtrak Annual Ridership at New London

Year	Boardings + Alightings
FY1999	104,735
FY2000	105,530
FY2001	109,729
FY2002	113,085
FY2003	114,756
FY2004	135,749
FY2005	147,842
FY2006	150,455
FY2007	161,658
FY2008	169,112



Source: Amtrak Fact Sheet for State of Connecticut, Fiscal Year 200. FY2008 data provided directly by Amtrak

Figure 3-4: Amtrak FY2008 Monthly Ridership at New London

Month	FY 08 Boardings + Alightings
October, 2007	15,071
November, 2007	14,669
December, 2007	12,988
January, 2008	10,786
February, 2008	12,073
March, 2008	13,195
April, 2008	13,121
May, 2008	14,102
June, 2008	12,657
July, 2008	18,539
August, 2008	18,518
September, 2008	13,393
Total	169,112

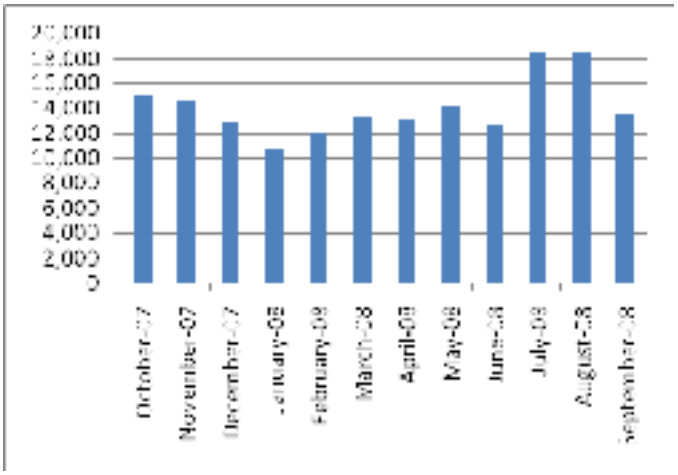
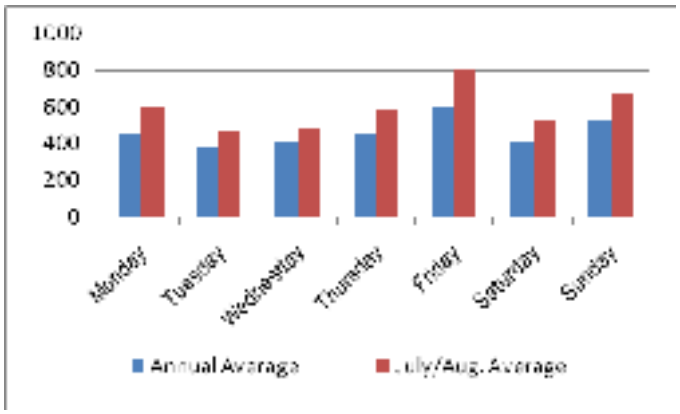


Figure 3-5: Amtrak Average Daily Ridership at New London

Day of Week	FY2008 Boardings + Alightings: Annual Average	FY2008 Boardings + Alightings: July/Aug. Average
Monday	459	598
Tuesday	387	477
Wednesday	408	479
Thursday	457	590
Friday	595	808
Saturday	406	522
Sunday	524	670



months[2] with over 18,500 riders each month. Other months ranged from a high of just over 15,000 in October 2007 to a low of about 10,800 in January 2008. Monthly ridership averaged just over 14,000. Thus, summer ridership was 32% over the monthly average while January ridership was just 77% of the average.

The daily ridership figures generally showed a consistent pattern of variability by day of week as shown in Figure 3-5. Friday exhibited the highest average ridership (595 passengers) for the year, followed by Sunday (524). The lowest ridership days were typically Tuesday, Saturday and Wednesday. Despite the general trend, every day of the week, except Saturday, had days where ridership exceeded 800 passengers. These were generally associated with holiday travel around July 4th, Labor Day, Columbus Day and Thanksgiving, and with summer Fridays. In July and August ridership follows a similar pattern, but with volumes 17%-35% higher than the annual average.

[2] This coincided with the 2008 spike in gasoline prices.

Ridership data for the entire Shore Line East was provided by the Connecticut Department of Transportation (ConnDOT). The service has been in place since 1990. Initial ridership stabilized in the late 1990's but has been growing since 2000. Ridership growth has been steady in recent years. From 2003 to 2007, Shore Line East ridership grew at an average annual rate of 5.8% from 385,500 riders to 483,600. Ridership in the first eleven months of 2008 (when gasoline prices spiked) was up 75,000 riders, or 17%, but 24,000 of these riders are on the new weekend service that began in July leaving a weekday increase of 11.8%. Ridership at New London station on the one daily SLE train averaged two boardings and 12 alightings daily in November 2008. Ridership on the Amtrak trains providing SLE service was not provided. ConnDOT estimates this figure at 20 boardings per day, indicating that the daily New London SLE boardings total is about 22.

Ridership Characteristics and Travel Patterns

The passenger survey carried out for this study provided some insight into the ridership characteristics and opinions of passengers using various modes, including Amtrak. The survey was administered to Amtrak passengers at Union Station waiting rooms and boarding platforms on Saturday, August 2, 2008 and Thursday, August 7, 2008. A total of 107 responses were collected from passengers waiting for Amtrak service, 66 on Thursday and 41 on Saturday. The responses indicated that:

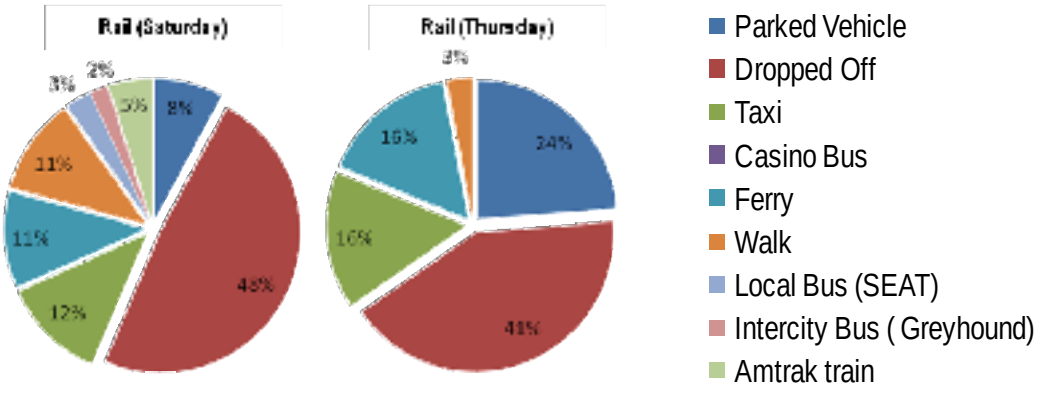
- Most of the Amtrak travel is for social/recreational purposes. Work related trips constituted 25% of the surveys done on Thursday and only 15% on Saturday. Fewer than 5% were making school related trips.
- Amtrak rail service in New London primarily serves riders who travel occasionally. Most of the rail passengers (77% on Thursday and 87% on Saturday) were making their first trip or using the service less than once a month. The rest use it about once or twice a month. There were no respondents traveling more frequently.
- Approximately equal numbers of passengers were traveling to the section of the corridor between New London and Boston and to the section of the corridor between New London and New York. However, 34% of weekday travelers and 13% of the weekend travelers were traveling past New York City to the mid-Atlantic region.
- Information on connections from other modes to Amtrak is presented in Figure 3-6. The largest group of passengers (over 40% on both days) was those who were dropped off at the station. In the Thursday survey, the next largest group (24%) parked their personal vehicles, although only 8% did so on Saturday. A smaller share arrived by ferry or taxi. On Saturday a few people walked or took the bus.
- All but one of the passengers who parked used the Water Street Garage across the street from Union Station.
- While in New London, the majority of rail passengers surveyed indicated that did not visit any local businesses; however 37% did so, mostly visiting restaurants.

Another survey worth noting is the 2008 Shoreline East Customer Satisfaction Survey[3]. That survey (conducted at all SLE stations except New London) identified that the SLE station at Old Saybrook, approximately 20 miles west of New London and served by all SLE trains, attracts travelers from a wide area. The survey indicated that 26% of ridership at Old Saybrook comes from Waterford, New London and other towns farther north and east. This implies that about 52 of the approximately 202 daily riders

[3] Warner Transportation Consulting, prepared for ConnDOT, *2008 Shore Line East Customer Satisfaction Survey Final Report*, August 2008

boarding at Old Saybrook[4] might use a station in New London if SLE were extended (although some may choose to continue to park for free at Old Saybrook rather than pay for parking in New London). The

Figure 3-6: How Amtrak Passengers Arrived at the Station



survey also indicated that 7% of the 80 Westbrook riders (6 passengers) come from the New London area so they might also use a New London SLE station, yielding an estimate of up to 58 daily boardings (and 58 daily alightings) that might be diverted to a New London SLE stop.

While the private automobile remains the most common access mode to the railroad station, operators of other modes, especially the ferry, recognize the importance of the connection to rail. Cross Sound Ferry noted that many students from Long Island use rail services at New London to connect to colleges in Boston. They typically find a few transfers from each Amtrak train and will wait for those passengers if a train is arriving when a ferry is scheduled to leave. However, the rail and ferry schedules are not coordinated. Several years ago there was a joint ticketing arrangement between Cross Sound Ferry and Amtrak that is not presently active. Fishers Island Ferry also mentioned that transfers to and from the train, primarily to/from New York City, are common occurrences during summer weekends and that being adjacent to the railroad station is important to the Fishers Island Ferry.

3.1.2. Current Operational Needs

Rider Opinions

When asked to rate specific characteristics of their experience at the station, Amtrak users' average responses ranged from fair to good. However, 33% of the respondents rated one characteristic -- amenities at the station (e.g. food services, restrooms and newsstands) -- as poor or very poor. No other characteristic was rated poor or very poor by more than 10% of rail users. Amtrak passengers surveyed who used the parking lot were satisfied with the parking facility. In comparison, the people who were dropped off at the station held a poorer opinion of the parking facilities although fewer than 10% gave them a poor or very poor rating.

Current Operational Needs

Both passenger rail operations appear to be functioning well for current service levels in New London. However, based on the rider opinions expressed in response to the ratings questions and in free format comments, better amenities are needed at the station including things such as more food service options, better restrooms and better signage and information.

[4] September 2008 ridership reported by ConnDOT

There is a strong desire for improved rail commuter services in the region, and the Southeastern Connecticut Council of Governments (SCCOG) has made this one of its highest priorities in its Regional Transportation Plan prepared in 2007. Shore Line East expansion to New London is planned and is being actively pursued by the Shore Line East Coalition, a subcommittee of New London's City Center District[5]. Several respondents to the Shore Line East Customer Satisfaction Survey expressed the need for adding regular service at the New London stop, although none of those surveys were conducted at the New London station.

3.1.3. Future Operational Needs

Planned Shore Line East Expansion

The Connecticut DOT's 2007 report on Expanding Rail Service on Shore Line East[6] states that in a planned Phase 2 (planned for the 2009-2010 timeframe and subsequently delayed until 2010[7]), more service will be brought to New London by operating all twelve weekday trains and all nine weekend day trains to/from New London. This is expected to require $4 million in annual operating costs in addition to a significant capital investment in rolling stock and facilities. Note that no capital improvements to New London's Union Station and no new leasing costs were identified as needed for the SLE expansion in that report. An estimated $13 million is needed for rolling stock, plus an $800,000 expansion in yard facilities. The report projects that a 500 car parking facility would be needed in New London at a cost of at least $6 million. The report projects a $260,000 increase in revenue from increased ridership, which roughly translates into about 35,000 riders (or 17,500 round trips) annually[8], or about 62 additional boardings per weekday and 13 boardings per weekend/holiday day. The 62 weekday boardings would be new riders in addition to the estimated 58 current riders from the New London area who now park in Old Saybrook and use Shore Line East but who would be expected to use the station in New London instead. Thus, SLE ridership at Union Station is expected to grow six-fold. While a large percentage of these 120 New London riders boarding in New London would require parking, this is far less than the 500 spaces recommended in the ConnDOT report. After implementation, ConnDOT projects an annual growth in SLE ridership of 4%.

The report also points out several constraints to increasing this service which include negotiating and amending current agreements with Amtrak as they own this part of the Northeast Corridor, as well as increased traffic over the three movable bridges which will require further agreements with Amtrak, the Department of Environmental Protection, U.S. Coast Guard and other agencies. Other constraints identified in the report include availability of personnel, funding to cover additional operating and maintenance costs, and equipment and capital railroad infrastructure requirements.

Phase 3 of the Shoreline East expansion plans include the introduction of bidirectional commuter service between New London and New Haven. SLE would add four weekday eastbound trains making all stops in the morning and six weekday westbound trains making all stops in the evening. Substantial additional capital costs to upgrade intermediate stations for bidirectional operations have been identified for this alternative. No implementation date has been set by ConnDOT.

[5] The website www.onemorestop.net states : The mission of the Shore Line East Coalition is to extend the existing New Haven to Old Saybrook Shore Line East commuter service one more stop to New London and bring frequent, reliable, and affordable commuter rail service to the commuters, tourists, and residents of southeastern Connecticut.
[6] ConnDOT, *Expanding Rail Service on Shore Line East*, January 2007
[7] The Day reported on December 17, 2009 that ConnDOT had announced an additional delay of 1 ½ to 2 months.
[8] Assuming the ten-ride discounted fare of $7.40 per one-way trip.

Other service scenarios are also being explored which include preliminary discussions with Rhode Island on possible SLE service expansions to the east of New London.

Amtrak 2030 Master Plan

Amtrak is currently developing a master plan for Northeast Corridor service in the Year 2030. The draft schedules developed for the master planning effort did not increase the amount of service to the New London station. Northeast Regional trains would remain at nine per weekday in each direction. Acela Express schedules call for an increase from 10 to 16 trains per weekday through New London in each direction but there are no plans to increase the number that stop in New London. While the number of trains stopping would not increase, Amtrak could increase capacity by increasing the length of the train up to a maximum of 11 cars per train. The increase in the number of Acela Express trains would result in an additional 12 brief closings of the two railroad crossings each weekday. Amtrak has not explicitly estimated ridership for New London Station in 2030, but they have estimated a nationwide growth factor that would result in a 67% increase to 282,950 annual New London passengers (boardings plus alightings). This translates into an increase in average summer Friday ridership from 808 to 1,350.

Other Potential Service Changes

Advocates have proposed an eastward expansion of MTA/MetroNorth Railroad electric commuter service to New London. The expanded MetroNorth service would replace all SLE service (both services are subsidized by ConnDOT). The expanded service would provide direct, no-transfer commuter-rail type service between New York City and southeastern Connecticut. New bus connections from New London to the casino resorts and Mystic could replace existing casino bus connections to MetroNorth in New Haven that must use heavily congested I-95 to reach the casino resorts. MetroNorth currently has no plans for such expansion, but if implemented as a substitute for Shore Line East, this would likely increase the number of trains, rail ridership to and through New London, and the demand for parking and shuttle bus access.

Future Operational Needs

Increases in the number of SLE and Amtrak trains serving the station could exacerbate the impacts that trains have on pedestrians and vehicles using the State Street at-grade crossing. Operational measures or physical improvements could be needed to mitigate these impacts.

ConnDOT identified the need for more parking (500 spaces) to accommodate New London ridership resulting from the planned SLE Phase 2 expansion although the estimated shift from Old Saybrook (58 weekday riders) and the projected revenue increase (90-120 weekday riders) imply that initial ridership could be much less. New London at present tends to have ample parking available on most weekdays when most SLE ridership would occur. Capacity could become constrained, however, if Cross Sound Ferry reduces its on-site parking, especially on summer Fridays when weekend ferry crowds begin to fill the Water Street Garage. Similar capacity constraints could impact SLE weekend riders in the summer.

In addition, Amtrak will require that SLE trains utilize Track 6 for passenger boarding and alighting. The ConnDOT Office of Rail is currently looking at short term modifications to the Track 2 (northbound) platform to access SLE trains on Track 6. While ConnDOT has stated that it is too early to investigate the possibility of building a future high-level platform on the water side of Track 6, it envisions a potential future platform in this location on the outside of the curved portion of Track 6 (to lessen train-to-platform gap issues) since it would be more functional for passenger service and SLE train positioning.

3.2 Intercity Bus (Greyhound)

3.2.1. Operations and Services

Passenger Operations

Greyhound Bus Lines (owned by First Group since October 2007) provides the only scheduled intercity bus service to/from New London. Scheduled service operates daily between New York and Boston with an intermediate station stop in New London. (Greyhound and other carriers provide additional service between New York and Boston that does not stop in New London – most of these services operate via I-84 through Hartford.) In New London, Greyhound operates out of a small brick building along Water Street on the north side of Union Station (the building is not a part of the original Union Station structure). Greyhound leases the building, presently on a month to month basis, from the private owners of Union Station. The Greyhound terminal building houses ticketing and customer information, freight-handling functions, office space, restrooms, and a small passenger waiting area. The bus station is open and staffed seven days a week, although the hours vary. Generally, one or two employees are present at the station during operating hours.

Figure 3-7: Greyhound Bus Loading Area



(a)



(b)



(c)

Greyhound uses 45-foot long, "over-the-road" coaches with a raised passenger seating section and a luggage compartment underneath (buses are 13-feet high). Greyhound buses access the terminal from Eugene O'Neill Drive using Atlantic Street to Water Street to avoid using State Street. Atlantic Street has two sharp turns but it is faster than proceeding via State Street. Atlantic Street can become very congested during special events in New London when State Street is congested or closed, impacting Greyhound travel times. Greyhound service experiences other delays on this route, primarily on I-95 between New London and New York. The worst delays are on Fridays and Sundays. Currently, Greyhound does not coordinate with other New London transportation providers and does not have any policies regarding the holding of buses to accommodate passengers arriving late on other carriers.

The Greyhound bus loading area consists of four saw-tooth style bus bays adjacent to the building (Figure 3-7a). There are two full-sized bus bays and two shorter bays. Despite the saw-tooth design, Greyhound drivers prefer to park parallel to the street and railroad tracks, across the bus bays (Figure 3-7b). This allows easy egress without requiring the bus to back up. The

bays must be clear of other vehicles, however, so that drivers can pull far enough off the street to access the luggage bays on both sides of the bus. There were persistent problems with cars (and during the Parade Project construction, taxis) parking in the bus bays and restricting bus movement (Figure 3-7c). When this occurs, or when multiple Greyhound buses are in the terminal, buses may need to back out of their sawtooth bays. Occasionally (reportedly about once a day on average) buses are forced to back into Water Street impacting traffic and possibly creating a safety hazard.

Buses typically spend 15 minutes or less at the terminal and there are typically no more than two buses present at the same time (one headed to Boston and one headed to New York), unless a delay occurs or extra service is operated. The longer dwell times occur when buses arrive early and have to wait until their scheduled departure time. Late buses spend as little time as possible in the terminal. While buses are in the terminal, passengers disembark and collect their checked baggage from the bus baggage compartment; freight may need to be unloaded/loaded by the ticket agent; and boarding passengers stow their baggage in the baggage compartment before boarding. If there is sufficient time, through-riders may disembark to stretch, smoke, or use the station restrooms.

Greyhound sells tickets in the terminal and through Greyhound's website. Although online reservations make up only an estimated 15% of New London boardings, about 50% of reservations are made in advance and the majority of the remaining 35% are purchased in advance at the terminal. All passengers, regardless of when tickets were purchased, must obtain a claim check from the agent in the terminal if they are checking baggage. Passengers with international destinations must have their passports checked by the agent. Passengers must carry their own luggage to the bus but Greyhound staff will assist them in stowing bags in the luggage compartment. Tickets are then collected as passengers board the bus.

Freight Operations

Greyhound also carries freight. Its freight business has been growing recently and is currently about five or six pieces per day in New London. Freight consists primarily of larger items that UPS does not accept. Shippers bring freight to the ticket counter and pay for shipping costs at that time. There is a storage room in the terminal for freight and agents are responsible for loading and unloading freight from the bus when it arrives. When freight is taken off the bus it is placed in the storage room and the recipient is called. Recipients then have three days to claim the item before storage charges are incurred.

Service Levels

The Greyhound route operating through New London serves stops in Boston, Providence, and the two casino resorts (Mohegan Sun and Foxwoods) to the northeast and New Haven, Bridgeport, Stamford, White Plains and New York City to the southwest. New London is an intermediate stop on the route to these destinations and no Greyhound bus service currently originates or terminates there. New York City is the southern terminus of the route. Most trips terminate in Boston on the northern end although some weekend express trips terminate in Providence.

Service varies by day of the week. The schedule is shown in Table 3-3. There are typically four to five roundtrips per weekday. Sunday is the busiest day of the week with twelve southbound and nine northbound trips. Fridays and Saturdays have nine and seven round trips respectively. Some weekend service runs express and skips some or all of the Connecticut stops to the southwest of New London. A few of the supplemental weekend trips serving New London also skip the casino resorts and primarily serve the Boston and Providence to New York market. Schedules are not coordinated with those of any other carriers.

3.2.1. Utilization of Services

Ridership

Greyhound does not record ridership by station. Greyhound estimates that about 100 passengers board Greyhound buses at the New London terminal on a typical summer weekday. This increases to about 160 per day on busy weekends (Fridays and Sundays). In lower ridership time periods this drops to as low as 50 boardings on weekdays and 80 on weekend days. Thus, Greyhound carries comparably fewer travelers than other inter-city carriers (Amtrak and Cross Sound Ferry) at the Regional Intermodal Transportation Center (RITC). That and the fact that Greyhound ridership peaks on Fridays and Sundays may explain why there were fewer responses obtained to the passenger survey that was conducted for this study on a Saturday and a Thursday in August, 2008. Greyhound noted that ridership levels were higher in the past when there were more naval operations around the New London area. Greyhound still gets considerable business from the Coast Guard Academy.

Table 3-3: Greyhound Service to/from New London

Monday-Thursday		Friday & Sunday		Saturday	
Southbound	Northbound	Southbound	Northbound	Southbound	Northbound
4:55 AM	8:45 AM	4:55 AM	1:35 AM	4:55 AM	8:45 AM
9:40 AM (Mon only)	12:30 PM	10:15 AM	8:45 AM	9:40 AM	12:30 PM
10:15 AM	5:45 PM	1:05 PM (Fri only)	12:30 PM	10:15 AM	12:55 PM
2:15 PM	9:50 PM	1:35 PM (Sun only)	12:55 PM	2:15 PM	3:10 PM
8:50 PM		2:15 PM	3:10 PM	5:10 PM	5:45 PM
		2:50 PM	5:45 PM	8:50 PM	9:50 PM
		4:35 PM (Sun only)	7:25 PM (Sun only)		9:55 PM
		5:10 PM	8:55 PM		
		6:20 PM	9:50 PM		
		6:55 PM (Sun only)	9:55 PM (Fri only)		
		8:50 PM			
		10:55 PM (Sun only)			
Total: 4 Trips, 5 Monday	Total: 4 Trips	Total: 8 Trips Friday 11 Trips Sunday	Total: 9 Trips	Total: 6 Trips	Total: 7 Trips

Rider Characteristics and Travel Patterns

The passenger survey conducted for this study offers some insight into the rider characteristics and travel patterns for Greyhound intercity passengers; however only 18 responses (9 Thursday and 9 Saturday) were obtained from Greyhound riders and this sample size is insufficient to draw conclusions that are statistically valid. Most (67%) of the passengers were traveling for social or recreational purposes with the remainder traveling for other purposes. Most (72%) of the passengers that boarded Greyhound intercity bus services in New London utilized the service less than once every month or were first time users. The rest of the passengers traveled at least one or twice in a month. Greyhound riders were primarily traveling to destinations located along the Boston-New York corridor.

Conversations with Greyhound indicated that many passengers originating at the New London terminal are from the local New London area, though some come from as far as Norwich. Survey responses indicated that the largest share of passengers (44%) was dropped off at the terminal; however a considerable share

(22%) made their connection through the local SEAT buses. The remainder walked, used the ferry or parked. It should again be noted that this information is based on very few survey responses. Greyhound staff indicated that a substantial number (as much as 50%) of New London passengers use SEAT buses for access.

Greyhound staff recognizes several important connections to other modes and facilities. They noted that students from Long Island take Cross Sound Ferry service to New London and then board Greyhound to get to colleges in Boston. Also, some passengers to/from New York connect to the Fishers Island Ferry. Some passengers taking the bus to New York utilize the Water Street parking garage.

Finally, the survey indicated that the majority of Greyhound passengers (65%), in the course of their trip, visit New London businesses, primarily restaurants and shops. Although few Greyhound riders were surveyed, this percentage was far greater than that found for the other groups of travelers surveyed. This may be because so many riders are New London area residents.

3.2.2. Current Operational Needs

Rider Opinions

Of the few Greyhound passengers who responded to the survey, 41% gave a poor or very poor rating for amenities at the terminal (e.g. newsstand, food services and restrooms). Note that, among the six groups of passengers surveyed, this was the highest percentage of poor or very poor ratings. One in four Greyhound passengers who responded gave a poor or very poor rating for comfort (e.g., seating and climate control) at the terminal and one in five gave a poor or very poor rating for "clearly marked schedules for all transportation modes". Some of the few passengers who provided comments felt the need for a better waiting area.

Of the passenger groups surveyed, Greyhound passengers were most likely to visit downtown if more shopping, recreation and services were offered.

Deficiencies in Current Operations

Despite the generally poor and antiquated facilities, Greyhound operations in New London function reasonably well. While the capacity of the facility to handle buses is generally adequate, Greyhound indicated that a third full-sized bay would help them to better manage operations during peak times when it is possible for three buses to be at the terminal at the same time. A third bay could be used as a shared facility with other carriers or operators and Greyhound indicated that even the second bay could be shared as long as a third bay was available when needed. Operations could be improved by keeping private vehicles and taxis from infringing on Greyhound space. A terminal design that prevented the occasional need to back out into traffic would be desirable. Also, traffic delays caused by special events in the downtown inhibit operations on specific days.

Greyhound would like to see an improved pedestrian connection to Cross Sound Ferry's Long Island service and would consider moving its terminal closer to the ferry dock in order to develop the market for ferry-bus connecting service. Presently, and especially in the winter, the walk required adversely affects the appeal of the ferry-bus connections. Greyhound would also consider more coordinated schedules, as well as real-time coordination, with Cross Sound Ferry, especially if the physical connection were improved.

Greyhound would like to upgrade the terminal interior, as it is currently doing in many locations. However, Greyhound will not invest in the current New London terminal due to the current month-to-month nature of its lease. Any terminal upgrade or relocation should consider the need to provide close proximity of

counters to bus bays which is important in the handling of freight; also important to be considered is the need for short term parking for freight drop-off and pick-up. The growing freight business may also require additional facilities and enhanced capacity. Greyhound may also consider consolidated ticketing with SEAT, Amtrak and other bus carriers. In such a scenario, however, ticketing agents would have to be able to handle freight as well as passenger ticketing.

3.2.3. Future Operational Needs

Potential future service changes

Several changes are in process within the Greyhound system. Greyhound is adding routes and also undertaking terminal upgrades at many station locations. Based on current information, Greyhound appears to be unlikely to add new routes through New London; however, frequency of bus service could be increased if ridership grows in the future.

Operational Needs

Increased frequency of service is unlikely to require any substantial changes in operational needs beyond those present needs noted above.

3.3 Cross Sound Ferry

3.3.1. Operations and Services

Maritime operations

Established in 1975, Cross Sound Ferry operates ferry services in the region and is one of the largest privately owned ferry operations in the United States. Headquartered in New London, Cross Sound Ferry provides services to and from the North Fork of Long Island (Orient Point, NY) and to and from Block Island, RI (through a sister company, Block Island Ferry Services). While the Long Island line operates both auto and high-speed passenger ferries, only passenger ferry service is offered to Block Island, a small island south of the Rhode Island coast and a popular summer tourist destination. In summer months, Cross Sound's facilities are also used by Viking Fleet to operate one round trip per week to Montauk, on the South Fork of Long Island. Cross Sound's administrative, operations and maintenance functions are located in New London.

Ferry service is offered 364 days a year (with the exception of Christmas) with nine vessels, listed in Table 3-4. (Cross Sound does not handle any commercial freight.) Seven of these vessels can accommodate autos, trucks, motor homes, buses, motorcycles and bicycles, along with passengers. The capacity of these vessels ranges from 20 to 120 cars and 20 to 1,000 passengers, and the journey takes approximately an hour and twenty minutes one way. Cross Sound Ferry also offers high-speed ferry service between Long Island (Orient Point) and New London with its high-speed, passenger-only catamaran, the 400-passenger SeaJet, which covers the 16 mile journey in about 40 minutes. The 530 passenger Jessica W. ferry serves Block Island (RI). Vessels are typically removed from service in the off peak months for routine maintenance. Most of the boats are docked and serviced in New London at night, although one or two of the auto ferries remain at Orient Point overnight in the summer. Cross Sound's sister company, Thames Shipyard and Repair further up the Thames River in New London provides repair and retrofitting services to Cross Sound Ferry.

Ferries operate according to published schedules. Delays sometimes occur in New London when freight trains block the Governor Winthrop crossing. Departures are held for late arriving Amtrak trains on a case

by case basis to accommodate any passengers connecting from the train. The final boat of the day to Block Island is often held for Amtrak passengers.

Table 3-4: Cross Sound Ferry Boats

	John H.	Cape Henlopen	Mary Ellen	Susan Anne	New London	North Star	Caribbean	Sea Jet
Length Overall (feet)	240	327	260	250	260	168	128	122
Date Built	1989	1941	1983	1964	1979	1968	1972	1989
Car Capacity	120	90	85	80	60	35	22	0
Passenger Capacity	1000	900	675	840	300	300	120	400

Source: Cross Sound Ferry www.longislandferry.com

Terminal Operations

In New London the service benefits from easy access to and from I-95 for cars and trucks traveling directly to the ferry and to parking. Most passengers originating in New London access the ferry by car. Ferries to Long Island take trucks as well as passenger vehicles (only one ferry has height restrictions) and passengers without cars. The Block Island Ferry and the high-speed SeaJet service to Long Island do not carry vehicles.

Vehicle access to the terminal site is from Governor Winthrop Boulevard or Water Street, across the tracks, to Ferry Street. Pedestrian access to the site is either through the at-grade railroad crossing at Governor Winthrop Boulevard used by vehicles or through the at-grade crossing at State Street, walking north through the City Pier Park onto the ferry site. Both at-grade crossings can be blocked by passing trains. The at-grade crossing at Governor Winthrop Boulevard is blocked when trains are passing through New London. Amtrak trains move quickly and do not tie up the crossing for long; however the freight trains close off vehicular and pedestrian access for longer periods of time. Pedestrian access across the State Street crossing is blocked by passenger trains when they are stopped at the station.

All vehicles entering the site are greeted by an agent at the Ferry Street entrance (Figure 3-8a). Those who are parking are charged the $10 fee and are directed to one of the two long term parking areas. Those picking up or dropping off passengers are directed to one of two pick-up/drop-off areas. Those vehicles being taken on board the next ferry to Long Island are directed to a series of numbered lanes in the staging area based on the size of the vehicle (Figure 3-8b). Those with reservations on a later boat are directed to a standby staging area on the far (south) side of the ferry ramps. Currently, the staging areas are barely adequate for ferry volumes. Increases in vehicle volumes will require that areas once used for staging that were converted to long term parking be converted back into staging areas, reducing the availability of on-site long term parking.

Tickets for passengers and their vehicles traveling to Long Island can be booked online, by phone, or using phones in the ticket office (the reservations office is in a separate building). Larger commercial vehicles cannot reserve online and must reserve by telephone. There are discounts for children, same day round trips, and ten-ride ticket books. While there is nearly always adequate capacity for passengers, vehicles typically require advanced reservations. About 50% of reservations are made via the internet. Boarding passes must be picked up inside the New London ticket office at which time ID checks are also conducted. Drivers are otherwise encouraged to remain with their vehicles in the staging area and until they are on board the ferry. Passengers not traveling in vehicles can wait in the ticket office or in an outdoor waiting area. Boarding passes are collected on the ramp as vehicles/passengers enter the boat (Figure 3-8c). If there is capacity remaining on a departing ferry, vehicles waiting in the standby staging area will be allowed

on an earlier trip. Upon arriving in New London, vehicles exit the boat and continue out of the facility without stopping (Figure 3-8d).

Cross Sound Ferry will soon implement an electronic ticketing system which will eliminate the need to pick up boarding passes in the ticket office. Agents will be able to issue boarding passes at the entrance to the site.

The SeaJet high-speed service to/from Long Island is geared to passengers originating on Long Island bound for the casinos in Connecticut. These passengers generally park and purchase their tickets on Long Island and then transfer to casino shuttle buses at the Cross Sound Ferry terminal in New London. The service is designed to provide fast and seamless connections for casino-bound patrons with nothing to distract them on their way to the casinos. Tickets are sold at the ticket office only on the day of travel. Reservations are not taken. Upon request, passengers receive a round trip bus ticket to one of the two

Figure 3-8: Cross Sound Ferry Terminal



casinos at no additional charge. Passengers purchasing a round trip ticket are assigned a return trip time based on the time of their originating trip with passengers on earlier originating trips receiving earlier return times. Changes in return trip time are honored on a space available basis and are arranged with bus operators at the casinos.

Tickets for Block Island passengers can be booked online, by phone, or in person. There are discounts for children and same day round trips. Reservations are strongly recommended. About 65% of reservations and made via the internet. Both reserved tickets and tickets purchased in person must be picked up at the Block Island Ferry ticket booth. Tickets are taken as passengers enter the boat.

Cross Sound provides limited on-site parking at the New London ferry terminal at $10 per day on a first-come, first-served basis. Parking is provided on an unpaved 70 space lot between the Block Island Ferry terminal and City Pier Park. This lot is partly on Cross Sound Ferry property and partly on land leased from the City. Another area at the north end of the site behind the administrative offices was originally intended for staging but was converted to 60 parking spaces in 2004. There is also a 130 space employee-only parking lot at this end. Cross Sound advertises to its customers that additional parking is available at the Water Street Parking Garage directly across the street from the ferry terminal. Directions from the Water Street Garage to the ferry are provided on the Cross Sound website. Weekend parkers may also be directed to the Julian lot by ferry personnel.

Service Levels

The auto ferry to Long Island offers frequent ferry service 364 days a year. In summer months, 14 round trips are operated on most weekdays (Monday through Thursday) and 23 round trips are operated on peak weekend days (Fridays and Sundays) in August. Examples of the summer schedule for these days are shown in Table 3-5. Schedules vary somewhat from day to day. In the spring and fall, service levels are somewhat reduced with the least service provided in the winter. In January, seven round trips are operated on weekdays and eleven round trips are operated on weekends.

SeaJet high-speed passenger ferry service to and from Long Island operates daily from mid-March through December and weekends (Friday, Saturday and Sunday) in the winter. The SeaJet provides four round trips each day. During the summer peak season, 6 round trips are operated on Fridays and Saturdays, as shown in Table 3-6.

Cross Sound operates three weekday and four weekend passenger-only round trips to Block Island from the end of June to the beginning of September. In June and September only weekend service is operated. The schedule is shown in Table 3-7. In summer months, Viking Fleet operates one round trip per week to Montauk, Long Island, and uses Cross Sound's SeaJet dock.

Table 3-5: Long Island Vehicle Ferry Summer Schedule

Mid-week service (Summer Mon-Thurs)		Maximum service (August Fri & Sun)	
Outbound	Inbound	Outbound	Inbound
7:00 AM	8:20 AM	7:00 AM	8:20 AM
	9:20 AM	7:30 AM	9:20 AM
8:00 AM	10:20 AM	8:00 AM	10:20 AM
9:00 AM		9:00 AM	10:50 AM
	11:20 AM	9:30 AM	11:20 AM
10:00 AM	12:20 PM	10:00 AM	12:20 PM
11:00 AM		11:00 AM	12:50 PM
	1:20 PM	11:30 AM	1:20 PM
12:00 PM	2:20 PM	12:00 PM	2:20 PM
1:00 PM		1:00 PM	2:50 PM
	3:20 PM	1:30 PM	3:20 PM
2:00 PM	4:20 PM	2:00 PM	4:20 PM
3:00 PM		3:00 PM	4:50 PM
	5:20 PM	3:30 PM	5:20 PM

4:00 PM	6:20 PM	4:00 PM	6:20 PM
5:00 PM		5:00 PM	6:50 PM
	7:20 PM	5:30 PM	7:20 PM
6:00 PM	8:20 PM	6:00 PM	8:20 PM
7:00 PM		7:00 PM	8:50 PM
	9:20 PM	7:30 PM	9:20 PM
8:00/8:30 PM		8:00 PM	10:05 PM
		8:45 PM	10:35 PM
		9:45 PM	11:05 PM
14 Trips	14 Trips	23 Trips	23 Trips

Table 3-6: SeaJet Passenger Ferry Schedule

Regular Schedule		Summer Weekends	
Outbound	Inbound	Outbound	Inbound
7:00 AM	8:40 AM	7:00 AM	8:40 AM
9:00 AM	10:40 AM	9:00 AM	10:40 AM
		11:00 AM	12:40 PM
5:00 PM	6:40 PM	5:00 PM	6:40 PM
7:00 PM	8:40 PM	7:00 PM	8:40 PM
		9:00 PM	10:25 PM
4 Trips	4 Trips	6 Trips	6 Trips

Table 3-7: Block Island Passenger Ferry Summer Schedule

Monday-Thursday		Friday-Sunday	
Outbound	Inbound	Outbound	Inbound
8:10 AM	11:00 AM	8:10 AM	11:00 AM
11:30 AM	5:50 PM	11:30 AM	2:20 PM
		2:50 PM	5:50 PM
6:10 PM	9:05 PM	6:10 PM	9:05 PM
3 Trips	3 Trips	4 Trips	4 Trips

3.3.2. Utilization of Services

Ridership

The service from Long Island brings in a large number of customers from Long Island to the casino destinations at Mohegan Sun and Foxwoods. It also serves as a "bridge" from eastern Long Island to New England. Ferry services saw a surge in demand that peaked in 2004 as tourism continued to grow around New London and increasing highway congestion made road travel a less desirable option. Cross Sound Ferry noted that in 2004, the auto ferry peaked at 1.1 million annual passengers and 495,000 vehicles, while the SeaJet passenger-only service carried 250,000 passengers. They noted a decline in ridership after 2004 of approximately 5% with the auto ferry currently carrying just over one million passengers in 2007. The SeaJet carried about 230,000 passengers in 2007. The Block Island Ferry peaked in 2005 with 105,000 passengers, with 2007 annual ridership just under 100,000 and 2008 expected to be around 88,000.

Cross Sound Ferry indicated that the peak ridership months are July and August with about 30% of annual vehicle and passenger volume on the Long Island Auto ferry occurring in those two months. Figure 3-9 shows monthly ridership for the two Long Island services (the auto ferry and the SeaJet) combined for the peak year of 2004. The figure also shows monthly vehicle volumes on the auto ferry. The figure shows the peaking of ridership in July and August and the lowest ridership in December through March. Vehicle volumes are slightly less peaked, possibly due to peaking of ridership on the passenger-only SeaJet in summer months. (Cross Sound Ferry did not provide separate monthly ridership data for the SeaJet, nor did they provide data more recent than 2004.) The Block Island Ferry operates only in the summer.

Cross Sound Ferry identified Sundays as the highest ridership days, followed by Fridays, with the lowest ridership occurring mid-week. Cross Sound Ferry provided examples of daily ridership from 2004 (2005 for Block Island) shown in Table 3-8 (note that the SeaJet did not operate in January 2004 and the Block Island Ferry is summer-only). With the recent decline in ridership and vehicle traffic noted above, Table 3-9 shows estimated 2008 ridership on the four types of days.

Figure 3-9: Long Island Ferry 2004 Monthly Volumes

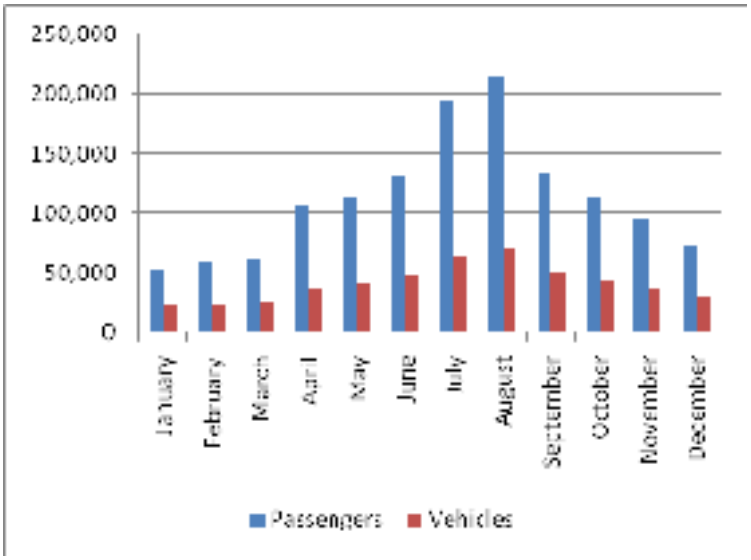


Table 3-8: Typical Daily Cross Sound Ferry Ridership (2004/2005)

	Auto Ferry Vehicles	Auto Ferry Passengers	SeaJet Passengers	Block Island Passengers
Peak Summer Sunday	3,193	8,541	1,031	2,050
Summer Weekday	1,744	3,867	797	1,806
January Sunday	962	2,298	310	
January Weekday	567	998		

Table 3-9: Estimated Daily Cross Sound Ferry Ridership (2008)

	Auto Ferry Vehicles	Auto Ferry Passengers	SeaJet Passengers	Block Island Passengers
Peak Summer Sunday	3,033	8,114	949	1,695
Summer Weekday	1,657	3,674	733	1,494
January Sunday	914	2,183	274	
January Weekday	539	948		

Rider Characteristics and Travel Patterns

Cross Sound Ferry recognizes rail as an important link and counts on some transfers from each Amtrak train, which it expects will increase in the future. The operator noted that students from Long Island use the ferry to connect to rail to Boston. They also noted that about 85% of SeaJet riders use the casino shuttle buses. Most are day trippers who are retired. Others come for a weekend of entertainment and gambling. Block Island passengers also tend to be day trippers.

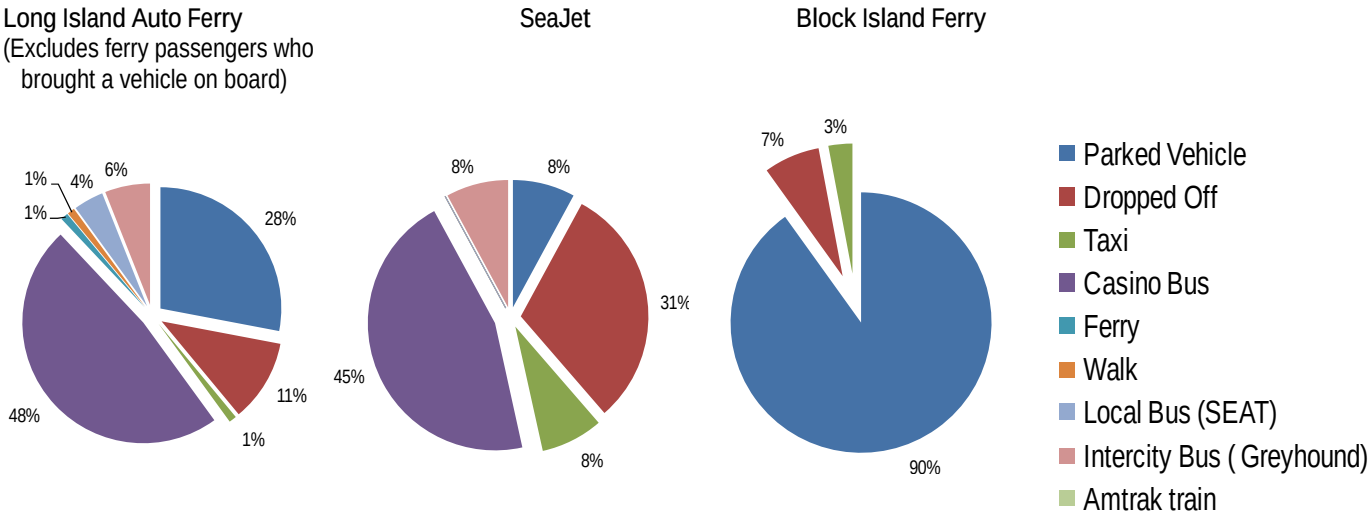
The passenger survey conducted for this study offered some useful insights into rider patterns. For the Long Island auto ferry, 118 survey responses were obtained. There were 28 responses on Saturday August 9th and 90 on Sunday August 17th. For the Block Island passenger ferry, 126 responses were obtained on Saturday August 9th. For the SeaJet, only 16 responses were obtained on Friday August 8th. Some of the key conclusions that can be drawn from these responses are:

- Most ferry passengers come in groups of 2 to 4, which comprise 82% of Long Island Ferry, and 77% of Block Island Express Ferry passengers. Less than 10% travel alone.
- The Block Island Express Ferry and SeaJet serve narrow, largely tourist markets with 95% of travelers making recreational trips.
- On the Long Island auto ferry, 64% of the respondents leaving New London indicated that they were on their return leg of a round trip while only 23% were on the originating leg of their trip indicating that most patrons are probably New York State residents
- While data from Cross Sound Ferry indicate that about 49% of passengers drive a vehicle onto the Long Island auto ferry (and many more are likely passengers on those vehicles), 75% of survey respondents arrived in a vehicle on Saturday August 9th but only 11% did so on Sunday August 17th, indicating that the larger August 17th group of survey respondents is probably not a representative group of auto ferry travelers.
- The mode of access for those responding to the survey who did not bring their cars on board the auto ferry is shown in Figure 3-10. Almost half (all of them on August 17th) reported using a casino bus to reach the ferry even though casino buses only meet the auto ferry on days when the SeaJet is not running (SeaJet was running that day). Thus, the August 17th survey is again not typical of ferry riders and must have included a tour group traveling by bus.
- With 48% of those not bringing a car on board the auto ferry reporting use of a casino bus, only 28% reported parking their cars in New London and 11% reported being dropped off. Very few passengers utilized the intercity bus or the SEAT service. No passengers reported using the Amtrak connection. Excluding August 17th and looking only at the August 9th data, all but one rider who did not bring a car on board parked a car in New London.
- Also shown in Figure 3-10, only about half of the SeaJet passengers surveyed reported using the casino bus shuttle, even though Cross Sound Ferry reports that the figure averages around 85%.
- Also shown in Figure 3-10, most (91%) passengers on the Block Island Ferry brought their own cars and utilized parking in New London. Only about half of these reported where they parked but 80% of those reporting indicated that they parked at the Water Street Garage and 20% reported other downtown locations. None reported parking on ferry property (most likely because on-site parking fills early in the day). Most of the respondents who did not park were dropped off. No passengers reported using the Amtrak connection.
- Few ferry passengers visited any businesses downtown during the trip – only 12% of Long island ferry riders, 14% of SeaJet riders and 17% of Block Island ferry riders.

Although none of the Cross Sound Ferry passengers surveyed indicated that they connected from Amtrak, 12% of Amtrak passengers surveyed indicated that they connected from the ferries. This could result from

the much greater number of ferry riders in comparison to the number of Amtrak riders and/or the fact that those connecting from Fishers Island were not distinguished from Long Island ferry riders in the rail survey.

Figure 3-10: How Cross Sound Ferry Passengers Arrived at the Terminal



3.3.3. Current Operational Needs

Rider Opinions

The riders on the ferries to Long Island gave good ratings for most characteristics of the New London terminal including convenience in making connections, comfort and amenities at the terminal station, ease of finding locations of connections, ease of finding schedules, purchasing tickets, and safety and security at the terminals. Parking, amenities and nearby places of interest got the lowest ratings, each with 11%-13% of respondents giving poor or very poor ratings.

The riders on the ferries to Block Island gave lower ratings than the Long Island ferry riders. Amenities were rated poor or very poor by 23% of Block Island Ferry respondents and comfort was rated as such by 20% of respondents, reflecting the lack of amenities around the Block Island ferry dock. Nearby places of interest were rated poor or very poor by 20% reflecting the isolated location of the terminal. Parking was rated poor or very poor by 17% indicating dissatisfaction with the primary mode of access to this service. (Note that none parked at the Cross Sound Ferry site.) Other characteristics did not receive poor or very poor ratings from more than 13%.

Deficiencies in Current Operations

No needs or deficiencies have been identified in Cross Sound's maritime operations. At present, the terminal staging areas are adequate. The 130 on-site customer parking spaces, however, are rarely sufficient for the volume of Block Island passengers on summer weekends and tend to fill with the first trip of the day. Limited parking on-site forces passengers who do not take their vehicles on board (mostly Block Island passengers) to park on the opposite side of the railroad tracks in the Water Street Garage which has poor pedestrian connections to the ferry landing. The same poor pedestrian access affects riders transferring to and from Amtrak trains and Greyhound buses. Cross Sound Ferry has continuously expressed its concern about the safety and convenience of passengers who must walk across the tracks to parking and other travel modes. Cross Sound Ferry has expressed a strong desire for a pedestrian bridge over the railroad tracks to the train station, bus terminal and garage to address these poor pedestrian connections.

Much of the other 70-space, unpaved on-site parking area near the Block Island terminal is leased from the City and so its long-term availability is not guaranteed. Cross Sound's 130 space employee parking lot is leased from Yankee Gas, so its long-term availability is also not guaranteed.

A minor problem in access to its site that Cross Sound faces is the at-grade crossing at Governor Winthrop Boulevard that is blocked when trains pass through the crossing. Passenger trains tend not to be a problem but freight trains can block the intersection for several minutes and can be disruptive if this coincides with a ferry arrival or departure.

3.3.4. Future Operational Needs

Potential Future Service Changes and Related Operational Needs

While ridership peaked in 2004 and has been slightly lower in recent years, it is expected to recover in the coming years as the economy recovers, recreational travel continues to grow, and I-95 construction in Connecticut and Long Island Expressway traffic encourage drivers to seek alternate routes to New England.

Cross Sound has not made projections of future demand but can and expects to respond quickly to the changing demands of the traveling public. Cross Sound representatives anticipate increasing demand as traffic and congestion on I-95 and the Long Island Expressway increase and believe they are ready to respond as the needs arise. They are able to add additional ferry trips to meet the demand and even increase the size of their vessels.

Cross Sound does not have specific plans for new services; however, they have long considered adding service to the South Fork of Long Island and have considered reinstating high-speed passenger service to Martha's Vineyard that was discontinued in 2003. Nantucket is another possible future destination. Cross Sound believes that expansion of high-speed passenger services would best be accompanied by construction of a new high-speed ferry terminal at the site of the Block Island Ferry ticket building and had developed a plan to do so in conjunction with a plan for a pedestrian bridge over the railroad tracks. This terminal would include indoor ticketing facilities, restrooms, and an indoor waiting area and could include additional amenities and concessions.

Increased demand and new services would affect landside capacity. Increased vehicle ferry traffic would force Cross Sound to convert parking areas to vehicle staging, increasing the demand for off-site parking facilities and the need for improved pedestrian connections. New passenger-only services would also increase the demand for off-site parking. Construction of a new high-speed ferry terminal would also take up space now used for parking.

3.4 Fishers Island Ferry

3.4.1. Operations and Services

Maritime Operations

The Fishers Island Ferry operates from New London and provides passenger and freight service to Fishers Island, a small island that is part of Suffolk County, NY, although located just 7 miles southeast of New London. The ferry is the only commercial route to the island. The ferry is operated by the Fishers Island Ferry District, a public entity financed through a special tax district. The District has a terminal with an operations office in New London and a terminal with a business office on the island. Ticketing is handled in New London. There are freight-handling crews at both terminals.

Ferry service is offered 365 days a year to Fishers Island with two vessels accommodating autos, trucks and passengers. The larger ferry, *Race Point*, was built in 1985, is 162-feet long and can carry 250 people and 28 autos[9]. This boat is the primary boat in service and operates in the spring, summer and fall. It is typically removed from service in the winter for routine maintenance. It carries most of the commercial traffic (trucks and freight). The smaller ferry, *Munnatawket*, was built in 1978, is 132-feet long and can carry 209 people and 21 autos. This boat operates along with *Race Point* in the summer and in the winter when *Race Point* is out of service. It is typically removed from service for routine maintenance in the spring or fall. Generally, both boats operate in the summer and only one at a time operates during the rest of the year. The boats are docked and serviced in New London at night and when not operating. Major maintenance is conducted in the off-season through a competitive bidding process since the District is a public entity.

Boats operate round trips between the two terminals according to published schedules. Delays sometimes occur in New London when trains block the State Street crossing. Departures are held until after trains depart both to accommodate any passengers connecting from the train and to accommodate any vehicles caught on the other side of the railroad crossing. In addition to Amtrak trains, freight trains are also reported to occasionally block the crossing. The final boat of the day will be held up to ten minutes (20 minutes on Fridays) if they are informed of a passenger who is arriving late. Sometimes the boat captain will contact Amtrak bridge attendants to determine whether he should hold for a late train.

Terminal Operations

The ferry carries automobiles as well as passengers traveling without cars. A staging area is provided for vehicles waiting to board the ferry. There is also a small short-term parking area in New London for anyone dropping off or picking up a passenger or package. There is no long term parking provided on the New London site.

Ticketing is generally handled at the New London end. All tickets sold are round trip tickets. Tickets are either for a single round trip or are sold as a 10-ride commuter book. There are discounts for children and seniors, and year-round island residents receive a substantially reduced rate. While there is nearly always adequate capacity for passengers, vehicles typically require advanced reservations. About 75% of reservations are made via the internet, with the remainder made in person. (Phone reservations are not accepted for passenger vehicles.) Both reserved tickets and tickets purchased in person must be picked up inside the New London ticket office. Boats load 30 minutes prior to departure. Tickets are taken as vehicles/passengers enter the boat. Random ID checks for security purposes are conducted at the ticket office and when boarding. Passengers receiving the resident discount must also show a valid Island ID Card.

Commercial Vehicle and Freight Operations

Commercial vehicles must make reservations by phone. There is a separate fee structure for commercial vehicles based on length and weight of the vehicle. While there are a considerable number of trucks using the ferry, the operators estimate that about half of the goods carried to and from the island are handled as freight. The District maintains a freight office at both terminals. The offices are open nine hours per day, six days a week. There are typically dozens of daily truck deliveries to the freight offices in peak season. These include UPS and Fedex vehicles, as well as local merchants and private individuals. Freight can consist of anything from small packages to construction materials. Anyone can drop off a package; no

[9] Trucks typically take up more space than autos and reduce the number of vehicles carried accordingly.

reservations are needed. Freight is handled by ferry staff typically using freight wagons which are loaded and rolled onto and off of the ferry by ferry staff. Freight recipients are notified by phone when an item arrives; no delivery services are provided.

Service Levels

The ferry service operates all year long with peak service lasting four months from mid-May to mid-September with five to eleven daily round trips. The service during weekdays begins at 4:40 AM and the last trip departs from New London at 6:30 PM. The most service, eleven round trips, is offered on Fridays when the service extends to 10:00 PM. The least service is offered on Saturdays. Summer schedules for these two days of the week are shown in Table 3-10. In the off peak season four to seven round trips are

Table 3-10: Fishers Island Ferry Summer Schedule

Minimum Service (Saturday)		Maximum Service (Friday)	
Outbound	Inbound	Outbound	Inbound
		4:40 AM	6:25 AM
7:00 AM	9:00 AM	7:00 AM	9:00 AM
10:00 AM	11:45 AM	11:00 AM	1:15 PM
12:15 PM	2:00 PM	1:00 PM	3:00 PM
		2:45 PM	4:30 PM
3:30 PM	5:30 PM	3:30 PM	5:30 PM
		5:15 PM	6:45 PM
6:30 PM	8:00 PM	6:30 PM	8:00 PM
		7:15 PM	8:45 PM
		8:30 PM	10:00 PM
		10:00 PM	11:30 PM
5 Trips	5 Trips	11 Trips	11 Trips

offered with the most service on Fridays. A special holiday schedule offers more trips on a few popular holidays and reduced service during others.

3.4.2. Utilization of Services

Ridership

The island has a year-round population of about 500 that swells to 3,000 in the summer. Ferry operators indicated that the ferry typically carries about 160,000 passengers and 40,000 vehicles annually, with a significant seasonal variation. Operators report that annual ferry ridership is stable and may be increasing slightly.

Detailed ridership data by day was provided by the ferry operator for calendar year 2008. Daily passenger and vehicle volumes are recorded only for trips from New London to Fishers Island. The number of return trips each day had to be estimated. With no information on how long passengers stay on island, all passengers were assumed to be either daily commuters or weekend visitors[10]. In 2008, the ferry carried

[10] Return volumes were assumed to equal the arriving volumes on most days, reflecting the commuter traffic to the island. However, Friday arriving volumes are generally much higher than other days, so Friday return volumes were capped at the average volume for the previous four weekdays, with the excess shifted to a Sunday return on the same weekend. Thus Friday arrivals were assumed to be split between weekday daily commuters and weekend visitors. Similar adjustments were made for long holiday weekends.

over 153,000 passengers and over 42,000 vehicles. Passenger and vehicle volumes by month are shown in Figure 3-11[11]. Ridership clearly peaks in summer months with a 2008 peak monthly volume of about 20,000 passengers and 5,000 vehicles. Volume in winter months was typically below one half of that in summer months.

Estimated average volumes by day of week are shown in Figures 3-12 and 3-13 for passengers and vehicles, respectively. In both cases the average daily volumes for July and August are shown versus the average daily volume for the entire year. It can be seen that weekday (Monday-Wednesday) passenger volumes average about 30-40% higher in the summer, while weekend (Friday-Sunday) volumes average 60-95% higher in the summer in comparison to annual averages. Vehicle volumes reflect a similar trend.

Figure 3-11: Fishers Island Ferry 2008 Monthly Volumes

Month	Passengers	Vehicles
January	8,784	2,176
February	7,405	1,994
March	8,869	2,406
April	10,644	2,924
May	15,712	4,374
June	19,826	5,166
July	20,168	5,608
August	19,940	5,878
September	12,624	3,590
October	13,125	3,670
November	9,554	2,721
December	6,876	2,114
	153,526	42,620

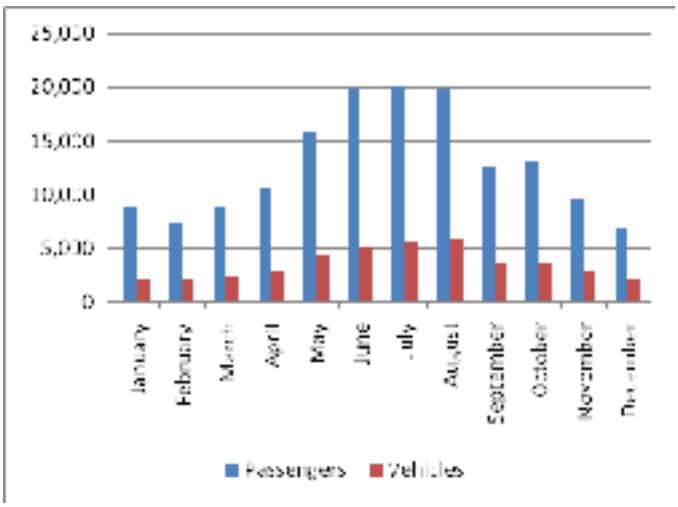
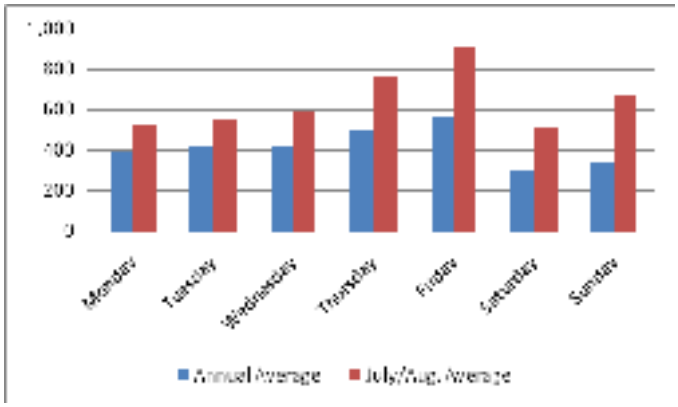


Figure 3-12: Fishers Island Ferry Average Weekday Passenger Volumes

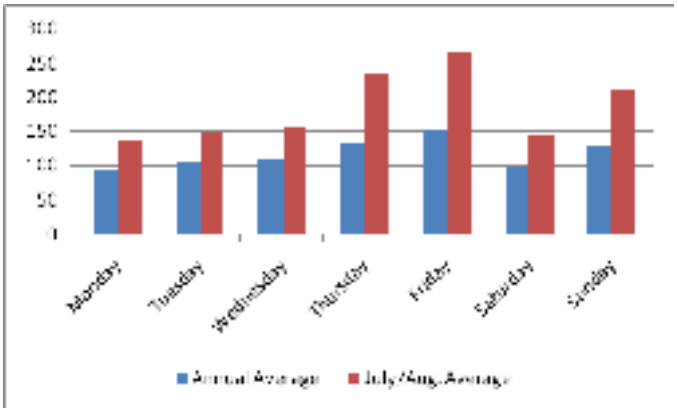
	Annual Average	July/Aug. Average
Monday	384	518
Tuesday	422	549
Wednesday	424	587
Thursday	496	763
Friday	560	909
Saturday	306	509
Sunday	345	668



[11] Because only trips going to the island were reported, and all passengers were assumed to be either daily commuters or weekend visitors, people spending longer periods on the island could cause early summer month ridership estimates to be somewhat high and later summer months to be somewhat low.

Figure 3-13: Fishers Island Ferry Average Weekday Vehicle Volumes

	Annual Average	July/Aug. Average
Monday	93	138
Tuesday	106	150
Wednesday	108	156
Thursday	133	236
Friday	152	266
Saturday	97	145
Sunday	127	209



Rider Characteristics

Fishers Island Ferry District representatives report that ferry riders consist of year round and seasonal island residents. There is no tourist business as the island offers little in terms of recreation and entertainment for non-residents. There is a magnet school on the island that serves about 30 Connecticut students who use the ferry every school day. There are daily commuters too – mostly contractors who live in Connecticut, who park their cars in New London and access their work trucks parked on the island.

Fishers Island considers itself part of the southeastern Connecticut community. According to the Ferry operators, its passengers patronize local downtown businesses. Fishers Island Ferry customers are much more oriented to southeastern Connecticut businesses than those of other intercity modes, primarily due to the lack of shopping and services on the island.

The passenger survey conducted for this study did not include passengers on the Fishers Island Ferry. However, surveys of riders on Amtrak indicated that 16% of weekday and 11% of weekend passengers connect from one of the ferries. Fishers Island Ferry operators report that some of the ferry passengers use the train from New York on summer weekends. They also report occasional connections from Cross Sound Ferry from Long Island to Fishers Island, but bus connections are uncommon. Ferry operators reported that some of the weekend residents park in the Water Street garage; however, they report that daily commuters to the island generally park for free on New London streets and know of locations where the two-hour parking limit is typically not enforced.

3.4.3. Current Operational Needs

The newly-built terminal facility at the New London site is not reported to have any significant operating deficiencies and has adequate passenger amenities; however there are some ADA compliance issues. Access to the site, for both vehicles and pedestrians, is a critical concern for safe and efficient operations. There is a need to maintain truck access (including 18-wheelers) to site. The ferry operators have voiced the need for safer pedestrian access, possibly via a bridge or tunnel, as the train crossing is potentially hazardous as well as a source of delays in ferry operations. Major events in downtown New London also impede access to the ferry terminal, particularly for vehicles needing to access the site through congested streets and crowds of pedestrians. Operators did not voice any concerns over the availability of parking. Ferry operators are not interested in joint ticketing with the other modes at New London due to security concerns, which they presently handle while ticketing.

3.4.4. Future Operational Needs

Fishers Island Ferry operators indicated that ridership is stable and there will likely be little need for any significant expansion of service on their vehicle ferries. There has been some consideration of adding a third boat which would be a passenger-only high-speed ferry that could complete the trip in 20-30 minutes instead of about 40 minutes. The District has not committed to this or made any plans to change schedules to include such a boat. However, since ridership is not expected to grow substantially, this may just tend to concentrate some of the passenger-only demand at certain times. Vehicle demand would remain unchanged or could be concentrated at fewer times if vehicle-ferry schedules were curtailed with the introduction of passenger-only service. Addition of a third boat would also require an additional ferry slip in New London. There are currently only two slips but there is room to construct a third.

3.5 Casino Shuttle Bus

3.5.1. Operations and Services

Shuttle Operations

Both Foxwoods and Mohegan Sun casino resorts provide shuttle buses to meet most SeaJet high-speed ferry services in New London. The bus services to each casino are operated by separate private bus companies. The services are designed to provide fast and seamless connections for casino-bound patrons with nothing to distract them on their way to the casinos. The number of buses traveling to each casino is determined by the bus operators based on passenger counts sent by Cross Sound Ferry after each boat departs from Orient Point. During peak season, the number of buses needed for a single ferry trip can be as many as eight or nine. The casino coach buses load and unload passengers on the Cross Sound Ferry property behind the Long Island Ferry ticket office where they can directly embark and disembark from the SeaJet high-speed ferry (Figure 3-14). Buses enter and exit the site via Governor Winthrop Boulevard and make non-stop connections directly to and from the casino resorts.

Figure 3-14: Casino Bus Loading Area



Sea Jet passengers are able to use the casino shuttle bus services at no cost, and those over 21 receive a free food and gambling voucher package from the casinos valued at over $30. Tickets are sold at Orient Point and passengers are able to walk directly from the ferries to waiting shuttle buses in New London without the need to enter the ticket office.

Service Levels

Shuttles meet three of the four daily SeaJet round trips. Connections are made to the 8:40 AM, 10:40 AM and 8:40 PM SeaJet arrivals and to the 7:00 AM, 5:00 PM, and 7:00 PM SeaJet departures. Service operates 364 days per year (shuttles meet vehicle ferries on winter weekdays when the SeaJet does not operate). Two additional round trips are operated on summer weekends.

3.5.2. Utilization of Services

Ridership information for the shuttle services was not obtained from the casinos; however, Cross Sound Ferry reports annual ridership on the SeaJet of about 230,000 passengers, 85% of which use the casino shuttles for an annual total of about 196,000 riders. This also indicates a peak summer Sunday ridership of about 875 (in 2004) and summer weekday ridership of about 675. Ridership on January weekends would

be about 260. Ridership data for weekdays in January (when the SeaJet does not run and shuttles meet the vehicle ferry) was not obtained.

3.5.3. Current Operational Needs

The current operation is reported to be working well with no improvements needed.

3.5.4. Future Operational Needs

Proposed Regional Tourist Transit System

SCCOG commissioned a study in 2003 to develop a business plan for an intermodal connection between the RITC and various attractions in the region including the two casino resorts (Foxwoods and Mohegan Sun) and Mystic[12]. The study recommended that a tourist circulator be provided operating between New London, Mystic and the two casino resorts. The proposed tourist transit system would include the following four regional routes when fully implemented:

- Route A: Mohegan Sun – New London – Mystic
- Route B: Foxwoods – New London
- Route C: Foxwoods – Mystic
- Route D: Mohegan Sun – Foxwoods

In addition, the plan envisioned future linkages between the regional routes and other destinations. Figure 3-15 shows the proposed full implementation route system. Only Routes A and B would serve New London. Route A would operate between Mohegan Sun and Mystic with stops in New London both downtown and at the ferry terminal. Route B would operate from Foxwoods non-stop to New London stopping at both the ferry terminal and downtown. This design allows the system to subsume the existing services between the two casino resorts and the high speed passenger ferries while still preserving the direct shuttle nature of the existing service. Service would operate from 9 am to midnight on most days with service extending to 2 am on Friday and Saturday night. Frequencies would vary by season and by time of day. The most frequent service would operate during weekend peak hours in the summer season. At this time the frequency would be as in Table 3-11 for the two demand scenarios:

Proposed Initial Implementation

The implementation of the tourist transit system was envisioned to begin with a pilot system. Figure 3-16 shows the Pilot System which is envisioned to consist of three regional routes as follows:

- Route A: Mohegan Sun – New London- Mystic
- Route C: Foxwoods – Mystic
- Route D: Mohegan Sun – Foxwoods

In the pilot system, it is assumed that the current casino coach service would be maintained as a separate service to connect to the high speed passenger ferries. During the peak weekend in the summer season, the frequency of service shown in Table 3-12 was envisioned in the pilot system:

Only Route A would serve New London, meaning buses operating every 15 minutes in each direction in addition to the existing casino shuttles.

[12] SCCOG, *Intermodal Connections Study Southeast, Final Report,* 2005, prepared by TranSystems

The tourist circulator system has not yet been implemented and funding has not been secured, although a grant-in-aid to partially fund the pilot system was appropriated from the State DOT, provided the grant is equally matched from non-state sources. At this time, SCCOG has not been able to secure the required non-state matching funding for the pilot system and the State funding has lapsed.

Potential Ridership

The Intermodal Connections Study projected a range of ridership for the fully implemented system. The range was based on differences in the extent to which potential riders respond to the availability of new transit services. For a peak summer Saturday, ridership on the entire system was projected to be between 9,365 and 19,465 riders. The study did not specify the year for which these estimates were made, but it

Figure 3-15: Full Implementation Tourist Transit System

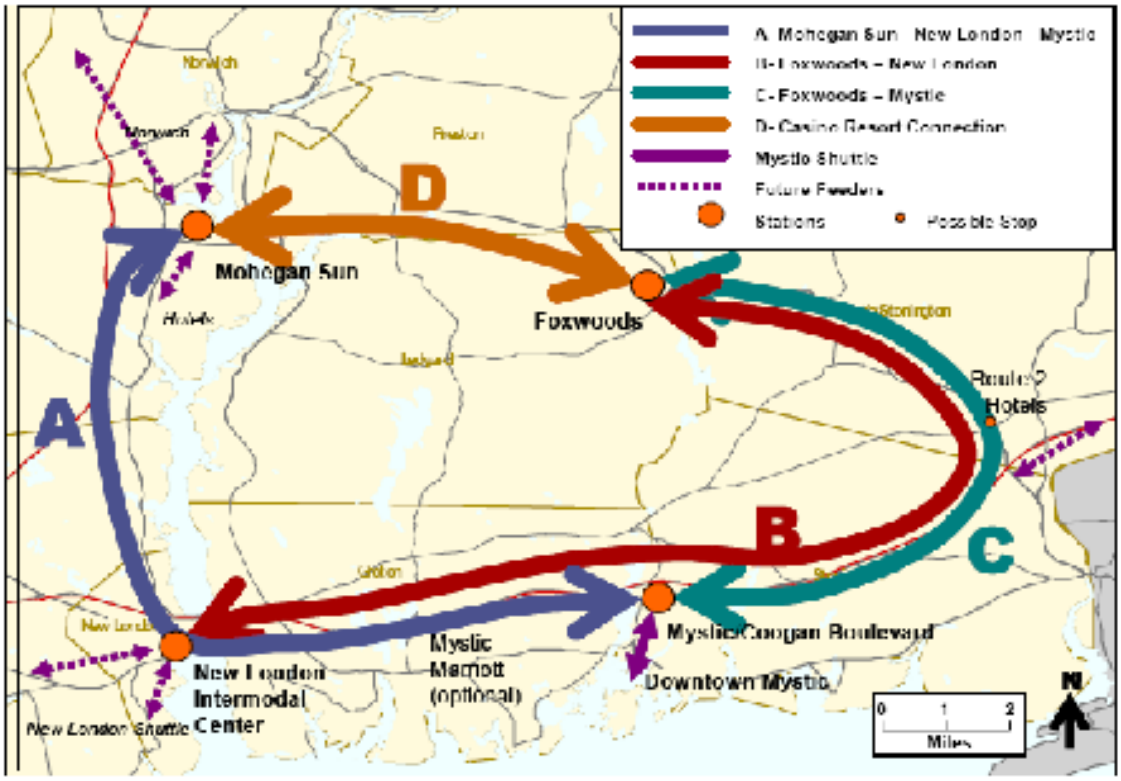


Table 3-11: Proposed Tourist Transit System Service Frequency
During peak hours on summer weekends

Route	Low Demand Scenario	High Demand Scenario
Route A:	4 per hour	6 per hour
Route B:	2 per hour	2 per hour
Route C:	4 per hour	10 per hour
Route D:	5 per hour	10 per hour
Mystic Shuttle:	4 per hour	10 per hour

was envisioned that full system implementation would be at least five years after the initial startup of the system, or no sooner than 2010.

The study did not publish detailed estimates of ridership by destination because of the inherent uncertainty associated with very detailed projections. Nevertheless, unpublished estimates of ridership to and from New London shed some light on the number of riders who might use stops at the RITC. The study did not make the assumption that there would significant new development in New London so much of the New London ridership was assumed to be intermodal connections to both the ferry and train. In the low demand scenario, New London ridership was estimated at 3,130 boardings and alightings on a peak summer Saturday (of these, 2,879 were assumed to be intermodal connections - up from 800 estimated existing connecting trips from the ferry). In the high demand scenario, New London ridership was estimated at 4,584 on a peak summer Saturday (with 4,065 assumed to be intermodal connections). No distinction was made in the study between ferry connections and rail connections; however, it is likely that the share of connecting trips that are to/from rail would increase.

Figure 3-16: Proposed Pilot Tourist Transit System

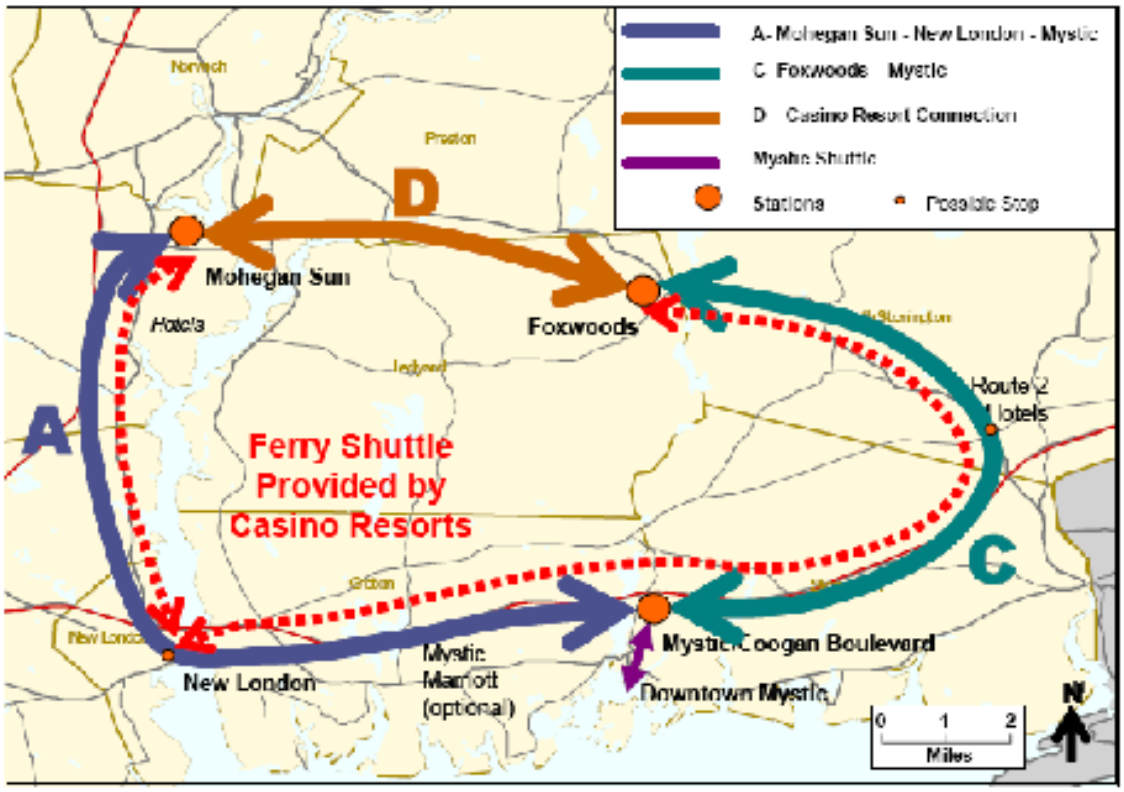


Table 3-12: Proposed Tourist Transit System Pilot Service Frequency
During peak hours on summer weekends

Route	Frequency
Route A:	4 per hour
Route C:	4 per hour
Route D:	5 per hour
Mystic Shuttle:	4 per hour

For the pilot system, no ridership projections were made. For the present study, ridership levels equal to half of the low demand scenario are assumed. In the pilot system, intermodal connection trips to the casinos would continue to be served by casino shuttles and there would be no direct connection to

Foxwoods other than the Route 108 bus. Thus, the pilot system would serve an estimated 289 peak summer Saturday trips, consisting of trips destined to New London and intermodal connections in New London bound for Mystic. The casino shuttles would serve up to 1,257.

Operational Needs

In the full implementation system, it was envisioned that there would be major-stops or transit centers at two locations in New London – at the RITC and at the Ferry Terminal. The latter was envisioned to serve the arriving and departing ferry passengers for the direct casino connections and because planning for an improved RITC had not yet begun. It was envisioned that the tourist shuttle bus stop at the RITC in New London would be equipped with an enhanced shelter, lighting, one medium and one enhanced dynamic sign with lighting, an electrical hook up and a trash receptacle.

The full system, in peak season, would result in six to eight buses per hour accessing the stop or stops at the RITC. An access route that is largely uninhibited by delays caused by railroad crossings would be desirable. Convenient intermodal connections from Cross Sound Ferry, Amtrak, and Greyhound would also be needed at the RITC. Communications with these operators regarding bus and train arrivals and delays could also make connections more seamless, as would joint ticketing and promotion of services. Convenient connections to SEAT buses would also be needed to provide connections to local and regional destinations for employees and local residents visiting the regional attractions.

Again, it should be emphasized that as of this time, SCCOG has not been able to secure funding for the pilot or full system.

3.6 SEAT Local Bus Service

3.6.1. Operations and Services

SEAT Operating Structure

SEAT (Southeast Area Transit) is the local bus service provider for the Southeastern Connecticut region (New London, Norwich, Groton and the nearby communities). SEAT is a multi-municipal public agency created by the local municipalities and acting ordinances similar to the Southeastern Connecticut Council of Governments. It consists of nine member towns: East Lyme, Griswold, Groton, Ledyard, Montville, New London, Norwich, Stonington and Waterford. SEAT also operates bus routes through four non-member towns. Though SEAT is not a state agency, all SEAT fixed assets and land are owned by the Connecticut Department of Transportation (ConnDOT) and are leased to SEAT. First Transit, a private contractor, manages the service. SEAT buses are primarily 35-foot and 40-foot transit buses stored and maintained at a ConnDOT-owned facility in Preston. All drivers report to work in Preston and deadhead their buses (i.e., operate closed door) to begin their routes in New London and Norwich.

Figure 3-17: SEAT New London Hub



New London Transfer Hub Operations

SEAT is operated as a "pulse system." This means that a set of buses, each serving a different route, is scheduled to arrive and depart from a transfer hub at the same time at regular intervals throughout the day. The region has transfer hubs/pulse points in New London, Norwich, and Groton. The Water Street bus stop

(Figure 3-17) is the New London hub; it serves four local (within New London) routes and four regional "corridor" routes (connecting New London to other municipalities). These eight New London SEAT bus routes are as follows:

Corridor Routes

- Route 1/101: New London to Norwich via Route 32
- Route 2: New London to Groton and Norwich via Routes 117/184 or Route 12
- Route 3: Niantic-New London-Groton via Routes 161 and 1
- Route 108: New London-Groton-Olde Mistick Village-Foxwoods express

Local Routes

- Route 12: Broad Street/Jefferson Avenue serving Jefferson Ave./ Crystal Mall/ New London shopping Center and Senior Center
- Route 13: Montauk Avenue/Ocean Avenue serving Senior Center/L&M Hospital/ Ocean Beach
- Route 14: Crystal Avenue/Colman Street, also serving Crystal Mall and New London Mall
- Route 15: Jefferson Avenue/Colman Street serving New London and Waterford (evenings only)

The three daytime local routes operate hourly on the hour from the Water Street hub. The four corridor routes generally operate every two hours on the hour and are staggered so that only two buses serve the hub at a time. Routes 1 and 3 operate from New London on the "odd" hours from 7:00 AM to 5:00 PM (with additional trips on Route 101 at 6:00 and 8:00 AM). Routes 2 and 108 operate from New London on the "even" hours from 8:00 AM to 6:00 PM with earlier and later service (from 6:00 AM to 10:00 PM) on Route 108. Thus, under current schedules, typically five buses meet at the hub each hour and a maximum of six buses serve the hub at any one pulse time.

Of the seven routes, three (Routes 1, 3, & 108) approach downtown from the north along Eugene O'Neill Drive. These are joined by two more (Routes 12 & 13) approaching from the west along State Street, These five continue east along State Street to Bank Street where they are met by two more (Routes 3 & 14). All seven routes then turn north and use Water Street to reach the RITC area. When departing, the seven routes head north on Water Street. Four continue out along Water Street while three turn west onto Governor Winthrop Boulevard, then south onto Eugene O'Neill Drive and follow Green and Bank Streets out of downtown.

At the RITC, Route 108 stops in front of the Union Station building (except during the Parade Project construction) while the other routes stop in the SEAT bus stop area which consists of about 400 feet of curb space along Water Street just north of the rail and intercity bus stations. Buses in that area line up along the curb at pulse time. Buses generally arrive a few minutes before the hour giving passengers time to transfer. Buses then depart simultaneously on the hour. There are no permanent SEAT supervisors stationed at the hub although mobile supervisors randomly check on operations. If a bus is running late, the operator will notify the dispatcher at the Preston headquarters who will make a decision as to whether to instruct buses on other routes at the hub to hold. SEAT does not monitor service by any other providers at the hub and does not hold buses for passengers transferring from other modes.

Service Levels

Table 3-13 provides an overview of the span of service and frequency on the New London routes. Table 3-14 shows the weekday schedule for all New London routes. As indicated above, the three daytime local routes operate hourly while the four corridor routes generally operate every two hours. Local routes make ten to eleven trips daily, while corridor routes have longer hours and make six to eleven trips during the day. Most of the services operate Monday through Saturday with Sunday trips on the New London/ Mohegan Sun/Norwich corridor route (101) and the Olde Mistick Village/Foxwoods route (108).

Joint Ticketing and Supplemental Services

Amtrak sells fares on SEAT Route #108 to Foxwoods through a joint ticketing arrangement. To serve these passengers the Route #108 (Foxwoods/ Olde Mistick) stops in front of the Union Station building instead of at the main SEAT Water Street hub bus stop. SEAT also runs additional shuttles from Union Station to Mystic when cruise ships are in port. Cruise ship operators generally provide shuttles from the State Pier to Union Station and use the Route 108 stop in front of the station. Route 108 and supplemental shuttle buses are then moved to the regular SEAT stop.

Table 3-13: SEAT Bus Services

SEAT Routes	Days of operation	Span of Service (at New London)	Headway	Total Trips/ day
	Corridor Routes			
1/101: Norwich/New London (Rt. 101 via Mohegan Sun)	All Days	Mon-Sat 6 AM to 11 PM Sunday: 7 AM - 6 PM	60-120 min 60 min Sun.	11
2: Norwich/ Groton/New London	Mon-Sat	8 AM to 6 PM	120 min	6
3: Groton/New London/Niantic	Mon-Fri	7 AM to 5 PM	120 min	6
108: New London/ Olde Mistick Village/ Foxwoods	All Days	6 AM to 10 PM Sunday: 6 AM to 6 PM	120 min	9 M-Sat. 6 Sun.
	Local Routes			
12: Jefferson Ave/Crystal Mall/ New London Shopping Center/ Senior Center	Mon-Sat	8 AM to 6 PM	60 min	11
13: Senior Center/ L& M hospital/ Ocean Beach	Mon-Sat	7 AM to 6 PM (Sat: starts at 8 AM)	60 min	12 M-F 11 Sat.
14: Crystal Ave./New London Mall/ Crystal Mall/ NL Shopping Center/Colman St.	Mon-Sat	8 AM to 6 PM	60 min	11
15: New London/ Waterford (evening service)	Mon-Sat	7 PM to12 Mid	60 min	5

3.6.1. Utilization of Services

Originating and Transferring Ridership

SEAT reports systemwide ridership in FY 2008 as 1,158,771 annual passenger trips. Ridership has increased on the order of 8%-9% in four of the last five years. There is some seasonal variation, with ridership in August (the highest month) averaging about 19% higher than in February (the lowest month).

SEAT does not collect data on ridership by stop, so there is no information from SEAT on the number of originating or transferring riders using the Water Street hub bus stop; however, the number of transfers used on SEAT bus routes serving New London may be a reasonable approximation of the number of transferring riders. In October 2008, for the routes serving New London, there were 52 transfer riders for

every 100 paid riders. Ridership data by route and date for the same month indicates average daily paid ridership (excluding transfers) of 1,456 on the seven routes in New London. This implies that there are approximately 763 daily weekday transfers, most of which probably occur at the Water Street stop; however, this is likely to be an over-estimate since some of these could be transferring in Groton or Norwich on the routes that connect to those cities. Therefore, it was assumed that 75% of these transfers occur on Water Street, or about 572 daily transfers. These transfers, if spread over 17 hourly pulses, would imply an average of 34 transferring passengers per hourly pulse. The number of originating (non-transferring) passengers cannot be determined from available data. Saturday ridership is comparable to weekdays, but on Sundays there are only two New London routes operating so transfers would be minimal. Therefore, with 306 weekdays and Saturdays per year, annual transfers are estimated at 175,000.

Table 3-14: New London SEAT Schedule

	Monday-Saturday		Sunday	
Time	Corridor routes	Local Routes	Corridor routes	Local Routes
6:00 AM	101, 108	-	108	-
7:00 AM	1, 3*	13*	101	-
8:00 AM	101, 2, 108	12, 14, 13	101, 108	-
9:00 AM	1, 3*	12, 13, 14	101	-
10:00 AM	2, 108	12, 13, 14	101,108	-
11:00 AM	1, 3*	12, 13, 14	101	-
12:00 PM	2, 108	12, 13, 14	101,108	-
1:00 PM	1, 3*	12, 13, 14	101	-
2:00 PM	2, 108	12, 13, 14	101, 108	-
3:00 PM	1, 3*	12, 13, 14	101	-
4:00 PM	2, 108	12, 13, 14	101,108	-
5:00 PM	1, 3*	12, 13, 14	101	-
6:00 PM	2, 108	12, 13, 14	101, 108 (both end)	-
7:00 PM	101, 1 (ends)	12, 13, 14 (all end) 15 begins	-	-
8:00 PM	108	15	-	-
9:00 PM	101	15	-	-
10:00 PM	108 (ends)	15	-	-
11:00 PM	101	15	-	-

* indicates service that does not operate on Saturdays

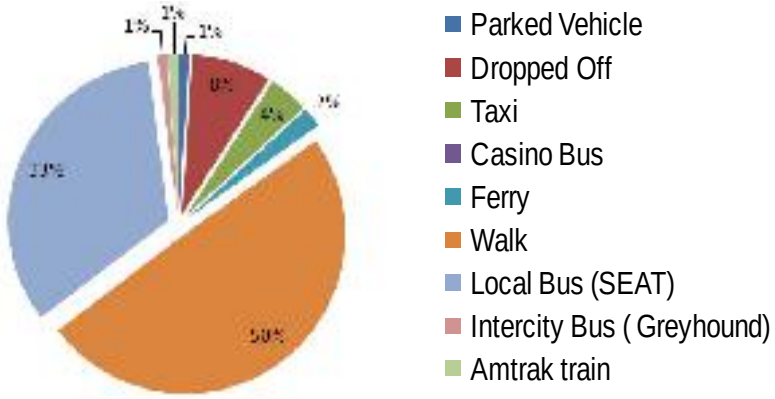
Rider Characteristics and Travel Patterns

Most SEAT riders making transfers in New London reportedly use the Water Street hub bus stop near Union Station to do so. Some conclusions about travel patterns can be drawn from the passenger survey conducted for this study in August 2008, which gathered 85 responses from SEAT passengers at the Water Street bus stop (36 on Thursday and 49 on Saturday). The data indicated:

- SEAT buses at the Water Street terminal are used most by daily commuters for work and business (64% of respondents). They also serve significant proportions of people making social/recreational trips (18%) and shopping and personal trips (17%). Only one respondent used it to travel to and from school.

- The vast majority (84%) of SEAT riders surveyed use SEAT at least once a week.
- Most of the passengers surveyed were bound for stops in New London, Groton, and Norwich and at the Crystal Mall.
- As shown in Figure 3-18, only about one third of SEAT passengers boarding at the Water Street stop reported making a transfer. About half of the passengers reported walking to the terminal. Very few made connections through other modes; 12% were dropped off or took a taxi. The actual percentage making transfers is believed to be much higher since transferring passenger spend less time waiting and would have been less likely to complete the survey.

Figure 3-18: How SEAT Passengers Arrived at the Terminal



The survey, as well as information provided by SEAT, indicated that there are very few passengers connecting from Amtrak to Route 108. SEAT tracks the number of Amtrak tickets received. For the first eleven months of 2008, only 387 Amtrak tickets were received or about 35 per month (or less than one round trip per day). This ranged from 14 in April to 64 in May. Most Route 108 passengers are simply transferring from other SEAT routes. However, SEAT is promoting the Amtrak connection and hopes to improve ridership.

3.6.2. Current Operational Needs

Rider Opinions

The passenger survey also gathered responses regarding rider opinions about the SEAT Water Street bus stop. As with most of the other rider groups surveyed, SEAT riders rated the amenities at this location (such as restrooms, newsstands and food services) lowest among the attributes with 28% rating them poor or very poor. Also, 23% rated passenger comfort at the bus stop to be poor or very poor. Other attributes like parking, ease of finding schedules for all modes, personal security at the terminal, and nearby places of interest also got poor/very poor ratings from a significant share (14%-17%) of respondents. Among the six traveler groups surveyed, SEAT passengers gave the lowest or second lowest ratings to every category except amenities (where they gave the third lowest ratings behind Greyhound and Amtrak passengers).

Deficiencies in Current Operations

While there are clearly deficiencies in the current SEAT bus stop on Water Street (including a lack of shelter, restrooms and information), it functions fairly well operationally. A location closer to, and more integrated with, the Greyhound terminal and Union Station is desired by SEAT. SEAT operations could benefit from sharing passenger waiting, information, and ticketing functions with other operators such as Greyhound and Amtrak. SEAT would also consider sharing bus bays with Greyhound in order to better

integrate services and support functions. SEAT would also like to have the Route 108 stop closer to other SEAT buses, while still providing the Amtrak connection.

SEAT reported that there are sometimes problems with taxis encroaching on their bus stop area along Water Street. SEAT did not report any issues with traffic circulation near the RITC during normal operation; however, special events cause considerable vehicle and pedestrian congestion making hub operations very difficult.

SEAT would like to be able to move some operating functions to New London, such as having bus drivers report at New London instead of at the SEAT facility in Preston. To support this, the New London terminal would need to include a small office, driver break room, employee restrooms and employee parking.

3.6.3. Future Operational Needs

Potential Future Service Changes

SEAT has no plans for additional routes. However, SEAT is waiting for funding to increase the frequency on corridor routes to hourly. This will translate into seven or eight buses at every pulse instead of the current five or six. There is a possibility that all routes could increase to every 30 minutes sometime in the future. This would not affect the space needed at the terminal but would increase the number of pulse times during the day and would presumably mean more total daily ridership using the terminal. This would probably reduce the number of riders using the terminal at any one time since the effect on ridership of a doubling of service would likely be less than a doubling of ridership. Typically, such an increase in service might result in a 25%-50% increase in ridership at best.

Future Operational Needs

The current 400-foot long curbside terminal facility on Water Street appears to be able to accommodate six to seven buses and so could probably accommodate the possible increase in service levels if Route 108 remains in front of the station. Any reconfigured terminal space should be designed to accommodate at least seven buses.

3.7 Taxis and Other For-Hire Services

3.7.1. Operations and Services

There are a number of taxi and car services operating in downtown New London. These include Harry's Cab Service, Port City Taxi and Yellow Cab/Curtin Transportation Group. These three companies generally have about 22-28 taxis in operation at any given time.

A taxi stand is located on Water Street in front of Union Station (Figure 3-19a). The area is about 150-feet in length and was shared with private vehicles dropping off and picking up passengers at the station and also with the SEAT Route 108 bus. (A few days each year, the area ias also shared with buses shuttling passengers to and from cruise ships docked a short distance away at the State Pier.) Although each function has a designated section of curb space, there was considerable overlap in their use. Taxis not currently serving customers generally go to Union Station to wait for a fare, although this is reportedly not the only taxi stand in the city. Taxis there can pick up passengers coming out of the station but can also leave to pick up elsewhere when customers phone for a cab. Thus, taxis at the station are not necessarily there to serve customers from the RITC. Taxi operators indicated that there was room for as many as about twelve taxis in front of the station and it was not uncommon for as many as eight to ten taxis to be there. When the Parade Project was underway, taxis had to find somewhere else to park (Figure 3-19b), and many used the Greyhound bays although Greyhound attempted to keep them out.

Taxi companies also serve the ferry terminals. Passengers may walk to the taxi stand from the ferries but typically they call for service and cabs drive over to the ferry terminal.

There are currently no other for-hire transportation services at the station such as auto or bicycle rental services.

Figure 3-19: Union Station Taxi Stand


(a)


(b)

3.7.2. Utilization of Services

One of the taxi companies, representing about one fourth of the taxis in the city, noted that they pick up between 15 and 30 passengers a day at the station. Most are local trips, with some passengers going to the casino resorts. The other companies could not estimate the number of passengers picked up at the station. The access mode shares from the passenger survey showed that about 16% of Amtrak passengers used a taxi to access the station. This would indicate that about 30-50 passengers a day reach the station by taxi.

3.7.3. Current Operational Needs

Taxi operators indicated that, before Parade construction, the size of the area shared by taxis and private vehicles dropping off passengers was adequate most of the time but could be bigger. During Parade construction, they had no officially sanctioned place to stand. The Parade Project has changed this area and was intended to make improvements in safety and make the area more pedestrian friendly. The Parade Project leaves about 100-feet of curb space in front of the station (a 50% reduction in the pre-construction curb space). This space is separated from traffic by a flush island (although it was originally proposed to be a raised island with sloped curbing). The curb in front of the station has been bumped out near each end of the island (at the State Street intersection and at the crosswalk before the Greyhound terminal) constraining entry and exit into the area. The area, as modified, has capacity to park only about five vehicles parallel to the curb[13]. Thus, both the post-Parade Project situation leaves taxis with less space to park than before construction. Taxis will likely need additional taxi stand space, though given that some of the waiting cabs do not ultimately pick up passengers at the station, all of this this space need not be at the train station.There is a lack of bicycle storage at the RITC. There may be opportunities in a variety of locations at or around Union Station to add bike racks (e.g., at City Pier, along South Water Street, in front of the Water Street Garage, etc.).

[13] Taxi operators reported that they used to back in to angle parking and that this provided more capacity. However, this does not appear to be compatible with the current traffic flow and the design incorporated in the Parade Project.

3.7.4. Future Operational Needs

Demand for taxis trips to and from the RITC can be expected to mirror overall ridership at the station, and probably most closely match rail and Greyhound bus ridership. As ridership increases on those modes, the number of taxi trips may increase.

If New London becomes a more attractive destination for travelers, there may be sufficient demand to support auto rentals at the station. These could be traditional auto rentals or they could be membership-based services such as Zip-Car. Either would require parking spaces near the station to store vehicles. Traditional auto rentals would require, at a minimum, a rental counter located in the station or nearby and could require other facilities. Zip-Cars typically do not require anything beyond parking spaces for the vehicles.

Increased visitation of attractions in New London could also potentially support a bicycle rental concession. This would require a rental counter and secure storage space for the bicycles.

3.8 Automotive Traffic

3.8.1. Operations

Access Routes to the RITC

Much of the RITC is located along Water Street which is a one-way street serving as a major connection from downtown New London to I-95. The section of the road between State Street and Governor Winthrop Boulevard provides access to the Union Station building, the southbound rail platform, the Greyhound Bus terminal and the SEAT transfer hub, all located on the east side of the street. On the west side of the street, it provides access to the Water Street Garage.

State Street and Governor Winthrop Boulevard run perpendicular to Water Street and cross the railroad tracks. State Street provides vehicular access to the Fishers Island Ferry as well as pedestrian access to the northbound rail platform, City Pier and Cross Sound Ferry. Governor Winthrop Boulevard connects to Ferry Street east of the railroad tracks providing vehicular access to Cross Sound Ferry facilities.

Eugene O'Neill Drive, Atlantic Street, Bank Street, and South Water Street also provide important vehicular and pedestrian connections near the RITC. All are one-way streets. The access routes and major streets in the vicinity of the RITC are described in greater detail in Chapter 2.

The intersections at State Street and Bank Street, Eugene O'Neill Drive and State Street, Eugene O'Neill Drive and Governor Winthrop Boulevard, and Water Street and Governor Winthrop Boulevard are signalized. Nearby intersections that are not signalized are: State Street and South Water Street, Atlantic Street and Water Street, and Atlantic Street and Eugene O'Neill Drive. Entry from State Street westbound to Water Street and Atlantic Street to Water Street are controlled by STOP signs.

Railroad Crossings

There are two at-grade railroad crossings at the RITC that significantly impact access to transportation facilities. The signalized crossing at Governor Winthrop Boulevard is the only vehicular access route to the Cross Sound Ferry terminal. Access is briefly blocked approximately 40 times per weekday when passenger trains pass through, and is blocked for longer periods twice each day when P&W freight trains pass through. Currently P&W does not connect to NECR in New London so the longer delays that once took place are no longer occurring. On weekends, 23 passenger trains pass through the crossing on

Saturday and 26 on Sunday. A combined schedule of all passenger trains using the crossing is shown in Table 3-15.

The second crossing is at State Street (Figure 3-20) which is used for vehicular access to the Fishers Island Ferry as well as pedestrian access to the northbound rail platform, City Pier and Cross Sound Ferry. When one of the 23 daily Amtrak or SLE trains is stopped in the station, vehicular and pedestrian access is blocked. The crossing is also briefly blocked by each of the 17 Acela trains that do not stop. Access is blocked for longer periods twice each day when freight trains pass through.

Table 3-15: Schedule of All Trains Passing through New London

Weekday			Weekend		
5:52 AM	NB	NE Regional	5:52 AM	NB	NE Regional
6:30 AM	SB	Acela	8:16 AM	SB	NE Regional
7:36 AM	SB	*Acela (no stop)*	9:23 AM	NB	NE Regional
7:51 AM	SB	NE Regional	9:35 AM	SB	*Acela (no stop) Sat. only*
8:36 AM	SB	*Acela (no stop)*	10:14 AM	NB	*Acela (no stop) Sat. only*
8:37 AM	NB	Acela	10:20 AM	SB	NE Regional
9:20 AM	NB	NE Regional	11:14 AM	SB	NE Regional
9:54 AM	SB	NE Regional	11:23 AM	NB	NE Regional
10:13 AM	NB	*Acela (no stop)*	12:31 PM	NB	NE Regional
10:36 AM	SB	*Acela (no stop)*	12:35 PM	SB	*Acela (no stop)*
10:55 AM	NB	NE Regional	1:17 PM	SB	NE Regional
11:16 AM	SB	NE Regional	2:14 PM	NB	Acela (no stop)
12:13 PM	NB	*Acela (no stop)*	2:35 PM	SB	*Acela (no stop)*
12:36 PM	SB	*Acela (no stop)*	3:19 PM	SB	NE Regional
12:46 PM	SB	NE Regional	3:26 PM	NB	NE Regional
1:32 PM	NB	NE Regional	4:14 PM	NB	*Acela (no stop) Sun. only*
1:36 PM	SB	*Acela (no stop)*	4:26 PM	NB	NE Regional Sat. only
2:13 PM	NB	*Acela (no stop)*	4:35 PM	SB	*Acela (no stop) Sun. only*
2:36 PM	SB	*Acela (no stop)*	4:50 PM	SB	NE Regional
2:56 PM	NB	NE Regional	5:28 PM	NB	NE Regional
3:13 PM	NB	*Acela (no stop)*	5:35 PM	SB	*Acela (no stop) Sun. only*
3:17 PM	SB	NE Regional	6:14 PM	NB	Acela (no stop) Sun. only
4:27 PM	NB	NE Regional	6:17 PM	SB	NE Regional
4:36 PM	SB	*Acela (no stop)*	7:23 PM	NB	NE Regional
4:53 PM	SB	NE Regional	8:14 PM	NB	*Acela (no stop) Sun. only*
5:11 PM	NB	*Acela (no stop)*	8:18 PM	SB	NE Regional
5:51 PM	SB	*Acela (no stop)*	9:26 PM	NB	NE Regional
6:06 PM	NB	*Acela (no stop)*	10:20 PM	NB	NE Regional Sun. only
6:22 PM	NB	NE Regional	11:25 PM	SB	NE Regional
6:41 PM	SB	*Acela (no stop)*			
7:10 PM	NB	*Acela (no stop)*			
7:15 PM	SB	NE Regional			
7:43 PM	NB	Shore Line East			
7:55 PM	SB	Shore Line East			
8:08 PM	NB	*Acela (no stop)*			
8:19 PM	SB	NE Regional			
8:25 PM	NB	NE Regional			
9:08 PM	NB	Acela			
10:20 PM	NB	NE Regional			
11:25 PM	SB	NE Regional			

Note: Times are estimated for Acela non-stop trains

Figure 3-20: State Street Railroad Crossing





3.8.1. Utilization of Facilities

Current Traffic Volumes and Level of Service

Based on traffic information documented in a recent study[14], vehicular access and traffic operations on the roadways and intersections are, in general, good during the winter season. To understand traffic operations during a summer Saturday, turning movement count data was collected on Saturday, August 2, 2008 during the morning (7:00 AM – 9:00 AM), mid day (11:00 AM – 1:00 PM), and afternoon (4:00 PM – 6:00 PM) peak periods at the following intersections:

- State Street and Bank Street
- State Street and Water Street
- Governor Winthrop Boulevard and Ferry Street
- Governor Winthrop Boulevard and Water Street

These counts were adjusted to represent a typical summer Saturday based on auto ferry vehicle volume data. The resulting peak hour traffic volumes are shown in Figure 3-21.

A study of the capacity was conducted to determine the ability of the roadways and intersections to accommodate summer Saturday traffic under various levels of service. Level of Service (LOS) is a qualitative measure of the effect of a number of factors including intersection geometrics, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of an intersection. Six levels of service are defined by letter designations ranging from A to F, with LOS A representing the best operating conditions and LOS F representing the worst. Generally, LOS D is considered acceptable. Results from the capacity analysis during the morning (AM), mid day, and afternoon (PM) under 2008 (summertime) Saturday conditions indicate that all signalized and stop-controlled intersections operate well with an overall intersection LOS C or better during all peak hours. Figure 3-22 illustrates the LOS conditions.

[14] Wilbur Smith Associates, Pedestrian Safety and Access Improvements to the Intermodal Transportation Facility, 2007

Figure 3-21: Peak Hour Traffic Volumes (2008 Existing Conditions)

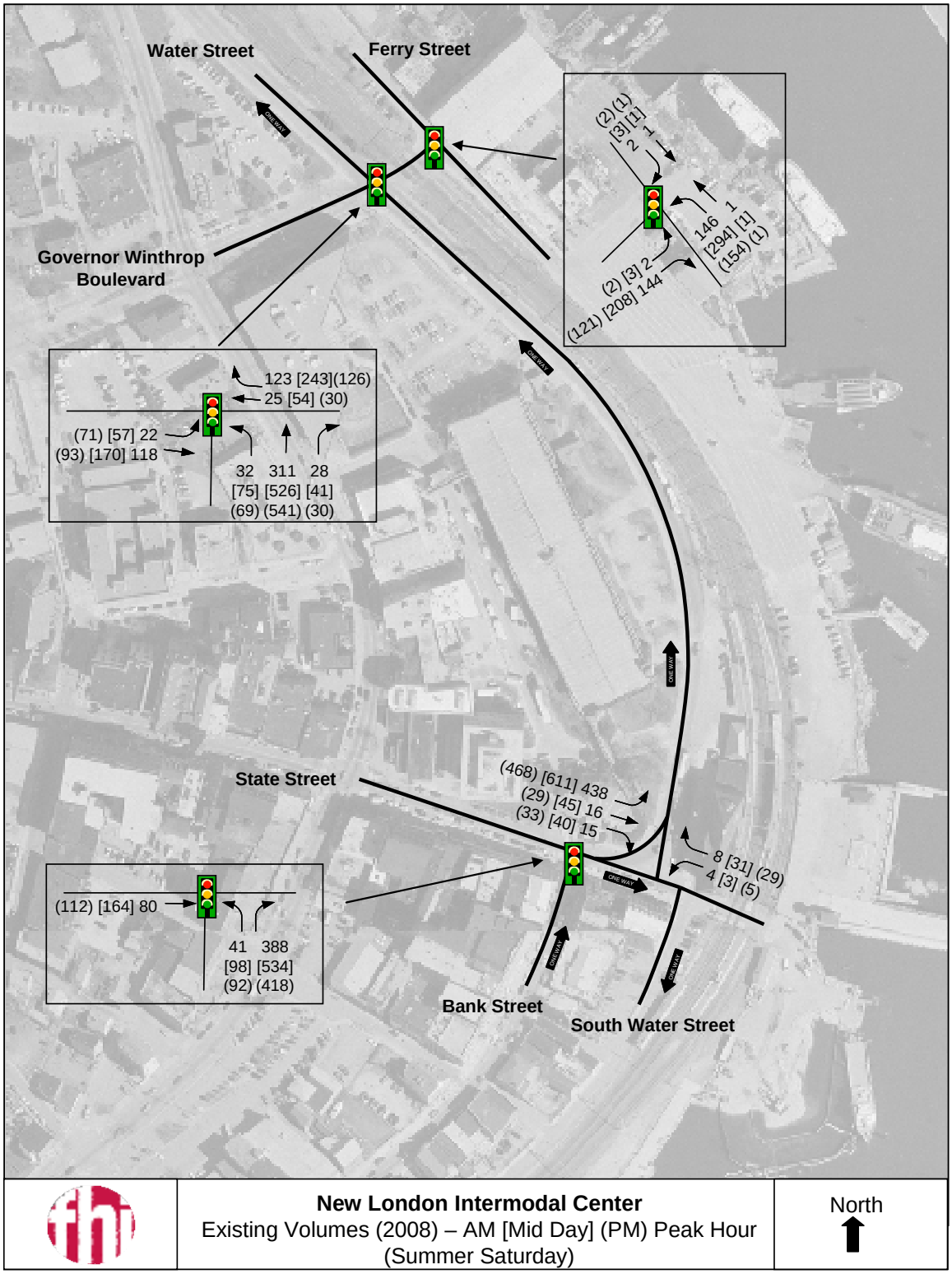
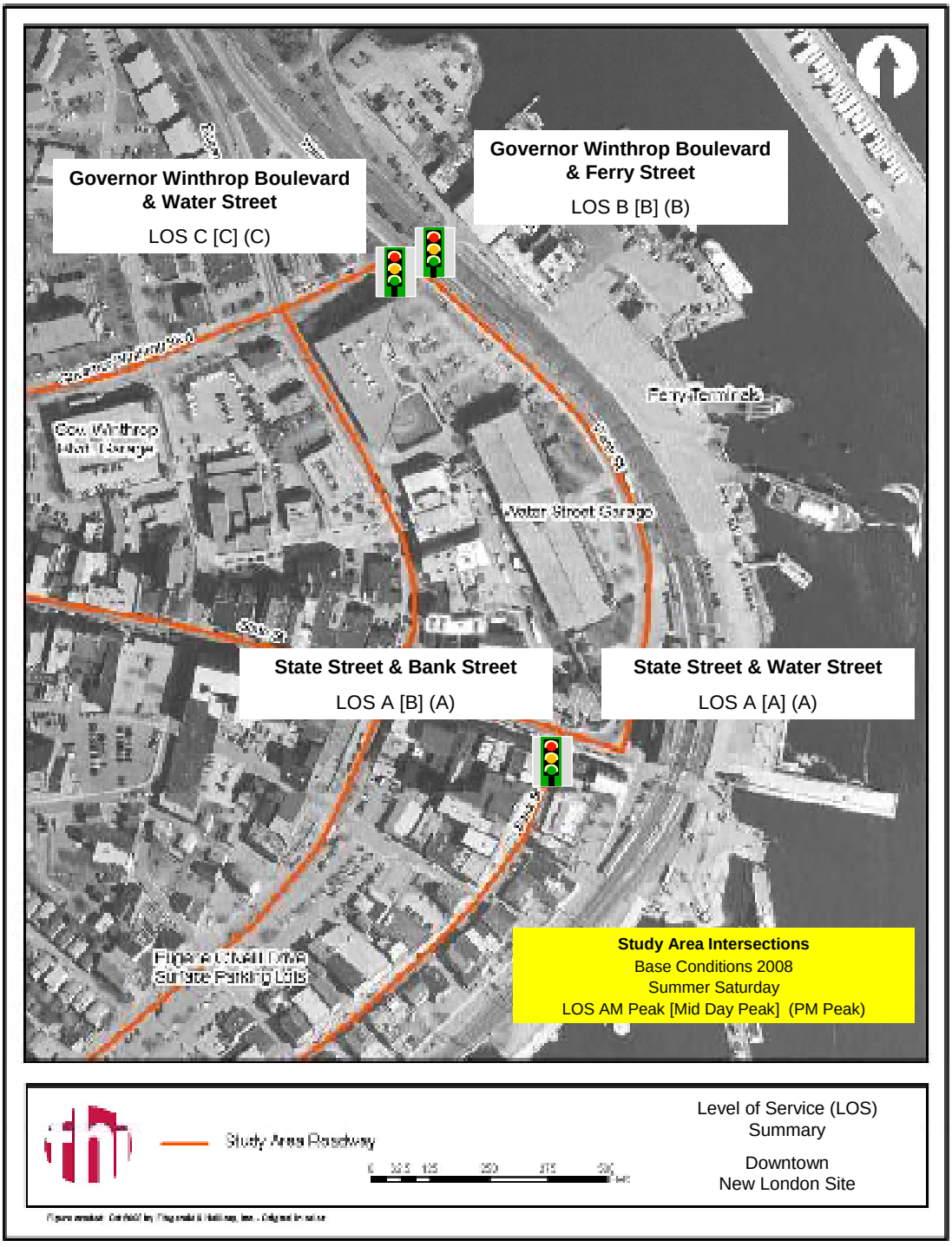


Figure 3-22: Level of Service Summary (2008 Existing Conditions)



Curbside activity

Prior to Parade construction, an approximately 150-foot section of Water Street in front of Union Station was shared among taxis, private vehicles dropping off and picking up passengers and the SEAT Route 108 bus. On a few days each year (nine days in 2008), when cruise ships were docked at the State Pier, as many as 20 shuttle buses operated between the State Pier and this area, displacing the other uses. Greyhound and SEAT buses utilize their own terminal areas farther north along Water Street and move in and out of traffic. Crosswalks to access the Water Street Garage are located before and after the Greyhound terminal. There has been significant potential for conflicts between operators, between operators and private vehicles, and between vehicles and pedestrians. The Parade Project is expected to change the character of this important section of Water Street.

3.8.2. Current Operational Needs

Current roadway operations are acceptable; thus roadway improvements are not required to accommodate existing traffic. Though one-way street patterns improve safety and reduce the number of conflicts, they can confuse drivers who are not familiar with the area. Also there are concerns about delays and safety at the at-grade railroad crossings at State Street and Governor Winthrop Boulevard. Operational changes or physical improvements to eliminate these conflicts and concerns would be desirable. Pedestrian safety and vehicle conflicts along Water Street should be improved by the Parade Project.

The Parade Project is changing the area near the RITC and includes improvements designed to increase safety and make the area more pedestrian friendly. The Parade Project will leave about 100 feet of curb space in front of the station. This space will be separated from traffic by a narrow at-grade island. The curb in front of the station will be bumped out near each end of the island (at the State Street intersection and at the crosswalk before the Greyhound terminal) constraining entry and exit into the area. The area will have capacity to park only about five vehicles and will have to be shared by taxis and private vehicles picking up and dropping off passengers. Given that this area could previously accommodate around 12 vehicles and it was not uncommon for up to ten taxis to be standing in this area, this area is likely to be overloaded on a regular basis. Taxis standing in this area may prevent other vehicles from picking up and dropping off passengers. It is unlikely that SEAT buses will be able to use this small area, nor would cruise ship shuttle buses.

3.8.3. Future Operational Needs

While the pickup/drop-off and taxi area in front of the station is likely to be overloaded in the short term, it is likely to see increased use as Shore Line East service is expanded to New London, as soon as 2010. Taxis and private vehicles may need to be separated and provided with more space in the vicinity of the RITC.

Some growth in traffic in New London is likely to occur independent of traffic growth associated with the RITC. The most recent traffic study estimated a 2% background growth rate in traffic[15]. This would partially be the result of new downtown developments and partially the result of growth in travel using the RITC. Increasing traffic may cause intersections that currently operate at an acceptable level of service to become unacceptable or fail. Possible increases in RITC-related traffic are discussed in Section 3.3 and the traffic level of service impacts and traffic mitigation options will be addressed as study recommendations are developed.

[15] Wilbur Smith Associates, Pedestrian Safety and Access Improvements to the Intermodal Transportation Facility, 2007

3.9 Parking

3.9.1. Parking Facility Operations

Several parking facilities are available for the use by patrons at the RITC and people working and visiting downtown New London area. These include two garages (the Water Street Garage and the Governor Winthrop Garage) and four surface lots.

Figure 3-23: Water Street Garage



The Water Street garage (Figure 3-23) is closest to Union Station, located just across Water Street. The 3.5-story structure has 975 spaces (recently this number was reported to be reduced to 940). About 200-300 spaces are obligated to be available for use by Amtrak passengers. While owned by the City, the garage is operated by Pro-Park. Parking at the Water Street garage costs $1 per hour up to a maximum of $6 per day, Monday through Thursday. To reflect the fact that peak usage is on weekends, on Friday through Sunday the hourly rate is $2, with a maximum of $8 on Fridays and $15 per day on weekends. Monthly rates are $69 per month and $156 for three months. The garage has a combined entrance/exit on Water Street at the center of the building and an exit onto Water Street at the north end of the building. A cashier is on duty only at this exit. There is also an entrance/exit on Atlantic Street at the north end of the building. This exit cannot be used by cash customers.

Farther west into the Central Business District, and away from the waterfront, at the intersection of Governor Winthrop Boulevard and Union Street, the Governor Winthrop Garage offers 400 parking spaces. This formerly City-owned garage is now owned and operated by Cornish Parking. The garage has no hourly rates charging $10 per day or $55 per month. It is only open for entry from 8 AM until noon. A flat weekend rate of $15 is charged for parking all weekend.

The two City-owned surface lots on Eugene O'Neill Drive are located north and south of Pearl Street and offer a total of 155 spaces. Parking is free, but there is a two hour limit enforced on weekdays. For longer term usage, a monthly parking permit for these surface lots can be purchased for $25. There is no time limit on weekends or for permit users.

The other surface lot in the Central Business District is the 186-space privately-owned Julian Parking lot located adjacent to the north side of the Water Street Garage. It is not open to the public on weekdays when it serves the adjacent office building, but has been opened on summer weekends when ferry passengers create additional demand and when rates at the Water Street garage are higher. When open, the lot is available from Friday evening through Sunday at a cost of $15 per day.

On the eastern side of railroad tracks, Cross Sound Ferry offers a 130-space parking area for its patrons and another 130 spaces for its employees. The lot is staffed and parking is available on a first-come/first-served basis for a fee of $10 per day. The passenger spaces are split between the unpaved lot to the south of the site that is partially owned by the City of New London and leased to Cross Sound Ferry, and space behind the administration building that has been temporarily converted from a vehicle staging area. Fishers Island Ferry does not provide long term parking.

Throughout downtown New London there is free on-street parking with an enforced two-hour limit only on weekdays.

3.9.2. Utilization of Facilities

Parking Revenues

Daily parking revenue data for the Water Street Garage was obtained from the City of New London for the months of January and August 2008. The data shows revenue separately for parkers paying monthly rates and parkers paying daily rates. The total monthly revenue for each type is shown in Table 3-16.

Those paying monthly rates are most likely people working in downtown New London. The data shows that monthly rate total revenue is 56% higher in August than in January, possibly indicating differences in seasonal employment and also possibly less availability of on-street free parking in the summer. At $69/month, these revenue figures translate into 197 monthly parkers in January and 307 in August. Daily rate parking revenues, however, are over seven times higher in August than in January, reflecting the highly seasonal use of the garage. Daily rates vary according to the number of hours parked and the day of the week, so revenue data cannot be directly translated into numbers of parked vehicles.

The daily rate revenues were provided by individual date for the two months. This can be used to understand the difference in utilization of the garage on different days of the week. Figure 3-24 shows the average daily revenue from day rate parkers for January and August 2008.

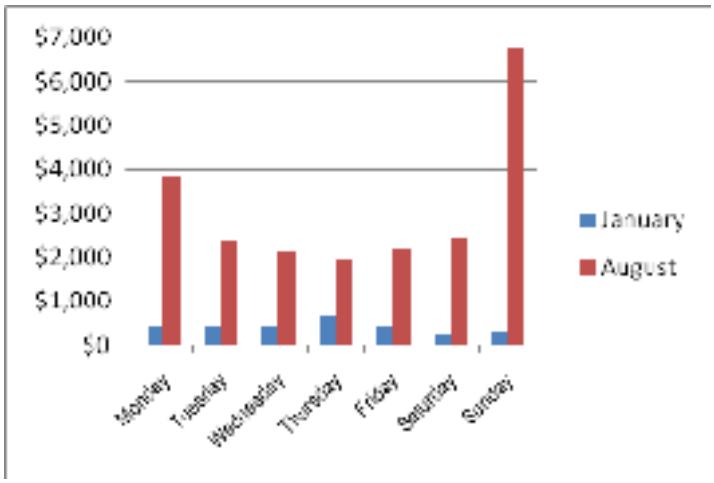
It should be noted that the day of week reflects the day on which parkers exited the garage, regardless of how many days they may have parked there. Thus, in August, Sunday is by far the day with the highest revenue, as this likely includes revenue vehicles parked for the weekend while people traveled to Block

Table 3-16: Water Street Garage Monthly Parking Revenue

	January	August
Daily	$13,764	$98,409
Monthly	$13,576	$21,157
Total	$27,340	$119,566

Figure 3-24: Water Street Garage Average Daily Revenue for Day Rate Parkers

Day	January	August
Monday	$457	$3,869
Tuesday	$428	$2,425
Wednesday	$466	$2,130
Thursday	$667	$1,962
Friday	$429	$2,167
Saturday	$240	$2,441
Sunday	$363	$6,765



Island. Similarly, Monday is the second highest day, probably from people taking a long weekend. Tuesday through Saturday all experienced much lower average revenue than Sunday and Monday, with Thursday having the lowest average daily rate revenue.

While January daily rate revenue is just a fraction of August revenue, January daily rate revenue shows a very different pattern by day of week. Saturdays and Sundays experienced the lowest average revenue. Thursdays experienced the highest revenue, though only about a third of August Thursdays, the lowest revenue day in August.

Parking Utilization

A parking occupancy survey was conducted for the study on Saturday August 2, 2008 to capture parking demand during peak summer conditions. The survey examined the two parking garages and four surface lots. While the goal was to capture peak summer conditions, inclement weather resulted in less than typical peak summer weekend patronage. The counts indicated that the Cross Sound Ferry parking lot was filled to capacity but the two parking garages were utilized to less than half their capacity. Cross Sound Ferry reported that the Block Island Ferry, a major source of cars parked in some of these facilities, carried only 740 passengers that day, by far the lowest ridership of the five Saturdays between July 26th and August 23rd. The other four Saturdays ranged between 1,510 passengers and 1,156 passengers. Thus the Saturday peak occupancy reflected in the August 2nd data does not reflect the summer Saturday peak occupancy under typical peak summer conditions.

An adjustment was made to reassess the summer peak Saturday occupancy at the parking facilities. For a conservative analysis, several calculations and assumptions were made. First, the Block Island Ferry ridership was expanded by 82.4% to reflect the average of the four mid-summer Saturdays with more favorable weather conditions. Second, it was assumed that the ferry lot could not accommodate any additional parkers and that the additional parkers would use the other parking facilities in proportion to the number in each lot parking to use the ferry as indicated by the August 2nd windshield survey of parkers (discussed below). Third, it was assumed that the additional parkers arrive over the course of the day in the same pattern as those on August 2nd and have the same average vehicle occupancy. Finally, no changes were made in the number of non-ferry parkers reported on August 2nd.

On August 2nd, 456 ferry passengers parked at the various parking facilities in Downtown. Based on the above assumptions, under ideal summer peak Saturday conditions, it is estimated that 831 ferry passengers park their vehicles in the parking facilities, and that the summer peak Saturday occupancy at the six parking facilities is estimated at a total of 1,341. Table 3-17 presents a summary table of the estimated parking occupancy under ideal summer peak conditions. It should be noted that counts were repeated in 2009 on a sunny Saturday in early August to verify the adjusted figures. The results showed that the adjusted counts were fairly close to the new one day count.

The table shows that, under current peak summer Saturday conditions, there are still over 200 spaces available at each of the two garages, as well as some space in the Eugene O'Neill lots and probably the Julian lot. It should be noted that other summer activities in the downtown could increase the number of non-ferry parkers and the number of such parkers could also be somewhat higher when the weather is good, but there was no data from which to estimate the possible impact. It should also be noted that there is no guarantee that the 186 spaces in the Julian lot will be open to the public in the future, which would increase the demand on other facilities.

Table 3-17: Estimated Peak Summer Saturday Parking Utilization

	Total Spaces	Peak Occupancy	Peak % Occupied	Time of Highest Occupancy	Lowest Occupancy	Lowest % Occupied	Time of Lowest Occupancy
Water Street Garage	975	747	77%	12:00 - 1:00 pm	370	38%	7:00 - 8:00 am
Governor Winthrop Garage	400	150	38%	3:00 - 4:00 pm	97	24%	7:00 - 8:00 am
Eugene O'Neill Surface Lot (1)	125	125	100%	6:30 - 7:00 pm	28	22%	7:00 - 7:30 am 8:00 - 8:30 am
Eugene O'Neill Surface Lot (2)	130	35	27%	6:30 - 7:00 pm	15	12%	1:30 - 3:00 pm
Julian Surface Lot	186	142	76%	8:00 - 8:30 am	56	30%	7:00 - 7:30 am
Cross Sound Ferry	130	142	109%	8:00 - 8:30 am	97	75%	7:00 - 7:30 am
Total	1946	1341	69%		663	34%	

(1) Eugene O'Neill Surface Lot (corner of Eugene O'Neill Drive and Golden Street)
(2) Eugene O'Neill Surface Lot (corner of Green Street & Pearl Street)

Characteristics and Travel Patterns of Parkers

Responses gathered during the passenger survey conducted for this study in August, 2008 indicated that a large percentage of passengers traveling by ferry make use of parking in New London. The vast majority (91%) of Block Island Ferry passengers park in New London, while a number of Long Island Ferry passengers also park in New London. A significant percentage (24%) of weekday Amtrak passengers also used the parking facilities. Passengers on the other surveyed transportation modes at New London (SeaJet, Greyhound, and SEAT) did not utilize parking very frequently[16]. Nearly all of the Amtrak passengers who parked reported using the Water Street Garage. Ferry passengers reported a mixture of facilities used, although the vast majority of the Long Island Ferry parkers and 41% of the Block Island Ferry parkers did not indicate which parking facility they used. Of the 63 Block Island Ferry parkers who indicated where they parked, 81% said they parked in the Water Street Garage, 13% parked in the Governor Winthrop Garage and 6% parked in the Eugene O'Neill lots. None of the Block Island passengers surveyed indicated that they parked on ferry property (probably because the ferry lot fills early in the morning). The Julian lot was not listed on the survey form as a possible choice.

A windshield survey of parking customers was also conducted for this study on Saturday August 2nd and Thursday August 7th. The survey forms were placed on the windshields of automobiles using the surface parking lots (except for the Julian Lot due to a lack of permission to do so) and the two garages. The parking survey form was provided with a postage-free, mail-back feature. The numbers of responses obtained are indicated in Table 3-18. (The number of responses gathered represents the number of survey forms returned and not the actual number of customers using each lot on either day.)

Respondents' reasons for parking are shown in Table 3-19, separately for Saturday and Thursday surveys. The responses indicated that on Saturday, the most common reason for parking at both the ferry lot (86%) and the Water Street Garage (50%) was to access the ferry (the survey form did not specify which ferry). The next most common reasons for parking at the Water Street Garage were working in New London (26%) and taking the train (15%). The most common reason for parking at the Governor Winthrop Garage was working in New London (50%) followed by taking the ferry (14%) and taking the train (5%). On Saturday the majority of respondents at two of the facilities were long term parkers (parking for 1 day or

[16] It should be noted that Fishers Island Ferry passengers were not surveyed so their use of parking in New London is not known, although it is believed to be significant.

Table 3-18: Parking Survey Responses Received

Parking Facility	Saturday	Thursday
Water Street Garage	70	36
Governor Winthrop Garage	23	13
Eugene O'Neill Lots	7	21
Ferry Lot	14	10
Total	114	80

Table 3-19: Reasons for Parking

Saturday	Work in New London	To take Ferry	To take Train	Visit	To take Bus	Other	Total
Water Street Garage	26%	50%	15%	0%	0%	9%	100%
Governor Winthrop Garage	50%	14%	5%	5%	0%	27%	100%
Eugene O'Neill North	33%	17%	0%	0%	0%	50%	100%
Eugene O'Neill South	0%	0%	0%	100%	0%	0%	100%
Ferry Lot	0%	86%	0%	7%	0%	7%	100%

Thursday	Work in New London	To take Ferry	To take Train	Visit	To take Bus	Other	Total
Water Street Garage	50%	28%	19%	0%	0%	3%	100%
Governor Winthrop Garage	85%	15%	0%	0%	0%	0%	100%
Eugene O'Neill North	50%	13%	6%	0%	0%	31%	100%
Eugene O'Neill South	80%	0%	20%	0%	0%	0%	100%
Ferry Lot	0%	100%	0%	0%	0%	0%	100%

more). Long term parkers accounted for 59% of respondents at the Water Street Garage and 86% of respondents at the Cross Sound Ferry Lot.

On Thursday, the most common reason for parking at all but the ferry lot was working in New London. All of the ferry lot respondents, 28% of the Water Street respondents and 15% of the Governor Winthrop respondents were connecting to the ferries. Nineteen percent of Water Street Garage users were connecting to Amtrak services on Thursday. On Thursday, the majority of respondents were short term parkers.

3.9.3. Current Operational Needs

Opinions of Parking Customers

The parking customer survey also gathered drivers' opinions about the parking facilities in the downtown New London area that serve patrons of RITC.

Responses indicate that:

- Almost all the users rated the facility where they parked to be either "accessible" or "easily accessible" to their destination.

- A majority of users on both days at all facilities (except the Governor Winthrop Garage) rated the cost of parking as "reasonable" or "very reasonable". A larger percentage of Governor Winthrop Garage users both on Thursday and Saturday rated the fee as too high.
- Regarding the ratings of attributes such as signage, security, accessibility, and ticketing, the responses reflected an overall dissatisfaction with signage and security at several parking facilities.
  - The Water Street Garage security system was rated "very poor" or "poor" by 42% of the respondents. (The security system is not in operation and there are no cameras.)
  - 56% of the respondents at Governor Winthrop garage rated the security system as "very poor" or "poor", while 33% rated the signage as "very poor" or "poor". (The security system is not in operation and there are no cameras.)
  - 30% of the respondents at the Cross Sound Ferry lot rated the signage as "very poor" or "poor".
  - The Eugene O' Neill surface lots received a "very poor" or "poor" rating by a majority of respondents on security systems and by nearly half on signage.

Opinions of Passengers on Each Travel Mode

To capture additional information about the opinions regarding parking facilities, the passenger surveys conducted on each mode also asked for ratings of parking. Here the responses of passengers who were dropped off at the terminal were compared to those who used the parking facilities, and the response of the overall population of respondents. The data did indicate that people who did not use the parking facilities had a more negative opinion of them than those who did. (Note that elevators were not in operation at either garage during the survey period.)

Deficiencies in Current Parking Operations

Based on the responses to the parking customer survey, most of the parking lots and garages were found lacking with respect to security and signage. Concerns regarding safety and security in parking lots were also expressed in the comments written in on the survey questionnaires. Users of the Governor Winthrop Garage were also displeased with the cost of parking there. As discussed in Chapter 2, the parking garage users were also dissatisfied with the stairway/elevator facilities and other physical elements.

3.9.4. Future Operational Needs

Parking in New London serves an important function for downtown activities and is a significant feature of the RITC for thousands of passengers using the various transportation modes there. Future downtown developments as well as transportation improvements will impact parking demand and, potentially, capacity.

The Parade Project, currently underway, is installing pedestrian improvements and traffic calming measures in downtown near the RITC and is replacing the current pedestrian bridge connecting Water Street Garage and the Parade with a new exterior elevator. This will lead to better pedestrian access to the Garage and possibly greater utilization of the facility by travelers. Other improvements to the Water Street Garage are also underway and will include the installation of cameras and repair of the elevators.

Adjacent to the Water Street Garage, at the Julian parking lot site, a new high rise building is proposed. The owners have obtained an agreement with the City to have rights to use 100 spaces in the Water Street Garage. This could impact the long term availability of parking in the garage for other uses and may impact the availability of the Julian lot.

Several possible transportation improvements noted earlier could also impact downtown parking needs. Expansion of Shore Line East would create additional parking demand on weekdays, and eventually, on

the weekend as well. Expansion of service or new services at the Cross Sound Ferry terminal could reduce or eliminate long term parking at that site shifting current parkers (primarily on weekends) to the Water Street Garage and creating new parking demand as well.

Finally, the City is looking into introducing on street parking meters in the downtown area. These would not likely directly affect weekday users of the transportation modes, as on-street spaces are already limited to two hours on weekdays. If the meters are used on weekends it could increase the need for off-street long term parking facilities during peak summer weekends.

3.10 Summary of Deficiencies and Needs for the Transportation Modes

The deficiency mentioned most often by travelers is the general lack of amenities in each of the facilities. The Union Station area lacks any retail amenities, vending machines or food concessions. Restroom facilities are locked and in need of improvement. SEAT passengers have no restrooms. While the rail station has a substantial waiting area, the Greyhound waiting area is cramped and antiquated. SEAT has only a single standard outdoor bus shelter and a few benches.

Both ferry operators have adequate indoor ticketing facilities for the vehicle ferries, though indoor waiting areas are limited. The Block Island passenger ferry has no indoor waiting area and no nearby restroom. While there is a single food concession at the Long Island ferry terminal, there are no other retail or food concessions at either ferry terminal. Surveyed passengers expressed dissatisfaction with places to visit near the ferry terminal.

Deficiencies in transportation operations are mostly related to bus services. The Greyhound bus bays are not configured in the fashion that Greyhound prefers and operators are sometimes forced to back into Water Street to exit the terminal. Greyhound also desires access to a third bay. While the amount of space allotted to SEAT is adequate, SEAT would prefer a location closer to the station and would like an indoor facility for a supervisor and for operators to report for work.

Traffic issues focus on the two railroad crossings. The crossings at State Street and Governor Winthrop Boulevard are closed for 40 Amtrak and two long freight trains each day. This impacts the ability of pedestrians and vehicles to access both ferry terminals. Downtown festivals and events also cause general traffic problems affecting bus operations and access to the ferry terminals, particularly the Fishers Island terminal.

There are also conflicts between different uses on Water Street. Prior to Parade construction, taxis and private vehicles picking up passengers competed for space on Water Street in front of the Union Station building. These vehicles also occasionally interfered with SEAT Route #108 which stops in that area. With Parade construction ongoing, taxis and cars often park in the Greyhound bays interfering with their operations. After construction is completed, the taxi and pick-up area in front of the station building will be smaller that it was previously, potentially creating more conflicts and congestion.

Finally, some parking facilities are in poor condition, most are located far from the ferry terminals, and parking capacity may not be adequate for future needs. Survey respondents rated the security, signage and elevators at parking facilities poorly. The majority of passengers using the Block Island Ferry must park across the tracks at the Water Street garage where signage and access routes to the ferry are poor. The future of the surface parking lots located closest to the ferry is also uncertain. Replacement parking and capacity for future expansion may be needed. (Future parking needs are discussed in Section 3.14.2)

3.11 Interconnectivity of the Modes at the Transportation Center

Whether connecting between public transportation modes, parking a vehicle to use a public transportation, or traveling to or from downtown New London, all passengers become pedestrians at some point. The success of any intermodal center hinges on the ability to provide easy pedestrian connections both between modes and to the surrounding area. As important as the physical connections is the need to provide information across modes through marketing, wayfinding and posted information. Seamless ticketing systems can also make connections easier. Finally, the availability of amenities and services can make connections more convenient and comfortable. This section addresses these aspects of interconnectivity between the modes at the New London RITC.

3.11.1. Pedestrian Access and Connections

Key Intermodal Connections

While there are many transportation modes and services converging at the same location, some modes benefit more from that convergence than others. Also, for each operator or service, it may be more important to connect to certain services than to others. Based on the existing conditions observed and on conversations with the operators regarding current and future needs, Table 3-20 shows the more important connections for each operator or service. In the table, key current connections are denoted with and "C", while future connections are denoted with an "F". The following describes how these key connections to the ticketing area and the boarding area for each mode are currently made, including the physical and operational obstacles that are encountered.

To Amtrak and Shore Line East

Access to the Amtrak (and Shore Line East) ticketing area inside Union Station is easiest from the passenger car drop-off area/taxi stand and SEAT Foxwoods bus on Water Street immediately in front of the station. The walk from the Water Street garage (the closest parking facility excluding the Cross Sound Ferry parking located adjacent to City Pier) is also short and the Parade Project should improve the pedestrian crossing. Access to the Amtrak ticketing area from the ferries is more difficult. The easiest connection, although about 600-feet, is probably the Fishers Island Ferry where passengers must walk the length of the ferry's vehicle staging area and then cross the tracks to the back of the station building. Passengers from the Block Island and Long Island ferries must walk between 600-feet and 1,100-feet from the ferries, across the staging area, along the railroad tracks through an unpaved lot, through City Pier Park and across the tracks to the back of the station. Access routes to Union Station are shown in Figure 3-25, with the route from the SEAT stop and Greyhound shown in Figure 3-25a and the route from Cross Sound ferry, through the staging area and parking lot, in Figure 3-25b. After getting tickets in the station, northbound passengers must walk along the platform to State Street to cross the tracks and access the northbound platform. Ferry passengers traveling north (typically those from Long Island) who already have their rail tickets can access the northbound platform directly without crossing the tracks twice. It should also be noted that none of the ferries, or even the SEAT bus, have schedules that are coordinated with Amtrak. Also, Amtrak does not communicate with ferry operators or hold trains for passengers arriving from late ferries.

Table 3-20: Key Connections between Services

	Intercity Modes			Short Distance Modes					Local Modes		Vehicle Access	
	Amtrak	Greyhound	Long Island Auto Ferry	Fishers Island	Block Island Ferry	SeaJet	Casino shuttles	SLE	SEAT	Taxi	Parking	Roadway Access
Amtrak			C	C	C		F		C	C	C	
Greyhound			C						C			
Long island Auto Ferry	C	C										C
Fishers Island	C										C	C
Block Island Ferry	C						F				C	
SeaJet							C					
Casino shuttles	F				F	C		F	F			
SLE							F				F	
SEAT	C	C					F		C			
Taxi	C											
Parking	C			C	C			F				C
Roadway Access			C	C							C	

Figure 3-25: Access Routes to Union Station



from SEAT and Greyhound



from Cross Sound Ferry

To Greyhound

Access to the Greyhound ticketing area just north of the Union Station building is easy from the rail platforms[17], from the adjacent SEAT bus stop/transfer hub and from the adjacent taxi stand in front of the building. Access from the Long Island ferry is much more difficult. Passengers from the Long Island ferry must walk up to 1,300-feet from the ferry, across the loading area, south along the railroad tracks through an unpaved lot, through City Pier Park and across the tracks at State Street and north along Water Street (or the southbound rail platform) to the bus terminal building. (The direct line-of-sight distance for this walk is only about 600-feet.) After passengers get their tickets, buses then pick up passengers adjacent to the terminal building. Passengers who already have bus tickets and no baggage to check can access the buses directly without entering the terminal building. It should also be noted that the ferry schedule and the Greyhound schedule are not coordinated in any way although Greyhound is interested in doing so. Also, Greyhound does not communicate with Cross Sound Ferry so that they could hold buses for passengers arriving late from the ferries.

To the Long Island Auto Ferry

Access to the Cross Sound Ferry Long Island Ferry ticket office, located just north of the ferry slips, is difficult from most other modes. From Amtrak traveling southbound (as most Long Island-bound passengers are doing), passengers must wait for the train to depart, cross the tracks at State Street, walk through City Pier Park (Figure 3-26a), across the unpaved parking area (Figure 3-26b), through the vehicle staging area for the ferries (past all of the ferry slips) and across to the ticket office, a distance of about 1,200-feet. Passengers from Greyhound face a similar, but slightly longer, walk traveling along the southbound rail platform before following the same route. Ferry passengers must then walk between 150-feet and 350-feet from the ticket office to the boats. Ferry schedules are not coordinated with those of any other operator. Finally, unlike most other modes, the Long Island Ferry carries vehicles so direct vehicular access is important. The ferry terminal is conveniently located for auto access from I-95 and Route 32. The only difficulty is the railroad crossing on Governor Winthrop Boulevard where Amtrak trains cause brief delays but where freight trains often cause more lengthy delays.

Figure 3-26: Access Route to Cross Sound Ferry



looking north from State Street



looking south from the Block Island terminal

[17] Although they must go to the front of the building since the rear entrance is locked and blocked and there is no connection between the Union Station lobby and the Greyhound terminal.

To the Block Island Ferry

Access to the Cross Sound Ferry Block Island ticket office, located south of most of the ferry slips, is somewhat shorter than that for the Long Island Ferry. From Amtrak traveling southbound, passengers must wait for the train to depart, cross the tracks at State Street, walk through City Pier Park, across the unpaved parking area to the ticket office, a distance of about 700-feet. From Amtrak northbound, the walk is slightly shorter. Ferry passengers must then walk a short distance from the ticket office to the ferries. Block Island Ferry schedules are not coordinated with Amtrak. Cross Sound will hold ferries for late trains but has no direct means of communication with Amtrak to determine train status. Unlike the Long Island Ferry, the Block Island Ferry is a seasonal passenger-only service (i.e., no vehicles are transported) so the need for direct vehicular access is replaced by a need for considerable parking. Cross Sound Ferry provides limited on-site parking, which fills up early in the day; so many passengers must park in the Water Street Garage or the Julian lot (which is open only on summer weekends). Although the Water Street Garage pedestrian exit at the southeast corner of the garage (to which ferry passengers are directed by signage) is less than 300-feet line-of-sight from the ticket office, passengers must cross Water Street, walk along Water Street or the southbound rail platform and follow the route from the Amtrak platform to the ticket office, a distance of over 1,100-feet. This is shorter than walking via the Governor Winthrop Boulevard crossing and Ferry Street (1,400-1,900 feet, depending on the garage exit used). From the Julian lot, passengers cross at the Governor Winthrop Boulevard crossing and follow the vehicle route along Ferry Street into the ferry terminal, a distance of over 1,000 feet.

To the SeaJet Long Island Passenger Ferry

Most SeaJet passengers purchase a package ticket at the Long Island terminal giving them bus transportation directly between New London and either the Mohegan Sun or Foxwoods Casino Resort. Buses provided by the two casino resorts park adjacent to the SeaJet slip and passengers walk directly onto the ferry from the buses. Cross Sound Ferry and the contracted bus operators communicate the number of passengers and the time of arrival as needed for a seamless operation.

To the Fishers Island Auto Ferry

Access to the Fishers Island Ferry ticket office, located on the waterfront south of State Street, is not as difficult as that to the other ferries. From Amtrak traveling northbound (as most Fishers Island-bound passengers are doing), passengers walk only about 250-feet across the ferry's vehicle staging area to the ticket office. Passengers who park in New London face a longer walk depending on their exact parking location. Those using the Water Street Garage must cross Water Street, follow Water Street or the southbound rail platform to State Street, cross the tracks at State Street and then walk 250-feet across the ferry's vehicle staging area to the ticket office. Ferry passengers must then walk about 150-feet from the ticket office to the ferry. Ferry schedules are not coordinated with those of any other operator; however, the ferry operator will hold the last boat of the day for a passenger with a late connection and the boat captain communicates with Amtrak to determine whether there is a late connecting train. Finally, like the Long Island Ferry, Fishers Island Ferry carries vehicles. Access to the terminal is via Huntington Street and State Street from I-95 northbound. The route follows city streets and is subject to delays especially during summer months when festivals are held in the downtown. A more common difficulty for both pedestrian access from the garage and auto access is at the railroad crossing on State Street where Amtrak trains stopped in the station block the crossing and where freight trains often cause more lengthy delays. Currently the Parade Project has blocked access to Water Street from the Fishers Island Ferry site and exiting vehicles are directed to use South Water Street (a difficult turn for some trucks given the Amtrak employee parking along the tracks), but this is temporary.

To SEAT

The SEAT hub bus stop on Water Street is conveniently located adjacent to the Greyhound terminal for passengers alighting from Greyhound buses and taking SEAT to a local destination. Many SEAT-to-SEAT transfers occur within the SEAT transfer hub area. The connection from Amtrak is important primarily for SEAT Route 108 which is marketed as a connecting service for Amtrak to Foxwoods in the published Amtrak timetable (although there are few current users). This connection has been made easy as, prior to Parade construction, Route 108 loaded directly in front of Union Station instead of with the other SEAT buses. The future stop location for Route 108 has not been determined. The schedule for Route 108, however, does not appear to be coordinated with the arrival of Amtrak trains, nor is the bus held for late arriving trains. The pre-Parade construction location of the Route 108 stop, in front of Union Station, was not as beneficial for the many SEAT riders who transfer between Route 108 and other SEAT buses as they needed to walk from one end of the Greyhound terminal area to the other.

To Taxis

The taxi stand is located immediately in front of Union Station[18]. Access from Amtrak southbound is simply through or around the station building. Access from Amtrak northbound is via the State Street crossing. Greyhound is a short distance away on Water Street. The walk from the Fishers Island Ferry is about 600-feet and includes crossing the tracks at State Street. Taxis will pick up passengers at the Cross Sound Ferry property if called.

To the Casino Shuttles and the Proposed Tourist Transit System

Currently, the casinos run shuttle services which connect almost seamlessly with the SeaJet high speed passenger ferry to Long Island. The proposed tourist transit system should connect with Amtrak/SLE, SEAT and the Block Island Ferry as well. This will require multiple shuttle stops in downtown New London unless RITC improvements provide more direct access between facilities. The locations of these stops should be planned considering the need to connect with each of these services, as well as provide access to downtown New London.

To Parking

Access to the Water Street Garage for passengers arriving by car is fairly easy via Eugene O'Neill Drive and Atlantic Street. Traffic at State Street can be avoided. For passengers returning to the garage from the northbound rail platform and the ferries, most must walk fairly long distances crossing the tracks at State Street and then crossing Water Street (which will be improved by safety and traffic calming measures included in the Parade Project). Ferry passengers must walk through the unpaved parking lot, and through City Pier Park, before reaching the State Street crossing. A few passengers from Long Island ferries may make the longer walk via Governor Winthrop Boulevard instead.

Access to the Cross Sound Ferry parking lot, Julian lot and Governor Winthrop Garage for passengers arriving by car is also fairly easy via Eugene O'Neill Drive and Governor Winthrop Boulevard. Passengers returning from Cross Sound Ferry walk a short distance to their cars in the ferry lot, but must walk a longer distance, crossing the tracks at Governor Winthrop Boulevard and then crossing Water Street, to reach the Julian lot. The Governor Winthrop Garage is two blocks further up Governor Winthrop Boulevard. Amtrak passengers who may use the garage must also walk a long distance, crossing the tracks at State Street (if coming from the northbound platform) and walking two blocks up State Street to Union Street to reach the garage.

[18] The stand has been temporarily relocated during Parade construction; however, plans call for it to be restored in approximately its original location.

Access to the Eugene O'Neill lots for passengers arriving by car requires driving a slightly longer distance along Eugene O'Neill Drive and crossing State Street. Passengers returning to the lot from the northbound rail platform and the ferries follow the same path to State Street as they would to the Water Street Garage, but then must turn onto Bank Street and Golden Street to reach the lot.

To the Highway System

Vehicles departing from the various transportation modes that constitute the RITC to the highway system generally use Water Street. The Cross Sound Ferry parking lot, Long Island auto ferry, and Fishers Island Ferry all funnel departing vehicles across the tracks onto Water Street. Vehicles departing from the Long Island Ferry and ferry parking lot must cross the railroad tracks at Governor Winthrop Boulevard, and thus may face delays due to passing trains. Vehicles departing from the Fishers Island Ferry must cross the railroad tracks at State Street, facing possibly longer delays due to trains stopped in the station. They may also be delayed more by traffic and pedestrians when festivals are being held in the downtown area and are currently affected by the Parade Project construction. Vehicles departing from the Governor Winthrop Garage and Julian lot follow Governor Winthrop Boulevard to Water Street, and the Water Street Garage funnels traffic directly onto Water Street, for an easy exit from the city. Departing from the Eugene O'Neill lots may be more difficult as traffic must use Bank Street and State Street, passing through the Parade area, to reach Water Street.

3.11.2. Access to/from Downtown

For connecting passengers who wish to visit downtown New London, the ease of the walk differs by mode. Those connecting to Amtrak or Greyhound, who pick up their ticket in the station or bus terminal building, likely get their tickets first and are then able to exit to Water Street. After the Parade Project is completed, they will be able to easily walk through the improved Parade area to State and Bank Streets if they have time before their ticketed departure time. Those connecting to Amtrak or Greyhound who already have tickets, those connecting to SEAT or a taxi, and those who are returning to their cars in the Water Street Garage are also able to divert directly up State Street to visit downtown on their way to their connection. Most of these (except northbound rail passengers coming from the ferries) are already passing along the downtown side of the tracks.

Passengers connecting to the ferries, given the greater distance from downtown of the ferry ticket offices as compared to their arriving modes, face a decision. Do they walk to the ferries to check-in first, turn around to walk back to downtown and then walk back to arrive at the boat just before departure; or do they visit downtown first and then try to allow enough time to check-in just before boarding the ferry? This choice either limits their willingness to turn around and walk back to visit downtown or reduces the amount of time they have to visit downtown so they allow enough time to check in before embarking on the ferries. Undoubtedly, the likelihood of visiting downtown is negatively impacted by the inconvenience of the walk to and from the ferry terminal.

Those taking vehicles on the auto ferries who wish to make a stop in downtown New London have to find parking downtown. Those traveling to Fishers Island are likely quite familiar with New London and know where to park and what to do. They embark and disembark on State Street and pass right through downtown. Long Island Ferry passengers are typically making long distance trips and are less likely to be familiar with New London. When embarking on a ferry in New London they need to check in and remain with their vehicle. When disembarking from the auto ferry, they exit to Governor Winthrop Boulevard and turn right onto one-way Water Street to leave the city, but could choose to drive into downtown via Governor Winthrop Boulevard and Eugene O'Neill Drive and park if they had a desire to do so. New

London Main Street plans to erect a gateway sign at the northwest corner of the Water Street/Governor Winthrop Boulevard intersection to encourage such travelers to stop in downtown New London before getting on the highway.

While the current casino shuttle services that meet the SeaJet high-speed passenger ferry are designed to rapidly transport ferry/casino customers to the casinos, as opposed to encouraging them to come into downtown, the proposed tourist transit system is designed to provide better access to downtown New London for visitors throughout the region. A well-situated downtown stop, in addition to a stop at the ferry terminal would be needed for the new tourist bus system.

3.11.3. Good Connections to Maintain

The above discussion identified, for each mode, where the pedestrian routes for key intermodal connections are good and where they are lacking. Good connections are close together, on good surfaces, esthetically pleasing, weather protected and free from obstructions and delays. Poor connections require long walks through less hospitable areas and may involve crossing railroad tracks at gated at-grade crossings that are often closed. In designing improvements to the RITC, it will be important to maintain those key pedestrian connections that are good, while improving those that are deficient. The good connections, as noted above, that should be maintained include:

- Greyhound to/from SEAT
- SEAT 108 to/from Amtrak southbound (northbound requires crossing the tracks)
- Greyhound to/from taxis and pick-up/drop-off
- Amtrak to/from taxis and pick-up/drop-off (although some may have to cross the tracks)
- Amtrak northbound to Fishers Island (southbound requires crossing the tracks)
- SeaJet high-speed passenger ferry to/from the casino shuttles
- Amtrak southbound, Greyhound, and SEAT to/from the Parade and downtown
- Roadway access to the Long Island Auto Ferry and to the Water Street Garage, Governor Winthrop Garage and surface lots

This list represents the most important connections to maintain. There are other good quality connections that are made less frequently. While less critical, these should also be maintained if at all possible.

3.11.4. Deficiencies in Current Connections

The most difficult key connections to make are those that involve crossing the railroad tracks and accessing the ferry terminals. These include

- Greyhound to/from the Long Island Ferry
- Amtrak to/from the Long Island Ferry and the Block Island Ferry
- Water Street and Governor Winthrop garages to/from the Block Island Ferry
- Union Station and southbound rail platform from the Fishers Island Ferry
- Taxis and Water Street Garage to/from the Fishers Island Ferry
- Downtown to/from the Long Island Ferry and the Block Island Ferry

Other less than optimal connections result from pedestrians and vehicles needing to cross the railroad tracks at State Street where trains in the station can cause delays and pedestrian areas are not clearly distinguished from the roadway. These include:

- Amtrak/SLE northbound platform to/from the Water Street Garage, SEAT 108 and taxis

- Amtrak/SLE northbound platform to Union Station lobby and ticket counter
- Fishers Island Ferry roadway access

Finally, there is a general lack of coordination of schedules and lack of real time status information shared among operators. The SeaJet passenger ferry and the casino shuttles are coordinated in both ways. There are no other cases of coordinated schedules among any of the modes. The only other known real time coordination is between the Fishers Island Ferry and Amtrak in very limited instances.

3.11.5. Potential Future Deficiencies

The major changes expected or possible in the future include the proposed regional tourist transit system and the Shore Line East expansion. Beyond these changes, some operators anticipate incremental increases in ridership and service frequency and Cross Sound Ferry may introduce service to new destinations. This may result in some increase in parking demand, particularly for Cross Sound Ferry. Shore Line East will require good connections to parking and an adequate parking supply. The tourist transit system will require good connections to the SeaJet and Block Island passenger ferries and to Amtrak, as well as to SEAT (largely for employee travel to tourist centers).

The key connections affected, therefore, would include insuring connections from an adequate number of parking spaces to the rail station and to the ferries. Providing well-located stops for the tourist transit system at the ferry terminal, rail station and SEAT bus stop will be key to its success. The frequency of the proposed shuttles will largely eliminate the need for schedule coordination with other modes at most times; however, some coordination will be necessary at low ridership times and to coordinate the hours of service with the schedules of other modes. Real-time communications at such times may also be beneficial.

3.12 Marketing, Ticketing, Information and Wayfinding

3.12.1. Joint Marketing and Ticketing

There are currently few joint marketing and ticketing activities among the transportation operators serving New London. The best and most successful example is the joint service provided by Cross Sound Ferry and the two casinos. Casino shuttle schedules are presented jointly with SeaJet ferry schedules on the Cross Sound website and published schedules and both casino websites have links to Cross Sound Ferry. Cross Sound Ferry issues the tickets that are used on the shuttles.

Another example is the joint marketing of Amtrak and SEAT Route 108 to Foxwoods. Amtrak includes the SEAT schedule in its timetable and through service tickets incorporating the fare for the SEAT trip are sold by Amtrak. Amtrak then reimburses SEAT for through service tickets used on SEAT. This example has not been very successful in generating ridership.

Amtrak and Shore Line East also have a joint ticketing arrangement since most Shore Line East service to New London is provided by Amtrak trains. The Amtrak trains accepting SLE multi-ride tickets are listed on the SLE schedule alongside SLE trains. SLE service is not mentioned in the Amtrak timetables.

At one time Amtrak had joint ticketing arrangements with Cross Sound Ferry but this agreement lapsed due to changes in Amtrak personnel. Cross Sound Ferry indicated that it would consider reinstating the arrangement especially if pedestrian connections can be improved and the arrangement could result in increased awareness of its ferry service.

3.12.2. Availability of Connection Information

All of the operators in New London have websites describing their services, including schedules and, in most cases, the ability to make reservations and/or buy tickets online. The operators have varying levels of information on their websites about other operators and how to make connections in New London. Operators focused on New London tend to have more New London-specific information than national carriers.

The ferries tend to have the most information on other operators on their websites. Cross Sound Ferry provides the schedules for the casino connections and has links to the websites for Amtrak, SLE and Greyhound. It also provides phone numbers for the New London taxi companies. Fishers Island Ferry also has several links including Amtrak, SLE and Cross Sound Ferry. Neither ferry website provides information on how to connect to other services.

Amtrak's timetable, available on its website, includes the SEAT Route 108 schedule but has no information on how to connect. The SEAT website does not include any links to other operators but has phone numbers for Amtrak, SLE, Greyhound, Fishers Island Ferry and Cross Sound Ferry. The Greyhound website does not have any information on New London connections.

There are other websites, for example newlondonmainstreet.org, that list all of the carriers but not how to connect between them.

While all of the operators provide online information through their websites, most (with the exception of SEAT) also provide on-site information in their own terminals as well. All of this information is provided indoors; none of the operators post their schedules outside although Amtrak train announcements can be heard outside. Furthermore, the various operators provide little on-site information about the other modes. Connecting passengers must find their way to the other terminals to obtain schedule and fare information.

3.12.3. Wayfinding in the RITC

Wayfinding and signage are very important components of the connections between modes. Because there are so many physical components to wayfinding, this was discussed in Chapter 2. In general, wayfinding signage throughout the city street network is lacking; the existing signage does not provide clear and concise messages nor are the signs strategically placed. Wayfinding signage between transportation modes is generally deficient and is sometimes inconsistent or directs pedestrians to a less than optimal route. A majority of the problems relate to wayfinding for pedestrian access to and from the Cross Sound Ferry site, both for the Long Island Ferry and the Block Island Ferry. The Main Street program and the City of New London are currently developing a signage project to encourage visits to the Historic Waterfront district which should be coordinated with any new RITC signage.

3.12.4. Information on Downtown New London

The transportation providers serving New London do not provide information on downtown New London attractions on their websites. Many provide directions to their terminal by automobile and some include a map. Cross Sound Ferry provides some information on things to do in southeastern Connecticut. While New London proper is not featured, there is a link to the City's website for information on things to do.

In its terminal, Cross Sound Ferry has brochures on things to do in New London. Greyhound and Union Station do not consistently have such brochures in their waiting areas.

Cross Sound Ferry is also taking a step to promote New London in cooperation with the Chamber of Commerce of Eastern Connecticut. Beginning late in the summer of 2008, representatives were stationed on board the ferries distributing information on things to do in New London. The program is planned to resume in the summer of 2009.

3.12.5. Deficiencies in Marketing, Ticketing, Information and Wayfinding

Joint marketing and ticketing among New London operators is minimal and schedule information and information on how to connect to other modes is lacking both pre-trip and on-site. Wayfinding signage is minimal, non-existent or misleading. Little information on downtown New London is available through the transportation operators. Performance of the RITC as a transportation center could be improved by more joint marketing and ticketing efforts and improved pre-trip and on-site information on how to make connections. A centralized system to provide real time connection information in all terminals may be beneficial. Downtown New London could benefit from more information on downtown attractions and activities being provided in advance, both on vehicles and in the station area.

3.13 Amenities and Commercial Services

3.13.1. Current Amenities in the RITC

An important component in making intermodal connections more pleasant is the availability of passenger amenities. These include restrooms, sheltered waiting areas, climate control and benches.

Both the Fishers Island Ferry and the Cross Sound Ferry provide restrooms for their patrons. Union Station and Greyhound have locked restrooms with signs restricting access to their customers only. There are no separate restrooms for SEAT (riders typically use the Greyhound restrooms) or at the Block Island Ferry ticket booth (passengers must walk 400' across the vehicle ferry ramps to use the restrooms located at the Long Island Ferry ticket office). There are no public restrooms at the Water Street Garage or in the Parade area. Furthermore, when asked to rate several characteristics of the transportation services, riders of Greyhound, Amtrak, SEAT and the Block Island ferry all gave the worst ratings of all characteristics to amenities at the terminal.

Figure 3-27: Union Station Waiting Area



Waiting areas differ by mode as well. Amtrak and Shore Line East passengers have a large attractive waiting area inside Union Station with seating for about 50 (Figure 3-27). Platforms are covered but are open on the sides. There is minimal outdoor seating. Greyhound has a much smaller waiting area in its building with seating for about 25 that is in need of updating. Greyhound has a covered outdoor waiting area with no seating. Auto ferry passengers often wait in their vehicles, but Cross Sound Ferry has a waiting area inside its Long Island ticket office (Figure 3-28a). There is an outdoor covered gangway for Block Island Ferry passengers outside the ticket office (Figure 3-28b) but capacity is limited and some passengers have to wait in an uncovered area. (Note that Block Island service is summer only so an indoor waiting area is less necessary.) Fishers Island Ferry does not have an indoor waiting area although there is a lobby. SEAT has only one small unheated bus shelter and several unsheltered benches that are in need of repair.

Figure 3-28: Cross Sound Ferry Ticket Offices


(a)


(b)

3.13.2. Current Commercial Services in the RITC

Another important component is the availability of commercial services. These include food concessions/restaurants and retail, including both convenience concessions (such as newsstands) and nearby shopping for longer stays.

Figure 3-29: Cross Sound Ferry Food Concession



Food concessions and restaurants in the RITC are limited. The Union Station building has only vending machines. A restaurant previously located in the building closed many years ago. There is a snack bar adjacent to the Long Island Ferry ticket office on the Cross Sound Ferry site (Figure 3-29) and a seasonal snack bar at City Pier Park that is passed by pedestrians crossing the tracks at State Street en route to any of the ferry terminals. There is one restaurant on the south side of State Street on the downtown side of the railroad crossing. Not far away, but off the path followed by connecting passengers, there are fast food and other restaurants along Bank Street. Many of these have open-air decks facing South Water Street and the river.

There are no newsstands or other non-food concessions in the RITC, nor are there other types of shopping in the immediate area where connecting passengers would normally walk. Nevertheless, there are shops, restaurants and galleries along State and Bank Streets in New London within a ten minute walk of most of the RITC for connecting passengers who are able to take the time to visit the city.

3.13.3. Potential for Additional Amenities and Commercial Services

The SEAT bus stop area is most in need of amenities such as restrooms, shelters and improved seating. The Greyhound terminal lacks outdoor seating and the indoor facility is in need of improvement. An improved Block Island Ferry building with restrooms and an indoor waiting area would also be beneficial. (Cross Sound Ferry developed plans for a new high speed ferry terminal that was to be served directly by the proposed pedestrian bridge project that was aborted.) Additional food concessions and/or restaurants would benefit connecting passengers. With the largest connecting pedestrian volumes currently passing through the State Street rail crossing, locations close to that point, including in and around the Union Station Building could be the optimal location to serve connecting passengers.

3.14 Future Ridership and Service Scenarios and Impacts

The master plan for the RITC will need to consider transportation needs well into the future. The plan must consider a shorter range (2015) and longer range (2030) time frame. Unfortunately few, if any, of the individual transportation providers were able to provide estimates of ridership or service levels that far into the future. Some provided general ideas about potential future expansion while others simply plan to react to the market as it develops. Therefore, it was necessary for the consultant team to develop future scenarios based on an assumed level of growth in travel on each mode and an estimate of each operator's likely response to that growth.

3.14.1. Ridership and Service Scenarios

High and Low Demand Scenarios

Two future transportation scenarios were developed, reflecting lower and higher growth rates. The higher demand scenario can be equated to one in which New London, and the southeastern Connecticut region, become a more attractive destination. In this case, recent high growth rates in ridership on some services would continue and would be accompanied by growth in ridership on other services that have had recent ridership losses. The lower demand scenario reflects more modest improvements in the region accompanied by more modest rates of ridership growth on most services. Ridership growth rates were estimated based on recent and longer term trends for each mode. The recent sharp downtown in the economy complicated this process and therefore both scenarios assume a period of no net growth over the next two to three years. Both scenarios then reflect a recovery period of moderate to high growth through 2015 (although the high demand scenario assumes that the recovery starts somewhat sooner). Both scenarios then assume a slightly lower average annual rate of growth through 2030. The ridership scenarios are presented in the following section. It should be noted that these reflect assumptions based on past trends and input from the operators and are intended for the purpose of setting reasonable upper and lower bounds for decision-making concerning the RITC facility. They should be used with caution and should not be taken as projections of future travel resulting from a comprehensive demand analysis (which would be beyond the scope of this study).

Service changes accompanying each demand scenario were also developed in order to assess future operational needs. Planned or anticipated expansions of Shore Line East and SEAT services are included in the near and long term. The high demand scenario also incorporates the proposed Tourist Transit System and includes new ferry services by 2030. Additional trips on the ferries, Greyhound and Shore Line East are incorporated as warranted by demand. While Amtrak has indicated that no new Northeast Corridor service can be added, additional stops by Acela trains are assumed in the high demand scenario. The service scenarios are presented below after the ridership scenarios.

It should be noted that new transit oriented development at the RITC is not explicitly included in these transportation scenarios. The impacts of such development will be incorporated later in the study as development opportunities at the RITC are identified.

Ridership Scenarios

Ridership growth assumptions for the two scenarios are shown in Table 3-21, alongside a summary of recent ridership trends. Ridership on all existing services is not assumed to exceed current levels for several years due to the current economic downtown. The first year above current levels is assumed to be 2012 in the low scenario and 2011 in the high scenario. Assumed growth rates beyond those years differ for different types of services due to differences in markets served, differences in past trends and different

Table 3-21: RITC Future Ridership Scenarios

		Annual Ridership Growth Assumptions[19]					
		Low Scenario[20]			High Scenario[21]		
Modes	Recent Annual Trend	2009-2011	2012-2015	2016-2030	2009-2010	2011-2015	2016-2030
Amtrak[22]	5.6% since 1999 (New London only)[23]	no net change from 2008	4%	2%	no net change from 2008	6%	4%
Shore Line East	5.8% since 2003 (systemwide)	Ph. 2 projections in New London			Ph. 2 projections in New London		
Greyhound[24]	unknown	no net change from 2008			no net change from 2008		
Long Island Auto Ferry[25]	peaked in 2004 -5% in 2005, then stable	no net change from 2008	1%	1%	no net change from 2008	2%	2%
Casino Shuttles/ Tourist System	-2.8% since 2003 (assumed same as SeaJet)	no net change from 2008	2%	1%	no net change from 2008	2/3 of low demand scenario (shuttles remain)	average of low and high demand scenarios
SeaJet Passenger Ferry[24]	-2.8% since 2003	no net change from 2008	2%	1%	no net change from 2008	3%	2%
Block Island Passenger Ferry[26]	-6% since 2005						
Other Passenger Ferries	none currently operated	NA	NA	NA	NA	NA	See note[27]
Fishers Island Auto Ferry[28]	stable	no net change from 2008	0%	0%	no net change from 2008	0%	See note[29]
SEAT	7.7% since 2003 (systemwide)	no net change from 2008	6%	4%	no net change from 2008	8%	6%

[19] Both scenarios assume little to no growth over the next few years, then a recovery through 2015, followed by more moderate steady growth through 2030.

[20] Low Scenario assumes that an economic recovery begins in 2012 and that future non-tourist ridership increases at less than recent trends through 2015. Average annual increases through 2030 are assumed to be less than in the 2013-2015 period. Small increases in tourist ridership are assumed.

[21] High Scenario assumes that an economic recovery begins in 2011 and that future non-tourist ridership increases at close to recent trends through 2015. Average annual increases through 2030 are assumed to be less than in the 2013-2015 period. More significant increases in tourist ridership are assumed, including a new tourist transit system.

[22] Long term rail ridership growth assumed to be less than the very high growth rates of recent years and more consistent with longer term trends.

[23] Annual Amtrak New London ridership growth was 2.3% from 1999-2003 but 8.1% from 2003-2008.

[24] Data not available on Greyhound New London ridership. Growth assumed to match Amtrak.

[25] Projected growth in vehicular travel on I-95 is approximately 1.5% annually. Ferry travel assumed to be lower in low scenario and higher in high scenario. Low scenario growth is equivalent to projected growth in Suffolk County NY population.

[26] Growth rate in recreational ferry travel is assumed to be lower than that of non-tourist intercity travel since ridership has declined in recent years despite increases in other travel modes at the RITC.

[27] Ridership assumed to equal ½ of current Block Island ridership.

[28] Fishers Island Ferry District projects stable ridership. The addition of a possible future high-speed passenger ferry is assumed in 2015.

[29] No increase in vehicular travel. A 25% increase in passengers is assumed due to new passenger-only ferry.

expected service changes. In general, the scenarios assume a slight mode shift toward rail and bus transportation in both intercity and local travel. They assume the rate of growth in auto ferry traffic to be around that projected for highway travel in southeastern Connecticut while the rate of growth in tourist travel is slightly higher.

The recent trend for both Amtrak ridership to New London and Shore Line East system-wide ridership has been a nearly 6% annual increase in ridership (although Amtrak average annual growth jumped from 2.3% before 2003 to over 8% in recent years). Shore Line East is expected to begin operations to New London in the next few years and ridership in 2010/2011 is assumed to equal projections for the proposed Phase 2 expansion. Rail ridership to New London, in the high scenario, is then assumed to grow at the recent 6% rate annually until 2015, then at 4% annually thereafter. In the low scenario, it is assumed to grow at 4% until 2105, then at 2% thereafter (closer to the Amtrak pre-2003 growth rate). Historic ridership data was not available from Greyhound, so the rail growth rates were used since these services serve somewhat similar intercity travel markets in the Northeast Corridor.

The Long Island Auto Ferry recently experienced a decline in patronage but ridership is believed to have stabilized. Ridership is not assumed to exceed current levels until 2010/2011. Assumed growth after that time was based on projected growth rates for traffic on I-95. A recent study[30] projected growth rates along various portions of I-95 in southeastern Connecticut averaging about 1.5% annually. Therefore, auto ferry traffic is assumed to grow at 1% annually beginning in 2011 in the low demand scenario and 2% annually beginning in 2010 in the high demand scenario.

The Fishers Island Auto Ferry is not assumed to experience any increase in ridership. Ridership has been stable for several years and the operators do not expect much change. The Island is small and has a stable population. Some passenger ridership increase is assumed by 2030 in the high scenario, the result of the possible introduction of new high-speed passenger service.

The Block Island passenger ferry, the SeaJet high-speed passenger ferry service, and the accompanying casino shuttles cater to a recreational market. Ridership on these services has seen a slight decline in recent years, especially on the Block Island service. These services are not assumed to exceed current ridership levels until 2010/2011. They are then assumed to grow, in the low scenario, at 2% annually until 2015 and 1% thereafter, and in the high scenario, at 3% annually until 2015 and 2% thereafter. In 2030, the high scenario also assumes two new high-speed ferry services operated by Cross Sound Ferry – most likely a restoration of high-speed passenger service to Martha's Vineyard and new high-speed passenger service to Montauk on Long Island's south fork. The high scenario also assumes the implementation of the proposed tourist transit system, with the pilot system in place by 2015 and the full system in place before 2030. Year 2015 ridership is assumed to be 2/3 of the low demand scenario developed for that system in the 2005 study, and year 2030 ridership is assumed to be the average of the low and high demand scenarios[31].

SEAT has experienced the highest ridership growth of any of the operators in recent years (7.7% annually since 2003), though ridership was somewhat stagnant before 2003. After 2011 ridership is assumed to grow at 6% until 2015 and then at 4% afterwards in the low scenario. In the high scenario, after 2010 ridership is assumed to grow at 8% until 2015 and then at 6% afterwards. This high growth rate in the high

[30] Clough, Harbour & Associates LLP, *I-95 Corridor Feasibility Study*, published approximately 2003

[31] Working files from the SCCOG Intermodal Connections Southeast Study (by TranSystems) were used to estimate ridership to/from New London proper for the pilot system in 2015, and both to/from New London and to/from intermodal connections (rail and ferry) for the full system in 2030.

scenario is assumed to be supported by service frequency improvements, new local routes before 2030, and expansion of Sunday service.

Table 3-22: RITC Future Service Scenarios

	Service Level Assumptions			
	Low Scenario		High Scenario	
Modes	2015	2030	2015	2030
Amtrak	No change	No change	5 Acela trains stop in each direction; no change in NE Regional	8 Acela trains stop in each direction; no change in NE Regional
Shore Line East	Phase 2 implemented	Phase 3 implemented	Phases 2 and 3 implemented	Two additional daily round trips
Greyhound	No change	2 additional daily trips each direction	1 additional daily trip each direction	4 additional daily trips each direction
Long Island Auto Ferry	No change	additional trips as needed (with existing fleet)	No change	additional trips as needed possible expansion of fleet
Casino Shuttles/ Tourist System	No change	Matches SeaJet expansion	Pilot tourist system operated	Full tourist system operated
SeaJet Passenger Ferry	No change	1 additional daily round trip (7 summer weekend round trips; 5 round trips other days)	No change	Second boat added; 10 summer weekend round trips; 6 round trips other days
Block Island Passenger Ferry	No change	1 additional daily round trip (5 summer weekend round trips; 4 round trips other days)	No change	Second boat added; 7 weekend day round trips; 4 weekday round trips
Other Passenger Ferries	none	none	none	Service to Martha's Vineyard 2/day Service to Montauk 2/day (summer only)
Fishers Island Auto Ferry	No change	No change	No change	New passenger ferry added; 4 daily round trips in peak season
SEAT	Hourly service on all routes	Hourly service continued	30 minute service and hourly Sunday service on all routes	30 minute service; hourly Sunday service; Foxwoods route eliminated; two new routes

Service Scenarios

Assumptions regarding service changes for the two scenarios are shown in Table 3-22. With some exceptions, service levels on existing services are not assumed to change significantly by 2015. This is partly in response to the assumed limited ridership growth rates described above, as well as the fact that in many cases the existing service levels supported higher ridership levels just a few years ago.

Amtrak is currently completing a master plan for Northeast Corridor in 2030. Amtrak has stated that the number of Northeast Regional trains operating through New London is not expected to change through 2030. (Any increase in demand can be accommodated by increasing the number of coaches in each train.) The number of Acela trains is expected to increase from 10 to 16 in each direction by 2030 although there are no plans to increase the number of these making stops in New London. Therefore, the low demand scenario assumes no change in the number of Amtrak trains stopping New London despite higher

ridership. The high demand scenario assumes that Amtrak increases the number of Acela trains stopping in New London to half of all Acela service, in order to respond to an increasing demand for travel as the region becomes a more popular destination.

Shore Line East's phased expansion plans, detailed earlier in this report, are assumed to be implemented in both scenarios. In the low scenario, Phase 2 occurs by 2011 and Phase 3 after 2015. In the high scenario, Phase 2 occurs by 2010 and Phase 3 occurs before 2015. In the high scenario, Shore Line East service is assumed to increase further by an additional two daily round trips sometime before 2030.

In 2015, the twelve Phase 2 Shore Line East trains in each direction will result in an increase in the daily number of weekday trains crossing State Street from 40 to 64. By 2030, the six additional Amtrak trains in each direction and four to eight additional Shore Line East trains in each direction will result in an increase in the daily number of weekday trains crossing State Street to between 84 and 92, more than doubling the current number. P&W has the capacity to carry more freight on its existing daily trains; however, it cannot be predicted whether a second daily freight train would be needed in the future.

As noted previously, Greyhound has no specific expansion plans. Any increases in service to New London can be expected to result from increased demand throughout the corridor rather than from increases in demand specific to New London. While overall New York to Boston corridor ridership trends are beyond the scope of this study, the low scenario assumes that service would not increase by 2015 but would increase by two additional daily trips in each direction by 2030. The high scenario assumes that service would increase by one additional daily trip in each direction by 2015 and would increase by four additional daily trips in each direction by 2030.

Cross Sound Ferry has stated that they can and will adjust service on the Long Island Ferry to meet demand. It is not known how much excess capacity exists on the auto ferry in peak or off-peak seasons. However, it was assumed that a 10% increase in volume could be accommodated with existing service levels and that, beyond that level, the number of trips operated would increase proportional to travel volume. This would result in no increase in the number of ferry trips in 2015 in either scenario, but a 10% increase in service in the low scenario and a 35% increase in service in the high scenario in 2030.

Cross Sound Ferry will also adjust service on the SeaJet and Block Island high-speed passenger ferries to meet demand. With only modest increases in ridership assumed, both SeaJet and Block Island services are assumed to remain unchanged in 2015 in both scenarios. In the low demand scenario, only one additional daily round trip on each service is assumed in 2030. In the high demand scenario, more significant ridership increases are assumed. For the SeaJet, four additional round trips (for a total of ten) are assumed on weekends and two (for a total of six) on weekdays. For Block Island, three additional round trips (for a total of seven) are assumed on weekends and one (for a total of four) on weekdays. On both services, the weekend service levels would not be possible with just one boat, so Cross Sound Ferry would need a second boat for each of these services on weekends. Additionally, in the high demand scenario, two new high-speed ferry services are assumed in 2030 – a restoration of high-speed passenger service to Martha's Vineyard and new high-speed passenger service to Montauk on Long Island's south fork. A combined total of four round trips on summer weekend days are assumed to these two destinations.

The casino shuttle buses would mimic the service levels on the SeaJet in the low demand scenario. In the high demand scenario, casino shuttle buses would continue to meet the SeaJet in 2015, but would be replaced by the tourist transit system before 2030. The proposed tourist transit system is assumed to be implemented only in the high demand scenario. The pilot system (which has no direct shuttles to the ferry)

was previously assumed to be implemented before 2015. The full system (including ferry shuttles) was assumed to be implemented before 2030. In 2015, service on the Mohegan Sun to Mystic route via New London was assumed to operate every 30 minutes in each direction, with service every 15 minutes during peak times on peak summer weekends. (Foxwoods passengers would transfer in Mystic.) In 2030, on peak summer weekends, service on that route would operate every 15 minutes at most times and would increase to every 12 minutes during peak times. Also in 2030, another route would operate non-stop from New London to Foxwoods every 30 minutes year round. As previously explained, funding for this proposed system had not been secured at the time of completion of this study.

Service on the Fishers Island Auto Ferry is not assumed to change in either scenario. The high demand scenario in 2030 includes a new high-speed passenger-only ferry with four daily round trips in peak season.

SEAT is assumed to experience the largest increase in overall system ridership, based on recent trends of high ridership increases and stated goals of increasing service frequency. In the low demand scenario, service on corridor routes is assumed to increase to hourly. In the high demand scenario, service on all routes is assumed to increase to every 30 minutes and hourly service is added on Sunday. By 2030, in the high demand scenario, two new routes are assumed to operate from the New London terminal while the Foxwoods route (Route 108) would be replaced by the new tourist transit system route from New London to Foxwoods.

Other services that would continue serve the RITC or be added in the future include taxis, cruise ship shuttle buses, and car and bike rentals. Taxi use can be expected to increase in both scenarios, and can be expected to most closely follow the increase in Amtrak ridership and the addition of Shore Line East service. The cruise ship market is dependent on other factors but it can be assumed that cruise ships will continue to visit the city on a very limited number of days each year in either scenario. On those days, shuttle buses are likely to continue to bring passengers to the Historic Waterfront District and the RITC. The RITC may be able to support new services, such as car and bike rentals, and can be considered as improvement plans are developed.

3.14.2. Impacts on the RITC

Annual Ridership Increases

The scenarios described above would result in the growth in passengers and vehicle volumes (on ferries) shown in Table 3-23. The percentages shown reflect the growth from current (calendar or fiscal year 2008) ridership that would result from the assumptions described above for each scenario. Table 3-24 shows the annual ridership and vehicle volumes than would result from this growth.

The tables show that the higher growth rates assumed for rail and intercity (Greyhound) bus would result in substantial ridership increases, especially by 2030. Ridership on these modes would increase by 57% in the low scenario and 141% in the high scenario. The lower growth rates for Cross Sound Ferry would result in ridership and vehicle volumes equaling or barely exceeding peak 2004 levels by 2015, but increasing by roughly one fourth over current levels in 2015 and by roughly one half over current levels in 2030. Fishers Island Ferry volumes are assumed to be stable except for an increase in passenger resulting from new passenger service in the 2030 high scenario. The high growth rates assumed for SEAT would result in more than a doubling of ridership in the 2030 low scenario to more than a tripling of ridership in the high scenario.

Table 3-23: Future Scenario Ridership Growth Assumptions

	Low		High	
Transportation Mode	2008-2015	2008-2030	2008-2015	2008-2030
Amtrak	17%	57%	34%	141%
Shore Line East *	17%	57%	34%	141%
Greyhound	17%	57%	34%	141%
Long Island Auto Ferry	4%	21%	10%	49%
Casino Shuttles / Tourist Transit	8%	26%	16%	56%
SeaJet Ferry	8%	26%	16%	56%
Block Island Ferry	8%	26%	16%	56%
Fishers Island Ferry	0%	0%	0%	25%
SEAT	26%	127%	47%	252%
Long Island Ferry Vehicles	4%	21%	10%	49%
Fishers Island Ferry Vehicles	0%	0%	0%	0%

* Shore Line East growth over Phase 2 expansion projections

Table 3-24: Future Scenario Annual Ridership
One-way trips

		Low		High	
Transportation Mode	Current	2015	2030	2015	2030
Amtrak	169,112	197,837	266,263	226,310	407,572
Shore Line East		76,041	102,341	86,985	156,654
Greyhound	68,000	79,550	107,064	90,999	163,885
Long Island Auto Ferry	1,000,000	1,040,604	1,208,109	1,104,081	1,485,947
Casino Shuttles / Tourist Transit	196,000	212,157	246,307	227,218	
Tourist Transit				26,000	389,000
SeaJet Ferry	230,000	248,959	289,034	266,633	358,853
Block Island Ferry	88,000	95,254	110,587	102,016	137,300
New Ferries					44,000
Fishers Island Ferry	160,000	160,000	160,000	160,000	200,000
SEAT	175,000	220,933	397,889	257,132	616,233
Total Passengers	2,086,112	2,331,336	2,887,594	2,547,374	3,959,444
Long Island Ferry	470,000	489,084	567,811	518,918	698,395
Fishers Island Ferry	40,000	40,000	40,000	40,000	40,000
Total Vehicles	510,000	529,084	607,811	558,918	738,395

Daily Ridership Increases

Ridership and vehicle data presented in the previous section on individual modes, as well as detailed data provided by some operators, were used to estimate daily ridership on each mode for four different example days. The four example days were defined as follows:

- Peak Summer Sunday – A summer Sunday typical of the three or four busiest Sundays of the year
- Summer weekday – an average Tuesday or Wednesday in July and August
- January Sunday – an average Sunday in January
- January weekday – an average Tuesday or Wednesday in January

July and August are the peak months for all operators and for the Water Street Garage, while the winter months (December through February), typically have the lowest ridership.

Sundays were selected as the peak demand days because Cross Sound Ferry reported that Sunday is their busiest day. Sunday is also the highest revenue day in the Water Street Garage in summer months. Sunday is the second highest ridership day for Amtrak (next to Friday) and the third highest ridership day in summer for the Fishers Island Ferry (next to Friday and Thursday). Greyhound reported that Sundays and Fridays are their highest ridership days. Mid-week days (typically Tuesday and Wednesday) have the lowest ridership for most of these operators. Commuter services, such as SEAT and Shore Line East, have consistent ridership on weekdays and lower ridership on weekends.

Table 3-25 shows the Sunday (both Peak Summer and January) ridership that would result from the assumed growth rates for the two scenarios. Figure 3-30 graphically illustrates the peak summer Sunday figures. The table and figure show that currently just under 14,000 people board or alight at the RITC on a peak summer Sunday. (This represents total boardings and alightings so connecting passengers are counted twice.) Under the low scenario, the total would be expected to increase slightly in 2015 and increase to over 16,000 by 2030. In the high scenario, it would increase to almost 16,000 by 2015 and to over 25,000 by 2030. As the table shows, the vast majority of these (over 80% in most cases) are ferry riders, with the majority of these on the Long Island auto ferry. However, while ferry ridership would grow, the share of passengers who are ferry users would be expected to decline in the future, especially in the high scenario. Amtrak and Greyhound initially make up only 8% of current passengers, but would be expected to increase to 10% in 2030 under the two scenarios. The casino shuttle and future tourist system would grow from 6% to 14% of passengers. Shore Line East is not expected to have substantial weekend ridership and most SEAT service would only operate on Sundays in the high scenario. In January, the SeaJet and Block Island ferries do not operate, so the Long Island Ferry accounts for just 65% of current Sunday ridership and would be expected to decline to as low as 47% in 2030 under the high scenario. Amtrak and Greyhound would be expected to grow from about 15% to about 19% of RITC ridership.

Table 3-26 shows the weekday (both summer and January) ridership that would result from the assumed growth rates for the two scenarios. The table shows that currently over 8,000 people board or alight at the RITC on a summer weekday (again, connecting passengers are counted twice). Under the low scenario, this would be expected to increase to over 9,000 in 2015 and to over 11,000 by 2030. In the high scenario, this would increase to 10,000 by 2015 and to over 16,000 by 2030. Again, the vast majority of these (over 70%) are ferry riders. The share of passengers who are ferry users would again be expected to decline in the future, especially in the high scenario. Amtrak and Greyhound initially make up only 8% of current passengers, but would be expected to increase to 10% in 2030 under the two scenarios. The casino shuttle and future tourist system ridership, while increasing in numbers would maintain its 7% share and grow to 10% with the full tourist transit system in 2030. Shore Line East, when extended to New London, is expected account for about 3% of weekday riders. SEAT currently accounts for about 7% of riders, but the high growth rate assumed for SEAT would result in an increase in share to between 12% and 14%. In January, the Long Island Ferry accounts about 40% of current Sunday ridership and would be expected to decline to as low as 25% in 2030 under the high scenario. Amtrak and Greyhound would be expected to grow maintain a 17% share of ridership. The casino and tourist system would maintain around a 6-7% share while Shore Line East would carry about 10% and SEAT would be expected to grow from about 22% to as much as 32% on January weekdays.

Table 3-25: Future Scenario Weekend Ridership

	Peak Summer Sunday					January Sunday				
		Low		High			Low		High	
Transportation Mode	Current	2015	2030	2015	2030	Current	2015	2030	2015	2030
Amtrak	760	889	1,197	1,017	1,832	353	413	556	472	851
Shore Line East		58	79	67	121		58	79	67	121
Greyhound	320	374	504	428	771	160	187	252	214	386
Long Island Auto Ferry	8,114	8,443	9,803	8,958	12,057	2,183	2,272	2,637	2,410	3,244
Casino Shuttles	806	873	1,013	935		233	252	293	270	
Tourist Transit				275	3,647				54	804
SeaJet Ferry	949	1,027	1,192	1,100	1,480	274	297	345	318	428
Block Island Ferry	1,695	1,835	2,131	1,966	2,645					
New Ferries					848					
Fishers Island Ferry	746	746	746	746	933	165	165	165	165	206
SEAT				462	1,108				378	906
Total Passengers	13,390	14,246	16,664	15,954	25,441	3,368	3,645	4,326	4,349	6,945
Long Island Ferry	3,033	3,157	3,665	3,349	4,507	914	951	1,104	1,009	1,358
Fishers Island Ferry	248	248	248	248	248	68	68	68	68	68
Total Vehicles	3,281	3,405	3,913	3,597	4,755	982	1,019	1,172	1,077	1,426

Figure 3-30: Future Scenario Peak Summer Sunday Ridership

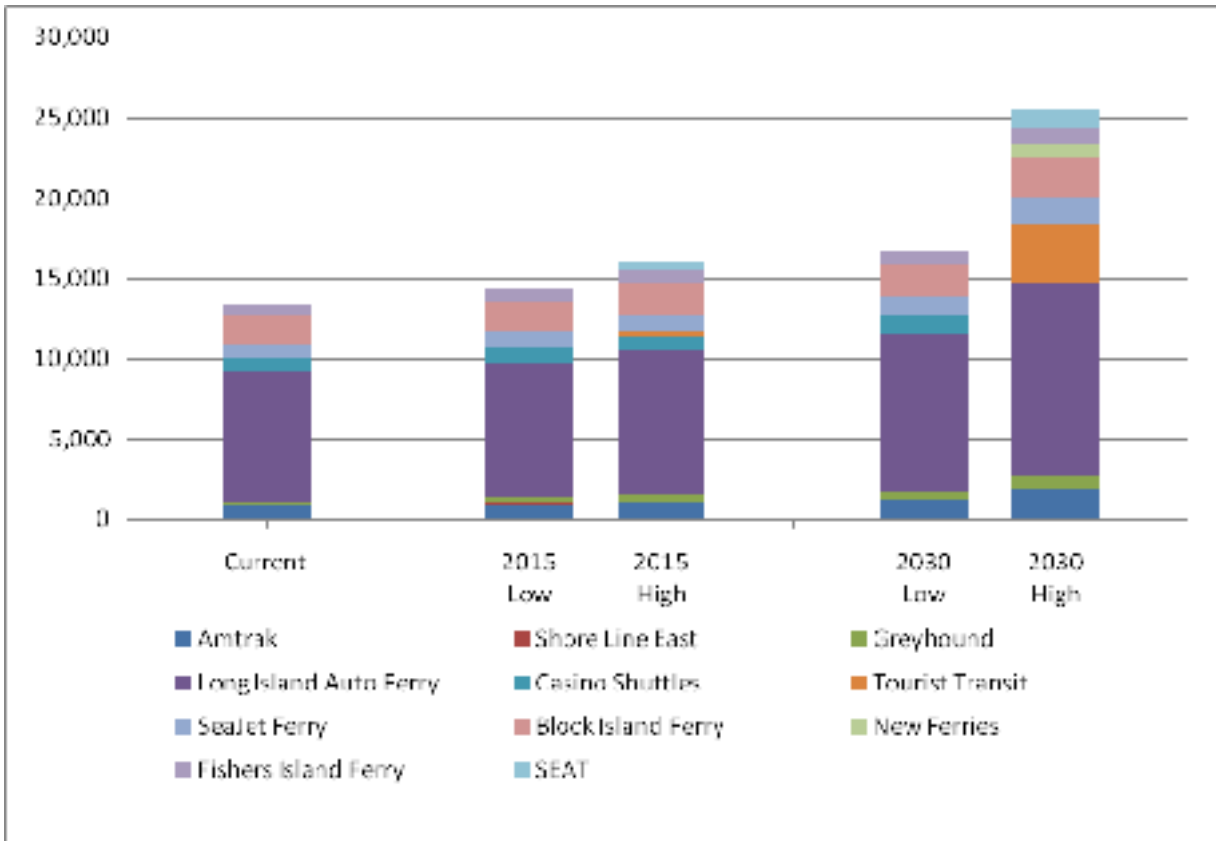


Table 3-26: Future Scenario Weekday Ridership

	Summer Weekday					January Weekday				
		Low		High			Low		High	
Transportation Mode	Current	2015	2030	2015	2030	Current	2015	2030	2015	2030
Amtrak	476	557	749	637	1,147	316	370	498	423	762
Shore Line East		281	378	321	578		281	378	321	578
Greyhound	200	234	315	268	482	100	117	157	134	241
Long Island Auto Ferry	3,674	3,823	4,438	4,056	5,459	948	987	1,145	1,047	1,409
Casino Shuttles	623	675	783	723		175	189	220	203	
Tourist Transit				105	1,569				26	384
SeaJet Ferry	733	794	921	850	1,144					
Block Island Ferry	1,494	1,617	1,877	1,732	2,330					
New Ferries					747					
Fishers Island Ferry	573	573	573	573	716	327	327	327	327	409
SEAT	629	794	1,430	924	2,215	515	650	1,171	757	1,813
Total Passengers	8,402	9,347	11,465	10,188	16,388	2,381	2,921	3,896	3,237	5,596
Long Island Ferry	1,657	1,724	2,002	1,829	2,462	539	561	651	595	800
Fishers Island Ferry	153	153	153	153	153	72	72	72	72	72
Total Vehicles	1,810	1,877	2,155	1,982	2,615	611	633	723	667	872

Increased Demand for Connections

The growth in the share of RITC passengers using Amtrak and the addition of Shore Line East service will increase the need to provide good connections from Union Station to parking facilities such as the Water Street Garage. Increased rail traffic is also likely to result in an increased demand for taxi service at the station and would likely result in an increase in the share of ferry riders (Long Island, Block Island and Fishers Island) accessing the ferries by train. Thus, connections between Union Station and both of the ferry terminals are likely to become even more important in the future.

Growth in Greyhound ridership is not likely to affect modes as significantly as growth in rail ridership since few Greyhound riders use modes other than local SEAT buses. However, connections between Greyhound and the Long Island Ferry will still be important. The high growth rates assumed for SEAT would result in substantial ridership increases but few SEAT riders connect to other services.

The introduction of the tourist transit system replacing the casino shuttles and SEAT Route 108 would increase the need for tourist bus connections to Amtrak and SEAT, as well as connections to all of the Cross Sound Ferry services (SeaJet, Long Island and Block Island).

Operational Needs

The increases in ridership and service resulting from the growth rates assumed in each scenario would impact the operations of each transportation provider at the RITC.

The planned increase in the number of Amtrak Acela trains passing through, the assumed increase in the number of Acela trains stopping, and the addition of Shore Line East would result in more trains serving the station and more trains using the two grade crossings. Allowing more Acela trains to stop in New London would impact Acela operations, adding time to each affected trip. The increased number of rail passengers will also result in more people passing through the Union Station building and platform area. Greater

passenger volumes will also expand the need for taxi and passenger pick-up and drop-off in front of the station. Similarly, Greyhound ticketing facilities and waiting area will have to accommodate more people and the Greyhound bays, after 2015, will need to handle a few more buses each day.

Increases in auto volumes on the Long Island Ferry will likely require Cross Sound Ferry to reallocate parking areas to become staging areas, probably sometime after 2015, especially in the high scenario. This parking will need to be replaced and additional parking spaces will be needed to accommodate increasing Block Island Ferry ridership. (Parking needs are discussed below) In both scenarios, Cross Sound Ferry would need to use its existing fleet to provide more service and may need to expand its fleet. In the high scenario, new high-speed passenger-only ferry boats would be needed to accommodate increased service levels and to operate new services.

Under both scenarios SEAT would need to accommodate a substantial number of additional transferring passengers at its facility at the RITC. Increased corridor route frequency in either scenario will create a need to layover six buses instead of five at pulse time. The increase in frequency in the high scenario will not require additional space but would result in much more SEAT activity visible at the RITC SEAT bus stop.

Increase in Parking Demand

While ridership typically peaks on Sundays and Fridays, the number of cars parked in New London peaks on Saturdays, reflecting the fact that many people park their cars for the weekend and travel on Friday and Sunday. Peak summer Saturday parking counts presented in Section 3.9.2 indicated that the two parking garages and four surface lots currently accommodate an estimated 1,341 parked vehicles, representing 69% of their capacity of 1,946. Of the three facilities most directly serving the RITC, the Cross Sound Ferry lot typically fills to capacity while the Water Street Garage and Julian lot are an estimated 77% full. Surveys and supplemental analyses indicated that 915 (68%) of the 1,341 parked cars belonged to RITC patrons, mostly ferry passengers.

Future parking demand under each scenario was determined using an estimated share of passengers parking vehicles for each ferry service and then relating the resulting current number of total ferry passengers to the number of currently parked vehicles belonging to ferry patrons. This resulted in a factor that was used to calculate parked vehicles from the estimated number of future ferry passengers under each scenario. For parkers coming to downtown for other purposes, a 1% annual growth factor was employed for the low scenario and a 2% annual growth factor was employed for the high scenario.

The resulting estimates of parked vehicles on a summer weekend are shown in Table 3-27 and Figure 3-31. The table relates the total number of parked vehicles to the total capacity of all six parking facilities. The figure contrasts the number of parked vehicles versus the capacity of all six parking facilities, of the three facilities nearest the RITC and the Water Street Garage alone. Both the table and figure contrast the parking demand of RITC users and other purposes. Parking facilities are generally considered adequate if no more than 90% of capacity is utilized. The table shows that in the low scenario, demand would not exceed 88% of total capacity (although some individual facilities will likely fill to capacity). In the high scenario, higher growth rates and expanded ferry services would increase demand to well over current total capacity. In either scenario, the Water Street Garage and Julian lot would likely fill to capacity, forcing either RITC patrons and/or people with downtown destinations to park at the Governor Winthrop Garage or Eugene O'Neill lots.

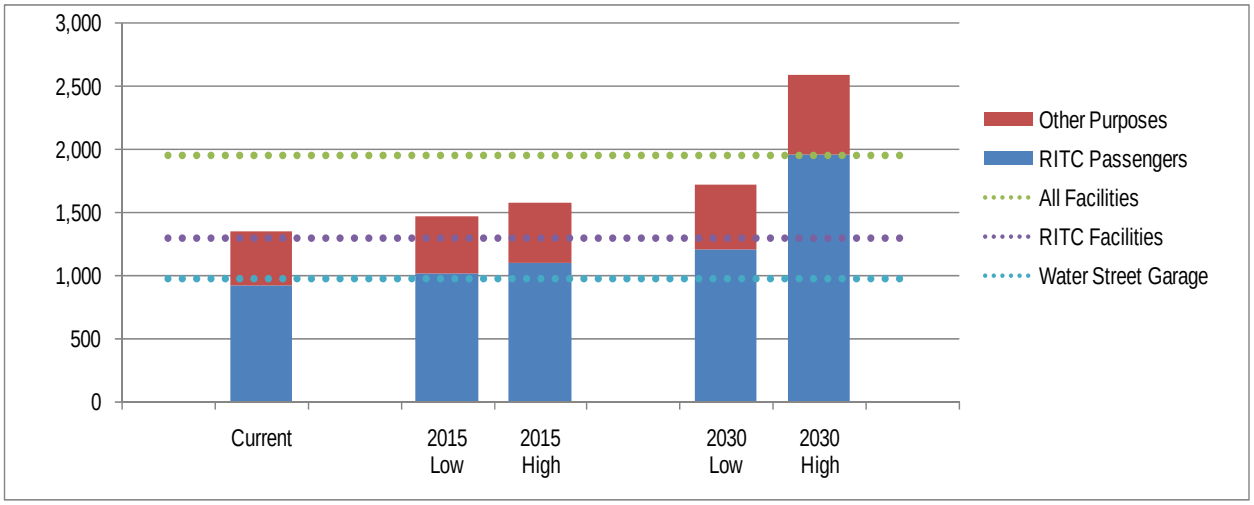
Looking just at demand generated by the RITC, RITC parkers currently use 47% of the available spaces at the six facilities. Future estimates show that this would increase to 62% in 2030 in the low scenario, and in the high scenario, would take up all of the available capacity leaving none for non-RITC patrons. Because

Table 3-27: Future Peak Summer Weekend Parking Demand

		Low		High	
	Current	2015	2030	2015	2030
RITC Users:					
Existing Ferries	831	896	1,037	958	1,287
New Ferries					413
Amtrak	84	98	132	113	203
Shore Line East		22	30	25	45
Non-RITC Users:					
Work in New London	236	246	285	261	351
Other	190	198	230	210	283
Total Vehicles	1,341	1,460	1,714	1,566	2,581
% Total Parking Capacity (all facilities)	69%	75%	88%	80%	133%
Parked Vehicles of RITC Users	915	1,016	1,199	1,095	1,948
% Total Parking Capacity (all facilities)	47%	52%	62%	56%	100%
% RITC Parking Capacity (three facilities*)	71%	79%	93%	85%	151%
% Water Street Garage Capacity	94%	104%	123%	112%	200%

* Cross Sound Ferry lot, Water Street Garage, and Julian lot

Figure 3-31: Potential Parking Impacts- Peak Summer Saturday



some facilities are much more convenient to the RITC, and to the ferries in particular, than others, it may be more useful to compare RITC parking demand to the capacity of just the three most convenient facilities – the Cross Sound Ferry lot, the Water Street Garage, and the Julian lot. The table shows that RITC parkers currently use 71% of the capacity of these three facilities. This would increase to 93% in 2030 in the low scenario. This would leave little room for other users of these facilities, although there would be capacity in other downtown parking facilities. In the high scenario, RITC parkers would exceed the capacity of the three most convenient facilities by over 50% even if no one else parked there.

With increasing vehicle volumes on the Long Island Ferry, it is likely that the Cross Sound parking lot will need to be converted into additional staging areas and will no longer be available for parking. Furthermore, the Julian lot may be developed and would no longer be available for ferry parking. This would reduce the three most convenient parking facilities down to one – the Water Street Garage. The last line of the table compares the total RITC parking demand to capacity of the Water Street Garage alone. Without the Cross Sound and Julian lots, current demand would fill the garage to 94% of capacity – essentially full, leaving no room for other types of users. Estimated future demand would result in 2030 RITC demand exceeding the capacity of the garage by 23% in the low scenario and 100% in the high scenario. Even 2015 demand would exceed capacity in both scenarios. Thus, eliminating the two lots would almost immediately create a significant need for new parking.

Traffic Impacts

Forecasted traffic growth in New London, the additional traffic generated from increased ridership and vehicle volumes at the RITC, and potential new development at the RITC site are anticipated to negatively impact traffic operations if no roadway improvements are implemented. A capacity analysis was conducted assuming the future 2030 high growth scenario, with 2% annual background growth[32], and no new development at the RITC. (The impacts of new joint developments will be examined later in the study as development potential at the site is identified.) The capacity analysis was conducted to determine the ability of the roadways and intersections to accommodate future summer Saturday traffic in a worst case (2030 high demand) scenario. The low demand scenario would be expected to have less significant impacts.

The resulting 2030 peak hour high demand scenario traffic volumes are shown in Figure 3-32. Results from the capacity analysis are shown in Figure 3-32. The results indicate that most of the study area intersections would operate with an acceptable overall intersection level of service (LOS D or better) during a summer Saturday under future 2030 high demand scenario conditions. However, the intersection of Governor Winthrop Boulevard with Water Street would be expected to have critical movements that operate poorly (LOS E or F) during the mid day peak hour under 2030 summer Saturday conditions. The results show that the overall intersection could be expected to operate at LOS F during the mid day peak hour under these conditions if no roadway improvements were implemented.

The intersection of Governor Winthrop Boulevard with Water Street would be impacted by expansion of ferry vehicle traffic, expansion of passenger pickup/drop-off traffic on Water Street, and increased traffic from the parking facilities assumed in the high growth scenario. However, the expected background traffic growth unrelated to the RITC is the most significant contributing factor to the expected deterioration in level of service. Delays at this intersection could impact Greyhound, SEAT, taxi and Cross Sound Ferry operations. The intersection is adjacent to the at-grade railroad crossing; thus, both property-line and physical constraints limit the type of improvements (such as widening to provide additional lanes) that can be implemented to improve traffic operations. It would be possible to adjust the signal timing to improve the overall performance of the intersection; however, this intersection is controlled by a single traffic signal controller, which also controls the intersection of Governor Winthrop Boulevard with Ferry Street, thereby limiting low cost signal phasing and timing options. Measures to improve the performance of this intersection can be developed as improvements to the RITC are identified.

[32] As projected in Wilbur Smith Associates, Pedestrian Safety and Access Improvements to the Intermodal Transportation Facility, 2007

Facility Needs

Ridership and service under the future scenarios will likely require some additional or enhanced transportation facilities in addition to expanded parking. While current rail facilities are likely to be adequate, the area for taxis and passenger pick-up and drop-off may need to be expanded, and bus facilities may need to be expanded and enhanced. Ferry operators may also need to add facilities to accommodate the expanded services reflected in the high scenario.

In the short term, the immediacy of peak summer weekend parking need is dependent on the availability of parking at Cross Sound Ferry and the Julian lot. If those remain available, additional parking may not be needed until after 2015. Under either scenario, additional parking will be needed well before 2030. By 2030, in the low demand scenario, peak summer weekend parking demand would be near the total capacity of all downtown parking facilities, while in the high scenario, higher growth rates and expanded ferry services would increase demand to well over total capacity. RITC parkers alone would take up all of the available capacity in the high scenario, leaving no room for other users. If RITC parkers were limited to the three closest facilities, they would nearly fill the facilities even in the low scenario. On weekdays, parking facilities are not as highly utilized as on summer weekends. Shore Line East expansion is expected to increase weekday parking demand, but weekday demand is still not likely to exceed the capacity needed for peak summer weekends.

In the near term, as Shore Line East is expanded and rail ridership grows, additional space will be needed close to the station for passenger pick-up/drop-off and for taxis. It may be necessary to establish a holding area for taxis away from the taxi stand at the station to allow for efficient use of the space in front of Union Station.

Next to the station, Greyhound currently operates with essentially 2 bays but would like to have access to at least three. Increased ridership and expanded service, especially in the high scenario, would make access to a third bay even more desirable. Greyhound's ticketing and waiting area is also not likely to be adequate to accommodate expanded ridership and service.

SEAT currently operates with a minimal facility at the RITC. If ridership continues to grow at something even close to current growth rates, the number of SEAT passengers using the RITC will increase significantly. Increased frequency will further increase the number of passengers and will make the facility utilized for a much larger percentage of the day and all weekend. This increased use would make the case for an enhanced facility with an enclosed waiting area and additional amenities. While the SEAT Water Street hub has ample room to pulse the six existing routes (the seventh route, Route 108, stops at a different location), adding more than one new route (as in the 2030 high scenario) may require additional space at the facility.

The proposed tourist transit system included in the high scenario would also create a need for additional bus facilities. In 2015, the pilot system would have a single route operating through New London in both directions. This is likely to require a single bus bay at the RITC near Union Station if service is every 30 minutes, but would require a second bay as service becomes more frequent by 2030. Also by 2030, the bus bay near Union Station currently used by the SEAT Foxwoods route (Route 108) would be converted to use by the Foxwoods tourist transit route since it would replace the SEAT route. Thus, the tourist transit system would require three bus bays at the station by 2030. On a very limited number of days, the RITC bus facility would also need to accommodate a number of cruise ship shuttle buses.

Figure 3-32: Peak Hour Traffic Volumes (2030 High Scenario Conditions)

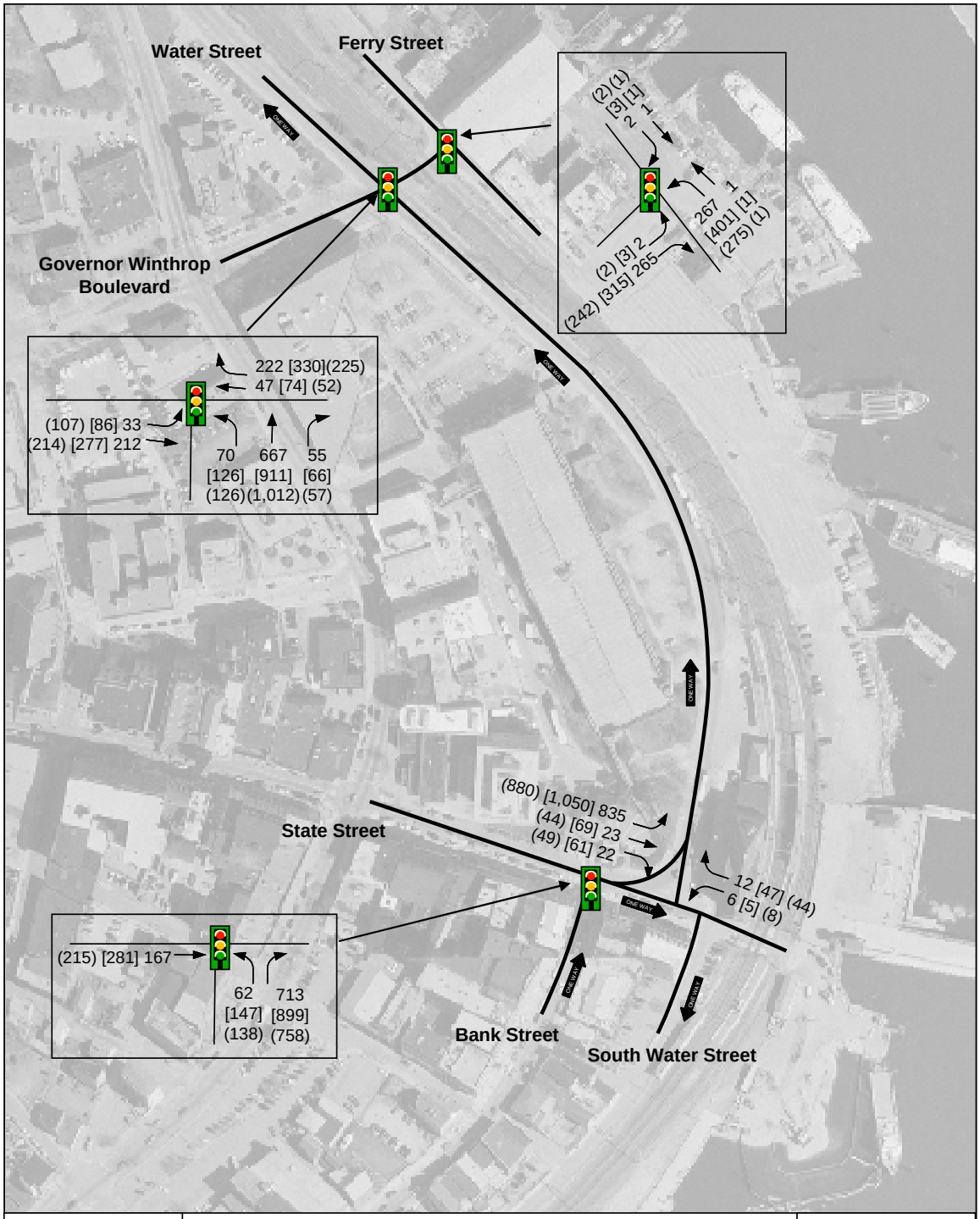
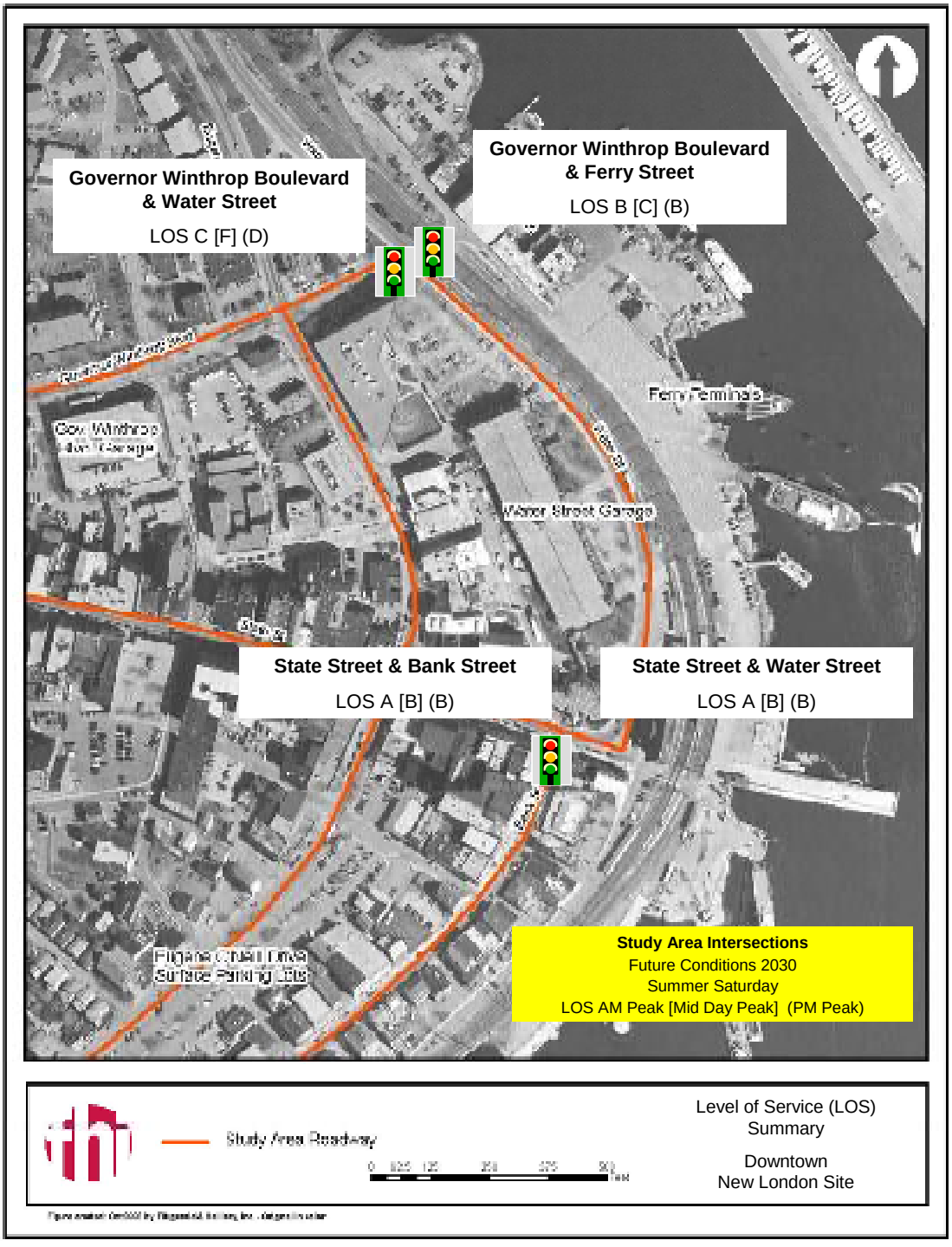


Figure 3-33: Level of Service Summary (2030 High Scenario Conditions)



Depending on the improvements in pedestrian connections in the RITC, the tourist transit buses may or may not need an additional stop at the Cross Sound Ferry terminal. In 2015, it is assumed that the existing casino shuttle buses would continue to serve the ferry as they do today. By 2030, the casino shuttles would be replaced by the tourist transit buses which may continue to need a facility on ferry property if good pedestrian access is not available to the stop to be used by non-ferry passengers.

Cross Sound Ferry has expressed interest in constructing a new high-speed passenger ferry terminal at the site of the Block Island ticket office and dock. This would serve the Block Island Ferry, SeaJet and any new passenger ferry services. While a new facility with improved bus access would benefit existing services, it would be even more desirable with the expanded service and new services under the high scenario. The facility could include a bus loading area adjacent to the dock, or could be connected to a bus loading area across the tracks by a pedestrian bridge.

3.15 Summary of Operational and Service Needs

This chapter identified that the Regional Intermodal Transportation Center includes many elements that are working well and should be maintained. There are also many elements that are in need of improvement. Future ridership increases, expansion of services, growth in tourism, and new development in New London will likely create new needs that must be addressed in the future. Each of these areas is summarized in this section.

3.15.1. Current Elements to be Maintained

Operational Elements

For the most part, each individual transportation provider's operation is working fairly well. Amtrak operates smoothly through New London; buses come and go with minimal delays from local traffic on most days. Ferry operations go smoothly. Parking facilities fill on only a few days each year.

Key Connections

Several key connections between modes were identified. Where these key connections are good, they should be maintained. Good connections are close together, on good surfaces, esthetically pleasing, weather protected and free from obstructions and delays. The good connections that should be maintained include:

- Greyhound to/from SEAT
- SEAT 108 to/from Amtrak southbound (northbound requires crossing the tracks)
- Greyhound to/from taxis and pick-up/drop-off
- Amtrak to/from taxis and pick-up/drop-off (although some may have to cross the tracks)
- Amtrak northbound to Fishers Island (southbound requires crossing the tracks)
- SeaJet high-speed passenger ferry to/from the casino shuttles
- Amtrak southbound, Greyhound, and SEAT to/from the Parade and downtown
- Roadway access to the Long Island Auto Ferry and to the two garages

There are also several other good quality connections that are made less frequently. While less critical, these should also be maintained if at all possible.

3.15.2. Current Deficiencies and Needs

Modal Improvement Needs

Bus facilities and operations are most in need of improvement. Greyhound's ticketing and waiting area is antiquated and there is no outdoor waiting area or outdoor seating. The bus bays are not configured in the fashion that Greyhound prefers and create possible safety concerns. Greyhound also desires access to a third bay. SEAT would prefer a location closer to the station and would like an indoor facility for operations personnel. SEAT's passenger facilities are minimal and need improvement.

While both ferry operators have adequate indoor ticketing facilities for the vehicle ferries, indoor waiting areas are limited. The Block Island passenger ferry has no indoor waiting area and no restroom. A more substantial passenger ferry terminal building is needed.

Traffic and Parking Needs

Traffic issues focus on the two railroad crossings. The crossings at State Street and Governor Winthrop Boulevard are frequently closed, impacting the ability of pedestrians and vehicles to access both ferry terminals. Downtown festivals and events also cause general traffic problems affecting bus and ferry operations. The area in front of Union Station, even after Parade construction is complete, may be too small for efficient use by the taxis and private vehicles picking up and dropping off passengers.

Parking facilities are located far from the ferry terminals and may not be adequate for current needs if existing surface parking at Cross Sound Ferry and the Julian lot become unavailable. Security, signage and elevators at the parking facilities are poor. Many passengers using the Block Island Ferry must park in the garages and walk long distances and across the tracks. Wayfinding signage and access routes from the garages to the ferry terminals are poor.

Connectivity and Information Needs

Several key connections between facilities have been identified as deficient. The most difficult key connections to make are those that involve crossing the railroad tracks and accessing the ferry terminals. The major obstacles are the distances involved, level changes, wayfinding signage, condition of the pathways and delays and safety at the two railroad crossings. The key connections identified as deficient include:

- Greyhound to/from the Long Island Ferry
- Amtrak to/from the Long Island Ferry and the Block Island Ferry
- Water Street and Governor Winthrop garages to/from the Block Island Ferry
- Union Station and southbound rail platform from the Fishers Island Ferry
- Taxis and Water Street Garage to/from the Fishers Island Ferry
- Downtown to/from the Long Island Ferry and the Block Island Ferry

Other less than optimal connections result from pedestrians and vehicles needing to cross the railroad tracks at State Street. Trains in the station can cause delays and pedestrian areas are not clearly distinguished from the roadway. These include:

- Amtrak/SLE northbound platform to/from the Water Street Garage, SEAT 108 and taxis
- Amtrak/SLE northbound platform to Union Station lobby and ticket counter
- Fishers Island Ferry roadway access

There is a general lack of coordination of schedules and real time status information shared among operators. There is virtually no coordination of schedules among any of the modes.

Joint marketing and ticketing among New London operators is minimal and schedule information and information on how to connect to other modes is lacking both pre-trip and on-site. Wayfinding signage is minimal, non-existent or misleading. Little information on downtown New London is available through the transportation operators. Performance of the RITC as a transportation center could be improved by more joint marketing and ticketing efforts and improved pre-trip and on-site information on how to make connections. A centralized system to provide real time connection information in all terminals may be beneficial. Downtown New London could benefit from more information on downtown attractions and activities being provided in advance, both on vehicles and in the station area.

Amenities and Commercial Needs

The deficiency that was mentioned most often by passengers is the general lack of amenities in each of the facilities. The Union Station area lacks any retail amenities or food concessions. Restroom facilities are locked and in need of accessibility improvements. SEAT passengers have no restrooms. While the rail station has a substantial waiting area, the Greyhound waiting area is cramped and antiquated. SEAT has only a single standard outdoor bus shelter and a few benches. While there is a single food concession at the Long Island Ferry terminal, there are no other retail or food concessions at either ferry terminal.

3.15.3. Future Operational and Service Needs

Expected Need for Operational and Service Improvements

Two transportation scenarios were developed. The scenarios reflect assumptions based on past trends and input from the operators and are intended for the purpose of setting reasonable upper and lower bounds for decision-making concerning the RITC facility. They should be used with caution and should not be taken as projections of future travel.

Both scenarios result in increased demand for transportation services at the RITC. The modal growth assumptions in both the scenarios would result in greater increases in rail and bus ridership than in ferry travel. This would be consistent with a slight general shift towards public transit modes in both intercity and local travel, accompanied by modest increases in auto related ferry travel. The higher of the two demand scenarios reflects not only greater growth in travel on all modes, but also reflects an increase in tourism in the region and an increase in recreational travel both within the region and to/from the region using expanded passenger ferry services. New transit oriented development at the RITC is not explicitly included in these transportation scenarios.

Both scenarios incorporate Shore Line East service to New London and expanded service by most operators to accommodate demand. The high demand scenario also includes new and expanded services to increase ridership. The high demand scenario includes more Acela service stopping in New London, increased frequency on Greyhound and SEAT, increased frequency on all of Cross Sound Ferry's services, and new high-speed passenger ferry services.

The increases in ridership and service resulting from the growth rates assumed in each scenario would impact the operations of each transportation provider at the RITC. The increased number of rail passengers would result in more people passing through the Union Station building and platform area. Greater passenger volumes would also expand the need for taxi and passenger pick-up and drop-off in

front of the station. Similarly, Greyhound ticketing facilities and waiting area would have to accommodate more people and the Greyhound bays, after 2015, would need to handle a few more buses each day.

Increases in auto volumes on the Long Island Ferry would likely require Cross Sound Ferry to convert parking areas to become staging areas, probably sometime after 2015, especially in the high scenario (generating additional off-site parking needs). In both scenarios, Cross Sound Ferry would need to use its existing fleet to provide more service and may need to expand its fleet. In the high scenario, new high-speed passenger-only ferry boats would be needed to accommodate increased service levels and to operate new services.

Under both scenarios SEAT would need to accommodate a substantial number of additional transferring passengers at its facility at the RITC. The increase in frequency in the high scenario will also result in much more SEAT activity visible at the RITC.

Increased rail traffic would likely also result in an increase in the share of ferry riders (Long Island, Block Island and Fishers Island) accessing the ferries by train. Thus, connections between Union Station and both of the ferry terminals are likely to become even more important in the future. Increased rail travel is also likely to result in an increased demand for taxi service and passenger pick-up in front of the station.

Impact on Future Facilities

The demand for parking is a key element in determining future facility needs. If the Cross Sound parking lot is needed for auto ferry staging, and the Julian lot is developed without public replacement parking, existing demand would create an immediate need for additional parking. Otherwise, under either scenario, additional parking may not be needed before 2015 but would certainly be needed well before 2030. By 2030, in the low demand scenario, peak summer weekend parking demand would be near the total capacity of all downtown parking facilities, while in the high scenario, higher growth rates and expanded ferry services would increase demand to well over total capacity. RITC parkers alone would take up all of the available capacity in the high scenario, leaving no room for other users. If RITC parkers were limited to the three closest facilities, they would nearly fill the facilities, even in the low demand scenario. It is also likely that additional space will be needed for taxis and for passenger pick-up/drop-off, possibly through the creation of an off-site taxi holding area. Increased traffic at the Water Street intersection with Governor Winthrop Boulevard may result in unacceptable traffic levels of service that would need to be addressed.

Ridership and service under the future scenarios will likely require some additional or enhanced facilities. While current rail facilities appear to be adequate to meet future demand, it was determined late in the study that Shore Line East service when expanded will be shifted to Track 6 (the freight track) at Amtrak's request. Connecticut DOT will modify the existing platform and may consider construction of an additional platform in the future to the east side of Track 6. Bus facilities may need to be expanded and enhanced. Greyhound may need access to a third bay. Greyhound's ticketing and waiting area would likely need to be enhanced and expanded. For SEAT, increased corridor route frequency in either scenario will create a need to layover an additional bus and any new routes would further increase space requirements. The increase in frequency in the high scenario would result in much more SEAT activity visible at the RITC bus stop. This increase in vehicles using the facility and the accompanying increase in ridership would make the case for an enhanced facility with an enclosed waiting area, additional amenities and an indoor facility for operating personnel. The proposed tourist transit system included in the high scenario would also create a need for additional bus facilities, both close to downtown and accessible to the Cross Sound Ferry terminal. At Cross Sound Ferry, the tourist transit buses would replace the casino shuttles using the same, or preferably enhanced, facilities.

Ferry operators may also need to add facilities to accommodate the expanded services reflected in the high scenario. Cross Sound Ferry may wish to construct a new high-speed passenger ferry terminal at the site of the Block Island ticket office and dock, serving the Block Island Ferry, SeaJet and any new passenger ferry services. Fishers Island would need a new ferry slip if they begin operation of a passenger-only ferry.

Current and future operational and facility needs for all modes, the need for improved connections between modes, the need for additional parking and the need for improved amenities will play a key role in developing improvements to the Regional Intermodal Transportation Center. It is hoped that that these improvements will create a more efficient transportation center while providing the potential for greater economic benefit both to the City of New London and the southeastern Connecticut region.

Table of Contents

4. Market Analysis 4-1

4.1 Introduction 4-1
4.1.1. Study Purpose 4-1
4.1.2. Study Area Overview 4-1
4.1.3. Summary of Strengths, Challenges and Opportunities 4-5
4.2 Demographic & Economic Profile 4-6
4.2.1. Study Area Context 4-6
4.2.2. Analysis Areas 4-6
4.2.3. Demographic & Economic Profile 4-7
4.2.4. Labor and Industry 4-14
4.2.5. Key Findings 4-23
4.3 Market Conditions 4-23
4.3.1. Residential Market Conditions 4-23
4.3.2. Office Market Conditions 4-32
4.3.3. Downtown New London Office Market 4-38
4.3.4. Retail Market Conditions 4-45
4.3.5. Analysis of the Existing Downtown Retail Mix 4-49
4.4 Development Assumptions 4-68
4.4.1. Development Strengths, Constraints and Opportunities 4-68
4.4.2. Key Market Determinants 4-69
4.4.3. Implementation Strategies 4-73
4.4.4. Development Scenario Assumptions 4-74
4.5 Development Projections 4-74
4.5.1. Residential Potential Market Capture 2008-2018 4-74
4.5.2. Office Potential Market Capture 2008-2018 4-79
4.5.3. 2018 Supportable Office Space 4-80
4.5.4. Retail Sales Projections by Market Source 4-81
4.5.5. 2018 Supportable Retail Space 4-87
4.6 Conclusions Regarding Development Potential 4-88
4.6.1. Residential 4-88
4.6.2. Office 4-89
4.6.3. Retail 4-89
4.6.4. Transit Oriented/Smart Growth Opportunities 4-90
4.7 Economic Impacts of TOD Over the Long Term 4-91
4.7.1. Residential Impacts 4-91
4.7.2. Office Impacts 4-92
4.7.3. Retail Impacts 4-94
4.7.4. Order of Magnitude Estimates of Impacts Summary 4-95
4.7.5. Additional Qualitative Impacts/Benefits 4-95

List of Figures

Figure 4-1: Downtown New London Pedestrians 4-1
Figure 4-2: Downtown New London Streetscape 4-1
Figure 4-3: Amtrak train 4-3
Figure 4-4: State Pier 4-3
Figure 4-5: The Garde Art Center, New London 4-5
Figure 4-6: Downtown New London 4-6
Figure 4-7: Half-Mile Radius from Union Station 4-7
Figure 4-8: Top Tapestry Segments for Downtown, ½ Mile Walkshed and City 2008 4-12
Figure 4-9: At-Place Employees by Category, 2008 4-15
Figure 4-10: Downtown Labor Force and At-Place Employment, 2008 4-17
Figure 4-11: Labor Force Mix by Occupational Category, 2008 4-17
Figure 4-12: New London County Employee Growth 2000-2007 4-19
Figure 4-13: New London County Establishment Growth 2000-2007 4-20
Figure 4-14: New London County Primary Residential Market Area 4-25
Figure 4-15: Downtown Occupied Residential Units by Type 4-27
Figure 4-16: Downtown Residential Market by Ownership 4-27
Figure 4-17: Historical Single Family Building Permit Activity, New London County 4-28
Figure 4-18: Historical Multi-Family Building Permit Activity, New London County 4-28
Figure 4-19: Residential Pipeline Projects, City of New London 4-30
Figure 4-20: Residential Pipeline Projects, New London Submarket 4-30
Figure 4-21: Hartford Regional Office Market and Submarkets 4-33
Figure 4-22: New London Office Submarket Boundaries 4-34
Figure 4-23: Historical Vacancy Rate Trend 4-37
Figure 4-24: Office Inventory by Office Class, % of Total Square Footage 4-38
Figure 4-25: Downtown Office Space Inventory by Industry Type 4-40
Figure 4-26: Hartford Regional Office Markets Year-to-Date Developments, Third Quarter 2008 4-42
Figure 4-27: Hartford Regional Office Market Historical Deliveries 4-43
Figure 4-28: Hartford Regional Retail Market and Submarkets 4-46
Figure 4-29: New London Retail Submarket 4-47
Figure 4-30: Downtown Retail Space by Type (Based on Number of Units) 4-50
Figure 4-31: Downtown Retail Space by Type (Based on Occupied Square Feet) 4-51
Figure 4-32: Hartford Regional Market Retail Space Delivered and/or Under-Construction, Third Quarter 2008 4-54
Figure 4-33: Subregional Market Trade Area 4-58
Figure 4-34: Southeastern Connecticut Travel & Tourism Expenditures by Category, 2001 4-61

List of Tables

Table 4-1: Selected Current Demographics, 2008 4-8
Table 4-2: Downtown Demographics as a Percentage of Surrounding Geographies 4-8
Table 4-3: Projected Changes in City of New London Household Income 4-9
Table 4-4: Existing & Future Households 4-9
Table 4-5: Change in Population by Age Group 4-10
Table 4-6: Households by Type (2000) 4-10
Table 4-7: Existing & Future Households 4-11
Table 4-8: Area Commuting Patterns by Location of Residence, 2000 4-11
Table 4-9: Average Vehicle Availability, 2000 4-12
Table 4-10: At-Place Employees by Category, 2008 4-15
Table 4-11: Labor Force Industry Mix by Employment, 2008 4-16
Table 4-12: Daytime-Nighttime Ratio 4-18
Table 4-13: New London County Top Non-Municipal Employers (2007) 4-18
Table 4-14: Projected Growth in Office Employment by Industry Sector, New London County, 2006-2016 4-21
Table 4-15: Projected Growth in Office Employment by Industry Sector New London County, 2008-2018 4-22
Table 4-16: Employment by Industry Sector, New London County and Downtown New London, 2008 4-22
Table 4-17: Residential Market Profile- New London County, City of New London and Downtown New London, 2008 4-26
Table 4-18: Residential Pipeline Development, Multi-Unit Structures 4-29
Table 4-19: Hartford Regional Office Market, Third Quarter 2008 4-36
Table 4-20: Office Market Comparison Third Quarter 2008 4-36
Table 4-21: New London County Quarterly Absorption 2006-2008 4-37
Table 4-22: Market Inventory by Office Building Class, Third Quarter 2008 4-38
Table 4-23: Downtown New London Composition of Office Tenant Base (2008) 4-39
Table 4-24: Select Downtown New London Office Vacancy Rate by Location (2008) 4-40
Table 4-25: Downtown Office Vacancies by Floor 4-41
Table 4-26: Hartford Regional Office Markets Year-to-Date Developments, Third Quarter 2008 4-42
Table 4-27: Retail Market Snapshot, Third Quarter 2008 4-48
Table 4-28: Retail Inventory by Product Type, Third Quarter 2008 4-49
Table 4-29: Downtown New London Retail Space by Store Type and Square Footage November 2008. 4-50
Table 4-30: Downtown New London Retail Vacancies by Floor 4-52
Table 4-31: Selected Downtown Retail Vacant Space 4-52
Table 4-32: Hartford Regional Retail Markets Year-to-Date Developments Third Quarter 2008 4-53
Table 4-33: Existing Downtown New London Household Retail Expenditures, 2008 4-55
Table 4-34: Typical Downtown Retail Purchases Made By Downtown Office Workers 4-56
Table 4-35: Downtown New London Employee Total Retail Expenditures, 2008 4-56
Table 4-36: Existing Subregional Household Retail Expenditures, 2008 4-58
Table 4-37: Southeastern Connecticut Tourists 2003-2008 4-60
Table 4-38: Total Tourism Expenditures by District (million 2001$) 4-60
Table 4-39: Tourist Market Potential 4-62
Table 4-40: Public Transportation Market, 2008 4-63
Table 4-41: Selected Responses to Intermodal Passenger Survey 4-63
Table 4-42: Downtown Retail Establishments, Occupied Space, Sales & Sales Per Square Foot by Industry Group, 2008 4-65

Table 4-43: Downtown Retail Sales Volume by Source, 2008 4-67
Table 4-44: Key Conclusions Regarding Downtown New London 4-70
Table 4-45: Key Conclusions Regarding Downtown New London 4-70
Table 4-46: Key Conclusions Regarding Downtown New London 4-71
Table 4-47: Strategies for Assumed Development Scenarios, Marketing Promotions and Quality of Life 4-75
Table 4-48: Strategies for Assumed Development Scenarios, Design, Infrastructure and Environment 4-76
Table 4-49: Strategies for Assumed Development Scenarios, Land Use, Zoning, Buildings and Infrastructure 4-77
Table 4-50: Strategies for Assumed Development Scenarios, Location, Transportation and Organization 4-78
Table 4-51: Downtown Residential Demand Projections- 10 Year Term (2008-2018) 4-79
Table 4-52: Employment Growth by Industry Sector New London County and Downtown New London, 2018 4-80
Table 4-53: Employees Per Square Foot Downtown New London, 2008-2018 4-80
Table 4-54: Downtown New London Distribution of Office Demand 10 Year Term (2008-2018) 4-81
Table 4-55: 2018 Downtown Household Retail Sales (2008$) 4-82
Table 4-56: 2018 Subregional Household Retail Sales (2008$) 4-83
Table 4-57: 2018 Downtown Employee (Office Worker) Retail Sales (2008$) 4-84
Table 4-58: 2018 Tourist Retail Sales (2008$) 4-85
Table 4-59: 2008-2018 Downtown Retail Sales by Market Source and Scenario (2008$) 4-86
Table 4-60: 2008-2018 Downtown Retail Sales by Market Source and Scenario (2008$) 4-86
Table 4-61: Change in Retail Sales by Market Source and Scenario 2008-2018 (2008$) 4-87
Table 4-62: Supportable New Downtown Retail Space 2008-2018 4-87
Table 4-63: Downtown Development Program 2008-2018 4-88
Table 4-64: Residential Space Annual Property Tax to the City 4-92
Table 4-65: Resident Income Tax to the State 4-92
Table 4-66: Downtown Office Employees Income Tax to the State 4-92
Table 4-67: Office Space Annual Property Tax to the City 4-93
Table 4-68: Downtown Retail Employees Income Tax to the State 4-94
Table 4-69: Retail Space Annual Property Tax to the City 4-94
Table 4-70: Retail Sales Tax to the State 4-94
Table 4-71: Order of Magnitude Impact Estimates 4-95

4. Market Analysis

4.1 Introduction

4.1.1. Study Purpose

This chapter examines the market development potential at and in the general area around Union Station (i.e., downtown New London), the current and future site of the RITC. Through a demographic and economic overview of the RITC site area, as well as analyses examining the residential, office and retail market development potential of the station and surrounding areas, this market analysis considers the land uses and services that can complement the RITC. This analysis was prepared using an industry standard research process, taking into consideration emerging demographic and economic factors, transit oriented development factors, and public/private development opportunities. The analysis provides quantitative and qualitative information and data analysis in order to examine the market demand and development potential for the site and station area.

4.1.2. Study Area Overview

Study Area Definition/Description

New London is located in southeastern Connecticut halfway between Boston and New York City on the shores of the Thames River and the Long Island Sound. The boundary of New London's Historic Waterfront District runs along Huntington Street, Federal Street, Water Street, and Tilley Street. Train tracks run along the Thames River on the downtown's eastern perimeter. Union Station is located at 27 Water Street in the Historic Waterfront District on the waterfront. Union Station is a historic railroad station and is the anchor for transit oriented development. The market analysis focuses on the Historic Waterfront District in New London, referred to later in this chapter for convenience as "downtown". The photos in Figures 4-1 and 4-2 below show a busy street in downtown New London during Sailfest and an early morning streetscape in downtown which shows the historical character in the New London buildings.

Figure 4-1: Downtown New London Pedestrians



Figure 4-2: Downtown New London Streetscape



Development History/Historical Character/Industry

New London is an historic city founded by European settlers in 1646[1] New London's waterfront location allowed the city to grow rapidly throughout the 1700s. By the mid 1800s, demand for whale oil peaked and the harbor became America's third leading whaling port[2] Shipwrights, coopers, riggers, grocers, painters, blacksmiths, and bankers were among the mass of businesses to build along the river, in addition to the homes of wealthy maritime merchants[3] The wealth that whaling brought into the city provided the capital to fund many of downtown's historic buildings. Downtown New London is included under the National Register of Historic Places and much of the 18th and 19th century architecture still exists throughout the downtown. A number of the historic buildings have been or are under rehabilitation, including Union Station, the Bacon Building, Crocker House, and the Mohican Hotel building.

The historical character is preserved in the retail shops, business offices, residential units and restaurants in downtown today. For example, the upper floors of the Crocker House, built in 1873, have been converted into market rate apartments that cater to young professionals and empty-nesters. The Hygienic Art Gallery is located in a building that was originally built as a whaling company's provisioning store and crew's quarters. The historic character is a large part of the charm and attraction that makes New London a unique place for specialty shops, restaurants, and leisure visitors.

The major industry clusters in the City of New London are bioscience and healthcare, defense, maritime, and creative arts and technology. The core company in the bioscience and healthcare cluster is Pfizer, Inc.(which recently, after this market analysis was completed, announced its departure from its New London site) and the major hospital is Lawrence & Memorial, which employ 6,200 and 2,200 persons respectively. In New London, the maritime cluster is supported by the deep water port facility at Admiral Shear State Pier which handles bulk cargo vessels and cruise ships. In 2007, 37 ships came through the port facility (30 cargo ships and seven passenger cruise ships) carrying over 170 million metric tons of cargo (mainly forest products and copper). General Dynamics Electric Boat (in Groton) and the US Coast Guard Academy (in New London) are major employers in the defense industry cluster, with a total of 9,300 jobs. Finally, creative arts and technology activities are emerging economic drivers in New London. The Garde Arts Center has over 80 performances each year, and art galleries such as the Alva Gallery, the Burnished Chariot Gallery, the Golden Street Gallery, and the Hygienic Art Gallery and Sculpture Garden feature regionally and nationally known artists. Performing arts venues and art galleries attract emerging and established artists to New London. In fact, in southeastern Connecticut, "it is estimated that there are over 4,000 employees and self employed residents involved directly in the Art and Creative Cluster"[4]

Transportation and Infrastructure

By the 1800s, the New London harbor offered ferry services along the coast with connections to New York, Hartford, Providence, and Boston on elegant coastal steamers[5] Today, ferries connect New London to Orient Point (NY), Fishers Island (NY), Montauk Harbor (NY) and Block Island (RI). Railroads came to New London in 1846, linking rail and steamboat travel along the coast. Union Station was built in the 1880s, replacing a much less impressive rail depot from 1852[6] The primary modes of transportation in New London are still concentrated around the waterfront.

[1] Historic New London Map, published by *The Day*
[2] Bank Street, New London Ct, A Self-Guided Walking Tour, New London Landmarks, Inc.
[3] Ibid
[4] Southeastern Connecticut Enterprise Region, 2008
[5] Bank Street, New London Ct, A Self-Guided Walking Tour, New London Landmarks, Inc.
[6] State Street, New London Ct, A Self-Guided Walking Tour, Lyman Allyn Art Museum

The current RITC exists as a set of adjacent transportation sites surrounding Union Station. The RITC hosts several local and intercity transportation modes, including: Amtrak (shown in Figure 4-3) and Shore Line East rail services; the Cross Sound Ferry, Fishers Island Ferry, and additional docking space at City Pier and nearby State Pier (shown in Figure 4-4); Greyhound, casino resort shuttles, and local SEAT bus services; taxi services; and public and private parking facilities. In addition to the public transportation options in New London, the city is also well connected to major roadways. I-95 runs just north of downtown New London and intersects I-395 approximately six miles west of downtown. The Boston Post Road (US Route 1) also runs just outside downtown New London before linking with I-95 to the north of downtown.

Figure 4-3: Amtrak train



Figure 4-4: State Pier



Public Policies and Plans

Consistency between the recommendations in this chapter and existing public policies and plans is important for ensuring that efforts are not duplicated and publically approved efforts are not undermined. Documents reviewed prior to beginning the market analysis were the City of New London Plan of Conservation and Development (2007), the City of New London Comprehensive Economic Development Strategy (2003), New London Downtown Action Agenda (2001), New London New Vision: A Comprehensive Urban Development Program for Connecticut, Progress Report (1999), and New London Downtown Master Plan (1998). Additionally, during the period of this market analysis, the City was undertaking a solicitation process for a study of the impacts of an Incentive Housing Zone (IHZ) on the downtown. The information presented in this market analysis will play an integral part in the analysis of a proposed IHZ.

There are existing policies in place to help promote development in the downtown area. The City has a business rent subsidy program to attract new businesses, an enterprise zone (which includes the downtown area) that provides tax incentives, a revolving loan fund for small and medium sized businesses, commercial and mixed use building rehabilitation program, a façade improvement program and a city center sign improvement program. The City and other economic development groups (such as the Downtown New London Association, City Center District and Main Street New London) have made great efforts to spur development in the downtown.

Land Use/Zoning

Existing land uses in downtown include residential, office, retail, warehouse, government operations, and open space. In regard to zoning, the downtown is located in the Central Business District (CBD) 1 and 2 zones. The CBD 1 and 2 zones are intended to provide for and encourage a variety of retail businesses,

business and professional offices, service businesses, entertainment and cultural establishments. Also, these zones support the provision of adequate parking and pedestrian areas. The CBD 1 zone is centered on State and Bank Streets and is more restrictive in the allowable uses. Retail uses are the preferred ground floor use; residential is not allowed (except for live-work units) and office is only permitted by special permit. The concentration of retail and service uses is in an effort to achieve continuity of frontage to strengthen the retail presence[7].

Cultural and Tourist Attractions

Southeastern Connecticut is the largest tourism district in the state with regard to tourist expenditures and revenues collected by local governments and the state. Travel and tourism expenditures in southeastern Connecticut ($3.4 billion dollars were spent in 2001) are one and a half times higher than the next highest district (greater New Haven had $1.3 billion in 2001). However, high tourism expenditures in southeastern Connecticut are directly related to the presence of casino resorts. At the same time, New London and the subregion around New London (Mystic, Groton, etc.) constitute a tourist destination separate from the casino resorts and attracting additional tourists to this region will inevitably support new shopping and dining opportunities.

A variety of recreational and cultural activities are available in New London. The city has 26 small shops, 32 restaurants, cafes and bars[8], 4 antique stores[9], and an eclectic artist's community with 8 galleries[10] exhibiting new works on a regular basis. Several historic sites also exist throughout the city, including the Antientist Burial Ground, the Custom House Maritime Museum, the Hempsted House, Nathan Hale Schoolhouse, Monte Cristo Cottage, Fort Trumbull State Park, the Pequot Chapel and Pequot Colony, and the Shaw-Perkins Mansion. The city is also home to Connecticut College, Mitchell College, and the United States Coast Guard Academy. Casino resorts are a large attraction to southeastern Connecticut, and casino resort sponsored buses operate from downtown New London high-speed passenger ferry to each casino resort (Foxwoods and Mohegan Sun).

Downtown New London has a strong presence in the provision of arts and culture for the region. As mentioned earlier, the Garde Arts Center hosts performances that attract residents living within a 30 minute drive-time from the Center. Performances at the Garde include Broadway series, ballets, musicians, and opera to name just a few. The Garde and other arts/cultural venues attract day-trippers from the southeastern Connecticut region to New London. Figure 4-5 shows the Garde Arts Center in New London.

[7] City of New London Zoning Regulations, Sections 530 and 535 CBD 1 and 2, amended 9/30/2008
[8] New London's Historic Waterfront Dining Guide, New London Main Street
[9] Historic Waterfront District Map & Guide, New London Main Street
[10] Ibid

Figure 4-5: The Garde Art Center, New London



4.1.3. Summary of Strengths, Challenges and Opportunities

Site visits, interviews with stakeholders (see Appendix C), and market analysis revealed common themes of strengths, challenges, and opportunities in downtown New London. These selected strengths, challenges, and opportunities were discussed with regard to their relationship to the improvement of the RITC.

- Strengths: historic downtown with unique characteristics, , national trends of residential, office and retail shifts into urban centers, growth in key industries (professional/scientific, maritime, and creative arts and technology), a large regional tourist industry, existing demand for market rate downtown residential space, eclectic niche of retailers and restaurants, entertainment and arts venues, local and regional metropolitan connections (Boston, New Haven, Stamford, New York, Philadelphia, and Washington), and an historic multimodal transportation center in downtown serving as an origin or destination for 1.8 million passengers annually

- Challenges: difficult/expensive renovations, obsolete retail spaces, perception of crime, low traffic counts, national economic downturn, difficult pedestrian environment connecting the train station, ferries and downtown, low occupancy of existing commercial space, predominantly lower income population in the city, small downtown residential population, and a relatively small downtown worker population

- Opportunities: build on local economic and demographic trends with an expanded residential presence downtown for empty nesters and young professionals, attract businesses in key employment industries, encourage more tourist visits to the area, encourage niche retailers, bolster downtown entertainment/arts/cultural events, improve streetscape to attract public transportation users to the downtown, and expand the marketing/branding program of downtown and the RITC to capture a larger share of the “culture class” emerging in the new economy and visitors who use the various transportation modes

4.2 Demographic & Economic Profile

4.2.1. Study Area Context

To understand demographic and economic characteristics surrounding Union Station in downtown New London, a demographic and economic analysis of selected areas was performed including downtown New London, a half-mile walkshed surrounding Union Station, the City of New London, and New London County. To put these conditions into context, characteristics of households and employment within these areas each of these defined areas were compared.

4.2.2. Analysis Areas

Downtown (Historic Waterfront District) New London is the primary analysis area. As shown below in Figure 4-6, New London's downtown northern boundary runs along Federal Street and up approximately to the corner of Hallum and Water Streets. The eastern and southern downtown perimeters follow the edge of the waterfront. Union Station is situated in the center of the downtown's eastern border on the waterfront. The downtown's western boundary is Huntington and Reed Streets, not including the primarily residential blocks between Reed and Starr Streets northwest of Blinman Street.

Figure 4-6: Downtown New London

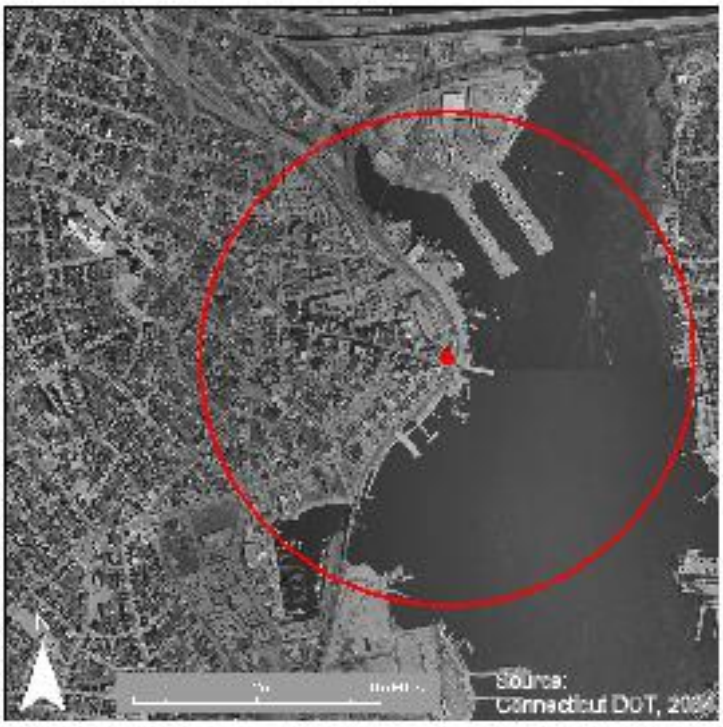


Source: Google Earth, The Day, BBPC 2008 (graphic image, not drawn to scale)

A demographic and economic profile of the half-mile walkshed surrounding Union Station in downtown New London is also included. The area encompasses all the land within an approximate ten minute walk of the station. Generally, for transit oriented development a half mile is considered to be the reasonable distance that most people would walk to a transit center. Figure 4-7 below shows Union Station (red dot) and the

half-mile walkshed (outlined in red). The City of New London and New London County are also examined in the demographic and economic section.

Figure 4-7: Half-Mile Radius from Union Station



4.2.3. Demographic & Economic Profile

Table 4-1 compares selected demographics of downtown New London, the half-mile walkshed from Union Station, the City of New London and New London County. Compared to the surrounding geographies, the downtown study area has:

- 34 percent of the households and 75 percent of the jobs in the half-mile walkshed, and 4 percent of the households and 20 percent of the jobs in the city
- Significantly lower median household income ($20,250) than the city ($39,534) and county ($64,622), and slightly lower than the half-mile walkshed ($21,787)
- Higher median home value ($210,000) compared to the half-mile walkshed ($168,085) and city ($191,004), but lower than the county ($264,400)
- A smaller average household size (1.22) and higher median age (44.5) compared to the half-mile walkshed (1.90, 32.3), city (2.22, 31.2) and county (2.43, 39.3)
- A higher median age (44.5) compared to the half-mile walkshed (32.3), city (31.2) and county (39.3)

Table 4-1: Selected Current Demographics, 2008

	Downtown New London	½ Mile Walkshed	City of New London	New London County	Downtown as % of City
Population	511	2,425	26,252	268,890	2%
Households	421	1,239	10,433	105,937	4%
Household Size	1.22	1.90	2.22	2.43	-
Labor Force (16+)	364	1,866	21,201	215,546	1.7%
At-Place Employment	3,059	4,053	15,468	112,560	20%
Median HH Income	$20,250	$21,787	$39,534	$64,622	-
Median Home Value	$210,000	$168,085	$191,004	$264,500	-
Median Age	44.5	32.3	31.2	39.5	-

Source: ESRI Business Information Solutions, Main Street New London BBPC 2008

The table above shows that the median household income in the downtown is lower than the surrounding geographies. This is reflected by the high number of publicly subsidized, rental housing units in the downtown. In contrast, the median home value is higher in the downtown than the half-mile walkshed and the City of New London. This is indicative of the recent surge in the rehabilitation of residential units in downtown for higher income households demanding market rate units.

As shown below in Table 4-2, downtown New London accounts for a larger portion of the at-place employment in surrounding geographies compared to the downtown's portion of population, households, and labor force in surrounding geographies. For example, although the downtown population only makes up 23% of the half-mile walkshed's population, downtown employees account for almost 80% of the walkshed's at-place employment. This indicates that a significant number of workers in the downtown area commute to work from outside downtown.

Table 4-2: Downtown Demographics as a Percentage of Surrounding Geographies

	Downtown as % of 1/2 Mile Walkshed	Downtown as % of City	Downtown as % of County
Population	22.9%	2.0%	0.2%
Households	32.8%	3.7%	0.4%
Labor Force (16+)	37.4%	2.8%	0.2%
At-Place Employment[11]	78.6%	19.8%	2.7%

Source: ESRI Business Information Solutions, BBPC 2008

The downtown's median household income is lower than that of surrounding geographic areas, potentially reflecting retirees with limited earned incomes and existing lower income downtown residential areas. Although still lower than the average household income in the county, the city's average household income is higher than in the downtown and expected to rise over the next five years. Table 4-3 shows the

[11] That is, workers at their workplace locations

projected changes in the city's household income between 2008 and 2013. By 2013, the percentage of the city's households with income under $40,000 is projected to decrease, while the share of households making over $75,000 is anticipated to increase faster than the share of lower income households. The downtown is also in a position to potentially attract higher income empty nesters.

Table 4-3: Projected Changes in City of New London Household Income

	2008	% Total	2013	% Total
<$10,000	1,183	11%	1,086	10%
$10,000 - $19,999	1,263	12%	1,145	11%
$20,000 - $29,999	1,454	14%	1,315	12%
$30,000 - $39,999	1,382	13%	1,117	11%
$40,000 - $49,999	1,094	10%	1,048	10%
$50,000 - $59,999	1,076	10%	934	9%
$60,000 - $74,999	920	9%	1,119	11%
$75,000 - $99,999	1,348	13%	1,778	17%
$100,000 - $149,999	422	4%	660	6%
$150,000 - $199,999	116	1%	162	2%
$200,000+	171	2%	222	2%
Total Households	10,433		10,590	
Average Household Income	$51,712		$59,399	

Source: ESRI Business Information Solutions, BBPC 2008

Table 4-4 shows the projected changes in the number of households in the downtown, half-mile walkshed, city and county between 2008 and 2013. Although the current number of households in the downtown area is small, the downtown is projected to experience a nearly 3 percent increase in its number of households over the next 5 years, reflecting current trends and planned projects. The number of households in the city and the county will also increase, but at a slower rate than the downtown (0.3 percent and 0.4 percent, respectively). All the new growth in the half-mile walkshed is projected to occur within the downtown[12]. A total of 58 units are expected to be added to the downtown area.

Table 4-4: Existing & Future Households

	Total		Net Increase	
	2008	2013	2008-2013	%
Downtown	421	479	58	2.76%
1/2 Mile Walkshed	1,239	1,297	58	0.94%
City	10,433	10,590	157	0.30%
County	105,937	108,794	5,826	0.38%

Source: ESRI Business Information Solutions, Main Street New London, City of New London Office of Development and Planning, BBPC 2008

Similar to surrounding geographies, the downtown is projected to experience growth of residents age 55 to 74 (and over 85) as the current population ages, while the number of residents between the ages of 10

[12] Discussions with the City of New London revealed 58 new residential units to be constructed over the next five years.

and19 is expected to decrease. In addition to growth of residents age 55 and over, the group aged 20 to 24 is anticipated to increase at a faster rate than the city or county. These age groups represent empty-nesters and young professionals who typically do not have young children. These changes in households by age group are detailed in Table 4-5.

Table 4-5: Change in Population by Age Group

	Downtown			5 Year Growth Rate (2008 to 2013)		
	2008	2013	5 Yr Growth Rate	½ Mile Walkshed	City	County
Total	511	546	-4.49%	6.85%	0.72%	1.88%
0-4	23	24	5.67%	4.35%	3.51%	1.98%
5-9	20	21	5.77%	5.00%	0.54%	-1.53%
10-14	22	20	-9.66%	-9.09%	-10.28%	-3.88%
15-19	20	23	-7.69%	15.00%	-7.02%	-3.95%
20-24	23	31	18.85%	34.78%	7.90%	5.54%
25-34	66	58	-1.16%	-12.12%	3.52%	6.63%
35-44	86	81	-6.30%	-5.81%	-11.08%	-12.79%
45-54	81	87	5.11%	7.41%	-4.10%	1.48%
55-64	69	79	16.02%	14.49%	20.95%	16.31%
65-74	46	63	18.18%	36.96%	12.98%	12.40%
75-84	38	38	0.00%	0.00%	-9.21%	-4.62%
85+	17	21	25.00%	23.53%	3.88%	12.77%

Source: ESRI Business Information Solutions, BBPC 2008

Table 4-6 categorizes households by families, persons living alone and households with persons 65 and over. In 2000, the households in the downtown included fewer families (20.8 percent) and more persons living alone (71.5 percent) than in the half-mile walkshed, city and county. The percentage of households in the downtown with persons 65 or older (27.1 percent) was also somewhat higher than in the half-mile walkshed, city and county. The percentage of households without children increases as the distance to the RITC decreases. Downtown residential units are apartments found above retail and office spaces, and as the distance from the RITC increases, the residential units change to single family attached and detached.

Table 4-6: Households by Type (2000)

	Families	Persons Living Alone	HH with persons > 65
Downtown	20.8%	71.5%	27.1%
½ Mile Walkshed	40.7%	50.5%	20.7%
City	52.9%	37.8%	21.7%
County	67.3%	26.4%	23.5%

Source: US Census, ESRI Business Information Solutions, BBPC 2008

According to the 2008 projections prepared by ESRI, shown below in Table 4-7, New London County is projected to add a total of 2,857 households from 2008 to 2013 for a total of 108,794 households in 2013 (a 0.54 percent annual growth rate)[13]. Assuming this rate of growth continues through 2018, New London

[13] ESRI Business Information Solutions, 2008

County would be expected to add roughly 5,826 households over the ten-year period, or approximately 580 households per year.

Table 4-7: Existing & Future Households

	Total			Net Increase	
	2008	2013	2018	2008-2018	Annual %
New London County	105,937	108,794	111,763	5,826	0.54%

Source: ESRI Business Information Solutions, BBPC 2008

As shown in Table 4-8, residents who live closer to the RITC use public transportation modes more often. In 2000, residents in the downtown were more likely to take public transportation than residents of any of the surrounding areas. Average commute times for the downtown were similar to that of the surrounding areas. The passenger surveys conducted as part of this study revealed that 50 percent of passengers at the Water Street SEAT bus stop walked to catch the bus. The passenger survey also indicated that 50 percent of the passengers waiting at the Water Street bus stop are using the bus to go to work. The work commuters are generally traveling to the Crystal Mall, Groton, casino resorts, and Norwich.

Table 4-8: Area Commuting Patterns by Location of Residence, 2000

	Downtown	½ Mile Walkshed	City	County
Means to Work				
Total	185	847	12,201	129,553
Drove Alone	47.6%	55.3%	66.8%	81.1%
Carpooled	11.4%	16.2%	12.2%	9.9%
Public Transportation	9.2%	7.0%	3.1%	1.6%
Walked	18.9%	13.8%	12.0%	3.8%
Other Means	7.6%	5.2%	2.3%	0.9%
Worked at Home	5.3%	2.6%	3.7%	2.6%
Travel Time to Work				
> 5 minutes	0.5%	1.5%	7.3%	3.6%
5 to 9 minutes	19.8%	23.2%	18.0%	12.7%
10 to 19 minutes	35.8%	36.0%	40.1%	34.0%
20 to 24 minutes	12.8%	14.0%	11.8%	15.5%
25 to 34 minutes	14.4%	11.8%	11.4%	16.5%
35 to 44 minutes	2.7%	1.8%	2.1%	5.0%
45 to 59 minutes	3.7%	3.3%	1.8%	4.5%
60 to 89 minutes	1.1%	3.3%	2.6%	3.6%
90+ minutes	3.7%	2.5%	1.2%	1.8%
Average Travel Time (minutes)	20.7	19.4	17.2	22.2

Source: US Census, ESRI Business Information Solutions, BBPC 2008

According to the US Census, and detailed below in Table 4-9, the average household in the downtown had 0.6 vehicles in 2000, similar to the average household in the half-mile walkshed (0.7 vehicles), but lower than the city (1.3 vehicles) and county (1.8 vehicles). Households living closer to the RITC are less likely to have access to a vehicle and are more likely to use public transportation to get to work.

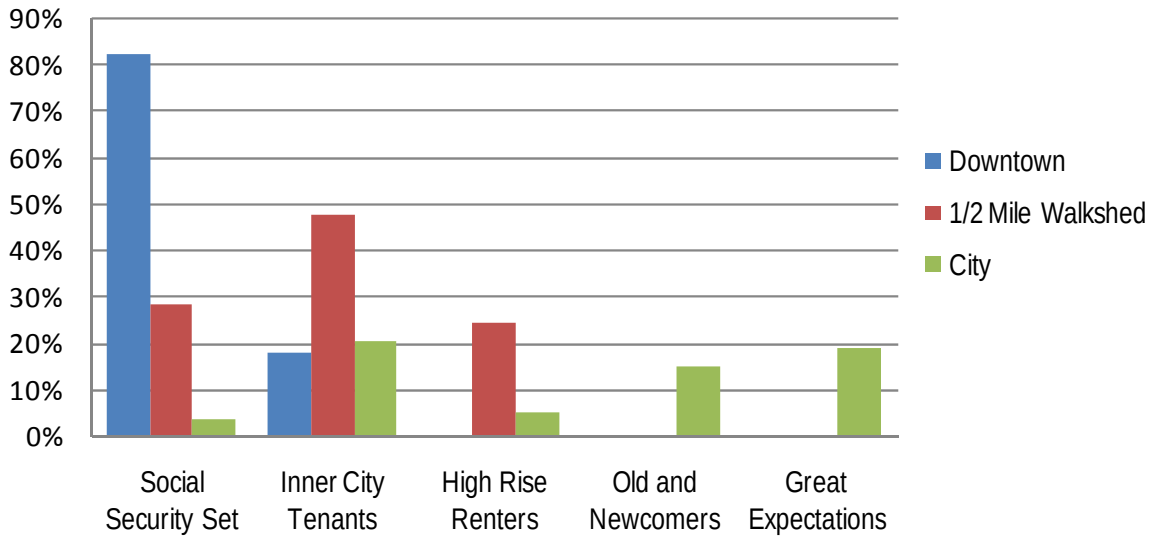
Table 4-9: Average Vehicle Availability, 2000

Downtown	½ Mile Walkshed	City	County
0.6	0.7	1.3	1.8

Source: US Census, ESRI Business Information Solutions, BBPC 2008

To identify the lifestyle characteristics and housing preferences of local residents, an evaluation of top household segments was performed using the trademarked 65-segment Community Tapestry system. This system classifies U.S. neighborhoods based on their socioeconomic and demographic compositions, using nation-wide demographic information such as labor force characteristics, median income, age, and spending habits to categorize neighborhoods according to the community tapestry classification system. Figure 4-8 identifies the top tapestry segments in the downtown, half-mile walkshed and the city.

Figure 4-8: Top Tapestry Segments for Downtown, ½ Mile Walkshed and City 2008



Source: ESRI Business Information Solutions, BBPC 2008

These segments share a number of common traits, including:

- Diversity – most segments are ethnically diverse
- Higher intensity housing – residents tend to live in mid- to high-rise, low rent buildings
- Single person families – many residents live alone or in shared, non-family housing
- Nearby and discount shopping – residents prefer to do grocery shopping close to home and tend to bargain hunt
- Split between young and old – residents are either at the beginning or end of the adult age spectrum

Though these segments share traits, they each have distinctive characteristics (based on nation-wide statistics), as described below:

- Social Security Set (82 percent of downtown area) – A somewhat older market with a median age of 45.6 years and 40 percent of households aged 65 or older. Individuals generally subsist on very low fixed incomes, but have accumulated some wealth over their lifetime. The median household income for this market is $16,632 and the median net worth is $35,073. Many residents do not own cars and therefore rely on easily accessible public transportation.

- Inner City Tenants (18 percent of downtown area) – This multicultural market is almost one-third Hispanic and younger than average, with a median age of 27.9. These neighborhoods are often a stepping-stone for recent immigrants, with an annual population growth of 0.7 percent. Household types are diverse with a high turnover rate because many individuals are enrolled in nearby colleges and work part-time. Accommodation/food services employment is high. One-fifth of housing is owner-occupied.

- High Rise Renters (24.4 percent of half-mile walkshed) – This group represents a diverse mix of race and ethnicity, with a large Hispanic population and a median age of 29.9 years. Household types are mainly single parent and single person; although a larger-than-average proportion of other families is also present. While there is a high unemployment rate, the majority of employed residents work in service, professional, and office/administrative support occupations. This segment ranks the highest among all Community Tapestry segments for number of renters (9 out of 10 households), commute to work (41.1 minutes), and population density (42,445 people per square mile).

- Old and Newcomers (14.9 percent of city) – These neighborhoods are in transition, populated by renters who are either starting their careers or retiring. The proportion of householders either in their 20s or aged 75 or older is higher than the proportion at the national level. These neighborhoods have more single person and shared households than families. Educational attainment is above average, as is college and graduate school enrollment. Slightly higher proportions of workers are in food preparation and office/administrative support positions.

- Great Expectations (18.6 percent of city) – Young singles who live alone and married-couple families dominate this segment, with many residents just beginning their careers or family lives. This segment has a higher proportion of residents in their 20s and a higher proportion of householders younger than 35 years old compared to the national proportions. There is a 68 percent labor force participation rate in this segment, with the primary employers in the manufacturing, retail, and service industry sectors. Half the households own their homes, the other half rent.

Tapestry Applicability to the Downtown

Site visits and stakeholder interviews verify many of the trends seen in the tapestry analysis. The ethnic restaurants and corner stores seen throughout the half-mile walkshed match the diversity apparent throughout the area. Also, low-income housing units exist in downtown New London (such as the Mohican Hotel) and many people who live in these households rely on public transportation. However, there is a growing segment of young professionals ("Great Expectations") who are just beginning their careers. This group seeks affordable rental units in urban centers with transit accessibility. People in this cohort do not yet have children and like to dine out, attend music and art events and are helping to cultivate a "culture class" in New London. The existence of a vibrant, historic, waterfront downtown connected via public transportation to cultural, job, and family opportunities creates a unique place and a competitive advantage

to attract residential development and further attract culture class residents which can support the new economy and job clusters that are emerging in New London.

4.2.4. Labor and Industry

The Southeastern Connecticut Enterprise Region has identified six industry clusters to build into a stronger presence in the southeastern portion of the state. These clusters are defense, maritime, tourism, creative arts and technology, bioscience and chemicals, and agriculture[14]. Five of the six are applicable to New London. Agriculture is not a large part of the New London economy; as shown in the preceding table, only 0.6 percent of the county labor force is employed in agriculture. These five clusters can be enhanced by a vibrant downtown with enhanced residential, retail and cultural opportunities with transit linkages to the New London area as well as opportunities in the larger northeast corridor from Boston to Washington. In New London the applicable clusters are:

- Defense Industry: The Naval Submarine Base in Groton and General Dynamics/Electric Boat contribute more than half of the 33,000 defense jobs in Connecticut, not including the jobs that result from medium and small size firms that provide subcontract support. Also, the Coast Guard Academy and the US Coast Guard Research and Development Center provide jobs to residents in the county.

- Maritime: The deep water port facility in New London, the cruise lines, the ferries and the world-class maritime research and education facility embodied in the Marine Sciences and Technology Center operated by the University of Connecticut at Avery Point all contribute to the growing strength in this industry.

- Tourism: The fastest growing industry in southeastern Connecticut is currently tourism[15]. Over 30,000 people are employed in the tourism industry and that number is expected to grow. Southeastern Connecticut's attractions revolve around shoreline and heritage sites and activities, and the region's two large Native American casino resorts located within 25 minutes of downtown New London. A total of 25 percent ($351.6 million dollars) of the total state tourism revenue ($1,405.0 million) in 2001 was generated in southeastern Connecticut; this is $168.7 million dollars higher than the next highest tourism region (Greater Hartford).

- Creative Arts and Technology: This category includes all individual artists in all media, a wide range of non-profit cultural institutions, and commercial enterprises. It is estimated that there are over 4,000 employees and self-employed residents involved directly in the Art and Creative Cluster in southeastern Connecticut, with several thousand more in supporting businesses. New London has the Hygienic Arts Co-Op which provides low cost housing to emerging artists.

- Bioscience and Healthcare: Pfizer is the region's core company in this cluster. Pfizer's Global Research and Development Headquarters are located in two facilities in Groton and New London. In both facilities, Pfizer employs approximately 5,200 people directly with an additional 1,000+ contract employees.[16] New London's Lawrence & Memorial Hospital and Norwich's William W. Backus Hospital also collectively employ close to 4,000 additional employees. The region's total employment in this sector exceeds 13,000.

[14] Southeastern Connecticut Enterprise Region, 2008
[15] Southeastern Connecticut Enterprise Region, Industry Cluster: Tourism, 2008
[16] Southeastern Connecticut Enterprise Region, Industry cluster: Bioscience and Healthcare, 2008

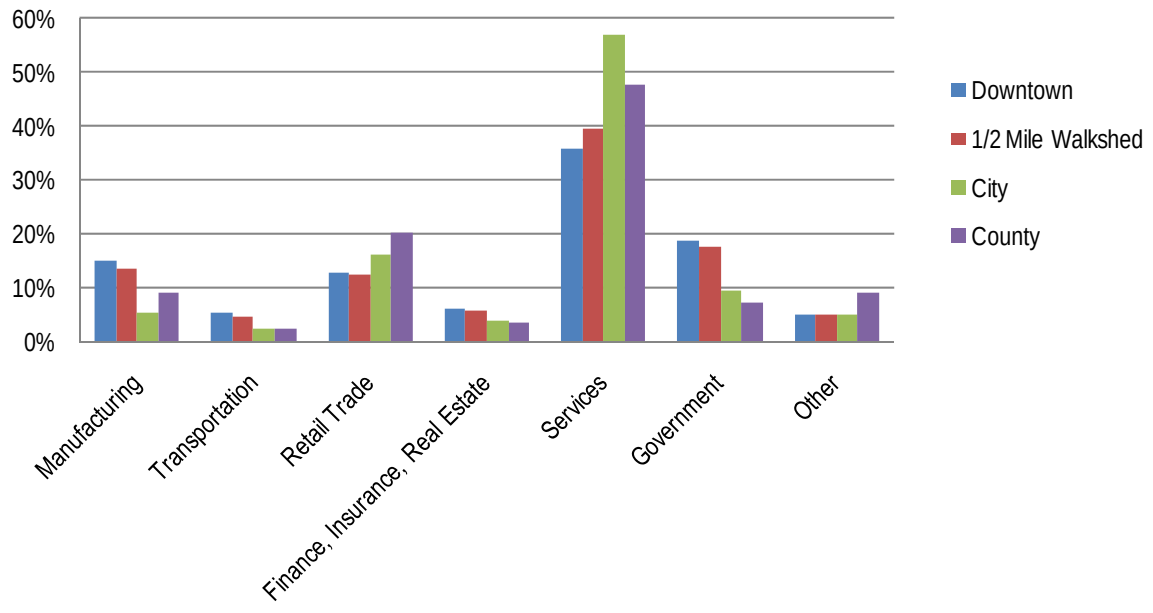
At-place employees are those that work within the study area. These employees can live and work in the study area or live outside the study area and commute into the study area for work. As shown below in Table 4-10, the downtown has 3,059 employees representing 20 percent of the total city at-place employees and 3 percent of the total county at-place employees. Figure 4-9 graphically shows the at-place employees by category. As shown, the highest number of people working in the downtown, half-mile walkshed, and county are in services.

Table 4-10: At-Place Employees by Category, 2008

	Downtown		1/2 Mile Walkshed		City		County	
	#	%	#	%	#	%	#	%
Manufacturing	468	15%	559	14%	866	6%	10,468	9%
Transportation	171	6%	203	5%	387	3%	2,927	3%
Retail Trade	392	13%	507	13%	2,506	16%	23,075	21%
Finance, Insurance, Real Estate	193	6%	243	6%	634	4%	4,052	4%
Services	1104	36%	1,605	40%	8,817	57%	53,579	48%
Government	575	19%	721	18%	1,469	10%	8,217	7%
Other	156	5%	215	5%	789	5%	10,243	9%
Total	3,059	100%	4,053	100%	15,468	100%	112,560	100%

Source: ESRI Business Information Solutions, BBPC 2008

Figure 4-9: At-Place Employees by Category, 2008



The labor force represents the number of people employed or seeking employment in a study area. As shown below in Table 4-11, the downtown labor force totals 245 employees representing 2 percent of overall city labor force (12,801 employees), a similar share to the percentage of city residents living in the downtown (2 percent). The service industry dominates the labor force in the downtown (over 65 percent of the labor force), followed by retail trade (6.9 percent), and then finance/insurance/real estate (6.1 percent).

Table 4-11: Labor Force Industry Mix by Employment, 2008

	Downtown		½ Mile Walkshed		City		County	
	#	%	#	%	#	%	#	%
Agriculture/Mining	0	0.0%	0	0.0%	26	0.2%	877	0.6%
Construction	11	4.5%	65	6.0%	665	5.2%	10,226	7.0%
Manufacturing	8	3.3%	89	8.3%	1,074	8.4%	15,193	10.4%
Wholesale Trade	1	0.4%	14	1.3%	243	1.9%	3,214	2.2%
Retail Trade	17	6.9%	119	11.1%	1,611	12.6%	17,238	11.8%
Transportation/Utilities	12	4.9%	44	4.1%	473	3.7%	6,866	4.7%
Information	6	2.4%	27	2.5%	320	2.5%	2,483	1.7%
Finance/Insurance/Real Estate	15	6.1%	46	4.3%	473	3.7%	6,574	4.5%
Services	164	66.9%	624	58.0%	7,187	56.1%	74,796	51.3%
Public Administration	11	4.5%	48	4.5%	729	5.7%	8,327	5.7%
Total	245	100%	1,075	100%	12,801	100%	145,794	100%

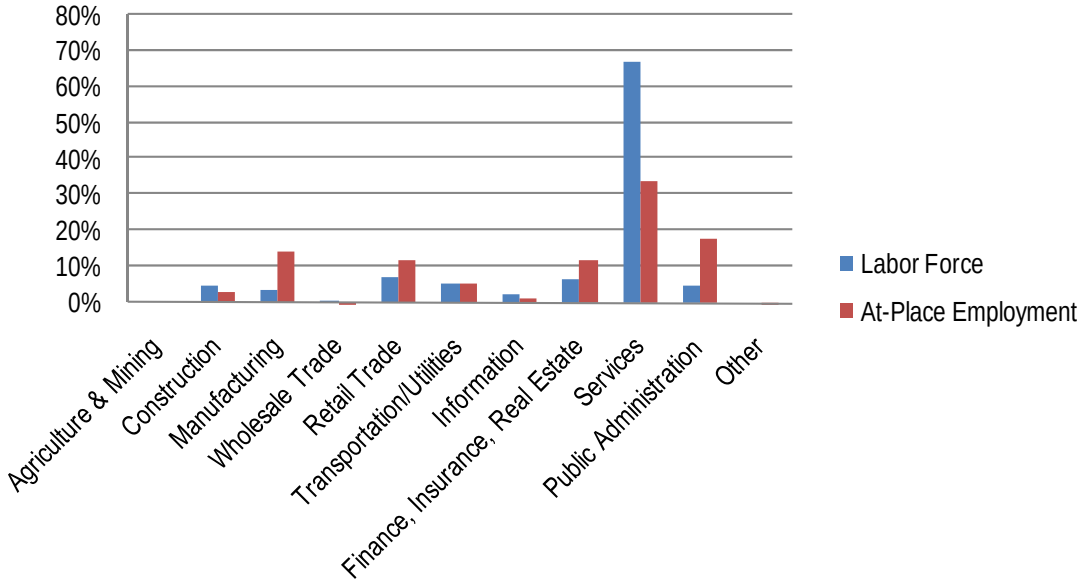
Source: ESRI Business Information Solutions, BBPC 2008

Figure 4-10 shows the differences between labor force and at-place employment in the downtown study area. Labor force refers to the occupations of an area's residents, while at-place employment refers to the occupations of people who work in the area, but do not necessarily live there. Although more than half of the labor force works in the service industry, public administration also has a larger percentage of the labor force in the downtown. Government jobs provide nearly 20 percent of the at-place employment in the downtown, but account for only 4.5 percent of the area's labor force. This mismatch reflects the large proportion of government workers that do not live within walking distance of work.

The share of at-place employees working in the service industry in the downtown is lower than in the city and county, while government-based employment is higher. The at-place employment distribution by category for the downtown is very similar to that of the half-mile walkshed's at-place employment.

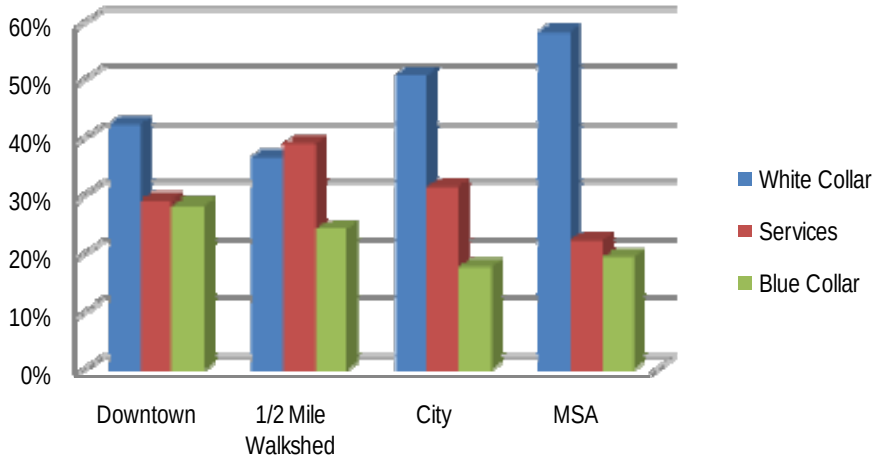
As shown in Figure 4-11, white collar jobs make up the majority of residents' occupations in the downtown study area, the city and the county. White collar jobs in the county are primarily found in the research and development facilities for bioscience and healthcare, the defense industry, the colleges in the area, and in information technology. As these clusters continue to grow in southeastern Connecticut, the growth in jobs will attract additional white collar workers to the region. However, the prevalence of service and retail trade employment in the downtown is reflected in its higher relative share of service-based employment and lower relative share of white-collar employment compared to the city and county. This can be attributed to the number of retail shops and restaurants in the downtown area as well as the larger downtown area's current role in the housing market – that is, providing more affordable housing versus its emerging role as a residential core appealing to white collar, higher income households.

Figure 4-10: Downtown Labor Force and At-Place Employment, 2008



Source: ESRI Business Information Solutions, BBPC 2008

Figure 4-11: Labor Force Mix by Occupational Category, 2008



Source: ESRI Business Information Solutions, BBPC 2008

Table 4-12 shows the "daytime-nighttime ratio" for the four study areas, which is a comparison of the at-place employment to residential population of an area. The comparison of daytime population to nighttime population is important because it describes the type and timing of activity in the downtown. For example, if the number of at-place employees is much higher than the residential population, then the downtown will have high activity from 7:00 AM to 7:00 PM during weekdays. If the residential population is higher, then the most activity will be in the evenings and on the weekends. A ratio higher than one represents an area with a higher number of employees during the day as compared to the number of residents. A ratio less than one indicates an area with a higher residential population as compared to at-place employment.

Table 4-12: Daytime-Nighttime Ratio

	Downtown	½ Mile Walkshed	City	County
At-Place Employment	3,059	4,053	15,468	112,560
Total Residential Population	511	2,452	26,252	268,890
Daytime-Nighttime Ratio	5.99	1.65	0.59	0.42

Source: ESRI Business Information Solutions, BBPC 2008

The number of jobs in downtown New London (3,059) is higher than the residential population (511). This higher employment base is demonstrated in the area's ratio of employees to residents (the "daytime/nighttime ratio"), which is significantly higher (6 times) than the ratio found in the half-mile walkshed (165 percent), city (59 percent) and county (42 percent). Therefore, the higher ratio represents the fact that downtown New London has its highest population during the workday.

In order to determine how New London's daytime-nighttime ratio compares to other cities, the ratios from a sample of seven cities in the region were examined. The daytime-nighttime ratio for the half-mile radius from the city hall of each city was compared to the daytime-nighttime ratio of the New London half-mile walkshed. As compared to the sample cities, New London's daytime-nighttime ratio was lower than average. This means that there is a more equal distribution of jobs and households in the half-mile walkshed of downtown New London than that of surrounding cities. The cities with their ratios are as follows: Bridgeport, CT 2.28, Hartford, CT 8.13, Newburyport, MA 0.78, New Haven, CT 1.18, Newport, RI 1.54, Springfield, MA 2.78, and Stamford, CT 1.86.

As shown in Table 4-13, six of the top twenty employers in New London County are located in the City of New London, including Pfizer Global Research & Development (6,200 employees in both the Groton and New London facilities[17]) and Lawrence & Memorial Hospital (2,200 employees). These employers serve as magnets to attract other businesses to New London and can help to strengthen the employment base. The U.S. Coast Guard Academy, Connecticut College, AT&T and The Day are also located in the City of New London.

As shown in the line graphs (Figures 4-12 and 4-13), which display historical employee and business growth, jobs and businesses in professional, scientific and technical services jumped between 2000 and 2003 when Pfizer came to New London County. The Pfizer Global Research and Development facility in New London is located at the beginning of Pequot Avenue. The facility sits on 20 acres and is 790,000 square feet.

Growth in professional, scientific and technical services has an increasing trend line from 2001 to 2006. These types of businesses currently occupy 66 percent of the occupied office units in downtown New London. Should these business types continue to grow, downtown could capture a percentage of the new growth. Also, the largest number of businesses located within the county is in this category. This suggests that there are a large number of firms with a small number of employees. These firms seek smaller spaces. Downtown New London's small office suites are appropriate for these types of establishments.

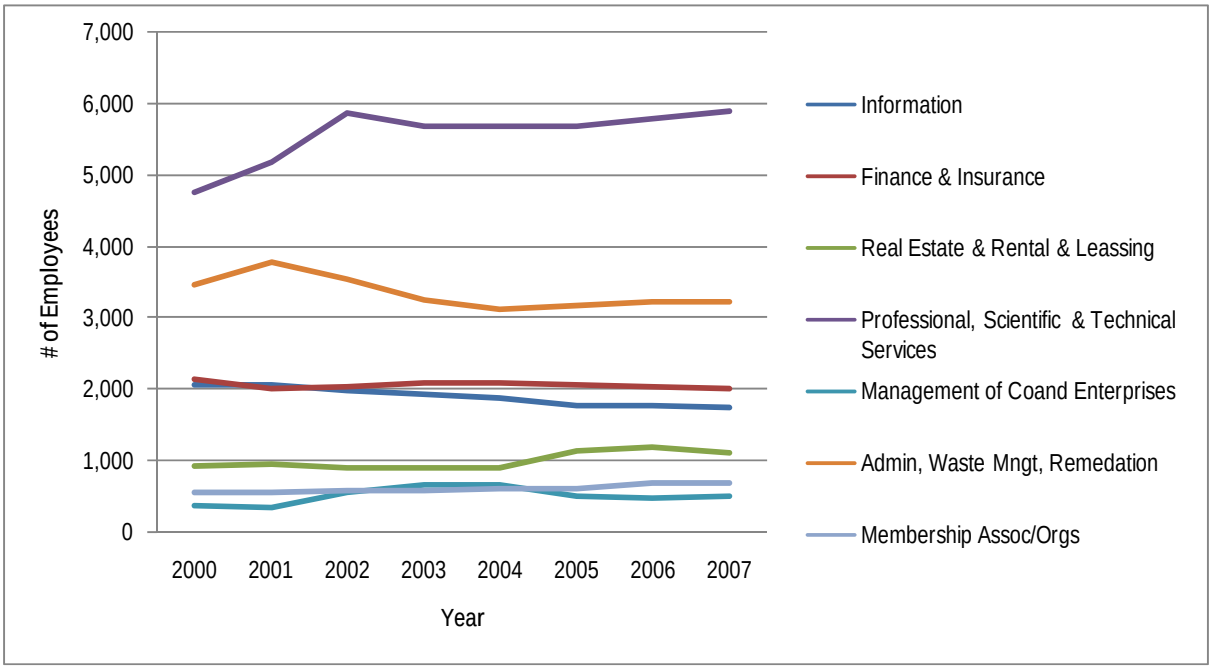
[17] As noted earlier in this study, Pfizer announced in late 2009 that it is moving out of its New London site and consolidating its operations in the region at its site in Groton. Recently, as a result of the current economic recession and lower revenues, Pfizer announced that they may downsize their research and development arm and may potentially lay off 400 employees. This may or may not affect New London's science and technology employees. As noted earlier in this study Pfizer announced in late 2009 that it is moving out of its New London site and consolidating its operations in the region at its site in Groton.

Table 4-13: New London County Top Non-Municipal Employers (2007)

	Company	Employees	Located in the City of New London
1	Foxwoods Casino Resort	13,789	
2	U.S. Naval Submarine Base	10,550	
3	Mohegan Sun Casino Resort	10,500	
4	General Dynamics/Electric Boat	8,000	
5	Pfizer Global Research & Development	6,200	✓
6	Lawrence & Memorial Hospital	2,200	✓
7	Milstone Station/Dominion Inc.	1,880	
8	W. Wm. Backus Hospital	1,600	
9	U.S. Coast Guard Academy	1,300	✓
10	Connecticut College	845	✓
11	Computer Sciences Corp.	678	
12	AT&T	623	✓
13	Waterford Hotel Group	531	
14	ShopRite Supermarkets	418	
15	Interim Health Care of Eastern CT	400	
16	The Day	395	✓
17	Cross Sound Ferry	385	
18	Davis Standard	365	
19	Three Rivers Community College	352	
20	Daticon	350	

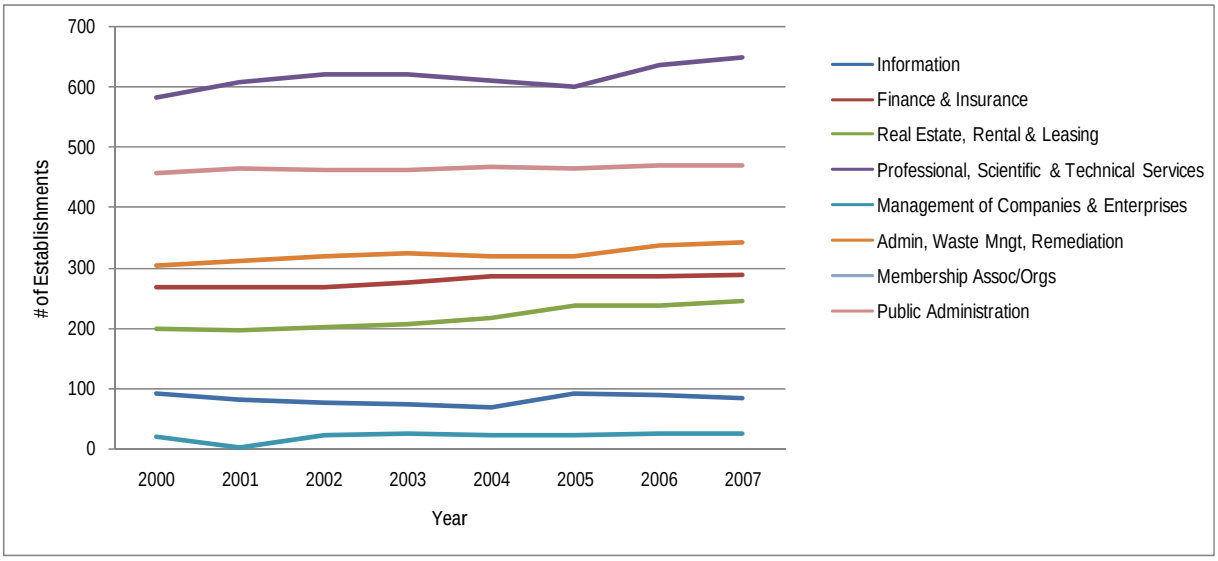
Source: SECTER Economy and Labor Force Statistics, BBPC 2008

Figure 4-12: New London County Employee Growth 2000-2007



Source: CT Dept of Labor, QCEW Program Data, BBPC 2009

Figure 4-13: New London County Establishment Growth 2000-2007



Source: CT Dept of Labor, QCEW Program Data, BBPC 2009

In the City of New London, outside the downtown, there are Class A office space buildings that are available to accommodate new demand for users looking for higher quality office space. As office space in downtown New London becomes more functionally obsolete, new tenants are finding that Class A office complexes like Shaw's Cove (6 buildings with over 300,000 square feet) and buildings like One Chelsea Street (60,000 +/- square feet, adjacent to Pfizer campus and Fort Trumbull) fit their needs more appropriately.

More than likely, development will continue around Fort Trumbull. Substantial state funded investment was made in this area, including an extensive environmental contamination remediation effort and the construction of new infrastructure including streets, sidewalks and underground utilities[18].

Employment growth projections are best understood initially at a subregional county level, since many new and expanding firms consider sites across municipalities within New London County. Based on this assumption, job growth forecasts were evaluated for New London County in order to assess office development opportunities in the downtown area.

Office-based employment in New London County, as projected by the Connecticut Department of Labor, is projected to grow by almost 10 percent over the ten-year period (2006-2016), or 1 percent annually[19]. The most rapid growth in office jobs is anticipated in the professional, scientific and technical services industry (1.67 percent compounded annual growth rate). A core company in this industry is Pfizer. Pfizer employs approximately 5,200 people plus 1,000 subcontract employees. Also the Lawrence Memorial Hospital in New London and Norwich's William W. Backus Hospital employ approximately 4,000 people, and in the City of New London, Sheffield Pharmaceuticals employs over 200 people[20]. This field is followed by administrative support, waste management, and remediation services which are projected to grow at a rate of 1.24 percent compounded annually. More traditional office-based industries, management,

[18] Plan of Conservation and Development, 2007 Supplement, City of New London, Connecticut
[19] The Department of Labor projections do not take into account the recent economic downturn.
[20] Southeastern Connecticut Enterprise Region, 2008

finance/insurance, and real estate rental and leasing, are each projected to grow more moderately, in the range of 0.75 percent to 0.84 percent per year.

As shown below in Table 4-14, New London County is projected to gain a total of 1,866 new employees for a total of 17,047 in 2016, based on 2006-2016 Connecticut Department of Labor projections. However, if current employment growth rates continue, and a linear growth model is used for the two year period (2016-2018), in New London County, the projection for 2018 employment (ten years in the future) is estimated at approximately 18,107. Projected growth for office employment by industry sector for 2008-2018 is shown in Table 4-15.

Comparing downtown New London's at-place employment data in 2008 to the 2008 New London County data shows the percentage of total county jobs located in the downtown. The highest percentage of overall county jobs in downtown is in the information industry (23 percent), followed by membership organizations (19 percent). The largest number of jobs in the downtown is also in the information industry (406 jobs) followed by professional, scientific & technical services (310 jobs). On average, downtown currently captures 7 percent of the jobs in the county. The highest percentage of downtown jobs are in information and professional, scientific and technical services. A breakdown of the county jobs located in downtown New London is shown in Table 4-16.

Table 4-14: Projected Growth in Office Employment by Industry Sector, New London County, 2006-2016

Industry Type	Employment 2006	Projected Employment 2016	Total Employment Change	10-Year % Growth	Annual Growth Rate
Information	1,786	1,829	43	2.41%	0.24%
Finance and Insurance	2,046	2,223	177	8.63%	0.83%
Real Estate and Rental and Leasing	1,181	1,284	103	8.71%	0.84%
Professional, Scientific, and Technical Services	5,792	6,820	1,028	17.75%	1.67%
Management of Companies and Enterprises	480	517	37	7.61%	0.75%
Administrative Support, Waste Management, Remediation Services	3,221	3,642	421	13.08%	1.24%
Religious, Grant making, Civic, Professional, and Similar Organizations	675	733	58	8.54%	0.83%
TOTAL	15,181	17,047	1,866	9.53%	1.17%

Source: Connecticut Department of Labor, BBPC 2008

Table 4-15: Projected Growth in Office Employment by Industry Sector
New London County, 2008-2018

Industry Type	Employment 2008	Projected Employment 2018	Total Employment Change	10-Year % Growth	Annual Growth Rate
Information	1,795	1,851	56	3.12%	0.24%
Finance and Insurance	2,080	2,316	236	11.35%	0.83%
Real Estate and Rental and Leasing	1,201	1,339	138	11.49%	0.84%
Professional, Scientific, and Technical Services	5,987	7,425	1,438	24.02%	1.67%
Management of Companies and Enterprises	487	537	50	10.27%	0.75%
Administrative Support, Waste Management, Remediation Services	3,301	3,875	574	17.39%	1.24%
Religious, Grant making, Civic, Professional, and Similar Organizations	686	764	78	11.37%	0.83%
TOTAL	15,537	18,107	2,570	12.71%	1.54%

Source: Connecticut Department of Labor, BBPC 2008

Table 4-16: Employment by Industry Sector, New London County and Downtown New London, 2008

Industry Type	New London County	% Distribution	Downtown Jobs	% Distribution	% of County Jobs in Downtown
Information	1,795	12%	406	37%	23%
Finance & Insurance	2,080	13%	149	14%	7%
Real Estate, Rental & Leasing	1,201	8%	45	4%	4%
Professional, Scientific & Technical Services	5,987	39%	310	29%	5%
Management of Companies & Enterprises	487	3%	0	0%	0%
Administrative Support, Waste Management, Remediation Services	3,301	21%	43	4%	1%
Membership Associations & Organizations	686	4%	132	12%	19%
TOTAL	15,537	100%	1,085	100%	7%

Source: Connecticut Department of Labor, ESRI, BBPC 2008

4.2.5. Key Findings

The demographic and economic profile for the New London downtown area reveals important information to support the redevelopment of the RITC. Projected increases in population, household income and employment in the downtown create demand for residential units, office and retail space near the RITC. The demographic and economic profile showed that the downtown is unique compared to the surrounding analysis areas. Concentration of jobs, older population, more people living alone (less families), and higher priced home values create an identity for the downtown different from the broader geographic areas. At the same time, the downtown still struggles with low household incomes, families reliant on government support, low percentage of residential homeownership as well as a low numbers of at-place-employment. Key findings of relevance to the downtown include:

- New London already has a strong presence in five of the six key industry clusters for southeastern Connecticut (defense, maritime, bioscience and technology, creative arts and technology, and tourism)
- Households living closer to the RITC are more likely to use public transportation
- There is a growing population of people aged 20-35 and 55-74 in the downtown
- The downtown population will increase more rapidly than the half-mile walkshed, city or county as a whole
- The percentage of household earning more than $75,000 per year is expected to increase in the downtown over the next five years
- These economic and demographic trends bode well for future downtown development opportunities, which could be further enhanced by the presence of a myriad of transit opportunities.

4.3 Market Conditions

The market conditions section identifies the existing conditions, real estate trends, and regional projections for the market segments (residential, office and retail). The geographical areas discussed in this section are the ones that the downtown is located in. These include the Hartford regional market area for office and retail, the southeastern Connecticut tourism district, New London County, the New London submarket for office and retail, the city and the downtown.

As the existing conditions are the jumping off point for the future projections, the historical trends identify the momentum for future growth, and the greater regional growth projections are a basis for which downtown can generate demand for new supportable development. In all, this section is the body of data on which downtown's new supportable development projections are based.

4.3.1. Residential Market Conditions

Overview

Downtown New London is currently experiencing increased demand for housing units. The Day newspaper recently published an article called "…And the Rentals Downtown Don't Stay Vacant Long". This article said that, "the past five years alone produced about 200 new housing units"[21]. Compared to the downtown

[21] Kevin Dale, The Day Newspaper, "…And the Rentals Downtown Don't Stay Vacant Long" published 9/22/08

residential growth seen in the last 15 years, this represents a relatively large increase. In addition, new housing units are the result of successful rehabilitation of dilapidated, historic buildings.

In the broader context, the nation is experiencing a residential shift back into the urban fabric. This shift incorporates households ranging from low to high income. However, the highest demand is for housing that fits the budgets of middle income households. Rehabbing older product into housing in high demand locations offers a great investment option. Downtown New London offers middle income households affordable rents (averaging $925/month) and potentially higher income households access to urban lifestyles. Desirable urban areas include many of the amenities offered in New London's downtown, such as neighborhood retail shops, historic structures, variety of restaurants, schools, an emerging office presence, art/culture and access to alternative transportation with linkages throughout the Northeast Corridor.

The residential market analysis examines the ten year window for supportable new residential development in downtown New London. The recent national downturn in the economy plays a role in the regional and local residential market. In the near term (1-4 years), housing developments that offer for-sale units will experience significant slow-downs, but the rental market, particularly in moderate income urban areas, is projected to see higher activity. This analysis incorporates the national economic slow-down into the projected 2018 demand for downtown residential units.

The current slow-down represents an opportunity to plan for new residential development and better position the downtown to capture a higher percentage of the region's growth in an improved economy. With populations moving back to infill urban locations, apartment demand and development are intensifying. The growing trends towards infill neighborhoods and away from car-dependent lifestyles have increased the demand for transit oriented development. "Emerging Trends In Real Estate" by the Urban Land Institute reported that residential projects near mass transit stops are "no-brainers". New London can market its downtown in order to take advantage of this opportunity.

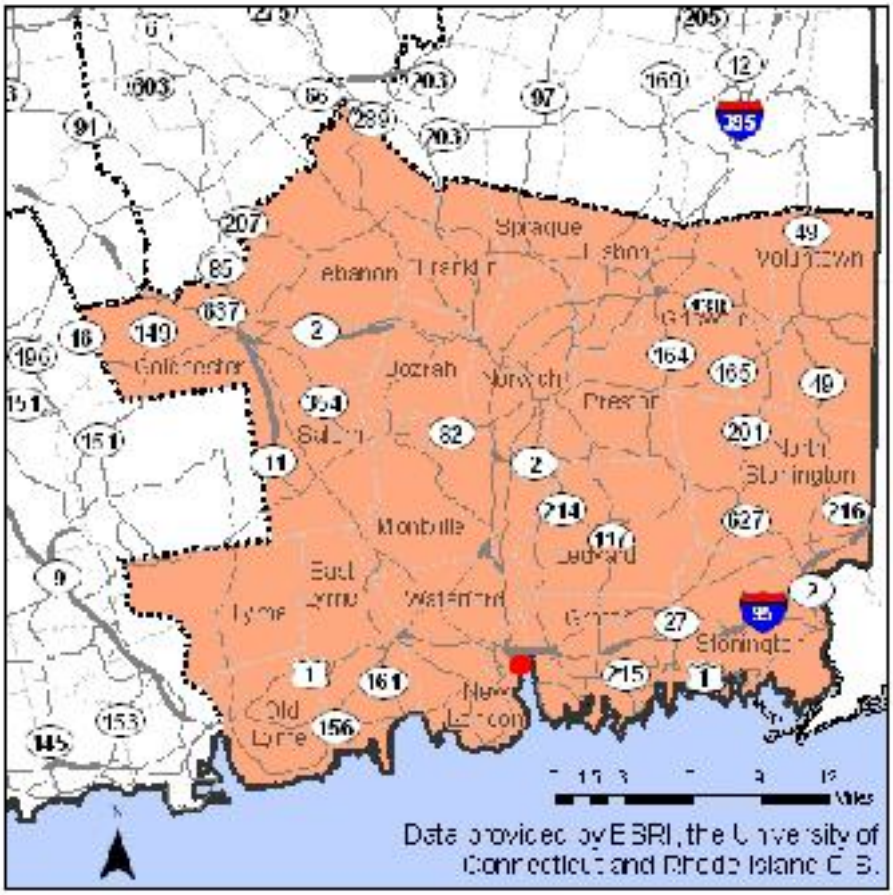
Residential Market Areas and Conditions

Broader residential markets in part impact the potential for housing development in specific local areas. To place the downtown New London residential trends in context, the residential market characteristics of the downtown area are evaluated against those of the City of New London, New London County and ongoing national trends. Figure 4-14 below shows the primary residential market for New London County.

In addition to assessing broad contextual residential real estate markets, a residential primary market area was identified. This market area is defined as the geographic area containing most demand for new housing in downtown New London. Generally speaking, the majority of demand for new housing emerges from residents of nearby jurisdictions. The Urban Land Institute suggests that roughly 75 percent of buyers and/or renters in new housing developments are local residents. To capture all the surrounding communities, the downtown area's residential primary market area is defined as New London County.

Additionally, the spin-off residential demand provided by potential future employees of new office developments in the downtown area have been evaluated as a secondary, non-geographic source of market demand. Similarly, demand is increased from larger regional markets, outside of the primary market area, to take advantage of the special attributes of the downtown. Outside the primary market area, demand is increased by the rail access opportunities along the Northeast Corridor.

Figure 4-14: New London County Primary Residential Market Area



Key Observations

Table 4-17 compares the downtown New London housing stock to the surrounding geographies. Figures 4-15 and 4-16 further categorize downtown's housing stock by unit type and ownership. Key characteristics of the downtown housing market include:

- Downtown New London's housing stock represents only 0.4 percent (442 units) of the county's housing stock (117,020 units) and 4% of the city's (11,838 units)
- The city's housing stock represents 10 percent of the county's housing stock
- A significant portion of the housing in downtown is rental; 88 percent (391 units) of the housing in downtown is renter occupied versus 55 percent (6,428 units) for the city and 30 percent (34,287) for the county
- Naturally, the percentage of single family homes is largest in the county and smallest in the downtown; the opposite is true for multifamily (largest percentage is in downtown)
- 98 percent of the structures in downtown were constructed pre-1970; most of the structures are historical
- The median rent for market rate units in the downtown is $925/month
- A notable increased interest in urban living and transit opportunities

Table 4-17: Residential Market Profile- New London County, City of New London and Downtown New London, 2008

	Downtown New London	City of New London	New London County
Total Housing Units	442	11,838	117,020
Owner-Occupied	30	4,013	71,616
Rental	391	6,428	34,287
Vacant Units	21	1,397	11,117
Vacancy %	5%	12%	10%
Median Home Value	$210,000	$191,004	$264,500
Median Rent (1/)	$925	$876	$895
Single-Family (attached/detached) % (2/)	1%	36%	67%
Multi-Family % (2/)	94%	64%	30%
Structure older than 1970 % (2/)	98%	74%	57%

1/ 2005-2007 U.S. Census American Community Survey Data was used for County and City median rents. For Downtown, 2008 The Day articles and stakeholder interviews revealed that market rate rental units ranged in size from 475 - 1,800 SF and ranged in rent from $750 - $1,100, yielding an average of $925. Downtown median rent estimation does not include subsidized housing.

2/ 2005-2007 U.S. Census American Community Survey Data was used for County and City, 2000 Census Data was used for Downtown

Source: ESRI Business Information Solutions, U.S. Census Bureau, The Day, Interviews with Bill Cornish, Peter Levine and Michael Joplin (contributed to rental information), Main Street New London, BBPC 2008

Residential Construction Activity

Between 1996 and 2007, nearly 14,137 single family residential building permits were issued in New London County, for an annual average of roughly 1,175 permits per year. As shown in Figure 4-17, the greatest permitting activity for the county was seen between 2003 and 2005.

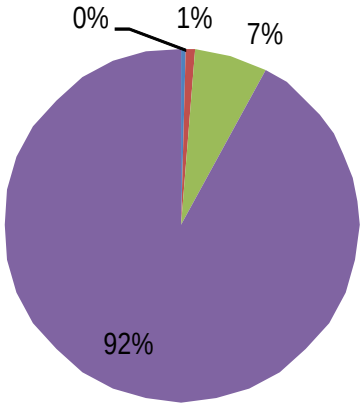
As shown in Figure 4-18, during that same 12 year period 270 permits were issued for residential housing with two or more units in New London County. Similar to single family, the greatest permit activity for multi-family units was between 2003 and 2005.

As displayed in the following Table 4-18, there are currently 1,255 residential units in the "pipeline" in the county. Projects that are in the "pipeline" are either under construction, planned or proposed. Ten of these projects are in the City of New London and will bring 325 new units into the city. A total of 152 units are under construction, planned or proposed in the downtown.

Figure 4-19 displays the location of the above referenced pipeline projects located within the City of New London and Figure 4-20 shows the location of the county's projects located outside the city limits.

Figure 4-15: Downtown Occupied Residential Units by Type

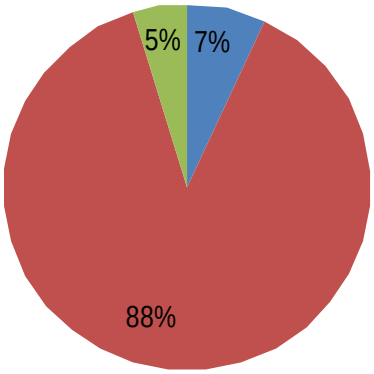
Source: Main Street New London, The Day, BBPC, 2008)



Downtown New London Residential Units by Type		
Housing Type	# of Units	% Total
Single Family	2	0.5%
2 Family	3	1%
Condo	28	7%
Apartment	388	92%
TOTAL Occupied	421	100%

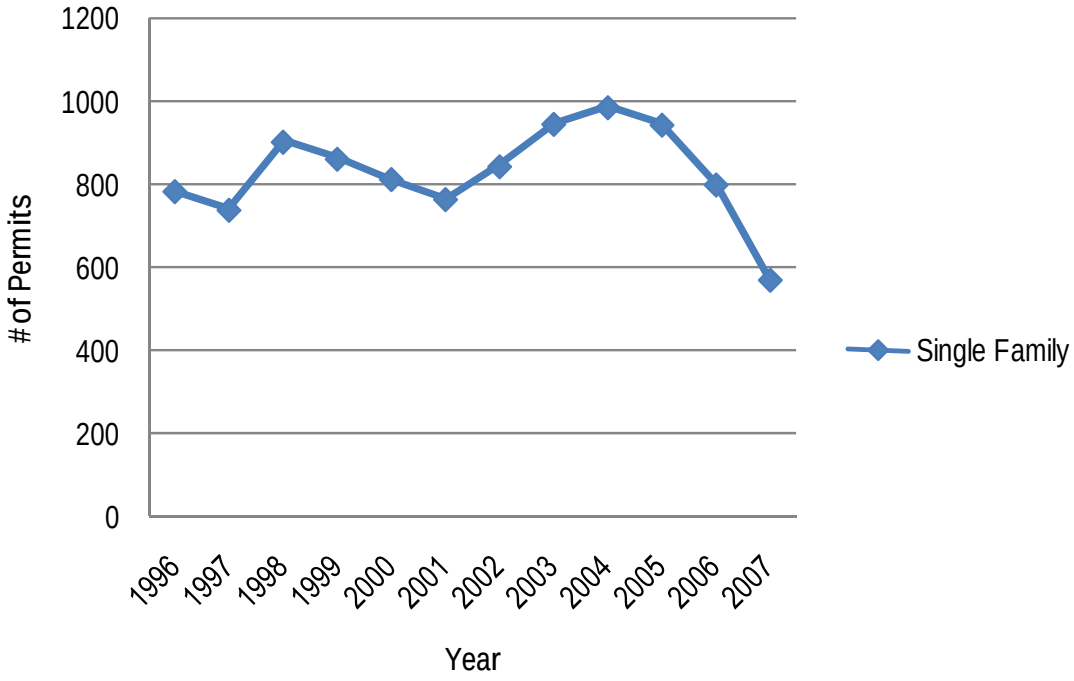
Figure 4-16: Downtown Residential Market by Ownership

(*Source: Main Street New London, The Day, BBPC, 2008)*



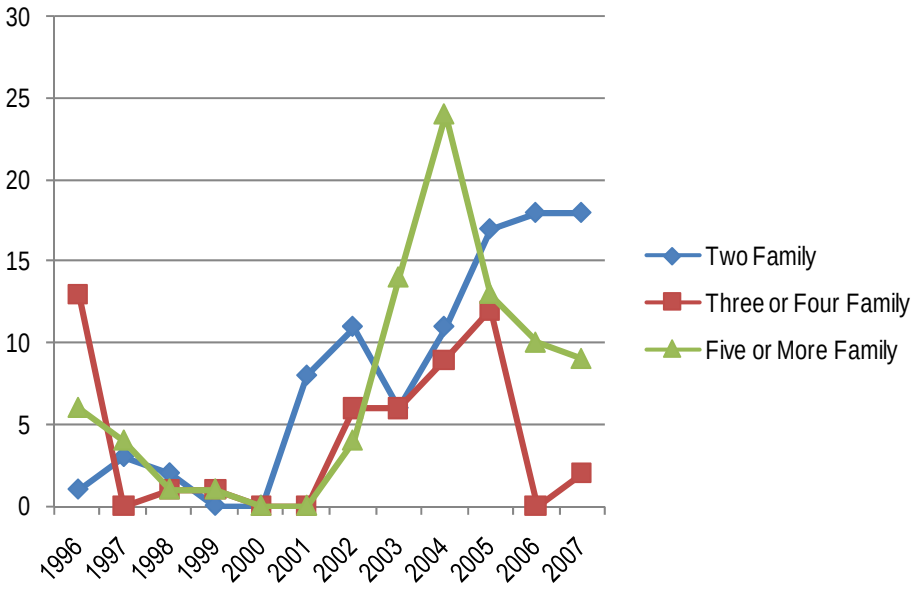
Downtown New London Residential by Ownership		
Housing Ownership	# of Units	% Total
Owner-Occupied	30	7%
Rental	391	88%
Sub-Total Occupied	421	95%
Vacant	21	5%
TOTAL	442	100%

Figure 4-17: Historical Single Family Building Permit Activity, New London County



Source: US Census, BBPC 2008

Figure 4-18: Historical Multi-Family Building Permit Activity, New London County



Source: US Census, BBPC 2008

Table 4-18: Residential Pipeline Development, Multi-Unit Structures

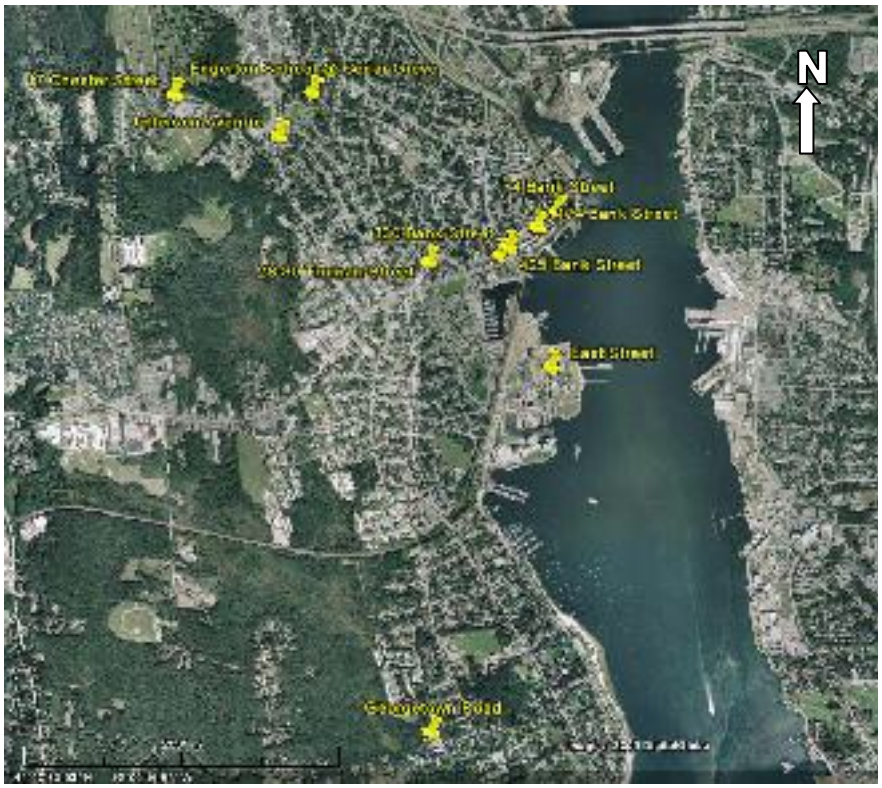
New London County 2008				
Address	City	# of Units	Type	Status
Georgetown Road	New London	31	Condos	Planned*
Jefferson Avenue	New London	19	Unknown	Planned*
East Street	New London	80	Apartments	Planned*
17 Chester Street	New London	6	Condos	Planned*
28-30 Truman Street	New London	5	Apartments	Proposed
330 Bank Street (downtown)	New London	92	Condos	Planned*
425 Bank Street (downtown)	New London	52	Condos	Under Construction
174 Bank Street (downtown)	New London	6	Condos	Under Construction
74 Bank Street (downtown)	New London	2	Condos	Under Construction
Edgerton School @ Cedar Grove	New London	32	Apartments	Proposed
Subtotal		*325*		
11 Ledgewood Road	Groton	200	Apartments	Proposed
Stillman Ave. @ Prospect Street	Pawcatuck	39	Condos	Planned
12 River Rd. @ Clark Street	Stonington	56	Apartments	Under Construction
River Road @ 8th Street	Norwich	154	Apartments	Proposed
River Road @ 8th Street	Norwich	96	Townhomes	Proposed
607 Norwich Avenue	Norwich	100	Apartments	Planned
607 Norwich Avenue	Norwich	100	Apartments	Planned
Hansen Road @ Scotland Road	Norwich	185	Senior Citizen Housing	Proposed
Subtotal		*930*		
TOTAL		1,255		

*Have zoning approval

Source: Reis, Inc., City of New London Office of Development and Planning, BBPC[22]

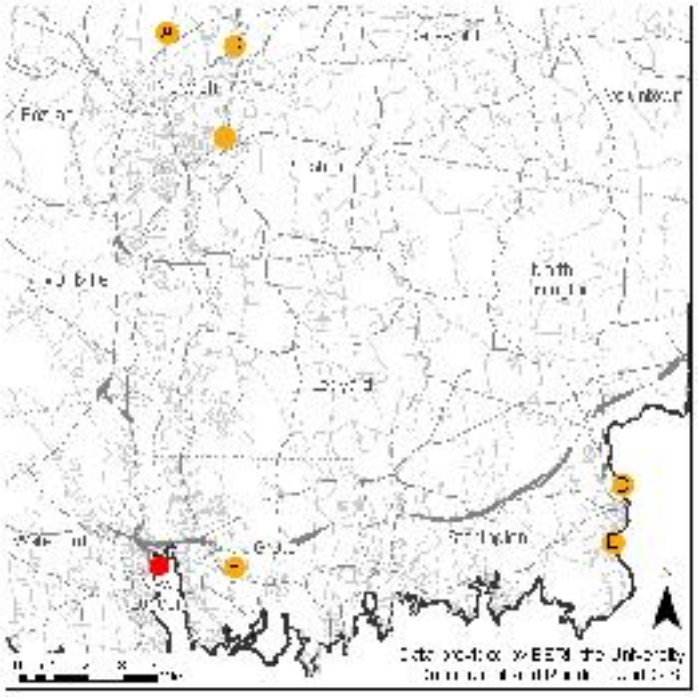
[22] Reis, Inc. is a provider of real estate performance information. Their information is updated on a quarterly basis, and the website is www.reis.com.

Figure 4-19: Residential Pipeline Projects, City of New London



Source: Office of Development and Planning, City of New London, REIS, Inc., BBPC 2008

Figure 4-20: Residential Pipeline Projects, New London Submarket



A - Hansen Rd. @ Scotland Rd.
Norwich, CT (85 units)

B - 607 Norwich Ave.
Norwich, CT (200 units)

C - River Road @ 8th St.
Norwich, CT (250 units)

D - Stillman Ave. @ Prospect St.
Pawcatuck, CT (39 units)

E - 12 River Road @ Clark St.
Stonington, CT (56 units)

F - Ledgewood Rd.
Groton, CT (200 units)

Residential Market Sources of Demand

Demand for housing derives from both existing and projected future households (including potential renters and homeowners) in New London County, spin-off demand from new office workers, as well as potential additional net new empty nesters and young professional relocations into the county. To determine the extent of potential demand, the consultant team analyzed household projections for the county, new office worker growth, and national economic and demographic trends.

As people across the nation turn to housing that reduces their household energy costs, residential spaces close to public transportation are seeing increasing demand. Urban areas close to public transportation offer reduced commuter costs, and urban living spaces are typically smaller and cost less to operate.

This has been evidenced in downtown New London. Interviews with developers who have renovated downtown's historical buildings into modern apartments revealed that their renovated buildings are experiencing 100 percent occupancy. Building owners indicated that most of the tenants are between 25 and 35 years of age without small children. Empty nesters have also showed an interest in living downtown, but are hesitant to live in units above the first floor without an elevator, as is the case in some of downtown's older structures. As downtown amenities expand and the benefits and public transportation is enhanced, the downtown residential price levels should be able to support added amenities such as elevators. Demand among empty-nesters should increase over time.

Preferences of Target Households

Households moving into downtown New London will range from low income to high income. The target households from within the region and downtown employees will be moderate income young professionals, higher income empty nesters, and emerging artists and young professionals. Emerging artists and young professionals having varying incomes will gravitate towards live/work units, trading amenities for lower rents. Empty nesters, which will also include new moves into the market area, will seek residences with more amenities such as views of the Thames River and elevators, higher prices and access to New York, New Haven and Boston.

The downtown's target households are interested in retail rich environments, the convenience of proximity to public transportation and downtown jobs. Such households prefer to be close to restaurants, shops, cultural and artistic venues, historic or architecturally distinctive buildings and smaller/compact lots.

New London offers a competitive edge which appeals to target households by being the host to a variety of public transportation options (train, ferry and bus). While the distance is too far for daily commuting to Boston or New York, the opportunity to use these modes for occasional business trips, weekend cultural, entertainment and family visits is unique as compared to other communities in New London County.

For higher income households there are certain attributes which will help to make residential units in downtown New London more competitive with the surrounding areas. According to the National Multi-Housing Council, amenities found in innovative new housing developments include:

- Architecturally distinctive features that pay tribute to the area's heritage
- Compact lots
- Private entries
- Direct entry garage parking
- Nine-foot ceilings

- Bay windows and skylights
- Two-level units
- Gourmet kitchens
- Deluxe master baths
- Full-sized laundry facilities
- Keyless entry systems
- Units wired for integrated telephone, cable and internet service
- In-wall speaker systems with theater-quality sound
- Business centers, conference facilities
- Media rooms
- Community gardens
- Car wash and detailing facilities
- Daycare and children's activities
- Pet daycare and dog walking services

Live/work units for emerging artists in downtown are available in conjunction with the Hygienic Art Gallery. Live/work units are often in older buildings and typically use loft style floor plans. Live/work units tend to be more successful when located in urban areas with other similar units around.

Recruitment of neighborhood-serving shops and restaurants should also be considered as key amenities to include with new housing developments to bolster the attractiveness to both future residents and employees in the downtown area.

4.3.2. Office Market Conditions

Overview

New London currently offers an attractive downtown for small specialized office based businesses. Businesses in bioscience, healthcare, technology, defense, and maritime industries are already located in and around the City of New London. These established businesses are a pull factor for new companies. Their presence will continue to attract companies that find a competitive advantage to locating near existing businesses in these industries. Companies new to downtown New London will range from established companies wishing to have a small satellite office in New London to locally based start-up firms seeking spaces with lower rents.

Proximity to the train station and ferry to Long Island provides an additional incentive for businesses to locate in downtown New London. High speed rail access to business centers such as Boston and New York City are attractive points for businesses looking to relocate or expand. Also, as the national residential trend towards downtown areas continues, employees will not only have the option to live within walking distance to work, but shops and restaurants will expand providing places for employees to shop and eat downtown during lunch breaks. Additionally, existing businesses, such as Pfizer, and other establishments, such as Connecticut College and Coast Guard Academy act as magnet that draw new businesses to New London.

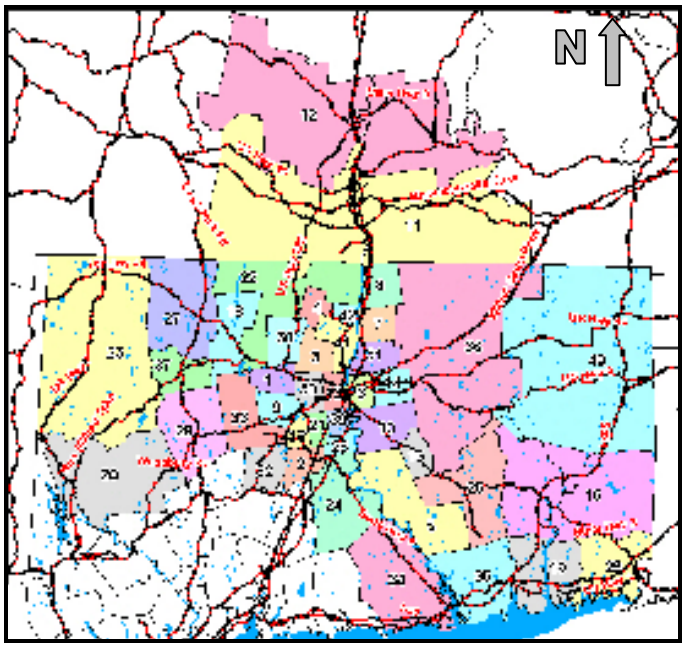
Office Market Areas and Conditions

Downtown New London is situated within the broader Hartford regional office market. The Hartford regional office market encompasses all the land in Connecticut except for the area within Fairfield and New Haven Counties and extends north into Massachusetts including Hampden and Hampshire Counties. Within the

Hartford regional market, there are a total of 16 markets (including New London County) and 42 submarkets including New London (the city and its environs). Figure 4-21 shows the entire Hartford regional market and each submarket.

Figure 4-21: Hartford Regional Office Market and Submarkets

Source: CoStar, BBPC 2008 (Graphic object, not shown to scale)

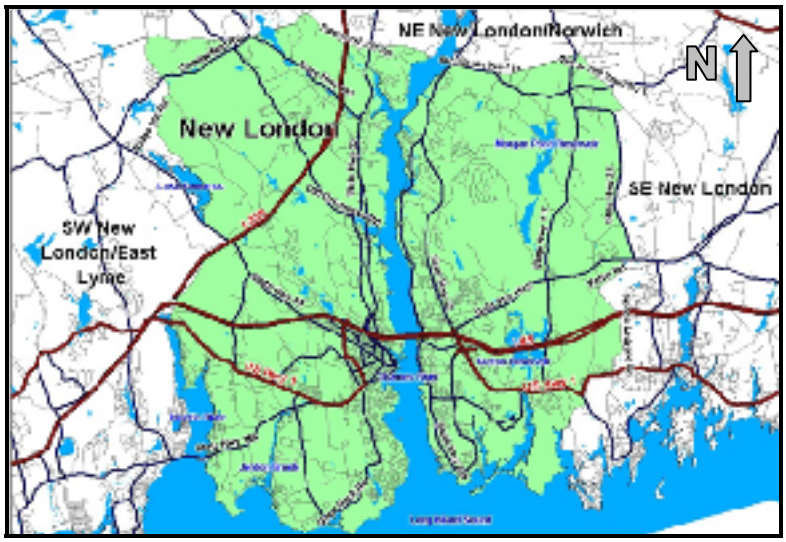


Submarket Name	#	Submarket Name	#
Avon	1	NW Outlying	22
Berlin Outlying	2	NW Litchfield County	23
Bloomfield	3	NW Middlesex/Middleton	24
E Granby	4	NW New London/Colchester	25
E Hampton/E Haddam	5	Rocky Hill	26
E Hartford	6	Rt 8/Winsted	27
E Windsor	7	SE Litchfield County	28
Enfield	8	SE New London	29
Farmington	9	Simsbury	30
Glastonbury	10	S Windsor	31
Hampden Co (MA)	11	Southington	32
Hampshire Co (MA)	12	SW Outlying	33
Hartford City	13	SW Midlsx/Old Saybrk/Rt 9	34
Manchester	14	SW New London/E Lyme	35
Marlborough Outlying	15	Tolland Co	36
NE New London/Norwich	16	Torrington	37
New Britain	17	W Hartford	38
New Hartford/NE Litchfield	18	Wethersfield	39
New London	19	Windham Co	40
New Milford/SW Litchfield	20	Windsor	41
Newington	21	Windsor Locks	42

The focus of the office market for downtown New London, however, is the New London County and New London submarket particularly as it relates to the five employment clusters (bioscience, healthcare, technology, defense, and maritime industries) within the New London submarket. New London County includes 5 submarkets: New London, NE New London/Norwich, NW New London/Colchester, SE New London and SW New London/ East Lyme. The New London submarket is number 19, located in the bottom right corner of the map.

A subset of New London County, the New London Submarket includes communities such as the City of New London, Groton, and Waterford. The New London submarket is shown below in Figure 4-22. The New London submarket extends beyond the city boundaries.

Figure 4-22: New London Office Submarket Boundaries



Source: CoStar, BBPC 2008 (Graphic object, not shown to scale.)

Trends in regional markets influence the potential for office development in the downtown area. Each of the surrounding markets and submarkets including the New London County Market and the New London Submarket have been analyzed to ascertain past trends and future outlook.

Key Observations

In 2008, conditions and trends in the New London submarket (city and environs), New London County market and the Hartford regional market were moderately favorable for office expansion in key industries. Trends indicate there may be near term opportunities for the provision of Class A space in the Hartford Market.[23] Due to the regional and local strength in professional jobs, particularly related to economic clusters found in New London, new Class A office space can be added to downtown New London. Key current conditions and near term trends in these office markets include:

- Office-based employment growth, particularly in the professional, scientific and technical services sector, information and services sector

[23] Class A buildings are generally extremely desirable investment grade properties that command the highest rents or sale prices compared to other buildings in the same market. Class B buildings generally qualify as more speculative investment, and as such, command lower rents or sale prices compared to Class A properties. Class C buildings are generally no-frills, older buildings that offer basic space and command lower rents or sale prices compared to other buildings in the same market.

- The Hartford regional market has consistently lower vacancy rates than the national average (during third quarter 2008 it had a 10.1 percent vacancy while the US average was nearly 12 percent)
- 76 percent of the office space in the Hartford regional market is designed for multiple tenants; only 24 percent of the rentable building space is for a single-tenant
- Hartford regional market office rental rates are consistently lower than the US average (during third quarter 2008 Hartford regional market rates averaged approximately $19 per SF/year while the US average was $24 per SF/year)
- The Class A regional office market recorded positive net absorption over the last four quarters, while Class B recorded negative in third quarter 2008 and fourth quarter 2007; Class C recorded negative for all four quarters
- New London County provides 8 percent (5.5 million square feet) of the office space in the Hartford regional office market (72.6 million square feet).

Inventory

The existing office inventory, detailed below in Table 4-19, examines the entire Hartford regional market, the New London County market, the New London submarket and downtown New London. With over 5 million square feet of rentable space, the county office market comprises 8 percent of the total Hartford regional market. The New London submarket comprises 4 percent of the total Hartford regional market, and the downtown area comprises 1 percent of the total Hartford regional market. The largest office markets in the region are Hartford City, West Hartford, and Hampden County (MA).

- A total of 27 percent of the entire Hartford regional market is located in the Hartford City market.
- Approximately half of the office space in New London County is located in the New London submarket. Downtown New London contains 8 percent of the county's total office inventory and 16 percent of the submarket's inventory.
- The vacancy rate for New London County decreased from third quarter 2006 (10.3 percent) to third quarter 2008 (7.5 percent).
- 42 percent of the Hartford regional office market is Class B office space, whereas in both the New London County market and New London submarket there is a significant portion of Class C space (54 percent for both). This indicates an older inventory with less updates and amenities as compared to the regional market.
- The Downtown New London office market has a vacancy rate (20.7 percent) that is higher than the surrounding geographies
- Building activity was slow as of the third quarter 2008 for both the New London Submarket and the Downtown New London; both had zero space under construction and/or delivered.
- Only 8.9 percent (41,000 square feet) of the development activity for the Hartford Regional Market was in New London County as of the third quarter of 2008.

Table 4-20 shows a comparison of the Hartford, New London County, New London and downtown office markets.

Table 4-19: Hartford Regional Office Market, Third Quarter 2008

Market	# of Buildings	Total Rentable Building Area (SF)	Total Vacant Square Feet	% Vacancy
Berlin Outlying	60	892,432	36,826	4.1%
East Hartford	428	5,400,524	399,027	7.4%
Hampden County (MA)	498	8,584,694	966,004	11.3%
Hampshire County (MA)	56	1,060,214	140,751	13.3%
Hartford City	349	19,763,283	2,560,113	13.0%
Litchfield County	213	1,270,464	83,178	6.5%
Marlborough County	15	83,179	0	0.0%
Middlesex County	347	4,019,936	289,669	7.2%
New London County	432	5,478,611	410,196	7.5%
New London Submarket	*162*	*2,622,289*	*241,825*	*9.2%*
Remaining New London County	*270*	*2,856,322*	*168,371*	*5.9%*
Downtown New London	*47*	426,109	*88,505*	*20.7%*
Remaining New London Submarket	*115*	*2,430,213*	*153,320*	*8.3%*
North	284	6,235,767	697,991	11.2%
Northwest Outlying	43	346,183	11,435	3.3%
South	314	5,953,784	655,294	11.0%
Southwest Outlying	209	2,292,357	32,352	1.4%
Tolland County	72	607,057	68,717	11.3%
West Hartford	527	9,337,233	922,880	9.9%
Windham County	66	1,236,966	47,057	3.8%
Total Hartford Market	3,913	72,562,684	7,321,490	10.1%

Source: CoStar, Main Street New London, BBPC 2008

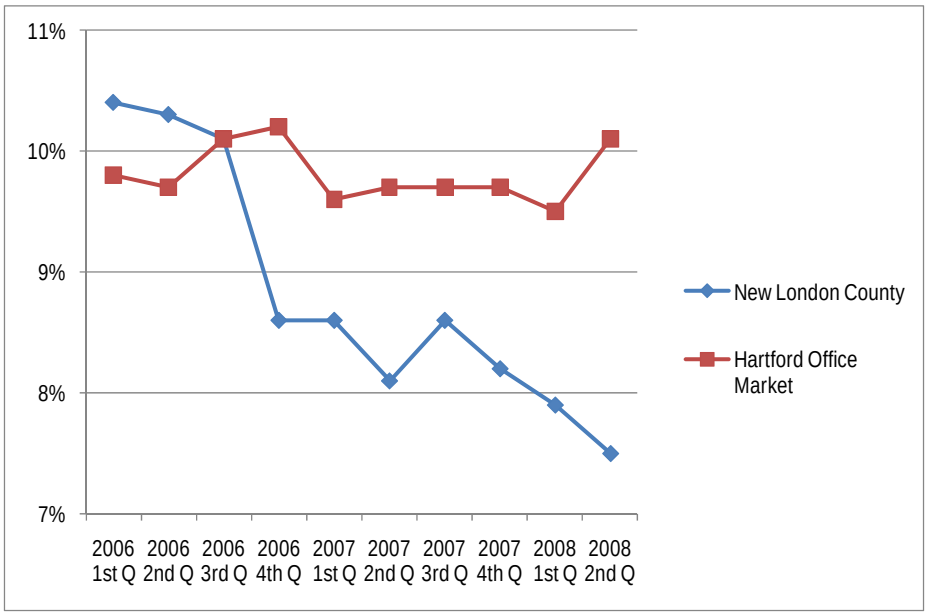
Table 4-20: Office Market Comparison Third Quarter 2008

Market	# of Buildings	Total Rentable Building Area (SF)	Average Building Size (SF)	SF % of Hartford Regional Market	SF % of New London County	SF % of New London Submarket
Hartford Regional Market	3,913	72,562,684	18,544	100%	-	-
New London County	432	5,478,611	12,682	8%	100%	-
New London Submarket	162	2,622,289	16,187	4%	48%	100%
Downtown New London	47	426,109	9,066	1%	8%	16%

Source: CoStar, Main Street New London, BBPC

As shown in Figure 4-23, the vacancy rate for office space in the Hartford Regional Market has been relatively flat since 2006, but rose to 10.1 percent at the end of the second quarter of 2008. In contrast, the New London County vacancy rate trend decreased from 10.3 percent at the end of the third quarter in 2006 to 7.5 percent by third quarter 2008.

Figure 4-23: Historical Vacancy Rate Trend



Source: CoStar, 2008

Absorption levels in the county were examined to determine whether new office spaces are constructed or if tenants are expanding (or decreasing) to occupy (or vacate) more office space in the market area. Absorption is the rate at which available space in the marketplace is leased during a period of time. As displayed in Table 4-21, New London County absorbed 20,780 square feet of space between 2006 and third quarter 2008[24] Over the last three years, from 2006 through 2008, the average annual absorption was 38,000 square feet. However, from 2006 to third quarter 2008, no new office buildings were added to the New London County inventory. During this 11 quarter period, office tenants moved into and out of existing office space. By the third quarter of 2008, vacancy rates were at their lowest point (7.5 percent) because businesses expanded or new tenants were added to the market but no new space was constructed.

Table 4-21: New London County Quarterly Absorption 2006-2008

Year	Quarter	# Bldgs.	Total RBA	Vacant SF	Vacancy %	Occupied SF	Net Absorption
2006	1	432	5,478,611	523,364	9.6%	4,955,247	0
	2	432	5,478,611	568,333	10.4%	4,910,278	-44,969
	3	432	5,478,611	562,537	10.3%	4,916,074	5,796
	4	432	5,478,611	551,906	10.1%	4,926,705	10,631
2007	1	432	5,478,611	470,708	8.6%	5,007,903	81,198
	2	432	5,478,611	469,453	8.6%	5,009,158	1,255
	3	432	5,478,611	446,408	8.1%	5,032,203	23,045
	4	432	5,478,611	470,660	8.6%	5,007,951	-24,252
2008	1	432	5,478,611	451,841	8.2%	5,026,770	18,819
	2	432	5,478,611	430,976	7.9%	5,047,635	20,865
	3	432	5,478,611	410,196	7.5%	5,068,415	20,780
2006-2008 Change		0	0	-113,168	2.1%	113,168	-

Source: CoStar, BBPC 2008

[24] CoStar Group, Inc.

With over half of the office space in the New London County market classified as Class C space, the county currently caters to a more cost conscious tenant who is less interested in higher amenities. However, for the entire Hartford regional market, Class C space has reported negative absorption over the last four quarters. This indicates a surplus of supply for Class C office space and a desire for higher quality space. In comparison, the Hartford regional office space is more evenly distributed between the classes. While Class C space makes up the largest percentage, it occupies only 6 percent more space than Class A. Of the three markets, the New London submarket has the largest percentage of Class A space (33 percent). Table 4-22 and Figure 4-24 detail the Hartford, New London County and New London office submarkets by building class.

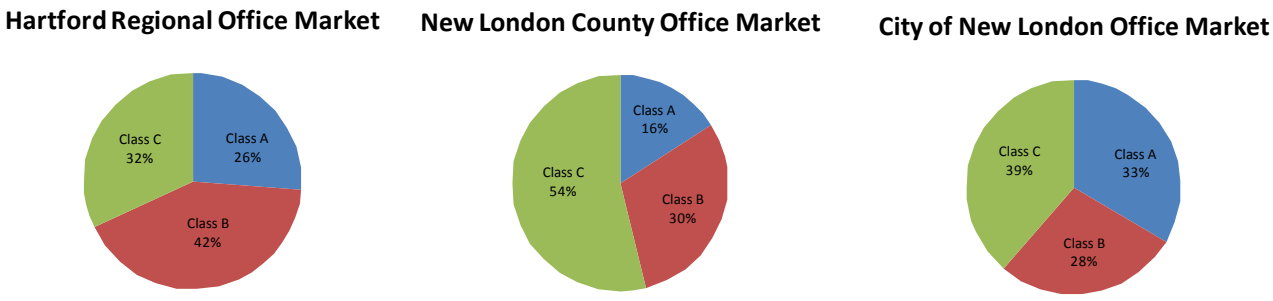
Table 4-22: Market Inventory by Office Building Class, Third Quarter 2008

Market	Class A		Class B		Class C		Total	
	# of Bldgs.	SF	# of Bldgs.	SF	# of Bldgs.	SF	# of Bldgs.	SF
Hartford Region	93	19,026,962	992	30,289,587	2,828	23,246,135	3,913	72,562,684
New London County	4	879,052	65	1,644,142	363	2,955,417	432	5,478,611
New London Submarket	4	879,052	26	728,233	132	1,015,004	162	2,622,289
Downtown New London (1/)	2	130,000	N/A	N/A	N/A	N/A	N/A	N/A
Total	101	20,785,066	1,083	32,661,962	3,323	27,216,556	4,507	80,663,584

1/ Only partial information is available for downtown office inventory by building class. Stakeholder interviews revealed that two buildings in downtown are considered Class A; these buildings are 1 Union Plaza (50,000 square feet) and Mariner's Square (80,000 square feet).

Source: CoStar, BBPC 2008

Figure 4-24: Office Inventory by Office Class, % of Total Square Footage



Source: CoStar, BBPC 2008

4.3.3. Downtown New London Office Market

Downtown New London office space inventory includes 426,109 square feet of rentable space. Rentable space is office space that is currently occupied by an office tenant, vacant, or actively on the market for rent. Rentable space in the downtown market does not include basement space or space that is currently used for storage.

As shown in Table 4-23, a total of 337,604 square feet is occupied by office tenants (79.2 percent of the total inventory); 88,505 square feet is vacant (20.7 percent of total inventory). Top office based businesses occupying office space in downtown are financial institutions (collectively occupy 78,046 square feet), The Day Newspaper (occupies 62,669 square feet) and AT&T (occupies 79,776 square feet). Also, due to the

Superior and General Court Houses in downtown, a large number of legal professionals have occupied space near these facilities (24,723 square feet of space).

Table 4-23: Downtown New London Composition of Office Tenant Base (2008)

	# of Units	% Distribution	Gross Sq. Feet (1/)	% Distribution
Transportation & Public Utilities				
Ferry, Cruise ships	3	3%	16,675	4%
Utilities	3	3%	34,516	8%
City Government (2/)	1	1%	4,341	1%
Sub-Total	7	7%	55,532	13%
Finance & Real Estate				
Depository Institutions	4	4%	56,797	13%
Financial Management & Consulting	8	8%	21,249	5%
Real Estate	4	4%	8,681	2%
Sub-Total	16	16%	86,727	20%
Services				
Business Services	12	12%	34,015	8%
Health Services	5	5%	21,958	5%
Legal Services	14	14%	24,723	6%
Social Services	5	5%	11,912	3%
Architects, Engineering & Construction	4	4%	11,476	3%
Publications & Broadcasting	5	5%	74,261	17%
Miscellaneous Services (3/)	7	7%	17,000	4%
Sub-Total	52	50%	195,345	46%
Total Occupied Space (4/)	75	73%	337,604	79%
Total Vacant Space	28	27%	88,505	21%

Source: Main Street New London, BBPC, 2008

1/ Assuming equal distribution of units
2/ Municipal buildings are not included in the commercial office space inventory except for one floor of 15 Masonic Street which is occupied by a city service
3/ Includes membership organizations, travel agencies, event planning, and cultural services
4/ Space currently occupied by office tenants, does not include office space which is currently occupied by retail, restaurant or residential use

Source: Main Street New London, BBPC 2008

Key Observations

- Business types that offer services, such as legal services, occupy the largest percentage of office space in downtown (50 percent) and consequently occupy the largest amount of square footage (195,345 SF)
    - Legal services are the most common within the downtown office market with 14 tenants. They are typically located in small office suites with an average size of 1,760 square feet of space each
    - Business services are second most common with 12 tenants, each averaging 2,800 square feet
- Publications and broadcasting occupies the most square feet of office space in downtown. Of this space, 62,669 square feet is occupied by The Day Newspaper on Eugene O'Neill Drive

Of the available downtown office space, 79 percent is occupied (337,604 square feet). A total of 88,505 square feet (21 percent) is vacant. The graphs below in Figure 4-25 categorize downtown office space by number of units and square footage.

Figure 4-25: Downtown Office Space Inventory by Industry Type

(Source: Main Street New London, BBPC 2008)

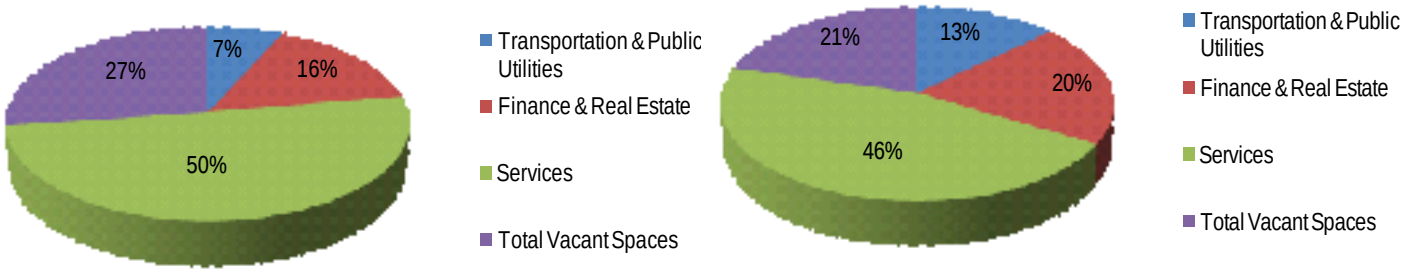


Table 4-24 shows eleven selected office properties in downtown New London. All vacant office space downtown is within the eleven properties shown. Together these properties make up over 30 percent of the total office space in downtown. The largest property is Mariner's Square (125 Eugene O'Neill Drive); this property is almost 80,000 square feet. In regard to vacancies, three buildings (224 Bank Street Bldg. C, 301 State Street and 125 Eugene O'Neill Drive) make up 80 percent of the total vacant space in downtown. Both buildings on Bank and State Streets are five stories tall. 301 State Street has four street level businesses and total vacancy on floors 2-5. 224 Bank Street Bldg. C has tenants in units on the first, second and fourth floors. 125 Eugene O'Neill Drive, a Class A office space, is three stories and has a total of three tenants.

Table 4-24: Select Downtown New London Office Vacancy Rate by Location (2008)

Location	Rentable Sq. Feet	Vacant Sq. Feet	% Vacant
11 Bank Street	1,804	450	25%
224 Bank Street (Bldg. B)	7,921	4,400	56%
224 Bank Street (Bldg. C)	37,588	22,832	61%
125 Eugene O'Neill Drive	79,020	13,170	17%
151 Eugene O'Neill Drive	6,478	3,239	50%
39 Green Street	8,784	5,856	67%
116 Huntington Street	5,492	2,034	37%
69 State Street	6,474	1,950	30%
224 State Street	25,848	7,643	30%
301 State Street	43,896	34,404	78%
310 State Street	21,404	5,697	27%
Total Space	244,709	88,505	36%

Source: Main Street New London, BBPC 2008

As shown earlier in Table 4-23, 28 units are vacant in the downtown. Table 4-25 demonstrates that all vacancies are located above the first floor.[25] Second floor office space has the highest office vacancy at 36 percent followed by the third, fourth and fifth floors each with 21 percent vacant. Understanding where the

[25] In the CBD-1 zone office uses are permitted only by special permit on the first/ground floor.

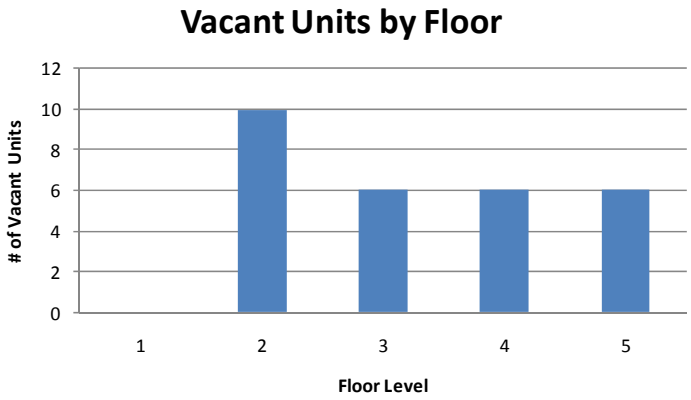
vacancies are by floor helps to identify why vacancies exist. For example, higher vacancies on the second floors beg the question of whether the asking rents are too high for second floor space as compared to the third and fourth floors, or are there first floor retail uses that are incompatible with second floor office uses?

Table 4-25: Downtown Office Vacancies by Floor*

Floor	# of Vacant Units	% of Total Office Vacancies
1	0	0%
2	10	36%
3	6	21%
4	6	21%
5	6	21%
Total Vacant Office Units	28	100%

**Assuming equal distribution of units*

Source: Main Street New London, BBPC 2008



Office Market Construction Activity

As shown in Table 4-26 and Figure 4-26, office development activity was relatively low at the regional level as of third quarter 2008, and modest in submarkets surrounding the City of New London. Key observations regarding regional office development include:

- Approximately 273,609 square feet was under construction in the Hartford regional office market
- Construction in New London County accounted for 15 percent (41,000 square feet) of the total regional office construction
- The 41,000 square feet under construction in New London County represents a 0.7 percent increase in the total inventory and a 0.8 percent increase in the occupied inventory for the county
- New London County market was the fourth most active market out of the 16 markets
- However, only nine of the office markets had active construction in the third quarter
- 87 percent of all projects under construction were Class B; the remaining 13 percent was Class A

As displayed below in Figure 4-27, construction activity in the Hartford regional office market has dropped significantly over the last 25 years. The highest activity was seen between 1984 and 1990 where the average annual square feet delivered was 2.2 million. The lowest point in delivered square feet was between 1994 and 1997 where the annual average was approximately 100,000 square feet. From 2000 to 2008 the average annual delivery of office space rose slightly to 480,000 square feet. The largest projects underway at the end of the third quarter 2008 were less than 50,000 square feet.

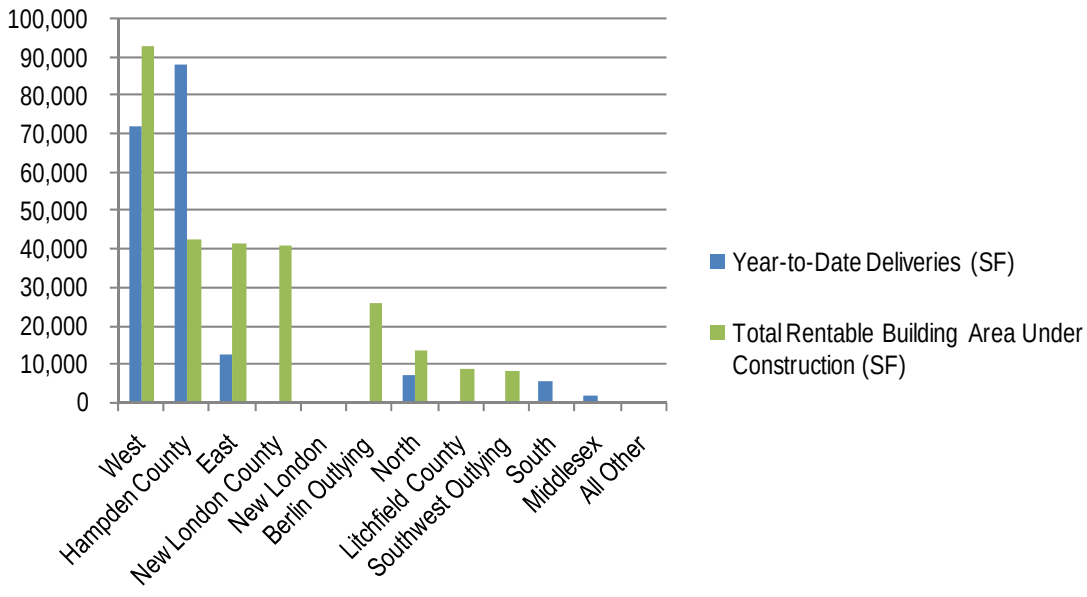
Table 4-26: Hartford Regional Office Markets Year-to-Date Developments, Third Quarter 2008

Market	Year-to-Date Deliveries (SF)	% Occupied	Total Rentable Building Area Under Construction (SF)	% Preleased	Delivered and Under Construction	% of Hartford Market
West Hartford	72,000	83%	93,256	49.6%	165,256	35.9%
Hampden County (MA)	88,000	50%	42,685	76.5%	130,685	28.4%
East Hartford	12,150	100%	41,383	100.0%	53,533	11.6%
New London County	0	-	41,000 (1/)	52.5%	41,000	8.9%
New London Submarket	*0*	-	*0*	-	*0*	*0.0%*
Downtown New London	*0*	-	*0*	-	*0*	*0.0%*
Berlin Outlying	0	-	25,680	48.0%	25,680	5.6%
North	7,000	60%	13,200	100.0%	20,200	4.4%
Litchfield County	0	-	8,500	29.0%	8,500	1.8%
Southwest Outlying	0	-	7,904	100.0%	7,904	1.7%
South	5,500	81%	0	-	5,500	1.2%
Middlesex	1,632	100%	0	-	1,632	0.4%
All Other	0	-	0	0.0%	0	0.0%
Total Hartford Regional Market	186,282		273,608		459,890	100.0%

Source: CoStar, Main Street New London, BBPC 2008

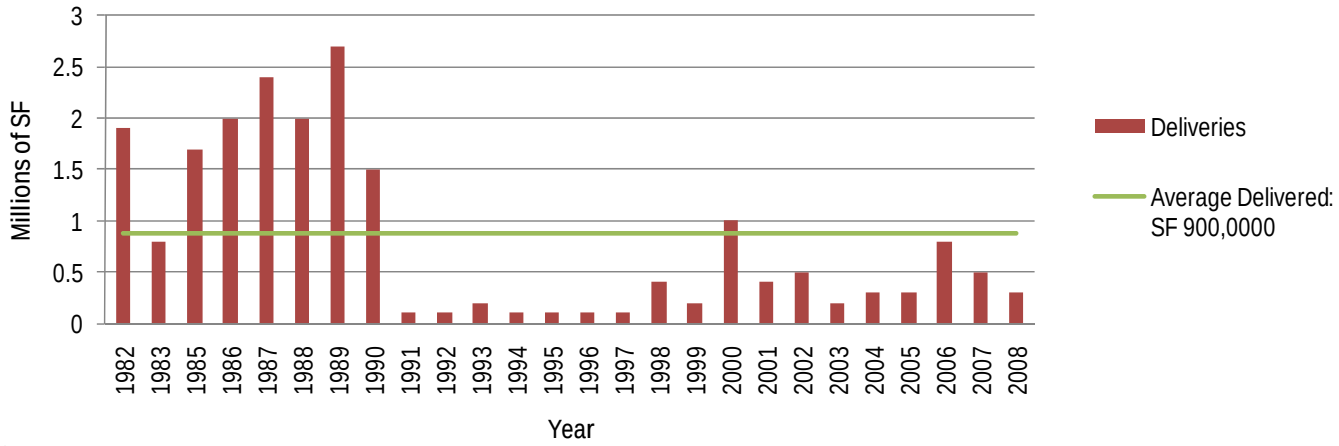
1/ Includes three Class B office developments: 80 Norwich New London Tpke, 26,000 SF, delivered fourth quarter 2008; 2 Huntley Road, 8,000 SF, delivered fourth quarter 2008; and 279 Boston Post Rd, 7,000 SF delivered second quarter 2009.

Figure 4-26: Hartford Regional Office Markets Year-to-Date Developments, Third Quarter 2008



Source: CoStar, BBPC 2008

Figure 4-27: Hartford Regional Office Market Historical Deliveries



Source: CoStar, BBPC 2008

Office Market Sources of Demand

Employment growth in office-based industries – through both recruitment of new firms as well as expansion of existing firms – generally drives opportunities for the development of new office space. Office demand was evaluated at the subregional job growth level (New London County).

The greatest source of new office growth is in the underlying regional strength in bioscience and healthcare, technology, defense, and maritime industries. The major employers in these industries are Pfizer's global research and development headquarters[26] (split between two facilities -- one in New London and the other in Groton), the Naval Submarine Base and General Dynamics Electric Boat (both in Groton), the Coast Guard Academy, cruise lines and deep water pier (all three in New London). These existing firms/industries attract smaller firms and start-up firms. These companies find that by locating near Pfizer and the other businesses listed above they can increase their chance of getting subcontracts and other types of spin-off business.

Office Space Preferences of Target Tenants

Potential tenants will be attracted to the business benefits derived from locating in a region with strength in bioscience, technology, defense and maritime industries and the emerging amenities (retail and residential choices, water views, and growing cultural class) in downtown New London.

As identified in the employee growth projections. The largest demand for office space is from the office based services. Typically, these types of businesses occupy smaller office suites and price and demanded amenities will vary with experience and firm size. For example, a start-up architectural firm with few employees may seek an office suite with no more than 950 square feet. However, this same architectural firm may trade $/SF to be in a renovated historical space with water views.

Of course, new and expanding employers will not come automatically to the downtown area. The downtown area must offer an environment attractive to new firms interested in relocating or existing firms ready to expand. Preferences in terms of property type, size, land area and other characteristics can vary

[26] As noted earlier, Pfizer recently announcing it is leaving its New London facility and consolidating its regional operations in Groton.

by industry. In New London, a variety of industries occupy office space, but key growth industries in the area include:

- Healthcare and pharmaceutical companies- both existing and start-up
- Information technology based businesses
- Defense industry firms
- Service firms- including finance, professional/technical services and law firms

These industries share many preferences, foremost of which are the desire to locate near a highly educated local workforce and to locate within clusters of industries offering similar products and services. Key building and environmental features demanded by these industries include:

- Green buildings (including LEED certified) – attractive for a variety of reasons, including enhancement of corporate image (in fact, many corporations are now requiring new buildings to be LEED certified), economic savings, healthy workplace, and environmental responsibility. Features may include:
    - Accessibility to alternative modes of transportation (bus, train, bikeways)
    - Green roofs
    - Passive heating and cooling
    - Pervious materials for parking lots
    - Efficient water systems
    - Enhanced indoor environmental quality
    - Non-toxic and sustainable materials
    - Reuse of materials (including historic properties)
- Location within mixed-use environments – offering workers the chance to walk to retail shops and restaurants and various housing options
- Location near cultural and recreational offerings
- Creative and inspiring architecture (including rehabilitated historic spaces as well as state-of-the-art new spaces)
- Access to regional transportation
- Residential offerings to accommodate executives seeking apartments close to the office
- For emerging pharmaceutical and information technology companies, flexible space configurations are popular (which allow initial occupancy of smaller spaces in the range of 2,500 to 5,000 square feet, with potential to expand into larger spaces if rapid company growth occurs)
- For start-up firms, affordable rents are important

The downtown area offers potential to build a more attractive environment to appeal to firms in these key growth industries. Individual developers can play an important role in this enhancement by renovating existing multistory buildings in the downtown. Renovating Class C space into Class B space will help to provide appropriate space for start-up firms that cannot afford high rents. Also building high-quality, green buildings that feature retail and even residential uses in addition to modern office space will help to encourage a mix of activities in the downtown. Public sector actions can also improve the area's appeal by codifying, as appropriate, building, parking and streetscape requirements that will optimize the area's aesthetic potential.

4.3.4. Retail Market Conditions

This analysis examines the existing level of retail market action in downtown New London and New London County and the various sources of market area sales and will project future expenditures of target market sources (e.g. downtown and local households within a defined market area, downtown employees, tourists, and "other" {passengers starting or ending their trips at the RITC and college students}).

Overview

Downtown New London has a variety of retail shops, many of which are locally owned. For example, Flavours of Life, commonly called the Fair Trade Store, is owned by former Pfizer employees. Downtown is characterized by locally-owned, niche retailers and restaurateurs. Regionally, southeastern Connecticut has a large tourist draw with a variety of local, regional and national retailers in the surrounding cities (e.g. Mystic, Niantic and Waterford as well as the casino resorts). Establishing New London as more of a regional retail destination is contingent on creating a cluster of shops which are unique to New London. However, in order to support downtown residential and office workers, convenience goods and restaurants must be available in downtown. These residents and employees will in turn support available retail.

Opportunities for retail development in downtown New London will primarily derive from the demand generated by downtown and local residents and tourists. Other retail opportunities are created by residents and employees, day-trippers arriving by car, train, ferry and bus, college students and potential retail activity occurring in regional markets.

State Street and Bank Street have the highest concentration of restaurant and entertainment uses in the downtown area. Popular restaurants like the Buckley House, Lucca's, Muddy Waters, and Zavala attract workers to happy hour from the commercial cluster near Fort Trumbull, college students, and downtown residents and workers. Annual events such as Sailfest and Fish Tales, Tugs and Sails bring activity to the downtown and draw attendance from the greater southeastern Connecticut region.

Retail Market Areas and Conditions

The retail market areas surrounding the downtown are defined by the same boundaries delineated for the surrounding office real estate market. The Hartford regional market contains the New London County market and the New London submarket. The market boundaries for each product type (retail and office) are the same because geographic retail clusters are often located near residential populations to minimize distance from customers and workers. These market boundaries are shown below in Figure 4-28.

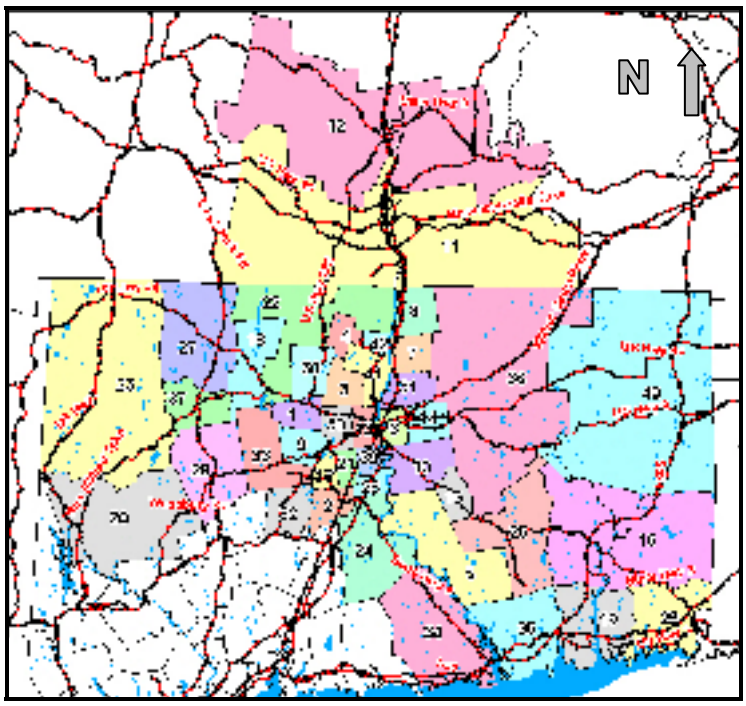
Current conditions and trends at the regional and submarket levels have been evaluated and compared to help assess downtown New London's market position for future retail growth. Retail space data is provided for the New London submarket (which includes the City of New London and the immediately surrounding cities). The New London Retail submarket is shown in Figure 4-29.

Key Observations

New London County is a major player in the regional retail market. One third of the regional retail inventory is located in the county. Table 4-27 is a snapshot of the retail market conditions. Retail markets surrounding and within the City of Hartford also carry large percentages of the total regional inventory. Historically, southeastern Connecticut has been a tourist destination and continues to be one today. Within the state, southeastern Connecticut has the greatest positive impact on state and local revenues generated

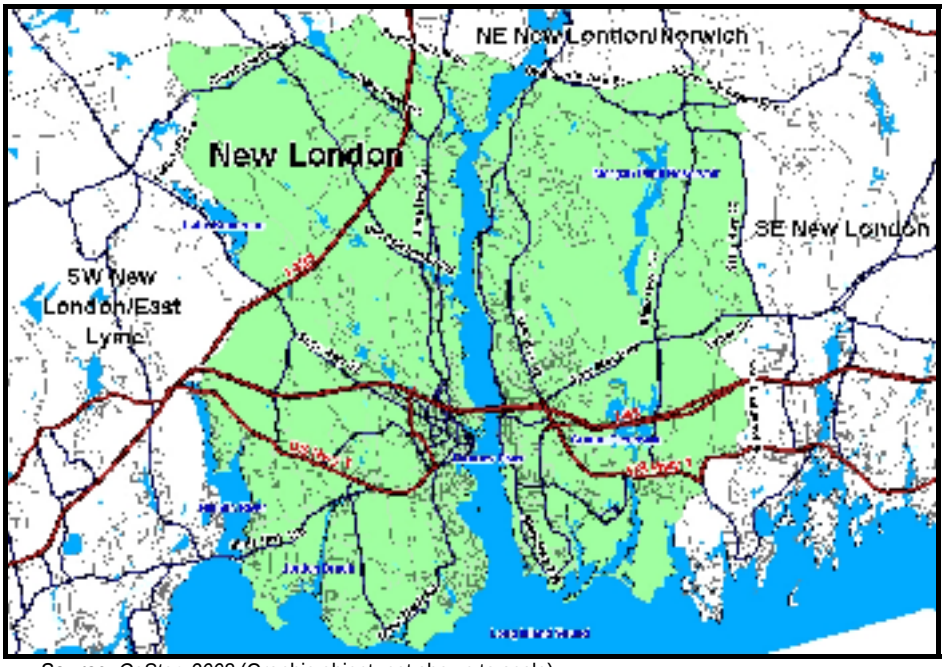
Figure 4-28: Hartford Regional Retail Market and Submarkets

Source: CoStar, 2008 (Graphic object, not shown to scale)



Submarket Name	#	Submarket Name	#
Avon	1	NW Outlying	22
Berlin Outlying	2	NW Litchfield County	23
Bloomfield	3	NW Middlesex/Middleton	24
E Granby	4	NW New London/Colchester	25
E Hampton/E Haddam	5	Rocky Hill	26
E Hartford	6	Rt 8/Winsted	27
E Windsor	7	SE Litchfield County	28
Enfield	8	SE New London	29
Farmington	9	Simsbury	30
Glastonbury	10	S Windsor	31
Hampden Co (MA)	11	Southington	32
Hampshire Co (MA)	12	SW Outlying	33
Hartford City	13	SW Midlsx/Old Saybrk/Rt 9	34
Manchester	14	SW New London/E Lyme	35
Marlborough Outlying	15	Tolland Co	36
NE New London/Norwich	16	Torrington	37
New Britain	17	W Hartford	38
New Hartford/NE Litchfield	18	Wethersfield	39
New London	19	Windham Co	40
New Milford/SW Litchfield	20	Windsor	41
Newington	21	Windsor Locks	42

Figure 4-29: New London Retail Submarket



Source: CoStar, 2008 (Graphic object, not shown to scale)

from tourism. For this reason and others, New London County has a considerable number of retail establishments.

- 13 percent (1,422 square feet) of the total Hartford regional market inventory is in New London County
- The New London County market and the New London submarket have vacancy rates slightly higher than the regional average (7.2 percent and 7 percent respectively)
- Downtown New London's vacancy rate (37%) is 5 times higher than the surrounding geographies
- After the Hampden County, MA market, New London County has the largest inventory of retail space
- Approximately 40 percent of the total 2008 delivered space and projects under-construction in the Hartford regional market is in New London County; downtown New London has 8,235 square feet under construction
- Markets with vacancy rates under 6 percent surround the City of Hartford (Hampden Co. (MA), Hampshire Co. (MA), Hartford City, Marlborough Co., North, Northwest Outlying, Southwest Outlying, and West)
- 25 percent ($351.6 million) of the total State tourism revenue ($1.4 billion) in 2001 was generated in southeastern Connecticut; this is $168.7 million higher than the next highest tourism region (Greater Hartford)
- Within the New London County submarket, there are many destinations for travelers seeking art, theater, historical sites and museums

Table 4-27: Retail Market Snapshot, Third Quarter 2008

Market	Existing Inventory		Vacancy		YTD Delivered Inventory	Under Construction (SF)	Rate
	# of Buildings	Total Rentable Area (SF)	Vacant SF	Vacancy %			
Downtown New London	156	387,610	141,750	37%	0	8,235 (1/)	$4.50-$12 (2/)
New London Submarket	796	7,176,558	505,466	7%	20,850 (3/)	72,135 (4/)	$12.31
New London County	1,422	15,553,606	1,118,957	7.2%	20,850	1,297,401 (5/)	$12.85
Hartford Region	10,808	127,440,013	8,157,529	6.4	474,418	2,729,612	$13.76

1/ 174 Bank Street 5,235 SF and 74 Bank Street 3,000 SF retail space under construction
2/ Rate depends on lease structure and payment of utilities and other expenses
3/ 698 Bank Street 14,550 SF and 989 Poquonock Road 6,300 SF delivered in the second quarter of 2008
4/ Includes downtown construction plus projects in the City of New London area
5/ Includes all construction projects above plus projects in New London County

Source: CoStar, 2008, Main Street Downtown Inventory, 2008 and U.S. Properties, 2008

Inventory

The Hartford regional retail market has approximately 127.5 million square feet of retail space. Of this, 12.5 percent is located in New London County, 5.6 percent is in the New London submarket, and 0.3 percent is in downtown New London. New London County is the second largest player in the Hartford regional market (Hampden County, MA, is first with 18.8 percent of the total square footage).

The Hartford region hosts a broad mix of retail development product types, as shown in Table 4-28, ranging from traditional malls to more recently constructed general retail centers, but recently delivered space is focused primarily on development of power centers and shopping centers.

As these development types gain in popularity, the traditional shopping mall format is losing popularity. Power centers typically consist of several freestanding (unconnected) anchors and only a minimum amount of small specialty tenants. Shopping center is the combined retail type of community center (generally has 2-3 anchor tenants, but not department stores; the typical anchor is a grocery or large drug store), neighborhood center (provides for the sale of convenience goods and personal services for the day-to-day living needs of the immediate neighborhood) and strip center (attached row of stores or service outlets managed as a coherent entity with on-site parking usually located in front of the stores).

Currently, the largest percentage (55 percent) of the Hartford regional inventory is occupied by general retail. General retail examples are typically single tenant, general purpose commercial buildings with parking. The second most frequent type of retail structure is the shopping center with 32 percent of the total regional inventory. In New London County, 1.3 million square feet of retail space was either recently delivered or under-construction (product types include general retail, power center, and shopping center). As of third quarter 2008, the New London submarket has 92,985 square feet of recently delivered or under-construction retail space (product types include general retail and shopping center). The distribution is presented in Table 4-28.

Table 4-28: Retail Inventory by Product Type, Third Quarter 2008

	Hartford Regional Market				New London County				New London Submarket			
	# of Ctrs	Total RBA	Distribut-ion	Vacancy %	# of Ctrs	Total RBA	Distribut-ion	Vacancy %	# of Ctrs	Total RBA	Distribut-ion	Vacancy%
General Retail	9,312	70,067,803	55%	6%	1,286	9,154,820	59%	7%	434	3,821,646	53%	23%
Mall	12	9,654,819	8%	2%	1	770,000	5%	40%	1	770,000	11%	40%
Power Center	14	4,730,872	4%	4%	2	784,800	5%	4%	1	284,800	4%	3%
Shopping Center	940	41,390,654	32%	8%	100	4,696,210	30%	10%	39	2,275,219	32%	7%
Specialty Center	11	1,595,865	1%	11%	2	147,776	1%	0%	1	24,893	0%	0%
Total	10,808	127,440,013	100%	6%	1,422	15,553,606	100%	7%	476	7,176,558	100%	7%

Source: CoStar, BBPC

4.3.5. Analysis of the Existing Downtown Retail Mix

Downtown Boundaries

As shown in the demographic section, New London downtown's northern boundary runs along Federal Street and up approximately to the corner of Hallum and Water Streets. The eastern and southern downtown perimeters follow the edge of the waterfront. Union Station is situated in the center of the downtown's eastern boundary on the waterfront. The downtown's western boundary is Huntington and Reed Streets, not including the primarily residential blocks between Reed and Starr Streets northwest of Blinman Street.

Downtown Businesses by Type

Based on visual inspection, interviews with downtown business owners and a survey completed by Main Street New London, downtown New London has a total of 89 different occupied retail businesses. Retail trade has the highest number of establishments with 75 businesses, or 48 percent of the total establishments. This is followed by services (personal, business, amusement and recreation) with 14 establishments, or 9 percent of the total number of establishments. In addition there are 67 vacant stores in the downtown constituting 43 percent of the total retail establishments in downtown New London. Table 4-29 summarizes the retail space by type of business and number of establishments for downtown New London as of November 2008 and Figure 4-30 shows them by type in a pie chart.

Eating and drinking places/clubs constitutes the most numerous type of business in downtown New London with 28 establishments. Nightlife is growing in downtown[27]. Also, increasing numbers of ethnic restaurants are opening[28]. Eating and drinking places are followed by miscellaneous retail (liquor stores, gifts, florists and newsstands) with 14 establishments. Art galleries/studios are close behind miscellaneous retail with

[27] Interview with Susan Howard, U.S. Properties, Inc. on October 7, 2008.
[28] Karin Crompton and Kevin Dale, The Day Newspaper, "No Shortage of Ideas to Fill the Vacancies", published on 9/2/2008.

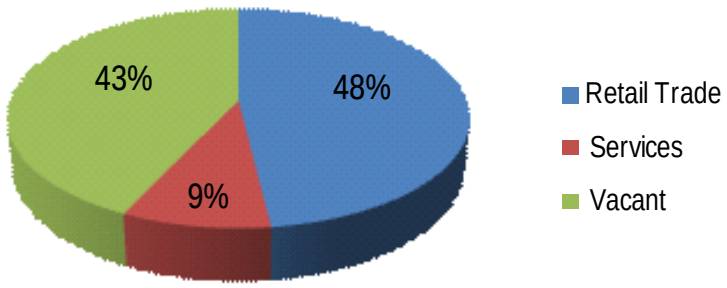
Table 4-29: Downtown New London Retail Space by Store Type and Square Footage November 2008

	# of Establishments	% Distribution	Gross (SF)*	% Distribution	Avg. (SF)	Range/Size
Retail Trade						
Eating & Drinking Places/Clubs	28	18%	60,188	16%	2,150	462-7,023
Apparel & Accessory Stores	9	6%	20,651	5%	2,295	950-6,720
Art Galleries/Studios	13	8%	47,892	12%	3,684	810-17,701
Home Furnishing/Electronics	7	4%	39,603	10%	5,658	1,540-16,642
Food & Drink Stores	4	3%	6,759	2%	1,690	1,278-2,381
Miscellaneous Retail	14	9%	43,449	11%	3,104	705-9,454
Sub-total	75	48%	218,542	56%	2,914	462-17,701
Services						
Personal Services	8	5%	13,377	3%	1,672	680-3,540
Business Services	3	2%	8,020	2%	2,673	1,108-5,092
Amusement & Recreation Services	3	2%	5,921	2%	1,974	950-3,521
Sub-Total	14	9%	27,318	7%	1,951	680-5,092
TOTAL OCCUPIED SPACE	89	57%	245,860	63%	2,763	462-17,701
TOTAL VACANT SPACE	67	43%	141,750	37%	2,116	264-10,767
TOTAL	156	100%	387,610	100%	2,485	264-17,701

**Assuming equal distribution of units*

Source: Main Street New London, BBPC, 2008

Figure 4-30: Downtown Retail Space by Type (Based on Number of Units)



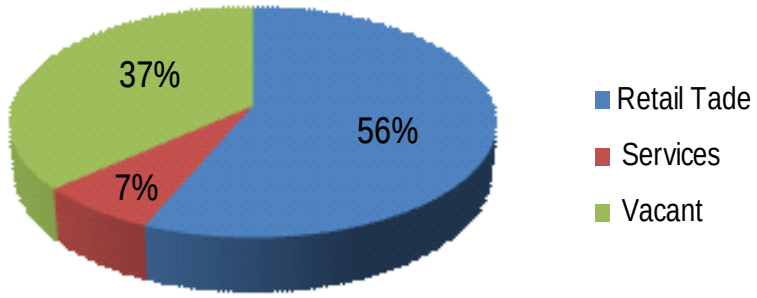
Source: Main Street New London, BBPC, 2008

13 establishments. New London has created an art niche. Weekend art events draw large crowds to downtown New London and galleries such as the Hygienic Art Gallery showcases regional, national and international art.

Downtown Business by Type by Square Feet

Downtown New London has approximately 387,610 square feet of retail space, with a vacancy rate of 37 percent as of November 2008. The total occupied space is 245,860 square feet. The mix is comprised of primary uses – retail trade and services. As with the number of establishments, eating and drinking places/clubs occupy the most space, a total of 60,188 square feet. This is followed by art galleries/studios with 47,892 square feet and then miscellaneous retail with 43,449 square feet. Furnishing and electronics occupy 10 percent of the total (39,603 square feet). All together, services (personal, business, amusement and recreation) occupy 7 percent of the total space at 27,318 square feet. This is shown in Figure 4-31.

Figure 4-31: Downtown Retail Space by Type (Based on Occupied Square Feet)



Source: Main Street New London, BBPC, 2008

Downtown Vacancy

Vacant store fronts are pervasive in downtown. Approximately 43 percent of the total downtown retail units are vacant (67 units) and 37 percent of the total square footage (141,750 square feet) is vacant. People cited in a recent newspaper article reasons as to why downtown has a persistent problem with vacancies. The reasons include: [29]

- Perceived lack of parking
- Bureaucratic red tape
- Aging, odd shaped buildings
- Low pedestrian and vehicular traffic

However, beyond the perceived problems within downtown looms a large source of competition. The suburban malls in surrounding communities have millions of square feet and lots of parking to lure retailers. For example, "after the one million square foot Crystal Mall opened three miles from downtown in 1984, downtown vacancies skyrocketed to nearly 500,000 square feet."[30]

[29] Karin Crompton and Kevin Dale, The Day Newspaper, "No Shortage of Ideas to Fill the Vacancies", published on 9/2/2008.
[30] Karin Crompton and Kevin Dale, The Day Newspaper, "Chain Retail for New London Just a Pipe Dream, Brokers Say", published on 9/1/2008.

An analysis of the downtown New London market by floor level finds that the vast majority of vacancies exist on the first floor, most likely because most of the downtown retail space is on the first floor. First floor retail vacancies account for 50 percent of all downtown vacancies. The distribution is presented in Table 4-30.

Table 4-30: Downtown New London Retail Vacancies by Floor

Floor	No. of Vacant Units	% of Total Retail Vacancies	% of Total Downtown Vacancies
Floor 1	60	90%	50%
Floor 2	5	7%	4%
Floor 3	2	3%	2%
Floor 4	0	0%	0%
Floor 5	0	0%	0%
Sub-Total	67	100%	56%

Source: Main Street New London, BBPC, 2008

Out of the 60 vacant first floor units, there are ten properties which have over 4,000 square feet vacant. These properties are listed in Table 4-31. Together the selected properties are 13 percent of the total retail space and 36 percent of the total vacant retail space.

Table 4-31: Selected Downtown Retail Vacant Space

Address	Square Feet Vacant on First Floor
18 Bank Street	10,704
224A Bank Street	6,510
224D Bank Street	4,836
239 Bank Street	5,584
29 Golden Street	4,862
118B State Street	4,370
128-138A State Street	4,184
253 State Street	4,040
281B State Street	5,888
Total	50,978

Source: Main Street New London, BBPC, 2008

Downtown New London's retail inventory is characterized by locally owned retailers with the highest percentage of businesses in food services. At the same time, downtown has a vacancy rate of 37 percent and local real estate professionals indicated a high turnover rate in retail businesses. The vacancies are distributed among many buildings, and site visits and research revealed that many of the vacant spaces are along Bank and State Streets, where the largest number of retail sites are located. The suburban malls and other retail centers in surrounding communities serve as competition for existing retailers and for attracting new retailers. At the same time, there is a growing population in the downtown and as this population increases, the existing retail stores will increase their sales and new stores will open.

Retail Market Construction Activity

Construction and delivery data for third quarter 2008 showed that almost half (41 percent) of the projects in the Hartford regional market are in New London County. A total of 69 percent of the total 1,336,701 square feet in New London County is pre-leased; this leaves 31 percent (or 414,377 square feet) yet to be leased. Year-to-date developments are presented in tabular form in Table 4-32 and in a bar chart in Figure 4-32.

Downtown New London offers retail businesses unique, historic spaces at lower rents than the larger geographies. Downtown New London is not a large player in the regional market (less than 1 percent of the regional market) or county market (2.5 percent of the total county market). However, the retail market is strong in New London County and this strength can boost retail opportunities in downtown New London.

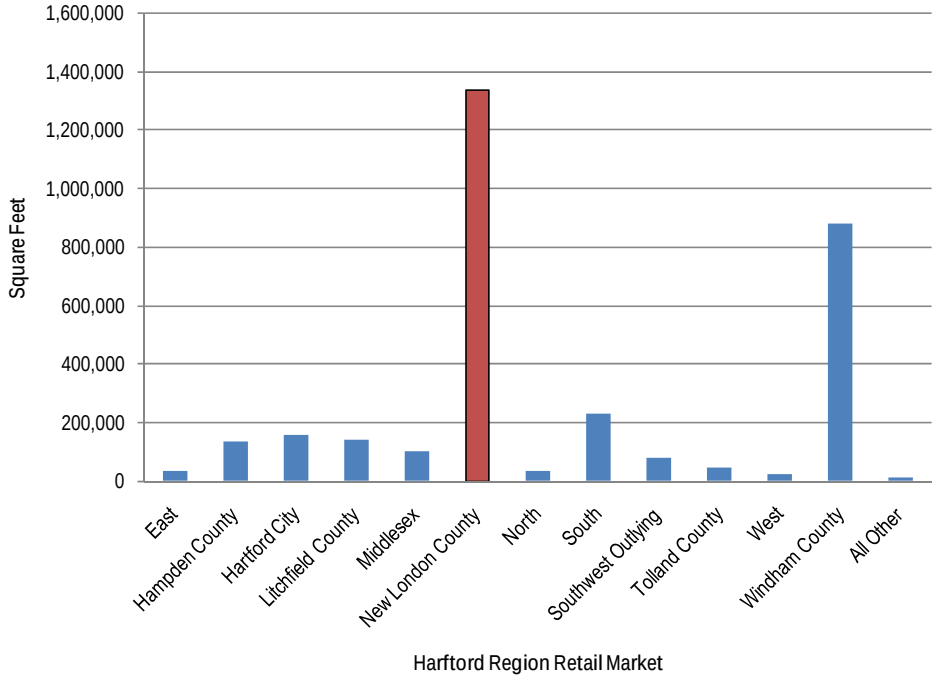
Table 4-32: Hartford Regional Retail Markets Year-to-Date Developments Third Quarter 2008

Market	Year-to-Date Deliveries (SF)	Total Rentable Building Area Under Construction (SF)	Pre-leased %	Delivered and Under Construction	% of Hartford Market
East	15,983	16,731	100%	32,714	1%
Hampden County (MA)	131,840	5,500	100%	137,340	4%
Hartford City	0	158,000	51%	158,000	5%
Litchfield County	65,080	73,044	32%	138,124	4%
Middlesex	29,820	73,704	47%	103,524	3%
New London County (1/)	26,218	1,310,483	69%	1,336,701	41%
New London Submarket	*20,850*	*63,900*	-	*84,750*	*3%*
North	0	32,510	78%	32,510	1%
South	95,802	134,276	14%	230,078	7%
Southwest Outlying	0	78,372	95%	78,372	2%
Tolland County	45,000	0	-	45,000	1%
West	23,147	0	-	23,147	1%
Windham County	41,528	838,024	75%	879,552	27%
All Other	-	8,968	100%	8,968	1%
Total Hartford Market	495,268	2,784,544		3,279,812	100.0%

1/ Includes two retail developments delivered and four under construction: 698 Bank Street , 14,550 square feet delivered second quarter 2008; 989 Poquonock Road, 6,300 square feet, delivered second quarter 2008; Liberty Crossing Shopping Center, 880,000 square feet; Crossing at Lisbon, 319,166 square feet; Waterford Crossing Bldg. 2, 55,000 square feet; and Keystone Shoppes, 35,000 square feet

Source: CoStar and BBPC 2008

Figure 4-32: Hartford Regional Market Retail Space Delivered and/or Under-Construction, Third Quarter 2008



Source: CoStar and BBPC 2008

Retail Market Sources of Demand

In order to project new retail expenditures in downtown New London, sources of potential sales and the amount of potential sales must be determined. Retail sales in New London are derived from both demand within the community and outside the community. Sources that drive retail demand range from office workers needing a place to eat on their lunch break to tourists looking for gifts to bring home. The major sources of retail demand for the downtown New London market are households residing in the downtown and a defined subregional market area, downtown employees, tourists and others. Others consist of households residing outside the subregional trade area, and specialized market sectors such as: public transportation users, college students, business to business sales, and internet sales.

These market sources spend a percentage of their household income on retail purchases. Downtown New London currently captures a share of their expenditures. Expansion of selected market sources such as downtown residents and employees and increased capture rates of sectors would enhance retail sales. In order to determine ten year potential future demand (expenditures by market sources) and the future square footage needed to support this demand, the current (2008) sales made by these market sources in the downtown must be determined. Downtown's future ability to capture this potential will be applied to future (2018) retail expenditures and downtown's capture of expenditures by market source are in turn converted to supportable square feet by using sales per square foot data for the retail businesses in downtown New London.

Downtown New London Sources of Market Demand

Interviews with downtown merchants, field visits to the downtown, and retail industry research suggest that downtown retailers as a whole derive their sales from five segments:

- Households in the downtown
- Households in a defined subregion
- Employees in the downtown
- Tourists
- Other
    - College Students
    - Public transportation passengers
    - Internet sales
    - Business to business

Downtown Residential Household Retail Expenditures

Based on data from ESRI, site visits and interviews, it has been determined that there are a total of 421 households in downtown. In 2008, these downtown households spent $21.6 million annually on retail goods and services. These sales represent purchases made within and outside the downtown. Table 4-33 shows the expenditure by retail good for the downtown households. Downtown New London has the potential to capture a portion of this household demand.

Table 4-33: Existing Downtown New London Household Retail Expenditures, 2008

Retail Industry	Total Retail Expenditures
Food & beverage stores	$1,221,930
Health & personal care stores	$1,856,900
Food services & drinking places	$10,579,415
Furniture, home furnishings & electronics	$289,346
Art galleries	$1,811,460
Clothing & shoes	$1,950,770
Sporting goods, hobby & music stores	$2,448,249
Misc. store retailers	$1,523,258
Total	$21,681,328

Source: BBPC , ESRI

Downtown Office Workers Retail Expenditures

The International Council of Shopping Centers (ICSC) developed a study called *Office Worker Retail Spending* Patterns that found 59 percent of downtown office workers make purchases in retail stores near the workplace. The highest percentage (44 percent) of workers made grocery purchases. The total distribution is presented in Table 4-34. The ICSC also found the average amount spent on downtown retail purchases and the distribution by merchandise category.

Table 4-34: Typical Downtown Retail Purchases Made By Downtown Office Workers

Merchandise Category	% of Workers
Groceries	44%
Snacks/Incidentals	35%
Personal Care/Drug	31%
Apparel/Accessories	25%
Home Items	24%
Gifts/Cards	22%
Sports/Toys/Electronics	20%
Newspapers/Magazines	14%
Cosmetics/Perfume	8%
Total % Made a Purchase	59%

Source: International Council of Shopping Centers, Office Worker Retail Spending Patterns, 2004

To determine total retail expenditures made by workers in downtown New London, the average annual expenditures per employee on retail goods from the ICSC study were distributed across four retail categories: food and beverage stores, health and personal care stores, food services and drinking places, and mall type purchases. This was multiplied by the actual number of office employees (1,085 in the downtown) and the percent actually making a purchase (59 percent in the downtown). Table 4-35 shows the total downtown employee retail expenditures. Downtown New London captures a portion of the $4.5 million in retail expenditures.

Table 4-35: Downtown New London Employee Total Retail Expenditures, 2008

Downtown Employees 1,085	Annual Employee Expenditures	Total Retail Expenditures
Food & beverage stores	$1,534	$972,388
Health & personal care stores	$742	$470,510
Food services & drinking places	$2,029	$1,286,061
Mall-type merchandise	$2,821	$1,787,939
Total/Average	$7,126	$4,561,709

Mall-type merchandise includes furniture and home furnishings, electronics, clothing and shoes, sporting goods, hobby and music stores, art galleries, and misc. store retailers
Annual expenditures per employee were derived by multiplying weekly expenditures by 49 to adjust for holiday and vacation days

Source: ESRI, BBPC

Subregional Household Retail Expenditures

Subregional households are included as a market source because they make expenditures within the downtown. The households included in the subregion are located in the city and within a defined trade area. Within the subregion there were 61,419 households in 2008.

A trade area is the geographic area from which the preponderance of a retail establishment's residential customer base originates. Trade areas differ based on the type of products offered at the retail establishment. For example, the trade area for a good such as milk is typically smaller than the trade area for furniture or apparel. The distance a consumer will travel to buy a gallon of milk is significantly shorter than the travel distance tolerated to buy a new sofa. Another factor affecting the trade areas for goods is comparison shopping. To purchase a gallon of milk, one does not need to compare brands or stores. To purchase a piece of furniture, consumers are willing to travel further distances to compare various merchandise.

Trade areas are also impacted by competitive retail destinations. A shopping district with little nearby competition will have a much larger trade area than a shopping district with significant regional goods competition.

These factors, as well as several others, impact the designation of trade areas for downtown New London. These factors include:

- Types of retail and services offered/retail niche
- Travel times to and from the downtown
- Location of competitive facilities
- Merchants' and shoppers' input (ascertained through interviews and surveys)

The subregional residential market trade area is generally a 20-minute drive time extending from Union Station. The market area is based on the location of competitive retail businesses and the average time people are willing to drive to a retail center such as downtown New London. The region excludes the major retail center in Norwich. As shown in Figure 4-33, this market area extends north on I-395 just past the intersections with State Highway 82 south of Norwich, CT; goes east on I-95 just past the Rhode Island Border; is bordered by the Long Island Sound to the south; and extends west on I-95 to Old Saybrook.

Within the subregion there are 61,419 households, and these households spend an annual $1.3 billion on retail goods and services. Table 4-36 shows the total retail expenditures in the subregion and the retail expenditures by retail industry.

Tourists[31]

The tourist retail market is defined as visitors to the southeastern Connecticut region. Within Connecticut, the southeastern region generates the highest revenues for both the state and local economies. A large percentage of tourists going to the casino resorts and area leisure activities, both in and around New London, pass through New London either by way of car, ferry, bus or train. In 2001, tourists to southeastern Connecticut spent $595.4 million. While much of the tourism expenditures are made in the casino resorts

[31] The tourism data in this report may be updated as new data on tourists in southeastern Connecticut becomes available.

Figure 4-33: Subregional Market Trade Area

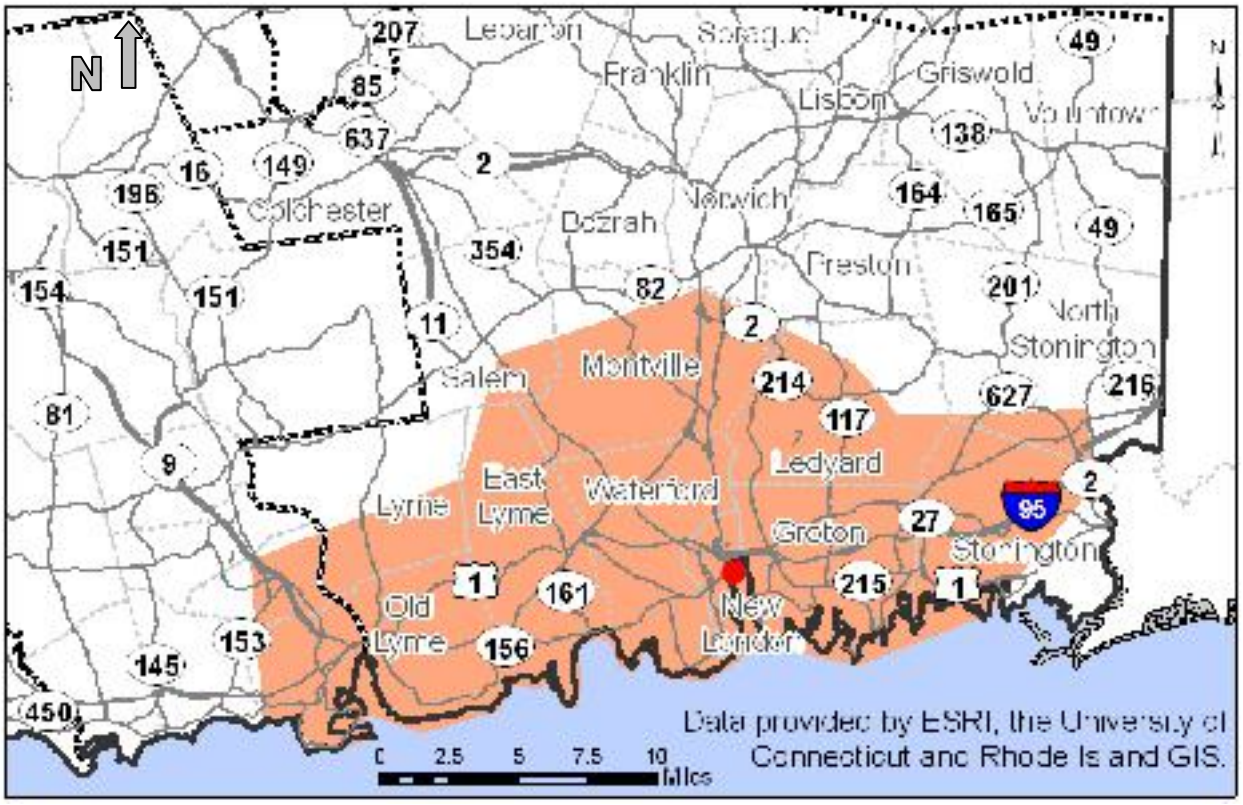


Table 4-36: Existing Subregional Household Retail Expenditures, 2008

Retail Industry	Total Retail Expenditures
Food & beverage stores	$302,364,501
Health & personal care stores	$78,355,138
Food services & drinking places	$277,203,776
Furniture, home furnishings & electronics	$111,132,787
Art galleries	$185,383,333
Clothing & shoes	$118,378,379
Sporting goods, hobby & music stores	$51,681,098
Misc. store retailers	$190,055,021
Total	$1,314,554,033

Source: BBPC , ESRI

(44 percent of total expenditures in 2001 were for casino gambling expenditures), downtown has the potential to capture a share of the remaining expenditures.

The fastest growing industry in southeastern Connecticut is currently tourism. [32] Over 30,000 people are employed in the tourism industry and that number is expected to grow. [33] A total of 25 percent ($351.6 million) of the total state tourism revenue ($1,405.0 million) in 2001 was generated in southeastern Connecticut; this is $168.7 million higher than the next highest tourism region (Greater Hartford).

Daytrip Market and Overnight Market[34]

The visitors to the southeastern Connecticut area, and therefore New London, are divided into two markets: the daytrip market and the overnight market. The daytrip market is typically comprised of travelers from a two-hour drive of the destination. An identifying characteristic of this market is the propensity of repeat trips to destinations. The daytrip market for New London County was extended slightly beyond the two hour radius due to the unique draw of the casino resorts for visitors from New York City and Long Island. The daytrip market is subdivided into three submarkets:

- Primary Daytrip Market – local area residents who reside in New London County
    - Average household income in 2005: $69,036
- Secondary Daytrip Market – residents who live beyond New London County, but within a 2-hour drive of New London
    - Average household income in 2005: $83,317 with 39% earning more and $75,000 annually
- Tertiary Daytrip Market – residents of New York City and Long Island
    - Average household income in 2005: $71,083 with 30% earning less than $25,000 annually

The total daytrip market includes 20.5 million people. The 2005 Southeastern Connecticut Council of Governments (SCCOG) Intermodal Connections Study Southeast projected the daytrip market to increase by 594,641 to a total of 21,062,070 annual daytrip visitors in 2008.

The overnight market is made up of people traveling to or through the region. The 2005 SCCOG study found the following information regarding overnight visitors:

- Travelers staying overnight in commercial establishment (hotels and motels) in the southeastern region are estimated at approximately 2.5 million annually
- Travelers staying at the homes of friends and relatives within the primary and secondary daytrip markets are estimated at approximately 5.8 million annually.
- Travelers passing through the Mystic region en route to:
    - Cape Cod: 1.1 million annually
    - Rhode Island: 1 million annually

The total overnight traveler market is estimated at roughly 11.4 million annually in 2005. The 2005 SCCOG study projected the overnight traveler market to increase to 12.4 million by 2008. As shown in Table 4-37, together, the daytrip and overnight markets were projected to bring 33,500,386 tourists to southeastern Connecticut in 2008.

[32] Southeastern Connecticut Enterprise Region, Industry cluster: Tourism, 2008
[33] ibid.
[34] Much of the information presented in this section is from the 2005 Southeastern Connecticut Council of Governments "Intermodal Connections Study Southeast".

Table 4-37: Southeastern Connecticut Tourists 2003-2008

SE Connecticut Tourists	2003	2008
Daytrip	20,467,429	21,062,070
Overnight	11,395,735	12,438,316
Total	31,865,167	33,500,386
Source: SCCOG 2005 Study		

Proving further evidence to the strength of tourism in southeastern Connecticut is that in 2001, overall state tourism expenditures were highest in the southeast[35]. The region generated $3.4 billion in travel and tourism expenditures; this amount represents 34 percent of the total statewide. Table 4-38 shows the expenditures by tourism district for the state of Connecticut.

Table 4-38: Total Tourism Expenditures by District (million 2001$)

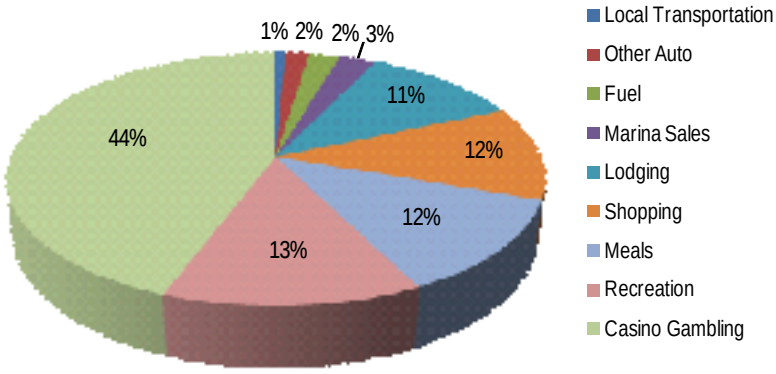
Tourism District	Total Expenditures
Central CT	$256.6
Coastal Fairfield	$743.8
CT River Valley	$1,307.9
Greater Hartford	$1,113.3
Greater New Haven	$1,337.9
Housatonic Valley	$164.3
Litchfield Hills	$334.4
North Central	$310.6
Northeast CT	$362.5
Southeastern CT	$3,398.0
Waterbury Region	$563.1
State Total	$9,892.4
Source: Connecticut Center for Economic Analysis, 2003	

A breakdown of the expenditure by category was completed in the 2005 SCCOG study. The largest percentage of expenditures in southeastern Connecticut went towards casino gambling expenditures. A total of 44 percent ($1.5 billion) of the total expenditures in southeastern Connecticut was allocated to casino gambling expenditures in 2001. Total tourism expenditures in southeastern Connecticut minus casino gambling expenditures in 2001 were $1.9 billion. The distribution of expenditures by category is shown in Figure 4-34.

[35] Connecticut Center for Economic Analysis, University of Connecticut "The 2001 Economic Impact of Connecticut's Travel and Tourism Industry", 2003

Figure 4-34: Southeastern Connecticut Travel & Tourism Expenditures by Category, 2001

(Source: Connecticut Center for Economic Analysis, Southeastern Connecticut Council of Governments)



Tourism Expenditures in SE Connecticut (2001)		
Expenditure Category	2001	Percent
Recreation	$450,300,000	13%
Meals	$413,300,000	12%
Shopping	$406,900,000	12%
Fuel	$75,200,000	2%
Other Auto	$56,000,000	2%
Local Transportation	$23,800,000	1%
Lodging	$379,300,000	11%
Casino Gambling	$1,503,300,000	44%
Marina Sales	$89,800,000	3%
Total	$3,397,900,000	100%

In order to understand the potential meals and shopping retail expenditures made by tourists in southeastern Connecticut during 2001 the total sales on meals and shopping must be adjusted for the impact of casino resorts. In the southeastern Connecticut area casino gambling expenditures represent 44 percent of tourist expenditures. In the state as a whole it represents 21 percent, but in the areas outside of southeastern Connecticut it is only 9.5 percent. In the southeastern Connecticut area, meals and shopping as a percent of total expenditures are both 12 percent; meals and shopping each represent $0.27 for each dollar spent on casino gambling.

Outside of southeastern Connecticut, $0.19 and $0.22 are spent for meals and shopping, respectively, for each dollar spent on casino gambling expenditures. Casino resorts are bringing more people into the area and they are spending proportionately more as whole on meals and shopping than tourists in other districts.

Based on the amount of casino gambling expenditures spent in southeastern Connecticut versus other districts, it is estimated that 78 percent of total tourist expenditures are associated with the casino resorts. Therefore, of the total $3.398 billion of expenditures, $747.5 million were the expenditures made in southeastern Connecticut excluding the casino resorts in 2001. However, of this amount, the amount spent on meals and shopping from the districts outside of southeastern Connecticut should be applied to the expenditures without the casino resorts. Therefore, 19 percent of the $747.5 million is spent on meals ($142 million) and 22 percent is spent on shopping ($165 million). The total tourist retail expenditures for the southeastern region in 2001 were $307 million. This is shown in Table 4-39.

However, to determine the 2008 total expenditures made by tourists in southeastern Connecticut on meals and shopping, the 2001 expenditures need to be increased to reflect the tourism growth in southeastern Connecticut. State revenues collected from slots in southeastern Connecticut increased by 23 percent during the 2001 to 2008 period. This reflects both inflation and real growth in tourism. In order to determine the growth in expenditures on meals and shopping, the 2001 expenditures were increase by 23 percent to reflect the 2008 total expenditures. Based on the adjustment it is estimated that tourists spent approximately $380 million on meals and shopping in 2008.

Table 4-39: Tourist Market Potential

Expenditure Category	Southeastern Connecticut Tourist Expenditures (in millions $2001)	
	Actual	Adjusted to Exclude the Casino Resorts
Total Expenditures	$3,397.90	$747.5
Meals	$413.3	$142
Shopping	$406.9	$165
Total Meals and Shopping	$820.2	$307

Source: Connecticut Center for Economic Analysis, BBPC

Downtown New London has an existing tourism base that can be built upon to capture a larger portion of tourist expenditures. For example, downtown New London has a strong presence in the provision of arts and culture for the region. The Garde Arts Center hosts performances that attract residents living within a 30 minute drive-time from the Center[36]. Performances at the Garde include Broadway series, ballets, musicians, and opera to name just a few. The 2008 season features 81 performances of 48 different events. Another example of downtown's strength in arts and culture is the Hygienic Gallery. The Hygienic Gallery is a long-standing (30 plus years) fine arts venue in downtown that features local, regional, national and international work. More than just a gallery, the Hygienic Arts Cooperative is a six-member Co-op that helps to operate the building and provide affordable residential studios for emerging artists.

New London has a strong presence, but other areas such as Norwich, Stonington, Waterford and Mystic have encouraged arts and tourism as well. Supporting the regional presence in arts and tourism will help to attract tourists from outside the southeastern Connecticut region and by increasing the popularity of the region. Top leisure attractions in New London and the surrounding area are:

- Mystic Aquarium & Institute for Exploration
- Lyman Allyn Museum of Art
- U.S. Coast Guard Museum
- Mystic Seaport
- U.S.S. Nautilus and Submarine Force Museum
- Monte Cristo Cottage (boyhood home of Eugene O'Neill)
- Fort Trumbull
- Garde Arts Center

Other Sources of Market Demand

Other sources of market demand include college students, tourists, public transportation users, the internet and business to business.

[36] Interview with Steve Segal, November 2008

Public Transportation Users

The public transportation market does not have a specific geographic area. However, the market users are defined as the ferry, train and bus passengers either arriving or leaving the RITC in downtown New London. As determined in the survey conducted as a part of this study, 94 percent ferry users, 67 percent of Greyhound bus users, and 69 percent of Amtrak users reported the purpose of their trip was for recreation. Table 4-40 shows the number of passengers by mode in 2008 (a total of 1.8 million).

Table 4-40: Public Transportation Market, 2008

Mode	Mode Description	# of Passengers
Rail	Amtrak (1/)	169,112
	Shoreline East (2/)	3,500
Bus (3/)	Greyhound (4/)	68,000
Maritime	Cross Sound Ferry (5/)	1,400,000
	Fishers Island (6/)	160,000
Total		1,800,612

1/ Amtrak passenger data is FY 2008
2/ Shoreline East is based on 14 riders/weekday
3/ SEAT Bus was not included in the tourists projections because over 50% used the bus to commute to work (New London Intermodal Survey, 2008)
4/ Chamber of Commerce of Eastern Connecticut, Inc. Meeting (9/6/06)
5/ 2008 interviews with Cross Sound Ferry
6/ Chamber of Commerce of Eastern Connecticut, Inc. Meeting (9/6/06)

The survey of RITC users that was conducted as a part of this study asked the passenger participants to indicate their likelihood of visiting downtown if improvements were made. The survey revealed that the public transportation passengers (who generally do not visit downtown businesses now) would be inclined to visit downtown New London if improvements were made (see Table 4-41). Such improvements may include pedestrian friendly linkages in to downtown from the RTIC, more restaurants and retail shops, enhancement of the cultural and entertainment venues and a more walkable streetscape.

Table 4-41: Selected Responses to Intermodal Passenger Survey

Public Transportation Type	Purpose of trip - % Recreation	Ranking of Places of Interest Near RITC (1/)	Visit Downtown New London businesses on this trip	Likelihood of Visiting Downtown if Improved	Most Important Element to Add to Make Downtown New London a Destination
Block Island Ferry	94%	3	82% said none	likely	cultural/entertainment
Greyhound Bus	67%	5	41% said restaurant	very likely	cultural/entertainment
Amtrak Train	69%	4	62% said none	likely	cultural/entertainment
SEAT (2/)	18%	4	-	-	-

1/ Nearby places of interest were ranked on a 1-5 scale; 1 was lowest and 5 was highest
2/ 50.6% of SEAT passengers were commuting to work

Source: New London Intermodal Passenger Survey, TranSystems/FHI, 2008

The results from the survey indicate that the downtown retailers can capture a larger percentage of the potential visitor retail expenditures if improvements are made to the downtown area, particularly in family and cultural/entertainment facilities. A successful branding campaign and public investments to create a more enticing transition between the RTIC and the downtown will also add to the capture of a larger percentage of public transportation passenger retail expenditures.

College Students

A total of three colleges are located in New London. The students at these colleges are a source of demand of retail for in the city. The potential for the downtown to increase its capture of students' retail expenditures is growing as the downtown increases the amount of student oriented stores such as, chic restaurants, clubs, coffee houses and shops. As of fall 2008, there were a total of 3,713 students attending classes in New London. Each college had the following student enrollment numbers:

- Connecticut College: 1,900 students
- Coast Guard Academy: 963 cadets
- Mitchell College: 850 full and part-time students.

College students are generally cost-conscious and therefore will not spend the same amount per capita as young adults or empty nesters living downtown. This is particularly true when applied to restaurants, as many of these students will eat meals on campus. However, visits by their parents, relatives and friends during the course of the academic year provide additional potential demand for downtown businesses.

Internet Sales and Business to Business

Technology has enabled many retailers to trade goods and services over the internet. A portion of the retail sales in downtown are inevitably captured by the internet market. Also, business to business sales capture an intrinsic percentage of the total downtown retail sales. For example, a downtown law firm might purchase copy paper from a downtown office supply shop or cater a business luncheon through a downtown restaurant.

Existing Downtown Retail Sales

In order to project future sales in downtown, the present (2008) amount of sales in the downtown must be determined. Separate methods were used to estimate 2008 retail sales in downtown New London. Sales per square foot data from the Urban Land Institute (ULI) for the community shopping centers in the northeast were examined. ESRI sales by North American Industry Classification System (NAICS) codes for the downtown were examined, and a "rule-of-thumb" total sale to lease levels of 10 to 1 was used. Field surveys, interviews, comparable community data, and BBPC's experience were utilized to estimate a most likely sales level by retail store type.

The retail business inventory database created by New London Main Street tallied up all the retail businesses in downtown by location and occupied square footage. BBPC distributed the retail businesses by retail industry type in order to determine how many businesses and how many square feet they occupy. In downtown New London, retail businesses occupied 245,860 square feet. The industry with the highest number of businesses is food services and drinking places (28), and it is also the industry which occupies the highest total square footage (60,188 square feet). Table 4-42 shows the number of establishments and square footage by industry type.

In 2008, an estimated $22.7 million of retail sales were made in downtown. The total square footage of each retail industry is divided into the estimate of sales per industry type for 2008 to determine the sales per square foot and provided a "test of reasonableness" for the sales estimates based on BBPC's understanding of downtown New London. Full-service restaurants have the highest total sales for 2008 ($8.4 million). The industry with the highest estimated sales per square foot is food services and drinking places ($139/SF) followed by food and beverage stores ($123/SF). The industry with the lowest estimated

sales per square foot is miscellaneous retailers ($46/SF) and furniture and home furnishings ($81/SF). The average sales per square foot for retailers in all industry sectors in downtown New London is $92/SF. Table 4-42 shows the total square footage, sales and sales per square foot for each retail industry sector.

Table 4-42: Downtown Retail Establishments, Occupied Space, Sales & Sales Per Square Foot by Industry Group, 2008

Industry Group	# of Establishments	Downtown SF	Downtown Supply (sales)	Sales Per SF
Food & beverage stores	4	8,090	$998,884	$123
Health & personal care stores	10	18,569	$1,856,900	$100
Food services & drinking places	28	60,188	$8,390,561	$139
Furniture, home furnishings & electronics	6	38,493	$3,118,417	$81
Art galleries	12	30,191	$3,019,100	$100
Clothing and shoes	9	22,493	$1,885,012	$84
Sporting goods, hobby, and music stores	8	22,364	$2,301,060	$106
Misc. store retailers (1/)	12	45,472	$2,092,772	$46
Total/Average	89	245,860	$22,701,048	$92

1/ Misc. store retailers include florists, office supplies, and used merchandise

Source: BBPC, Main Street New London, ESRI Business Solutions

Existing Sales and Capture Rates by Market Source

Each market source has a 2008 total expenditure amount of which downtown captures a portion. Understanding 2008 total retail expenditures enables the projection of 2018 household expenditures based on an estimate capture of expenditure growth. This section provides the existing total retail expenditures by market source and the capture of total expenditures used for purchases in the downtown which will later be used to development projection scenarios for 2018 expenditures in the downtown.

In order to determine the distribution of existing downtown retail sales by market source, each source (downtown residents, downtown employees, subregional households, tourists, and others) was assigned a percentage of total 2008 sales. Percentages of total sales were determined through interviews with local business owners, stakeholders, the consultant team's market knowledge of downtown New London and national retail expenditure trends.

As shown in Table 4-43, subregional households (50 percent), downtown households (16 percent) and downtown employees (14 percent) make up the largest percentage of total retail sales in downtown New London; together they make up 80 percent of total sales. Tourist expenditures make up 8 percent of total retail sales and "other" makes up 12 percent.

Downtown expenditures by each market source are a percentage of the market source's total retail expenditures. By dividing the downtown expenditures into the total expenditures, downtown's 2008 capture of total retail expenditures is determined. This capture rate is important because its fluctuation causes increases or decreases in downtown sales.

In 2008, downtown retailers captured 50 percent of the subregional household expenditures, 17 percent of downtown household expenditures, 14 percent of downtown employee retail expenditures, 8 percent of tourists retail (meals and shopping) expenditures, and 12 of "other" retail expenditures. This is shown in Table 4-43.

The bottom row of Table 4-43 shows the total retail expenditures made by each market source and the percent of the total expenditures captured by downtown. As the table shows, the downtown captures the largest percent of downtown employee expenditures (68 percent), but downtown employees do not constitute the largest percentage of total downtown sales. The largest percentage of downtown sales is generated by subregional households ($11 million). However, of the total retail expenditures made by subregional households, downtown only captures 0.87 percent. A similar situation is present for tourist expenditures. Downtown only captures 0.58 percent of their total expenditures ($307 million).

Key Findings

The following summarizes the key findings for the residential, office and retail markets in downtown New London.

There are currently 442 residential units in downtown New London, 5 percent of which are vacant. An additional 58 units are planned, proposed or under construction in the downtown. Since 2003, there has been a relative surge in residential population in downtown New London. Demand for downtown housing is derived from both existing and future county households, spin-off demand from new office workers, as well as households relocating into the county to take advantage of transit and downtown amenities. Target households for new residences downtown include empty-nesters and young professionals.

There is a total of 426,109 square feet of office space in the downtown contained in approximately 50 buildings. Of the total office space, 21 percent is vacant. Approximately 80% of this vacant space is contained in 3 buildings. Downtown, the city and the county are all characterized by older office space. The largest users of downtown office space are "office services" businesses; examples of which include legal firms, social service agencies, and architectural/engineering firms. Demand for downtown office space is derived from the region's strength in bioscience and healthcare, technology, defense and maritime industries. New companies are attracted downtown in order to serve existing businesses; create local satellite offices for existing businesses located elsewhere; and establish new locally-based start-up firms.

There are 156 retail entities downtown, of which 89 are occupied by retail businesses. These 156 retail entities occupy a total of 387,610 square feet, of which 37% is vacant. The major constraints for retailers considering locating downtown are a perceived lack of parking, aging/odd-shaped buildings, low pedestrian and vehicular traffic, and competition from suburban malls. Demand for downtown retail is derived from the following sources: downtown residents and employees, residents of the subregion, and tourists, as well as "other". The retail sales downtown in 2008 totaled $22.7 million. The largest generator of downtown sales was the subregional households ($11 million), followed by downtown households ($3.6 million), downtown employees ($3.1 million), "other" ($2.6 million) and tourists ($1.8 million). Of the total expenditures by each market source, the downtown office workers spent the largest percentage of their total expenditures in downtown (68 percent), followed by downtown households (17 percent), subregional households (0.87 percent) and tourists (0.58 percent).

Table 4-43: Downtown Retail Sales Volume by Source, 2008

	Total Sales Downtown	Downtown Households		Downtown Employees		Subregional Households		Tourists		Other	
Retail Industry	-	%	Sales	%	Sales	%	Sales	%	Sales	%	Sales
Food & beverage stores	$998,884	10%	$99,888	35%	$349,609	45%	$449,498	5%	$49,944	5%	$49,944
Health & personal care stores	$895,242	20%	$179,048	30%	$268,573	32%	$286,477	4%	$35,810	14%	$125,334
Food services & drinking places	$8,390,561	15%	$1,258,584	10%	$839,056	55%	$4,614,809	10%	$839,056	10%	$839,056
Furniture, home furnishings & electronics	$3,118,417	6%	$187,105	15%	$467,763	60%	$1,871,050	5%	$155,921	14%	$436,578
Art galleries	$3,019,100	15%	$452,865	11%	$332,101	50%	$1,509,550	12%	$362,292	12%	$362,292
Clothing & shoes	$1,885,012	10%	$188,501	11%	$207,351	59%	$1,112,157	8%	$150,801	12%	$226,201
Sporting goods, hobby & music stores	$2,301,060	20%	$460,212	14%	$322,148	45%	$1,035,477	5%	$115,053	16%	$368,170
Misc. store retailers	$2,092,772	40%	$837,109	16%	$334,844	26%	$544,121	5%	$104,639	13%	$272,060
Total Downtown Sales by Source	$22,701,048	16%	$3,663,313	14%	$3,121,445	50%	$11,423,139	8%	$1,813,515	12%	$2,679,636
% Caputred in Downtown & Total Retail Expenditures:		17%	$21,681,328	68.43%	$4,561,709	0.87%	$1,314,554,033	0.58%	$307,000,000		-

Source: BBPC, ESRI, Main Street New London

4.4 Development Assumptions

In order to project future demand for downtown space, the market conditions must be synthesized with the strengths, constraints and opportunities. This combination enables the formulation of a continuum of assumptions about the downtown capture of future growth.

4.4.1. Development Strengths, Constraints and Opportunities

Interviews with stakeholders, research and site visits helped to build a qualitative case for new development opportunities in downtown New London. This section highlights the strengths, constraints and opportunities in downtown identified through the interviews, visits and research. These strengths, constraints and opportunities are then combined with quantitative regional growth projections to construct the scenarios for new supportable development in the following section.

Strengths, Constraints and Opportunities

Downtown New London has a growing character that sets it apart from the surrounding communities. Business owners, residents, shoppers and diners will be attracted to the new "sense of place" in downtown. Historic buildings, mixed-uses, water views, and an amenity-rich central business district which includes a variety of restaurants, retail shops, and residences make New London's downtown an attractive place to live, work and play. The proximity to the train station, bus terminal and ferry docks also puts New London at an advantage for attracting office tenants downtown. "Increasingly, people (employees and employers) want to drive less and seek subway, commuter rail or light rail alternatives. Developers can't miss securing project sites near rail stops and train stations".[37] Due to these appealing characteristics, New London may be able to capture an even greater percentage of the regional office growth in key industries. However, currently the commuter rail service offered by Shore Line East in New London is very limited and there is no subway or light rail service; Shore Line East is expected to be expanded to have all existing trains serve New London in 2010 and eventually will allow for bi-directional commuting, that is, into New London as well as out of New London.

Also, as residential, retail and office growth occurs in the downtown it becomes more of an activity center that feeds itself. Start-up business owners are attracted to the older, cheaper spaces and established businesses looking to expand find newly renovated Class A space in downtown. Vibrant retail and restaurant businesses are attracted to downtown because of new employees, tourists and downtown residents. Employees find that living near their downtown workplaces is a viable option because a range of residential units are available.

Despite the above advantages, demand for office space in downtown New London continues to remain modest and demand for retail space continues to remain low. While the office vacancy rate in downtown hovers around 11 percent, absorption of existing vacant space is extremely slow, and in some cases, some vacant space takes years to be occupied. The same is true for retail space; the 2008 vacancy rate was 37 percent. Commercial real estate property professionals listing property in downtown report the ongoing difficulty in attracting new tenants. They cite the following reasons for difficulties in attracting tenants: older, outdated spaces which are not competitive in the regional markets, rehabilitation of older structures is

[37] Urban Land Institute, Emerging Trends in Real Estate, 2009

costly and time consuming, downtown parking is difficult, and there is a perceived negative image of New London.

The following tables summarize key conclusions regarding the strengths, constraints, and opportunities related to the potential for newly occupied space in the downtown area of New London. Tables 4-44, 4-45, and 4-46 show the strengths, constraints and opportunities for each market segment in tabular form.

4.4.2. Key Market Determinants

Residential

Target users for new residential units are empty-nesters looking for higher amenity units and young professionals seeking proximity to urban amenities and lower rents in urban areas. The plethora of historic buildings in downtown makes New London an attractive place for both target user groups to live. As retail and entertainment businesses continue to expand, residential units will have higher demand and make projects more feasible from a private development perspective.

Future residents will be attracted to downtown New London because of its proximity to the RITC. New London's unique location and public transportation connection to larger metropolitan areas such as Boston and New York City make it an ideal place to live for households wishing to visit these places on the weekend or for a special occasion or event. Implementing strategies aimed at improving the connections to the RITC from the downtown, providing a range of housing choices and enhancing the retail downtown will increase downtown's capture of new residents.

New units can be integrated in mixed-use developments to take advantage of the potential synergies between housing, employment and retail uses. Such co-location of uses will afford residents the opportunity to walk rather than drive to work and retail venues.

As was revealed in a recent article in The Day newspaper, over the last five years demand for downtown residential units has grown substantially.[38]The article states that, "the past five years alone have produced about 200 new housing units." Owners of downtown residential units have reported full occupancies and in some cases waiting lists for the new apartments which are reported to net at or above $1,000 per month.

On the national trend line, mixed use and infill projects in metropolitan areas are gaining in popularity. The Urban Land Institute's "Emerging Trends in Real Estate" for 2009 says that people crave greater convenience in their lives as energy prices and road congestion accelerates. "They want to live closer to work and shopping without the hassle of car dependence".[39]

[38] Kevin Dale, The Day, "…And the Rentals Downtown Don't Stay Vacant Long", Published 9/22/08
[39] Urban Land Institute and Price Waterhouse Coopers, October 2008. *Emerging Trends in Real Estate 2009*

Table 4-44: Key Conclusions Regarding Downtown New London

Residential Market		
Strengths	Constraints	Opportunities
• City offers historic appeal and has strong niche in cultural and arts establishments • Existing trend towards downtown living in New London in both supply and demand • Projected household growth in New London County can contribute to modest growth in downtown • Proximity to public transportation as people seek for housing with access to rail, bus and ferry • New London's location in the Northeast Corridor provides access to larger metropolitan areas	• Perception that area is unsafe/poor market image • Desirable residential developments in other parts of New London County are major source of competition • Older buildings represent obstacles for affordable and timely renovations • Lack of existing retail and amenities and strong linkages to the RITC to support residents	• Growing nightlife and restaurants in downtown • Establish weekly farmers market and community garden • Enhance pedestrian safety/environment around the RITC • Provide housing to meet a range of incomes • New office growth can stimulate spin-off demand for housing • Expand Shoreline East service • Marketing of RITC and regional access as key selling point to new households

Source: BBPC, 2008

Table 4-45: Key Conclusions Regarding Downtown New London

Office Market		
Strengths	Constraints	Opportunities
• Growing young professional population downtown • Emerging amenity rich mixed-use downtown environment • Projected growth in key office based industries: service firms- including finance, professional/technical services and law firms, information technology based businesses, and healthcare and pharmaceutical companies • Funds available for historic preservation as part of building renovations • Public sector – including city and state- are supportive of transit oriented office development • Unique player in regional office market due to access to regional/intercity transportation modes	• Development policies are perceived as cumbersome • Older buildings are difficult and expensive to renovate • Current market conditions are not strong enough to support speculative development (build to suit opportunities are best) • High vacancy rates • Lack of existing retail and residential to serve office employees • Competitive Class A office space available in the City of New London	• More efficient permitting process "one-stop shop" • Increasing the availability of new shops and restaurants to downtown workers • Marketing campaign to attract office users • Live where you work incentives for downtown employees • Providing affordable office spaces for start-up companies • Encourage office development adjacent to Union Station to take advantage of high speed access to larger cities

Source: BBPC, 2008

Table 4-46: Key Conclusions Regarding Downtown New London

Retail Market		
Strengths	Constraints	Opportunities
• Projected tourism growth in New London County can contribute to modest tourism growth in downtown • Offers historic appeal and has strong niche in cultural and arts establishments • Existing trend towards downtown living in New London to support retail establishments • Downtown office and residential growth can stimulate spin-off demand for retail • Proximity to public transportation for tourists and travelers arriving in New London • 1.8 million passengers going through New London downtown per year	• Perception that area is unsafe/poor market image • Desirable retail developments in other parts of New London County are major source of competition (suburban malls and other tourist destinations such as Mystic) • Older building represent obstacles for retail shop layouts (length to width ratio of rentable space) • Lack of existing residential to support retail • Retail space vacancy rates are high • Downtown improvement tax for businesses • Existing low traffic counts is a deterrent to chain retailers • Tourists are currently bypassing New London to a large extent and going to Mystic, the casino resorts and other New England destinations	• New residential growth to attract retail • Growing nightlife and restaurants in downtown • Marketing of train station and regional access to employment as key selling point to new households • Enhance the unique niche created by existing specialty stores and ethic restaurants • Enhance pedestrian safety around train station • Expand Shoreline East service • Downtown grocery store to attract residents • Create an incentive program for downtown retailers • General marketing of downtown to tourists and public transportation users – branding and streetscaping

Source: BBPC, 2008

Office

The key determinant for office demand in New London is growth in key industries. These industries are bioscience and healthcare, technology, defense, and maritime. Creating a downtown environment which fosters the growth of start-up companies in these industries in New London will create demand for low rent office suites. Additionally, attracting satellite offices of established companies in the downtown will create a demand for higher rent office suites. The corridor between the RITC and the New London campus of Pfizer is a key growth area for office uses. Putting new office development around the RITC is the first step, and then encouraging new office growth along the corridor is the long-term vision.

However, New London will only be able to capture these new employees if it is able to create an environment attractive to new or expanding firms. Key building and environmental features demanded by industries likely to be attracted to a city like New London include flexible space, green buildings, mixed-use environments, access to regional networks, proximity to retail goods and services, and residential offerings.

To ensure that downtown New London can capture the employment growth projected for the county, strategies related to business cultivation and recruitment should be undertaken. These strategies are meant to increase the number of businesses and employees entering or expanding in the downtown New London market.

Retail

The downtown is recognized for a collection of small retail shops and arts and entertainment venues. New London has the momentum to continue this trend and develop as a niche destination for ethnic restaurants, art galleries and eclectic shops. Several stakeholders indicated that New London has the potential to become more of a regional destination for cultural and entertainment events. Annual events such as Sailfest, Fish Tales, Tugs and Sails, and Celts and Currachs are already popular events. Festivals such as these should increase in frequency to bring more day-trip and overnight visitors to New London. Increasing the frequency of these events will have the intrinsic benefit of branding the city as a regional destination for cultural events and vibrant nightlife.

The surveys that were completed as a part of this study, interviews with stakeholders, and newspaper articles found that more food options and expanded retail goods and services are what the public sees as the most needed enhancement to downtown. Specifically, the types of retail goods and services they would like to see enhanced (more of, new, or improved) in downtown New London include specialty gift stores, dance clubs/bars, antique stores, activities for 16+ crowd and young adults, farmer's market and a grocery store. In addition, they were interested in enhanced eating and drinking places such as more ethnic restaurants, and cafés with outdoor seating.

As revealed in the earlier section, the southeastern Connecticut tourist market has the potential to increase their amount of retail expenditures in New London. By implementing strategies targeted to attract more tourists into the downtown, more visitors will come into the downtown. For example, constructing a welcome center in the RTIC will educate visitors of the history, unique shops and cultural activities in the downtown.

Existing and future retailers throughout downtown New London will benefit from strategies aimed at expanding demand. These strategies are meant to increase the:

- Number of retail customers: residents, employees, public transportation passengers and tourists

- Frequency of retail patronage such that each customer makes more retail trips, and
- Length of stay for tourists and public transportation passengers such that visitors stay longer and spend more

4.4.3. Implementation Strategies

In order to develop quantitative projections for new supportable demand in downtown New London, development scenario assumptions for the low, mid and high scenarios must be made. The low scenario represents low investment needed to maintain downtown's existing capture of new residential growth, office based businesses, and retail sales. The mid scenario invests more than the low scenario in an increased effort to capture a larger share of the regional growth in residences, office based businesses and retail sales. The high scenario optimizes the capture rate and increases the level of investment to attract more residents, office based businesses and retail sales from outside the county and southeastern Connecticut region.

The overall strategy for downtown New London is to create a place for people to live, work and play. The downtown needs to appeal on multiple levels. First, the strongest driver for new growth is the demand for residential units. A variety of residential units should be pursued so as to be available for households of all income levels. Secondly, New London must attract spin-off businesses from the key office industries (bioscience, healthcare, technology, defense, and maritime) to the downtown. Office spaces should be directed to areas near the train station and along the corridor that connects the downtown to the Fort Trumbull commercial area (Eugene O'Neill Drive and Bank Street). Finally, as new residential units come in and office spaces are constructed and rented, retail growth will follow the demand created by these uses. At the same time, the largest untapped market for retail are the tourists who come to southeastern Connecticut, and in order to capture a larger share, downtown must grow into a larger destination for tourists. New retailers and restaurateurs, entertainment events and art venues, as well as an inviting streetscape, will attract tourists into the downtown.

Over the near term (1-3 years), the most important activity to undertake is a marketing program to emphasize the "live, work, play" aspects of downtown New London. Development activity will be slower over the near term as the national market begins to turn around. Placing a greater emphasis on cultural events, to attract people who otherwise would not come into New London, will help to expose the unique aspects of the downtown. Implementing a branding campaign to reach out to tourists will capture a larger share of the visitors traveling to southeastern Connecticut. By locating a visitor center in the RITC, tourists who come into New London will see that the downtown has unique retail shops and restaurants, entertainment activities and places to live and work. Exposing New London to tourists will expose it to potential residents and office and retail tenants.

Also a priority in the near term is infrastructure enhancements. Leveraging federal and state dollars or using other methods to fund improvements to the streetscape and pedestrian safety will make downtown New London more attractive for private sector investment. Specifically, infrastructure improvements are needed near the RITC and along Eugene O'Neill Drive as people enter New London by vehicle. The current Parade Project is a positive first step in opening up the downtown to the public transportation passengers. If Union Station is purchased or put under a long term lease to the City, federal money is available for historic renovations and enhancements to the station.

4.4.4. Development Scenario Assumptions

Tables 4-47 through 4-50 provide specific implementation strategies that are associated with a series of assumptions. These strategies are meant to enhance existing efforts, build upon the strengths, correct the constraints, and harness the opportunities in downtown New London. Table 4-47 discusses strategies for improving marketing, promotions and quality of life. Table 4-48 discusses strategies for enhancing the design, infrastructure and environment in the downtown. Table 4-49 presents strategies for enhancing land use, zoning, building and infrastructure, and Table 4-50 discusses strategies for enhancing transportation and organization.

4.5 Development Projections

In order to calculate the new supportable space for downtown New London for all market segments (residential, office, and retail), the development assumptions for the low, mid and high scenarios are applied to downtown's capture of future growth.

4.5.1. Residential Potential Market Capture 2008-2018

Based on the downtown's number of residential units in the pipeline and under construction (60 units under construction), approximately 1 percent of the county residential growth (5,826 units) will be captured in the downtown from 2008-2018. Further, the spin-off demand provided by new office buildings could support new units of housing in the downtown area and new units will be demanded by growth occurring from new households from outside the New London region. New office workers in the downtown used in the residential development projections are from the findings in the office development projections in this report.

ESRI's projections for the county do not take into account the influence of the most recent (July-December 2008) changes in the national economy. As a result, the consultant team adjusted downtown's capture of new growth to reflect recent changes in the national economy. Bringing national and local trends into projections helps to provide a more accurate portrayal of future conditions. To incorporate these trends into the projections for the downtown, a range of supportable residential units is provided. Projections for low, mid and high downtown household growth scenarios are shown below in Table 4-51.

- Low scenario: captures 1 percent of the county household growth plus 20 percent of the low scenario projection of new office workers and adds 10 percent to the total to account for growth resulting from relocations into downtown from outside the region
- Mid scenario: captures 2 percent of the county household growth plus 25 percent of the mid scenario projection of new office workers and adds 20 percent to the total to account for growth resulting from relocations into downtown from outside the region
- High scenario: captures 3 percent of the county household growth plus 30 percent of the high scenario projection of new office workers and adds 30 percent to the total to account for growth resulting from relocations into downtown from outside the region

Table 4-47: Strategies for Assumed Development Scenarios, Marketing Promotions and Quality of Life

Table 4.4: Strategies for Assumed Development Scenarios, Marketing Promotions and Quality of Life				
Strategy	Low	Mid	High	Further Explanation
Coordinated Marketing	Market downtown retailers on ferries and other forms of public transportation	Expand joint marketing of downtown as cohesive destination. Encourage retailers with similar goods to jointly advertise	Further broaden marketing effort to attract residents and businesses to downtown from outside the region	Continuing efforts to brand downtown New London as a unique place to live, work and play is instrumental for attracting visitors from within and outside the region.
Support Special Events & Tourism Efforts	Continue to support existing special events in downtown	Expand special events to occur throughout the year and on weekends. Encourage retailers to partner with other retailers, restaurants, and hoteliers to offer weekend and holiday specials	Further target day-trip and over-night tourists from outside the region to special events	Quality of life plays an important role in business recruitment, retention, and expansion in New London, as highlighted by numerous stakeholders. Efforts that expose regional visitors to New London's assets and amenities should be encouraged because they can plant seeds for future relocations of businesses and skilled employees. Special events like Fish Tales, Tugs and Sails, Sailfest and Celebration of Lights and Song by the Sea are important influences on business development, and should be encouraged to expand.
Live, Work, Play	Promote New London as a unique place to live, work, and play to existing downtown residents and office employees	Expand the effort to promote New London as a unique place to live, work, and play to regional residents, tourists and office workers	Further expand the promotion New London as a unique place to live, work, and play to downtown and regional residents and employees, tourists from within and outside the region, public transportation users, and college students in New London	New London has a strong historical and cultural base on which to build the concept of live, work and play. This concept is a mutually reinforcing strategy to attract residents, office based businesses, tourists, college students and public transportation users to downtown New London. Successfully attracting these groups will create a unique "sense of place" in downtown that will be unmatched by surrounding communities.

Source: BBPC, 2008

Table 4-48: Strategies for Assumed Development Scenarios, Design, Infrastructure and Environment

Strategy	Low	Mid	High	Further Explanation
Retailer Workshops	Help current and future retailers to improve their window displays	Expand the help to current and future retailers; coordinate with other retailers to offer weekend specials and improve their window displays	Further expand the help to current and future retailers to organize special weekends and holiday sales, improve coordination between retailers and improve their window displays	Many of the retailers in downtown are locally and independently owned. Retailer workshops can help to improve the viability of independent retailers by increasing their aesthetic appeal to shoppers, enhancing coordination of special holiday/event sales, and survive ebb of seasonal visitors
Way finding/Streetscaping Enhancement	Install signage	Install signage, improve walkability and enhance gateway features	Further enhance signage, pedestrian walkability, bikeability and redevelopment gateways into downtown	Improving navigation to and within downtown, particularly to parking resources will enhance the flow of traffic; improving walkability and bikeability between downtown streets and providing spaces for outdoor café tables will enhance the appeal of downtown shopping and create a "sense of place". Providing bikeracks and bikeways will encourage a more environmentally susutainable way of transportation. Gateway enhancements will draw in visitors to the downtown.
Grant and Loan Programs	Continue grant and loan programs for businesses and building owners	Increase the loan amounts for building rehabilitations	Further increase program funding for new businesses, facades, and rehabilitations to help businesses and building owners renovate along streets for a cohesive look	Grant and loan improvement programs have and will continue to enhance the aesthetic appearance of the architectural environment and create a destination for regional shoppers and diners.
Visitor's Center	Set up a visitor's information kiosk in the RITC	Locate a Welcome Center	Locate a Welcome Center with a mini-museum, audio/visual center and gift shop	A visitor's center will educate passengers arriving by public transportation and visitors arriving by car about the amenities in the downtown such as special events, restaurants and cultural activities.
Community Gardens	Provide workshops on growing container gardens	Provide tools and seeds to grow gardens to downtown residents	Provide a public space for a community garden	Providing green spaces for unit owners and renters will instill a sense of community and beautify the downtown area.
Continue to Retain/Recruit Retailers	Retain existing retailers	Expand programs to recruit neighborhood serving retail	Further expand programs to recruit neighborhood serving retail and independent, unique specialty retailers	To enhance downtown's attraction as a special destination, encourage retailers to target multiple customer segments (e.g. public transportation passengers and college students in addition to residents) to expand customer base.

Source: BBPC, 2008

Table 4-49: Strategies for Assumed Development Scenarios, Land Use, Zoning, Buildings and Infrastructure

Strategy	Low	Mid	High	Further Explanation
Market Downtown New London as Professional Employment Hub for Bioscience/Technology, Maritime and Defense Industries	Retain existing businesses	Expand strategies to retain existing businesses and target key industries: professional, scientific and technical services	Further expand strategies to retain existing businesses, target key industries and increase the advertising to include areas within and outside the region	Encourage downtown stakeholders, including the City Center District and the New London Development Corporation to continue marketing downtown New London as a hub for professional employment. Use newsletters, websites, press releases and other media outlets to draw attention to downtown's proximity to Pfizer, maritime businesses, and defense businesses. Convey the historic character, unique flavor, and inspiring spaces for working and living that are present in downtown New London.
Predictable/Transparent Development Review	Maintain a streamlined review system for developers and business owners	Enact flexible zoning provisions to facilitate transit oriented development	Examine surrounding communities' development review process and revise New London's development review to boost the competitive advantage of New London	Establishing and maintaining a streamlined, easy-to-navigate, and expedient review system can help boost the City's competitive edge against competing jurisdictions and encourage business owners as well as developers to choose the City of New London. Streamlined review can include pre-application conferences, permit coordinating processes, expedited permits for higher-intensity development, and clear standards for development. Further, increasing the user-friendliness of the City's permitting fee system can be accomplished through the introduction of online calculators to allow developers the chance to identify ballpark fee estimated in a simple, one-stop-source.
Market Product Preference to Developers	Continue to work with real estate industry professionals to identify the needs of potential tenants	Expand strategies to work with real estate industry professionals to identify the needs of potential tenants and actively target specific tenants	Expand to incorporate specialized space features into new and vacant space and set up targeted marketing programs to potential tenants	Encourage developers to add specialized space features to the New London inventory in demand by target tenants and reach these tenants through marketing materials (e.g. brochures, websites, etc.). Focus on harder to find research and development space, lab space, and green building features.
Green Building Incentives	Encourage green building by educating developers on the benefits of green buildings	Encourage green building by reducing building permit fees and provide assistance in obtaining LEED certification	Further encourage environmentally sustainable designs in all aspects of redevelopment from the construction materials used in sidewalks to the emissions level requirement of buildings	Encourage developers to build and rehabilitate green, which is attractive to business firms for a variety of reasons, including enhancement of corporate identity, economic savings, healthy workplace, and environmental responsibility. Features may include: accessibility to alternative modes of transportation; green roofs; passive heating and cooling; pervious materials for parking lots; efficient water systems; enhanced indoor environmental quality; non-toxic and sustainable materials; and reuse of materials (including historic properties).
Cluster Like Retail Businesses	Educate retailers on the benefits of clustering	Encourage like retailers to locate near each other to benefit from an agglomeration economy	Create a "restaurant row" that can be marketed as a place with a variety of dining choices for tourists and regional residents	New London has an existing mix of ethnic restaurants. Attracting more restaurants of these types will create a regional destination. Retailers will benefit from locating near each other; customers from one shop will "spill-over" into neighboring retail shops.

Source: BBPC, 2008

Table 4-50: Strategies for Assumed Development Scenarios, Location, Transportation and Organization

Table 4.7: Strategies for Assumed Development Scenarios, Location, Transportation and Organization

Strategy	Low	Mid	High	Further Explanation
Parking Demand Management	Install signage to parking facilities	Market public transportation options to downtown residents which includes a downtown circulator	Expand public transportation methods by implementing joint use parking for public transportation users and downtown business patrons, mixed-use developments and bolstering public transportation choices	Stakeholders suggested that parking is a constraint to commercial growth. Methods to reduce vehicular demand can include reductions in demand through design, such as mixed-use development that allows walking from work, shop and home rather than auto trips. Bolstering public transportation service and usage through activities such as promoting Amtrak and Shore Line East train service is another key strategy to lessen vehicular congestion. Signage to parking garages also helps to reduce confusion.
Enhance the Capabilities of Downtown Improvement Groups	Continue to support the efforts of downtown improvement groups	Provide additional funding for beautification/marketing efforts	Match funds received from taxes levied against downtown districts and create a land development corporation	Community groups are the stewards of downtown's image. Groups include but are not limited to the City Center District, New London Main Street and Downtown New London Association. Historically, these groups have been a reliable means of supporting downtown events and funding downtown improvement efforts.
Coordination with Regional Tourism Groups	Continue efforts to coordinate with regional tourism groups	Open a continuous channel of communication with tourism groups to inform and be informed of special events occurring in New London as well as in other parts of the region	Send representatives from New London to other regional events to advertise New London as a special place to visit	Groups include but are not limited to Mystic Coast and Country Travel Industry Association and the Eastern Connecticut Tourism District. These groups have done an excellent job of marketing the region and enhancing the coordination with these groups will build New London's reputation as a special place to live, work and play.

Source: BBPC, 2008

Table 4-51: Downtown Residential Demand Projections- 10 Year Term (2008-2018)

	Low		Mid		High	
Residential Units	58	62%	117	55%	175	46%
Downtown Worker Generated Residential Demand	26	28%	52	25%	92	24%
Relocations from Outside the Region	9	10%	42	20%	80	30%
Total	93	100%	211	100%	347	100%

Source: BBPC, 2008

4.5.2. Office Potential Market Capture 2008-2018

Job growth projections in the downtown use subregional (county) job growth as a base. Office-based employment in the county, as projected by the consultant team and the Connecticut Department of Labor, is projected to grow by almost 13 percent over the ten year period (2008-2018). Downtown will capture a portion of this growth.

The analysis of projected office demand in downtown uses employment growth to project future demand. This analysis includes low, mid, and high scenarios based in the assumptions provided in the earlier section for employment growth in downtown New London.

- Low scenario: This scenario holds the current percent of county jobs in downtown at the 2008 rate by industry.
- Mid scenario: This scenario holds the capture rate the same for all industries except for professional, scientific and technical services (which has been identified as target employment growth industry in downtown New London) and real estate, rental and leasing (which will grow with the new businesses and residents attracted by the emerging culture class and sense of place).
- High scenario: This scenario increases all capture rates of new county growth and adds 25 percent to the new employee number to represent growth in business establishments relocating from outside of the county to the downtown.

Based on this methodology, downtown is projected to capture 5 to 12 percent of the county's growth in jobs by 2018, as shown below in Table 4-52. Between 130 and 306 new jobs are projected for downtown New London, and these jobs will occupy a combination of existing and newly developed office space.

In 2008, the average office-based employee in New London County occupied 326 square feet[40] In downtown the average office-based employee occupied 311 square feet, as shown in Table 4-53 below. Using the same average square foot per employee for the 2018 job projection (a net new 130-306 jobs in the downtown from 2008-2018) will therefore result in demand for approximately 40,430 to 95,166 additional occupied square feet of office space by 2018.

[40] Average office-based employee is calculated by dividing the number of employees in 2008 by the total occupied square feet for 2008. New London County had 5,068,415 square feet of occupied office space and 15,537 employees in 2008.

Table 4-52: Employment Growth by Industry Sector New London County and Downtown New London, 2018

Industry Type	2018 New County Jobs	Low		Mid		High	
		Downtown Capture	Net New Downtown Jobs	Downtown Capture	Net New Downtown Jobs	Downtown Capture	Net New Downtown Jobs
Information	56	23%	13	23%	13	25%	14
Finance & Insurance	236	7%	17	7%	17	8%	19
Real Estate, Rental & Leasing	138	4%	5	10%	14	12%	17
Professional, Scientific & Technical Services	1,438	5%	74	10%	144	12%	173
Management of Companies & Enterprises	50	0%	0	0%	0	0%	0
Administrative Support, Waste Management, Remediation Services	574	1%	6	1%	6	1%	6
Membership Associations & Organizations	78	19%	15	19%	15	21%	16
TOTAL	2,570	5%	130	8%	208	12%	306

Source: Connecticut Department of Labor, ESRI, BBPC 2008

Table 4-53: Employees Per Square Foot Downtown New London, 2008-2018

	2008					2018	
	Total Rentable Building Area	Vacant SF	Occupied SF	Employees	Employee/SF	New Employees	New Office Space Demand
Low	775,579	88,505	337,604	1,085	311	130	40,430
Mid						209	65,000
High						306	95,166

Source: CoStar, Connecticut Department of Labor, ESRI, BBPC

4.5.3. 2018 Supportable Office Space

As noted earlier, several Class A office spaces exist outside of the downtown (Shaw's Cove and Fort Trumbull area). These buildings present competition to the downtown supply, and will continue to do so over the next 10 years. However, providing an amenity rich downtown to potential office tenants and gradually linking the downtown to the developing commercial center near Fort Trumbull will create a commercial corridor that will be highly desirable.

By maintaining its current capture of jobs and the same SF/employee (311), downtown New London can expect to see new office employee growth over the next ten years reach an addition of 130 to 306

employees and an increase in occupied square feet of 40,430 to 95,166; this represents a 5-12 percent capture of the County's growth. However, by pursuing the new culture class and linking the downtown to the commercial center at Fort Trumbull, downtown's capture of occupied office space may be further increased.

As mentioned earlier, the increase in occupied office space will be distributed between existing downtown office space and new office development. Due to the limited supply of Class A office space in downtown, a percentage of the newly demanded occupied space will be in newly constructed office space and a percentage will fill vacant existing space. For the low scenario, a 50/50 split was used, for the mid scenario a 60/40 split was used, and for the high scenario a 70/30 split was used. Table 4-54 below shows the low, mid and high projections for downtown office space demand for the next 10 years.

Table 4-54: Downtown New London Distribution of Office Demand 10 Year Term (2008-2018)

	Existing Office Supply (SF)		New Office Supply (SF)	
Low	50%	20,215	50%	20,215
Mid	40%	26,000	60%	39,000
High	30%	28,550	70%	66,616

Source: BBPC, 2008

It is unreasonable to assume that the demanded office space will be all new construction. Some of the potential new demand for office space over the ten year period can be absorbed by existing office space that is vacant. This vacant space can be existing vacant space or space vacated by an existing tenant downsizing or relocating out of the downtown. Between 20,215 and 28,550 square feet will be absorbed by existing space and 20,215 and 66,616 square feet will be newly constructed office space.

However, it is difficult to predict the needs of future tenants and whether the existing space will accommodate those needs, considerable renovations to existing structures will be made, or if new buildings must be constructed. If firms new to New London are local start-ups that are looking for lower rents, it may be that the existing space with minor renovations will be appropriate for the company's needs. However, when comparing the existing office inventory to the space preferences of established companies looking to expand into New London, much of the existing inventory does not match the trends identified by these types of users. These users are seeking high quality, low energy impact space that may not be available in downtown New London at this time.

4.5.4. Retail Sales Projections by Market Source

In order to determine projected 2018 retail sales for downtown New London, ten year projections for each market source (downtown residents and employees, subregional residents, tourists and "other") were undertaken. Ten year projections are based on increases in real retail expenditures, growth in households and employees, and changes in downtown's capture of total retail expenditures.

The following section determines the 2018 retail demand in downtown by market source then combines each market sources' 2018 projected expenditures to determine the total expenditures that downtown may

capture a portion of. 2018 retail sales projections are not broken out by retail industry. This is due to the high variation of merchandise and services for sale by retailers in downtown New London. For example, the retail business, "O! Brasil", sells art work, jewelry and furniture. These three items all belong to different North American Industry Classification System codes which are used to distribute the historical sales data presented in earlier sections.

Downtown Household 2018 Retail Demand

The projection of 2008-2018 retail expenditures in the downtown made by downtown households includes low, mid and high scenarios. The differences between the scenarios are derived from the assumption made in Section 4.5 of this chapter and are reflected in the changes in downtown's capture of total retail expenditures. An annual increase of 0.5 percent in expenditures per household is also included in all scenarios.

- Low scenario – represents the new retail sales generated from an additional 93 households in the downtown and holds the capture rate at the 2008 level (17 percent).
- Mid scenario - represents the new retail sales generated from an additional 211 households in the downtown and proportionately increases the capture rate by 5 percent to 17.85 percent.
- High scenario - represents the new retail sales generated from an additional 347 households in the downtown and proportionately increases the capture rate by 10 percent to 18.7 percent.

Contingent upon future market conditions, the downtown area can capture between $4 million to $6 million of 2018 retail expenditures, as shown in Table 4-55.

Table 4-55: 2018 Downtown Household Retail Sales (2008$)

Scenario	2008 Retail Expenditures by Households	2018 Retail Expenditures by 2008 Households (1/)	New Households (2/)	2018 Expenditures of New Households (3/)	Total Retail Expenditure Potential	2018 Downtown Retail Capture Rate	2018 Downtown Household Expenditures in Downtown
Low	$21,681,328	$22,765,394	93	$2,544,480	$25,309,874	17.0%	$4,302,679
Mid	$21,681,328	$22,765,394	211	$5,772,960	$28,538,354	17.9%	$5,094,096
High	$21,681,328	$22,765,394	347	$9,493,920	$32,259,314	18.7%	$6,032,492

1/ 2018 retail expenditures represent an annual increase of 0.5% in real retail expenditures
2/ Projections of new households are made in the residential analysis of this report
3/ Total 2018 Expenditures is based on the average HH income of new residents ($72,000) and the amount spent on retail (38%)

Source: BBPC, ESRI, New London Main Street

Subregional Household 2018 Retail Demand

The projection of 2008-2018 retail sales in the downtown made by subregional households includes low, mid and high scenarios. In order to develop the scenarios, the downtown 2008 capture rates of total retail expenditures were adjusted to reflect different market conditions.

- Low scenario –increases the capture rate from 0.87 percent in 2008 to 1 percent of total retail expenditures meaning that the downtown will attract 0.13 percent more subregional residents to downtown retail businesses than in 2008.
- Mid scenario - represents a proportional increase of 33 percent to the downtown's capture of subregional expenditures (bringing the capture rate to 1.16%). This scenario assumes moderate growth of desirable amenities to the subregional households in the downtown.
- High scenario - represents a 50 percent proportionate increase over the 2008 capture rate (bringing the new capture rate to 1.31 percent). This scenario assumes more intense growth of desirable amenities to the subregional households in the downtown.

Contingent upon future market conditions, the downtown area can capture between $13.8 million to $18 million of 2018 retail expenditures generated by subregional households, as shown in Table 4-56.

Table 4-56: 2018 Subregional Household Retail Sales (2008$)

Scenario	2008 Retail Expenditures by Subregional Households	2018 Retail Expenditures by 2008 Subregional Households (1/)	2018 Downtown Retail Capture Rate	2018 Subregional Household Expenditures in Downtown
Low	$1,314,554,033	$1,382,211,234	1.00%	$13,822,112
Mid	$1,314,554,033	$1,382,211,234	1.16%	$16,047,472
High	$1,314,554,033	$1,382,211,234	1.31%	$18,068,265

1/ Represents projected household growth by 2018 and an annual growth of 0.5%/year in expenditures per household

Source: BBPC, ESRI, New London Main Street

Downtown Employee 2018 Retail Demand

As shown in Table 4-57, the projection of 2008-2018 retail sales in the downtown made by downtown employees includes low, mid and high scenarios. The differences between the scenarios are derived from the projected new office employees in the downtown from office market analysis presented in an earlier section of this report and increases in the capture rate of total retail expenditures.

- Low scenario – represents the new retail sales generated from an addition 130 office employees in the downtown and maintains the capture rate from 2008 (68.43 percent).
- Mid scenario - represents the new retail sales generated from an additional 209 office employees in the downtown and proportionately increases the 2008 capture rate by 5 percent (bringing the capture rate to 72 percent).
- High scenario - represents the new retail sales generated from an additional 306 office employees in the downtown and proportionately increases the 2008 capture rate by 10 percent (bringing the capture rate to 75 percent).

Contingent upon future market conditions, the downtown area can capture between $3.9 million to $5.2 million of 2018 downtown office worker retail expenditures, as shown in Table 4-57.

Table 4-57: 2018 Downtown Employee (Office Worker) Retail Sales (2008$)

Scenario	2008 Retail Expenditures by Office Employees	2018 Retail Expenditures by 2008 Office Employees (1/)	New Office Employees (2/)	2018 Retail Expenditures from New Employees (3/)	Total Retail Expenditure Potential	2018 Downtown Retail Capture Rate	2018 Downtown Office Worker Expenditures in Downtown
Low	$4,561,709	$4,789,794	130	$917,280	$5,707,074	68%	$3,905,351
Mid	$4,561,709	$4,789,794	209	$1,474,704	$6,264,498	72%	$4,501,136
High	$4,561,709	$4,789,794	306	$2,159,136	$6,948,930	75%	$5,230,668

1/ 2018 retail expenditures assumes a 0.5%/year increase in real retail expenditures
2/ Projections of new office employees are made in the office analysis section of this report
3/ Average Retail Expenditures by Office Employee are estimated using the Internal Council of Shopping Centers' Office Worker Retail Spending data of $7,056/employee/year

Source: BBPC, ESRI, New London Main Street

Tourism 2018 Retail Demand

This section will examine southeastern Connecticut tourist expenditures on meals and shopping to determine downtown's potential capture of tourist retail expenditures. As noted in the previous section, $380 million were spent on non-casino related meals and shopping in southeastern Connecticut during 2008. Expenditures made by tourists on meals and shopping in southeastern Connecticut can potentially be captured in downtown New London. As shown in Table 4-58, $1.8 million was spent in downtown New London retail businesses by tourists. This represents a 2008 capture of 0.48 percent of the total retail expenditures made by tourists.

Similar to the other market sources, the projection of 2008-2018 retail sales in the downtown made by tourists includes low, mid and high scenarios. In order to develop the scenarios, the downtown 2008 capture rates of total retail expenditures were adjusted to reflect different market conditions.

- Low scenario – increases the 2008 capture rate by 5 percent (bringing the capture rate to 0.68 percent). This scenario only increases the capture rate to reflect an increase in household income. It assumes that the downtown will neither attract nor detract tourists to downtown retail businesses.
- Mid scenario - represents a 25 percent increase over the 2008 capture rate (bringing the rate to 0.85 percent). This scenario assumes moderate growth of desirable tourist activities in the downtown.
- High scenario - represents a 50 percent increase over the 2008 capture rate (bringing the rate to 1.02 percent). This scenario assumes more intense growth of desirable tourist amenities and activities in the downtown and in the region.

Contingent upon future market conditions, the downtown area can capture between $2.7 million to $4 million of 2018 retail expenditures generated by tourists in southeastern Connecticut.

Table 4-58: 2018 Tourist Retail Sales (2008$)

Scenario	2008 Total Expenditures by Tourists (1/)	2018 Total Expenditures by 2008 Tourists (2/)	2008 Total Downtown Expenditures	2008 Downtown Capture of Total Expenditures	2018 Downtown Retailer Capture of Tourist Expenditures	2018 Downtown Expenditures by Tourists
Low	$379,952,498	$398,950,123	$1,813,515	0.48%	0.68%	$2,712,861
Mid	$379,952,498	$398,950,123	$1,813,515	0.48%	0.85%	$3,391,076
High	$379,952,498	$398,950,123	$1,813,515	0.48%	1.02%	$4,069,291

1/ 2008 total tourist expenditures represent the 2001 amount spent on meals and shopping in southeastern Connecticut (adjusted for casino related expenditures) increased to reflect real growth in tourism in southeastern Connecticut and inflation for the period 2001-2008

2/ 2018 retail sales represent an increase of 0.5%/year in real retail expenditures

Source: BBPC, ESRI, New London Main Street

Other 2018 Retail Demand

The market sources contained within the "other" category include college students, public transportation passengers, internet sales and business to business sales. Individually these groups have a small impact on total downtown retail sales, but collectively they capture 12 percent of total 2008 downtown retail sales. Capture of potential retail development and expansion deriving from "other" retail expenditures is based on its relationship to the total downtown sales that will result from sales derived from households (downtown and subregional), downtown employees and tourists.

The projection of 2018 "other" expenditures is presented in three scenarios. The low scenario is adjusted for an increase in real tourist expenditures. However, the mid and high scenarios for other retail expenditures in downtown are derived from their relationship to the subtotal of other market sources.

- Low scenario – the low scenario represents a 0.5 percent annual increase to the 2008 downtown sales to account for real household income growth
- Mid scenario – the mid scenario builds off the mid scenarios from the other market source projections. The 2008 "other" capture rate of total 2008 downtown sales is maintained (12 percent), but due to increased capture rates in alternative market sources, the tourist expenditures are proportionately increased by 43 percent over the original 2008 downtown sales.
- High scenario – the high scenario also uses the projected 2018 sales from the alternative sources but proportionately increases the capture rate of total downtown retail sales for "other" by 10 percent which makes the capture of total downtown 2018 retail sales 13 percent.

Contingent upon future market conditions, the downtown area can capture between $2.8 million to $4.9 million in new retail sales downtown as a result of a combined growth within the markets sources in the "other" category. Table 4-59 shows the range of projected sales in downtown New London from the "other" category.

Total 2018 Downtown Retail Demand

The combined retail sales generated from all market sources in 2018 ranges from $27 million to $38 million. These sales include the existing expenditures from the market sources and new expenditures made as a result of increases in real household retail expenditures, new residential and office growth in downtown and downtown's ability to increase its capture of total retail expenditures. This is shown in Table 4-59.

Table 4-59: 2008-2018 Downtown Retail Sales by Market Source and Scenario (2008$)

Market Source	2008 Downtown Sales	2018 Downtown Sales					
		Low		Mid		High	
		$	%	$	%	$	%
Downtown Households	$3,663,313	$4,302,679	16%	$5,094,096	15%	$6,032,492	16%
Downtown Office Employees	$3,121,445	$3,905,351	14%	$4,501,136	14%	$5,230,668	14%
Subregional Households	$11,423,139	$13,822,112	50%	$16,047,472	49%	$18,068,265	47%
Tourists	$1,813,515	$2,712,861	10%	$3,391,076	10%	$4,069,291	11%
Subtotal	*$20,021,412*	*$24,743,003*	*90%*	*$29,033,781*	*88%*	*$33,400,717*	*87%*
Other	$2,679,636	$2,813,618	10%	$3,836,038	12%	$4,915,335	13%
Total	$22,701,048	$27,556,621	100%	$32,869,819	100%	$38,316,052	100%

Source: BBPC, ESRI, New London Main Street

The new downtown sales are determined by subtracting the 2008 sales from the 2018 sales. As is shown in Table 4-60, a range of $4.8 million to $15.6 of expenditures will be captured by the downtown.

Table 4-60: 2008-2018 Downtown Retail Sales by Market Source and Scenario (2008$)

Market Source	New Downtown Sales 2008-2018		
	Low	Mid	High
Downtown Households	$639,366	$1,430,783	$2,369,179
Downtown Office Employees	$783,906	$1,379,691	$2,109,223
Subregional Households	$2,398,974	$4,624,334	$6,645,126
Tourists	$899,345	$1,577,561	$2,255,776
Subtotal	*$4,721,591*	*$9,012,369*	*$13,379,305*
Other	$133,982	$1,156,402	$2,235,699
Total	$4,855,573	$10,168,771	$15,615,004

Source: BBPC, ESRI, New London Main Street

As Table 4-61 shows, the downtown retail sales by market source for each scenario showing the percentage increase over 2008. For all sources combined, the low scenario represents an increase of 21 percent over the 2008 sales, the mid scenario a 45 percent increase and the high scenario a 69 percent increase. Note that the market source with the largest dollar impact on downtown retail sales is

subregional households making up 49 percent of the sales in the low scenario, 45 percent in the mid scenario and 43 percent in the high scenario. The market source with widest range of growth rate (since 2008) is the "other" source, which has a total difference of 78 percent between the low and high scenarios. The second widest range in growth rate is the tourist market source which has a difference in growth of 75 percent between the low and high scenario.

Table 4-61: Change in Retail Sales by Market Source and Scenario 2008-2018 (2008$)

Market Source	Low		Mid		High	
	%	$	%	$	%	$
Downtown Households	17%	$639,366	39%	$1,430,783	65%	$2,369,179
Downtown Office Employees	25%	$783,906	44%	$1,379,691	68%	$2,109,223
Subregional Households	21%	$2,398,974	40%	$4,624,334	58%	$6,645,126
Tourists	50%	$899,345	87%	$1,577,561	124%	$2,255,776
Other	5%	$133,982	43%	$1,156,402	83%	$2,235,699
Total	21%	$4,855,573	45%	$10,168,771	69%	$15,615,004

Source: BBPC, ESRI, New London Main Street

4.5.5. 2018 Supportable Retail Space

In order to determine the 2018 supportable retail space, the 2018 new market source expenditures are converted into square feet using average sales per square foot of $200.

Projected 2018 downtown retail sales will be distributed between existing retail business and new retail businesses. Before determining supportable new retail space from the new retail sales, the percentage of retail sales going to existing businesses must be subtracted. Approximately 20 percent of newly demanded retail sales will be attributed to increases in sales productivity of the existing businesses. The residual 80 percent of newly demanded retail sales can be converted to new retail space or absorption of existing vacant retail space.

Table 4-62 shows that, by dividing the average sales per square foot amount ($200) into the residual newly demanded retail sales ($4.8 million to $15.6 million), the supported new retail space (19,422 square feet to 62,460 square feet) is projected.

Table 4-62: Supportable New Downtown Retail Space 2008-2018

Scenario	New 2018 Downtown Sales	Sales Capture by Existing 2008 Retail Businesses (20%)	Residual Sales Potential to Support New Retail (80%)	Average Sales/SF	Supportable New Retail Space 2008-2018
Low	$4,855,573	$971,115	$3,884,458	$200	19,422
Mid	$10,168,771	$2,033,754	$8,135,017	$200	40,675
High	$15,615,004	$3,123,001	$12,492,003	$200	62,460

Note: 80% of total new downtown sales will be available to support the development of new/renovated retail space; 20% of sales will be captured by existing retailers increasing sales productivity

Source: BBPC, ESRI, New London Main Street

However, as noted in the previous subsection of this report, 141,750 square feet of retail space is currently vacant in downtown. A percentage of new retail businesses and/or expansion of existing businesses will fill a portion of the vacant space. On the other hand, some tenants may find that newly renovated or newly constructed retail space fits their needs better than the existing space. The supportable retail space projections are projections for the increase in occupied space and may be in new space or infill of existing space, depending on tenant needs.

4.6 Conclusions Regarding Development Potential

It is projected that downtown New London can support additional retail, office and residential space over the next ten-year period. However, development will stall as the nation-wide economic downturn negatively influences market conditions that support growth. It is expected that the supportable square feet and units can be phased in throughout the ten year period, but the majority of the development will occur in years 5-10. The market analysis for office, residential and retail revealed the following projected development program (See Table 4-63 below):

Table 4-63: Downtown Development Program 2008-2018

	Low		Mid		High	
	SF	%	SF	%	SF	%
Office	20,215	15%	39,000	14%	66,616	14%
Retail	19,422	15%	40,675	14%	62,460	13%
Residential Units	93 units (93,000 SF)	71%	211 units (211,000 SF)	73%	347 units (347,000 SF)	73%
Total Square Feet	130,707		288,262		473,181	

Source: BBPC, 2008

The level of development in downtown New London depends on the market conditions, available space, micro and macro economic trends, public policy incentives and proactive marketing programs. Any combination of these factors will influence the development potential of downtown New London.

Taking in to consideration the current economic downturn, downtown New London is not projected to see rapid growth in the near term (1-4) years. As businesses and households begin to recover, they will look for new business, tourist, and retail opportunities. The City of New London, and other organizations aiming to make downtown a more attractive option for office locations, residential living and retail shopping and restaurants, have the near term to foster incentives and develop a marketing campaign to reach out to potential office and retail space users, tourists, residents and other groups potentially spending money in downtown.

4.6.1. Residential

Projected household growth in New London County, coupled with potential spin-off demand provided by future workers in new office buildings and growing national trends toward living in downtown and in locations near transit, can offer opportunities for modest residential expansion in the downtown (in the range of 93 to 347 units during the 10 year period). However, this residential growth will not come

automatically, and the provision of a higher-amenity environment is critical to attracting future residents. New units can be integrated into new mixed-use developments and upper floors of existing buildings and can be designed to take advantage of the potential synergies between housing, employment and retail uses.

4.6.2. Office

New London and its downtown area have potential to support new office users. A positive regional real estate environment (e.g. New London County and Hartford Regional office market), projected employment growth, recent expansion of key office-based industries (e.g. pharmaceutical companies, defense industry firms, service firms- including finance, professional/technical services and law firms, information technology based businesses, and healthcare) and a supportive public sector all increase the potential to attract office space users.

Additionally, the downtown area is beginning to cultivate an atmosphere that will help to ensure that new employers will locate in this area. The increasing numbers of downtown residential units, urban restaurants and shopping opportunities for employees combined with the accessibility to public transportation alternatives make downtown New London a unique player in the regional market.

New London County is expected to see growth in office space demand in the next ten years and downtown New London has the potential to capture a share of this growth. After examining office growth projections for the county, as well as factoring in national trends and the demand for office space near downtown transit centers, we believe it is reasonable to expect downtown New London to gain between 130 and 306 new office employees by 2018. This translates into a range of supportable office space of 20,215 – 66,616 square feet of new downtown office space.

While the current recession will limit opportunities in the near term, it offers an opportune time to plan for new office opportunities and better position the city to capture future growth in the office market. In the near term (1-4 years), office development will likely slow as the demand for office space responds to companies' (tenants') layoffs, inability to obtain financing, and other effects of the economic slowdown. However, while this analysis takes into account the current slowdown, it also looks beyond and projects potential office space demand in downtown New London over the longer term. Note however that a slower recovery could delay the projected development time frame beyond 2018 or shift the outcome to the lower end of the range reflected in the three scenarios (this is true for office, retail and residential development).

Overall, as more companies seek new office locations, urban places near existing industry, such as downtown New London, will be hotspots. Downtown will become an even more attractive option as the availability of residential units, retail stores and restaurants grows.

4.6.3. Retail

The ten year projected demand for retail in downtown New London is primarily generated by downtown households, subregional households, downtown employees and tourists. Secondarily, subregional employees, college students, public transportation users, business to business, and the internet are also generators of new retail demand. New 2018 supportable retail space will range from 19,422 to 62,460 square feet.

However, it is difficult to predict the needs of future tenants and whether the existing space will be able to accommodate those needs, considerable renovations to existing structures will need to be made, or if new buildings will need to be constructed. Interviews with retailers revealed that a difficulty with the existing retail space is the length to width ratio. Retailers rent the entire space, but only use the front half for merchandise and are left with empty space in the back which they have to pay for.

A portion of the potential new demand for retail space over the ten year period can be absorbed by existing retail space that is vacant. This vacant space can be existing vacant space or space vacated by an existing tenant downsizing or relocating out of the downtown.

Downtown New London is recognized for the collection of niche retail shops and arts and entertainment venues. However, this is also an area for improvement identified by the survey respondents as a way to attract more visitors (who pass through the RITC) into downtown. Interviews with local stakeholders revealed that New London has the momentum to become a niche destination for ethnic restaurants, art galleries and eclectic shops. At the same time, retailers must provide for the basic needs of residents and downtown employees, such as a grocery store and a pharmacy. To succeed in downtown New London, retailers need to be innovative with their product lines. For example, a shoe store might also sell chocolate or a flower shop might also have a coffee bar (such as the Thames River Greenery).

Several stakeholders have indicated that a grocery store is needed downtown. The average lease area for a grocery store is approximately 52,000 square feet. More importantly, grocery retailers have site selection criteria regarding population, median household income, and traffic counts. It was revealed that at this time, the traffic counts are not high enough to attract a major grocery store retailer. However, over the next 5 to 10 years, the office presence and the growth of residential units in downtown will increase the population and traffic counts to meet the needs of the grocery retailers. In addition, grocery retailers are responding to the national trends of households moving back into historic urban areas. Small-format grocery stores typically occupy half the lease area of a standard grocery store and may be better candidates for downtown New London. However, one block from the downtown boundary is a member owned market called Fiddleheads Cooperative. This market offers organic and locally grown foods as well as music and art events. At this time, the hours of operation are limited, but with a growing population downtown it is expected that the cooperative will expand its hours to attract additional customers.

4.6.4. Transit Oriented/Smart Growth Opportunities

Redevelopment of the RITC and surrounding area in downtown New London would make it an appropriate location for the projected demand of retail, office and residential space. For example, renovating historic Union Station and redeveloping the Water Street Garage adjacent to the train station can capture a portion of the new growth. However, infill of vacant lots and renovations of properties in the downtown are also potential projects which will meet the proximity criteria to be considered “transit-oriented” development (TOD). As defined by the American Public Transportation Association, “TOD is compact, mixed-use development near new or existing public transportation infrastructure that serves housing, transportation and neighborhood goals”. It has a pedestrian-oriented design that encourages residents and workers to drive their cars less and ride mass transit more.[41]

[41] American Public Transportation Association, Transit Resource Guide. http://www.apta.com/research/info/briefings/briefing_8.cfm

The market sector that will derive the most benefits from locating near the RITC is residential. As daily commuting to work in New York City and Boston are not realistic drivers for residents, the most logical users of the public transportation modes in New London are weekend travelers. The largest group is the residents of New London interested in taking day or weekend trips into the larger cities. Providing housing choices near the RITC will attract these users.

The realization of transit-oriented development potential will require a combination of private and public sector support. Implementing policies and programs which encourage private sector investments will bring positive change. Encouraging development which enhances the connections between the RITC and the downtown will help to turn the surrounding area into a vibrant, walkable self-supporting area. For example, currently 1.8 million passengers pass through the RITC each year, and only 22.7% of these passengers are actually going to or coming from New London. Building a marketing program to attract more passengers into New London will help to add to a sustainable base for the retail and restaurant shops.

The next chapter identifies specific types, combinations and locations of developments for downtown to become a vibrant development area.

The next section of this chapter examines the economic impacts of TOD development.

4.7 Economic Impacts of TOD Over the Long Term

Based on the mid-level forecasts described in the prior section, the following long-term economic and fiscal impacts resulting from the net new office, retail and residential development were estimated:

- Residential
  - New Residential Units/Households
  - New Residential Property Tax (City Revenue)
  - New Residents' Income Tax (State Revenue)

- Office
  - New Office Employees
  - New Office Employee Income Tax (State Revenue)
  - New Office Space Property Tax (City Revenue)

- Retail
  - New Retail Employees
  - New Retail Employee Income Tax (State Revenue)
  - New Retail Space Property Tax (City Revenue)
  - New Retail Sales Tax (State Revenue)

These impacts are described by sector below.

4.7.1. Residential Impacts

The estimated impacts resulting from 211 new residential units in downtown New London are approximately $1.2 million in annual property taxes. This is shown in Table 4-64.

Table 4-64: Residential Space Annual Property Tax to the City

Number of Units	211
Total SF Residential	211,000
Value Per SF	$228
Assessed Value/SF	$48,108,000
Mill Rate	25.49
Total Annual Tax	$1,226,273

Note: Assessed Value was determined using average sales price of downtown New London condos.
Source: Basile Baumann Prost Cole & Associates, City of New London, 2009

The 211 new residential households will generate more than $522,000 in income tax. This may or may not be new revenue since residents may be moving to New London from other parts of Connecticut. The total income tax revenue (from both new and relocating residents) is shown in Table 4-65.

Table 4-65: Resident Income Tax to the State

Number of Units/Households[1]	211
Residents of CT [2]	169
Not Included in Office & Retail Employee Income Tax [3]	152
Average Annual Wage [4]	$72,800
Income Tax Per Unit [5,6]	$3,440
Income Tax to CT	$522,605

1: It is assumed that 1.5 working individuals are in each household.
2: It is assumed that 90% claim CT as their residence. Note that these may not all be new residents to the state.
3: It is assumed that 20% of new downtown office and retail employees live downtown.
4: It is assumed that the mortgage payment is 25% of the annual wage. The mortgage payment is assumed to be based on a loan value of $228,000 with a 30 year payment schedule, and an interest rate of 7%.
5: Connecticut personal income tax is calculated based on a sliding scale.
6: Assumes a taxpayer filing status of "single". In Connecticut, the first $10,000 has a 3% tax and excess over the first $10,000 is taxed at 5%. The tax credit is determined and then subtracted from the income tax to determine the estimated individual income taxes.
Source: Basile Baumann Prost Cole & Associates, State of Connecticut, 2009

4.7.2. Office Impacts

It is assumed that the projected office space will be net new, not replacement space, to downtown New London. If there are any transfers from existing office space to new office space, it is assumed that the vacated space will be re-tenanted. The estimated income tax impacts resulting from the 209 new office employees in downtown are over $20,000 per year. This is shown by industry type in Table 4-66.

The new supportable square footage for office space downtown is 39,000 SF. Using an income approach to the valuation of the office space, the total property tax impacts are above $246,000 per year. This is shown in Table 4-67.

Table 4-66: Downtown Office Employees Income Tax to the State

Industry Type	Number of Jobs	Average Annual Wage [1]	Income Tax [2,3]	Total Income Tax CT [4]
Information	13	$86,087	$4,104.00	$50,684
Finance & Insurance	17	$64,834	$3,042.00	$49,128
Real Estate, Rental & Leasing	14	$56,390	$2,593.00	$34,487
Professional, Scientific & Technical Services	144	$73,420	$3,471.00	$474,833
Management of Companies & Enterprises	0	$100,288	$4,814.00	$0
Administrative Support, Waste Management, Remediation Services	6	$35,842	$1,298.00	$7,399
Membership Associations & Organizations	15	$51,614	$2,143.00	$30,538
Total	209	$468,476	$21,465	$647,069

1: May 2008 Bureau of Labor Statistics Occupational Wage Estimates for Norwich-New London, CT-RI, adjusted to 2012 dollars (assume inflation of 1.5% per year).
2: Connecticut personal income tax is calculated based on a sliding scale.
3: Assumes a taxpayer filing status of "single". In Connecticut, the first $10,000 has a 3% tax and excess over the first $10,000 is taxed at 5%. The tax credit is determined and then subtracted from the income tax to determine the estimated individual income taxes.
4: Assumes 95% of workers live in the State.
Source: Task 5 Analysis of Development Potential for Site and Area, Part 1, Basile Baumann Prost Cole & Associates, Bureau of Labor Statistics, 2009

Table 4-67: Office Space Annual Property Tax to the City

New Office SF	39,000
Assessed Value [1]	$9,660,000
Mill Rate	25.49
Annual Tax	$246,233

1: Assessed value is determined using an income approach. It is assumed that the rental rate is $23/SF, operating costs are 30% of the gross income and the capitalized rate is 6.5%
Source: BBPC, City of New London, Susan Howard (US Properties), 2009

4.7.3. Retail Impacts

In the market analysis, the team projected the changes in retail sales as a result of the induced effects of the transit improvements. Since the current retail is underperforming, we allocated 20% of new retails sales to existing stores and 80% to new retail stores. The estimated income tax impacts resulting from the 156 new retail employees in new stores in the downtown are over $66,000 per year. This is shown in Table 4-68.

Table 4-68: Downtown Retail Employees Income Tax to the State

Industry Type	Number of Jobs [1]	Average Annual Wage [2]	Income Tax [3.4]	Total Income Tax CT [5]
Retail Sales Persons	156	$26,545	$448.00	$66,394

1: Number of retail jobs is based on a calculation of 1 full time equivalent job per 250 SF.
2: May 2008 Bureau of Labor Statistics Occupational Wage Estimates for Norwich-New London, CT-RI, adjusted to 2012 dollars (assume inflation of 1.5% per year)
3: Connecticut personal income tax is calculated based on a sliding scale.
4: Assumes a taxpayer filing status of "single". In Connecticut, the first $10,000 has a 3% tax and excess over the first $10,000 is taxed at 5%. The tax credit is determined and then subtracted from the income tax to determine the estimated individual income taxes.
5: Assumes 95% of workers live in the State
Source: Basile Baumann Prost Cole & Associates, Bureau of Labor Statistics, 2009

The new supportable square footage for new retail space downtown is 40,675 SF. Using an income approach to the valuation of the office space, the total property tax impacts are slightly below $134,000 per year. Property tax impacts are shown in Table 4-69.

Table 4-69: Retail Space Annual Property Tax to the City

New Retail SF	39,000
Assessed Value [1]	$5,256,462
Mill Rate	25.49
Annual Tax	$133,987

1: Assessed Value is determined using an income approach. It is assumed that the rental rate is $12/SF, operating costs are 30% of the gross income and the cap rate is 6.5%
Source: Basile Baumann Prost Cole & Associates, City of New London, Susan Howard (US Properties), 2009

The total new retail sales in 2018 resulting from new downtown retail shops and additional sales in existing shops is approximately $10 million. The sales tax generated by these sales is over $610,000 per year as shown in Table 4-70.

Table 4-70: Retail Sales Tax to the State

New 2018 Downtown Sales	$10,168,771
Sales Tax Rate	6%
Sales Tax to State of CT	$610,126

Source: Basile Baumann Prost Cole & Associates

4.7.4. Order of Magnitude Estimates of Impacts Summary

The total estimated fiscal impacts from the RITC induced development are over $1.6 million in property tax, 1.2 million in income tax and $600,000 in sales tax. The induced economic impacts are 317 new downtown residents and 356 new employees (209 office employees and 156 retail employees). However, a percentage of the downtown residents will also work in the downtown in retail and in office professions. The City will collect over $1.6 million in property taxes and the State will collect nearly $2 million in income and sales tax. Table 4-71 shows the order of magnitude impact estimates.

Table 4-71: Order of Magnitude Impact Estimates

Fiscal Impacts	
Property Tax (City Revenue)	$1,606,494
Income Tax (State Revenue)	$1,225,981
Sales Tax (State Revenue)	$610,126
Economic Impacts	
New Residents	317
New Office Employees	209
New Retail Employees	156

4.7.5. Additional Qualitative Impacts/Benefits

In addition to the economic and fiscal benefits quantified above, the improved RITC should provide additional impacts/benefits in terms of enhancing the area's vitality and its economic competitiveness, including:

- Enhanced position of the City, in that the improvements will support downtown revitalization and improve employment recruitment efforts
- Enhanced opportunities for transit oriented development over time including in the historic Union Station building
- Enhanced transit service convenience (regional/local bus, inter-city bus, rail, and ferry)
- Induced transit ridership
- Impacts on transit operating costs
- Enhanced transit user benefits
- Enhanced pedestrian access

5. Transit Oriented Development/Downtown Development Opportunities 5-1

5.1 Introduction 5-1
5.2 Assumptions and Guiding Principles 5-1
5.3 Potential Development Sites 5-2
5.3.1. Small Infill Parcels (Type A) 5-2
5.3.2. Large Undeveloped Parcels (Type B) 5-3
5.3.3. Large Potential Redevelopment Parcels (Type C) 5-7
5.3.4. Rehabilitation Candidates (Type D) 5-7
5.3.5. Other Sites Considered: Waterfront Parcels 5-8
5.4 Downtown Development Programs Derived from Market Analysis 5-9
5.5 Conclusions Regarding TOD Sites 5-11
5.6 A Long Range TOD Opportunity 5-11
5.6.1. Historic Context 5-11
5.6.2. The Urban Renewal Era and Potential Redevelopment Sites 5-14
5.6.3. Conceptual Framework Plan 5-16
5.6.4. Conceptual TOD Master Plan 5-17

List of Figures

Figure 5-1: Development Site Typologies 5-3
Figure 5-2: Bird's Eye View of Water Street Parking Garage 5-4
Figure 5-3: Plan View of Water Street Parking Garage 5-5
Figure 5-4: Overall Site Plan for the Parade 5-6
Figure 5-5: Potential Events Space 5-6
Figure 5-6: Diagram of Existing Commercial Occupancy 5-8
Figure 5-7: Low Scenario 5-9
Figure 5-8: Mid Scenario 5-10
Figure 5-9: High Scenario 5-10
Figure 5-10: Downtown New London 5-11
Figure 5-11: Bird's Eye View of New London, 1911 5-12
Figure 5-12: Bird's Eye View of the Parade, 1911 5-12
Figure 5-13: The Parade Looking West 5-13
Figure 5-14: The Parade Looking Towards Union Station 5-13
Figure 5-15: Aerial View of Potential Redevelopment Sites 5-14
Figure 5-16: Underutilized Property in Downtown New London 5-14
Figure 5-17: Water Street (Before and After) 5-15
Figure 5-18: Atlantic Street (Before and After) 5-15
Figure 5-19: State Street at the Parade (Before and After) 5-15
Figure 5-20: Conceptual Framework Plan 5-16
Figure 5-21: Potential Redevelopment Sites 5-16
Figure 5-22: Conceptual TOD Master Plan 5-17
Figure 5-23: Conceptual Ground Level Plan 5-18
Figure 5-24: Conceptual Roof Plan, TOD Master Plan 5-18
Figure 5-25: Illustrative Cross-Sections of the Water Street Garage 5-19
Figure 5-26: Cross-Section Key 5-19
Figure 5-27: Existing Development Conditions 5-20
Figure 5-28: 3D Model of Existing Development Conditions 5-20
Figure 5-29: Potential Redevelopment Sites 5-21
Figure 5-30: TOD Master Plan Build-Out 5-21
Figure 5-31: New Development on the Eugene O'Neill Dr. Parking Lots 5-22
Figure 5-32: New Development on Eugene O'Neill Drive and Atlantic Street 5-22
Figure 5-33: Sightline to Parade Monument from Atlantic Street 5-23
Figure 5-34: Reestablished John Street 5-23
Figure 5-35: Existing View to Union Station 5-24
Figure 5-36: Potential Expanded View to Union Station 5-24
Figure 5-37: Addison, TX 5-25
Figure 5-38: New Development on the North Side of the Parade 5-25
Figure 5-39: Orenco Station, Hillsboro, Oregon 5-26
Figure 5-40: Bank Street looking towards the Parade 5-26
Figure 5-41: Rollins Square Mixed-Use Development, Boston, Massachusetts 5-27
Figure 5-42: TOD Master Plan Build-Out 5-27

5. Transit Oriented Development/Downtown Development Opportunities

5.1 Introduction

This chapter identifies transit oriented development (TOD) opportunities in downtown New London, building on the market analysis described in Chapter 4. In addition, a potential long range TOD opportunity is explored in the latter part of the chapter.

As defined by the American Public Transportation Association, "TOD is compact, mixed-use development near new or existing public transportation infrastructure that serves housing, transportation and neighborhood goals." It has a pedestrian-oriented design that encourages residents and workers to drive their cars less and ride mass transit more. Sites that are proximate to and within a comfortable walk (generally defined as a five-to-ten minute walk, or a quarter-mile to half-mile, respectively) of the RITC are appropriate locations for the retail, office and residential space demands identified in the market analysis. Renovating Union Station, redeveloping the Water Street Garage parcel in combination with adjacent sites, rehabbing existing buildings, and redeveloping vacant lots, among other development strategies, will help capture projected growth.

The residential market sector will derive the most benefit from locating near the RITC. As daily work commuting to New York City and Boston is not realistic for residents, the most logical users of the public transportation modes in New London are weekend travelers. The largest group is the residents of New London interested in taking day or weekend trips into larger cities. Providing housing choices near the RITC will attract these users.

The realization of TOD potential will require a combination of private and public sector support. Implementing policies and programs that encourage private sector investments will help bring positive change. Encouraging development that enhances connections between the RITC and the downtown will help transform the surrounding area into a vibrant, walkable and self-supporting area. Currently, 1.8 million passengers pass through the RITC each year, and only 22.7% of these passengers are actually going to or coming from New London. Building a marketing program to attract more passengers into New London will help in creating a sustainable base for downtown retail and restaurant development.

5.2 Assumptions and Guiding Principles

The determination of TOD capacity is based on the findings from the market analysis and a physical site analysis, including an evaluation of the dimensional characteristics, location (sites considered are at most a quarter-mile from the RITC and generally in and around the downtown), and adjacent land uses. A form-based approach was employed when determining long range TOD opportunities (described in Section 5.6). TOD in the RITC area could catalyze downtown economic development, contribute to the local tax base, and create an active street life and pedestrian-friendly environment.

The sites with the most promise in terms of TOD potential are identified and discussed further in the next section. The following are general assumptions considered during the TOD analysis:

- New development should be compressed into an area proximate to Union Station and the RITC; it should reinforce and support existing land use patterns, particularly the retail concentrations on Bank and State Streets.
- The development of a "higher-amenity" environment is critical to attracting future residents and visitors who pass through the RITC. Emphasis should be placed on creating both an active, lively street life and a beautiful pedestrian environment, leveraging the amenity value of Union Station and the Parade.
- TOD opportunities should include a range of potential sites – rehabilitation of older buildings, small infill parcels, larger undeveloped parcels and large potential redevelopment sites. Short-range opportunities should not preclude more ambitious long-term (20-30 year) opportunities.
- The "face" of downtown as seen by the thousands of people passing through the RITC daily is the blank wall of the Water Street Garage, and this should be substantially altered in any redevelopment plan.
- The creation of a large "event" space should be incorporated into one or more redevelopment options. Events (outdoor antique automobile shows, craft fairs, etc.) are a proven way to attract tourists and should be able to lure RITC travelers into spending time in the downtown New London.

5.3 Potential Development Sites

A list of potential development candidates was developed to establish a range of typologies for discussion with the Stakeholder Steering Committee, City Officials, members of the real estate community, property owners and others as appropriate. This enabled a discussion regarding the following questions: Should the focus be on rehabilitation candidates, infill parcels or large potential redevelopment parcels, or a combination of all of the above? Should the focus be on Water, State and Bank Streets or should new districts evolve? Should an outdoor "events space" be integrated into the TOD opportunities plan?

Sites that could potentially accommodate TOD range from small infill parcels to large potential redevelopment sites. The identified sites were organized into several site typologies, as described below (See Figure 5-1 for a map that shows site locations).

5.3.1. Small Infill Parcels (Type A)

There are a few scattered infill parcels within a quarter mile radius of Union Station in the 3,500 sq. ft. to 14,500 sq ft. range (see Figure 5-1). A 14,500 sq. ft. parcel could accommodate up to 12 - 14 dwelling units per floor (60 - 70 units in a five story building), depending on residential building type, parcel geometry and dimensional characteristics.

Pros

- Infill development will quickly fill in "gaps" in the streetwall and, in some instances, provide continuous retail frontage.
- Sites are within a quarter-mile of Union Station.
- Helps ensure a variety of building types.

Cons

- Sites are small and existing zoning/bulk and area regulations may provide insurmountable development obstacles; achievable densities as-of-right may not be great enough to make it worth the investment for developers.

- Awkward parcel geometries and lack of visibility.
- Piecemeal approach takes time to make transformative changes.
- Insufficient number of parcels to fulfill a significant portion of the future land use program.

5.3.2. Large Undeveloped Parcels (Type B)

The two large parking lots on Eugene O'Neill Drive, between Golden Street and Tilley Street, could accommodate approximately 20 dwelling units per level (depending on residential building type) or 100 structured parking spaces per level with some surface parking. The two sites are about a five-minute walk from the RITC and are some of the largest undeveloped sites within a quarter-mile of the RITC (see Figure 5-1).

Figure 5-1: Development Site Typologies



Pros

- Opportunity to create development that serves as a visual gateway to downtown.
- Significant frontage (about 700 linear feet) on the south side of Eugene O'Neill Drive provides the opportunity to make a transformative change in the downtown streetscape.
- Opportunity to enhance the city's land use mix.
- Parking lots are large enough to accommodate contemporary retail, office, and residential floor plates.
- Sites are within a quarter-mile of Union Station and adjacent to the entertainment/retail district.
- Sites are relatively flat, publicly-owned and adjacent to one another.

Cons

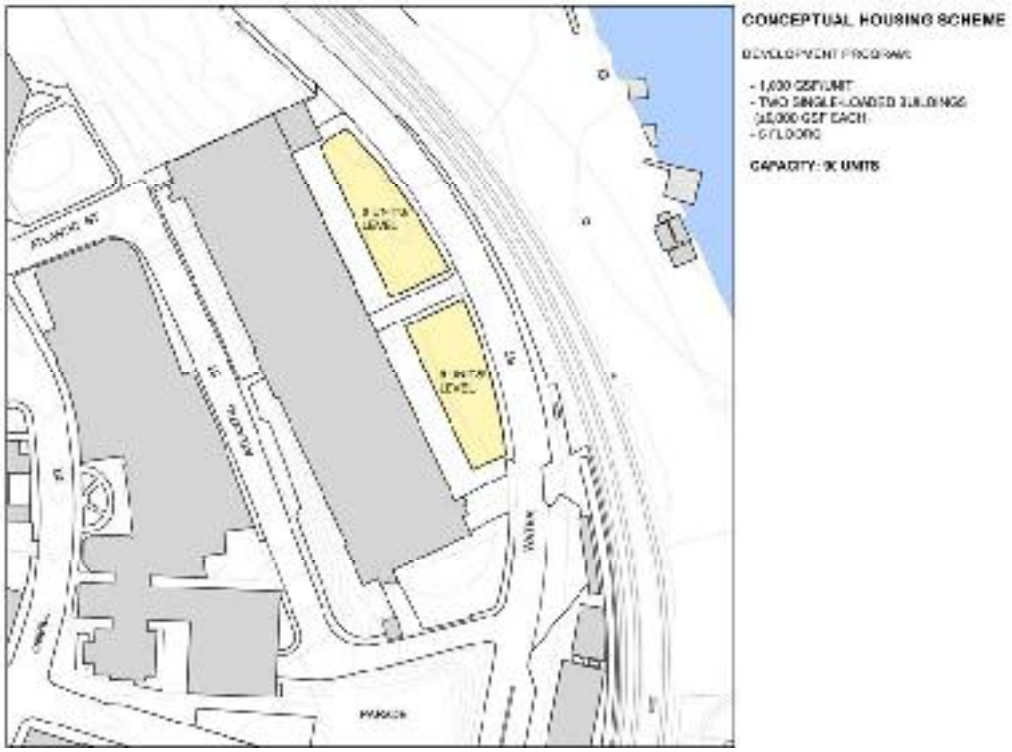
- Over most of their lengths, the sites' widths fall just short of 120 feet, the full width of a two-bay parking garage.
- Need to replace existing parking spaces, which puts a significant constraint on the potential development program.

Another undeveloped site that could potentially support development is the area in front of the Water Street Parking Garage on Water Street (see Figure 5-2). Composed of two individual parcels, this site is the largest undeveloped property within sight of Union Station and is a total of about three-quarters of an acre. Assuming the site's current zoning regulations remain, the site could be developed with approximately 90 dwelling units. See Figure 5-3 for a diagram that shows one potential housing arrangement. Although the site can technically accommodate development, a set of physical constraints may create considerable difficulty. For instance, the Water Street Garage has two access points on Water Street – one at the north corner of the garage and the other is at the center of the garage. Both of these points, particularly the central access point, significantly impact the two undeveloped parcels and would need to remain open to serve the garage. Another constraint is that the garage is sited very close to the north and south parcel's rear lot line, which would make filling out the sites impracticable. Adjacent bus facilities, daily operation of the public parking garage and noise related to railroad operations are discordant with certain land uses (for example, housing) and may limit desirability. These constraints, among others, make higher density development difficult if the Water Street Garage operations are to remain intact. The parcels in front of the Water Street Garage have greater value for development if the Water Street Garage were a part of the redevelopment scheme.

Figure 5-2: Bird's Eye View of Water Street Parking Garage



Figure 5-3: Plan View of Water Street Parking Garage



Alternatively, the two parcels, in conjunction with the Parade (see Figure 5-4), the Water Street frontage at Union Station and, possibly, the short term closing of a portion of Water Street, could be designed as part of a 3.5 acre "events plaza" (see Figure 5-5). Large banners representing the summer's events can be hung in front of the garage, creating a festive environment and attracting tourists using the RITC into downtown New London. It should be noted that transportation uses – including pick up /drop off and short term parking - are envisioned for the two parcels as part of the Preferred Short Term Alternative, as described in the Master Plan Chapter of this Final Report.

The area identified as "Union Station Property" in Figure 5-4 may continue in its current use for intercity buses or could become commercial property or public open space if bus operations were relocated.

Pros

- The parcel fronting the parking garage is large enough for housing development.
- Potential water views.
- Proximate to and highly visible from Union Station and the Parade.
- Attractive redevelopment in this area could significantly change the "face" of downtown, especially for visitors arriving by rail.
- Parcels are large enough for potential events space; a potential events space would attract visitors and would inevitably lead to more economic activity in downtown.

Cons

- Parcel dimensions only allow for single loaded housing and are generally not large enough for other land uses that require larger floor plates.
- Potential achievable density is limited.

Figure 5-4: Overall Site Plan for the Parade

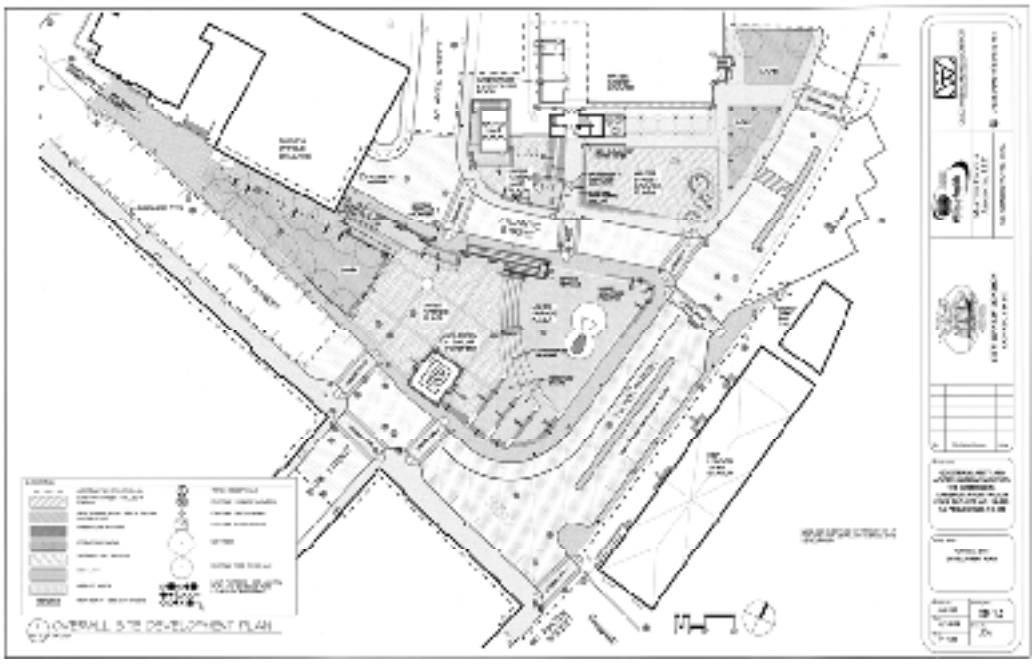
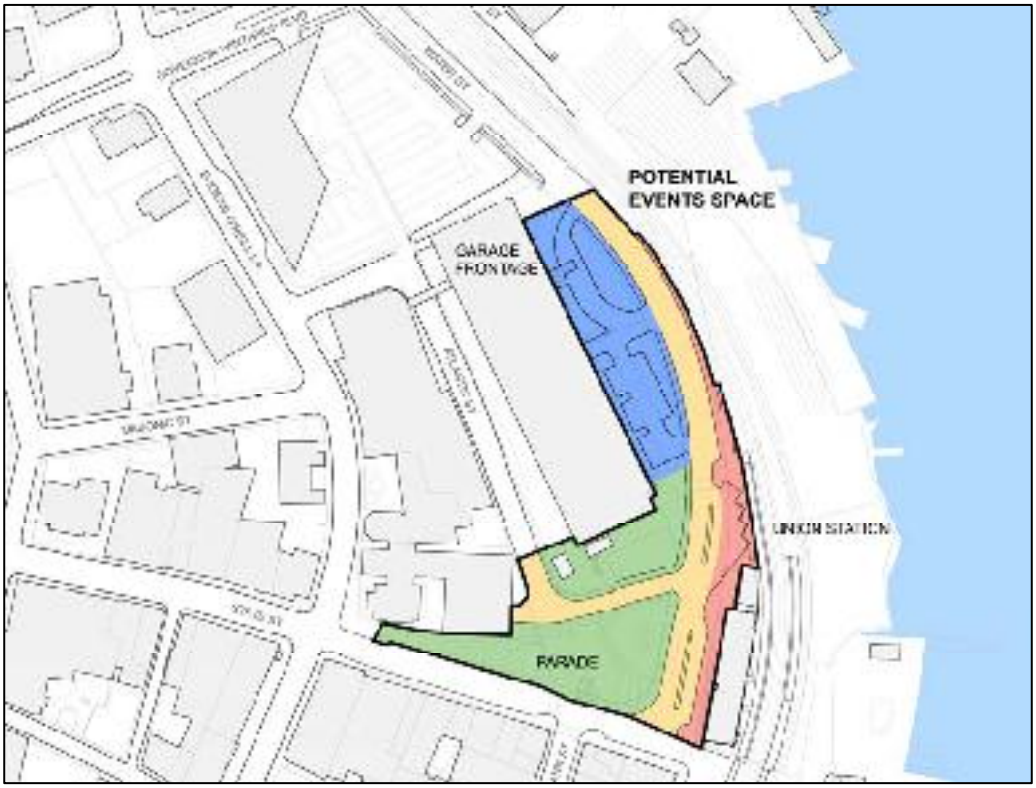


Figure 5-5: Potential Events Space



- Adjacent bus operations, daily operation of the public parking garage and rail noise are discordant with housing and may limit desirability.
- A potential events space would occupy a desirable development site and would require an event management structure.

5.3.3. Large Potential Redevelopment Parcels (Type C)

Multiple sites currently in use, including the Mariner Square, Radisson Hotel, Winthrop Parking Garage and Police Station sites, might be positioned for redevelopment. These sites are within a quarter-mile of the RITC and have the highest capacity for transformative redevelopment within the RITC area (see Figure 5-1).

Pros

- High visibility.
- Several of the sites are relatively flat.
- Present significant opportunity to restore the streetwall.
- Potential water views.
- Sites are clustered.

Cons

- Relatively long, indirect walks from Union Station and entertainment/retail district.
- Significant grade change between Water Street and Governor Winthrop Boulevard/Union Street intersection contributes to a lack of site visibility for visitors entering the RITC.
- Sites not related to the existing Bank and State Streets activity corridors.
- Would require a proactive public redevelopment policy and strategy including, potentially, land assembly.

5.3.4. Rehabilitation Candidates (Type D)

There are many fine buildings on State and Bank Streets which offer both ground floor retail and upper floor commercial and housing rehabilitation opportunities. The emphasis should be placed on sites close to the RITC. The difficulty will be retrofitting older building floor plates for contemporary uses. For example, many of the ground floor retail spaces are very narrow and very deep. Other rehabilitation opportunities include historic Union Station and the adjacent Greyhound building. See Figure 5-6 for a map that shows locations of vacancies in downtown New London.

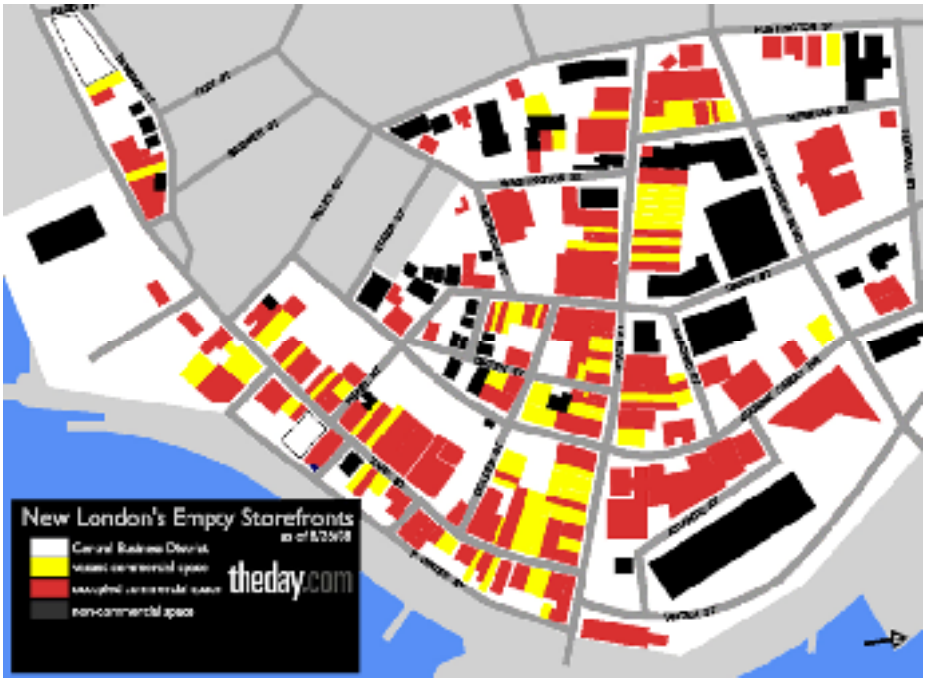
Pros

- Most rehab candidates on Bank and State Streets would reinforce the existing entertainment/retail presence and would help create an active “destination.”
- Rehab candidates are plentiful in the downtown.
- Would help stabilize historically and architecturally significant buildings; blocks on Bank and State Streets are virtually intact.

Cons

- In many cases, the configuration of the floor plates and square footage per floor are not adequate for and/or inefficient for many uses.
- Structural requirements, building code compliance and utility upgrades, among other potentially necessary improvements, create significant financial obstacles.
- Rehabs will put additional constraint on on-street parking supply.

Figure 5-6: Diagram of Existing Commercial Occupancy
(graphic provided by The Day)



5.3.5. Other Sites Considered: Waterfront Parcels

There may be opportunities for some reconfiguration of Cross Sound Ferry parking and staging areas by the owner, which would create an opportunity for modest development sites (see Figure 5-1). The Connecticut Coastal Management Ordinance limits waterfront property to water dependent uses with some exceptions. There are many examples in other New England states of waterfront mixed-use development with generous public access at the water's edge. Public access, in these instances, has been deemed a "water dependent use." These were explored with the landowners and it was determined that transportation uses would preclude other land uses in these areas.

Pros

- Opportunity for waterfront housing with beautiful views.
- Proximate to Union Station.
- Redevelopment would activate the waterfront and potentially provide additional public access and passive recreation.
- Sites are relatively flat.
- Could contribute to the "visual gateway" image for arriving ferry passengers.

Cons

- Would require parcel reconfiguration and the reorganization of the parking and vehicle staging areas.
- Limited vehicular and pedestrian access to sites from Water Street.
- Noise impacts.
- Internal vehicular circulation may be difficult due in part to the sites' narrow widths.
- Conflicts with transportation needs at these sites

5.4 Downtown Development Programs Derived from Market Analysis

As illustrated in Figure 5-7, significant rehabilitation of existing buildings along Bank and State Streets as well as the development of several small infill sites within the downtown would accommodate the low downtown development program of 20,215 SF of office space, 19,422 SF of retail space, and 93,000 SF of housing (93 units).

As illustrated in Figure 5-8, in combination with the rehab/development under the low scenario, the development of larger development parcels, including the Eugene O'Neill Drive parking lots and Water Street parking garage frontage would accommodate the mid downtown development program of 39,000 SF of office space, 40,675 SF of retail space, and 211,000 SF of housing (211 units).

Lastly, in combination with all of the above, the redevelopment of large potential redevelopment sites on Atlantic Street, Eugene O'Neill Drive and Union Street, as indicated in Figure 5-9, would accommodate the high downtown development program of 66,616 SF of office space, 62,460 SF of retail space, and 347,000 SF of housing (347 units).

Figure 5-7: Low Scenario



Figure 5-8: Mid Scenario

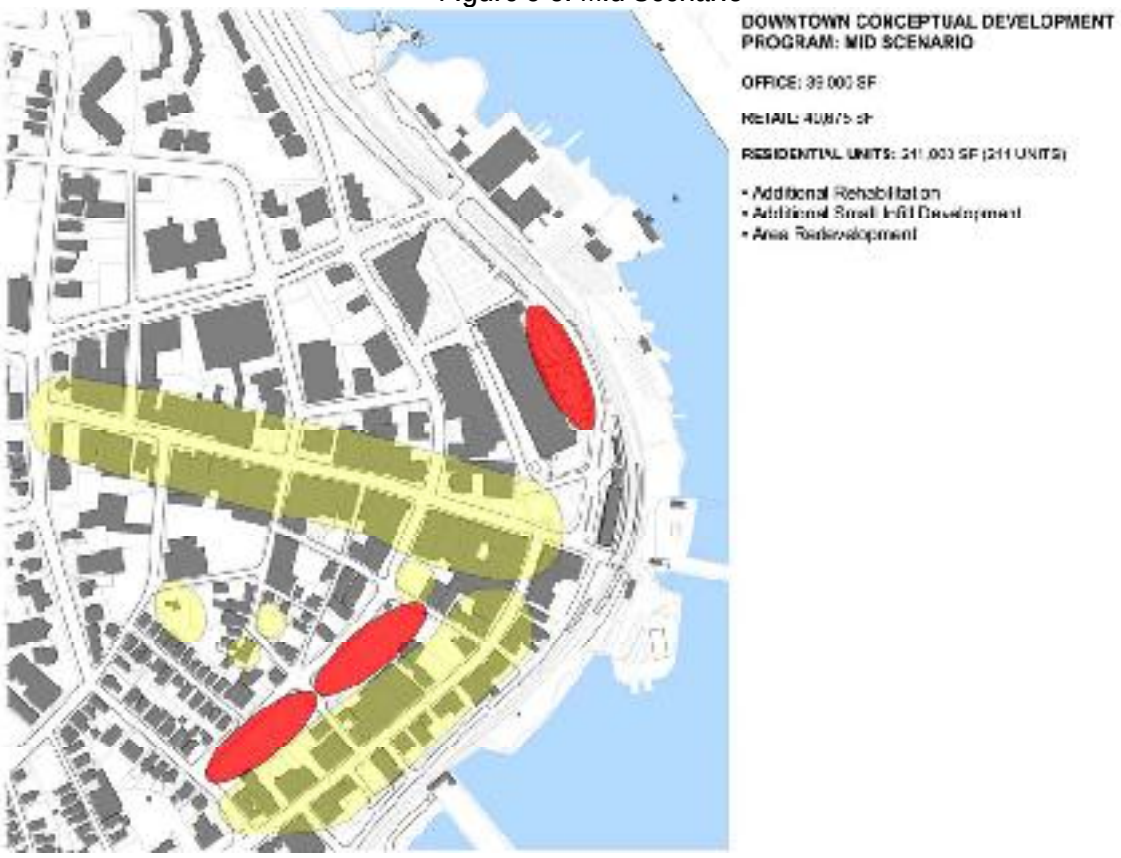
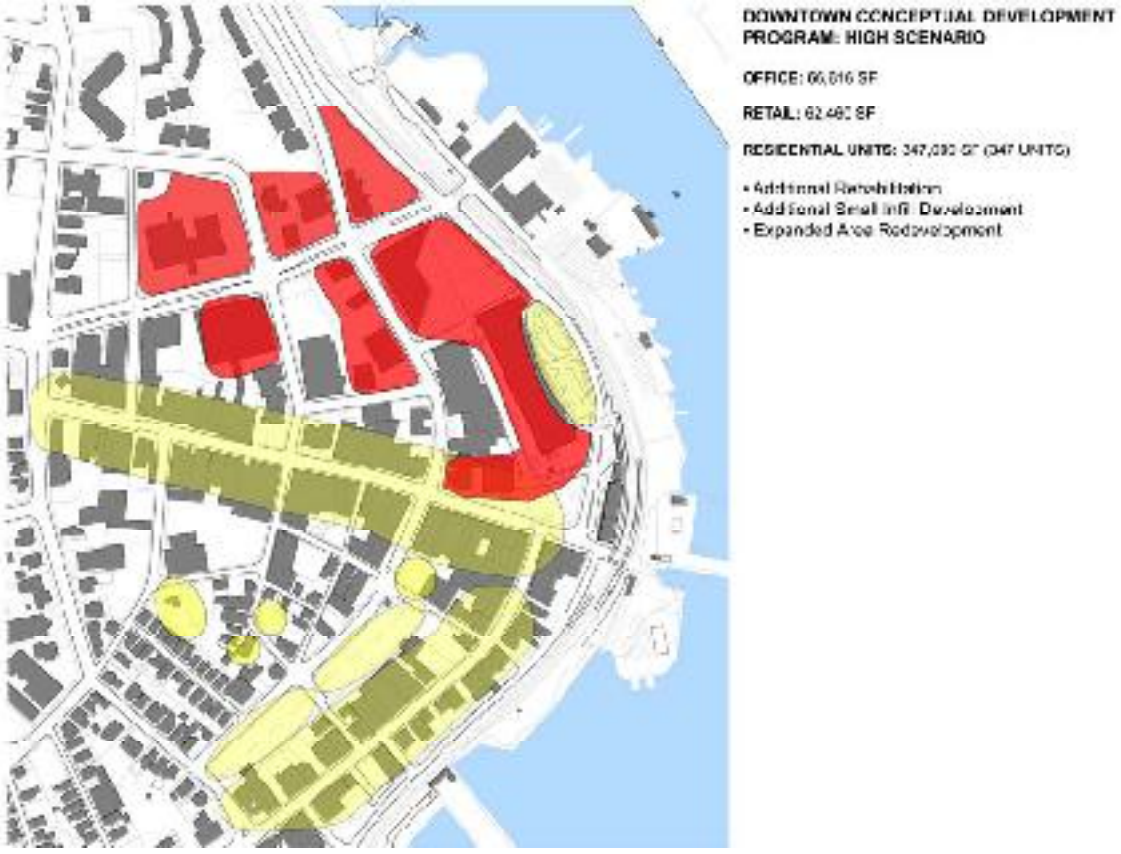


Figure 5-9: High Scenario



5.5 Conclusions Regarding TOD Sites

Most of the sites under the various type classifications are promising in terms of TOD potential. Parcels along the waterfront were initially considered for potential TOD. However, it was learned that they are better used as part of a fully operating RITC and can substantially benefit from pedestrian and vehicular circulation improvements and aesthetic enhancements.

Presently, there are very few undeveloped sites and, consequently, most of the major opportunities for TOD around the RITC are long term (20 or 30 years). The most immediate opportunities lie in the vacant storefronts on Bank and State Streets, and small infill parcels identified above. Although it is conceivable that these sites could be rehabilitated / developed within the short range, they are too small to achieve a significant portion of the future land use program identified in the market analysis. In addition, achievable as-of-right development densities may not be great enough to make it worth the investment for developers. Developing the identified sites with well-designed, higher density, mixed-use development (with an emphasis on residential development) could potentially improve connections between the RITC and the downtown, increase transit ridership, and help transform the RITC and downtown New London into a vibrant, pedestrian-friendly, self-supporting district. The realization of this TOD potential will require public/private partnerships and community support.

The following section explores a long range TOD opportunity for the undeveloped and large potential redevelopment sites identified in the above analysis.

5.6 A Long Range TOD Opportunity

5.6.1. Historic Context

New London's urban form and pattern is unique. Resembling a bow and arrow – State Street is the arrow and Water Street the bow – downtown New London's winding street pattern was formed by topography, by the shoreline and by the many small individually-owned parcels of land. It was a network of small winding streets with a pleasing sense of enclosure and intimacy, fronted by handsome buildings – many with active ground floor uses. In sum: a lively pedestrian environment with a dramatic and beautiful urban square, the Parade, at the point where the arrow meets the bow (see Figures 5-10 through 5-14).

Figure 5-10: Downtown New London



Figure 5-11: Bird's Eye View of New London, 1911



Figure 5-12: Bird's Eye View of the Parade, 1911



Figure 5-13: The Parade Looking West



Figure 5-14: The Parade Looking Towards Union Station



5.6.2. The Urban Renewal Era and Potential Redevelopment Sites

The character and parcelization of downtown New London changed dramatically during the Urban Renewal era. Smaller parcels were combined to form larger redevelopment sites and smaller, secondary streets were altered or demolished. The result is large superblocks, wider roads and large single use buildings. Many of the redevelopment sites identified in Figure 5-15 were assembled and redeveloped during the Urban Renewal era, and currently represent an opportunity to reestablish a finer grain street and block system and to provide new development that is compatible with existing historic buildings.

Characteristics common to all of the highlighted sites are the use of surface parking lots, single-story buildings, large setbacks, little-to-no recognition or reinforcement of the street edge, multi-storied office buildings with little regard to architectural and streetscape context, and large, blank-faced parking garages. The streets that serve the sites are very wide and designed to move automobiles as quickly as possible with minimal disruption. These physical characteristics are vestiges of the urban renewal era and create a pedestrian-unfriendly and aesthetically dull streetscape.

Figure 5-16 shows a commercial property in downtown New London that is underutilized and displays some of the characteristics outlined above. Figures 5-17 through 5-19 show current photographs of existing Urban Renewal era development in downtown New London juxtaposed with views of its historic streetscape and architecture.

Figure 5-15: Aerial View of Potential Redevelopment Sites



Figure 5-16: Underutilized Property in Downtown New London





Figure 5-17: Water Street (Before and After)

Circa 1960



2009



Figure 5-18: Atlantic Street (Before and After)

1860 (formerly Bradley St.)



2009



Figure 5-19: State Street at the Parade (Before and After)

Circa 1900



2009



5.6.3. Conceptual Framework Plan

Figure 5-20 is a conceptual framework plan that outlines the important corridors (in blue) that provide pedestrian and vehicular access to the redevelopment sites highlighted in Figure 5-15 and Figure 5-21, and identifies potential future corridors (in yellow). Together, the corridors serve as the "skeleton" of the conceptual TOD master plan (see Figure 5-22) and are critical to the functioning of a pedestrian-friendly, mixed-use district.

Figure 5-20: Conceptual Framework Plan



Figure 5-21: Potential Redevelopment Sites



5.6.4. Conceptual TOD Master Plan

There are a number of events that could trigger the realization of a long range TOD master plan, which could include a new bus facility, new waterfront garage and associated mixed-use development:

- The Water Street parking garage may reach the end of its useful life and need to be replaced.
- A private developer could approach the City with a proposal for a public/private partnership mixed-use development on the Water Street Garage site.
- One or more of the other large redevelopment sites north of State Street may become available for redevelopment.

Whatever the trigger, this conceptual TOD master plan posits a future that restores the character and vitality of downtown New London to the long period of history prior to the Urban Renewal era. The plan is flexible and development can proceed incrementally over time in varying sequences.

The conceptual development program, shown in Figure 5-22 and outlined below, was derived from a form-based analysis of development opportunities on the key redevelopment sites. Envisioned for the sites is a mix of housing, retail, hotel and office development.

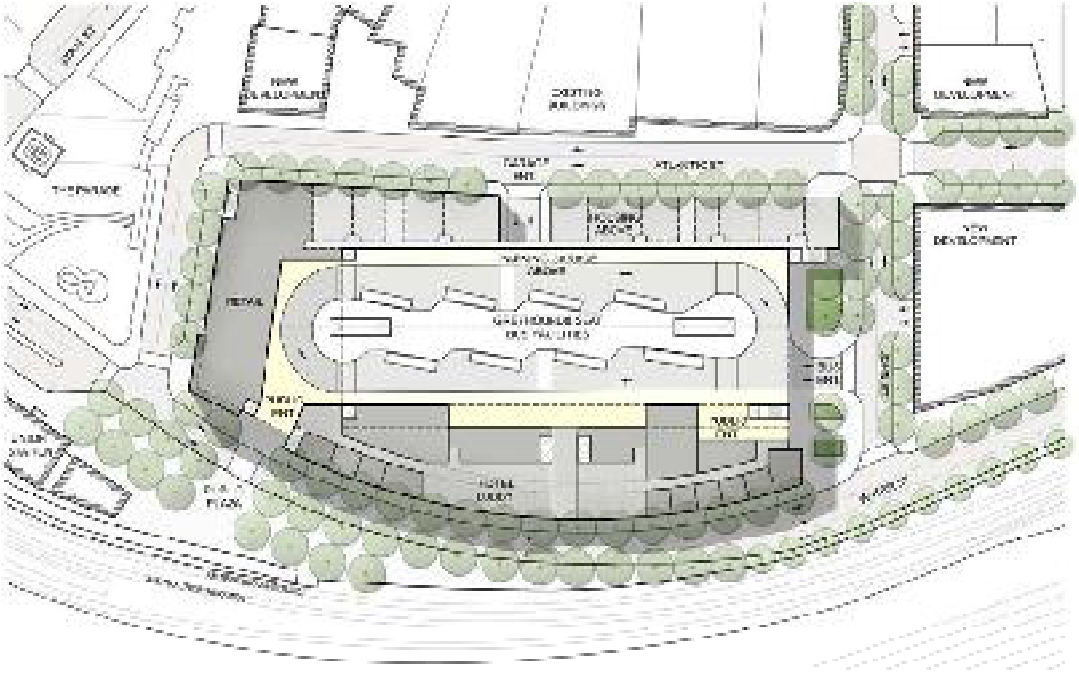
Conceptual Development Program:

- Total Development Area: 13.5 acres
- Housing: 430 – 520 units (1,000 SF. – 1,200 SF per unit)
- Retail: 35,000 SF
- Hotel: 250 rooms
- Office: 240,000 SF
- Parking: On-street and rear surface lots, six structured parking facilities (two below grade, four above grade)
- Transit: New Greyhound and SEAT bus terminal on ground level of rebuilt Water Street parking garage

Figure 5-22: Conceptual TOD Master Plan



Figure 5-23: Conceptual Ground Level Plan



The plans shown in Figure 5-23 and Figure 5-24 illustrate a new Greyhound and SEAT bus terminal and parking garage wrapped with ground floor retail, housing and a hotel. The terminal features a center island to facilitate passenger transfers, pedestrian access from Water Street adjacent to Union Station and bus access from John Street. Other surrounding development includes mid-to-high rise housing, office buildings and above and below grade parking structures.

Figure 5-24: Conceptual Roof Plan, TOD Master Plan



Figure 5-25: Illustrative Cross-Sections of the Water Street Garage



Figure 5-25 shows an existing cross-section of the Water Street parking garage and a potential cross-section of the new Greyhound and SEAT bus terminal / rebuilt parking garage wrapped with housing (fronting Atlantic Street) and a hotel (fronting Water Street) at the location shown in Figure 5-26.

Figure 5-26: Cross-Section Key



Figure 5-27: Existing Development Conditions



Figure 5-27 is an aerial photograph of downtown New London and Figure 5-28 is a 3D model of downtown New London viewed approximately from the same vantage point. The images that follow illustrate potential building massing of the conceptual TOD master plan shown in Figure 5-22.

Figure 5-28: 3D Model of Existing Development Conditions

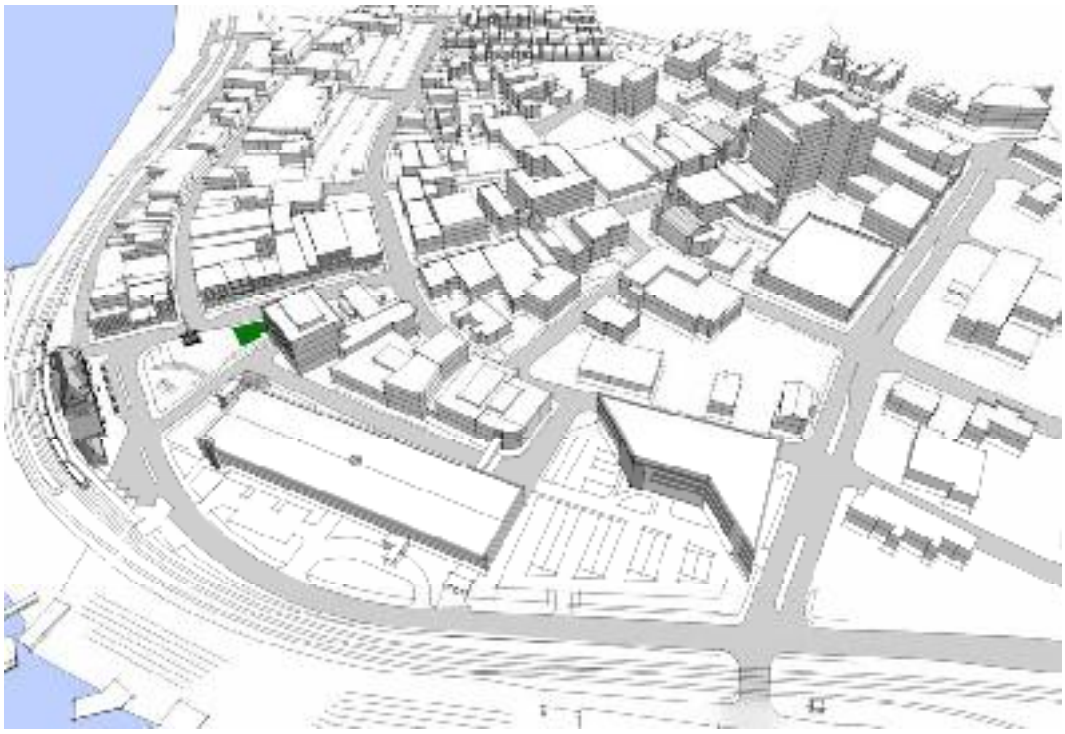


Figure 5-29: Potential Redevelopment Sites

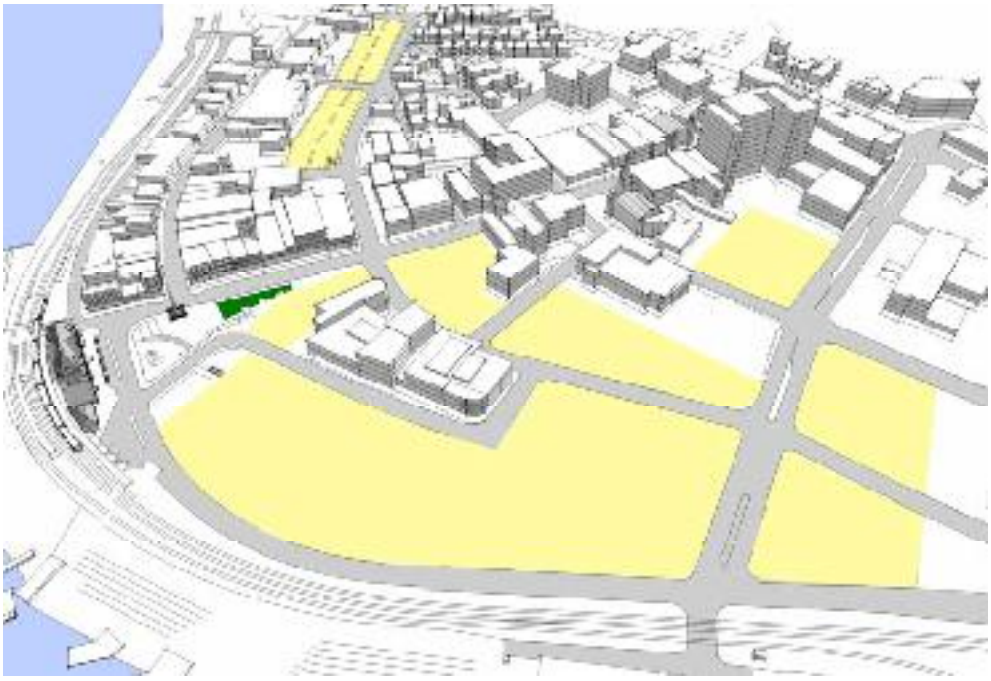


Figure 5-29 shows the redevelopment sites cleared of existing development. Figure 5-30 shows the potential arrangement of new buildings and massing based on the conceptual TOD master plan shown in Figure 5-22. Building heights shown generally reflect average prevailing height of proximate existing buildings. In some cases, taller buildings were used to concentrate land uses near major future parking facilities (e.g. office and residential development) and to punctuate street corners and create visual interest. The taller buildings are setback from the historic areas flanking State and Bank Streets.

Figure 5-30: TOD Master Plan Build-Out



Figure 5-31: New Development on the Eugene O'Neill Dr. Parking Lots



Figure 5-31 shows residential development on the southern Eugene O'Neill Drive parking lot, and a multi-level parking garage on the northern Eugene O'Neill Drive parking lot. Development on the parking lots will fill in the gaps in the street wall and improve the visual quality of the streetscape.

Figure 5-32: New Development on Eugene O'Neill Drive and Atlantic Street



As illustrated in Figure 5-32, siting mid-to-high rise residential and office development at the back of sidewalk along Eugene O'Neill Drive and Atlantic Street will create legible street corridors and façade planes.

Figure 5-33: Sightline to Parade Monument from Atlantic Street



Sightlines to major downtown landmarks should be reinforced by new development. Physical landmarks that visually terminate street corridors will create visual interest, strengthen the sense of place and improve pedestrian wayfinding. Figure 5-33 illustrates the visual connection between the potential new development and an important landmark in the Parade.

Figure 5-34: Reestablished John Street



The redevelopment of the Water Street garage site together with the adjacent Mariner Square property would provide the opportunity to reestablish John Street, a former east-west street that was removed during Urban Renewal. This new street (shown in Figure 5-34), along with the extension of Atlantic Street north to Governor Winthrop Boulevard, would create a finer grain block system and provide pedestrians and vehicles much needed east-west and north-south connections through the site.

Figure 5-35: Existing View to Union Station

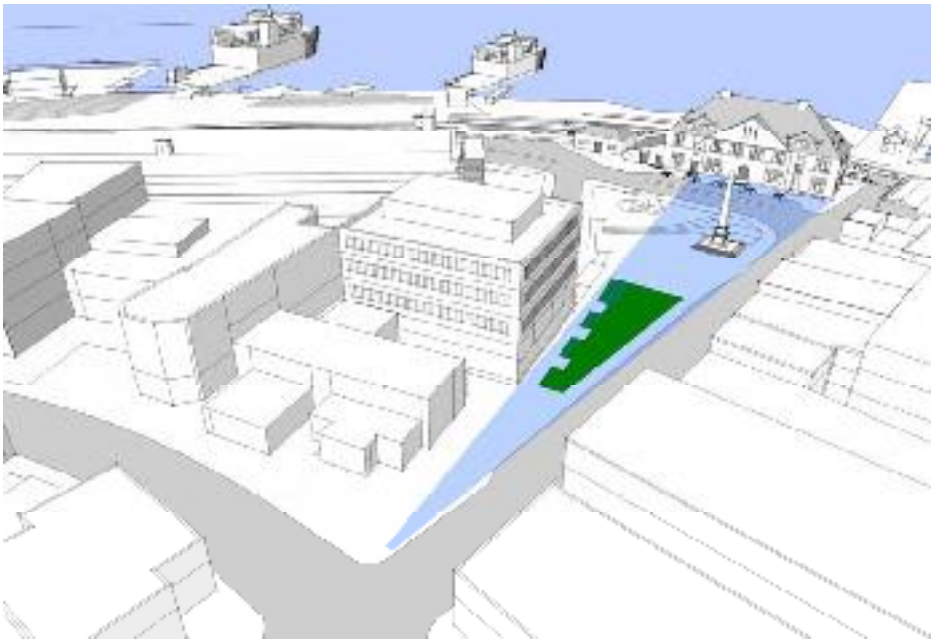


Figure 5-35 shows the existing field of view to the Union Station façade from the northeastern corner of the intersection of State Street and Eugene O'Neill Drive. Sightlines to the northern quarter of Union Station are blocked by existing buildings. Siting new development behind the existing façade plane will allow views to the entire west wall of Union Station, as illustrated below.

Figure 5-36: Potential Expanded View to Union Station



Figure 5-37: Addison, TX



New multi-story buildings developed at edges of large public spaces should define the open space and have active ground floor uses, as shown in Figure 5-37. As shown in Figure 5-38, siting new mixed-use development along the edge of the Parade will establish a stronger north edge, create the pleasing sense of enclosure for pedestrians and help activate the public space. In addition, providing visual connection to Bank Street from Atlantic Street via the Parade, through the use of paving materials and lighting, will strengthen the new development's ties to the entertainment district.

Figure 5-38: New Development on the North Side of the Parade



Figure 5-39: Orenco Station, Hillsboro, Oregon



As shown in Figure 5-39, a well-designed pedestrian zone has wide sidewalks, shade trees, planting strips, pedestrian-scale lighting and awnings. Other desirable streetscape elements include on-street parking, active retail uses on the ground floor of adjacent buildings and high-quality building materials.

Figure 5-40: Bank Street looking towards the Parade



New buildings should be designed to be visually compatible with existing 18th, 19th and 20th century downtown buildings, such as with those shown in Figure 5-40. The mixed-use development shown in Figure 5-41 is a highly successful and award-winning example of the integration of modern design into an historic 19th century neighborhood.

Figure 5-41: Rollins Square Mixed-Use Development, Boston, Massachusetts





Figure 5-42: TOD Master Plan Build-Out



The redevelopment sites represent an opportunity to create a new “face” for downtown New London, a new and dramatic visual gateway to downtown from the waterfront and the RITC, and to establish a lively, mixed-use and pedestrian-friendly district with strong pedestrian connections to Union Station, bus and ferry facilities, as shown in Figure 5-42.

Table of Contents

6. Development of Potential Improvement Options 6-1

6.1 Introduction 6-1
6.2 Process Used to Develop and Refine Options 6-1
6.2.1. Identification of Transportation Needs and Development Opportunities 6-2
6.2.2. Development of Guiding Principles and Goals/Screening Evaluation Criteria 6-2
6.2.3. Development of Preliminary Ideas 6-6
6.2.4. Consolidation of Ideas 6-8
6.2.5. Stakeholder Discussions 6-9
6.2.6. Preparation of Short and Long Term Options for Further Review 6-9
6.3 Summary of Needs and Opportunities Identified 6-9
6.3.1. Development Opportunities 6-9
6.3.2. Summary of Parking Needs by Future Year Scenario 6-10
6.4 Short Term Alternatives 6-12
6.4.1. Improvements Common to All Alternatives 6-13
6.4.2. Improvements Specific to Particular Alternatives 6-21
6.5 Long Term Vision Concepts 6-34
6.5.1. Four Long Term Concepts 6-35
6.5.2. Long Term Development Opportunities 6-47
6.5.3. Preserving the Long Term Development Opportunity 6-48
6.6 Screening Evaluation of Options 6-49
6.6.1. Key Advantages and Disadvantages of Each Short Term Alternative 6-50
6.6.2. Key Advantages and Disadvantages of Each Long Term Vision Concept 6-54
6.7 Stakeholder Input for the Development of a Master Plan Short Term Concept 6-59

List of Figures

Figure 6-1: Large Development* Parcels with Alternative Development – Transportation Uses 6-11
Figure 6-2: Pedestrian and Aesthetic Improvements 6-14
Figure 6-3: Rendering of Short Term Pedestrian and Aesthetic Improvements in the Context of One Possible Improvement Scheme 6-15
Figure 6-4: Specific Pedestrian Improvements – Location of Section Views 6-17
Figure 6-5: Specific Pedestrian Improvements – Section Views Along Water Street (Section A-A) 6-18
Figure 6-6: Specific Pedestrian Improvements – Section Views Along Ferry Street (Section B-B) 6-19
Figure 6-7: Specific Pedestrian Improvements – Section Views Along State Street (Section C-C) 6-20
Figure 6-8: Short Term Alternative 1 6-24
Figure 6-9: Short Term Alternative 1B Variation Showing Separate Passenger Terminal for SEAT 6-25
Figure 6-10: Short Term Alternative 2 6-26
Figure 6-11: Short Term Alternative 2B Variation Showing Use of Garage Ground Level Space for Bus Passenger Terminal 6-27
Figure 6-12: Short Term Alternative 3 6-28
Figure 6-13: Short Term Alternative 3b Showing Greyhound Terminal on South Parcel 6-29
Figure 6-14: Short Term Alternative 4 6-30
Figure 6-15: Long Term Concept A 6-37
Figure 6-16: Long Term Concept AA (A with a Pedestrian Bridge) 6-38
Figure 6-17: Long Term Concept B 6-39
Figure 6-18: Long Term Concept C 6-40
Figure 6-19: Long Term Concept CC (C with a Pedestrian Bridge) 6-41
Figure 6-20: Long Term Concept D 6-42
Figure 6-21: Long Term Concept DD (D with a Footbridge) 6-43

List of Tables

Table 6-1: Major Issues Identified 6-3
Table 6-2: Desirable Improvements 6-4
Table 6-3: Guiding Principles 6-5
Table 6-4: Screening Evaluation Criteria 6-6
Table 6-5: Menu of Improvement Options Considered at the Charrette 6-7
Table 6-6: Primary Short Term Alternatives 6-23
Table 6-7: Water Street at Governor Winthrop Boulevard Traffic Evaluation 6-33
Table 6-8: Four Long Term Concepts 6-36
Table 6-9: Evaluation of Short Term Alternatives 6-53
Table 6-10: Evaluation of Long Term Concepts 6-58

6. Development of Potential Improvement Options

6.1 Introduction

This chapter describes the improvement options developed by the consulting team to address deficiencies in transportation center functionality (facilities and operations) and opportunities for related transit-oriented development that were identified in earlier tasks of the study. The purpose of this chapter is to describe these options, their development and a qualitative evaluation of the options with respect to screening evaluation criteria. Based on a review of these options and the consultant evaluation, SCCOG, the City of New London and the Stakeholder Steering Committee members reached consensus on which options were to be refined and advanced into the Master Plan.

Candidate improvements to the RITC included both short term and long term options. The following describes each and the relationship between them.

The short term improvements were designed to:

- be specific
- involve low costs
- potentially include temporary actions
- be feasible for City and/or the transportation providers to take action
- be able to obtain consensus

The long term improvements, on the other hand, were meant to reflect a general vision of the future and meet future transportation needs while capturing major development opportunities. It is important to recognize that full consensus on the long term vision was not necessary at this time, unless a recommended short term option would preclude one of the desirable long term concepts. The short term recommendations should instead serve to lead to desirable long term future visions.

The remainder of this chapter is organized as follows:

- Process Used to Develop and Refine Options
- Summary of Needs and Opportunities Identified
- Options for Short Term Improvements
- Options for Long Term Improvements
- Screening Evaluation of Options

6.2 Process Used to Develop and Refine Options

The development of improvement options followed a six step process as described below:

6.2.1. Identification of Transportation Needs and Development Opportunities

The first step of the improvement development process was to summarize the findings of the earlier tasks into a list of transportation needs and development opportunities that the improvements would be designed to addressed. The major issues identified are shown in Table 6-1; these issues are grouped as follows:

- parking needs
- ferry space needs
- bus operation needs
- intermodal linkages
- development opportunities
- potential phasing

The Master Plan for the RITC needed to consider transportation needs well into the future. However, the transportation providers were not able to provide estimates of future ridership or service levels. Therefore, it was necessary for the consultant team to develop future scenarios based on an assumed level of growth in travel on each mode and an estimate of each operator's likely response to that growth. Two future transportation scenarios, reflecting lower and higher growth rates, were developed for the years 2015 and 2030. In the higher demand scenario recent high growth rates in ridership on some services would continue and would be accompanied by growth in ridership on other services that have had recent ridership losses. The lower demand scenario reflects more modest improvements in the region accompanied by more modest rates of ridership growth on most services. Both the scenarios have been discussed in detail in Chapter 3 of this report.

The list of desired transportation improvements to address the needs is shown in Table 6-2.

6.2.2. Development of Guiding Principles and Goals/Screening Evaluation Criteria

Guiding Principles

To guide the development of options for the Master Plan and the screening evaluation of those options, the following guiding principles were developed to reflect our understanding of the goals of SCCOG, the City and the Stakeholder Steering Committee. These are shown in Table 6-3.

Screening Evaluation Criteria

A set of screening evaluation criteria, related to the guiding principles described above, was developed for use in evaluating the proposals. These are shown in Table 6-4.

Table 6-1: Major Issues Identified

1. Large Parking Demand
   a. The future high scenario envisions a large increase in parking demand
   b. In the near term, additional parking may not be required, however the future availability of some existing sites is uncertain
   c. Where can the future parking demand be accommodated?

2. Ferry Space Needs
   a. Future growth in the auto ferry requires expanded staging area, possibly affecting current on-site parking used for the Block Island Ferry
   b. Sea Jet dock area needs to accommodate 9 coach buses per boat
   c. Some reorganization of CSF facilities may be possible and is being contemplated by CSF

3. Bus Operations Needs
   a. SEAT and Greyhound need better facilities to accommodate current and future bus operations and to provide desirable passenger amenities
   b. The bus facilities may not need to be where they are and may be easy to relocate

4. Intermodal Linkages
   a. Rail services depend on adequate parking, pickup/dropoff and taxi access
   b. The two bus operations must be located near each other and preserve some key connections to other modes
   c. The Block Island and other passenger ferries originating in New London will need adequate and convenient parking
   d. Pedestrian convenience, safety, wayfinding and environment needs improvement

5. Development Opportunities
   a. The opportunities are highly influenced by the location scheme of the transportation facilities (e.g., concentration of all transportation facilities near Union Station limits development in the immediate area, assuming there are height limits and other urban design/historical constraints)
   b. Opportunities also vary over time with greater development possible in the long term
   c. The large number of travelers passing through the RITC represents an opportunity to attract visitors to downtown that has not been adequately exploited
   d. Moving bus facilities from the current location may enhance development opportunities for Union Station

6. Potential Phasing
   a. Any major development or substantial reorganization of uses will take time
   b. A long term vision could optimize the development potential and transportation functionality
   c. Short term needs must be met in a manner that doesn't preclude reaching the long term vision
   d. Short term improvements would likely need to be lower cost, particularly if they don't serve the long term vision

Table 6-2 Desirable Improvements

Buildings and Facilities

- Encourage full use of the Union Station building
- Provide more retail/food amenities in the Union Station area
- Provide permanent space for an updated, fully accessible Greyhound ticketing/waiting area
- Consolidate bus/rail ticket functions where possible (maintain Greyhound freight service)
- Provide an indoor waiting area for SEAT in or near the station and near SEAT buses
- Provide an indoor office area for SEAT operations
- Provide a sheltered or indoor ticketing/waiting area for the Block Island Ferry
- Provide more amenities for Block Island Ferry passengers
- Bring Water Street and Governor Winthrop parking garages to proper physical condition
- Repair elevators and bring Water Street and Gov. Winthrop parking garages into ADA compliance
- Provide accessible routes to/from the Eugene O'Neill Drive lots

Parking Capacity

- Ensure a sufficient number of weekday parking spaces for Shore Line East expansion
    - At least 100 in 2010
    - Up to 200-300 in the future
- Provide sufficient cost-effective parking for summer weekend demand
    - Replace on-site ferry parking if it needs to be converted to vehicle staging
    - Maintain or replace the Julian lot if it becomes unavailable for weekend RITC users
    - Increase weekend parking (sometime after 2015)
- Increase the number of handicapped-accessible parking spaces
    - Water Street and Governor Winthrop garages
    - Eugene O'Neill lots

Street Space and Bus Stops

- Provide at least nine bus bays (2-3 Greyhound; 6-7 SEAT) – with no buses backing out
- Provide a stop for the SEAT Foxwoods/Tourist Transit with a convenient pedestrian connection to downtown, the rail station and SEAT
- Provide a stop for the casino shuttles/Tourist Transit with a convenient connection to the SeaJet
- Provide an adequate pick-up/drop-off area for rail (Amtrak and SLE) and Greyhound passengers
- Provide a taxi stand (not necessarily at Union Station)
- Manage conflicts for curb space between the different uses
- Provide a pick-up/drop-off area(s) for Cross Sound Ferry (for both Long Island and Block Island)

Traffic

- Minimize delays to ferry traffic caused by railroad crossing closures
- Minimize interference with bus circulation caused by special events
- Minimize interference with auto access to ferries caused by special events
- Optimize signalization at Water Street/Governor Winthrop intersection to minimize vehicle delays and maintain vehicle access to ferries

Pedestrian Connections

- Maintain or enhance existing good connections
    - Union Station and southbound platform to taxis, rail pick-up/drop-off area, SEAT Foxwoods
    - Northbound rail platform to Fishers Island Ferry
    - Greyhound to/from SEAT, taxis and pick-up/drop-off area
    - SeaJet to/from casino shuttles and future Tourist Transit stops
    - Downtown to/from Union Station, southbound rail platform, Greyhound and SEAT
- Improve directness, attractiveness, safety, accessibility and physical condition of the pedestrian connections to the ferry terminals and improve wayfinding
    - Parking facilities and rail platforms to/from Block Island Ferry

Table 6-2: Desirable Improvements (Continued)
o Greyhound and Amtrak station to/from Long Island Ferry o Downtown to/from all ferries • Improve pedestrian crossing of tracks at Union Station/State Street o Improve wayfinding and safety o Minimize delays from gate closings o Using existing surface crossing or new grade-separated crossing • Provide pedestrian improvements at Water Street/Governor Winthrop intersection to ensure pedestrian safety and accessibility Information, Orientation and Aesthetics • Provide static route and schedule information for all modes at all locations including maps for making connections at the Intermodal Center • Provide standardized wayfinding signage for all connections • Provide standardized wayfinding signage to downtown from all RITC facilities • Provide standardized vehicle wayfinding signage to all parking facilities, pick-up/drop-off areas and ferry terminals • Provide real-time connection information for passengers connecting between bus/rail and ferries • Provide ferry and bus operators with real-time expected arrival information on rail and ferry • Enhance the appearance of the rail alignment, bus facilities and Water Street Garage to create a more pedestrian- and tourist-friendly environment

Table 6-3: Guiding Principles

1.	Emphasize short term improvements that:
	a. address identified deficiencies b. are specific c. are low cost d. are easy to implement e. work towards ,or at least are not incompatible with, the desired longer term vision(s)
2.	Identify one or more long term visions, which should be more general and allow for some flexibility so that the City can respond to private developer proposals
3.	Identify possible phasing of improvements that identifies where the big decisions occur
4.	Preserve and enhance the viability and growth of the transportation operators and local businesses
5.	Make transfers between modes safe and convenient
6.	Capitalize on the synergies of transportation services and development
7.	Balance the space needs of transportation services and development
8.	Maximize opportunities for those types of development that are likely given the character and advantages of New London
9.	Avoid schemes that would involve land takings / focus instead on opportunities for public-private cooperation
10.	Consider the goals of private businesses/property owners as well as public goals
11.	Create an attractive gateway for New London and the region and encourage travelers to visit New London

Table 6-4: Screening Evaluation Criteria

Common Criteria

- Low Cost
- Improves Safety and Convenience for Transfers
- Enhances Pedestrian Safety
- Enhances Wayfinding/Information
- Has Sufficient Capacity (Operations in Short Term, Demand and Growth for Public Transportation Modes and Parking in the Long Term)
- Enhances Attraction of Visitors
- Minimal Environmental Issues
- Minimal Property Issues
- Potential for Public Private or Grant Funding (for the Transportation Improvements in the Short Term)

Short Term Criteria

- Easy to Implement
- Adaptable to Future Changes in Operating Needs
- Flexible to Accommodate Long Term Commercial Development
- Compatibility with Bus Terminal Long Term Concepts
- Maintains or Enhances Traffic Operation/Safety

Long Term Criteria

- Ease of Project Development
- Ease of Phasing
- Improves Convenience for Parking Access
- Enhances Pedestrian Environment
- Promotes Likely Development/Local Economy
- Capitalized on Synergies between Transportation & Development
- Balances Need for Transportation & Development

6.2.3. Development of Preliminary Ideas

The consulting team held a charrette in early March of 2009 to develop some initial ideas in a brainstorming type of format. Transportation planners, economic development specialists and architects/urban designers on the consultant team participated. The consulting team members divided into three groups, each of which had a mix of specialists. Each team was asked to develop three concepts over the course of the one-day charrette. The three concepts were defined by the general approach to improving connections across the tracks, that is, surface pedestrian improvements at State Street, surface pedestrian improvements at Governor Winthrop Boulevard and a footbridge or tunnel.

Prior to the charrette, a number of possible options for the consultant team to consider were assembled, as shown in Table 6-5 below:

Table 6-5: Menu of Improvement Options Considered at the Charrette
Connection to Water Street Garage
A. New footbridge (pedestrian bridge)
B. Enhanced pedestrian routing through Parade, across at State Street and through City Pier
C. Enhanced pedestrian routing across at Governor Winthrop Boulevard (with CSF reconfiguration)
D. Pedestrian underpass/tunnel
Cross Sound Ferry Passenger Facility
A. New passenger ferry terminal/bus loading area at current Block Island Ferry site
B. New passenger ferry terminal/bus loading area on lot next to City Pier
C. Remove structures and create a new passenger ferry terminal/bus loading area opposite Governor Winthrop Boulevard
D. Relocate all non-vehicle ticketing new passenger ferry terminal (vehicles check in at gate)
Greyhound Terminal
A. Reconfigure existing bays and rehab terminal building
B. Relocate across the street to the south (Union Station) end of the lot in front of the garage
C. Relocate across the street to the north (bank) end of the lot in front of the garage (with pedestrian path to Gov. Winthrop crossing)
D. Relocate across the tracks at Governor Winthrop Boulevard (Yankee Gas/CSF site)
E. Relocate a to new terminal at the Governor Winthrop Garage site or Ramada site
SEAT Hub
A. Construct better shelters and an information center at the existing site
B. Relocate to the Greyhound site and use the Greyhound Terminal or space in Union Station for waiting, pass sales, information and office space
C. Relocate buses to directly in front of Union Station and have waiting, pass sales, information and office space in the station building
D. Relocate across the street to the lot in front of the garage
E. Relocate a to new terminal at the Governor Winthrop Garage site or Ramada site
Additional Parking
A. Remove CSF structures and/or expand onto Yankee Gas site
B. Reconstruct new larger Water Street Garage
C. Construct larger replacement for Governor Winthrop Garage (or Ramada site?)
D. Construct garage on Eugene O Neill Drive lot(s) with shuttle service to CSF
E. Identify existing remote surface lots with low weekend utilization (with shuttle service)
F. Construct new remote surface lots near I-95 (with shuttle service)

Table 6-5: Menu of Improvement Options Considered at the Charrette (continued)

Taxi Stand Location
A. At the Greyhound site
B. Along Water Street at current SEAT site
C. Park along Atlantic Street and pick up at the Greyhound site
D. Install direct phones at the station and move stand to Governor Winthrop Garage/Ramada site
E. Install direct phones at the station and move stand to the Eugene O Neill Drive lots
F. Along South Water Street (make 2-way and move Amtrak parking)
G. Across the street in the lot in front of the garage
H. In front of Union Station
Pick-up/Drop-off Area
A. In front of the station
B. Create an off-street area in the Greyhound site
Tourist Transit/ Shuttle Bus
A. Two stops - use SEAT terminal plus a stop at Cross Sound Ferry
B. One stop only - at a new passenger ferry terminal
C. One stop only on Water Street at the station (with improved pedestrian access to ferry terminal)
D. Additional downtown stops (at Eugene O'Neill & State and State and on Bank St.)
Development Options
A. Small Infill Parcels and Rehab
B. New residential development fronting Water Street
C. Residential development on E. O'Neill lots
D. Event Space on Water Street
E. Redevelop Greyhound site for commercial use
F. Major redevelopment of Water Street Garage and adjacent parcels
G. Major redevelopment of Governor Winthrop Garage
H. Waterfront development on CSF property

6.2.4. Consolidation of Ideas

A wide variety of ideas were developed at the charrette. Many of these focused on the larger picture for the long term. Many of the ideas involved significant redevelopment and relocation of existing facilities. Debrief meetings with the Council of Governments and City staff suggested that more attention be paid to short term and low cost solutions that could address the short term needs at lower costs. After the charrette, the consulting team undertook three activities:

1. Consolidate the many long term visions into a logical set of alternatives.
2. Develop short term options for consideration.
3. Conduct some discussions with some key stakeholders to get a reality check on some of the ideas and get some additional input to refine the ideas.

6.2.5. Stakeholder Discussions

Besides discussing the ideas with SCCOG Project Manager, meetings or conversations were held with key stakeholders. These included City staff (City Manager, Economic Development and Planning), Union Station, Cross Sound Ferry, SEAT, Greyhound, taxi operators and the Water Street Garage manager.

6.2.6. Preparation of Short and Long Term Options for Further Review

After the meetings with key stakeholders, the short and long term options were refined for presentation to the Steering Committee. Note that while certain stakeholders expressed some preferences for, or concerns about, certain options, the options were generally not dropped from presentation to the Stakeholder Steering Committee. Where options could be adjusted to address a concern or a new option could be identified, that was done. If an option was deemed completely unworkable, it was replaced by a more feasible option. However, since the purpose was to identify options and highlight the tradeoffs, options that were not favored by some key stakeholders due to particular drawbacks were still included for consideration by the larger group.

6.3 Summary of Needs and Opportunities Identified

While the above identified the key transportation needs and many possible improvement options to consider, before a set of short term alternatives and long term vision concepts could be developed for evaluation, the development opportunities and parking needs had to be clarified. These are briefly described below based on the analysis discussed in earlier chapters.

6.3.1. Development Opportunities

Potential development sites around the RITC were identified in Chapter 5. They fell into the following classifications:

- Small Infill Parcels
- Large Undeveloped Parcels
- Large Potential Redevelopment Parcels
- Rehab Candidates

Most of the sites that fall under these classifications remain promising in terms of development potential. It was learned that the waterfront parcels originally identified as candidates are better used as part of a fully operating RITC, and consequently were removed from the list of potential development sites. However, the sites can significantly benefit from pedestrian and vehicular circulation improvements and aesthetic enhancements.

In addition, the Radisson hotel site on Governor Winthrop Boulevard and the Police Station site (combined with adjacent parcels) at the intersection of Eugene O'Neill Drive and Governor Winthrop Boulevard were added to the list of Large Potential Redevelopment Parcels since these might become available over the

long term. Lastly, a preliminary analysis of the City-owned Eugene O'Neill Drive parking lots (which fall under "Large Undeveloped Parcels") revealed that the parcels' dimensional constraints and geometric characteristics create more development obstacles than previously thought, particularly for a potential parking structure. These obstacles will not preclude development, but will add complication and expense. However, they remain significant in terms of development potential.

Most of the major opportunities for development around the RITC are long term (20 or 30 years), as there is a very limited number of undeveloped sites. The most immediate opportunities lie in the vacant storefronts on Bank and State Streets, and small infill parcels identified in Chapter 5. Although it is conceivable that these sites could be rehabilitated/developed within the short term, they are too small to achieve a significant portion of the future land use program identified in the market analysis of Chapter 4. In addition, achievable as-of-right development densities may not be great enough to make it worth the investment for developers.

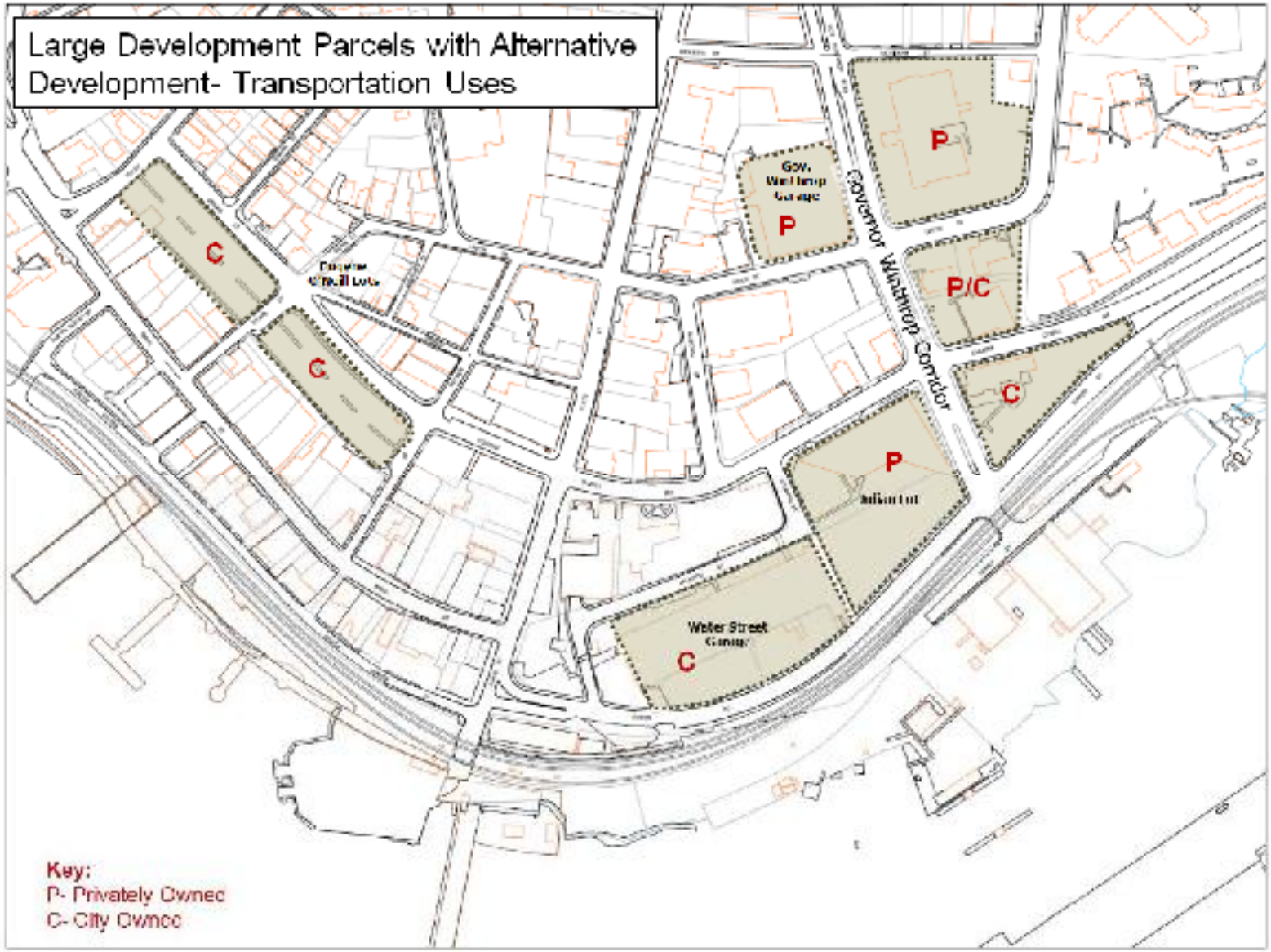
The two undeveloped parcels directly in front of the Water Street Parking Garage on Water Street (the north parcel was formerly a bank drive-through; the south parcel is currently used as a parking lot) are the largest undeveloped sites within sight of Union Station – a total of about three-quarters of an acre (see Figure 6-1). However, upon closer inspection, it is apparent that there is a set of physical constraints that create development difficulty. For instance, the Water Street Garage has two access/egress points on Water Street – one at the north corner of the garage and the other is at the center of the garage. Both of these points, particularly the center one, significantly impact the two undeveloped parcels and would need to remain open to serve the garage. Another constraint is that the garage is sited six feet west of the north and south parcel's rear lot line, which would make filling out the two sites impracticable. Adjacent bus operations, daily operation of the public parking garage and noise related to railroad operations are discordant with certain land uses (for example, housing) and may limit desirability. These constraints, among others, make higher density development difficult if the Water Street Garage operations are to remain intact. The parcels in front of the Water Street Garage have greater value for development if the Water Street Garage were part of the redevelopment scheme.

6.3.2. Summary of Parking Needs by Future Year Scenario

The amount of parking needed by the RITC in the future is a significant factor that will drive plans to ultimately replace the Water Street Garage as it nears the end of its expected lifespan around 2030. Peak summer Saturday parking counts at the two parking garages and four surface lots serving the RITC indicate that these facilities currently accommodate an estimated 1,341 parked vehicles, representing 69% of their total capacity. Of the three facilities most directly serving the RITC, the Cross Sound Ferry lot typically fills to capacity while the Water Street Garage and Julian lot are an estimated 77% full. Note that these figures represent a typical peak summer Saturday and currently some days may exceed these figures while others are below that level.

The study estimated future parking demand for high and low demand scenarios for the years 2015 and 2030. In 2015, demand on a typical peak summer Saturday is estimated to increase to 75%-80% of total capacity, with the Water Street Garage nearing its practical capacity only in the higher demand scenario. With the Cross Sound Ferry and Julian parking lots full and the Water Street Garage reaching capacity, RITC patrons will begin to overflow into the Eugene O'Neill surface lots and Governor Winthrop Garage. By 2030, demand is estimated to increase to a range of between 88% of capacity and 130% of capacity.

Figure 6-1: Large Development* Parcels with Alternative Development – Transportation Uses



*Note that included are some privately owned parcels that may or may not be available in the future for redevelopment.

The Water Street Garage
would fill even in the lowest demand scenario but the overflow could be accommodated by the Governor Winthrop Garage and O'Neill lots forcing some passengers to walk much farther. High scenario demand would exceed the capacity at every facility. Thus, current facilities, if all remain open, should be able to accommodate demand through 2015 and possibly much longer, although it can be expected that nearby facilities will fill and that some patrons will have to walk longer distances from the more distant facilities. Beyond 2015, whether there is a need for additional parking will depend on the growth in demand for RITC services, particularly the Block Island and any new passenger ferry services which typically require the most parking.

The need to increase parking could be triggered sooner by the closure or loss of any of the six parking facilities. If vehicle volumes on the Long Island Ferry increase, it is likely that the Cross Sound parking lot will need to be converted into additional staging areas and will no longer be available for parking. Furthermore, Cross Sound's long term use of parking spaces leased from Yankee Gas for its employees is not a certainty which could have some further impacts on the parking available on Cross Sound property for passenger use. However it should be noted that Cross Sound has some plans to remove two structures to make more total surface area for staging and parking available in the event it needs more space. Also, the Julian lot may be developed and may no longer be available for ferry parking. However, any new development would likely provide parking (some replacement parking and some parking for additional demand created by the development, so the total number of spaces available on a weekend to meet ferry demand might not actually be reduced and could be increased provided the owner opened the garage on weekends to serve this demand. Finally, the condition of the Governor Winthrop Garage may force its closure or replacement before the Water Street Garage needs replacement. Any of these closures would severely constrain parking at least temporarily.

While parking in the near term in general appears to be sufficient, the master plan will need to address the need for expanded parking in the long term. The number of additional spaces needed on a peak summer Saturday could vary from only a few to several hundred and will not be able to be accurately estimated for many years. The plan will therefore need to identify possible options for expanding parking in the long term but be flexible in terms of the size of any new and replacement parking facilities.

6.4 Short Term Alternatives

This section identifies several alternatives for short term, lower cost improvements for the RITC. These improvements are designed to enhance the traveler and visitor experience, particularly as a pedestrian. The improvements should be implementable in a relatively short time frame, through cooperative arrangements among the City and the major property owners. The improvements do not require major redevelopment or reconstruction efforts; however, they should make significant progress in addressing identified issues, including pedestrian safety, unclear connections, amenities, image, aesthetics, etc. The improvements should be compatible with the longer term visions and subject to decisions in the future.

For all practical purposes, the locations of the auto ferry terminals and rail station are fixed. The location of the major parking facilities serving the RITC are also fixed, at least for the short term. It should also be

noted that the Parade Project, which was under construction and nearing completion (at the time this task was underway), was assumed to need to remain in place without modification (or only very minor impacts)[1].

The most flexible components of the RITC are the Greyhound Bus Terminal, the SEAT pulse-point bus hub, the taxi stand, the pick-up/drop-off areas at Union Station, the location of the high speed passenger ferry docks, and the allocation of staging versus parking space on the Cross Sound Ferry site. Also subject to possible new uses are the area in front of the Water Street Garage and the area on the Cross Sound Ferry property that currently contains the steel building and the eastern portion of the brick building. (Cross Sound Ferry has identified the potential reuse of the latter for additional parking and staging areas.)

The most urgent needs to address are:

- Pedestrian Safety Improvements
- Enhancing the Pedestrian Environment
- Facilitating Transfers Between Modes
- Improving Wayfinding
- Enhancing Bus Passenger Amenities
- Enhancing the Aesthetic Appearance and Welcoming Visitors
- Encouraging Transportation Uses at Union Station

6.4.1. Improvements Common to All Alternatives

Among the components of the short term improvement are several which do not vary significantly among the short term alternatives, as follows:

- Enhanced pedestrian crosswalks and pathways including ADA compliance
- Enhanced pedestrian scale lighting
- Wayfinding signage between all components of the RITC
- Enhanced traveler information through signage, information kiosks, information center
- Aesthetic improvements to the façade of the Water Street Garage and the railroad right-of-way, that is, new fencing and landscape improvements, events banners and welcome signage on Water Street Garage façade
- Use of Union Station as a gateway to New London
- Extend the taxi stand along State Street between Bank Street and South Water Street

The above improvements are illustrated in Figure 6-2 through Figure 6-7 and described below.

The most critical focus areas for short range pedestrian and aesthetic improvements in the RITC area are at the two intersections where streets cross the railroad and that provide pedestrian and vehicular access to the waterfront, ferry services, City Pier, and Union Station. Those two critical intersections, in many cases, need either new or wider sidewalks (new west sidewalk on Ferry Street, widened north and south sidewalks on State Street), more clearly marked pedestrian zones at both rail crossings, pedestrian-scale

[1] Later refinement of short term alternatives assumed that modifications north of Atlantic Street would be permissible.

Figure 6-2: Pedestrian and Aesthetic Improvements

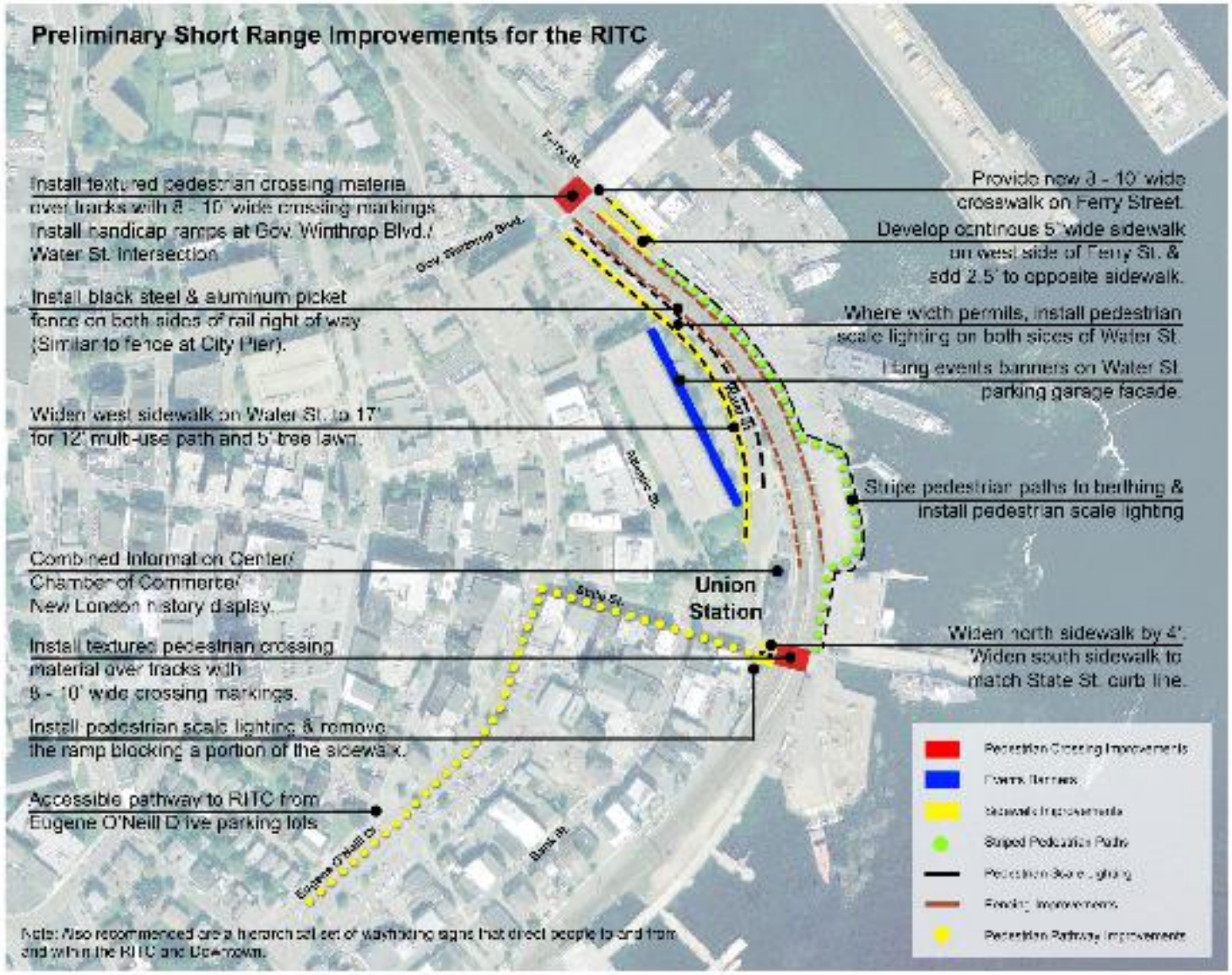


Figure 6-3: Rendering of Short Term Pedestrian and Aesthetic Improvements in the Context of One Possible Improvement Scheme



Figure 6-4: Specific Pedestrian Improvements – Location of Section Views

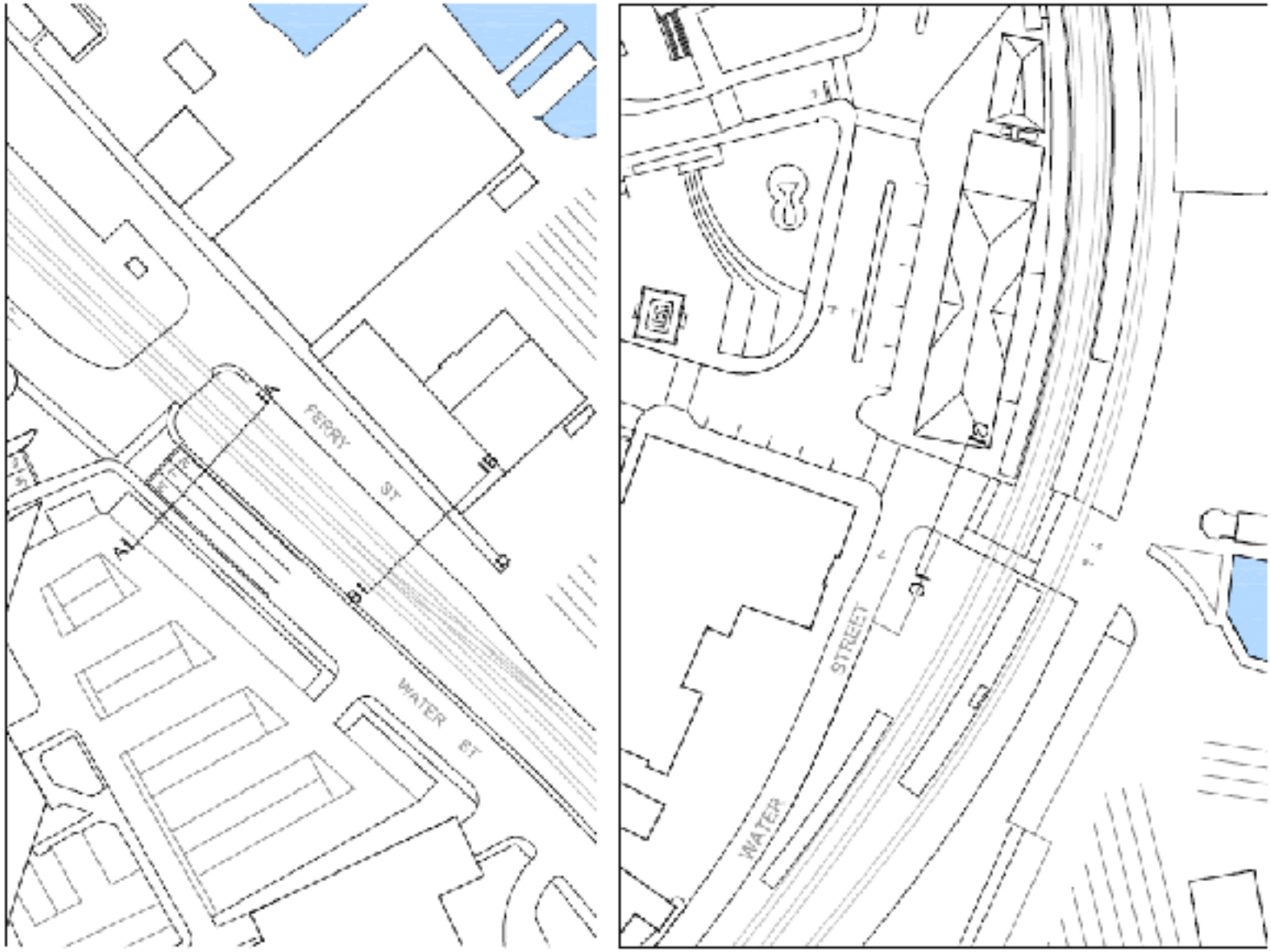


Figure 6-5: Specific Pedestrian Improvements – Section Views Along Water Street (Section A-A)

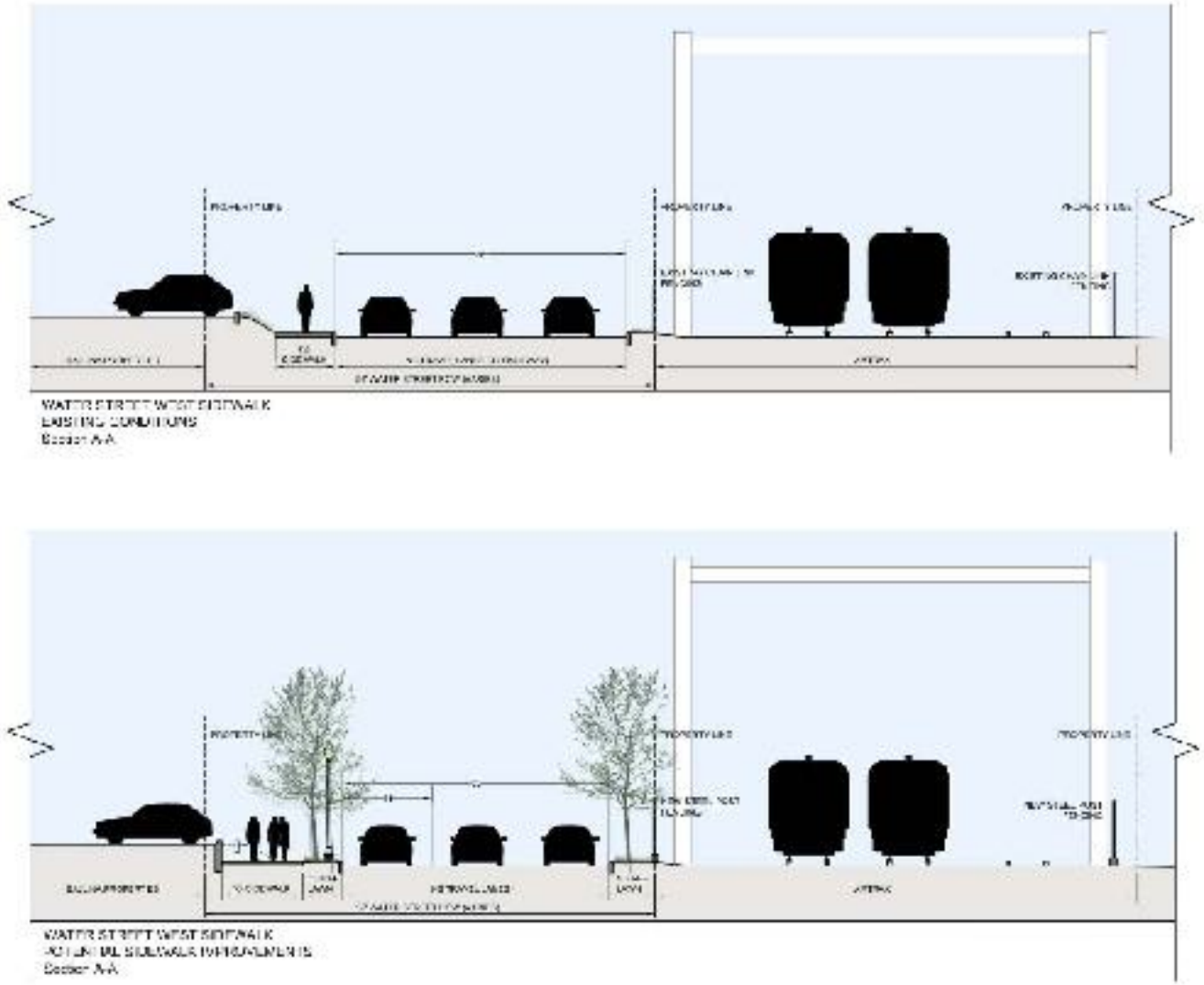


Figure 6-6: Specific Pedestrian Improvements – Section Views Along Ferry Street (Section B-B)

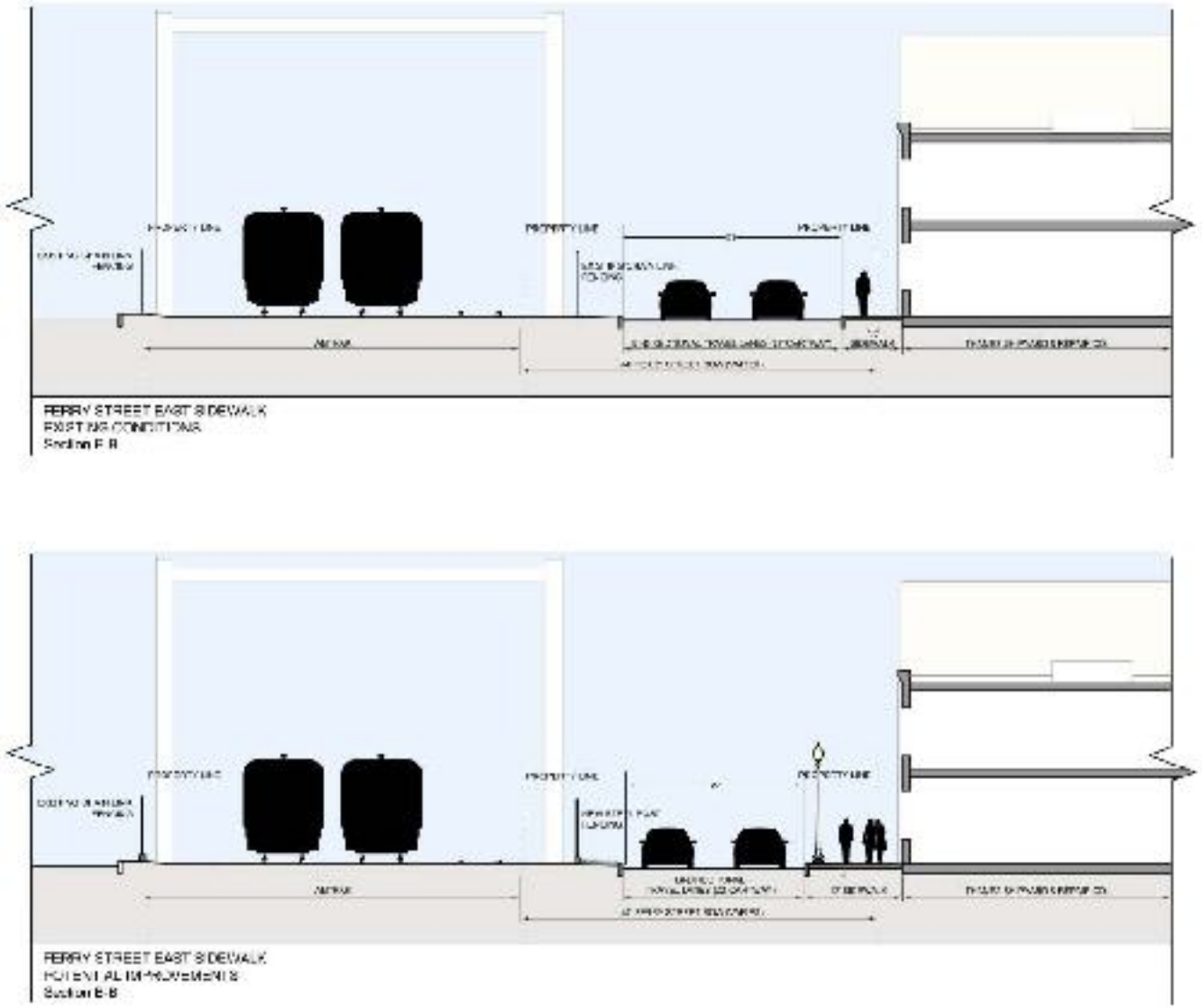
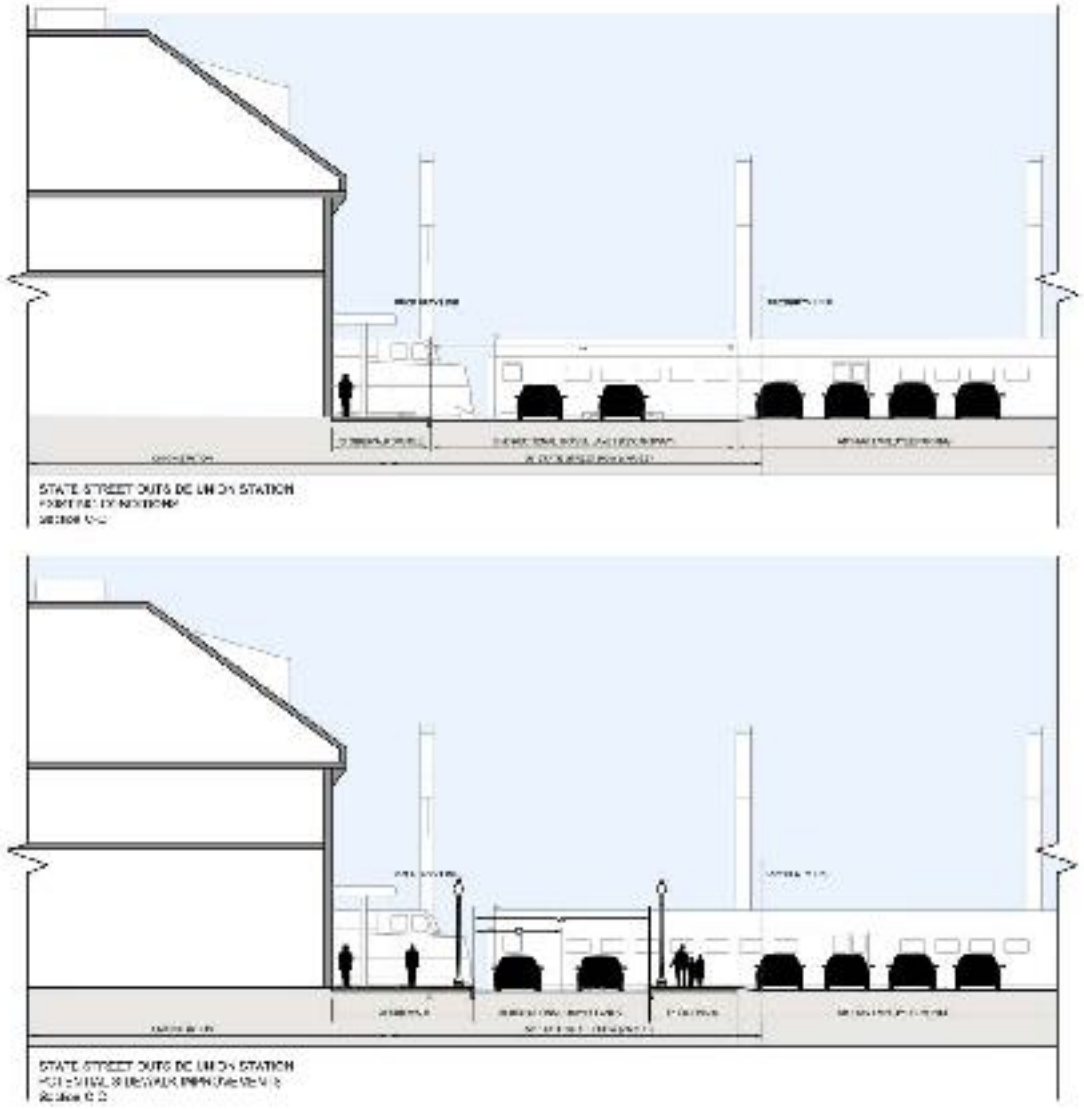


Figure 6-7: Specific Pedestrian Improvements – Section Views Along State Street (Section C-C)



lighting, new crosswalks, and a new wayfinding signage system. To strengthen connections between these two intersections and between the Water Street Garage and all of the transportation modes on the east side of Water Street, a set of short range pedestrian and aesthetic improvements are recommended for Water Street as well, including widening the west sidewalk (and, if feasible, creating an extended east sidewalk), and installing pedestrian scale lighting, tree lawns and street trees. Other improvements are the establishment of gateways at the entrances to the waterfront/ferry site.

Another focus for pedestrian improvements is along the waterfront. Recommendations include developing a striped or textured pedestrian path, with pedestrian-scale lighting and guiding bollards, starting at City Pier and following the water's edge to the Block Island Ferry boarding area, then turning west to a new pathway that follows the east side of the rail corridor ultimately connecting with Ferry Street. Other improvements include installing black steel post fencing along the east and west sides of the rail corridor within the RITC area. Another potential improvement is installing red brick pavers on the sidewalks directly outside of Union Station. These enhancements will provide a more uniform station area aesthetic.

These short term pedestrian and aesthetic improvements will create a higher-quality pedestrian environment and will tie together the transportation modes. Together, they will create a safer and more secure and attractive RITC area for residents, tourists, and transit and ferry patrons.

Besides a wayfinding signage program, the information and signage improvements could include static signage about transportation modes, orientation maps, information kiosks, etc. Dynamic message signs might ultimately play a role. These could display information about train, bus and ferry arrivals.

One possible element would be incorporating a visitor welcome center into Union Station, that is, a combined Information Center and Chamber of Commerce presence and a New London history display in Union Station. This may require a State role at Union Station.

6.4.2. Improvements Specific to Particular Alternatives

The short term alternatives differ primarily in what changes are assumed to occur in the location and configuration of certain transportation facilities. Specifically, the differences between alternatives are related to whether the two bus operations are retained in their current locations or relocated to the space now available in front of the Water Street Garage. In either case, there should be upgrades to the customer facilities for the bus services.

Similarly, there are options as to how the curb space along the east side of Water Street is used if the buses are moved and how the space in front of the Water Street Garage is used if the buses remain in their current location. Improved taxi stand and vehicle pick-up/drop-off areas at Union Station would be made in all options but somewhat differently.

The primary alternatives for the bus facilities studied were as follows:

1. Enhance both facilities in place on the east side of Water Street
2. Move both facilities across the street to the off-street space in front of the Water Street Garage
3. Move only SEAT to the space in front of the Water Street Garage and leave Greyhound at the current site with some possible reconfiguration

4. Move only Greyhound to the space in front of the Water Street Garage and extend SEAT southward to include the former Greyhound site

Within these basic alternatives, there were some variants identified.

Besides the location of bus facilities, another potential major difference between alternatives could be how Cross Sound Ferry uses its space, specifically, whether Cross Sound Ferry removes some of its existing buildings (as they had discussed) to create more auto staging space, whether or not they add or remove on-site parking and whether or not they shift locations of the passenger ferries. Several options were examined and discussed with Cross Sound Ferry as noted below:

- Passenger Ferries Remain As Is
- Sea Jet and Block Island Both Located Near City Pier
    - Sea Jet moves next to existing dock location of Block Island Ferry
    - Block Island Ferry moves to dock adjacent to City Pier
- Only Sea Jet Near City Pier
    - Sea Jet moves to a dock adjacent to City Pier
    - Block Island Ferry moves to current Sea Jet dock location

After discussion with Cross Sound Ferry, however, it was concluded that the current configuration of the passenger ferries works best even if Cross Sound Ferry removes some buildings to expand and reconfigure its auto ferry staging area. As a result, the study did not distinguish short term alternatives based on options for reconfiguring the Cross Sound Ferry area.

The basic short term alternatives are summarized in Table 6-6 and illustrated in Figure 6-8 through Figure 6-14. The following describes these alternatives and sub-options.

Short Term Alternative 1 (See Figure 6-8)

This alternative maintains both SEAT and Greyhound on the east side of Water Street but reconfigures the area to bring SEAT closer to Union Station and expands and renovates the Greyhound Terminal Building to be a combined bus terminal for both operators. (Alternatively, a SEAT passenger waiting area could be included in Union Station or constructed in a separate building north of the Greyhound Terminal. Figure 6-9 shows the latter variant.) Canopies are provided for waiting bus passengers and a unified paving scheme ties the rail and bus facilities together. Auto pickup and dropoff are in front of Union Station and taxi queuing is on State Street extending beyond Bank Street as needed. Existing short-term and handicapped parking remains in the space in front of Water Street Garage, and would be expanded into the old bank site.

Short Term Alternative 2 (See Figure 6-10)

This alternative uses the space in front of the Water Street Garage on the west side of Water Street to create a new combined off-street bus terminal for SEAT and Greyhound. This would require relocating the center garage entrance and associated structural modifications to the garage. The curb space currently occupied by Greyhound buses becomes available for more auto pickup and dropoff and taxi use. The old Greyhound Terminal and surrounding expanded sidewalk is available for commercial reuse (although on-site parking remains a somewhat constraining factor for many potential uses even if City zoning allows reuse of existing buildings without meeting the parking requirements a new building would face).

Table 6-6: Primary Short Term Alternatives

Alternative #	Name	Description	Greyhound	SEAT	Water Street Garage	Other
1	Both SEAT and Greyhound Stay on East Side of Water Street	One new expanded terminal building and canopy along curb (or SEAT terminal in Union Station)	2 sawtooth bays in current location	4 parallel to Greyhound, 5 north of Greyhound	Short term parking/pickup-dropoff (and/or public event space)	Need to Relocate Parade Crosswalk
2	Both SEAT and Greyhound Move to West Side of Water Street (off street)	New Free-Standing Passenger Terminal	2 sawtooth bays	7 parallel bays	Bus terminal with building; need to relocate center entrance	Reuse east side space for Pickup-Dropoff and plaza; Reuse Greyhound building for café; Need to Relocate Parade Crosswalk
3	Only Greyhound Moves to West Side of Water Street (off street)	SEAT relocated to Greyhound area	3 sawtooth bays and new terminal building	9 bays (4 sawtooth and 5 parallel); terminal at renovated old Greyhound building	Greyhound terminal and some short term parking and pickup-dropoff	Can't use FTA funds for exclusive Greyhound Terminal; Need to Relocate Parade Crosswalk
4	Only SEAT Moves to West Side of Water Street (off street)		2 sawtooth bays	7 sawtooth (or 9 parallel) bays, new terminal building	SEAT bus terminal with building; need to relocate center entrance	Need to Relocate Parade Crosswalk

Figure 6-8: Short Term Alternative 1

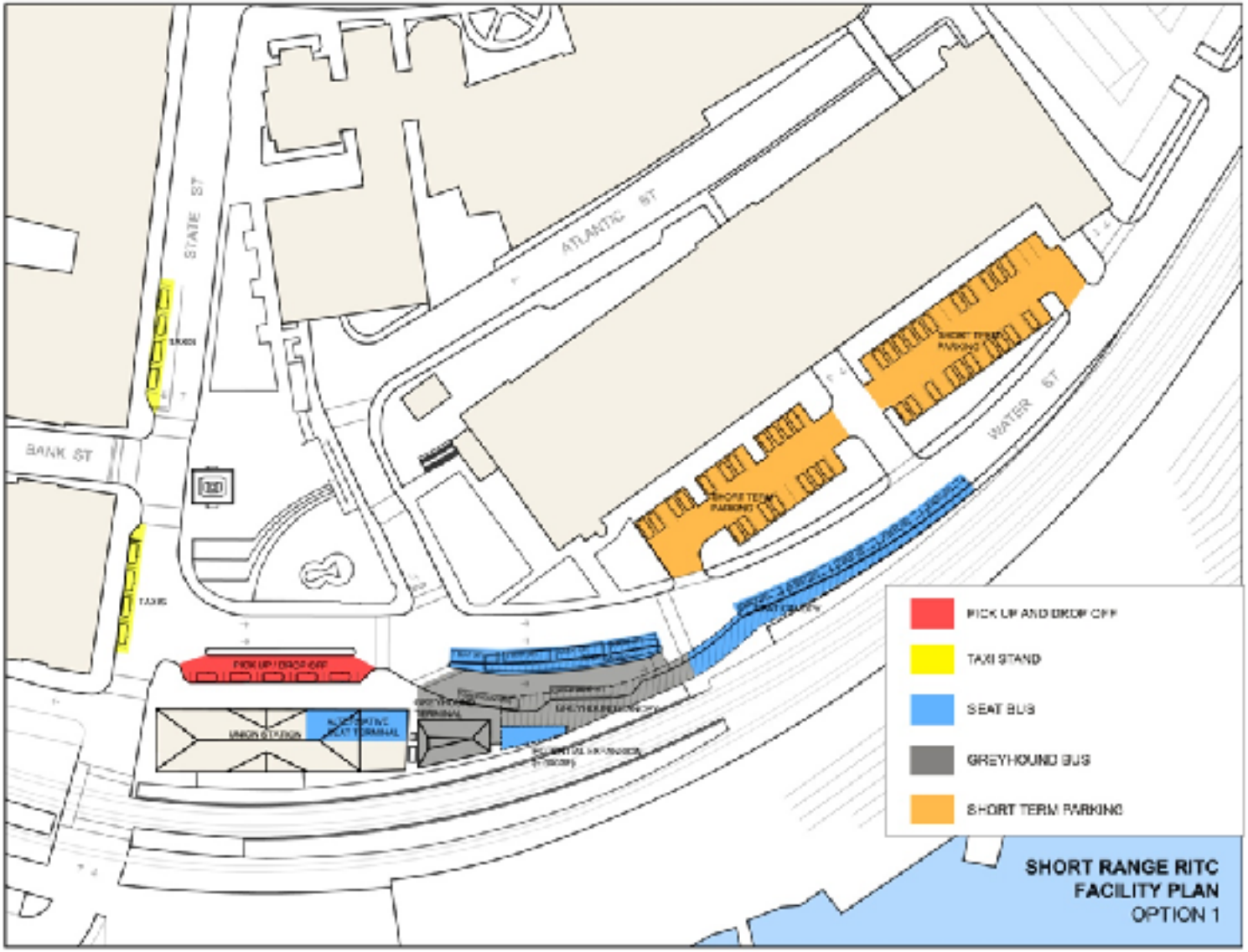


Figure 6-9: Short Term Alternative 1B Variation Showing Separate Passenger Terminal for SEAT

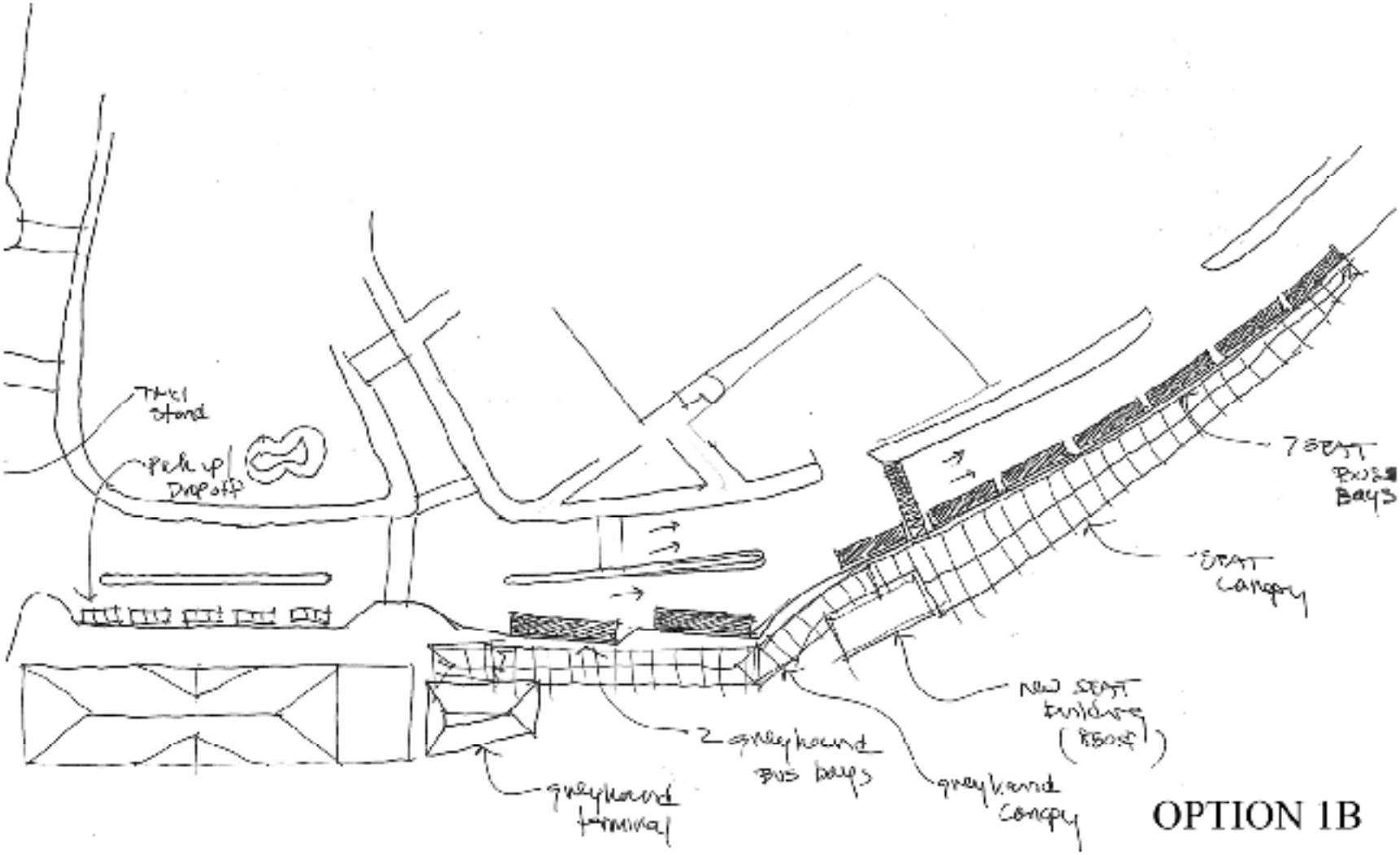


Figure 6-10: Short Term Alternative 2

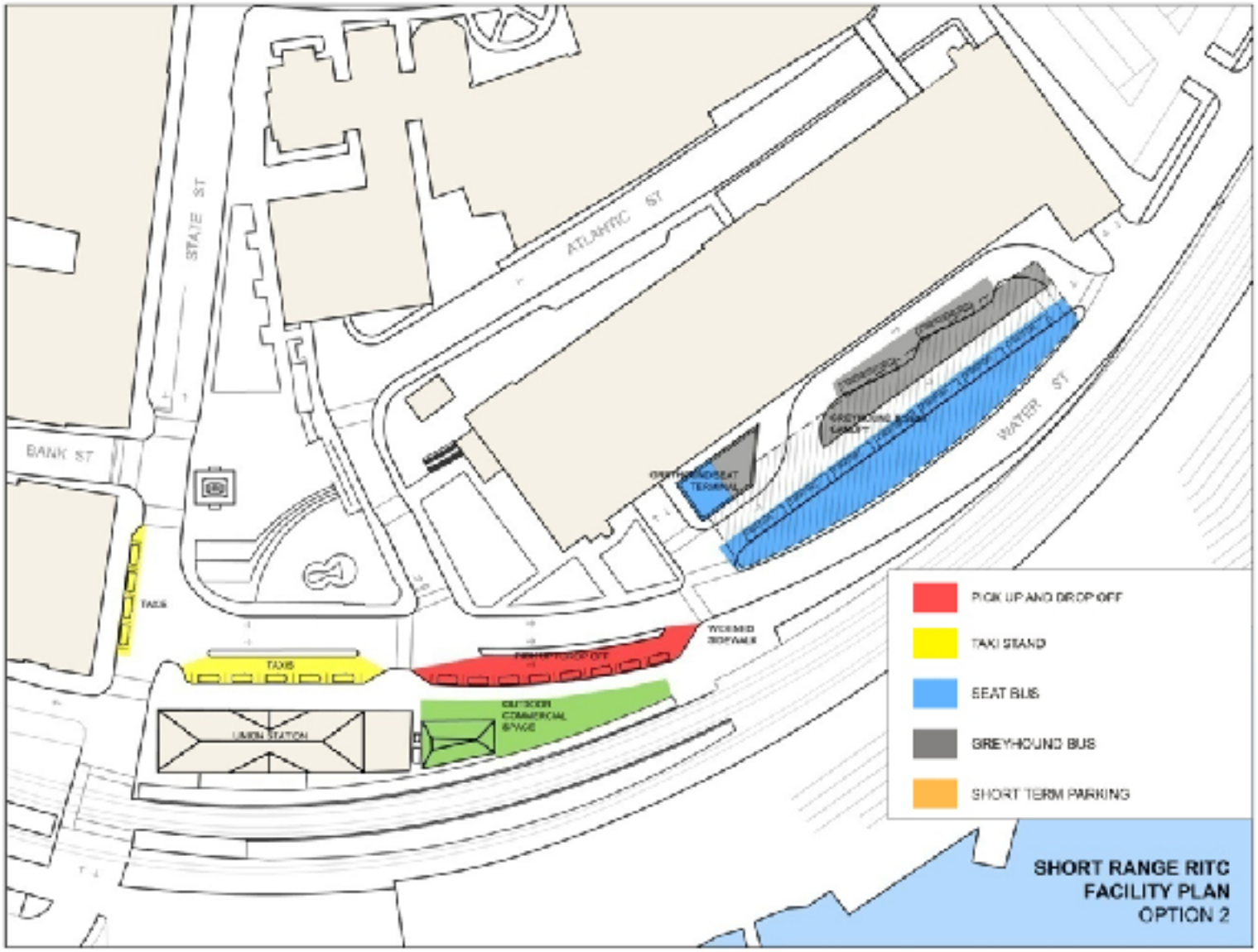


Figure 6-11: Short Term Alternative 2B Variation Showing Use of Garage Ground Level Space for Bus Passenger Terminal

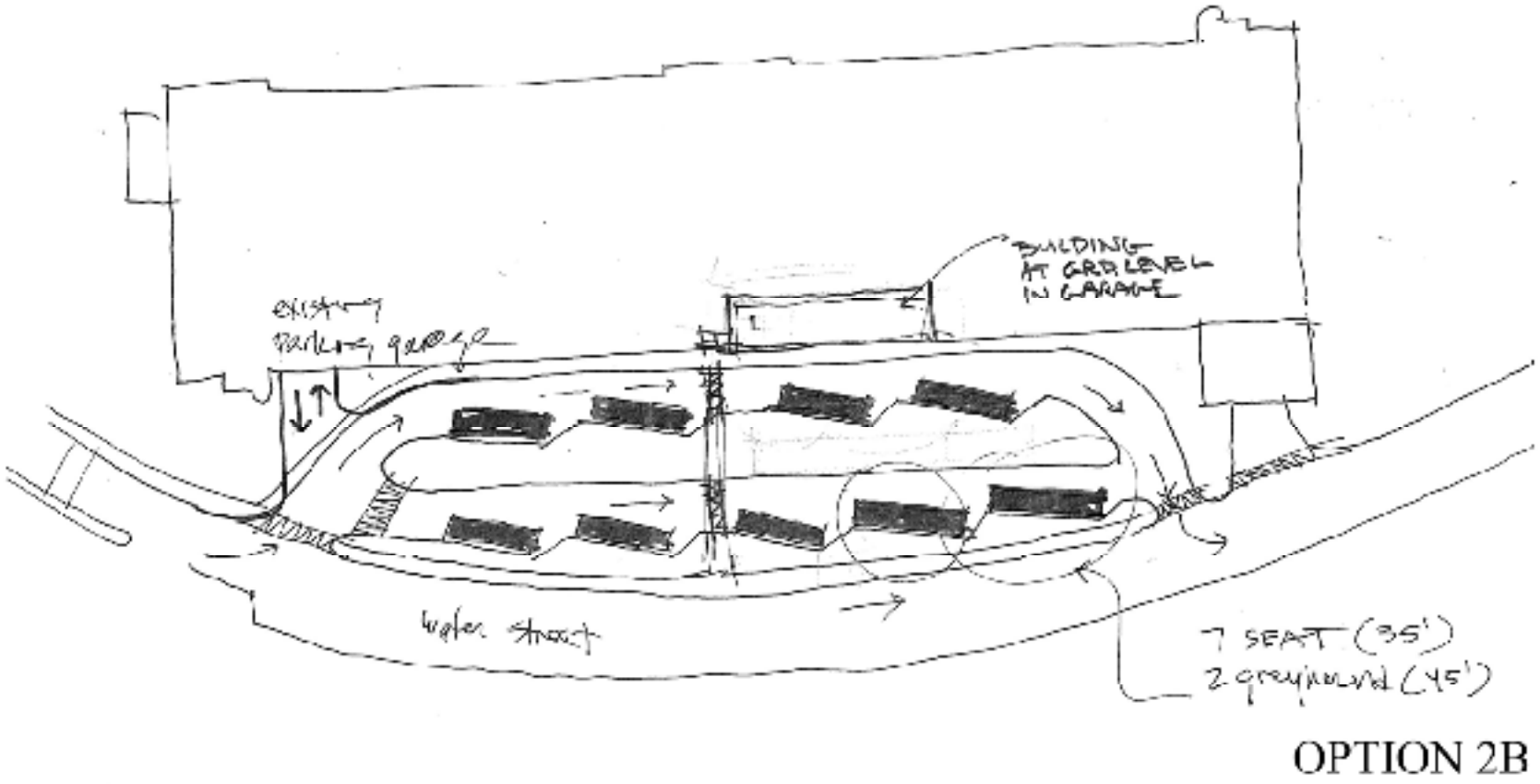


Figure 6-12: Short Term Alternative 3

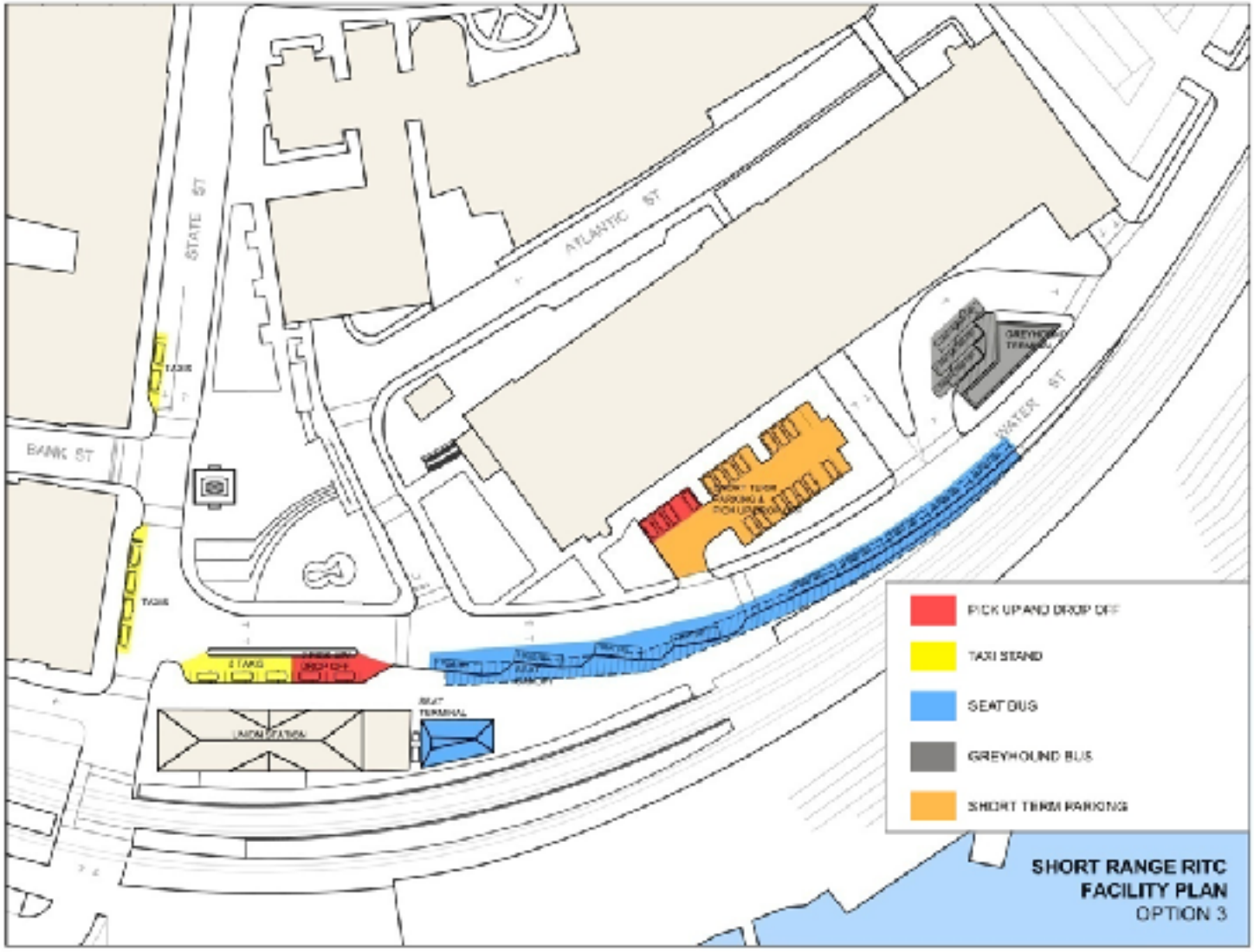


Figure 6-13: Short Term Alternative 3b Showing Greyhound Terminal on South Parcel

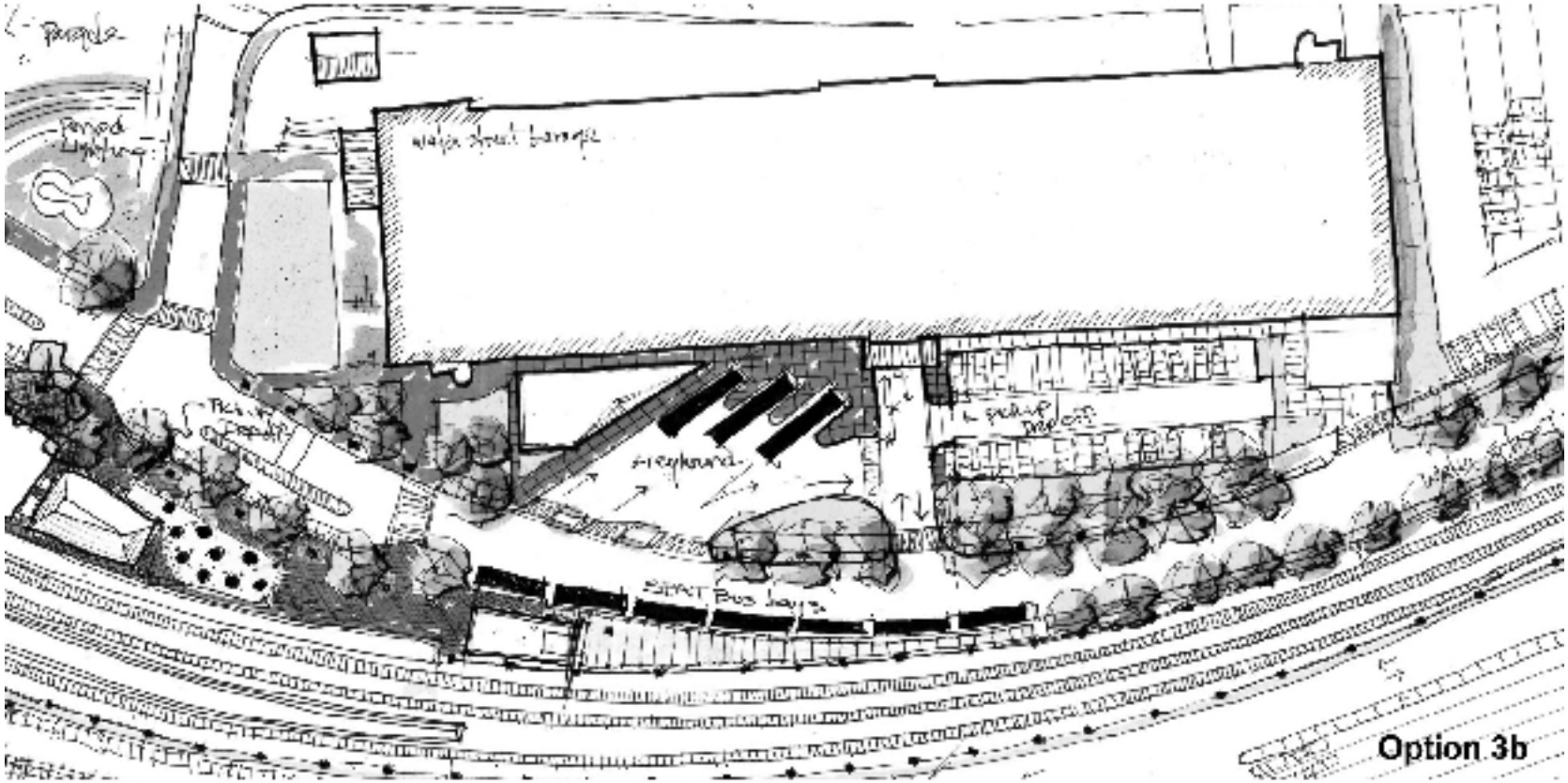
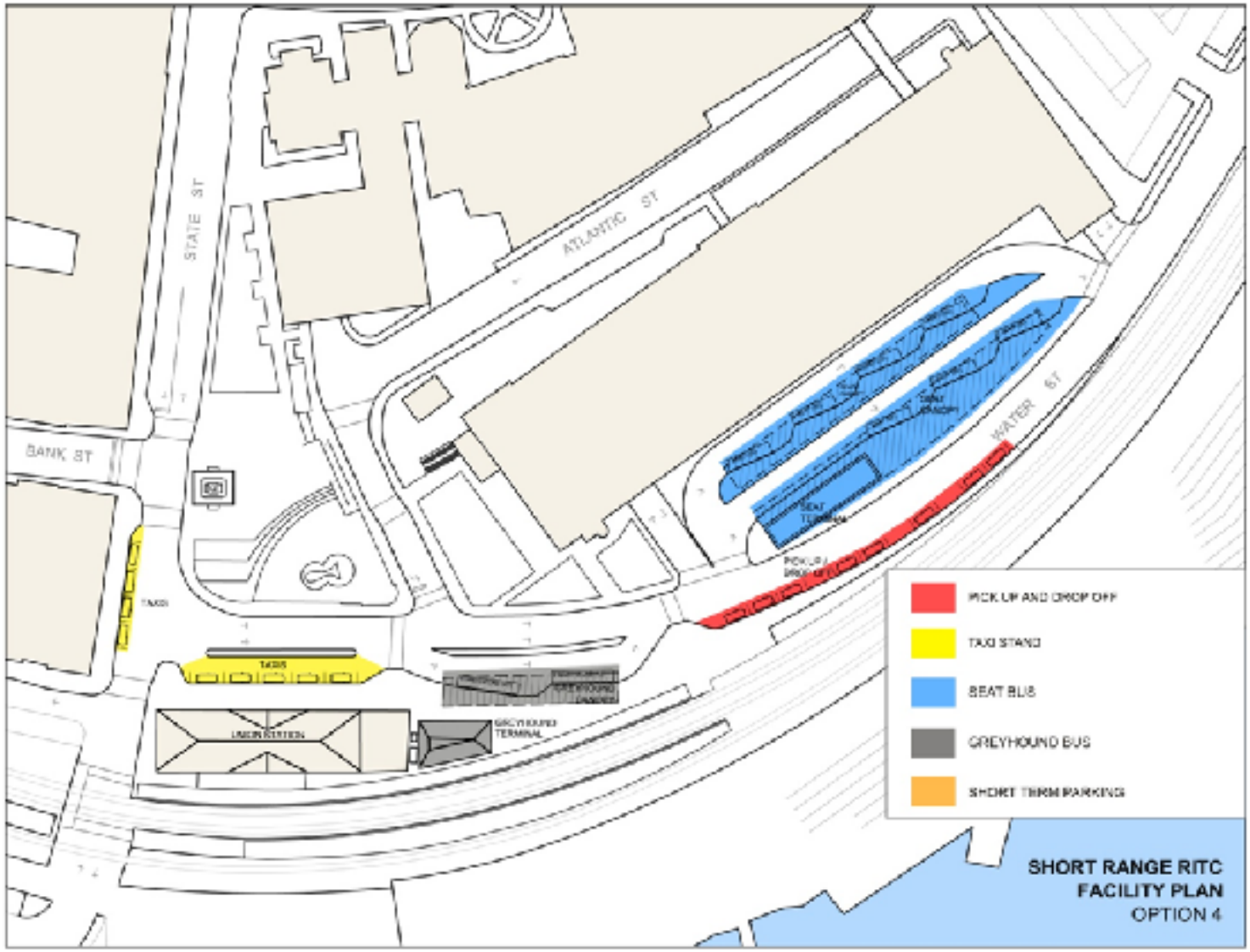


Figure 6-14: Short Term Alternative 4



(Figure 6-11 shows a variant where space on the ground floor of the parking garage is used to provide the passenger waiting area instead of constructing a building near the sidewalk.)

Short Term Alternative 3 (See Figure 6-12)

This alternative uses the north parcel in front of the Water Street Garage to create a new off-street, Greyhound bus terminal. SEAT moves closer to Union Station utilizing the existing Greyhound building and curb space. Canopies are provided for waiting bus passengers Taxis use the front of Union Station building and queue along the first block of State Street as needed. Pick-up/drop-off spaces and short term parking are provided in the south parcel in front of the garage. Figure 6-13 shows a variant of this scheme where Greyhound is located on the south parcel and where SEAT remains in its current space leaving the old Greyhound building for commercial re-use).

Short Term Alternative 4 (See Figure 6-14)

This alternative uses the parcels in front of the Water Street Garage to create a new off-street terminal for SEAT. This would require relocating the center garage entrance and associated structural modifications to the garage. Greyhound stays at its existing site but its terminal is enhanced. Pick-up/drop-off area moves to the current SEAT area on the east side of Water Street. Taxis utilize the curb space in front of Union Station and the first block of State Street for queuing. While Figure 6-14 shows that 7 sawtooth bays can be provided, a variant could be designed with 9 parallel bays which would not allow buses to have independent movement and fixed berths by route.

Options Considered But Not Included in the Short Term Alternatives

Several options were considered but not included in the proposed set of alternatives for consideration due to identified constraints. These are described briefly below:

Bringing SEAT into Union Station

SEAT had expressed a strong interest in both having a customer waiting/information area in Union Station and having its buses load in front of Union Station. The consulting team considered these options. While a customer area in the station is feasible, a variety of concerns led to an alternative with buses loading in front of Union Station not being included. These concerns are the following:

- There is insufficient curb space directly in front of Union Station to accommodate the number of SEAT required buses, meaning they would need to extend north of the building into the Greyhound area and beyond.
- Buses will have difficulty pulling into the southernmost end of the space due to the fact they are turning from State Street (the Parade project bulb-out at that location would have to be removed).
- The proposal would require the current users of this space, i.e., taxis and auto pickup/dropoff, to be relocated to another space and removed from this space.
- There are few viable options for alternative taxi and auto pickup/dropoff areas. Locating them farther north on Water Street would involve a long walk, across the street (off-street) would involve the need to cross Water Street and on South Water Street would involve the need to cross State Street and impact current uses such as Amtrak parking and driveway access. Taxis and waiting passengers need to be able to see each other and taxis need to be able to queue.

- Since SEAT buses currently pulse on the hour, most of the time the space would not be used by the buses. As a result, it would be very difficult to ensure that the bus stop would be clear and usable by buses and not be occupied by auto pickup/dropoff and taxis encroaching on the bus stop area. It would be particularly hard to enforce this given that taxis and auto drivers are individuals.
- Approximately 60% of the Amtrak rail users at Union Station were found in our surveys to use taxis or auto pickup and dropoff for access/egress, compared to between 0% and 3% (on the two survey days) using SEAT buses. With expansion of Shore Line East commuter service, additional demand is anticipated at the station for access modes including a significant share of auto pickup and dropoff, as well as parking and bus. Typically local bus has not been a major access mode for commuter rail. The connections between rail and taxi and rail and auto pickup/dropoff were identified as key connections that needed to be preserved.

SEAT's preference for a customer waiting/information area in Union Station was taken into account in alternatives that move SEAT closer to Union Station. One key disadvantage of a waiting area in Union Station is the limited visibility of the bus berths from the existing waiting room lobby. Therefore, alternatives that move SEAT closer to Union Station included a waiting area closer to the buses with greater visibility of the bus berths.

Note that after refinement of the Short Term Alternatives was completed in response to stakeholder comments, utilization of Union Station for bus terminal space requirements was included in the final Fallback Minimum Construction Alternative.

Moving the Greyhound Terminal Farther North on Water Street and SEAT Closer to Union Station

One option to give SEAT better access to Union Station is to swap locations between SEAT and Greyhound. This would enable SEAT to use the Greyhound Terminal Building as its waiting area. Greyhound had identified that it must have access to the left side luggage compartment of its coaches. Water Street is too narrow at the SEAT bus stop location to provide either sawtooth bays or parallel bays with safe left side access to the coach. For this reason, any concept that shifted Greyhound northward on the east side of State Street was dropped.

Removing a Travel Lane to Extend a Wider Sidewalk on the East Side of Water Street to Governor Winthrop Boulevard

Based on the existing conditions when this study was undertaken, the consulting team concluded the following:

The sidewalk along the east side of Water Street extends north to the SEAT bus stop and then ends. A very narrow, unpaved path continues alongside the poorly maintained, fenced railroad right-of-way from this point to Governor Winthrop Boulevard. Clearly, this well-worn path is along a desire line of some pedestrians, largely as a path to the Cross Sound Ferry site from the bus terminal area. The unpaved path is somewhat obstructed by unused utility poles, signposts and bent fencing as well as weeds. While better wayfinding could direct pedestrians along other paths, it would be desirable to have a paved sidewalk along the railroad right-of-way to accommodate pedestrians and to improve the attractiveness of the area. At the time of this report, the fencing was due to be replaced shortly by the City.

It appears that a four foot sidewalk would be feasible if the utility pole/unused lamppost can be removed or relocated. This is the minimum for a sidewalk. It would be desirable to widen the sidewalk by narrowing or reducing the number of travel lanes on Water Street. Currently, there are two 12-foot travel lanes alongside the bus loading area and three travel lanes at the approach to Governor Winthrop Boulevard beyond the bus stop. The lane width has been measured at 36 feet. Thus currently there are three 12-foot travel lanes. Two options emerged to reduce the street running way width and increase the sidewalk :1) to reduce lane width or 2) remove one lane.

A traffic analysis was conducted for the intersection of Governor Winthrop Boulevard at Water Street during the mid-day peak hour on a summer Saturday under current conditions and projected conditions in the year 2030 to evaluate the feasibility of reducing the number of travel lanes on Water Street. The mid-day peak hour was used for this analysis as the mid-day peak hour represents the peak hour of highest traffic volume. The analysis results, as shown in Table 6-7, indicate that operations will significantly decline on Water Street if capacity is reduced from three to two lanes.

Table 6-7: Water Street at Governor Winthrop Boulevard Traffic Evaluation
Midday Peak Hour Summer Saturday Conditions

Water Street Northbound Approach LOS(Delay in Seconds)		
	Existing Capacity on Water Street	Reduction in Capacity on Water Street to Two Lanes
Existing Condition (2008)	C (34.4)	D (39.4)
Future Build Condition (2030)	D (42.3)	F (117.0)

Water Street functions at Level of Service (LOS) C today, an acceptable level of service. Utilizing a three-lane configuration the LOS in 2030 is projected to be LOS D, which is also an acceptable LOS for an urban street of this type. However, should the number of lanes be reduced from three to two, the LOS today would change to LOS D and in 2030 to LOS F, an unacceptable LOS. A reduction in lanes would lead to a 30-car back up on Water Street (twice as many as projected in 2030 with three lanes) and potentially impact traffic operations on State Street.

For this reason, a narrowing to two approach lanes was deemed infeasible. It may be possible to narrow lanes somewhat to 11 or 11.5 feet to add 1.5 – 3 feet to the sidewalk.

Note that as the Short Term Alternatives were refined in the Master Plan, a wider sidewalk on Water Street was also included in the Preferred Alternative, but this was made possible by relocating Water Street rather than removing a travel lane.

Shifting Taxi, Bus or Auto Pickup/Dropoff to the East of the Railroad Right-of-Way

Some consideration was given to moving some functions to the east side of the railroad tracks along State Street, adjacent to City Pier, or on Cross Sound Ferry property. While a taxi and auto pickup/dropoff area for Cross Sound Ferry is feasible, such an area east of the tracks near Union Station could not be accommodated without infringing on the Fishers Island Ferry property or City Pier.

Shifting Greyhound to the east side of the tracks would improve the key connection between Greyhound and Cross Sound Ferry. However, delays at the railroad crossings caused by the 40 daily trains were

considered too much of a hindrance to Greyhound operations. Also, City Pier Park prevents the creation of a straight route passing through Cross Sound Ferry property and the amount of space required for Greyhound buses to turn around would likely impact Cross Sound Ferry operations.

Including a Pedestrian Bridge in Short Term Options

Although a pedestrian bridge was considered a viable long term option, it was not considered in the initial set of short term alternatives for the following reasons:

- A pedestrian bridge with the necessary 40-foot clearance, vertical circulation elements for the ferry and both rail platforms and capacity to accommodate large surges of passengers disembarking from ferry boats would be quite costly to construct. Cross Sound Ferry does not propose to fund a pedestrian bridge on its own. In the past, Cross Sound has identified the potential for high speed ferry terminal that would connect to a footbridge constructed by others.
- To obtain funding from Amtrak the pedestrian bridge must be located to serve Union Station and the potential impacts of a footbridge on the historic station suggest that it would not be easy to implement in a short time frame. The prior proposal for a pedestrian bridge was tabled for a variety of reasons including controversy over the design impacts on the historic structure, high costs, and inability to agree on a shared arrangement for handling maintenance costs. While most rail stations in Connecticut on the Northeast Corridor route have overpasses or underpasses to enable passengers to cross the tracks even while trains are in the station, these stations typically do not have adjacent grade crossings that inhibit train speed and provide easy pedestrian access between platforms. The New London circumstances are somewhat unique. Because of the State Street and Governor Winthrop Boulevard grade crossings and the curvature, speeds for the Acela are limited. Construction of an overpass would not offer significant operational benefits to Amtrak. The main benefit to Amtrak would be to allow a few passengers to access the northbound platform while a train is in the station. Before the train approaches and the gate closes off access, the northbound platform is easily accessed at surface level and passengers would clearly prefer this path to a bridge that is 40-feet high. The Parade Project was funded by a $10 million grant originally programmed for the footbridge project. As a result, we concluded that quick approval of funding would also be unlikely.
- The best scenario for a pedestrian bridge would be one in which a developer is building a major development project on the Water Street Garage site and could benefit from RITC patrons passing through. Such a developer could possibly assume some of the cost as well as maintenance of the structure. Such a project would undoubtedly be a long term project rather than a short term project.

Note that as the Short Term Alternatives were refined in the Master Plan, a pedestrian bridge was included in the Short Term Preferred Alternative to respond to ConnDOT's directive that an up and over or tunnel crossing of the tracks be included in any short term plan.

6.5 Long Term Vision Concepts

The long term vision concepts are necessarily less specific than the short term alternatives. They are designed to identify alternative visions for the RITC area beyond the year 2030 when the Water Street Garage and some other facilities and properties are due for reconstruction or redevelopment. It may not need to identify one single long term vision concept at this time; this final report includes more than one alternative long term vision that can be followed as the opportunity arises.

Four future RITC concepts were initially developed based on the two-by-two matrix below. The concepts reflect two primary decisions.

1. Will the RITC be concentrated at the immediate Union Station area near the intersection of State Street and Water Street, or will the RITC be extended to include the area from State to Governor Winthrop Boulevard in the Water Street corridor?

2. Will the parking facilities for the RITC be concentrated, thereby dispersing potential transit-oriented development (within walk distance of the RITC)? or will the parking be dispersed over a wider area (but within walk distance of the RITC) thereby allowing more concentrated transit-oriented development near the RITC, taking maximum advantage of the waterfront location as well as the proximity to the RITC? Note that given the scale of downtown New London and our understanding of the desire to protect the character of the city, it was deemed infeasible to concentrate both parking and development.

Future RITC Concepts

	Concentrated Parking / Dispersed Development	Dispersed Parking / Concentrated Development
Concentrated Transportation Center	A	C
Extended Transportation Center	B	D

After discussion with Cross Sound Ferry, it was determined that there was less flexibility to move passenger ferries to alternative locations on the Cross Sound Ferry property. As a result, Concept B evolved into a Concentrated Transportation Center concept. Table 6-8 summarizes the resulting concepts, followed by a text description. Figures 6-15 through 6-21 illustrate the concepts. Detailed descriptions are also provided after the figures. Note the concepts generally can include a footbridge or rely on surface connections; a footbridge version of three of the four concepts designated with double letters was included, thus bringing the total number of concept alternatives to seven.[2]

6.5.1. Four Long Term Concepts

Following the descriptions of the concepts is an explanation of the long term development opportunities they represent.

[2] Later in the study, an up and over pedestrian bridge or tunnel crossing the tracks was mandated by ConnDOT to be part of the short term alternatives. This is reflected in the Master Plan in Chapter 7.

Table 6-8: Four Long Term Concepts

A: Concentrated Transportation Center (Concentrated Parking / Dispersed Development) • Transportation facilities concentrated near Union Station • Expanded parking as close to Union Station as possible • Parking/transportation facilities limit development opportunities near the waterfront • Large development opportunities are far from the Parade and Union Station
B: Concentrated Transportation Center with Parking Facilities along Water Street (Concentrated Parking / Dispersed Development) • Transportation facilities concentrated near Union Station • Expanded parking on sites along Water Street closer to Governor Winthrop Blvd. • Parking/transportation facilities limit development opportunities near the waterfront • Large development opportunities are far from the Parade and Union Station
C: Concentrated Transportation Center with Relocated Parking Facilities and New Water Street Development (Dispersed Parking / Concentrated Development) • Transportation facilities concentrated near Union Station • Some parking relocated from Water Street to sites along Governor Winthrop Blvd. • Relocation of parking facilities increases development opportunities near the waterfront and Union Station
D: Extended Transportation Center with Relocated Parking Facilities and New Water Street Development (Dispersed Parking / Concentrated Development) • Some transportation facilities relocated along Governor Winthrop Blvd. • Some parking relocated from Water Street to sites along Governor Winthrop Blvd. • Relocation of parking/transportation facilities increases development opportunities near the waterfront and Union Station

Long Term Concept A/AA (See Figure 6-15 and Figure 6-16)

This concept limits the enhanced transportation facilities to the Water Street Garage site and the adjacent surface lots. Redevelopment of the Water Street Garage would consist of only a larger parking garage, possibly with a bus terminal for SEAT and Greyhound on the ground level. A passenger ferry terminal, with berths for Block Island Ferry and the SeaJet and loading space for casino buses, would be built adjacent to City Pier on the currently city-owned waterfront parcel with pedestrian access via the Parade, State Street and City Pier. Cross Sound Ferry would convert the existing standby staging area to parking and proceed with the planned removal of buildings and use of that space for staging. The concept could include a pedestrian bridge connecting directly from the new garage to the new passenger ferry terminal. (The concept with a footbridge is designated Concept AA).

Long Term Concept B (See Figure 6-17)

This concept incorporates redevelopment of the Mariner Square property into the redevelopment of the Water Street Garage site. The larger development would include a limited amount of new commercial space near the Parade as well as a larger parking garage and possible bus terminal for SEAT and Greyhound. Much of the parking would be located near the northern end of the site and Block Island Ferry passengers would use the Governor Winthrop Boulevard railroad crossing when walking from the new garage. The Block Island Ferry and SeaJet would swap locations. Casino buses would use the currently city-owned waterfront parcel. Cross Sound Ferry would retain the existing standby staging area and

Figure 6-15: Long Term Concept A

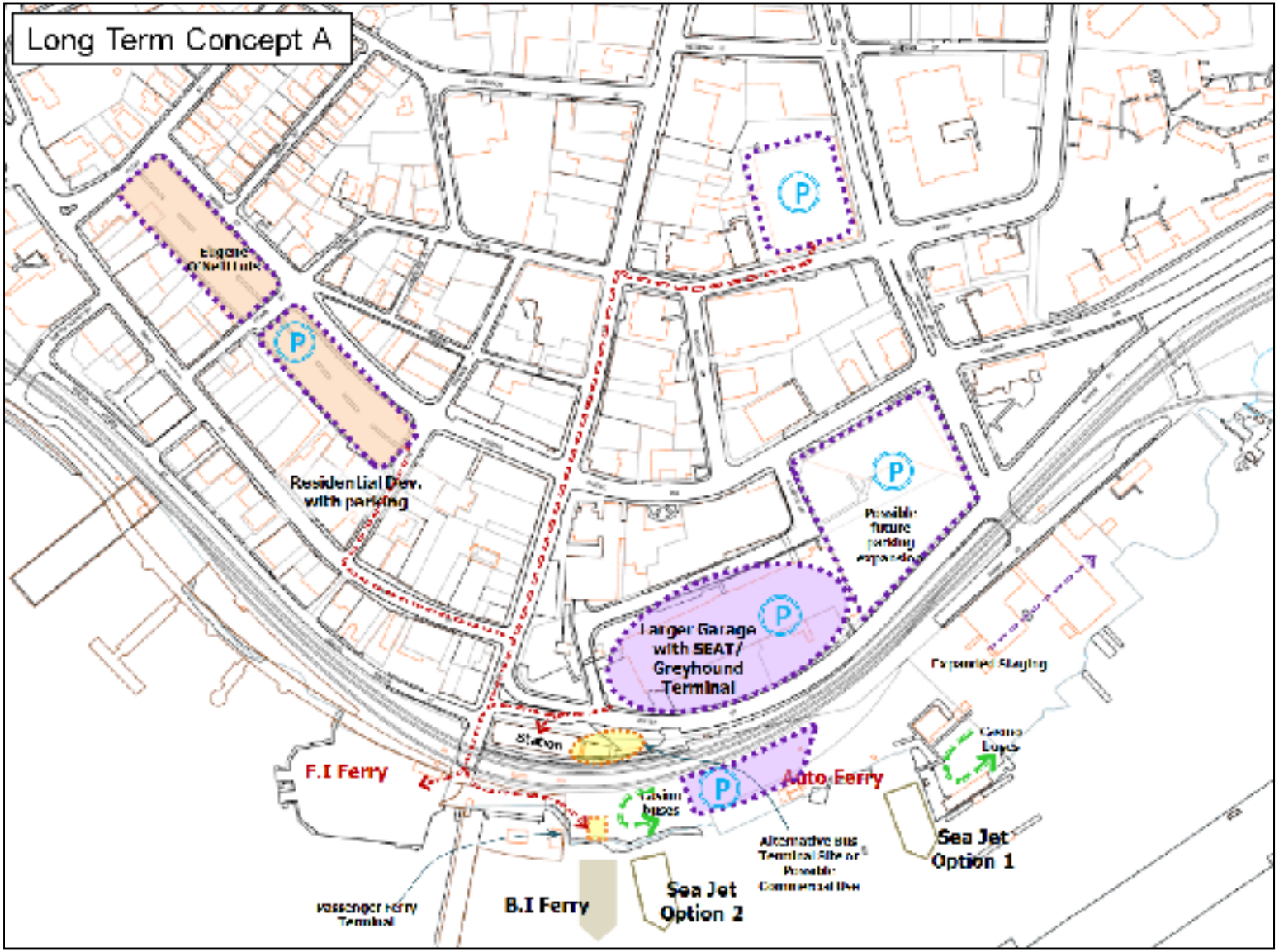


Figure 6-16: Long Term Concept AA (A with a Pedestrian Bridge)

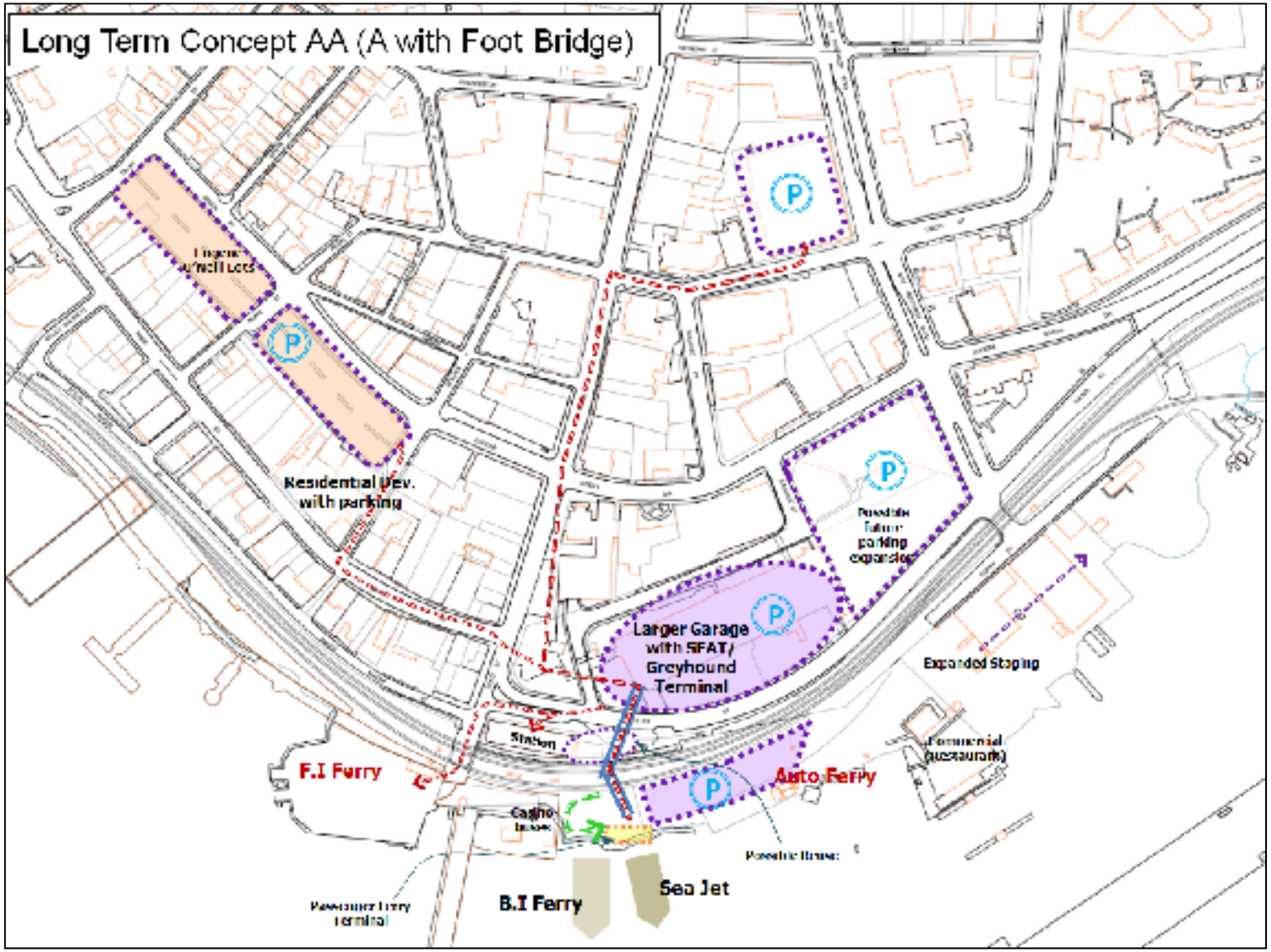


Figure 6-17: Long Term Concept B

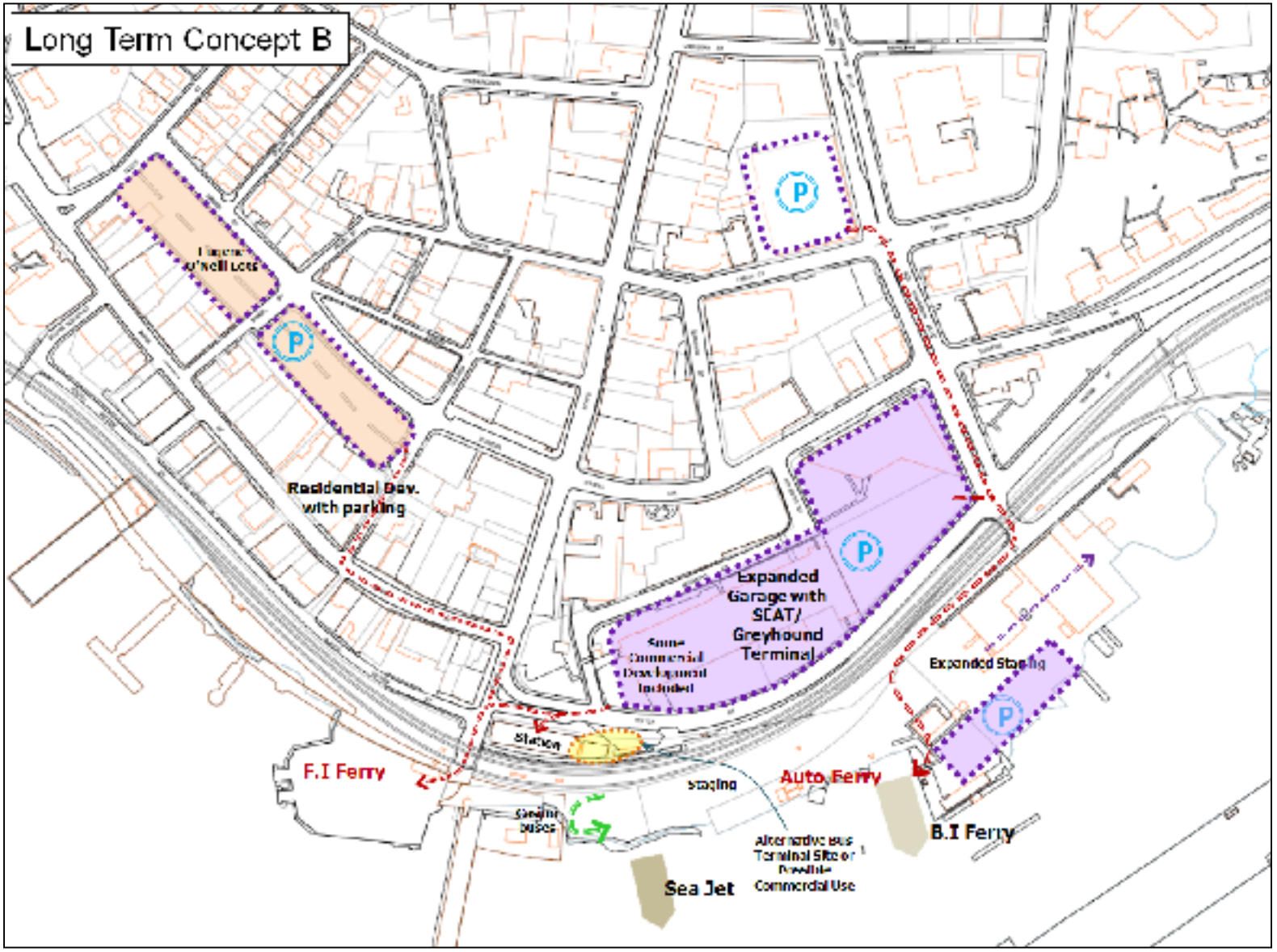


Figure 6-18: Long Term Concept C

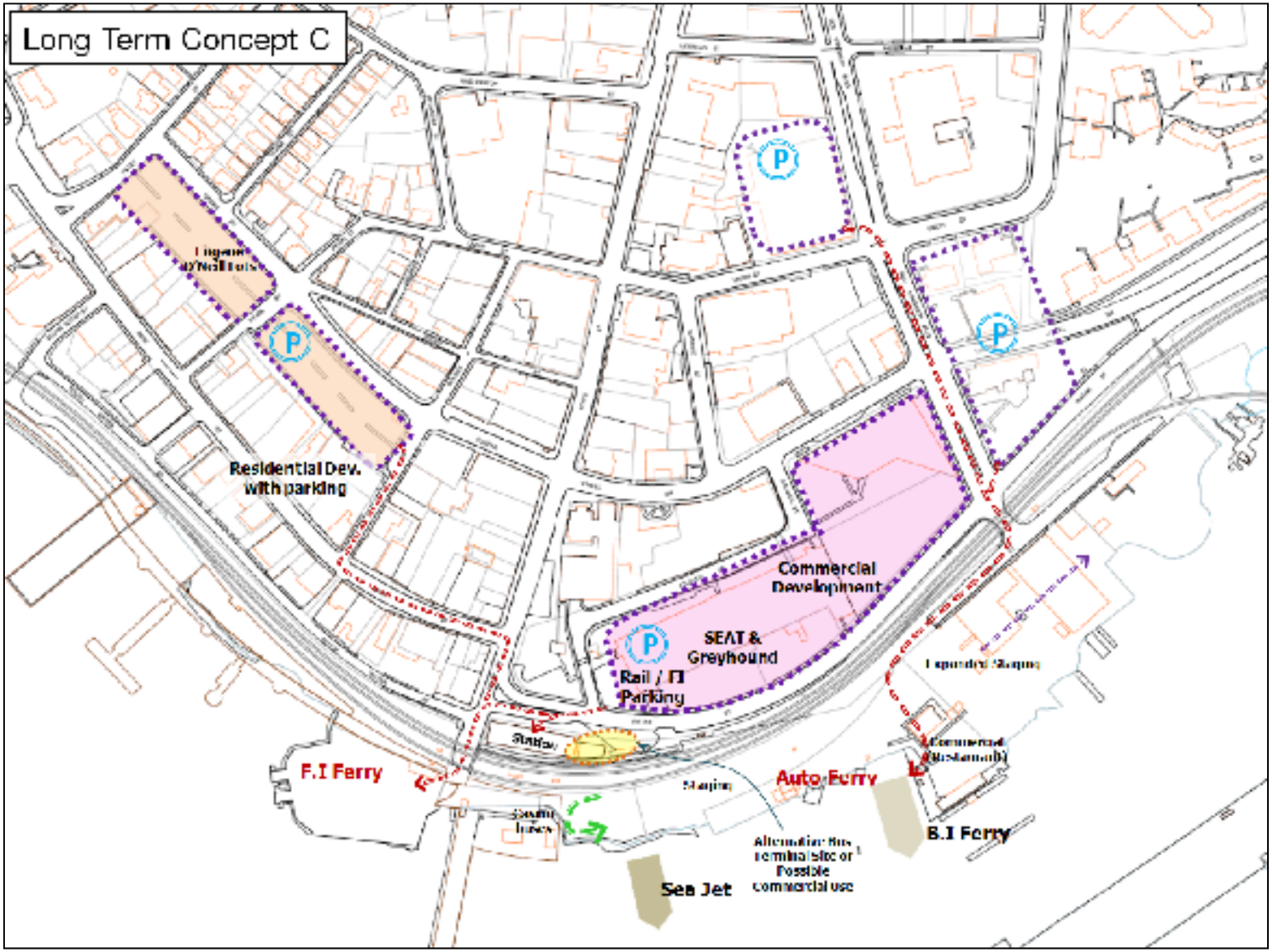


Figure 6-19: Long Term Concept CC (C with a Pedestrian Bridge)

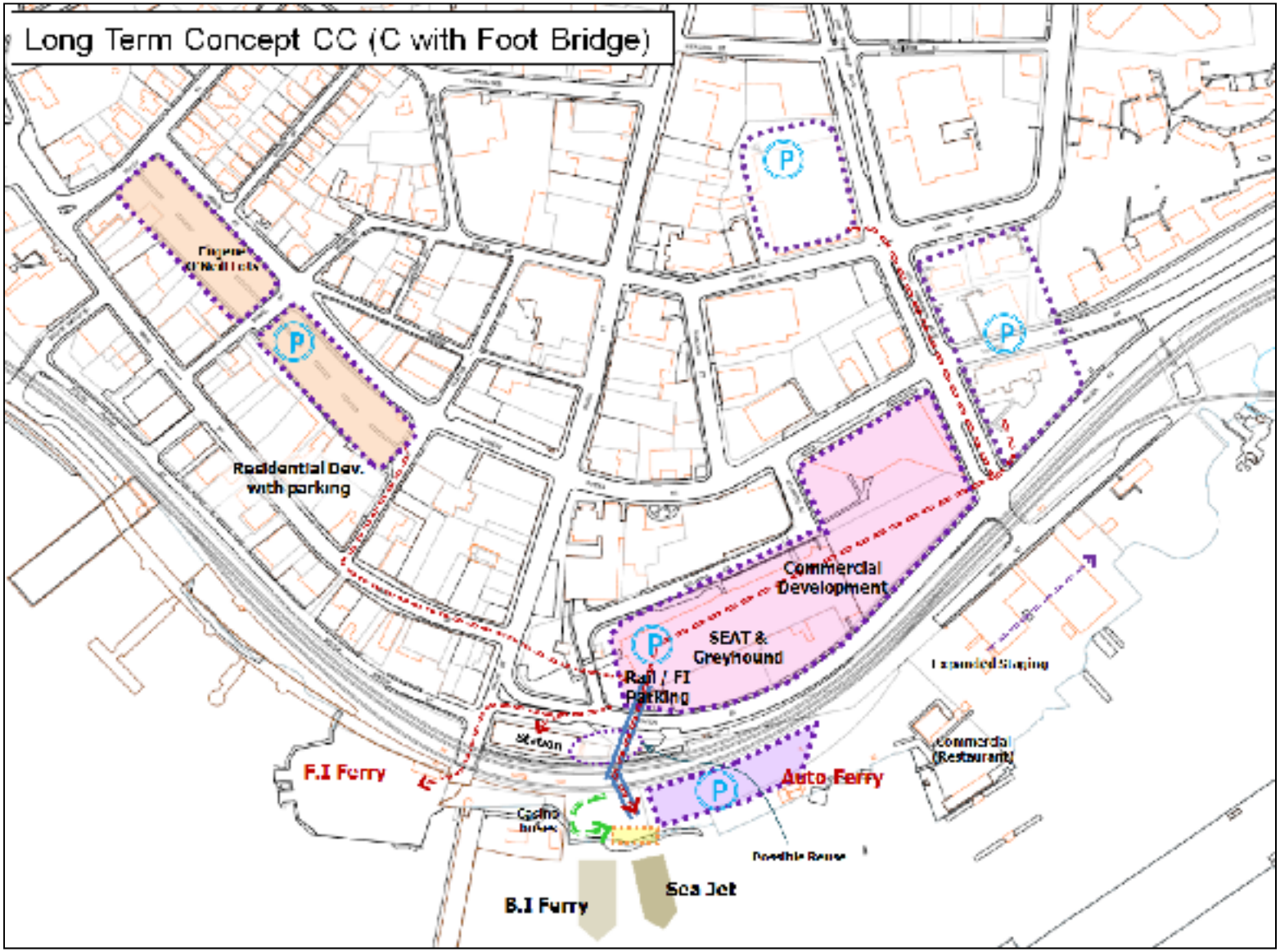


Figure 6-20: Long Term Concept D

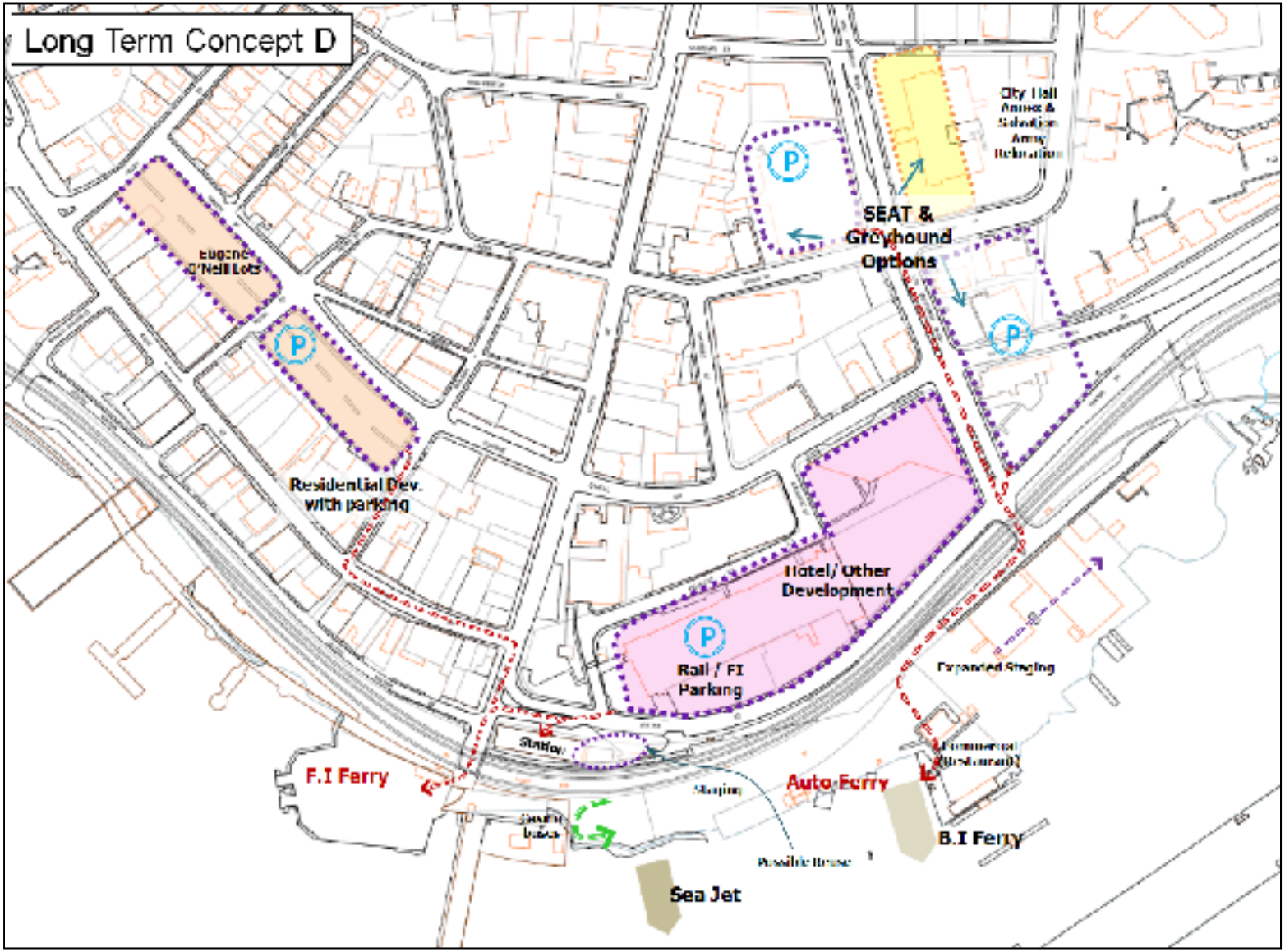
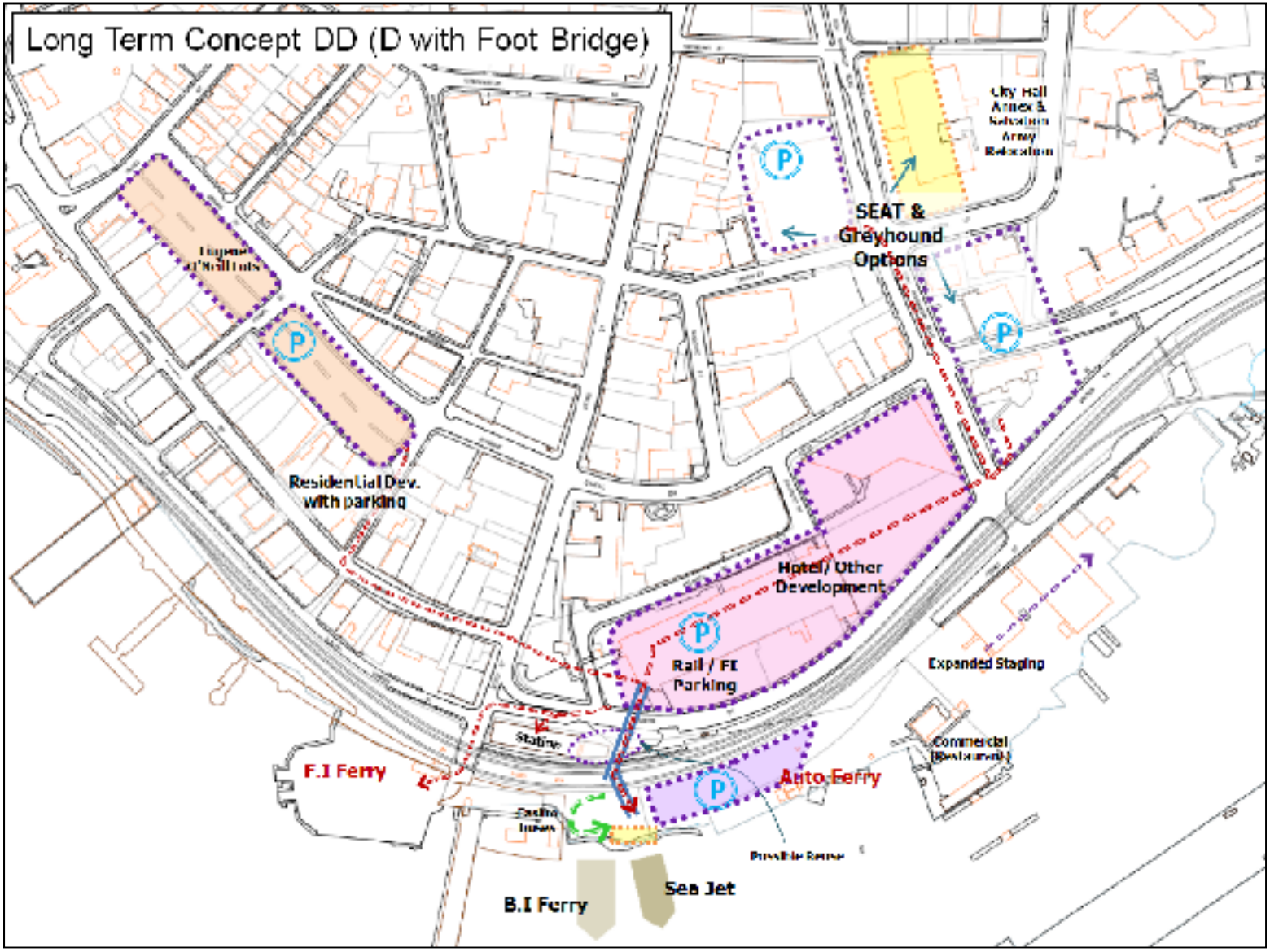


Figure 6-21: Long Term Concept DD (D with a Footbridge)



proceed with the planned removal of buildings using that space for additional staging and for parking for the Block Island Ferry. This concept does not include a pedestrian bridge.

Long Term Concept C/CC (See Figure 6-18 and Figure 6-19)

This concept involves replacing the Water Street Garage with a new garage located on the north side of Governor Winthrop Boulevard. The Water Street Garage site, including Mariner Square, would be redeveloped into a new commercial space connecting the new garage to the Parade and Union Station. The development would include a small parking garage primarily serving rail passengers and possibly a ground level bus terminal for SEAT and Greyhound. The SeaJet and casino buses would use the currently city-owned waterfront parcel. Without a footbridge (designated Concept C), the Block Island Ferry would use the current SeaJet location and Block Island Ferry passengers would use the Governor Winthrop Boulevard railroad crossing when traveling from the new garage. With a footbridge (designated Concept CC), a new passenger ferry terminal serving both the SeaJet and Block Island Ferry would be located near City Pier and connected to the footbridge ; passengers would pass through the new commercial development traveling from the new garage to the footbridge.

Long Term Concept D/DD (See Figure 6-20 and Figure 6-21)

This concept involves replacing the Water Street Garage with a new garage located on the north side of Governor Winthrop Boulevard. The Water Street Garage site, including Mariner Square, would be redeveloped into a new commercial space connecting the new garage to the Parade and Union Station. The development would include a small parking garage designed to serve rail passengers. A new bus terminal would be built along Governor Winthrop Boulevard either as part of the new garage or as a separate facility. The SeaJet and casino buses would use the currently city-owned waterfront parcel. Without a footbridge (designated Concept D), the Block Island Ferry would use the current SeaJet location and Block Island Ferry passengers would use the Governor Winthrop Boulevard railroad crossing when traveling from the new garage. With a footbridge (designated Concept DD), a new passenger ferry terminal serving both the SeaJet and Block Island Ferry would be located near City Pier and connected to the footbridge. Passengers would pass through the new commercial development traveling from the new garage to the footbridge.

Concept A: Concentrated Transportation Center with a New Water Street Garage

Transportation Elements

- Rail, Fishers Island and Long Island Auto Ferry unchanged
- New larger garage on existing Water Street Garage site
- SEAT/Greyhound/tourist bus terminal in the new Water Street Garage, or alternatively on the east side of Water Street
- New passenger ferry terminal for Block Island Ferry on current city-owned property adjacent to City Pier
- SeaJet either at the new passenger ferry terminal or remaining at the existing location
- New casino bus loop near the passenger ferry terminal (if SeaJet is relocated)
- Existing auto ferry standby staging area converted to parking
- Some Cross Sound Ferry buildings removed and replaced with an expanded staging area
- Principal access from parking to the Block Island Ferry is via the Parade, State Street and City Pier

Development Elements

- Residential development and parking garage on Eugene O'Neill lots (parking primarily to support new residences and area businesses with minimal additional capacity for the RITC)
- Infill development and rehabilitation of existing buildings
- Some development possible along Governor Winthrop Blvd. and Eugene O'Neill Dr. north of State

Concept AA: Concentrated Transportation Center with a New Water Street Garage and Footbridge

Same as Concept A except

- New footbridge connecting new Water Street Garage to rail platforms and ferry terminal
- SEAT/Greyhound/tourist bus terminal in the new Water Street Garage (a bus terminal on the east side of Water Street may not be compatible with the footbridge)
- New passenger ferry terminal for Block Island Ferry and SeaJet connected to the footbridge
- Possible restaurant or other development in current casino bus loading area
- Principal access from parking to the Block Island Ferry is via the footbridge from the Water Street Garage

Concept B: Concentrated Transportation Center with Commercial Development Including a New Water Street Garage

Transportation Elements

- Rail, Fishers Island and Long Island Auto Ferry unchanged
- New larger garage with some commercial development on a combination of the existing Water Street Garage site and the Julian site
- SEAT/Greyhound/tourist bus terminal in the new Water Street Garage, or alternatively on the east side of Water Street
- Block Island Ferry at current SeaJet location; current casino bus area converted to parking
- SeaJet near Union Station on current city-owned property adjacent to City Pier; new casino bus loop in current parking area
- Some Cross Sound Ferry buildings removed and replaced with an expanded staging area
- Principal access from parking to the Block Island Ferry is via Governor Winthrop Boulevard

Development Elements

- Limited new commercial development near the Parade as part of the new garage
- Residential development and parking garage on Eugene O'Neill lots (parking primarily to support new residences and area businesses with minimal additional capacity for the RITC)
- Infill development and rehabilitation of existing buildings
- Some development possible along Governor Winthrop Boulevard

Concept C: Concentrated Transportation Center with Relocated Parking Facilities and New Water Street Development

Transportation Elements

- Rail, Fishers Island and Long Island Auto Ferry unchanged
- New garage spanning Eugene O'Neill Drive on north side of Governor Winthrop Boulevard (includes police station site)
- New development on Water Street Garage/Julian site with onsite parking plus parking for rail and Fishers Island Ferry passengers

- SEAT/Greyhound/tourist bus terminal in the new Water Street development, or alternatively on the east side of Water Street
- Block Island Ferry at current SeaJet location
- Possible restaurant or other development in current casino bus loading area
- SeaJet near Union Station on current city-owned property adjacent to City Pier; new casino bus loop in current parking area
- Some Cross Sound Ferry buildings removed and replaced with an expanded staging area
- Principal access from parking to the Block Island Ferry is via Governor Winthrop Boulevard

Development Elements

- Major new development on Water Street garage site with possible waterview hotel, bus terminal and less RITC parking
- Residential development and parking garage on Eugene O'Neill lots (parking primarily to support new residences and area businesses with minimal additional capacity for the RITC)
- Infill development and rehabilitation of existing buildings
- Office/commercial development on Governor Winthrop Boulevard (e.g. new City Hall Annex)

Concept CC: Concentrated Transportation Center with Relocated Parking Facilities, New Water Street Development and Footbridge

Same as Concept C except

- New footbridge connecting new Water Street development to rail platforms and ferry terminal
- SEAT/Greyhound/tourist bus terminal in the new Water Street development (a bus terminal on the east side of Water Street may not be compatible with the footbridge)
- New passenger ferry terminal for Block Island Ferry and SeaJet connected to the footbridge
- Existing auto ferry standby staging area converted to parking
- Principal access from parking to the Block Island Ferry is through the new Water Street development and over the footbridge

Concept D: Extended Transportation Center with Relocated Parking Facilities and New Water Street Development

Transportation Elements

- Rail, Fishers Island and Long Island Auto Ferry unchanged
- New SEAT and Greyhound bus terminal on Governor Winthrop Boulevard (at the Radisson site or other site)
- New garage spanning Eugene O'Neill Drive on north side of Governor Winthrop Boulevard (includes police station site)
- New development on Water Street Garage/Julian site with onsite parking plus parking for rail and Fishers Island Ferry passengers
- Block Island Ferry at current SeaJet location
- Possible restaurant or other development in current casino bus loading area
- SeaJet near Union Station on current city-owned property adjacent to City Pier; new casino bus loop in current parking area
- Some Cross Sound Ferry buildings removed and replaced with an expanded staging area
- Principal access from parking to the Block Island Ferry is via Governor Winthrop Boulevard

Development Elements

- Major new development on Water Street garage site with possible waterview hotel etc. and less RITC parking
- Residential development and parking garage on Eugene O'Neill lots (parking primarily to support new residences and area businesses with minimal additional capacity for the RITC)
- Infill development and rehabilitation of existing buildings
- Office/commercial development with bus terminal on Governor Winthrop Boulevard (e.g. new City Hall Annex)

Concept DD: Extended Transportation Center with Relocated Parking Facilities, New Water Street Development and Footbridge

Same as Concept D except

- New footbridge connecting new Water Street development to rail platforms and ferry terminal
- New passenger ferry terminal for Block Island Ferry and SeaJet connected to the footbridge
- Existing auto ferry standby staging area converted to parking
- Principal access from parking to the Block Island Ferry is through the new Water Street development and over the footbridge

6.5.2. Long Term Development Opportunities

As discussed in the Chapter 4 and Chapter 5, the Water Street Garage parcel, coupled with the adjacent Mariner Square parcel, and Union Plaza parcel (which compose the downtown "superblock" bounded by Water Street, State Street, Eugene O'Neill Drive, and Governor Winthrop Boulevard) represents a long term opportunity for large-scale, transformative redevelopment. One vision for these parcels (as explored in Long Term Concept D) is a thriving mixed-use district that contains a mixture of mid- and high-rise housing with water views, attractive office buildings with water views, and an extension of the Bank Street entertainment and retail district. This redevelopment represents a unique opportunity to create a new "face" for downtown New London and would set up a lively, pedestrian-friendly interior street pattern that is in keeping with downtown New London's historic urban block pattern, but with better pedestrian and vehicular access to surrounding streets and downtown destinations.

The underutilized sites are some of the largest, most visible and accessible parcels in the downtown. In a potential long term scenario (referred to as Long Term Concept D in this chapter), with SEAT and Greyhound bus facilities and a replacement public parking structure developed together on one of the identified large potential redevelopment parcels along the nearby Governor Winthrop Boulevard corridor, the Water Street Garage parcel and its two smaller adjacent parcels are freed up for redevelopment, thereby allowing approximately three acres of prime downtown water view property to be developed as a combination of housing, office, and retail. If the Mariner Square and Union Plaza parcels are included, there would be over five contiguous acres available for redevelopment.

Two development density scenarios were developed to provide a general understanding of the level of long term development opportunity in Long Term Alternative D. The first assumes all potential new buildings (housing and office) are developed at three stories with some ground floor retail. This first study revealed that all of the "high" land use program identified in the Chapter 4 Market Analysis (62,460 sq. ft. of retail space (80 percent new or renovated retail space and 20 percent existing retailers increasing sales productivity); 347,000 sq. ft. of residential (347 units); and 66,616 sq. ft. of office space) is achievable on the downtown superblock described above, the City-owned Eugene O'Neill Drive parking lots, and the potential redevelopment parcels identified on the Post Office block on Atlantic Street. The second study assumes that all potential new buildings are developed at varying heights, including a potential 12-to-15-

story housing tower, a six-story office building, ground level retail, and four-story housing on the remaining parcels. This second study revealed that not only can the downtown superblock, City-owned Eugene O'Neill Drive parking lots, and Post Office block parcels accommodate the "high" land use program, but can considerably exceed it. It was found that the sites can accommodate 35 percent more retail, 50 percent more housing, and 36 percent more office development.

6.5.3. Preserving the Long Term Development Opportunity

If the majority of City-owned parking facilities are moved from the Water Street Garage parcel to a site along Governor Winthrop Boulevard, and SEAT and Greyhound bus facilities are developed in its place (as explored in Long Term Concept C), the opportunity for transformative redevelopment will be considerably diminished. Two reasons for this are:

1.) The bus berthing facilities would encumber a great percentage of the Water Street Garage parcel, which limits space available for ground floor retail, water view housing and office buildings.

2.) Air rights development over the new bus berthing and potential new smaller parking facility is be required to achieve the long term development vision explored in Long Term Concept C and to take full advantage of the site's unmatched and valuable water views. However, in addition to the construction cost premium associated with the site's significant grade change, the complication of air rights development over both a bus berthing facility and a new parking garage will likely make redevelopment of the site difficult, expensive and potentially cost prohibitive.

All long term development alternatives should be explored and evaluated, and it is vital to consider how the siting of bus berthing and other transportation-related facilities would affect future development patterns. Having a clear understanding of how these decisions can impact potential future development is vital in achieving long term development goals.

Options Considered But Not Included in the Long Term Concepts

Several options were considered but not included in the proposed set of concepts for consideration due to identified constraints. These are described briefly below:

Building a Deck over the Railroad Right-of-Way

While a pedestrian bridge has been considered in the past and is a long term option under consideration, members of the consulting team identified that a footbridge might not be well used for several reasons:

- The height would mean climbing many stairs which would discourage use compared to a longer but level path via State Street. Elevators might not be able to handle the peak loads particularly as a ferry unloads. Escalators would need to be enclosed and might be difficult for users with strollers.
- Few rail users would need to use the footbridge since prior to train arrival and after train departure, they can easily cross the tracks at grade at State Street.

As a result, and in support of the goal of creating a vibrant, visitor-friendly space, one concept considered was a wider deck promenade over the railroad right-of-way connecting a new Cross Sound Ferry high-speed passenger ferry terminal with the Parade area and redeveloped Water Street Garage. This idea was

perceived to have major visual impact and property/air-rights impacts and would be likely to be very high cost. The deck, and the necessary associated development, were viewed as out-of-scale with the character of downtown New London and were therefore dropped from further consideration.

Building a Tunnel Under the Railroad Right-of-Way

During the charrette phase of the design process the consulting team considered the feasibility of a short underpass/tunnel under the railroad tracks as one Long Term option. In evaluating the feasibility of the tunnel connecting the west side of the railroad/train station and the east side of the railroad and ferry terminal, the following items and elements were considered:

1. Constructability
2. Disruption to existing operations
3. Operational cost and maintenance
4. Capital cost of construction

Design and cost parameters have been used for similar tunnel projects constructed along the Northeast Corridor including jacked tunnel construction for a similar installation in Westport, CT.

The tunnel, if built, would be approximately 110-120' in length, 10' x 10' extending from the area north of the existing Greyhound Bus Terminal to a location just east of the three track rail line east of the station building. Vertical access would be provided to the southbound and northbound platforms via stairs and elevators and a pedestrian ramp east of and parallel to the tracks for ferry access. Dewatering, security cameras, lighting, vandal-proof finishes and graphics have all been anticipated along with canopies over the access points. Costs for escalators have been presented as options as well. During construction of tunnel, only one rail line would be operational as well as the freight spur.

Construction techniques would incorporate jacking of the tunnel section under the rail facilities with minimal clearance under the track bed. This construction technique was recently used in Westport, CT for an tunnel installation.

The tunnel (under the tracks) is somewhat less expensive than the full pedestrian bridge with extensions to the Water Street Garage and Cross Sound Ferry area. However, the disadvantages to the tunnel with respect to security, maintenance, disruption to rail traffic, de-watering and a connection to the Water Street Garage, make this a less desirable option than the pedestrian structure which has the ability to connect the garage, station, and ferry terminal less expensively with improved security and less maintenance requirements.

6.6 Screening Evaluation of Options

The identified options for the short term and long term were screened using the criteria identified earlier in Table 6-4. The following rating scale is used in the illustrative tables, Tables 6-9 and 6-10 for the Short Term Alternatives and Long Term Concepts, respectively.

Rating Scale:	1	2	3	4	5	
	low	low-med	med	med-high	high	NA

6.6.1. Key Advantages and Disadvantages of Each Short Term Alternative

The following describes the key advantages of each short term alternative. Table shows a summary level evaluation rating. A more detailed table supporting the rating is provided in Appendix D.

Short Term Alternative 1

Advantages

- Lowest cost - renovation/expansion of existing facilities on largely existing sites
- Would be compatible and easy to phase as an interim improvement leading to a long term concept with a relocated bus terminal across the street or at another site (with or without a footbridge).
- Maintains flexible space in front of Water Street garage for short term parking and/or redevelopment over time.
- Minimizes need to cross Water Street to transfer between buses and rail (or between buses, or to ferries)
- Provides more curbside berths for SEAT closer to Union Station.

Disadvantages

- Difficult to implement since construction would be at current site
- Reconfiguration of curb space and expansion of passenger building may face some physical challenges in a tight space
- Impact of passenger building expansion on historic building
- Building expansion is likely not compatible in the long term with a footbridge
- More constraints on space for taxi and auto pickup/dropoff; would require more use of State Steet for taxis and/or auto pickup/dropoff
- Some impact on crosswalk to Water Street Garage (may need to be relocated)
- SEAT berths would not allow independent movement, thereby preventing designating berths by route
- SEAT waiting area somewhat far from berths
- Greyhound lacks freight pickup/dropoff space (other than bus bays)

Short Term Alternative 2

Advantages

- Easy to implement since construction would be at available site which would not affect bus operations
- Frees up space at existing Greyhound Terminal for commercial use including outdoor space, which could attract visitors passing through the RITC
- Shorter connection between buses and Long Island ferries via Governor Winthrop Boulevard crossing.
- SEAT waiting area fairly close to berths

- Provides one long curb space in front of Union Station for taxi and auto pickup/dropoff

Disadvantages

- Higher cost – new construction of all facilities on new site and modification to garage entrance/structures
- Would impact parking garage operations
- Occupies space in front of Water Street Garage so that it is not available for parking and may not be perceived as available for longer term development
- Requires bus users to cross street to get to rail station or ferries
- Awkward configuration of lanes at entrance to Water Street Garage; pedestrian safety issue
- Would require subsequent temporary or permanent relocation of the bus terminal to reconstruct a larger Water Street Garage or development
- Number of SEAT berths limited to 7 and no independent movement is provided to allow designation of berths by route

Short Term Alternative 3

Advantages:

- Phasing is easy for both Greyhound and SEAT.
- SEAT is provided with some saw-tooth bays enabling independent movement. These bays can be assigned to specific routes.
- If SEAT and/or Greyhound expand operations, additional bus bays/ curb space are available.
- A shorter connection is provided between Greyhound and the LI ferries via the Governor Winthrop Boulevard crossing.

Disadvantages:

- SEAT terminal and waiting area at the existing Greyhound location is somewhat far from most bus berths.
- Awkward directionality of lanes at center entrance to garage, this may impact traffic operations and pedestrian safety issues
- One of the two parcels in front of the Water Street Garage is occupied and may reduce potential for redevelopment or alternative use.
- Crosswalk to Water Street Garage may need to be relocated
- May require subsequent temporary or permanent relocation of the Greyhound bus terminal to reconstruct a larger Water Street Garage or development
- No FTA funding would be available for the new Greyhound terminal

Short Term Alternative 4

Advantages:

- SEAT is provided with seven saw-tooth bus bays for independent movement, allowing designation of bays by route. A dedicated terminal building provides a SEAT waiting area closest to, and with a clear view of, all bus bays.
- Taxi operations and pick-up/drop-off space is less constrained
- Easy to phase implementation (construction of new SEAT terminal doesn't affect current SEAT operations).

Disadvantages:

- Higher cost – new construction of all facilities on new site and modification to garage entrance/structures
- Would impact parking garage operations
- Awkward travel lane configuration at relocated garage entrance which may impact pedestrian safety and traffic operations.
- Number of SEAT bays is limited to seven with the saw-tooth design used to allow independent movement. (However, more SEAT buses could be accommodated if parallel berths were used instead.)
- Short term parking is no longer available in front of the Water Street Garage
- Occupies space in front of Water Street Garage so that it is not available for parking and may not be perceived as available for longer term development
- Would require subsequent temporary or permanent relocation of the bus terminal to reconstruct a larger Water Street Garage or development

Table 6-9: Evaluation of Short Term Alternatives

Criterion	Short Term Alternative 1	2	3	4
Low Cost				
Easy to Implement				
Acceptable to Future Changes in Operational Needs				
Flexible to Accommodate Long Term Commercial Development				
Compatibility with Bus Terminal Long Term Concepts				
Improves Safety and Convenience for Transfers				
Enhances Pedestrian Environment and Safety				
Maintains or Enhances Traffic Operations/Safety				
Enhances Wayfinding/Information				
Capacity to Accommodate Short Term RTC Operations				
Enhances Attraction of Visitors				
Minimal Environmental Issues				
Minimal Property Issues				
Potential for Public Private or Grant Funding				

Key: better ... worse

6.6.2. Key Advantages and Disadvantages of Each Long Term Vision Concept

The following describes the key advantages of each long term concept. Table 6-10 shows a summary level evaluation rating. A more detailed table supporting the ratings is provided in Appendix E.

Long Term Concept A/AA

Advantages:

- The Water Street Garage site is owned and available to the City.
- It is easy to build the new bus terminals at the new site and then shift the buses without disrupting bus service. (If buses stay on east side of Water Street, a temporary bus facility might be needed during construction.)
- Julian site could be added in a later phase.
- With all major transportation services concentrated wayfinding should be relatively easy.
- Transfers between public transportation modes would be short.
- Transfers between public transportation and parking would be short.
- FTA funding for a bus /intermodal center is feasible including parking provided it is for transit uses.

- WITHOUT FOOTBRIDGE (A)
  - Brings garage users through the Parade area.
- FOOTBRIDGE OPTION (AA)
  - Would facilitate transfers and wayfinding and enhance pedestrian safety crossing railroad tracks and Water Street
  - Also links NB and SB rail platforms when trains are in the station.
  - Would support development of a consolidated passenger ferry terminal near City Pier.
  - It also identifies the path to the ferries.

Disadvantages:

- Parking capacity may be insufficient at the existing site.
- It is hard to replace the parking in the Water Street Garage during construction.
- Bus terminal size is constrained by parking needs at the garage.
- Structure is likely to be much larger than the current garage
- There are aesthetic impacts of a large garage without any commercial development (much like exists today).
- Little opportunity for adjacent development. All immediate area is devoted to transportation.
- Fails to capitalize on waterfront development opportunity.
- Fails to capture visitors with attractions (retail, entertainment) in immediate area.

- FOOTBRIDGE OPTION (AA)
  - Introduces vertical element to transfer; large crowds couldn't use elevators.
  - Diverts garage users from traversing the Parade.
  - Has potential visual impacts, including impacts on the historic station building.
  - Involves multiple property owners.
  - Adds costs that would need to be funded without any potential funds from a private development of TOD.
  - Limits bus options on east side.

Long Term Concept B

Advantages:

- Includes small commercial development near the Parade in the expanded Water Street Garage; complements Parade improvements.
- Parking capacity may be limited by inclusion of commercial development.
- May be easier to phase by building additional parking on Julian site first.
- Provides fairly convenient surface access to relocated Block Island Ferry.
- Less need for footbridge with this alternative.
- FTA funding for a bus /intermodal center is feasible including parking provided it is for transit uses.

Disadvantages:

- Requires assembly of parcels including Julian property which contains active first class office building. There would likely be an interim loss of commercial space during construction.
- Bus terminal size would be constrained by the parking needs at the garage as well as the inclusion of commercial development.
- Doesn't encourage major economic development; devotes most of immediate area to transportation.
- Distinguishes separate parking areas oriented to Block Island Ferry from rail; could influence FTA funding.
- Wayfinding must orient Block Island Ferry passengers to Gov. Winthrop Blvd. intersection.
- Funnels more pedestrians across Governor Winthrop Blvd. /Water Street intersection which is vehicle access point for auto ferries.
- Funnels Block Island Ferry passengers away from the Parade
- Doesn't support Cross Sound Ferry plan for single passenger ferry terminal with footbridge.

Long Term Concept C/CC

Advantages:

- Allows for more commercial development at Water Street Garage site.
- Development complements Parade project.
- New parking garages on Governor Winthrop Boulevard could be phased in first.
- Police Station site is likely to be available to City; other sites will require some assembly including private and City-owned land.
- FTA funding for a bus /intermodal center is feasible including parking provided it is for transit uses.

  WITHOUT FOOTBRIDGE (C)
  - Provides fairly convenient surface access to relocated Block Island Ferry.
  - Provides maximum possible auto ferry staging capacity.
  - Could retain SEAT and/or Greyhound buses on east side of Water Street as an option.
- FOOTBRIDGE OPTION (CC)
  - Provides safer access from Water Street Garage to Block Island Ferry at current location and supports Cross Sound Ferry plan for single passenger ferry terminal with footbridge.
  - Identifies path to the ferries.

- Encourages pedestrian traffic through the new commercial development and therefore enhances development potential.
- Provides more on-site Block Island ferry parking.
- Developer could provide funding for footbridge.

Disadvantages:

- Possible interim loss of commercial space.
- May require relocation of Police Station and/or other properties.

- WITHOUT FOOTBRIDGE (C)
  - Funnels more pedestrians across Governor Winthrop Blvd. /Water Street intersection which is vehicle access point for auto ferries.
  - Diverts Block Island Ferry users of the garage from the State Street/Parade area.
- FOOTBRIDGEOPTION (CC)
  - Requires wayfinding for Block Island Ferry passengers from remote parking areas through new commercial development to footbridge.
  - Involves multiple property owners.
  - Has visual impacts including impacts on the historic station building.

Long Term Concept D/DD

Advantages:

- Maximizes development near the RITC, including potential waterview hotel.
- Development complements Parade project.
- Moves SEAT closer to geographical center downtown area.(possibly closer to more originating riders)
- Offers SEAT and Greyhound more space for development of bus terminal.
- New parking garages on Governor Winthrop Boulevard could be phased in first.
- Police Station site is likely to be available to City; other sites will require some assembly including private and City-owned land.
- FTA funding for a bus /intermodal center is feasible including parking provided it is for transit uses.

- WITHOUT FOOTBRIDGE (D)
  - Provides reasonably convenient surface walk from parking to relocated Block Island Ferry.
  - Provides maximum possible auto ferry staging capacity.
- FOOTBRIDGE OPTION (DD)
  - Provides safer access from Water Street Garage to Block Island Ferry at current location and supports Cross Sound Ferry plan for single passenger ferry terminal with footbridge.
  - Identifies path to the ferries.
  - Encourages pedestrian traffic through the new commercial development and therefore enhances development potential.
  - Provides more on-site Block Island Ferry parking.
  - Developer may provide funding for footbridge.

Disadvantages:

- Moves SEAT and Greyhound farther from rail station and ferries.

- Separates parking for Block Island Ferry from rail parking which could impact FTA funding (but does combine Block Island Ferry parking with intercity bus parking)
- Possible interim loss of commercial space.
- May require relocation of Police Station, hotel and/or other properties.

- WITHOUT FOOTBRIDGE (D)
    - Funnels Block Island Ferry pedestrians through Gov. Winthrop Blvd./Water Street intersection which is vehicle access to auto ferries.
    - Diverts Block Island Ferry users of the garage from the State Street/Parade area.
- FOOTBRIDGEOPTION (DD)
    - Requires wayfinding for BI Ferry passengers from remote parking areas through new commercial development to footbridge.
    - Involves multiple property owners.
    - Has visual impacts including impacts on the historic station building.

Table 6-10: Evaluation of Long Term Concepts

Criterion	Long Term Concept						
	A	AA	B	C	CC	D	DD
Footbridge?		✓			✓		✓
Low Cost							
Ease of Project Development							
Ease of Phasing							
Improves Safety and Convenience for Transfers							
Improves Convenience for Parking Access							
Enhances Pedestrian Environment							
Enhances Pedestrian Safety							
Enhances Wayfinding/Information							
Has Capacity to Accommodate RITC Demand/Growth (Public Transportation Modes)							
Has Capacity to Accommodate RITC Demand/Growth (Parking)							
Promotes Likely Development/Local Economy							
Capitalizes on Synergies between Transportation & Development							
Balances Need for Transportation & Development							
Enhances Attraction of Visitors (to New London)							
Minimal Environmental Issues							
Minimal Property Issues							
Potential for Public-Private or Grant Funding for transportation improvements							

Key: best worst

6.7 Stakeholder Input for the Development of a Master Plan Short Term Concept

There was ongoing stakeholder and public involvement and agency coordination throughout the study. This included two public meetings and six meetings of a Stakeholder Steering Committee including representatives of transportation providers, property owners, downtown business and other interest groups, and representatives of City and State agencies. (The public process is documented in Appendix F including meeting minutes.) Individual meetings were also held with key stakeholders.

The stakeholders had considerable comments on the identification and evaluation of the short and long term alternatives. As a result, the consultant team was redirected to respond to the consensus that emerged. The consultant team proceeded to examine the feasibility of some suggestions made at the Stakeholder Steering Committee meeting such as introducing another railroad crossing between the two current crossings, shifting rail platforms northward to allow surface crossing while trains were in the station, relocating or removing the freight siding, etc. SCCOG directed the consultant team to develop and revise new short term alternatives. The direction was to 1) develop alternatives for bus terminal facilities located on the east side of Water Street adjacent to Union Station, incorporating use of the building currently used by Greyhound, and shifting Water Street to the west, if needed, to provide adequate space to meet the bus operator needs, and 2) to include an up-and-over pedestrian bridge in the short term alternatives that would enable passengers to cross the tracks when trains are in the station (as mandated by ConnDOT) and which could include additional span to connect to the Water Street Garage and the waterfront. This is reflected in the Preferred Alternative of the Master Plan described in the next section.

With regard to the long term concepts, there was no clear consensus on a specific vision for the future. There was agreement that the replacement of the Water Street Garage would not occur for many years considering the investment the City was making to repair the facility. As a result, the sentiment was that the alternative visions would be helpful in the future but the Master Plan should focus on the short term alternatives including immediate actions. As a result, the long term visions are documented in this chapter but are not carried forward into the next chapter describing the Master Plan. Perhaps the most important thing is to continue to keep options open to respond to development opportunities in the future and to continue discussion on the long term vision.

7. Proposed Master Plan Improvements 7-1

7.1 Introduction 7-1
7.2 Overview of the Short Term Master Plan Concept 7-2
7.3 Physical Improvements in the Preferred Alternative 7-4
7.3.1. Transportation Facilities on the East Side of Water Street 7-4
7.3.2. Optional Pedestrian Bridge Extensions 7-15
7.3.3. Taxi, Auto Pick-up/Drop-off and Bicycles 7-15
7.3.4. Pedestrian Improvements 7-17
7.3.5. Wayfinding 7-23
7.3.6. Use of Union Station 7-25
7.4 Design Concerns Regarding the Preferred Alternative 7-25
7.5 Other Options 7-27
7.5.1. "Best Practices" Bus Terminal 7-27
7.5.2. Fallback Minimum Construction Alternative 7-28
7.6 Non-Transportation Uses at Union Station 7-32

List of Figures

Figure 7-1: Plan for Combined Bus Terminal in the Preferred Alternative 7-6
Figure 7-2: Context of Bus Terminal Plan in the Preferred Alternative 7-7
Figure 7-3: Example of Floor Plan for Combined Bus Terminal in the Preferred Alternative 7-8
Figure 7-4: Preferred Alternative with Center Section of Pedestrian Bridge View from the Parade 7-9
Figure 7-5: Preferred Alternative with Center Section of Pedestrian Bridge View from Above Water Street 7-10
Figure 7-6: Preferred Alternative with Full Pedestrian Bridge Including Extensions View from the Parade 7-11
Figure 7-7: Preferred Alternative with Full Pedestrian Bridge Including Extensions View from above Water Street 7-12
Figure 7-8: Optional Pedestrian Bridge Extensions 7-15
Figure 7-9: Taxi and Automobile Pickup and Drop-off Area 7-17
Figure 7-10: Pedestrian Improvements in the Preferred Alternative 7-19
Figure 7-11: Specific Pedestrian Improvements – Section Views Along Ferry Street 7-20
Figure 7-12: Specific Pedestrian Improvements – Section Views along State Street at Union Station 7-20
Figure 7-13: Specific Pedestrian Improvements – Section Views Along Water Street 7-20
Figure 7-14: Immediate vs. Short Term Pedestrian Improvements 7-21
Figure 7-15: Wayfinding Signage Plan 7-22
Figure 7-16: Wayfinding Signage Example 7-24
Figure 7-17: Site Plan for Fallback Minimum Construction Alternative 7-30
Figure 7-18: Conceptual Floor Plan for Fallback Minimum Construction Alternative 7-31

List of Tables

Table 7-1: Architectural Program for Bus Facilities at RITC 7-3

7. Proposed Master Plan Improvements

7.1 Introduction

As detailed in the previous chapter, the consultant team prepared potential improvement options for the Regional Intermodal Transportation Center located in New London's Historic Waterfront District including Union Station and nearby transportation facilities. These potential improvements were developed based on the earlier findings regarding needs. Improvements were outlined for two time frames, short term and longer term.

More specific improvements were developed for implementation in the short term. While some of these improvements could be implemented immediately, others would require some time to obtain funding, complete design, obtain necessary permits, complete construction, etc. The immediate actions were not distinguished at that time from other short term elements. The short term options addressed pedestrian safety and amenities, taxi and auto pick up and drop off, parking needs, bus terminal facilities for SEAT and Greyhound, and other issues. Wayfinding was not addressed at this early stage. Limited opportunities for transit-oriented development were identified in the short term schemes.

For the longer term, general vision concepts were prepared. The longer term was defined largely by the availability of the entire Water Street Garage site, that is, the time frame when the City would consider demolition of the Water Street Garage and its replacement with new structures that could contain parking, commercial or residential development and possibly public transportation facilities. The long term concepts examined trade-offs between providing more parking to meet low and high projected needs, bus terminal facilities to meet growing service needs and development opportunities. Each concept took a different approach on which use would be closest to Union Station and which would be farther away.

During the process, the consultant team conducted discussions with key stakeholders to better understand needs and preferences. Several options for both the short term and long term time frames were presented and evaluated in a Stakeholder Steering Committee meeting held on June 30, 2009. There was no single simple solution so rather than recommend one option the tradeoffs were displayed and discussed. The goal was to obtain input from the Committee and then to obtain direction from SCCOG on how to proceed to develop the Master Plan. As the Master Plan design process continued, cost estimates and economic impacts and environmental impacts were assessed. Public involvement continued with a public meeting.

The June 30th Stakeholder Steering Committee meeting was effective in stimulating discussion about the potential improvements. Various interests were represented at the meeting and there were strong comments about the alternatives presented. Many suggestions were made at the meeting and it was clear that the stakeholders wanted to redirect the study toward different alternatives. The consultant team, while awaiting additional comments, proceeded to examine the feasibility of some suggestions made at the meeting; i.e. introducing another railroad crossing between the two current crossings, shifting rail platforms northward to allow surface crossing while trains were in the station, relocating or removing the freight siding, etc. The results of these investigations are summarized in Appendix G.

Shortly after the meeting, a request was made that more review time should be provided and that stakeholders should reconvene to discuss options and then provide the input SCCOG was seeking.

SCCOG decided to host and facilitate such a meeting and to have the study stakeholder involvement coordinator present to record the input. A consensus on the short term plan emerged among the stakeholders present at the follow up meeting held on July 28th 2009 and SCCOG directed the consultant team to develop and revise new alternatives for the short term. The direction was to:

Develop alternatives that retain the passenger transportation facilities on the east side of Water Street adjacent to Union Station, incorporating use of the building currently used by Greyhound, and shifting Water Street to the west, if needed, to provide adequate space for planned improvements, and to include an up-and-over pedestrian bridge in the short term alternatives that would enable passengers to cross the tracks when trains are in the station and which could include an additional span to connect to the Water Street Garage. ConnDOT reiterated the latter direction in a letter to the Council of Governments dated September 28, 2009 which stated that it, as a matter of policy, could only support a short term alternative that includes either an up-and-over pedestrian bridge or tunnel across the tracks.

The consultant team followed up on stakeholder suggestions and reported back to SCCOG with its findings. It was determined that the freight track could not be relocated since ConnDOT and Amtrak anticipate using it for the expanded Shore Line East service to New London. It was also determined that a new at-grade rail crossing was not realistic and would not be allowed, and that the platforms could not be shifted far enough northward to allow the State Street crossing gate to remain open when trains are in the station (see Appendix G for more detail on these findings). Work progressed on developing the plan for a bus terminal on the east side of Water Street, incorporating a westward relocation of Water Street and a pedestrian bridge. To prepare for the design work, the consultant team conducted individual stakeholder discussions with key stakeholders, particularly the two bus operators, to address their needs at the bus terminal and to develop an architectural program based on bus operator needs (see Table 7-1).

The team worked through several iterations to develop feasible layouts of bus berths and terminal structures within the confined space on the east side of the street. At the same time, work progressed on examining governance at other intermodal centers with multiple providers and developing a recommendation on the organizational framework for the RITC. The master plan has been drafted based on the directions given by the Council of Governments.

7.2 Overview of the Short Term Master Plan Concept

The consultant team developed a package of short term improvements, designated the “Preferred Alternative,” based on the direction of SCCOG and input from the Stakeholder Steering Committee members and transportation providers, recognizing both fiscal and physical constraints posed by the area currently regarded as the RITC. While developing this package of improvements, the consultant team incorporated designs that reflect best professional judgment working within the parameters and constraints. This package of improvements includes a new combined bus terminal, pedestrian improvements to enhance safety and passenger amenities, wayfinding improvements to facilitate transfers between modes and to and from downtown areas of interest to visitors, and a pedestrian bridge over the tracks that could be extended to the Water Street Garage and/or the Cross Sound Ferry property. This plan also envisions a major State role in owning the RITC. These improvements represent what can be done in the short term, i.e., five years, provided the property owners and involved agencies collaborate to utilize a variety of funding sources to achieve their goals.

Table7-1: Architectural Program for Bus Facilities at RITC

6-Nov-09

DRAFT Greyhound Architectural Program (Building Space Requirements)				
Space	Min. Square Footage (gsf)	Max. Square Footage (gsf)	Formula	Notes
Passenger Areas				
25 Passenger Waiting Area		375 gsf	15 gsf/passenger	Includes circulation area
Passenger Restrooms				Shared with 3647
Men		250gsf		2 stalls/st, 2 handicap stall, 2 urinals, 2 sinks
Women		300 gsf		3 stalls/stalls, 2 handicap stall, 2 sinks
Ticket Queuing		50gsf	1.5 gsf per passenger	Assumes existing space is adequate (5'x10')
Vending		60 gsf		Assumes three machines (current provision) - includes circulation area
Administration Areas				
Ticket Counter		60 gsf		5' deep x 10' wide
Office		48 gsf		8' deep x 6' wide
Maintenance/Storage Area		48 gsf		8' x 6' closet
Baggage and Freight Room		260 gsf	2/3 of seating space	
Subtotal		1,481 gsf (MAX)		

DRAFT SEAT Architectural Program (Building Space Requirements)				
Space	Min. Gross Square Footage (gsf)	Max. Gross Square Footage (gsf)	Formula	Notes
Passenger Areas				
50 - 100 Passenger Waiting Area	500 gsf	1,000gsf	10 gsf/passenger	Includes circulation area
Passenger Restrooms				Shared with Greyhound
Men		250gsf		2 stalls/st, 2 handicap stall, 2 urinals, 2 sinks
Women		300 gsf		3 stalls/stalls, 2 handicap stall, 2 sinks
Ticket Queuing	90 gsf	150 gsf	1.5 gsf per passenger	Assumes 6 passenger min., 12 passengers max.
Vending		60 gsf		Assumes three machines. Includes circulation area.
Public Pay Phones		9 gsf	1.5 gsf per phone	Assumes two pay phones. Includes circulation area.
Luggage Lockers	50 gsf	200 gsf	2 gsf per locker	Assumes 25 - 50 percent use. Does not include circulation.
Administration Areas				
Ticket Counter		60 gsf		5' deep x 10' wide
Office		100 gsf		10' deep X 10' wide
Maintenance/Storage Area		48 gsf		8' x 6' closet
Security Room		48 gsf		8'X6'. Desk, chair & computer monitor
Employee Areas				
Driver Break Room		360 gsf		15'X25'. Assumes 5'X3' table, chairs, refrigerator, microwave, sink, and counter. Includes circulation.
Driver Lockers (In breakroom)		18 gsf	1 locker per driver	Assumes 1' wide X 2' deep. Does not include circulation (provided in break room calculation
Driver Restrooms:				
Men		64 gsf		8'X8'
Women		64 gsf		8'X8'
Subtotal:	1,830 gsf (MIN)	2,470 gsf (MAX)		

Grand Total (Greyhound & SEAT Building Space Requirements:	2,731 gsf (MIN)	3,171 gsf (MAX)

Elements of the Master Plan fall into the following categories:

- Physical Improvements
- Costs and Financing
- Environmental Considerations
- Management, Governance and Operations

Physical improvements are described in this chapter. Succeeding chapters discuss the other three elements of the plan.

The plan achieves a number of the study objectives but does have some drawbacks. A subsequent section discusses the consultant team's remaining concerns about the design and discusses alternatives.

Appendix G includes documentation of the investigations conducted concerning several suggestions that were presented at the June Stakeholder Steering Committee meeting.

7.3 Physical Improvements in the Preferred Alternative

The major physical elements of the Preferred Alternative for the short term include the following:

- Transportation Facilities on the East Side of Water Street
- Optional Pedestrian Bridge Extensions
- Taxi and Pick-up/Drop-off Areas
- Pedestrian Improvements
- Wayfinding
- Use of Union Station

The physical improvements achieve a number of the study objectives; however some drawbacks are identified in Section 7.4.

7.3.1. Transportation Facilities on the East Side of Water Street

Following the directions of SCCOG and the Stakeholder Steering Committee, the consultant team developed alternative hand-sketched schemes for keeping the bus facilities on the east side of Water Street in proximity to the other transportation modes; these schemes were designed to accommodate a pedestrian bridge that would cross the tracks and potentially link with the Water Street Garage and ferry terminal. Greyhound, SEAT, and SCCOG reviewed several options and selected one of the schemes which subsequently was further refined. To validate the scheme as workable, digitized maps were prepared, bus turning movements were checked using the AutoTurn software, and draft floor plans were prepared for the expanded terminal building. Note that the floor plans were not to develop a final building design but to make sure that it was feasible to address the architectural program. Refinements to the design were made as needed. A context diagram, site plan and conceptual floor plan for the preferred alternative are shown in Figure 7-1through Figure 7-3 and 3-D visualizations are shown in Figures 7-4 through Figure 7-7.

The site plan of the combined Greyhound and SEAT terminal focuses on several major elements of the RITC, including the bus terminal facilities and berths on the east side of a relocated Water Street and an up-and-over pedestrian bridge which would cross over the railroad tracks between the southbound and northbound platforms and, optionally, over Water Street to the Water Street Garage and over the freight

track and parking area to the Cross Sound Ferry property. The pedestrian improvement concepts are not shown on this site plan. Those elements of the plan are shown in separate drawings (Figure 7-10 through Figure 7-14). The following describes the major elements.

- Relocation of Water Street - Relocation of Water Street westward was necessary to accommodate the bus facilities. It should be noted that travel lanes would also be reduced to 11 feet in width although the design allows for an extra foot for the curbside lanes. The existing parking area and landscaping on the parcels in front of the Water Street Garage are affected but the relocation has been designed to have minimal impact on the Parade (modifying only the portion of the Parade project north of Atlantic Street), on the Julian property, and on the garage access and egress (preserving the center entrance/exit and the primary exits at the north end of the Garage). The circulation pattern to access the garage is somewhat affected as is the crosswalk from the southeastern exit from the garage (closest to Union Station). The site plan shows a potential new location for the impacted crosswalk. The relocation of Water Street and narrowing of Water Street travel lanes will allow a new eight foot wide sidewalk on the east side of Water Street to extend from Governor Winthrop Boulevard south to the current SEAT bus stop. The sidewalk width could expand to as much as 15 feet south of the existing bus stop. (The sidewalk and a proposed extension farther north are not shown on these drawings, but are discussed in the section on pedestrian improvements).

- Traffic and Parking Considerations - A 500-foot right lane on the Water Street approach to Governor Winthrop Boulevard was preserved to be used as a straight and right turn lane as it is now. About 27 parking spaces for short term parking and drop off on the west side of Water Street in front of the Water Street Garage where there are currently 24 spaces and an unused drive-thru bank.

- Expanded Shore Line East Service- ConnDOT is currently in discussions with Amtrak for expanded Shore Line East (SLE) service to New London. Besides access to parking and the existing waiting area, SLE will need access to a platform. Amtrak will require that SLE trains utilize Track 6 (i.e. the freight track) for passenger boarding and alighting. The ConnDOT Office of Rail is currently looking at short term modifications to the Track 2 (northbound) platform to access SLE trains on Track 6. While ConnDOT has stated that it is too early to investigate the possibility of building a future high-level platform on the water side of Track 6, it envisions a potential future platform in this location on the outside of the curved portion of Track 6 (to lessen train-to-platform gap issues) since it would be more functional for passenger service and SLE train positioning.

- Pedestrian Bridge - The up-and-over pedestrian bridge incorporated into the expanded bus facility is the minimum segment required to accommodate rail passengers. Extensions to connect to the Water Street Garage and ferry facilities are described in the next section. The minimum pedestrian bridge described here is a preliminary concept design that includes elevators and stairs on the “northbound platform” which would serve passengers using trains on Track 2 and the freight siding (which is to be used for Shore Line East once the platform is widened), and within the potential future building expansion north of the existing Greyhound building and adjacent to the “southbound platform”. The vertical element on the southbound platform is incorporated into the new bus terminal structure to be more space-efficient and to possibly allow for indoor connections.

Figure 7-1: Plan for Combined Bus Terminal in the Preferred Alternative

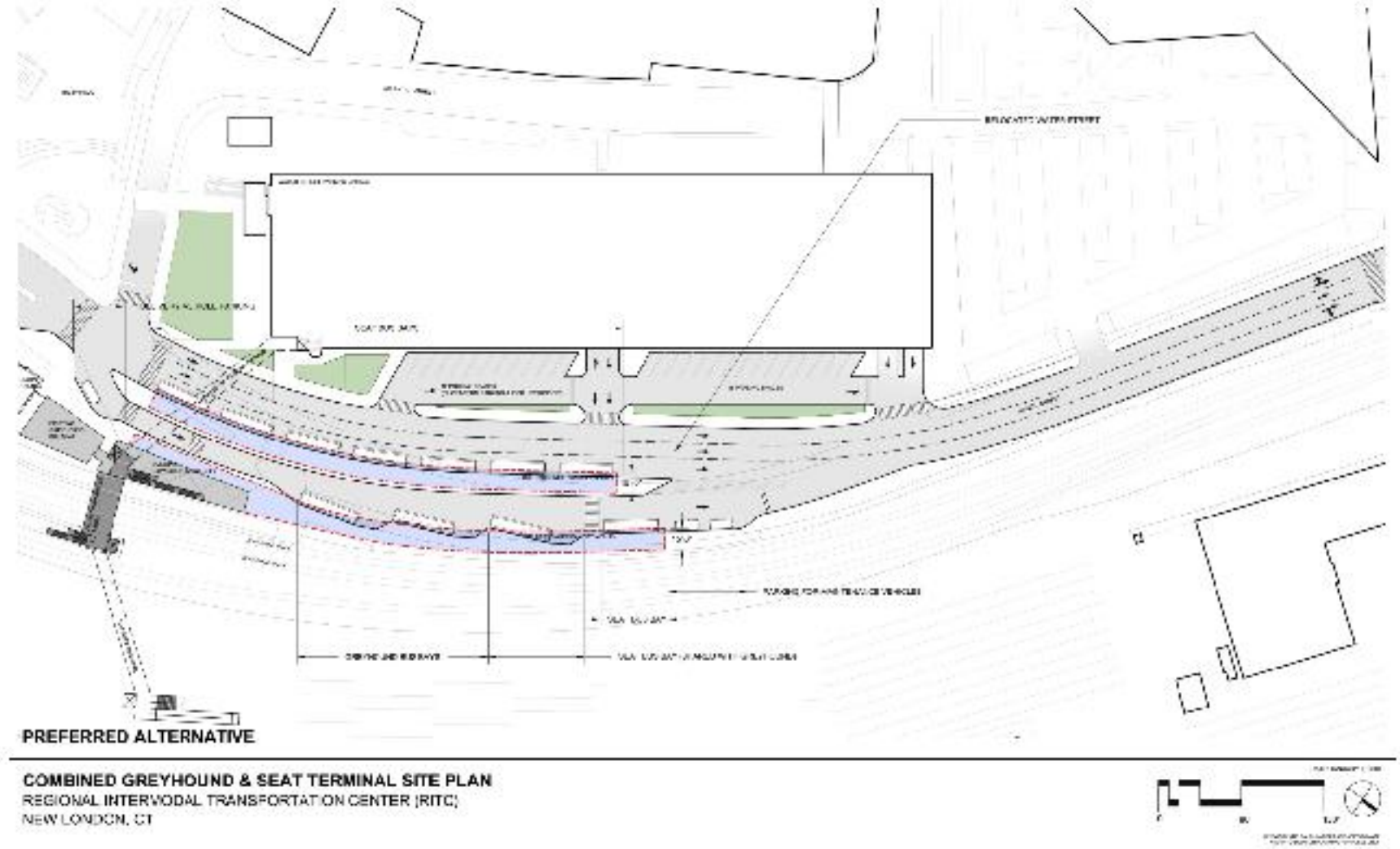


Figure 7-2: Context of Bus Terminal Plan in the Preferred Alternative

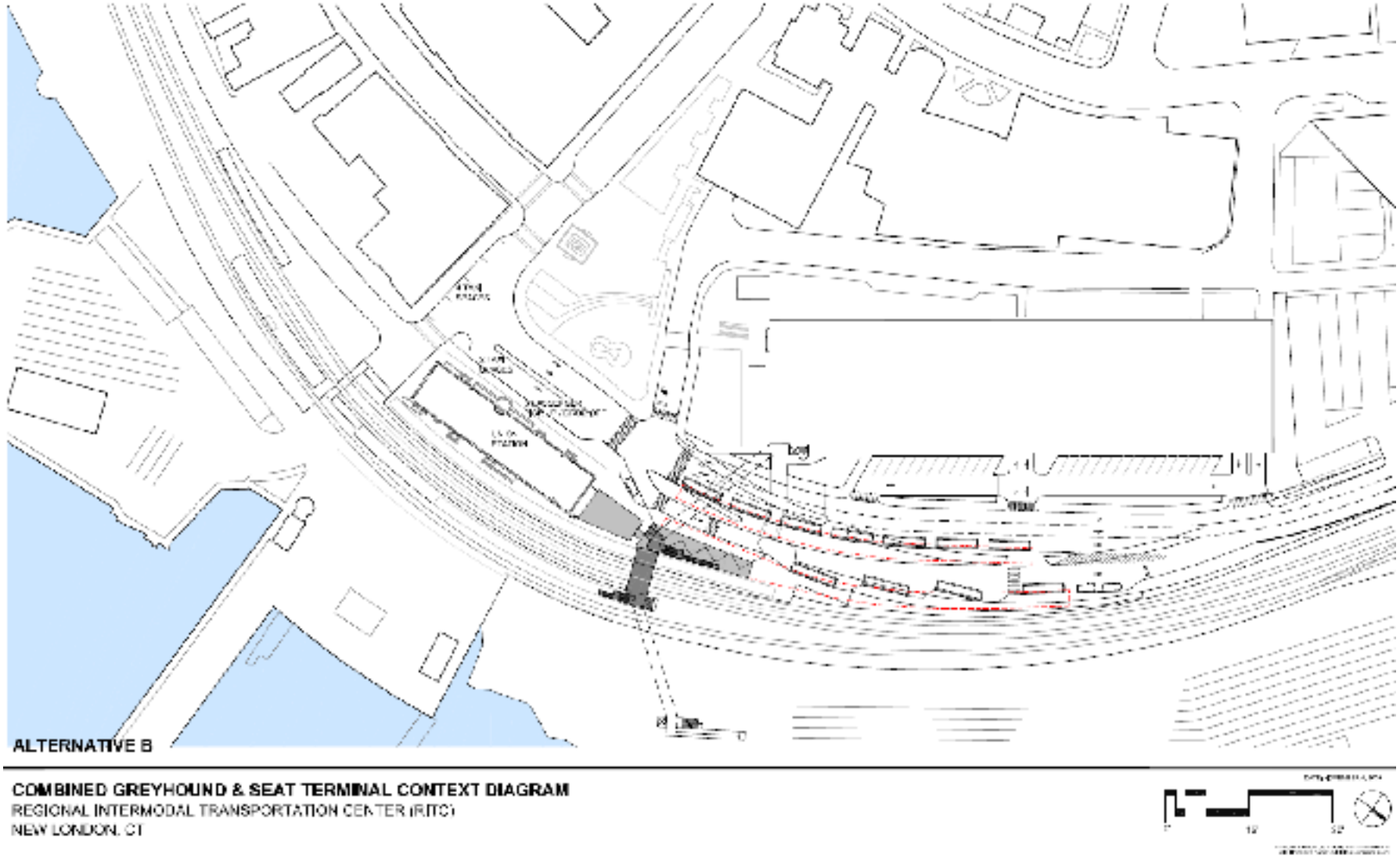


Figure 7-3: Example of Floor Plan for Combined Bus Terminal in the Preferred Alternative

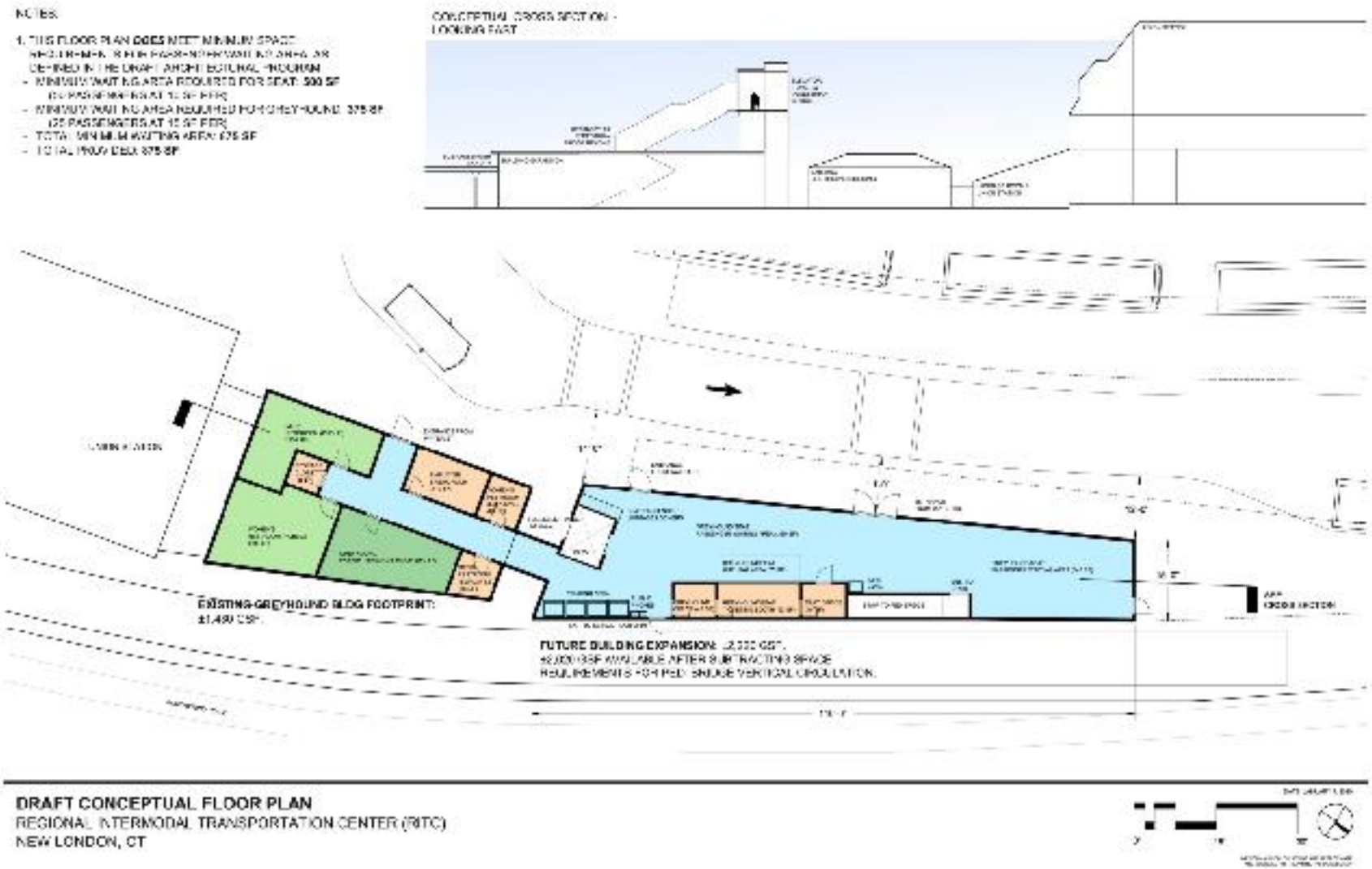


Figure 7-4: Preferred Alternative with Center Section of Pedestrian Bridge
View from the Parade

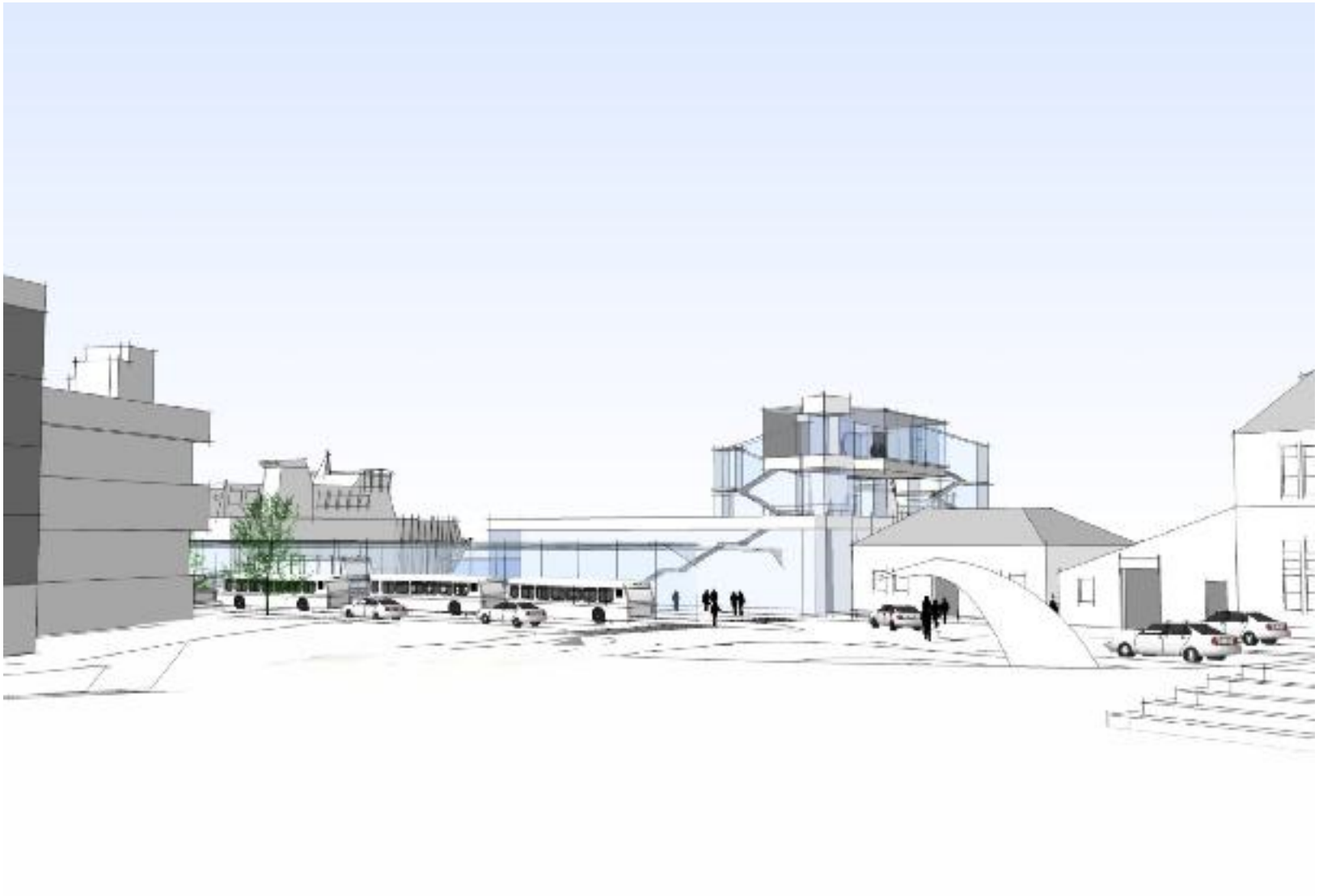


Figure 7-5: Preferred Alternative with Center Section of Pedestrian Bridge
View from Above Water Street



Figure 7-6: Preferred Alternative with Full Pedestrian Bridge Including Extensions
View from the Parade

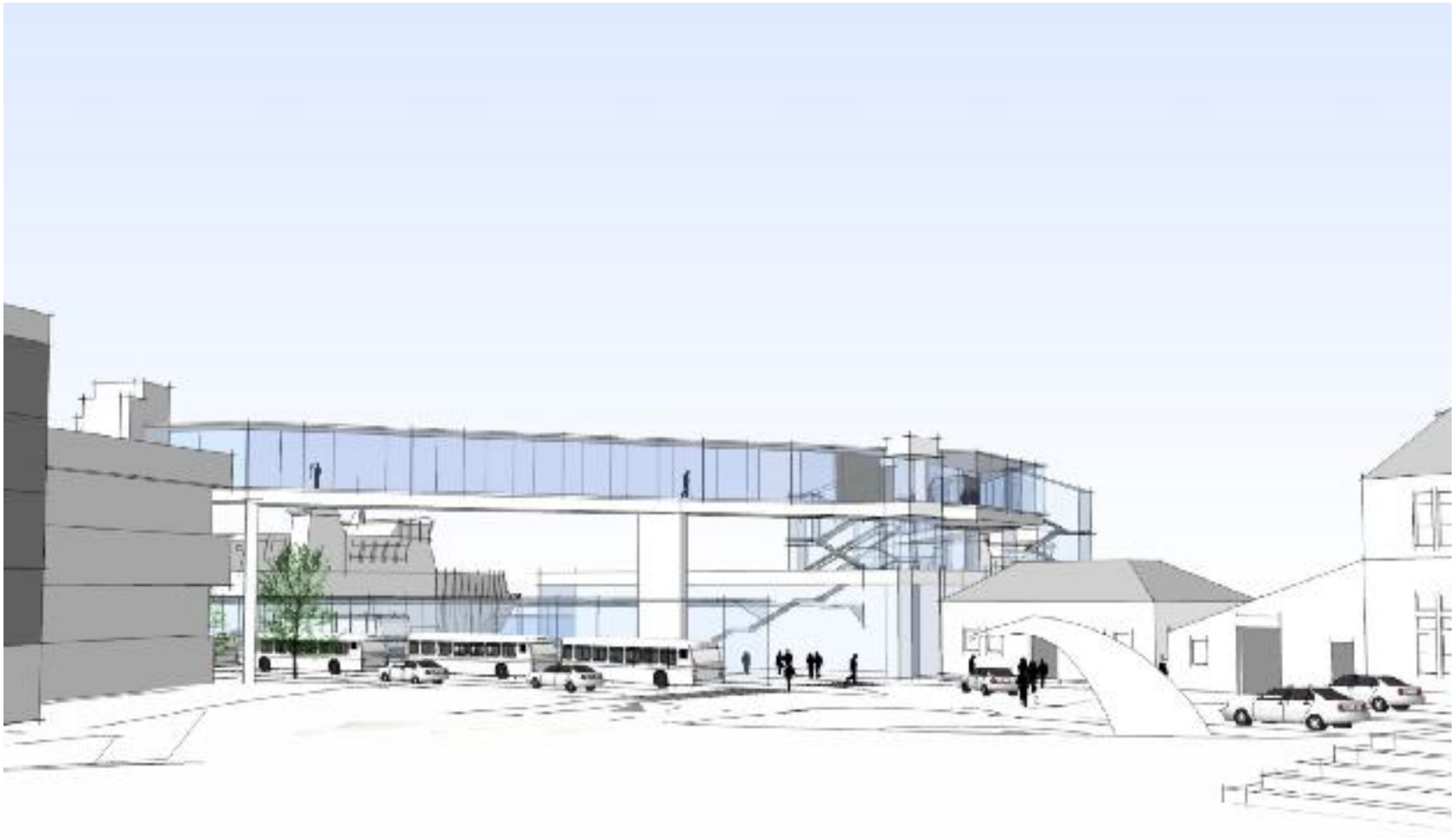


Figure 7-7: Preferred Alternative with Full Pedestrian Bridge Including Extensions
View from above Water Street



- Northbound Rail Platform Extension – The northbound high-level platform needs to be extended 30 - 40 feet to accommodate vertical circulation for the pedestrian bridge. The railing on the east side of this platform needs to be removed and the platform widened to serve Shore Line East trains using the third "freight" track.

- Bus Operations - Given the overall space constraints, the plan does not provide independent movement at most of the SEAT bays (just at the shared sawtooth bay); this was a desired but not required feature for SEAT. However 7 nose-to-tail bus berths for 40-foot transit buses can be provided on Water Street along a passenger waiting island which would be 15-feet wide and would include a canopy. SEAT could use additional bays along the rail platform sidewalk area including one dedicated SEAT bay and one sawtooth bay shared with Greyhound. Greyhound would have two dedicated sawtooth bays. The plan provides for one Greyhound freight pick-up/drop-off space near the existing Greyhound building as requested and some space at the north end of the bus aisle for SEAT bus maintenance vehicles.

- Bus Passenger Terminal Building - The space that can be allocated to a new addition to the Greyhound building to provide a passenger waiting area with views of the bus bays is limited by the need to provide for adequate pedestrian circulation in the area. Two alternatives for the addition were developed and considered. The alternative (originally called Alternative B and now referred to as the Preferred Alternative) that matches the architectural program better has been described below. Description of the other alternative considered is included in Appendix H.

  The Preferred Alternative proposes a building addition of 2,220 GSF which provides 2,020 GSF in usable space after subtracting space requirements for the pedestrian bridge vertical circulation. The result is a passenger waiting area of 875 SF which meets the minimum requirements of the architectural program, allowing for 25 Greyhound passengers and 50 SEAT passengers. The remainder of the interior houses a joint Greyhound/SEAT ticketing/information booth/counter and individual offices for each operator, space for the elevator and stairs to the pedestrian bridge, luggage lockers, vending area, public phones, a queuing area for the ticket counter and circulation space. The existing Greyhound building would be used to house passenger restrooms, a SEAT driver break room and restrooms, a SEAT storage closet and a Greyhound freight room, as well as circulation space. The two buildings would be connected by a corridor using the existing doorway on the north wall of the Greyhound building.

  To achieve greater curb space, this alternative shifts the bus bays along the sidewalk farther north. While this increases the distance Greyhound passengers have to walk by approximately 60 feet, it enables the straight curb line to extend farther north and the building addition to be extended and continue a straight line façade. The sidewalk provided in front of the building addition is 11 feet wide at its narrowest point but expands to 12 feet and 14 feet and the north and south ends of the building addition, due to the curvature of the busway.

  Compared to the other alternative, the Preferred Alternative allows for a larger building addition and thus provides the minimum waiting space required by to the architectural program. It also allows for a broader sidewalk and a façade that is straight rather than notched as in the other alternative; however the angle is even more askew from the Union Station façade. In addition, extending the building farther north adds another 30' to the barrier along the southbound train platform.

A possible interior floor plan is illustrated in Figure 7-3. The purpose of the floor plan is to document that the Master Plan concept is feasible; it is not intended to illustrate a final design for the terminal, which is beyond the scope of the master plan. The following caveats related to the floor plan should be noted:

- Final terminal design and floor plan should be developed subsequent to this master plan and might yield an improved arrangement of space.
- The draft architectural program was developed to begin this spatial analysis and uses gross level assumptions. It is purely conceptual and intended for planning purposes only. Space requirements for building components will need to be refined and conform to all applicable codes.
- The conceptual floor plan is an illustration of what can reasonably fit given the space constraints. The plans attempt to incorporate all program components, but are not a precise representation of the architectural program.

The following highlights the characteristics of the floor plan:

- The option has the stairway to the pedestrian bridge located far from Union Station and the train ticketing area.
- The option has elevator doors to the interior and exterior.
- The option has a door to the southbound rail platform.
- The freight area is close to the dedicated freight drop off parking but relatively far from the Greyhound bays.
- Stringing transportation uses in two distinct building volumes necessitates a long corridor with multiple doors. Several notable consequences are:
    - There will be a lot of space dedicated to passenger circulation.
    - Wayfinding will be complicated.
    - Many spaces within the terminal will be unobserved by ticketing agents. This could create security issues.
    - Security/Surveillance – The option has good surveillance of the waiting areas and allows the customer service personnel to see the bus bays through the large glass wall. There is no good surveillance of the restroom corridor and cameras would be needed to ensure security.
    - The floor plan has a pinch point on the sidewalk near the elevator and crosswalk (width is only 11-14 feet).

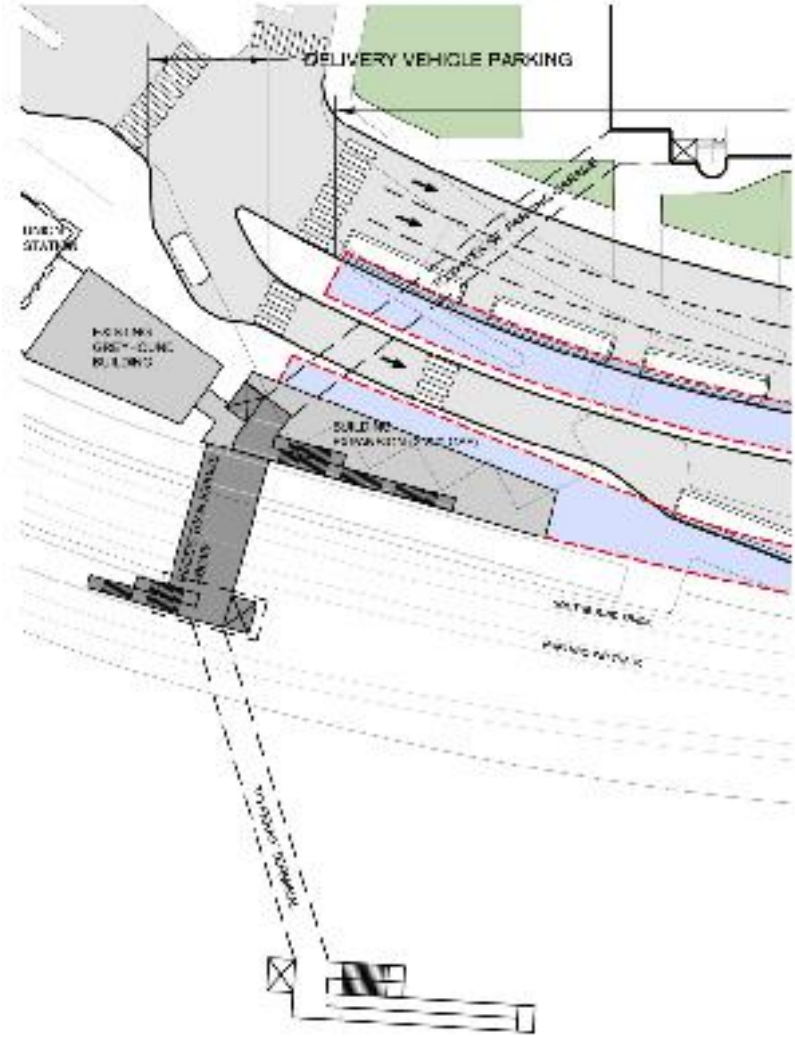
In summary, the Preferred Alternative's bus terminal has the following characteristics:

- It maintains a bus terminal on the east side of Water Street
- It requires relocated Water Street onto City-owned property in front of the Water Street Garage in order to provide the necessary space on the east side of the street
- It provides expanded capacity for buses
- It includes a new bus terminal building near bus stops as an addition to the current Greyhound building to provide a large enclosed waiting room with view of buses
- it requires use of currently private property (Union Station)

7.3.2. Optional Pedestrian Bridge Extensions

The up-and-over pedestrian bridge described above and incorporated into the expanded bus facility is the minimum segment required to accommodate rail passengers and considered a pre-requisite element of the short term plan by ConnDOT. Extensions could be included as part of the initial construction, or at a later date, to connect to the Water Street Garage and to connect to the Cross Sound Ferry facilities. These extensions are shown as dashed lines in Figure 7-8. A preliminary concept design for the ferry extension would pass over the City-owned parcel used for ferry parking to the Cross Sound Ferry property. It would include an elevator, stairs and an escalator at the site of a possible future high-speed ferry terminal to be built by Cross Sound Ferry. The extension to the Water Street garage would not include any new vertical circulation elements as vertical circulation in the Water Street Garage would utilize the existing stairway at the southeastern corner of the Garage and a restored elevator in the adjacent location or the new elevator recently installed.

Figure 7-8: Optional Pedestrian Bridge Extensions



7.3.3. Taxi, Auto Pick-up/Drop-off and Bicycles

Taxi and automobile pick-up and drop-off are critically important access modes for the train service at Union Station and are expected to grow in importance with the increased presence of Shore Line East at

the station. However, the space available for taxi and automobile pick-up and drop-off at the rail station and bus terminal is already constrained by the limited space on Water Street and strong competition for multiple uses. These uses include the existing SEAT bus stop, the Greyhound bus bays, Amtrak official parking, on-street parking and use of the curbside lane for travel lanes and parking garage entrances and exits. The expansion of bus facilities on the east side of Water Street does not reduce the curb space for such uses compared to the existing case but it does not expand it either. (Taxi and automobile pick-up and drop-off in the Greyhound bus bays occurred during Parade construction but are not considered an existing legal use.)

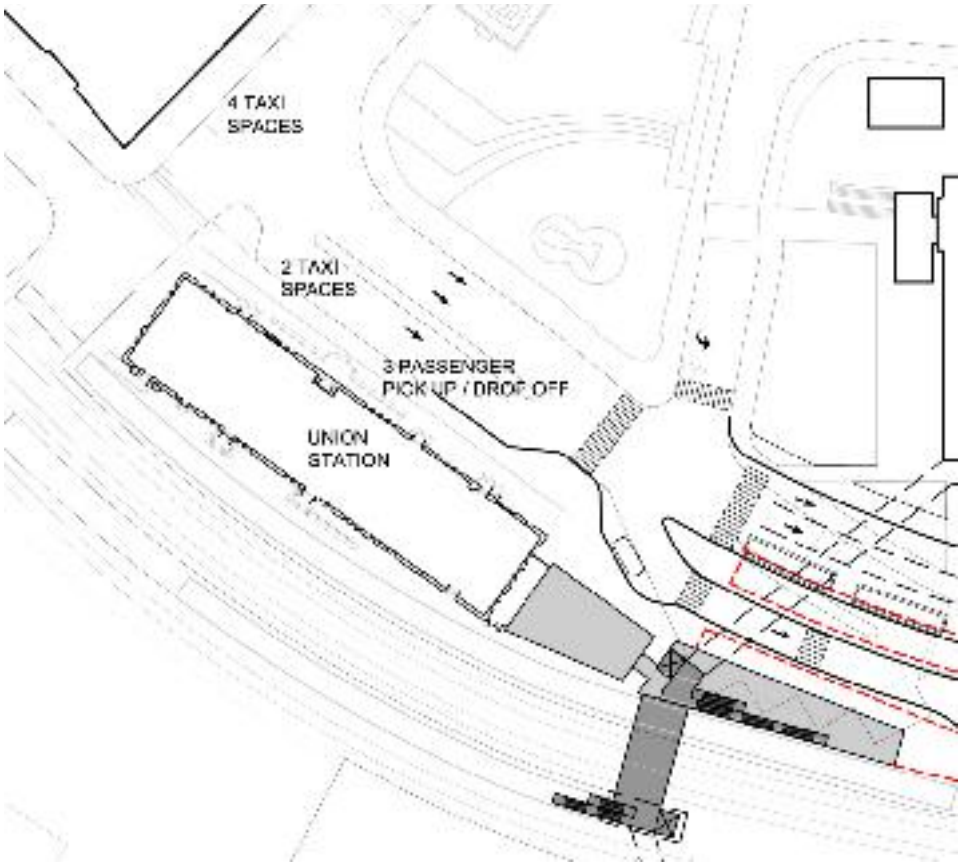
The proposed short term plan, shown in Figure 7-9, envisions retaining the existing taxi and automobile pick-up and drop-off in front of Union Station. The use of the first block of State Street (between South Water Street and Bank Street) is proposed as an additional taxi queue area. The most logical way to use this space would be to have taxis pick-up passengers in two spaces located at the south end of the curb line in front of Union Station and to have taxis queue on the first block of State Street until they can pull into these spaces. It should be noted that there are some retail/restaurant uses on the first block of State Street and there may be opposition to this suggestion. However, the current one way street pattern makes other options impractical. The recommendation affects only a few parking spaces, while it would add substantially to the taxi space available. It should also be noted that the taxi queuing space is envisioned to be limited to that necessary for the transportation functions at the RITC (connections with the train and bus service) and it is recommended that other taxi stands be located or continue to be used for general taxi needs in downtown New London.

It is recommended that the remainder of the spaces in front of Union Station should be designed to accommodate drop-off of passengers from automobiles and taxis but not pick-up of passengers (except for pick-up of disabled individuals). This is to avoid having vehicles sitting and waiting for trains to arrive. For taxis, the pick-up function is best handled in an orderly queue starting from the first two spaces at the southern end of the space front of Union Station and continuing on the first block of State Street. Taxis dropping off passengers would not pick up new passengers if there is a taxi queue; they would have to circle around and come back down State Street to be last in the queue. We recognize that this is a different mode of operation than the taxis are currently accustomed to and there would need to be discussion among the taxi operators to adjust their operating practice.

For automobile pick-up, the space in front of the Water Street Garage, noted in the figures as short-term parking, would be used. These spaces can be designated for various short term parking needs and can easily accommodate the vehicles waiting for arriving trains. Approximately 27 spaces can be provided there.

Provisions for non-motorized access, such as bicycles, should be also included in the final design of the RITC. Though space is limited, bike racks could be incorporated at one or more locations close to the rail station. Bike racks directly in front of the rail or bus station buildings would not be desirable due to the limited space and potential conflicts with pickup and drop-off activity and with bus passengers. Instead, bike racks could be located on the City Pier side of the tracks (near the platform to be used by Shore Line East) or just south of State Street where Amtrak vehicles now park (assuming Amtrak can use spaces in front of the Water Street Garage). Bike racks could also be located within or in front of the Water Street Garage, especially if the pedestrian bridge extends to the garage. Another possible, more secure, location would be inside the former baggage shed portion of Union Station itself. This location could also used in conjunction with a possible bike rental concession.

Figure 7-9: Taxi and Automobile Pickup and Drop-off Area



7.3.4. Pedestrian Improvements

Figure 7-10 provides an illustrative plan of all recommended immediate and short term pedestrian improvements. Figure 7-12 through Figure 7-13 are sections drawings at State Street, Water Street and Ferry Street showing the existing conditions and pedestrian improvements at these streets. Figure 7-14 is a phasing diagram that identifies immediate and short term improvements by location.

Immediate Pedestrian Improvements

Focus for immediate pedestrian improvements in the RITC area are the intersections of Water Street and Governor Winthrop Boulevard and Water Street and State Street. These two intersections are critical pedestrian and vehicular linkages to the waterfront, ferry services, City Pier and the Waterfront Park, and Union Station. The intersections need more clearly marked pedestrian zones at their rail crossings, pedestrian scale lighting, wider sidewalks and crosswalks.

Another focus for immediate pedestrian improvements is along the waterfront. Recommendations include developing a new waterfront pathway, with pedestrian scale lighting and guiding bollards, starting at City Pier and branching northerly in two directions - one path coursing along the back edge of the site adjacent to the railroad and the other following the water's edge to the Block Island Ferry boarding area. The

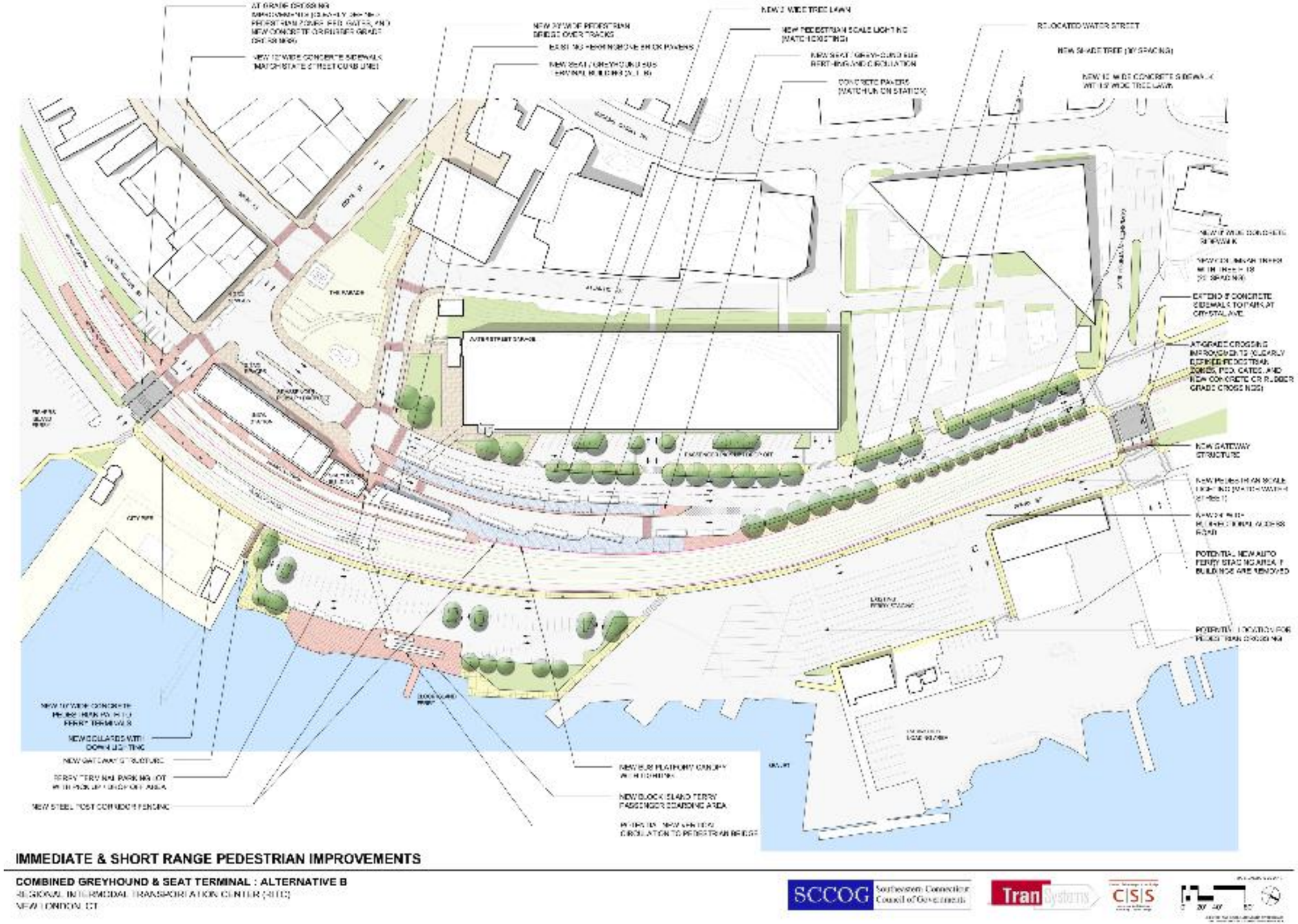
pathways would ultimately connect with Ferry Street and lead to the intersection of Water Street and Governor Winthrop Boulevard. Other immediate improvements include installing steel post rail corridor fencing within the RITC area and two gateway structures to create a sense of arrival at the ferry area. *Note that the City has erected steel post rail corridor fencing on the west side of the railroad right-of-way during the study period taking into account the consultant team recommendation.*

Other Short Term Pedestrian Improvements

Short term pedestrian improvements are defined as those that can be implemented along with the relocation of Water Street and development of the new Greyhound and SEAT bus berthing area and terminal building on the east side of Water Street, immediately north of the existing Greyhound building. This will create the opportunity to strengthen connections between the intersections of Water Street and Governor Winthrop Boulevard and Water Street and State Street, and between the Water Street Parking Garage and all transportation modes within the RITC district. Key pedestrian improvements along relocated Water Street include installing a new sidewalk on the east side of the street connecting to Governor Winthrop Boulevard lined with columnar trees, a wider sidewalk on the west side of the street with continuous tree lawn and shade trees, and pedestrian scale lighting. It is envisioned that the east side sidewalk would continue about 1,500 feet beyond Governor Winthrop Boulevard to the intersection with Crystal Avenue, the location of an existing pedestrian bridge and small park as well as the link to neighborhoods east of Water Street. Other recommendations include continuing Union Station's paving scheme through the new combined Greyhound and SEAT bus berthing area, which will provide a more uniform station area aesthetic.

The immediate and other short term pedestrian improvements will create a higher-quality pedestrian environment and will better tie together transportation modes. Together, they will create and more attractive RITC for residents, tourists, and transit and ferry patrons.

Figure 7-10: Pedestrian Improvements in the Preferred Alternative



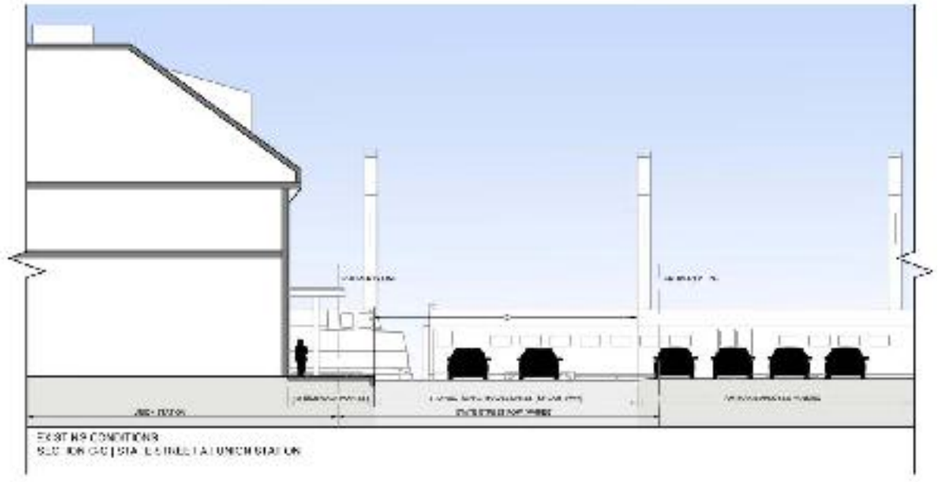
IMMEDIATE & SHORT RANGE PEDESTRIAN IMPROVEMENTS

COMBINED GREYHOUND & SEAT TERMINAL : ALTERNATIVE B

REGIONAL INTERMODAL TRANSPORTATION CENTER (RITC)

NEW LONDON, CT

Figure 7-12: Specific Pedestrian Improvements – Section Views along State Street at Union Station



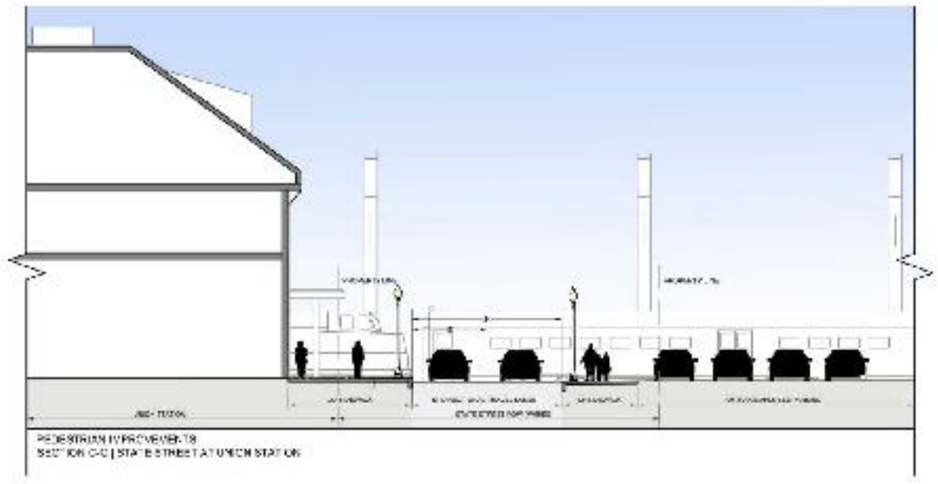
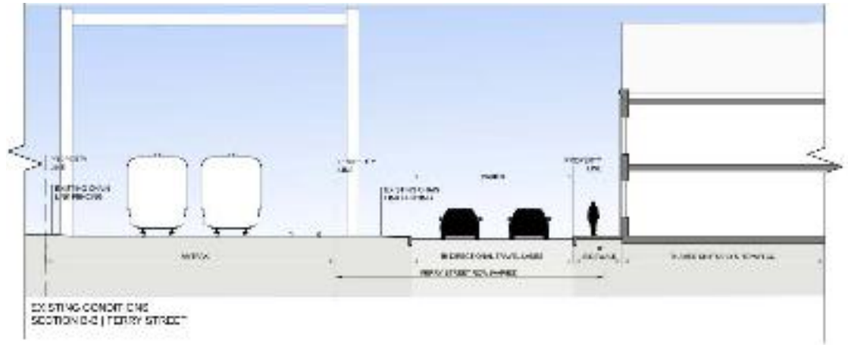


Figure 7-11: Specific Pedestrian Improvements – Section Views Along Ferry Street



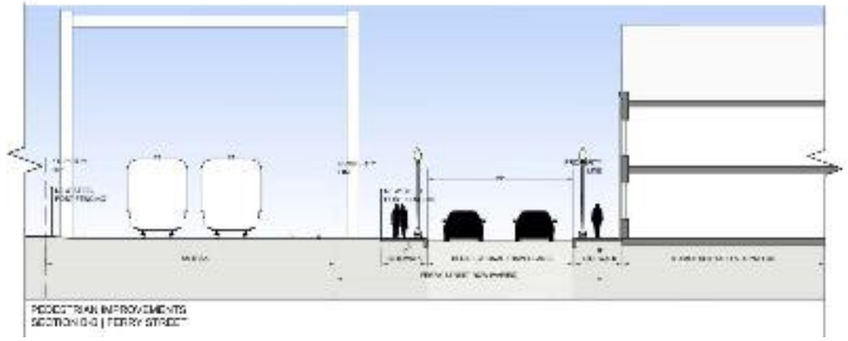
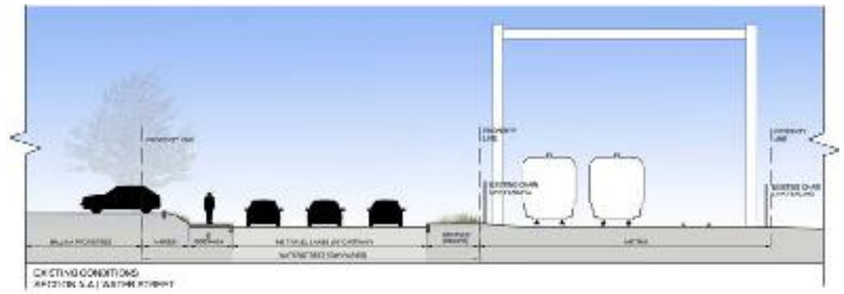


Figure 7-13: Specific Pedestrian Improvements – Section Views Along Water Street



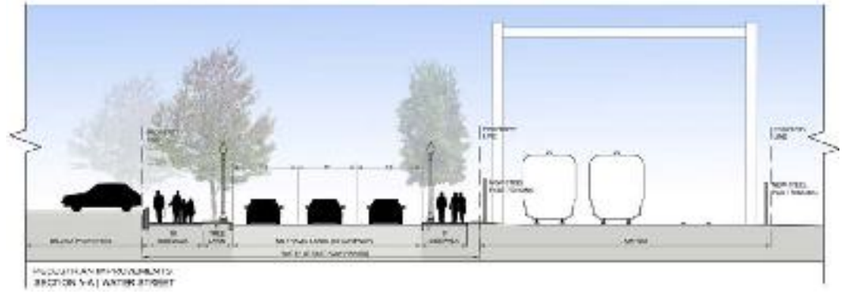
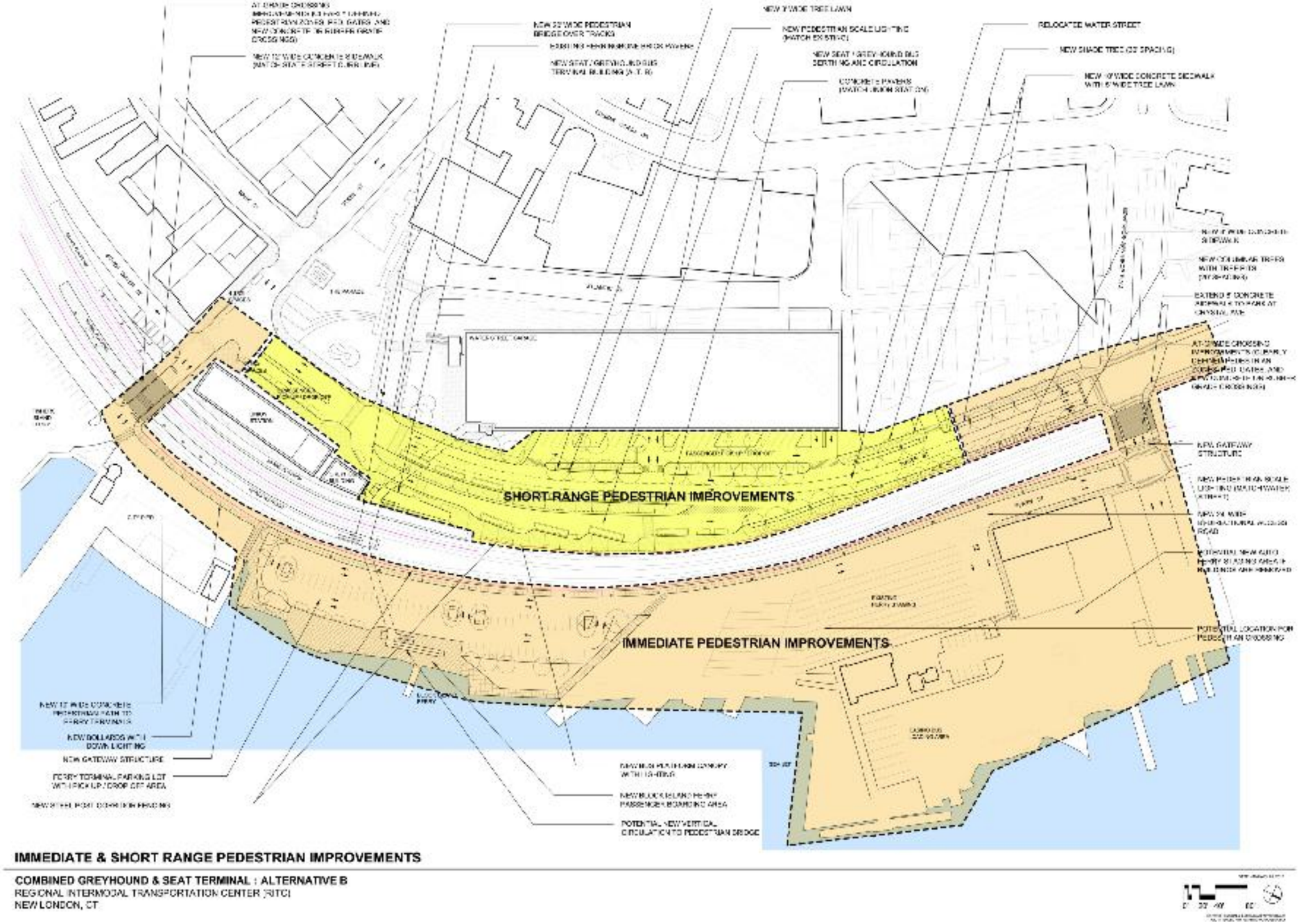


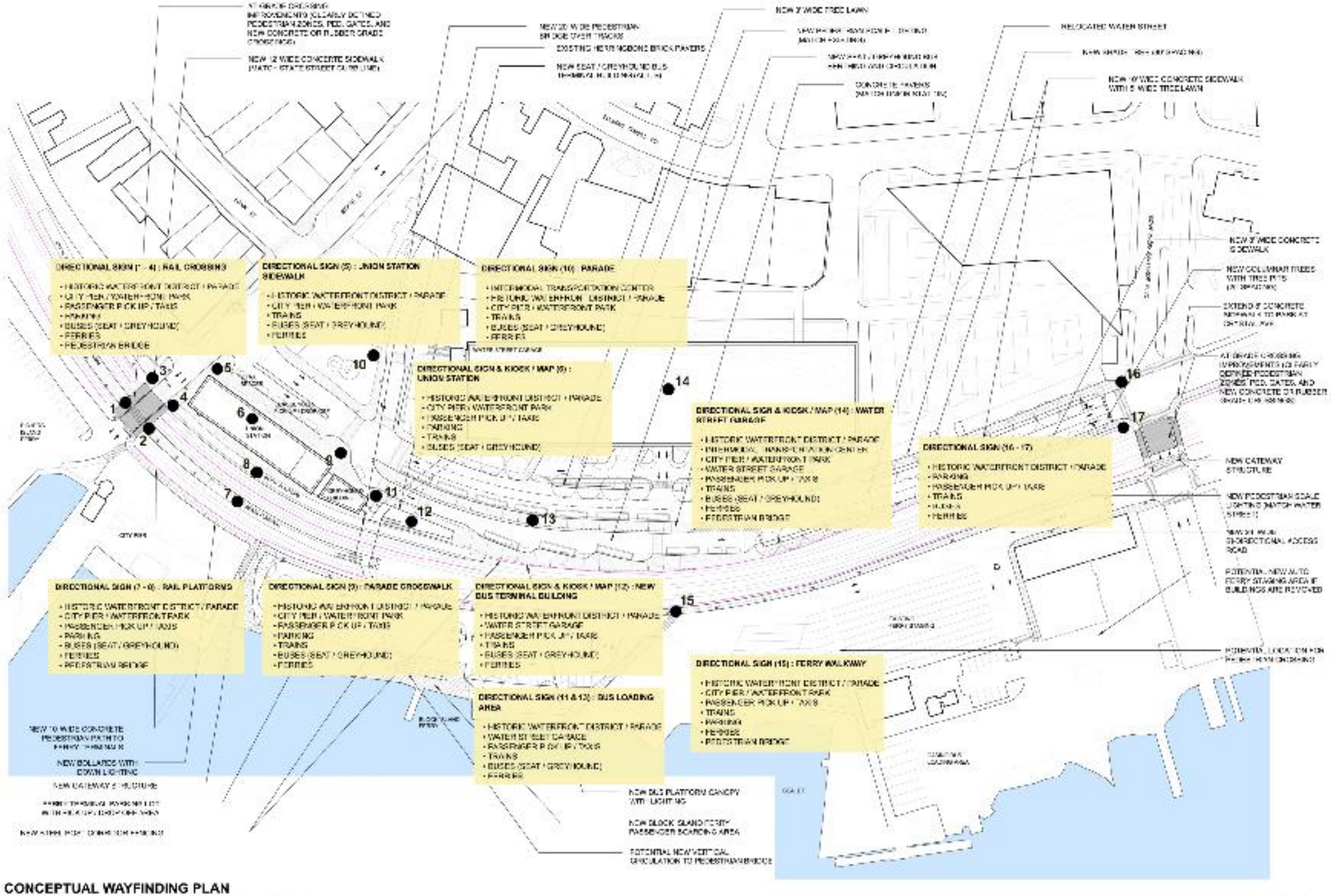
Figure 7-14: Immediate vs. Short Term Pedestrian Improvements



IMMEDIATE & SHORT RANGE PEDESTRIAN IMPROVEMENTS

COMBINED GREYHOUND & SEAT TERMINAL : ALTERNATIVE B
REGIONAL INTERMODAL TRANSPORTATION CENTER (RITC)
NEW LONDON, CT

Figure 7-15: Wayfinding Signage Plan



CONCEPTUAL WAYFINDING PLAN

COMBINED GREYHOUND & SEAT TERMINAL : ALTERNATIVE B
REGIONAL INTERMODAL TRANSPORTATION CENTER (RITC)
NEW LONDON, CT

7.3.5. Wayfinding

A wayfinding and signage program can help to provide a consistent identity to the RITC district, guide RITC users between transportation modes, and provide visitors with directions to and from important destinations and attractions within and outside the area.

The final wayfinding and signage program will require a more detailed design, and initiating that design is one of the recommendations of this plan. The following key recommendations should be included in the final program:

- Wayfinding signage should be placed at strategic locations in and around the RITC.
- New London tourism will benefit from a wayfinding program. The program should include other downtown destinations in addition to the RITC district.
- The program should include a variety of signage types:
  - Directional signs announcing the RITC and pointing the way at major intersections and along principal pedestrian routes.
  - Locus maps showing the entire area, both the Historic Waterfront District and RITC with transportation modes and important buildings labeled, and a "You Are Here" symbol.
  - Directional signs to specific buildings, uses and/or attractions. These signs should be located in the Historic Waterfront District and within the RITC.

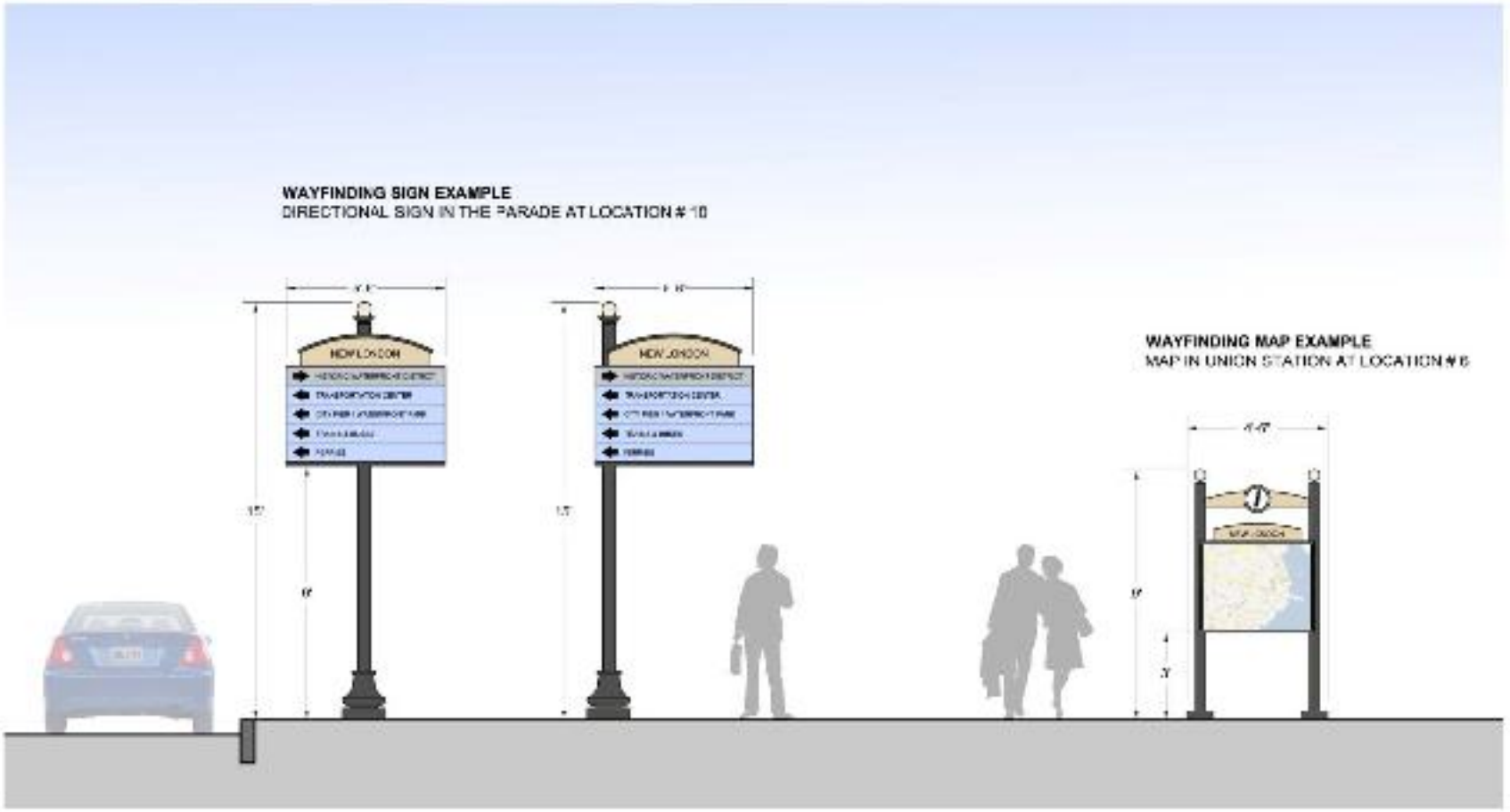
At a minimum, RITC sign content should include directions to the following:

- Historic Waterfront District
- City Pier/Waterfront Park
- Passenger pick up
- Taxis
- Major parking facilities
- Trains
- Buses (SEAT/Greyhound)
- Ferries
- Pedestrian Bridge

Figure 7-15 identifies the major decision points within the RITC. It is recommended that directional wayfinding signage be installed at each of the major decision points to help guide transit patrons and visitors to the various transportation modes and other destinations within the RITC. Suggested sign content at each of the wayfinding locations is also indicated.

The style of the signs could take a variety of forms, but one that acknowledges the character of the district would be distinctive and appropriate. The program can then be implemented as part of the implementation of other public improvements. An example of a sign that could be located at location 10 is shown in Figure 7-16.

Figure 7-16: Wayfinding Signage Example



7.3.6. Use of Union Station

The Master Plan has identified Union Station as the centerpiece of the existing and future RITC. It has identified how Union Station property can be used to create an enhanced intermodal center. It continues the current use of the Union Station lobby for rail passenger facilities and the use of the Greyhound building for bus facilities. The plan proposes that outdoor space included in the property be used for expansion of bus facilities, the pedestrian bridge and passenger pickup and drop-off space. Incorporation of these transportation facilities, however, leaves some space inside the building available for other uses.

The TOD market analysis conducted in this study addressed the potential demand for residential, office and retail development within walking distance of the RITC. The analysis considered the potential for development over a ten year period within ½ mile around Union Station. Union Station represents just one key resource that could be positioned to serve some of this demand. Although residential demand was found to have the greatest potential in New London, the Union Station building is more suited to office development with possible first floor retail uses.

To date, however, the Union Station property has not been redeveloped to its full potential. The interior space in the Union Station building, both on the ground floor and the upper floors, has been underutilized. In the past, the upper floors were occupied office space and there are still some limited office uses there today. A restaurant occupied the second floor and some first floor space in the past. However, even before the recent economic downturn, much of this space remained vacant.

Given the recently announced departure of Pfizer from Fort Trumbull and the overall economic downturn combined with the previously weak position of New London as an office market, the market for office space is severely depressed in the short term. Union Station faces competition from other downtown building spaces and the newly vacant first class office space at Fort Trumbull. However, if we look several years into the future, one can envision Union Station being better positioned as a result of proposed transportation and other downtown improvements, improving economic activity nationally, and a series of policy decisions designed to promote downtown New London as a transportation center and a site for TOD. It will be critical to take advantage of this time to develop a comprehensive TOD plan for the Historic Waterfront District, including Union Station, and to make policy decisions that support that plan, while also keeping options open to take advantage of arising opportunities.

7.4 Design Concerns Regarding the Preferred Alternative

In summary, the bus facility scheme was developed in response to the directions given by SCCOG and the Stakeholder Steering Committee (namely all passenger transportation facilities on the east side of Water Street close to Union Station and a pedestrian bridge over the railroad tracks). These directions pose a number of constraints on the design, and it is noted that the plan still has a number of drawbacks (with either alternative) that need to be well understood.

- Both alternatives (the alternative presented in the report as well as the alternative described in Appendix H) for the bus terminal use connected spaces in two distinct building volumes. Circulation within and between the buildings requires much of the facility's square footage. This raises concerns of efficiency, logical functional relationships, security, and ADA requirements.

- The sidewalk adjacent to the new terminal building will likely be very crowded. Even with the realignment of Water Street, the shifting of buses northward, and introduction of narrower travel lanes, the sidewalk adjacent to the new terminal is still a pinch point. For example, the 10-11 foot sidewalk provided in front of the Greyhound/SEAT building addition may not be adequate as both a general purpose sidewalk and circulation space for bus passengers
- The building addition extends the barrier created by the existing Greyhound building for those pedestrians who wish to pass between the north end of the rail platform and the street, the Parade and the garage (assuming they do not wish to go to or through Union Station). Allowing pedestrians to pass through the narrow building addition would complicate circulation within the building and would reduce its capacity as a waiting room.
- Greyhound buses will at times block the view of the SEAT buses from the passenger terminal waiting area discouraging use of the indoor waiting area.
- SEAT passengers will need to cross the bus aisle to access most bus berths from the terminal.
- While the design incorporates a wider sidewalk that varies between 8 feet and 15 feet on the east side of Water Street (between Governor Winthrop Boulevard and the existing SEAT bus stop), the need to accommodate buses has barred the possibility for a wider east side sidewalk that could accommodate additional pedestrian amenities (including substantial tree lawns that more effectively buffer the pedestrian realm from traffic lanes and bus and train activity).
- The relocation of Water Street would modify some of the Parade project's improvements north of Atlantic Street.
- The introduction of a building addition, vertical circulation towers and continuous bus canopies will have a significant visual impact on historic buildings.
- The bus terminal and canopies along the bus berths as well as the pedestrian bridge will further block views of the waterfront from public areas including the Parade, Water Street and State Street. Cross-section elevation views, context drawings (zoomed-out views) and 3-D visualizations help illustrate the potential impacts. (3-D visualizations of the view impacts were shown in Figures 7-4 through Figure 7-7.)
- Most of the space along both sides of Water Street is devoted to buses and short term parking and would reduce the amount of space devoted to trees and landscaping. Minimal space along Water Street is devoted to visitor amenities or transit oriented development. The visitor to New London arriving by ferry or train is not faced with an inviting, active urban space, but only a series of garage type facilities and a broad expanse of asphalt devoted to automobiles, bus circulation and parking.
- With the exception of the shared sawtooth bay, the SEAT bus bays will not have independent movement.
- The bus aisle for Greyhound buses is adequate, but narrow, and must occasionally be used by private vehicles using the freight drop-off area.
- The primary modes serving rail passengers such as auto pick up and drop off and taxis have not been given expanded space along the east side of Water Street. They are limited to the small existing space immediately in front of Union Station supplemented by the proposed taxi stand expansion on State Street and passenger pick-up space on the west side of Water Street in front of the Water Street Garage, a distance from Union Station.
- The relocation of Water Street reduces the size of the overall Water Street parcel which impacts any future redevelopment of the Water Street Garage and adjacent parcels.

Given these concerns, some alternatives to this Preferred Alternative are discussed in the following section, including a Fallback Minimum Construction Alternative.

7.5 Other Options

7.5.1. "Best Practices" Bus Terminal

The plan that has been developed for the east side of Water Street bus terminal is constrained by the space available even with the costly relocation of Water Street. The consultant team has highlighted a number of drawbacks associated with the location of the bus terminal there along with the necessary vertical circulation for the pedestrian bridge over the tracks. It is the professional opinion of the consultant team that a bus terminal that fully conforms to best practices in bus terminal design, while meeting the program needs articulated by the bus operators, cannot be designed for the east side of Water Street. Best practices would dictate that passenger waiting facilities are of adequate size, have an efficient design and be located proximate to and with a clear view of all bus bays. Pedestrian flows should be separated from bus and vehicular traffic and conflicts between major pedestrian movements should be avoided. Adequate space should be provided for all pedestrian movements and structures should not impede pedestrian flow between buses and to and from other modes. Bus bays should allow independent movement of all buses and bus traffic should be separate from passenger and freight pick-up and drop-off traffic. Finally, the design should be attractive, allowing green space whenever possible, and should complement the adjacent structures and uses.

From the viewpoint of physical feasibility, such a best practices design could be constructed on the west side of Water Street if the Water Street Garage were demolished and a bus terminal were located on the ground level of a new parking structure and/or development project. Such a facility could have adequate room to provide for independent movement of all SEAT buses. There would be adequate space for all the specified functions and the space could be configured in a more optimal way allowing better placement of adequate waiting areas adjacent to the bus loading areas. The bus terminal would be close enough to Union Station to permit easy transfers between the buses and rail services and other modes. If the pedestrian bridge were extended to the reconstructed garage, transfers between bus and rail could be made without crossing Water Street travel lanes. Separating the bus terminal from the vertical circulation elements of the pedestrian bridge will provide better pedestrian flow. Parking would be conveniently located above. Pick-up and drop-off for bus passengers and Greyhound freight could be incorporated into the design. Having the bus terminal on the west side of Water Street would not require (but would not prohibit) the relocation of Water Street and would allow the entire east side of Water Street to be used for taxis and expanded auto pick-up and drop-off associated with Shore Line East service. The east side of Water Street could also be landscaped replacing the proposed bus terminal and canopies with trees and green space and retaining the current connection between the street and the rail platform. In addition, it should be noted that this option relies only on City-owned land. Union Station property currently used by Greyhound could possibly be used to provide several additional parking spaces.

Despite these advantages, this is a costly option considering the need to demolish the Water Street Garage and then rebuild it to supply needed parking. In addition, it would require an interim plan for parking during the construction period. The City of New London advised SCCOG and the consultant team that it was not in a position to consider demolition and reconstruction of the Water Street Garage and that it does not have the funds to pursue this option even it was to obtain some FTA funding for the bus and bus related facilities. SCCOG directed that this option be dropped from further consideration because the City does not support it. Nevertheless, it was agreed that it was important to note that this option would result in a better bus terminal design and offer more space for other functions on the east side of Water Street. This option is reflected in some of the long term alternatives documented in Chapter 6 of this Final Report.

7.5.2. Fallback Minimum Construction Alternative

If the funding cannot be obtained to build a new bus terminal and shift Water Street westward in the short term, there would need to be a fallback plan that can be accomplished at lower cost. There are several possible options and one option has emerged as the Fallback Minimum Construction Alternative.

One option would be improving facilities in place such as providing additional and improved bus shelters and informational signage at the existing SEAT bus stop and renovating the interior of the Greyhound terminal while maintaining the existing Greyhound bus bays. This could be complemented by low cost pedestrian and wayfinding improvements. The renovation of the interior of the existing Greyhound building would require funding from Greyhound which would in turn require a more long term arrangement with the owners of Union Station. The renovation could allow the building to accommodate some waiting SEAT passengers, a SEAT information kiosk and access to the renovated restrooms by SEAT passengers, all without impacting Greyhound operations. The latter would require some SEAT funding as well. The modified building floor plan would be compact with less seating and would be located far from the SEAT bus loading area, but it would avoid some of the other concerns associated with the proposed short term plan.

Another option would be moving some bus terminal functions into the existing Union Station building. This would of course require lease or purchase of space inside Union Station. The Greyhound functions could be moved into the Union Station building while maintaining the current Greyhound bus bays. However, Greyhound prefers to have its ticket counter and freight handling as close to the buses as possible and so may not wish to move. Some or all of SEAT's space requirements. Use of the old baggage shed area would be subject to some reconstruction including addressing the floor level differential between it and the lobby. ADA access would also need to be improved at the station to make access convenient from the bus areas. Enhanced and expanded restrooms would likely be needed. The SEAT boarding area would need to remain in place but the closest bus would be located at least 300 feet from the Union Station main entrance. This would reduce the likelihood of use of the waiting room by SEAT passengers, particularly those who transfer from one bus to another. Due to the limited size and number of windows in Union Station, it would be difficult for passengers to see the arrival of their bus and passenger announcements/displays presumably using ITS technology would be required. Even with such announcements, passengers may be inclined to wait outside in all but the most inclement weather. Due to the long distance between Union Station and the SEAT bus stops, shelters would need to be provided at the bus stops to complement the waiting area in the Station. Due to the need for taxi and auto pick-up and drop-off for Amtrak, Shore Line East and Greyhound, it is not feasible to bring SEAT buses closer to the Station. Given these drawbacks, this option was not recommended.

A third option was developed that combines these ideas, using the Greyhound building for a passenger waiting room and ticketing/information office for both SEAT and Greyhound while using Union Station ground floor space to meet additional space needs. A link between the two buildings is envisioned. This concept forms the basis of the Fallback Minimum Construction Alternative (hereafter called the Fallback Alternative for short) described below. This alternative has been included, at the City's request, to identify an option that could be exercised to meet needs in the short term if the funding cannot be obtained to construct the Preferred Alternative or if there are other reasons not to pursue the Preferred Alternative. Since one primary reason for including it is the lack of funds, it is assumed to exclude the Pedestrian Bridge that is included in the Preferred Alternative; however, if funding can be obtained for the Pedestrian Bridge, it is compatible with the Fallback Alternative. The pedestrian improvements other than the Pedestrian

Bridge would be assumed to be included in the Fallback Alternative although the design would be revised to accommodate the current street configuration.

The Fallback Alternative, like the Preferred Alternative, keeps all the public transportation services on the east side of Water Street. However, it does not involve construction of new bus terminal building and it does not involve the relocation of Water Street or the creation of two parallel set of bus boarding areas. As a result, it cannot provide expanded capacity for buses, though it does accommodate the current needs. It utilizes existing buildings including both the Greyhound Building and Union Station itself for the bus terminal facilities, requiring interior modifications and the construction of a connection between the two buildings. Figure 7-17 shows the configuration of the bus terminal area and Figure 7-18 shows a Conceptual Floor Plan within the existing buildings (for the purposes of a feasibility assessment and not a final design).

The major drawback of the Fallback Plan is the fact that the indoor waiting area would be located considerably farther from the SEAT buses than in the Preferred Alternative. Experience suggests that bus passengers prefer to wait near their buses. Canopies are provided at the bus boarding areas as in the Preferred Alternative. To accommodate winter and other poor weather circumstance, a large bus shelter is incorporated closer to the SEAT buses to address this drawback. However the Floor Plan shows the same indoor waiting area in the Greyhound Building as proposed for the new bus terminal building addition in the Preferred Alternative.

In summary, the Fallback Alternative has the following characteristics:

- It maintains a bus terminal on the east side of Water Street with the current bus capacity
- It does not require relocation of Water Street and preserves the full current Water Street Garage site for future development
- It uses existing buildings with renovation
- Like the Preferred Alternative, it requires use of currently private property
- It offers a smaller indoor waiting area which is farther from the buses than the Preferred Alternative
- It is considerably lower cost than the Preferred Alternative

It should be noted that the Fallback Plan, like the Preferred Plan, envisions use of privately owned property (Union Station property) and that arrangement to purchase or lease the required property would need to be negotiated.

Figure 7-17: Site Plan for Fallback Minimum Construction Alternative

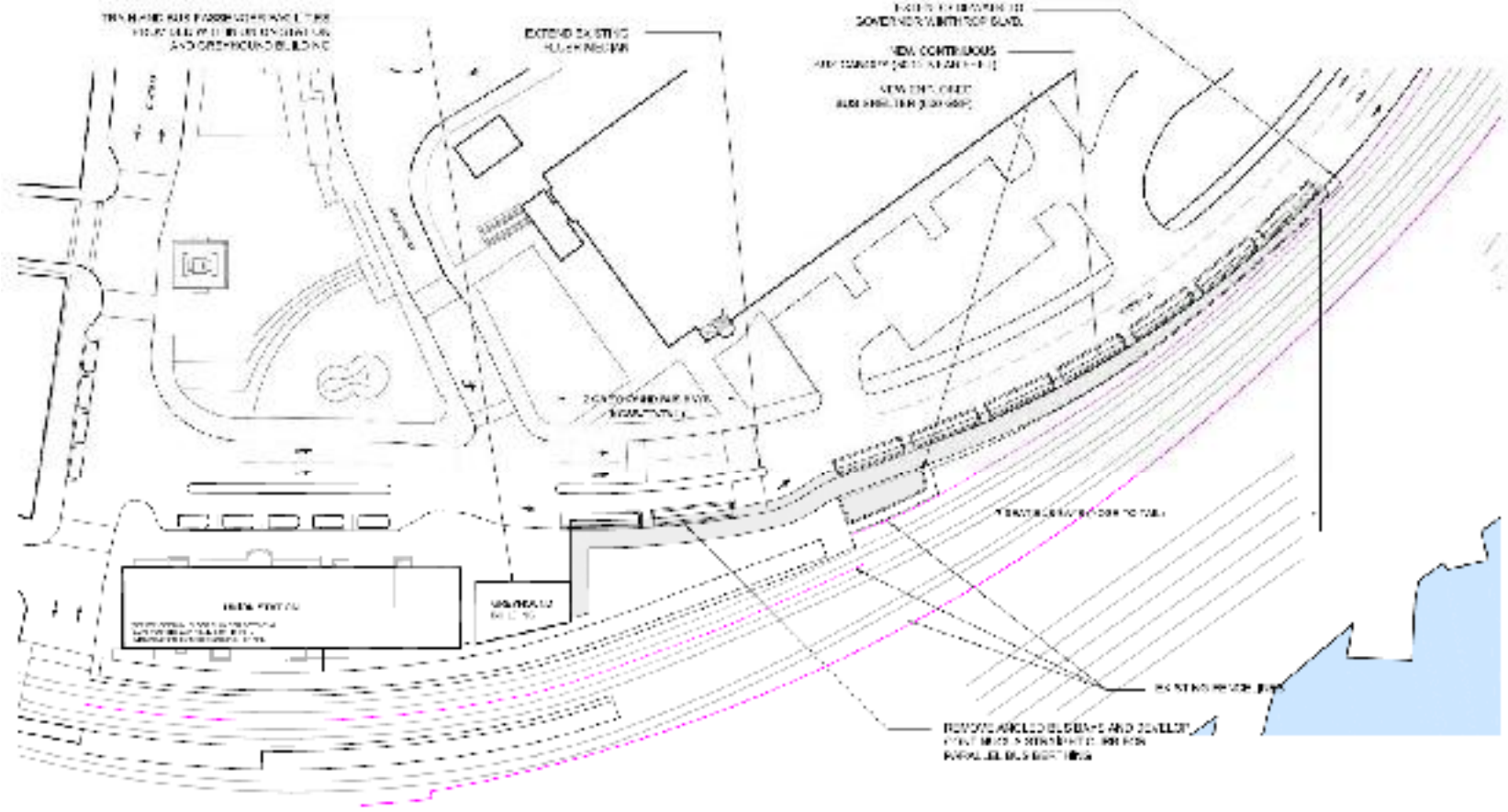
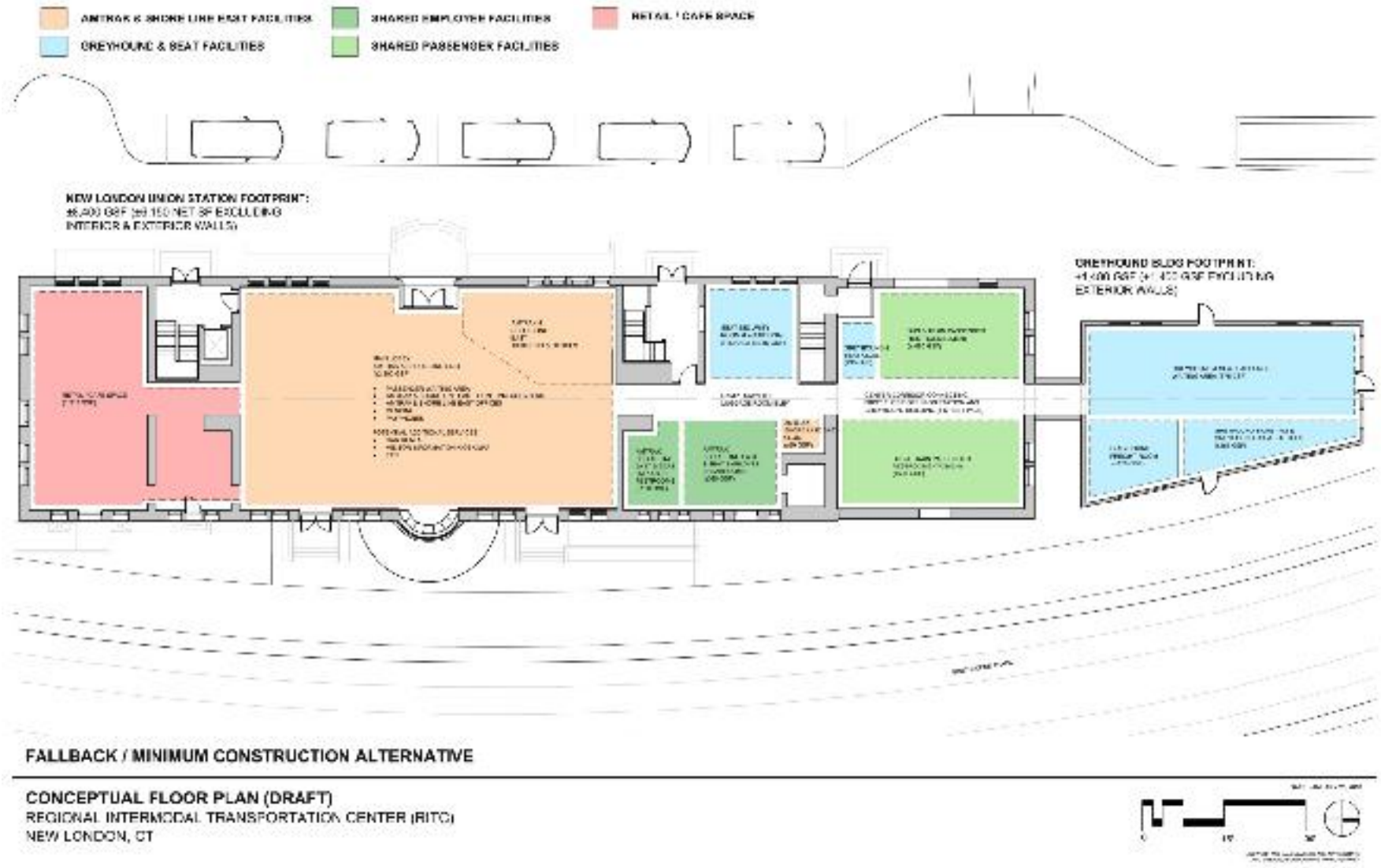


Figure 7-18: Conceptual Floor Plan for Fallback Minimum Construction Alternative



7.6 Non-Transportation Uses at Union Station

The Preferred Alternative continues the current use of the Union Station lobby for rail passenger facilities, while the Fallback Minimum Construction Alternative relies on much of the building's ground floor for bus and train passenger facilities. While it is recommended that the State purchase or arrange a long-term lease of Union Station property (in whole or in part) in order to support these transportation uses, the property will still include considerable space available for non-transportation purposes, particularly on the upper floors. Due to the overall economic downturn and the depressed market for office space, the Master Plan is not specific about how to use the remaining Union Station space in the near term. Instead, it will be critical to take advantage of this time to develop a comprehensive TOD plan for the Historic Waterfront District, including Union Station, and to make policy decisions that support that plan, but also to keep options open to take advantage of arising opportunities.

Any reuse of Union Station space beyond transportation uses would depend on greatly upgraded surroundings. The Parade Project is clearly a key step in this direction. The transportation improvements detailed in this Master Plan are the next step. This will also need to be accompanied by an upgrade of the remaining interior spaces to bring the building to current codes. In the past, the costs of such upgrades may have limited the ability of the private sector to market the space.

State ownership to foster the transportation goals could facilitate development in Union Station that would not happen without public funds. Office space could be developed for transportation related or other state related purposes. A visitor center or other visitor attraction could be housed in the building, for example. A detailed marketing and concept plan for the non-transportation redevelopment of the remainder of Union Station will need to be developed as market conditions improve. This study has outlined the transportation uses and the overall ten-year TOD potential in the area and has presented alternatives for the site. A final decision on the transportation center must precede the further development of options for reuse of Union Station.

It should be recognized that the critical transportation uses place constraints on the feasibility of using the remaining space, both on the ground floor and the upper floors, for many other types of uses. This is because they consume any on-site space that could be used for parking, they use the curb space that would be otherwise used for service entrances and deliveries and, in the case of the Fallback Alternative, they constrain access to upper floors by occupying almost all the ground floor space. (Only the long term vision concepts that place the bus terminal somewhere other than the east side of Water Street leave the Union Station property relatively unencumbered.) With or without these encumbrances, the upper floors may have a fairly limited marketability. The space is best suited to office space for either public or private tenants, although the space is rather uniquely configured, suggesting the market could be narrower than for more conventional spaces.

While a comprehensive TOD strategy is needed, the strategy for Union Station could be one of incremental improvements. It may not be reasonable to attract full time retail tenants into the ground floor until a market can be developed. An incremental approach could mean bringing kiosks for retail uses in summer and holiday seasons and introducing part time cafes and later evolving to full time retail and restaurant space. However, part-time uses should only be introduced for a limited time with the understanding that they will eventually be replaced by full-time uses.

8. Costs and Economic Impacts of the Short Term Improvement Plan 8-1

8.1 Capital Costs 8-1
8.1.1. Immediate Pedestrian Improvements 8-1
8.1.2. Non-Immediate Short Term Improvements 8-3
8.1.3. Bus Terminal Operating/Maintenance Costs 8-6
8.1.4. Union Station and Water Street Garage Repair and Operating/Maintenance Costs 8-7
8.1.5. Short Term Economic Impacts of the Preferred Alternative 8-8
8.1.6. Capital Cost of the Fallback Minimum Construction Alternative 8-10
8.1.7. Summary of Costs 8-11

List of Tables

Table 8-1: Capital Cost Estimates for RITC Preferred Alternative –Immediate Improvements 8-2
Table 8-2: Capital Cost Estimates for RITC Preferred Alternative –Short Term Improvements 8-4
Table 8-3: Breakdown of New Bus Facility Operating and Maintenance Costs 8-7
Table 8-4: Summary of Estimated Economic & Fiscal Impacts 8-9
Table 8-5: Cost Estimate for the Fallback Alternative (2012 dollars) 8-10

8. Costs and Economic Impacts of the Short Term Improvement Plan

This section covers both the costs of developing the enhanced RITC (including both immediate and short term improvements in the Preferred Alternative) and the economic impacts that would occur in the short term as a result of RITC construction. It also includes an order of magnitude estimate of the capital cost for the Fallback Minimum Construction Alternative for comparison purposes.

8.1 Capital Costs

Capital cost estimates are provided in Tables 8-1 and 8-2 for the Preferred Alternative (all passenger transportation facilities located on the east side of Water Street). Costs associated with immediate improvements have been calculated in 2011 dollars and those with short term improvements are presented in 2012 dollars. The plan includes pedestrian and wayfinding improvements as well as construction of a new and renovated joint bus terminal to serve both bus operators. Relocation of Water Street is necessary before this can be accomplished. These construction activities will require substantial capital expenditures and will require advance efforts to secure funding and to negotiate a lease or purchase of the property. Certain improvements to the pedestrian facilities can be accomplished early, without waiting for the relocation of Water Street and the construction of new and renovated bus terminal facilities. These are referred to as Immediate Pedestrian Improvements.

8.1.1. Immediate Pedestrian Improvements

The scope of the immediate term improvements would consist of:

1) New 4-Quad Railroad Warning Gates at both the State Street and Governor Winthrop Boulevard railroad crossings.
2) Rubberized crossing improvements at the State Street and Governor Winthrop railroad crossings and a wider sidewalk.
3) Sidewalk and curb and fencing improvements along the east side of the railroad right-of-way and on the City-owned lot, including decorative lighting.
4) Gateway arches at two locations adjacent to the ferry area.
5) New sidewalk along the west side of the railroad right-of-way from a point about 200 feet south of the Governor Winthrop crossing to the park at the intersection with Crystal Street.
6) Wayfinding elements (on the areas unaffected by the street relocation and some temporary wayfinding elements that can be relocated when the street is relocated as needed).

As shown in Table 8-1, the total estimate for these costs in 2011 dollars is $3.3M plus engineering/inspection and contingency; including those additional costs brings the total to $4.7M, excluding costs of improvements internal to the Cross Sound Ferry property.

Recommended pedestrian improvements which are internal to the Cross Sound Ferry property such as paving, walkways and landscaping are assumed to be entirely funded by the property owner; these costs have been estimated as a separate component as shown in Table 8-1.

Table 8-1: Capital Cost Estimates for RITC Preferred Alternative –Immediate Improvements

ITEM	COST
IMMEDIATE PEDESTRIAN IMPROVEMENTS	
Railroad Protective Gates at Governor Winthrop Blvd	$ 1,200,000
Railroad Protective Gates at State Street	$ 1,200,000
State Street and Governor Winthrop Rubberized Crossings	$ 300,000
Wayfinding and Gateway Structures	$ 150,000
Pedestrian Walkway, Fencing, Landscaping East of Rail ROW	$ 440,000
Subtotal	$ 3,290,000
Engineering & Inspection	$ 465,000
Subtotal	$ 3,755,000
Contingency	$ 705,000
Subtotal	$ 4,460,000
Escalation	$ 255,000
Total - Immediate Improvements (2011 $) excluding improvements internal to Cross Sound Ferry	$ 4,715,000
IMMEDIATE PEDESTRIAN IMPROVEMENTS INTERNAL TO CROSS SOUND FERRY	
Additional Sidewalk along Easterly Perimeter	$ 150,000
Perimeter Landscaping	$ 50,000
Block Island Express Boarding Area Pavement Reconstruction	$ 120,000
SeaJet Bus Parking Area Pavement Reconstruction	$ 320,000
Subtotal	$ 640,000
Engineering & Inspection	$ 50,000
Subtotal	$ 690,000
Contingency	$ 70,000
Subtotal	$ 760,000
Escalation	$ 46,000
Total - Immediate Improvements (2011 $) for improvements internal to Cross Sound Ferry	$ 806,000
Total - Immediate Improvements (2011 $) including improvements internal to Cross Sound Ferry	$ 5,521,000

The additional costs associated with improvements to Cross Sound Ferry are as follows:

1. Additional sidewalk along the easterly perimeter of the property – this is estimated at $150,000 excluding the boarding area.
2. Perimeter landscaping (excluding the paved drop-off and pickup area already included in the immediate improvements above) – this is estimated at $50,000.
3. Pavement reconstruction of the Block Island Express ferry boarding area – this is estimated at $120,000.
4. Pavement reconstruction of new bus parking area for the SeaJet – this is estimated at $320,000.

Thus the total cost of pedestrian/pavement/landscaping improvements at the Cross Sound Ferry property is $640,000. (This excludes demolition of the existing building any new roadway construction.) Engineering Inspection would add $50,000 and Contingency $70,000 to this estimate, and Escalation to 2011 $46,000, bringing the total for the Cross Sound Ferry improvement to $806,000 in 2011 dollars. The total cost for immediate improvements including those improvements at the Cross Sound Ferry property is $5.5M.

8.1.2. Non-Immediate Short Term Improvements

The cost estimate for the non-immediate short term improvements is shown in Table 8-2.

Pedestrian Bridge

A new pedestrian bridge would be constructed to enable travelers to cross the railroad tracks and potentially to directly access the Water Street Garage and Cross Sound Ferry property. The bridge is conceived of as three sections, only one of which is mandated by ConnDOT. The mandatory section is the central section that would connect from the southbound platform area and bus terminal area on the east side of Water Street spanning the Amtrak tracks to the northbound platform. Vertical access to this section of the bridge will include elevators and stairs. The optional western section of the new pedestrian bridge will connect the Water Street Garage to the bus terminal and will integrate the vertical circulation provided at the bus terminal and at the Garage (and optionally could include restoration of the existing elevator at the southeast corner of the Garage). The optional eastern section of the bridge will connect from the northbound platform over the freight railroad track to the Cross Sound Ferry property. Vertical access at the ferry side will include elevators, escalators and stairs.

The pedestrian bridge concept has been developed incorporating short spans using precast concrete units and precast units for stairs, enhanced architectural features, enclosed sides, escalators and security cameras, etc. The bridge is assumed to be constructed with a pitched standing seam metal roof and be fully enclosed with glazed curtain wall construction. The anticipated elevation of the structure over the tracks is envisioned at an elevation of 36 feet to provide the necessary clearance over the electrified lines.

The cost for the entire pedestrian bridge including all three sections is $8M plus engineering/inspection, contingency and escalation to 2012 dollars. The breakdown by section is shown in Table 8-2. The central section, required by ConnDOT would cost $3.2M and include vertical circulation (i.e., stairs and elevators) for the northbound and southbound platforms (the latter at the bus terminal). The optional western section to the Water Street Garage would cost $1M. It could rely on existing vertical circulation in the Water Street Garage or include a rehabilitation of the existing unused elevator shaft at the southeast corner (for an additional $300,000). The optional eastern section to the ferry area would cost $3.5M and include vertical circulation; an escalator was included there as requested by Cross Sound Ferry.

It should be noted that Connecticut DOT has not made a decision regarding the possibility of constructing a new Shore Line East platform on the east side (water side) of the tracks. In the long term, a new 120-foot platform for Track 6 located on the water side (east) of the track would be preferred and would likely cost $2M. Such a platform would require expansion of the required central section of the pedestrian bridge to include a third vertical circulation element, thus impacting the cost. It might also affect the decision to construct the optional eastern section of the bridge to the ferry area.

Table 8-2: Capital Cost Estimates for RITC Preferred Alternative –Short Term Improvements

ITEM	COST With Center Section of Pedestrian Bridge Only	COST With Optional Extensions to Pedestrian Bridge
SHORT TERM IMPROVEMENTS		
Pedestrian Bridge:		
Bridge Over Amtrak with Elevators and Stairs	$ 3,200,000	$ 3,200,000
Bridge to Garage (Optional)		$ 1,000,000
Garage Elevator Rehabilitation (Optional)		$ 300,000
Bridge To Ferry with Escalator, Stairs and Elevator (Optional)		$ 3,500,000
Subtotal Pedestrian Bridge	$ 3,200,000	$ 8,000,000
Water Street Reconstruction / Site Work	$ 1,700,000	$ 1,700,000
Pedestrian Improvements Ferry Boarding Area	$ 150,000	$ 150,000
Supplemental Wayfinding Improvements	$ 100,000	$ 100,000
Subtotal Water Street Relocations and Pedestrian Improvements	$ 1,950,000	$ 1,950,000
New Bus Terminal Building Addition	$ 500,000	$ 500,000
Existing Greyhound Building Renovation	$ 222,000	$ 222,000
Bus Canopy	$ 600,000	$ 600,000
Subtotal Bus Terminal	$ 1,322,000	$ 1,322,000
Subtotal – Short Term Improvements (2010 $)	$ 6,472,000	$ 11,272,000
Engineering and Inspection	$ 971,000	$ 1,691,000
Subtotal (2010 $)	$ 7,443,000	$ 12,963,000
Escalation to 2012	$ 745,000	$ 1,297,000
Rounded (2012 $)	$ 8,188,000	$ 14,260,000
Contingency 20%	$ 1,638,000	$ 2,852,000
Total (2012 $)	$ 9,826,000	$ 17,112,000
Total – Short Term Improvements (2012 $)	$ 9,900,000	$ 17,200,000.00

Water Street Relocation and Pedestrian Improvements

The relocation of Water Street includes reconstruction of the street as well as pedestrian improvements along the relocated street. Other pedestrian improvements in the short term include the area around the ferry terminal end of the pedestrian bridge and wayfinding improvements. Each is described below:

Water Street Reconstruction/Site Work

To provide sufficient space for the enhanced bus terminal, Water Street would need to be relocated between Atlantic Street and Governor Winthrop Boulevard. The cost estimate has assumed that utility relocation would be confined to adjustments and changes in surface features since the utilities would remain in the roadway right of way. The reconstruction of the street would include the creation of some sawtooth style bus bays on the east side of Water Street and the construction of a bus passenger island and a busway. Reconstruction of the sidewalk and parking area on the west side of Water Street would be required using City owned property in front of the Water Street Garage. Re-landscaping and new sidewalks would be required.

Pedestrian improvements that would need to await completion of the Water Street relocation include:

1. Sidewalk and curb and fencing improvements along the west side of the railroad right-of-way, the east and west sides of Water Street in the area of the street relocation including decorative lighting and landscaping. The sidewalks at the RITC bus terminal would use pavers like those at Union Station to unify the area.
2. Crosswalks across Water Street in the affected section of Water Street.

The cost of this element, including the pedestrian improvements, is $1.7M plus engineering/inspection, contingency and escalation to 2012 dollars.

Pedestrian Improvements at the Ferry Boarding Area

Other pedestrian improvements would include paving and support amenities (consisting of concrete pavers, curbing and landscaping) for the passenger boarding area at the ferry terminal touchdown for the pedestrian bridge. The cost for this element is $150,000 plus engineering/inspection, contingency and escalation to 2012 dollars.

Wayfinding Improvements

Wayfinding improvements would include wayfinding signage and wayfinding maps throughout the area in accordance with the wayfinding plan. The cost for this element is $100,000 plus engineering/inspection, contingency and escalation to 2012 dollars.

Bus Terminal

The bus terminal includes the renovation of the existing bus terminal and the construction of a new building addition, as well as the construction of canopies along the bus boarding areas. (The construction of a bus island, busway and sawtooth bays is included above in the Water Street reconstruction cost.) Each is described below:

Existing Bus Terminal - The concept includes the complete interior renovation of the existing bus terminal building. The renovation of the existing space is envisioned to include: new restrooms, (public and

employee); a new Greyhound baggage/freight storage room, a SEAT storage area and a SEAT employee break room, as well as circulation space. Design elements of the renovated terminal include renovated mechanicals and bathroom facilities with vandal resistant finishes. No major changes are included to the building exterior.

New Bus Terminal - A one-story addition would be constructed next to the existing terminal building with a large glass wall facing the bus boarding areas. This addition would house a new passenger waiting area for both Greyhound and SEAT passengers. A ticket vending booth and small office will also be provided for each operator. The building would include seating, static and real time displays, lockers, vending machines and environmental controls. The new bus terminal addition will be integrated with the proposed pedestrian bridge. Access to the bridge will be by an elevator and stairs.

Canopies - Canopies would be constructed along the bus boarding areas situated on the east side of Water Street and on the passenger boarding island to provide both SEAT and Greyhound passengers with shelter as they arrive and depart. The structure is envisioned as a structural steel frame that employs a cantilever design with a pitched, standing seam metal roof. The structure will have no ceiling construction but will be lighted. Design elements of the canopy will include: low back tempered glass, tinted standing seam metal roof, on demand seat heaters and benches.

The cost of all the bus terminal elements (with the full pedestrian bridge) is $1.3M plus engineering/inspection, contingency and escalation to 2012 dollars.

The total cost of all the non-immediate short range elements (with the full pedestrian bridge) including engineering/inspection, contingency and escalation to 2012 dollars is $17.2M.

The total cost of immediate and short range elements (with the full pedestrian bridge) including engineering/inspection, contingency and escalation to future year dollars for future year expenses is about $22M, excluding those improvements internal to Cross Sound Ferry and about $23.0 M including the improvements internal to Cross Sound Ferry.

8.1.3. Bus Terminal Operating/Maintenance Costs

Projected operating and maintenance costs of the new bus facility serving Greyhound and SEAT and the pedestrian overpass structure were developed during the preparation of the Master Plan. The costs associated with utilities, service, security, and maintenance, and operating costs associated with a facility consisting of a ticketing area, convenience facility, waiting area, and bridge are anticipated to be between $6.00 and $8.00 per square feet per month or annually between $266,400 and $355,200 for the New London Facility in 2010 dollars. The unit costs shown in Table 8-3 were developed using information on costs from similar facilities in Connecticut, including Bridgeport Bus Station (at the Intermodal Transportation Center) and the Guilford Shore Line East train station.

Table 8-3: Breakdown of New Bus Facility Operating and Maintenance Costs

Category	% of operating costs	Unit Cost Per Square Foot Per Month
Cleaning and Janitorial	20%	$1.20-$1.60
Repair and Maintenance	20%	$1.20-$1.60
Utilities	40%	$2.40-$3.20
Security	10%	$0.60-0.80
Administrative	10%	$0.60

Estimates for the repair and operating/maintenance costs for Union Station and the Water Street Garage were obtained from other sources and are discussed in Section 8.1.4. Since the existing ferry facilities will continue to be owned by Cross Sound Ferry and Fishers Island Ferry, their operating costs are not included in the Master Plan.

8.1.4. Union Station and Water Street Garage Repair and Operating/Maintenance Costs

Since it is recommended in Chapter 10 that the State purchase (or long term lease) Union Station and since ConnDOT suggested that such a purchase would need to be combined with a purchase (or long term lease) of Water Street Garage, there will be a cost associated with acquiring these properties. The cost of acquiring Union Station and Water Street Garage will have to be negotiated with the private owner and the City respectively. Determining a purchase price for these properties is beyond the scope of this study. In prior years, ConnDOT commissioned two appraisals of Union Station and the owner of Union Station made known his desired price should the railroad station be sold. Both Union Station and the City's Water Street Parking Garage have assessed values for tax purposes. These figures, along with updated appraisals, would be the logical starting points for negotiations to purchase the two buildings.

The costs to bring these facilities into a state of good repair and the ongoing costs of operating and maintaining these facilities also need to be addressed. The following provides information on these items based on readily available information.

Union Station

- Operating Expenses
  Operating expenses on an annual basis were reported to be approximately $256,843 by Norman Benedict in his appraisal of Union Station prepared for ConnDOT in 2006.

  It should be noted that currently Union Station obtains income from leases including Amtrak and Greyhound. This income offsets operating costs. Of course a considerable portion of the space in Union Station is vacant. In his appraisal in 2006, Norman Benedict reported that a potential annual income of $420,000 could be realized at Union Station when fully leased.

- Repair Costs
  In 2006, the Norman Benedict appraisal reported the estimated cost of renovating the facility to allow for leasing to be $1,560,000.

  In January 2007, ConnDOT commissioned a condition inspection report conducted by DMJM/Harris/AECOM to evaluate existing conditions, and prepare a cost estimate of renovations

and code improvements. This was supplemented in August 2007 to include recommendations for the elevator pit.

The reports estimated the cost of repairs and improvements necessary to meet code requirements and provide suitable access and egress to the leasable areas as follows:

2007 Projected Budget $	$1,044,254
2007 Elevator Pit	$ 124,127
	$1,168,381
A/E Inspection Fees (20%)	233,676
	$1,402,057
Escalation to 2012	$ 240,310 (1)
	$1,642,367 (2)

(1) Estimated at 3% per year
(2) Exclusive of Tenant Fit Out Costs

Note that the above is consistent with the repair cost cited in the 2006 Norman Benedict appraisal.

Water Street Garage

- Operating Expenses
  Annual operating expenses and income have been reported for the following periods:

	Income	Expenses
July 2005 – June 2006	$678,315	$359,291
July 2006 – June 2007	$643,097	$304,936
July 2007 – June 2008	$528,627	$351,982
July 2008 – June 2009	$599,777	$376,073

  Thus the net revenue after operating expenses ranges from $200,000 to $300,000 based on this four year period.

- Repair Costs
  In October 2007, Desmond Associates prepared a condition inspection report for the City and developed a five (5) year plan of improvements estimated to cost $2,551,640. Currently, Desmond has been commissioned to prepare plans for approximately $850,000 of improvements in 2010. This leaves about $1.7 M in future costs for needed improvements. The City is also considering conducting additional aesthetic architectural enhancements to the façade in 2010, but the cost for these have not been identified by the City.

8.1.5. Short Term Economic Impacts of the Preferred Alternative

Fiscal and economic impact analyses were conducted as part of this study which identify that the construction of the RITC improvements will have positive short term fiscal and economic impacts. From the City and regional perspective, the improvements to the RITC will generate both direct and indirect jobs, regional material purchases, and regional consumer expenditures. However, the property is currently under private ownership and future public ownership will remove a real property tax generating property (the

current tax payment to the City is $25,661[1]). From the State's perspective, the improvements to the RITC will generate income tax and sales tax. The improvements to the RITC have positive economic and fiscal impacts. However, these quantified impacts are only during the construction period. The negative impact resulting from the loss of real property tax is ongoing.

The results of an economic-fiscal impact evaluation for the proposed Regional Intermodal Transportation Center short term impacts are provided in this section. The improvements to the RITC will provide a range of economic and fiscal impacts to the City of New London and the State of Connecticut. These quantified impacts occur during the construction of the facilities.

During the construction period, a variety of new economic opportunities will be generated. The construction will create 88 full-time equivalent direct jobs with an aggregate payroll of nearly $4.2 million. Almost $6.7 million in material purchases will be made in the region and consumer expenditures will total nearly $3.6 million. All amounts have been inflated annually by 1.5% to 2012 dollars. The summary of the analysis is shown in Table 8-4. Additional documentation of the economic-fiscal impact evaluation is presented in Appendix I.

Table 8-4: Summary of Estimated Economic & Fiscal Impacts

Economic Impacts [1]			
	Direct	Indirect	Total
Jobs (FTE) [2]	88	57	145
Payroll	$4,185,001	$2,077,853	$6,262,855
Material Purchases (regional)	$6,679,062		$6,679,062
Consumer Expenditures	$3,556,656		$3,556,656

Annual Fiscal Impacts (3/)	State of Connecticut	City of New London	TOTAL
Income Tax	$155,175		$155,175
Real Property Tax		($25,660)	($25,660)
Indirect Sales Tax	$76,149		$76,149
TOTAL	$231,324	($25,660)	$205,664

1. Total estimated jobs and payroll do not differentiate as to where employees live or as to where employees make consumer expenditures
2. FTE indicates "full-time equivalent", working 2,080 hours annually
3. It is assumed that the building will be owned by the State, as recommended by this study. Therefore, permit fees are not applicable because the City will lose jurisdiction over the property.

The related fiscal impacts, quantified on the direct impacts only, of construction will be approximately $205,700 to the State and City. This includes over $155,000 in income tax from construction workers and over $76,000 in sales tax of indirect consumer retail expenditures. All amounts have been inflated annually by 1.5% to 2012 dollars. In addition, tax revenues are based on current prevailing tax rates. It is assumed

[1] This tax loss may not be as large as estimated if payments are made by the State in lieu of taxes. Such payments could be 35-40% of the tax.

that the City and State will waive sales taxes on material purchases related to construction and building permit fees.

Assuming that Union Station will transfer to public ownership as recommended, the property will not generate real property taxes and the City will have a loss of over $25,000 per year not counting any Pilot payment from the state. When capitalized using current 30 year municipal bond yields of 4.5%, this translates into a loss of approximately $570,000 to the City over a 30 year period.

8.1.6. Capital Cost of the Fallback Minimum Construction Alternative

The cost for the Fallback Alternative short term improvements (excluding immediate pedestrian improvements and any pedestrian bridge) is estimated at $3 M (in 2012 dollars). The immediate pedestrian improvements would be expected to be about the same as in the Preferred Alternative) and consists of providing the following: (See Table 8-5)

- Bus Canopy and Bus Shelter along Water Street
- Code and Service improvements to the First Floor and Elevator Pit of Union Station
- First Floor fit-out and renovation of the Greyhound, Amtrak and First Floor lease space
- HVAC and life safety improvements

Exterior renovation, door and window replacement, roofing, emergency power, communications, hazardous material remediation, furniture and structural improvements have not been included.

Table 8-5: Cost Estimate for the Fallback Alternative (2012 dollars)

Pedestrian Improvements	
Ferry Boarding Area	$150,000
Supplemental Wayfinding	$100,000
Pedestrian Subtotal	$250,000
Union Station	
Bus Canopy & Bus Shelter	$350,000
Water Street Sidewalk Reconstruction	$100,000
Existing Station Code and First Floor Space Upgrades	$341,000
Elevator Upgrades (1)	$125,000
Escalation for 5 & 6 above	$59,000
First Floor Space Fit Out	$875,000
Union Station - Subtotal	$1,850,000
Subtotal	$2,100,000
20% Engineering & Inspection	*$420,000*
Subtotal	$2,520,000
Contingency 20%	*$504,000*
TOTAL	$3,024,000
(1) Based on CTDOT 2007 Conditions Reports	

Thus the capital cost of the Fallback Alternative is about $6.9M less than the Preferred Alternative (assuming the Preferred Alternative includes the center section of the Pedestrian Bridge and the Fallback

Alternative does not). If funding were available to construct the center section of the pedestrian bridge in addition to the Fallback Alternative, approximately $4.5 M additional would be required (including engineering inspection, contingency and escalation).

8.1.7. Summary of Costs

The capital cost estimates for the Preferred Alternative are:

- Immediate Improvements (in 2011 dollars):
  - $5.5 M including improvements on the Cross Sound Ferry property
  - $4.7 M excluding improvements on the Cross Sound Ferry

- Short term Improvements (in 2012 dollars):
  - $9.9 M including the center section of the pedestrian bridge
  - $17.2 M including the full pedestrian bridge

The above costs exclude the costs of acquiring Union Station and the Water Street Garage or making repairs to those facilities. Costs to purchase these facilities would be the result of negotiation. Repair costs, based on prior studies, appear to be in the range of $1.6 M for Union Station and $1.7 M for the Water Street Garage (excluding repairs are underway in 2010 at the Water Street Garage). ConnDOT is preparing cost estimates for immediate improvements to allow Shore Line East to use Track 6 from the platform currently used for Track 2. In the long term, a new 120-foot platform for Track 6 located on the water side (east) of the track would be preferred and would likely cost $2 M.

The short term improvements for Fallback Minimum Construction Alternative would cost just over $ 3M (excluding immediate pedestrian improvements), which would be about $6.9 M less costly to construct than the Preferred Alternative.

The operating and maintenance costs for Preferred Alternative are:

- RITC excluding the Water Street Garage, ferry facilities and Union Station itself (in 2010 dollars):
  - $0.27 M-$0.36 M per year.
- Union Station:
  - Currently, the Union Station operating and maintenance costs are covered by the private owner. A 2006 appraisal study identified that cost at about $0.26 M. This does not include the effect of offsetting lease revenues from Amtrak and Greyhound.
- Water Street Garage
  - The Water Street Garage, owned by the City of New London, reported an operating cost of about $0.38 M for the year ending June 2009 but revenues more than covered this cost and resulted in net revenue of about $0.22 M.
- Ferry Properties
  - The operating and maintenance costs of the ferry properties are covered by the private owners.

Table of Contents

9. Environmental Issues 9-1

9.1 Current Environmental Conditions at the RITC Site 9-1
9.1.1. Contamination Issues 9-1
9.1.2. Environmental Conditions – Natural and Cultural Issues 9-4
9.2 Recommended Environmental Strategy 9-11
9.2.1. Detailed Investigation of Contamination 9-11
9.2.2. Required Permits, Certificates and Approvals 9-12

List of Figures

Figure 9-1: Site Plan Showing Property Parcels 9-2
Figure 9-2: Historic and Community Resources 9-6
Figure 9-3: Environmental Data – Natural Environment 9-6
Figure 9-4: Environmental Data – Hurricane Inundation Areas 9-9

List of Tables

Table 9-1: Summary of Contamination Findings 9-5

9. Environmental Issues

This chapter of the Final Report describes the environmental issues associated with the project. Section 9.1 documents the current environmental conditions at the site, including contamination issues, and the natural and cultural environmental issues. Section 9.2 identifies the environmental strategy recommendations regarding the need for environmental permits and detailed investigations.

9.1 Current Environmental Conditions at the RITC Site

9.1.1. Contamination Issues

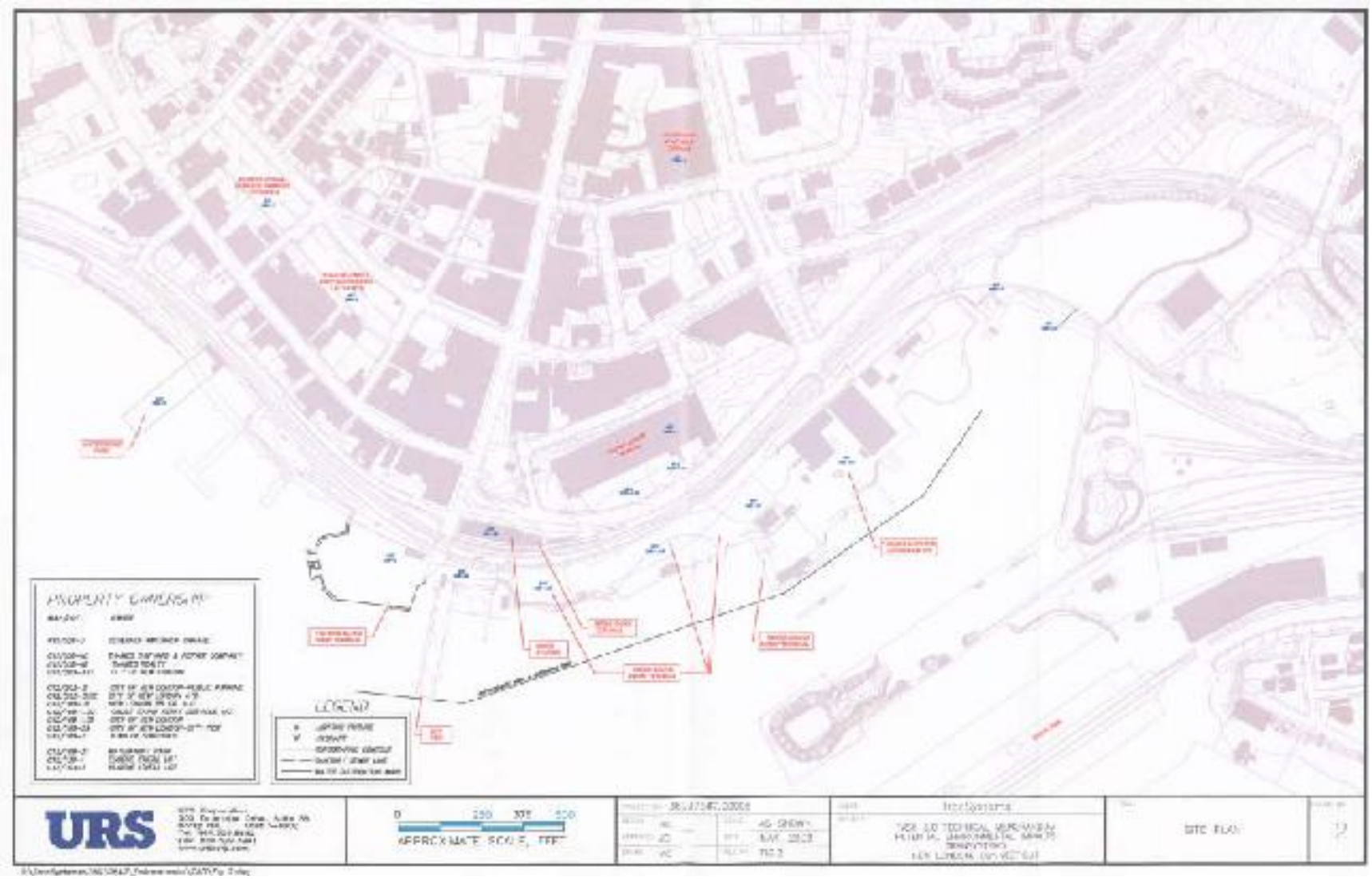
Existing development along the ferry terminus and railroad parcels have a history of uses which could yield potential for site contamination. A detailed site inventory was conducted as part of the current study to identify and evaluate any areas of concern. Figure 9-1 shows the property parcels at the site.

The consulting team conducted a screening of fourteen individual parcels (assessor's lots) in the City of New London that comprise the RITC Master Plan and Efficiency Study area. This area is located in the general vicinity of Union Station, Water Street and the ferry terminals along the Thames River. The review was conducted to provide a preliminary assessment of potential environmental impacts to soil and/or groundwater at the individual parcels comprising the RITC. This screening relied on secondary data obtained through a review of regulatory databases, historical aerial photographs, fire insurance maps, soils maps, and other readily available documentation pertinent to the study area. The scope of work did not include a site inspection or a review of files at the Connecticut Department of Environmental Protection.

In general, all of the RITC parcels along the Thames River east of Water Street and the current rail lines were the location of historical rail and vessel shipping activity and/or other industrial manufacturing or processing activity. In addition, all of these parcels, including the parcels currently occupied by the Cross Sound Ferry operations, City Pier, Fisher's Island Ferry operations, and Waterfront Park were expanded in area via the placement of fill material along the shoreline of the Thames River at various times between approximately 1951 and 1986.

This assessment did not identify historic filling activities on the RITC parcels located to the west of Water Street and the current rail corridor. However, all of these parcels (including the Water Street Garage facility, the Eugene O'Neil Drive parking lots, and the Governor Winthrop Parking Garage) were previously occupied by building structures dating back to the late 1880s and are located in areas of mapped Urban Land which also indicates the potential for the presence of fill material. The review identified that most of the Site has been used for industrial and transportation purposes since at least the late 1800s and/or was developed with building structures dating to the 1880s.

Figure 9-1: Site Plan Showing Property Parcels



Former and/or current businesses at the Site include, but are not limited to, the following:

- Thames Shipyard and Repair Co.;
- New London Gas & Electric Company;
- Boiler Works;
- Box Factory;
- New England Carpet Company;
- Thos Drummond's Boiler Works;
- Bishop Lumber and Coal Company;
- New York, New Haven & Hartford Railroad and Steamship Companies;
- Federal Biscuit Co.;
- Mohegan Cotton Mills Co; and,
- N.Y. N. H. & H. R. R. Maintenance Department.

A review of the Sanborn maps indicated that the following structures were formerly present on various Site parcels:

- Railroad tracks;
- Railroad freight houses;
- A machine shop;
- Oil storage;
- Potential manufactured gas plant, coal gasification plant;
- Coke (and/or coal) storage;
- Automobile garage;
- Junk storage;
- 1,000,000 cubic foot "gas holder";
- Aboveground storage tanks/numerous oil tanks;
- Engine room; and,
- A paint shop.

Other findings of this assessment are:

- Spills or other environmental issues (as indicated by listings on State and Federal environmental databases) that indicate the possible likelihood for contamination were identified on several of the parcels;
- Soils at the Site are mapped as urban land complex and/or urban land indicating the possibility of the presence of urban fill on the parcels. Such urban fill is often polluted with contaminants; and,
- Spills or other environmental issues (as indicated by listings on State and Federal environmental databases) that indicate the possible likelihood for contamination were identified on several properties adjoining or in the vicinity of the Site parcels and indicate the potential for impact to the Site from these off-Site sources.

Unless otherwise noted, this assessment did not identify the documented presence of contaminated soil and/or groundwater at the Site parcels. However, based on the current and former industrial use and potential filling activities, it is possible that contaminated soil and/or groundwater exist at the Site parcels from releases of chemical and/or materials used at, placed on or transported through the parcels.

The consultant team assigned a Potential Impact Rating of Low, Moderate or High, to each of the parcels. A Low Potential Impact Rating indicates minimal potential for impacts to soil and/or groundwater. A Moderate Potential Impact Rating assumes impacts to soil and/or groundwater are likely to be present. A High Potential Impact Rating assumes impacts to soil and/or groundwater are present, based on these data. It is the consultant team's opinion that there is a high probability that the soil and groundwater at the Site is likely impacted. The consultant team's findings relative to the Site, including assigned Potential Impact Ratings, are summarized in Table 9-1. Detailed information is provided in Appendix J.

9.1.2. Environmental Conditions – Natural and Cultural Issues

This section documents the findings of a preliminary screening of the natural environment and cultural and community resources located in the general vicinity of the existing RITC site. A preliminary environmental screening was conducted through the following means:

- Review of Connecticut Department of Environmental Protection (CTDEP) Geographical Information Systems (GIS) data and other CTDEP environmental publications.
- Review of National Register of Historic Places data.
- Field reconnaissance that involved a windshield survey of environmental resources.

The following natural, cultural, and community resources and issues areas were considered:

- Section 106 Resources
- Section 4(f) Resources
- Section 6(f) Resources
- Coastal Resources
- Floodplains and Stream Channel Encroachment Lines
- Management of Stormwater Runoff
- Visual Impacts
- Wetlands
- Surface Water Resources
- Groundwater Resources
- Public Water Supply Reservoirs
- Fish, Shellfish, and Wildlife Habitats
- Rare, Threatened, or Endangered Species and Significant Natural Communities
- Active Farmland and Farmland Soils
- Wild and Scenic Rivers
- Hurricane Inundation Areas
- Noise Sensitive Land Uses

A brief summary of findings is presented below for each of the aforementioned resource categories and/or issue areas. In addition, Figure 9-2 and Figure 9-3, respectively, depict cultural and environmental resources at the site.

Section 106 Resources

The National Register of Historic Places (NRHP) is the nation's official list of cultural resources worthy of preservation. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. Information on the NRHP website, a review of records and discussion with staff at the State Office of Historic Preservation, and information contained in various reports prepared for the City of New London were consulted for this section. Some of the historic sites and districts discussed below are depicted graphically in Figure 9-2.

Table 9-1: Summary of Contamination Findings

Parcel ID	Property Address	Current Occupant/Description	Current Uses	Historical Uses	Site-Specific Database Findings	Potential Environmental Issues	Potential Impact Ranking
136-1 D1	Water St	Cross Sound Ferry	Leased Parking for Cross Sound Ferry	Railroad Freight House, Coal Storage.	None	Former industrial use, urban fill, current automobile parking.	Moderate
136-1 D2	Water St	Cross Sound Ferry	Parking/Vehicle Queuing	Railroad Freight House, Coal Storage.	None	Former industrial use, urban fill, current automobile parking.	Moderate
136-1 E	2 Water Street	Cross Sound Ferry	Parking/Vehicle Queuing/Ferry Slips	Railroad Freight House, Steamboat Landing, New London Gas & Electric Company, Coal Shed, Feed Warehouse, Molasses Storage, Metalworks & Machine Shop, Carpet Manufacturing, Coal & Lumber Yard, Boiler Works, Box Factory.	CT Spills	Former industrial use, urban fill, coal storage, current automobile parking, possible fuel oil tank, documented oil spill.	Moderate to High
136-1 C	Ferry St	Thames Shipyard & Repair Co	Cross Sound Ferry Operations & Maintenance	Coal and Lumber Yard, Gas Storage, Coal and Coke Storage, Boiler Works, Machine Shop, possible coal gasification plant, New London Gas & Electrical Company, Connecticut Power Company Gas & Electric Plant, Oil and Gas Storage.	RCRA-SQG, AIRS, Spills	Current and former industrial use including possible coal gas fed oil plant, vessel repair facility, urban fill, RCRA generator, possible oil tanks, documented diesel fuel spill.	High
136-1 B	Water St	Union Station	Passenger rail and bus terminal.	Train Station.	Spills	Former industrial use, current sub station, adjacent railroad tracks and urban fill	Low to Moderate
136-2A	City Pier	Concrete pier and plaza areas	Public pier and waterfront access.	Ferry/barge slips.	Spills	Former industrial use, urban fill.	Low to Moderate
136-2	State St	Fishers Island Ferry Auto/passenger ferry terminal.	Parking/Vehicle Queuing/Ferry Slips	Railroad Freight House, Rail Lines, Ferry Slips.	UST	Former industrial use, railroad use, oil tank, urban fill, automobile parking.	Low to Moderate
203-2	139 Water Street.	Water Street Garage Parking garage	Municipal Parking Garage.	Tenements, Saloons, Dwellings, Cigar Shop, Police Station, Chinese Laundry, Cobblers Shop, Boarding House, Liquor Store.	None, UST listing for Old Middle School at 28 Water Street;.	Former industrial use, urban fill, UST, possible oil tank, current automobile parking	Low to Moderate
203-3.01	140 Water St	North entrance/exit for parking for 139 Water Street Garage	Ground Level.	Tenements, Saloon, Molasses Storage, Bakery, Dwellings, a portion of Mohegan Cotton Mills and N.Y.N.H.& H. RR Maintenance Department	None, UST listing for Old Middle School at 28 Water Street;.	Former industrial use, urban fill, adjacent UST, possible oil tank, current automobile parking	Low to Moderate
203-3.02	Water St.	South exterior parking lot of Water Street Garage	Parking.	Barber Shop, Paint Shop, Thomas Hotel, Atlantic Hotel, Boss Bakery, Fenton Biscuit Co., Automobile Parking, Police Station, a portion of Mohegan Cotton Mills and N.Y.N.H.& H. RR Maintenance Department	None, UST listing for Old Middle School at 28 Water Street;.	Former industrial use, urban fill, adjacent UST, possible oil tank, current automobile parking	Low to Moderate
170-2	Eugene O'Neill Dr.	Eugene Lot (North); Parking lot	Municipal Parking	Residential, and/or commercial development.	None	Former buildings, possible industrial use, urban fill, current automobile parking.	Low to Moderate
139-1	Green St.	Eugene Lot (South) Parking lot	Municipal Parking	Residential, and/or commercial development.	None	Former buildings, possible industrial use, urban fill, current automobile parking.	Low to Moderate
136-21	Waterfront Park	Public Walk/Plaza/Pier	Public promenade/waterfront access.	Railroad sidings and shipping piers.	EPA Brownfields Pol. CIEC	Former industrial use, urban fill, Brownfield site	High (Documented)
139-3	Governor Winthrop Blvd.	Governor Winthrop Garage	Private Parking	Residential, and/or commercial development.	None	Former buildings, possible industrial use, urban fill, current automobile parking.	Moderate

Based on Assessor's cards.
Potential Impact Ranking:
Low - Assumes minimal potential for impacts to soil and/or groundwater to be present
Moderate - Assumes impacts to soil and/or groundwater are likely to be present.
High - Assumes impacts to soil and/or groundwater are present

Figure 9-2: Historic and Community Resources

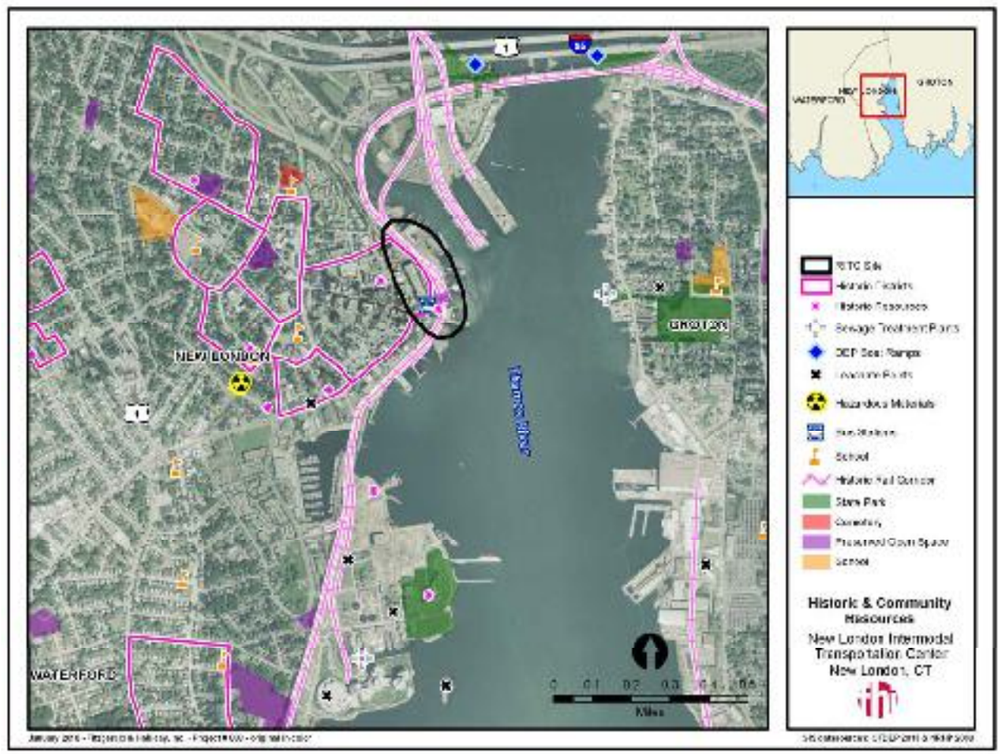
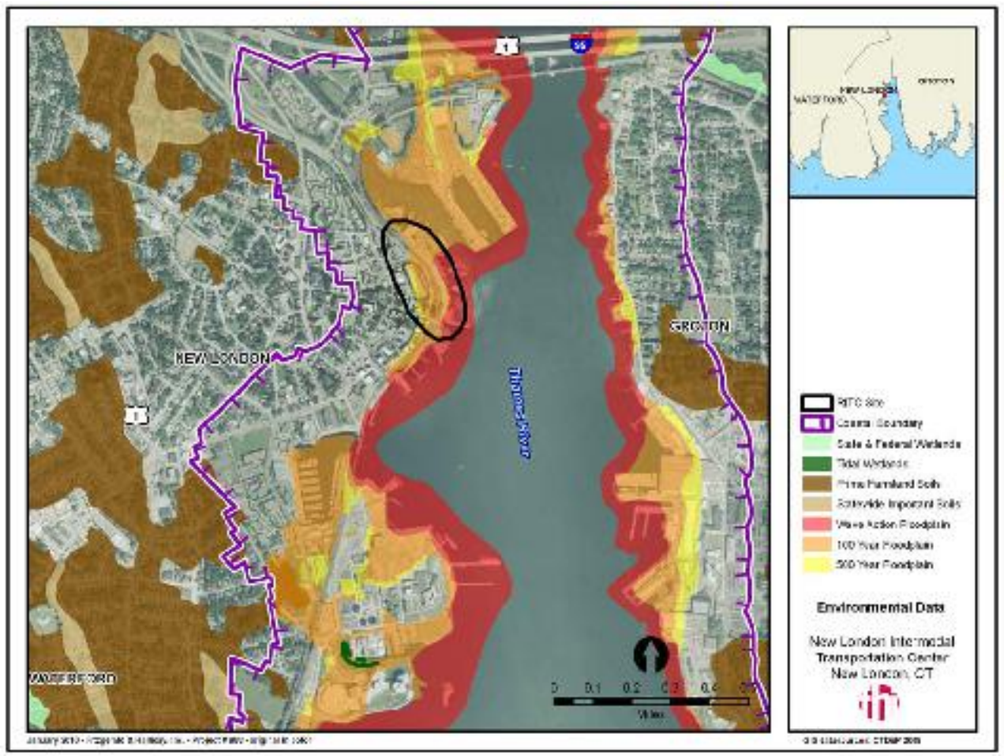


Figure 9-3: Environmental Data – Natural Environment



The proposed RITC project is located within the Downtown New London Historic District, which was formally listed on the National Register of Historic Places (National Register) on April 13, 1979. Union Station, which was individually listed on the National Register in 1971, is a significant historic resource within this district. The station is the largest railroad station designed by Henry Hobson Richardson and one of the two most important buildings designed by him in the State of Connecticut. Although the Greyhound Terminal Building located immediate adjacent to Union Station on the north is not described in the National Register nomination as a contributing structure within the Downtown New London Historic District, the building is approximately 100 years old. Thus, due to the historic sensitivity of the project area, any work conducted at this location will have to be carefully orchestrated with the Connecticut State Historic Preservation Officer (SHPO) to ensure full compliance with Section 106 of the Historic Preservation Act, as federal funds will likely be used to develop the RITC. If the project were privately funded, Section 106 would not apply.

The location of the Greyhound Terminal Building within the Downtown New London Historic District does not mean the building cannot be altered or removed for a new terminal. However, a process must be followed whereby a project's sponsor works directly with the SHPO, as well as with identified consulting parties and the public. The sponsor must show an effort was made to minimize harm and that all prudent and feasible alternatives to avoid an adverse effect were made. This assessment of prudent and feasible alternatives would include revisiting alternatives such as the RITC alternative with the bus terminal located west of Water Street on the site of the existing Water Street Parking Garage. If an historic structure is removed, mitigation generally entails extensive documentation of the structure, to preserve a record of the structure.

Section 4(f) Resources

Section 4(f) of the 1966 Department of Transportation Act (49 USC 303) prohibits use of land from any public park, recreation area, wildlife or waterfowl refuge, or historic property listed on or eligible for the NRHP unless there is no feasible or prudent alternative to the use of the land and the project includes all possible planning to minimize harm. There are no public recreational areas, or wildlife or waterfowl refuges in the project vicinity; however, the H.H. Richardson-designed Union Station building is listed on the NRHP and thus qualifies for protection as a Section 4(f) resource.

In addition, the RITC project is located adjacent to Union Station, within the Downtown New London National Register Historic District, and would require modification to the existing Greyhound Terminal Building which is approximately 100-years old. Therefore, Section 4(f) protections would apply to the RITC project since it has the potential to result in either direct or constructive use impacts to adjacent National Register properties. Section 4(f) is not advisory in nature and is taken seriously by federal agencies.

Section 6(f) Resources

Section 6(f) of the Land and Water Conservation Fund Act (1965) provides funds for acquisition, maintenance, and enhancement of public recreational open space by municipalities. There are no public recreational properties or facilities funded and protected under Section 6(f) on or near the existing site.

Coastal Resources

As seen in Figure 9-4 the proposed RITC concept is located entirely within Connecticut's coastal boundary as defined by section 22a-94 of the Connecticut General Statutes (CGS). Therefore, a Connecticut Department of Environmental Protection (CTDEP) Coastal Consistency Review and a City of New London Coastal Consistency Review will be required in order to ensure full compliance with coastal resource and use policies designated in Connecticut's Coastal Management Act. Coastal resources in the vicinity of the project site include Shorelands and Coastal Flood Hazard Areas. Shorelands are essentially any developed areas within the coastal zone that are not subject to coastal flood hazards. The proposed RITC concept most likely will be consistent with all Shorelands use policies as defined in CGS 22a-92(b)(2)(I). Coastal Flood Hazard Areas are lower elevation areas that may be impacted by coastal flooding attributed to 100-year storms [(CGS 22a-92(a)(2); CGS 22a-92(b)(2)(F); CGS 22a-92(b)(2)(J); and CGS 22a-92(c)(2)(B)]. The RITC concept would have to be evaluated with respect to Coastal Flood Hazard Areas to determine if any new infrastructure is planned within the hazard area. The Union Station property partially lies within the 100-year flood zone and it is likely construction of the pedestrian bridge would also be within this zone. If new infrastructure is planned within the Coastal Flood Hazard Area, then an assessment would be needed to determine the extent to which that new infrastructure may or may not affect coastal flooding, erosion, and natural patterns of water circulation and tidal exchange.

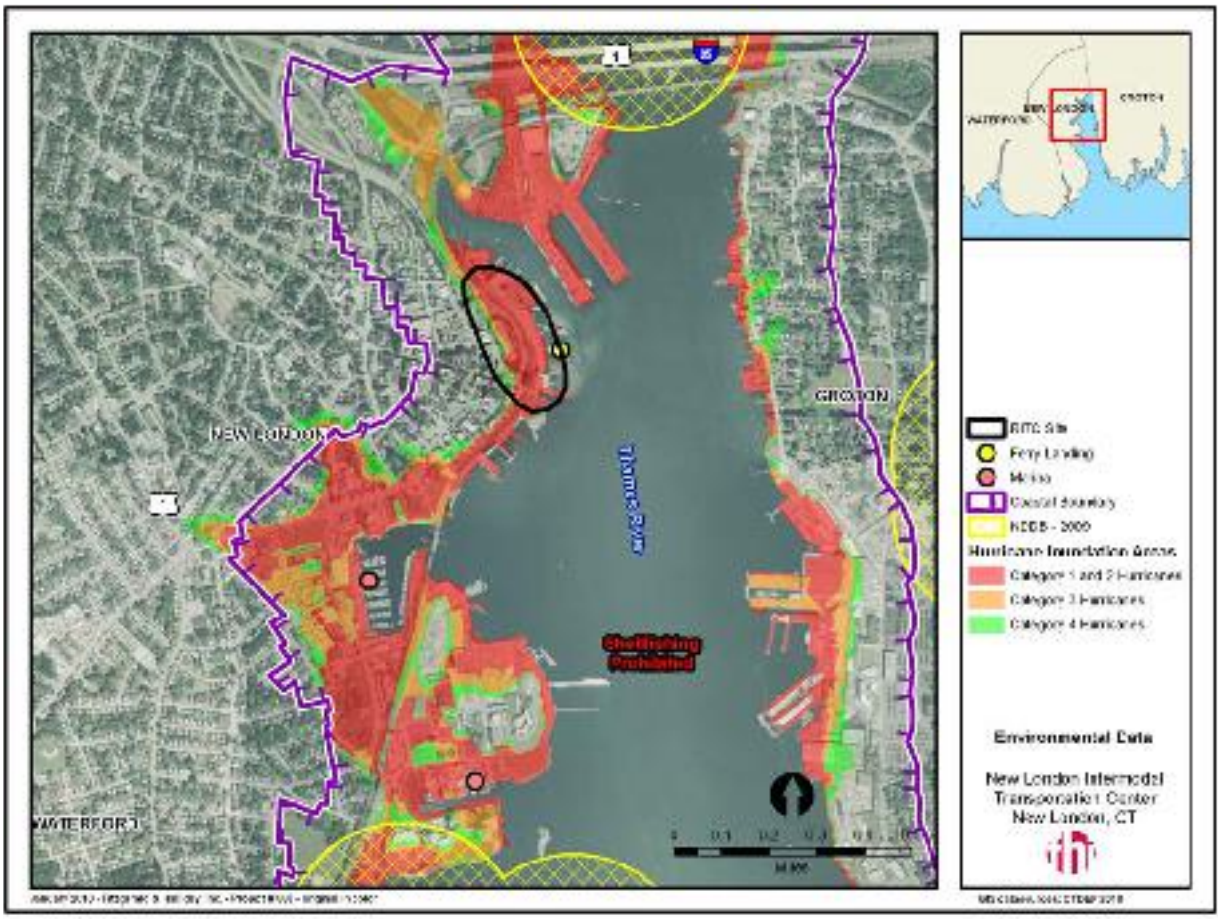
Floodplains and Stream Channel Encroachment Lines

There are no CTDEP Stream Channel Encroachment Lines (SCEL) associated with the Thames River in the vicinity of the RITC site. Because a portion of the site is located within the 100-year floodplain as designated by the Federal Emergency Management Agency (FEMA), a Flood Management Certification may need to be filed with the CTDEP for the RITC project. This certification is required if state funding will be used in order to demonstrate that the proposed action will not directly cause flooding or exacerbate existing flooding conditions at or downstream of the project area. Any structures placed within the 100-year floodplain (such as the pedestrian bridge) will need to be flood-proofed up the height of the 100-year flood elevation. Floodplain resources in the vicinity of the RITC site are depicted on Figure 9-4.

Management of Stormwater Runoff

It does not appear that the proposed RITC concepts will introduce a significant amount of impervious surface over existing conditions. However, a narrow strip of natural landscaped area located east of the Water Street Parking Garage would be eliminated with the westerly relocation of Water Street; and a small grassy strip located east of Water Street would be eliminated to accommodate new bus parking bays arranged in a saw-tooth configuration. These two existing green areas are the only pervious surfaces in the immediate project vicinity. Their removal and subsequent development as described above would result in a slight increase in impervious paved surface area over existing conditions. Additionally, new bus canopies, a new/expanded bus depot building, and a new pedestrian overpass will create additional impervious rooftop surfaces on the existing site. It is also likely that the proposed RITC concepts will include the construction of either new or upgraded storm drainage facilities in the project area that will connect to existing stormwater drainage infrastructure. The addition of new impervious surfaces on the project site and potential improvements to existing site drainage as part of the proposed RITC project must comply with both the *Connecticut Stormwater Quality Manual* (CTDEP, 2004) and the *Connecticut*

Figure 9-4: Environmental Data – Hurricane Inundation Areas



Sedimentation and Erosion Control Manual (CTDEP, 2002). Compliance will help ensure that contaminated stormwater runoff from the site is properly treated prior to it being discharged into the nearby Thames River. During construction, a Stormwater General Permit from Construction Activities will need to be obtained from CTDEP.

Visual Impacts

The City of New London is in the final stages of completing the Parade Project. That project involved a complete re-configuration of the Parade area located at the intersection of Bank Street and State Street. One of the main elements of that project was to open up the view shed of the Thames River to the east from locations along State Street and the Parade. In particular, the newly reconfigured Parade area now allows for direct views of the Thames River along a line of sight to the north of existing Union Station and the Greyhound Terminal Building.

The proposed RITC concept calls for a new/extended Greyhound Terminal Building to the north of the existing building, new bus canopies, and a new pedestrian overpass across the existing rail corridor which would enable rail passengers to safely cross between the north and south rail platforms. That pedestrian bridge could optionally be expanded in order to provide a direct connection (over Water Street) to the Water

Street Parking Garage on the west and a connection to the Cross Sound Ferry to the east. These structural elements will effectively obstruct the direct line of sight views of the Thames River that the Parade project intended to and successfully created.

Wetlands

A review of CTDEP GIS data reveals that there are no hydric soils (i.e. poorly drained or very poorly drained soils) that would indicate the presence of wetlands on or adjacent to the existing site. Subsequent field reconnaissance confirmed the GIS data, as the existing site is fully developed and part of a larger urban area located along the western shoreline of the Thames River. Thus, there are no inland wetlands or tidal wetlands on or adjacent to the existing site.

Surface Water Resources

The only surface water resource in the vicinity of the existing site is the Thames River, which is located directly to the east. The river, which is tidally influenced in the vicinity of the existing site, is designated by the CTDEP as a Class SC/SB water resource with respect to water quality. The SC/SB classification means coastal waters (S) with a current water quality classification of C and a water quality goal of B. Designated uses of SC waters are for fish, shellfish, and wildlife habitat, certain aquaculture operations, recreational uses, industrial, and other legitimate uses, including navigation, but the C classification means that the water is presently not meeting all Water Quality Criteria due to pollution. Class SB designated uses include SC uses plus shellfish harvesting for transfer to a depuration plant or relay (transplant) to approved areas for purification prior to human consumption.

Groundwater Resources

Aquifer protection areas, commonly referred to as wellhead protection areas, represent the area of groundwater contribution for active public water supply wells. A review of CTDEP data revealed that there are no aquifer protection areas or public water supply wells in the vicinity of the existing site. Groundwater in the project area is designated by CTDEP as Class GB. This groundwater can be used for industrial processes, but it is not suitable for human consumption without treatment.

Public Water Supply Reservoirs

There are no public water supply reservoirs on or adjacent to the existing site. Drinking water is supplied to the site by the City of New London's public water system.

Fish, Shellfish, and Wildlife Habitats

The existing site is a built-out urban area with constant pedestrian, vehicular, and train activity. Wildlife habitat is non-existent. Vegetation is sparse and is limited to a row of mature trees along Water Street in front of the Water Street parking garage. There are also several small areas of mowed/maintained grass along Water Street and adjacent to the Northeast Corridor fence line. There is limited landscaping west of Union Station associated with an area known as the Parade. Due to a significant amount of industrial land use along the Thames River and the presence of marinas and ferry terminals in the vicinity of the existing

site, shellfishing in the Thames River is prohibited. Recreational fishing occurs at public access points along the shore of the Thames River near the existing site.

Rare, Threatened or Endangered Species and Significant Natural Communities

The CTDEP Natural Diversity Data Base (NDDB) was consulted to obtain a preliminary understanding as to whether or not any rare, threatened or endangered plant and animal species or significant natural communities exist in the project area. The NDDB contains information on the status of more than 1,000 rare species of plant and animals, including invertebrates, and 45 significant natural communities There are no rare, threatened or endangered plant or animal species or significant natural communities on or adjacent to the existing site.

Active Farmland and Farmland Soils

The area surrounding the existing site is developed with roads, buildings and other man-made infrastructure. There are no prime or statewide important farmland soils or active farmlands on or adjacent to the existing site.

Wild and Scenic Rivers

There are no Wild and Scenic River resources at the existing site or in the project study area.

Hurricane Inundation Areas

The existing site resides within coastal areas that could potentially become inundated during Category 1 or 2 hurricanes.

Noise Sensitive Areas

Noise-sensitive land uses include: a) residences, hotels, and other buildings where people sleep; b) institutional resources such as churches, schools, hospitals, and libraries; and c) various tracts of land where quiet is an essential element of the land's intended purpose.

The existing site is located at the foot of State Street along the western bank of the Thames River. Surrounding land uses include ferry terminals, public parking, and commercial businesses among others. The area is a very active transportation center with trains, buses, taxis, ferries, and pedestrian activity at all hours of the day. There are no noise sensitive land uses on or immediately adjacent to the existing site.

9.2 Recommended Environmental Strategy

9.2.1. Detailed Investigation of Contamination

It is recommended that prior or during the next phase of design development of improvements requiring excavation for building foundations, utilities, or other significant construction requiring excavation, soil

samples and testing for materials should be conducted to determine the absence or presence of contamination. These soil samples can be combined with structural geotechnical borings. Excavations for utility infrastructure and the disposal of soil/reuse from excavations can be reused as backfill, however, excess materials need to be disposed of in accordance with CTDEP requirements.

Renovation or modification to the existing Greyhound Terminal Building and the Water Street Parking Garage could require addressing materials containing asbestos, lead or other regulated substances. A thorough inspection and necessary tests of floor tiles, piping, window sealants and other potentially asbestos containing material (ACM) should be conducted by a certified testing lab.

9.2.2. Required Permits, Certificates and Approvals

The following permits, certificates, and approvals may be required for construction of the RITC project:

State

- CTDEP Coastal Consistency Review and Determination
- CTDEP Flood Management Certification
- General Permit for Storm Water and Dewatering Wastewaters from Construction Activities
- CTDEP Contaminated soil/and/or sediment management
- State Historic Preservation Officer approval (Through the Section 106 Process)

City of New London

- City of New London Coastal Site Plan Review and Determination
- Local Building Permit (New London Building Official)

It should be noted that working through the Section 106 and Section 4(f) processes will add time and expense to the RITC design and development project. The project sponsor will need to work directly with the State Historic Preservation Officer, as well as with identified consulting parties, such as New London Landmarks, Inc. and the public. New London Landmarks is a non-profit corporation formed to promote the preservation and development of the urban environment of New London that was originally founded in the 1970s to save the proposed demolition of Union Station. The sponsor must show an effort was made to minimize harm and that all prudent and feasible alternatives to avoid an adverse effect were made. The assessment of prudent and feasible alternatives may include revisiting the alternatives of placing the bus terminal located west of Water Street on the site of the existing Water Street Parking Garage.

10. Implementation Issues 10-1

10.1 Management, Governance and Operational Considerations 10-1
10.1.1. Governance Options 10-1
10.1.2. RITC Ownership and Governance Recommendations 10-2
10.1.3. Operational and Informational/Marketing Improvements 10-3
10.2 Funding for Short Term RITC Improvements 10-4
10.3 Next Steps 10-4

10. Implementation Issues

The project to create an enhanced Regional Intermodal Transportation Center would need substantial funding, a lead agency that could own and build the project and coordination among the various transportation providers. This chapter addresses the management, governance and operation of the Regional Intermodal Transportation Center, the need for capital and operational funding, and the steps necessary to implement the short term improvements envisioned in the Master Plan.

10.1 Management, Governance and Operational Considerations

The RITC encompasses a variety of modes and both public and private interests. The Master Plan reflects the goals of the study to make intermodal travel more seamless and to increase the integration and coordination of modes at the RITC. In doing so, it envisions enhanced facilities for intermodal transfer involving both initial capital (construction and equipment) costs and ongoing operating and maintenance costs. As the specific improvements in the Master Plan were developed, the question arose as to how an improved RITC would be governed, that is who would lead the implementation of the master plan, own the facility, make policies, manage it, fund it, operate it and maintain it.

10.1.1. Governance Options

Governance of the RITC should promote the provision of good service to the customers of the center, and provide a reasonable income to its owners. Customers should be served by safe and well-maintained routes between parking and train, bus and ferry services, good wayfinding information to guide travelers, and convenient and up-to-date schedule information for the various modes located throughout the RITC area. The short term improvements envisioned in the Master Plan will benefit passengers using the various RITC modes, including the additional commuter rail passengers expected to use the station with the introduction of expanded Shore Line East service. Better wayfinding will help to facilitate intermodal connections and help downtown visitors to find their way to the station and the ferry facilities and transportation users find their way to downtown businesses.

The major beneficiaries of additional travelers at the RITC will be:

1) The operators of the various passenger transportation modes at the facility (Greyhound, SEAT, Amtrak, Shore Line East, Cross Sound Ferry, taxis, etc.)
2) Parking facility owners (primarily the City which currently owns the Water Street Garage)
3) The owner of Union Station should benefit by an increase in travelers that would enable it to lease space for fast food or a coffee shop on the first floor. In the future if commuter rail proves to be attractive, there may be an increased opportunity to develop the upper floors at Union Station as offices or as condominium units. In addition, the owner could benefit from leasing space to SEAT.
4) Local businesses – through increased patronage

While some elements of the RITC would continue to be owned, managed and operated by individual entities, there will likely be a need for coordination among the various transportation operators and for shared funding of some elements. In addition, there will need to be an entity assigned to maintain the proposed pedestrian bridge over the rail tracks, particularly if it extends to the Water Street Parking Garage and the Cross Sound ferry terminal which are owned by the City and the ferry company, respectively.

As part of the study, research was conducted on the types of governance at other intermodal transportation centers in Connecticut and around the country and the special provisions put in place to finance operation of those centers as one step towards developing a governance recommendation that would complement the physical plan recommendations developed as part of the RITC Master Plan. This effort is documented in Appendix K. Several primary organizational models of governance were identified that involved varying assignments of ownership, funding, and management responsibilities among stakeholders/partners. They included:

- Single Existing Public Entity
- Coordination among Several Existing Entities
- New Special-Purpose Entity
- Existing Private Developer/Company

The recommended governance structure outlined below is a combination of the first three options.

10.1.2. RITC Ownership and Governance Recommendations

The recommended governance structure is as follows:

- The rail station, bus station and pedestrian bridge should be owned by the State.
- The ferry facilities would remain under separate ownership, that is, by the ferry operators.
- The Water Street Garage could either remain under separate ownership by the City or could be purchased by the State.
- A new authority or district is not likely to be needed in this case, but an association of key stakeholders would be advisable to integrate customer services including schedule information and wayfinding and to ensure collaboration during implementation and on an ongoing basis.

It is recommended that the State of Connecticut Department of Transportation (ConnDOT) play a lead role in the RITC improvements, given the State's interest in providing high quality rail connections in New London, including the expansion of its Shore Line East commuter rail service, promoting bus transit services, and ensuring safe and efficient pedestrian crossings of the railroad right-of-way. It is recommended that the State purchase the Union Station property in its entirety in order to assure continued public use of the improvement and eligibility for FTA funding. This would have to be accomplished through negotiation with the private owner to purchase the property or, alternatively, enter into a long term lease. (A long-term lease could be for the entire property or could be limited to the first floor and the surrounding area needed for the bus terminal and pedestrian bridge[1].) ConnDOT has also indicated that any purchase of Union Station by the State may need to be accompanied by a purchase or lease of the Water Street Parking Garage currently owned by the City in order to ensure a revenue stream to cover operating and maintenance costs (the garage operating income does exceed its operating expenses). In that case, negotiations with the City would also be needed. (It is a common approach to link the train station to the source of parking revenue as is the case in New Haven, Hartford and Stamford.) However, since the Water Street Garage serves multiple purposes, arrangements would need to be made to ensure continued use for non-transportation purposes if ConnDOT purchased the garage.

[1] In the case of a limited lease provisions would need to be made to provide for parking for private development of the upper floors; perhaps an arrangement could be made to provide dedicated parking for this purpose in the Water Street Garage.

In addition to acquiring Union Station, ConnDOT would also be responsible for building the new bus terminal (which would then be leased to SEAT and Greyhound) and would be responsible for building the pedestrian bridge.

The ferry facilities would continue to be owned by the ferry companies and Cross Sound Ferry would be expected to fund improvements to the ferry facilities, such as the High Speed Ferry terminal it has proposed in the past, as well as the recommended improvements to pedestrian and vehicular circulation and parking on its property.

In order to ensure that public information is coordinated and that the various stakeholders of the RITC are involved in the continued improvements in the area, it is suggested that an RITC Association be established to advise ConnDOT on implementation of the center and to agree on a plan for dissemination of public information for the RITC. Formation of this group may be an important first step toward implementation of the Master Plan. The principal membership of this Association would be the transportation providers, the City and Connecticut DOT and any private owner if private property is involved. A private non-profit organization could be set up with a Board of Directors that includes representatives of the City of New London, the Council of Governments, SEAT, Union Station Associates (if they were still an owner of the property), the ferry operators, Greyhound, and the local taxi companies. To cover expenses of its activities, each would be asked to contribute funding to the coordinating body, in relation to the benefits expected from the improved RITC. For example, if the City of New London retained ownership of the Water Street Garage, it could pledge a portion of new parking revenues to support the work of the RITC Association. The RITC Association might take on activities such as contracting to have informational kiosks installed at different points in the RITC, or contracting with a marketing firm to develop a brochure which shows all the services at the RITC. Staff could be provided to the RITC Association as an in-kind service from the City or SEAT.

The precise structure of such an association will need to be developed through discussions among the members.

10.1.3. Operational and Informational/Marketing Improvements

Responsibilities of this association would likely include arrangements for ongoing operational coordination (e.g., schedule coordination, information sharing, joint marketing and ticketing, etc.), sharing of maintenances responsibilities for intermodal linkages and longer term planning for the RITC. These are described below:

Schedule Coordination and Static Information Sharing - Schedule coordination opportunities are likely to be limited particularly given New London's position as an intermediate bus and rail stop and SEAT's current multi-hub system. However there is potential for static information sharing, e.g., posting Amtrak, SLE, CS Ferry, FI Ferry, SEAT and Greyhound schedules in the Union Station lobby, bus terminal and ferry terminals (each operator could produce schedules for posting at other locations so updates involve only one piece and not an entire display).

Real-Time Information Sharing on Delays and Service Adjustments - While Amtrak has an online system and ferries know the status of all trips, the other operators may not have real time information. An RITC Association would need to address the issue to develop a system allowing operators to post information (or tie into existing systems such as Amtrak).

Joint Ticketing - Joint ticketing opportunities are mostly likely for ferry service in combination with Amtrak, Shore Line East and Greyhound. Greyhound might also be able to handle SEAT pass sales under a contract arrangement.

Joint Marketing and Pre-Trip Customer Information - Opportunities for joint marketing and pre-trip customer information are most likely for the ferries in combination with Amtrak, SLE and Greyhound.

Sharing of Maintenance Responsibilities for Linkages - Individual entities could be assigned specific responsibilities or there could be a jointly-funded cleaning/maintenance contractor.

Longer Term Planning - An association would provide a forum for longer term planning to meet future needs and continue the process of developing improvements to intermodal linkages.

10.2 Funding for Short Term RITC Improvements

ConnDOT is currently seeking an earmark for improvements at Union Station and has obtained an amount of $7 M in the current draft of the transportation reauthorization bill, somewhat less than had been sought. Even if this funding is ultimately secured, additional funding will be necessary to implement the short term improvements. Transportation Enhancement Funding once reauthorized may be an additional source. Federal funds will require local shares and the State looks to municipal entities to supply local shares. Development of a funding plan was not part of the scope of this study but is an important next step.

10.3 Next Steps

This *Master Plan and Efficiency Study* identified a short term Preferred Alternative, comprised of both immediate and short term improvements, as well as a Fallback Minimum Construction Alternative that would be less costly. The Master Plan recommends that the State take a lead role in owning and building the facility with the support and ongoing guidance of an association of key stakeholders including the City of New London and the transportation providers. Much remains to be done to implement the study findings.

The next steps to advance the project include the following:

- *City endorsement of study findings* – Implementation of the proposed improvements would require approval of the City of New London. The Parade, the Water Street Garage and the location of Water Street itself would be impacted by the improvements. The project would also clearly have visual, environmental, transportation and economic impacts on the city as a whole. While City staff and elected officials participated as stakeholders in the study, City Council endorsement is important in order to advance the project. City building permits will also be required.

- *Coordinate with the Connecticut Department of Transportation* – As the most likely lead agency and ultimate owner/operator of much of the RITC, ConnDOT will need to begin to take the lead role in advancing the project.

- *Form an association to continue key stakeholder involvement* – The formation of an RITC Association will be critical to maintain the momentum developed by this study and to continue the involvement of the numerous stakeholders. The Association could initially take the form of an

informal advisory group to SCCOG and ConnDOT, but could eventually evolve into a more formal organization with responsibility for marketing, information, operations and planning.

- *Pursue funding opportunities and develop a detailed financial plan* – The proposed earmark, if obtained, would provide funding for only part of the project. Additional funding sources would be required. Local matching funds would also be required for most funding sources. A source of operating funding for the facility would also be needed, possibly including of rental income from the operators, contributions from the RITC association, parking revenues and/or other sources.

- *Negotiate with the property owners to acquire or lease the necessary properties* – State ownership of much of the RITC is recommended; however, the cost to acquire or lease Union Station can only be determined through negotiation with the private owner. Also, the State and City would have to negotiate a price for the garage if ownership is to be transferred.

- *Develop more detailed facility designs and conduct required environmental studies* – The Master Plan includes only design concepts for the RITC. More detailed preliminary design and environmental studies will be necessary to advance the project before final design can begin and environmental permits obtained.

Appendix A: Fort Trumbull Municipal Development Plan, Section 3.5, Environmental Conditions

3.5 Environmental Conditions

3.5.1 Environmental Evaluation

The Fort Trumbull MDP Area Final Environmental Impact Evaluation (EIE) and associated Record of Decision (ROR) dated March, 1999 is incorporated herein by reference. An areawide Phase I Environmental Site Assessment of the MDP area was performed in order to assess the environmental risk associated with the redevelopment of properties. Parcel histories were obtained using historical City directories and topographic maps (Connecticut State Library), Sanborn Fire Insurance Company maps (New England DataMap Technology Corporation – NEDT), and historical aerial photographs (Connecticut Department of Environmental Protection – CTDEP). These data were used to determine prior occupants and activities for each parcel in the MDP area and potential environmental concerns for later Phase II prioritization.

Appendix B: ADA Compliance

This appendix contains ADA surveys for each of the following facilities conducted by the consultant team (i.e., by URS Corporation under a subcontract) in December 2008:

1. Union Station
2. Greyhound Bus Terminal
3. SEAT Bus Stop
4. Cross Sound Ferry Terminal
5. Fishers Island Ferry Terminal
6. Water Street Parking Garage
7. Governor Winthrop Municipal Parking Garage
8. North Eugene O'Neill Drive Surface Parking Lot
9. South Eugene O'Neill Drive Surface Parking Lot
10. Julian Parking Lot

ADA SURVEY - UNION STATION (35 Water Street, New London, CT)

CUSTOMER SITE ACCESS

1. Accessible Route: Pedestrian safety and access improvements to Union Station are under construction: Reference, Sheet SD.10 dated 2-19-08, Pedestrian Safety and Access Improvement to the Intermodal Transportation Facility. Construction includes the following:
    a. Accessible route from the Water Street Garage, State Street, Atlantic Street, Bank Street and South Water Street.
    b. Union Station drop off vehicle parking area
    c. Bus parking at Bus Station
2. Entrance Doors and Doorway:
   Dimensions:
    d. The existing door opening, maneuvering clearances on push and pull, threshold heights and door clearances between hinged door and doors open to 90 degrees and are ADA compliant.
3. Other requirements:
    e. Pulls, latches, door closers are ADA compliant

CUSTOMER LOBBY

1. Accessible Route:
    a. Accessible route to connect accessible building entrance with accessible lobby facilities is compliant.
    b. Running slopes/change in levels are compliant
    c. The clear width of walking surfaces are compliant
    d. No objects protrude into the circulation path
    e. Maneuvering clearances on swinging doors are compliant
2. Accessible Service Counter:
    a. The existing service counter is accessible. A portion of the counter surface is 36" length and 36" AFF.
3. Accessible Vending Machines
    a. All vending machines and ATM machines are accessible. The maximum height of any operable part is 48".

MISCELLANEOUS ELEMENTS

1. Ramps
    a. Water Street (Front Entrance) ramp dimensions, ramp landings, handrails and edge protection are complaint.
2. Stairs (Along path of emergency egress)
    a. Stair treads and risers and handrails are compliant.
3. Doors (Along an accessible path)
    a. Doors openings, maneuvering clearance, pulls, latches and door closers are compliant.

MENS RESTROOMS

1. Doors
    a. Restroom entrance door is ADA compliant

TOILET ROOM

2. Clearances

b. Turning space is compliant.

3. Lavatories and Sinks
   a. Lavatories and sinks mounting heights and clearances are ADA compliant
4. Mirror
   a. Mirror located above lavatory countertop is not compliant, the bottom of the mirror is higher than 40" AFF.
5. Towel Dispenser
   a. Electric Hand Blowers are ADA compliant.

ACCESSIBLE WATER CLOSET

6. Size and Dimensions
   a. Water closet is ADA compliant
7. Grab Bar and Accessories
   a. Grab bars and accessories are ADA complaint
8. Accessible Urinals
   b. Urinals are ADA compliant

WOMENS RESTROOM

1. Doors
   a. Restroom entrance door is ADA compliant

TOILET ROOM

2. Clearances
   a. Turning space is compliant.
3. Lavatories and Sinks
   b. Lavatories and sinks mounting heights and clearances are ADA compliant
4. Mirror
   a. Mirror located above lavatory countertop is not compliant, the bottom of the mirror is higher than 40" AFF.
6. Towel Dispenser
   a. Electric Hand Blowers are ADA compliant.

ACCESSIBLE WATER CLOSET

7. Size and Dimensions
   a. Water closet is ADA compliant
8. Grab Bar and Accessories
   a. Grab bars and accessories are ADA complaint

EMPLOYEE AREAS

ACCESSIBLE EMPLOYEE ENTRANCE

1. Dimensions
   a. Door opening clearances, maneuvering clearances, pull, latches and closers are complaint
2. Accessible Routes – Workroom
   a. Accessible route, running slope, change in elevation, clear width of walking surfaces and protruding objects into the circulation path are compliant

EMPLOYEE SITE ACCESS

ACCESSIBLE ROUTES

1. Routes

a. Accessible route from employee parking to employee entrance not compliant.

2. Walking Surface
   a. Parking surface not compliant (no paving).
3. Parking Spaces
   a. No accessible employee parking spaces
4. Vehicle Spaces
   a. No accessible car or van spaces
5. Surface Slope and Clearance
   a. Not compliant at employee parking area
6. Parking Identification
   a. No International Symbol of accessibility or signage indentifying van accessibility.
7. Passenger Loading Zone
   a. No passenger loading zone

ADA SURVEY – GREYHOUND BUS TERMINAL (Water Street, New London, CT)

CUSTOMER SITE ACCESS

1. Accessible Route: Pedestrian safety and access improvements to Union Station are under construction: Reference, Sheet SD.10 dated 2-19-08, Pedestrian Safety and Access Improvement to the Intermodal Transportation Facility. Construction includes the following:
    a. Accessible route from the Water Street Garage, State Street, Atlantic Street, Bank Street and South Water Street.
    b. Union Station drop off vehicle parking area
    c. Bus parking at Bus Station
2. Entrance Doors and Doorway:
    a. Dimensions:
    b. The existing door opening, maneuvering clearances on push and pull, threshold heights and door clearances between hinged door and doors open to 90 degrees and are ADA compliant.
3. Other requirements:
    a. Pulls, latches, door closers are ADA compliant

CUSTOMER LOBBY

3. Accessible Route:
    a. Accessible route to connect accessible building entrance with accessible lobby facilities is compliant.
    b. Running slopes/change in levels are compliant
    c. The clear width of walking surfaces are compliant
    d. No objects protrude into the circulation path
    e. Maneuvering clearances on swinging doors are compliant
4. Accessible Service Counter:
    a. The existing service counter is not accessible
5. Accessible Vending Machines
    a. All vending machines and ATM machines are accessible. The maximum height of any operable part is 48".

MISCELLANEOUS ELEMENTS

1. Doors (Along an accessible path)
    a. Doors openings, maneuvering clearance, pulls, latches and door closers are compliant.

MENS RESTROOMS

1. Doors
    a. Restroom entrance door is ADA compliant

TOILET ROOM

2. Clearances
    a. Turning space is compliant.
3. Lavatories and Sinks
    c. Lavatories and sinks mounting heights and clearances are ADA compliant
4. Mirror
    a. Mirror located above lavatory countertop is compliant
5. Towel Dispenser

b. Towel dispenser is not compliant (57" AFF max permitted 54"AFF)

ACCESSIBLE WATER CLOSET

6. Size and Dimensions
   a. Water closet is ADA compliant
7. Grab Bar and Accessories
   a. Grab bars and accessories are ADA complaint

WOMENS RESTROOM

1. Doors
   b. Restroom entrance door is ADA compliant

TOILET ROOM

2. Clearances
   a. Turning space is compliant.

3. Lavatories and Sinks
   d. Lavatories and sinks mounting heights and clearances are ADA compliant
4. Mirror
   a. Mirror located above lavatory countertop is compliant.
5. Towel Dispenser
   b. Towel dispenser is not compliant (57" AFF max permitted 54"AFF)

ACCESSIBLE WATER CLOSET

6. Size and Dimensions
   a. Water closet is ADA compliant
7. Grab Bar and Accessories
   a. Grab bars and accessories are ADA complaint

EMPLOYEE AREAS

ACCESSIBLE EMPLOYEE ENTRANCE

1. Dimensions
   b. Door opening clearances, maneuvering clearances, pull, latches and closers are complaint
2. Accessible Routes – Workroom
   a. Accessible route to workroom is not compliant (change in level is 5", curb ramp required).

EMPLOYEE SITE ACCESS

ACCESSIBLE ROUTES

3. Accessible Route: Pedestrian safety and access improvements to Union Station are under construction: Reference, Sheet SD.10 dated 2-19-08, Pedestrian Safety and Access Improvement to the Intermodal Transportation Facility.

ADA SURVEY -- SEAT BUS STOP (Water Street, New London, CT)

CUSTOMER SITE ACCESS

1. Accessible Route: Pedestrian safety and access improvements to Union Station are under construction: Reference, Sheet SD.10 dated 2-19-08, Pedestrian Safety and Access Improvement to the Intermodal Transportation Facility. Construction includes the following:
    a. Accessible route from the Water Street Garage, State Street, Atlantic Street, Bank Street and South Water Street.
    b. Union Station drop off vehicle parking area
    c. Bus parking at Bus Station
2. Access:
   Dimensions:
    a. Boarding/alighting area, surface, and slope are compliant.
   Connection:
    b. Bus stop boarding and alighting is not connected to street with required curb ramp.
3. Bus signs:
    a. Signage is code compliant
4. Bus Shelter:
    b. Shelter provides required ground space clearance within the shelter.

ADA SURVEY - CROSS SOUND FERRY TERMINAL (Ferry Street/City Pier, New London, CT)

CUSTOMER SITE ACCESS

ACCESSIBLE ROUTE

1. No accessible route is provided from building entrance to parking spaces, no passenger loading zone is provided.
2. Walking Surface
    a. Walking surface is compliant

PARKING SPACES

3. Scoping Requirements
    a. Parking spaces are not marked, no accessible parking is provided
4. Vehicle Space
    a. No van parking space is provided
5. Access Aisles
    a. No access aisles are provided to the accessible route.
6. Surface Slope and Clearance
    b. Surface slope and clearance are compliant
7. Parking Identification
    a. No accessible parking space and passenger loading identification is provided
8. Entrance Doors and Doorway:
    f. The existing door opening, maneuvering clearances on push and pull, threshold heights and door clearances between hinged door and doors open to 90 degrees and are ADA compliant.
9. Other requirements:
    g. Pulls, latches, door closers are ADA compliant

CUSTOMER LOBBY

1. Accessible Route:
    a. Accessible route to connect accessible building entrance with accessible lobby facilities is compliant.
    b. Running slopes/change in levels are compliant
    c. The clear width of walking surfaces are compliant
    d. No objects protrude into the circulation path
    e. Maneuvering clearances on swinging doors are compliant
2. Accessible Service Counter:
    a. The existing service counter is not accessible, no portion of the service countertop is 36 " min long and 36 " high,
3. Accessible Vending Machines
    a. All vending machines and ATM machines are accessible. The maximum height of any operable part is 48".

MISCELLANEOUS ELEMENTS

RAMP

1. Ramp is compliant.
2. Ramp Landing
    a. Ramp landing is compliant

3. Handrails
    a. Handrail is not compliant (cross section is not circular)
4. Doors (Along an accessible path)
    a. Doors openings, maneuvering clearance, pulls, latches and door closers are compliant.

STAIRS (ALONG PATH OF EMERGENCY EGRESS)

1. Treads and Risers
    a. Treads and risers are compliant
2. Handrails
    a. Handrails are not compliant
       (Top of handrail to high 44" max. permitted 38")
    b. Cross section of handrail is compliant.
       (Outside dia. is not 1.25"min – 2"max.)
3. Drinking Fountains
    a. Drinking fountains are compliant.
4. ATM Machines
    a. ATM machines are compliant

MENS RESTROOMS

1. Doors
    a. Restroom entrance door is ADA compliant

TOILET ROOM

2. Clearances
    a. Turning space is compliant.
3. Lavatories and Sinks
    a. Lavatories and sinks mounting heights and clearances are ADA compliant
4. Mirror
    a. Mirror located above lavatory is not compliant
       (Mirror is 50" aff , max permitted 40" aff.)
5. Towel Dispenser
    a. Towel dispenser is compliant.

ACCESSIBLE WATER CLOSET

6. Size and Dimensions
    a. Water closet is ADA compliant
7. Grab Bar and Accessories
    a. Grab bars and accessories are ADA complaint

WOMENS RESTROOM

1. Doors
    a. Restroom entrance door is ADA compliant

TOILET ROOM

2. Clearances
    a. Turning space is compliant.
3. Lavatories and Sinks
    a. Lavatories and sinks mounting heights and clearances are ADA compliant
4. Mirror

a. Mirror located above lavatory is not compliant
(Mirror is 50" aff, max permitted 40" aff.)

5. Towel Dispenser
    a. Towel dispenser is compliant.

ACCESSIBLE WATER CLOSET

6. Size and Dimensions
    a. Water closet is ADA compliant
7. Grab Bar and Accessories
    a. Grab bars and accessories are ADA complaint

EMPLOYEE AREAS

ACCESSIBLE EMPLOYEE ENTRANCE

1. Dimensions
    a. Door opening clearances, maneuvering clearances, pull, latches and closers are compliant
2. Accessible Routes – Workroom
    a. Accessible route to workroom is compliant.

EMPLOYEE SITE ACCESS

ACCESSIBLE ROUTES: See Customer Site Access

ADA SURVEY - FISHERS ISLAND FERRY TERMINAL (City Pier, New London, CT)

CUSTOMER SITE ACCESS

ACCESSIBLE ROUTE

1. Accessible route is provided from building entrance to accessible parking spaces, no passenger loading zone is provided.
2. Walking Surface
    a. Walking surface is compliant except for change in sidewalk elevation at entrance.

PARKING SPACES

3. Scoping Requirements
    a. Adequate number of accessible parking spaces is provided
4. Vehicle Space
    a. Van parking space is required, should be 11'0" wide minimum.
5. Access Aisles
    a. Access aisles are required to be 5 feet wide minimum and are connected to the accessible route.
6. Surface Slope and Clearance
    a. Surface slope and clearance are compliant
7. Parking Identification
    a. Accessible parking space identification is compliant, no van accessible sign is provided
8. Entrance Doors and Doorway:
    a. The existing door opening, maneuvering clearances on push and pull, threshold heights and door clearances between hinged door and doors open to 90 degrees and are ADA compliant.
9. Other requirements:
    a. Pulls, latches, door closers are ADA compliant

CUSTOMER LOBBY

1. Accessible Route:
    a. Accessible route to connect accessible building entrance with accessible lobby facilities is compliant.
    b. Running slopes/change in levels are compliant
    c. The clear width of walking surfaces are compliant
    d. No objects protrude into the circulation path
    e. Maneuvering clearances on swinging doors are compliant
2. Accessible Service Counter:
    a. The existing service counter is not accessible, no portion of the service countertop is 36 " min long and 36 " high,
3. Accessible Vending Machines
    a. All vending machines and ATM machines are accessible. The maximum height of any operable part is 48".

MISCELLANEOUS ELEMENTS

1. Ramp
    a. Ramps at main entrance are not compliant. (8.33 max pitch permitted, existing is 9.4%).
2. Ramp Landing
    a. Ramp landing is compliant

3. Handrails
    a. Handrails are not provided at either entrance ramp.
4. Doors (Along an accessible path)
    a. Doors openings, maneuvering clearance, pulls, latches and door closers are compliant.
5. Stairs (No stairs are present along path of emergency egress).
6. Drinking Fountains
    a. Drinking fountains are compliant.

MENS RESTROOMS

1. Doors
    a. Restroom entrance door is ADA compliant

TOILET ROOM

2. Clearances
    a. Turning space is compliant.
3. Lavatories and Sinks
    a. Lavatories and sinks mounting heights and clearances are ADA compliant
4. Mirror
    a. Mirror located above lavatory countertop is compliant
5. Towel Dispenser
    a. Towel dispenser is compliant .

ACCESSIBLE WATER CLOSET

6. Size and Dimensions
    a. Water closet is ADA compliant
7. Grab Bar and Accessories
    a. Grab bars and accessories are ADA complaint

WOMENS RESTROOM

1. Doors
    1. Restroom entrance door is ADA compliant

TOILET ROOM

2. Clearances
    a. Turning space is compliant.
3. 3. Lavatories and Sinks
    b. Lavatories and sinks mounting heights and clearances are ADA compliant
4. 4. Mirror
    a. Mirror located above lavatory countertop is compliant.
5. 5. Towel Dispenser
    c. Towel dispenser is compliant.

ACCESSIBLE WATER CLOSET

6. Size and Dimensions
    a. Water closet is ADA compliant
7. Grab Bar and Accessories
    a. Grab bars and accessories are ADA complaint

EMPLOYEE AREAS

ACCESSIBLE EMPLOYEE ENTRANCE

1. Dimensions
    a. Door opening clearances, maneuvering clearances, pull, latches and closers are complaint
2. Accessible Routes – Workroom
    a. Accessible route to workroom is compliant.

EMPLOYEE SITE ACCESS

ACCESSIBLE ROUTES: See Customer Site Access

ADA SURVEY - WATER STREET MUNICIPAL PARKING GARAGE (Water Street, New London, CT)

CUSTOMER SITE ACCESS

ACCESSIBLE ROUTE

1. Accessible Route: Pedestrian safety and access improvements to Union Station are under construction: Reference, Sheet SD.10 dated 2-19-08, Pedestrian Safety and Access Improvement to the Intermodal Transportation Facility. Construction includes the following:
   a. Accessible route from the Water Street Garage, State Street, Atlantic Street, Bank Street and South Water Street.
   b. Union Station drop off vehicle parking area
   c. Bus parking at Bus Station
   d. Elevator and Stair Lobby from Water Street Garage to Union Station
2. Accessible route is provided from building entrance to 13 HC spaces at the lower level. Upper level 3 HC spaces are not accessible
3. No Van accessible space is provided
4. Walking Surface
   a. Walking surface is compliant

PARKING SPACES

5. Scoping Requirements
   a. Accessible parking spaces are provided
      - 16 HC spaces provided, no van accessible types.
      (Based on 975 parking spaces- 20 HC spaces are required, including 3 van accessible)
      - Of the 16 existing HC spaces, 13 are compliant
6. Access Aisles
   a. Access aisles are compliant on the lower level
   b. Access aisles are not compliant on the upper level
7. Surface Slope and Clearance
   a. Surface slope and clearance are not compliant
8. Parking Identification
   a. Parking signage is not compliant
9. Curb Ramps
   a. Curb ramps are not compliant
10. Entrance Doors and Doorway:
    a. The existing door opening, maneuvering clearances on push and pull, threshold heights and door clearances between hinged door and doors open to 90 degrees and are ADA compliant.
11. Other requirements:
    a. Pulls, latches, door closers are ADA compliant

CUSTOMER LOBBY

1. Accessible Route:
   a. Accessible route to connect accessible building entrance with accessible lobby facilities is not compliant. (curb ramp required , change in level of 6")
   b. Running slopes/change in levels are compliant
   c. The clear width of walking surfaces are compliant
   d. No objects protrude into the circulation path
   e. Maneuvering clearances on swinging doors are compliant

2. Accessible Service Counter:
   a. No service counter is provided
3. Accessible Vending Machines
   a. No vending machines provided.

MISCELLANEOUS ELEMENTS

STAIRS (IF PRESENT ALONG PATH OF EMERGENCY EGRESS)

1. Treads and Risers
   a. Treads and Risers are compliant
2. Handrails
   a. Handrails are not compliant
      (Cross section of handrails is not compliant)

TOILET ROOMS

3. Toilet rooms are not provided

TICKET GATES

4. All entrance/exit gates are accessible

ELEVATORS

5. All existing elevators are not operable

EMPLOYEE AREAS

ACCESSIBLE EMPLOYEE ENTRANCE

1. Dimensions
   a. Door opening clearances, maneuvering clearances, pull, latches and closers are complaint
2. Accessible Routes – Office
   a. Accessible route to workroom is not compliant.
   (Curb ramp required for access to workroom)

EMPLOYEE SITE ACCESS

ACCESSIBLE ROUTES: See Customer Site Access

ADA SURVEY – GOV. WINTHROP PARKING GARAGE (Governor Winthrop Boulevard, New London, CT)

CUSTOMER SITE ACCESS

ACCESSIBLE ROUTE

1. Accessible route is provided from building entrance to 2 HC spaces on the lower level, 4 at the middle level and 1 at the upper level. All 7 HC spaces are not accessible or compliant.
2. No Van accessible space is provided
3. Walking Surface
    a. Walking surface is compliant

PARKING SPACES

4. Scoping Requirements
    a. Accessible parking spaces are provided
    7 HC spaces provided, no van accessible types.
    (Based on 400 parking spaces- 8 HC spaces are required, including 1 van accessible)
5. Access Aisles
    a. Access aisles are not compliant.
6. Surface Slope and Clearance
    a. Surface slope and clearance are not compliant
7. Parking Identification
    a. Parking signage is not compliant
8. Curb Ramps
    a. Curb ramps are not compliant
9. Entrance Doors and Doorway:
    a. The existing door opening, maneuvering clearances on push and pull, threshold heights and door clearances between hinged door and doors open to 90 degrees and are ADA compliant.
10. Other requirements:
    a. Pulls, latches, door closers are ADA compliant

CUSTOMER LOBBY

1. Accessible Route:
    a. Accessible route to connect accessible building entrance with accessible lobby facilities is not compliant. (curb ramp required, change in level of 6")
    b. Running slopes/change in levels are compliant
    c. The clear width of walking surfaces are compliant
    d. No objects protrude into the circulation path
    e. Maneuvering clearances on swinging doors are compliant
2. Accessible Service Counter:
    a. No service counter is provided
3. Accessible Vending Machines
    a. No vending machines provided.

MISCELLANEOUS ELEMENTS

STAIRS (IF PRESENT ALONG PATH OF EMERGENCY EGRESS)

1. Treads and Risers

a. Treads and Risers are compliant

2. Handrails

a. Handrails are not compliant
(Cross section of handrails is not compliant)

TOILET ROOMS

1. Toilet rooms are not accessible to the public.

TICKET GATES

1. All entrance/exit gates are accessible

ELEVATORS

1. All existing elevators are not operable

EMPLOYEE AREAS

ACCESSIBLE EMPLOYEE ENTRANCE

1. Dimensions

a. Door opening clearances, maneuvering clearances, pull, latches and closers are complaint

2. Accessible Routes – Office

a. Accessible route to workroom is compliant.

EMPLOYEE SITE ACCESS

ACCESSIBLE ROUTES: See Customer Site Access

ADA SURVEY - NORTH EUGENE O'NEILL DRIVE PARKING LOT (Eugene O'Neil Drive, New London, CT)

CUSTOMER SITE ACCESS

ACCESSIBLE ROUTE

1. Accessible route is not provided for HC spaces
2. Van accessible space is not provided
3. Walking Surface
    a. Walking surface is compliant

PARKING SPACES

4. Scoping Requirements
    a. HC parking spaces are provided
        - 2 HC and no Van Accessible space
        - 8HC including 1 van accessible space is the minimum requirement based on 112 existing spaces.
5. Access Aisles
    a. HC Access aisles are not compliant
    b. Van access aisles are not provided
6. Surface Slope and Clearance
    a. Surface slope and clearance are compliant
7. Parking Identification
    a. HC parking signage is not compliant
    b. Van accessible signage is not provided

EMPLOYEE SITE ACCESS

ACCESSIBLE ROUTES: See Customer Site Access

ADA SURVEY -SOUTH EUGENE O'NEILL DRIVE PARKING LOT (Eugene O'Neil Drive, New London, CT)

CUSTOMER SITE ACCESS

ACCESSIBLE ROUTE

1. Accessible route is not provided for HC spaces
2. Van accessible space is not provided
3. Walking Surface
    a. Walking surface is compliant

PARKING SPACES

4. Scoping Requirements
    a. HC parking spaces are provided
        - 4 HC and no Van Accessible space
        - 8HC including 1 van accessible space is the minimum requirement based on 126 existing spaces.
5. Access Aisles
    a. HC Access aisles are not compliant
    b. Van access aisles are not provided
6. Surface Slope and Clearance
    a. Surface slope and clearance are compliant
7. Parking Identification
    a. HC parking signage is not compliant
    b. Van accessible signage is not provided

EMPLOYEE SITE ACCESS

ACCESSIBLE ROUTES: See Customer Site Access

ADA SURVEY - JULIAN PARKING LOT (Water Street, New London, CT)

CUSTOMER SITE ACCESS

ACCESSIBLE ROUTE

1. Accessible Route: Pedestrian safety and access improvements to Union Station are under construction: Reference, Sheet SD.10 dated 2-19-08, Pedestrian Safety and Access Improvement to the Intermodal Transportation Facility. Construction includes the following:
    a. Accessible route from the Water Street Garage, State Street, Atlantic Street, Bank Street and South Water Street.
    b. Union Station drop off vehicle parking area
    c. Bus parking at Bus Station
    d. Elevator and Stair Lobby from Water Street Garage to Union Station
2. Accessible route is provided for HC spaces
    a. Van accessible space is not provided
3. Walking Surface
    a. Walking surface is not compliant

PARKING SPACES

4. Scoping Requirements
    a. Accessible parking spaces are provided
    b. 5 HC and no Van Accessible spaces provided.
        i. (Based on 103 existing spaces, 8HC including 1 van accessible space is the minimum requirement).
5. Access Aisles
    a. HC Access aisles are not compliant
    b. Van access aisles are not provided
6. Surface Slope and Clearance
    a. Surface slope and clearance are not compliant
7. Parking Identification
    a. HC parking signage is compliant
    b. Van accessible signage is not provided

EMPLOYEE SITE ACCESS

ACCESSIBLE ROUTES: See Customer Site Access

Interviews for the Market Analysis were conducted with:

1. Tony Sheridan, Chamber of Commerce of Eastern Connecticut
2. Susan Howard, US Properties
3. George Cihocki, US Properties
4. Charlotte Hennigan, Thames River Greenery
5. John Markowicz, Southeastern Connecticut Enterprise Region (SECTER)
6. Bill Cornish, 130 State Street
7. Michael Joplin, New London Development Corporation
8. John Brooks, New London Development Corporation
9. Bill Newman, CT Commercial Realty
10. Christopher A. Jennings, President, Mystic Coast Country
11. Frank McLaughlin, New London Main Street
12. Jerry Sinnamon, New London Main Street
13. Barry L. Runyan, New London Main Street
14. Barun K. Basu, New London Main Street
15. Todd O'Donnell, Union Station
16. Barbara Timken, Union Station
17. Susan Munger, New London Landmarks
18. Sandra Kersten Chalk, New London Landmarks
19. Tom Stone, Greyhound
20. Kip Bochain, Parking Commission
21. George Cassidy, Connecticut's Port of New London
22. Martin Berliner, City Manager of City of New London
23. Kevin Cavanaugh, Mayor, City of New London
24. Len Wolman, Waterford Group
25. Terry Bickhardt, Waterford Group
26. Brian Fox, Waterford Group
27. Mark Wolman, Waterford Group
28. Steve Segal, Garde Arts Center
29. Mark Easter, Fishers Island Ferry
30. Bruce Hyde, former City of New London employee
31. Ella Bowman, SEAT General Manager
32. Jim Martin, SEAT (Board Chairman during the study period)
33. Richard MacMurray, Cross Sound Ferry
34. Adam Wronowski, Cross Sound Ferry
35. Stan Mickus, Cross Sound Ferry

Appendix D:
Detailed Table of Advantages and Disadvantages of Short Term Alternatives

POTENTIAL IMPROVEMENT QUALITATIVE EVALUATION MATRIX - SHORT TERM ALTERNATIVES

Criterion	Alternative: SHORT TERM 1- SEAT & GH on east side of Water Street	SHORT TERM 2- SEAT & GH on west side of Water Street (off-street)	SHORT TERM 3- GH moves to west of Water Street, SEAT shifts southward to curent GH site	SHORT TERM 4- SEAT moves in front of Water Street Garage, GH stays at current site
Low Cost	4	2	3	2
	Lowest cost since limited to reconfiguring/enhancing existing area, including - canopy - expanded and renovated passenger terminal building - bus bays, curb and pavement improvements - some cost to building short term parking in front of Water Street Garage	Highest cost since involves reconstruction of garage and new facility on area on west side of Water Street including - canopy - new passenger terminal building for both SEAT/GH - new bus bays and medians in front of the garage - curb and pavement improvements and widening sidewalks on the east side of Water Street - reconfiguration of parking garage access/exit	Moderate cost since includes partial use of west side and renovation of GH building for SEAT - canopy - new passenger terminal building for GH/renovation of GH building for SEAT - some changes for GH bus bays - SEAT will require median and curbside changes	Highest cost since involves reconstruction of garage and new facility on area on west side of Water Street including - sawtooth bays for SEAT, pavement - new passenger terminal building for SEAT/ renovations of GH terminal building - GH bus bay improvements at current site - reconfiguration of parking garage access/exit
Easy to Implement	3	4	5	4
	- Difficult to phase -- GH and SEAT operations will be affected during construction (more for GH) - Area of curb and sidewalk affected is concentrated - Accomodating new building in the tight space next to exisitng GH building may offer some challenges	- GH and SEAT can continue to operate as is and would move once new facility is ready - Relocating one entrance to the parking garage would pose challenges - Significant amount of construction involved	Phasing is easy: - New GH site constructed, then GH moves and its old site can be renovated for SEAT, then SEAT can move	Phasing is possible for SEAT - GH operations may be affected during construction - Relocating one entrance to the parking garage would pose challenges - Significant amount of construction involved
Adaptable to Future Changes in Operational Needs	3	4	5	5
Tourist Circulator	Layout of facilities can accommodate Tourist Transit buses (northern parcel in front of Water St garage)	Layout of facilities can accommodate Tourist Transit buses (on east side of Water Street in pick-up/drop off area)	Accommodation of Tourist Transit buses may be possible on either SEAT site, or on west side of Water Street	Layout of facilities can accommodate Tourist Transit buses (pick-up/drop off area along east side sidewalk)
Other Modes	Would not be compatible with a footbridge at the originally proposed site.			
Taxi/Auto PU-DO	More constrained	Less constrained	Moderately constrained	Less constrained
Flexible to Accommodate Long Term Commercial Development	5	3	3	2
	Space in front of Water Street Garage may be reprogrammed for development provided that short term parking can be relocated	Space in front of Water Street Garage is occupied and may not be perceived to be available for future development. Old Greyhound terminal is available for reuse.	Part of space in front of Water Street garage is occupied and may not be perceived to be available for residential/commercial development	Part of space in front of Water Street garage is occupied and may not be perceived to be available for residential/commercial development
Compatibility with Bus terminal Long Term Concepts	5	2	3	2
	Works with all long term concepts	Least Compatible	Less Compatible	Least Compatible
Improves Safety and Convenience for Key Transfers	Key connections rated below	Key connections rated below	Key connections rated below	Key connections rated below
Taxi -Amtrak	3	5	4	5
Auto PU/DO- Rail	5	4	2	3
Auto PU/DO- GH	5	3	4	4
LI Ferry- GH	4	5	5	4
GH- SEAT	5	5	4	4
Overall	4.4	4.4	3.8	4
Enhances Pedestrian Environment and Safety	5	4	3	3
	- Pedestrian enhancements in all alternatives - All bus operations on same side of street, crossing is minimized - Impact on crosswalk between Water Street Garage and bus stops	- Pedestrian enhancements in all alternatives - Both sides of street mainly continuous sidewalk - Awkward directionality of lanes at relocated entrance to garage - Impact on northern edge of Parade project	- Pedestrian enhancements in all alternatives - Non-continuous sidewalk on west side of Water Street - Awkward directionality of lanes at center entrance to garage	- Pedestrian enhancements in all alternatives - Non-continuous sidewalk on west side of Water Street - Awkward directionality of lanes at relocated entrance to garage
Maintains or Enhances Traffic Operations/Safety	5	2	2	2
		Awkward travel lane configuration at relocated garage entrance	Awkward travel lane configuration at center garage entrance	Awkward travel lane configuration at relocated garage entrance
Enhances Wayfinding/Information	5	4	4	4
	- Wayfinding improvements in all alternatives - All bus operations on the same side of the street	- Wayfinding improvements in all alternatives	- Wayfinding improvements in all alternatives	- Wayfinding improvements in all alternatives

POTENTIAL IMPROVEMENT QUALITATIVE EVALUATION MATRIX - SHORT TERM ALTERNATIVES

Criterion	Alternative: SHORT TERM 1- SEAT & GH on east side of Water Street	SHORT TERM 2- SEAT & GH on west side of Water Street (off-street)	SHORT TERM 3- GH moves to west of Water Street, SEAT shifts southward to curent GH site	SHORT TERM 4- SEAT moves in front of Water Street Garage, GH stays at current site
Capacity to Accommodate Short Term RITC Operations:	Taxi queue would have to go further up State Street and would not have loading directly in front of Union Station.	Taxis would have front of Union Station plus 1st block of State Street for queuing.	Taxis would have part of Union Station plus 1st and 2nd block of State Street for queuing.	Taxis would have front of Union Station plus 1st block of State Street for queuing.
- Auto PU-DO	5 PU/DO in front of Union Station supplemented by ST parking on west side of Water Street.	Ample auto PU/DO on east side of Water Street nearest Shore Line East platform.	Auto PU/DO on west side of Water Street.	Auto PU/DO ample but located farther north on east side of Water Street at old SEAT bus stop.
- Parking	Parking on west side of Water Street preserved. Impact on State Street west of Bank Street.	No parking on west side of Water Street. Could offer some parking on east side of Water Street at old SEAT bus stop. Some impact on Water Street Garage spaces.	Some parking on west side of Water Street.	No parking on west side of Water Street. Some impact on Water Street Garage spaces.
- Bus Capacity	SEAT would not have independent pull out for any bays (ability to designate all bays by route) (total 9 bays). SEAT waiting area farther from bays. Lack of convenient freight PU/DO parking space (aside from bus bays).	SEAT would not have independent pull out for any bays (ability to designate all bays by route) (total 7 bays). SEAT waiting area fairly close to bays.	SEAT would not have independent pull out for all of its bays (ability to designate all bays by route) (total 9 bays). Could assign crridor routes to sawtooth bays. SEAT waiting area far from most bays.	SEAT would have independent pull out for all bays (ability to designate all bays by route) (total 7 bays or more bays if did not have sawtooth for independent pull out). Provides SEAT waiting area closest to and with best view of all bus bays.
Ratings - Taxi	3	5	4	4
- Parking	5	3	4	3
- Bus Capacity	4	2	4	5
- Auto PU-DO	2	4	5	5
Overall	3.5	3.5	4.25	4.25
Enhances Attraction of Visitors	3	4	3	3
	- Architectural/aesthetic enhancements	- Commercial space may attract visitors - Architectural/aesthetic enhancements	- Architectural/aesthetic enhancements	- Architectural/aesthetic enhancements
Minimal Environmental Issues	3	5	5	5
	Possible Historical building issues with new building, canopy	No evident environmental issues	No evident environmental issues	No evident environmental issues
Minimal Property Issues	3	5	5	5
	Issue with new bulilding near existing GH building	City owned parcels	City owned parcel	City owned parcels
Potential for Public Private or Grant Funding	5	4	3	3
	Funding may be possible for all components	Funding may be possible for certain components	No FTA funding available to build Greyhound Terminal	Potential for funding for SEAT terminal

Appendix E:
Detailed Table of Advantages and Disadvantages of Long Term Concepts

POTENTIAL IMPROVEMENT QUALITATIVE EVALUATION MATRIX - LONG TERM CONCEPTS

Concept:

Criterion	LONG TERM A Concentrated Concentrated Dispersed NO	LONG TERM AA Concentrated Concentrated Dispersed YES	LONG TERM B Concentrated Concentrated Dispersed NO	LONG TERM C Concentrated Dispersed Concentrated NO	LONG TERM CC Concentrated Dispersed Concentrated YES	LONG TERM D Extended Dispersed Concentrated NO	LONG TERM DD Extended Dispersed Concentrated YES
Bus-Rail Linkage							
Parking							
Development							
Footbridge?							
Low Cost	5 - garage w/bus terminal - passenger ferry terminal	4 - garage w/bus terminal - passenger ferry terminal - footbridge	4 - garage w/bus terminal - commercial development	3 - commercial development w/garage and bus terminal - new garage	2 - commercial development w/garage and bus terminal - new garage - passenger ferry terminal - footbridge	2 - commercial development w/garage - new garage - new bus terminal	1 - commercial development w/garage - new garage - new bus terminal - passenger ferry terminal - footbridge
Ease of Project Development	5 - primarily public project on public land	4 - primarily public project on public land '- footbridge involves multiple property owners	4 - public property and one private owner	3 - police station relocation and multiple private owners	2 - police station relocation and multiple private owners '- footbridge involves multiple property owners	2 - police station relocation and multiple private owners - possible hotel relocation	1 - police station relocation and multiple private owners - possible hotel relocation '- footbridge involves multiple property owners
Ease of Phasing	1 - interim parking may not be available - may require temporary bus relocation	1 - interim parking may not be available - may require temporary bus relocation	2 - some on-site phasing of parking possible - interim loss of commercial space - may require temporary bus relocation	3 - police station and other relocation can be done first - parking can be phased most easily - possible interim loss of commercial space - may require temporary bus relocation	3 - police station and other relocation can be done first - parking can be phased most easily - possible interim loss of commercial space - may require temporary bus relocation	4 - police station and other relocation can be done first - parking can be phased most easily - possible interim loss of commercial space - requires temporary bus relocation only if hotel site used	4 - police station and other relocation can be done first - parking can be phased most easily - possible interim loss of commercial space - requires temporary bus relocation only if hotel site used
Improves Safety and Convenience for Transfers	4	4	3	3	4	2	3
better	rail - BI Ferry rail - SeaJet better in Opt.2	rail - BI Ferry rail - SeaJet GH - LI Ferry	rail - SeaJet GH - LI Ferry	rail - SeaJet GH - LI Ferry	rail - BI Ferry rail - SeaJet GH - LI Ferry	rail - SeaJet	rail - BI Ferry rail - SeaJet
worse			rail - BI Ferry	rail - BI Ferry		rail - BI Ferry rail - SEAT	rail - SEAT
Improves Convenience for Parking Access	4 - expanded garage	5 - expanded garage - footbridge	4 - expanded garage	4 - new garage	4 - new garage - footbridge - longer walk	4 - new garage	4 - new garage - footbridge - longer walk
Enhances Pedestrian Environment	2 - aesthetics of mega garage	1 - aesthetics of mega garage - visual impact of footbridge	3 - aesthetics of mega garage masked by commercial development	4 - new development augments Parade	4 - new development augments Parade - visual impact of footbridge - pedestrians directed through development	5 - larger new development augments Parade	5 - larger new development augments Parade - visual impact of footbridge - pedestrians directed through development
Enhances Pedestrian Safety	3	4 - footbridge	3	3	5 - footbridge - walking path through new development	3	5 - footbridge - walking path through new development
Enhances Wayfinding/Information	4 - compact configuration	5 - compact configuration - footbridge identifies pathway to ferries	3 - best path to desired ferry may not be obvious	3 - best path to desired ferry may not be obvious	5 - footbridge identifies pathway to ferries	3 - best path to desired ferry may not be obvious	5 - footbridge identifies pathway to ferries

POTENTIAL IMPROVEMENT QUALITATIVE EVALUATION MATRIX - LONG TERM CONCEPTS

Concept:							
Criterion	LONG TERM A Concentrated Concentrated Dispersed NO	LONG TERM AA Concentrated Concentrated Dispersed YES	LONG TERM B Concentrated Concentrated Dispersed NO	LONG TERM C Concentrated Dispersed Concentrated NO	LONG TERM CC Concentrated Dispersed Concentrated YES	LONG TERM D Extended Dispersed Concentrated NO	LONG TERM DD Extended Dispersed Concentrated YES
Bus-Rail Linkage Parking Development Footbridge?							
Has Capacity to Accommodate RITC Demand/Growth (Public Transportation Modes)	3 bus terminal size limited by parking need; if bus terminal remains on east side then space for future tourist transit buses would be limited.	3 bus terminal size limited by parking need	3 bus terminal size limited by extent of commercial development and parking need; if bus terminal remains on east side then space for future tourist transit buses would be limited.	5 maximum possible LI ferry staging area; if bus terminal remains on east side then space for future tourist transit buses would be limited.	4	5 maximum possible LI ferry staging area	4
Has Capacity to Accommodate RITC Demand/Growth (Parking)	2 mega garage may not have sufficient capacity	2 mega garage may not have sufficient capacity	3 garage size limited by extent of commercial development	4 - large new garage plus some parking in new development	5 - large new garage plus some parking in new development - more onsite ferry parking	4 - large new garage plus some parking in new development	5 - large new garage plus some parking in new development - more onsite ferry parking
Promotes Likely Development/Local Economy	1 - provides no new development parcels	1 - provides no new development parcels	2 - possible small commercial development at Parade end of garage	3 - moderate commercial development with bus terminal and rail garage	4 - moderate commercial development with bus terminal and rail garage - footbridge enhances development potential	4 - larger commercial development with rail garage	5 - larger commercial development with rail garage - footbridge enhances development potential
Capitalizes on Synergies between Transportation & Development	1 - provides no new development parcels	1 - provides no new development parcels	2 - possible small commercial development between transportation facilities	4 - moderate commercial development mixed with transportation facilities	5 - moderate commercial development connects parking to transportation facilities	3 - larger commercial development divides transportation facilities	4 - larger commercial development divides transportation facilities and connects parking to ferries
Balances Need for Transportation & Development	1 - provides no new development parcels	1 - provides no new development parcels	2 - possible small commercial development at Parade end of garage	5 - more distant parking allows more commercial development around transportation facilities	5 - more distant parking allows more commercial development around transportation facilities	3 - large commercial development splits transportation facilities	3 - large commercial development splits transportation facilities
Enhances Attraction of Visitors to New London	3 - brings garage users through Parade area	2 - diverts garage users from Parade area	1 - diverts garage users from State Street and Parade area	1 - diverts garage users from State Street and Parade area	4 - footbridge draws garage users through new development	1 - diverts garage users from State Street and Parade area	5 - footbridge draws garage users through large new development
Minimal Environmental Issues	5 none	3 footbridge impacts historic building	5 none	5 none	3 footbridge impacts historic building	5 none	3 footbridge impacts historic building
Minimal Property Issues	5 - primarily public project on public land	4 - primarily public project on public land '- footbridge involves multiple property owners	4 - public property and one private owner	3 - multiple private owners	2 - multiple private owners '- footbridge involves multiple property owners	2 - multiple private owners - could involve hotel site	1 -multiple private owners - could involve hotel site '- footbridge involves multiple property owners
Potential for Public-Private or Grant Funding for Transportation Improvements	4 - federal money for bus/intermodal terminal with parking	4 - federal money for bus/intermodal terminal with parking and footbridge	5 - federal money for bus/intermodal terminal with parking '- possible private funding of parking	5 - federal money for bus/intermodal terminal with parking '- possible private funding of parking	5 - federal money for bus/intermodal terminal with parking and footbridge '- possible private funding of parking and footbridge	4 - federal money for bus/intermodal terminal (could include garage) '- possible private funding of parking	4 - federal money for bus/intermodal terminal (could include garage) '- possible private funding of parking and footbridge

Appendix A: Fort Trumbull Municipal Development Plan, Section 3.5, Environmental Conditions

1. Public and Stakeholder Participation Plan

This Public and Stakeholder Participation Plan has been developed to support public understanding of and participation in the development of a master plan for the Regional Intermodal Transportation Center currently located in downtown New London, CT.

The public and stakeholder participation process will take into account concerns of operators and managers of the transportation system, governmental, advocacy and interest groups and the general public. The consultant will create a process to both give out information and receive information from stakeholders throughout the development of the master plan.

The Public and Stakeholder Participation Plan has been developed with these underlying principles:

- Access to information: A record of all public meetings will be kept. Technical documents will be available on a special section of the SCCOG website, www.seccog.org.
- Clarity: Information will be presented in terms understandable to the public.
- Responsiveness: All questions by the public will be answered in a timely manner.
- Multi-level communication: A variety of methods will be used to reach out to and hear from the public. Newsletters, community meetings, website and stories in the media will be employed. One-on-one meetings with key stakeholders will be held.
- Timeliness: The public will receive adequate notice of meetings, and meetings will be scheduled at a time and place that is convenient and comfortable.
- Coordination: Good communication among all concerned stakeholders will be critical to the success of the process.

Key elements of the outreach effort will include:

Public/Stakeholder Participation Plan

A Public and Stakeholder Participation Plan will be developed in collaboration with SCCOG at the initiation of the study. This plan will include a list of outreach activities and a proposed schedule.

Stakeholder Steering Committee

A Stakeholder Steering Committee will be developed for this study. A letter of invitation to participate as advisors will be sent by SCCOG to elected officials and staff of the City of New London, local, state and federal elected leaders, transportation providers (ferry, local and regional bus, train, parking lot/garage operators) economic development, neighborhood and downtown interests. A complete list of invitees is attached. This group will serve in an advisory capacity, providing guidance on issues and strategies as well as feedback on all major findings and documents produced. The Committee will meet five times (July, October, February, May and August) with the following tentatively proposed agendas:

- Meeting 1: Meet Consultant team, discuss study goals and objectives and review committee

representation.

- Meeting 2: Review goals statement, review profile of existing transportation services and facilities based on surveys and the screening evaluation of candidate sites;

- Meeting 3: Review analysis of service and operational needs, screening of Intermodal Center candidate improvements, market analysis of development/potential and preliminary Transit Oriented Development (TOD) opportunities

- Meeting 4: Review analysis of costs, economic and environmental impacts of improvement alternatives, review TOD opportunities

- Meeting 5: Final Master Plan presentation

A summary report of all Stakeholder Steering Committee meetings and Power Point Presentations will be posted on the study website for public review.

Stakeholder Meetings

The consultant will meet one on one with various public agencies and private transportation operators concerned with the viability of a thriving intermodal facility in downtown New London. These meetings will allow participants to have a candid discussion with the Consultant team where they can share opinions or information they would be unwilling to divulge in a more public forum. Stakeholders interviewed might include:

- Federal (Federal Railroad Administration and Homeland Security, Federal Transit Administration)

- State (CT Departments of Transportation, Environmental Protection and Economic Development)

- Local/Regional (City of New London, New London Main Street, New London Development Corporation, , New London Landmarks, Mystic Coast and Country, Eastern Connecticut Tourism District, Chamber of Commerce of Eastern Connecticut, Neighborhood Alliance of New London, Union Station and parking lot property owners)

- Transportation Operators (SEAT, Greyhound, Amtrak, Cross Sound Ferry, Fishers Island Ferry, New London Parking Commission, Port of New London/Connecticut Cruise Ship Task Force)

The Consultant expects up to ten stakeholder interviews will be held.

Public Meetings

Two public meeting will be held to inform the New London region about the study and to offer an opportunity for dialogue and discussion. The first meeting will be held during the first half of the study (mid-November). The agenda for this meeting will include an overview (purpose, process and product) of the study, review of existing conditions and operations at the current site, review of an alternative site in the Ft. Trumbull peninsula and discussion of selection of a preferred site. This meeting will be facilitated to allow an open discussion by the public.

A second public meeting will be held near the conclusion of the study (May-June) when a draft report is available. The agenda for this meeting will be to review the findings and recommendations of the study and

to obtain input and feedback on possible solutions from the local general public. This meeting will blend an open house format with a formal presentation followed by discussion by the public.

The Consultant team will take a lead role in the development and implementation of the public meetings. In collaboration with SCCOG and the City of New London, the Consultant will:

- Select a meeting location and coordinate all room logistics.
- Develop a meeting agenda.
- Provide all meeting materials in sufficient quantities for distribution to the public. This includes agendas, fact sheets and other relevant materials.
- Deliver a formal PowerPoint presentation or alternative presentation format.
- Facilitate meeting, creating a climate to draw out public comment and opinion.
- Document meeting by providing written summary for distribution and website posting.
- Create and implement communication plan to publicize meeting. Items that will be included are press notification, e-mail blast, placement of notice in existing newsletters, communication networks.

Approximately one month before the public meeting is scheduled, a planning checklist detailing tasks and schedule required for meeting coordination will be developed and reviewed with SCCOG.

Study Summary Fact Sheets

Two study summary fact sheets will be published to coincide with public meetings. The initial fact sheet will describe the purpose of the study and findings. The second fact sheet will report on key findings and major recommendations of the study.

Fact sheet #1 will be printed on one 8 ½ x 11 inch paper, double sided and in color. Fact sheet #2 will be printed at least the same size and color as fact sheet #1 but may be expanded to an 11 ½ x 17 inch size if the graphics produced by the study do not present well in the smaller size.

A total of 200 hard copies of the fact sheets will be produced in hard copy. Distribution will be done primarily electronically, either by the internet or by email.

Website

A free standing website is not recommended for this study given its scope and duration. Yet an increasing percentage of the public receives information from on-line sources. The public has come to expect access to information over the internet. In addition, members of the public who have an interest in civic affairs may not have the time or inclination to attend public meetings.

The consultant team will work with the webmaster for SCCOG's existing website, www.seccog.org to establish a webpage with additional sub-pages devoted to news and information about the RITC study. The Consultant will request prominent placement within the existing SCCOG website so that the RITC study is visible on the home page when website visitors enter the site. The website will include an overview of the

plan, project documents and updates, meeting notices and reports and an email address for submitting comments. The public will be able to contact the consultant team through the website, ask questions and submit opinions or provide information.

In addition, the Consultant will request the City of New London establish a link to the study on the City's own website

Publicity in Local Media

Press releases will be written and distributed to the media when the project is kicked off and at the study's end.

Steering Committee Members and Invitees

Name		Organization
Martin	Berliner	SCCOG, City of New London City Manager
Kip	Bochain	Parking Commission Chairman
Ella	Bowman	SEAT General Manager
John	Brooks	New London Development Corporation
Karen	Bryant	City Center District
Michael	Carey	Suisman, Shapiro, Wool, Brennan, and Gray
Kevin	Cavanagh	City of New London
Joseph	Celli	Water Street Garage
Sandra	Chalk	New London Landmarks, Executive Director
Jenny	Contois	Congressman Joe Courtney, District Director
William	Cornish	Cornish Parking
Charles	Curtin	Curtin Transportation
Chris	DuPont	Fishers Island Ferry (invited)
Dick	Guggenheim	SCCOG
Charlotte	Hennigan	Thames River Greenery (invited)
Rep. Ernest	Hewett	State Representative
Bruce	Hyde	City of New London, Director of Planning and Development (early in study)
Rev. Wade	Hyslop, Jr.	City of New London
Joseph	Jaskiewicz	Mayor, Town of Montville, SCCOG Chairman (beginning of study)
Chris	Jennings	Mystic Coast and Country (early in study)
Michael	Joplin	New London Development Corporation, President
Dan	Karp	Daniels Dairy Downtown
John	Markowicz	seCTer, Executive Director
Jim	Martin	SEAT Chairman (at time of study)
Molly	McKay	(invited)
Frank	McLaughlin	New London Main Street, President
Stan	Mickus	Cross Sound Ferry
Rep. Edward	Moukawsher	State Representative
Jeffrey	Nelson	Governor's Eastern Office
Todd	O'Donnell	Union Station
Penny	Parsekian	New London Main Street, Chief Executive Officer
Kevin	Regan	Amtrak
Frederick	Riese	Connecticut DEP

Rep. Betsy	Ritter	State Rep. 38th District
William	Satti	Mashantucket Pequot Tribe (invited)
Tony	Sheridan	Chamber of Commerce of Eastern Connecticut, President
Peter	Simmons	CT Department of Economic and Community Development
Donna	Simpson	Eastern CT Tourism District, Executive Director
Harry	Smith	City of New London, City Planner
Joe	Smith	Mohegan Tribe (invited)
Dan	Steward	SCCOG, First Selectman, Town of Waterford
Sen. Andrea	Stillman	State Sen. 20th District
Tom	Stone	Greyhound

The following staff members from ConnDOT, the grantor for this study, also participated in the Stakeholder Steering Committee meetings:

Albert	Martin	ConnDOT, Deputy Commissioner
Andrew	Davis	ConnDOT, Project Manager
Eugene	Colonese	ConnDOT
Grayson	Wright	ConnDOT
Craig	Bordiere	ConnDOT
Jon	Foster	ConnDOT

Southeastern Connecticut Council of Governments

Regional Intermodal Transportation Center Master Plan and Efficiency Study

Public Meeting

November 13, 2008





Agenda

- Introduction of the Study Sponsors and Team
- Study Purpose and Tasks
- The Existing Transportation Center
- Evaluation of the Existing Site vs. an Alternative Site
- Passenger and Parking Survey Findings
- Economic Development and the Transportation Center
- Public/Stakeholder Involvement
- Open Discussion

Study Sponsors and Team

- **Southeastern Connecticut Council of Governments**
  - James Butler, Executive Director and Project Manager
- **Connecticut Department of Transportation**
- **Consultant Team**
  - TranSystems
    - Larry Englisher, Consultant Project Manager
  - Fitzgerald & Halliday
    - Jill Barrett, Stakeholder Involvement Coordinator
  - URS Corporation
  - Crosby Schlessinger and Smallridge
  - Basil Baumann Prost and Cole

Study Purpose

- **Develop a seamless transportation hub for the region that will support revitalization of downtown New London**
- **Create a Master Plan for the Transportation Center**
  - Review suitability of location
  - Identify operational issues and solutions
  - Estimate costs of improvements
  - Identify development opportunities
  - Identify synergies and partnerships

What an Enhanced Transportation Center Would Offer to New London and to the Region

- Easy access to intra- and inter- regional transportation
- Convenient transfers between modes
- Easy access to supporting services, facilities and parking
- Enhanced development and economic activity near the center and in the region
- Support for the region's tourist industry



How the Study Will Progress

- Screening Evaluation of Sites - ***Completed***
- Evaluation of Transportation Needs - ***Underway***
- Evaluation of Infrastructure Conditions and Opportunities - ***Underway***
- Development of Improvement Options - ***Winter***
- Transit Oriented Development Opportunities - ***Winter***
- Evaluation of Options and Recommendations- ***Spring***
- Public Involvement – ***Ongoing***
  - Next Public Meeting Next Spring

The Existing Transportation Center

- Union Station anchors the existing center
- Unique confluence of rail, bus and ferry
- Connections need improvement
- Well-functioning intermodal center is considered vital to future development





Existing Downtown Site



Existing Transportation Services

- **Amtrak Intercity Rail**
  - 1 Acela, 9 Regional trains each direction on weekdays
- **Shore Line East Commuter Rail**
  - 1 weekday round trip
- **Greyhound Intercity Bus**
  - 9-11 in each direction on Sundays
- **Cross Sound Ferry to Long Island**
  - 14 auto + 6 high speed passenger round trips on peak weekends
- **Block Island Ferry**
  - 4 roundtrips on peak season weekend days
- **Fishers Island Ferry**
  - 11 auto roundtrips on peak season Fridays





Local Access to Existing Transportation Services

- **SEAT Bus (7 routes pulse)**
- **Casino Coaches (meet passenger ferries)**
- **Taxi**
- **Private Automobile Parking**
- **Pick up / Drop off**
- **Bicycle**
- **Pedestrian**
- **Tourist Shuttle (proposed)**





Parking Facilities at the Existing Transportation Center

- Water Street Garage (City) — 975 spaces
- Eugene O'Neill Surface Lots (City) — 255 spaces
- Governor Winthrop Garage (Private) — 400 spaces
- Julian Surface Lot (Private) — 186 spaces
- Cross Sound Ferry (Private) — 130 spaces





Evaluation of Existing Site vs. Alternative Site



- Existing Downtown Site
- Fort Trumbull Site
  - Important redevelopment site
  - Considered as possible site for cruise ships to dock

How Sites Were Evaluated

○ Minor Issues/High rating
◒ Moderate Issues/Medium rating
● Major Issues/Low rating

	Existing Site	Fort Trumbull
Capacity for Operations	○	◒
Vehicular Access	○	●
Parking Capacity	○	◒
Traffic Impacts	○	○
Pedestrian Access	○	◒
Capital Cost	○	●
Environmental (Contamination)	◒	◒
Environmental (Natural)	○	○
Environmental (Cultural)	◒	●
Compatibility with Other Land Uses	○	◒
Economic Development Opportunity	○	◒
Public Support	○	●
Consolidated RITC	○	●

Comparison of the Two Candidate Sites

- **Existing Downtown Site with Improvements**
  - Central location with good access
  - Infrastructure already exists; costs would be lower
  - Uniquely consolidates ground and maritime modes in one location
  - Cruise ships would remain at State Pier
- **Fort Trumbull Site**
  - Can accommodate rail, intercity bus, SEAT and parking
  - Less desirable location for rail, intercity bus and SEAT
  - Cruise ships and ferries not feasible
  - Fractured Transportation Center without any maritime modes
  - Higher cost
  - Negative impacts on economic development and tax revenue
- **Strong Recommendation: Improve and Maintain the Transportation Center at the Existing Downtown Site**

Passenger and Parking Surveys



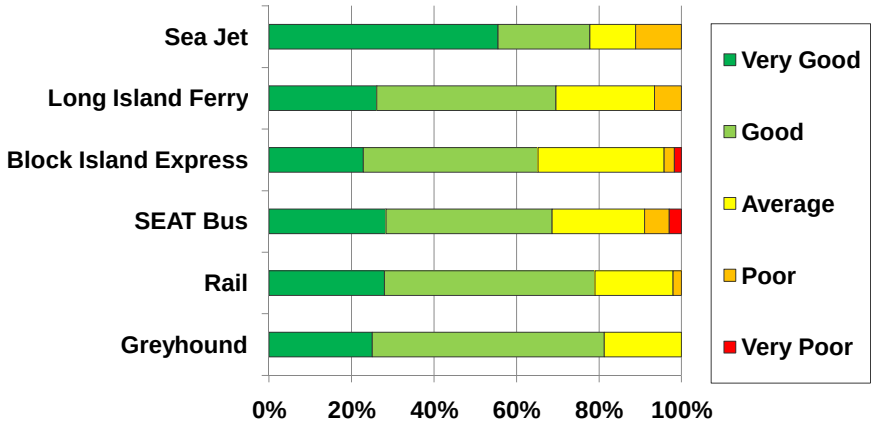


- Conducted August 2008
- Almost 500 rail, bus and ferry passengers
- Almost 200 parking users

Key Findings of Passenger Surveys

- Most rated the transportation facilities as good
  - Both overall and individual attributes
  - Greyhound passengers rated amenities at the terminal below average
  - Rail users most interested in food service, clean restrooms
  - SEAT passengers more concerned about improving bus operations and routes than facilities
- Most passengers do not transfer between public transportation services
  - Most frequent transfers took place between the ferries and the rail service
- Most passengers do not visit downtown
  - Most likely - Greyhound passengers
  - Least likely - LI Ferry and Sea Jet passengers, even with additional services

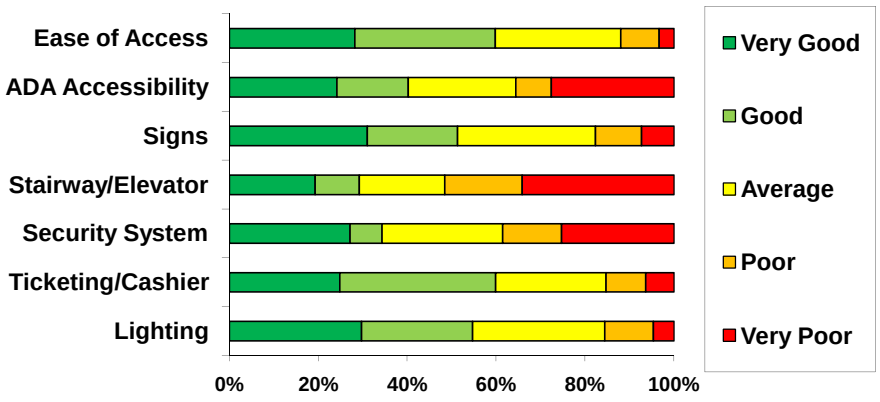
How Passengers Rated the Existing Transportation Center



Particular Concerns of Passengers (Rated Poor/Very Poor)

- **Amenities (food services, restroom, newsstand)**
  - at the Greyhound bus terminal, rail station, SEAT bus stop and Block Island ferry terminal
- **Comfort (seating, climate control)**
  - at the Greyhound bus terminal, SEAT bus stop, Block Island ferry terminal
- **Nearby places of interest**
  - for Block Island ferry passengers
- **Schedule information**
  - for Greyhound and SEAT riders

How Parkers Rated Amenities in Garages/Surface Lots



Downtown Businesses Passengers Visited



What Would Increase Passenger Visits to Downtown?

	% of responses
Cultural/Entertainment Center	35%
Expanded Retail/Shopping	31%
More Restaurants, Fine Dining	26%
Other suggested factors	3%
Hotel/Casino	2%
Improved Parking	2%

Based on Ferry, Rail and Intercity Bus passengers

The Transportation Center and Economic Development

- Passengers using transportation facilities represent large, untapped market for downtown New London and the region
- Combination of transportation assets enables access to federal dollars for "Transit-Oriented Development" or TOD
- Study includes a market analysis of TOD potential
  - Strategies to improve the image of downtown New London
  - Identification of niche retail, entertainment, arts/cultural and residential opportunities for downtown
- Master Plan will identify TOD opportunities and concepts

What is Transit-Oriented Development (TOD)?

- Uses the multimodal transportation center as a catalyst for downtown development
- Creates public/private partnership opportunities
- Optimizes use of Federal funding to attract private sector investment
- Encourages concentrated mix of land uses that fosters transit use and facilitates community revitalization







Why New London is Ripe for TOD



- Downtown is already the region's hub for transportation services (rail, bus, ferry, auto, cruise ships)
- Offers waterfront access, historic buildings, arts and culture
- Has a walk-able scale
- Recent and planned projects (e.g., Parade) and organizations are contributing to a downtown renaissance
- Growing downtown residential population
- Presents opportunities to develop demand

Example of Successful TOD - Silver Spring, MD

Key Elements that Led to Success

- County was champion for TOD
- Inclusive and ongoing public involvement
- Public-private partnership
- Streamlined regulations
- Incentives
- Pedestrian enhancements
- Theater was a catalyst





Results

- Renaissance for an underutilized downtown that had a poor image
- New restaurants, shops, offices, public places, cinemas
- Community buy-in and support

Examples of Planned TOD – Downtown Intermodal Center, Normal, IL

- Serves intercity rail; local and intercity buses
- Parking garage serving downtown and transit
- Center includes public and private office; retail; day care center; public radio station
- Catalyst for revitalization of downtown, large adjacent underutilized parcels
- Pedestrian friendly streets, streetscape, new roundabout and landscaping create a new "Gateway into Downtown "
- Construction begins 2009





Example of Planned TOD - Bridgeport, Connecticut

- Planned TOD within walking distance of Amtrak/commuter rail station
- Innovative strategies:
  - Historic building tax credits
  - Federal transit funding
  - New zoning allowed shared parking
- National model for mixed income, mixed use development





Public/Stakeholder Involvement

To inform and engage the community through:

- Two public meetings
- Meetings with key stakeholders & property owners
- Steering Committee
- Newsletters/fact sheets
- Website: www.seccog.org

What Stakeholders Have Said So Far

- The Transportation Center is vital to the region's economy
- It should serve as gateway to New London and the region
- It should encourage visitors to visit area businesses
- Union Station is a key asset for New London and the region
- All other modes cite the importance of access to Union Station
- Increased commuter rail service should be taken into account
- Pedestrian access is a problem, particularly to the ferries
- Parade Project will make some improvement to pedestrian access
- Public-private cooperation is needed
- Everyone seeks a coordinated plan to move forward with

Open Discussion

- What are the most important transportation issues that need to be addressed at the Transportation Center?
- How can an improved Transportation Center provide the most benefit to the region's businesses, residents and institutions?
- What type of development would work best with an improved Transportation Center?

Regional Intermodal Transportation Center Master Plan

New London, Connecticut

NOV. 2008 FACT SHEET



*New London serves as the gateway to southeastern Connecticut for people arriving by trains, ferries and buses. The Southeastern Connecticut Council of Governments (SCCOG) initiated a study of the transportation facilities in downtown New London in the summer of 2008, with a goal of planning a more seamless transportation hub for the region. Funded with a $750,000 grant from the Connecticut Department of Transportation, the **Regional Intermodal Transportation Center Master Plan and Efficiency Study** is examining transportation services currently serving the city and region and developing concepts for an enhanced Center with associated economic development.*

Who is conducting the study?

The study is being managed by SCCOG staff with assistance from a consultant team headed by TranSystems. Other firms included on the consultant team are: Basile Baumann Prost and Cole & Associates, Inc., Crosby/Schlessinger/Smallridge LLC, Fitzgerald & Halliday, Inc. and URS Corporation.

The consultant is working closely with a Steering Committee that includes representation from the transportation providers, businesses, and economic development groups, the City of New London, the Connecticut Department of Transportation and other stakeholders.

Why is the study being conducted?

Downtown New London offers a unique hub of transportation services – intercity and commuter rail, intercity and local/regional bus and automobile and passenger ferry. It is the transportation center for the entire southeastern region funneling many business and recreational visitors into the area and linking New England and Long Island and Connecticut with Massachusetts, Rhode Island, New York and beyond. Union Station anchors the current Regional Intermodal Transportation Center, yet it is privately owned. Its owners are exploring alternative uses for Union Station. While the various transportation modes are currently adjacent to each other, the ease of making transfers between modes could be improved.

On a sunny summer weekend, New London is a busy place. Ferries shuttle thousands of passengers between New London and the various islands. Passengers arrive and leave by Amtrak trains, Shore Line East, Greyhound buses, Casino sponsored coaches, SEAT buses, taxis, automobiles, bicycles and on foot. This year, nine cruise ships visited New London and docked at the nearby State Pier. It is hoped that more will come in the future.

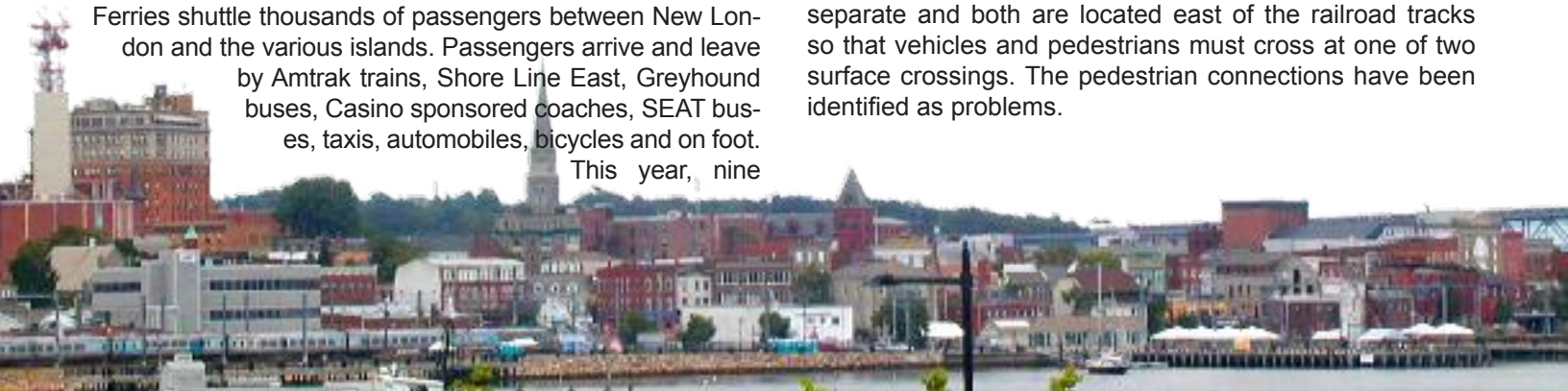
A well-functioning intermodal center is considered vital to future development in New London and the region. The City and area businesses would like to identify strategies to encourage passengers traveling through the city to shop, dine and explore local cultural attractions. It is believed that a revitalized intermodal transportation center could offer unique potential development opportunities.

The result of the study will be a Master Plan for the transportation center which will identify specific transportation facility improvements and development opportunities.

What will be studied?

The study is focusing on the Union Station area, including the rail, bus and nearby ferry and parking facilities. Currently, Union Station serves Amtrak and Shore Line East train passengers as well as passengers on inter-city and regional/local buses. The Shore Line East service is currently limited but may be expanded in the near future. Currently, the SEAT facilities are limited to one bus shelter and few benches. The Greyhound Bus Terminal is attached but separate from the rail station. There are limited amenities for passengers.

Adjacent to Union Station are active ferry service connections to Fishers Island (NY), Long Island (Orient Point, NY), and Block Island (RI). The Cross Sound Ferry (Long Island and Block Island) and Fishers Island Ferry facilities are separate and both are located east of the railroad tracks so that vehicles and pedestrians must cross at one of two surface crossings. The pedestrian connections have been identified as problems.





Parking needs are also being examined. The City of New London and private entities operate parking facilities downtown totaling around 2,000 spaces that serve travelers using the transportation services. The largest facility is the Water Street Garage located directly across Water Street from the transportation hub. Pedestrian connections to and from the parking facilities have also been identified as problems. The Parade Project, recently begun by the City of New London, adjacent to the Water Street Garage will improve sightlines, pedestrian crossings and introduce traffic calming.The study will examine the needs of each mode and ways to improve intermodal connections, The latter will include physical conditions, information and wayfinding and other factors.

An important part of the study will be an examination of the market for development at and around the transportation center. The study will look specifically at those types of development that can build on the advantages provided by the transportation facilities. Opportunities for joint development of an enhanced transportation center and other economic development will be identified and conceptualized.

Should the transportation center remain downtown?

In the initial phase of the study the Connecticut Department of Transportation asked SCCOG to evaluate the potential of moving the transportation center to the Fort Trumbull peninsula. This evaluation has concluded that it should remain at its existing downtown location.

The downtown location is better suited as a transportation center because it is a central location with good access and uniquely consolidates the ground and maritime modes in a single location. Infrastructure (station, utilities, etc.) already exists so costs would be lower.

Moving the transportation center to the Fort Trumbull peninsula would result in a less desirable location for rail, intercity bus and SEAT, high costs and cut off the existing connection to ferry services, since the analysis revealed that it was infeasible to locate ferry and cruise ships at the Fort Trumbull site due to a combination of maritime and ground access issues.

How will a Master Plan for the transportation center be developed?

The consultant will develop a master plan by following these steps:

- Review suitability of location
- Identify current and future operational issues and potential solutions - This may include, for example: pedestrian-friendly spaces and linkages, information and wayfinding signage, ticketing, passenger comfort (restrooms, seating, weather protection, lighting), amenities (food, WiFi,), circulation of vehicles, parking supply and location, operator office needs, etc.
- Estimate costs of improvements
- Identify development opportunities and concepts
- Identify synergies and potential partnerships

What do travelers say about traveling to and through New London?

During the summer, study consultants talked with 469 people traveling through New London by intercity and regional buses, ferries and rail to find out what they thought about the transportation facilities and the city. Opinions were gathered from another 196 people who used nearby parking garages and lots. On the whole, responses were mostly positive about the transportation facilities, although there were many suggestions for things that need improvement. It was learned that few of these travelers visit downtown while passing through New London. Asked what would make them most likely to visit downtown, they indicated more cultural attractions and entertainment, retail shops and restaurants.

When will the study be completed?

A draft Master Plan with recommendations will be completed and ready for review by the public in late spring.

Contact Info:	**James Butler**, Executive Director, SCCOG, Project Manager 860-889-2324 **www.seccog.org**

SCCOG Southeastern Connecticut Council of Governments



Regional Intermodal Transportation Center
Questionnaire/Comments

1. In the last year, what transportation services have you used? (Check all that apply)
   - ❑ SEAT bus
   - ❑ Greyhound Bus
   - ❑ Train (Amtrak/Acela/Shore Line East)
   - ❑ Fisher's Island Ferry
   - ❑ Block Island Ferry
   - ❑ Orient Point Ferry
   - ❑ Parking Garage or Lot

2. How would you rate the transportation center using the following scale: 5(very good), 4 (good), 3 (average), 2 (Poor), 1 (Very Poor, n/a (if rating does not apply). If your rating is specific to any one service facility (bus station, ferry, etc.) please indicate in comment section below:

	5	4	3	2	1	n/a
Parking	❑	❑	❑	❑	❑	❑
Convenience Getting to / from the Terminal	❑	❑	❑	❑	❑	❑
Convenience Making Connections with the Ferry	❑	❑	❑	❑	❑	❑
Comfort at the Terminal (seating, climate control)	❑	❑	❑	❑	❑	❑
Amenities at the Terminal (food services, restrooms, newsstand)	❑	❑	❑	❑	❑	❑
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	❑	❑	❑	❑	❑	❑
Clearly-marked schedules for all transportation (rail, ferry, bus)	❑	❑	❑	❑	❑	❑
Purchasing Tickets	❑	❑	❑	❑	❑	❑
Personal Security at the Terminal	❑	❑	❑	❑	❑	❑
Physical Safety at the Terminal (and While Making Connections)	❑	❑	❑	❑	❑	❑
Nearby Places of Interest	❑	❑	❑	❑	❑	❑
Overall	❑	❑	❑	❑	❑	❑

Comments:_____

_____

_____

3. Of the following, which do you think would be the single <u>most important</u> in making downtown New London more of a "destination" for visitors and/or residents? (Check one)
   - ❑ Create a cultural/entertainment center
   - ❑ Expand retail shopping
   - ❑ Have more restaurants, including fine dining
   - ❑ More housing
   - ❑ Other_____

4. What improvements you would like to see at the transportation center?

_____

_____

_____

(continue on other side)

Name (optional)_____

List of Attendees

Sandra Chalk
Peg Curtin
Frank McLaughlin
Stan Mickus
Todd O'Donnell
Harry Smith
Barbara Hample
Larry Hample
Nat Trumbull
Art Costa
Krystal Kornegay
Susan Munger
Lloyd Beachy
Christopher Deveau
Laurie Deredita
John Alexander
Penny Parsekian
Lynda McLaughlin
Phil Turner
Kenric Hanson
Alan Sprecace
Larry Englisher
Jim Butler
Skip Smallridge
Jim Wensley
Jill Barrett

Regional Intermodal Transportation Center Study
Summary of Public Meeting
November 13, 2008 7:00 p.m.
New London Public Library

Jim Butler, Executive Director of Southeast Connecticut Council of Governments (SCCOG), sponsor of the study, welcomed attendees and introduced the study team.

Larry Englisher, project manager for the consultant team, made a thirty minute presentation that detailed the purpose, funding, study tasks and schedule of the study, why the study recommends keeping the transportation at its present downtown location, key finding of passenger and parking surveys and potential economic development opportunities in the vicinity of the transportation center.

Larry Englisher noted the purpose of the study is to develop a seamless transportation hub for the region that will support revitalization of downtown New London. A Master Plan will be created for the transportation center after reviewing the suitability of a location, identifying operational issues and solutions, estimating the cost of improvements and identifying development opportunities and public/private partnerships.

The transportation center has a unique confluence of modes. Several services (bus, train and ferry) are located next to each other but are not necessarily well connected. Two sites – existing downtown site and the Fort Trumbull peninsula - were evaluated. The comparison of the two sites indicated the downtown location is preferred.

In August nearly 500 passengers participated in a survey to learn their opinions and travel patterns. Most rated most aspects of the transportation facilities in New London for all modes as good. Few passengers transferred between services and the majority do not visit downtown. Many passengers said they would be more likely to visit downtown if retail, restaurants and cultural/entertainment attractions were expanded.

Larry Englisher spoke about New London's potential for transit-oriented development. He said the city's transportation assets, waterfront location and historic character make New London ripe for this type of development.

Jill Barrett of the consultant team said the study team had conducted thirteen one-on-one interviews with stakeholders. Nearly all said the transportation center was very important to downtown New London and the region and they wanted to see a coordinated plan to move forward. The meeting was then opened up for questions and discussion. The following is a summary of public comment.

I am concerned that civic interests are not involved in this study. Besides people from the region being on a Steering Committee, the City of New London and other local people ought to be participating.

Jim Butler responded that the Steering Committee has many representatives from New London – the Mayor, city staff, transportation service providers, programs such as New London Main Street, City Center District, and New London Landmarks Association.

Major Kevin Cavanagh said he had been working closely with the consultant team and knows they have met with many local officials and community leaders and have a good understanding of the city and the transportation center.

Comments about the transportation center:

Metro North needs to establish regular service to New London and even to Rhode Island. A concerted effort should be made to get patrons of the casinos off I-95 and onto trains as is done by the State of New Jersey and New York to service Atlantic City.

There needs to be better links between the modes, such as signage, weather protection and separation of passengers from automobile traffic and traffic calming.

Schedules should be coordinated better.
Stan Mickus of Cross Sound Ferry noted the ferry is often held up leaving port to wait for the Amtrak train when it is late.

Please keep the plan to feasible concepts, things that can be implemented, especially in today's troubled economy.

More marketing needs to be done to make people aware of New London's assets.

Does the study's scope include a walkway extension to Fort Trumbull? It would be wonderful to connect the downtown to Fort Trumbull, ideally via the rail bridge.
Jim Butler responded this connection is beyond the study scope but the team will look at it in the context of the overall study.

Will the study team work with developers?
No, the study will not be reaching out to specific developers on opportunities in New London. However, the study has real estate professionals on the team who will advise on potential market niches and assets the city could use to attract developers.

Are zip cars being looked at for the transportation center? Two are coming to Conn College soon and having zip cars available to people who arrive by train but don't need a full day or weekend rental may fill a void.

What about bike rentals?
Todd O'Donnell, owner of Union Station said he has been considering using the storage shed area at the station as a place to park bikes.

Could ticketing for all services – bus, ferry and train – be consolidated into Union Station?

The transportation center should accommodate growing bus use in the future. Right now there are not comfortable facilities for bus passengers.

What about establishing a shuttle service to connect people between the modes and the downtown?

This may sound far fetched, but people movers may work.

Comments about development:

The market will respond to improved transportation. Look at what happens in areas where there is good commuter rail.

New London should begin by increasing residential units first, retail will follow. There is a proven housing demand today but it has to be larger to support retail.

I'd like to see condos on top of the parking garage.

There is already good nightlife/entertainment in New London, especially for young people. We need to build on that.

There is also a demand for upscale, larger housing with parking for empty nesters.

More public comment:
Additional comments were submitted on a comment form at the close of the meeting. About one half (10 of 21) of people attending the meeting used the forms to share opinions.

To the question, what do you think is most important to making downtown New London more of a "destination" for visitors or residents, the responses were: *expand retail shopping (4), more housing (2), more small businesses (1), increase population (1), promotion (1), and seamless shoreline service from Grand Central Terminal in NY to the casinos (1).*

Suggestions to improve the transportation center were:

Maintain Union Station as the center and use full space in the station to improve amenities for travelers. Use small jitneys to move passengers around various modes of transportation.

A safe, convenient, well-lit and attractive overhead pedestrian walkway linking the ferries, train station, parking garage and downtown is the single most important issue facing the future of the development of the multi-modal transportation center. This would provide New London a "gateway" for transportation users into downtown New London.

Use space in between Greyhound/Amtrak seating area and put housing/offices above. Keep the transportation center at Union Station by improving and bringing together all modes of transportation facilities and retail.

Consolidate ticket counters and offices in Union Station.

I have used the train, Fisher's and Block Island Ferries and parking with children and luggage. My biggest concern is about convenience and safety on the ferry operator's properties. Pedestrian access/waiting lines are in the parking lots and vehicle travel lanes.

Connections into the city – ease of a trolley bus to move people all over the city.

Build a tunnel from Union Station to the ferry.

Please make sure that the improvements will be able to EVENTUALLY handle a greatly increased rail and casino connection.

Southeastern Connecticut Council of Governments

Regional Intermodal Transportation Center Master Plan and Efficiency Study

Public Meeting

January 14, 2010





Agenda

- Introduction
- The Existing Transportation Center and Functions
- Economic Development and the Transportation Center
- Long Term Vision Concepts
- Short Term Improvement Alternatives
- Open Discussion

Introduction

Study Sponsors and Team

- **Southeastern Connecticut Council of Governments**
  - James Butler, Executive Director & Project Manager
- **Connecticut Department of Transportation**
- **Consultant Team**
  - TranSystems
    - Larry Englisher, Consultant Project Manager
  - Fitzgerald & Halliday, Inc.
    - Jill Barrett, Stakeholder Involvement Coordinator
  - URS Corporation
  - Crosby Schlessinger and Smallridge
  - Basil Baumann Prost and Cole

Study Purpose

- **Develop a seamless regional transportation hub that supports revitalization of downtown New London**
- **Create a Master Plan for the Transportation Center**
  - Review suitability of location
  - Identify operational issues and solutions
  - Estimate costs of improvements
  - Identify development opportunities
  - Identify synergies and partnerships

How the Study was Conducted

- **Technical Tasks**
  - Screening Evaluation of Sites – Downtown vs. Ft. Trumbull
  - Transportation Needs
  - Infrastructure Conditions and Opportunities
  - Transit Oriented Development Opportunities
  - Development and Evaluation of Options
  - Master Plan
- **Public Involvement**
  - Two public meetings
  - Six Steering Committee Meetings
  - Meetings with key stakeholders & property owners
  - Passenger surveys
  - Newsletters/fact sheets
  - Website: www.seccog.org

The Existing Transportation Center



- Union Station anchors the existing center
- Unique confluence of rail, bus and ferry
- Connections need improvement
- Well-functioning intermodal center is considered vital to future development



Existing Transportation Services

- Amtrak Intercity Rail
- Shore Line East Commuter Rail
- Greyhound Intercity Bus
- Cross Sound Ferry to Long Island
- Block Island Express Ferry
- Fishers Island Ferry
- SEAT Bus (7 routes pulse)
- Casino Coaches (meet passenger ferries)
- Taxi
- Private Automobile Parking
- Pick up / Drop off
- Bicycle
- Pedestrian
- Tourist Shuttle (proposed)






Major Needs

- **Street Space and Bus Stops**
  - Adequate bus bays, curb space for pickup/drop-off and taxis
- **Buildings and Facilities**
  - Bus and Block Island ferry waiting area, retail/food amenities
  - Repairs to garage structure and elevators, ADA accessibility
  - Encourage full use of Union Station
- **Parking and Traffic**
  - Parking for Shore Line East expansion (100 then 200-300) and summer weekend needs
  - Minimize Traffic Impacts
- **Pedestrian Connections between Modes**
  - Safety, directness, attractiveness, accessibility and physical condition
  - At railroad crossings, to and from ferries, key intermodal connections
- **Information, Orientation and Aesthetics**
  - Wayfinding signage, static and real time information, appearance/visitor-friendliness
- **Ability to Phase Improvements**

Transit-Oriented Development (TOD)?

- **What is TOD?**
  - Uses the multimodal transportation center as a catalyst for downtown development
  - Creates public/private partnership opportunities
  - Establishes a walkable, lively, attractive and amenity-rich pedestrian environment within a quarter-to-half mile radius of the transit center
  - Encourages concentrated mix of land uses that fosters transit use and facilitates community revitalization
- **New London is ripe for TOD**
  - Walkable, waterfront, historic resources, arts, etc.



The Transportation Center and Economic Development

- Transportation users represent large, untapped market
- Combination of transportation assets enables access to federal dollars
- Potential for 130,000 - 473,000 sq. ft. of retail, office and residential TOD over 10 years
- Identified specific TOD opportunities and concepts

Long Term Economic and Development Impacts of TOD

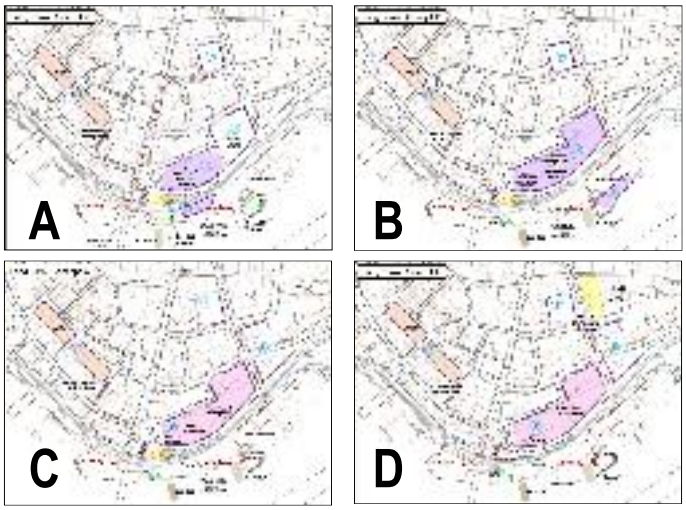
- Enhanced TOD opportunities including Union Station
- Order of magnitude estimate
  - Based on mid level development

Fiscal Impacts	
Property Tax (City Revenue)	$1,606,494
Income Tax (State Revenue)	$1,225,981
Sales Tax (State Revenue)	$610,126
Economic Impacts	
New Residents	317
New Office Employees	209
New Retail Employees	156

Source: Basile Baumann Prost Cole & Associates, 2009

- Other non-quantified impacts
  - Induced transit ridership (intercity and local bus, rail and ferry)
  - Transit user benefits
  - Ongoing facility operational costs
  - Enhanced pedestrian access
  - Environmental and air quality impact

Long Term Concepts
(with or without Pedestrian Bridge or Tunnel)



Evaluation of Long Term Concepts

- **Major tradeoffs exist among concepts**
- **Stakeholders did not develop a clear preference for the long term future**
  - Preferred keeping transportation functions together
  - Liked ideas that encouraged pedestrians to visit businesses
  - Water Street Garage will not be replaced for some time
  - Felt that study should focus on shorter term solutions

Development of Master Plan for Short Term

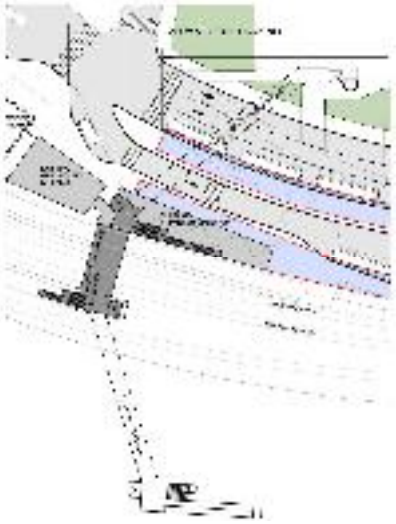
- Developed and evaluated an initial set of alternatives
- Presented to key stakeholders
- Revised in response to stakeholder concerns
- Focused on immediate (1-2 years) and short term (3+ years)
- Focused on keeping all modes close together on the east side of Water Street
- Included pedestrian bridge in short term plan per Connecticut DOT

Components of Short Term Preferred Alternative

- Pedestrian Bridge and Other Improvements
- Wayfinding Improvements
- Rail Station Improvements
- Combined Bus Terminal
- Pick-up/Drop-off/Taxi Improvements

Pedestrian Bridge

- Minimum segment over tracks
- Located 36 to 55 feet over rail tracks
- Integrated with bus terminal building
- Could extend to Water Street Garage
- Could extend to Cross Sound Ferry (possible passenger terminal)
- Tunnel option was also investigated

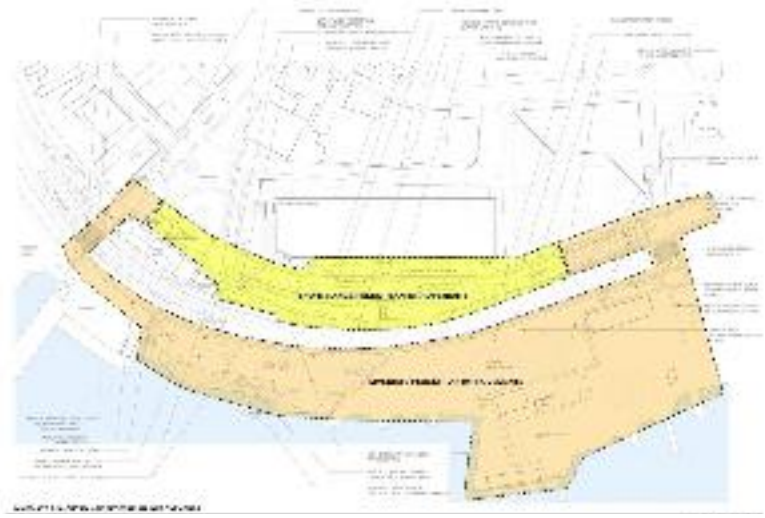


Pedestrian Improvements

- Pedestrian bridge
- Sidewalks/pathways on both sides of rail ROW
- Use of pavers
- Quad gates/ rubber surfaces at the two RR crossings
- Fencing of ROW
- Landscaping
- Gateway structures
- Pedestrian scale lighting
- Canopies with lighting

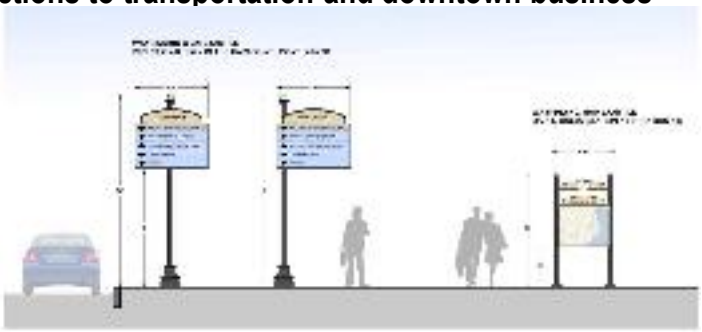


Immediate and Short Range



Wayfinding Plan

- 17 locations
- Maps and signs
- For pedestrians and vehicles
- Directions to transportation and downtown business



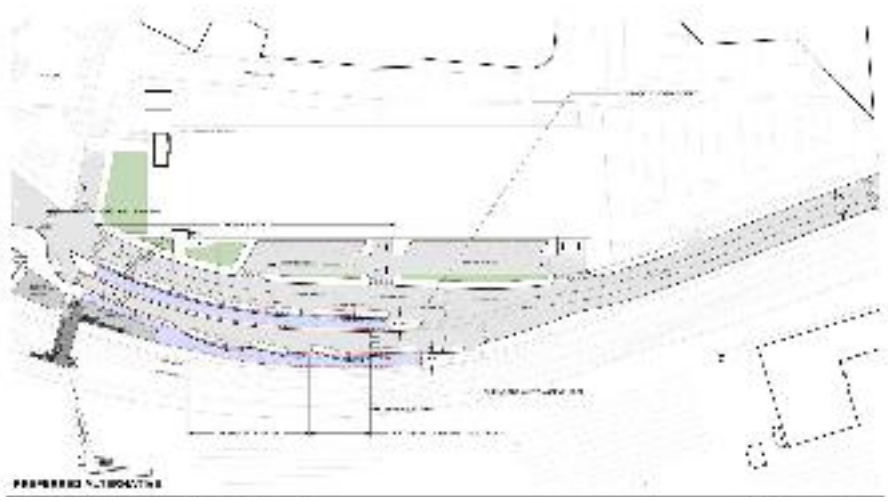
Rail Station Improvements

- **Amtrak**
  - No major improvements needed
- **Shore Line East**
  - At Amtrak's request, SLE will use Track 6 (freight track)
  - ConnDOT will make short term modifications to northbound platform to allow access to Track 6
  - ConnDOT may consider a future platform on the water side of Track 6
    - Would impact pedestrian bridge design

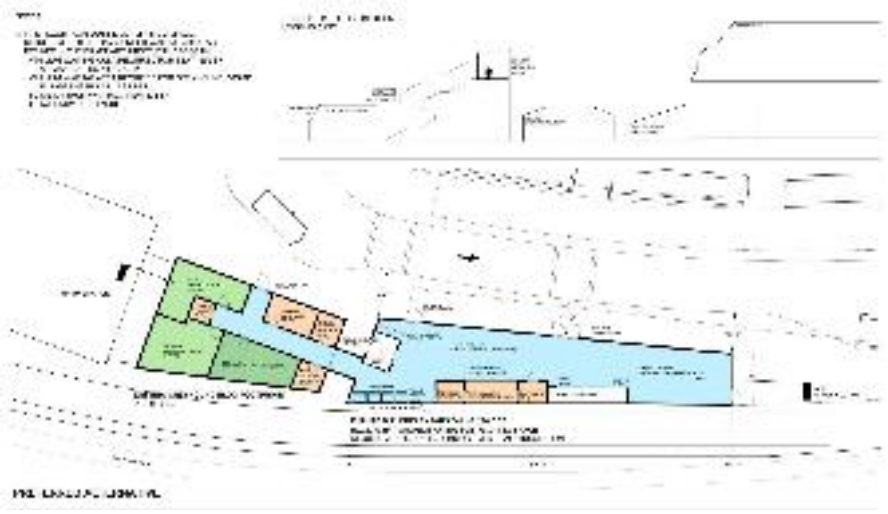
Bus Terminal – Preferred Alternative

- **East side of Water Street**
- **Water Street relocated to provide space**
- **Expanded capacity for buses**
- **New bus terminal building near bus stops**
- **Large enclosed waiting room with view of buses**
- **Requires use of currently private property**

Preferred Alternative - Bus Terminal Layout



Preferred Alternative
Bus Terminal Conceptual Floorplan



Other Modes in the Short Term Plan

- **Auto Uses**
  - Drop-off in front of Union Station
  - Pick-up/Short term parking in front of Water Street Garage
  - Zipcar in Water Street Garage
  - Car rental in Union Station
- **Taxis**
  - Pick-up and drop-off in front of Union Station
  - Queue – Include first block of State Street



- **Bicycles**
  - Bike rental
  - Bike racks

Visual Impacts – Current Views from the Parade





Visual Impacts of Preferred Short Term Alternative
– with Bus Terminal/Canopy and the Center Section of Pedestrian Bridge



Visual Impacts of Short Term Preferred Alternative
– with Bus Terminal/Canopy and the Full Pedestrian Bridge



Visual Impacts of Preferred Short Term Alternative
– with Bus Terminal/Canopy and the Center Section of Pedestrian Bridge



Visual Impacts of Preferred Short Term Alternative
– with Bus Terminal/Canopy and the Full Pedestrian Bridge



Environmental Considerations

- **Built environment**
  - Need for CT DEP permits
  - Some potential for hazardous materials
- **View shed impacts**
- **State Historic Preservation Officer approval**
  - Section 106 and 4(f)
- **Local building permits and City Council approval**

Governance Recommendation

- **Major State role**
  - State ownership of train station, bus terminal and pedestrian bridge
  - Negotiate purchase or long term lease (of at least first floor of Union Station and the area required for the bus terminal and pedestrian bridge)
  - Possible State ownership or long term lease of Water Street Garage
- **Existing ownership of ferry terminals**
- **Creation of a new RITC association**
  - Principal membership – Transportation Providers, City and ConnDOT
  - Responsibilities
    - Schedule Coordination and Static Information Sharing
    - Real-Time Information Sharing on Delays and Service Adjustments
    - Joint Marketing/Pre-Trip Customer Information and Joint Ticketing
    - Sharing of Maintenance Responsibilities for Linkages
    - Longer Term Planning

Cost Estimate: Short Term and Immediate Improvements

Immediate (including CSF internal)	$5.5 M
Short Term with Full Pedestrian Bridge	$17.2 M

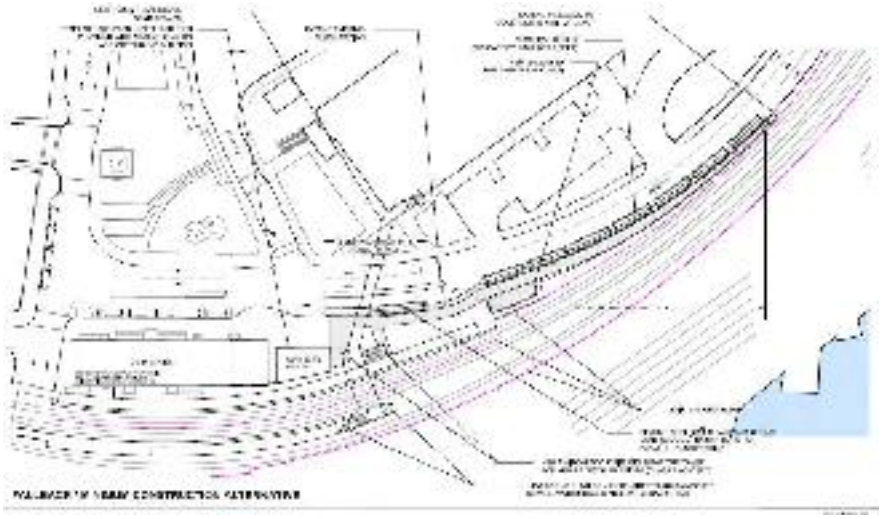


Ongoing Operating Costs Per Year	$0.3-$0.4 M

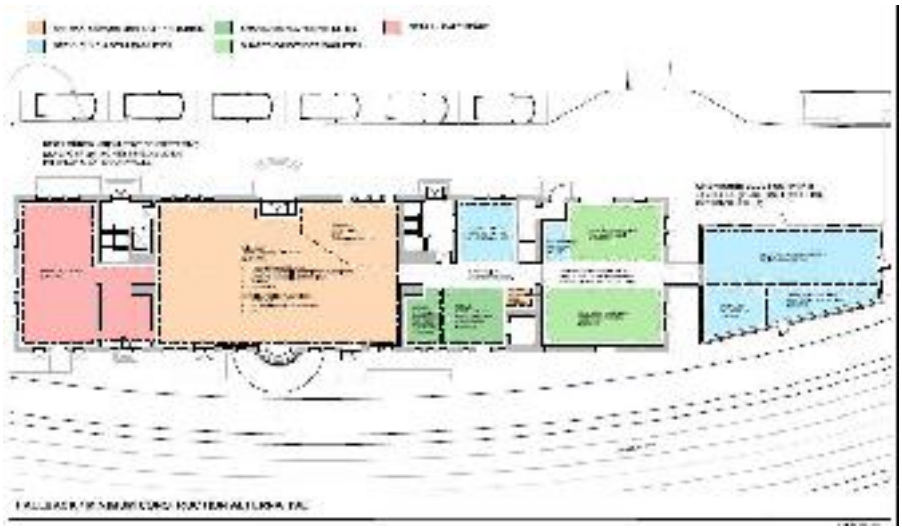
Fallback Minimum Construction Alternative

- Bus Terminal remains on the east side of Water Street
- Water Street not relocated
- Maintains current bus capacity
- Preserves the full current Water Street Garage site for future development
- Uses existing buildings with renovation
- Requires use of currently private property
- Indoor waiting area farther from buses
- Short Term $3M without Pedestrian Bridge (excluding immediate pedestrian improvements)

Fallback Minimum Construction Alternative



Fallback Minimum Construction Alternative
Train Station and Bus Terminal Conceptual Floor Plan





View of proposed transportation center in downtown New London. Master Plan also has an option of extending the elevated pedestrian footbridge to connect to the ferries and to the Water Street garage.

Regional Intermodal Transportation Center Master Plan is Completed

The Southeastern Connecticut Council of Governments (SCCOG) has completed a Regional Intermodal Transportation Center Master Plan to upgrade facilities and make connections in downtown New London's transportation hub more seamless. The project was managed by SCCOG and prepared by a consultant team headed by TranSystems.

New London serves as the gateway to southeastern Connecticut for people arriving by trains, ferries and buses. No other New England city has so many transportation services located in close proximity to each other. Though close connections are a plus for travelers, trying to accommodate the needs of all in a very small space has drawbacks.

The master plan took over a year to develop. Existing facilities and current and future operational needs were evaluated. Various short term concepts and long term visions were explored. Over that time numerous meetings were held with a Steering Committee that included representatives of transportation providers, businesses, the City of New London, State Department of Transportation and other stakeholders. Two public meetings were also held.

Feedback from the Steering Committee and the public directed the planning team to keep the transportation center where it is currently located and concentrate all services on the east side of Water Street. During the study, the Connecticut Department of Transportation said the expansion of Shore Line East service into New London would require a safe, separated passage over the railroad tracks so both a footbridge and tunnel were evaluated.

The final preferred design for the transportation center locates all facilities on the east side of Water Street and provides additional capacity for bus service to meet additional demand. A new bus terminal for both SEAT and Greyhound passengers and footbridge would be built. Im-

provements for pedestrians, automobile pick-up/drop-off and taxis are also part of this design, which was presented to the Steering Committee in early December 2009. After this meeting, the City of New London and owner of Union Station suggested the study team develop an additional alternative that would better utilize Union Station and be less costly. A scheme that houses more transportation services in Union Station and does not require relocating Water Street was then developed. This alternative does not provide additional bus capacity.

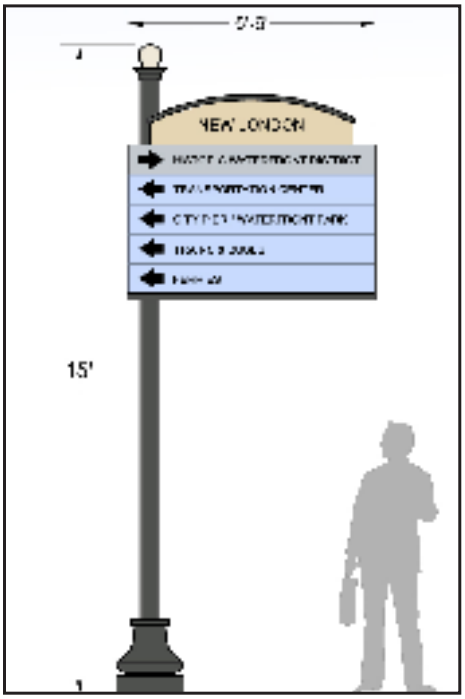
The preferred alternative

All transportation facilities remain, as is the case today, on the east side of Water Street. A new bus terminal building would be built adjoining the existing brick building used by Greyhound. The terminal would have a large, glass-enclosed waiting room with a view of buses.

Water Street would be relocated in a westward direction to provide space for additional SEAT bus parking. An over the tracks footbridge would connect to the bus terminal and could be extended westward over Water Street to the parking garage and eastward closer to the Block Island ferry. This alternative would require use of currently private property.

A better walking environment

Some two million travelers pass through New London each year. Many do not set foot in the city as their only destination is the ferries. But several hundred thousand make connections by walking between parking areas and the ferry, between the twain and ferry or stroll into the downtown area for a bite to eat or shopping.



The study team identified several ways to improve street crossings and sidewalks for pedestrians as well as signage to improve wayfinding in downtown New London.

Recommended improvements include:

- Sidewalks/pathways on both sides of railroad
- Attractive fencing along tracks
- Use of pavers
- Quad gates/ rubber surfaces at railroad crossings
- Landscaping, trees along Water Street
- Gateway structures
- Pedestrian scale lighting
- Canopies with lighting

Transit-Oriented Development (TOD)

Besides looking at transportation facilities, the study team reviewed the potential for Transit-Oriented Development in New London. The enhanced transportation center along with the Parade project should serve as a catalyst to increased development. Parcels along the waterfront were initially considered for potential TOD. However, it was concluded that they are better used as part of a fully operating transportation center.

Presently, there are very few large undeveloped sites within walking distance of the transportation center. The most immediate opportunities lie in the vacant storefronts on Bank and State Streets, and small infill parcels. Although these sites could be rehabilitated or developed within the short term, they are too small to achieve a significant portion of the future land use program identified in the study's market analysis.

Most of the major opportunities for TOD around the transportation center are long term – in 20 or 30 years. One example would be the site of the Water Street Garage once it is past its useful life. Should development occur near the transportation center, the master plan envisions it would increase transit ridership, help transform the transportation center area and downtown New London into a vibrant, pedestrian-friendly, district.

Governance

The Master Plan recommends the State of Connecticut take a major role in the transportation center either through ownership or long term lease of the train station, bus terminal and pedestrian bridge. It also suggests the creation of a new association comprised of transportation providers, the City of New London and the Connecticut Department of Transportation to enhance operations and coordination of services.

For more information contact: Jim Butler, Southeastern Connecticut Council of Governments, 860-889-2324, jbutler@seccog.org.

Regional Intermodal Transportation Center Study
Summary of Public Meeting
January 14, 2010, 6:30 p.m.
New London Public Library

Jim Butler, Executive Director of Southeast Connecticut Council of Governments (SCCOG), sponsor of the study, welcomed attendees and introduced the study team and recognized State Representative Ernie Hewitt who was in the audience. Approximately 35 people were in attendance (see attached sign-up sheet).

Larry Englisher, project manager for the consultant team, made a thirty five minute Power Point presentation that detailed the purpose and findings of the study. He said the intent of the study was to develop a seamless transportation hub for the region that will support revitalization of downtown New London as well as plan for future development opportunities in the vicinity of the transportation center. The city has a unique confluence of modes (bus, train and ferry) that are located next to each other but are not necessarily well connected.

The consultant team created a Master Plan for the transportation after reviewing the suitability of the existing location, identifying operational issues and solutions, conducting passenger surveys and traffic analysis, estimating the cost of improvements, and identifying development opportunities and public/private partnerships. Also reviewed were environmental impacts. Extensive feedback from a Stakeholder Steering Committee occurred throughout the study.

Major recommendations of the study included a pedestrian and wayfinding plan, to make it easier and less confusing for pedestrians as well as vehicles to navigate around the transportation hub. The final Preferred Alternative for the transportation center located all facilities on the east side of Water Street and provided additional capacity for bus service to meet additional demand. A new bus terminal for both SEAT and Greyhound passengers and footbridge would be built. In addition, a Fallback Minimum Construction Alternative was developed, that houses more transportation services in Union Station and does not require relocating Water Street, in the event that no funding becomes available for the Preferred Alternative. However, this alternative does not provide additional bus capacity. Both alternatives require the use of privately held property.

At the conclusion of the presentation, Jim Butler moderated a session where members of the public shared their viewed and posed questions to the study team. The following is a summary of public discussion. Responses to questions are in italics.

Tony Sheridan: I am pleasantly surprised by the study. The consultants have done a good job. It will bring New London back to the days of glory. When you go to the next step, let's continue to have good give and take with the stakeholders as you did throughout the study. Be creative with the design.

Jim Butler: As a city resident I want to be proud of the transportation center. The new signage and gateway improvements that have just been put up show some of the recommendations of this study are already starting to happen.

Larry Hample: New London's Parking Commission had no involvement in the study and it should have.
Jim Butler: We believe we met with representatives early on in the study, as well as with City staff, but he would be glad to meet with the Commission.

Peg Curtin: On behalf of the taxis, please consider taking out the bump-out at Union Station. Also, why don't you consider diagonal parking for the taxi area in front of the station?
Larry Englisher: The City expressed concern about removing the bump-out. We don't know if diagonal parking is practical and meets safety considerations but this decision needs to involve the taxi operators and the City.
Jim Butler: This is a detail that can be worked out. Tonight we are looking at the larger picture. Recently I tried to make the turn around the bump-out and found that I could.

John Markowicz: It seems like the cost of additional connections to the garage and the ferry from the footbridge would cost $7 million and this does not include the cost of acquiring private property and making improvements to accommodate Shore Line East. Who will pay for this? Do you expect a recommendation for STP funds out of this study?
Jim Butler: There may be a couple of sources of money. There is a $7 million allocation earmarked through the Surface Transportation Act. Also, there may be federal enhancement funds. I am hopeful there is enough support locally to form an association of the transportation providers. We call it a regional center because the geography is shared but the services operate independently. The group would provide advocacy to advance the project. The CT DOT (Transportation Department) would need to be a participant at the table as well.

Harry Smith, New London City Planner: I like the idea of a working group. The minimum construction Fallback Alternative and central portion of the footbridge could be funded with the $7 million but not the pedestrian improvements.Does the glass bus station fit with the historic nature of the train station?
Sandra Chalk, New London Landmarks: Architects would have to be involved in creating a design that would work. The idea of the glass is to try to keep the views to the river open.
Skip Smallridge: The bus terminal does not have to be mostly glass, though glass is needed on the Water Street side so that passengers waiting for a bus can see them as they approach the station. He also said there are two schools of thought when designing a building near an historic structure – make the new building in the style of the old or make the new building compatible with old but with a new design.

Bud McAllister: As a preservationist I like what you have done.

Kathleen Barrett: There is a lot of pedestrian traffic for the morning and evening boat to Fishers Island. Are there any improvements planned?
Larry Englisher: There are pedestrian improvements – rubber surfaces, wider sidewalks and quad gates – planned.

Thank you for bringing up sidewalks. New London should be walkable.

A sidewalk on Water Street is important because people are now walking in the mud on or the road.

Sandra Chalk: I love the recommendations for pedestrian access improvements. I'd love to see them separated out from the short term alternatives [building plans]. I like to immediately concentrate on making the area as attractive as possible.
Larry Englisher: Implementing pedestrian improvements are a matter of timing. The plan identifies pedestrian improvements that could be done immediately if funding is available - at the two railroad crossings and on the waterfront side of the right-of-way. The other improvements would logically need to wait until Water Street is relocated or they would have to be redone.

Todd O'Donnell: I think you underestimate the importance of the open space north of the train station. A lot of cars use it for quick pick up or drop off of "Aunt Mabel or "Uncle Bill." Snow removal will be difficult. Your proposal has all the passengers coming to that area. It will be very congested.
Jim Butler: The consultants expressed concerns about space constraints but this summer there was strong consensus to concentrate the transportation center on the east side of Water Street. However, without cooperation things won't happen.

Sandra Chalk: The public would enjoy seeing more detail on access to Waterfront Park and Cross Sound Ferry so they could picture what is proposed.

From a bicyclist's perspective, new racks in front of Union Station and bike sharing in the Water Street garage are good. How do you envision cyclists coming here safely as there are no bike lanes in New London?

Larry Hample: How many steps are there in the staircase for the pedestrian bridge – seventy? When's the last time you went up 70 steps?

Barbara Hample: I'm looking out for the taxpayers and have no interest in a pedestrian bridge. I'm concerned about safety and maintenance. It's only benefitting the ferries. We had a pedestrian bridge in the 30's. No one used it and it was torn down. It's not human nature to walk up 65 steps. Using an escalator is scary for some and not practical for people with luggage and strollers. The wait line for the elevator when the ferry arrives will be long. Many people are not happy about the idea of the pedestrian bridge. Who will pay for it?

Jim Butler: We asked the consultants to have an open mind about the bridge. When DOT decided to expand Shore Line East they determined a bridge was necessary for safety. We hope the State will pay for it.

Does having a pedestrian bridge make New London eligible for federal funds?
Andy Davis, CONNDOT: Originally Cross Sound Ferry had proposed a new terminal and footbridge that involved federal funds. For this project CONNDOT [CT Department of Transportation] has a lot of sources of funds that could be used.

I love New Haven's tunnel at their train station. What did you find when you investigated a tunnel for New London?
Paul Schmidt, consultant team: There were several factors we considered when comparing the tunnel and pedestrian bridge. There were more negatives with the tunnel including: disruption and maintaining access to rail during construction, cost, security, groundwater issues, higher maintenance and it had no capability for expansion [to the garage or ferry.]
Andy Davis: From the CTDOT perspective the tunnel is more costly and a pedestrian bridge has the advantage of being able to see in and out.

Laura Cordes: How do you access the pedestrian bridge to access Shore Line East from Water Street?
Larry Englisher: There will be access to the footbridge elevator by a door from the street and from inside the building.

Is the tower for the pedestrian bridge that connects to the Water Street garage free standing? If the life span of the garage is limited, then the bridge support should not be connected to the garage and need to be re-built if the garage is taken down.
Jim Butler: We will make a note of this point.

Sandra Chalk: Quite a bit needs to happen for Shore Line East to be able to expand service to New London.
Andy Davis, CONNDOT: We are having negotiations about bridge openings, Amtrak wants more switches and platforms need to be built. However, expanding service is not contingent on the new platform being in place.

The plan for moving Water Street sounds fairly major and pretty disruptive. Would it impact the Julian lot?
Larry Englisher: There will be no impact on the Julian lot, minimum impact on the Water Street garage and Parade improvements. The relocated road would be built first so that traffic can be maintained on the existing road during construction.

People come into New London for the train and ferries and then shoot right out again. Who are we doing this for? How do we keep them in New London?

Should we stop now and bring the plan before the City Council before it is finalized? I am concerned City Council members are not here tonight.

Jim Butler: The Council had a conflicting meeting tonight; I have offered to meet with the City Council to discuss the plan.

I appreciate the glass for the bus station but Bridgeport built a new glass bus station that was much bigger than needed.
Larry Englisher: We approached SEAT and Greyhound to learn what they thought their space needs were.
Andy Davis: We plan for 20-30 years into the future for projects.

Jim Butler thanked those present for attending and for their interest throughout the study.

Meeting Attendees
Sandra Chalk
Peg Curtin
John Markowicz
Frank McLaughlin
Stan Mickus
Todd O'Donnell
Tony Sheridan
Harry Smith
Dan Steward
Rep. Ernest Hewett
Ella Bowman
Bill Humphreys
Barbara Hample
Larry Hample
Andrew Lockwood
Andy Davis
Lindsey Blank
Bud McAllister
Anthony Silvestri
Rachel Pattison
Wick York
Demetrios Louziotis
Kip Bochain
Diane Ruhmshottel
Nat Trumbull
Art Costa
Krystel Kornegay
Laura Cordes
Susan Munger
Kathleen Edgecomb
Lloyd Beachy
Christopher Deveau
Kathleen Barrett
Laurie Deredita

Elena Pascarella
Jim Butler
Skip Smallridge
Jim Wensley
Paul Schmidt
Jill Barrett

3. Stakeholder Steering Committee Meetings

Southeastern Connecticut Council of Governments

Regional Intermodal Transportation Center Master Plan and Efficiency Study

Steering Committee Meeting #1

July 14, 2008

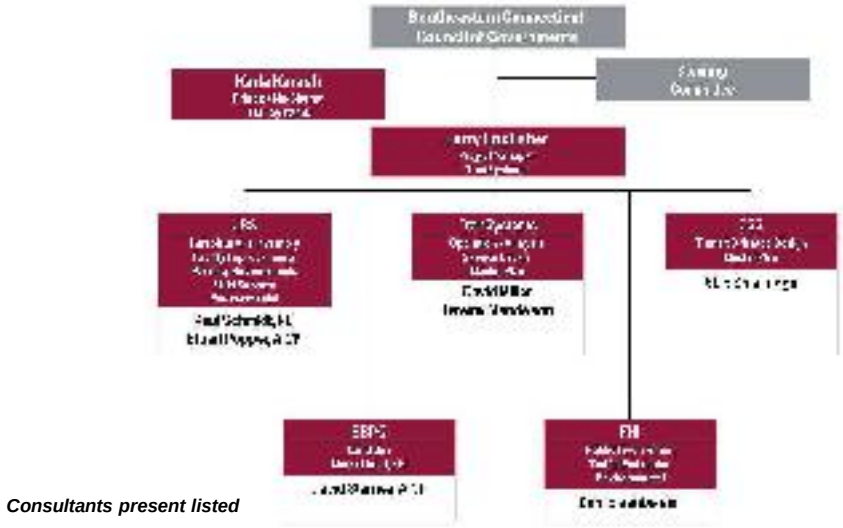




Agenda

- Introductions
- Background: Study Purpose and Funding
- Overview of Study Tasks and Schedule
- Technical Tasks and Data Collection
- Role of the Steering Committee
- Discussion on Project Goals/Vision
- Next Steps

Team Organization



Consultants present listed

Study Background

- **Union Station anchors the current regional intermodal transportation center (RITC)**
  - Unique confluence of modes
- **Intermodal connections need improvement**
  - Were prior plans to improve pedestrian connections
  - Parade Project will create new plaza and improve pedestrian/vehicular circulation
- **Private owners exploring alternative uses for Union Station**
- **Well-functioning intermodal center is considered vital to future development in New London**





Existing Downtown New London Sites and Fort Trumbull



- Current sites within walk distance of downtown
- Ferries and rail station, bus, taxis, parking at current site
- Fort Trumbull important redevelopment site
- Fort Trumbull may be able accommodate cruise ships

Transportation Services at the Existing RITC

- **Long Distance Modes (weekday round trips)**
  - Amtrak (1 Acela, 9 Regl)
  - Shore Line East (1+3 AT)
  - Intercity Bus (5)
  - Cross Sound Ferry (11 auto + high speed passenger)
  - Block Island Ferry (3-4 passenger)
  - Fishers Island Ferry (8 auto)
- **Local /Access Modes**
  - SEAT Bus (7-8 routes pulse)
  - Casino Coaches (meet passenger ferries)
  - Taxi
  - Private Automobile
  - Bicycle
  - Pedestrian
  - Tourist Shuttle (proposed)

Study Purpose: Create a Master Plan for the RITC

- Review feasibility for alternative siting of RITC at Fort Trumbull
- Identify operational issues and solutions
- Estimate costs of improvements
- Identify transit-oriented development opportunities
- Identify synergies and partnerships

Study Tasks and Target Schedule

	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
	2008						2009							
Steering Committee Meeting														
Goals & Objectives														
Review of Prior Work														
Screening Evaluation of Sites														
Surveys														
Existing Conditions Summary & Findings														
Current Services, Operations & Needs														
Future Service Levels & Operational Impacts														
Markets and Opportunities														
Potential Improvements														
Costs, Economic Impacts, Environmental Impacts														
Public Meeting														
Draft Report														
Board Presentation														
Final Report														

What an Enhanced Transportation Center Could Mean for New London and the Region

- Easy access to regional/interregional transportation services
- Convenient transfers between modes
- Easy access to supporting services, facilities and parking
- Enhanced development and economic activity near the center and in the region
- Support for the region's tourist industry

Bird's Eye View 1911



State Street & The Parade





New London



1868



Current

Context



Current Bird's Eye View



Water Street Circa 1960



Conceptual Redevelopment at the Existing Site





Fort Trumbull Peninsula



Looking east



Looking west

Technical Tasks and Data Collection

- Screening Evaluation of Sites
- Evaluation of Transportation Needs (Existing and Future)
- Evaluation of Infrastructure Conditions and Opportunities
  - Data Collection to Assess Needs
  - Development of Improvement Options
- Transit Oriented Development Opportunities
- Economic Opportunities Impacts
- Public Involvement

Early Screening Evaluation of the Two Sites

- **Draft Criteria for Screening Evaluation**
  - Ability to serve key connections
  - Capacity to meet likely demand
  - Capital cost of the required improvements
  - Impacts on the transportation operators
  - Traffic impacts
  - Environmental sensitivity of the sites
  - Compatibility with other existing/potential site uses
  - Economic impact on downtown New London
  - Potential for transit oriented development
  - Likely public support

Transportation Needs and Interfaces Between Modes

- **Transportation Needs**
  - Ticketing/Information
  - Restrooms/Amenities
  - Office/ Employee Needs
  - Layovers and Operations
- **Future Needs**
  - Growth and expansion
  - New services
  - New amenities/retail
- **Potential Interfaces**
  - Shuttle - LI Ferry/Cruise Ships
  - Shuttle - Rail
  - Auto to Block/Fisher's Is. Ferry
  - Auto to Rail
  - Greyhound - SEAT
  - Others

Transportation Infrastructure Conditions and Opportunities

- **Vehicular Capacity / Circulation**
  - Excess Capacity
  - Shortcomings
  - Special Issues
  - Safety Issues
- **Parking Supply / Location**
  - Adequate Placement
- **Transit Operating Capacity / Accessibility**
  - Storage / Constrained Operations
- **Pedestrian Linkages / Interconnection**
  - Accessibility
- **Pedestrian Friendly Spaces**
- **Signage & Wayfinding**



Data Collection

- **Review of existing studies and plans**
- **Parking and traffic counts**
- **Windshield mail-back survey of parked cars**
- **Brief interviews of train and bus riders at Union Station**
- **Surveys of ferry passengers**
- **Will conduct data collection during August tourist season**

Transit Oriented Development (TOD) Opportunities at/near the RITC

- Seize the immediate TOD opportunities
- Leverage immediate TOD opportunities as catalyst for future downtown development
- Creative financing: Leverage public transportation dollars
- Seamless connections
- Gateway to downtown New London
- Leverage investment and amenity: Waterfront Park / Bank Street / The Parade

Focused Market/Economic Analysis of Opportunities/Impacts

- Identify existing conditions, trends and factors influencing development
- Relate transit services / design to TOD opportunities
- Identify site-specific and waterfront / downtown area TOD / smart growth opportunities
- Evaluate economic viability
- Evaluate economic impacts of scenarios (direct / indirect, economic / fiscal Impacts)
- Leverage federal funding opportunities
- Identify potential structures for public/private partnerships

Public Involvement

To inform and engage the New London community through:

- Meetings with stakeholders & property owners
- Steering Committee
- Two public meetings
- Newsletters/fact sheets
- Website

Your Role as a Steering Committee Member

- Attend five meetings over course of the study
- Assist in identifying other stakeholders
- Identify issues and concerns
- Identify sources of data
- Review interim findings and recommendations

Discussion

Next Steps

- Data Collection
- Site Screening Evaluation
- Next Meeting: early Fall

- Contact information: Jim Butler, 860-889-2324
  - jbutler@seccog.org
  - Website: www.seccog.org

SUMMARY OF MEETING

Project:	**Regional Intermodal Transportation Study**
Date of Meeting:	2:00 PM, Monday, July 14, 2008
Location of Meeting:	New London Office of Development and Planning Conference Room
Purpose of Meeting:	Kick-Off Meeting; to introduce the consultant team and to discuss the objectives, schedule and initial data collection efforts
Meeting Attendance:	Attendees listed on page 4

Summary of Meeting Discussion:

- Welcoming remarks were made by James Butler, SCCOG Chairman Joseph Jaskiewicz (Mayor, Montville) and Mayor Kevin Cavanaugh (New London)
- The Steering Committee members in attendance introduced themselves along with the project team consultants
- Larry Englisher made a presentation summarizing the project approach, objectives and schedule

Questions/comments made during the presentation and in the discussion period afterward:

- Senator Stillman: Why is the schedule 14 months long and not less? And why did it not start sooner?
    - Jim Butler: The starting schedule was constrained by the funding and procurement procedures of ConnDOT (Connecticut Department of Transportation) and SCCOG (Southeastern Connecticut Council of Governments). The consultant was hired within a week of the target date. The schedule is based on the number of tasks and it was initially thought to take 18 months but we were able to work with the consultant to shorten the schedule to 14 months. If the consultants can finish sooner, they will; since they will be paid based on completion, there is no disincentive to finishing sooner. The addition of the screening of the Fort Trumbull site did not extend the schedule by more than a month or so, especially since much of the data collection can take place concurrent with the screening.
- Senator Stillman: Can the draft report be made available prior to the next tourist season so the local organizations can act on the recommendations?
    - Jim Butler: Yes, and interim draft findings will be provided over the course of the study so it is not as if the findings will be held until the end and presented all at once
- Tony Sheridan: Who suggested including Fort Trumbull as an alternative?
    - Jim Butler: ConnDOT asked SCCOG to look at it, and it is anticipated that this effort will fulfill the "Alternative Site" requirements of NEPA/CEPA, facilitating environmental documentation in the future.
    - Mayor Cavanaugh: Looking at an alternative site is necessary to the process
- Question: Who will make the decision regarding which site is chosen?

  - Jim Butler: SCCOG/ConnDOT, in conjunction with the operators of the current transit services. As part of the SCCOG, New London will be part of the decision-making
  - ConnDOT Deputy Commissioner Albert Martin: It is not ConnDOT's intent to impose on the process, they are following the City's lead
- John Markowicz: An issue for the cruise ships is that more security is necessary at the terminals when the ships are in – please note that in the report
- Tony Sheridan: Can the data collection effort capture the exodus of riders to the Old Saybrook station for Shore Line East service? They have better amenities and free parking (although full) and better service frequency at that location.
  - Gene Colonese of Rail Administration at ConnDOT: there is a phased approach planned to bring service back to New London
- Tony Sheridan: A legislative agenda item for the Chamber of Commerce is to try to get all Amtrak trains to stop in New London
- Charles Curtin: While there is free parking in Old Saybrook, there is no taxi service there. The availability of taxi service in New London could potentially alleviate the need for some parking if people take a taxi to and from the terminals instead of parking
- Question: Can we survey people in Old Saybrook or New Haven who would be potential riders of rail from New London?
  - Paul Schmidt: We will work with Gene Colonese of Rail Administration to collect data from CONNDOT surveys of Shore Line East users
- Comment: Shore Line East service does not currently meet the needs of the City/Region
- Comment: While surveys were conducted in conjunction with the 2003 study of transportation in the region, findings regarding the propensity to use mass transit may be invalid if today's gas prices would influence opinions
- Tony Sheridan: Can we look at the survey questions prior to the survey?
  - Jim Butler indicated he will make them available via e-mail.
- Comment regarding the interfaces between modes of transportation: People on Cruise ships do not typically interact with train service
- Question: Can the link to study documents posted on the web be included with the invitations to future Steering Committee Meetings?
  - Jim Butler: Yes
- Mayor Cavanaugh: At the scoping process we determined that there would be monthly meetings, yet the schedule indicates that there are only five meetings with the Steering Committee. This is important to keep the project on track.
  - Jim Butler: It was our understanding/intent to hold monthly meetings with the project team and City/SCCOG staff. If additional meetings are needed with members of the steering committee, they can be called on short notice as needed. Jim also indicated that he would be including in his monthly report to the SCCOG an update on the study progress.
  - SCCOG Chairman Jaskiewicz/Deputy Commissioner Martin confirmed that meetings can be organized if additional meetings are determined as necessary
- John Markowicz asked Todd O'Donnell what he thinks about the process, since he owns Union Station
- Todd O'Donnell: I will work with the consultants. I want this process to work. However if the decision is to go to Fort Trumbull, it is a big, 12- year problem.

- Tony Sheridan: What is the format of the final report – it needs to be something that can result in funding requests for the upcoming window of opportunity for the opening of federal funding.
    - Jim Butler: This is being referred to as a report but in fact it is a plan and it will include preliminary design plans.
- Kip Bochain: Don't relocate the transportation center to Fort Trumbull.
- Comment: Downtown business owners don't want the RITC to move to Fort Trumbull.
- Question: What is the status of the Coast Guard Museum?
    - Michael Joplin: the Environmental Documentation is expected to be submitted in Mid September and it is anticipated that the decision one way or the other will be announced by the end of October. We are speculating that the announcement will be made on Homecoming Weekend of the Academy in Mid October.
- John Markowicz: What is the schedule of the Parade construction and how do these projects impact one another?
    - Bruce Hyde: The Parade construction is expected to take place from August 2008 to September 2009
- Michael Joplin: Is the consultant team okay with the Parade design?
    - Jim Butler: The consultants submitting for the Study were instructed that the SeCTer project should be considered a given component of the design of the area, and that although the projects are adjacent they should not conflict with one another
- Comment: Getting pedestrians across the rail is a key issue
- Comment: There is a need for bicycle storage and car-sharing at the Train Station.
- Tom Stone: Surveys of bus passengers should be conducted on a weekend
    - Larry Englisher: Surveys will take place on a Saturday and a weekday
- Todd O'Donnell: How do the consultants intend to reflect the impacts of rising gas prices on forecasts of ridership
    - Larry Englisher: It's important to strike a balance between incorporating changes in behavior stemming from rising fuel prices and over-estimating changes in travel behavior based on short-term observations of responses.
    - Tom Stone: We have seen increased ridership over the past 18 months
    - Dep. Comm. Martin: The irony is that as public transit use increases and personal vehicle use decreases, gas tax revenues used to fund public transit may actually decrease
    - Skip Smallridge: Recent studies that he has been involved with have asked whether design can incorporate short range transportation modes such as zip cars, scooters and bikes
    - Todd O'Donnell: For the study to be credible it should reflect current trends
    - John Markowicz: Eventually the prices of mass transit will reflect rising fuel prices as well, potentially mitigating the shift from personal vehicle
- Question: Is it possible that Fort Trumbull is identified as a desirable site for the cruise ships while the Regional Intermodal Transportation Center remains in its current location?
    - Jim Butler: Yes
    - Senator Stillman: The Cruise Ship Task Force should be asked for input, they are currently investigating the possibility of New London becoming a point of embarkation/disembarkation which would potentially benefit from the Cruise pier being co-located with the ITC

    - Dep. Comm. Martin: While the cruise ships do not release their schedules until the start of the new season, the number of ships has increased over the past few years and the cruise companies have indicated that they are pleased with their experience in New London
- Michael Joplin: Can the Steering Committee be given 30 days notice for upcoming meetings including access to the most relevant documents available and possibly the presentation so that they can come into the meeting informed?
    - Jim Butler: Yes
- Larry Englisher: Is this time of day acceptable to everyone for the meetings?
- Consensus: Yes

The next Steering Committee meeting will be scheduled for autumn 2008.

Meeting Attendees:

Steering Committee:

Tony Sheridan	Chamber of Commerce of Eastern CT
Bruce Hyde	City of New London
Kevin Cavanaugh	City of New London
Jenny Contois	Congressman Joe Courtney
Frederick Riese	Connecticut DEP
William Cornish	Cornish Parking
Stan Mickus	Cross Sound Ferry
Peter Simmons	CT DECD
Charles Curtin	Curtin Transportation
Dan Karp	Daniels Dairy Downtown
Donna Simpson	Eastern CT Tourism District
Tom Stone	Greyhound
Joe Smith	Mohegan Tribe
Chris Jennings	Mystic Coast and Country
Michael Joplin	New London Development Commission
Sandra Chalk	New London Landmarks
Frank McLaughlin	New London Main Street
Kip Bochain	New London Parking Commission.
Martin Berliner	SCCOG, City of New London
Joseph Jaskiewicz	SCCOG, Town of Montville
Dan Steward	SCCOG, Town of Waterford
John Markowicz	seCTer
Sen. Andrea Stillman	State Sen. 20th District
Todd O'Donnell	Union Station
Michael Carey	Suisman, Shapiro, Wool, Brennan, and Gray

ConnDOT

Andy Davis	ConnDOT
Albert A. Martin	ConnDOT, Deputy Commissioner
Eugene Colonese	ConnDOT

SCCOG Staff

James Butler	SCCOG
Dick Guggenheim	SCCOG

Study Team

Larry Englisher	TranSystems
David Miller	TranSystems
Jeremy Mendelson	TranSystems
David Starnes	Basile Baumann Prost Cole & Associates, Inc.
Skip Smallridge	Crosby Schlessinger Smallridge
Sam Eisenbeiser	Fitzgerald & Halliday, Inc.
Paul Schmidt	URS
Stuart Popper	URS

Other

H. Tucker Braddock	Greater Norwich Chamber of Commerce
Bill Haase	Town of Stonington

Submitted By: Samuel K. Eisenbeiser, Fitzgerald & Halliday, Inc. **Date: 07/30/08**

Southeastern Connecticut Council of Governments

Regional Intermodal Transportation Center Master Plan and Efficiency Study

Steering Committee Meeting #2

October 21, 2008





Agenda

- Comparison of Alternative Sites
- Survey Findings
- Stakeholder Input
- Next Steps

Comparison of Two Candidate Sites: Approach

1. Evaluate advantages/ disadvantages of locating each mode at each site (assuming it is feasible)
2. Evaluate feasibility of each mode at each site
3. Identify the realistic alternative set of modes at each site
4. Evaluate the two realistic alternatives
5. Make a recommendation, considering feasibility, capacity, cost and other advantages



Source: ESRI ArcGIS Map Service

Comparison of Two Candidate Sites: Evaluation Criteria

- Capacity for Operations
  - Landside, Maritime
- Parking Capacity
- Vehicular Access
- Traffic Impacts
- Pedestrian Access
- Compatibility with Other Existing/Potential Uses
- Capital Cost
- Likely Public Support
- Economic Development Opportunity (TOD)
- Environmental Sensitivity
  - Natural, Cultural, Contamination
- Capacity to Accommodate the Entire Package of Modes

Existing Downtown Site: Facilities

- **Union Station**
  - Privately-owned
  - Amtrak lease
  - One weekday SLE roundtrip
  - Greyhound leases adjacent space
- **SEAT on-street stop**
  - Shelter/benches
- **New Fishers Is. Ferry terminal**
- **Cross Sound Ferry facilities**
  - LI auto, hi-speed pass. ferry
  - Block Island pass. ferry
  - 130 parking spaces
- **Large parking facilities**
  - Water Street Garage (City) – 975 spaces
  - Eugene O'Neill Surface Lots (City)– 255 spaces
  - Governor Winthrop Garage (Private) – 400 spaces
  - Julian Surface Lot (Private) – 186 spaces
- **Taxi stand**
- **Cruise Ships at State Pier**
- **Parade Project**

Existing Downtown Site



Fort Trumbull Site

- **Redevelopment Site and Plan (MDP)**
  - Mixed office, residential and hotel
- **Existing Uses**
  - Coast Guard Facility
  - Historic Fort, State Park & Visitor Center
  - Marina
  - Fishing Piers (public, commercial)
  - One office building
  - Wastewater Treatment Plant
  - Pfizer Global Research Center
- **Proposed Coast Guard Museum**



Comparison of Two Candidate Sites: Cruise Ships

- **Can use State Pier but not City Pier**
- **State Pier acceptable but improvements desired**
- **Fort Trumbull attractive location if feasible**
- **Pier 7 cannot be used as is due to length,depth, wind load and interference with federal channel and Electric Boat**
- **Costly, complete pier reconstruction needed**
- **Landside access is a problem**
- **Environmental permits unlikely**
- **<u>Move deemed desirable (with drawbacks) but not feasible</u>**

Fort Trumbull Piers

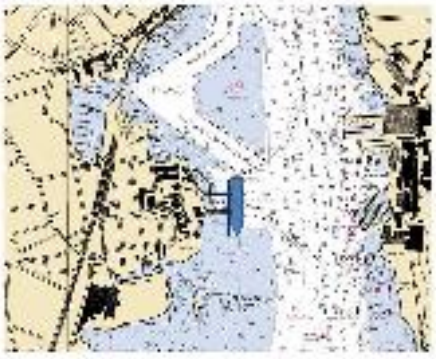


Potential Cruise Ship Location at Fort Trumbull

At Existing Pier



With Reoriented Pier



Comparison of Two Candidate Sites: Ferries

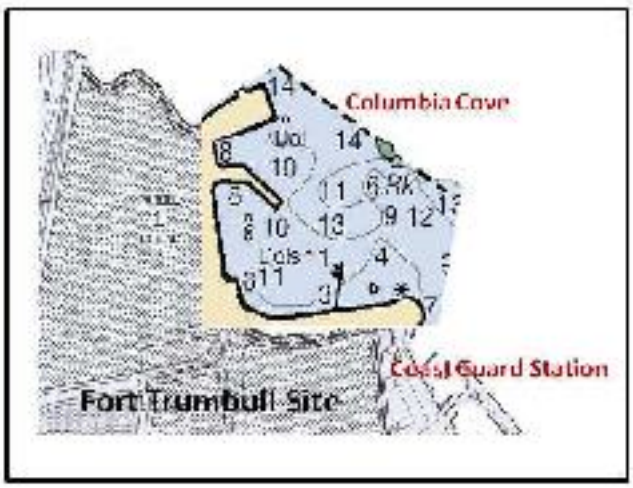
- **Neither ferry operator is interested in moving**
- **Both have major investments in current site**
- **Current site has major access advantages**
- **Only possible location at Ft Trumbull is Columbia Cove**
  - Would require dredging to create new pier
  - Unlikely to get necessary permit given present alternatives
  - Landside access inconvenient
  - Would require land programmed for other uses
- **<u>Move deemed both undesirable and infeasible</u>**





Source: Google Earth, TeleAtlas, Digital Globe

Potential Ferry Location at Fort Trumbull



Comparison of Two Candidate Sites: Rail Station

- **Union Station owner would prefer rail station to remain**
  - Amtrak had no official opinion but is unlikely to support moving
  - Current site offers better access
- **Moving rail station to Fort Trumbull**
  - Would be costly
  - Would require land programmed for other uses at Fort Trumbull
- **<u>Move deemed feasible but not desirable</u>**





Comparison of Two Candidate Sites: Bus Modes

- **Intercity Bus (Greyhound)**
  - Prefers downtown location with good access to interstate highway
  - Primary interaction is with SEAT
- **Local Bus (SEAT)**
  - Prefers downtown location and more integration with Union Station
  - Pedestrian access is most important
- **Proposed Regional Shuttle Bus**
  - Would require an extra stop to serve Fort Trumbull
- **<u>Move deemed undesirable but feasible</u>**





Comparison of Two Candidate Sites: Parking

- **At existing site, the ample parking resources are shared among modes and with downtown uses**
- **At Fort Trumbull, parking would need to be constructed**
  - Could possibly be shared among modes and with development
  - Development has not progressed and distances between facilities would likely be greater
  - Additional parking required would reduce acreage for development
  - Current train and ferry parking needs are about 500 spaces or 5 acres of surface parking
- **<u>Feasible; desirable if needed to support other modes</u>**

Comparison of Two Candidate Sites: Environmental Issues

- **Both sites have some contaminated areas; not a deciding factor**
- **Natural resource constraints are quite limited at both sites**
- **Major difference has to do with Section 106 and Section 4(f)**
- **Fort Trumbull site has several historic and archaeological concerns:**
  - Foremost is State Designated Archaeological Preserve located directly east of and adjacent to the railroad tracks (most logical spot for a planned intermodal center)
  - Fort Trumbull State Park, the nearby Italian Dramatic Club, and the Hamilton Street complex
- **Existing site location better suited to an intermodal center**

Comparison of Two Candidate Sites: Economic Development

- **Downtown site with improvements has stronger development potential**
  - Strong existing pedestrian oriented infrastructure / network with nearby supportive uses and development opportunities
  - Numerous potential opportunity sites that can be (re)developed
  - Multiple modes of transport are already located in downtown
  - Enhancement of the current RITC would take advantage of its accessible location
- **Moving to Ft. Trumbull has potential for negative impacts**
  - parking and space requirement needs for an intermodal center will conflict with the development goals for the Fort Trumbull peninsula and reduce tax revenue
  - moving only rail and bus (the feasible modes) frees up very little of the downtown waterfront property for other development and removes significant numbers of people from the downtown economy

Comparison of Two Candidate Sites: Public Support

- Notable lack of support among the stakeholders for moving the RITC to the Fort Trumbull site
- Likely to be a lack of support among the stakeholders and the public for relocating the rail and bus modes while leaving the ferry and cruise ship modes at their current locations

Comparison of Two Candidate Sites: Realistic Alternatives (Packages of Modes)

- **Existing Downtown Site**
  - with improvements
  - cruise ships remaining at State Pier
- **Fort Trumbull Site**
  - with rail, intercity bus, SEAT and parking
  - without ferries or cruise ships
  - would result in:
    - Fractured RITC without any maritime modes
    - Less desirable location for rail, intercity bus and SEAT
    - High cost
    - Negative impacts on economic development and tax revenue

Overall Evaluation Summary

○ Minor Issues/High rating
◒ Moderate Issues/Medium rating
● Major Issues/Low rating

	Current Site	Fort Trumbull
Capacity for Operations	○	◒
Vehicular Access	○	●
Parking Capacity	○	◒
Traffic Impacts	○	○
Pedestrian Access	○	◒
Capital Cost	○	●
Environmental (Contamination)	◒	◒
Environmental (Natural)	○	○
Environmental (Cultural)	◒	●
Compatibility with Other Land Uses	○	◒
Economic Development Opportunity	○	◒
Public Support	○	●
Consolidated RITC	○	●

Recommendation and Discussion

- **It is the strong recommendation of the consultant team that the RITC be maintained at the downtown site.**
  - The existing site has the unique advantage of consolidating the ground and maritime modes in a single location
  - The cruise ships would be the main reason for moving to Fort Trumbull, but that is not feasible
  - Downtown offers a central location with good access
  - Infrastructure already exists; costs would be lower
- **Develop improvements at the existing site**
- **Discussion**

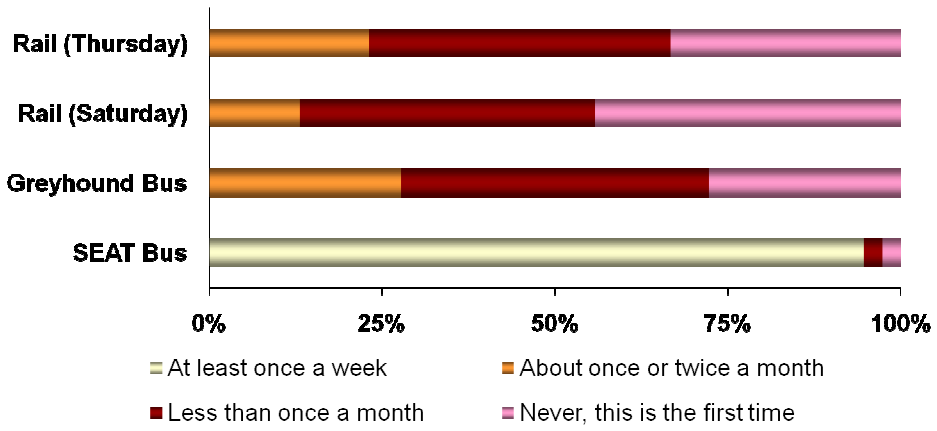
Surveys Conducted in August

- **Passenger Modes**
  - Rail (Amtrak) (107)
  - Cross Sound Ferry
    - Long Island Auto Ferry (117)
    - High Speed LI Ferry (16)
    - Block Island Ferry (126)
  - Greyhound Bus (18)
  - SEAT Bus (85)
- **Parking Garages/Lots**
  - Water Street Garage (106)
  - Governor Winthrop Garage (37)
  - Eugene O'Neill lot /Golden St. (23)
  - Eugene O'Neill lot /Pearl St. (6)
  - Cross Sound Ferry lot (24)

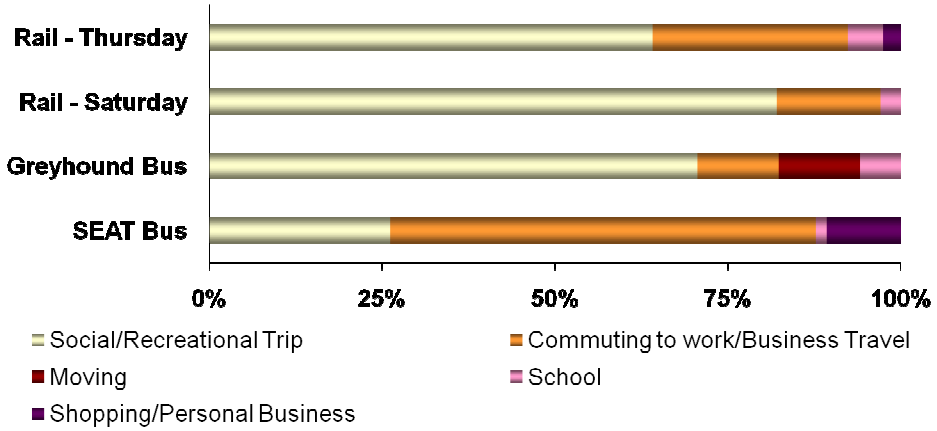
Key Findings

- **Most rated transportation facilities in New London for all modes as good – both overall and individual attributes**
  - Greyhound passengers rated amenities at the terminal below average
  - Rail users most interested in food service, clean restrooms
  - SEAT passengers more concerned about improving bus operations and routes than facilities
- **Most passengers do not transfer between public transportation modes**
  - Most frequent transfers took place between the ferries and the rail service
- **Most passengers do not visit downtown**
  - Most likely - Greyhound passengers
  - Least likely - LI Ferry and Sea Jet passengers, even with additional services

Findings: Trip Frequency



Findings: Trip Purpose



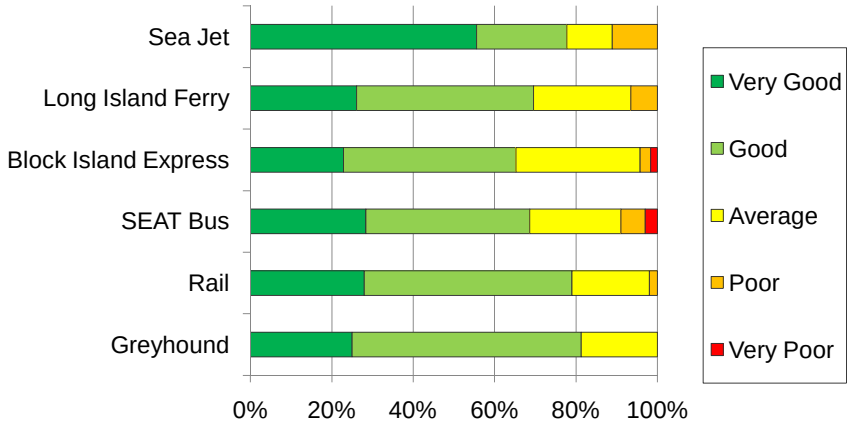
Findings: Access Modes

Mode to Terminal	LI Ferry	Sea Jet	Block Island Express Ferry	Rail (Thurs.)	Rail (Sat.)	Greyhound Bus	SEAT Bus
Personal vehicle, parked in various lots	28%	8%	**91%**	24%	8%	11%	1%
Dropped off	11%	31%	7%	**42%**	**49%**	**44%**	8%
Taxi	1%	8%	3%	16%	12%	0%	4%
Charter/Casino Bus	**48%**	**46%**	0%	0%	0%	0%	0%
Ferry	1%	0%	0%	16%	11%	11%	2%
Walked	1%	0%	0%	3%	11%	11%	**49%**
Local Bus (SEAT)	4%	0%	0%	0%	3%	22%	**33%**
Intercity Bus (Greyhound)	6%	8%	0%	0%	2%	0%	1%
Amtrak Train	0%	0%	0%	0%	5%	0%	1%

Key Intermodal Connections

- **Auto (Parking, Pick-up/Drop-off)**
  - Block Island Ferry
  - Amtrak Rail
  - Shore Line East Rail
  - Greyhound
- **Auto (Drive-on)**
  - LI Ferry
- **Greyhound**
  - SEAT
  - LI Ferry
- **Rail**
  - Fishers Island Ferry
  - Taxi
- **Future Shuttle Bus:**
  - LI (High-Speed Passenger) Ferry
  - Cruise Ships
  - Rail

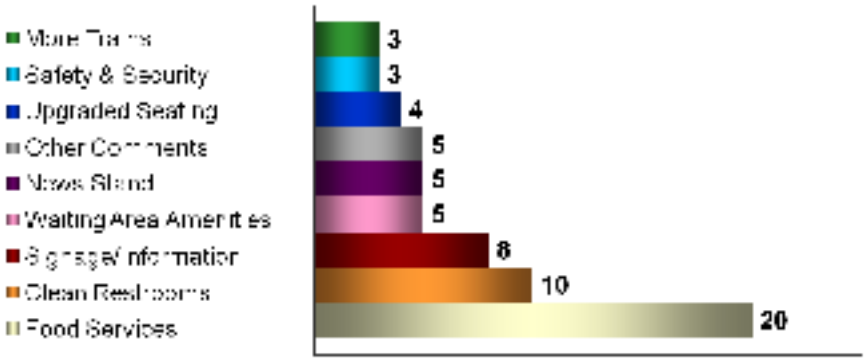
Findings: Ratings of Amenities
Overall Rating by Survey Group



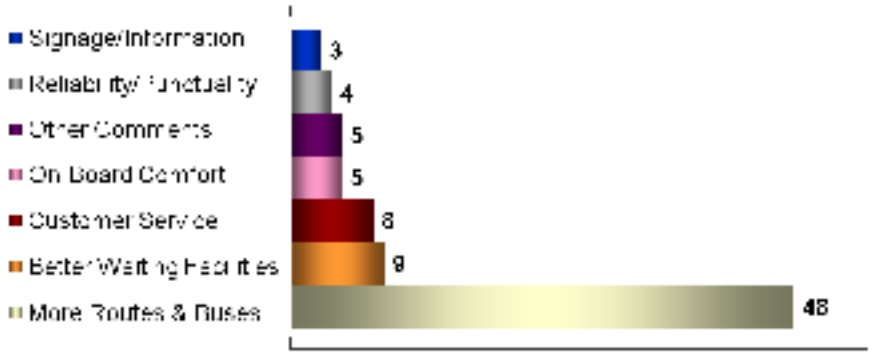
Findings: Average Ratings of Individual Amenities
1= Very Poor, 2= Poor, 3= Average, 4 = Good, 5= Very Good

	LI Ferry	Sea Jet	BI Ferry	Rail	Grey-hound	SEAT Bus
Parking	3.6	4.9	3.7	3.9	4.1	3.5
Convenience getting to/from the terminal/station	4.2	4.7	4	4.2	4.6	3.8
Convenience making connections with the transit service	4.2	4.8	4.2	4.3	4.2	3.7
Comfort at the terminal/station (seating, climate control)	3.9	4.3	3.6	4	3.4	3.7
Amenities at the terminal/station (food services, restrooms, newsstand)	3.6	4.4	3.4	3.1	2.9	3.5
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	4	4.5	3.9	4.1	4.1	3.9
Clearly-marked schedules for all transportation modes	4	4.5	3.8	4.1	3.9	3.7
Purchasing tickets	4.1	4.5	4.3	4.6	4.5	3.8
Personal Security at the terminal/station	4	4.6	3.8	4.1	3.9	3.7
Physical Safety at the terminal/ station (and while making connections)	4.1	4.6	4	4.3	4.1	3.9
Nearby places of interest	3.7	4.5	3.3	3.7	3.8	4.2

Findings: Needed Improvements – Rail Passengers

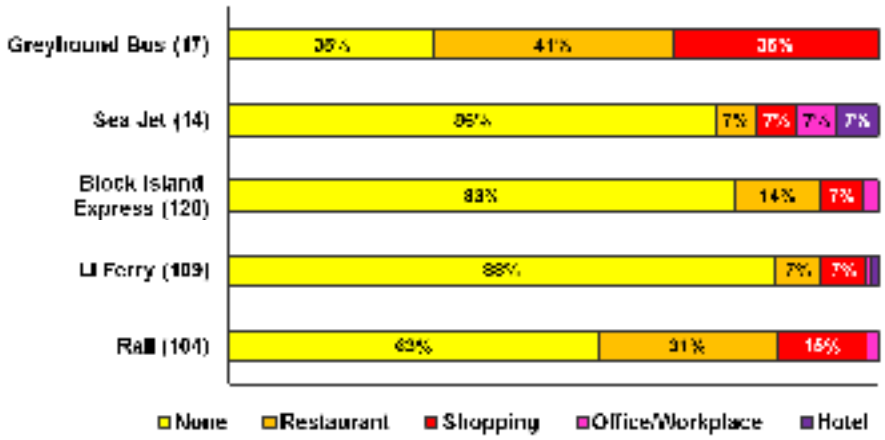


Findings: Needed Improvements – SEAT Bus Passengers



Note: the number of Greyhound responses was very small; however a better waiting area was the most frequently noted desired improvement.

Findings: Businesses Visited in Downtown New London



Findings: Likelihood of Visiting Downtown

Transit Mode	Average Response
Greyhound Bus	3.94
Rail	3.79
Block Is. Express Ferry	3.41
Long Island Ferry	3.04
Sea Jet Ferry	2.75

Scale:

Very Likely – 5
Likely – 4
Don't Know -3
Unlikely – 2
Very Unlikely - 1

Findings: What Would Increase Visits to Downtown

	Number	%
Create a cultural/entertainment center	109	35.0%
Expand retail shopping	95	30.5%
Have more restaurants, including fine dining	81	26.0%
Other suggested factors	10	3.2%
Hotel/Casino	6	1.9%
Improved Parking	5	1.6%
All of the Above	5	1.6%

Based on Ferry, Rail and Intercity Bus passengers

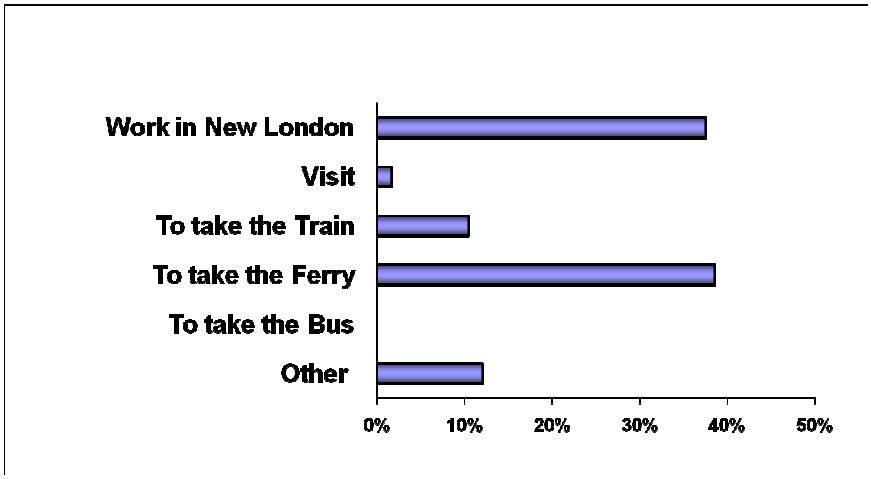
Additional Observations from Passenger Surveys

- **Inadequacy of signage**
  - Surveyors were routinely asked for directions by people on their way to the ferry piers.
  - Lack of information about schedules and how to purchase tickets
- **Visual separation from downtown New London**
  - Many physical barriers create obstacles between the transportation terminals and the commercial facilities on Bank Street.

Parking Accumulation (Saturday August 2nd)

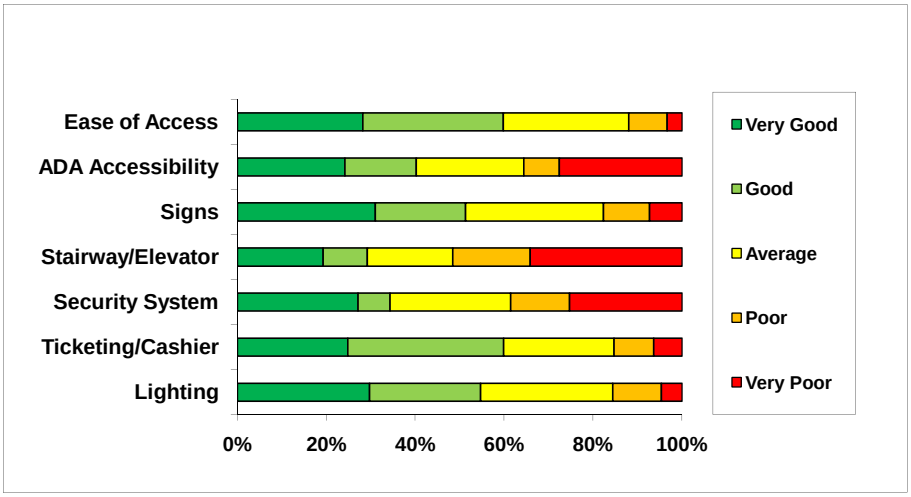
Facility	*Capacity*	*Peak Occupancy*
Water Street Garage	975	48%
Gov. Winthrop Garage	400	33%
E.O'Neill/Pearl Lot	130	22%
E.O'Neill/Golden Lot	125	89%
Julian Lot	186	41%
Cross Sound Lot	130	109%
Total	1946	50%

Parking: Trip Purpose

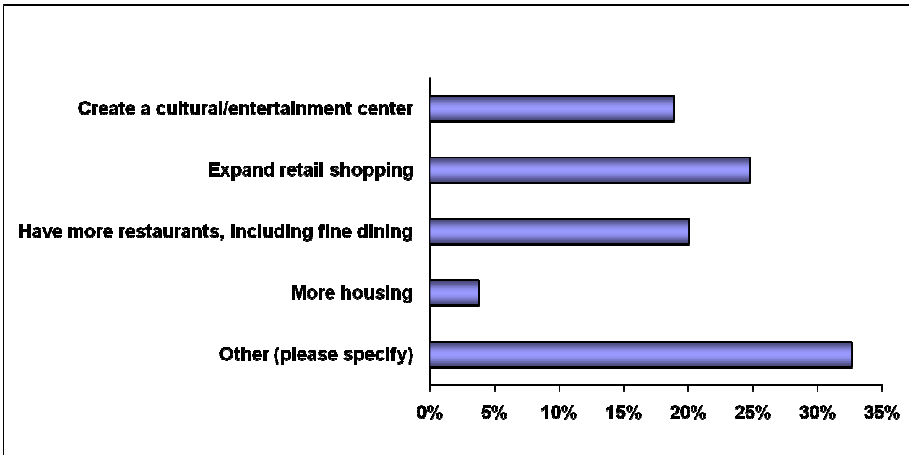


- Responses: 192

Parking: Rating of Amenities



Parking: What Would Increase Visits to Downtown



- Responses: 190

Stakeholder Meetings to Date

- Mayor of New London
- NLDC
- New London Main Street
- New London Landmarks
- Port of NL/Cruise Ship Task Force
- Union Station
- Greyhound
- SEAT
- Cross Sound Ferry
- Fishers Island Ferry
- Mystic Country
- Parking Commission Chair
- Chamber of Commerce of Eastern CT
- SECTER
- Potential Future Meetings
  - Amtrak, Property owners, others??

Stakeholder Input on Key Issues

- The RITC is critically important to the region's economy
- Pedestrian access is a problem, particularly to the ferries
- Union Station is a key asset for New London and the region
- All other modes cite the importance of access to Union Station
- Parade Project will make some improvement to pedestrian access
- RITC should serve as gateway to New London and region and encourage visitors to visit area businesses
- Commuter rail needs should be considered
- There are many synergies among the modes
- Public-private cooperation is needed
- Everyone seeks a coordinated plan to move forward with

Next Steps

- **Fact Sheet – October**
- **Existing Conditions Deliverable – October**
- **Public Meeting – November 13**
- **Documentation of Current Service Characteristics and Needs – November**
- **Market Analysis Deliverable – January**
- **Next Steering Committee – February**
  - Current and Future Service Needs
  - Existing Physical Conditions
  - Opportunities for Improvements
  - Market Analysis

SUMMARY OF MEETING

Project:	**Regional Intermodal Transportation Study**
Date of Meeting:	1:30 PM, Tuesday, October 21, 2008
Location of Meeting:	New London City Hall, Council Chambers
Purpose of Meeting:	Steering Committee review of evaluation of site alternatives, passenger and parking surveys
Meeting Attendance:	Attendees listed on page 4

Larry Englisher, Consultant Project Manager, presented a comparative analysis of the Fort Trumbull and downtown transportation center alternative sites, including existing conditions of each of the transportation modes, environmental characteristics and transit oriented development opportunities. It was the strong recommendation of the consultant team that the RITC be maintained at the downtown site for the following reasons:

- The existing site has the unique advantage of consolidating the ground and maritime modes in a single location
- The cruise ships would be the main reason for moving to Fort Trumbull, but that is not feasible
- Downtown offers a central location with good access
- Infrastructure already exists downtown and would be lower cost

Summary of Meeting Discussion on alternative sites:

John Markowicz: You didn't note in the presentation but if I read the report correctly, the costs in 2008 dollars to move the transportation center to Fort Trumbull will be between $135-165 million, adding parking would bring the total close to $200 million. He recommended that Fort Trumbull should no longer be considered.

Tony Sheridan agreed. He said the consultants did a thorough though unnecessary study and it was time to move on.

Jim Butler said SCCOG would discuss with Andy Davis of ConnDOT if ConnDOT thought the analysis of the two alternative sites was complete.

John Markowicz asked Andy Davis if he accepted the findings of this study's evaluation. Andy responded he needed further review but thought the work was 95% done and will coordinate any further review with local officials.

John Markowicz asked if SCCOG had made a decision about the recommendation to keep the transportation center at its current location.

Jim Butler responded he was confident that the SCCOG Board would concur with the consultant's findings.

John Alexander endorsed the idea of seamless shoreline rail especially between New London and New York City to transport people to the casinos and take cars off I-95. Mr. Alexander said

people in Southeast Connecticut would have better access to New York City and Pfizer would have more reliable, convenient transportation for its employees by rail. Larry Englisher responded that evaluating the potential for this type of service was not in the scope of the study but the consultant would be documenting needs of each mode at the transportation center facilities and take into account any planned or likely changes in transportation services based on available information.

Jill Barrett presented the *findings of the passenger survey* and Stuart Popper presented the results of the *parking survey*. Key findings were:

Most passengers rated transportation facilities in New London for all modes as good – both overall rating and attributes

- Greyhound passengers rated amenities at the terminal below average
- Rail users most interested in food service, clean restrooms
- SEAT passengers more concerned about improving bus operations and routes than facilities

Most passengers between public transportation modes

- Most frequent transfers took place between the ferries and the rail service

Most users do not visit downtown

- Greyhound passengers most likely to visit downtown
- LI Ferry and Sea Jet passengers least likely to visit downtown even with additional services

Summary of Meeting Discussion on the surveys:

John Markowicz: Did you ask people about whether they visited the region beyond New London? The survey should have. The response was no.

Tony Sheridan: He agreed and said that the study focus is too narrow. The emphasis should be a regional intermodal center. A huge number of people are here in the region for tourist reasons. I know many people don't want to talk about this but we don't have public toilets and need them. If we want people to travel comfortably we need to provide toilets.

Representative Ritter asked, "What did people who got dropped off say about parking? It would be interesting to know if the people who don't use parking have a more negative view about it than the survey results indicate." Jill Barrett responded that attitudes of this subgroup would be evaluated for the Steering Committee and contrasted with those who do park.

Charles Curtin noted that some ferry passengers carrying luggage need to take a taxi to the parking garage.

A Steering Committee member asked if we asked drivers who dropped off or picked up people what they thought about parking facilities. Jill Barrett responded that we did not and that this would have been very difficult to accomplish safely.

Tony Sheridan noted that the number of people indicating that they would visit downtown New London if retail shopping, restaurants and entertainment was increased presented an opportunity for the city to capture more of the people traveling through the area without presently stopping.

There was also a comment that it would be interesting to see how businesses visited in downtown New London varied by where the visitor comes from.

Frank McLaughlin indicated that the Main Street organization would be interested in the survey results. In addition, it was noted that the seven-minute shuttle from the cruise ship to downtown is an excellent opportunity to see New London and learn about what there is to see. The Main Street program distributed 6,000 brochures on these buses, but started late in the season.

Mayor Kevin Cavanagh asked the consultant if parking operators were questioned about their ideas on when is the peak parking period. He also wanted to see the survey results broken down by garage.

John Markowicz asked if the parking results were based on self reporting.

Mayor Kevin Cavanagh requested a separate meeting be held with the Steering Committee to discuss the results of the surveys. It was suggested a meeting be held the afternoon of November 13.

Other Comments:
Sandra Chalk indicated there is a growing interest in the arts in New London and recommended the consultant speak with Steve Sigel of the Garde.

It was suggested the consultant also talk with representatives from the casinos.

John Markowicz: Will the study look at potential increase in rail and other modes of transport? Larry Englisher responded that the study take into account growth. John suggested that a percentage increase be included.

Jim Butler remarked the consultant had met with New London Main Street representatives about how to coordinate with the historic waterfront district wayfinding project.

John Brooks of the New London Development Corporation said he thought RITC was not a good name for the center and that it was important to create a branding concept for the center; it should be a short descriptive name.

It was also pointed out that the downtown is officially being known as the “Historic Waterfront District.”

Jim Butler announced there would be a public meeting on the study on November 13 at 7 p.m. at the New London Public Library. Mayor Kevin Cavanagh asked what would be presented at the meeting. He suggested the information be presented in a way that would drive people to ask questions.

Meeting Attendees:

Steering Committee:

Tony Sheridan	Chamber of Commerce of Eastern CT
Mayor Kevin Cavanagh	City of New London
Jenny Contois	Congressman Joe Courtney
Frederick Riese	Connecticut DEP
Stan Mickus	Cross Sound Ferry
Peter Simmons	CT DECD
Charles Curtin	Curtin Transportation
Jeffrey Nelson	Governor's Eastern Office
Tom Stone	Greyhound
Chris Jennings	Mystic Coast and Country
John Brooks	New London Development Corporation
Sandra Chalk	New London Landmarks
Frank McLaughlin	New London Main Street
Martin Berliner	SCCOG, City of New London
Dan Steward	SCCOG, Town of Waterford
Jim Martin	SEAT
Ella Bowman	SEAT
John Markowicz	seCTer
Sen. Andrea Stillman	State Senator, 20th District
Rep. Betsy Ritter	State Representative, 38th District
Michael Carey	Suisman, Shapiro, Wool, Brennan, and Gray
Todd O'Donnell	Union Station

Other

John Alexander

ConnDOT

Andy Davis	ConnDOT
Craig Bordiere	ConnDOT (Rails)

SCCOG Staff

James Butler	SCCOG
Dick Guggenheim	SCCOG

Study Team

Larry Englisher	TranSystems
Jim Wensley	TranSystems
Skip Smallridge	Crosby Schlessinger Smallridge
Jill Barrett	Fitzgerald & Halliday, Inc.
Paul Stanton	Fitzgerald & Halliday, Inc.
Stuart Popper	URS

Southeastern Connecticut Council of Governments

Regional Intermodal Transportation Center Master Plan and Efficiency Study

Steering Committee Meeting #3

March 11, 2009





Agenda

- **Welcome**
- **Transportation Needs and Deficiencies**
  - Discussion and confirmation of needs and desired improvements
- **Development Potential**
  - Discussion of development potential and input on synergy with transportation improvements
- **Next Steps**

Transportation Needs and Deficiencies

- 1. Facilities and Current Operations
- 2. Intermodal Connections and Access to Downtown
- 3. Future Needs and Operational Impacts

Union Station Building

- **1888 HH Richardson structure**
  - Exterior in good condition
  - ADA access good
  - Upper floor occupancy 20%
  - Transportation uses first floor
  - 33% rated amenities poor
- **Needs and deficiencies**
  - Customer amenities (food, retail)
  - Better information for all modes
  - Needs tenants to generate revenue for private owner





Rail Platform Area

- **Three tracks**
  - Two electrified passenger rail tracks
  - One freight track (not electrified)
- **Southbound platform**
  - At-grade access behind the station
  - High level platform across State Street
- **Northbound Platform**
  - At-grade & high level access behind station
  - No access from the station to a northbound train once it enters the station







Rail Operations

- **Amtrak service**
  - 18 Northeast Regional trains each weekday – no plans to increase
  - 20 Acela trains each weekday (only 3 stop in New London)
  - Acela to increase to 32 trains by 2030 (no increase to New London)
- **Shore Line East (SLE) service and expansion**
  - Currently 1 round trip/weekday
  - Phase 2: 12 weekday and 9 weekend day trips in 2010
    - Estimated 120 weekday boardings
  - Phase 3: 4-6 added round trips for commuting into New London
- **Freight service**
  - One daily P&W freight train each direction

Rail Operations (cont.)

- **Rail operations**
  - Passenger trains in station block State Street
    - No crossing between platforms
  - Freight trains do not stop but can be up to 1 mile long
  - P&W interchange with NECR no longer active but could resume
- **Needs and deficiencies**
  - Access between station and NB platforms not possible when a train is in the station
  - 100+ weekday parking spaces needed for SLE, plus future growth

Greyhound Terminal Building

- **Historic 1890 addition**
  - Exterior good condition / ADA issues inside



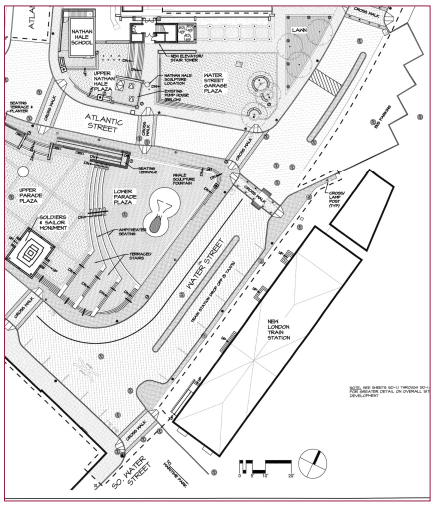
- **Greyhound operations**
  - Ticketing, freight handling and storage
- **Passenger ratings**
  - Worst ratings for amenities, comfort and schedule information
- **Needs and deficiencies**
  - Updated ticketing/waiting area, possibly consolidated with others
  - Freight handling needs must be considered in any changes
  - Better customer information is needed for all modes

Passenger Drop-off Area, Taxi Stand and Bus Bays

- **Limited taxi and auto drop off/pick up area at Union Station**
- **Configuration prior to Parade construction**
  - Shared area for pickup/drop-off, taxi and SEAT Foxwoods
  - Used as a taxi stand for whole city
  - Cruise ship buses occasionally displace others
- **Two angled intercity bus bays**
  - Greyhound must back out from angled bays or park across bays
- **Parade Project**
  - Better pedestrian access to the station
  - Reduced area for pickup/drop-off, taxi and SEAT Foxwoods
  - No change to intercity bus bays

Passenger Drop-off Area, Taxi Stand and Bus Bays (cont.)

- **Needs and deficiencies**
  - Greyhound desires three bays and elimination of angled configuration
  - SLE expansion will increase need for pickup/drop-off
  - Likely inadequate pickup/drop-off/taxi area after Parade
  - May need to find new locations for some functions
  - Taxi stand could be moved away
  - Special events interfere with bus and pick-up / drop-off operations



SEAT Transfer Hub Operations

- **SEAT Transfer Hub**
  - Steel/Plexi-Glass shelter benches
- **Services and operations**
  - 8 routes – buses pulse hourly
  - Max. 6 at a time (inc. Foxwoods)
- **Passenger ratings**
  - Worst passenger ratings of all groups
- **SEAT plans**
  - No new routes
  - Possible increased frequency
    - Increase to 7 buses/pulse
    - Increase to ½ hour pulse
- **Needs and deficiencies**
  - Foxwoods route should board closer to other SEAT routes
  - An indoor ticketing/information/ waiting area is desirable
  - Better customer information is needed for SEAT and other modes
  - SEAT would like indoor office space for managing operations
  - SEAT would like buses to be closer to Union Station
  - Special events interfere with operations

Cross Sound Ferry Facilities

- **Office, warehouse, repair and ticket buildings**
- **Four auto ferry and two passenger ferry slips**
- **Generally ADA compliant (lacks accessible routes)**
- **Large flexible area (some unpaved)**
  - For staging, parking (130 spaces), pick-up/drop-off and shuttle buses



Long Island Vehicle Ferry Operations

- **Access and Loading**
  - Vehicle access via Governor Winthrop Boulevard RR crossing
  - Ticketing currently inside ticket office (soon to be issued at gate)
  - Vehicles are sorted by size in staging area or sent to standby
- **Needs and deficiencies**
  - Increased demand will require conversion of parking to staging
  - Accessible passenger drop-off and pickup area is needed



SeaJet and Casino Resort Shuttle Bus Operations

- **Ticketing/parking**
  - Tickets sold at Orient Point
  - Most park at Orient Point
- **Ferry/bus loading/unloading**
  - 85% of SeaJet passengers connect to casino shuttle buses
  - As many as nine buses are needed
- **Needs and deficiencies**
  - Service & connections function well
  - Operator would like a new terminal with a connection to parking



Block Island Ferry Operations

- **Parking**
  - Most arrive by car and park
  - 130 on-site spaces fill very early
  - Most park across tracks
- **Ticketing and loading**
  - No indoor ticket counter/waiting area (only first 100 under cover)
- **Needs and deficiencies**
  - Indoor ticket counter/waiting area
  - Poor pedestrian access from parking
  - Additional nearby or easily accessed parking is needed
  - Operator desires new terminal with connections to off-site parking



Fishers Island Ferry Facilities and Operations

- **New two story building**
- **Two auto ferry slips**
- **Vehicle and pedestrian access**
  - Via State Street RR crossing
  - ADA access is fair



- **Parking**
  - Weekenders park in garage, commuters park all day on city streets
  - No on-site parking
- **Needs and deficiencies**
  - RR crossing can block access and delay operations
  - Pedestrian safety at railroad crossing is a concern

Downtown Garages

- **Water Street in good condition**
  - City proceeding with recommended repairs
- **Governor Winthrop in poor condition**
  - Some repairs made, more needed
- **ADA issues (both garages)**
  - Too few handicapped parking spaces
  - Limited handicapped accessibility
  - No operating elevators
- **Capacity**
  - Water Street 975 spaces
  - Governor Winthrop 400 spaces





Downtown Surface Lots

- **Julian lot**
  - 186 spaces in good condition
- **Eugene O'Neill North lot**
  - 125 spaces in fair condition
- **Eugene O'Neill South lot**
  - 130 spaces in fair condition
- **ADA issues at all three**
  - Lack required number of handicapped spaces and access routes



Parking Utilization

- **Peak summer Saturday occupancy**

Facility	Capacity	Occupancy		Occupancy by Purpose: Ferry	Train	Work	Other
Water Street Garage	975	747	77%	508	72	125	43
Governor Winthrop Garage	400	150	38%	39	7	65	40
Eugene O'Neill Surface Lot (East)	125	132	106%	40	-	37	56
Eugene O'Neill Surface Lot (West)	130	28	22%	-	-	-	28
Julian Surface Lot	186	142	76%	122	6	10	3
Cross Sound Ferry	130	142	109%	122	-	-	20
Total	**1,946**	**1,341**	**69%**	**831**	**84**	**236**	**190**

- **Needs and deficiencies**
  - Off-street parking for the RITC appears adequate under current conditions

Traffic and Pedestrian Issues



- **Street network**
  - Mostly one-way streets
  - Generally in good condition
- **Traffic Level of Service**
  - Peak summer Saturday LOS A, B, or C
  - Current traffic operations are at an acceptable level of service
- **Parade Project addresses pedestrian issues near Water & State**
- **Needs and deficiencies**
  - Narrow / missing sidewalks east side of Water St. past SEAT Hub
  - Pedestrian issues at RR crossings should be addressed

Railroad Crossings

- **Governor Winthrop Boulevard**
  - 40 brief passenger train closings/weekday (23-26 on weekends)
  - 2 freight train closings/day (4-8 minutes each)
  - Impacts Cross Sound Ferry vehicular traffic
- **State Street**
  - 23 passenger trains per weekday stop, blocking the street
  - 17 Acela trains pass through per weekday without stopping
  - 2 freight train closings/day (4-8 minutes each)
  - Impacts pedestrian traffic to all ferries and northbound trains
  - Impacts Fishers Island Ferry vehicular traffic

Railroad Crossings (cont.)

- **Needs and deficiencies**
  - Gate closings inhibit access to ferries, impacting ferry operations
  - Gate closings inhibit pedestrian access to ferries and NB trains
  - Pedestrian path across tracks at State Street could be improved





Intermodal Connections and Access to Downtown

Good Connections

- Close together
- Good level surfaces
- Esthetically pleasing
- Weather protected
- Free from obstructions
- Free from delays

Poor Connections

- Require long walks
- Grades or level changes
- Less hospitable areas
- No weather protection
- Cross railroad tracks

Key Pedestrian Connections

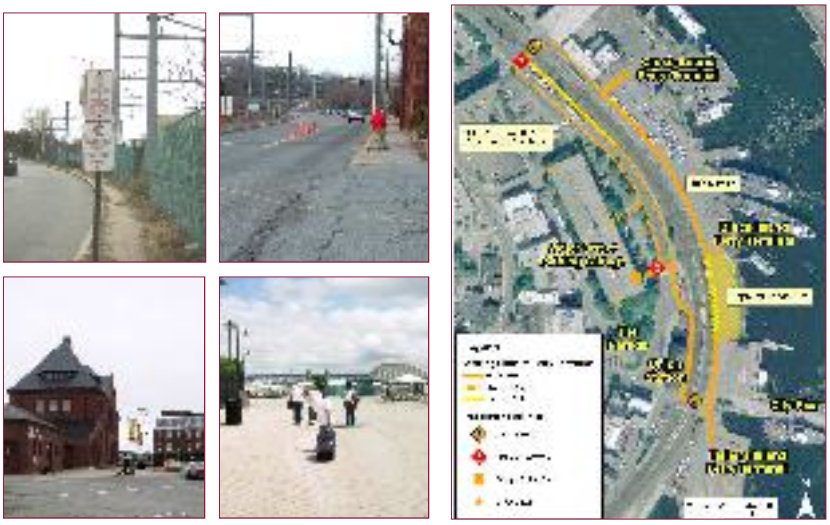
	Intercity Modes			Short Distance Modes					Local Modes		Vehicle Access		
	Amtrak	Greyhound	CSF Auto Ferry	Fishers Island	CSF Block Island	CSF SeaJet	Casino shuttles	SLE	SEAT	Taxi	Parking	Roadway Access	Downtown
Amtrak			■	■■	■		□		■■	■	■		■■
Greyhound			■						■				■
CSF - Auto Ferry	■	■										■	■
Fishers Island	■■										■	■	■
CSF - Block Island	■						□				■		■
CSF - SeaJet							■						■
Casino shuttles	□				□	■		□	□				■
SLE							□				□		□
SEAT	■■	■					□		■				■
Taxi	■												■
Parking	■			■	■			□				■	■
Roadway Access			■	■							■		■
Downtown	■■	■	■	■	■	■	■	□	■	■	■	■	

Key Current Connection ■Good ■Poor ■Must Cross Tracks □ Key Future Connection

Poor Key Connections

- **Poor connections**
  - Greyhound to/from the Long Island Ferry
  - Amtrak to/from the Long Island Ferry and the Block Island Ferry
  - Water Street and Gov. Winthrop garages to/from the Block Island Ferry
  - Union Station and SB rail platform from the Fishers Island Ferry
  - Taxis and Water Street Garage to/from the Fishers Island Ferry
  - Downtown to/from the Long Island Ferry and the Block Island Ferry
- **Other connections crossing tracks at State Street**
  - Amtrak/SLE NB platform to/from the Water St. Garage, taxis, Foxwoods
  - Amtrak/SLE NB platform to Union Station lobby and ticket counter
  - Fishers Island Ferry roadway access

Pedestrian Paths to Cross Sound Ferry



Wayfinding Signage and Facility Design

- **Misleading wayfinding signage**
  - Vehicle wayfinding and pedestrian wayfinding signage give conflicting messages
  - Signage from the SB rail platform/Greyhound to the ferries points toward Governor Winthrop Boulevard
- **Wayfinding improvements needed**
  - From the Water Street Garage to the Block Island Ferry
  - From Cross Sound Ferry to all other modes
  - From the NB rail platform
  - From SEAT
  - Design of facilities should make wayfinding obvious

Future Needs and Operational Impacts

- **Current Ridership**
  - Annual
  - Daily
  - Recent Trends
- **Future Scenarios**
  - Ridership
  - Service changes
  - Parking impacts

Current Annual Ridership at the RITC

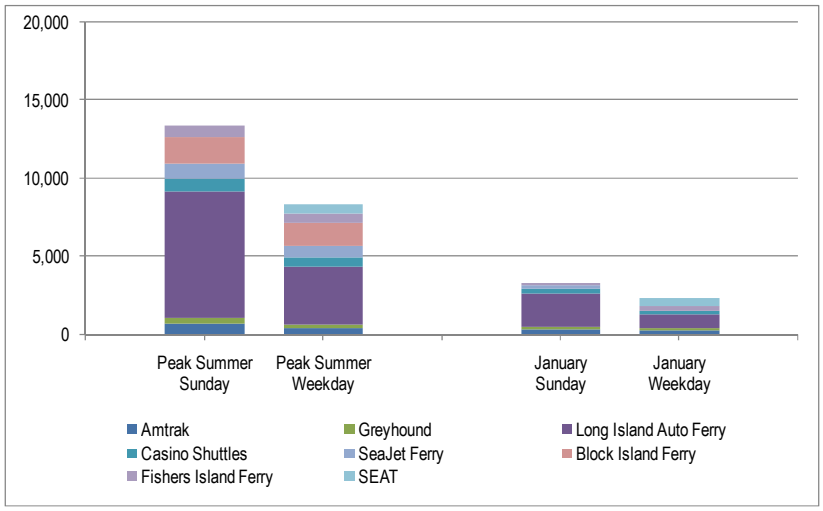
Transportation Mode	Annual Riders
Amtrak	169,112
Greyhound	68,000
Long Island Auto Ferry	1,000,000
Casino Shuttles	196,000
SeaJet Ferry	230,000
Block Island Ferry	88,000
Fishers Island Ferry	160,000
SEAT	175,000
Total Passengers	**2,086,112**

Vehicle Ferry	Annual Vehicles
Long Island Ferry	470,000
Fishers Island Ferry	40,000
Total Vehicles	**510,000**

Recent Ridership Trends

- **Rail and bus services**
  - Amtrak New London ridership increasing 6% annually
  - SLE systemwide ridership increased 6% annually 2003-2007
    - weekday ridership up 12% in 2008
  - SEAT systemwide ridership increasing 8%-9% annually
  - Greyhound ridership specific to New London is not available
- **Ferry services**
  - Long Island Ferries down 5% since peak in 2004
  - Block Island Ferry down 16% since peak in 2005
  - Fishers Island Ferry ridership is stable

Current Estimated Daily Ridership at the RITC



Future Scenarios

- **Two scenarios –low and high growth**
  - For setting reasonable upper and lower bounds for decision-making
  - Reflect assumptions based on past trends and input from operators
  - NOT result of a comprehensive demand analysis
  - NOT projections of future travel
- **Two horizon years – 2015 and 2030**

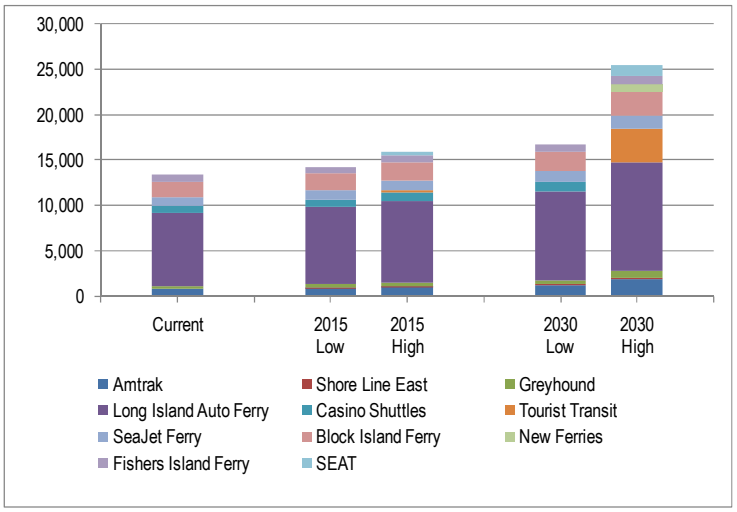
Low Growth Scenario

- **Ridership**
  - No net growth through 2012
  - Moderate (4%) bus/rail annual growth to 2015; 1-2% ferry growth
  - Lower growth rates 2016-2030
- **Services**
  - No change in Amtrak service
  - Shore Line East Phase 2 implemented around 2011
  - SEAT provides hourly service on all routes by 2015
  - Shore Line East Phase 3 implemented after 2015
  - Some additional trips on Greyhound after 2015
  - Some additional trips on all Cross Sound Ferry services after 2015

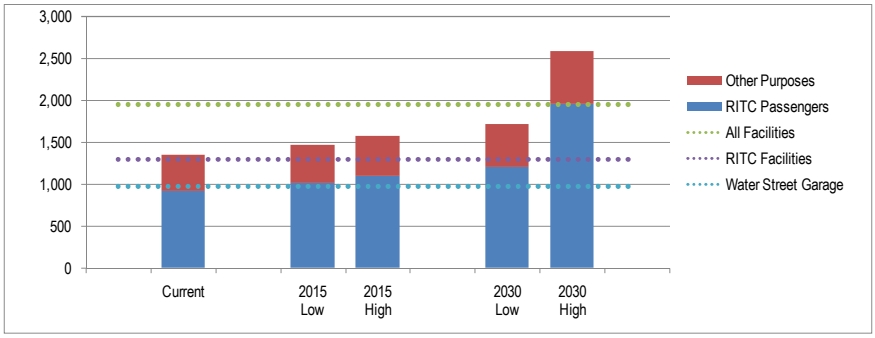
High Growth Scenario

- **Ridership**
  - No net growth through 2011
  - Recent bus/rail growth trends resume to 2015; 2-3% growth on ferry
  - More moderate growth 2016-2030
- **Services**
  - Additional Acela service stopping in New London
  - Shore Line East Phase 2 and 3 implemented before 2015
  - SEAT adds Sunday service and increases weekday frequency by 2015
  - Tourist Transit System implemented (pilot by 2015 – full by 2030)
  - Additional trips on SLE, Greyhound and Cross Sound Ferry after 2015
  - New passenger-only ferry services after 2015

Future Scenario Peak Summer Sunday Ridership



Potential Parking Impacts – Peak Summer Saturday



- **Future parking needs**
  - Water Street Garage alone cannot handle RITC demand
  - Maintaining/replacing Julian and ferry lots sufficient through 2015
  - Overflow or displacement from Water Street Garage after 2015
  - All downtown parking needed for RITC in 2030 high growth

Summary of Desired Improvements

Buildings and Facilities
- Encourage full use of the Union Station building
- Provide more retail/food amenities in the Union Station area
- Provide permanent space for an updated, fully accessible Greyhound ticketing/waiting area
- Consolidate bus/rail ticket functions where possible (maintain Greyhound freight service)
- Provide an indoor waiting area for SEAT in or near the station and near SEAT buses
- Provide an indoor office area for SEAT operations
- Provide a sheltered or indoor ticketing/waiting area for the Block Island Ferry
- Provide more amenities for Block Island Ferry passengers
- Bring Water Street and Governor Winthrop parking garages to proper physical condition
- Repair elevators and bring Water Street and Gov. Winthrop parking garages into ADA compliance
- Provide accessible routes to/from the Eugene O'Neill Drive lots

Parking Capacity
- Ensure a sufficient number of weekday parking spaces for Shore Line East expansion
  - At least 100 in 2010
  - Up to 200-300 in the future
- Provide sufficient cost-effective parking for summer weekend demand
  - Replace on-site ferry parking if it needs to be converted to vehicle staging
  - Maintain or replace the Julian lot if it becomes unavailable for weekend RITC users
  - Increase weekend parking (sometime after 2015)
- Increase the number of handicapped-accessible parking spaces
  - Water Street and Governor Winthrop garages
  - Eugene O'Neill lots

Street Space and Bus Stops
- Provide at least nine bus bays (2-3 Greyhound; 6-7 SEAT) – with no buses backing out
- Provide a stop for the SEAT Foxwoods/Tourist Transit with a convenient pedestrian connection to downtown, the rail station and SEAT
- Provide a stop for the casino shuttles/Tourist Transit with a convenient connection to the SeaJet
- Provide an adequate pick-up/drop-off area for rail (Amtrak and SLE) and Greyhound passengers
- Provide a taxi stand (not necessarily at Union Station)
- Manage conflicts for curb space between the different uses
- Provide a pick-up/drop-off area(s) for Cross Sound Ferry (for both Long Island and Block Island)

Traffic
- Minimize delays to ferry traffic caused by railroad crossing closures
- Minimize interference with bus circulation caused by special events
- Minimize interference with auto access to ferries caused by special events
- Optimize signalization at Water Street/Governor Winthrop intersection to minimize vehicle delays and maintain vehicle access to ferries

Pedestrian Connections
- Maintain or enhance existing good connections
  - Union Station and southbound platform to taxis, rail pick-up/drop-off area, SEAT Foxwoods
  - Northbound rail platform to Fishers Island Ferry
  - Greyhound to/from SEAT, taxis and pick-up/drop-off area
  - SeaJet to/from casino shuttles and future Tourist Transit stops
  - Downtown to/from Union Station, southbound rail platform, Greyhound and SEAT
- Improve directness, attractiveness, safety, accessibility and physical condition of the pedestrian connections to the ferry terminals and improve wayfinding
  - Parking facilities and rail platforms to/from Block Island Ferry
  - Greyhound and Amtrak station to/from Long Island Ferry
  - Downtown to/from all ferries
- Improve pedestrian crossing of tracks at Union Station/State Street
  - Improve wayfinding and safety
  - Minimize delays from gate closings
  - Using existing surface crossing or new grade-separated crossing
- Provide pedestrian improvements at Water Street/Governor Winthrop intersection to ensure pedestrian safety and accessibility

Information, Orientation and Aesthetics
- Provide static route and schedule information for all modes at all locations including maps for making connections at the Intermodal Center
- Provide standardized wayfinding signage for all connections
- Provide standardized wayfinding signage to downtown from all RITC facilities
- Provide standardized vehicle wayfinding signage to all parking facilities, pick-up/drop-off areas and ferry terminals
- Provide real-time connection information for passengers connecting between bus/rail and ferries
- Provide ferry and bus operators with real-time expected arrival information on rail and ferry
- Enhance the appearance of the rail alignment, bus facilities and Water Street Garage to create a more pedestrian- and tourist-friendly environment

Potential Development – Market Analysis

- **Agenda**
  - Purpose
  - Study Area- Strengths, Challenges, & Opportunities
  - Residential, Office and Retail Market Findings
  - Summary
  - Next Steps



Purpose

- **Examine the market potential of the area surrounding the RITC and the Historic Waterfront District (Downtown)**
  - Assess demographic and economic conditions
  - Analyze key target residential, office and retail markets
- **Provide strategies to improve the market image of the RITC and Downtown**
- **Identify opportunities for retail, office, and residential development surrounding the RITC and Downtown**

Study Area



Unique Attributes of Downtown New London

- **Strengths**
  - Multimodal center with regional/intercity connections
  - Large regional tourist industry
  - Growing residential population and burgeoning cultural class
- **Challenges**
  - Obsolete retail space and commercial space
  - Perception of crime
  - Difficult pedestrian connections to the RITC
  - Small residential and worker population; lower income
  - Significant competition for tourism

Unique Attributes of Downtown New London - Opportunities

- **Build on economic/demographic trends**
- **Expand the residential presence of young professionals and empty nesters**
- **Enhance the marketing/branding campaign**



- **Expand demand from downtown residents and employees, regional residents, transit users, tourists, and college students**
- **Improve streetscape to attract visitors**
- **Bolster entertainment/arts/cultural events**

Economic and Demographic Conditions

Selected Current Demographics, 2008

	Downtown New London	½ Mile Walkshed	City of New London	New London County	Downtown as % of City
Population	511	2,425	26,252	268,890	2%
Households	421	1,239	10,433	105,937	4%
Household Size	1.22	1.90	2.22	2.43	-
Labor Force (16+)	364	1,866	21,201	215,546	1.7%
At-Place Employment	3,059	4,053	15,468	112,560	20%
Median HH Income	$20,250	$21,787	$39,534	$64,622	-
Median Home Value	$210,000	$168,085	$191,004	$264,500	-
Median Age	44.5	32.3	31.2	39.5	-

Source: *ESRI Business Information Solutions, Main Street New London BBPC 2008*

Development Scenario Assumptions

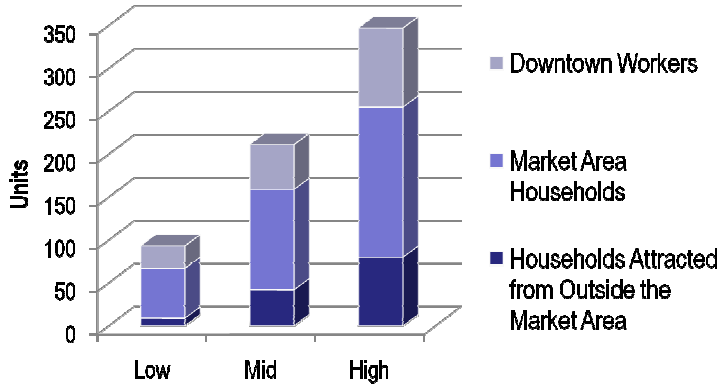
- **Low Scenario**
  - Reflects a relatively low level of investment needed to **maintain** downtown's existing capture rates of market area residential, office, and retail demand
- **Mid Scenario**
  - Reflects a mid range of investment needed to **increase** downtown's capture rate of the market area residential, office, and retail demand
- **High Scenario**
  - Reflects a higher level of investment needed to **further increase** downtown's capture rate **and** attract additional demand from outside the market area

Residential Market

- **Sources of Demand:**
  - Existing and projected household growth in the county
  - Additional downtown office workers
  - Relocations of households into the county to take advantage of transit and downtown amenities
- **Target Households:**
  - Moderate income young professionals,
  - Higher income empty nesters
  - Artists

Residential Market Conclusions

2008-2018 Downtown Residential Demand by Source and Scenario

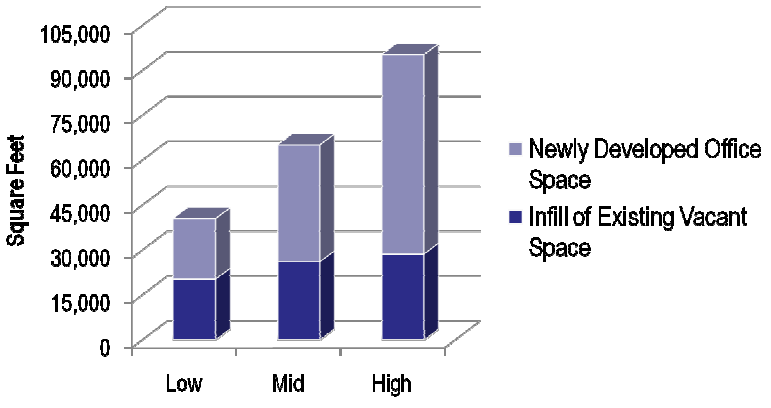


Office Market

- **Sources of Demand**
  - Regional strength in bioscience and healthcare, technology, defense and maritime industries
  - New companies attracted to serve existing businesses
  - Existing companies establishing small, local satellite offices
  - Locally based start-up firms seeking spaces with lower rents

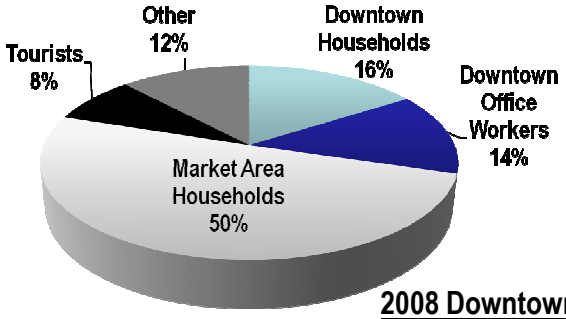
Office Market Conclusions

2008-2018 Downtown Office Demand by Source and Scenario



Retail Market

2008 Downtown Sources of Retail Sales ($22.7M)

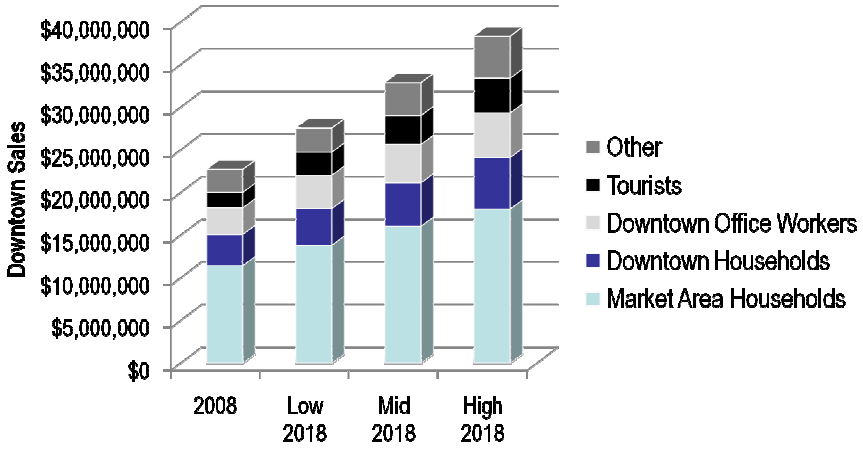


2008 Downtown Capture Rates

(% of Expenditure Potential Captured in Downtown)

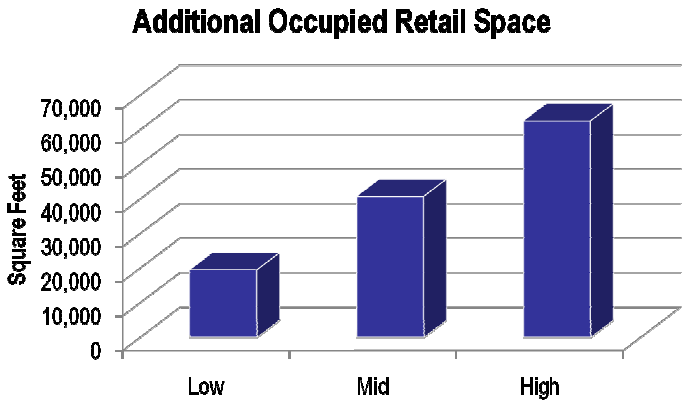
- Downtown Households = 17%
- Downtown Office Workers = 68%
- Market Area Households and Tourists each = < 1%

2008 Existing Sales by Source and 2018 Projected Sales By Source and Scenario



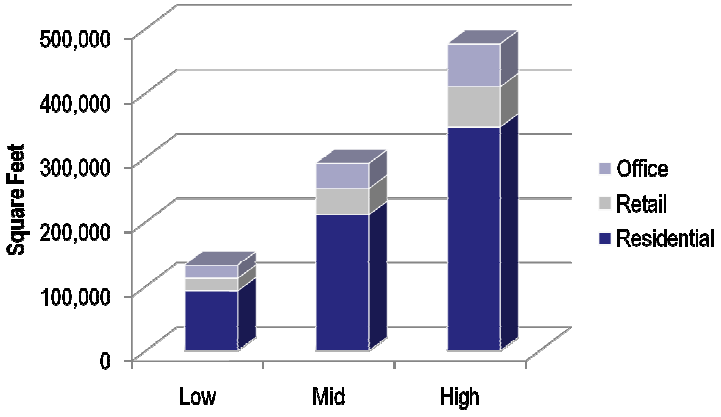
Retail Market Conclusions

2008-2018 Downtown Retail Square Feet Demand by Scenario



Summary of Market Demand

2008-2018 Downtown Supportable Development by Use and Scenario



Summary

- **Development market opportunities focus on residential**
  - Approximately 72% of total projected space is residential
  - Remainder is evenly distributed between retail and office
- **Public sector investment influences the level of supportable space**
  - Low Development Scenario: 130,000 SF
  - Mid Development Scenario: 288,000 SF
  - High Development Scenario: 475,000 SF
- **Given the current economic downturn, the majority of the growth will occur in the later part of the 10 year period**
- **This provides an opportunity in the near term to position the downtown as a more attractive option and competitive location for future growth**
- **Proximity to the RITC provides a market advantage, particularly to attract households seeking easy access to other metropolitan areas**

Redevelopment and Implementation Strategies

- **Based on the market analysis findings**
- **Identify candidate opportunities**
- **Obtain stakeholder input**
- **Develop ideas and incorporate into the improvement options and Master Plan**





Strategies

- **Locate new development proximate to the RITC**
- **Reinforce/support existing retail concentration**
- **Create attractive, high-amenity environment to attract future residents and visitors who use the RITC**
  - Create lively street life and a beautiful pedestrian environment
  - Leverage Union Station and The Parade
  - Alter the blank wall presented by the Water Street Garage
  - Incorporate a large “event” space
- **Include a range of potential sites**
  - Older buildings, infill parcels, vacant parcels/redevelopment sites
  - Consider both short-term and long-term opportunities

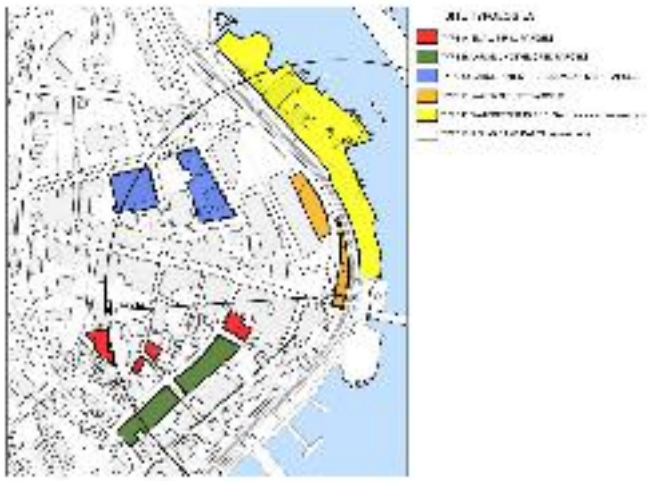
Downtown Development Program - Low, Mid, High



Empty Storefronts



Potential Redevelopment Sites



Water Street Garage Opportunity for Housing



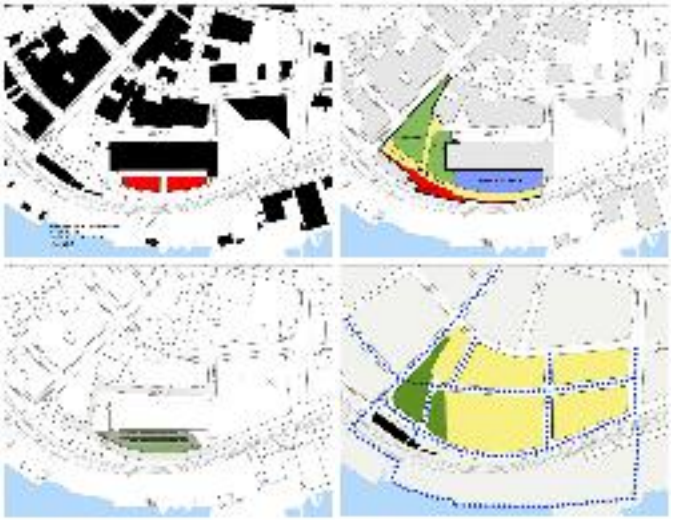
Potential Events Space



Potential Long Range Opportunity



Options



Next Steps

- Define specific transportation improvements and development opportunities
- Identify candidate improvement schemes, incorporating compatible transportation and development elements
- Obtain COG, City and Steering Committee feedback
- Narrow set of reasonable alternatives
- Evaluate costs and impacts of alternatives

Appendix

Current Estimated Daily Ridership at the RITC

Transportation Mode	Peak Summer Sunday	Peak Summer Weekday	January Sunday	January Weekday
Amtrak	760	476	353	316
Greyhound	320	200	160	100
Long Island Auto Ferry	8,114	3,674	2,183	948
Casino Shuttles	806	623	233	175
SeaJet Ferry	949	733	274	
Block Island Ferry	1,695	1,494		
Fishers Island Ferry	746	573	165	327
SEAT		629		515
Total Passengers	**13,390**	**8,402**	**3,368**	**2,381**
Long Island Ferry	3,033	1,657	914	539
Fishers Island Ferry	248	153	68	72
Total Vehicles	**3,281**	**1,810**	**982**	**611**

Future Scenario Annual Ridership

Transportation Mode	Current	Low 2015	Low 2030	High 2015	High 2030
Amtrak	169,112	197,837	266,263	226,310	407,572
Shore Line East		76,041	102,341	86,985	156,654
Greyhound	68,000	79,550	107,064	90,999	163,885
Long Island Auto	1,000,000	1,040,604	1,208,109	1,104,081	1,485,947
Casino Shuttles	196,000	212,157	246,307	227,218	
Tourist Transit				26,000	389,000
SeaJet Ferry	230,000	248,959	289,034	266,633	358,853
Block Island Ferry	88,000	95,254	110,587	102,016	137,300
New Ferries					44,000
Fishers Island Ferry	160,000	160,000	160,000	160,000	200,000
SEAT	175,000	220,933	397,889	257,132	616,233
Total Passengers	**2,086,112**	**2,331,336**	**2,887,594**	**2,547,374**	**3,959,444**
Long Island Ferry	470,000	489,084	567,811	518,918	698,395
Fishers Island Ferry	40,000	40,000	40,000	40,000	40,000
Total Vehicles	**510,000**	**529,084**	**607,811**	**558,918**	**738,395**

Future Scenario Peak Summer Sunday Ridership

	Peak Summer Sunday				
		Low		High	
Transportation Mode	**Current**	**2015**	**2030**	**2015**	**2030**
Amtrak	760	889	1,197	1,017	1,832
Shore Line East		58	79	67	121
Greyhound	320	374	504	428	771
Long Island Auto Ferry	8,114	8,443	9,803	8,958	12,057
Casino Shuttles	806	873	1,013	935	
Tourist Transit				275	3,647
SeaJet Ferry	949	1,027	1,192	1,100	1,480
Block Island Ferry	1,695	1,835	2,131	1,966	2,645
New Ferries					848
Fishers Island Ferry	746	746	746	746	933
SEAT				462	1,108
Total Passengers	**13,390**	**14,246**	**16,664**	**15,954**	**25,441**
Long Island Ferry	3,033	3,157	3,665	3,349	4,507
Fishers Island Ferry	248	248	248	248	248
Total Vehicles	**3,281**	**3,405**	**3,913**	**3,597**	**4,755**

Potential Parking Impacts – Peak Summer Saturday

		Low		High	
	Current	**2015**	**2030**	**2015**	**2030**
RITC Users:	**915**	**1,016**	**1,199**	**1,095**	**1,948**
Existing Ferries	831	896	1,037	958	1,287
New Ferries					413
Amtrak	84	98	132	113	203
Shore Line East		22	30	25	45
Non-RITC Users:	**426**	**444**	**515**	**471**	**634**
Work in New London	236	246	285	261	351
Other	190	198	230	210	283
Total Vehicles	**1,341**	**1,460**	**1,714**	**1,566**	**2,581**
% Total Capacity	**69%**	**75%**	**88%**	**80%**	**133%**

- **Total downtown capacity exceeded only in 2030 high growth**

RITC Parking Demand vs. Capacity

	Capacity	Current	Low 2015	Low 2030	High 2015	High 2030
Total RITC Parkers		915	1,016	1,199	1,095	1,948
All Facilities	1,946	47%	52%	62%	56%	100%
RITC Facilities *	1,291	71%	79%	93%	85%	151%
Water Street Garage	975	94%	104%	123%	112%	200%

* Ferry lot, Julian lot, and Water Street Garage

- **Future parking needs**
  - Water Street Garage alone cannot handle RITC demand
  - Maintaining/replacing Julian and ferry lots sufficient through 2015
  - Overflow or displacement from Water Street Garage after 2015
  - All downtown parking needed for RITC in 2030 high growth

Market Analysis Methodology

- **Industry standard research process**
- **Evaluate existing conditions and emerging demographic and economic factors**
- **Examine downtown and transit oriented development factors**
- **Assess competitive market position**
- **Identify public/private development opportunities**

Low Scenario

- Marketing of downtown businesses
- Continue support of annual events
- Continue grant and loan programs for businesses
- Existing business retention
- Visitor's information kiosk in the RITC
- Encourage green building through education
- Maintain streamlined development review systems
- Educate retailers on benefits of clustering
- Install signage to parking facilities
- Continue to coordinate with regional and local non-profit groups

Mid Scenario

- Expanded Version of Everything in the Low Scenario Plus:
- Expand marketing within the region
- Expand special events to occur throughout the year
- Improve walkability and enhance gateway features
- Locate a welcome center
- Recruit downtown employee and resident serving retail
- Reduce permit fees and provide assistance for buildings obtaining LEED certification
- Provide a special event/seasonal transit service
- Enact flexible zoning provisions to facilitate transit oriented development
- Provide additional funding to downtown improvement groups

High Scenario

- Expanded Version of Everything in the Low and Mid Scenarios Plus:
- Facilitate provision of sites for redevelopment proximate to Union Station and the RITC
- Create a large public event space
- Broaden marketing efforts to recruit businesses and retailers from outside the area
- Enhance gateways (specifically the Water Street Garage) and streetscapes to improve pedestrian environment
- Develop one or more visitor attraction centers (examples: mini-museum, audio-visual center and gift shop)
- Create a restaurant row or cluster of specialized uses
- Expand public transportation by implementing a downtown circulator
- Provide new shared use parking

Downtown Residential Market

- 442 units (5% vacant)
- Additional 58 units planned, proposed or under construction
- "The past five years alone produced about 200 new housing units" The Day Newspaper 9/22/08
- Growing national/regional trend towards downtown living
- Benefits of transit
  - Likely non-commuter trips

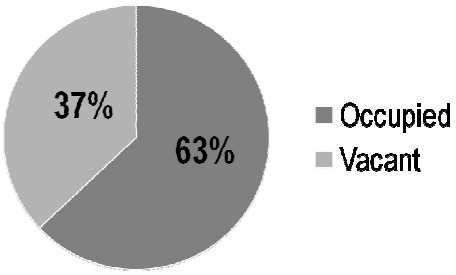


Downtown Office Market

- 426,109 SF of office space in approximately 50 buildings
- 21% is vacant; 80% of vacancies in 3 buildings
- Inventory of older office space in downtown, the city and the county
- Largest users are "office services"
  - Business, Legal, Social Services, Publications, Architects/Engineering/Construction

Downtown Retail Market

- 387,610 SF of retail space in approximately 156 units
- 89 retail establishments
- 37% is vacant
- Total 2008 retail sales of $22.7M



- Constraints
  - Perceived lack of parking
  - Aging and/or odd-shaped buildings
  - Low pedestrian and vehicular traffic
  - Competition from suburban malls

SUMMARY OF MEETING

Project:	**Regional Intermodal Transportation Study**
Date of Meeting:	1:30 PM, Wednesday, March 11, 2009
Location of Meeting:	New London City Hall, Council Chambers
Purpose of Meeting:	Presentation of key findings of Tasks 2, 3, 4, and 5 to the Steering Committee
Meeting Attendance:	Attendees listed on pages 3 & 4

Larry Englisher, the Consultant Project Manager, along with Jim Wensley and Stuart Popper (of URS), presented a summary of key findings of Tasks 2, 3 and 4. They outlined transportation needs and deficiencies by describing the current facilities and current operations, intermodal connections and wayfinding and access to downtown as well as future needs and operational impacts under a low and high scenario for 2015 and 2030. Following the presentation the Steering Committee engaged in a discussion with these comments:

Charles Curtin: I've been in the taxi business for 70 years and believe the report is flawed because it eliminates the space for taxi cabs in front of the train station. Taxis are an integral part of the system, and taxi service complements, rather than competes with, other transportation services. The parking count is flawed as 25% of the taxis leave from the railroad station. He indicated that Union Station is not the only taxi stand for the city. There will be a security problem with women walking at night if the taxi stand is moved too far from the train station. Perhaps the cab station should be put on the other side of the station.

Larry Englisher responded that it was not the intent of this report to recommend eliminating the taxi stand from Union Station and that the team would be glad to discuss the issue further and will follow up.

Tony Sheridan believes the Parade project is causing a loss in space for the taxis, especially with a raised median. Todd O'Donnell noted the raised median is not being installed. Pavers are being used instead.

Sandra Chalk asked if the team had looked into using the space on the east side of the Water Street garage as a location for transportation services. Larry Englisher said options for this space would be evaluated in the next phase of the study. Sandra also asked if the team had information on how far people are willing to walk to services. Larry responded that generally a ¼ mile standard is used. The team is looking at vacant spaces within that radius.

Dan Karp asked a series of questions: 1) Are the desired improvements on the meeting handout in any priority order? Response: No, they are arranged by subject area. 2) What do you mean by providing "accessible routes" to the Eugene O'Neill Drive lots? Response: More accessible sidewalks and designated ADA compliant routes. 3) Are the wayfinding signs designed for vehicles or pedestrians? Response: Both – for people and autos. 4) A desired improvement is more food and retail at the train station. Why aren't you looking at getting people to go to the existing downtown restaurants? Response: We are looking at that as well.

Penny Parsekian said if people have only a few minutes they won't leave the station, but if they have time and there is good wayfinding, combined with the improvements with the parade project, a lot of the problem of getting people out of the station and on the streets will go away.

John Markowicz asked why a car rental is not being considered. Larry Englisher responded that car rental facilities are mentioned in the report but was not included in the slide presentation.

Todd O'Donnell asked if the study team had any information comparing walking distances between trains, ferries and parking in other cities. Larry Englisher responded that specific information was not gathered as facilities in New London are closely located. Larry added that it is generally understood that the quality of the walking experience is also a very significant factor. People perceive distance between destinations as closer than it may be in reality if the environment is pleasant or farther away than in reality if the walk is inhospitable.

Kevin Cavanaugh requested the study team come back to the Steering Committee with a prioritized list, including 1-2 major items that would have the most impact. These items may be the most costly and take the longest time but result in the biggest impact.

Tony Sheridan asked if the region was on track for the next round of federal funding. Jim Butler said Congress had not yet authorized the next round of the Surface Transportation Act, which would succeed SAFETEA-LU, and which would create funding for projects like this.

Jim Prost (of Basile Baumann Prost and Cole) and Skip Smallridge (of Crosby Schlessinger and Smallridge) made a presentation to the Steering Committee on the topic of transit-oriented economic development. They elaborated on New London's strengths, challenges and opportunities, market analysis findings (residential, office and retail) as well as redevelopment and implementation strategies. Steering Committee members expressed the following views in the ensuing discussion:

Dan Karp said he thought marketing was very important for downtown New London and new parking was needed. Jim Prost said the study team recognized the need to have parking near development but wanted to understand the relationship between parking and destinations so parking could be optimized. Larry Englisher added that a goal of the parking analysis that was done was to understand the peaking characteristics of different uses. Dan Karp said he thought there was a dichotomy of interests, do we want to make parking convenient for travelers to get in and out of the city quickly or do we want to expose them to downtown? Larry Englisher responded that he thought the RITC plan should strike a balance between these two objectives.

Tony Sheridan said the information provided by the consultant was excellent but wondered if consensus about an approach to take might be easier to reach if the consultant would provide information on what has worked elsewhere that would be applicable in New London. Larry indicated that at the next meeting when we present options we can provide some examples from elsewhere.

John Markowicz asked if there was a recommended height to new construction. Skip Smallridge suggested 4-5 stories for buildings on Bank and State Streets but from the Radisson and beyond the heights could be greater. John also asked that the team consider the impact on parking that would occur with increased service from Shore Line East (SLE) rail service and the need for

rental cars for people accessing New London on public transportation. Martin Berliner responded that it was understood that more commuters would be coming to New London when Shore Line East expands service. Deputy Commissioner of CT DOT Albert Martin said increased SLE service would come and it won't take 10 years.

Todd O'Donnell remarked that the world has been turned upside down since the study started and wondered if the study could be sped up. Would projects that address infrastructure qualify for stimulus money?

In response to a question from John Markowicz, Jim Butler confirmed that CT DOT had officially accepted the recommendation of Task 1A of the study - that the RITC should remain in downtown New London, rather than move to the Fort Trumbull area.

The meeting adjourned at 3:40 pm. The next Steering Committee meeting will be held in May or June.

Meeting Attendees:

Steering Committee:

Tony Sheridan	Chamber of Commerce of Eastern CT
Kevin Cavanagh	City of New London
Harry Smith	City of New London
Jenny Contois	Congressman Joe Courtney
John Gaucher	Connecticut DEP
Stan Mickus	Cross Sound Ferry
Charles Curtin	Curtin Transportation
Dan Karp	Daniels Dairy Downtown
Jeffrey Nelson	Governor's Eastern Office
Tom Stone	Greyhound
John Brooks	New London Development Corporation
Sandra Chalk	New London Landmarks
Frank McLaughlin	New London Main Street
Kip Bochain	New London Parking Commission
Martin Berliner	SCCOG, City of New London
Dan Steward	SCCOG, Town of Waterford
Ella Bowman	SEAT
John Markowicz	seCTer
Michael Carey	Suisman, Shapiro, Wool, Brennan, and Gray
Todd O'Donnell	Union Station

Other

Penny Parsekian	New London Main Street
Nat Trumbull	UCONN – Avery Campus

ConnDOT

Andy Davis	ConnDOT (Planning)
Craig Bordiere	ConnDOT (Rails)
Albert A. Martin	Deputy Commissioner

SCCOG Staff

James Butler	SCCOG
Dick Guggenheim	SCCOG

Study Team

Larry Englisher	TranSystems
Jim Wensley	TranSystems
Jeff Reeder	TranSystems
David Miller	TranSystems
Shruti Rathore	TranSystems
Skip Smallridge	Crosby Schlessinger and Smallridge
Jim Prost	Basile Baumann Prost and Cole
Jill Barrett	Fitzgerald & Halliday, Inc.
Carla Tillery	Fitzgerald & Halliday, Inc.
Stuart Popper	URS

Southeastern Connecticut Council of Governments

Regional Intermodal Transportation Center Master Plan and Efficiency Study

Steering Committee Meeting #4

June 30, 2009





Agenda

- **Introduction**
- **Short Term Alternatives and Evaluation**
  - Discussion
- **Long Term Vision Concepts and Evaluation**
  - Discussion
- **Next Steps**

Introduction – Recent Activities

- Reviewed transportation needs, development opportunities
- Conducted a team charrette to generate ideas
- Identified a set of preliminary candidate improvements
- Discussed with COG, City and stakeholders
- Refined the candidate set of improvements
- Conducted screening (qualitative) evaluation
- Identified trade offs in technical memorandum
- Now seek to narrow focus on best alternative(s) – particularly for short term

Major Issues to Address

- Parking Demand
- Needs of Individual Modes
- Intermodal (Pedestrian) Linkages
- Development Opportunities
- Ability to Phase Improvements

Guiding Principles

- Make transfers between modes safe, convenient and comfortable
- Preserve and enhance viability and growth of the transportation operators and local businesses
- Create an attractive gateway and encourage traveler visitation
- Consider both public and private property owner goals
- Look for public-private cooperation opportunities, not takings
- Maximize development opportunities that are likely given character and advantages of New London
- Capitalize on the synergies of transportation and development
- Balance the space needs of transportation and development

What Would Encourage Development?

- Significantly improved image of downtown
  - Active, attractive streetscape
  - Enhanced visual/physical link between downtown and the RITC
  - Consideration of negative perceptions of bus facilities
  - Critical mass on key parcels: Water Street Garage parcel could be the key



Water Street Garage Parcel and Potential Development

- Would require phased implementation of replacement parking and new development
- Could take many years to achieve
- Full potential is reflected in long term vision concepts
- Short term alternatives address immediate transportation, pedestrian and aesthetic improvements

Short Term Improvements

With Existing Water St. Garage and Marginal Demand Increase

- Address transportation deficiencies including pedestrian issues and environment
- Are specific
- Have low costs
- Feasible - City or transportation providers can take action
- Elicit consensus
- Do not preclude desired long term vision
- May include temporary actions

Long Term Vision Concepts

With Reuse of Water Street Garage Parcel and Expanded Transportation Facilities

- **General vision of future**
- **Meet long term transportation needs**
- **Capture major development opportunities**
- **Do not need to achieve consensus at this time**
  - Master Plan could include more than one long term vision
  - Allow for flexibility so City can respond to development opportunities as they arise

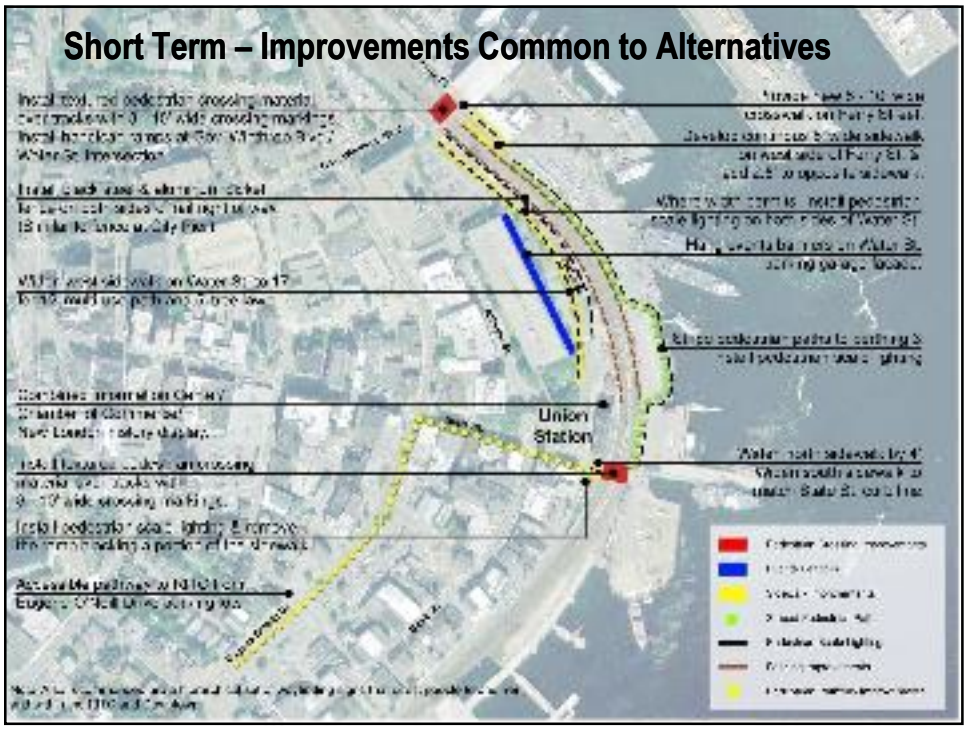
Short Term Improvements – Urgent Needs

- **Enhancing pedestrian safety and environment**
- **Facilitating transfers**
- **Improving wayfinding**
- **Enhancing bus passenger amenities**
- **Enhancing the aesthetic appearance and welcoming visitors**
- **Encouraging transportation uses at Union Station**

Short Term – Improvements Common to Alternatives

- **Enhanced pedestrian scale lighting**
- **Wayfinding signage between all components of the RITC**
- **Enhanced traveler information**
  - through signage, information kiosks, information center
- **Aesthetic improvements to the façade of the Water Street Garage and the railroad right-of-way**
  - i.e., new fencing and landscape improvements, events banners and welcome signage on Water Street Garage façade
- **Use of Union Station as a gateway to New London**
- **Extend taxi stand along State Street**
  - between Bank Street and South Water Street

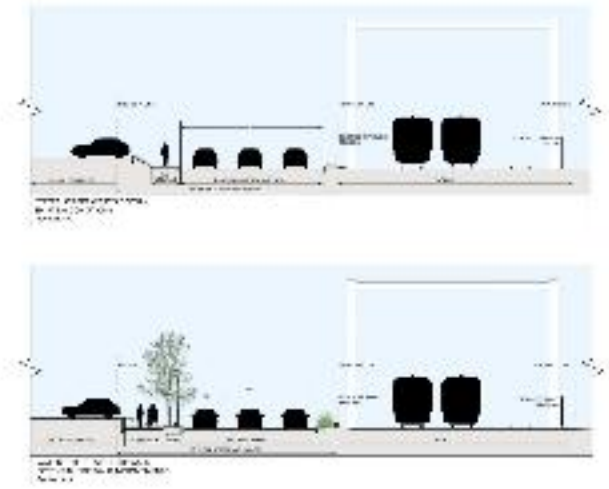
Short Term – Improvements Common to Alternatives



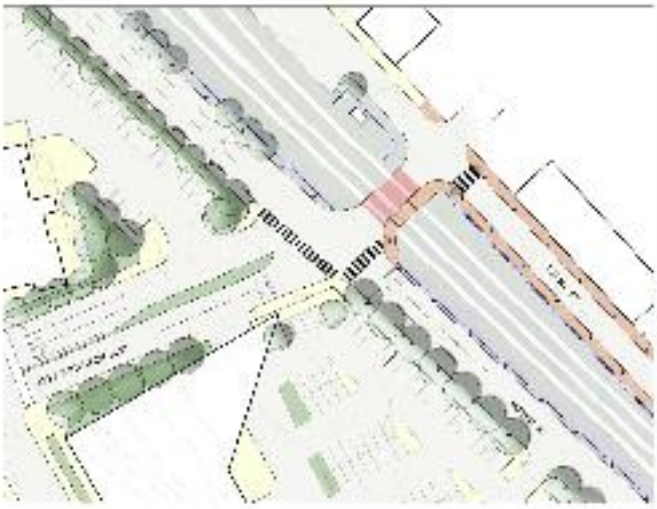
Short Term – Improvements Common to Alternatives



Pedestrian Improvements – West Side of Water Street



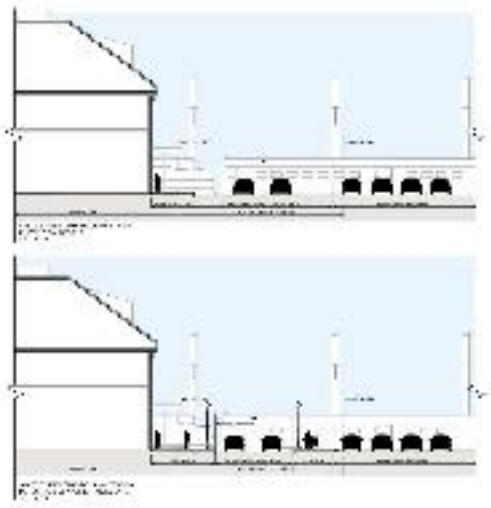
Pedestrian Improvements – Gov. Winthrop Boulevard



Pedestrian Improvements – State Street at RR Crossing



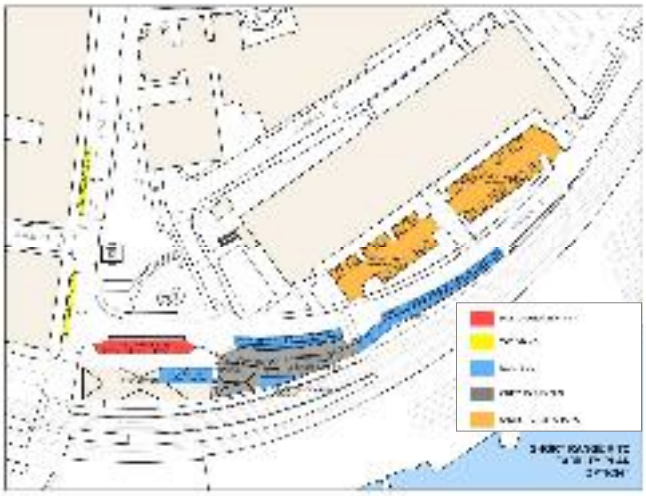
Pedestrian Improvements – State Street at RR Crossing



Bus Terminal Locations in Short Term Alternatives

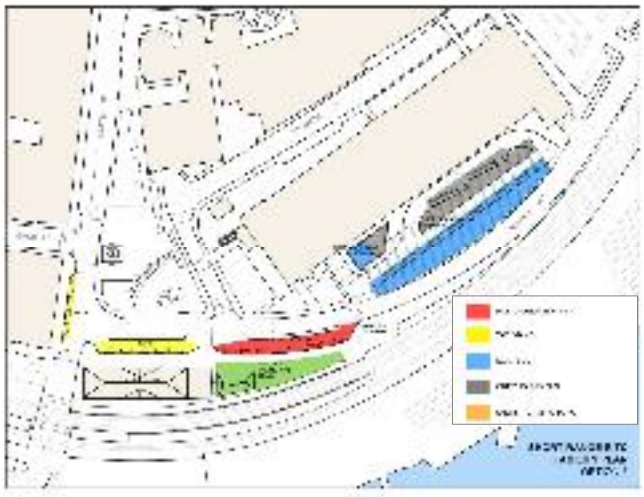
	SEAT on East Side of Water St.	SEAT on West Side of Water St.
Greyhound on East Side of Water St.	1	4
Greyhound on West Side of Water St.	3	2

Short Term Alternative 1



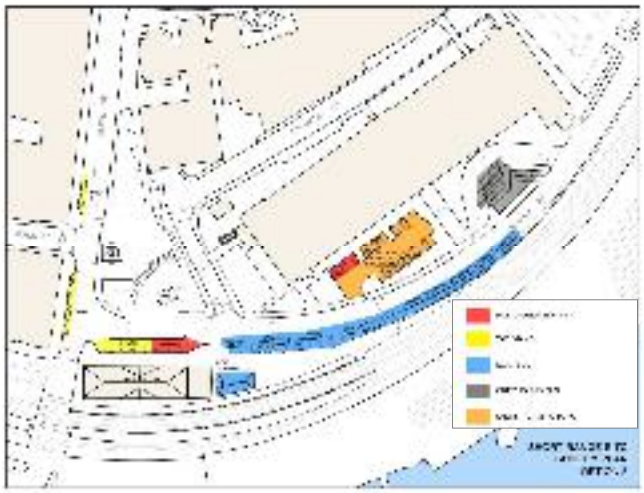
- Expanded and renovated joint bus terminal on east side
- Taxis on State St.
- Pickup/dropoff (PU/DO) at Union Station
- Expanded short term parking in front of garage

Short Term Alternative 2



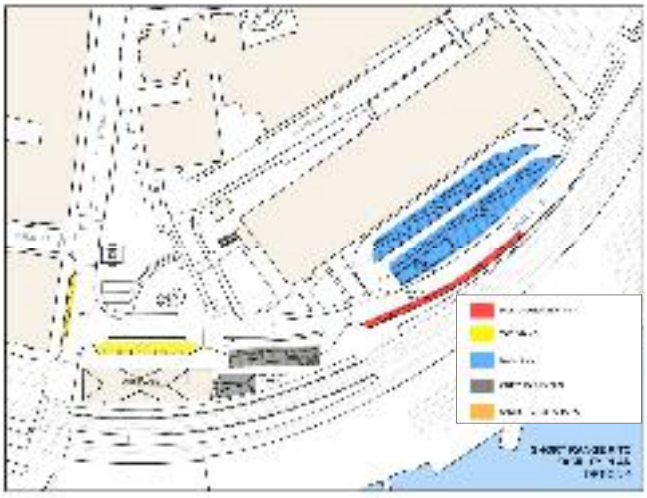
- New joint bus terminal on west side in front of garage
- Taxis at Union Station and State St.
- PU/DO at former Greyhound site
- Expanded sidewalk or short term parking at former SEAT site
- Commercial reuse of Greyhound building

Short Term Alternative 3



- New Greyhound terminal on west side in front of garage
- SEAT at former Greyhound site with renovated terminal
- Taxis at Union Station and State St.
- Drop-off at Union Station
- Pick-up/Short term parking in front of garage

Short Term Alternative 4



- New SEAT terminal on west side in front of garage
- Renovated Greyhound terminal with reconfigured bays
- Taxis at Union Station and State St.
- PU/DO at former SEAT site

Evaluation of Short Term Alternatives

Criterion	Short Term Alternative 1	2	3	4
Low Cost				
Easy to Implement				
Adaptable to Future Changes in Operational Needs				
Flexible to Accommodate Long Term Commercial Development				
Compatibility with Bus Terminal Long Term Concepts				
Improves Safety and Convenience for Transfers				
Enhances Pedestrian Environment and Safety				
Maintains or Enhances Traffic Operations/Safety				
Enhances Wayfinding/Information				
Capacity to Accommodate Short Term RITC Operations:				
Enhances Attraction of Visitors				
Minimal Environmental Issues				
Minimal Property Issues				
Potential for Public Private or Grant Funding				

Key: best worst

Key Advantages - Short Term Alternatives

- **Alternative 1**
  - Lowest cost
  - Compatible with all LT concepts
  - Maximum ST parking
  - Consolidated bus terminal
  - SEAT close to Union Station
- **Alternative 2**
  - Consolidated bus terminal
  - Frees up Greyhound Terminal Building for re-use
  - Short connection between bus and LI ferries
- **Alternative 3**
  - Maximum bus capacity and expansion possibility
  - Some SEAT bays have independent movement
  - SEAT close to Union Station
  - Short connection between Greyhound and LI ferries
- **Alternative 4**
  - SEAT waiting area closest to bays
  - Can provide independent movement for current SEAT routes

Key Disadvantages - Short Term Alternatives

- **Alternative 1**
  - Very tight fit
  - SEAT waiting area distant from some berths
  - Fewest taxi and PU/DO spaces
  - Taxis only on State St. including past Bank St.
  - Implementation could affect operations
  - May be historic building issues
- **Alternative 2**
  - Very tight fit
  - Requires relocation of garage center entrance
  - Awkward lane configuration
- **Alternative 3**
  - No FTA funds for Greyhound terminal
  - PU/DO far from station
  - Awkward lane configuration
- **Alternative 4**
  - PU/most DO far from station
  - Requires relocation of garage center entrance
  - Awkward lane configuration

Discussion of Short Term Alternatives

- **Which short term concept is best and should be developed further in the master plan?**
- **Which aspects of this concept need to be refined?**

	SEAT on East Side of Water St.	SEAT on West Side of Water St.
Greyhound on East Side of Water St.	1	4
Greyhound on West Side of Water St.	3	2

Long Term Concepts – Range of Options

	A	B	C	D
Bus Facilities	close to Union Station			Governor Winthrop Boulevard
Expanded Parking	Current Garage Site	Current Garage site plus Julian site	Governor Winthrop Boulevard	
Water Street Commercial Development	none	minimal	moderate	significant

Long Term Concept A



- New larger WSG
- Bus terminal in garage or on east side
- New BI Ferry Terminal
- WS Garage parking to BI Ferry access via State
- Sea Jet at current location or near BI Ferry
- Relocated on-site BI Ferry parking and LI Ferry staging

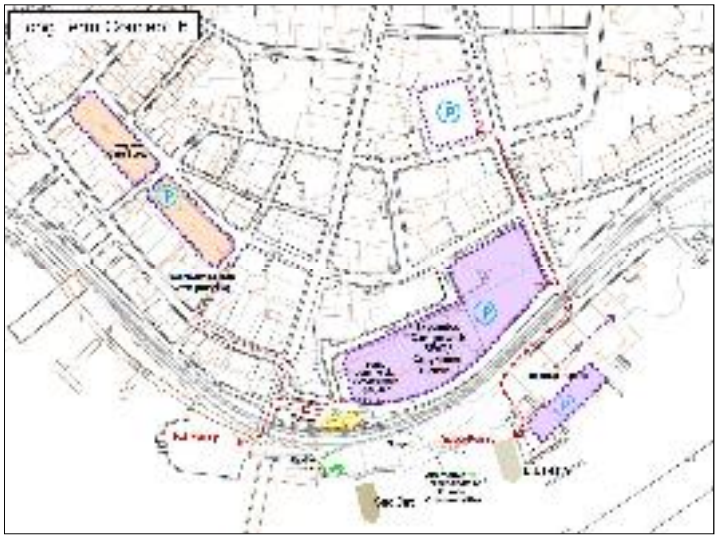
Long Term Concept AA



Same as A except:

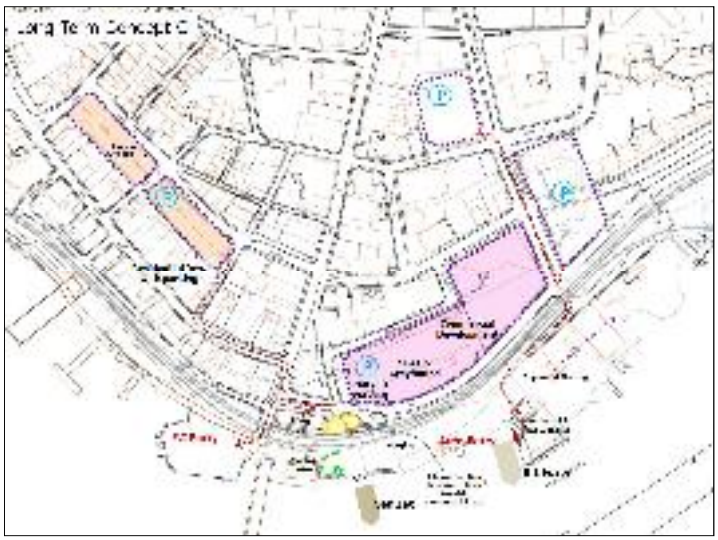
- Footbridge from new garage to new high speed ferry terminal
- Bus terminal in garage
- New High Speed Ferry Terminal (BI and SeaJet)
- WS Garage parking to BI Ferry access via footbridge

Long Term Concept B



- New larger WSG on expanded site with small commercial use
- Bus terminal in garage or on east side
- Swap SeaJet and BI Ferry locations
- Garage parking to BI Ferry access via GW Boulevard

Long Term Concept C



- New parking garage(s) on GW Boulevard
- New commercial development on WS Garage site with some rail/FI parking
- Bus terminal in garage or on east side
- Swap SeaJet and BI Ferry locations
- Garage parking to BI Ferry access via GW Boulevard

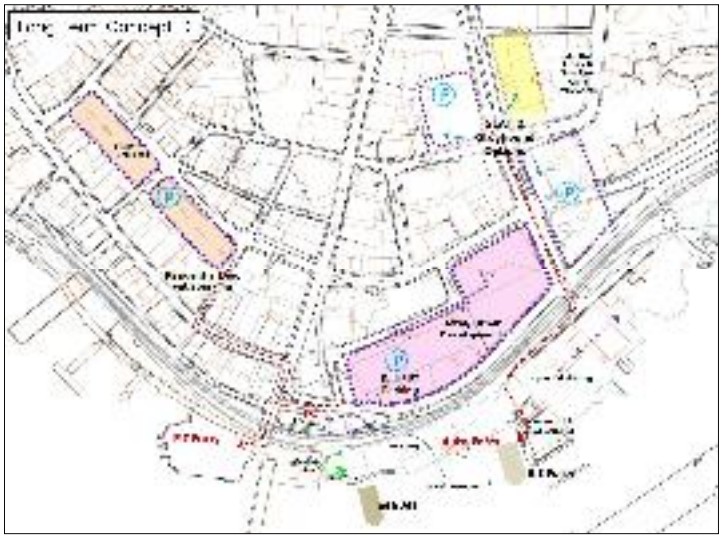
Long Term Concept CC



Same as C except:

- Footbridge from new development to new high speed ferry terminal
- Bus terminal in garage
- Relocated on-site BI Ferry parking and LI Ferry staging
- Garage parking to BI Ferry access via footbridge from new development

Long Term Concept D



- New parking garage(s) on GW Boulevard
- New commercial/ hotel development on WS Garage site with some rail/FI parking
- New bus terminal on GW Boulevard
- Swap SeaJet and BI Ferry locations
- Garage parking to BI Ferry access via GW Boulevard

Long Term Concept DD



Same as D except:

- Footbridge from new development to new high speed ferry terminal
- Relocated on-site BI Ferry parking and LI Ferry staging
- Garage parking to BI Ferry access via footbridge from new development

Concept D Development



Evaluation of Long Term Concepts

Criterion	Long Term Concept						
	A	AA	B	C	CC	D	DD
Footbridge?		✔			✔		✔
Low Cost							
Ease of Project Development							
Ease of Phasing							
Improves Safety and Convenience for Transfers							
Improves Convenience for Parking Access							
Enhances Pedestrian Environment							
Enhances Pedestrian Safety							
Enhances Wayfinding/Information							
Has Capacity to Accommodate RITC Demand/Growth (Public Transportation Modes)							
Has Capacity to Accommodate RITC Demand/Growth (Parking)							
Promotes Likely Development/Local Economy							
Capitalizes on Synergies between Transportation & Development							
Balances Need for Transportation & Development							
Enhances Attraction of Visitors (to New London)							
Minimal Environmental Issues							
Minimal Property Issues							
Potential for Public-Private or Grant Funding for transportation improvements							

Key: best worst

Key Advantages - Long Term Concepts

- **Concept A**
  - Maximizes adjacent parking
  - Shortest transfer distances
  - Focuses on City-owned parcels
- **Concept B**
  - Maximizes adjacent parking
  - Easier to phase by building parking on Julian site first
  - Less need for a footbridge
- **Concept C**
  - Allows for more commercial development at WS Garage site
  - New parking garages on Gov. Winthrop Blvd. could be built first
  - Encourages foot traffic on city streets
- **Concept D**
  - Maximizes adjacent development
  - Capitalizes on water views
  - Encourages foot traffic on city streets
  - Puts buses closer to downtown uses
  - Offers largest most flexible bus terminal site

Key Disadvantages - Long Term Concepts

- **Concept A**
  - Minimum adjacent development
  - Requires surface crossing of RR
  - Bus terminal constrained by parking needs
  - Aesthetic impact of large garage
- **Concept B**
  - Does not support CSF high speed ferry terminal plan with a footbridge
  - Parking capacity may be limited by any commercial use
  - Funnels BI Ferry passengers to vehicle access point for CSF
- **Concept C**
  - Requires relocation of Police Station or other properties
  - Funnels BI Ferry passengers to vehicle access point for CSF (without footbridge)
- **Concept D**
  - Shifts bus connections away from Union Station
  - Requires longer distances for some connections
  - Funnels BI Ferry passengers to vehicle access point for CSF (without footbridge)

Advantages/Disadvantages of a Footbridge

Advantages:

- **All Footbridge Concepts**
  - Facilitates transfers, wayfinding
  - Enhances pedestrian safety
  - Links NB and SB rail platforms
  - Supports development of CSF High Speed Ferry Terminal
- **Alternative CC/DD**
  - Encourages pedestrian flow through new development

Disadvantages:

- **All Footbridge Concepts**
  - Has visual & historic impacts
  - Introduces vertical element to transfer
  - Adds capital & operating /maintenance costs
  - Involves multiple property owners
  - No single responsible entity
  - Constrains bus terminal options on east side of Water Street
- **Alternative CC/DD**
  - Requires wayfinding to/from remote parking areas

Discussion

- **Which long term visions are most appealing?**
- **Which aspects of the long term vision need more work for the master plan?**

Next Steps

- Obtain comments
- Refine selected alternatives
- Evaluate costs, economic impacts and environmental impacts
- Develop Draft Master Plan
- Report back to Steering Committee in September
- Hold early fall public meeting

SUMMARY OF MEETING

Date:	July 8, 2009
Project:	**New London Intermodal Transportation Study**
Date of Meeting:	1:30 PM, Tuesday, June 30, 2009
Location of Meeting:	New London City Hall Council Chambers
Purpose of Meeting:	Discuss Short-Term Alternatives and Long-Term Vision Concepts

Summary of Meeting Discussion:

- Introductory remarks were made by Jim Butler
- Larry Englisher and Skip Smallridge made a presentation summarizing the study progress to date and the short-term alternatives and long-term vision concepts

Questions/comments made during the presentation and in the discussion period afterward:

- Kenric Hanson asked what was considered "short term" vs. "long term"
    - Larry replied short term is what may be implemented in 3-5 years compared to 15-20 years. Over the short term the overall increase in demand would be marginal
- Senator Andrea Stillman inquired about the meaning of the phrase "encouraging transportation uses at Union Station" listed as an urgent need on slide 9
    - Larry replied other uses will include bicycles and car rentals.
    - Jim Butler added that existing transportation uses will also be encouraged.
- Kevin Cavanaugh asked if costing of the short term-common improvements has been done.
    - The team replied that it has not been done yet but it is a part of the next steps.
- Dan Karp asked, on slide 11, why sidewalk improvements are suggested for Eugene O'Neill Drive and not Bank St, noting that there are more businesses on Bank St.
    - Skip Smallridge noted that Eugene O'Neill Blvd. has a wider pedestrian pathway than Bank St.
    - Senator Stillman asked if there could be multiple alternative pathways.
    - Skip Smallridge indicated that we need to provide signage for one ADA-compliant route
- Joseph Celli noted a concern that directional signage should suggest one direction (towards RITC/ Union Station) and not disperse on several paths
    - Skip Smallridge noted that if the distance from the parking area, for instance the Julian Lot, is closer to the destination via Gov. Winthrop Blvd., then people will take that route, so both pathways will be signed.
    - Larry Englisher noted that the preferred pathways are being identified.
    - Dan Karp indicated that the shortest routes may change if the Cross Sound Ferry ticket office were moved closer to Union Station
- Tony Sheridan emphasized the importance of improving passenger safety as an objective of this study and asked what became of pedestrian bridge plans
    - Larry Englisher noted that these plans are covered in the latter part of the presentation on Long Term Vision Concepts

- Charles Curtin noted that there is not much difference between pick up/drop off and taxis and that these areas might be shared in the plan. He also noted that 50 taxis are licensed to operate in New London.
- Joseph Celli asked if there has been increased demand for bus service.
    - Jim Butler replied that SEAT wishes to increase routes and decrease the time between pulses.
    - Tom Stone mentioned that ridership has been hit due to the economic downturn. Also they face increased competition from other intercity carries that operate the same routes between Boston and NYC. Tom suggested that bays may be used by other buses (tour buses, etc) as well as shared with SEAT.
    - Kevin Cavanaugh asked if official projections were used to estimate bus demand.
    - Jim Wensley indicated that there were none available
    - Tom Stone noted that in other cities specific areas are designated for charter or tourist buses
    - Charles Curtin noted that it is good to have the taxis close to the buses
- Senator Andrea Stillman: How are people expected to transfer from ferry to bus when there is a train in the station?
    - Larry Englisher: Ferry operators have mentioned previously that in such cases, ferries wait for the trains to clear the tracks.
    - Jim Butler added that such connections are very few in number.
    - Tom Stone added that they have explored the idea of shifting to the CSF property but traffic delay crossing the RR tracks??? presents the greatest hindrance.
    - Larry Englisher also said that if the buses are moved to or closer to Gov Winthrop Blvd., it will offer a better connection to ferries.
    - John Markowicz: Can Amtrak extend platforms further north?
    - Craig Bolieri (CTDOT Rail): It may not be possible due to the arc of the tracks and distance between the northbound rail and freight tracks.
    - Several members stressed the need to address transfers among modes and trains blocking up State Street.
    - Sandra Chalk asked how long the trains are typically in the station
    - Larry Englisher noted that it was about 7-8 minutes. (Time when gates at a crossing are closed is about 5 minutes- observation made by team after the meeting)
    - Kenric Hanson asked if the issue weren't simply a matter of poor planning on the part of travelers
    - Stan Mickus noted that Amtrak is typically late, contributing to connections being missed, and that it is not necessarily the fault of the travelers
- Sandra Chalk liked the 2nd Short-Term option which allows for open space and for Pick up/Drop Off (PU/DO) and bicycles and around station, and consolidates buses. It is assuming a good cross walk is provided.
- Jesse Lerch remarked that saw-tooth bays are needed for SEAT to increase service (as shown in short-term option 2B)
- Another attendee asked if there is a concern with PU/DO traffic and taxis interfering with traffic flow at the intersection of State Street and Water Street, also noting that a saw tooth parking configuration would allow independent movement of queued vehicles
    - Jim Butler said that saw tooth parking would require backing up into the traffic lanes

- Senator Stillman liked option 3. She expressed that she did not like taxis queuing on State Street. Sharing of PU/DO and taxis makes sense however too much short term parking will be used by people not using the station.
    - Jim Butler asked if the City can work with the taxis to identify a taxi waiting area nearby.
    - Senator Stillman asked if more taxis could fit if they pulled in at an angle
    - Jim Butler indicated that the 20' designated width would then not be enough and travel lanes would be interfered with
    - Charles Curtin said that in the past, taxis have used a saw tooth configuration in which they backed into the space, allowing for independent operation while avoiding the issue of backing into the flow of traffic
- John Markowicz asked if buses and taxis can share the same space
    - Tom Stone indicated that this does not work. He suggested that taxi cabs utilize space at Amtrak parking lot.
- Todd O'Donnell noted that Amtrak has a six-car parking lot for employees and that the taxis might be able to go there and these cars could be given parking spaces in the Water Street garage
- Commissioner Martin asked whether it was logical to move parking structures away from the waterfront and develop the lots near the water for more active uses
    - Skip Smallridge indicated that the ideal site for parking from a city development standpoint is to have passengers walking through the town to access the ferry
    - Comm. Martin asked if this would be better for attracting business to the city
    - Skip Smallridge agreed that it would be better to not have Water Street Garage serve as the face of the city
- Tony Sheridan advised the committee to concentrate on long term and utilize the transportation money that will be available in the near future, find a way to cross tracks, and via development options seek to revitalize the major streets around the RITC. Passengers by water modes form the major bulk of New London visitors and hence development along Water St is critical and needs to be inviting.
- Michael Carey asked why the area behind the Water Street Garage currently occupied by The Day is not considered for redevelopment
    - Skip Smallridge indicated that the areas highlighted in yellow are considered to be underutilized and that is the focus. He noted that the street could be enlivened in the future if the Day moved its production facilities to a suburban location as other newspapers such as the Boston Globe have done.
- Charles Curtin indicated that he would like to see pedestrians cross the tracks and the road from a multi-level building on the west side using elevators
- Kevin Cavanaugh asked for a cost comparison between short term and long term options. In his opinion common short term improvements will be expensive and the team should concentrate on the development scenarios in the long term alternatives
- Kevin Cavanaugh also mentioned that language on pg. 28 regarding the pedestrian overpass is very dismissive and that the team should revise it
- John Markowicz: For the Gov. Winthrop option (bus terminal on Radisson parcel) one of the disadvantages to point out is that the long walk to the station will be undesirable during winter.

- John Markowicz: A suggestion was made that the freight rail track merge with the Amtrak North Bound rail track north instead of south of the station. That will free up a lot of waterfront area.
- Craig Bolieri of CT DOT's rail division indicated that it is unclear whether the switch can be relocated
- Sandra Chalk: Some people asked about a tunnel rather than building a pedestrian bridge. A member pointed out that it works well in New Haven (though conditions vary at both the locations). The team pointed out problems that an underpass will pose.
    - Larry Englisher noted that a great deal of space is required for the ramps to the tunnel and that given a necessary turn within the tunnel, security was also an issue
    - Paul Schmidt noted the inherent problems with providing tunnel access given the groundwater
    - Craig Bolieri indicated that the New Haven station location provides adequate space for the tunnel access system and that it is not comparable to this area. He said that there is a tunnel in Westport but a tunnel poses many challenges with regard to the geology and meeting ADA requirements
- Kenric Hanson asked about the projection of vehicular transportation use in the area for the long term scenario with respect to I-95 widening plans.
    - Larry Englisher indicated that the assumptions for forecasting growth of the various modes were outlined in Task 3 & 4 and that they had limited information to use
- Tom Stone pointed out that only short term option 1 works if there is going to be subsequent long term development of the Water St garage parcel . He also raised concern that moving the terminal to Gov. Winthrop Rd will not qualify for FTA funding as an intermodal center.
    - Skip Smallridge said that some places across the country where there has not been a big chunk of space available have obtained FTA funding for facilities located several blocks away from the rail station. FTA may also be rewriting rules within the next year.
- Larry Hample pointed out that the pedestrian bridge is not practical, and the older bridge was taken down for the same reason – it required 90 steps up and 90 steps down to reach the ticket office from the west side of the rail.
- Jim Butler noted that a mechanism should be established to maintain the dialogue among the local stakeholders after the study is finished
- John Markowicz asked if adding an at grade crossing midway (in front of Water St Garage) to address the blocking of the State St. was considered
    - Larry Englisher said it had not.
    - Craig Bolieri indicated that CTDOT is trying to reduce at-grade crossings.

The next Steering Committee meeting will be scheduled for early fall 2009.

Meeting Attendees

Steering Committee:

Tony Sheridan	Chamber of Commerce of Eastern CT
Kevin Cavanagh	City of New London

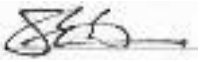
Jenny Contois	Congressman Joe Courtney
John Gaucher	Connecticut DEP
Stan Mickus	Cross Sound Ferry
Charles Curtin	Curtin Transportation
Dan Karp	Daniels Dairy Downtown
Tom Stone	Greyhound
Sandra Chalk	New London Landmarks
Frank McLaughlin	New London Main Street
Martin Berliner	SCCOG, City of New London
John Markowicz	seCTer
Michael Carey	Suisman, Shapiro, Wool, Brennan, and Gray
Todd O'Donnell	Union Station
Joseph Celli	Water Street Garage
Craig Bolieri	CTDOT Rail
Andy Davis	CTDOT
John Gaucher	CTDEP
Larry Hample	New London Parking Commission

Other Attendees

Kenric Hanson	New London Sustainability Commission
Don Gibson	New London Main Street
Jesse Lerch	New London Main Street
Karin Compton	The Day

Study Team

Jim Butler	Southeastern Connecticut Council of Governments
Larry Englisher	TranSystems
Jim Wensley	TranSystems
Shruti Rathore	TranSystems
Skip Smallridge	Crosby Schlessinger Smallridge
Paul Schmidt	URS
Jill Barrett	Fitzgerald & Halliday, Inc.
Sam Eisenbeiser	Fitzgerald & Halliday, Inc.

Submitted By:  **Date: 07/08/09**

Fitzgerald & Halliday, Inc.

Project:	**Regional Intermodal Transportation Center Study**
Date of Meeting:	1:30 PM, Tuesday, July 28, 2009
Location of Meeting:	New London Public Library
Purpose of Meeting:	Discuss Short Term and Long Term Improvement Alternatives
Meeting Attendance:	Attendees listed on pages 6 & 7

Jim Butler welcomed attendees. He explained the purpose of the meeting was to discuss various improvement options for the Regional Intermodal Transportation Center identified by the consultant hired by Southeastern Connecticut Council of Governments (SCCOG). Jim set the record straight on several inaccuracies in a July 25 story that ran in The Day. He stressed that the consultant has not prepared a final report but rather a technical memorandum that was written to be reviewed by the Steering Committee and the public. After review and comment, the consultant will fine tune recommended options for further development. Jim said he hoped today's meeting would lead to consensus on improvement items that people could then get behind and help implement.

The following is a summary of comments:

Frank McLaughlin: I am pleased SCCOG is hosting this forum for people to communicate their views on what improvements are needed.

John Alexander: I think you should consider amending the scope of this project to include a potential seamless, non-stop train service between New York City and New London that could transport thousands of people coming to the casinos that are now using I-95 to get to the region. Jim Butler responded that an amendment was not possible and Andy Davis of Connecticut Department of Transportation (CONNDOT) concurred that was the case. Jim Butler also said that the Consultant is taking into consideration increased Shoreline East service to New London when identifying future parking needs.

Jim Martin: SEAT prefers integrating improved bus facilities into the existing train station building, adding more dedicated space north of Union Station that could co-house Greyhound and SEAT. He envisions a two-story building where a walkway can be constructed over the catenaries to a secondary building east of the train tracks. Escalators would move people quickly to the ferries, trains and buses. Sandra Chalk asked, where would all the buses go? Jim Martin responded buses would still park on Water Street. Tom Stone of Greyhound said a shared bus facility would eliminate security issues. Jim Martin believes the bus facility could be managed by the state, city or SEAT.

Molly McKay: Could you picture your (bus facility) proposal on the west side of Water Street? Jim Martin responded, no, the space in front of the garage would be a too tight a fit. He said not all buses are at the station at the same time – two Greyhound and 5-6 SEAT slots are needed in the future. Tom Stone agreed the space in front of the garage was problematic. He said maneuvering buses in and out takes up a lot of space and has

detailed his concerns in a memo to SCCOG. Buses like to avoid backing up. Andy Davis of CONNDOT said if you need more room for bus storage it's possible to realign Water Street, moving travel lanes up to ten feet west towards the garage. Jim Martin said he does not want people crossing Water Street to access SEAT buses.

Martin Berliner: How much interaction is there between buses? Would passengers need to cross the road?

Andy Davis: Yes, Greyhound passengers would need to cross the road and stated that the Department of Transportation is recommending that an up and over footbridge over the tracks be a component of any selected improvement option.

Frank McLaughlin: On the CONNDOT website there is information about federal TIGER Grants - $1.5 billion will be spent by Sept 30, 2011 on capital improvements (bridges, public transportation, and ports). However, the deadline for application is Sept 15, 2009. Frank said (1) he is concerned this study won't be ready in time to meet the deadline and (2) who would apply for the grant program?

Jim Butler: CONNDOT has already put in a request for a Congressional earmark in the amount of $7 million for upgrades to Union Station, up and over upgrades across the tracks as part of the SAFETEA-LU reauthorization. However, it appears Congress will delay reauthorization of the Surface Transportation Act funds this October, thus delaying any earmarks that get approved.

Norm LaFleur: Overweight loads on our roads and bridges are a problem.

Mike Carey: I have noticed the removal of the elevated pedestrian bridge at the Water Street Garage as part of the parade project has made a big aesthetic improvement. It has opened up wonderful views of the water as you walk down State Street. Can't we get along without building another bridge?

Rusty Sargeant: I am an architect and have worked with the owners of Union Station. I've looked at the scheme where a bridge passes through the bus station and it would be aesthetically bad. Has there been any consideration to a controlled pedestrian crossing? Has there been any thought to making Eugene O'Neill Drive a two-way street as it would result in less traffic on Water Street? The train and the ferries must be an integral part of a transportation center and they need to stay put where they are. I don't have strong feelings about where the buses should be located.

Barun Basu: Have you considered the life and structural goodness of the Water Street Garage building? Perhaps we need to think of a bridge over the tracks as more than a walkway and perhaps combine with a ferry terminal. A larger structure could accommodate ticketing, Zip and rental cars, bike rentals. There should be more pedestrian orientation in this study. Jim Butler responded that the garage is structurally sound and details on its condition are in Technical Memoranda #2.

Barry Runyan: The New London Economic Development Commission has noted three concerns: (1) no short term options consider moving pedestrians across the track, (2) there are lots of owners involved, so who can implement an improvement plan, and (3) will the plan be explained in layman's terms and in brevity so that the public can understand and easily digest it? He urged there be a recommended design that best utilizes the assets together and a way to implement the plan. Jim Butler responded an executive summary of the plan will be made, supported by a large technical document. Jim said he is mindful of Tony Sheridan words, "we don't just need a study; we need a master plan."

Jim Butler then raised the issue of implementing the plan once the preferred options are agreed upon. He said in light of the fact that the transportation services are all provided by disparate entities, he asked those present: Do we need to organize some type of entity like a Transportation Authority to implement the plan? He said he has asked the consultant to examine what has been done around the country in terms of creating a governance structure comprised of various transportation providers working together.

Dennis Downing: A planned footbridge was previously shot down before because it cost a lot of money to build and maintain it and he thought a proposal to build an up and over bridge would generate a lot of opposition. Instead he suggested better crosswalks on Water Street preceded by speed bumps.

Tony Sheridan: It is critically important to come together as a region to support improvements, to make New London the hub of Southeast CT. He said: (1) SCCOG should be the entity to move a plan forward, (2) $20 million has been put into New London's Riverfront Park but there should be a footbridge over the tracks from the Custom House to access the park. Bank Street (i.e., businesses on the east side of Bank Street)should be turned around to face the river and (3) a footbridge over Water Street is essential as two thirds of the people who use the ferry arrive from across the tracks. Bridges can be attractively designed and they don't flood. He said his board, Chamber of Commerce of Eastern CT, would support development of the plan; do the politicking needed but a prioritization of 2-3 items is needed.

Bob Christina: If Bank Street could be extended around the Mariner Square building and connect to Atlantic Street, this would remove a lot of traffic from Water Street.

Norm LaFluer: We could solve the problem of motorists not stopping for pedestrians in crosswalks if we used cameras.

Kevin Cavanagh: We need to prioritize what we want to accomplish. A long term plan is needed though initial efforts may focus on short term items. Kevin said the City is (1) working to replace fence along Water Street, (2) recommending extending the taxi stand area to in front of Zavellas Restaurant on State Street, and (3) making adjustments to improve traffic flow in the taxi/ pick up/drop off area.

Penny Parsekian: New London Main Street is working with the Wronowskis and the City to put textured crosswalks in areas leading to Cross Sound Ferry as proposed.

Bill Morse: The number one priority should be to get people across the tracks. I see people dragging luggage through the dirt; it's a matter of time before people get hit. Has a pedestrian crossing across the tracks been considered? Sometimes the easiest solution is the best. Jim Butler responded that the consultant looked into an at-grade track crossing and it would take a congressional act to make that happen because it's national rail policy to reduce these crossings. Andy Davis of CONNDOT confirmed his department would not support another at-grade rail crossing.

Bill Morse: The sidewalk level at the southeast corner of the Water Street garage is a dead zone. If there were activity there better connections to downtown would occur.

Michael Caron, Director of Corporate Affairs for Pfizer: He said his company is interested in becoming part of the solution and does not a have position on the various options.

Dick Guggenheim and Jim Butler: Clarified information on why the elevated bridge did not get built a few years ago. The bids came in higher than the funding the City had available for the project and the money was re-programmed to the parade project.

Sandra Chalk: We should narrow the traffic lanes on Water Street and install a sidewalk wide enough on the east side of Water Street so people can comfortably walk. Jim Butler responded the consultants had looked at that and found only one pinch point where there is an out of service light pole. He said he also thinks such a sidewalk should be extended northerly up to the neighborhood park at the corner of Crystal Avenue to serve the neighbors of this area who walk to the SEAT bus stop.

Martin Berliner: Better signs are needed informing pedestrians leaving the parking garage of preferred routes to the train station and ferries..

Rusty Sargeant: It makes sense to have an up and over bridge on the north end of the garage and develop the south end of the garage for better linkages to downtown.

Jim Martin: The garage should be taken down and moved closer to the water. If we want people to stay in New London, we need to have sanitary facilities and lockers. Jim Butler responded that if you move the garage closer to the water, views will be cut off. Jim Martin replied the views now are of the ferry buildings and state pier.

Barun Basu: Has there been any talk with the casino people about parking? Jim Butler responded the casinos were invited to participate in this study and have not been actively involved. John Alexander said if there was non-stop train service from New York City to New London, interest by the casinos may dramatically increase.

Dennis Downing: A sidewalk should be installed on the east side of Water Street and Atlantic Street should be opened to two-way traffic. Jim Butler responded that there are several problems with making Atlantic Street two-way, including the fact that The Day newspaper needs to use Atlantic Street for its deliveries of ink and newsprint.

Bill Cutler: He said he spent many years in Chicago and was impressed by the visionary thinking of Daniel Burnham who he thought said, "Make no small plans. They lack the magic to move men's hearts." This type of thinking needs to work its way into this plan. There must be magic to come forth to inspire hope. With hope comes commitment.

Tom Stone: Greyhound could share a terminal with SEAT

Jim Martin: The bus station needs to be a continuation of Union Station.

Harry Smith: Could Water Street be relocated further west? Andy Davis responded he thought it could move about 10 feet closer to the garage.

Mike Carey: Can the first floor of the existing garage be used for retail space? Jim Butler responded that option was looked at and would be difficult.

Bill Morse: Does the City Council need to approve the plan? Jim Butler responded that this is a plan of the SCCOG, being done on behalf of the transportation providers and the City of New London. There is no requirement that the City of New London formally endorse the plan. Bill said he thought the plan would be an easier sell if both a tunnel and an up and over footbridge proposal were equally explored. Jim Butler responded that he would ask the consultant to at least compare the ease/difficulty of construction of both and the range of costs of the two alternative access improvements.

Dennis Downing: I would be OK with a footbridge over the tracks but opposed to one over Water Street.

Sandra Chalk: Let's use Union Station for the transportation center and concentrate complementary development there.

Martin Berliner: If we really need to improve pedestrian safety, then we need to concentrate on steps/activities besides the pedestrian overhead bridge.

Jim Martin: Can City Pier be extended (and make a better connection between downtown and the cruise ships) while not interfering with the ferries? Martin Berliner responded that this would require a lot of dredging and permits required may not be obtainable.

Sandra Chalk: The surface parking lots on Eugene O'Neill Drive are prime development sites which should include parking. Parcel J and Howard Street are also in close walking distance to the Regional Intermodal Transportation Center and should be where future development is directed

Bill Morse: Why was time and money used to study Fort Trumbull as a transportation center site? Jim Butler responded it was required by CONNDOT who is funding the study. Andy Davis said an alternative site exploration would be needed when seeking grant funds.

Jim Butler asked the group if it could come to some agreement on priority items. Consensus was expressed on the following points:

- The number one priority is improved, better, and safer pedestrian access between modes
- A pedestrian footbridge is needed over railroad tracks, and continuing it over Water Street to the parking garage should be evaluated
- Keep all transportation facilities on the east side of Water Street
- Use the existing Union Station building and annex to house transportation services to the fullest extent possible, and provide commercial facilities in the station that are supported by the travelling public
- Long term proposal to move bus facilities to Governor Winthrop Boulevard is not supported
- Long term proposals involving redevelopment of private properties (i.e. Radisson Hotel) and municipal properties (i.e. Police Station) are not supported

Meeting Attendees:

Steering Committee:

Tony Sheridan	Chamber of Commerce of Eastern CT
Kevin Cavanagh	City of New London
Harry Smith	City of New London
Stan Mickus	Cross Sound Ferry
Tom Stone	Greyhound
Sandra Chalk	New London Landmarks
Frank McLaughlin	New London Main Street
Ella Bowman	SEAT
Jim Martin	SEAT
Martin Berliner	SCCOG, City of New London
Dan Steward	SCCOG, Town of Waterford
Michael Carey	Suisman, Shapiro, Wool, Brennan, and Gray
Adam Wronowski	Cross Sound Ferry

ConnDOT

Andy Davis	ConnDOT
Albert A. Martin	ConnDOT, Deputy Commissioner
Craig Bordiere	ConnDOT

SCCOG Staff

James Butler	SCCOG

Dick Guggenheim	SCCOG

Study Team

Jill Barrett	Fitzgerald & Halliday, Inc.

Other

Bob Christina	
John Alexander	
Barbara Hample	
Lawrence Hample	
Jerry Sinnamon	
Albert Sussler	
Bill Morse	
Penny Parsekian	
Kathleen Wick	
Molly McKay	
Dennis Downing	
Norm LaFleur	
Tony Cronin	The Day
Rusty Sargeant	
Barun Basu	
Barry Runyan	
Ben Martin	
Jack Doolittle	
Michael Caron	Pfizer, Director of Public Affairs
Bill Cutler	

Submitted By: Jill Barrett, Fitzgerald & Halliday, Inc. **Date: 07/30/09**

Southeastern Connecticut Council of Governments

Regional Intermodal Transportation Center Master Plan and Efficiency Study

Steering Committee Meeting #5

December 3, 2009





Agenda

- **Introduction**
- **Proposed Short Range and Immediate Improvements**
  - Pedestrian and Wayfinding Improvements
  - Bus Terminal
  - Rail Platform Modifications for Shore Line East
  - Taxi, Auto Pickup/Dropoff/Parking, Bicycle
- **Impacts**
  - Visual Impacts
  - Costs and Economic Impacts
  - Environmental Issues/Permits
- **Governance/Implementation**
- **Discussion**

Introduction

- Responded to stakeholder concerns raised in the summer
- Focus on immediate and short term
- Focus on keeping all modes close together on the east side of Water Street
- Include pedestrian bridge in short term plan

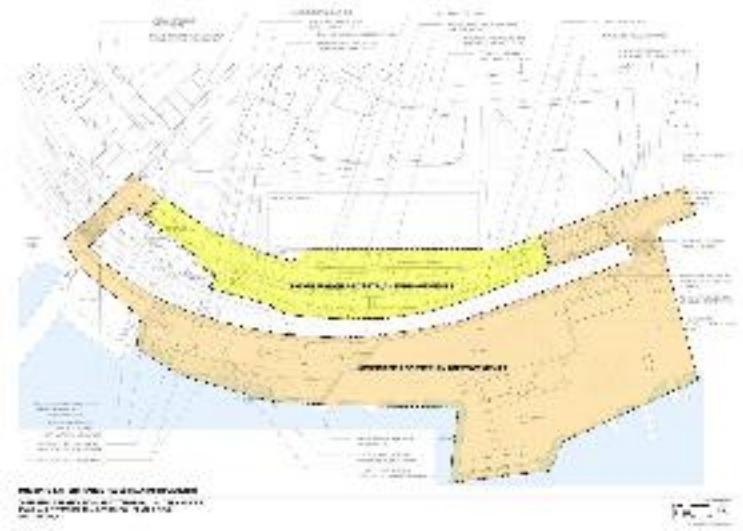
Pedestrian Improvements

- Pedestrian bridge
- Sidewalks/pathways on both sides of rail ROW
- Use of pavers
- Quad gates and rubber railroad crossings at State Street and Governor Winthrop Boulevard
- Fencing of ROW
- Landscaping
- Gateway structures
- Pedestrian scale lighting
- Canopies with lighting

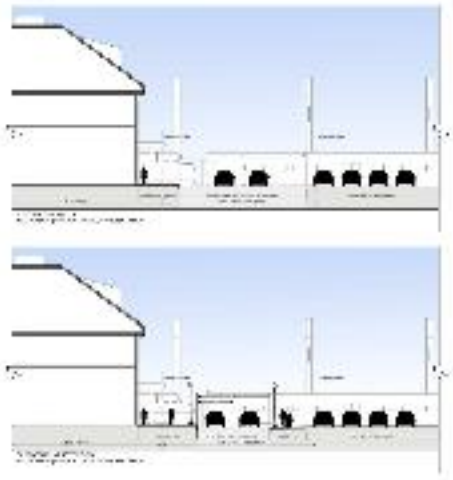
Pedestrian Improvements



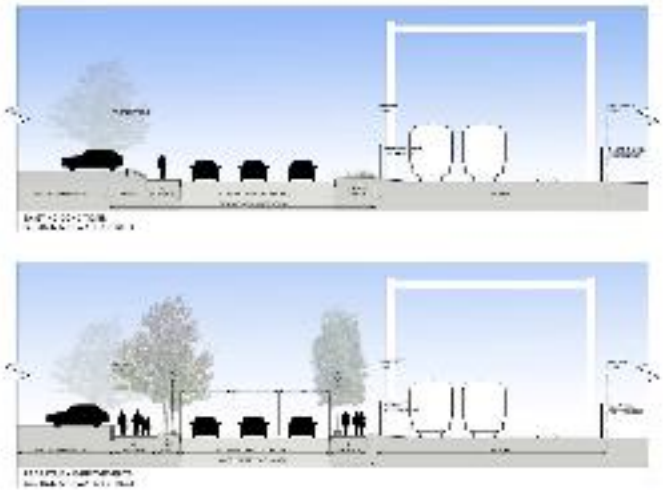
Immediate and Short Range



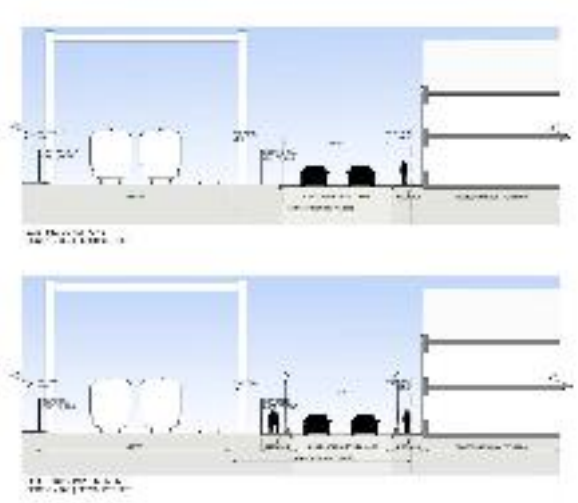
State Street RR Crossing



Governor Winthrop RR Crossing – Water Street



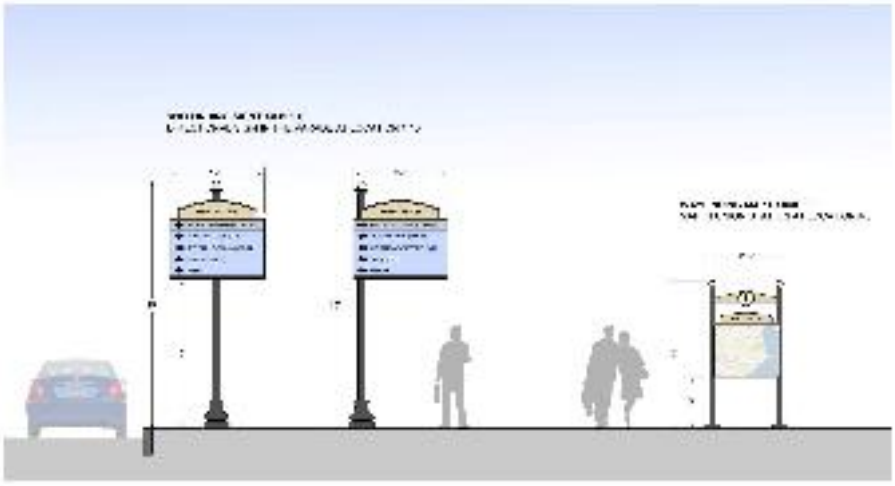
Governor Winthrop RR Crossing – Ferry Street



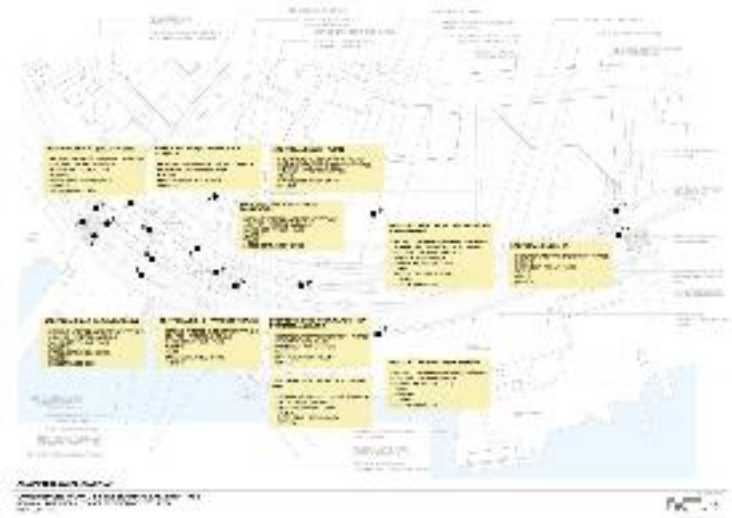
Pedestrian Bridge – Sketch



Wayfinding Sign Example



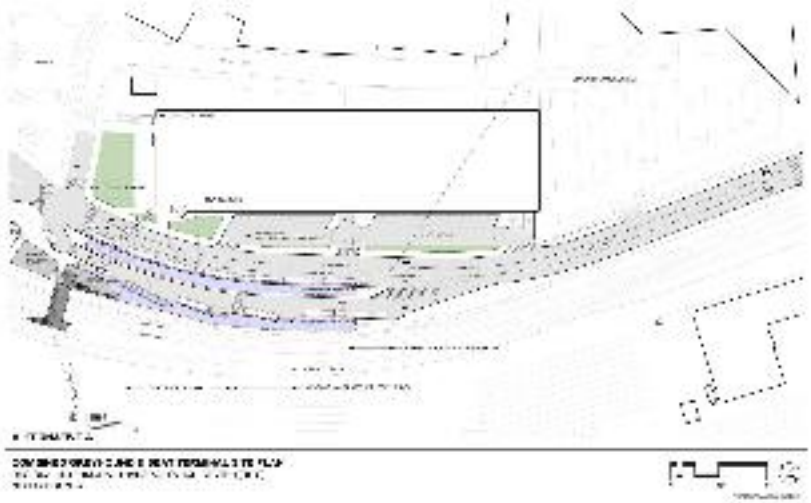
Wayfinding Plan



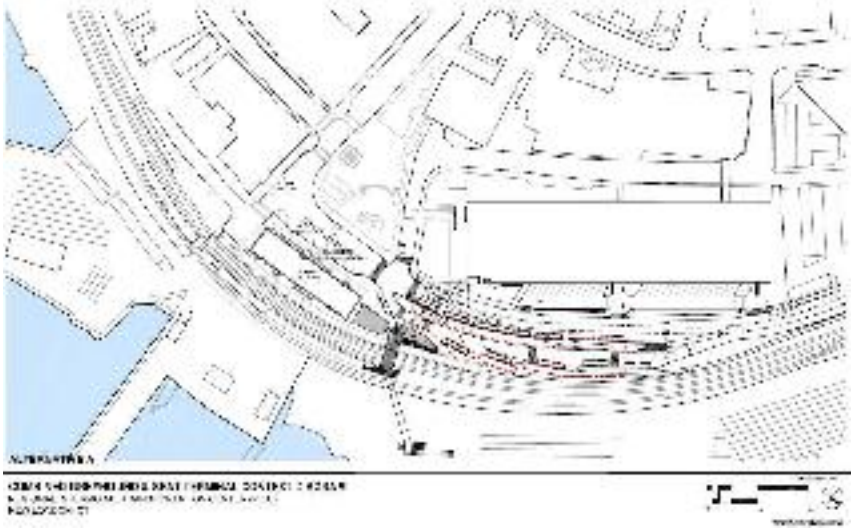
Bus Terminal

- Early alternatives recap
- Stakeholder and SCCOG feedback
- Revised alternatives
  - East Side of Water Street
  - Two alternatives
  - Some drawbacks
- Backup alternatives
  - Drawbacks
- Best practice alternative
  - Financial Feasibility Issues
- Property considerations

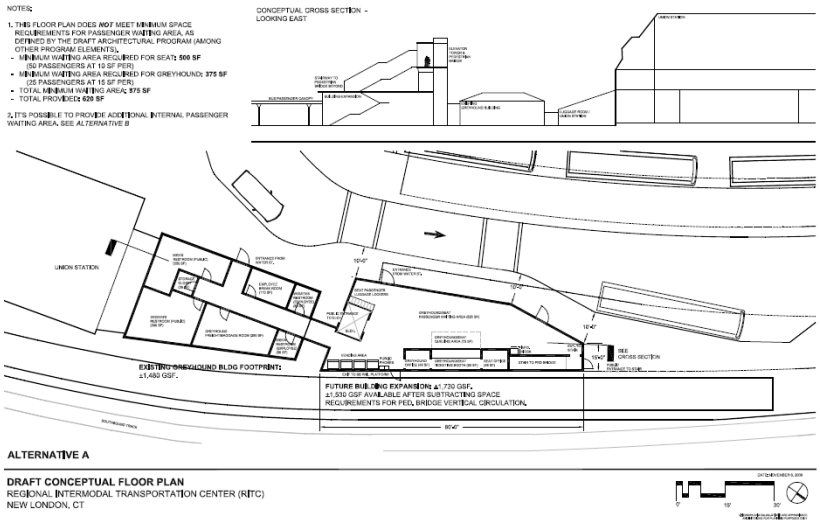
Bus Terminal – Alternative A



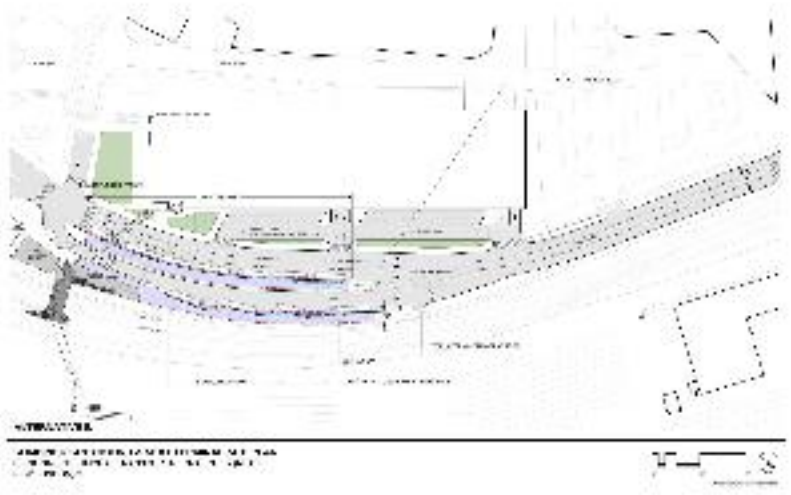
Bus Terminal Context – Alternative A



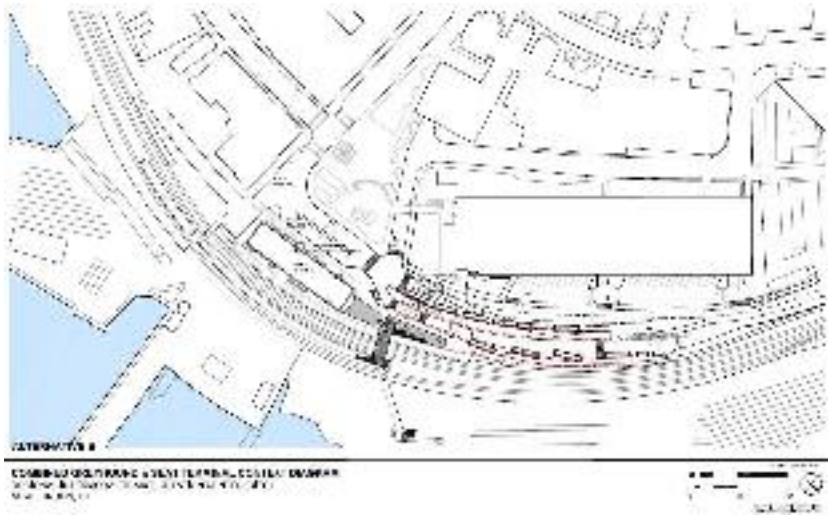
Bus Terminal Floorplan – Alternative A



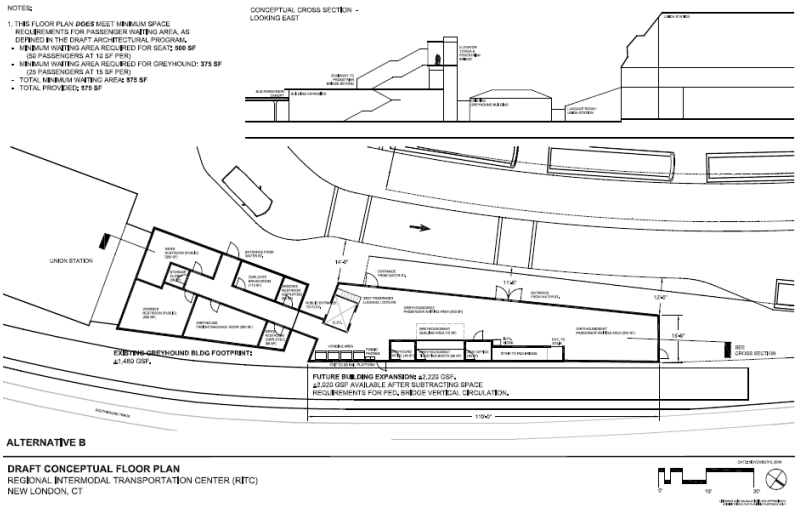
Bus Terminal – Alternative B



Bus Terminal Context – Alternative B



Bus Terminal Floorplan – Alternative B



Shore Line East

- **At Amtrak's request, SLE will use Track 6 (Freight track) to the extent possible**
- **ConnDOT will make modifications to northbound platform to allow access to Track 6**
  - Curvature will require bridge plates
  - Convex curvature creates gaps at ends of the rail cars where doors are located
  - Second car (ADA) will not have access to both doors
- **ConnDOT is currently assessing the feasibility of a new platform on the east side of Track 6 which would reduce gaps**
  - Would impact pedestrian bridge design

Other Modes

- **Auto Uses**
  - Drop-off – in front of Union Station
  - Pick-up/Short term parking in front of Water Street Garage
  - Zipcar in Water Street Garage
  - Car rental in Union Station
- **Taxis**
  - Pick-up and drop-off in front of Union Station
  - Queue – Include first block of State Street, remove bulb-out
- **Bicycle**
  - Bike racks
  - Bike rental

Visual Impacts – Current View



Visual Impacts – Current View



Visual Impacts – Alternative B – Center Section of Ped. Bridge



Visual Impacts – Alternative B– Center Section of Ped. Bridge



Visual Impacts – Alternative B– Center Section of Ped. Bridge



Visual Impacts– Alternative B– Center Section of Ped. Bridge



Visual Impacts– Alternative B– Center Section of Ped. Bridge



Visual Impacts– Alternative B – Center Section of Ped. Bridge



Visual Impacts – Alternative B – Full Pedestrian Bridge



Visual Impacts – Alternative B – Full Pedestrian Bridge



Cost Estimate: Short Term and Immediate Improvements

Pedestrian/Wayfinding	$3.6M
Pedestrian Bridge - Over Amtrak	$3.2 M
Pedestrian Bridge - Extension to Garage	$1.0M
Pedestrian Bridge - Extension to Ferry	$3.8M
Bus Terminal and Canopies	$1.3M
Water Street Reconstruction	$1.7M
TOTAL - Short Term and Immediate Improvements including Engineering/Inspection, Contingency and Inflation	$25.0M
Immediate Improvements (excluding CSF internal)	$4.7M
Additional Immediate Improvements (at CSF property)	$0.8M
Ongoing Operating Costs Per Year	$0.3-$0.4 M

Short Term Construction Economic Impacts of RITC

Direct jobs	88
Direct payroll	$4.2M
Direct material purchases in the region	$6.7M
Direct and indirect jobs	145
Total earnings impact	$6.3M

Short Term Construction Fiscal Impacts of RITC

Annual loss of real property taxes	$ 25,600
Capitalized value of lost real property tax (based on current 30 year municipal bond yield of 4.5%)	$568,900
Sales tax (on direct and indirect construction generated sales)	$ 76,100
Direct income tax	$155,200

Long Term Economic and Development Impacts

- Enhanced TOD opportunities including Union Station
- Impacts of site constraints (does not meet best practices)
- Induced transit ridership (intercity and local bus, rail and ferry)
- Transit user benefits
- Transit operational costs
- Ongoing facility operational costs
- Enhanced pedestrian access
- Environmental and air quality impact

Environmental Considerations

- Built environment
  - Need for CT DEP permits
  - Some potential for hazardous materials
- View shed impacts
- State Historic Preservation Officer approval
  - Section 106 and 4(f)
- Local building permits and City Council approval

Governance

- **Four models**
  - Single existing entity
  - Multiple existing entities
  - New special purpose entity
  - Private sector/developer
- **Recommendations**
  - Major State role
  - State ownership of bus terminal, train station, pedestrian bridge
    - Negotiate purchase or long term lease at least first floor of Union Station and the area required for the bus terminal and pedestrian bridge
  - Existing ownership of ferry terminals and garages
  - Creation of a new RITC association to coordinate information, etc.

Operational/Information Coordination

- **Association could facilitate:**
  - Schedule Coordination and Static Information Sharing
  - Real-Time Information Sharing on Delays and Service Adjustments
  - Joint Ticketing
  - Joint Marketing/Pre-Trip Customer Information
  - Sharing of Maintenance Responsibilities for Linkages
  - Longer Term Planning

SUMMARY OF MEETING

Project:	**Regional Intermodal Transportation Study**
Date of Meeting:	Thursday, December 3, 2009, 1 p.m.
Location of Meeting:	New London City Hall, Council Chambers
Purpose of Meeting:	Discussion of Preferred Alternative
Meeting Attendance:	Attendees listed on pages 5 & 6

Jim Butler, Executive Director of Southeastern Connecticut Council of Governments (SCCOG) welcomed attendees and thanked the Steering Committee for being involved in the study. Jim emphasized the concepts that would be presented at the meeting were not detailed site plans. He said the concepts were not a SCCOG plan, but were based on input provided by stakeholders and the public throughout the course of the study. These would only be implemented by the people/entities involved and no concept would be forced on the City of New London.

Larry Englisher presented a preferred alternative that placed a new bus terminal on the east side of Water Street and a pedestrian foot bridge built in three segments – a segment that traversed the train tracks, a segment that connected to the Water Street Garage and a segment that connected to the Cross Sound Ferry property. (see presentation http://www.seccog.org/intermodalStudy/pdfs/SteeringCmte_12309_FINAL.pdf). The presentation was followed by considerable discussion by committee members, the study team and SCCOG. Listed below is a summary of questions and responses in italics.

Dan Karp: Where would people access the garage on Water Street? Does the concept allow enough queue space for cars?

Larry Englisher: Yes. Entry and queue space would be provided in the short term parking area in front of the garage.

John Markowicz: Had you considered a two-story bus terminal?

Skip Smallridge: In our experience with bus terminals, people need to feel they are near the buses or they won't use the indoor waiting area. We think people on a second story waiting area would have too much anxiety as they would have to get down the stairs in time to meet the bus.

Charles Curtin: Taxi parking in front of Union Station works differently than in other cities. The last two cars in the queue are the most active cars because they are closest to where passengers get off the train. You should consider angled back-in parking for taxis because it would create more spaces and is safer.

Larry Englisher: We provided queue space on State Street to enable taxis to use a more traditional queuing approach with loading/unloading occurring in front of the station. There should be further discussion and coordination with the taxi operators on the taxi operating strategy.

Craig Bordiere: How high is the pedestrian bridge? Is there internal and external access to it?

Larry Englisher: The bridge is 55 feet at its highest point and can be accessed both internally and externally.

John Markowicz: The glass windbreak along the bus island is positioned on the east side but the prevailing winds come from the west. I would suggest more enclosure.

Jim Butler: The glass also serves to prevent passengers spilling onto the roadway.
Larry Englisher: The final design could incorporate some windbreaks on the west side.

Sandra Chalk: Is there access to the southbound train platform?

Larry Englisher: Yes, there is access at the northern end of the proposed bus terminal and through the train station and at the southern end of the terminal.

John Markowicz: Did anyone suggest the pedestrian bridge be wider and incorporate a ticket area?
Larry Englisher: No. We were interested in minimizing visual impact and cost.

Sandra Chalk: Where will the access be to Shore Line East (SLE)?

Larry Englisher: The southbound platform now used by SLE can be accessed on the north side of the bus terminal. However, with the increased service the plan is for the SLE trains to be on the freight track and we understand the northbound platform will be modified to accommodate this. Passengers would need to use the pedestrian bridge to access this platform (or the State Street surface crossing).

Frank McLaughlin: Can you expand on the $3.6 million pedestrian wayfinding?

Larry Englisher: This cost is for more than just the wayfinding; it includes other pedestrian improvement, a lot of paving of sidewalks in addition to signs.

Who will clean the glass in the new bus terminal? Will Greyhound and SEAT contribute?

CTDOT representative Andy Davis addressed attendees and said his department would review the report and would provide comments. He noted that the governance recommendation was that the State acquire the train station property. He said if the State acquired the train station, it would want to take the Water Street garage as well to provide revenue for ongoing operating costs. Andy said the State would need to know what improvements to the Station would be required in the short and long term. He asked that information on acquiring property, maintenance costs and annual operating costs be detailed. He also asked whether an association would be allowable under federal laws and noted that State laws would apply.

Jim Butler said the State will be given a range of costs. We do know the Water St. Garage has had a valuation.

Dick Guggenheim from SCCOG said CONNDOT has submitted a project budget estimate of $10 million to Congressman Courtney's office for inclusion as an earmark in the reauthorization of the next federal transportation act as a "placeholder" for this cost.

Tony Sheridan: I think today's plan is a dramatic improvement. It looks like the pedestrian bridge is above the top floor of the garage. It will be important for the public to see a final finished design for the bridge.

Larry Englisher: The bridge connects to the top floor of the garage. This is a master plan not a design study but we could include in the final report and presentation photos of similar pedestrian bridges elsewhere as examples.
Andy Davis: The bridge will probably end up looking like the pedestrian bridge in Old Saybrook.

Tony Sheridan: We would need something that would look good and that would compliment the architecture already existing at Union Station.

Jim Butler: The design concept for the building is light and airy, especially compared to the other pedestrian bridge that looked too blocky and heavy.

Dan Karp: Does the State typically own garages at other train stations?

Andy Davis: Yes, we own the stations in New Haven, Stamford.

Harry Smith: Are the garages at stations only for station use? Does the State own garages that serve joint uses?

Chris Bordiere: Generally the garages are used by commuters.
Andy Davis: The City of Bridgeport owns the garage at the station but it is operated by the State and Bridgeport does not receive revenue. This garage, however, also serves as parking for the sports facilities in the area – hockey, baseball.
Jim Butler: Some special arrangements could be made to address non-commuter use of the garage.

Dan Karp: How much space is lost by the proposed widening/moving of Water Street?
Chris Riale: We think a maximum of 50 feet but it is unlikely to result in many lost parking spaces.

John Markowicz: What is the rationale for the pedestrian bridge? Who pays for the pedestrian bridge? What if the response to Shoreline East doesn't justify added trains?

Jim Butler: The State views the pedestrian bridge as very important for safety and hopefully would pay for the bridge, perhaps with assistance from the federal government.
Andy Davis: The State likes localities to contribute a share.
Harry Smith: Even distressed communities?
Andy Davis: All communities.

Todd O'Donnell: I've learned that $10.8 million has been set aside for a downtown intermodal center and $7 million to acquire the New London railroad station.

Andy Davis: Sometimes congressional representatives will list projects.

Dick Guggenheim: That item and amount is just a placeholder.

Harry Smith: The team has presented a preferred alternative yet you've noted a number of drawbacks that you're concerned about if the transportation center is located on the east side of Water Street.

Skip Smallridge: Yes, we see a number of operational drawbacks to the preferred alternative.
Jim Butler: We looked at locating the bus terminal on the west side of Water Street in front of the garage, but it resulted in circulation issues, lost parking and would require a retrofit of the garage. We also looked at relocating the bus terminal to Governor Winthrop Blvd. and rejected that location. We think we can live with this design.
Jim Martin: I think the preferred alternative is a wonderful improvement over what we have now. The glass structure would mitigate the concerns about the visual impact of the building.

Sandra Chalk: I think the short term improvements to sidewalks and wayfinding are fantastic. I do not think the study addressed well potential uses of Union Station. It has deep basements, one half the main floor is available as well as one half the second floor and attic. I am puzzled that more thinking hasn't gone into this rather than building new.

Larry Englisher: We concluded Union Station would not work well for bus passengers. The distance from the SEAT bus stop is too great for passengers to be able to make connections and the stop can't be closer. Greyhound needs to be close to buses because their passengers have baggage. Visibility to the street from Union Station is poor because of its narrow windows and ADA accommodations would be needed. This study has not proposed specific uses for Union Station. Placing a visitor's center, café and service desk for rental cars within the station have been suggested. Any purchase or long term lease of Union Station would have to consider the need for parking to support uses of the building, perhaps providing dedicated parking within the Water Street Garage.

Sandra Chalk: Isn't the re-use of existing stations part of the Transportation Enhancement Act? There are wonderful examples of re-use of historic stations for bus and train passengers. These stations also take advantage of transit-oriented-development (TOD) opportunities. Worcester, MA has done a wonderful job rehabilitating their Union Station.

Skip Smallridge: What we're finding with TOD projects nationwide is that a lot of the development besides the transit functions is transit adjacent development and that somewhere only between 5-10% of the people living or working in the development actually use the transit. We also found that stations do not need a lot of retail space. For example, New Haven has about only 5,000 sq. ft retail space even though it has a lot of commuters using the station. Worcester's retail space is on very shaky ground; that station is at the beginning of a 15-20 year redevelopment plan.

John Markowicz: Why didn't you connect the pedestrian bridge to the east side of Union Station?

Todd O'Donnell: It would have been less obtrusive to make the connection on the east side. There was originally a footbridge at the building. I had someone develop concepts for this and an underground connection and can share them.

Larry Englisher: there would be additional impacts on the historic station if a pedestrian bridge were constructed from the east side of the Union Station building. The pedestrian bridge would be very high up since it must go over the catenary unlike the old footbridge. It would also block the view down State Street through to the Thames River if constructed at this location.

John Markowicz: An additional ground-level crossing would have worked but I understand that the federal government wants to reduce, not add crossings, and we need the two that we have to access the ferries.

Larry Englisher: Yes that is true. We documented that in the appendix to the pre-meeting handout as well as follow-up on other comments from the prior meeting.

Jim Butler thanked everyone for attending and for their input, and said a public meeting on the study's recommendations will be held in January. In response to a question, he said there will be a comment period that would end a short time after the public meeting is held. The draft report will then be presented to the SCCOG board.

The meeting adjourned at 3:20 p.m.

Meeting Attendees:

Steering Committee:

Tony Sheridan	Chamber of Commerce of Eastern CT
Harry Smith	City of New London
Stan Mickus	Cross Sound Ferry
Mark Hood	CT DECD
Charles Curtin	Curtin Transportation
Dan Karp	Daniels Dairy Downtown
Sandra Chalk	New London Landmarks
Frank McLaughlin	New London Main Street
Dan Steward	SCCOG, Town of Waterford
James Martin	SEAT
John Markowicz	seCTer
Sen. Andrea Stillman	State Sen. 20th District
Todd O'Donnell	Union Station

ConnDOT

Andy Davis	ConnDOT (Planning)
Craig Bordiere	ConnDOT (Rails)
Jon Foster	ConnDOT (Rails)

SCCOG Staff

James Butler	SCCOG
Dick Guggenheim	SCCOG

Study Team

Larry Englisher	TranSystems
Jim Wensley	TranSystems
Skip Smallridge	Crosby Schlessinger and Smallridge
Chris Riale	Crosby Schlessinger and Smallridge
Jill Barrett	Fitzgerald & Halliday, Inc.
Paul Schmidt	URS

4. Board Meeting

Southeastern Connecticut Council of Governments

Regional Intermodal Transportation Center Master Plan and Efficiency Study

SCCOG Board Meeting

January 19, 2010





Agenda

- Introduction
- The Existing Transportation Center and Functions
- Economic Development and the Transportation Center
- Long Term Vision Concepts
- Short Term Improvement Alternatives

Introduction

Study Sponsors and Team

- **Southeastern Connecticut Council of Governments**
  - James Butler, Executive Director & Project Manager
- **Connecticut Department of Transportation**
- **Consultant Team**
  - TranSystems
    - Larry Englisher, Consultant Project Manager
  - Fitzgerald & Halliday, Inc.
  - URS Corporation
  - Crosby Schlessinger and Smallridge
  - Basil Baumann Prost and Cole

Study Purpose

- **Develop a seamless regional transportation hub that supports revitalization of downtown New London**
- **Create a Master Plan for the Transportation Center**
  - Review suitability of location
  - Identify operational issues and solutions
  - Estimate costs of improvements
  - Identify development opportunities
  - Identify synergies and partnerships

How the Study was Conducted

- **Technical Tasks**
  - Screening Evaluation of Sites – Downtown vs. Ft. Trumbull
  - Transportation Needs
  - Infrastructure Conditions and Opportunities
  - Transit Oriented Development Opportunities
  - Development and Evaluation of Options
  - Master Plan
- **Public Involvement**
  - Two public meetings
  - Six Steering Committee Meetings
  - Meetings with key stakeholders & property owners
  - Passenger surveys
  - Newsletters/fact sheets
  - Website: www.seccog.org

The Existing Transportation Center



- Union Station anchors the existing center
- Unique confluence of rail, bus and ferry
- Connections need improvement
- Well-functioning intermodal center is considered vital to future development



Existing Transportation Services

- Amtrak Intercity Rail
- Shore Line East Commuter Rail
- Greyhound Intercity Bus
- Cross Sound Ferry to Long Island
- Block Island Express Ferry
- Fishers Island Ferry
- SEAT Bus (7 routes pulse)
- Casino Coaches (meet passenger ferries)
- Taxi
- Private Automobile Parking
- Pick up / Drop off
- Bicycle
- Pedestrian
- Tourist Shuttle (proposed)









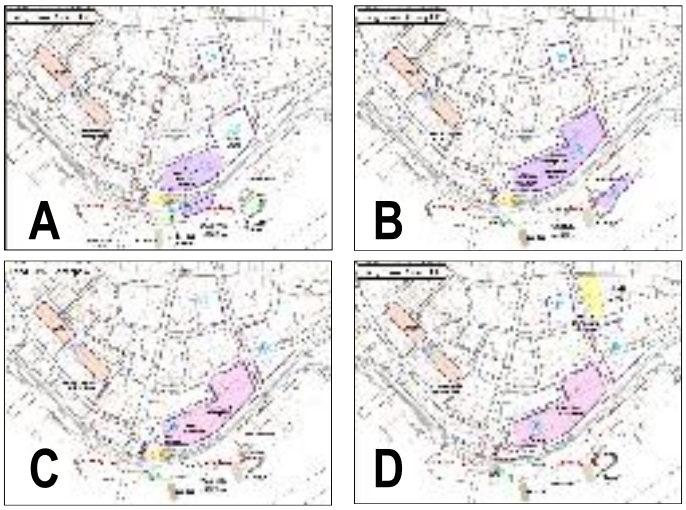
Major Needs

- **Street Space and Bus Stops**
  - Adequate bus bays, curb space for pickup/drop-off and taxis
- **Buildings and Facilities**
  - Bus and Block Island ferry waiting area, retail/food amenities
  - Repairs to garage structure and elevators, ADA accessibility
  - Encourage full use of Union Station
- **Parking and Traffic**
  - Parking for Shore Line East expansion (100 then 200-300) and summer weekend needs
  - Minimize Traffic Impacts
- **Pedestrian Connections between Modes**
  - Safety, directness, attractiveness, accessibility and physical condition
  - At railroad crossings, to and from ferries, key intermodal connections
- **Information, Orientation and Aesthetics**
  - Wayfinding signage, static and real time information, appearance/visitor-friendliness
- **Ability to Phase Improvements**

The Transportation Center and Economic Development

- **Transportation center can be a catalyst for development within walk distance**
  - Transportation users represent large, untapped market
  - Transportation assets enables access to federal dollars
  - 130,000 - 473,000 SF of retail, office and residential over 10 years
- **Based mid-level estimate, could yield:**
  - More than 300 new residents and 350 new jobs
  - $1.6M in annual property tax revenue to City
  - $1.8M in sales and income tax revenue to State

Long Term Concepts
(with or without Pedestrian Bridge or Tunnel)



Evaluation of Long Term Concepts

- **Major tradeoffs exist among concepts**
- **Stakeholders did not develop a clear preference for the long term future**
  - Preferred keeping transportation functions together
  - Liked ideas that encouraged pedestrians to visit businesses
  - Water Street Garage will not be replaced for some time
  - Felt that study should focus on shorter term solutions

Development of Master Plan for Short Term

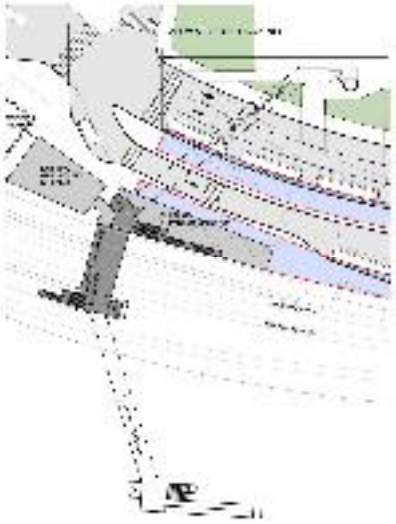
- Developed and evaluated an initial set of alternatives
- Presented to key stakeholders
- Revised in response to stakeholder concerns
- Focused on immediate (1-2 years) and short term (3+ years)
- Focused on keeping all modes close together on the east side of Water Street
- Included pedestrian bridge in short term plan per Connecticut DOT

Components of Short Term Preferred Alternative

- Pedestrian Bridge and Other Improvements
- Wayfinding Improvements
- Rail Station Improvements
- Combined Bus Terminal
- Pick-up/Drop-off/Taxi Improvements

Pedestrian Bridge

- Minimum segment over tracks
- Located 36 to 55 feet over rail tracks
- Integrated with bus terminal building
- Could extend to Water Street Garage
- Could extend to Cross Sound Ferry (possible passenger terminal)
- Tunnel option was also investigated

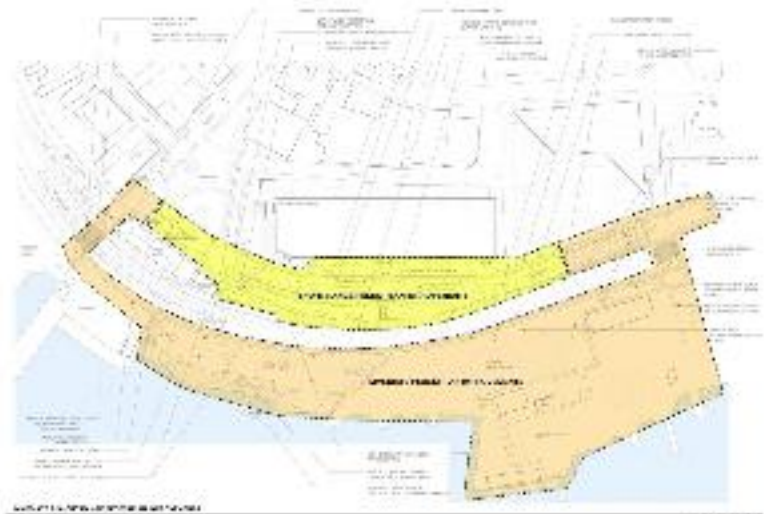


Pedestrian Improvements

- Pedestrian bridge
- Sidewalks/pathways on both sides of rail ROW
- Use of pavers
- Quad gates/ rubber surfaces at the two RR crossings
- Fencing of ROW
- Landscaping
- Gateway structures
- Pedestrian scale lighting
- Canopies with lighting

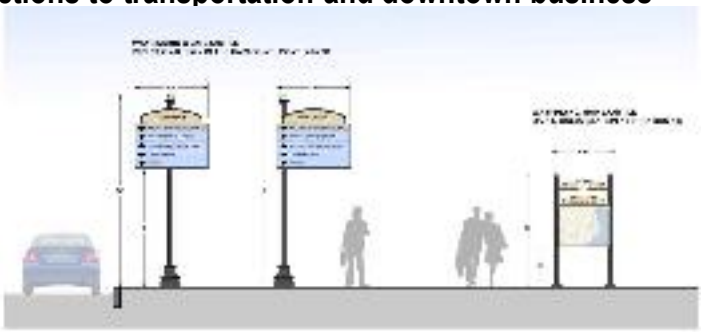


Immediate and Short Range



Wayfinding Plan

- 17 locations
- Maps and signs
- For pedestrians and vehicles
- Directions to transportation and downtown business



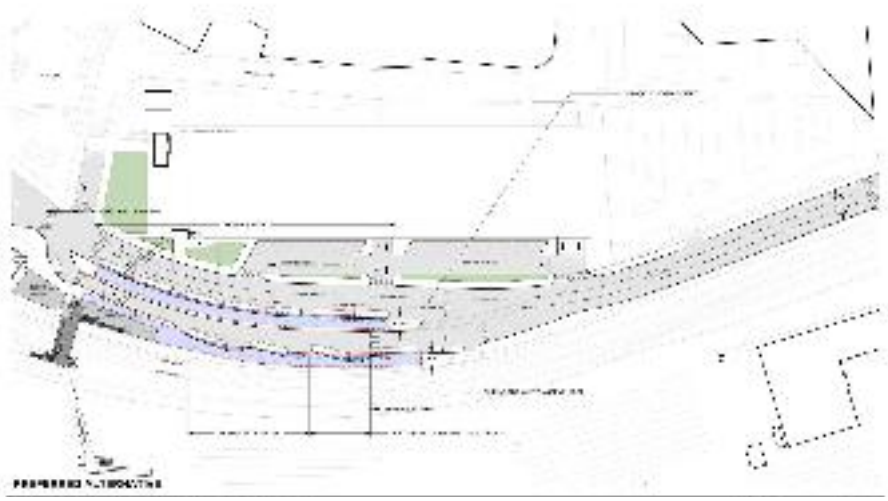
Rail Station Improvements

- **Amtrak**
  - No major improvements needed
- **Shore Line East**
  - At Amtrak's request, SLE will use Track 6 (freight track)
  - ConnDOT will make short term modifications to northbound platform to allow access to Track 6
  - ConnDOT may consider a future platform on the water side of Track 6
    - Would impact pedestrian bridge design

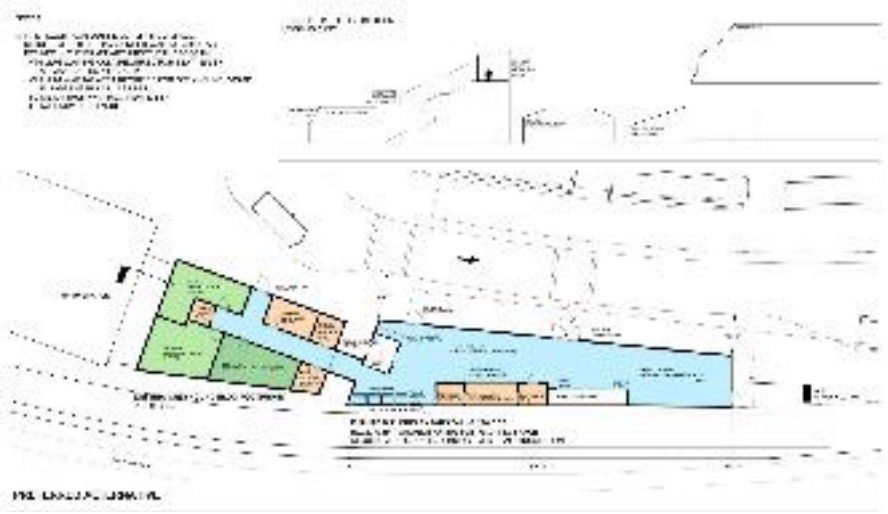
Bus Terminal – Preferred Alternative

- **East side of Water Street**
- **Water Street relocated to provide space**
- **Expanded capacity for buses**
- **New bus terminal building near bus stops**
- **Large enclosed waiting room with view of buses**
- **Requires use of currently private property**

Preferred Alternative - Bus Terminal Layout



Preferred Alternative
Bus Terminal Conceptual Floorplan



Other Modes in the Short Term Plan

- **Auto Uses**
  - Drop-off in front of Union Station
  - Pick-up/Short term parking in front of Water Street Garage
  - Zipcar in Water Street Garage
  - Car rental in Union Station
- **Taxis**
  - Pick-up and drop-off in front of Union Station
  - Queue – Include first block of State Street



- **Bicycles**
  - Bike rental
  - Bike racks

Visual Impacts – Current Views from the Parade





Visual Impacts of Preferred Short Term Alternative
– with Bus Terminal/Canopy and the Center Section of Pedestrian Bridge



Visual Impacts of Short Term Preferred Alternative
– with Bus Terminal/Canopy and the Full Pedestrian Bridge



Visual Impacts of Preferred Short Term Alternative
– with Bus Terminal/Canopy and the Center Section of Pedestrian Bridge



Visual Impacts of Preferred Short Term Alternative
– with Bus Terminal/Canopy and the Full Pedestrian Bridge



Environmental Considerations

- **Built environment**
  - Need for CT DEP permits
  - Some potential for hazardous materials
- **View shed impacts**
- **State Historic Preservation Officer approval**
  - Section 106 and 4(f)
- **Local building permits and City Council approval**

Governance Recommendation

- **Major State role**
  - State ownership of train station, bus terminal and pedestrian bridge
  - Negotiate purchase or long term lease (of at least first floor of Union Station and the area required for the bus terminal and pedestrian bridge)
  - Possible State ownership or long term lease of Water Street Garage
- **Existing ownership of ferry terminals**
- **Creation of a new RITC association**
  - Principal membership – Transportation Providers, City and ConnDOT
  - Responsibilities
    - Schedule Coordination and Static Information Sharing
    - Real-Time Information Sharing on Delays and Service Adjustments
    - Joint Marketing/Pre-Trip Customer Information and Joint Ticketing
    - Sharing of Maintenance Responsibilities for Linkages
    - Longer Term Planning

Cost Estimate: Short Term and Immediate Improvements

Immediate (including CSF internal)	$5.5 M
Short Term with Full Pedestrian Bridge	$17.2 M

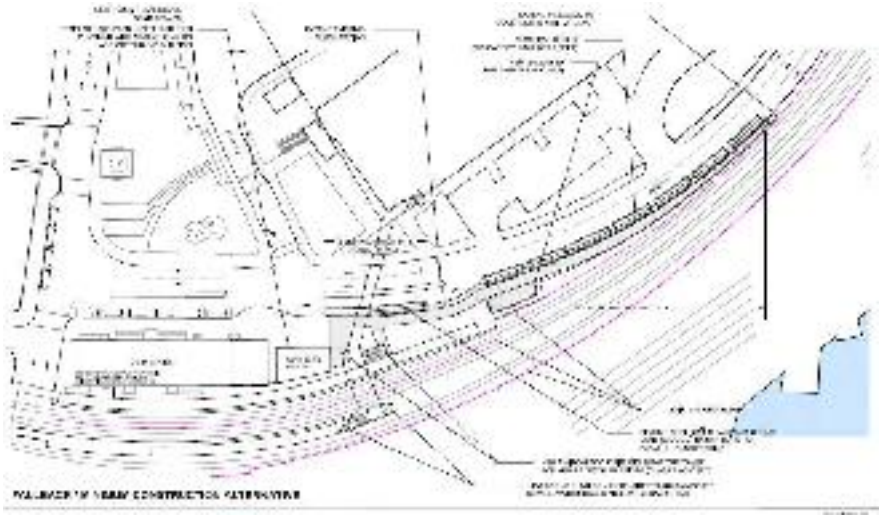


Ongoing Operating Costs Per Year	$0.3-$0.4 M

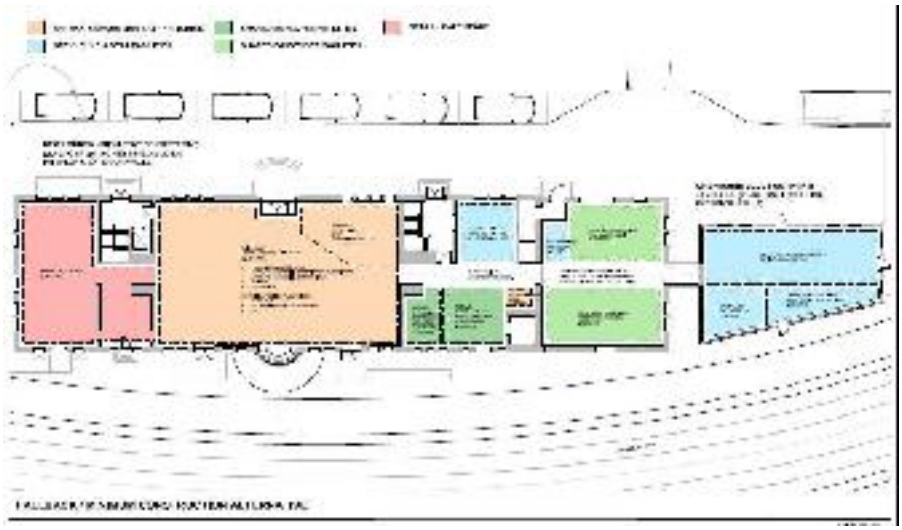
Fallback Minimum Construction Alternative

- Bus Terminal remains on the east side of Water Street
- Water Street not relocated
- Maintains current bus capacity
- Preserves the full current Water Street Garage site for future development
- Uses existing buildings with renovation
- Requires use of currently private property
- Indoor waiting area farther from buses
- Short Term $3M without Pedestrian Bridge (excluding immediate pedestrian improvements)

Fallback Minimum Construction Alternative



Fallback Minimum Construction Alternative
Train Station and Bus Terminal Conceptual Floor Plan



Survey of Ferry Riders: Cross Sound Ferry / Sea Jet / Block Island Express Ferry

We are asking people using the ferry to tell us how we can improve your experience at the ferry terminal and surrounding area as part of a study to improve New London's transportation center. Please complete this questionnaire and return it to the surveyor. Your answers to the following questions will be very helpful to this project. Thank you.

Today's Date/Time _____

1. What is the primary purpose of your trip?

- ❑ Recreation
- ❑ Work-related
- ❑ Other _____

2. What is your destination? _____

3. Are you making a round trip on the ferry or just traveling one-way?

- ❑ One-way (Please skip to Question 5)
- ❑ Round trip (Continue with Question 4)

4. If you are making a round trip, is this your return trip?

- ❑ Yes
- ❑ No

5. How many people are in your travel party? _____

6. Did you or your travel party bring a car onto the ferry?

- ❑ Yes (Please skip to Question 8)
- ❑ No (Continue with Question 7)

7. If no, how did you get to the ferry terminal in New London?

- ❑ Used a car that is parked near the ferry terminal in New London (Please indicate the specific parking location)
  - ❑ Ferry Property
  - ❑ Water Street Garage
  - ❑ Gov. Winthrop Blvd. Garage
  - ❑ Eugene O'Neill Dr. Parking Lots
  - ❑ Other_____
- ❑ Dropped off
- ❑ Local Bus (SEAT)
- ❑ Intercity Bus (Greyhound/Peter Pan)
- ❑ Charter Bus
- ❑ Amtrak or Shore Line East Train
- ❑ Taxi
- ❑ Casino Bus
- ❑ Walked
- ❑ Other _____

8. How would you rate the ferry terminal in New London using the following scale: 5 (Very Good), 4 (Good), 3 (Average), 2 (Poor) and 1 (Very Poor). If item does not apply, check "n/a".

	5	4	3	2	1	n/a
Parking	❑	❑	❑	❑	❑	❑
Convenience Getting to / from the Terminal	❑	❑	❑	❑	❑	❑
Convenience Making Connections with the Ferry	❑	❑	❑	❑	❑	❑
Comfort at the Terminal (seating, climate control)	❑	❑	❑	❑	❑	❑
Amenities at the Terminal (food services, restrooms, newsstand)	❑	❑	❑	❑	❑	❑
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	❑	❑	❑	❑	❑	❑
Clearly-marked schedules for all transportation (rail, ferry, bus)	❑	❑	❑	❑	❑	❑
Purchasing Tickets	❑	❑	❑	❑	❑	❑
Personal Security at the Terminal	❑	❑	❑	❑	❑	❑
Physical Safety at the Terminal (and While Making Connections)	❑	❑	❑	❑	❑	❑
Nearby Places of Interest	❑	❑	❑	❑	❑	❑
Overall	❑	❑	❑	❑	❑	❑

9. Did you or will you visit any of the following downtown New London businesses on this trip (other than at a Ferry Terminal Concession)? Check all that apply:

- ❑ Shopping
- ❑ Restaurant
- ❑ Office/Workplace
- ❑ None
- ❑ Other _____

10. How likely would you be to go to downtown New London if there were improved/additional shopping, restaurants, culture/entertainment, business services, recreation, etc.? (Check one.)

❑	❑	❑	❑	❑
Very Likely	Likely	Don't Know	Unlikely	Very Unlikely

11. Of the following, which do you think would be <u>most important</u> in making downtown New London more of a "destination" for visitors and/or residents? (<u>Check one</u>.)

- ❑ Create a cultural/entertainment center
- ❑ Expand retail shopping
- ❑ Have more restaurants, including fine dining
- ❑ More housing
- ❑ Other _____

Survey of Rail Passengers

We are asking people using the train to tell us how we can improve your experience at Union Station and the surrounding area as part of a study to improve New London's transportation center. Please complete this questionnaire and return it to the surveyor. Your answers to the following questions will be very helpful to this project. Thank you.

Today's Date/Time _____

1. Which train are you taking today?

- ❑ Amtrak
- ❑ Shore Line East

2. What is your destination? _____

3. How often do you use the train at New London?

- ❑ At least once a week
- ❑ About once or twice a month
- ❑ Less than once a month
- ❑ Never, this is the first time

4. What is the purpose of your trip?

- ❑ Commuting to work
- ❑ Business travel
- ❑ Social/Recreational Trip
- ❑ School
- ❑ Other _____

5. How did you get to the train station?

- ❑ Used a car that is parked near the train station in New London (Please indicate the specific parking location)
  - ❑ Water Street Garage
  - ❑ Gov. Winthrop Blvd. Garage
  - ❑ Eugene O'Neill Dr. Parking Lots
  - ❑ Other_____
- ❑ Dropped off
- ❑ Local Bus (SEAT)
- ❑ Intercity Bus (Greyhound/Peter Pan)
- ❑ Charter Bus
- ❑ Amtrak or Shore Line East Train
- ❑ Ferry
- ❑ Taxi
- ❑ Casino Bus
- ❑ Walked
- ❑ Other _____

6. How would you rate the train station in New London using the following scale: 5 (Very Good), 4 (Good), 3 (Average), 2 (Poor) and 1 (Very Poor). If item does not apply, check "n/a".

	5	4	3	2	1	n/a
Parking	❑	❑	❑	❑	❑	❑
Convenience Getting to / from the Station	❑	❑	❑	❑	❑	❑
Convenience Making Connections with the Train	❑	❑	❑	❑	❑	❑
Comfort at the Station (seating, climate control)	❑	❑	❑	❑	❑	❑
Amenities at the Station (food services, restrooms, newsstand)	❑	❑	❑	❑	❑	❑
Ease of finding location of other connections (ferry, bus, taxi, etc.)	❑	❑	❑	❑	❑	❑
Clearly-marked schedules for all transportation (rail, ferry, bus)	❑	❑	❑	❑	❑	❑
Purchasing Tickets	❑	❑	❑	❑	❑	❑
Personal Security at the Station	❑	❑	❑	❑	❑	❑
Physical Safety at the Station (and While Making Connections)	❑	❑	❑	❑	❑	❑
Nearby Places of Interest	❑	❑	❑	❑	❑	❑
Overall	❑	❑	❑	❑	❑	❑

7. What is the most important improvement needed to the train station facilities?

_____

_____

8. Did you or will you visit any of the following downtown New London businesses on this trip (other than at the train station Concession)? Check all that apply:

- ❑ Shopping
- ❑ Restaurant
- ❑ Office/Workplace
- ❑ None
- ❑ Other _____

9. How likely would you be to go to downtown New London if there were improved/additional shopping, restaurants, culture/entertainment, business services, recreation, etc.? (Check one.)

❑	❑	❑	❑	❑
Very Likely	Likely	Don't Know	Unlikely	Very Unlikely

10. Of the following, which do you think would be <u>most important</u> in making downtown New London more of a "destination" for visitors and/or residents? (<u>Check one.</u>)

- ❑ Create a cultural/entertainment center
- ❑ Expand retail shopping
- ❑ Have more restaurants, including fine dining
- ❑ More housing
- ❑ Other _____

Survey of Intercity Bus Passengers

We are asking people using the bus to tell us how we can improve your experience at Union Station and the surrounding area as part of a study to improve New London's transportation center. Please complete this questionnaire and return it to the surveyor. Your answers to the following questions will be very helpful to this project. Thank you.

Today's Date/Time _____

1. Which bus service are you waiting for?

- ❑ Greyhound
- ❑ Peter Pan
- ❑ Other _____

2. What is your destination? _____

3. How often do you use the intercity bus service at New London?

- ❑ At least once a week
- ❑ About once or twice a month
- ❑ Less than once a month
- ❑ Never, this is the first time

4. What is the purpose of your trip?

- ❑ Commuting to work
- ❑ Business travel
- ❑ Social/Recreational Trip
- ❑ School
- ❑ Other _____

5. How did you get to the bus terminal?

- ❑ Used a car that is parked near the bus terminal in New London (Please indicate the specific parking location)
  - ❑ Water Street Garage
  - ❑ Gov. Winthrop Blvd. Garage
  - ❑ Eugene O'Neill Dr. Parking Lots
  - ❑ Other_____
- ❑ Dropped off
- ❑ Local Bus (SEAT)
- ❑ Intercity Bus (Greyhound/Peter Pan)
- ❑ Charter Bus
- ❑ Amtrak or Shore Line East Train
- ❑ Ferry
- ❑ Taxi
- ❑ Casino Bus
- ❑ Walked
- ❑ Other

6. How would you rate the bus facility in New London using the following scale: 5 (Very Good), 4 (Good), 3 (Average), 2 (Poor) and 1 (Very Poor). If item does not apply, check "n/a".

	5	4	3	2	1	n/a
Parking	❑	❑	❑	❑	❑	❑
Convenience Getting to / from the Bus Terminal	❑	❑	❑	❑	❑	❑
Convenience Making Connections with the Bus	❑	❑	❑	❑	❑	❑
Comfort at the Terminal (seating, climate control)	❑	❑	❑	❑	❑	❑
Amenities at the Terminal (food services, restrooms, newsstand)	❑	❑	❑	❑	❑	❑
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	❑	❑	❑	❑	❑	❑
Clearly-marked schedules for all transportation (rail, ferry, bus)	❑	❑	❑	❑	❑	❑
Purchasing Tickets	❑	❑	❑	❑	❑	❑
Personal Security at the Terminal	❑	❑	❑	❑	❑	❑
Physical Safety at the Terminal (and While Making Connections)	❑	❑	❑	❑	❑	❑
Nearby Places of Interest	❑	❑	❑	❑	❑	❑
Overall	❑	❑	❑	❑	❑	❑

7. What is the most important improvement needed to the Intercity Bus Terminal facilities?

_____

_____

8. Did you or will you visit any of the following downtown New London businesses on this trip (other than at the Union Station Concession)? Check all that apply:

- ❑ Shopping
- ❑ Restaurant
- ❑ Office/Workplace
- ❑ None
- ❑ Other _____

9. How likely would you be to go to downtown New London if there were improved/additional shopping, restaurants, culture/entertainment, business services, recreation, etc.? (Check one.)

❑	❑	❑	❑	❑
Very Likely	Likely	Don't Know	Unlikely	Very Unlikely

10. Of the following, which do you think would be <u>most important</u> in making downtown New London more of a "destination" for visitors and/or residents? (<u>Check one.</u>)

- ❑ Create a cultural/entertainment center
- ❑ Expand retail shopping
- ❑ Have more restaurants, including fine dining
- ❑ More housing
- ❑ Other _____

Survey of Local (SEAT) Bus Passengers

We are asking people using the SEAT bus to tell us how we can improve your experience at the Water Street Bus Stop, Union Station and the surrounding area as part of a study to improve New London's transportation center. Please complete this questionnaire and return it to the surveyor. Your answers to the following questions will be very helpful to this project. Thank you.

Today's Date/Time _____

1. Which SEAT bus are you boarding at the Water Street Bus Stop? Please specify:

Route No. _____ or Route Name _____

2. What is your destination? _____

3. How often do you use the SEAT buses in downtown New London?

- ❑ At least once a week
- ❑ About once or twice a month
- ❑ Less than once a month
- ❑ Never, this is the first time

4. What is the purpose of your trip?

- ❑ Commuting to work
- ❑ Business travel
- ❑ Social/Recreational Trip
- ❑ School
- ❑ Other _____

5. How did you get to the Water Street bus stop?

- ❑ Dropped off
- ❑ Other Local Bus (SEAT)
- ❑ Intercity Bus (Greyhound/Peter Pan)
- ❑ Charter Bus
- ❑ Amtrak or Shore Line East Train
- ❑ Ferry
- ❑ Taxi
- ❑ Casino Bus
- ❑ Walked
- ❑ Used a car that is parked near the Water Street bus stop in New London (Please indicate the specific parking location)
  - ❑ Water Street Garage
  - ❑ Gov. Winthrop Blvd. Garage
  - ❑ Eugene O'Neill Dr. Parking Lots
  - ❑ Other_____
- ❑ Other _____

6. How would you rate the Water Street Bus Stop in Downtown New London using the following scale: 5 (Very Good), 4 (Good), 3 (Average), 2 (Poor) and 1 (Very Poor). If item does not apply, check "n/a".

	5	4	3	2	1	n/a
Parking	❑	❑	❑	❑	❑	❑
Convenience Getting to / from the Water Street Bus Stop	❑	❑	❑	❑	❑	❑
Convenience Making Connections with the SEAT Bus	❑	❑	❑	❑	❑	❑
Comfort at the Water Street Bus Stop (seating, climate control)	❑	❑	❑	❑	❑	❑
Amenities at the Water Street Bus Stop (food services, restrooms, newsstand)	❑	❑	❑	❑	❑	❑
Ease of finding location of other connections (rail, ferry, bus, taxi, etc.)	❑	❑	❑	❑	❑	❑
Clearly-marked schedules for all transportation (rail, ferry, bus)	❑	❑	❑	❑	❑	❑
Purchasing Tickets	❑	❑	❑	❑	❑	❑
Personal Security at the Water Street Bus Stop	❑	❑	❑	❑	❑	❑
Physical Safety at the Water Street Bus Stop (and While Making Connections)	❑	❑	❑	❑	❑	❑
Nearby Places of Interest	❑	❑	❑	❑	❑	❑
Overall	❑	❑	❑	❑	❑	❑

7. What is the most important improvement needed to the SEAT Water Street Bus Stop?

_____

_____

_____

8. Other comments:

_____

_____

_____

_____

_____

_____

_____

_____

_____

Appendix G:
Investigation of Several Stakeholder Suggestions Raised in June and July 2009

The consultant team followed up on several stakeholder suggestions made at the June and July meetings in accordance with the direction provided by the SCCOG. SCCOG direction, based on the consensus of the meetings, was to develop the master plan with all passenger transportation facilities on the east side of Water Street and pedestrian safety improvements including but not limited to an "up-and-over" pedestrian bridge crossing the railroad tracks (unless further investigation undertaken identifies a tunnel as a superior option). The consensus was understood to include joint bus facilities located next to Union Station. Specifically, the team prepared recommendations on the following issues so as to obtain confirmation from SCCOG before proceeding with the master plan design:

1. Feasibility of removing the freight siding (third track) at the station
2. Historic status of the Greyhound Building (and how it can be modified or reused)
3. Whether a tunnel is feasible and preferable to a footbridge
4. Feasibility of moving Water Street westward (and/or narrowing travel lanes to allow additional space for the bus facilities and a sidewalk on the east side)
5. Feasibility of introducing another pedestrian at-grade crossing

1. Feasibility of Removing the Freight Siding

It was suggested at the Stakeholder Meeting on June 30th by John Markowicz that the team examines removing or relocating the freight track in order to move the platforms farther north so as to allow pedestrian crossings at State Street while trains are in the station. In addition, the team realized that removing the freight track completely could also create more flexibility in locating the pedestrian bridge and a reduced need for vertical circulation. Investigation was conducted on whether the freight siding (known as Track 6) could be removed or relocated. **The team's conclusion is that due to ConnDOT and Amtrak objections to removing the track and the high costs to relocate it, among other factors, these options are foreclosed.** The following discusses each of these in more detail.

a. Removing or Relocating the Freight Track to Allow Relocation of the Platforms

The first part of this is whether the freight track can be removed or relocated. The team called P&W RR and was initially told that the freight track cannot be removed. Since P&W has not needed the ability to bypass of the station recently, it appeared that the reason was not an operational one, although the high platforms on the main tracks could create width restrictions that the freight track would not have. However, the team subsequently determined that the key need for P&W is to have access to the NECR line and so it discussed preserving the connection to the NECR by relocating the switch to this track from the main line. This switch must be on tangent track and P&W thought that it could not be relocated north of the station due to lack of a tangent track. P&W also indicated that it might cost millions of dollars to make the change. Finally P&W noted that removing the track would be subject to agreement between Amtrak, P&W and NECR with Amtrak as the lead agency. (Later discussion with Amtrak revealed that Amtrak owns a portion of the track and the rest is owned by NECR.) However, relocating the switch to meet P&W needs is a moot point since ConnDOT indicated that it plans to use the track for

SLE operations; this was also confirmed by Amtrak. Both ConnDOT and Amtrak therefore would oppose removing the track even if the freight needs for a switch could be addressed in another way.

If the track could not be removed, perhaps it could be relocated eastward to allow the platforms to be moved northward. This may require Governor Winthrop Boulevard crossing to be reconstructed and a narrowing of Ferry Street impacting plans for a better pedestrian path. Up to 12 catenary support towers would need to be relocated at significant cost. (Relocation would still leave the barrier between the northbound platform and Cross Sound Ferry.) It appears that such a relocation would impact Cross Sound Ferry as well as City property.

In order to open up State Street when trains are in the station, it would be necessary to move and extend the platforms. (Note that southbound trains would have to be stopped at least 100 feet north of State St.) *Assuming the freight track could be removed or relocated*, it appears that the relocation of the platforms may be feasible, although it is not clear if there is sufficient space for the southbound platforms either on Amtrak land or using existing sidewalk space on the east side of Water Street. Full high platforms would likely be required and ramps from the historic station onto the platforms would have to be constructed. The existing canopy on the southbound platform would also have to be modified or reconstructed.

Newer speed sensing technology would have to be approved to allow pedestrian crossing while the train is approaching. Even if the platform relocation is feasible, there are several disadvantages. SEAT bus stop sidewalk space would be impacted and the ability to build a new bus terminal on the east side of Water St. (as described in some of the options) would be restricted. Passenger would have substantial additional walk distances to/from the station lobby (about 900 feet longer). Wheelchair passengers would have long distances from the first car on NB trains.

The overall conclusion is that it is infeasible, too costly and undesirable from a passenger perspective to relocate the platforms and relocate/remove the freight track to enable the State Street crossing to be open when trains are in the station.

b. Removing the freight track and revising the pedestrian bridge concept

If the freight track were able to be completely removed and the platforms moved slightly northward[1], a pedestrian bridge could be aligned differently than in the prior pedestrian bridge concept. Moving the pedestrian bridge farther north would keep it farther from the historic station, perhaps making design more flexible (although a longer walk distance to and from the station is a disadvantage). And without the freight track, one vertical circulation element could be removed and the northbound track could open directly to the ferry property. It would have then been possible to do a simpler pedestrian bridge at considerably lower cost than the previous design. The team now knows the track cannot be removed and so this is not a feasible option.

[1] a smaller modification that would not open up the State Street crossing

2. Historic Status of the Greyhound Building

The Greyhound building, built at the turn of the twentieth century, was not included in the 1971 Union Station listing on the National Historic Register. Though not specifically described as a contributing structure, this building is now about 100 years old and located within the Downtown New London Historic District, which was listed in the National Register of Historic Places on April 13, 1979. Thus any work conducted at this location will have to be carefully orchestrated with the Connecticut State Historic Preservation Officer to ensure full compliance with Section 106 of the Historic Preservation Act, as federal funds will be likely used to develop the RITC. If the project were privately funded, Section 106 would not apply.

Additionally, if federal funds are used, Section 4(f) of the 1966 Department of Transportation Act (49 USC 303) will apply. Section 4(f) prohibits use of an historic property listed on or eligible for listing on the National Register of Historic Places, unless there is "no feasible or prudent" alternative to the use of the property and the project includes all possible planning to minimize harm. Section 4(f) is not advisory in nature and is taken seriously by federal agencies. Its provisions would apply to the Greyhound building.

The location of the Greyhound building within the Downtown Historic District does not mean the building cannot be altered or removed for a new terminal. The historic Yale Boathouse in New Haven is a local example of a National Register-eligible building that was taken down to allow the expansion of the Q Bridge. However, a process must be followed whereby a project's sponsor works directly with the State Historic Preservation Officer. The sponsor must show that an effort was made to minimize harm and that all prudent and feasible alternatives to avoid an adverse effect were explored and that there was no prudent and feasible alternative. If an historic structure is removed, mitigation generally entails extensive documentation of the structure, to preserve a record of the structure. Also, working through the Section 106 and Section 4(f) processes will add time and expense to project development.

It is the professional opinion of the consultant team that it would be risky to build the master plan on the premise of removing or significantly altering the Greyhound building since prudent and feasible alternatives clearly exist.

3. Whether a Tunnel is Feasible and Preferable to a Pedestrian Bridge

Stakeholders requested that the feasibility and cost of tunnel and pedestrian bridge be compared so that the study sponsors could make a final decision of which is preferred. If a tunnel was not superior to a pedestrian bridge, the consensus of the July 28th meeting was that a pedestrian bridge be included in the master plan for the near term at least over the tracks but not necessarily to the Water Street Garage.

Tunnel Feasibility / Pedestrian Bridge

In evaluating the feasibility of the tunnel and the pedestrian overpass connecting the west side of the railroad/train station and the east side of the railroad and ferry terminal, the following items and elements were considered:

1. Constructability
2. Disruption to existing operations

3. Operational cost and maintenance
4. Capital cost of construction

Design and cost parameters have been used for similar bridge and tunnel projects constructed along the Northeast Corridor including overpass clearances for bridges of 25' above the rail for Shoreline East Stations and jacked tunnel construction for a similar installation in Westport, CT.

Description of Tunnel and Bridge Projects

Tunnel

The tunnel is envisioned to be approximately 110-120' in length, 10' x 10' extending from the area north of the existing Greyhound Bus Terminal to a location just east of the three (3) track rail line east of the station building. Vertical access would be provided to the southbound and northbound platforms via stairs and elevators and a pedestrian ramp east of and parallel to the tracks for ferry access. Dewatering, security cameras, lighting, vandal-proof finishes and graphics have all been anticipated along with canopies over the access points. Costs for escalators have been presented as options as well. During construction of tunnel, only one rail line would be operational as well as the freight spur. Construction techniques will incorporate jacking of the tunnel section under the rail facilities with minimal clearance under the track bed. This construction technique was recently used in Westport, CT for an underpass installation.

Pedestrian Bridge

The pedestrian bridge concept has been developed using the following assumptions.

- Short spans using precast concrete units and precast units for stairs.
- Capital costs presented with and without garage connections. Bridge and stairs would have roof construction.
- Alternative options for the structure to incorporate enhanced architectural features, enclosed sides, escalators and security cameras, etc.

The bridge length could vary between 270' (from garage to high speed ferry slips) to as short as 100' (no connections to garage or high speed ferry slips). Depending on the length, architectural treatments, use of escalators, roofing, and enclosure methods, the cost can range substantially. The anticipated bridge was estimated at 10 feet in width with a wide section over the track area. The anticipated floor elevation of the structure over the tracks is envisioned at elevation 36 to provide the necessary clearance over the electrified lines.

Conclusions

Although there are several less expensive options for both the tunnel and the pedestrian bridge, the construction and development of either without enclosures, roofs, security and architectural enhancements are neither in the best interests of the users nor of the City and their overall goals.

Although somewhat less expensive, the tunnel lacks a connection to the Water Street Garage due to extensive utility staging and construction impacts within Water Street. The advantages of a visual landmark, reduced construction impacts to railroad operation and flexibility of extending the structure to the harbor are important. ***Therefore, the pedestrian bridge would be preferential to a tunnel.***

Capital Costs

	Tunnel to Ferry (no Garage Access)	Pedestrian Bridge to Ferry (no Garage Access)	Pedestrian Bridge to Ferry (with Garage Access)
Pedestrian Bridge or Tunnel Access over / under the track and platform with elevators, stairs, roof, open sides	$ 5,000,000	$ 2,400,000	$ 3,500,000
With escalator access, open sides		$ 3,300,000	$ 4,200,000
Pedestrian Bridge Access over / under the track and platform with elevators, stairs, roof, enclosed		$ 5,100,000	$ 6,000,000
With escalator access, enclosed		$ 5,800,000	$ 6,700,000
With enhanced architecture & decorative features	$ 6,000,000	$7,000,000	$ 7,700,000

Pros vs. Cons

	Pros	Cons
Tunnel	1. Somewhat lower cost 2. Provides safer access to ferry and rail platforms 3. No or limited visual impacts on historic buildings	1. No direct access to Water Street Garage 2. Dewatering and maintenance issues and operating costs higher 3. Security perception issue 4. Severe construction disruption to railroad and station access
Pedestrian Bridge	1. Provides safer access to rail platforms and ferries; can include safer and enhanced access to the Water Street Garage 2. Improves perception of waterfront access 3. Less severe disruption to ongoing rail operations during construction 4. Visual identification of the crossing location	1. Requires construction over the catenary and tracks 2. Escalator impacts to rail platforms 3. Longer vertical travel distances 4. Visual impacts to Historic Building are created; these impacts are compounded when the bridge is extended to the Water Street Garage

4. Feasibility of Moving Water Street Westward (and/or Narrowing Travel Lanes)

The team's traffic engineer has determined that 11 foot lanes would be reasonable for this section of Water Street. This gives us a bit of additional room for creation of a sidewalk on the east side of Water Street. However, to provide sufficient space to locate all the bus facilities, pedestrian accommodations and the vertical elements of a pedestrian bridge (or tunnel) means looking at shifting Water Street westward using the existing City property in front of the Water Street Garage.

Previously the team had concluded that this could not be done in a way that would meet AASHTO standards and preserve all of the Parade improvements. The team has now reexamined the shifting of Water Street relaxing the constraints related to the Parade – it has now assumed that the Parade improvements south of Atlantic Street must be preserved but the Parade improvements north of Atlantic Street can be impacted. The team also allowed for shifting the City sidewalk slightly to replace the Julian lot berm with a retaining wall to allow a smooth curve to be fit. It protected the garage exit onto Water Street at the north end of the garage.

5. Adding an At-Grade Pedestrian Crossing between the Water Street Garage and Cross Sound Ferry

An additional pedestrian crossing appears to be highly unlikely for several reasons as described below.

While a crossing could be moved without legislative approval, it appears that adding a crossing would require Connecticut legislative approval as well as the approval of FRA, Amtrak and the freight railroads. FHWA (general) guidance says new grade crossings, particularly on mainline tracks, should not be permitted unless no other viable alternatives exist, and even in those circumstances, consideration should be given to closing one or more existing crossings. If new access is proposed to cross a railroad where railroad operation requires temporarily holding trains, only grade separation should be considered.

More specific to the NE Corridor: In 1992, there was legislation stating that the US Secretary of Transportation shall develop a plan not later than Sept. 30, 1993 (in consultation with the States on the main line of the NE Corridor, to eliminate all highway at-grade crossings of the main line by not later than Dec 31, 1997. But the plan may provide that eliminating a crossing is not required if impracticable or unnecessary or using the crossing is consistent with the conditions the Secretary considers appropriate to ensure safety. A draft plan was created and recommended to close all crossings (recommending a pedestrian bridge at State Street, a vehicle overpass at Governor Winthrop Boulevard and a road from there on the east side of the tracks to Fishers Island Ferry). The draft plan for some crossings (including State Street and Governor Winthrop Boulevard in New London) met strong opposition, so the removal of those crossings was not a recommendation of the final plan[2] (pending more investigation and the demonstration and testing of enhanced grade crossing systems); as a result ,11 crossings remain open, all in southeastern Connecticut.

[2] USDOT, Federal Railroad Administration, Office of Railroad Development, The Northeast Corridor Transportation Plan – New York City to Boston, Report to Congress, Appendix A – Plan for Elimination of Highway At-Grade Crossings, July 1994

Scott Howland of Amtrak Policy and Planning said that “he doesn’t see Amtrak supporting any additional pedestrian crossings in New London.” ConnDOT has indicated that it is trying to reduce at-grade crossings rather than increase them.

Two alternatives for the addition of a new bus passenger terminal building at the RITC were developed and considered. The Preferred Alternative that matches the architectural program better is described in Chapter 7. The other alternative (denoted as Alternative A) is described below:

Alternative A

This is a 1,730 GSF addition to the existing 1,480 GSF Greyhound building. After subtracting space requirements for the pedestrian bridge vertical circulation, the building addition would provide 1,530 GSF of usable space. The addition would provide the waiting area for all passengers as well as a joint Greyhound/SEAT ticketing/information booth/counter and individual offices for each operator. The counter provides a good view of the both the indoor and outdoor passenger waiting areas and the bus bays through the glass wall, although a Greyhound bus in the first sawtooth bay could block the view of several SEAT buses. The remainder of the space in the building addition would be used for the elevator and stairs to the pedestrian bridge, luggage lockers, vending area, public phones, a queuing area for the ticket counter and circulation space. The passenger waiting area would total 620 square feet, enough to accommodate 25 Greyhound passengers (at 15 SF per person, including luggage) and 24-25 SEAT passengers (at 10 SF per person), less than the minimum 50 SEAT passengers desired in the architectural program. (A second level for the building addition was explored but rejected due to the fact that vertical circulation by escalators would consume more space rendering the ground floor of limited use and the fact that the addition of a level change would be very likely to reduce the passenger use of a waiting area primarily on the second floor.) The existing Greyhound building would be used to house passenger restrooms, a SEAT driver break room and restrooms, a SEAT storage closet and a Greyhound freight room, as well as circulation space. The two buildings would be connected by a corridor using the existing doorway on the north wall of the Greyhound building. The exterior of the Greyhound building would be relatively unmodified. The façade of the building addition is designed to follow the curb line and provide 10 feet of sidewalk. The line of the façade is askew from that of both Union Station and the Greyhound building and thus may result in a less attractive design. Canopies would be provided along the bus boarding areas and the canopy for the Greyhound sawtooth bays would extend along the front of the building addition. The 10 foot sidewalk is narrower than a desirable sidewalk considering that passengers will enter and exit the bus terminal along the sidewalk. The building extends the barrier created by building structures between the southbound rail platform and the street by an additional 80'. The result is that Alternative A conforms to the architectural program except that it cannot provide the desired amount of waiting space and has a narrow sidewalk.

Figure 1 shows the floor plan for Alternative A. Figure 2 and Figure 3 show the bus terminal site plan and the site context diagram respectively.

Figure 1: Alternative A Draft Conceptual Floor Plan

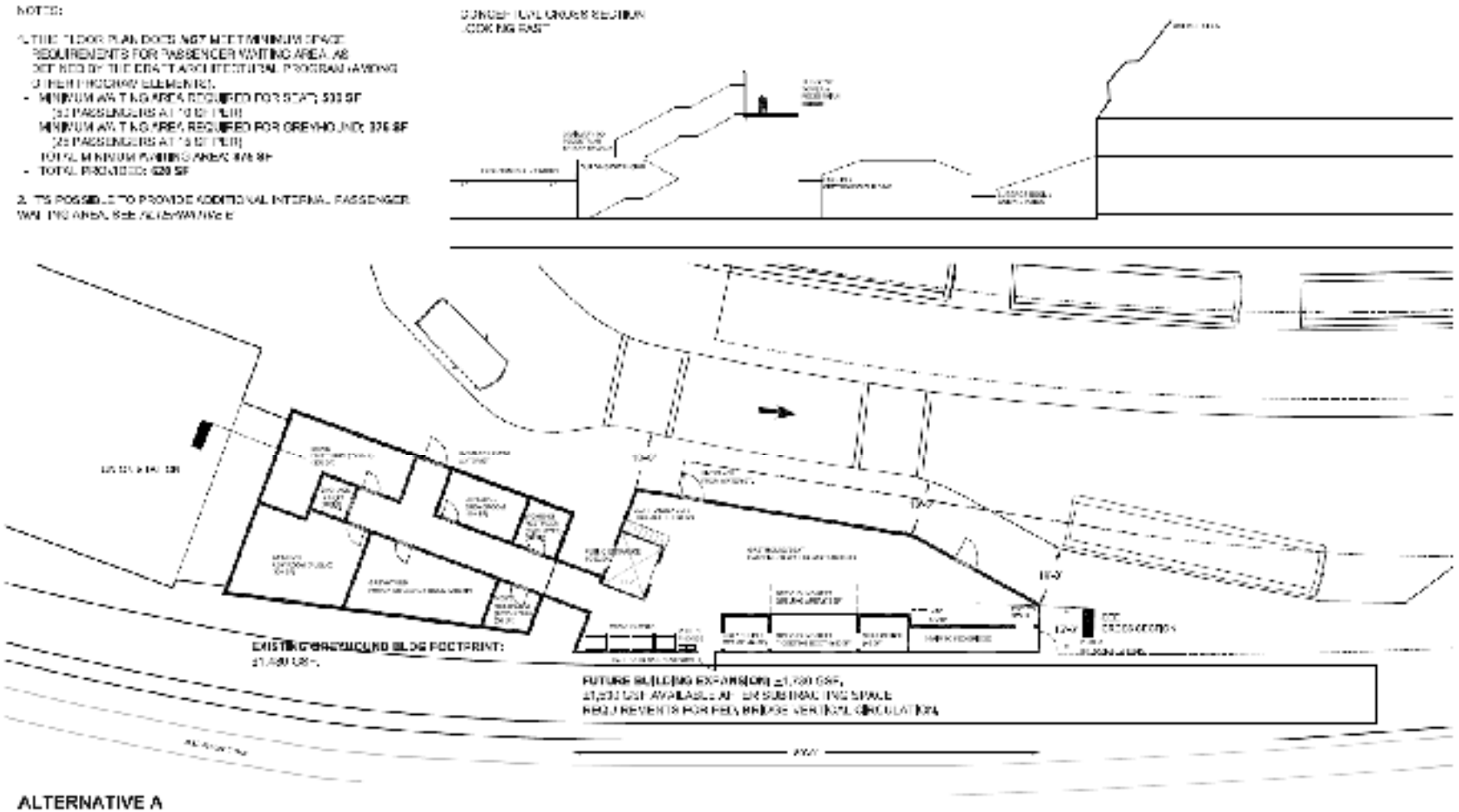


Figure 2: Alternative A Bus Terminal Site Plan

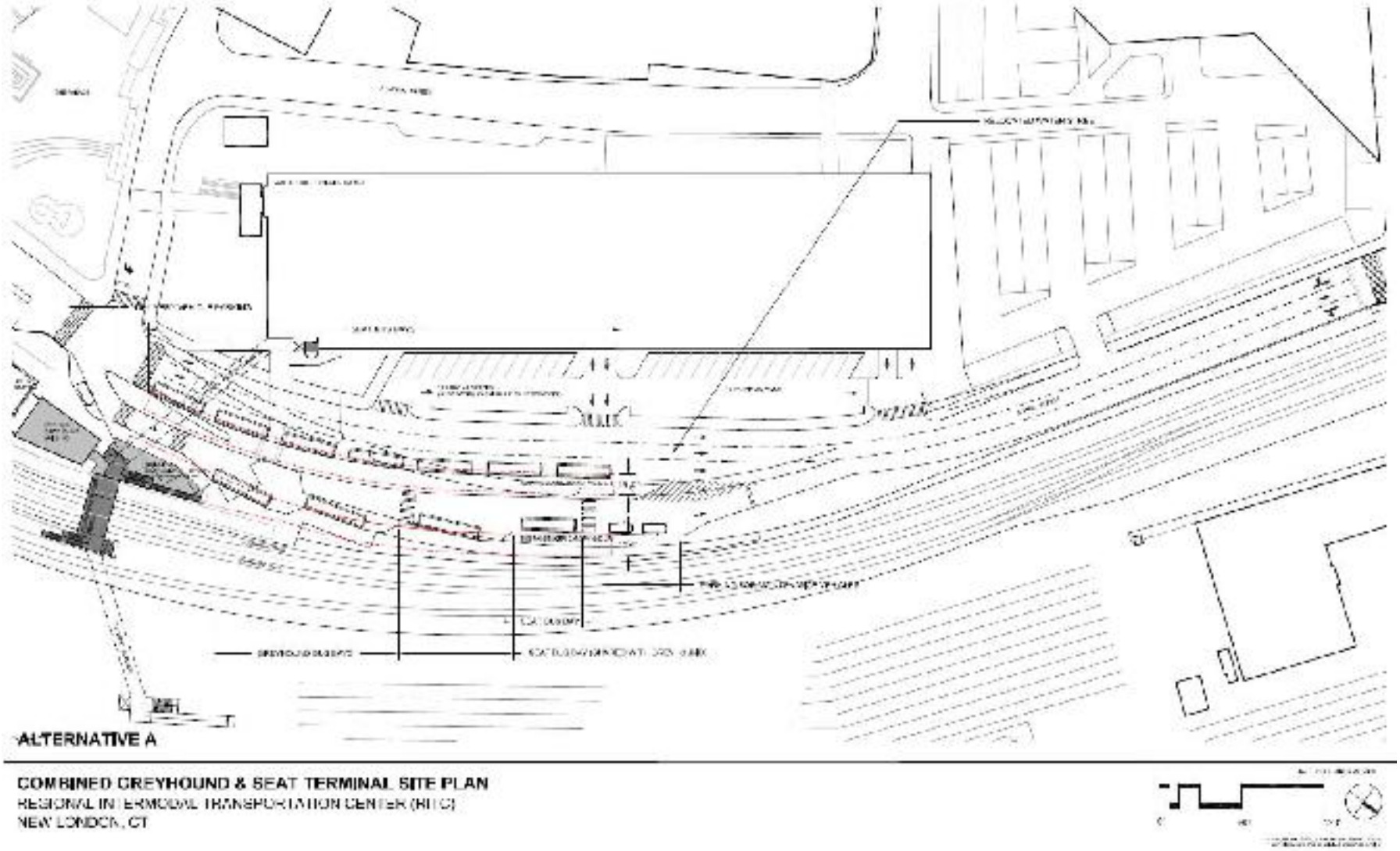
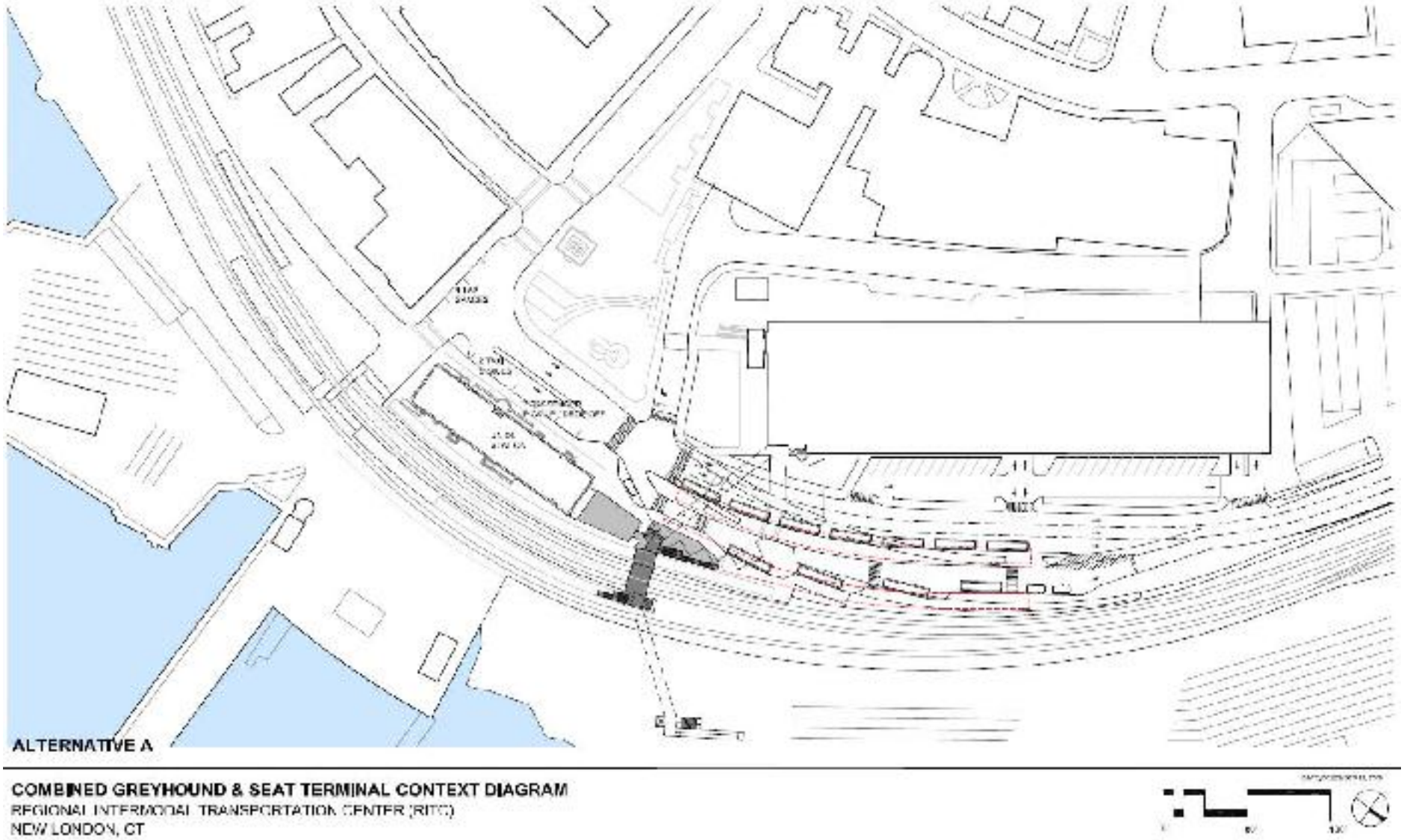


Figure 3: Bus Terminal Context Diagram For Alternative A



Appendix I: Economic and Fiscal Impacts of the Short Term Improvement Plan

This appendix presents additional documentation of the economic and fiscal impacts of the short term improvement plan (the Preferred Alternative). Table 1 below provides a summary of the impacts. Supporting evaluation is presented in Table 2 through Table 5.

Table 1: Summary of Estimated Economic & Fiscal Impacts, New London RITC Construction Period (2012 Dollars)

Economic Impacts (1/)			
	Direct	Indirect	Total
Jobs (FTE) (2/)	88	57	**145**
Payroll	$4,185,001	$2,077,853	**$6,262,855**
Material Purchases (regional)	$6,679,062		**$6,679,062**
Consumer Expenditures	$3,556,656		**$3,556,656**

Annual Fiscal Impacts (3/)	State of Connecticut	City of New London	TOTAL
Income Tax	$155,175		$155,175
Real Property Tax		-$25,660	($25,660)
Indirect Sales Tax	$76,149		$76,149
TOTAL	**$231,324**	**($25,660)**	**$205,664**

Source Notes

1/ Total estimated jobs and payroll do not differentiate as to where employees live or as to where employees make consumer expenditures

2/ FTE indicates "full-time equivalent", working 2,080 hours annually

3/ It is assumed that the building will be owned by the State, as recommended by this study. Therefore, permit fees are not applicable because the City will lose jurisdiction over the property.

Sources: Basile Baumann Prost Cole & Associates, TranSystems, URS, City of New London, State of Connecticut

Table 2: Preliminary Evaluation of Economic & Fiscal Impacts, New London RITC
Economic, Employment and Expenditure Impacts: Construction Period (2012 Dollars)

Project Cost (Construction)	$21,827,000

1. Estimated Earnings Impacts

Type of Labor	Construction Value	Labor Hours per $1,000 (1/)	Total Hours	Total FTE Jobs	Average Earnings/Hr. (2/)	Total Annual Earnings/FTE Jobs
Construction	$21,827,000	1.1	105,484	101	$27.88	$84,185,001

2. Total Economic Impact

Regional Output (3)	Output Multiplier (3/)	Indirect and Induced Economic Impact	Total Economic Impact
$21,827,000	1.1007	$10,006,052	$32,733,052

3. Expenditure Impacts

Total Earnings	Disposable Earnings (4/)	Consumption Expenditures (5/)
$84,185,001	$78,808,904	$73,550,050

4. Total Construction Period Employment Impacts

Output Type	Total FTE Jobs	Employment Multiplier (6/)	Indirect and Induced Employment Impact	Total Employment Impact (7/)
Construction Labor	101	1.4484	47	148

5. Total Earnings Impacts

Output Type	Total Annual Earnings	Earnings Multiplier (8/)	Indirect and Induced Earnings Impact	Total Earnings Impact (9/)
Construction Labor	$84,185,001	1.4965	$2,077,859	$80,262,860

6. Material Purchases

Type of Purchase	Per $1,000 Const. Cost	Expenditure
Regionally Purchased	$300	$6,079,707
Purchased Out of Region (10/)	$104	$2,270,708
Total Material Purchases		$8,449,170
Percentage Total Purchases		72%

Source Notes
1/ 1993 Ratios--Urban Land Institute
2/ May 2008 Bureau of Labor Statistics Occupational Wage Estimates for Construction Sector for Norwich New London MSA, adjusted to 2012 dollars (assume inflation of 1.5% per year)
3/ 2006 Output Multiplier for Construction Sector, RIMS II Model, Bureau of Economic Analysis
4/ Disposable Income was 91% of Personal Income as of September 2009 (assumed to remain the same in 2012), Bureau of Economic Analysis
5/ Consumption Expenditures was 93.4% of Disposable Income as of September 2009 (assumed to remain the same in 2012), Bureau of Economic Analysis
6/ 2006 Employment Multiplier Estimates Per $1 Million Income for Construction Sector, RIMS II Model
7/ Direct, Indirect and Induced Employment
8/ 2006 Earnings Multiplier for Construction Sector, RIMS II Model
9/ Direct, Indirect, and Induced Earnings
10/ Material purchases out of region are based on comparable multimodal center improvement projects

Sources: Basile Baumann Prost Cole & Associates, Bureau of Economic Analysis, Bureau of Labor Statistics, Urban Land Institute, TranSystems, CSS, URS

Table 3: Preliminary Evaluation of Economic & Fiscal Impacts, New London RITC
Income Tax Receipts: Construction Period (2012 Dollars)

Inputs	Connecticut Personal Income Tax Rate (1/)	Connecticut Personal Tax Credit (2/)
Income Tax	3.45%	10.00%

Period/Worker Category	RASFI INF Estimated Number of FTE Jobs	Average Wage/Hour (3/)	Estimated Annual Wages Per FTE Job (4/)	Estimated Individual Taxable Income	Estimated Individual Income Taxes (5/)	RASFI INF Realized Personal Income Taxes Connecticut (6/)
Construction Workers	00	$22.00	$47,557	$47,557	$1,098	$155,175
Total						$155,175

Source Notes
1/ Connecticut personal income tax is calculated based on a sliding scale.
2/ Connecticut personal tax credit is based on a person earning between $29,100 and $52,000
3/ See table on preliminary economic impact of construction
4/ Annual wages for a full-time job are estimated by multiplying average wage by 2080 hours
5/ Assumes a taxpayer filing status of "single" and an adjusted gross income of $47,557. In Connecticut, the first $10,000 has a 3% tax and excess over the first
$10,000 is taxed at 5%. The tax credit is determined and then subtracted from the income tax to determine the estimated individual income taxes.
6/ Assumes 95% of workers live in the State

Sources: Basile Baumann Prost Cole & Associates, Connecticut Department of Revenue Services

Table 4: Preliminary Evaluation of Economic & Fiscal Impacts, New London RITC
Real Property Tax Impacts (Loss): Annual Operations (2009 Dollars)

Use	Municipal Taxes	Total Taxes
Union Station (35 Water Street)	$25,661	$25,661
Total	$25,661	$25,661

Source Notes
1/ Taxes provided by City of New London Tax Division
2/ Rates are for 2008

Sources: Basile Baumann Prost Cole & Associates, City of New London Tax Division

Table 5: Preliminary Evaluation of Economic & Fiscal Impacts, New London RITC
Direct and Indirect Sales Tax Impacts: Construction Period (Annually) (1/)
2012 Dollars

Inputs	Connecticut Tax Rate
Sales Tax Rate	6.00%
Work Related Impacts Construction Workers	
Total Wages	$6,262,855
Consumer Expenditure (2/)	$5,323,051
Retail Expenditure (3/)	$1,756,607
Expenditures in CT	85%
Estimated Percent of Taxable Retail Goods/Services (4/)	05%
Total Retail Sales in Connecticut	$1,269,148
Estimated Direct and Indirect Sales Tax Revenue Per Employee	$525
Total Estimated Direct and Indirect Sales Tax Revenue	576,149

Source Notes
1/ Indirect sales tax revenue to Connecticut is generated as a result of purchases made by direct and indirect payroll
2/ Consumption Expenditures was 93.4% of Disposable Income as of September 2009 (assumed to remain the same in 2012), Bureau of Economic Analysis
3/ Retail expenditures was 33% of consumer expenditures as of September 2009 (assumed to remain the same in 2012), Bureau of Economic Analysis
4/ Adjusts for items exempt from Sales Tax include food (not ready-to-eat), most wearing apparel, drugs, textbooks, and residential heating fuels

Sources: Basile Baumann Prost Cole & Associates, Connecticut Department of Revenue Services, Bureau of Economic Analysis

The history of land use at the selected fourteen candidate sites (parcels) which comprise the RITC study area was evaluated from a review of historic aerial photographs, soils maps, historic Sanborn maps, a review of regulatory database information[1] and information presented in Chapter 2, describing the existing condition and use of the parcels. The current and historic site conditions of the RITC parcels and identified existing environmental conditions are presented below.

The following supporting documents were also supplied to SCCOG while the study was underway. These have not been duplicated in this appendix.

1. Copy of the FirstSearch database report
2. Copies of the Historical Aerial Photographs
3. Copies of the Sanborn Fire Insurance Maps

1. Cross Sound Ferry (LOT 108-1.01)

Existing Conditions

Current Owner: City of New London

Parcel Address: Water Street, no specific street address identified.

Acreage: 0.49 Acres

Mapped Soil Type: 100% Udorthents-Urban land complex.

Current Use: Leased to Cross Sound Ferry for automobile parking and is comprised mostly of 4,000 square feet of asphalt pavement.

Historical Use

Aerial Photo Survey

- 1934: This photograph shows a large structure that is likely a dock present at the eastern edge of the parcel extending into the Thames River. Several apparent small vessels are located adjacent to this structure.
- 1951: Due to the scale and poor resolution of this photograph, details of the parcel are difficult to discern. However, the apparent dock structure observed in the 1934 photograph is now smaller in size.
- 1965: The apparent dock structure observed in earlier photographs is no longer present and the shoreline of the parcel has changed in shape indicating possible filling activities.
- 1970: The parcel appears vacant. A seawall is present along the shoreline of this parcel.
- 1975: The parcel appears similar to that presented in the 1970 photograph. What appear to be automobiles are parked on the parcel.
- 1980: Due to the poor resolution of this photograph, details of the parcel are difficult to discern.

[1] Information obtained from the database for the 14 parcels is discussed in the parcel description section below.

- 1986: The parcel appears similar to that presented in the 1980 photograph.
- 1990: The parcel appears vacant and the shape of the shoreline has changed some indicating possible filling activities.
- 1996: The parcel appears similar to that presented in the 1990. Several apparent vehicles are present on the parcel.

Sanborn Fire Insurance Maps

The 1891 Sanborn map shows a railroad freight house, a coal bin, and two steam ship gangways at this particular parcel. The 1901 Sanborn map shows only the north half of this parcel and depicts a freight house with exterior siding tracks identified as the Central Vermont Railroad. The 1921 map illustrates a plank wharf and two small structures labeled as "office" at the southern end of the parcel and possibly a portion of a railroad track. The 1948 map shows the same wharf and structures but not the railroad track. No further information relevant to this parcel was identified on the Sanborn maps.

FirstSearch Database Findings

This parcel was not specifically identified in the FirstSearch database report.

Potential Environmental Conditions

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site:

- Former industrial use including the former presence of freight houses, coal storage and use, dock structures and railroad tracks;
- Possible presence and/or placement of urban fill material; and,
- Current use as automobile parking.

2. Cross Sound Ferry (LOT 108-1.03)

Existing Conditions

Current Owner: Cross Sound Ferry Services, Inc.

Parcel Address: Water Street, no specific street address identified.

Acreage: 1.16 Acres

Mapped Soil Type: 100% Udorthents-Urban land complex.

Current Use: Cross Sound Ferry vehicle parking and queuing (organizing for loading). Parcel is currently vacant and improved with approximately 50,000 square foot of asphalt pavement.

Historical Use

Aerial Photo Survey

- 1934: Due to the poor resolution of this photograph, details of the parcel are difficult to discern. However, the parcel appears to contain railroad tracks, train cars and possibly a building structure along the eastern border with the adjacent parcel.
- 1951: Due to the scale and poor resolution of the photograph, details of the parcel are difficult to discern.
- 1965: The previously described building structure is not present in this photograph. Several vehicles or trailers appear to be parked in the western portion of this parcel.
- 1970: The parcel appears to be vacant with the exception of a few parked vehicles.
- 1975: The parcel appears similar to that presented in the 1970 photograph, with some parked vehicles present.
- 1980: Due to the poor resolution of this photograph, details of this parcel are difficult to discern. However, the parcel appears to be vacant with the exception of several parked vehicles.
- 1986: Parked vehicles are present on the parcel.
- 1990: Parked vehicles are present on the parcel.
- 1996: The parcel appears similar to that presented in the 1990 photograph.

Sanborn Fire Insurance Maps

The 1891 Sanborn map shows portions of the same railroad freight house and one of the gangways for steamships identified on the adjacent parcel. This map also shows the presence of railroad tracks. The 1896 Sanborn map shows the railroad tracks labeled as "New England R.R". The 1901 Sanborn map shows a different freight house in the southern portion of this parcel and a different configuration of the railroad tracts. The 1921 Sanborn map shows the freight house labeled as "C.V.R.R. Freight Ho." The 1948 Sanborn map shows the parcel as vacant without the previously observed freight house or railroad tracks. No further information relevant to this parcel was identified in the Sanborn maps.

FirstSearch Database Findings

This parcel was not specifically identified in the FirstSearch database report.

Potential Environmental Conditions

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site:

- Former industrial use including the presence of a railroad freight houses, storage building and railroad use;
- Potential railroad use of coal;
- Possible presence of urban fill material; and,
- Current use as automobile parking.

3. Cross Sound Ferry (LOT 108-1E)

Existing Conditions

Current Owner: Thames Realty

Parcel Address: 2 Water Street

Acreage: 1.49 Acres

Mapped Soil Type: 100% Udorthents-Urban land complex.

Current Use/Description: Cross Sound Ferry vehicle parking and queuing. The main feature of this parcel is a 2,300 square foot, 2-story, wood-frame office building which operates as the Cross Sound Ferry's ticketing office. According to New London Assessor's information, the building is heated with fuel oil and was built in 1988. This parcel also contains four mooring points/loading areas for the Long Island and Block Island Ferries, as well as two slips for passenger ferries. Associated paved parking and vehicle queuing areas are also present.

Historical Use

Aerial Photo Survey

- 1934: This photograph shows a vessel docked at the northeast portion of this parcel, a building structure present in the northwest portion of this parcel, and a building structure present along the eastern central shoreline of this parcel.
- 1951: Due to the scale and poor resolution of this photograph, details of the parcel are difficult to discern.
- 1965: Two large building structures are present at the northern end of the parcel and what appear to be parked vehicles are present on various portions of the parcel.
- 1970: This photograph depicts only one of the two formerly present buildings in the north end of the parcel and what appears to be a barge docked at the northeast portion of the parcel. The remaining portions of the parcel appear to be vacant.
- 1975: No structures are present on the parcel. Several vehicles are present in various portions of the parcel.
- 1980: Several vessels are docked at the northeast portion of the parcel and several vehicles are present in various portions of the parcel.
- 1986: What appear to be vehicles are parked in various portions of the parcel. Several vessels are docked and/or moored adjacent to the parcel. What appears to be construction and/or filling activities appear to be present in the northern portion of the parcel.
- 1990: A structure is present in the current location of the ticketing office building at the northern end of the parcel. The existing paved parking and vehicle queuing areas are depicted as they currently exist.
- 1996: The parcel appears similar to that presented in the 1990 photograph.

Sanborn Fire Insurance Maps

The 1891 Sanborn map identifies several structures on this parcel. A structure identified as a freight house is located along the central eastern portion of the parcel. Structures present in the north end of the parcel are identified as a beef house, storage, molasses storage, J.M McCormick's Boiler Works, coal shed and a lumber yard. A dock extends east from the parcel into the Thames River. The current eastern portion of the parcel is shown as part of the Thames River on this map. No significant changes are illustrated in the 1896 Sanborn map. The 1901 Sanborn map identifies the coal and lumber yard as not being in operation. The boiler works is now identified as a box factory, and a portion of the storage area is identified as "junk".

The 1907 Sanborn map identifies the northern portion of the parcel, the area occupied by the coal and lumber yard in the 1901 Sanborn map, occupied by wire storage, indicates that the coal shed is vacant and indicates the presence of the New London Gas & Electric Co. The central portion of the parcel contains two structures identified as a garage and a motor works machine shop. The 1912 Sanborn Map depicts the portion of the Thames River to the east of the parcel as filled and now occupied by structures. The structures in this area and the remainder of the northern portion of the parcel are illustrated as occupied by the New England Carpet Company. Specific portions of the structures are identified as a storage house, cement fluex, general storage, office, freight house and storage. The remaining Sanborn maps through the 1940s era do not depict any significant changes at this parcel.

FirstSearch Database Findings

One listing was identified by the FirstSearch report at the location of this parcel:

- According to the FirstSearch report, a 65-gallon spill of No. 2 fuel oil occurred at this parcel on November 5, 2004. The spill was reportedly cleaned up by Clean Harbors and the status of the case is closed.

Potential Environmental Concerns

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site.

- Former industrial use including the presence of freight houses, railroad tracks, coal, lumber yard, carpet manufacturing, junk storage and a box factory;
- Potential railroad use of coal;
- Possible presence and/or placement of urban fill material;
- Current use as automobile parking;
- Potential fuel oil tank(s); and,
- Documented fuel oil spill and reported cleanup.

4. Cross Sound Ferry (LOT 108-1C)

Existing Conditions

Current Owner: Thames Shipyard & Repair Co.

Parcel Address: Ferry Street

Acreage: 2.69 Acres

Mapped Soil Type: 100% Udorthents-Urban land complex

Current Use/Description: This parcel contains three buildings, vehicle parking areas and three vessel docking piers used by the Cross Sound Ferry. One of the buildings is a 22,048 square foot 2-story, gas-heated, masonry office/warehouse built sometime prior to 1900 that is currently utilized by Cross Sound Ferry as an office building. Another building is a 20,000 square foot steel-frame, non-heated warehouse building built in 1977 is identified as the Cross Sound Ferry Repair Facility. The third structure, a 2,350 square foot single-story, fuel-oil heated, masonry warehouse building, built prior to 1900, is described as

utilized for Cross Sound Ferry's operations, repairs, and maintenance. The parcel also includes 250,000 square feet of paved parking and three piers in the Thames River utilized for vessel docking.

Historical Use

Aerial Photo Survey

- 1934: Due to the poor resolution of this photograph, details of the parcel are difficult to discern. However, what appear to be several large above ground storage tanks and vessel docking area are apparent. No building structures are apparent in this photograph.
- 1951: Due to the scale and poor resolution of the photograph, details of the parcel are difficult to discern.
- 1965: Due to the scale and poor resolution of the photograph, details of the parcel are difficult to discern.
- 1970: An "L" shaped building with an exhaust stack and a large circular structure that may be an above ground storage tank are present along the western portion of the parcel. The shoreline along the Thames River appears to have been filled in to some extent compared to what is shown in earlier photographs. A vessel is docked at the eastern side of the parcel.
- 1975: The "L" shaped building and a docked vessel are present at the parcel. The remainder of the parcel appears vacant.
- 1980: Due to the scale and poor resolution of the photograph, details of the parcel are difficult to discern.
- 1986: What appear to be the three current parcel buildings are present. The shape of the shoreline has changed somewhat from that observed in earlier photographs and several docks and small vessel are present.
- 1990: The parcel appears similar to that presented in the 1986 photograph.
- 1996: The parcel appears similar to that presented in the 1990 photograph.

Sanborn Fire Insurance Maps

The 1896 Sanborn map illustrates the "L" shaped building observed in the 1970 aerial photograph. No other parcel features are illustrated. The 1901 Sanborn map indicates that the parcel is occupied by New London Gas & Electric Company. The building on the parcel contains a machine shop, an engine and dynamo room and a purifying room. Other features at the parcel are an oil tank and two circular structures labeled as "iron gas holder". Gas holders are indicative of manufactured gas plants or coal gasification plants. A building located on the very northern portion of this parcel is labeled as Thos Drummond's Boiler Works. A facility identified as the Bishop Lumber and Coal Company is located to the immediate north of this parcel.

The 1912 Sanborn map depicts an additional iron gas holder and another oil tank present on the parcel. The property to the immediate north of the parcel is now occupied by the Palmer Bros. Storage and identified as storing waste and finished goods.

The 1948 Sanborn map identifies the parcel occupied by the Connecticut Power Co. Gas & Electric Plant. The following are illustrated on this map:

- Potential former use as a coal gasification plant;
- A one million cubic foot "gas holder" in the southwest corner of the parcel;

- A coke shed in the southeastern portion of the parcel;
- Two gas holder tanks in the central portion of the parcel with capacities of 100,000 and 200,000 cubic feet;
- A 100,000-gallon gasol oil tank and two oil tanks in the central eastern portion of the parcel;
- Oil tanks; and,
- Six purifier structures and a separator tank in the north and northeast portion of the parcel.

FirstSearch Database Findings

One site was identified by the FirstSearch report at the location of this parcel.

- Thames Shipyard and Repair Co., Inc. is identified on the Resource Conservation and Recovery Act (RCRA) generator database as a RCRA Small Quantity Generator with an EPA ID number of CTD042306175. The FirstSearch report lists that hazardous waste liquid, flammable liquid toxic NOS., flammable liquid NOS., and paint related material have been removed from this location under the tracking of hazardous waste manifests.
- The Thames Shipyard and Repair Co., Inc. is identified on the Permitted Air Source Listing (AIRS) database as a minor stationary source of air emissions.
- The Thames Shipyard and Repair Co. is identified on the Spills database due to a spill of 50 gallons of diesel fuel on September 18, 2004. According to the FirstSearch report, the status of this spill case is closed.

Potential Environmental Considerations

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site.

- Former industrial use of this parcel including the presence of the New London Gas & Electric Company, a machine shop, oil storage, iron gas storage, a boiler works facility, coke (and/or coal) storage, gasol oil storage and oil storage;
- Possible former presence of a coal gasification plant;
- Possible presence and/or placement of urban fill material;
- Current use for vehicle parking;
- Documented diesel fuel spill;
- Presence of a RCRA generator;
- Oil tanks; and,
- Current industrial use as an apparent vessel repair facility.

5. Union Station (LOT 108-1B)

Existing Conditions

Current Owner: New London Railroad Company LLC

Parcel Address: Water Street, no specific street address identified.

Acreage: 0.54 Acres

Mapped Soil Type: Approx. 50% Udorthents-Urban land complex, 50% Urban land.

Current Use/Description: This triangular shaped parcel contains a train station known as Union Station, and a Greyhound bus terminal. This parcel contains a 26,892 square foot 2.75-story, brick, building constructed in 1888. The building, known as Union Station, houses the railroad ticketing office and waiting room. The Greyhound bus terminal is located at the north end of Union Station in a 1,144 square foot, one-story, brick addition to the Union Station building. The interior contains ticket sales, seating, and restrooms. There is also an exterior canopied bus-stop and waiting area north of the ticketing office.

Historical Use

Aerial Photo Survey

- 1934: Due to poor resolution of the photograph, parcel details are difficult to discern. However, what appears to be a building similar to the current Union Station building is present on this parcel.
- 1951: Due to the scale and poor resolution of this photograph, parcel details are difficult to discern.
- 1965: Due to the scale and poor resolution of this photograph, parcel details are difficult to discern.
- 1970: The current parcel buildings are visible. Vehicle parking is observed along the west side of the building and railroad tracks are clearly visible to the east of the parcel.
- 1975: The parcel appears similar to that presented in the 1970 photograph.
- 1980: The parcel appears similar to that presented in the 1975 photograph.
- 1986: The parcel appears similar to that presented in the 1980 photograph.
- 1990: The parcel appears similar to that presented in the 1986 photograph.
- 1996: The parcel appears similar to that presented in the 1986 photograph.

Sanborn Fire Insurance Maps

The 1891 Sanborn map illustrates only the northernmost portion of the parcel and indicates the building is occupied by the Adams Express Co. Water Street is shown to the west of the parcel and railroad tracks are present to the east of the parcel. The 1896 Sanborn map shows the parcel building labeled as "Union Station" with the northernmost portion of the building labeled with "Adams Express Co.". The canopied shelter along the western side of the tracks is shown on this map. The 1907 Sanborn map depicts what is currently the Greyhound bus terminal as a baggage area. The map also identifies a restaurant in Union Station. The 1920 Sanborn map shows an overhead passage across the railroad tracks at the south end of this parcel. No changes are observed in the remaining Sanborn maps.

FirstSearch Database Findings

One site was identified by the FirstSearch report at the location of this parcel:

- A release of ten gallons of cooking grease was reported for 3 Water Street on August 16, 2002. The status of the case is noted to be closed. Because the material released was cooking grease, this release has little possibility to affect the parcel.

Potential Environmental Considerations

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site:

- Former industrial use of this parcel as indicated by the Sanborn maps identifying the former presence of the express company;
- Current bus terminal use;
- Possible presence of urban fill material; and,
- Adjacent railroad track.

6. City Pier (LOT 108-2A)

Existing Conditions

Current Owner: City of New London

Parcel Address: City Pier, no specific street address identified.

Acreage: 0.44 Acres

Mapped Soil Type: 100% Udorthents-Urban land complex.

Current Use/Description: This parcel consists of a public plaza area and a 264-foot pier that extends into the Thames River. The brick-paved public plaza is used for special public events. A small wood frame snack building built in 1950 is present in the public plaza portion of this parcel.

Historical Use

Aerial Photo Survey

- 1934: Due to poor resolution of this photograph, details of the parcel are difficult to discern. However, a pier extending into the Thames River is present in a similar location as the current pier.
- 1951: Due to the scale and poor resolution of the photograph, details of this parcel are difficult to discern. However, the pier observed in the 1934 photograph is no longer present. A different pier is present in a location immediately south of the former pier.
- 1965: Due to the poor resolution of the photograph, details of this parcel are difficult to discern. However, several vessels can be observed docked to the pier.
- 1970: This photograph clearly depicts the City Pier and several vehicles parked on the parcel. There does not appear to be any type of paved or finished public plaza.
- 1975: The parcel appears similar to that present in the 1970 photograph.
- 1980: The parcel appears similar to that present in the 1975 photograph.
- 1986: The parcel appears similar to that present in the 1980 photograph. Several vessels are docked at the pier.
- 1990: The parcel appears similar to that present in the 1986 photograph.
- 1996: The parcel appears similar to that present in the 1990 photograph.

Sanborn Fire Insurance Maps

It is difficult to discern the exact location of the parcel in the 1912 Sanborn map. However, this map appears to illustrate the presence of a small ferry waiting room, office for the Fisher's Island Navigation Co. and a ferry slip on this parcel. The 1921 Sanborn map shows several structures noted to be ferry houses and several large and small pier structures on the parcel. The 1948 Sanborn map depicts the outline of a concrete pier on wood piles.

FirstSearch Database Findings

One site was identified by the FirstSearch report at the location of this parcel:

- New London City Pier was identified on the Spills database. According to the FirstSearch report, a report of workers scraping paint off boats and that paint chips were falling into the river was reported on September 16, 1991. The status of this case is reported as closed.

According to the FirstSearch report, a listing on the Spills database indicates the reporting of petroleum sheen on the fifth floor of the train station complex. The FirstSearch report has mapped this spill on this parcel. However, the description of the spill indicates that the spill occurred at Union Station and not on this parcel.

Potential Environmental Conditions

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site.

Former industrial use of this parcel:

- Former industrial use as a ferry landing and freight houses; and,
- Possible presence of urban fill material.

7. Fisher's Island Ferry (LOT 108-2)

Existing Conditions

Current Owner: Town of Southold, New York

Parcel Address: State Street, no specific street address identified.

Acreage: 0.78 Acres

Mapped Soil Type: 100% Udorthents-Urban land complex.

Current Use/Description: This parcel is currently contains a 6,210 square foot, two-story, concrete and cinderblock, natural-gas heated building built in 2005. This building contains a ticket counter, restrooms, office space and storage and maintenance areas. There are two auto-ferry slips, and the majority of the remainder of the parcel consists of 23,200 square feet of asphalt paved vehicle parking and queuing areas.

Historical Use

Aerial Photo Survey

- 1934: This photograph shows a very large building structure extending to the southeast into the Thames River. What appear to be trains or trucks are present in the vicinity of this structure. A pier is present to the north of this building structure.
- 1951: Due to the scale and poor resolution, parcel features are difficult to discern. However, the large building structure observed in the 1934 photograph extending to the southeast of the parcel is

not present in this photograph.

- 1965: Due to the poor resolution of this photograph, parcel features are difficult to discern. However, the other pier, previously observed to the north of the large building structure, is no longer present.
- 1970: What appears to be filling activity is observed at the south end of the property. A building is present along the railroad tracks on the western side of the parcel and two vessels are docked at the eastern portion of this parcel.
- 1975: The southern portion of the parcel has extended somewhat from that observed in the previous photograph. Parked vehicles are present on the parcel and two vessels are docked at the eastern portion of the parcel.
- 1980: This parcel appears similar to that presented in the 1975 photograph.
- 1986: The parcel appears similar to that presented in the 1980 photograph. The orientation of the vessel docking is similar to the current slips.
- 1990: The parcel appears similar to that presented in the 1986 photograph.
- 1996: The parcel appears similar to that presented in the 1990 photograph.

Sanborn Fire Insurance Maps

The 1912 Sanborn map shows a portion of the large building structure labeled as a railroad freight house. The 1921 Sanborn Maps depict the freight house operated by the New York, New Haven & Hartford Railroad and Steamship Companies. The freight house extended into the Thames River to the southeast of the current ferry slips. Three railroad tracks are present at the north end of this structure. An office building and several loading platforms are present outside of the freight house. This parcel was not illustrated on the remaining Sanborn maps.

FirstSearch Database Findings

One site was identified by the FirstSearch report at the location of this parcel.

- Fishers Island Ferry located at State Pier Road (State Street) is identified in the Underground Storage Tank (UST) database. According to the FirstSearch report, this site is located immediately northwest of this parcel. However, based on the occupancy of this parcel by Fishers Island Ferry, there is the possibility that the UST was located on this parcel. According to the FirstSearch report, a 500-gallon asphalt coated or bare steel heating oil tank installed in 1950 is permanently out of use and was last used on March 1, 1991. No further details are presented.

Potential Environmental Considerations

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site:

- Possible presence and/or placement of urban fill material;

- Former use of the property by railroads;
- Former UST use indicates the possibility for releases to have occurred: and,
- Current automobile parking.

8. Water Street Garage (LOTS 203-2, 203-3.01, 203-3.02)

Existing Conditions

Current Owner: City of New London

Parcel Address(s): Water Street and 140 Water Street.

Acreage: 2.88 Acres Total (2.19, 0.30, and 0.39 respectively)

Mapped Soil Type: 100% Urban-Land.

Current Use/Description: The Water Street Garage, located on Lot 203-2, is an approximately 286,500 square foot, 5-level concrete parking structure constructed in 1975. The upper two levels were an addition completed in the mid-1980s. Two smaller separate parcels are located to the east of the Water Street Garage. Lot 203-3.01 is a 0.30-acre parcel utilized to access the garage structure and contains a small building, that according to the *Task 2 Technical Memorandum Survey of Physical Conditions Regional Intermodal Transportation Center Master Plan and Efficiency Study Southeastern Connecticut Council of Government* report, is a vacant drive-thru bank structure. Lot 203-3.02 is a 0.39-acre ground level parking area owned by the City of New London Redevelopment Agency which is also utilized to access the garage building. Three inoperable elevators are present in the garage. A pedestrian bridge extends from the northwest corner of the garage to the office building on the west side of Atlantic Street. Another pedestrian bridge is present at the south end of the garage and extends to the Parade Area located to the south of the garage (since removed).

Historical Use

Aerial Photo Survey

- 1934: Two city blocks that contain many building structures are present in the current location of the Water Street Garage.
- 1951. This parcel appears similar to that presented in the 1934 photograph.
- 1965: This parcel appears similar to that presented in the 1951 photograph.
- 1970: Only two of the previously present structures are observed in this photograph. All other structures observed in the earlier photographs are not present. Vehicles are present on various portions of these parcels.
- 1975: This photograph depicts the Water Street Garage and Parade Plaza to the south of the garage in their current configuration.
- 1980: The parcel appears similar to that presented in the 1975 photograph.
- 1986: The parcel appears similar to that presented in the 1980 photograph. A parking lot is present to the north of the property and a new building is present to the northwest.
- 1990: The parcel appears similar to that presented in the 1986 photograph.
- 1996: The parcel appears similar to that presented in the 1990 photograph.

Sanborn Fire Insurance Maps

The 1891 Sanborn map depicts the parcels as two city blocks, a western block and an eastern block. Potter Road is present between the two blocks. The structures present are identified as tenements, saloons, a cobbler, dwellings, Thames Hotel, Boss Bakery and a flour storage building. The 1896 Sanborn map

depicts saloons, two Chinese laundries, an ice house, dwellings, the Boss Bakery, Atlantic Hotel, police station, paint shop and molasses storage. The 1912 Sanborn map identifies the Federal Biscuit Co. occupying several buildings along Water Street. The 1921 Sanborn Map illustrates the presence of Mohegan Cotton Mills Co. in the former location of the Federal Biscuit Co. One building north of Potter Road is identified as police headquarters.

The 1948 map depicts fewer buildings in each of the two city blocks than were previously present. One large building present in the center of the eastern block is occupied by an automobile parking, storage and the N.Y. N. H. & H. R. R. Maintenance Department. Buildings present in the western block are identified as restaurants, state trade school, beer warehouse and dwellings.

FirstSearch Database Findings

Two sites were identified by the FirstSearch report at the location of these parcels:

- Old Middle School at 26 Water Street is identified on the Leaking Underground Storage Tank (LUST) database. The FirstSearch report shows this site in the location of the Water Street Garage. The status of this case is pending. No further information is presented.
- SAA, 160 Water Street: The FirstSearch report identifies this location as a spill site but does not present any further information other than the status of this spill as closed.

Potential Environmental Conditions

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site:

- Former industrial use of these parcels including cotton mill, automobile parking, paint shop and railroad maintenance facility;
- Current use as automobile parking;
- Possible oil tank associated with the vacant bank building;
- Possible presence of urban fill material; and,
- Possible presence of a LUST site on one of these parcels.

9. Eugene O'Neill Drive Surface Parking Lots (LOTS 140-2 AND 139.1)

Existing Conditions

Current Owner: City of New London

Parcel(s) Address: Green Street and Eugene O'Neill Drive.

Acreage: 1.20 Acres Total (0.87-acre and 0.97-acres respectively)

Mapped Soil Type: 100% Urban Land.

Current Use/Description: The Eugene O'Neill Surface Parking Lots are two separate parcels, the north lot (Lot 140-2) and the south lot (Lot 139-1). The north lot is located on the eastern side of Eugene O'Neill Drive between Golden Street and Pearl Street and consists of a 36,950 square foot bituminous pavement parking area and a 140 square foot office building (parking booth). The south lot is located along the east

side of Green Street one block south of the north lot and extends from Pearl Street to Tilley Street and is a 74,000 square foot bituminous pavement parking area.

Historical Use

Aerial Photo Survey

- 1934: This photograph depicts the location of both parcels occupied by building structures.
- 1951: These parcels appear to contain building structures.
- 1965: The 1965 photograph does not cover the area of these parcels.
- 1970: This photograph shows the north parcel and the northern portion of the south parcel. Parked vehicles are present on the north parcel and the visible portion of the south parcel.
- 1975: The two parcels appear similar to that presented in the 1970 photograph.
- 1980: Due to poor resolution of this photograph parcel details are difficult to discern.
- 1986: The two parcels appear similar to that presented in the 1980 photograph.
- 1990: The two parcels appear similar to that presented in the 1986 photograph.
- 1996: The two parcels appear similar to that presented in the 1990 photograph.

Sanborn Fire Insurance Maps

Sanborn maps specific to these properties were not reviewed for this assessment. The 1921 Sanborn map depicting the overall New London downtown area in 1921 shows the north parcel as a vacant parcel and the south parcel occupied by many individual building structures. No other Sanborn maps reviewed during this assessment presented coverage for these parcels.

FirstSearch Database Findings

The FirstSearch report did not identify any database sites at the location of either of these two parcels.

Potential Environmental Considerations

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site:

- Former building structures that could potentially have contained industrial businesses;
- Possible presence of urban fill material; and,

- Current parking lot use that could present releases from motor vehicles.

10. Waterfront Park (LOT 108-21)

Existing Conditions

Current Owner: City of New London

Parcel Address: Waterfront Park, no specific street address identified.

Acreage: 1.48 Acres

Mapped Soil Type: 100% Udorthents-Urban land complex.

Current Use/Description: Waterfront Park consists of a 1.48 acre corridor running south from City Pier along the Thames River, south from the Fisher's Island Ferry Property to the Amtrak Swing Bridge, and east of the railroad tracks. Opened in 2001, the park contains access to four piers (Children's Pier, Amistad Pier, Custom House Pier and Fisherman's Pier). The Custom House is located at Fisherman's Pier, and is the location of a police sub-station, restroom and laundry facilities. A 700-foot long walkway provides pedestrian access to the waterfront south towards the Swing Bridge.

Historical Use

Aerial Photo Survey

- 1934: Due to poor resolution of this photograph, parcel details are difficult to discern. However, railroad tracks and trains are visible at the parcel and a vessel is observed docked at the parcel.
- 1951: Due to poor resolution of this photograph, parcel details are difficult to discern. However, what appears to be a rail siding yard, east of the current track locations, south of the Fisher's Island Ferry property is present. Several other piers and what appear to be buildings are present along the shoreline of this parcel.
- 1965: Due to poor resolution of this photograph, parcel details are difficult to discern.
- 1970: The parcel appears similar to that presented in the 1965 photograph with the same partial coverage.
- 1975: The parcel appears similar to that presented in the 1970 photograph.
- 1980: The railroad siding yard does not appear to be active in this photograph.
- 1986: The shoreline of the parcel is in a different configuration than observed in earlier photographs and the apparent building structures observed in earlier photographs are no longer present.
- 1990: The parcel appears similar to that presented in the 1986 photograph. The railroad siding yard appears to be vacant in this photograph.
- 1996: The parcel appears similar to that presented in the 1990 photograph.

Sanborn Fire Insurance Maps

Sanborn maps specific to this property were not reviewed for this assessment. The 1921 Sanborn map depicting the overall New London downtown area in 1921 shows a total of six piers along the parcel. Seven railroad tracks are present at the north end of the property and two railroad tracks are present in the south portion of the parcel. Approximately nine structures are depicted on the six piers, along with several structures on the west side of the NY, NH, & H RR lines. One portion of the structures is identified as a "spar yard" (vessel spars, masts, etc). The uses of the remaining structures are not identified.

FirstSearch Database Findings

One site was identified by the FirstSearch report at the location of this parcel:

- Waterfront Park is identified as an EPA Brownfield site and in the Federal Institutional Control/Engineered Control listings in the database report. According to the FirstSearch report, the site was undergoing groundwater monitoring in 2002. In addition, passive groundwater remediation was occurring at the time through the use of oil absorbent socks in selected wells.

Potential Environmental Considerations

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site:

- Possible presence and/or placement of urban fill material;

- Former industrial use of the property by railroads;
- Former historic building structures; and,
- The listing of this parcel as a Brownfields site.

This assessment identified the likely presence of contaminated soil and/or groundwater at this portion of the Site based on the FirstSearch report identifying groundwater remediation at this parcel. Based on the former industrial use of this parcel, the apparent filling activities that have occurred at this parcel and the identification of this parcel as a Brownfield site, it is likely that contaminated soil and/or groundwater are present in this portion of the Site from releases of chemical and/or materials used at, placed on or transported through this parcel.

11. Governor Winthrop Garage (LOT 199-3)

Existing Conditions

Current Owner: Cornish Parking LLC

Parcel Address: Governor Winthrop Boulevard, no specific street address identified.

Acreage: 1.02 Acres

Mapped Soil Type: 100% Urban Land.

Current Use/Description: The Governor Winthrop Garage is a 161,736 square foot, four-story, concrete parking structure, constructed in 1970, located to the southwest of the intersection of Governor Winthrop Boulevard and Union Street. A pedestrian bridge is located at the south side of the garage and accesses buildings along State Street to the south.

Historical Use

Aerial Photo Survey

- 1934: The exact location of this parcel is difficult to discern in this photograph. However, the entire area near the parcel is occupied by building structures.
- 1951: The parcel appears similar to that presented in the 1934 photograph.
- 1965: This photograph does not show the parcel location.
- 1970: This photograph does not show the parcel location.
- 1975: This photograph depicts the completed parking garage structure, along with the newly widened Governor Winthrop Boulevard extending to Water Street to the east. The property to the north of the garage is vacant.
- 1980: The parcel appears similar to that presented in the 1975 photograph.
- 1986: The parcel appears similar to that presented in the 1980 photograph.

- 1990: The parcel appears similar to that presented in the 1986 photograph. A new building is present on the parcel across Governor Winthrop Boulevard to the north of the parcel.
- 1996: The parcel appears similar to that presented in the 1990 photograph.

Sanborn Fire Insurance Maps

Sanborn maps specific to this property were not reviewed for this assessment. The 1921 Sanborn map depicting the overall New London downtown area in 1921 shows a large building present at the parcel and other large buildings located on the block to the southwest of the parcel.

FirstSearch Database Findings

The FirstSearch report did not identify any database sites at the location of either of these two parcels.

Potential Environmental Considerations

Based on the review of available historical information and current property use, the following potential environmental conditions have been identified for this portion of the Site:

- Former historic building structures and possible industrial use of this parcels;
- Possible presence of urban fill material; and,
- Current parking lot use that could present releases from motor vehicles.

1. *Introduction and Purpose*

This document addresses governance of the Regional Intermodal Transportation Center. It summarizes the types of governance at other intermodal transportation centers in Connecticut and around the country and the special provisions put in place to finance operation of those centers. This research was conducted prior to developing a governance recommendation that would complement the physical plan recommendations developed in the RITC Master Plan. The intent of this task was not to complete a survey of all intermodal centers, which is clearly beyond the scope of this project, but simply to identify examples of what has been done at other intermodal centers with multiple entities, public and private.

Clearly, the RITC will encompass a variety of modes and both public and private interests. The master plan reflects the goals of the study to make intermodal travel more seamless and to increase the integration and coordination of modes at the RITC. The plan envisions enhanced facilities for intermodal transfer and involves both initial capital (construction and equipment) costs and ongoing operating and maintenance costs. As the specific improvements in the master plan were developed, the question arose as to how an improved RITC would be governed, that is who would lead the implementation of the master plan, own the facility, make policies, manage it, fund it, operate it and maintain it. While some elements of the RITC would continue to be owned, managed and operated by individual entities, there will likely be a need for shared funding of some elements. Before making a recommendation about how to govern shared elements of the RITC and how to make decisions affecting the RITC as a whole, it is prudent to examine the ways in which similar intermodal centers are governed and the mechanisms they have put in place to secure financial participation and joint decision-making from a variety of public and private entities.

2. *Approach*

The effort began by trying to identify intermodal centers that involve a variety of public and private entities and may have developed a special governance structure. Through internet searches and other sources, the consultant team identified likely candidates. Internet searches were able to identify the candidates and in some cases provide some useful information about their governance structure and financing. Follow-up contacts were necessary to obtain definitive information. In some cases, initially-identified candidates were later found to be fully governed by a single entity. Few cases of shared governance structures were found. The team did not find any examples in Connecticut of the creation of a new entity to govern an intermodal transportation center. However, it identified shared mechanisms used elsewhere, existing ownership and management examples from Connecticut and legislation in Connecticut that would enable shared mechanisms to be used.

Section 3 below provides an overview of the options for governance structure and a few brief case studies from around the country. The various funding mechanisms used for the construction as well as operation and maintenance are described for several of the examples. Examples of governance of intermodal centers from Connecticut are provided in Section 4. Potential Connecticut enabling legislation follows in Section 5. Recommendations for governance of the RITC in southeastern Connecticut are provided in Section 6.

3. Governance Options and Examples from Around the Country

3.1 Summary of Governance Options

There are four primary organizational models of governance that involve varying assignments of ownership, funding, and management responsibilities among stakeholders/partners. They are:

- Single Existing Public Agency
- Coordination Among Several Existing Entities
- New Special-Purpose Entity
- Existing Private Developer/Company

Each governance model is described briefly below, followed by selected case study examples from around the country. Connecticut examples are described in detail in Section 4.

Single Existing Public Agency – An existing public agency is the governing entity. The public agency could be the state, municipal government, transit authority or district or some other public entity. Transportation providers other than the owner agency simply lease space from the ownership entity to use the facilities for their operations.

For example, the Everett (WA) Transit Center is owned and primarily managed by the City of Everett. However, interagency agreements were established and partners contributed towards the funding of the project.

The Paul S. Sarbanes Transit Center Project in Silver Spring (MD) is another example that follows a similar model. The County is constructing the center on land owned by both the County and WMATA using a grant from the Federal Transit Administration. Montgomery County has provided the 10% local share for the capital grant. WMATA will take over ownership, operations and maintenance once the construction is completed. WMATA will enter into contracts (lease agreements) with other providers.

This appears to be the most common form of governance. Other centers with this form of governance identified during the research include Union Station in Hartford (CT) owned by Greater Hartford Transit District (described in more detail in Section 4), Brattleboro (VT) Intermodal Center owned by the Town of Brattleboro and the Senator Patricia McGovern Transportation Center in Lawrence (MA) owned by the Merrimack Valley Regional Transit Authority.

Coordination Among Several Existing Entities - In this case, different entities own and govern the component facilities that comprise the intermodal center, but they coordinate their efforts through the establishment of interagency agreements. For example, the Miami Intermodal Center in Florida had interagency agreements in effect before the project was undertaken to distribute the responsibilities for governance, management and operation among existing entities. Components of the project are funded by individual agencies and will be operated and maintained by individual agencies; no joint entity was formed. As another example, the Bridgeport (CT) Intermodal Center (described in more detail in Section 4) does not have a separate governing body; instead, the bus terminal, rail station and the ferry terminal are managed and operated by separate agencies.

New Special-Purpose Entity - A new organization is created for the purpose of the governance of the project. The mission, authority, powers and responsibilities are defined to suit the project.

The Transbay Transit Center (TTC) in San Francisco, CA and Denver Union Station are examples of intermodal centers that have a new entity in place to supervise design and construction, and to procure and expend funds. In case of TTC, the governing body the Transbay Joint Powers Authority, is responsible for ongoing operation and maintenance of the Transit Center as well as development and construction. In the case of Denver Union Station, the Denver Union Station Project Authority (DUSPA) is responsible only for the redevelopment of Union Station and construction of improvements for the intermodal center. The ongoing governing body for the center once it is constructed has not yet been formed but may evolve from DUSPA. However, it is envisioned that Denver's regional transit agency, RTD, will operate and maintain the center under an agreement. Thus, Denver presents a unique example of governance that has evolved with the needs of the project.

Existing Private Developer/Company – A private developer/company could serve as the governing entity for a project and then lease space or grant easements to accommodate public components. The team did not find many relevant examples that are currently using such a model. Most likely the reason such an approach is not widely used is that the private developer would not have access to federal transportation grants. However in Holyoke (MA), a private entity which is a subsidiary of the intercity bus company is developing and will own a multimodal transportation center to serve local transit and intercity bus service with government grant support. In order to satisfy FTA requirements for continuing public control, this center will provide a long-term lease to the Pioneer Valley Regional Transit Authority.

3.2 Examples

Paul S. Sarbanes Transit Center, Silver Spring, MD
Type: Single Existing Entity
Source: Don Sherman, Montgomery County
Silver Spring Transit Center website:
http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/content/DOT/projects/sstc/index.asp
Other websites: http://www.silverspringdowntown.com/item/federal-funding-for-silver-spring-transit-center-announced

The Paul S. Sarbanes Transit Center is located on a 5.7 acre site, in downtown Silver Spring adjacent to the WMATA Metrorail station. The Center, which is still under construction, replaces the old surface transit facility and enhances the capacity and efficiency of operations.

The existing rail station provides direct access to MARC commuter rail service as well as WMATA's Metrorail rapid transit. Multiple bus and shuttle operations will be served at the Center, which will feature 34 bus bays for WMATA Metrobus, Montgomery County Ride-On bus service, (Maryland) MTA Commuter Bus, Van-Go shuttle, intercity buses and the University of Maryland Shuttle. The Center includes kiss & ride spaces and taxi spaces, a multimodal transit store, bike trails and ITS enhancements.

The transit center site is partially owned by the County - 1.9 acres are owned by the County, and the remainder by WMATA. Once the construction of the Center by the County is completed, ownership

would be transferred to WMATA which will have responsibility for operations. WMATA will enter into contracts with other operators for the usage of space.

To attract private sector development, WMATA issued a joint development solicitation, according to news item (http://www.silverspringdowntown.com/item/federal-funding-for-silver-spring-transit-center-announced) dated March 1, 2006. Silver Spring Metro LLC would enter into a land lease with WMATA for private development of the site which would include hotel, residential and retail space.

Presently the total cost of project is $94 million (projected expenditure at beginning of project was $75 million) of which approximately $54 million are funded by the FTA. The funding sources (per information provided by Don Sherman of Montgomery County) are as follows: 80 percent Federal funds (max), 10 percent state funds and 10 percent local (County) funds (min), with Montgomery County funding cost overruns.

Everett Transit Center, Everett, WA
Type: Single Existing Entity
Source: Tom Hingson, Everett Transit
website: http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=8563

The Everett Transit Center serves as a transit hub and the northern terminus for Sound Transit, the agency that was formed in 1996 to provide regional (intercounty) service in King, Pierce and Snohomish counties. It consists of a 64,000 sq. ft building located on a 10 acre site next to the BNSF tracks. The transit center/railroad station and parking are owned by the City of Everett, Washington. Platforms and tracks are owned by BNSF Railroad.

Passenger rail service at the station is comprised of Amtrak intercity service and Sound Transit's Sounder commuter rail. Bus service at the station includes intercity service, Everett Transit, Snohomish County's Community Transit (which will also provide SWIFT Bus Rapid Transit), Sound Transit regional express bus service, Island Transit, and Skagit Transit.

The transit center building also includes a high end café, large leasing space, and civic/banquet facilities. The Everett Office of Workforce Washington and University Center, a consortium of some Washington colleges and universities, were the major tenants of the leased space until recently.

Initially the project vision revolved around transportation needs, specifically to replicate the local train station, which along with the Greyhound Bus station had closed. Several area stakeholders realized that the project was to be a major undertaking for the City and identified its transit oriented development opportunities. The University of Washington in particular saw this as an opportunity to gain a stronger foothold in the higher education market by locating an educational facility there that would be very accessible via public transit. Other local agencies had needs for space that could be accommodated at this accessible location including the Workforce Development Center. The City also felt that its Customer Service Office could be suitably accommodated at this location. Each partner had a need and thus the building design evolved from a single story building to a 4-story structure. The local and regional partners recognized the potential benefit of a joint development project which led to development of a partnership to finance the project.

Funding

The project cost was $44 million including the acquisition and clearing of land and the cost of the structure. Federal ($27 million), state, and local agencies, including Amtrak and Sound Transit, contributed funds to the project, which also relied on some private funding. The City of Everett took the lead role in managing the project. Some of the financial partners later became tenants of the building.

The operating expenses of the transit center are paid by Everett Transit (from the dedicated revenue fund of the City of Everett). A significant portion of the expenses was covered by the leases (however, the building is currently mostly vacant). Some transportation agencies contribute as well. Sound Transit pays a portion of the maintenance cost per a three year agreement. Amtrak has a 20 year lease with the City of Everett effective from 2002. The other bus services use the facility without paying under the mutual use agreement that applies to the member jurisdictions of the Puget Sound region.

In conclusion, the City was the lead agency and owns the facility. While there were interagency agreements that allowed for participation in capital funding and ongoing lease agreements, the facility does not have a special purpose governance body.

Transbay Transit Center, San Francisco, CA
Type: New Special-Purpose Entity
Source: Courtney Lodato, Singer Associates, Inc (consultants to TJPA)
Transbay Center website: http://www.transbaycenter.org/transbay/

The Transbay Transit Center (TTC) project will replace the old Transbay Terminal with a new intermodal center, extend Caltrain passenger rail service to the center and create a new mixed use neighborhood around the center. The transit center will also serve as the station for the future California high speed rail service.

The Transbay Joint Powers Authority (TJPA) is the governing body charged with design, construction, operation and maintenance of the transit center. It was formed in August 2001 (pursuant to Chapter 5, Division 7, Title 1 of the Government Code of the State of California) to jointly construct, build and operate the new regional transit hub. It is a collaboration of City and County of San Francisco, including the Municipal Transportation Agency (MTA) and the Office of the Mayor and the Board of Supervisors; the Alameda-Contra Costa Transit District (AC Transit); and the Peninsula Corridor Joint Powers Board-Caltrain (which in turn is composed of the City and County of San Francisco, the San Mateo County Transit District, and the Santa Clara Valley Transportation Authority; and the State of California Department of Transportation). TJPA has the authority to buy and sell property, enter into contracts, and accept and expend grants of cash and property for the development of the transit center.

Funding
The Transbay Transit Center program has been included in several local and regional plans. Of particular note is MTC's Resolution 3434: Regional Transit Expansion Program (RTEP) which enabled greater funding commitments from government agencies as well as strengthened advocacy for funds.

The Transit Center plan encompasses two phases. The first phase includes building the temporary terminal and moving the current operations to this location while the older terminal is torn down for new construction. The second phase consists of building the new terminal and bringing the Caltrain underground for a stretch of approximately 1.5 miles from its current station location. The terminal will be operation by 2015; Caltrain operations to the terminal will begin in 2018.

The first phase of the project is fully funded, with some remaining funding available for Phase 2. Funding sources identified include:

- Federal sources: Section 1601 Grant/ TIFIA loans; Bus and Bus-related Facilities Program; Projects of National and Regional Significance/section 1301 grant
- State sources: Regional Transportation Improvement Program; land sales of property provided by the state to the TTC project
- Regional sources: Regional Measure 1, which authorizes a standard auto toll of $1 for all seven state owned toll bridges, Regional Measure 2 that raises the auto toll from RM1 by $1, AB1171
- Local sources: San Francisco Proposition K sales tax; San Mateo Measure A sales tax; AC Transit Capital Contribution; pre-construction lease proceeds from tenants on TJPA acquired property; proceeds from transferable development rights[1] sold by TJPA; interest income.

TJPA will be revisiting the funding plan this fall to include the design of the train box in Phase 1.

Debt repayment will be through the following sources:

- Tax increment on property values in the redevelopment area
- Passenger facility charges which AC Transit, Caltrain and California High Speed Rail Authority will pay to TJPA

Union Station, Denver, CO
Type: New Special-Purpose Entity
Source: Tom Gougeon, Union Station Neighborhood Company
Denver Union Station website: http://www.denverunionstation.org/

Denver's historic Union Station had been a major rail hub in the region, before losing most of its patronage and services in recent decades as rail popularity declined. Since 2001, several public agencies have partnered to redevelop the historic station and create a central hub of a future transportation system. These agencies are the Regional Transportation District (RTD), the Denver Regional Council of Governments (DRCOG), the City and County of Denver (CCD), and the Colorado Department of Transportation (CDOT). The project to redevelop the station includes transit center improvements as well as redevelopment of the adjacent 19.5 acres., The transit center improvements will include an at-grade, eight-track commuter rail station, relocation of RTD's regional bus facility below grade under 17th Street; and relocation of the light rail station at-grade to the Consolidated Mail Line (CML). The 16th Street Mall Shuttle will continue to operate in dedicated lanes along 16th Street extended to the relocated light rail station. The new Downtown Circulator will include stops for easy transfers to commuter rail and light rail services. The plan also creates a number of new public plazas. Private development in the adjacent parcels will include parking garages, commercial and residential development.

Several governance mechanisms have evolved since 2001 to support ongoing phases of the project as described below.

[1] Appraisal of Real Estate defines a transferable development right as "a development right that is separated from a landowner's bundle of rights and transferred, generally by sale, to another landowner in the same or a different area. Appraisal Institute, the Appraisal of Real Estate, 11th ed. Chicago: Appraisal Institute, 1996, p. 148.

In August 2001, RTD purchased the Union Station site from its private owners, with funding from an intergovernmental agreement among the partnering agencies. An Executive Oversight Committee (EOC) was also formed as an interim vehicle for decision making to enable coordination among partners and initiate and oversee the Denver Union Station Master Plan and the development of the Environmental Impact Statement. The EOC is comprised of the chief executive of each of the four partnering agencies.

In June 2008, the Denver Union Station Project Authority (DUSPA) was created as a non-profit entity by the City of Denver[2]. This replaced the Intergovernmental Agreement in place. DUSPA has a Board of Directors that has membership incorporating representatives of all four partner agencies. The Master Developer, Union Station Neighborhood Company is also represented on the Board. DUSPA will be the primary financing entity for the project and will serve as the client for all contracted work related to the redevelopment of the Union Station and the multimodal center.

The governance structure to facilitate operations and maintenance of the multimodal center will be finalized within a year. DUSPA will most likely serve as a key component of the permanent entity established in the future. Once the transit improvements are complete, RTD will be responsible for the operation and maintenance per legal agreements between RTD and DUSPA.

Funding

There are several funding channels that are being utilized for the project. In the current setup, DUSPA serves as the primary funding agency for all activities related to the redevelopment and construction. It receives funds for construction from:

1. Federal sources including FTA and FHWA funds
2. ARRA stimulus funds from DRCOG/RTD
3. State Senate Bill 1 Funds from CDOT
4. Future TIP funding from DRCOG
5. Proceeds of sales of land around Union Station that the City will sell to the Union Station Neighborhood Corporation (the master developer for the site)

Denver Union Station has applied for loans from two low interest federal loan programs- the Railroad Rehabilitation and Improvement Financing (RRIF) program from Federal Railroad Administration (FRA) and the Transportation Infrastructure Finance and Innovation Act (TIFIA) federal credit program offered by USDOT. This project presents a unique and creative example of how the two loan programs are being used together to move a transit center project forward.

Funds for debt service will be available via:

[2] the Denver Union Station Project Authority ("Authority") is a nonprofit corporation created and existing under the Colorado Revised Nonprofit Corporation Act, Articles 121 through 137 of Title 7 of the Colorado Revised Statutes, as amended, its Articles of Incorporation and Ordinance No. 334, Series of 2008, adopted by the City Council of the City and County of Denver, Colorado.

1. Annual lease payments from RTD (this mechanism uses funding appropriated for the Denver Union Station in the Fastracks program[3])
2. Tax increment revenue (from property and retail sales) from a 40 acre area around the Union Station. This revenue has been pledged by the Downtown Development Authority for a period of 30 years or till loan repayment
3. Special taxing districts (metropolitan districts established to finance, construct and manage public improvements in the DUS project area) formed that levy a tax of 30 mills for 40 years
4. Lodging tax revenue from within the development area
5. City of Denver, which provides DUSPA with funds to meet interest payments under a City Contingent Commitment Agreement

Miami Intermodal Center, Miami, FL
Type: Coordination Among Several Existing Entities
Source: Gary L. Donn, Office of Transportation Support/MIC Program Manager, Florida Department of Transportation
Miami Intermodal Center website: http://www.micdot.com/

The Miami Intermodal Center (MIC) is a transportation hub being developed by the Florida Department of Transportation (FDOT). Located next to the Miami International Airport, the Intermodal Center will consist of a Rental Car Center, the Miami Central Station (services will include Amtrak, Tri-Rail, Metrorail, intercity and local buses, shuttles and taxis), major roadway improvements, the MIA (Miami International Airport) Mover and joint development.

The program is headed by FDOT in partnership with the U.S. Department of Transportation, Miami-Dade County, the Miami-Dade Expressway Authority and the South Florida Regional Transportation Authority. These partnerships were established well before the MIC program began. A steering committee with representation from all partners serves as the decision making body for governing policies for the MIC project. While no joint ownership was established, agreements among agencies enable financing and project coordination.

An individual agency is responsible for each specific component of the Intermodal Center. The People Mover between MIA and the MIC is Miami-Dade County's contribution to the MIC Program; it will be built and operated by the Miami-Dade Aviation Department (MDAD). Road construction and maintenance are FDOT's responsibility. The Miami Central Station, which is the main ground transportation hub, is also FDOT's responsibility. The Rental Center is being designed and constructed by FDOT and operations will be handed over to the Miami-Dade Aviation Department. The joint development component will consist of public and private ground lease development around Miami Central Station.

Funding
Funding sources include federal, state, local and private sources, as described below:

[3] FasTracks is RTD's 12-year comprehensive plan to build and operate high-speed rail lines and expand and improve bus service and park-n-Rides throughout the region, was approved by voters in 2004 allowing a regional sales tax increase. FasTracks commits $208.8 million for this project.

- Federal sources: Transportation Infrastructure Financing Innovation Act (TIFIA) loans. FDOT applied for TIFIA loans and is responsible for repaying the loan used for the construction of the Rental Car Facility. Funds for repayment will be collected from daily user charges assessed to rental car customers and contingent rent paid by rental car companies if revenue projections are not met.
- State sources: Internal State Transportation Trust Fund (STTF) loan and FDOT State Infrastructure Bank loan.
- Local/other sources: Miami-Dade County/MDAD contributions (The MIA mover is in MDAD's Capital Improvement Program), transportation funding prioritized by the Metropolitan Planning Organization, Miami-Dade Expressway Authority contributions
- Private sector sources: Private sector contributions include:
  - Customer Facility Charges (CFC) paid by rental car customers
  - Contingent rent to be paid by rental car companies, if necessary
  - Lease revenues paid by parcel owners through extended possession leases on MIC property already acquired

The joint development component will be funded by private developers interested in leasing property for commercial uses. FDOT which currently own the parcels may also consider selling or leasing these parcels to another public agency, allowing that agency and the developer to take the lead role on development.

Holyoke Multimodal Transportation Center (MTC), Holyoke, MA
Type: Existing Private Developer/Company
Source: PVTA website

The Holyoke MTC Project is a Joint Development Project initiated under Agreement between the Pioneer Valley Transit Authority (PVTA), the City of Holyoke, MA and the Holyoke Intermodal Facility, LLC, a private development firm from Springfield, MA. The $8.9 Million project includes the adaptive reuse and conversion of the former Holyoke Fire Department Headquarters at 206 Maple Street in Downtown Holyoke into a multi-use, Transportation Center with a new bus port and parking facility constructed on the adjacent city parking lot.

The former firehouse is being renovated by the future owner and operator of the facility, the Holyoke Intermodal Facility, LLC. Holyoke Intermodal Facility LLC, a subsidiary of Peter Pan Bus Lines, owns the fire house. Ownership of the fire house was transferred from the City of Holyoke and Peter Pan is redeveloping it.

A long term lease to PVTA was considered sufficient to allow public grant funds to be used. PVTA has provided project oversight, procured the private partner, prepared the joint development agreement and is the recipient of the state and federal funds.

Once completed, this 4-floor facility will house a first-floor PVTA bus ticketing counter and information booth as well as a customer waiting area, driver rest area and public restrooms. The second floor will be leased to Springfield-Holyoke-Chicopee Head Start for its daycare and preschool programs and the third and fourth floors will be leased to Holyoke Community College as a centralized location for its adult literacy programs.

The Bus Port will facilitate intra- and intercity bus service provided by the PVTA and Peter Pan Bus Lines. Riders on PVTA will be able to access seven routes and travel to the Holyoke Mall, Northampton, Springfield, Chicopee, Granby, Westfield, and Hadley from the new intermodal center. Peter Pan buses will have up to six trips a day into Springfield where riders will then be able to make connections to all areas served by Peter Pan. It is estimated that the facility will serve at least 7,000 transit users per week.

Although rail service is not currently provided in Holyoke, the MTC is within walking distance of the future restored passenger rail station.

The piece of land adjacent to the fire station, owned by the City of Holyoke, will be developed into a municipal parking facility that will serve the PVTA transit operations and the inter-city bus operation of Peter Pan Bus Lines.

The Holyoke MTC Project will provide the following benefits to the City and Region:

- Provide vastly improved transportation access, facilities and amenities for persons traveling to, from and through downtown Holyoke;
- Provide enhanced customer service and improved operations support facilities for both PVTA and Peter Pan Bus Lines in a state-of-the-art transportation facility;
- Create a transportation hub in Downtown Holyoke with access to service and transfers on seven existing transit routes and more than 7,000 passengers per week; while providing modal connections between local/intercity buses
- Provide for the adaptive reuse and restoration of the historic Firehouse on Maple Street that is currently vacant;
- Create an Adult Learning and Continuing Education Center through partnerships with Holyoke Community College and the Head Start Program offering basic literacy, GED and other classes;
- Leverage over $7M in State and Federal Funding through private and local contributions and invest approximately $9 Million in downtown Holyoke; and,
- Provide an improved streetscape and sidewalk system surrounding the MTC.

The project, which broke ground in January 2009, is scheduled for completion in early February of 2010.

At the groundbreaking, Peter Picknelly, President of Peter Pan Bus Lines said “The unique and collaborative partnership that was created between the City of Holyoke, the PVTA and Peter Pan has culminated in a project that will serve many diverse individuals and groups. Creative thinking in cooperative partnerships is the way to move forward in today’s economic climate.”[4]

Funding

The project is funded through a number of sources with $4,475,020.00 in Federal Funds, $533,825.00 in local contribution (Firehouse and adjacent lot), $1,000,000.00 from Peter Pan Investment, $1,500,000.00 from the State Transportation Bond Fund and $618,755 in State Matching Funds for FTA Grants. Funding was secured in 2002.

[4] http://www.pvta.com/uploads/HolyokeGroundBreaking.pdf

Besides the examples described above, the team identified other intermodal centers, including several in the region; however they were owned by a single agency and did not involve any financial partnerships for funding and therefore were not selected as case study examples. There were several other intermodal centers selected for case studies for which insufficient information was obtained.

4. Examples from Connecticut

Connecticut provides examples of intermodal facilities that fit under the categories of "Single Existing Entity/Agency" and "Coordination Among Several Existing Entities". Following are descriptions of Union Station in Hartford, Union Station in New Haven, the Stamford Transportation Center and the Bridgeport Intermodal Center.

Single Existing Entity/Agency

Most intermodal centers in Connecticut are managed by one entity. Following are three examples, each different in terms of its ownership and management structure.

Union Station, Hartford

Union Station, Hartford has gone through several owners prior to being owned by the Greater Hartford Transit District (GHTD). Prior to 1965, the owner of Union Station, Hartford was the New York, New Haven and Hartford Railroad. In 1965, E. Clayton Gengras purchased Union Station with the idea of developing it. But the project became too expensive, and the station was threatened with closure.

A private/public partnership was formed to help rescue Union Station, and resulted in the GHTD purchasing Union Station in 1980. The private/public partnership included a loan from a consortium of insurance companies. This loan only has to be repaid if the GHTD makes a profit on the private parts of the station.

Other partners included the Urban Mass Transit Administration (UMTA), the predecessor to FTA, the State of Connecticut DOT and Connecticut Economic Development, the developer (Halcyon and Union Station Associates Limited Partnership), and the City of Hartford.

The funding of the renovations was as follows:[5]

Urban Mass Transportation Administration	$14,420,926
Connecticut Department of Transportation	$500,000
Connecticut Economic Development	$350,000
Lenders Consortium (Aetna, Cigna, Connecticut Mutual, Travelers, The Hartford)	$3,300,000
Halcyon Ltd. (Union Station Associates Limited Partnership	$900,000
City of Hartford	(Property tax deferral)
TOTAL	$19,470,026

[5] Archived document provided by Vicki Shotland, Executive Director of the Greater Hartford Transit District

GHTD is responsible for paying for the operations of the station. The State of Connecticut contributed the Spruce Street parking lot, which revenues contribute to the operations of the station. Also, GHTD is able to use 5307 funding to help maintain Union Station. This funding is matched by the State of Connecticut.

GHTD has done a good job of keeping Union Station leased, while many similar centers struggle with this. Lease rates and terms vary greatly—as they have depended on when the lease was negotiated and with whom. GHTD is hopeful of negotiating more consistent deals in the future that will reflect the increased value of having commuter rail come to the station. GHTD is supposed to pay off the loan to the insurance companies when it makes a profit on the privately leased parts of the station—it has been making small payments on this loan over time.

Union Station, New Haven

Union Station in New Haven is owned by the Connecticut DOT. It is managed under an agreement with the New Haven City Parking Authority, an agreement that will go for 5-6 more years.[6] Revenues from the parking facility at the station go first to manage the parking lot and then to support the station.

Plans call for an expansion of the rail corridor through New Haven, additional parking, and TOD. To take full advantage of the expanded facility, the Connecticut DOT offices are expected to move to the new rail yard, providing more of the station for development. The Parking Authority and City of New Haven have conducted a study examining how additional parking and development could be provided near Union Station.

Stamford Transportation Center, Stamford

The Stamford Transportation Center is also owned by the State of Connecticut. It is managed by a private management company, Fusco Management, under contract to Connecticut DOT. The State has pledged $35 million to help to develop additional parking for the center. Current plans supported by Commissioner Joseph Marie call for that parking to be done in conjunction with transit-oriented development (TOD) near the station.

Coordination among Several Existing Entities

Bridgeport Intermodal Center

The Bridgeport Intermodal Center brings together a bus transfer facility, a train station with Amtrak and Metro North Service, intercity bus service and a ferry terminal. The Bridgeport Intermodal Center does not have a single governing body; instead, the bus terminal, rail station and the ferry terminal are managed and operated by separate agencies.

The City of Bridgeport was the applicant for FTA funding to construct the bus facility and the City owns the facility. The Greater Bridgeport Transit Authority leases from the City and subleases to intercity operators.

[6] Based on a phone conversation with James Redeker of Connecticut DOT 11/12/09.

The Connecticut DOT owns the train station. It contracts to a private firm, Fusco Management Company, for management of the train station and pedestrian walkways.

5. Relevant Connecticut Enabling Legislation

Intermodal transportation centers in other parts of the country have employed various mechanisms for governing and financing that depend on local legislation. This section discusses some of the most relevant legislative mechanisms that may be utilized in Connecticut to finance intermodal centers as well as spur transit related development. This section does not address all legislation that enables establishment of public-private partnerships, authorities and interagency agreements.

4.1 Special Services Districts

Under Chapter 105a of the Connecticut General Statutes, any municipality in Connecticut can establish a special service district within its confines "to promote the economic and general welfare of its citizens and property owners through the preservation, enhancement, protection and development of the economic health of such municipality." The powers of the district include, among others, "to acquire, hold and convey any estate, real or personal," "to contract," "to borrow money," " to recommend to the legislative body of the municipality the imposition of a levy upon the taxable interests in real property within such district, the revenues from which may be used in carrying out any powers of such district", "to construct, own, operate and maintain public improvements," and to provide some services that municipality is authorized to provide with certain limits. Among the powers are to construct, acquire or obtain leasehold interests in and to operate motor vehicle parking facilities within or without such district. There are requirements associated with holding a referendum, which can be done via mail, among the holders of record of taxable interests of real property and obtaining approval from both the majority of owners that also constitute more than one half of the total assessment. There are provisions for distinguishing the tax levy by land use and by sub-district and related requirements for approval by those interests. A board of commissioners conducts the business of the district. There are provisions in the law creating an obligation on the part of the municipality's legislative body to impose the levy recommended by the district as a municipal levy and to have the municipality collect such levy for the benefit of the district.

Bridgeport is an example of a municipality that has established a special services district in its CBD for the purpose of preventing deterioration of the CBD and supporting its revitalization. (This special services district was not formed to support the intermodal center.)

A similar type of special service district can be established to include the transit providers as well as adjacent parcels that may support transit oriented development, provided there is buy-in from a majority of property owners in the district. While construction and transit related improvements are funded via grants and loans, the property tax collected by the municipality may be utilized for debt service and to meet operation and maintenance costs of transit centers.

4.2 Tax Increment Financing

The State of Connecticut allows towns and cities to use tax increment financing to finance developmental projects, specifically using the incremental *property tax* revenue to repay debts. Towns

can issue the bonds themselves or request Connecticut Development Authority (CDA) to do so on their behalf.

TIF can be used for any type of development within a locally designated redevelopment area (CGS § 8-134), for business and industrial developments outside of these areas that follow prescribed development planning (CGS § 8-189 and 8-191), or anywhere in town if the project involves brownfield remediation. Certain municipalities can also use TIF for projects in other areas if the development involves information technology uses and the project creates significant economic benefits[7].

The State of Connecticut also has in place another Tax Increment Financing Program (Reference: Title 32, Chapter 588n, Section 32-285). This program allows for incremental *sales taxes* collected under Chapter 219 (sales and use taxes) and *admissions, cabaret and dues taxes* collected under chapter 225, generated by a project approved by the CDA under this section to be used to pay debt service on bonds issued by the authority to help finance significant economic projects. Candidate projects are evaluated by the authority based on information about the type of business, number of jobs created, feasibility studies or business plans, etc. The Executive Director of the authority makes a preliminary determination as to whether the project is eligible. Among the considerations is whether the project is deemed economically viable. A revenue impact assessment is prepared by the authority. The Board of Directors of the authority then determines whether to approve the project and if so the amount and type of bonds the authority shall issue to support the approved project. Note that such bonds may be only one source of support for the project; other state, federal and private sources can be used to support the project.

The above revenue sources can be used to repay bonds that would fund construction or other capital improvements.

[7] The information in this paragraph is from John G. Rappa, "Tax Increment Financing," OLR Research Report dated September 27, 2001 (http://www.cga.ct.gov/2001/rpt/olr/htm/2001-r-0737.htm). This information requires verification with the most updated provisions that are applicable under Connecticut General Statutes.



Boston Office
38 Chauncy Street
Suite 200
Boston, MA 02111
(857) 453-5450
Fax (857) 453-5451

Analysis of Costs for the Operation and Maintenance of the Transportation Related Areas of New London Union Station, the Adjacent Greyhound Facility and the Water Street Parking Garage

Prepared for the

Southeastern Connecticut
Council of Governments

As an Addendum to the Regional Intermodal Transportation Center Master Plan and Efficiency Study

November 2010







TranSystems

EXPERIENCE Transportation

Table of Contents

1. Introduction 1
1.1 Purpose of this Document 1
1.2 Review of the Governance Findings of the *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, March 2010 1
1.3 ConnDOT Considerations 2

2. Overview of the Facilities 3
2.1 Union Station 3
2.2 The Water Street Garage 5

3. Methodology 7
3.1 Background Reports 7
3.2 Site Visit 7
3.3 Basis of Operating Costs for Union Station 8

4. Union Station New London 9
4.1 Physical Description of Union Station 9
4.2 Union Station Activity Level Assumptions 10
4.3 Condition of Union Station 11
4.4 Outline of Scope of Work for Union Station to Operate as a ConnDOT Transportation Facility 17
4.5 Cost of Operation and Staffing Required for Union Station 22
4.6 Potential Lease Income for Union Station 26

5. Water Street Garage 27
5.1 Physical Description of the Water Street Garage 27
5.2 Condition of the Water Street Garage 28
5.3 Cost of Operation and Staffing Required for the Water Street Garage 32

6. Summary 35

List of Figures

Figure 2-1: Union Station from Water Street 3
Figure 2-2: Greyhound Building from Water Street 4
Figure 2-3: Site Area 4
Figure 2-4: Water Street Garage as Seen from the Parade 5
Figure 4-1: Showing Adjacent Platform for Track 1 and Elevated Platform for Track 2 10
Figure 4-2: Union Station Viewed From the Parade 11
Figure 4-3: Union Station Ticketing Office 16
Figure 4-4: Union Station Lobby 16
Figure 4-5: Potential Program for Station Improvements 18
Figure 5-1: Water Street Entrance to the Water Street Garage 28

List of Tables

Table 4-1: Repair Items from 2007 DMJM Harris | AECOM Elevator Pit Supplemental Report 13
Table 4-2: Repair Items Based on 2007 DMJM Harris | AECOM Conditions and Inspection Report 14
Table 4-3: New London Union Station Areas 17
Table 4-4: Union Station Probable Construction Cost for Repairs, Interior improvements and Tenant Fit-up Allowances (2010 costs) 20
Table 4-5: Outline of Probable Cost Components for Repairs, Interior and Other Improvements and Tenant Fit-Up Allowances (2010 costs).....22
Table 4-6: Relative Sizes and Activity of Union Station New London and Union Station Hartford 23
Table 4-7: Staffing for Union Station New London 24
Table 4-8: Annual Operating Expenses for New London Union Station and Derivation Approach.....25
Table 4-9: Potential Rental Income for Union Station 26
Table 5-1: Desman Associates Cost of Repairs to the Water Street Garage 30
Table 5-2: Desman Adjusted Repair Costs Water Street Priority I & II Repairs 31
Table 5-3: Staffing for the Water Street Garage.....32
Table 5-4: 2010 Budget for the Water Street Garage.....32
Table 5-5: Net Profit for the Water Street Garage and Green & Tilley Lot.....33
Table 5-6: Revenues, Expenses and Profits for the Water Street Garage (FY 2010 estimates based on partial information) 34
Table 5-7: Additional Parking Revenue from Shore Line East 34
Table 6-1: Summary of Costs and Revenues.....35

1. Introduction

1.1 Purpose of this Document

The purpose of this study is to provide some additional information for the Southeastern Connecticut Council of Governments (SCCOG) and the Connecticut Department of Transportation (ConnDOT) as a follow-on to a recently completed study and report entitled *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, dated March 2010 (RITC Master Plan). The study recommended that ConnDOT take ownership or play a management role in Union Station. ConnDOT indicated that they might also need to take ownership of or lease the Water Street Garage to secure a revenue stream to cover operating costs. ConnDOT and SCCOG wished to understand more about the capital and operating costs associated with ConnDOT's assuming such a role.

The scope for this project includes:

- A site visit to the facilities.
- An assessment of the staffing required to operate the transportation areas of the two facilities.
- An assessment of operation and maintenance costs for the transportation areas
- An outline of a scope of work to allow the operation of Union Station as a transportation facility. This would include the code corrections noted in previous studies.
- Provide an order of magnitude statement of the cost for ConnDOT to take responsibility for the entire complex.

1.2 Review of the Governance Findings of the *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, March 2010

The *Regional Intermodal Transportation Center Master Plan and Efficiency Study* recommended the following about the governance structure of Union Station[1]:

- The rail station, bus station and pedestrian bridge should be owned by the State.
- The ferry facilities would remain under separate ownership, that is, by the ferry operators.
- The Water Street Garage could either remain under separate ownership by the City or could be purchased by the State.
- A new authority or district is not likely to be needed in this case, but an association of key stakeholders would be advisable to integrate customer services including schedule information and wayfinding and to ensure collaboration during implementation and on an ongoing basis.

The report went on to say:

> It is recommended that the State of Connecticut Department of Transportation (ConnDOT) play a lead role in the RITC improvements, given the State's interest in providing high quality rail connections in New London, including the expansion of its Shore Line East commuter rail service,

[1] *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, by TranSystems for the Southeastern Connecticut Council of Governments, March 2010, page 10-2.

promoting bus transit services, and ensuring safe and efficient pedestrian crossings of the railroad right-of-way. It is recommended that the State purchase the Union Station property in its entirety in order to assure continued public use of the improvement and eligibility for FTA funding. This would have to be accomplished through negotiation with the private owner to purchase the property or, alternatively, enter into a long term lease. (A long-term lease could be for the entire property or could be limited to the first floor and the surrounding area needed for the bus terminal and pedestrian bridge.) ConnDOT has also indicated that any purchase of Union Station by the State may need to be accompanied by a purchase or lease of the Water Street Parking Garage currently owned by the City in order to ensure a revenue stream to cover operating and maintenance costs (the garage operating income does exceed its operating expenses). In that case, negotiations with the City would also be needed. (It is a common approach to link the train station to the source of parking revenue as is the case in New Haven, Hartford and Stamford.) However, since the Water Street Garage serves multiple purposes, arrangements would need to be made to ensure continued use for non-transportation purposes if ConnDOT purchased the garage.

The report estimated costs for the RITC improvements, but did not go into detail on the costs for repairs to the Union Station or the Water Street Garage. It estimated repair costs based on prior studies as being in the range of $1.6 M for Union Station (not including tenant fit-out costs) and $2.6 M for the Water Street Garage. Also, the costs associated with purchasing or leasing Union Station property and any cost of purchasing or leasing the Water Street Garage property were excluded from the RITC analysis.

1.3 ConnDOT Considerations

In considering what its role should be in the operation and/or ownership of Union Station, Connecticut DOT is asking to understand the costs associated with such state involvement. These costs would include an updated cost analysis of any immediate Code Compliance related improvements for the properties. ConnDOT asked for costs to be developed for the operation and maintenance of the facility assuming the following:

- Twenty-four (24) hours, 7 days/week, 365 days/year management and operation of the properties including regular maintenance and repair, including wear and tear items.

- Twenty-four (24) hours, 7 days/week, 365 days/year security presence at the properties, including the management of any security camera system(s).

- Building and grounds janitorial/cleaning program, to include a first class standard of cleanliness 24 hours, 7 days/week, 365 days/year.

- Comprehensive planning, supervision, operation, and reporting of parking operations at the Rail Facilities to include daily and monthly parking pass sales, daily deposits of receipts, and full accountability for monies received.

The scope is limited to the privately owned, historic, New London Union Station building and grounds and adjacent Greyhound Bus Customer Service Center along with the City owned Water Street Parking Garage. The operation and maintenance of the Amtrak owned passenger boarding platforms is excluded. However, ConnDOT is interested in the overall repair cost and operation and maintenance cost of the whole of Union Station, and TranSystems has promised an order of magnitude estimate of this cost.

2. Overview of the Facilities

2.1 Union Station

Union Station is an historic, architecturally-significant and imposing structure built in 1888 and renovated in the 1970s. It was the last of many railroad stations designed by Henry Hobson Richardson. Union Station is listed on the National Register of Historic Places.

Union Station's façade is brick and matching brownstone. The original building was a rectangle in plan with its principal axis is a north-south line. Originally, it had three stories, with a two story major waiting room at the center of the first floor. Two additional levels were added at a later date, within the original envelope. A single story baggage room was added at the north end bringing the full length to around 184 feet. The Greyhound building was added at the north end of the baggage room. It is a truncated rectangle with its east wall parallel to the rail platform and the west wall parallel to Water Street. Figures 2-1 and 2-2 show Union Station and the Greyhound building.

Union Station is privately owned. It serves as the region's train station for Amtrak intercity rail (Acela Express and Regional trains operating on the busy Northeast Corridor) and Connecticut DOT's Shore Line East commuter rail service (its easternmost terminal). Located alongside Union Station are the Amtrak-owned tracks used by passenger and freight rail services. Union Station is also the site of New London's intercity bus terminal (the Greyhound building) and the New London hub of the region's bus transit system. The local transit system, Southeast Area Transit (SEAT), has a curbside bus stop with a simple shelter on Water Street, north of the building and the Greyhound building. This bus stop serves as its New London hub.

Figure 2-1: Union Station from Water Street

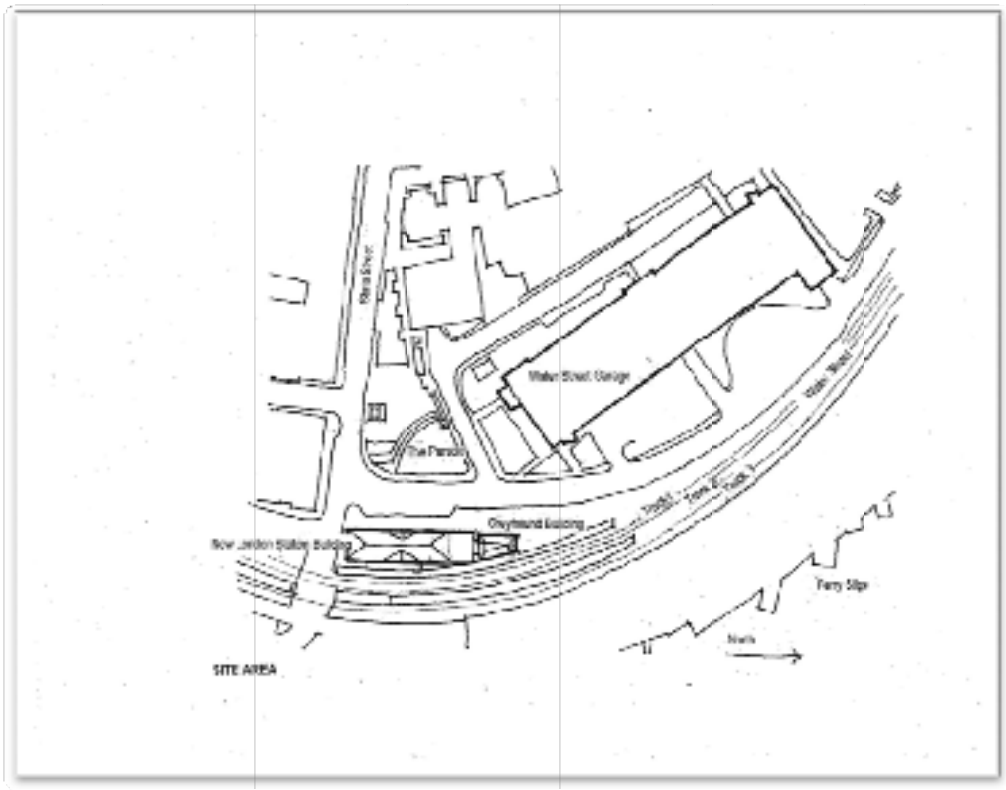


Figure 2-2: Greyhound Building from Water Street



New London Union Station and the Water Street Garage are on opposite sides of Water Street and adjacent to the Parade, an historic urban square that has recently been rejuvenated. The station building is separated from the waterfront and ferry slips by the railroad platforms and tracks. Figure 2-3 shows the site area.

Figure 2-3: Site Area



2.2 The Water Street Garage

The Water Street Garage is owned by the City of New London. The garage was built thirty years ago, and the two top levels added four or five year later. The exterior design is both structurally rational and well proportioned. The garage is by far the largest building in the area, yet by virtue of the façade treatment and some landscaping along Water Street and the Parade it adds to the urban scene rather than detracts from it. The Water Street Garage provides 906 parking spaces, serving railroad and ferry boat passengers. Figure 2-3 depicts the Water Street Garage.

Figure 2-4: Water Street Garage as Seen from the Parade



3. Methodology

The methodology used for this analysis included a review of prior work and background reports related to Union Station and the Water Street Garage, analyzing additional data on operating costs for Hartford's Union Station and a site visit to the properties in New London. With respect to the background reports on the condition of Union Station and the Water Street Garage, TranSystems reviewed these, updated costs, and commented on items that could affect the estimated costs based on extensive experience with historic buildings including six historic train stations. The operating and maintenance costs for the Water Street Garage were well documented and available.

3.1 Background Reports

Detailed reports and other information on the condition of Union Station and the Water Street Garage were available for this effort. These were:

- *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, by TranSystems, prepared for the Southeastern Connecticut Council of Governments, March 2010.
- *Condition Appraisal (Reevaluation) Water Street Parking Garage, New London Connecticut*, by Desman Associates, prepared for the City of New London Office of Development & Planning, October 2007.
- *Union Station New London Condition Inspection and Recommendation Report,* by DMJM Harris | AECOM, prepared for the Connecticut Department of Transportation, January 12, 2007.
- *(draft) Union Station Elevator Pit Supplemental Inspection and Report,* New London, prepared for the Connecticut Department of Transportation by DMJM Harris | AECOM, August, 2007.
- *Water Street Parking Garage Repair and Preventive Maintenance, FY 2008,* 2/13/2008.
- *Statement of Revenue and Expenses,* New London Parking Commission, Water Street Garage.

These reports and information were made available to TranSystems for conducting this study since an in-depth condition assessment was beyond the scope of this assignment.

3.2 Site Visit

On July 7, 2010 Dan Kopple of TranSystems visited New London to inspect the facilities and to talk with the owners/operators of the facilities. Jim Butler of SCCOG also participated in this site visit.

The site visit included a meeting with Todd O'Donnell, a partner in the Blackwell Company, the owners of Union Station and the Greyhound building. Mr. O'Donnell is also the manager of Union Station. He led a tour of the facilities. Mr. O'Donnell was informative and open in discussing the building, about his previous discussions with the City and the State, but did not provide current operating expense figures.[2]

At the Water Street Garage, a meeting was held with Joseph Celli, the manager of the Water Street Parking Garage for Propark, the company that manages the Garage for the City. Mr. Celli has managed the

[2] In a subsequent conversation with Jim Butler, Mr. O'Donnell indicated that he provided operating costs in a proposal for the State to purchase the station which he sent to Deputy Commissioner Al Martin at ConnDOT several years ago. Mr. O'Donnell reported that his operating costs totaled $175,000 annually. However, these costs may not have included everything that ConnDOT would want included in operations and maintenance and they are a few years old.

City-owned garage for about two years, and was proud of the progress he has made in catching up with deferred maintenance and turning the garage into a profitable operation. He was pleased to share information on costs and revenues.

3.3 Basis of Operating Costs for Union Station

Because we did not have data on operations and maintenance costs for Union Station in New London, a means of estimating these costs was required. Fortunately, Union Station in Hartford Connecticut has many similarities to Union Station in New London. The Greater Hartford Transit District, owner of Hartford's Union Station, was very generous in providing detailed information on the costs of operations and maintenance. These costs, and our own experience with historic stations, form the basis of the New London Union Station operating cost analysis. We are especially familiar with Hartford Union Station having recently developed a renovation plan for it.

Hartford Union Station is quite similar to the New London Union Station. The New London and Hartford stations were built in 1888 and 1889 respectively. H.H. Richardson designed New London; his successors, Shepley, Rutan and Coolidge, designed Hartford. Both stations have an original configuration of three stories, with a two story major waiting room at the center of the first floor. At each station two additional levels have been added, at a later date, within the original envelope.

Both stations are built of brick and matching brownstone. Both stations were Union Stations. In both cases Amtrak owns the platforms and right of way but leases space in the station building. Both stations support intercity bus operations. Hartford has, and New London has had, significant tenant activity including a restaurant. The two stations have essentially the same hours of operation. Supporters of each station have worked to avoid demolition threats and have maintained and restored the original buildings.

Although the two stations differ in building size, site size, the number of bus berths and number of present tenants, the rail passenger count are remarkably similar. In 2009 New London served 159,317 rail passengers and Hartford served 157,791.

Other transportation activities at the stations differ. Hartford Union Station has significant intercity bus traffic with on the order of 44-60 daily stops versus New London's which varies between 8 and 20. New London Union Station has significant ferry boat connections, which are seasonal. The ferry passengers swell the ranks of the rail passengers and fill the garage in the summer months.

Given the similarities of, and differences between the two stations, our approach to estimating cost of operations at New London has been to relate the cost of specific functions at Hartford to those expected at New London by the relative size of the factors that affect the specific costs. Detail on the cost derivation is included in Section 4.5.

4. Union Station New London

4.1 Physical Description of Union Station

Originally built in 1888, Union Station is reported to have been refurbished in 1976 and the upper floors renovated in 1988. It consists of brick masonry exterior bearing walls, wood framing and a high pitched slate roof with dormers. The different levels of the building are:

- Basement: Various utility rooms and unoccupied spaces.
- First Floor: Large central 2-story waiting room; offices, men's and women's rooms to the south; and unoccupied space to the north.
- Second Level (or First Floor Mezzanine): Mechanical room and unoccupied space in both north and south areas.
- Second Floor (Third Level): Office suite at the south end, the remainder of the floor is unoccupied.
- Third Floor (Fourth Level): Unoccupied space.
- Fourth Floor (Fifth Level – open to floor below): Unoccupied space.

The Greyhound Station consists of a waiting area, restrooms and ticket office in a one-story building to the north of Union Station.

Union Station is owned by the Blackwell Company, including the station building, the Greyhound building and limited property beyond the building lines. The property line along Water Street is at the building line. The property line on the east side is approximately five feet east of the east façade of the station building. The property lines at the station continue north and define a slightly bent, narrow rectangle of about 2,100 square feet, north of the Greyhound building. The Blackwell Company does not control or maintain the platforms or the Water Street pavement.

The present primary transportation use of the station buildings include the Amtrak ticket office, operations office, the waiting room for Amtrak and Shore Line East (SLE) passengers, rest rooms, an occasionally used baggage and freight room, and the Greyhound waiting room. There are two inter-city bus berths and two smaller bus berths adjacent to the Greyhound building. Taxis serve the station at the Water Street curb.

The Amtrak ticket office is manned by one agent during the period that Union Station is open and a second agent at busy periods. Greyhound mans the Greyhound building. Amtrak and Greyhound are the only tenants at present. The Blackwell Company occupies approximately 960 square feet at the south end of the second floor as its office. Union Station has had additional tenants in the past and was fully occupied as recently as the early 1990s.

A single elevator serves the basement, the first floor, the south mezzanine and the second floor. The basement is highly compartmented into relatively small rooms occupied by HVAC equipment, telecom and electrical equipment, meter rooms, elevator equipment room and a maintenance shop. There is potential tenant space at the south end and below the large waiting room, totaling about 2,600 square feet. It has been occupied previously by Amtrak and Amtrak police.

The station is served by three tracks. Track one, served by the platform at the east side of the station building is nominally for south-bound trains. At times when train schedules permit, it is used for north-bound

trains since it is significantly more convenient to the station than track two. Track two is separated from track one and the platform for track one by a fence to keep people from crossing the tracks. The platform for tracks two and three is elevated. It is accessed from grade by an ADA accessible ramp at the south end of the platform. To reach that ramp a person in the station building must walk south about 150 feet to cross State Street. State Street connects the City to the waterfront and crosses the tracks at a signalized grade crossing. A passenger must use that grade-crossing to get from the station to the ramp for the north bound train. Figure 4-1 shows the back of Union Station and the platforms.

Figure 4-1: Showing Adjacent Platform for Track 1 and Elevated Platform for Track 2



4.2 Union Station Activity Level Assumptions

As noted previously, the 2009 rail passenger count for the New London Station was 159,317. The estimated 2010 passenger count is 169,112 with 23 trains per day serving the station. That indicates a daily average of 463 passengers per day and an average of 20 passengers per train. The Amtrak trains have been serving the Shore Line East (SLE) passengers using New London Station. Two of the 23 daily trains are SLE trains, one north bound ("east bound") and one south bound ("west bound").

We understand that an additional 200 SLE passengers per day are expected to board or alight at Union Station in New London in the near future. The assumption that there is no duplication of SLE passengers in the current Amtrak numbers and the projected additional SLE passenger count implies that there will be 663 passengers per day either boarding or alighting.

The station should be sufficiently large to accommodate the anticipated passengers, even assuming a worst case condition, e.g. a Friday evening in August with 1,000 daily passengers, 200 passengers in the evening peak hour, and trains delayed an hour. The waiting room and the canopied platform within the length of the station building would hold 200 people at 20 square feet per person. Although the addition of 200 passengers per day would be a 43 percent increase over the anticipated 2010 count, it would not be a problem for the station, and would improve the value of its rental space.

Inter-city bus rider counts at New London are estimated to be approximately 100 riders per day on an average summer week day and 160 on a weekend day. In low periods the daily average is about 50

passengers per weekday and 80 on weekend days. The Greyhound Building is rarely crowded. There are 8-9 scheduled intercity bus stops at New London (counting both south and north bound service) Monday through Thursday. Weekends are busier with twice as many stops on Fridays and Sundays.

Taxis provide around 60 to 100 drop offs or pick-ups daily. SEAT has a bus stop near the station. Figure 4-2 shows Union Station with taxis waiting in front.

Figure 4-2: Union Station Viewed From the Parade



4.3 Condition of Union Station

There have been a number of studies that have examined the condition of Union Station. In 2006 Norman Benedict reported that the cost of renovating the station to allow for leasing would be $1,560,000.[3]

DMJM Harris | AECOM conducted two study efforts to assess the condition of Union Station. This report did not address general building upgrades and repair; rather its purpose was to bring the building into compliance with code. Unofficial comments and an incomplete listing of observations from a Connecticut DOT "Code Review Walk-through" conducted on Nov 3, 2006 with members of ConnDOT as well as DMJM Harris | AECOM noted that major upgrades or repairs since the 1975-76 station rehabilitation included a slate roof (around 2002), skylights, first floor windows, new staircases to upper levels and basement (partially complete), new electrical to upper levels, newer Burnham boilers (3 years old), and newer mechanical systems.

[3] *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, by TranSystems for the Southeastern Connecticut Council of Governments, March 2010, page 8-7.

In its initial report, DMJM Harris | AECOM found that overall repairs required to bring the station building and Greyhound building to code totaled $1,044,254 in 2007 dollars. The cost for code-related improvements for the first floor waiting room (including associated offices and public restrooms) was $340,925 in 2007 dollars.[4]

One of the findings of the initial report was that there was water in the elevator pit and a $57,566 price was given for installing a sump pump in the elevator pit and doing storm water mitigation. The report recommended additional research to determine the cause of the storm water infiltration and recommend appropriate mitigation measures. A supplemental investigation and report provided a larger budget of $124,127 to fix the problem with the water in the elevator pit.[5] Table 4-1 shows the estimate for the elevator pit budget provided by DMJM Harris | AECOM, and Table 4-2 shows the overall budget to bring the building to code, with the elevator pit repair budget updated to reflect the supplemental information.

[4] *Union Station New London Condition Inspection and Recommendation Report,* by DMJM Harris | AECOM, prepared for the Connecticut Department of Transportation, January 12, 2007, p. 16-17.

[5] *Union Station Elevator Pit Supplemental Inspection and Report (draft), New London,* prepared for the Connecticut Department of Transportation by DMJM Harris | AECOM, August, 2007, p. 6.

Table 4-1: Repair Items from 2007 DMJM Harris | AECOM Elevator Pit Supplemental Report

Item Description	Total Cost (2007 dollars)
Civil/Structural/Architectural	**$51,891**
Patch existing pipe penetrations	$1,086
Misc. wall penetrations (new)	$2,403
Sawcut existing slab	$1,524
Demo & remove slab	$4,504
Hand excavate trench fo new 6" perf dip	$9,121
Backfill trench for ane 6" dip	$4,728
Repair concrete slab overt new pipe	$9,106
Allowance for dewatering	$18,090
Seal elevator pit	$1,328
Plumbing	**$27,942**
Remove & dispose existing sump pumps & piping	$2,667
Install new sump pumps	$6,104
1.5 inch discharge pipe	$3,210
Misc. valves & cleanouts	$3,481
Perforated 6 inch dip	$4,339
Allowance for TV inspection & cleaning	$8,140
Electrical	**$12,113**
Allowance for electrical demolition	$1,416
Allowance for new/reoplacement electrical work	$,10,697
Subtotal (construction)	**$91,946**
Incidentals (ConnDOT) (25%)	**$22,986**
Contingencies (ConnDOT) (10%)	**$9,195**
Total Projected Budget	**$124,127**

Table 4-2: Repair Items Based on 2007 DMJM Harris | AECOM Conditions and Inspection Report

Item Description	Total Bldg. (2007 dollars)	1st Floor Lease Only (2007 dollars)
Architectural	**$178,144**	**31,731**
North egress stairway (basement to first floor)	$13,567	
North egress stairway (first floor and up)	$31,657	
Replace guardrail & handrail at south egress stairway	$16,240	
Install ADA compliant hardware	$10,173	$10,173
Renovate 2nd floor bathroom for ADA accessibility	$34,950	
First floor waiting area 2 hr. fire separation	$21,558	$21,558
Provide ADA access to upper floors	$50,000	
Plumbing/Fire Protection	**$265,818**	**$169,395**
Install lavatory shielding guards (toilet 105 & 106)	$2,520	$2,520
Install lavatory shielding guards (toilet 205)	$1,260	
Install sump pump in elevator pit & storm water mitigation	$91,946[6]	
Install lavatory shielding guards (Greyhound Station)	$3,216	
New automatic sprinkler system (required by ConnDOT)	$166,876	$166,876
HVAC	**$30,168**	**$18,237**
Extend supply & return ductwork (office 107)	$15,832	$15,832
Increase exhaust in restrooms	$2,406	$2,406
Increase exhaust in Greyhound Station Restrooms	$2,044	
Extend supply & return ductwork (Kitchen/storage)	$9,886	
Electrical	**$333,773**	**$33,174**
Label fire alarm system zones on panel	$2,995	$2,995
Emergency lighting battery pack	$3,619	$3,619
Check battery wall packs	$9,617	$9,617
Provide panelboard label & permanent outlet wiring	$7,940	$7,940
New smoke detector with connection to fire alarm system	$1,177	$1,177
Install strobe, battery-pack lighting & smoke detector	$4,854	$4,854
Permanent installation of conductors	$2,718	$2,718
North end of first floor of Union Station Repair/Upgrades	$27,134	
Remove unused conductors and provide cover plate	$200	$200
Replace broken cover plate	$54	$54
South stairwell emergency lighting wall pack	$2,265	
Complete south stairwell 2nd floor hallway electrical	$771	
Replace No Exit sign and provide illuminated exit sign	$771	
Electric room being used for storage	$544	
Greyhound Station pull station & smoke detectors	$18,090	
Greyhound Station back room EM lighting, smoke detectors, exit sign or pull boxes	$18,090	
Greyhound Station panel-board work	$6,954	
Basement floor electrical/telecommunications space	$52,007	
Basement floor exit signs	$9,045	
Basement floor smoke detectors	$9,045	
Remove abandoned wiring & tag circuit breakers	$4,368	
New conduits, pull boxes and conductors	$27,134	
Replace light fixtures	$9,045	
First floor mezzanine upgrades	$27,134	
Second floor upgrades	$27,134	

[6] The cost of the elevator repair from Table 4-1 prior to incidentals and contingencies.

Table 4-2: Repair Items from 2007 DMJM Harris | AECOM Conditions and Inspection Report (continued)

Item Description	Total Bldg. (2007 dollars)	1st Floor Lease Only (2007 dollars)
Electrical (continued)		
Install strobe, battery-pack lighting & smoke detector	$2,433	
Remove abandoned wiring & tag source	$4,368	
Third floor upgrades	$27,134	
Fourth floor upgrades	$27,134	
Subtotal	$807,903	$252,537
Incidentals (25%)	$201,976	$63,134
Contingencies (10%)	$80,790	$25,254
TOTAL Project Budget	$1,090,669	$340,925

The RITC Master Plan included a section on the condition of Union Station. According to that report, Union Station was inspected and that the exterior appeared to be in reasonably good condition having experienced renovations within the last ten years. An exception was missing panes in the glass canopy in the rear of building.[7]

On July 7, 2010, Dan Kopple of TranSystems inspected Union Station. Dan was the Architect of Record for dozens of historical renovations, including seven historic rail stations. These include a total rehabilitation of 30th Street Station in Philadelphia, the second largest station in terms of size and activity in the country, as well as rehabilitation of many smaller stations. Dan Kopple's observations were:

> Union Station is a visually powerful presence commanding the attention of observers in the Parade Square. Observations from a site visit on 7 July 2010 indicated that Union Station has been well maintained. The exterior of the New London Station appears to be in good condition, suggesting that it has had some masonry, window and roof restoration done relatively recently.
>
> The public spaces on the first floor level are neat but a little worn and would benefit from a program of rehabilitation and improved lighting. Such a program should be coordinated with the scope of work required by the 2007 DMJM Harris| AECOM report on code, ADA and related issues, and landlord's contribution to tenant improvements.
>
> Although the main waiting room and the rest rooms on the first floor are in acceptable condition, and Blackwell's office on the second floor is in good condition, the rest of the spaces are in a state of incomplete construction. General repair and finishing of common spaces would bring the impression of the interior into line with the visual presence of the exterior.

[7] *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, by TranSystems for the Southeastern Connecticut Council of Governments, March 2010, page 2-12.

Figures 4-3 and 4-4 show views inside Union Station.

Figure 4-3: Union Station Ticketing Office



Figure 4-4: Union Station Lobby



Although the station is active with a good number of passengers and additional people dropping off or meeting passengers, the stations tenants are limited to Amtrak, Greyhound and the station's owner-manager. Greyhound rents the building section that bears the company name. Amtrak rents the ticket office in the main room and the adjacent office space. At one time in the past, Amtrak police occupied the south end of the basement. And at several times in the Station's history a restaurant occupied the second floor.

4.4 Outline of Scope of Work for Union Station to Operate as a ConnDOT Transportation Facility

This section outlines a scope of work for ConnDOT if it is to lease the transportation areas of Union Station, in addition to the code corrections detailed previously in the DMJM Harris | AECOM report of 2007. Also, this section provides an order of magnitude statement of probable cost if ConnDOT were to take responsibility for the entire complex.

Union Station has a basement and floors one through four, totaling 33, 910 gross square feet, including the Greyhound building. It has a potential to offer 19,380 square feet rentable. Table 4-3 shows the estimates of gross area and potential rentable area. Note that these estimates are based on analysis of the 2003 CAD drawings by Barun Basu Associates, which may not reflect the current plan configuration in some areas.

Table 4-3: New London Union Station Areas[8]

Location	Gross Area (Square Feet)	Possible Rental Area (Square Feet)
Basement	6,510	2,270
1st Floor	8,440	3,590
Mezzanines	3,340	2,000
2nd Floor	6,800	5,280
3rd Floor	4,940	2,930
4th Floor	2,400	2,000
Subtotal	32,430	18,070
Greyhound Bldg	1,480	1,310
Total Bldg	33,910	19,380
Site Area	13,260	

In addition to repairs required to bring Union Station up to code, Union Station should be renovated to modernize the facility. In order to assess the probable cost, should ConnDOT become the overall owner or lease the transportation areas of Union Station, we have developed a list of proposed improvements which are consistent with the program for the station set out in the 2010 RITC Master Plan. That program includes ticket offices and back of house offices for Amtrak (which will also sell Shore Line East tickets), improved and expanded rest room facilities for railroad and bus patrons, better passenger information systems, and a food service tenant on the first floor. A layout for such station improvements is shown in the sketch in Figure 4-5.

[8] Estimated from plans in the *Union Station New London Condition Inspection and Recommendation Report,* by DMJM | Harris AECOM, prepared for the Connecticut Department of Transportation, January 12, 2007, found in pages following page 43.

Figure 4-5: Potential Program for Station Improvements

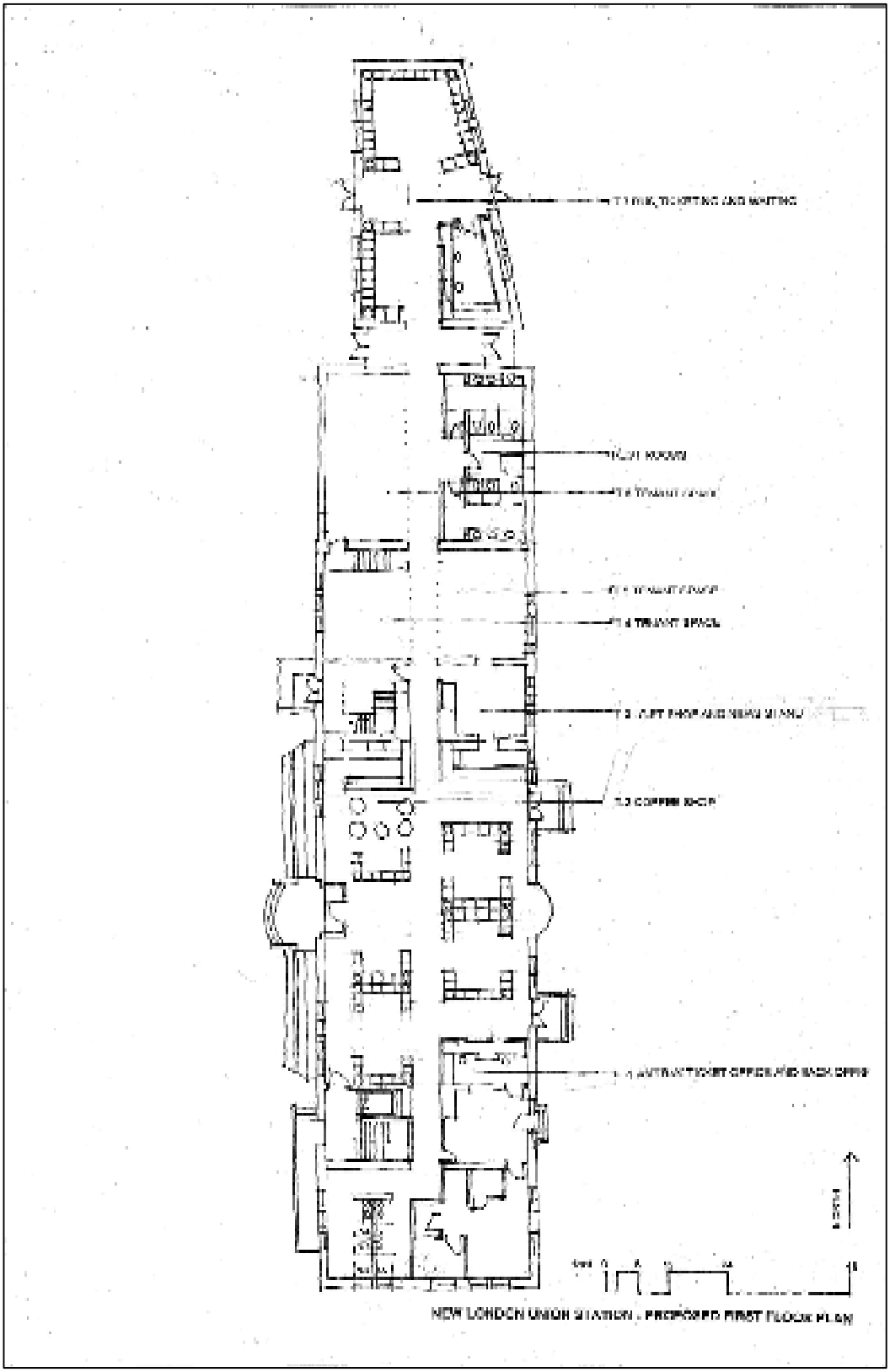


Table 4-4 shows the probable cost, in 2010 dollars, of a full building rehabilitation program or a rehabilitation program limited to the transportation areas which would be recommended in addition to the code and functional repairs proposed by the DMJM Harris | AECOM reports (represented I 2010 dollars), general improvements in finishes, lighting and minor repairs, and an allowance for the landlord's part of tenant improvements costs.

Tenant improvement costs are normally negotiated between the tenant and the landlord based on the market, the size and type of the tenant activity, and the nature of the lease. Some small tenants may produce high rents per area occupied, e.g. Dunkin Donuts. Other tenants requiring large areas might pay rents consistent with lower local office rates. Amtrak and Greyhound could be negotiated to include the areas actually occupied and a percentage of the common waiting and public spaces. Tenant fit-out costs can be delayed until there are tenants with which to negotiate.

The cost of work suggested for non-tenant improvements includes minor repairs to walls, floors and doors, general repainting and improved lighting. A detailed condition assessment and design will be required to determine the most cost effective scope of improvements. One element for which we have been a bit more specific is the proposed new men's and women's rest rooms on the first floor. That cost is based on the area, finish types and anticipated fixture count.

Table 4-4: Union Station Probable Construction Cost for Repairs, Interior improvements and Tenant Fit-up Allowances (2010 costs)

Floor	Item	Area (SF)	Unit Cost ($/SF)	Total Building. ($)	Transportation Spaces Only ($)
Basement					
	General areas, paint, light floor	4,240	20	84,800	
	Tenant fit-out	2,270	30	68,100	
1st Floor					
	General areas, paint, light floor	4,500	25	112,500	112,500
	Restrooms	350	240	84,000	84,000
	Tenant fit-out	3,590	35	125,650	125,650
Mezzanine					
	General areas, paint, light floor	1,260	20	25,200	
	Tenant fit-out	2,000	35	70,000	
Second Floor					
	General areas, paint, light floor	860	20	17,200	
	Tenant fit-out	5,280	35	184,800	
Third Floor					
	General areas, paint, light floor	1,500	20	30,000	
	Tenant fit-out	2,930	30	87,900	
Fourth Floor					
	General areas, paint, light floor	180	20	3,600	
	Tenant fit-out	2,000	30	60,000	
Greyhound building	Tenant fit-out	1,310	30	39,300	39,300
Sub Total	General Areas	12,890		357,300	196,500
Sub Total	Tenant fit-out	19,380		635,750	164,950
Total		32,270		993,050	361,450

An additional cost to consider should ConnDOT opt to own the building would be the addition of a security system with security cameras, particularly in the transportation spaces. An estimate for such a system of $65,000 is included in this analysis. TranSystems' security expert, James Elder, assisted in a quick appraisal of what might be needed based on a look at the first floor building sketch and pictures of the building and lobby area. Elder suggested that 10-15 security cameras might cover the area of concern, with an allowance of $3,000 per camera to allow for installation in a historical building. Another $20,000 would be required to set up the infrastructure including a server, workstation and so forth. Another point of comparison is Hartford Union Station, which is in the process of ordering new high-tech cameras to add to its current security system. [9]

[9] DJ Gonzalez of the Greater Hartford Transit District (GHTD) estimated that if GHTD started from scratch they could install a complete system for around $100,000. A smaller figure is reasonable for New London due to the smaller area to secure.

A more detailed investigation would certainly be needed to determine the cost of such a system. Elder pointed out that efficiency and effectiveness of such systems can be improved by using systems and services that "watch" the cameras and help flag problems. Guards can only focus effectively on around 6 screens at a time, thus are limited in their effectiveness. Systems can be monitored off-site using security services, which can alert on-site personnel. A combined security program with the Water Street Garage could also be efficient. Other design considerations can help to improve security, and these should be implemented when building renovation takes place.

A final expense to consider is the preventive maintenance required to protect the value of the historic structure. A building of the age, type and size of the New London Station building should have a detailed condition inspection and assessment of its exterior envelope made each 15 to 20 years. The repair work required due to natural causes in the 15 to 20 year period, for a building of the station's size, could be of the order of magnitude of $2 million. This $2 million is the expected cost to cover repairs to the roof and the structure that supports it, the exterior masonry and windows and doors. Since the roof was replaced in 2002, and since the exterior appears reasonably well maintained, it is reasonable to expect that a large expenditure for such repair would not be needed immediately. However, a reserve fund for such items should be established.

The budget proposed for improvements to the total building is approximately $2,007,000 for the general areas, and $985,000 for tenant fit-out for a total cost of around $2,992,000. The tenant fit-out cost is paid by the landlord, and repaid by the tenant through rent, and would not need to be done until tenants were identified. If one considers only the transportation related spaces, the cost is estimated at around $828,000 for improving the general areas and $256,000 for tenant fit-out for a total cost of around $1,084,000. Allowances are made for incidentals (25%), A&E and inspection fees (20%), and contingency (10%).

Table 4-5 summarizes the outline of cost components, with estimates for the whole building as well as for the transportation areas.

Table 4-5: Outline of Probable Cost Components for Repairs, Interior and Other Improvements and Tenant Fit-Up Allowances (2010 costs)

	Total Building ($)	Transportation Areas ($)
Subtotal of code related items from Table 4-2 (without incidentals and contingencies) updated to 2010 dollars	872,535	272,740
General area refurbishment from Table 4-3	357,300	196,500
Security system	65,000	65,000
Subtotal	1,294,835	534,240
A/E/Inspection Fees (20%)	258,967	106,848
Incidentals (25%)	323,709	133,560
Contingencies (20%)	129,484	53,424
TOTAL EXCLUDING FIT-OUT ALLOWANCES	2,006,995	828,072
Fit-out allowance	635,750	164,950
A/E/Inspection Fees (20%)	127,150	32,990
Incidentals (25%)	158,938	41,238
Contingencies (20%)	63,575	16,495
TOTAL FIT-OUT ALLOWANCE	985,413	255,673
TOTAL INCLUDING FIT-OUT ALLOWANCE	2,992,407	1,083,744

4.5 Cost of Operation and Staffing Required for Union Station

As described previously, the methodology for estimating operating costs and staffing for Union Station is based on detailed information provided by the Greater Hartford Transit District for Union Station in Hartford.

Table 4-6 shows a comparison between New London Union Station and Hartford Union Station. Among Connecticut rail stations, Hartford Union Station is the most similar to New London Union Station, and as described previously, the number of rail passengers at the stations is remarkably similar.

Table 4-6: Relative Sizes and Activity of Union Station New London and Union Station Hartford

Item	New London Union Station	Hartford Union Station
Gross area	33,910 SF	92,675
Rental area	Potential 19,000 SF	40,000 SF Actual
Site area including building	13,620 SF	143,540 SF
Site area less building foot print	3,700 SF	97,231 SF
Building foot print	9,920 SF	46,309 SF
Trains per day	23	12
Daily train activity	Amtrak NE Regional & ACELA 11 NB + 10 SB Shore Line East 1 EB,1 WB	Amtrak: 6 NB + 6SB
Annual passengers boarding and alighting at the station	159,317	157,791
Growth estimated 2010	6%	
Projected 2010 average daily passengers	169,112	166,420
Annual daily passengers 2010	463	456
Average daily passengers July and August	592	
Highest passenger levels, Fridays in July and August	808	
Future Shore Line East daily passengers	200	
Station hours	5:30AM to Midnight	6AM-11PM

Given the similarities of, and differences between the two stations, our approach to estimating cost of operations at New London has been to relate the cost of specific functions at Hartford to those expected at New London by the relative size of the factors that affect the specific costs. The factors used are as follows:

- Costs for energy use are factored relative to building gross area.
- Staffing and costs for janitorial service were related based on the ConnDOT requirements as well as staff required for the building and site size.
- Staffing and costs for security were based on ConnDOT requirements and are the same as for Hartford Union Station
- Some costs related to building management were set relative to Hartford's costs, but recognizing that there are fixed costs which won't change linearly with the size of the building.

Table 4-7 provides an analysis of staffing by function. The assumption is that the same staffing is required for the transportation spaces as well as the entire building, because a high level of oversight is required for the transportation spaces, but these same staff should be able to handle the increased space for the total building. As with other ConnDOT facilities, the assumption is that these staff would be provided through a management contract.

The assumption for staffing is that

Table 4-7: Staffing for Union Station New London

Staffing Item	Full Time Equivalents	Comment
Operations and general administration of the station	1.5 persons	ConnDOT requirement for full time management and reporting, so use same as Hartford.
Security	5 persons	24/7 365 days per year ConnDOT requirement. One person per shift same as Hartford
Janitorial	Total of 5.5 persons: 1 half time maintenance supervisor, 5 janitorial persons for 24/7 coverage	24/7 365 days per year is the ConnDOT requirement for 1st class cleaning for building and grounds. Hartford uses 5 full time janitorial persons to cover the entire facility, but does not provide 24/7 coverage. 24/7 coverage implies a need for 5 persons, but these should be able to cover the entire facility in New London. Hartford uses a full time maintenance supervisor, through a contractor, assume half time for New London

The cost information from Hartford Union Station, the factors used to apply each cost item to New London, and the resulting cost estimates for New London Union Station are indicated in Table 4-8. Specific relative values are mentioned for areas or staffing levels, and in some cases, both. The cost for the transportation space is modified from that of the total building to the extent that the reduced area would reduce the cost involved.

Table 4-8: Annual Operating Expenses for New London Union Station and Derivation Approach

Cost Element	Hartford (2010$)	Cost Considerations in Relation to Hartford	Total Bldg New London ($)	Station Level New London ($)
Wages, Operations and Administration	50,000	Similar staffing as Hartford & ConnDOT requirement	$50,000	$40,000
Indirect Costs/Overhead	75,000	Relative gross area	$62,500	$50,000
Legal	12,500	Fewer tenants, less area	$4,000	$3,000
Management Fee/Professional Services	15,000	Allowance	$10,000	$7,000
Security	135,000	1 per shift, 24/7 $15.50/hour as required by ConnDOT. Same as Hartford.	$135,000	$135,000
Janitorial Expense	210,000	1 per shift, 24/7 $8.25/hour, half time supervisor at $35/hr (reduced area), plus fee	$130,000	$130,000
Window Cleaning	1,000	Relative size	$500	$400
Exterminator	2,000	Relative size	$1,000	$1,000
Elevator Maintenance	10,000	Elevator count	$5,000	$0
HVAC Maintenance	48,000	Window units	$3,000	$3,000
Plumbing & Electrical Maintenance	5,000	Relative size	$4,000	$3,500
Trash Removal	12,000	New London 1/3 of Hartford's size, and although rail volume is similar there are many more intercity bus passengers at Hartford	$6,000	$4,000
Snow Removal	16,500	Relative size	$2,000	$2,000
Repair/Maintenance/Janitorial Supplies	3,000	Relative size	$2,000	$1,500
Property Supplies	12,500	Relative size	$3,000	$3,000
General Supplies	5,000	Relative size	$2,000	$2,000
Electrical	297,500	Relative building size, smaller site	$90,000	$50,000
Heating Fuel	100,000	Relative size	$30,000	$15,000
Water/Sewer	30,000	1/3 size	$10,000	$10,000
General Liability Insurance	44,986	Fewer tenants, less area	$15,000	$15,000
Permits, Fees, Licenses	500	Allowance	$500	$500
Dues, Subscriptions	1,800	Fewer activities	$1,000	$1,000
Outside Contractors/Non-property Utilities	27,250			
Subtotal	1,114,536		$566,500	$476,900
Real Estate Taxes	168,176	According to Todd O'Donnell (11/2/10).	$30,000	$15,000
Estimated Annual Expenses	$1,282,712		**$596,500**	**$491,900**

The probable operating cost for the complete station building is of the order of magnitude of $596,500 per year. If one considers only the first floor or station level to be appropriate, the cost of operations is estimated to be of the order of magnitude of $491,900 per year. Note that these costs include real estate taxes of $30,000, which is lower than the $77,515 which would be computed based on the assessed valuation of $3,062,640 and a millage rate of 25.31 per thousand.[10]

Norman Benedict conducted an appraisal of Union Station for ConnDOT in 2006 and found that the operating expense on an annual basis was $256,843.[11] The projected New London Union Station costs are higher than are currently being spent due to ConnDOT requirements for 24/7 operation, cleanliness and security.

The Rail Governance Study Task 4.3—Financial Review provided data on rail station costs and expenses for Connecticut Rail Stations on the New Haven Line from the years 1996 to 2000.[12] A breakdown is provided of expenses by station. Total annual expenses in 2000 ranged from $3.2 million dollars for New Haven Station to $0.1 million dollars for East Norwalk Station. Costs vary due to the size of the station and volume of people served. New London Union Station's projected operating costs are in the middle of this range, which is appropriate given that it is smaller than New Haven, and larger than the other stations on the line.

4.6 Potential Lease Income for Union Station

Union Station is empty above the first floor, except for the offices of the Blackwell Company. However, the building has been fully leased in the past. The downstairs transportation space appears reasonably lively, and there is some likelihood that a news vendor and a coffee shop might be attracted to the space, particularly once Shore Line East service to New London has been increased. Hartford Union Station has succeeded in keeping most of its spaces rented, and has attracted a Subway and Dunkin Donuts to its transportation lobby. Rents at Hartford range from around $80 per square foot to less than $10 per square foot, with an average being around $17. Transportation area rents were on average around $31 per square foot while rents elsewhere in the building averaged $13 a square foot. Table 4-9 shows potential lease income assuming New London Union Station could rent its space at rates similar to Hartford Union Station.

Table 4-9: Potential Rental Income for Union Station

Area	Potential Rental Area (SF)	Yearly Revenues
Transportation Spaces Only	4,900	$ 124,730
Total Building	19,380	$ 312,970

As reported in the RITC Master Plan, Norman Benedict reported that a potential annual an income of $420,000 could be realized at Union Station when fully leased.[13] The amount shown in Table 4-9 is considerably more conservative, but may be more realistic in the short term, given that the building has been mostly empty for a long time.

[10] From on-line City Assessor's database, accessed 10/29/10.

[11] *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, by TranSystems for the Southeastern Connecticut Council of Governments, March 2010, page 8-7.

[12] *Rail Governance Study Task 4.3—Financial Review*, by Seward and Monde Certified Public Accountants, for the Connecticut Department of Transportation, p.14.

[13] *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, by TranSystems for the Southeastern Connecticut Council of Governments, March 2010, page 8-7.

5. Water Street Garage

5.1 Physical Description of the Water Street Garage

The Water Street Garage was built thirty years ago, and the two top levels added four or five year later. The garage is a 286,500+/- square foot (roughly123 feet wide by 477 feet long), five-level, concrete parking structure and a 675 square foot office on the first floor. The facility is a two-bay camelback helix, with one-way traffic flow.[14]

The garage has two main vehicular points of access, one from Atlantic Street at the northwest corner (accessing the second level) and one (a double entry) from Water Street on the first level. The main exit location is at the northeast corner onto Water Street, however, the second level Atlantic Street entry has been converted into a reversible entry/exit area.

Pedestrian access to the garage is from the Parade and from the ground floor on Water Street. There is also access to Atlantic Street at grade and across Atlantic Street via a pedestrian bridge to the READCO property. Pedestrian access between levels is provided by four stair towers located at the northwest, southwest, and southeast corners as well as at the center of the facility. The corner stairways are enclosed and are not exposed to the elements, while the center stairway is only protected by being within the garage footprint. The garage functions well from a parker's point of view and from that of a parker (as pedestrian), leaving or seeking his or her car.

The Water Street Garage is owned by the City of New London. It provides 906 parking spaces, serving rail commuters, ferry boat passengers and people working in the general commercial areas along the streets leading to the Parade, Union Station, and the waterfront. The garage manager reported that the 906 spaces are completely filled on two summer weekends and relatively full on the other summer weekends. The garage is less than half full in the winter months. Figure 5-1 shows the Water Street Entrance of the garage.

[14] "Condition Appraisal (Reevaluation), Water Street Garage, New London, Connecticut, prepared for the City of New London Office of Development and Planning by Desman Associates, Rocky Hill, Connecticut, Project #40-071117.00-2, October 2007.

Figure 5-1: Water Street Entrance to the Water Street Garage



5.2 Condition of the Water Street Garage

The condition of the Water Street Garage was assessed by Desman Associates in 2001 and again in 2007.[15] In the latter appraisal, a long list of repairs was required. Table 5-1 shows the recommended repairs, which totaled around $1,533,288 as Priority I repairs, $332,852 as Priority II, and $685,500 as Priority III. The total cost of that work was projected to be $2,551,640 in 2007 dollars. These costs did not include design or construction management fees, for which Desman recommended adding an additional 12 to 15 percent.

Desman was asked to restate the scope of what should be done in 2008. They produced a scope titled "Priority I and II Repairs," which is shown on Table 5-2. The cost of repairs came to $803,405 in 2008 dollars.

The RITC Master Plan also discussed the condition of the Water Street Garage:

> The Water Street Garage and Governor Winthrop Garage show evidence of deferred maintenance (in particular, deteriorating concrete), although some repairs are now underway at the Water Street Garage addressing elevators, security, lighting and signage and others are planned. In addition, the elevators at the Water Street Garage need repairs. (A new tower is being constructed at the south end of the garage with a new elevator as part of the Parade Project.) Surveys of users of the parking facilities conducted as part of this study indicated the most dissatisfaction was with the stairways and elevators at the garages, as well as handicapped access. Another concern expressed in the surveys at the parking facilities was about security features. There is a lack of security systems in the garages and parking lots, including closed-circuit TV and

[15] Condition Appraisal (Reevaluation) Water Street Parking Garage New London CT, by Desman Associates, October 2007.

blue light call boxes. The Water Street Garage will have security cameras installed as part of upcoming renovations.[16]

In the site visit of July 7, 2010, Dan Kopple of TranSystems observed that despite the previously cited reports, the general appearance of the garage interior and exterior would suggest that the garage is in reasonably good condition.

A conversation with Joseph Celli on November 3, 2010 indicated that much more progress has been made in completing the list of repairs called for by the Desman report. Two elevators are in working order, one paid through funding for the Parade Project. In addition, the garage has been equipped with security cameras.

One contract is currently underway focusing on outside surfaces and another will be let and underway in the spring of 2011. Once this work is complete, Mr. Celli said that all of the Priority I, II and III repairs will have been completed.

[16] *Regional Intermodal Transportation Center Master Plan and Efficiency Study*, by TranSystems for the Southeastern Connecticut Council of Governments, March 2010, page 6.

Table 5-1: Desman Associates Cost of Repairs to the Water Street Garage[17]

Work Description	Priority 1 Repairs 12 to 24 Months	Priority 2 Repairs 24 to 46 Months	Priority III Repairs 48 to 60 Months
A. Concrete Repair			
1 Concrete overlay repair	$91,375.00	$16,125.00	$0.00
2 Concrete overlay repair @ transition areas	$62,100.00		
3 Concrete stair tread and landing repair	$11,400.00		
4 Miscellaneous tee stem repair	$7,500.00		
5 Spandrel beam corbel repair:	$16,000.00		
6 Tee stem corbel repair			
a. Minor repairs	$5,000.00	$5,000.00	
b. Major repairs	$8,000.00		
7 Miscellaneous concrete curb repair	$18,560.00	$4,640.00	
8 Miscellaneous vertical & overhead concrete repair	$73,125.00	$24,375.00	$0.00
9 Miscellaneous façade repair (Exterior of southeast elevator)		$5,200.00	
10 Spandrel beam end repair:			
a. Minor repairs	$15,200.00		
b. Major repairs	$10,500.00		
11 Surface scaling repair		$25,920.00	
12 Concrete slab-on-grade repair		$8,000.00	
B. Handicap Ramp Installation			
1 Southeast stair/elevator (Interior)	$8,800.00		
2 Southwest stair/elevator (Interior)	$11,000.00		
3 Northwest stair/elevator (Exterior @ grade)	$2,600.00		
4 Northwest stair/elevator (Interior)	$11,000.00		
C. Miscellaneous Masonry/CMU Repair			
1 Misc. masonry/CMU replacement	$8,250.00		
2 Misc. re-pointing	$3,000.00		
D. Epoxy Injection			
	$13,250.00	$13,250.00	
E. Waterproofing Repair			
1 Crack repair	$72,930.00	$12,870.00	$0.00
2 Control/construction joint repair	$9,817.50	$1,732.50	$0.00
3 Cove joint installation			
4 Miscellaneous expansion joint repair			
a. Spot repair to two recently repaired expansion joints	$4,200.00		
b. Parking deck expansion joint	$55,800.00		
c. Stair/Elevator expansion joint	$43,725.00		
d. Southwest pedestrian bridge expansion joint	$2,475.00		
5 Penetrating concrete sealer application		$137,520.00	
6 Roofing Repair		$9,300.00	
F. Guardrail & Stair Handrail Repair			
1 Stair handrail repair/code update			$48,000.00
2 Exterior vehicle guardrail/handrail replacement/repair/code update			$374,400.00
G. Door & Window Repair & Replacement			
1 Misc. door repair/replacement	$10,300.00		
2 Rework aluminum storefront at stairs and elevator lobbies	$32,500.00		
3 Replace bowed plexiglass windows in Stair No. 1, 3 & 4 (Glass block optional)	$37,300.00		
H. Elevator Repair/Replacement & Code Update			
	$495,000.00		
J. Miscellaneous Electrical Work			
1 Miscellaneous electrical coordination work	$33,000.00	$11,000.00	$11,000.00
2 Emergency exit signage	$22,500.00		
3 Emergency lighting (partial coverage pedestrian egress areas)	$25,000.00		
4 Fire alarm system update			$28,900.00
5 Intercom system installation			$53,000.00
K. Plumbing/Mechanical System Repair			
1 Drain pipe flushing *(before & after deck repair)*	$7,200.00	$4,320.00	
2 Supplemental drain installation	$10,800.00		
3 Supplemental drain pipe installation & repair	$8,400.00		
4 Rework stairwell roof drains and risers	$9,800.00		
5 Garage wash-down facilities			
a. Non-pressurized garage wash-down facilities (hose bib installation)			$49,400.00
b. Pressurized garage washdown facilities *(additive cost)*			$36,000.00
6 Floor drain & trench drain grating replacement	$4,800.00		
L. Painting Work			
1 Parking stall and lane striping	$5,700.00	$11,400.00	
2 Miscellaneous metal surfaces	$29,000.00		
3 Architectural waterproof coating for roof level elevator & Stairwell enclosures	$8,900.00		
4 Miscellaneous interior vertical concrete & masonry surfaces (lobby areas only)	$24,600.00		
M. Miscellaneous Coordination Work			
	$34,000.00	$11,900.00	$22,500.00
N. Mobilization/Demobilization			
	$28,600.00	$13,700.00	$21,000.00
Subtotal	**1,393,887.50**	**$302,552.50**	**$623,200.00**
Construction Contingencies @ +/-10%	$139,400.00	$30,300.00	$62,300.00
Total Construction Costs w/ Contingencies	**$1,533,287.50**	**$332,852.50**	**$685,500.00**

[17] *Condition Appraisal (Reevaluation) Water Street Parking Garage New London CT*, by Desman Associates, Oct. 2007, p. 39.

Table 5-2: Desman Adjusted Repair Costs Water Street Priority I & II Repairs[18]

Work Description	Priority I & II Repairs
A. Concrete Repair	
1 Concrete overlay repair	$103,950.00
2 Concrete overlay repair @ transition areas	$61,525.00
3 Concrete stair tread and landing repair	$9,800.00
4 Miscellaneous tee stem repair	$6,250.00
5 Spandrel beam corbel repair:	$16,000.00
6 Tee stem corbel repair	
a. Minor repairs	$8,000.00
b. Major repairs	$8,000.00
7 Miscellaneous concrete curb repair	$14,500.00
8 Miscellaneous vertical & overhead concrete repair	$97,500.00
9 Miscellaneous façade repair (Exterior of southeast elevator)	$5,200
10 Spandrel beam end repair:	
a. Minor repairs	$12,000.00
b. Major repairs	$10,200.00
11 Surface scaling repair	$24,300.00
12 Concrete slab-on-grade repair	$6,000,00
B. Miscellaneous Masonry/CMU Repair	
1 Misc. masonry/CMU replacement	$8,250.00
2 Misc. re-pointing	$3,000.00
C. Epoxy Injection	
	$13,500.00
D. Waterproofing Repair	
1 Crack repair	$85,800.00
2 Control/construction joint repair	$11,550.00
3 Cove joint installation	$29,480.00
4 Miscellaneous expansion joint repair	
a. Spot repair to two recently repaired expansion joints	$4,200.00
b. Parking deck expansion joint	$55,800.00
c. Stair/Elevator expansion joint	$43,725.00
d. Southwest pedestrian bridge expansion joint	$2,475.00
E. Miscellaneous Electrical Work	
1 Miscellaneous electrical coordination work	$34,500.00
K. Plumbing/Mechanical System Repair	
1 Drain pipe flushing *(before & after deck repair)*	$7,200.00
2 Supplemental drain installation	$9,000.00
3 Supplemental drain pipe installation & repair	$7,000.00
4 Rework stairwell roof drains and risers	$9,800.00
6 Floor drain & trench drain grating replacement	$3,000.00
L. Painting Work	
1 Parking stall and lane striping	$5,700.00
2 Miscellaneous metal surfaces	$29,000.00
3 Architectural waterproof coating for roof level elevator & Stairwell enclosures	$8,900.00
4 Miscellaneous interior vertical concrete & masonry surfaces (lobby areas only)	$24,600.00
M. Miscellaneous Coordination Work	
	$18,900.00
N. Mobilization/Demobilization	
	$17,800.00
Subtotal	**$730,405.00**
Construction Contingencies @ +/-10%	$73,000.00
Total Construction Costs w/ Contingencies	**$803,405.00**

[18] *Adjusted Repair Costs Water Street Priority I & II Repairs*, by Desman Associates, 3/12/2008, p. 1 of 1.

5.3 Cost of Operation and Staffing Required for the Water Street Garage

The City of New London contracts with Propark, Inc. for management of the Water Street Garage and the Green & Tilley Parking Lot. The staffing for these facilities was provided by Joseph Celli, Manager of the garage for Propark.[19] Table 5-3 shows the staffing. Similar staffing is assumed to be sufficient for future planning, with a continuation of a professional management contract. One addition that should happen under ConnDOT management would be to connect the security system with Union Station so that there could be 24/7 surveillance of the garage, handled through Union Station.

Table 5-3: Staffing for the Water Street Garage

Function	Number of Persons	Comment
Manager	1	Full time manager
Assistant Manager/Cashier	1	Full time person
Maintenance	1	30 to 35 hours per week
Cashiers	3-4	10 to 30 hours per week depending upon season. There are no cashiers at the Green & Tilley Parking Lot

The annual budget of expenses for the Water Street Garage is presented in Table 5-4 as $309,535. Table 5-4 comes from the March 2010 record of the revenue and expenses of the New London Parking Commission's Water Street Garage.

Table 5-4: 2010 Budget for the Water Street Garage

Operating Expenses	Budget/Year
Management Fee	14,910
Payroll	158,615
Workman's Compensation	10,310
Benefits, Vacations, Sick Pay	10,310
Employer Federal Cont.	12,134
State Unemployment	6,418
Fed. Unemployment	1,269
Operating Supplies	2,000
Uniform Expense	1,080
Signs	8,000
Repairs and Maintenance	5,000
Electricity/Utility/Water	38,000
Telephone	2,000
Tickets/print	1,600
Garage liability insurance	14,434
Fire/theft insurance	4,655
Group health insurance	12,800
Snow plowing and sanding	4,000
Equipment purchase/maintenance	1,000
Miscellaneous	1,000
Total Expenses	309,535

[19] Phone conversation between Karla Karash and Joseph Celli on November 3, 2010.

The fiscal year of the Garage is July 1 to June 30 of the following year. The net profit for the year ending June 30, 2010 was $306,097 for both the Water Street Garage and the Green & Tilley Lot (see Table 5-5). That is confirmed on Propark's report to the Parking Commission[20].

Table 5-5: Net Profit for the Water Street Garage and Green & Tilley Lot

Month/Year	Net Profit
Jan 2009	760.80
Feb 2009	2222.17
Mar 2009	6,026.93
Apr 2009	8,460.02
May 2009	12,413.03
Jun 2009	23,066.50
Jul 2009	90,991.22
Aug 2009	83,736.53
Sep 2009	29,785.32
Oct 2009	8,057.02
Nov 2009	10,532.07
Dec 2009	2,689.64
Subtotal CY 2009	**$ 278,741.25**
Jan 2010	7,785.61
Feb 2010	4,269.79
Mar 2010	5,490.08
Apr 2010	10,489.94
May 2010	19,801.65
Jun 2010	32,468.16
Subtotal FY 2010	**$ 306,097.03**

According to Mr. Celli, the revenues from the Green and Tilley Lot go to the City of New London. But the rest of the net profit is currently being set aside as a reserve fund for the maintenance of the Water Street Garage. This is a relatively new policy for the garage, as in prior years, the net profits all went to the City. For that reason, the garage had much deferred maintenance. As of March 2010, 95 percent of the FY 2010 revenues were due to the Water Street Garage and 5 percent were due to the Green and Tilley Lot.

Table 5-5 is also instructive in that it shows the contrast between July—August full house and the December –January low period. Fifty seven percent (57%) of the annual profit is made in the July—August period when the ferry boat traffic is at its peak. In the fiscal year ending June 2010, December and January produced just 3.4% of the year's profit. Mr. Celli noted that through improved efficiencies and a program marketing the garage, they have been able to improve the garage's profitability substantially.

Overall revenues for FY 2010 can be estimated at around $616,000 including both the Water Street Garage and the Green & Tilley Lot.[21] Table 5-6 summarizes the revenues, expenses and net profits for the Water Street Garage, including an estimate of revenues that go to the City from the Green & Tilley Lot. Note that the actual expenses for 2010 were running less than the budgeted expenses.

[20] Memo from Joe Coppola, Propark to the Parking Commission Members, July 15, 2010, regarding June 2010—Monthly Financial Report.

[21] Mr. Celli was able to provide enough information to us so that we could determine revenues for all months except for April 2010, which was estimated. The expenses for April, May and June were also estimated.

One current issue for the garage is that revenues for the July and August of 2010 were running 25% behind July and August of 2009.[22] Thus it may be that concern with competition from other parking areas would prevent rate increases at the Water Street Garage.

Table 5-6: Revenues, Expenses and Profits for the Water Street Garage (FY 2010 estimates based on partial information)

Revenues	**Annual Amount ($)**
Green & Tilley Lot	$ 31,098
Water St. Garage	$ 585,453
Total Revenues	$ 616,551
Operating Expenses	
Expenses	$ 275,552
Sales Taxes	$ 34,902
Total Expenses and Taxes	$ 310,454
Profits	
Net Profit after Taxes	$ 306,097
Less Green & Tilley Rev	$ 31,098
Remaining	$ 274,999

The increase in service on the Shore Line East will bring new business to the Water Street Garage. Assume that of the 100 estimated new riders per day, 90 percent will require parking. Also assume that half of these will be monthly parkers and half will be daily parkers. The additional revenue after taxes could be around $93,000 after taxes for the Water Street Garage.[23] Table 5-7 shows this calculation.

Table 5-7: Additional Parking Revenue from Shore Line East

	Number of Additional Parkers	**Rates**	**Yearly Revenue**
Monthly Parkers	45	$ 52.00	$ 28,080
Daily Parkers	45	$ 6.00	$ 70,200
Gross Revenue			$ 98,280
Taxes on Revenue			$ 5,563
Net New Revenue			$ 92,717

[22] Referred to in the Sept. 16, 2010 Parking Commission Draft Meeting Minutes.

[23] In October 2010, the City of New London began a pilot program to waive the parking fee for daily parkers using Shore Line East in order to encourage ridership on this service. They also offer monthly Shore Line East ticket holders a $26.00/month introductory rate for the first 3 months.

6. Summary

Looking at Union Station and the Water Street Garage together, and assuming that the City of New London carries forward with its plans to contract out the remaining repair work for the Water Street Garage, only Union Station would require further capital investment at this point in time. The total amount for Union Station as a whole would be around $2.99 million, of which approximately $1 million would be for tenant fit-out. If only the transportation areas were of interest, the total cost would be around $1.1 million with $0.26 million for tenant fit out.

Operating cost for both Union Station and the Water Street Garage together would be around $907,000. Operating cost for the transportation spaces at Union Station and the Water Street Garage would be $802,000. Offsetting these expenses would be the parking revenues from the Water Street Garage and rental income at Union Station. The potential revenues from a fully rented Union Station plus Water Street Garage revenues (including additional parking revenues from Shore Line East parkers) could be around $995,000. If the transportation spaces only are considered, these revenues could be around $806,000. Thus revenues can exceed operating costs for these two facilities. Table 6-1 summarizes these numbers.

Table 6-1: Summary of Costs and Revenues

	Full Building	Transportation Spaces Only
Cost of Improvements and Deferred Maintenance		
Union Station		
General Areas	$ 2,006,995	$ 828,072
Tenant fit-out	$ 985,413	$ 255,673
Building Total	$ 2,992,407	$ 1,083,744
Operating Expenses Including Taxes		
Union Station	$ 596,500	$ 491,900
Water Street Garage	$ 310,454	$ 310,454
Total	$ 906,954	$ 802,354
Revenues		
Union Station	$ 316,560	$ 128,320
Water Street Garage	$ 585,453	$ 585,453
Additional SLE Parking Rev	$ 92,717	$ 92,717
Total	$ 994,730	$ 806,490
Revenues Less Operating Expenses	$ 87,776	$ 4,136

With the newly renovated Parade and plans for increased service on Shore Line East, there will be ever greater activity around Union Station. The RITC Master Plan calls for further improvement in the intermodal connections and passenger amenities in the area. In the midst of this, it also seems appropriate to renovate Union Station and develop it into a first class rail facility and it is believed that participation by ConnDOT either in ownership or in a managerial capacity provides the best opportunity for that to happen.



Boston Office
38 Chauncy Street
Suite 200
Boston, MA 02111
(857) 453-5450
Fax (857) 453-5451