

ENVIRONMENTAL IMPACT EVALUATION

Union Station Parking Garage New Haven, Connecticut

State Project No. 301-114

*Prepared in accordance with the
Connecticut Environmental Policy Act
Connecticut General Statute 22a-1a to 1h*



Prepared for:
Connecticut Department of Transportation

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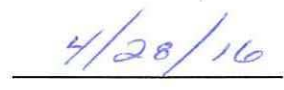

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LIST OF ABBREVIATIONS

ACM	Asbestos Containing Materials
ADA	Americans with Disabilities Act
AOEC	Area of Environmental Concern
ASCE	American Society of Civil Engineers
CAAA	Clean Air Act Amendments
C&D	State Plan of Conservation and Development
CCMA	Connecticut Coastal Management Act
CCO	Component Change-Out shop
CEPA	Connecticut Environmental Policy Act
CEQ	Council on Environmental Quality
CGS	Connecticut General Statutes
CFHA	Coastal Flood Hazard Area
CTDEEP	Connecticut Department of Energy & Environmental Protection (formerly Connecticut Department of Environmental Protection)
CTDOT	Connecticut Department of Transportation
CTDPH	Connecticut Department of Public Health
DFE	Design Flood Elevation
EIE	Environmental Impact Evaluation
EJ	Environmental Justice
EPA	U.S. Environmental Protection Agency
ETC	Estimated Time of Completion
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMC	Flood Management Certification
FTA	Federal Transit Administration
HAPs	Hazardous Air Pollutants
HCM	Highway Capacity Manual
HEI	Health Effects Institute
HLVs	Hazard Limiting Values
IPaC	Information for Planning and Conservation
IRIS	Integrated Risk Information System
ITE	Institute of Transportation Engineers
LEED	Leadership in Energy and Environmental Design
LEP	Limited English Proficiency
LOS	Level of Service

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LIST OF ABBREVIATIONS

MPO	Metropolitan Planning Organization
MSATs	Mobile Source Air Toxics
MTA	Metropolitan Transit Authority
NAAQS	National Ambient Air Quality Standards
NDDB	Natural Diversity Data Base
NHPA	New Haven Parking Authority
NLEV	National Low Emission Vehicle
NWI	National Wetlands Inventory
OLISP	Office of Long Island Sound Programs (CTDEEP)
OPM	Office of Policy and Management
OSTA	Office of the State Traffic Administration
PARCS	Parking Access and Revenue Control System
PM	Particulate Matter
PNH	Park New Haven
POCD	Plan of Conservation and Development
Res DEC	Residential Direct Exposure Criteria
RCRA	Resource Conservation and Recovery Act
RSRs	Remediation Standard Regulations
SCGC	Southern Connecticut Gas Company
SCRCOG	South Central Regional Council of Governments
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
STIP	State Transportation Improvement Program
SVOCs	Semi-Volatile Organic Compounds
TASC	Toxic Air Study in Connecticut
TCDD	Transportation Center Design District
TDM	Travel Demand Management
TIS	Traffic Impact Study
TOD	Transit Oriented Development
UI	United Illuminating
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish & Wildlife Service
UST	Underground Storage Tank
ULI	Urban Land Institute
VMT	Vehicle-Miles Travelled
WPCA	Water Pollution Control Authority

EXECUTIVE SUMMARY

Introduction

The Connecticut Department of Transportation (CTDOT) is proposing the construction of a new parking garage, with approximately 1,000 spaces and seven levels, for Union Station in the City of New Haven, Connecticut. The new garage will be constructed north of Union Station on State of Connecticut property that is currently occupied by a 260-space surface parking lot. The existing parking lot and adjacent parking garage are currently operated by New Haven Parking Authority (NHPA), doing business as Park New Haven (PNH), under a lease agreement with CTDOT.

Because this project will involve the construction of new parking facilities for more than 200 vehicles, and will be financed either in whole or in part with State funds, it is subject to the Connecticut Environmental Policy Act (CEPA). This document is an Environmental Impact Evaluation (EIE) that has been prepared in accordance with the requirements of CEPA, as amended by Public Act 02-121, and where applicable, Sections 22a-1a-1 to 22a-1a-12, inclusive, of the Regulations of Connecticut State Agencies.

The EIE describes the Purpose and Need for the construction of a new parking garage (the *Proposed Action*), along with the alternatives being considered, and evaluates the direct, indirect, and cumulative impacts associated with the Proposed Action, as well as any adverse environmental effects and proposed mitigation measures.

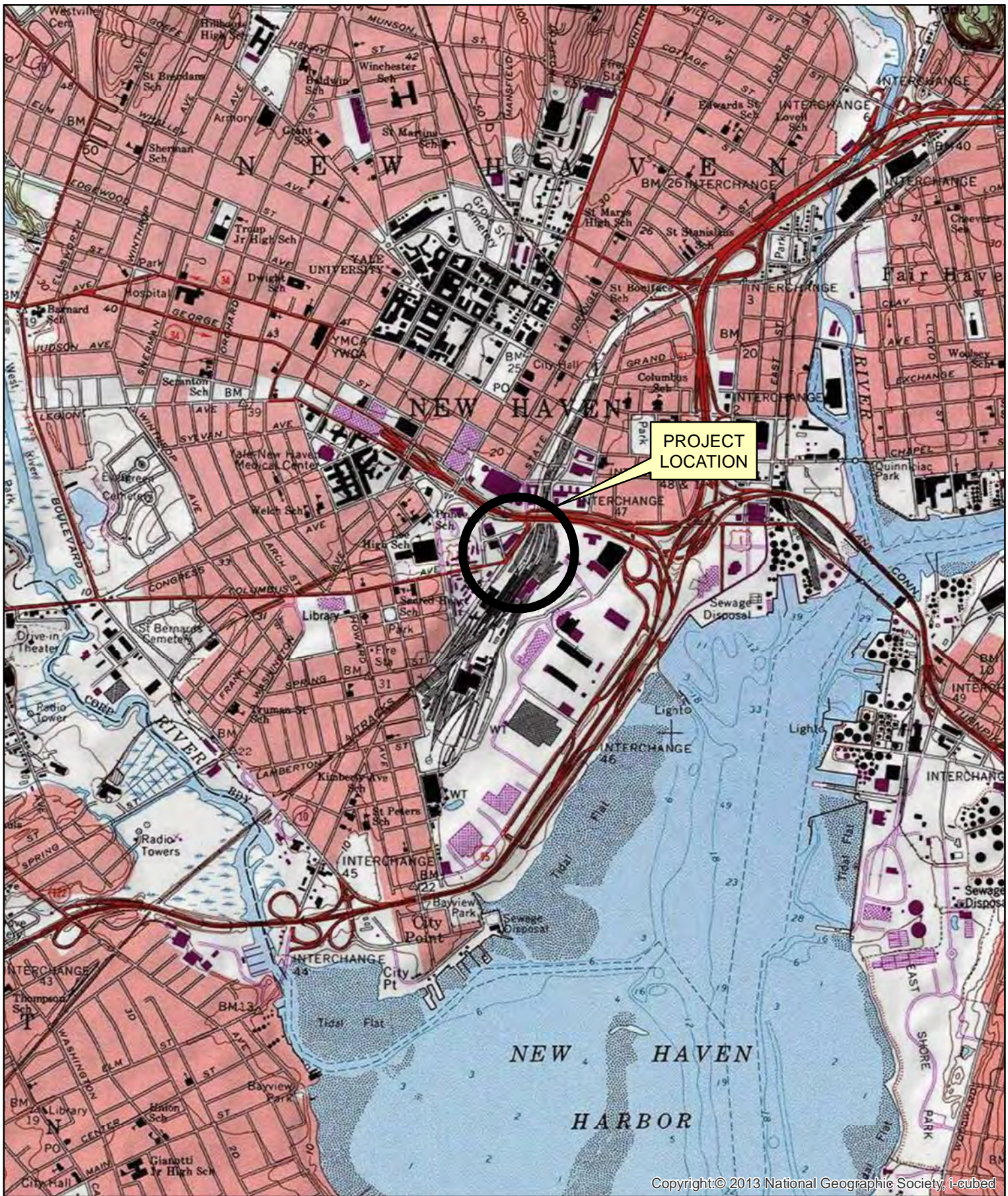
CTDOT is the sponsoring agency for the Proposed Action and this EIE.

Project Description

The Proposed Action (or *project*) involves the construction of a new multi-level parking garage for Union Station in the City of New Haven, CT. See Figure ES-1 for a Project Location Map. The proposed garage will accommodate approximately 1,000 parking spaces on seven parking levels. The proposed garage site is located north of Union Station on State of Connecticut property currently occupied by a 260-space surface parking lot. The project will effectively increase parking supply at Union Station by approximately 740 parking spaces.

The proposed garage site is bounded on the south by the existing Union Station parking garage, on the east by the New Haven railyard, on the west by Union Avenue, and on the north by a United Illuminating power substation. The broader project area also includes the existing Union Station parking garage and Union Avenue between Church Street South and Water Street.

Vehicular access to the proposed parking garage will be provided from Union Avenue from the south via the driveway serving the existing garage and parking lot, and from the north via a new driveway connection. The proposed project will link the new parking garage to the existing garage with a pedestrian connection on each level, and with a vehicular bridge connection on two levels. Elevators and stairs will provide pedestrian connectivity between levels and to the ground level where a new accessible pedestrian pathway through the existing garage will enhance connectivity between the new garage and the station building.



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0 1,000 2,000 Feet

Source: The University of Connecticut Libraries' Map and Geographic Information Center (MAGIC), USGS

New Haven

Project Location Map
 UNION STATION PARKING GARAGE EIE
 Connecticut Department of Transportation
 State Project No. 301-114
 New Haven, Connecticut

FIGURE:
 ES-1

The proposed project will also be designed with consideration to:

- Enhancing intermodal connectivity to/from Union Avenue, and to/from the existing station facilities.
- Incorporating new central management office space.
- Renovating existing space(s) in the original garage if feasible within the overall budget of the project, or as possible future project(s).
- Providing architectural and aesthetic treatments that respect the historic significance, scale, and aesthetic quality of the existing station building.
- Minimizing flood potential in the new garage and new office space. The project area is located within the 100-year floodplain and will require elevating the ground level of the proposed facilities above the design flood elevation.
- Accommodating a connection to a future pedestrian bridge to be implemented under a separate State project. The pedestrian bridge will ultimately link the station parking complex (comprised of the new parking garage and existing parking garage) to four existing train platforms and a second pedestrian bridge connecting to the new Component Change-out (CCO) facility on the east (south) side of the New Haven railyard.

Background

Union Station in New Haven is a regional intermodal transportation hub for passenger rail, intercity bus, local bus, and local shuttle and livery services. Specific services operating from Union Station include:

- Amtrak regional rail service operating between New Haven and New York City, Hartford and Boston
- CTDOT's Shore Line East commuter rail service operating from New London to New Haven and points south/west.
- Metro-North Railroad commuter train service operating along the New Haven Line between New Haven and points south/west to Grand Central Terminal in New York City
- Greyhound and Peter Pan intercity bus services
- CTTransit local bus service
- CTTransit Downtown shuttle service circulating around satellite parking locations, New Haven Green, and Union Station.

Also planned for early 2018, Amtrak's service to and from Union Station will include the New Haven-Hartford-Springfield commuter rail improvements.

As a regional transportation hub, Union Station is central to commuter, business, and recreational trips into and out of Greater New Haven and the south central region. For outbound patrons arriving by automobile, parking facilities at Union Station include an 884-space parking garage that was constructed immediately north of the station in 1985; and a 260-space surface parking lot located immediately north of the garage. These parking facilities are currently operated by NHPA, doing business as PNH, under a lease agreement with CTDOT. The current lease will expire in June 30, 2017.

Parking occupancy at Union Station is near or at 100% during the typical weekday commuter periods. Overflow parking is currently directed to Temple Street Garage, also operated by Park New Haven. Other private parking facilities promoted as satellite parking for Union Station include Gateway Garage at 54 Meadow Street operated by LAZ Parking, the Coliseum Lot at 275 South Orange Street operated by Propark America, and Lot O located at George Street and State Street operated by Propark America.

Since the late 1990s, both CTDOT and the City of New Haven have undertaken several initiatives to study, plan for, or implement new parking facilities at Union Station to address growing rail ridership and associated parking demands. Additionally, the City of New Haven and PNH have also undertaken several initiatives to study and plan for other transportation enhancements and economic development opportunities in and around Union Station.

CTDOT's latest effort (the Union Station Parking Garage Design and Environmental Assessment) contemplated the construction of a new parking garage located immediately south of Union Station. This effort was in progress when work was stopped in 2012 due in part to concerns about conflicts between the proposed garage operations and the adjacent taxi staging, intercity bus and passenger pick-up/drop-off activities in front of the station.

Purpose and Need (Justification for the Action)

The purpose of the Proposed Action is to expand the availability of parking at Union Station while addressing the future parking needs for the station to the greatest extent practicable. By providing for expanded parking within the limits of an existing surface parking lot on State of Connecticut property at Union Station, CTDOT's Proposed Action will also:

- Minimize new impacts to natural, cultural, and other community resources in the Union Station area.
- Help maintain and enhance convenient access to commuter and regional rail services for both local and regional customers.
- Require no significant investment by the City of New Haven to implement; at the same time will not preclude City plans for expanded retail and service opportunities within Union Station and private TOD investment in the Union Station district.

The primary need for the Proposed Action is insufficient parking supply at Union Station to address parking demand for Union Station. Specifically:

- The current typical weekday parking utilization at Union Station is 100% of the total parking supply of 1,144 spaces (884-space parking garage and 260-space parking lot).
- The current demand for Union Station parking permits is 166 people (as of November 2015), based on the waiting list maintained by PNH.
- The satellite parking supply for Union Station is diminishing and this supply is not controlled by the State of Connecticut.
- Parking analyses (Walker Parking Consultants, 2010) for the Union Station TOD study documented that new parking demand associated with ridership growth at Union Station is approximately 294 spaces or more by 2025.

If it is assumed the parking need at Union Station includes current parking demand in the existing garage and surface parking lot, wait-listed monthly permit requests, to-be displaced Coliseum Lot parkers, and forecasted growth, then the need for parking spaces is 1,804 spaces or more. If it is assumed that 90% parking utilization is desirable for efficient parking operations, then the needed parking supply is approximately 2,000 spaces.

The Proposed Action will yield a total parking supply of approximately 1,884 spaces (1,000 new spaces with 884 existing spaces) at Union Station to address the anticipated parking need.

Although the total parking supply yielded by the Proposed Action does not completely meet the anticipated need, 1,000 spaces provided in the new garage is the practical maximum number of spaces that can be accommodated on the proposed project site. Additionally, it is anticipated the future unmet parking demand at Union Station in New Haven could be offset in part by:

- Increased bicycling, walking, and transit trips to the station
- Increased commuter use of rideshare/carpool/vanpool services and incentive programs
- Enhanced rail service, parking, and access at nearby commuter rail stations

Alternatives Considered

No-Action

The No-Action Alternative generally involves maintaining the existing parking garage and surface parking lot at Union Station in New Haven. This alternative provides no new parking structures and no customer-based improvements to increase the capacity and functionality of the existing parking garage.

Additionally, the No-Action Alternative does not satisfy the stated purpose of the project which is to expand the availability of parking at Union Station to address future parking demands to the greatest extent practicable.

The No-Action Alternative is included in the EIE as a baseline comparison for the Build Alternative, as required by CEPA regulations.

Build Alternative (Proposed Action)

The Build Alternative generally involves the construction of a new multi-level parking garage for approximately 1,000 parking spaces on State of Connecticut property located immediately north of the existing parking garage and currently occupied by a 260-space surface parking lot for Union Station. The Build Alternative will create approximately 740 new parking spaces for the station.

Details of the Proposed Action, which will be subject to refinement and modification during subsequent design phases of the project, currently include the following:

- The proposed parking garage superstructure will be constructed of precast concrete and will be confined to the footprint of the existing surface parking lot.
- Approximately 1,000 parking spaces will be provided on seven parking levels (the ground floor level and six supported levels or stories). Of these spaces, a minimum of 20 spaces will be handicap-accessible. Additional spaces will be equipped for electric vehicle (EV) charging, or will be designed for conversion to EV charging as needed in the future.

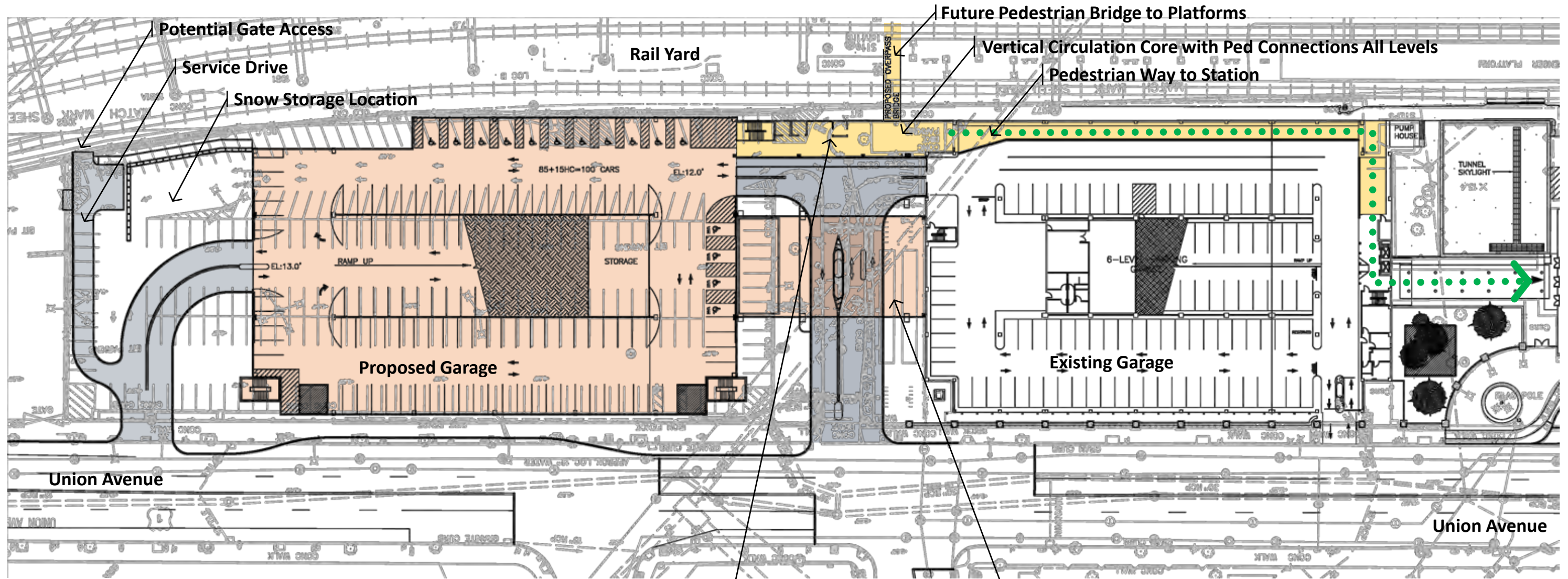
- The parking layout includes three parking bays. The center bay will be ramped between levels. The drive aisles will be bi-directional on the ramps and in the outer bays on the ground floor level much like the existing garage operated when first opened.
- The ground floor will be raised to an elevation of 12 feet (relative to the NAVD 88 vertical datum). This elevation is approximately three feet or more above the existing ground elevations on the site.
- The shared access driveway to the existing garage and parking lot will be reconstructed to achieve the required site elevations for the new garage and to provide an additional lane/gate to accommodate increased volumes of exiting and/or entering traffic.
- A new access driveway will be constructed from Union Avenue to the north end of the proposed garage. The driveway will include a spur for an access drive to the rear property line where relocated gate access to the railyard will be provided.
- Snow storage will be provided off the north end of the proposed garage.
- Vehicular bridge connections between the proposed and existing garages will be provided on the third and fifth levels. These bridge connections can be sufficiently sized for bi-directional traffic with adequate space for perpendicular parking on both sides of the drive aisle.
- A large elevator/stair core will span the entire gap between the proposed and existing garages in order to: provide pedestrian connections between the garages on all levels; provide access to stairs and elevators from all levels in both garages; and provide access to the future pedestrian bridge (under a separate project) that will ultimately provide access to the train platforms from both garages on the fourth level.
- There will be three elevators in the core to provide access between all levels. One of these will be a front-to-back elevator to accommodate the accessible route between the fourth level and an elevated landing to the future pedestrian bridge that will lead to existing train platforms and the CCO facility.
- The stairs and elevators will be situated north of the future pedestrian bridge location to facilitate phased construction of the core and to accommodate construction of the separately contracted bridge from the Union Avenue side of the railyard, if necessary.
- Parking in the existing garage will be modified to accommodate an accessible pedestrian pathway that enhances connectivity between the new garage, the proposed elevator/stair core, and the station building.
- Access stair towers will be provided in the corners of the proposed garage fronting Union Avenue.
- New central management office space will be provided just south of the proposed garage and beneath the bridge connections between the garages. Existing management, security, and storage spaces located in the existing garage may also be renovated.
- A bus pull-off will be provided on Union Avenue along the frontage of the proposed garage with adequate space for up to three typical 40-ft buses. A passenger waiting area with full-length canopy, direct stair access to the proposed garage, and amenities is being considered along the frontage of the proposed garage to complement the bus pull-off.

- The structural façades visible from Union Avenue will incorporate brick, glass, and architectural concrete finishes designed to balance the structural and architectural composition of the historic Union Station building.
- Lighting improvements along the frontage of the existing garage/Union Avenue sidewalk in conjunction with new lighting for the proposed garage; this would enhance the pedestrian accommodations along the entire parking/station complex.

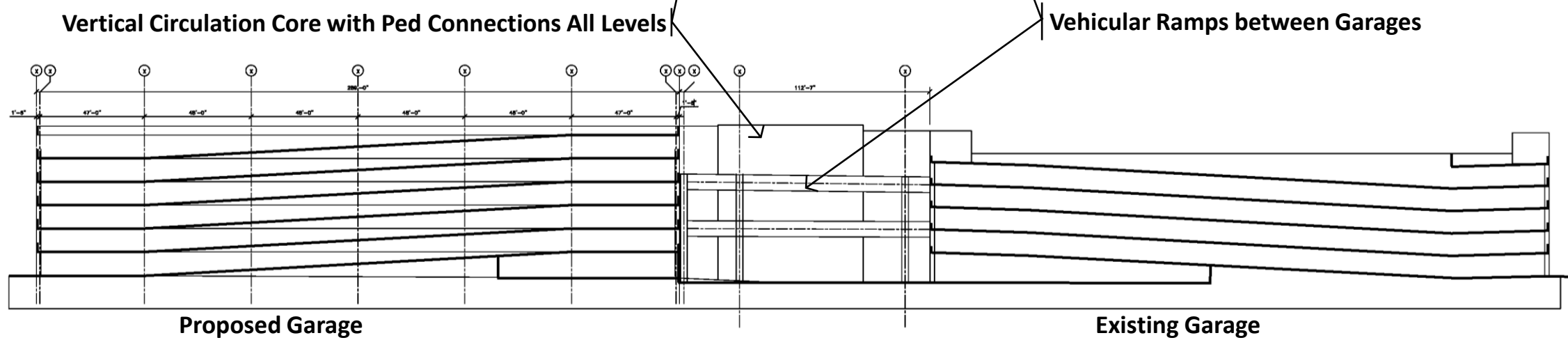
Other potential design and program opportunities of the Proposed Action that CTDOT considered during development of the alternative design concepts, and which may ultimately be incorporated in the proposed project pending further investigation, include:

- A new taxi staging area provided within the existing garage and adjacent to the proposed pedestrian walkway. This staging area would not replace taxi service in front of the station, but could help distribute the taxi activity and reduce some of the conflict among uses in front of the station.
- A second bus pull-off area along the frontage of the existing garage to accommodate additional buses proximate to the station.

A plan view of the Proposed Action is provided on Figure ES-2.



- SEVENTH LEVEL
EL. 77'-6"
- SIXTH LEVEL
EL. 67'-0"
- FIFTH LEVEL
EL. 56'-6"
- FOURTH LEVEL
EL. 46'-0"
- THIRD LEVEL
EL. 35'-6"
- SECOND LEVEL
EL. 24'-9"
- GROUND LEVEL
EL. 13'-0"



- SIXTH LEVEL
EL. 64'-9"
- FOURTH LEVEL
EL. 54'-9"
- FOURTH LEVEL
EL. 44'-9"
- THIRD LEVEL
EL. 34'-9"
- SECOND LEVEL
EL. 24'-9"
- GROUND LEVEL
EL. 14'-0"

Summary Of Mitigation Measures

The Proposed Action is anticipated to have some adverse impacts as compared to the No-Action Alternative. The impacts will be mitigated using the measures as described in this document and summarized in Table ES-1.

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Land Use, Zoning and Local & Regional Development Plans	<ul style="list-style-type: none"> • No adverse Land Use impacts. Modest beneficial impacts anticipated from improved conditions for development. • No Zoning impacts. • Consistent with Local & Regional Development Plans. 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.1.3</i>		
Consistency with State Plan	<ul style="list-style-type: none"> • Consistent with State Plan of Conservation and Development. 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.2.3</i>		
Air Quality	<ul style="list-style-type: none"> • No adverse Air Quality impacts. 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.3.3</i>		
Noise	<ul style="list-style-type: none"> • No Noise impacts, except during the construction period (see below). 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.4.3</i>		
Local Transit Considerations	<ul style="list-style-type: none"> • No adverse Transit impacts. Modest beneficial impacts anticipated from improved conditions for transit. 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.5.3</i>		

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Traffic and Parking	<ul style="list-style-type: none"> • Vehicular delay is anticipated to increase at some study intersections. However, no additional locations are anticipated to operate at overall LOS F. • Beneficial impacts on parking with overall increased number of spaces. 	<ul style="list-style-type: none"> • Proposed mitigation consists of signal timing/phasing improvements at the following intersections: <ul style="list-style-type: none"> ○ Church Street South & Columbus Avenue ○ Church Street South & Union Avenue ○ Union Avenue & Columbus Avenue/Meadow Street ○ Union Avenue/State Street and Water Street
<i>Section 3.6.3</i>		
Pedestrian and Bicycle Considerations	<ul style="list-style-type: none"> • Modest beneficial impacts for pedestrians anticipated from overall improved access. Existing bike parking, storage & amenities will be impacted. 	<ul style="list-style-type: none"> • Bicycle parking, storage & amenities will be replaced. Proposed Action will be designed in consideration of future plans for the area.
<i>Section 3.7.3</i>		
Cultural Resources	<ul style="list-style-type: none"> • No Cultural Resource Impacts. 	<ul style="list-style-type: none"> • As design plans advance, they will be provided to SHPO for review. If construction activities uncover the remains of a structure and/or archaeological resource that has the potential to be historically significant, CTDOT's archaeologist will be called and the resource will be evaluated. Consultation with SHPO will be initiated as deemed appropriate by the qualified archaeologist.
<i>Section 3.8.3</i>		
Visual Resources	<ul style="list-style-type: none"> • No Visual Resource Impacts. 	<ul style="list-style-type: none"> • CTDOT will seek to reuse a portion of the decorative metal fencing currently located along Union Avenue in the site design of the Proposed Action.
<i>Section 3.9.3</i>		

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Socioeconomic Resources	<ul style="list-style-type: none"> No adverse impacts on population, housing trends, housing choice, or EJ populations. Beneficial impacts from increase in commuter parking. 	<ul style="list-style-type: none"> Due to the presence of a substantive percentage of Hispanic and LEP populations in the study area, CTDOT will provide meeting materials in Spanish and translation in Spanish, if requested, for the public involvement activities
<i>Section 3.10.3</i>		
Safety and Security	<ul style="list-style-type: none"> No Safety and Security impacts. 	<ul style="list-style-type: none"> No mitigation warranted or proposed.
<i>Section 3.11.3</i>		
Agricultural Land and Soils	<ul style="list-style-type: none"> No Agricultural Land and Soils impacts. 	<ul style="list-style-type: none"> No mitigation warranted or proposed.
<i>Section 3.12.3</i>		
Endangered, Threatened, or Special Concern Species or Habitats	<ul style="list-style-type: none"> Clearing of several sycamore trees containing cavities, which may provide suitable breeding/nesting habitat for rare avian species. 	<ul style="list-style-type: none"> Implementation of time-of-year restriction on construction. Clear trees in winter-fall months.
<i>Section 3.13.3</i>		
Water Resources and Water Quality	<ul style="list-style-type: none"> Potential adverse impacts to water quality from stormwater discharge. 	<ul style="list-style-type: none"> Stormwater pollution control plan and flood management certification will be completed. Runoff will be collected and treated in appropriate systems.
<i>Section 3.14.3</i>		
Wetlands	<ul style="list-style-type: none"> No Wetlands Impacts. 	<ul style="list-style-type: none"> No mitigation warranted or proposed.
<i>Section 3.15.3</i>		
Hydrology & Floodplains	<ul style="list-style-type: none"> Minor adverse impacts anticipated to the 100-year floodplain/Coastal Flood Hazard Area. 	<ul style="list-style-type: none"> Minimize the volume of fill required on-site to achieve the design flood elevation.
<i>Section 3.16.3</i>		
Wild & Scenic Rivers, Navigable Waters, and Coastal Resources	<ul style="list-style-type: none"> No Wild & Scenic River or Navigable Waters Impacts. Minor adverse impacts anticipated to the coastal floodplain (CFHA). 	<ul style="list-style-type: none"> Minimize the volume of fill required on-site to achieve the design flood elevation.
<i>Section 3.17.3</i>		

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Public Utilities and Services	<ul style="list-style-type: none"> Increased demand (relative to existing) on public utilities. 	<ul style="list-style-type: none"> New utility service connections for electric, water, sewer and telephone. Potential new connection for gas.
<i>Section 3.18.3</i>		
Energy Requirements	<ul style="list-style-type: none"> No Energy Impacts. 	<ul style="list-style-type: none"> CTDOT will incorporate energy-efficient lighting and equipment into the design of the Proposed Action to help reduce the net increase in energy consumption associated with the new parking structure and systems.
<i>Section 3.19.3</i>		
Pesticides, Toxic or Hazardous Materials	<ul style="list-style-type: none"> No adverse impacts from solid waste, pesticides or toxic materials. Potentially contaminated soils on-site. Temporary handling of toxic & hazardous waste during the construction period (see below). 	<ul style="list-style-type: none"> Sampling, analysis and proper disposal of potentially contaminated soil. Excavated soils will be managed consistent with <i>General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer)</i>.
<i>Section 3.20.3</i>		
Soils and Geology	<ul style="list-style-type: none"> No Soils and Geology Impacts. 	<ul style="list-style-type: none"> No mitigation warranted or proposed.
<i>Section 3.21.3</i>		
Construction-Related		
<i>Section 3.23</i>		
Traffic	<ul style="list-style-type: none"> Disruption in normal traffic flow and circulation patterns, resulting in minor travel delays. 	<ul style="list-style-type: none"> Implement traffic management plan including construction phasing and parking (see below). Establish haul routes and staging areas. Define permissible hours of work and detour routes. Post detour wayfinding signage. Direct traffic with uniformed traffic-persons or other traffic controls.

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Parking	<ul style="list-style-type: none"> • Impacts from loss of 260-space parking lot. • Parking in existing garage impacted on limited basis for construction of garage connections. • On-street parking impacted for short durations due to lane closures, construction vehicle staging, and utility work. 	<ul style="list-style-type: none"> • Provide temporary parking accommodations. • Implement a public information program to notify public about major project progress and changes to parking availability.
Pedestrians & Bicyclists	<ul style="list-style-type: none"> • Temporary closures of existing sidewalks on Union Avenue. • Displacement of bicycle parking facilities at Union Station. 	<ul style="list-style-type: none"> • Re-route pedestrian traffic, with wayfinding signage. • Provide temporary bicycle parking facilities.
Transit	<ul style="list-style-type: none"> • Temporary disruptions to bus service. 	<ul style="list-style-type: none"> • Coordinate with transit service providers to minimize impacts.
Air Quality	<ul style="list-style-type: none"> • Localized impacts from diesel-powered construction vehicle exhaust, motor vehicle exhaust from traffic congestion, and fugitive dust emissions. 	<ul style="list-style-type: none"> • Manage emissions through proper operation and maintenance of construction equipment. • Prohibit excessive idling of engines. • Manage fugitive dust control through best management practices.
Noise	<ul style="list-style-type: none"> • Minor adverse impacts from construction noise are anticipated. 	<ul style="list-style-type: none"> • Limit duration and intensity of noise by using mufflers. Daytime construction will be maximized and nighttime construction activities will be limited to the greatest extent practicable.

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Stormwater and Water Quality	<ul style="list-style-type: none"> • Potential water quality degradation from stormwater discharge. 	<ul style="list-style-type: none"> • Implement stormwater pollution control plan developed in accordance with 2002 Connecticut Guidelines for Erosion and Sedimentation Control (CTDEEP, 2002). • Prevent and minimize sedimentation, siltation, and/or pollution of nearby surface water bodies and off-site wetlands. • Design in conformance with the Connecticut Stormwater Quality Manual (CTDEEP, 2004).
Hazardous Materials	<ul style="list-style-type: none"> • Potential impacts from construction machinery fuels, maintenance fluids, paints, solvents, and other hazardous/toxic materials. • Project area is considered an “Area of Environmental Concern” 	<ul style="list-style-type: none"> • Task 310 Plans, Specifications and Estimate will be required to assess the construction-related activities associated with the project and to ensure compliance with all applicable local, state, and federal laws, regulations, and guidance. • Potentially contaminated soils will be managed consistent with <i>General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer)</i>.
Safety	<ul style="list-style-type: none"> • Avoid and minimize impacts to construction workers and the public. 	<ul style="list-style-type: none"> • Adhere to CTDOT’s policy on work zone safety.
Utilities	<ul style="list-style-type: none"> • Temporary utility outages anticipated to connect new services, install new or relocate infrastructure. 	<ul style="list-style-type: none"> • Coordinate outages with utility providers and communicate plans with the City and affected public.

Conclusion

The Proposed Action will meet the purpose and need of the project by providing additional parking supply available at Union Station. The Proposed Action has the potential to result in adverse environmental impacts. However, with mitigation measures in place as identified in Table ES-1, no significant impacts are anticipated to remain as a result of the Proposed Action.

Comments received during the public review period for the EIE will be considered in making a record of decision on the Proposed Action.

Public Involvement

A Notice of Scoping for the Proposed Action was published in the Council on Environmental Quality (CEQ) Environmental Monitor on November 17, 2015 (presented in Appendix A), and a Public Scoping meeting was held at the Union Station Balcony, Union Avenue, New Haven on December 15, 2015. Public comments received during the 45-day comment period generally included concerns about creating intermodal opportunities at Union Station by including a bus depot in the Proposed Action.

A summary of the Public Scoping meeting and agency comment review letters are included in Appendix A.

A Public Hearing is scheduled for 6:00 pm on June 6, 2016 at Gateway Community College, 20 Church Street, New Haven, CT 06510. The public is encouraged to submit any comments on the EIE on or before July 5, 2016 to the attention of:

Mr. Mark W. Alexander
Transportation Assistant Planning Director
Bureau of Policy and Planning
Connecticut Department of Transportation
2800 Berlin Turnpike
Newington, CT 06131
dot.environmentalplanning@ct.gov

1. INTRODUCTION

The Connecticut Department of Transportation (CTDOT) is proposing the construction of a new parking garage, with approximately 1,000 spaces and seven levels, for Union Station in the City of New Haven, Connecticut. The new garage will be constructed north of Union Station on State of Connecticut property that is currently occupied by a 260-space surface parking lot. The existing parking lot and adjacent parking garage are currently operated by New Haven Parking Authority (NHPA), doing business as Park New Haven (PNH), under a lease agreement with CTDOT.

Because this project will involve the construction of new parking facilities for more than 200 vehicles, and will be financed either in whole or in part with State funds, it is subject to the Connecticut Environmental Policy Act (CEPA). This document is an Environmental Impact Evaluation (EIE) that has been prepared in accordance with the requirements of CEPA, as amended by Public Act 02-121, and where applicable, Sections 22a-1a-1 to 22a-1a-12, inclusive, of the Regulations of Connecticut State Agencies.

The EIE describes the Purpose and Need for the construction of a new parking garage (the *Proposed Action*), along with the alternatives being considered, and evaluates the direct, indirect, and cumulative impacts associated with the Proposed Action, as well as any adverse environmental effects and proposed mitigation measures. CTDOT is the sponsoring agency for the Proposed Action and this EIE.

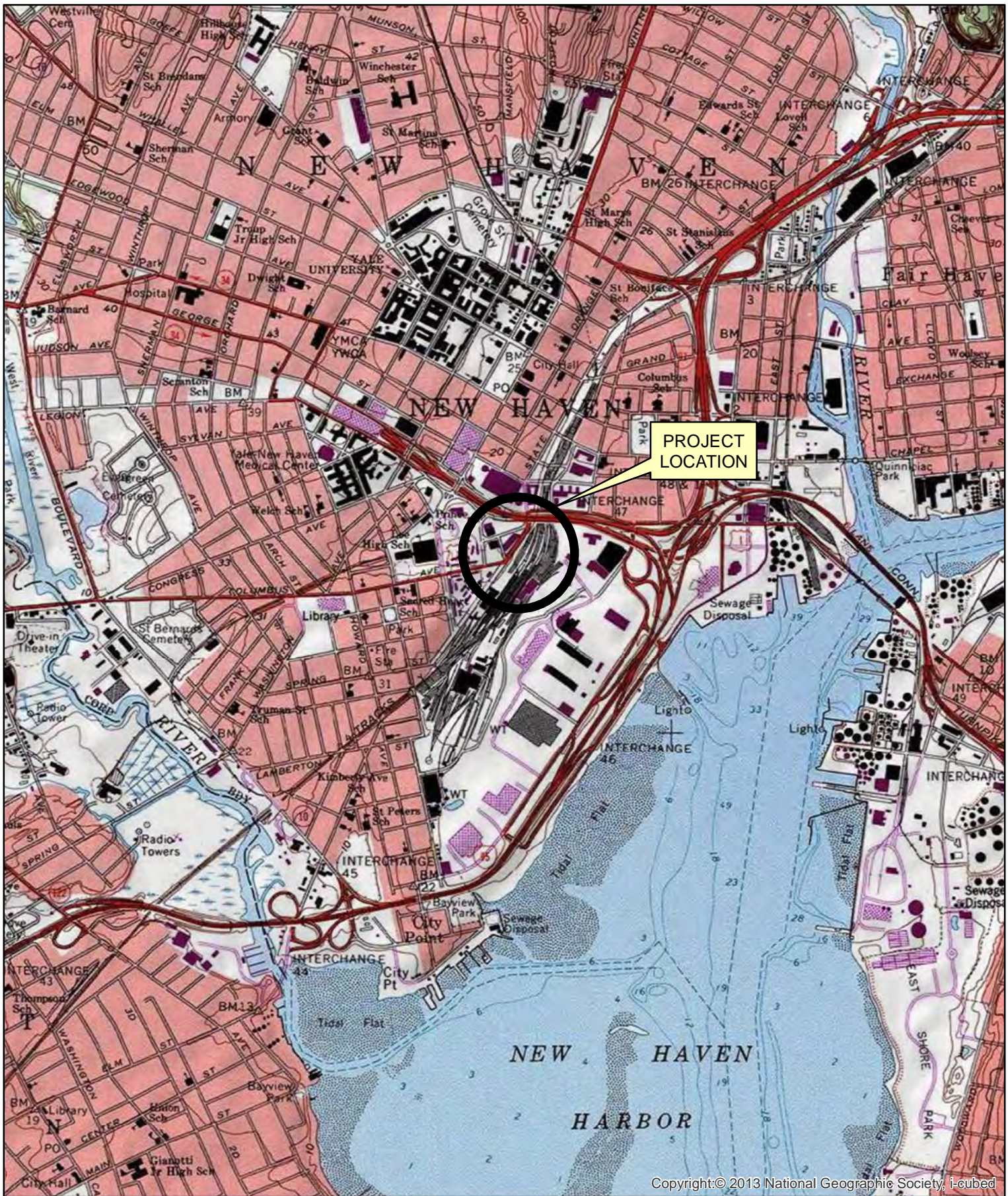
1.1 Project Description

The Proposed Action (or *project*) involves the construction of a new multi-level parking garage for Union Station in the City of New Haven, CT. See Figure 1.1-1 for a Project Location Map. The proposed garage will accommodate approximately 1,000 parking spaces on seven parking levels. The proposed garage site is located north of Union Station on State of Connecticut property currently occupied by a 260-space surface parking lot. The project will effectively increase parking supply at Union Station by approximately 740 parking spaces.

The proposed garage site is bounded on the south by the existing Union Station parking garage, on the east by the New Haven railyard, on the west by Union Avenue, and on the north by a United Illuminating power substation. The broader project area also includes the existing Union Station parking garage and Union Avenue between Church Street South and Water Street.

Vehicular access to the proposed parking garage will be provided from Union Avenue from the south via the driveway serving the existing garage and parking lot, and from the north via a new driveway connection.

The proposed project will link the new parking garage to the existing garage with a pedestrian connection on each level, and with a vehicular bridge connection on two levels. Elevators and stairs will provide pedestrian connectivity between levels and to the ground level where a new accessible pedestrian pathway through the existing garage will enhance connectivity between the new garage and the station building.



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0 1,000 2,000 Feet

Source: The University of Connecticut Libraries' Map and Geographic Information Center (MAGIC), USGS

New Haven

Project Location Map
 UNION STATION PARKING GARAGE EIE
 Connecticut Department of Transportation
 State Project No. 301-114
 New Haven, Connecticut

FIGURE:
 1.1 - 1

The proposed project will also be designed with consideration to:

- Enhancing intermodal connectivity to/from Union Avenue, and to/from the existing station facilities.
- Incorporating new central management office space.
- Renovating existing space(s) in the original garage if feasible within the overall budget of the project, or as possible future project(s).
- Providing architectural and aesthetic treatments that respect the historic significance, scale, and aesthetic quality of the existing station building.
- Minimizing flood potential in the new garage and new office space. The project area is located within the 100-year floodplain and will require elevating the ground level of the proposed facilities above the design flood elevation.
- Accommodating a connection to a future pedestrian bridge to be implemented under a separate State project. The pedestrian bridge will ultimately link the station parking complex (comprised of the new parking garage and existing parking garage) to four existing train platforms and a second pedestrian bridge connecting to the new Component Change-out (CCO) facility on the east (south) side of the New Haven railyard.

1.2 Background

Union Station in New Haven is a regional intermodal transportation hub for passenger rail, intercity bus, local bus, and local shuttle and livery services. Specific services operating from Union Station include:

- Amtrak regional rail service operating between New Haven and New York City, Hartford and Boston
- CTDOT's Shore Line East commuter rail service operating from New London to New Haven and points south/west.
- Metro-North Railroad commuter train service operating along the New Haven Line between New Haven and points south/west to Grand Central Terminal in New York City
- Greyhound and Peter Pan intercity bus services
- CTTransit local bus service
- CTTransit Downtown shuttle service circulating around satellite parking locations, New Haven Green, and Union Station.

Also planned for early 2018, Amtrak's service to and from Union Station will include the New Haven-Hartford-Springfield commuter rail improvements.

As a regional transportation hub, Union Station is central to commuter, business, and recreational trips into and out of Greater New Haven and the south central region. For outbound patrons arriving by automobile, parking facilities at Union Station include an 884-space parking garage that was constructed immediately north of the station in 1985; and a 260-space surface parking lot located immediately north of the garage. These parking facilities are currently operated by NHPA, doing business as PNH, under a lease agreement with CTDOT. The current lease will expire in June 30, 2017.

Parking occupancy at Union Station is near or at 100% during the typical weekday commuter periods. Overflow parking is currently directed to Temple Street Garage, also operated by Park New Haven. Other private parking facilities promoted as satellite parking for Union Station include Gateway Garage at 54 Meadow Street operated by LAZ Parking, the Coliseum Lot at 275 South Orange Street operated by Propark America, and Lot O located at George Street and State Street operated by Propark America.

Since the late 1990s, both CTDOT and the City of New Haven have undertaken several initiatives to study, plan for, or implement new parking facilities at Union Station to address growing rail ridership and associated parking demands. The notable initiatives include:

- *Request for Proposals for Designing, Financing, Construction & Management of a Multi-level 900 Space Public Parking Facility at Union Station Transportation Center* by CTDOT, 1998
- Union Station Parking Garage Schematic Design, by AECOM/DMJM for CTDOT, 2006
- *New Haven Union Station Transit Oriented Development Study* by Jones Lang LaSalle for City of New Haven, 2008
- Union Station Parking Garage Design and Environmental Assessment, State Project No. 301-114, by Medina Consultants for CTDOT, 2012
- *Union Station Transportation Center Transit-Oriented Development (TOD) Plan* by W-ZHA for City of New Haven, 2013

In addition to the *New Haven Union Station TOD Study* and *Union Station Transportation Center TOD Plan*, the City of New Haven and PNH have also undertaken several initiatives to study and plan for other transportation enhancements and economic development opportunities in and around Union Station. The notable initiatives include:

- *Hill-to-Downtown Community Plan* by Goody Clancy et al. for City of New Haven, 2013
- *Union Station Access Workshop* by Park New Haven, 2015
- *Mobility Study* by Nelson/Nygaard for Park New Haven, 2015

CTDOT's latest effort (the Union Station Parking Garage Design and Environmental Assessment) contemplated the construction of a new parking garage located immediately south of Union Station. This effort was in progress when work was stopped in 2012 due in part to concerns about conflicts between the proposed garage operations and the adjacent taxi staging, intercity bus and passenger pick-up/drop-off activities in front of the station.

1.3 Purpose and Need (Justification for the Action)

The purpose of the Proposed Action is to expand the availability of parking at Union Station while addressing the future parking needs for the station to the greatest extent practicable. By providing for expanded parking within the limits of an existing surface parking lot on State of Connecticut property at Union Station, CTDOT's Proposed Action will also:

- Minimize new impacts to natural, cultural, and other community resources in the Union Station area.
- Help maintain and enhance convenient access to commuter and regional rail services for both local and regional customers.

- Require no significant investment by the City of New Haven to implement; at the same time will not preclude City plans for expanded retail and service opportunities within Union Station and private TOD investment in the Union Station district.

The primary need for the Proposed Action is insufficient parking supply at Union Station to address parking demand for Union Station. Specifically:

- The current typical weekday parking utilization at Union Station is 100% of the total parking supply of 1,144 spaces (884-space parking garage and 260-space parking lot).
- The current demand for Union Station parking permits is 166 people (as of November 2015), based on the waiting list maintained by PNH.
- The satellite parking supply for Union Station is diminishing and this supply is not controlled by the State of Connecticut. Specifically:
 - The planned redevelopment of the Coliseum Lot site will eliminate 471 surface parking spaces that are located within walking distance of Union Station. Although the Coliseum Lot is promoted as Union Station parking by Propark America, the number of Union Station patrons who park in this location and who will be displaced when the site is redeveloped is unknown. If it is assumed that 50% of the current weekday parking demand is associated with Union Station, then approximately 200 daily parkers will be displaced when the site is redeveloped.
 - The parking supply at Temple Street Garage, which is operated by PNH, is 1,235 spaces. In 2012, available weekday parking supply was 459 spaces, based on utilization of approximately 63%. In 2014, available parking supply was 295 spaces, based on utilization of approximately 76%. A contributing factor to the decreasing availability of parking at Temple Street Garage between 2012 and 2014 is likely the opening of Gateway Community College in Downtown New Haven in late 2013. Prior to opening the college, PNH displaced 568 monthly permit holders to accommodate the City's lease of 700 parking spaces to the college. Although the Temple Street Garage is a satellite parking facility for Union Station, the number of Union Station patrons who park in this location and who may be displaced in the future due to growing demand and competition for parking in Downtown New Haven is unknown. Conservatively, it is assumed that Temple Street Garage will have insufficient supply to accommodate any of the future parking demand for Union Station.
- Parking analyses (Walker Parking Consultants, 2010) for the Union Station TOD study documented that new parking demand associated with ridership growth at Union Station is approximately 294 spaces or more by 2025.

If it is assumed the parking need at Union Station includes current parking demand in the existing garage and surface parking lot, wait-listed monthly permit requests, to-be displaced Coliseum Lot parkers, and forecasted growth, then the need for parking spaces is 1,804 spaces or more. If it is assumed that 90% parking utilization is desirable for efficient parking operations, then the needed parking supply is approximately 2,000 spaces.

The Proposed Action will yield a total parking supply of approximately 1,884 spaces (1,000 new spaces with 884 existing spaces) at Union Station to address the anticipated parking need. Although the total parking supply yielded by the Proposed Action does not completely meet the anticipated need, 1,000 spaces provided in the new garage is the practical maximum number of

spaces that can be accommodated on the proposed project site. Additionally, it is anticipated the future unmet parking demand at Union Station in New Haven could be offset in part by:

- Increased bicycling, walking, and transit trips to the station
- Increased commuter use of rideshare/carpool/vanpool services and incentive programs
- Enhanced rail service, parking, and access at nearby commuter rail stations

1.4 Public Participation and Agency Coordination

A Notice of Scoping for the Proposed Action was published in the Council on Environmental Quality (CEQ) Environmental Monitor on November 17, 2015 (presented in Appendix A), and a Public Scoping meeting was held at the Union Station Balcony, Union Avenue, New Haven on December 15, 2015. Public comments received during the 45-day comment period generally included concerns about creating intermodal opportunities at Union Station by including a bus depot in the Proposed Action.

A summary of the Public Scoping meeting and agency comment review letters are included in Appendix A.

A Public Hearing is scheduled for 6:00 pm on June 6, 2016 at Gateway Community College, 20 Church Street, New Haven, CT 06510. The public is encouraged to submit any comments on the EIE on or before July 5, 2016.

Additional agency coordination during preparation of the EIE included outreach to various federal and state resource agencies to obtain necessary resource data, meeting with Connecticut SHPO staff, and contact with officials from the City of New Haven.

2. ALTERNATIVES CONSIDERED

2.1 No-Action

The No-Action Alternative generally involves maintaining the existing parking garage and surface parking lot at Union Station in New Haven. This alternative provides no new parking structures and no customer-based improvements to increase the capacity and functionality of the existing parking garage.

Additionally, the No-Action Alternative does not satisfy the stated purpose of the project which is to expand the availability of parking at Union Station to address future parking demands to the greatest extent practicable.

The No-Action Alternative is included in the EIE as a baseline comparison for the Build Alternative, as required by CEPA regulations.

2.2 Build Alternative (Proposed Action)

The Build Alternative generally involves the construction of a new multi-level parking garage for approximately 1,000 parking spaces on State of Connecticut property located immediately north of the existing parking garage and currently occupied by a 260-space surface parking lot for Union Station. The Build Alternative will create approximately 740 new parking spaces for the station. During project planning and concept development, CTDOT considered several design concepts that each fall within a subset of this Build Alternative. For the purposes of the EIE, CTDOT's preferred design concept is presented as the Proposed Action. The other design concepts are summarized in Section 2.2.1.

Details of the Proposed Action, which will be subject to refinement and modification during subsequent design phases of the project, currently include the following:

- The proposed parking garage superstructure will be constructed of precast concrete and will be confined to the footprint of the existing surface parking lot.
- Approximately 1,000 parking spaces will be provided on seven parking levels (the ground floor level and six supported levels or stories). Of these spaces, a minimum of 20 spaces will be handicap-accessible. Additional spaces will be equipped for electric vehicle (EV) charging, or will be designed for conversion to EV charging as needed in the future.
- The parking layout includes three parking bays. The center bay will be ramped between levels. The drive aisles will be bi-directional on the ramps and in the outer bays on the ground floor level much like the existing garage operated when first opened.
- The ground floor will be raised to an elevation of 12 feet (relative to the NAVD 88 vertical datum). This elevation is approximately three feet or more above the existing ground elevations on the site.
- The shared access driveway to the existing garage and parking lot will be reconstructed to achieve the required site elevations for the new garage and to provide an additional lane/gate to accommodate increased volumes of exiting and/or entering traffic.

- A new access driveway will be constructed from Union Avenue to the north end of the proposed garage. The driveway will include a spur for an access drive to the rear property line where relocated gate access to the railyard will be provided.
- Snow storage will be provided off the north end of the proposed garage.
- Vehicular bridge connections between the proposed and existing garages will be provided on the third and fifth levels. These bridge connections can be sufficiently sized for bi-directional traffic with adequate space for perpendicular parking on both sides of the drive aisle.
- A large elevator/stair core will span the entire gap between the proposed and existing garages in order to: provide pedestrian connections between the garages on all levels; provide access to stairs and elevators from all levels in both garages; and provide access to the future pedestrian bridge (under a separate project) that will ultimately provide access to the train platforms from both garages on the fourth level.
- There will be three elevators in the core to provide access between all levels. One of these will be a front-to-back elevator to accommodate the accessible route between the fourth level and an elevated landing to the future pedestrian bridge that will lead to existing train platforms and the CCO facility.
- The stairs and elevators will be situated north of the future pedestrian bridge location to facilitate phased construction of the core and to accommodate construction of the separately contracted bridge from the Union Avenue side of the railyard, if necessary.
- Parking in the existing garage will be modified to accommodate an accessible pedestrian pathway that enhances connectivity between the new garage, the proposed elevator/stair core, and the station building.
- Access stair towers will be provided in the corners of the proposed garage fronting Union Avenue.
- New central management office space will be provided just south of the proposed garage and beneath the bridge connections between the garages. Existing management, security, and storage spaces located in the existing garage may also be renovated.
- A bus pull-off will be provided on Union Avenue along the frontage of the proposed garage with adequate space for up to three typical 40-ft buses. A passenger waiting area with full-length canopy, direct stair access to the proposed garage, and amenities is being considered along the frontage of the proposed garage to complement the bus pull-off.
- The structural façades visible from Union Avenue will incorporate brick, glass, and architectural concrete finishes designed to balance the structural and architectural composition of the historic Union Station building.
- Lighting improvements along the frontage of the existing garage/Union Avenue sidewalk in conjunction with new lighting for the proposed garage; this would enhance the pedestrian accommodations along the entire parking/station complex.

Other potential design and program opportunities of the Proposed Action that CTDOT considered during development of the alternative design concepts, and which may ultimately be incorporated in the proposed project pending further investigation, include:

- A new taxi staging area provided within the existing garage and adjacent to the proposed pedestrian walkway. This staging area would not replace taxi service in front of the station, but could help distribute the taxi activity and reduce some of the conflict among uses in front of the station.
- A second bus pull-off area along the frontage of the existing garage to accommodate additional buses proximate to the station.

A plan view of the Proposed Action is provided on Figure 2.2-1.

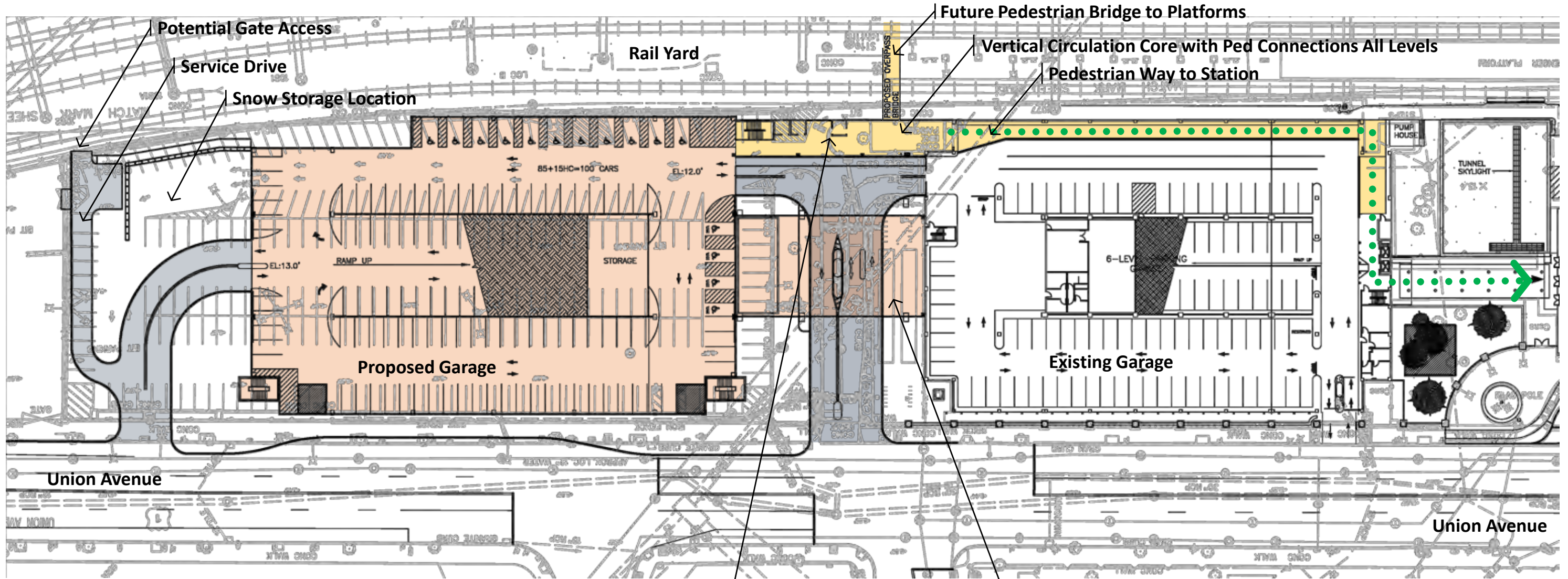
2.2.1 Other Design Concepts

CTDOT also considered the following design concepts during planning and concept development, though these concepts were determined to be undesirable, impractical, or otherwise not preferred to the Proposed Action presented in the previous section:

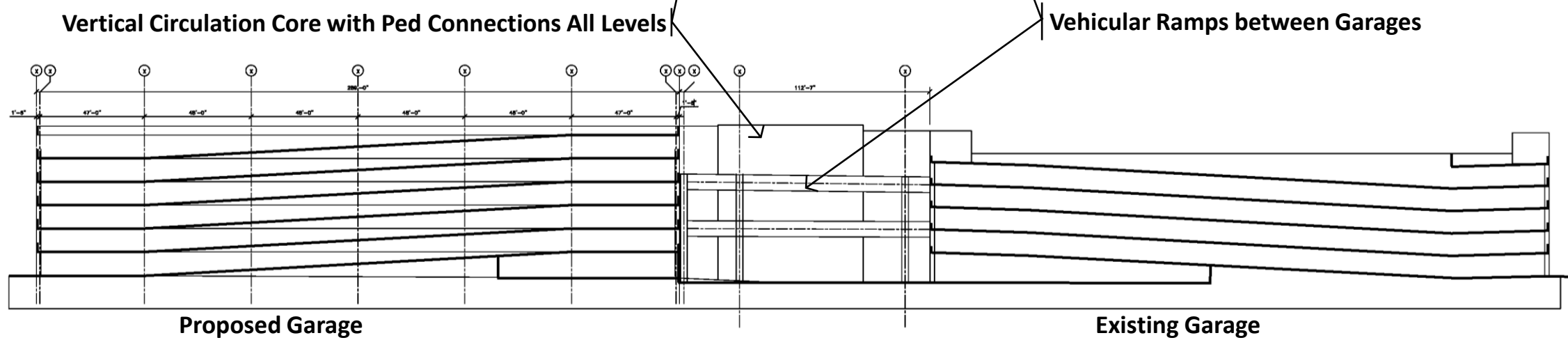
- A parking garage alternative occupying a larger footprint with 1,000 spaces on six parking levels (one fewer than the Proposed Action) was evaluated but subsequently dismissed from further consideration by CTDOT. The larger footprint would require the garage to be situated closer to the existing garage such that its foundations would have directly impacted the existing 66-inch brick storm sewer located on the project site. The “large footprint” alternative would therefore require costly relocation of the storm sewer or costly structural measures to avoid an impact.
- An alternative to accommodate bus circulation and docking on the ground floor of the proposed garage was explored. The conceptual layout illustrated sufficient space to dock up to three buses in the east bay of the proposed garage. The buses would share the main driveway with automobiles entering the garages and bus movements would generally conflict and inhibit automobile access to/from the ground level and the ramp to the upper levels. Buses entering the complex in this location would also be in direct conflict with pedestrian activity in the core and between garages and would compromise the space in the garage that is most desirable for handicap-accessible parking.

Furthermore, buses require additional clearance which would increase the elevations of the supported garage levels. Because CTDOT has committed to the State Historic Preservation Office (SHPO) that the proposed structure will have the same general massing and size as the existing parking garage, the additional clearance would limit the proposed structure to six levels and less than 850 parking spaces.

Bus accommodations would thereby measurably reduce the parking capacity of the proposed structure to the detriment of achieving the stated purpose of the project. Additionally, providing for buses within the garage created conflicts and safety concerns that were deemed to be undesirable and easily mitigated by providing space for a bus pull-off on Union Avenue and proximate to the garage.



- SEVENTH LEVEL
EL. 77'-6"
- SIXTH LEVEL
EL. 67'-0"
- FIFTH LEVEL
EL. 56'-6"
- FOURTH LEVEL
EL. 46'-0"
- THIRD LEVEL
EL. 35'-6"
- SECOND LEVEL
EL. 24'-9"
- GROUND LEVEL
EL. 13'-0"



- SIXTH LEVEL
EL. 64'-9"
- FOURTH LEVEL
EL. 54'-9"
- FOURTH LEVEL
EL. 44'-9"
- THIRD LEVEL
EL. 34'-9"
- SECOND LEVEL
EL. 24'-9"
- GROUND LEVEL
EL. 14'-0"

3. EXISTING ENVIRONMENT AND IMPACT EVALUATION

3.1 Land Use, Zoning and Local and Regional Development Plans

3.1.1 Existing Conditions

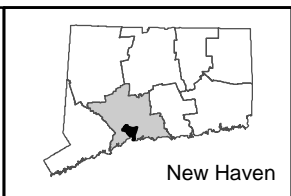
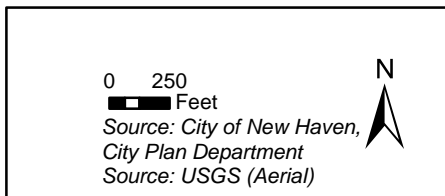
3.1.1.1 Land Use

The study area relative to land use considerations is generally within ½-mile from the project site. The project site is located on the southeast edge of the Downtown in the City of New Haven. It lies adjacent to the Long Wharf area which is situated along the shoreline of Long Island Sound, and west of Interstate 95 (I-95). Land uses surrounding Union Station and the project site are mixed. As shown on Figure 3.1-1, land use is categorized as mostly transportation, utilities, and warehousing or manufacturing east and south of the project site. Long Wharf Park provides a band of open space along the river east of the project site as well. To the west of the project site, land uses are a mix of multi-family residential with some office space and public facilities, such as hospitals or institutions. The core of Downtown New Haven lies immediately north of the study area and is a typical city center with a complex mix of uses, public spaces, and notably includes Yale University.

The regional transit-oriented development (TOD) study for the South Central Regional Council of Governments (SCRCOG; 2015) documented the proportion of land uses within ½ mile of Union Station. It found that:

“Of the 574 acres within the 1/2-mile walkshed, 199 acres (35%) are occupied by transportation infrastructure such as roadways and the rail line and station site. 126 acres (22%) are occupied by built-out residential land uses, municipal and institutional land uses occupy 55 acres (10%), and dedicated open space occupies 8 acres (1%). The total remaining parcel area, being commercial, industrial, vacant or underutilized residential land is 186 acres.”

The City of New Haven has organized the City for land use planning purposes in terms of cohesive neighborhoods. The project study area lies mostly within the Long Wharf neighborhood. It extends into three surrounding neighborhoods somewhat including the Hill, Downtown, and Wooster Square/Mill River.



Land Use
 UNION STATION PARKING GARAGE EIE
 Connecticut Department of Transportation
 State Project No. 301-114
 New Haven, Connecticut

FIGURE 3.1-1

3.1.1.2 Zoning

Zoning in the study area was derived from the City of New Haven Zoning Map as updated to September of 2014. As shown in Figure 3.1-2, the study area is zoned as follows:

- BA – General Business
- BE – Wholesale and Distribution
- RM2 -High Middle Density (residential)
- IL – Light Industrial
- PARK – Park or Open Space
- PDD – Planned Development District

The project site itself is zoned BE, intended for use for wholesale and distribution industrial activity, including related transportation facilities.

3.1.1.3 Local and Regional Development Plans

The City of New Haven has been actively planning for the study area and its surroundings in recent years. Local plans relevant to the Proposed Action include the following:

- *2003 Comprehensive Plan*: This plan's overall focus is on creating sustainable development in a “fully-developed urban landscape”. The plan articulates specific City policies for housing and neighborhood preservation, economic development, and transportation. Special emphasis is placed on the City's waterfront and downtown areas. They are particularly valued as both local and regional destinations and are areas which should have their strong identity preserved and strengthened. Recommendations in the Plan are organized in one of three directives which serve as guiding principles for future development of all scales. The plan recommends promoting TOD in the area encompassing Union Station. It acknowledges the parking deficit at the station and discourages new surface parking. Additionally, the plan highlights the need to improve and increase transit access within the City and as a connection to Union Station, in particular.
- *New Haven Future Framework, 2008*: This plan lays out a concept for the location of future development throughout the City. It targets the area of Union Station for infill. It includes the Union Station Garage as a part of a more detailed future development scenario for the area.
- *Union Station Transit-Oriented Development Study, February, 2008*: This study offers a preliminary conceptual design for TOD at and surrounding Union Station. It looks to leverage anticipated growth in ridership demand to encourage TOD, in particular to revitalize complementary retail at Union Station, and to create private development opportunities to enhance the area around the station. This plan recommends two garages including a “South Garage” as one of the programming elements in its concept plan.
- *Union Station Transportation Center, Transit-Oriented Development Plan, September 2013*: This follow-up TOD plan builds on the 2008 concept, and consists of a re-merchandising strategy for Union Station and a TOD strategy for Union Station. The TOD Strategy calls for development of a new parking garage north of the existing parking garage; one which would contain ground-level store space along Union Avenue.



Legend

- Project Area (1/2 Mile Buffer)
- Project Site

RESIDENTIAL DISTRICTS

- RH-1 Special High Density
- RH-2 General High Density
- RM-1 Low Middle Density
- RM-2 High Middle Density
- RO Residence-Office
- RS-1 Special Single Family
- RS-2 General Single Family

BUSINESS DISTRICTS

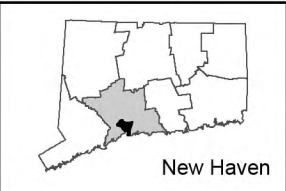
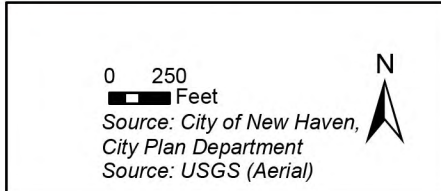
- BA General Business
- BA-1 Neighborhood Center / Mixed Use
- BB Automotive Sales
- BC Marine Commercial
- BD Central Business
- BD-1 Central Business / Residential
- BD-2 Central Business / Medical
- BD-3 Central Business / Mixed Use
- BE Wholesale and Distribution

INDUSTRIAL DISTRICTS

- IH Heavy Industrial
- IL Light Industrial
- IM Light Industrial/Marine

OTHER DISTRICTS

- PDD Planned Development District
- PDU Planned Development Unit
- PARK Park
- CEMETERY Cemetry
- AIRPORT Airport
- CAM Coastal Area Management



Zoning

UNION STATION PARKING GARAGE EIE
Connecticut Department of Transportation
State Project No. 301-114
New Haven, Connecticut

FIGURE
3.1-2

- *Comprehensive Plan Update, City of New Haven, Databook, June 2013*: The Comprehensive Plan Update focuses primarily on the physical development of the city. This document is a compilation of data and analyses on the city's socio-economic and housing trends and existing conditions. It lays the foundation for the Vision 2025 document discussed below.
- *New Haven Vision 2025 (November 2015)*: This document serves as the update to the 2003 comprehensive plan. The future land use vision reflected in this plan with respect to the Union Station area shows the desire to keep the station site remaining a transportation use. The adjacent area west of the station should be mostly for 'Downtown Residential Mixed Use,' while the area east of the station should be 'Large Scale Industrial Commercial Mixed Use'.
- *Livable Cities Initiative*: The Livable Cities Initiative is a neighborhood focused program intended to enhance local quality of life. Program components include:
 - Enforcement of the city's housing code and public space requirements.
 - Design and implementation of housing programs to support high quality, affordable, and energy efficient housing opportunities.
 - Education and awareness relative to neighborhood concerns.
 - Design and implementation of public improvements and programs to promote safe, healthy, and more attractive neighborhoods.

The following Hill to Downtown Planning Initiative was undertaken through collaborative efforts under this program.

- *Hill to Downtown Planning Initiative/ Hill to Downtown Community Plan, November, 2014*: This planning initiative and plan looks to strengthen connections between the Hill Neighborhood and the Downtown. It also aims to revitalize the neighborhood with higher density residential development in a mixed-use environment combined with neighborhood retail and services. The goal is to encourage infill development while protecting the character of the neighborhood. The concept plan for the neighborhood focuses in part on creating complete streets for the arterial roads that connect the area to the Downtown and Union Station in particular. It also cross-references the Union Station TOD Plan as supportive and complementary to the Hill to Downtown Planning Initiative. The plan also includes concepts for Union Avenue that incorporate traffic calming elements and multimodal accommodations.

The South Central Planning region which is composed of 15 communities includes the City of New Haven. The SCRCOG undertakes land use and transportation system planning for the region. Relevant plans for this analysis include:

- *Plan of Conservation and Development, South Central Region, July, 2009 (Regional POCD)*: The Regional POCD is a long range land use planning document that evaluates existing conditions and identifies physical areas for growth and preservation. The Regional POCD policies focus on fostering strong regional centers (which includes Downtown New Haven), broadening the region's housing choices, and responsible growth. The overarching land use policy is to "focus development in the region's existing developed corridors that have transportation, employment and utility infrastructure while conserving the region's land areas that are integral for maintaining the region's agricultural heritage, drinking water supply, and unique natural resources including lands

adjacent to Long Island Sound.” The Regional POCD acknowledges the significance of Union Station as an essential connection within the region as well as beyond its borders. One goal of the Plan mentions the station by stating that we should: “Continue to support the expansion of the area’s rail service including the transit parking areas for Milford and Union Station and station expansion along MetroNorth, Shoreline East and the New Haven/Hartford/Springfield line.”

- *Transit Oriented Development Opportunities for the South Central Region* (June, 2015): This plan notes that Union Station is a transportation hub connecting several rail lines, both existing and proposed. It also notes that State Street Station and Union Station in New Haven have the largest populations within a half-mile radius of the five station areas studied. Strategies recommended to encourage TOD around the stations included TOD supportive zoning, fostering economic development, enhancing station area connectivity, and providing the necessary infrastructure.

3.1.2 Impact Evaluation

3.1.2.1 Land Use

Under the No-Action Alternative, the site would remain in its current use and no change would occur. There would be no change to access to surrounding development. However, parking issues associated with the station would grow and could lead to more commuter parking in the surrounding neighborhoods on the street. This could be disruptive to sense of place and access within the neighborhood, resulting in an adverse impact.

Under the Proposed Action, the garage would be located on a site already used for parking. The parking use would become more intense, but would not encroach physically on surrounding land uses. As such, no change to compatibility with surrounding land uses is anticipated. The Proposed Action is expected to have a limited beneficial impact on access to development within the surrounding neighborhood. With the new garage, the availability of convenient parking at Union Station would discourage commuter parking on the surrounding street system somewhat. While there would be more traffic on Union Avenue from the proposed garage during peak hours, this is not anticipated to be substantial enough to cause traffic to find alternate routes through the adjacent neighborhoods. The proposed project would, therefore, have no adverse effect on ease of access to land and quality of everyday life there.

3.1.2.2 Zoning

The existing use of the project site is consistent with the current zoning designation for the parcel. The No-Action Alternative would be a continuation of existing conditions and thus consistency with zoning would continue. The Proposed Action would maintain the current use. As such, no conflict with zoning would occur.

3.1.2.3 Local and Regional Development Plans

The No-Action Alternative would not respond to existing parking shortages at Union Station or support any City of New Haven planning efforts for the area. Therefore, the No-Action Alternative would not support implementation of local and regional land use plans and initiatives.

The Proposed Action would be consistent with local and regional land use plans and initiatives in that it would support the continued vitality of Union Station as a local and regional transportation resource, and as a hub for revitalization and redevelopment efforts. In addition, it would support the goals expressed in these plans to promote TOD because it would diminish parking by commuters on neighborhood streets. The TOD plan for the station envisioned commercial or retail uses on the ground floor of any new garage associated with the station. While the Proposed Action would not provide for such uses integrated within the garage; such uses would be maintained within Union Station.

3.1.3 Mitigation

3.1.3.1 Land Use

As no adverse impact is anticipated, no mitigation is warranted or proposed.

3.1.3.2 Zoning

As no adverse impact is anticipated, no mitigation is warranted or proposed.

3.1.3.3 Local and Regional Development Plans

As no adverse impact is anticipated, no mitigation is warranted or proposed.

3.2 Consistency with State Plan of Conservation and Development

3.2.1 Existing Conditions

The State of Connecticut's Plan of Conservation and Development takes the form of the *Conservation and Development Policies: The Plan for Connecticut (2013-2018) (C&D Plan)*. It is prepared by the Office of Policy and Management (OPM) in accordance with Connecticut General Statutes (CGS) Section 16a-29 and was adopted by the General Assembly in June of 2013. CGS Section 16a-31 requires any state agency's actions to be consistent with the C&D Plan whenever it undertakes, among other things, a transportation facilities project of over \$200,000 in value using state or federal funds.

The OPM website (<http://ct.gov/opm/cwp/view.asp>) defines the C&D plan as follows:

"The Conservation and Development Policies Plan for Connecticut.....include(s) policies that guide the planning and decision-making processes of state government relative to: (1) addressing human resource needs and development; (2) balancing economic growth with environmental protection and resource conservation concerns; and (3) coordinating the functional planning activities of state agencies to accomplish long-term effectiveness and economies in the expenditure of public funds."

The Plan includes a set of growth management principles which focus largely on redevelopment and revitalization of existing infrastructure, development of mixed affordability housing, and development around transportation nodes. The C&D Plan's six Growth Management Principles (GMP) include to:

- 1) Redevelop and revitalize regional centers and areas with existing or currently planned physical infrastructure;

- 2) Expand housing opportunities and design choices to accommodate a variety of household types and needs;
- 3) Concentrate development around transportation nodes and along major transportation corridors to support the viability of transportation options;
- 4) Conserve and restore the natural environment, cultural and historical resources, and traditional rural lands;
- 5) Protect and ensure the integrity of environmental assets critical to public health and safety; and
- 6) Promote integrated planning across all levels of government to address issues on a statewide, regional and local basis.

A companion Locational Guide Map categorizes defined areas of land use/development by type. Each development type generally correlates to the policies of a particular Growth Management Principle. The Proposed Action falls in an area classified as a “Regional Center” with the highest priority for funding. A Regional Center is an area specifically targeted for redevelopment and revitalization, in particular with “compact, transit accessible, pedestrian-oriented mixed-use...” (OPM, 2014). It also encourages the development of supportive land uses around rail stations. As a project located in a Priority Funding Area, the Proposed Action also meets the State policy under CGS Section 16a-35d which requires that no state agency provide funding for a “growth-related project” that is outside the boundaries of priority funding areas, unless it meets specific criteria for an exception.

Furthermore, the Proposed Action falls within a category of activities that is consistent with the C&D Plan for GMP 1 above; more specifically, the policy to “Ensure the safety and integrity of existing infrastructure over its useful life through the timely budgeting for maintenance, repairs and necessary upgrades”. The Proposed Action is also consistent with GMP 3 above; more specifically, the policy to “Improve transit service and linkages to attract more customers through better integration of all transportation options and advances in technology, while providing convenience, reliability, safety and competitive modal choices.”

3.2.2 Impact Evaluation

The No-Action Alternative would conflict with the C&D plan goals for Regional Centers as it would not support revitalization or redevelopment. Additionally, it would not support enhanced transportation options and concentration of new development around transportation nodes.

The Proposed Action would be consistent with and supportive of the development goals, principles, and strategies articulated in the C&D Plan.

3.2.3 Mitigation

Since the Proposed Action would be consistent with the C&D Plan, no mitigation is warranted or proposed.

3.3 Air Quality

A qualitative assessment of the potential air quality impacts related to the Proposed Action was conducted. This was done by first screening the Base and No Action conditions to comparatively determine the potential impacts of the Proposed Action. This assessment resulted in a determination that no mitigation measures are necessary for air quality impacts. Details of the analysis and assessment follow.

3.3.1 Existing Conditions

The Federal Clean Air Act was passed by Congress in 1970 and signed into law by former President Nixon. It was last amended in 1990. This act requires the Environmental Protection Agency (EPA) to ensure that all Americans have safe air to breathe by (1) reviewing the public health standards for six major air pollutants every five years; (2) updating the standards as necessary to "protect the public health with an adequate margin of safety" based on the most recent studies available; and (3) consider only the public health, not the cost of compliance, when setting air quality standards.

In an effort to achieve the Clean Air Act goals, the EPA promulgated primary and secondary National Ambient Air Quality Standards (NAAQS) in 1971 for six pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), sulfur dioxide (SO₂), and particulate matter smaller than 10 micrometers in diameter (PM₁₀). Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Connecticut adopted the national standards and subsequently developed a State Implementation Plan (SIP) to attain and maintain these standards. The NAAQS pollutants and standards are presented in Table 3.3-1.

3.3.1.1 Mesoscale Analysis

Air monitoring is conducted throughout the state by the Connecticut Department of Energy & Environmental Protection (CTDEEP). Data collected at the monitoring sites help establish background air quality levels.

The State of Connecticut is divided into two air quality ozone non-attainment areas: the Greater Connecticut district, which includes Hartford, New London, Tolland, Windham and Litchfield counties, and the New York-Northern New Jersey-Long Island (NY-NJ-CT) district. The NY-NJ-CT district includes Fairfield, New Haven and Middlesex counties in southwestern Connecticut, including the project site. Each district is assigned an attainment or non-attainment status with respect to the NAAQS listed in Table 3.3-1.

The entire state is currently in attainment for CO, Pb, NO₂, SO₂, PM_{2.5}, and PM₁₀ (EPA, 2012b). The state attainment status implies that all regions of the state are in compliance with all standards (i.e., short term and long term; primary and secondary) for each of these particular pollutants.

Non-attainment for an air pollutant is assigned when one or more of the standards for the pollutant have been violated in one or more regions of Connecticut. The non-attainment designation that is subsequently applied to a region can reflect the “degree” of non-attainment depending upon a number of factors including the air pollution history in the region, previous designation of the region as either attainment or non-attainment, lack of air pollutant monitoring in the region, and inferences made based on pollutant monitoring performed in adjacent or similar regions.

Table 3.3-1: National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time		
Carbon Monoxide (CO)	9 ppm	8-hour (1)	None	
	35 ppm	1-hour (1)		
Lead (Pb)	0.15 µg/m ³ (2)	Rolling 3-Month Average	Same as Primary	
Nitrogen Dioxide (NO ₂)	0.053 ppm	Annual Mean	Same as Primary	
	0.100 ppm	1-hour (3)	None	
Particulate Matter (PM ₁₀)	150 µg/m ³	24-hour (4)	Same as Primary	
Particulate Matter (PM _{2.5})	12.0 µg/m ³	Annual Mean (5)	15.0 µg/m ³	
	35 µg/m ³	24-hour (6)	Same as Primary	
Ozone (O ₃)	0.070 ppm (2015 standard)	8-hour (7)	Same as Primary	
	0.075 ppm (2008 standard)	8-hour (8)	Same as Primary	
Sulfur Dioxide (SO ₂)	0.075 ppm	24-hour (9)	0.5 ppm (1300 µg/m ³)	3-hour (1)

Source: EPA National Ambient Air Quality Standards (NAAQS), EPA 40 CFR part 50

(1) Not to be exceeded more than once per year.

(2) Final rule signed October 15, 2008.

(3) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

(4) Not to be exceeded more than once per year on average over 3 years.

(5) To attain this standard, the 3-year average of the weighted annual mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.

(6) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³ (effective December 17, 2006).

(7) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O₃ standards additionally remain in effect in some areas. Revocation of the previous (2008) O₃ standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

(8) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008)

(9) 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years

On December 18, 2014, EPA issued final area designations for the 2012 annual notational air quality standard for fine particulate matter (PM_{2.5}). After working closely with CTDEEP, EPA completed the routine Clean Air Act process to identify that the State of Connecticut is “Unclassifiable/Attainment” based on air quality monitoring data between the years of 2011 and 2013.

Ozone concentrations to be compared to the NAAQS for ozone are calculated by taking the 3-year average of the annual 4th highest daily maximum 8-hour ozone averages. Currently the entire state of Connecticut is designated as non-attainment for ozone based on the 2015 ozone standard of 0.070 ppm.

The ambient ozone concentrations at a given location are less dependent on the amount of local emissions than on meteorological conditions, especially wind direction, temperature, and the amount of sunlight. CTDEEP operates an ozone monitoring station located in New Haven, Connecticut. In 2012, the 3-year average of the annual 4th highest daily maximum 8-hour ozone averages calculated for the New Haven station was 0.076 ppm, and the three-year average remains above the standard of 0.070 ppm, indicating elevated ozone concentrations in the region (CTDEEP, 2014).

3.3.1.2 Microscale Analysis

3.3.1.2.1 Mobile Sources

Mobile sources refer to emission sources that are designed to move from one location to another during normal operations such as automobiles, buses, trucks, etc. Carbon monoxide (CO) and ozone are the criteria pollutants of concern. Carbon monoxide is produced by the incomplete combustion of carbon-containing fuels and can be found in significant concentrations in vehicle exhaust.

Emissions of PM₁₀ and PM_{2.5} are also potential concerns, associated particularly with combustion of diesel engines. The Proposed Action will not be a significant generator of diesel engines except possibly during the construction period. A discussion of the diesel-powered construction equipment impacts during construction is provided in Section 3.23.

Analysis of SO₂ and NO₂ is not warranted, since transportation sources emit a very small percentage of the total emitted SO₂ (due to the relatively small percentage of sulfur in gasoline and diesel fuels) and particulate emissions (compared with the combustion of fossil fuels for space heating and power generation, incineration, industrial processes and construction activities). While NO₂ is emitted by motor vehicles, it is of primary concern due to its role in the formation of photochemical oxidant smog. Smog is typically measured by ozone formation, which is a regional problem and not unique to Connecticut.

3.3.1.2.2 Stationary Sources

There are no major stationary sources of air pollutants associated with the existing parking lot or Proposed Action. Other minor stationary sources may exist in the general vicinity associated with back-up generators, fuel burning equipment, or heating, ventilation and air conditioning equipment in surrounding buildings.

3.3.1.3 Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

The EPA is the lead Federal Agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of Mobile Source Air Toxics (MSATs). The EPA issued a Final Rule to Reduce Mobile Source Air Toxics under the heading Control of Hazardous Air Pollutants from Mobile Sources (February 2007) and FHWA issued an *Interim Guidance Update of Mobile Source Air Toxic Analysis in NEPA Documents* (March 2012). This rule and interim guidance was issued to reduce hazardous air pollutants from mobile sources. These hazardous air pollutants, also known as air toxics, include benzene and other hydrocarbons such as 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, and naphthalene. Air toxics emitted by motor vehicles and other moving sources contribute significantly to the nationwide risk from breathing outdoor air toxics. The EPA final standards will significantly lower emissions of benzene and the other air toxics in three ways:

- 1) by lowering benzene content in gasoline;
- 2) by reducing exhaust emissions from passenger vehicles operated at cold temperatures (under 75 degrees); and
- 3) by reducing emissions that evaporate from, and permeate through, portable fuel containers.

MSATs are not currently monitored in the project area. However, the CTDEEP conducted a Toxic Air Study in Connecticut (TASC) from 1999-2003 to provide data on ambient levels of toxic air pollutants, also called hazardous air pollutants (HAPs), in Connecticut. This monitoring is the most recent available data and was conducted in the immediate vicinity of six stationary sources of HAPs, and one background site. The closest monitoring location to the project area was approximately 5 miles to the west in Greenwich, Connecticut (CTDEEP, 2005).

The monitoring data showed that for the majority of the air toxics, the levels appear low when compared against Connecticut Department of Public Health proposed annual hazard limiting values (HLVs). The ambient levels for three chemicals (formaldehyde, acetaldehyde and manganese) may be of concern, but were at concentrations similar to those found in other parts of the United States. The study concluded that the carbonyl concentrations (i.e., formaldehyde and acetaldehyde) are likely dominated by motor vehicles, and the same may be true of manganese (NESCAUM, 2005).

3.3.2 Impact Evaluation

Stationary and mobile sources are generators of air pollutants. Greater vehicle volume or increases in vehicle congestion, especially at intersections, have the potential to lead to increased emissions. Mesoscale or regional air quality impacts are assessed through a conformity determination prepared by CTDOT. Microscale analyses are performed on the project level.

The No-Action Alternative would have no impact on mesoscale air quality. However, this alternative would not create additional parking in the short term and in the long-term would limit

the availability of parking for Union Station. In either case, the No-Action Alternative is not consistent with State or regional goals to reduce vehicle miles traveled (VMT), and subsequent emissions, on regional roadways through increased access to transit.

The Proposed Action includes the construction of a new parking garage that will accommodate approximately 1,000 parking spaces. The estimated new peak hour traffic generated by the Proposed Action are 230 vehicle trips during the AM peak hour and 180 vehicle trips during the PM peak hour (see Section 3.6). This increase of vehicular volume on the local traffic network should not have an effect on mesoscale air quality due to the increased VMT in the project area; therefore, further evaluation of mesoscale impacts are not anticipated due to the Proposed Action.

The 1990 Clean Air Act Amendments (CAAA) require SIPs to demonstrate how states with non-attainment and maintenance areas will meet federal air quality standards. The U.S. EPA issued final rules on transportation conformity (amended as 40 CFR 93 in 1999) which describe the methods required to demonstrate SIP compliance for transportation projects. The Conformity process ensures that transportation projects contained in Long Range Plans of the regional metropolitan planning organizations (MPOs) and State Transportation Improvement Programs (STIPs) meet the goals of the NAAQS by means of each state's SIP. The proposed parking garage at Union Station is promoted in the *South Central Region Long Range Transportation Plan 2015-2040* (SCRCOG, 2015) but is not included within STIP.

In general, the conformity process dictates that a proposed project not cause any new violations of NAAQS for pollutants of concern, or increase the frequency or severity of existing violations, or delays the attainment of NAAQS.

As mentioned above, the entire state, including the NY-NJ-CT district, is in non-attainment for ozone. CTDOT performed an ozone air quality conformity analysis (CTDOT, 2015). Both CTDOT and SCRCOG have determined that projects included in the *South Central Region Long Range Transportation Plan 2015-2040* (SCRCOG, April 2015) conform to the air quality requirement of 40 CFR 93.

As a result of the Proposed Action, intersections within the project area will have intersection LOS's of D, E or F. As a result, CO microscale analyses used to determine localized impacts is presented in the following section.

3.3.2.1 *Microscale Analysis*

At the local, or microscale level, CO is the transportation-related pollutant of concern. In order to assess local air quality impacts from the Proposed Action, a microscale air quality modeling analysis for CO was conducted. The No-Action Alternative is used as a baseline for comparison.

3.3.2.1.1 *Methodology*

The traffic impact analysis described in Section 3.6 identifies intersections with poor LOS in the existing and future year conditions. Based on the traffic impact analysis results and CTDEEP and EPA air quality modeling guidelines, study signalized intersections listed in Table 3.3-2 were considered for microscale air quality modeling.

EPA screening procedures in the guidance document *Guidelines for Modeling Carbon Monoxide from Roadway Intersections* (EPA, 1992) was used to select locations for detailed analysis. The EPA guidance specifies that all signalized locations with existing or projected LOS of D or worse should be ranked by total volume and by delay, and that detailed modeling should be conducted for at least the three worst intersections in each ranking.

The traffic volumes and analysis presented in Section 3.6 were utilized in this analysis. As shown in Table 3.3-2, six out of seven intersections were shown to have LOS of D or worse for the modeled scenarios. Three of the six intersections with high design year delays (AM or PM) also showed to have high volumes. A total of three intersections were modeled in the microscale air quality analysis:

- Church Street and Columbus Avenue
- Church Street and Union Avenue
- Union Avenue and Columbus Avenue

Ambient CO concentrations are typically at their highest near street intersections where motor vehicles are idling in a queue or moving at low speeds. The maximum ambient CO concentrations at the subject intersections were estimated using the EPA model CAL3QHC, version 2.0 (EPA, 1995). CAL3QHC is a line source dispersion model and traffic algorithm for estimating vehicular queue lengths at signalized intersections. The CO microscale analysis examined the Existing Condition (2015), No-Action at opening year (2018) and Proposed Action with Mitigation at opening year (2018) during peak traffic conditions. These scenarios provide a baseline with which to provide a qualitative assessment of the potential significance of air quality impacts of the Proposed Action.

CO concentrations are estimated at specified locations, called sensitive receptors, which are located in the vicinity of the subject intersection where the maximum CO concentrations are likely to occur and where the general public is likely to have access. These receptors are chosen according to the criteria described in the *Guidelines for Modeling Carbon Monoxide from Roadway Intersections* (EPA, 1992). Receptors are generally located within 100 feet of an intersection, where people are waiting to cross the roadway, along sidewalks adjacent to the subject intersections and associated traffic queues. Receptors were generally located at least 5 feet outside of the mixing zone of the free flow and queue links, which is the edge of the roadway and at the center of the adjacent sidewalks.

Table 3.3-2: Summary of Intersection Volumes and Delay for Air Quality

Intersection ID	Intersection	Existing Condition (2015)						No-Action at Opening Year (2018)						Proposed Action with Mitigation at Opening Year (2018)						Highest Volume	Highest Delay
		AM			PM			AM			PM			AM			PM				
		Volume	LOS	Delay	Volume	LOS	Delay	Volume	LOS	Delay	Volume	LOS	Delay	Volume	LOS	Delay	Volume	LOS	Delay		
1	Church St & N. Frontage Rd	3890	E	75.1	2890	D	36.2	4030	F	91.2	2980	D	37.3	4030	F	91.2	2980	D	37.3	4030	91.2
2	Church St & S. Frontage Rd	1820	C	22.6	2140	C	25.2	1910	C	22.5	2220	C	26.0	1910	C	22.5	2220	C	26.6	2220	26.6
3	Church St South & Columbus Ave	1320	C	30.7	1700	D	43.2	1390	D	38.8	1780	D	54.2	1410	C	33.2	1800	D	46.4	1800	54.2
4	Church St South & Union Ave	1340	D	42.2	1910	D	53.8	1370	D	45.5	1970	E	57.8	1430	D	43.8	2000	D	42.6	2000	57.8
5	Union Ave & Pedestrian Crossing	1000	A	3.7	1330	A	4.2	1020	A	3.7	1370	A	4.2	1080	A	3.8	1420	A	4.3	1420	4.3
6	Union Ave & Columbus Ave/Meadow St	1310	F	85.2	1770	F	200.0	1330	F	90.4	1810	F	215.6	1450	F	87.9	1960	F	165.2	1960	215.6
7	Union Ave/State St & Water St	880	C	34.0	1200	D	37.0	940	D	35.5	1270	D	43.3	970	D	36.3	1300	D	46.1	1300	46.1

LOS: Level of Service
 Delay: average delay per vehicle (seconds)

The maximum modeled CO concentrations are calculated as 1-hour averages and converted to 8-hour average concentrations using a conservative multiplication factor of 0.7. The CTDEEP recommends conservative background ambient CO concentration of 3.0 ppm, which is added to the 8-hour estimates for comparison to the NAAQS.

CAL3QHC requires various meteorological, site, and traffic information as model inputs. EPA-recommended values were used for meteorological parameters including wind speed, stability class, and mixing height. A 360-degree range of wind directions was considered in 10-degree increments. Values of meteorological variables used in the modeling analysis are provided in the Air Quality Analysis Technical Report (see Appendix B for availability).

The lane configurations of the modeled intersections for the No-Action condition were used to obtain free-flow and queue link coordinates and other site-specific input parameters. Signal timing (average red time and signal cycle length), traffic volumes, and other traffic parameters for the Base and No-Action conditions were estimated from traffic volumes and peak hour capacity analyses performed as part of the traffic impact analyses (Section 3.6). Values of traffic and site variables used in the analysis are provided in the Air Quality Analysis Technical Report (see Appendix B for availability).

CO emission factors for idling and moving vehicles, which are required as inputs to CAL3QHC, were calculated using the EPA motor vehicle emission simulator MOVES (EPA, 2014). Emission factors for the subject intersections were calculated for 2015 and 2018. The MOVES model runs were performed using input parameter values typical for the area; values are provided in the Air Quality Analysis Technical Report (see Appendix B for availability). The emission factors associated with freeflow and idle (queue) conditions on Union Avenue, Columbus Avenue and Church Street were generated from the varying links developed by the MOVES software. Input and output files for MOVES are included in the Air Quality Analysis Technical Report (see Appendix B for availability).

3.3.2.1.2 Analysis Results

Results of the microscale analysis for the subject intersections are summarized in Table 3.3-3. The table shows the estimated maximum 1-hour and 8-hour CO concentrations for the Proposed Action with Mitigation for the opening year (2018). The concentrations in the table include the assumed regional background 8-hour CO concentration of 3 ppm. Model results at each receptor location are included in the Air Quality Analysis Technical Report (see Appendix B for availability).

The study area intersections are predicted to experience increased traffic over time. However, the maximum 1-hour and 8-hour CO concentrations at the subject intersections should remain constant or decrease. The steady or decreasing emissions over time is largely due to newer vehicles with lower emission rates replacing older vehicles. Furthermore, the CO concentration estimates are well below the 1-hour and 8-hour CO standards of 35 and 9 ppm, respectively. The microscale air quality analysis demonstrates that the Proposed Action with Mitigation scenario will not result in an exceedance of the CO NAAQS.

Table 3.3-3: Predicted Maximum CO Concentrations for the Proposed Action Conditions

Air Quality Standard ³	Maximum CO Concentration (ppm) ^{1,2}	
	1-Hour	8-Hour
	35 ppm	9 ppm
Intersection	2018	2018
	Proposed Action with Mitigation	Proposed Action with Mitigation
Church Street & Columbus Avenue	3.4	3.3
Church Street & Union Avenue	3.3	3.2
Union Avenue and Columbus Avenue	3.4	3.3

¹Maximum of CO concentrations calculated at all receptor locations.

²CTDEEP recommended 8-hour background CO concentration of 3.0 ppm, and a multiplication factor of 0.7 to convert from 1-hour to 8-hour averages.

³Connecticut and National Ambient Air Quality Standards (NAAQS).

3.3.2.2 Stationary Sources

There are no major new stationary sources of air pollutants associated with the Proposed Action; therefore, no air quality impacts from stationary sources are anticipated.

3.3.2.3 Mobile Source Air Toxics

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of an environmental impact evaluation.

While a basic analysis of the likely MSAT emission impacts of the No-Action and Proposed Action alternatives are included in this document, available technical tools do not enable the prediction of project-specific health. A further discussion of the uncertainty associated with project-specific health impacts due to MSATs is included in the next section.

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from *Interim Guidance Update of Mobile Source Air Toxic Analysis in NEPA Documents* (FHWA, 2012).

The FHWA developed a tiered approach for analyzing MSATs, depending on specific project circumstances. The FHWA has identified three levels of analysis:

1. No analysis for projects with no potential for meaningful MSAT effects;
2. Qualitative analysis for projects with low potential MSAT effects; or
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

The Proposed Action has low potential for MSAT effects and therefore the qualitative analysis presented below is justified.

When comparing MSAT emissions from different alternatives, the amount of MSAT emitted would be proportional to the VMT assuming that other variables such as fleet mix are the same for each alternative. The VMT anticipated for the Proposed Action would be higher than that of the No-Action alternative because of the increased capacity of the proposed parking garage that would not otherwise occur in the area. This increase in VMT means MSAT generated by the Proposed Action would probably be higher than the No-Action alternative in the study area. There could also be localized differences in MSAT from indirect effects of the project such as associated access traffic, or emissions of evaporative MSAT (e.g., benzene) from parked and idling cars.

For both the No-Action and Proposed Action alternatives, emissions are virtually certain to be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by 72% from 1999 to 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future than they are today. Consequently, no adverse impact to air quality resulting from MSAT emissions is anticipated to occur from the Proposed Action.

3.3.2.3.1 Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts Analysis

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, 2012c). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents* (FHWA, 2006). Among the adverse health effects linked to MSAT

compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, 2007) or in the future as vehicle emissions substantially decrease (HEI, 2009).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable. The results produced by the EPA's MOBILE6.2 model, the California EPA's Emfac2007 model, and the EPA's DraftMOVES2009 model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates diesel particulate matter (PM) emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of EPA's guideline CAL3QHC model was conducted in “HYROAD Model Formulation” (ICF Consulting, 2002), which documents poor model performance at ten sites across the country - three where intensive monitoring was conducted plus an additional seven with less intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with NAAQS for relatively short time frames than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near roadways, and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI. As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA (EPA, 2012d) and the HEI have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than

approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

3.3.2.4 Project-Level Conformity Determination

As discussed above, Federal regulations concerning the CAAA conformity of transportation projects developed, funded or approved by the USDOT and by metropolitan planning organizations (MPOs) are contained in 40 CFR 93. The Proposed Action is within the boundary of SCRCOG and the respective Regional Transportation Plan is the *South Central Region Long Range Transportation Plan 2015-2040* (SCRCOG, 2015). The Proposed Action is promoted in the *South Central Region Long Range Transportation Plan 2015-2040*, but is not included in their Transportation Improvement Program (TIP).

In accordance with 40 CFR 93.115(a), the applicable criteria and procedures for determining the conformity of a project which is not from a conforming Transportation Plan *and* TIP are listed in Table 1 of 40 CFR 93.109(b). All of these criteria have been determined to be satisfied for the Proposed Action as follows:

- Transportation Control Measures (TCMs) – This project does not interfere with the implementation of any TCM in the current State Implementation Plan (SIP).
- Currently Conforming Plan – This project is promoted within the *South Central Region Long Range Transportation Plan 2015-2040*.
- CO, PM₁₀ and PM_{2.5} Hot Spots – The project will not contribute to any new violations of the existing CO standards as demonstrated by the microscale analysis.
- PM₁₀ and PM_{2.5} Control Measures – The project will not interfere with any proposed control measures included within the currently approved State Implementation Plan.
- Emissions Budget and/or Interim Emissions – This project is promoted in the current *South Central Region Long Range Transportation Plan 2015-2040* and therefore is considered to be consistent with the motor vehicle emissions budgets for the state.

In summary, the Proposed Action has been determined to be in conformity with the Clean Air Act, as amended, pursuant to applicable U.S. EPA regulations.

3.3.3 Mitigation

3.3.3.1 Mesoscale and Microscale Analysis

The increased traffic volume on the local traffic network associated with the Proposed Action should not impact mesoscale air quality impact. It is not anticipated that any short or long-term adverse microscale air quality impacts from increased traffic will occur as a result of the Proposed Action.

No mitigation measures are necessary to address stationary sources of air pollution since only minor stationary pollution sources are expected as a result of the proposed action. Construction-related air quality impacts and associated mitigation are discussed in Section 3.23.

3.3.3.2 Mobile Source Air Toxics

No specific mitigation for MSATs is proposed since, under the Proposed Action, reduced MSAT emissions are expected in the immediate area of the project due to EPA's MSAT reduction programs. On a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will result in substantial reductions in MSAT emissions that, over time, will cause region-wide MSAT levels to be significantly lower than today.

3.4 Noise

3.4.1 Existing Conditions

The existing setting of the project site is a highly urbanized area within a city of approximately 128,500 people. The project site is roughly bounded by New Haven Rail Yard to the east and south, a mixed-use area (residential, commercial, institutional, hospital uses) to the west, and the Route 34 elevated limited access highway to the north. Current activities contributing to the existing noise setting of the project site include movement of trains (electric and diesel) in and out of Union Station, the operation of rail yard equipment to maintain and repair train cars, and vehicular traffic along Union Avenue to the west, Church Street Extension to the south, and Route 34 to the north. The noise study area is defined according to screening distances provided in the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment* manual (FTA, 2006). For a new parking garage, FTA defines the study area as up to 125-feet from the center of noise-generating activity on the project site.

Physical measurements of existing noise were taken in 2010 in the vicinity of Union Station in support of an earlier parking garage study. Eleven noise measurements using a CEL-360 logging dosimeter were taken at various times during the day (morning peak, mid-morning, late morning, early afternoon, mid-afternoon, late afternoon, and evening peak). An average of the 11 measurements was then calculated to obtain an existing noise level. The average existing noise level in the vicinity Union Station based on physical measurements was 72.9 decibels (dB) (Ldn). "Ldn," which stands for "Day-Night Sound Level," is the cumulative 24-hour noise exposure experienced by a person.

There are three categories of noise-sensitive land uses defined by the FTA in the guidance manual entitled *Transit Noise and Vibration Impact Assessment* (FTA-VA-90-1003-06, May 2006). A Category 1 Land Use is generally defined as a tract of land where quiet is an essential

element in its intended purpose, such as an outdoor concert pavilion or a National Historic Landmark where outdoor interpretation routinely takes place. Category 2 Land Uses include residences and buildings where people sleep, and Category 3 Land Uses include institutions with primarily daytime and evening use, such as schools, churches, and libraries, as well as parklands with both active and passive recreation.

A site visit was conducted on February 19, 2016 to identify and categorize noise-sensitive land uses (receivers) near the project site and to develop a baseline for the existing noise environment at the site. Noise-sensitive receivers were identified for both an unobstructed (direct sight-line) screening distance *from the center of noise-generating activity* on the project site and for an obstructed sight-line (i.e., with intervening buildings and/or structures) screening distance. The center of noise-generating activity was assumed to be located in the approximate center of the proposed new parking garage site. Land uses within 125-feet (unobstructed), and 75-feet (obstructed), of the Proposed Action are considered to be noise-sensitive. These noise screening distances (thresholds) were used based on guidance relative to parking facilities, as contained in Chapter 4 of the FTA *Transit Noise and Vibration Impact Assessment* manual, and is therefore considered to be the study area for the noise impact analysis.

Following the methodology stipulated by the FTA guidance manual and through a review of aerial imagery, confirmed by the site visit, it was determined there are no noise-sensitive land uses within the noise analysis study area.

3.4.2 Impact Evaluation

The No-Action Alternative would be a continuance of existing conditions; thus future noise levels in the vicinity of Union Station are anticipated to be approximately 72.9 dB (Ldn) based on the 2010 noise measurements.

There are no noise sensitive receivers within the Proposed Action noise analysis study area. Therefore, no adverse impacts are anticipated.

3.4.3 Mitigation

There are no noise sensitive receivers within the study area. Therefore, no mitigation is warranted or proposed.

3.5 Local Transit Considerations

3.5.1 Existing Conditions

Union Station provides local and regional rail transit connections in the City of New Haven. Metro-North Railroad service is provided as part of the New Haven Line to New York. CTDOT's Shore Line East is also served at Union Station, providing service to and from New London, CT seven days a week. Shore Line East THRU (express) service is also available weekdays, which provides express service to Union Station, West Haven, Bridgeport, and Stamford Stations. Amtrak Service is also provided at the station, with access to Acela Express, Northeast Regional and Vermonter routes. In early 2018, Amtrak's service to and from Union Station will also include the New Haven-Hartford-Springfield commuter rail improvements.

The station is also served by local, regional, and interstate buses. Other forms of transit available at the station include both private and public shuttles to major destinations (such as Yale University), and paratransit services. The range and relevant details of the existing transit services are summarized below. Each of these services gains access to Union Station from Union Avenue. There is a bus access and loading area on the south end of the station. Additionally, there is a local bus stop with shelter directly in front of Union Station. Taxis and limousines currently use the passenger loading area fronting on Union Avenue to pick up and drop off passengers.

- CT Transit: Provides bus connections throughout New Haven and to other major cities as well as along Route 1 north of New Haven. Service includes:
 - The Union Station Shuttle, which connects passengers with off-site parking and major destinations such as Gateway Community College. It operates Monday through Friday from 6 AM to 10 PM.
 - A Downtown Commuter Connection. This service operates with limited connections from the Downtown to Union Station and only in the afternoon and evenings on weekdays.
- Milford Transit District: Provides a commuter transit connection to and from Milford.
- Peter Pan: Operates the New Haven to Hartford express bus service. Also provides long-distance bus travel to adjacent states.
- Greyhound and Mega-Bus: Provides inter-city service.
- Institution shuttles including Yale University, Southern Connecticut State University, Yale-New Haven Hospital, and Quinnipiac University.

The 2012 Comprehensive Plan Update Databook documented that:

“With over 8.5 million (bus) boarding’s, the New Haven Division is the second largest transportation system in the state. The service area covers 476 square miles, including the City of New Haven and all or part of 19 surrounding towns.....On an average weekday, Connecticut Transit carries approximately 30,000 passengers.”

3.5.2 Impact Evaluation

The No-Action Alternative would be a continuation of existing conditions. As such, it would have no impact on access to transit at Union Station or transit connections throughout the region.

The Proposed Action may increase rail ridership due to increased parking supply for commuters at the station. The Proposed Action would not reduce regional bus access to and from Union Station. The existing loading area for buses and shuttles would remain. The proposed bus pull-off in front of the proposed garage will expand accommodations for intra-city buses by providing space to load up to three buses at a time. There is also an opportunity to provide a bus pull-off in front of the existing garage to accommodate more bus traffic; this opportunity will be further investigated during design. By expanding intra-city bus accommodations in the station vicinity, the Proposed Action could have a beneficial effect on access to transit.

3.5.3 Mitigation

The Proposed Action is not anticipated to adversely affect transit services at Union Station. Therefore, no mitigation is warranted or proposed.

3.6 Traffic and Parking

This section summarizes the existing condition traffic volumes, operations, and safety conditions of the transportation system serving Union Station and the Proposed Action. This section also summarizes the projected future traffic operations for the end of 2018 Estimated Time of Completion (ETC) planning horizon with and without the Proposed Action. A detailed Traffic Impact Study (TIS) Technical Report has been prepared (see Appendix B for availability).

This section also summarizes the evaluation of existing and future parking conditions for the No-Action and Proposed Action alternatives.

3.6.1 Existing Conditions

Determining the characteristics of existing traffic conditions surrounding the proposed site permits an evaluation of locations where traffic problems might already exist and establishes a foundation for comparing future traffic conditions. The existing parking supply and demand is also evaluated to document the need for the Proposed Action.

3.6.1.1 Study Area Roadways

The Proposed Action is located on Union Avenue between Columbus Avenue and West Water Street, adjacent to the existing station parking garage. Two accesses to the site are proposed on Union Avenue, one across from Columbus Avenue and the other between Meadow Street and West Water Street. Based on the location of the Proposed Action, the following roadways, shown on Figure 3.6-1, were considered part of the project area network for this study:

- Union Avenue (US Route 1)
- Church Street / Church Street South
- North and South Frontage Roads
- Columbus Avenue (US Route 1)
- South Orange Street

Union Avenue (US Route 1) is a principal arterial, providing two lanes in each direction in the study area with the exception of the segment between Church Street and the South Station Parking Lot access, where one northbound lane is provided. The roadway speed limit is 25 mph. There are areas of on-street metered parking, a shoulder for taxi staging, and an area for passenger drop-offs/pick-ups in front of the Station entrance. Multiple bus stops are provided along the corridor. Union Avenue provides access to the existing Union Station parking garage and adjacent surface lots.

Church Street / Church Street South (US Route 1) is classified as a minor arterial, providing two lanes in each direction. It generally runs north - south through the study area and provides a link to downtown New Haven as well as to Route 34 and I-91 and I-95 via the North and South Frontage Roads. The roadway is referred to as Church Street South between Union Avenue and South Frontage Road and as Church Street north of South Frontage Road. The segment of

Church Street South between Union Avenue and Columbus Avenue is designated as US Route 1. On-street parking is generally provided on both sides of the roadway between Union Avenue and Amistad Street, and is not permitted from Amistad Street to George Street (north of the study area). Green bike lanes are provided on Church Street from South Frontage Road north, and bike boxes are provided at the North and South Frontage Road intersection stop bars.

North Frontage Road is a principal east-west arterial, providing three lanes in the westbound direction as part of the one-way pair with South Frontage Road. It provides a connection between I-95 and I-91 to the east and Route 10 (Ella T Grasso Boulevard) to the west. Green painted bike lanes are provided west of Church Street and a raised separated bike lane is provided east of Church Street. Bike boxes are provided at intersections outside of the study area.

South Frontage Road is a principal west-east arterial, providing three lanes in the eastbound direction as part of the one-way pair with North Frontage Road. It provides a connection between Route 10 (Ella T Grasso Boulevard) to the west and I-95 and I-91 to the east.

Columbus Avenue (US Route 1) is a segmented roadway within the study area. West of Church Street South it is a two lane principal arterial, and is considered US Route 1. East of Church Street South it is a local road for a short segment and then ends at Malcom Court. On-street parking is allowed on both of these segments. Columbus Avenue begins again at South Orange Street and then intersects with Union Avenue; this segment is considered a collector. On-street parking is not provided within this segment.

South Orange Street is a two lane north-south collector that connects Union Avenue via Columbus Avenue with South Frontage Road, which provides access to I-91 and I-95. Angled on-street parking for the New Haven Police Department is provided on the west side of the roadway and metered parallel parking is provided on the east side of the roadway.



Legend

- Study Intersections
- Project Site

0 125 250 Feet

Source: USGS (Aerial)

New Haven

Traffic Study Intersections

UNION STATION PARKING GARAGE EIE
 Connecticut Department of Transportation
 State Project No. 301-114
 New Haven, Connecticut

FIGURE:
3.6-1

3.6.1.2 Study Area Intersections

The traffic operations of key intersections within a roadway network are typically the primary indicators of the quality of traffic operations for the system, as these locations represent the area of greatest interactions of movement between various directional traffic streams (including vehicles, pedestrians, and bicyclists). To understand the nature of traffic flow and operations that may be influenced by the new parking garage, the following key intersections within the study area were identified for evaluation. These intersections are shown in relation to the site on Figure 3.6-1.

Signalized Intersections

- Union Avenue/State Street & Water Street
- Union Avenue & Meadow Street
- Union Avenue & Columbus Avenue/Union Station Parking Garage
- Union Avenue & Midblock Pedestrian Crossing Signal (at Union Station entrance/exit)
- Union Avenue & Church Street South
- Church Street South & Columbus Avenue
- Church Street & South Frontage Road
- Church Street & North Frontage Road

Unsignalized Intersections

- Union Avenue & Union Station Parking Garage Access
- South Frontage Road & South Orange Street

3.6.1.3 Base Year Traffic Volumes

The traffic volumes for the study area intersections were provided by the CTDOT Bureau of Policy and Planning for the 2015 Base Condition. Intersection turning movement volumes and pedestrian volumes for the weekday AM and PM peak hours of adjacent street traffic are provided in the TIS Technical Report (see Appendix B for availability). For the study area, the AM peak hour is generally 8:00 AM to 9:00 AM and the PM peak hour is generally 4:30 PM to 5:30 PM.

3.6.1.4 Level of Service Analysis

The operating conditions of transportation facilities are evaluated based on the relationship of existing or projected traffic volumes to the theoretical capacity of the roadway. Various factors affect roadway capacity, including traffic volume, speed, roadway geometry, grade, number and width of travel lanes and intersection control. The current standards for evaluating capacity and operating conditions are contained in the *Highway Capacity Manual 2010* (HCM 2010), published by the Transportation Research Board (TRB, 2010). The procedures describe operating conditions in terms of Level of Service (LOS). In general, LOS “A” represents the best operating conditions and LOS “F” represents the worst.

To determine existing traffic operating conditions at the study area intersections, a capacity analysis was performed using SYNCHRO 8 software. The HCM 2010 methodology of using an intersection peak hour factor was used but since the 2010 methodology cannot analyze the signal phasing at some of the study area intersections, the HCM 2000 reports were utilized for reporting the operational analysis.

The HCM methodology for unsignalized intersections generally assumes that major street traffic is not affected by minor street flows. Left turns from the major street are assumed to be affected by opposing, or oncoming, major street flow. Minor street traffic is affected by all conflicting movements. The HCM methodology expresses the quality of flow at unsignalized intersections in terms of Levels of Service (LOS) based on the amount of delay that a driver experiences. This relationship differs somewhat from the criteria used for signalized intersections, primarily because drivers expect different levels of performance from the two different kinds of transportation facilities. For unsignalized intersections, LOS ranges from A, with minimal delay (ten seconds or less per vehicle), to F, with long delays (50 seconds or greater per vehicle). LOS E or better is generally considered acceptable for unsignalized movements during peak periods. For signalized intersections, LOS ranges from A, with minimal delay (ten seconds or less per vehicle), to F, with long delays (80 seconds or greater per vehicle). LOS D or better is generally considered acceptable for signalized movements during peak periods.

The 2015 Base Condition was analyzed with the existing roadway geometry and existing signal timings obtained from the City of New Haven Traffic Department. The results of the LOS analysis for the 2015 Base Condition are summarized in Table 3.6-1. The TIS Technical Report (see Appendix B for availability) provides a detailed summary of LOS by movement for each intersection as well as the Synchro analysis reports.

As shown in Table 3.6-1, there are locations within the study that currently operate at LOS F during one or both peak hours. These intersections are as follows:

- Union Avenue & Columbus Avenue/Meadow Street
- South Orange Street & South Frontage Road northbound right

**Table 3.6-1: 2015 Base Condition LOS Summary
AM and PM Peak Hours**

Signalized Intersections						
Intersection	AM Peak		PM Peak			
	LOS	Delay (sec)	LOS	Delay (sec)		
Church Street & North Frontage Road	E	75.1	D	36.2		
Church Street & South Frontage Road	C	22.6	C	25.2		
Church Street South & Columbus Avenue	C	30.7	D	43.2		
Church Street South & Union Avenue	D	42.2	D	53.8		
Union Avenue & Midblock Pedestrian Crossing	A	3.7	A	4.2		
Union Avenue & Columbus Avenue/Meadow Street	F	85.2	F	200.0		
Union Avenue/State Street & Water Street	C	34.0	D	37.0		
Unsignalized Intersections						
Intersection	Movement	Lane Group	AM Peak		PM Peak	
			LOS	Delay (sec)	LOS	Delay (sec)
Union Avenue & Garage Entrance/Exit	Eastbound	LTR	A	9.1	A	0.0
	Westbound	LTR	B	11.9	A	9.9
	Northbound	L	A	0.0	A	0.4
	Southbound	L	A	0.8	A	0.4
South Orange Street & South Frontage Road	Northbound	R	B	14.0	F	278.8

3.6.1.5 Queue Analysis

Another factor that can affect traffic operations is the nature of queue formation and interactions within the traffic flow. Of particular interest are locations where queues are longer than the available storage or the distances between adjacent intersections, because of the additional impact on traffic flow and delay. The Existing Condition 50th percentile queues (maximum back of queue on a typical signal cycle) and 95th percentile queues (a statistical measure indicating the theoretical maximum queue occurring within the peak hour of study) were estimated for the study area intersections. The majority of queues are not estimated to extend past available storage or to adjacent signalized intersections. There are some instances where left- and right-turn lane queues are estimated to extend past the available turn lane storage. However, they are not estimated to extend back to adjacent intersections. Due to the close spacing of intersections in the study area, through queues do extend beyond adjacent upstream intersections at some of the study area intersections. The TIS Technical Report (see Appendix B for availability) provides a detailed summary of the queue analysis and a comparison to available storage.

3.6.1.6 Accident Analysis

Accident data was obtained from UConn’s Connecticut Crash Data Repository for the three-year period of January 1, 2012 to December 31, 2014, the most recent data available. The accident data showed a total of 237 accidents have occurred within the study area over the three-year period. Inspection of the accident data showed that 141 of the crashes occurred at the study area intersections and 96 occurred on the links between the study intersections.

Tables 3.6-2 and 3.6-3 summarize the intersection accidents by severity and type, respectively. Most of the accidents at the intersections were property damage only (97 crashes). There were 44 non-fatal injury crashes and no fatalities in the study area during the analysis period. There is a pattern of rear end accidents and sideswipe accidents at the signalized intersections. The intersections of Church Street South & Union Avenue, Church Street South & Columbus Avenue, and Union Avenue/State Street & Water Street experienced the majority of the rear end accidents. A high occurrence of rear end accidents typically correlates to traffic congestion where vehicles are in stop-and-go traffic/and or reaching the end of forming queues.

The intersection of Union Avenue/State Street & Water Street had the highest occurrence of sideswipe accidents. Sideswipe accidents typically occur on multilane approaches where drivers may be switching lanes to access turn lanes or where drivers drift into adjacent lanes. At the Union Avenue/State Street & Water Street intersection, the majority of the sideswipe accidents occurred in the southbound direction where four lanes are provided and immediately after the intersection, one lane turns into a right-turn only lane which may lead to driver confusion if they are not familiar with the area.

Table 3.6-2: Accident Severity by Intersection

Intersection	Property Damage Only	Personal Injury	Fatality	Total
Church Street & North Frontage Road	9	5	0	14
Church Street & South Frontage Road	10	6	0	16
Church Street South & Columbus Avenue	16	10	0	26
Church Street South & Union Avenue	13	8	0	21
Union Avenue & Midblock Pedestrian Crossing	0	0	0	0
Union Avenue & Parking Garage Entrance/Exit	2	0	0	2
Union Avenue & Columbus Avenue	7	2	0	9
Union Avenue & Meadow Street	12	1	0	13
Union Avenue/State Street & Water Street	26	12	0	38
South Orange Street & South Frontage Road	2	0	0	2

Table 3.6-3: Accident Type by Intersection

Intersection	Head On	Right Angle	Rear End	Left Turn	Fixed Object	Overtake	Sideswipe	Ped/Bike	Parking	Backing	Other	Total
Church Street & North Frontage Road	0	5	2	2	0	0	5	0	0	0	0	14
Church Street & South Frontage Road	0	7	3	0	0	2	3	1	0	0	0	16
Church Street South & Columbus Avenue	0	3	8	7	1	1	2	2	1	1	0	26
Church Street South & Union Avenue	0	0	10	5	0	1	2	1	1	1	0	21
Union Avenue & Midblock Pedestrian Crossing	0	0	0	0	0	0	0	0	0	0	0	0
Union Avenue & Parking Garage Entrance/Exit	0	0	0	1	0	0	0	0	0	1	0	2
Union Avenue & Columbus Avenue	0	0	1	0	1	0	4	0	2	1	0	9
Union Avenue & Meadow Street	0	0	2	2	1	0	6	0	1	1	0	13
Union Avenue/State Street & Water Street	0	6	8	5	2	5	10	1	0	0	1	38
South Orange Street & South Frontage Road	0	0	1	0	1	0	0	0	0	0	0	2

Tables 3.6-4 and 3.6-5 summarize the roadway link accidents by severity and type, respectively. The majority of the accidents on the links were property damage only (73 crashes). There were 23 non-fatal injury crashes, and no fatalities in the study area during the analysis period. There is a pattern of sideswipe and parking accidents in the study area. The segments with the highest incidence of sideswipes and parking incidents were Union Avenue between Church Street South and Cinque Green and Union Avenue between Meadow Street and Water Street. Sideswipes typically occur on multilane roadways where drivers may be switching lanes, or where drivers drift into adjacent lanes. Parking accidents may occur when a through vehicle strikes a parking/parked vehicle or opened door, or a parking vehicle strikes another parked vehicle while making the parking maneuver. In these segments on Union Avenue, drivers are frequently double parked or maneuvering to/from parallel parking, resulting in frequent lane changes by through traffic. Increased enforcement of double parking violations could be considered to help reduce the frequency of sideswipes and parking related crashes.

Table 3.6-4: Accident Severity by Link

Intersection	Property Damage Only	Personal Injury	Fatality	Total
Church Street: North Frontage Road to South Frontage Road	2	0	0	0
Church Street South: South Frontage Road to Columbus Avenue	5	7	0	12
Church Street South: Columbus Avenue to Union Avenue	0	1	0	1
Union Avenue: Church Street South to Cinque Green	23	4	0	27
Union Avenue: Cinque Green to Parking Garage Entrance/Exit	8	4	0	12
Union Avenue: Parking Garage Entrance/Exit to Columbus Avenue	5	1	0	6
Union Avenue: Columbus Avenue to Meadow Street	9	3	0	12
Union Avenue: Meadow Street to Water Street	21	3	0	24

Table 3.6-5: Accident Type by Link

Intersection	Head On	Right Angle	Rear End	Left Turn	Fixed Object	Overtake	Sideswipe	Ped/Bike	Parking	Backing	Other	Total
Church Street: North Frontage Road to South Frontage Road	0	0	0	0	0	0	2	0	0	0	0	2
Church Street South: South Frontage Road to Columbus Avenue	0	1	2	1	4	0	2	0	0	1	1	12
Church Street South: Columbus Avenue to Union Avenue	0	0	0	1	0	0	0	0	0	0	0	1
Union Avenue: Church Street South to Cinque Green	0	0	4	4	0	1	5	1	9	2	1	27
Union Avenue: Cinque Green to Parking Garage Entrance/Exit	0	0	3	1	0	0	6	0	0	1	1	12
Union Avenue: Parking Garage Entrance/Exit to Columbus Avenue	0	0	0	1	1	0	1	0	3	0	0	6
Union Avenue: Columbus Avenue to Meadow Street	0	0	1	1	0	1	4	1	3	1	0	12
Union Avenue: Meadow Street to Water Street	0	0	5	4	1	0	5	0	6	2	1	24

3.6.1.7 Parking

The parking supply at Union Station is completely utilized on a typical weekday and the supply at satellite locations available for Station parking is very highly utilized. Table 3.6-6 summarizes the existing parking supply available to Station patrons.

Table 3.6-6: Parking Supply

Lot/Garage	Type	Location	Owner	Operator	Operations	Supply (spaces)	Utilization
Union Station Parking Garage	Station	North of Station	State	PNH	24/7	884	100%
Union Station Surface Lot	Station	North of Station Garage	State	PNH	24/7	260	100%
Temple Street Parking Garage	Public	Temple St & George St (shuttle to Station)	City	PNH	24/7	1,235	76%
Coliseum Parking Lot	Public	State St & George St (shuttle to Station)	City	ProPark	M-F: 24 hrs Sa: 9 AM – 2 AM Su 10 AM – 4 PM	471	87%
Lot O	Public	State St & Fair St (nearby shuttle stop to station)	City	ProPark	24/7	68	87%

For the Union Station parking garage and surface lot, spaces are currently allocated as follows:

- 19 spaces are designated handicap-accessible
- 3 spaces are equipped with electric vehicle charging stations
- 3 spaces are reserved for car-share parking (*Zipcar*)
- 70 spaces (approximately) are reserved for “Special Permit Parking” including 3 spaces for NHPA personnel and 2 spaces for CTDOT personnel
- 1,049 spaces (approximately) are regular commuter parking spaces

There are currently 466 monthly permit holders for parking at Union Station and, as of November 2015, there are 166 people on the waiting list for a monthly permit.

On Union Avenue, limited on-street metered parking is provided from West Water Street to just north of Church Street South. On the east side of the roadway south of Union Station, parking is restricted to taxis only. On the west side of the roadway north of Meadow Street, parking is restricted to police vehicles. At the metered spots, there is a 2-hour limit between 8 AM and 5 PM. There is no time limit between 5 PM and 8 AM. There are also parking restrictions for street sweeping from April to November.

3.6.2 Impact Evaluation

The traffic impact of the Proposed Action was evaluated in the context of projected future volumes for the estimated time of completion (ETC) of the Proposed Action, which is the year 2018. The traffic operations for this future horizon were analyzed for the No-Action condition to provide a context for evaluation of the impacts of the Proposed Action.

3.6.2.1 Future No-Action Condition

Background traffic volumes for 2018, the ETC for the project, design horizon were provided by the CTDOT Bureau of Policy and Planning. These volumes were developed based on historical growth and other Office of the State Traffic Administration (OSTA) approved developments in the study area. The growth rate is generally 1% per year for the study area. The 2018 AM and PM peak hour No-Action traffic volumes are provided in the TIS Technical Report (see Appendix B for availability).

The results of the capacity analysis for the overall intersection for the 2018 No-Action condition are shown in Tables 3.6-8 and 3.6-9. Detailed LOS summaries by individual movement are provided in the Union Station Parking Garage Traffic Impact Study.

As shown in these tables, delay is estimated to increase through 2018 due to background traffic growth. The following additional location is projected to operate at LOS F during the AM peak hour for the ETC No-Action Condition:

- Church Street and North Frontage Road

As with the Existing Condition, there are some instances where left and right-turn lane queues are estimated to extend past the available turn-lane storage in the No-Action Condition. However, they are not estimated to extend back to adjacent intersections with the exception of the southbound left-turn at Union Avenue/State Street & Water Street during the PM peak hour. The 95th percentile queue for this movement is estimated to extend back to the State Street & George Street intersection; however, there is sufficient storage to accommodate the 50th percentile queue. There are also some instances where the through queues are estimated to extend beyond adjacent upstream intersections. The Union Station Parking Garage Traffic Impact Study included in Appendix B provides a detailed summary of the queue analysis and a comparison to available storage.

3.6.2.2 Trip Generation Potential

The proposed parking garage will provide approximately 1,000 parking spaces. This is 740 spaces more than the 260 spaces provided in the existing surface lot. To determine the number of new trips the parking garage will generate based on this additional capacity, trips-per-parking space were estimated for the existing surface lot and parking garage.

To be conservative, a higher ratio of trips-per-space was used for the 740 new parking spaces than was determined from the existing parking supply. Table 3.6-7 summarizes the trip generation estimates for the AM and PM peak hours.

Table 3.6-7: Proposed Parking Garage Trip Generation

Spaces	Weekday AM Trips			Weekday PM Trips		
	In	Out	Total	In	Out	Total
740 New Parking Spaces	200	30	230	20	160	180

3.6.2.3 Potential Effect on Traffic Operations

The new traffic generated by the project was distributed by CTDOT to the study area intersections based on existing commuter travel patterns. The Proposed Action generated traffic was then combined with the 2018 No-Action volumes to represent the estimated future volume conditions in the study area after the proposed garage is operational. The 2018 Proposed Action volumes are provided in the TIS Technical Report (see Appendix B for availability).

The study intersections were analyzed using existing geometry and signal timings and the estimated Proposed Action traffic volumes. The results of the capacity analysis for the overall intersection for the 2018 Proposed Action condition are shown in Tables 3.6-8 and 3.6-9. Detailed LOS summaries by individual movement are provided in TIS Technical Report (Appendix B).

As shown in these tables, delay is estimated to increase at the studied intersections due to the new Proposed Action site trips when compared to the 2018 No-Action condition. However, no additional locations are estimated to operate at overall LOS F.

3.6.2.4 Parking

The Proposed Action will provide approximately 1,000 parking spaces. This is 740 spaces more than the 260 spaces provided in the existing surface lot. The Proposed Action also includes the development of a bus pull-off in front of the new garage capable of accommodating three 40-foot buses. This will result in the loss of 11 metered on-street parking spaces on the east side of Union Avenue. These spaces will be replaced by designating short-term parking on the ground floor of the proposed garage.

3.6.3 Mitigation

3.6.3.1 Traffic

With the addition of the project generated traffic, the delay does increase at some of the study area intersections. The following traffic control improvements have been identified to mitigate these impacts.

- Church Street South and Columbus Avenue
 - Optimize signal timings
- Church Street South and Union Avenue
 - Optimize signal timings
- Union Avenue and Columbus Avenue/Meadow Street
 - Create split phasing for the eastbound Columbus Avenue approach and Parking Garage Entrance approach, so that the approaches enter the intersection separately (may require new signal heads to provide left-turn arrows)
 - Optimize signal timings
- Union Avenue/State Street and Water Street
 - Optimize signal timings

It is recommended that the Columbus Avenue and Parking Garage approaches to the Union Avenue and Columbus Avenue/Meadow Street intersection be changed to “split-phase” signal operation (so that these approaches enter the intersection separately) due to the offset geometry of these approaches and the increased volume associated with the new garage. This is a change from existing, as both approaches currently operate concurrently with the Columbus Avenue approach going red first while the parking garage approach has an extended green. Signal head changes are recommended with the proposed phasing change to indicate to drivers that they have a protected movement.

As shown in Tables 3.6-8 and 3.6-9, with these improvements, all overall intersection operations are estimated to operate at similar LOS or better when compared to the No-Action condition with the exception of the northbound yield at South Orange Street and South Frontage Road. The northbound yield from South Orange Street to South Frontage Road is estimated to have an increase in LOS F delay when compared to the No-Action Condition. It is noted that the LOS F delay level reported for the northbound yield from South Orange Street to South Frontage Road is likely higher than truly experienced by drivers. Drivers use the wide roadway width (approximately 25-30 feet) to accelerate and merge with traffic on the South Frontage Road rather than coming to a complete stop. The presence of a traffic signal at Church Street & South Frontage Road may also provide gaps in traffic that is not reflected in the analysis, so delay may be less than what is estimated.

With the proposed Mitigation, queues are estimated to be similar or less than the No-Action condition. During the PM peak hour at the Union Avenue & Columbus Avenue/Meadow Street intersection, the garage access westbound approach 50th and 95th percentile queues are still estimated to extend back to the parking garage access points. When this occurs, vehicles would have the option to use the secondary access points provided in both garages to exit. In addition, a reversible lane is being considered for the parking garage access across from Columbus Avenue that could provide additional storage for the approach during the PM peak hour.

Table 3.6-8: 2018 No-Action & Proposed Action LOS Summary; AM Peak Hour

Signalized Intersections								
Intersection	No-Action		Proposed Action		Proposed Action w/ Mitigation			
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)		
Church Street & North Frontage Road	F	91.2	F	91.2	F	91.2		
Church Street & South Frontage Road	C	22.5	C	22.5	C	22.5		
Church Street South & Columbus Avenue	D	38.8	D	42.5	C	33.2		
Church Street South & Union Avenue	D	45.5	D	52.3	D	43.8		
Union Avenue & Midblock Pedestrian Crossing	A	3.7	A	3.8	A	3.8		
Union Avenue & Columbus Avenue/Meadow Street	F	90.4	F	112.7	F	87.9		
Union Avenue/State Street & Water Street	D	35.5	D	36.5	D	36.3		
Unsignalized Intersections								
Intersection	Movement	Lane Group	No-Action		Proposed Action		Proposed Action w/ Mitigation	
			LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Union Avenue & Garage Entrance/Exit	Eastbound	LTR	A	9.2	A	9.2	A	9.1
	Westbound	LTR	B	11.8	B	11.9	B	12.3
	Northbound	L	A	0.0	A	0.0	A	0.0
	Southbound	L	A	0.8	A	0.8	A	0.8
South Orange Street & South Frontage Road	Northbound	R	B	14.4	B	14.7	B	14.7
Union Avenue & Proposed Garage Drive	Westbound	LR	-	-	A	8.8	A	8.8
	Southbound	L	-	-	A	3.3	A	3.3

Table 3.6-9: 2018 No-Action & Proposed Action LOS Summary; PM Peak Hour

Signalized Intersections								
Intersection	No-Action		Proposed Action		Proposed Action w/ Mitigation			
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)		
Church Street & North Frontage Road	D	37.3	D	37.3	D	37.3		
Church Street & South Frontage Road	C	26.0	C	26.0	C	26.6		
Church Street South & Columbus Avenue	D	54.2	E	62.2	D	46.4		
Church Street South & Union Avenue	E	57.8	E	62.1	D	42.6		
Union Avenue & Midblock Pedestrian Crossing	A	4.2	A	4.3	A	4.3		
Union Avenue & Columbus Avenue/Meadow Street	F	215.6	F	222.2	F	165.2		
Union Avenue/State Street & Water Street	D	43.3	D	46.1	D	46.1		
Unsignalized Intersections								
Intersection	Movement	Lane Group	No-Action		Proposed Action		Proposed Action w/ Mitigation	
			LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Union Avenue & Garage Entrance/Exit	Eastbound	LTR	A	0.0	A	0.0	A	0.0
	Westbound	LTR	A	9.8	A	9.8	A	9.8
	Northbound	L	A	0.4	A	0.4	A	0.4
	Southbound	L	A	0.4	A	0.4	A	0.3
South Orange Street & South Frontage Road	Northbound	R	F	332.6	F	472.2	F	472.2
Union Avenue & Proposed Garage Drive	Westbound	LR	-	-	A	9.1	A	9.0
	Southbound	L	-	-	A	0.5	A	0.5

3.6.3.2 Parking

Since the Proposed Action itself will provide additional parking in the station area, no additional mitigation is necessary.

3.7 Pedestrian and Bicycle Considerations

3.7.1 Existing Conditions

The study area for bicycle and pedestrian considerations is a ½ mile radius from Union Station. This is an industry ‘rule of thumb’ for a reasonable walking distance from a rail station.

3.7.1.1 Pedestrian Facilities

The entire street network in the study area includes sidewalks. Pedestrian signals are provided at all signalized intersections within the study area and an exclusive pedestrian phase is provided at

all locations. A signalized midblock pedestrian crossing is provided in front of the station for pedestrians to cross to/from the west side of Union Avenue. The pedestrian equipment for this crossing is generally older and does not provide countdown timers or integrated audible pedestrian signals/pushbuttons. Wayfinding signage to Union Station and downtown New Haven is provided by markings on the sidewalk throughout the study area as shown on Exhibit 3.7-1. Other pedestrian amenities are limited in the study area; there are few locations of safety bollards and seating along Union Avenue.



Exhibit 3.7-1: On-sidewalk wayfinding markings

The City of New Haven adopted a Complete Streets program and manual for street design in 2010. Through this program, projects can be proposed by street segment and programmed for funding. Complete street projects commonly include components for greater safety and accommodations for pedestrians.

The 2004 *Greenways and Trails Plan* (City Plan Dept., New Haven, 2003) reviews the status of plans for greenways throughout the City. All are considered for use by both pedestrians and bicyclists. Details of the study area greenways are described in Section 3.7.1.2.

3.7.1.2 Bicycle Facilities

Bicycle facilities can take the form of on-street lanes, roadway shoulders, off-street paths, parking facilities, and bicyclist amenities. There are no bicycle lanes on the roadways adjacent to Union Station. There are bicycle lanes provided in the study area on North Frontage Road and on Church Street north of South Frontage Road. In the vicinity of Church Street and North and South Frontage Roads, painted green bike lanes are provided as well as bike boxes at the signalized intersections. There are no designated state bicycle routes in the project vicinity (CTDOT, 2009). Union Avenue does have some ‘Share the Road’ signs to enhance bicyclist safety, however Union Avenue also has heavily used on-street parking which makes bicycling in the roadway or at the roadway edge more challenging. A short section of the Farmington Canal Greenway, which could accommodate bicyclists, travels through the study area from Water Street to a parking area behind the New Haven Rail Yard.



Exhibit 3.7-2: Union Station Bicycle Parking – South

There are approximately 100 bicycle parking spots at Union Station, most in the form of covered racks at the north end of the existing garage. Ten bike racks and ten bike lockers are also located

at the northeast corner of the garage. Signs located in the station area state that bicycles locked to fences, light poles, and other fixed objects will be removed. Field observation on February 19, 2016 noted that the bicycle racks were approximately 80 percent occupied. Bicycle amenities in the station and garage area include a “fixit” station equipped with a variety of tools and air pump for bicyclists to utilize free of charge.

A strategy plan for secure bicycle parking at Union Station was prepared for the City in 2009 (Nelson/Nygaard, 2009). In this report, two strategies for secure bicycle parking at the new garage were presented: a staffed bicycle station with repair shop and locker rooms, and bike lockers with overflow bike rack parking. The latter was identified as being much more cost effective but does not provide the amenities that a bike station does.

The *2004 Greenways and Trails Plan* (City Plan Dept., New Haven, 2003) states the following objectives for enhancing bicyclist opportunities in the City:

- “Given the exceptional opportunities and well-established benefits of greenways and cycling systems, the program is designed to meet a number of objectives. In keeping with the new comprehensive plan (2003), these objectives enhance New Haven’s sense of place and neighborhood identity. By building on segments of pathways that already exist, the plan is further designed to connect New Haven’s extensive system of parks across the City, allowing easier access from all neighborhoods;
- to provide additional circulation options between residences, schools and colleges, jobs, commercial areas, cultural attractions and City landmarks;
- to offer routes for modes of transportation that are cleaner, cheaper and healthier than motorized vehicles including biking, skating, walking, horseback riding, etc.;
- to contribute to a greater awareness and knowledge of New Haven’s abundant natural resources and unique geographical features including coastal / harbor areas and traprock ridges; and
- to provide access to scenic areas along the coastline and scenic landscapes across the region.”

The proposed program to provide this connected network includes the following two elements in the study area:

- Farmington Canal Greenway and Vision Trail Route: The Vision Trail is generally complete, though there is on-going coordination between CTDOT and the City to address re-routing the trail in the area of the New Haven Rail Yard. The Farmington Canal Greenway remains under development. The total length would be 3.7 miles; the existing portion is 1.64 miles.
- Harborside Trail Route: This trail would run from City Point along the shoreline to East Shore Park and Lighthouse Point. The total length would be 8.31 miles; the existing portion is 2.16 miles.

The plan notes that the City also has a Share the Streets program. Through this, it has proposed a series of design guidelines for bicycle facilities that can be applied to improve any of its streets.

3.7.2 Impact Evaluation

The No-Action Alternative would be a continuation of existing bicycle and pedestrian conditions. As such, it would not result in adverse impacts to bicycle and pedestrian conditions.

Access for pedestrians will be improved with the Proposed Action, having an overall beneficial effect. Under the Proposed Action, a large elevator/stair core will span the entire gap between the proposed and existing garages in order to: provide pedestrian connections between the garages on all levels; provide access to stairs and elevators from all levels in both garages; and provide access to the pedestrian bridge (to be constructed under a separate, future project) from both garages on the fourth level. There will be three elevators in the core to provide access between all levels. One of these will be a front-to-back elevator to accommodate the accessible route between the fourth level and an elevated landing to the future pedestrian bridge. The eastern (southern) parking bay in the existing garage will be reconfigured to accommodate a raised pedestrian walkway connecting the proposed elevator/stair core to the station.

Lighting improvements along the frontage of the existing garage/Union Avenue sidewalk in conjunction with new lighting for the proposed garage will enhance the pedestrian accommodations along the entire parking/station complex.

Existing bicycle parking, storage, and amenities located north of the existing garage will be directly impacted by the pedestrian walkway improvements and main access driveway improvements under the Proposed Action. The Proposed Action would have no other impact on bicycle facilities.

3.7.3 Mitigation

CTDOT will replace the impacted bicycle parking, storage, and amenities currently located north of the existing garage. The specific locations for and number of new bicycle parking and storage facilities will be determined during subsequent design phases; at a minimum, the current number of parking and storage facilities will be maintained. As warranted, the Proposed Action will also be designed in consideration of future bicycle improvements planned for the project area. No other mitigation is warranted or proposed.

3.8 Cultural Resources

3.8.1 Existing Conditions

Historic properties analyzed below include archaeological sites and historic buildings, structures, sites, objects and districts. The study area for above-ground resources was defined based on the potential for the new parking garage to be substantially visible from surrounding properties. As such, the study area is bounded by Route 34 in the north, Sargent Drive in the east, Church Street South in the south, and the properties fronting the west side of Union Avenue in the west.

Although the new parking garage may appear in views from outside the study area, it would be a minor element in an existing urban context, and thus would not have the potential to adversely affect historic properties. The project area for archaeological resources is confined to the project site, as no ground disturbance would occur outside this area.

3.8.1.1 Archaeological Resources

Archaeological investigations have resulted in the documentation of several sites in the adjacent New Haven Rail Yard property, including two roundhouses and Long Wharf. Additional surveys have been completed for parcels immediately west of the rail yard, proximate to the project area. In 1982, an archaeological survey was undertaken as part of the construction of the existing parking garage immediately south of the project site. The study included both the development of geological and historical contexts, and the analysis of several boring cores. One of these cores (no. 7U) falls within the project area. This core revealed fill down to ten feet and alluvial sand to twenty feet, characteristic of the entire project area which was marshland prior to the mid-19th century when it was filled. Due to the substantial filling of the area, no further archaeological investigations were recommended by that study.

In 2009, CTDOT began investigating the feasibility of locating a new parking garage on the lot immediately south of Union Station. This project was subsequently halted in 2012. As part of this study, and in consultation with the Connecticut State Historic Preservation Office (CT SHPO), a Phase 1A Archaeological Survey was completed in January 2011 by Archeological Consulting Services. The study documented the geologic and historic context of the area. Based on the prior disturbance of the site due to the siting of utilities, and because of the filling of marshland, no further archeological investigations were recommended.

Review of historic Sanborn maps and aeriels show no buildings located within the project area. The site currently serves as a surface parking lot, as the majority of it has since the early 20th century. A geophysical testing program utilizing ground penetrating radar was undertaken in November 2015 as part of the geotechnical investigations for the proposed project. The testing was intended to detect potential buried structures such as former roadway or rail beds, concrete slabs, or building foundations. Buried structures were identified through the testing, however the locations of these structures generally correspond with the former sidings and access roads on the site as found on an aerial photograph from 1951.

3.8.1.2 Architectural Resources

The New Haven Rail Yard lies immediately east of the project site. In the late 19th century, the New York, New Haven, and Hartford Railroad (New Haven Railroad) dominated rail service in southern New England, providing both passenger and freight service. At this time, the rail yard had the largest shop complex in the region, and was the site of construction for many freight cars and locomotives. The rail yard's shops played a vital role in maintaining the vitality of the railroad after World War I when it initiated a large-scale freight car construction and rebuilding program, and again in the 1960s when the shops focused on rebuilding the railroad's pioneering electric locomotives. The rail yard also undertook general repair and maintenance of the railroad's rolling stock. In the 1990s, following intensive cultural resources investigations at the rail yard, the yard and associated rail corridor were determined eligible for the National Register of Historic Places as an important example of Connecticut's turn-of-the-century railroad-related technology. As a historic property, the New Haven Rail Yard is comprised of a complex of interrelated buildings and potential archeological remains. As mitigation for potential adverse effects resulting from planned demolition and construction activities at the rail yard, Historic American Engineering Record (HAER) documentation of the complex was completed in 2006 (HAER No. CT-160, Public Archaeology Survey Team, 2006).

Located southwest of the project site, New Haven Union Station was designed by Cass Gilbert between 1919 and 1920 to replace an earlier station located to the east that burned. Gilbert is known both as a major early 20th century Beaux Arts architect and an early proponent of the skyscraper. The Beaux Arts-style Union Station building is four stories high and constructed of brick. The primary façade which fronts on Union Avenue has a symmetrical tripartite design. The central bay, which projects forward a few feet from the wings, is characterized by five monumental three-story-high recessed arches. Bands of vertically aligned rectangular windows pierce the facade in the flanking bays, and the brick walls rest upon a five-foot-high concrete and crushed stone base. A prominent marble beltcourse divides the third and fourth stories, and a marble cornice encircles the building. A wide marquee runs the length of the center block, serving to protect passengers entering and exiting the building from inclement weather. A covered walkway connects the building to the adjacent parking garage to the north. Union Station was listed in the National Register of Historic Places in 1975 for its association with the New Haven Railroad during a period of rail dominance, as well as a noteworthy example of the architecture of Cass Gilbert.



Exhibit 3.8-1: North and West Elevations of Union Station

No additional historic architectural resources have been identified within the study area.

3.8.2 Impact Evaluation

Under the No-Action Alternative, a new parking garage would not be constructed. Thus, there would be no effects to archaeological or historic architectural resources.

Through a 1982 archaeological survey of the parcel to the south and a 1999 Surficial Site Investigation of the project area, it has been determined that soils in the project area consist of fill. In addition, archaeological surveys for the parcels immediately north and south of Union Station have determined the area to have low archaeological sensitivity due to prior disturbance

and the presence of fill materials. These parcels lie in close proximity to the project site. CTDOT has thus determined that the project area has very limited potential to contain intact, eligible archaeological sites, and that the limited deep ground disturbance required for the new garage support piles does not warrant further archaeological investigations. The CT SHPO has concurred with this finding on September 8, 2015. This determination is included in Appendix C.

The construction of the parking garage would not directly affect the New Haven railyard or Union Station. Although the new parking garage would lie adjacent to the rail yard, it would not have adverse visual impacts on the historic property. Moreover, any visual impacts to Union Station would be minimal since the existing parking garage lies between the project site and the Union Station building, and the new garage would have similar height and massing to the existing garage. The design of the new garage would be compatible with the materials and character-defining features of Union Station. Thus, CTDOT has determined that the proposed project would not have an adverse effect on historic architectural resources. The CT SHPO concurred with this finding. This determination is included in Appendix C.

3.8.3 Mitigation

Coordination between CTDOT and CT SHPO has been on-going throughout the planning process. In March 2016, CTDOT met with CT SHPO to share preliminary design options. CT SHPO confirmed that each of the options would not result in an adverse effect. As design plans are advanced for the parking garage, they will be provided to the CT SHPO for their review and comment.

If construction activities uncover the remains of a structure and/or archaeological resource that has the potential to be historically significant, CTDOT's archaeologist will be called and the resource will be evaluated. Consultation with SHPO will be initiated as deemed appropriate by the qualified archaeologist. No other mitigation is warranted or proposed.

3.9 Visual Resources

3.9.1 Existing Conditions

The study area for visual resources was defined based on the potential for the new parking garage to be substantially visible from surrounding neighborhoods. It is identical to the study area for historic architectural resources discussed above. Although the new parking garage may appear in views from outside the study area, it would be a minor element in an existing urban context, and thus would not have the potential to substantially alter the viewshed.

The project site is a level surface parking lot which is encircled on the west, north and east sides by tall metal fencing. The decorative metal fence along the western property line on Union Avenue is visually distinctive and, according to the City of New Haven, may be original to the station property. The fencing on the other three sides is chain link. The parcel is bordered to the north by an open utility lot, and beyond that by an elevated portion of Route 34 which passes over the railroad tracks. Union Avenue borders the parcel on its west side. Across Union Avenue the built forms are visually imposing, including a multi-story police station and a parking garage. Further south on the west side of Union Avenue, the large blocky forms give way to the Church Street South Apartments, a series of three-story garden apartment buildings which lie directly

across the Avenue from Union Station. The density of the development on the west side of Union Avenue obscures views of the project site from areas further west. On its south side, the project site is tightly constrained by the six-story parking garage. This garage serves to block views to and from Union Station which abuts the existing parking garage to the south. Views to the east are more open and include the warehouse development on the east side of the Rail Yard.



Exhibit 3.9-1: View North from the Union Station Parking Garage Across the Project Site



Exhibit 3.9-2: View South Across the Project Site to the Union Station Parking Garage

3.9.2 Impact Evaluation

Under the No-Action Alternative, the parking garage would not be constructed. As such, there would be no impacts to visual resources.

Under the Proposed Action, a seven-level parking garage would be constructed on the project site. While it would alter the site's visual character, the overall height and massing of the proposed structure would be consistent with the existing garage to the south and the large buildings on the west side of Union Avenue, directly west of the project site. In addition, the materials and forms would be compatible with the Union Station building to the south. The new garage would not obstruct views of Union Station along Union Avenue. Thus, it is not anticipated that the construction of the new parking garage would adversely affect the visual character of the area. Instead, the new parking garage has the potential to improve visual conditions due to the elimination of a surface parking lot.

3.9.3 Mitigation

CTDOT will seek to reuse a portion of the decorative metal fencing currently located along Union Avenue in the site design of the Proposed Action. If this is determined not to be feasible, the fence can be salvaged for future re-use in other locations. No additional mitigation is warranted or proposed.

3.10 Socioeconomic Resources

3.10.1 Existing Conditions

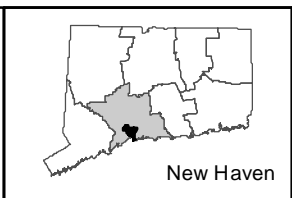
The study area relative to socioeconomic conditions includes the five U.S. Census Block Groups that encompass and surround the project site. These are shown in Figure 3.10-1. Socioeconomic conditions considered for this analysis include demographics, housing, employment, income and jobs. The socioeconomic data was obtained primarily from 2014 U.S. Census American Community Survey (ACS) five year databases. In general, most of the study area housing and resident population is in the Hill Neighborhood on its western side. Jobs and employment are dispersed throughout the study area.

3.10.1.1 Demographics and Trends

As shown in Table 3.10-1, the population of the study area represents approximately six percent of the City of New Haven as a whole. The largest age group is those of employment age at almost 64 percent. The data suggests, with 25 percent of the population school age or younger, that the area is largely one of families with children. The population of the study area at nearly 90 percent working age or younger is comparable in terms of age distribution to the City of New Haven as a whole. The percentage of elderly is, with the exception of one Census Block Group, lower than that in the larger SCRCOG region overall.



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 Feet
 Source: US Census
 Source: USGS (Aerial)



Block Groups
 UNION STATION PARKING GARAGE EIE
 Connecticut Department of Transportation
 State Project No. 301-114
 New Haven, Connecticut

FIGURE
 3.10-1

Table 3.10-1: Population by Age Cohort

Geography – Census Block Groups	Total Population (Pop.)	% Pre-school Age (age 1-5)	% School Age (age 6- 19)	% Employment Age (age 19-65)	% Elderly (65 and older)
90091401001	3,198	4.4	5.7	83.5	6.3
90091402001	1,374	9.6	27.1	39.3	23.9
90091403001	1,079	14.2	29.2	51.0	5.7
90091403002	1,683	8.9	19.1	65.2	6.7
90091422002	707	5.5	1.4	79.8	13.3
Study Area Total	8,041	8.5	16.5	63.8	11.2
City of New Haven	128,587	6.2	19.3	64.1	10.3
SCRCOG Region	561,108	5.2	18.2	60.9	15.6
State of Connecticut	3,592,053	5.3	19.0	60.1	15.3

Source: 2014 ACS

Table 3.10-2 summarizes ethnicity within the study area. The data indicates that the study area population is diverse with slightly more than 50% minority. This is comparable to the City of New Haven at large, but substantially greater than that in the SCRCOG region as a whole.

Overall, the population of the City of New Haven is expected to grow slowly over time. This is expected to translate to some growth in the study area population as well, given the housing and development initiatives there. The Connecticut Economic Resource Center (CERC) 2014 profile for New Haven projected one percent population growth in the City between 2012 and 2020. Similarly, the SCRCOG 2010 TDM Update (setting parameters for the regional travel demand model) projected a 0.10% annual growth rate in New Haven between 2000 and 2040.

3.10.1.2 Environmental Justice Considerations

The policy of the CTDEEP is that no segment of the population should, because of its racial or economic makeup, bear a disproportionate share of the risks and consequences of environmental pollution or be denied equal access to environmental benefits. This policy complements the federal Executive Order 12898, Federal Actions to Address Environmental Justice (EJ) in Minority populations and Low Income Populations, which requires federal agencies to avoid disproportionately high and adverse human health and environmental effects on minority and low income populations. It also is consistent with Title VI of the Civil Rights Act of 1964 which requires nondiscrimination in any federally funded activities. In addition, the CTDEEP policy is consistent with the U.S. Department of Transportation (USDOT) policy concerning persons with Limited English Proficiency (LEP). Under this federal policy, USDOT funding recipients are required to take reasonable steps to ensure meaningful access to their programs and activities by LEP persons. This state policy and the federal executive orders, legislation and policy are the foundation for the consideration of impacts to EJ and LEP populations under CEPA.

Table 3.10-2: Race and Ethnicity

Geography – Census Block Groups	Total Population	% White, Non-Hispanic	% Hispanic	% African American	% Asian	% American Indian/ Native Alaskan	% Native Hawaiian /Pacific Islander	% Two or more races	% Other	% Minority	% LEP
90091401001	3,198	51.2	8.8	22.3	16.3	0.0	0.0	3.9	6.3	48.8	5.8
90091402001	1,374	33.8	36.2	43.6	0.0	2.6	0.0	3.7	16.3	66.2	8.9
90091403001	1,079	29.4	42.4	36.5	0.0	0.6	0.0	12.6	20.9	70.6	11.4
90091403002	1,683	26.2	38.9	46.3	4.0	0.0	0.0	1.7	21.7	73.8	7.7
90091422002	707	92.1	3.7	4.0	0.0	0.0	0.0	2.4	1.6	7.9	3.7
Study Area Total	8,041	46.5	26.0	30.5	4.1	0.6	0.0	4.9	13.4	53.5	7.5
City of New Haven	128,587	43.8	24.7	36.7	5.0	0.3	0.1	2.8	11.2	56.2	8.2
SCRCOG Region	561,108	73.0	14.7	15.2	3.9	0.2	0.0	2.2	5.4	27.0	4.6
State of Connecticut	3,592,053	77.3	14.2	10.6	3.9	0.2	0.0	2.7	5.0	22.5	5.3

Source: 2014 ACS

Two complementary methodologies were used to identify possible environmental justice populations in the study corridor. The first was the U.S. Council on Environmental Quality (CEQ) guidance which identifies an EJ group where the proportion (percentage) of minority or below-poverty population in an area is "meaningfully greater" than the percentage in a broader (larger) area. Under the CEQ methodology, minority populations are those that classify themselves as any race except white. For income, the U.S Department of Health and Human Services (DHHS) calculations of poverty level by family size applies. The 2015 DHHS poverty level for a family of three is \$20,090 per year. The median household size in the study area is 2.5. Additionally, in order to identify all low-income populations, the FTA guidance (Circular 4703) for EJ analyses was also applied. It recommends including individuals whose family income is at or below 150 percent of the poverty line in addition to persons living below the poverty level. As such, for the purposes of this analysis, the more conservative approach is utilized; low income EJ populations are those households with annual incomes of \$30,000 or less.

The second method of identifying the locations of EJ populations in the study area was to consider the thresholds for identifying such populations as employed by the SCRCOG for regional planning and public outreach purposes. In the region's *South Central Regional Long Range Transportation Plan 2015-2040* (SCRCOG, April 2015), SCRCOG determined the thresholds for concentrations of EJ populations to be at 11.85 percent for those below poverty and 25.84 percent for minority.

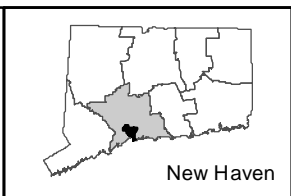
For this study, an EJ population is defined based on consideration of the above methodologies, and averaging the percentages among the three larger comparison areas. Thus, EJ and LEP populations include any of the following:

- Minority: 26% or more of residents identify as a race other than white
- Below Poverty: 25% at the poverty level or below
- Low-Income: 35% at or below 150% of the poverty level
- LEP: 6% or more of the population has limited English proficiency

The percentages of poverty, low income, and minority populations for the study area and comparison regions are shown in Table 3.10-3. Figure 3.10-2 shows the location of EJ populations in the study area. With one exception, the Census Block Groups which comprise the study area all have a concentration of EJ populations. Similarly, among the Study Area block groups, three (3) have a concentration of LEP populations. The Study Area as a whole, also has a concentration of LEP populations.



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 Source: US Census,
 ACS 2014
 Source: USGS (Aerial)



Environmental Justice
 UNION STATION PARKING GARAGE EIE
 Connecticut Department of Transportation
 State Project No. 301-114
 New Haven, Connecticut

FIGURE
 3.10-2

Table 3.10-3: Environmental Justice Populations

Geography/Census Block Groups	Total Population	% Minority	% Poverty Level or below	% at 150% of poverty level or below	Meets EJ Population Threshold
90091401001	3,198	48.8	23.9	23.9	Yes
90091402001	1,374	66.2	71.3	71.3	Yes
90091403001	1,079	70.6	61.7	67.7	Yes
90091403002	1,683	73.8	67.5	67.5	Yes
90091422002	707	7.9	13.3	13.3	No
Study Area Total	8,041	53.5	47.6	47.6	Yes
City of New Haven	128,587	56.2	38.0	38.0	
SCRCOG Region	561,108	27.0	20.1	20.1	
State of Connecticut	3,592,053	22.5	17.5	17.5	

3.10.1.3 Housing Characteristics

Housing characteristics in the study area are summarized in Table 3.10-4. The majority of housing in the study area is rental units. Overall, vacancy rates in the study area are higher than that in the City of New Haven or SCRCOG region. It is also notable that four of the five Census Block Groups have a relatively high percentage of households that do not have a vehicle. They are both EJ populations and transit-dependent. Access to transit including rail will be particularly important for many study area residents.

Table 3.10-4: Housing Characteristics

Geography/Census Block Groups	Total Housing Units	% Owner Occupied	% Renter Occupied	% Vacant	Average HH Size	% HH without vehicle
90091401001	3,105	4.2	95.8	13.1	1.5	41.1
90091402001	1,354	3.8	96.2	5.2	2.0	64.0
90091403001	1,060	17.8	82.2	13.7	3.6	24.7
90091403002	1,349	24.8	75.2	5.0	3.7	31.7
90091422002	707	33.2	66.8	7.2	1.8	11.9
Study Area Total	7,575	16.8	83.2	8.8	2.5	34.7
City of New Haven	118,574	30.8	69.2	6.7	2.5	28.4
SCRCOG Region	538,935	64.0	36.0	4.7	2.5	12.2
State of Connecticut	3,472,533	69.0	30.7	4.5	2.6	9.3

3.10.1.4 Employment and Income

Employment and income characteristics within the study area are summarized in Table 3.10-5. The percent of employed persons in the study area is lower than that in the City of New Haven overall and the SCRCOG region, as is the median household income. However, two of the Census Block Groups have a notably higher percentage employed than the comparison regions. The two Census Block Groups with the lowest employment levels are also those with unemployment rates greater than 30 percent. This data correlates to the relatively high poverty rate in the study area.

Table 3.10-5: Employment and Income

Geography/Census Block Groups	Total Employed	% Employed	% Unemployed	Median Household Income
90091401001	2,084	94.7	5.3	50,878
90091402001	368	65.2	34.8	13,202
90091403001	364	80.5	19.5	29,712
90091403002	785	60.9	39.1	43,472
90091422002	548	94.0	6.0	60,735
Study Area Total	4,149	79.1	20.9	39,600
City of New Haven	66,644	85.8	14.2	41,009
SCRCOG Region	307,789	89.6	10.4	68,103
State of Connecticut	1,962,119	89.9	10.1	78,688

Source: 2014 ACS

The SCRCOG 2010 TDM Update projected an annual 0.93% growth in jobs in New Haven between 2000 and 2040. Jobs by industry sector are listed in Table 3.10-6. The predominance of two major industry sectors in the form of educational services, and health care and social assistance (41 percent), along with the services industries (25 percent), is likely due in large part to the presence of several large institutions in the study area, including Yale New Haven Hospital, New Haven Police Department, and Gateway Community College.

Table 3.10-6: Employment by Percentage of Industry Sector

Industry Sector	Study Area by %	City of New Haven by %
Construction	0.9	2.6
Manufacturing	13.1	8.4
Wholesale trade	1.4	1.9
Retail trade	6.0	9.3
Transportation and warehousing, and utilities	3.5	4.2
Information	1.4	1.5
Finance and insurance, and real estate and rental and leasing	5.1	3.5
Professional, scientific, and management, and administrative and waste management services	11.3	0.6
Educational services, and health care and social assistance	41.2	41.8
Arts, entertainment, and recreation, and accommodation and food services	12.5	11.4
Other services, except public administration	2.1	4.1
Public administration	1.5	3.1

3.10.2 Impact Evaluation

Potential impacts to socioeconomic conditions include changes to:

- Population, housing, or employment trends;
- Housing choice;
- Access to jobs;
- Economic vitality;
- Consistency with economic development initiatives; and
- Disproportionately high adverse effects to EJ populations.

The No-Action condition would be a continuation of existing conditions. It would not impact any of these factors.

The Proposed Action would have no direct impact on population, housing trends, housing choice, or EJ populations. It would have a beneficial impact due to the increase in commuter parking, thereby facilitating access to jobs located beyond the project study area.

3.10.3 Mitigation

As no adverse impacts to socioeconomic conditions are anticipated, no mitigation is warranted or proposed. Nonetheless, due to the presence of a substantive percentage of Hispanic and LEP populations in the study area, CTDOT will provide meeting materials in Spanish and translation in Spanish, if requested, for the public involvement activities associated with both the EIE and subsequent design development for the Proposed Action.

3.11 Safety and Security

3.11.1 Existing Conditions

The Metropolitan Transportation Authority (MTA) police currently have offices within Union Station. However, the primary security for the existing parking lot, which is the future site of the Proposed Action, is conducted by employees of NHPA. While NHPA is the primary provider of security for the station building, exterior grounds and parking areas, MTA and Amtrak Police, along with City of New Haven Police provide support services as requested by NHPA. MTA police and Amtrak police patrol the adjacent tracks, station platforms and surrounding areas on the rail yard. The New Haven Police Department also patrols the surrounding public area (adjacent streets and neighborhoods), however they do not have a scheduled patrol at the proposed parking garage site. There are monitored security cameras at the bicycle storage area, and a security call-box on site.

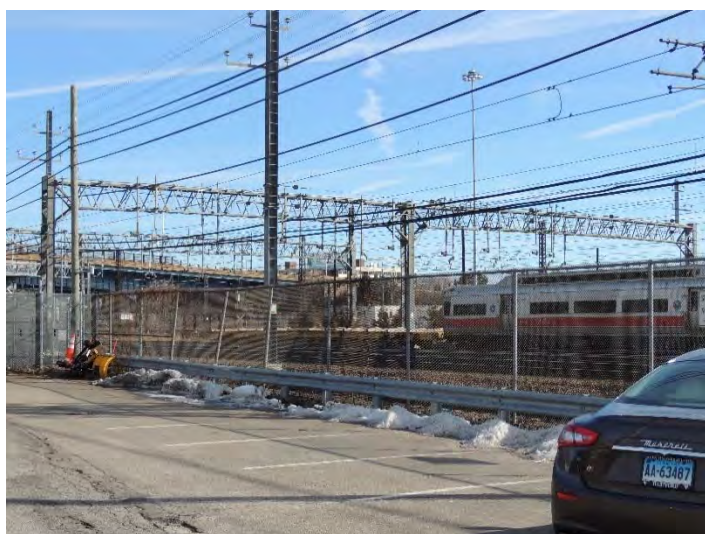


Exhibit 3.11-1. Chain-link fencing separating the existing surface lot from railroad tracks

Fences surround the existing surface parking lot site. Chain link fencing borders the east side of the parking lot adjacent to the railroad tracks (see Exhibit 3.11-1). Chain link fencing also runs along the south side of the parking lot, although there is a small opening for pedestrian access. An iron fence borders the west side of the parking lot along Union Avenue. A security fence separates the parking lot from an electrical substation, located to the north. The security fence is topped with barbed wire.

South of the existing surface lot is the main vehicular entrance to both the surface lot to the northeast and the existing parking garage to the southwest. The street entrance is open to vehicular, pedestrian, and bicycle traffic. Access (entry and exit) of vehicles into the surface lot and parking garage is controlled by a gate attendant. There is a fee to park in the surface lot, as well as the existing parking garage.

The headquarters for the New Haven Police Department is located on Union Avenue immediately northwest of Union Station. The New Haven Fire Department is headquartered at 952 Grand Avenue (approximately 0.5 mile from Union Station), with another nearby fire station at 525 Howard Avenue (approximately 0.25 miles away). Nearby hospitals include Yale New Haven Hospital at 20 York Street (less than 0.7 mile from Union Station) and the Hospital of Saint Raphael at 1450 Chapel Street (approximately 1.25 miles away).

3.11.2 Impact Evaluation

The No-Action condition would be a continuation of existing conditions. It would not impact any of these factors.

No adverse safety or security issues are anticipated with the Proposed Action. The new parking garage and pedestrian connection to Union Station will include a variety of modern safety and security measures to ensure the health and welfare of users of the facility. Modern LED lighting, security systems, revenue collection systems, and emergency power systems are proposed.

Similar to the existing parking garage, access (entry and exit) of vehicles into the new garage will be controlled by a gate attendant where the current surface lot driveway off Union Avenue is located today. Furthermore, patrolling and security of the proposed new facility will be provided by the same entities that currently provide these protection services. A new central management office, which will include a security component, is proposed along the main point of access to and from the garage. A second access (entry/exit) will be located on Union Avenue to the north. This second driveway will be gate controlled for monthly pass-holders and users paying by credit/debit card. To avoid vehicular conflicts with pedestrians and bicyclists, crosswalks and driving lanes will be clearly marked. Furthermore, a dedicated pedestrian walkway to Union Station will be installed parallel to the platform within the existing garage footprint, separated from the tracks by fencing. Accommodations for future connections to rail platforms will be located in between the new and existing parking garages.

3.11.3 Mitigation

As no adverse impacts are anticipated relative to public health and safety, no mitigation is warranted or proposed.

3.12 Agricultural Land and Soils

3.12.1 Existing Conditions

The Proposed Action site is a paved surface parking lot used by station/rail patrons. According to the U.S. Department of Agriculture Natural Resources Conservation Service (1990) and Soil Conservation Service (1976), the soils on the site consist of urban land, characterized as "...mainly areas that are covered by buildings, paved roads, and parking lots. Most of these areas are in the larger cities and the larger industrial and office complexes throughout the country."

There are no active farmlands or prime or statewide important farmland soils on the site.

3.12.2 Impact Evaluation

The No-Action Alternative will maintain the area in its present condition, and, therefore, will have no impacts to active farms or farmland soils.

The Proposed Action will not have any direct or indirect impact to active farms or to prime or other statewide important farmland soils.

3.12.3 Mitigation

Since the Proposed Action will have no effect on farmland soils, mitigation is not required or proposed.

3.13 Endangered, Threatened, or Special Concern Species or Habitats

3.13.1 Existing Conditions

According to the *Connecticut Natural Diversity Database* (CTDEEP, September 2015), there are no records of extant populations of federally listed endangered or threatened species or species listed by the State, pursuant to section 26-306 of the Connecticut General Statutes, as endangered, threatened or special concern in the project area. This is a preliminary determination, and a more detailed review may be conducted as part of any subsequent environmental permit applications submitted to CTDEEP for the project site.

According to a U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) report (conducted on April 13, 2016), the project site falls within an area which may provide suitable habitat for the Red Knot (*Calidris canutus rufa*) a federally endangered species. The Red Knot breeds in the Arctic tundra, and, therefore, the project site does not provide suitable habitat for its reproductive needs. Outside of breeding season, however, the Red Knot is found primarily in intertidal marine habitats, especially near coastal inlets, estuaries, and bays (Cornell Lab of Ornithology, 2016). It eats invertebrates, especially bivalves, small snails, and crustaceans. As such, it may be encountered along the shores of New Haven Harbor, or the estuaries and other marine habitats provided by the Mill and Quinnipiac Rivers.

The project site is currently a paved surface parking lot adjacent to an active railroad station and rail yard complex within a much larger urban area. While the surface lot itself is completely devoid of vegetation and other natural features, there are five mature sycamore trees growing along the sidewalk between Union Avenue and the surface lot. Several cavities within the trees may provide suitable habitat for a variety of species.

3.13.2 Impact Evaluation

The No-Action Alternative will maintain the study area in its present condition and therefore will not have an impact on wildlife, ecologically sensitive areas, or threatened and endangered species.

There are no records of extant populations of state listed endangered or threatened species or species of concern. The Red Knot is the only federally-listed species noted in the USFWS IPaC report for the site. A natural resource specialist visited the site, most recently in April 2016, and found no suitable habitat for Red Knot on the site. The existing surface parking lot is completely devoid of vegetation and other natural features suitable for meeting the basic requirements for food, shelter, or reproduction for the Red Knot, which prefers marine habitats, such as those offered by New Haven Harbor and the estuaries and inlets provided by the Mill and Quinnipiac Rivers, more than ½-mile to the east.

There are, however, five mature sycamore trees growing along Union Avenue which contain cavities capable of supporting a variety of wildlife. As part of the Proposed Action, these trees will be removed to facilitate construction of the bus pull-off and parking garage structure. When these trees are removed for the project, there are potentially suitable alternate sites for breeding and nesting purposes nearby, including Wooster Square Park.

3.13.3 Mitigation

Although no mitigation is required, it is recommended that the sycamore trees along Union Avenue be removed during the autumn-winter months to avoid and/or minimize impacts to habitat. Wildlife, particularly rare avian species, are known to use tree cavities, such as those observed in the sycamore trees, for breeding and nesting purposes in the spring-summer months.

3.14 Water Resources and Water Quality

3.14.1 Existing Conditions

3.14.1.1 Surface Water

There are no watercourses on or immediately adjacent to the Proposed Action site. The nearest surface water resource is New Haven Harbor, located approximately 2,700 feet to the southeast of the project site.

The Proposed Action “does not appear to be in a public water supply source water area,” as indicated by CTDPH’s December 2015 scoping review letter (Appendix A).

3.14.1.2 Groundwater

Groundwater underlying the project site is classified as “GB” (CTDEEP, 2013). Groundwater designated by the CTDEEP as Class GB is assumed to be degraded due to a variety of pollution sources, such as waste discharges, spills, and leaks of chemicals or land use impacts, and is assumed unsuitable for human consumption without treatment. Such waters are usually within a highly urbanized and/or industrial area and where public water supply service is available. GB-designated uses include industrial process water and cooling waters, and base flow for hydraulically connected surface water bodies.

There is an existing groundwater monitoring well located in the northeast quadrant of the existing parking lot. The disposition of this monitoring well will be addressed under the Task 310 efforts to be completed during subsequent design phases.

3.14.1.3 Stormwater

The project site is approximately two acres in size and is predominantly a paved surface parking lot. There is also a driveway at the southern end of the site along with a 3,625 square foot maintained lawn area, and a roofed attendant booth.

During rain events, stormwater flows across the parking lot, generally from the southwest to the northeast, to a low point in the northeast corner. From there a trench drain channelizes the runoff to a set of catch basins located north of the power substation on State of Connecticut property. These basins discharge to a 36” pipe culvert that runs under the railyard. Stormwater in the driveway and bike parking areas located just north of the existing parking garage drain to a

separate system of catch basins that discharge to a 66” brick culvert that runs diagonally across the south end of the Proposed Action site and continues under the railyard. Virtually no stormwater flows from the site to Union Avenue. Stormwater flow from both the 36” and 66” culverts ultimately discharge to twin 6-foot by 6-foot box culverts that outfall to New Haven Harbor.

3.14.2 Impact Evaluation

The No-Action Alternative will maintain the site in its present condition. The No-Action Alternative will, therefore, have no direct or indirect impacts to surface and/or groundwater resources or the quality of those resources. Stormwater flows will continue to be collected in catch basins and transported offsite towards New Haven Harbor within existing drainage systems.

There are no watercourses on or immediately adjacent to the Proposed Action site. Given the distance of the project site to the nearest surface water body, New Haven Harbor, potential impacts to surface water resources are limited to water quality degradation from stormwater discharges. The Proposed Action will not increase the area of impervious surfaces, but will involve replacement of the existing impervious surface lot with an impervious parking garage deck and access driveway.

Groundwater underlying the project site is classified as “GB” and is assumed to already be degraded due to sources of pollution such as waste discharges, spills, and leaks of chemicals or land use impacts. It is assumed to be unsuitable for human consumption without treatment and is typically used for industrial process water and cooling waters and base flow for hydraulically connected surface water bodies. The Proposed Action will not further degrade ground water underlying the project site. The existing groundwater monitoring well will be located under the proposed parking garage and inaccessible for monitoring.

The drainage system for the proposed parking garage will be consistent with current requirements for multi-level parking structures as recommended in CTDEEP’s December 2015 scoping comment letter (Appendix A). Runoff from exposed roof-level parking and from the exposed bridge connection to the existing garage, is likely to include large quantities of water with relative low concentrations of pollutants, similar to stormwater runoff from a surface parking area. CTDEEP requires that the first inch of runoff be treated for medium and coarse-grained sediment, as well as oil and grease, in an appropriate treatment system such as a hydrodynamic separator. Treated stormwater from the exposed parking levels can then be discharged to the City’s stormwater drainage system. Snowmelt runoff from the proposed snow storage area in the northwest quadrant of the site will generally be captured in a catch basin and treated in the same manner as runoff from the roof level of the parking garage in a hydrodynamic separator before being discharged to the stormwater drainage system. An operation and maintenance plan for the treatment system would be implemented to ensure that it continues to function properly.

CTDEEP also requires that runoff from the interior levels of the proposed parking garage be collected separately, treated and discharged to the sanitary sewer system. Runoff from the interior levels is likely to include tracked water from vehicles, drippage from the upper levels, and windblown precipitation, and is thus likely to be small in quantity but relatively

concentrated. Additionally, washing of interior levels will generate washwater that cannot be discharged to surface waters as it is not an allowable non-stormwater discharge. CTDEEP recommends treatment of this water in an oil-water separator with a capacity of at least 1,000 gallons that must be cleaned by a licensed waste oil hauler at least once per year. Washing the floors of the interior levels is eligible for coverage under the *General Permit for Miscellaneous Discharges of Sewer Compatible Wastewater* as building maintenance wastewater, although registration is required if greater than 5,000 gallons per day of washwater are generated.

The proposed drainage system for the site around the proposed parking garage will include new catch basins in the access driveways and in any low points on the site. The catch basins and associated new pipes will convey stormwater runoff to existing closed drainage systems, ultimately discharging to New Haven Harbor through existing outfalls. Because there is no increase in the impervious surface areas with the Proposed Action, the volume of stormwater runoff entering the existing closed drainage system is not anticipated to increase.

3.14.3 Mitigation

To mitigate potential surface water quality degradation, both during construction and post-construction, a stormwater pollution control plan will be designed and implemented in accordance with the 2002 Connecticut Guidelines for Erosion and Sedimentation Control (CTDEEP, 2002). The measures taken will prevent and minimize sedimentation, siltation, and/or pollution of nearby surface water bodies and off-site wetlands. Temporary and permanent stormwater management facilities will be appropriately designed in conformance with the Connecticut Stormwater Quality Manual (CTDEEP, 2004). Because the project is within, and affects, the 100-year coastal floodplain, the project will require flood management certification pursuant to section 25-68d of the CGS. In addition, a general permit for stormwater discharge during construction will be required from CTDEEP, since more than one acre will be disturbed.

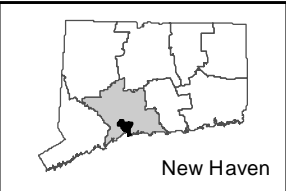
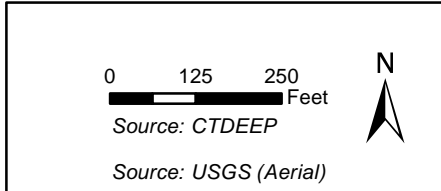
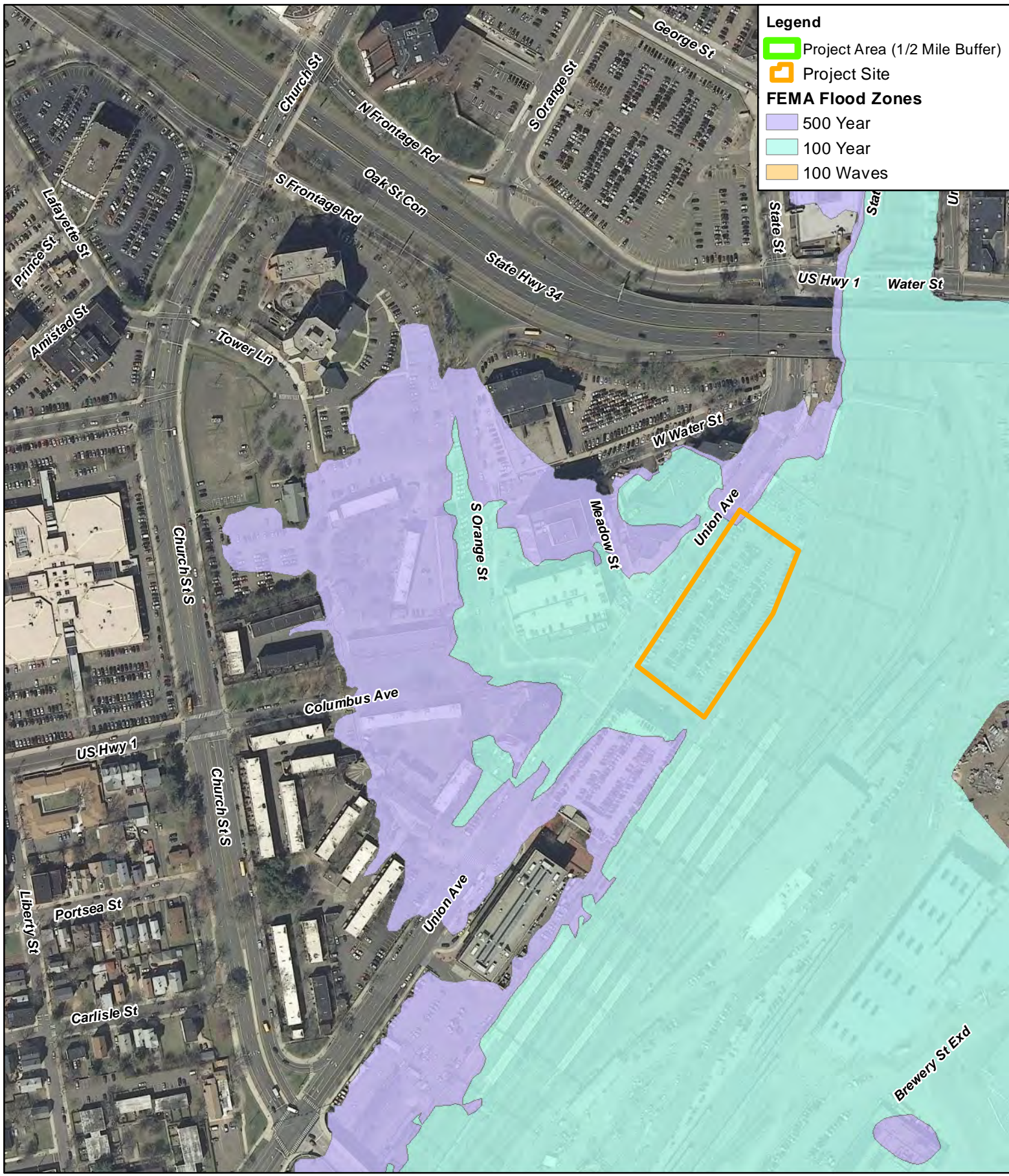
Additionally, the first inch of runoff from the roof level of the proposed garage and the bridge connection to the existing garage will be collected and treated in an appropriate system, such as a hydrodynamic separator, to remove medium and coarse-grained sediment and oil and grease. Snowmelt runoff from the snow storage area will be treated in the same manner. Runoff from the interior levels of the proposed garage will be collected separately and treated in an oil-water separator with a capacity of at least 1,000 gallons; this oil-water separator will be cleaned by a licensed waste oil hauler at least once per year.

The existing groundwater monitoring well, if determined to be needed for future monitoring, would be moved to an accessible location outside the footprint of the proposed parking garage.

3.15 Wetlands

3.15.1 Existing Conditions

CTDEEP and USFWS National Wetland Inventory (NWI) mapping, and U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey sources were reviewed to determine potential wetland locations in the study area. According to this initial screening using these sources, there are no wetlands or hydric soils on the site. This was



FEMA Flood Zones
 UNION STATION PARKING GARAGE EIE
 Connecticut Department of Transportation
 State Project No. 301-114
 New Haven, Connecticut

FIGURE 3.16-1

3.16.2 Impact Evaluation

The No-Action Alternative will maintain the area in its present condition, and, therefore, will have no impacts to the 100-year floodplain resources. The site will continue to experience chronic flooding during storm events.

The Proposed Action is considered an “activity” per CGS Section 25-68b (1) of Connecticut’s Flood Management Statutes and is subject to the 100-year floodplain requirements. Additionally, the Proposed Action is subject to Executive Order 11988, as amended, which requires all federal agencies to avoid construction within the 100-year floodplain unless no other practical alternative exists.

Although the Proposed Action encroaches upon the 100-year coastal floodplain, also referred to as the Coastal Flood Hazard Area (CFHA), the project site is currently a paved surface parking lot with minimal natural floodplain functions such as flood storage capacity. Because the Proposed Action is located in the CFHA, the proposed structures (which include the garage, garage stair and elevator core, and new central management office space located just south of the new garage) will be designed in accordance with ASCE 24-14 *Flood Resistant Design and Construction*, as referenced by the 2012 International Building Code. ASCE 24-14 requires the elevation of the ground floors of the proposed structures be set at or above the design flood elevation (DFE) of 12 feet for the site. Attaining the DFE on the ground floor of the proposed structures does require filling several feet above existing grade across the site and outside the footprint of the new parking garage. It is anticipated the ground floor of the new parking garage can be constructed at the DFE while maintaining a void below the structural slab; the extent to which the foundation design can reasonably and adequately allow for inundation of this void during a flood event will be further investigated during subsequent design phases. Placing fill and foundations for the proposed structures in the CFHA will reduce the volume of flood storage offered by the existing parking lot site, albeit minimally, potentially exacerbating local flooding that occurs presently. By converting a significant portion of the parking lot to a tiered garage and filling on site, the Proposed Action will adversely impact the CFHA. However, because the CFHA is expansive and extends along the entire coast of Connecticut and the proposed new parking garage project is located within a very small portion of the overall coastal floodplain, the adverse impact is anticipated to be negligible.

Furthermore, it is anticipated the reduction in flood storage capacity caused by the proposed structures and volume of fill on-site will not induce flooding in areas not otherwise flooded during the 100-year storm event.

3.16.3 Mitigation

The potential adverse impact of the Proposed Action on the floodplain will be minimized by minimizing the volume of fill required on-site to achieve the DFE, while still providing reasonable site access and maintaining an area for snow storage and snow removal on the site.

Since the Proposed Action site is within the 100-year floodplain and coastal flood hazard area, a CTDEEP Coastal Consistency Review will be required in compliance with the Connecticut Coastal Management Act. As a State Action affecting the floodplain, the Proposed Action will

also require Flood Management Certification (FMC) through CTDEEP. As part of the FMC application, a flood contingency plan will be developed and submitted for CTDEEP approval.

3.17 Wild & Scenic Rivers, Navigable Waters and Coastal Resources

3.17.1 Existing Conditions

3.17.1.1 Wild and Scenic Rivers

There are no Wild and Scenic Rivers or watercourses currently under study/consideration for designation to the National Wild and Scenic Rivers System located on or adjacent to the Proposed Action site.

3.17.1.2 Navigable Waterways

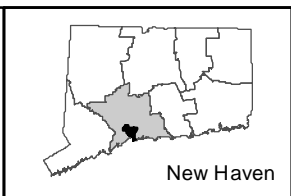
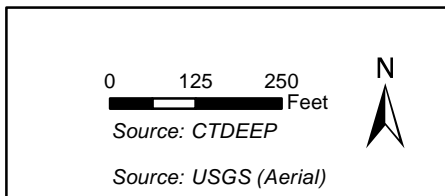
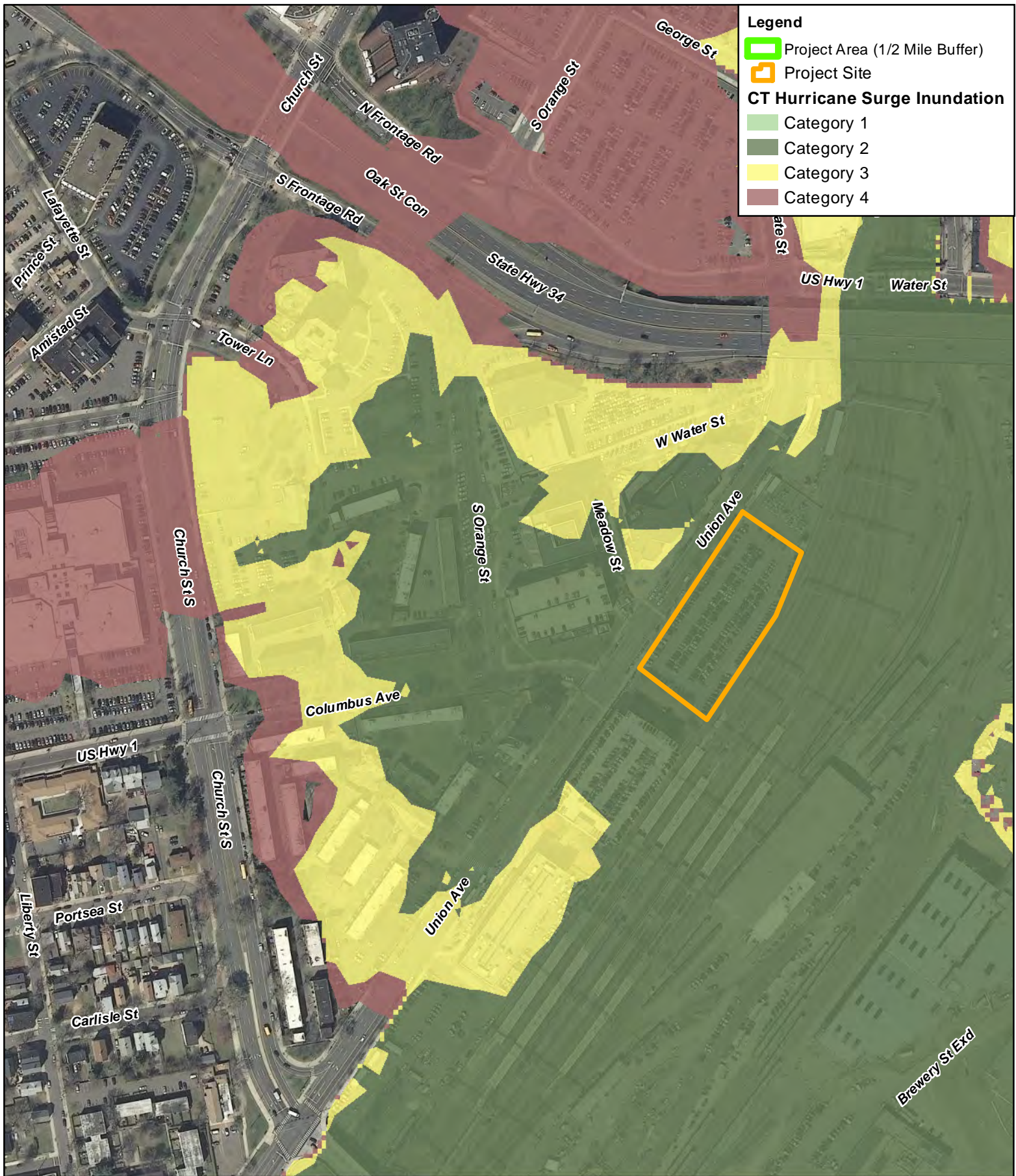
There are no navigable waterways located on or adjacent to the Proposed Action site.

3.17.1.3 Coastal Resources

The Proposed Action site lies within Connecticut's designated Coastal Boundary, as defined by the Connecticut Coastal Management Act (CCMA). Coastal resources at this location include coastal flood hazard areas associated with New Haven Harbor and Long Island Sound. The new proposed parking garage site is entirely within the coastal flood hazard area (CFHA) and is also within a Category 4 Hurricane Surge Area (U.S. Army Corps of Engineers, *Worst Case Hurricane Surge Inundation for Connecticut*, 2006) (see Figure 3.17-1).

According to the Connecticut General Statutes [CGS section 22a-93(7)(H)], coastal flood hazard areas are "those land areas inundated during coastal storm events or subject to erosion induced by such events, including flood hazard areas as defined and determined by the National Flood Insurance Act and all erosion hazard areas as determined by the Commissioner (of the CTDEEP). In general, coastal flood hazard areas include all areas designated within the A-zone and V-zones by FEMA."

There are two primary coastal flood hazard area policies under CCMA. One is "to manage coastal hazard areas to insure that development proceeds in such a manner that hazards to life and property are minimized" and the other is "to maintain the natural relationship between eroding and depositional coastal landforms; to minimize the adverse impacts of erosion and sedimentation on coastal land uses through the promotion of nonstructural mitigation measures."



CT Hurricane Surge Inundation
 UNION STATION PARKING GARAGE EIE
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 New Haven, Connecticut

FIGURE 3.17-1

3.17.2 Impact Evaluation

There are no Wild & Scenic Rivers or Navigable Waterways within the Proposed Action area.

The No-Action Alternative will not alter the existing condition of the Proposed Action site and therefore will not result in any direct or indirect impacts on the CFHA, the only Coastal Resource within the project site.

Although the Proposed Action encroaches upon the CFHA, the project site is currently a paved surface parking lot with minimal natural floodplain functions such as flood storage capacity. Nevertheless, construction of the proposed structures (which include the garage, garage stair and elevator core, and new central management office space located just south of the new garage) does require filling several feet above existing grade across the site and in the CFHA. By converting a significant portion of the parking lot to a tiered garage and filling on site, the Proposed Action will adversely impact the CFHA. However, because the CFHA is expansive and extends along the entire coast of Connecticut and the proposed new parking garage project is located within a very small portion of the overall floodplain, the adverse impact is anticipated to be negligible. Furthermore, it is anticipated the reduction in flood storage capacity caused by the proposed structure and volume of fill on-site will not induce flooding in areas not otherwise flooded during the 100-year storm event. For further discussion of proposed impacts to the CFHA, see Section 3.16.2 Hydrology & Floodplains.

3.17.3 Mitigation

There are no Wild & Scenic Rivers or Navigable Waterways within the Proposed Action area.

The potential adverse impact of the Proposed Action on the CFHA will be minimized by minimizing the volume of fill required on-site to achieve the DFE, while still providing reasonable site access and maintaining an area for snow storage and snow removal on the site.

Furthermore, during the project permitting phase, a CTDEEP coastal consistency review will be required for the Proposed Action, in compliance with the CCMA.

3.18 Public Utilities and Services

3.18.1 Existing Conditions

The existing public utilities and utility providers serving Union Station, the existing parking facilities, and the station area include:

- **Electric service** provided by United Illuminating (UI). Existing UI infrastructure includes utility poles and overhead distribution lines along the east side of Union Avenue between Meadow Street and West Water Street. The overhead lines cross from the east side of Union Avenue to Columbus Avenue. Overhead feeder lines from Union Avenue provide power to UI utility poles and luminaires within the Union Station parking lot. An underground conduit provides power from the distribution lines on Union Avenue to a 225 KVA stepdown transformer located at the northwest corner of the existing parking garage. A UI power substation is located immediately north of the existing Union Station parking lot and provides power to the railroad catenary system.

- **Water service** provided by South Central Connecticut Regional Water Authority (SCCRWA). Existing potable water infrastructure includes a 12” main under the northbound side of Union Avenue, with 12” mains that branch to Columbus Avenue and Meadow Street. The Union Avenue main feeds six fire hydrants on the east side of the street in the station area, including two located in front of the existing garage, one located in front of the existing parking lot, and three located near the station. The Union Avenue main also feeds a service connection located in the southwest corner of the existing parking lot. This service connection runs southeast from the street under the parking garage driveway and under the northeast corner of the parking garage to the railyard.
- **Sanitary sewer service** provided by Greater New Haven Water Pollution Control Authority (GNHWPCA). Existing sanitary sewer infrastructure includes a gravity sewer main that runs north to south along the middle of Union Avenue. Aside from roof leaders, storm sewer systems are generally separated from the sanitary sewer system in the Union Station area.
- **Gas service** provided by Southern Connecticut Gas Company (SCGC). Existing natural gas infrastructure includes a 4” gas line that runs north on Union Avenue, terminating in the vicinity of Union Station; and a 12” gas main that runs south on Union Avenue from Water Street, terminating just south of West Water Street.
- **Telephone service** provided by Frontier Communications. Existing telephone infrastructure includes a duct bank that runs along Union Avenue from the south of Union Station to a manhole at Columbus Avenue. From the manhole, a duct bank follows Columbus Avenue to the west, and a conduit extends east to the northwest corner of the existing parking garage. A duct bank also runs from West Water Street to State Street via Union Avenue.

3.18.2 Impact Evaluation

Construction of the Proposed Action will impact the following existing public utility infrastructure:

- There are four utility poles, three with street lights, and overhead utility lines located along the east side of Union Avenue that will require aerial relocation or relocation underground to accommodate construction of the proposed bus pull-off. If the overhead lines are relocated underground, new street lights will need to be provided on Union Avenue in this area. Six additional utility poles, overhead luminaire assemblies, and associated electric feeder lines located within the existing parking lot will require removal for construction of the new garage. Related impacts include the modification or replacement of site lighting along the main access driveway for the Proposed Action.
- The water service connection in the southwest corner of the existing parking lot could require relocation to accommodate construction of the foundations for the new garage.
- The existing fire hydrant located on Union Avenue in front of the existing parking lot will require relocation to accommodate construction of the proposed bus pull-off.

The Proposed Action will also increase demand (relative to existing demand) for electric, water, sewer, and telephone services in the Union Station area; demand for gas may also increase depending on the heating source selected for the new central management office space, and the

fuel source selected for emergency power systems. It is anticipated that construction of the Proposed Action will require the following utility service connections and improvements:

- New electric service will be required to power lights, electric vehicle charging stations, PARCS, security systems, mechanical systems, elevators, and receptacles throughout the proposed facilities. The new service may draw from either underground or overhead power.
- A water service connection will be required to provide water to the proposed central management office space and new garage.
- A sanitary sewer service connection will be required, potentially in the area of Meadow Street, to convey sewage from the proposed central management office space. If natural gas is needed to heat the proposed central management office space or to fuel emergency power systems, a new gas service connection may be required to supplement any existing service connections currently serving the site. According to the available utility mapping, underground gas lines run along Union Avenue from the south end in front of Union Station. Another underground gas stub is located at the intersection of Union Avenue and West Water Street. It appears that an extension would be required to provide a service connection to the proposed facility, requiring an 800' extension from the south along Union Avenue, or a 400' extension from the north along Union Avenue to connect at West Water Street.
- New telephone connections will be required for the new facility. It is expected that existing service in Union Station and the existing garage can be expanded to provide service to the proposed central management office space and new garage. If necessary, a new connection will be made directly to existing duct banks in Union Avenue.

3.18.3 Mitigation

New utility service connections will be required to provide electric, water, sewer, and telephone for the Proposed Action. A new connection may also be required for gas.

The degree to which individual utility services will have to be improved to support increased demand for the Proposed Action will be determined in consultation with the utility owners during subsequent design phases for the project; however, it is not anticipated that significant capacity improvements will be warranted.

3.19 Energy Requirements

3.19.1 Existing Conditions

The existing site consists of a surface parking lot, driveway, guard stand, and gated access. Energy consumption on the site includes the use of electricity for lighting of pole lamps and powering gates controlling entry to and exit from the site. Natural gas is used to heat the guard stand. Fossil fuels are also consumed by vehicles on the site and the surrounding environs.

Electricity is provided by UI, natural gas by Southern Connecticut Gas Company, and fuel oil by various companies. Electrical power is brought to the site via overhead and underground power lines that run along Union Avenue. Natural gas is brought to the site by underground pipes.

3.19.2 Impact Evaluation

The No-Action Alternative will maintain the area in its present condition, and, therefore, the rate of energy demand/consumption would remain essentially constant.

The Proposed Action includes a new parking structure, stairwells, stair and elevator core, and new central management office space that will require electric lighting, electric vehicle charging stations, PARCS, security systems, mechanical systems, elevators, and convenience power. These modern systems will increase energy consumption on the site from existing conditions.

As far as energy availability, UI estimates that, with the referenced upgrades, there will be adequate energy supply to meet the increased demand at the Proposed Action site. This site, zoned for transportation uses, permits activities which have similar energy requirements as the proposed new parking garage.

From a regional perspective, it is anticipated that the proposed new parking garage will have a positive impact on the consumption of energy because it will improve access to and enhance the use of rail transportation for longer trips. Thus, the Proposed Action is expected to contribute to an overall reduction in the consumption of fossil fuels associated with vehicular traffic on the region's roadways, especially during peak commuting periods.

Additionally, increasing the availability of electric vehicle charging stations with the Proposed Action will facilitate the introduction of the electric vehicle technology into the state and will serve to alleviate the present energy dependence on petroleum.

3.19.3 Mitigation

CTDOT will incorporate energy-efficient lighting and equipment into the design of the Proposed Action to help reduce the net increase in energy consumption associated with the new parking structure and systems. In doing so, the State will be eligible for financial rebates from United Illuminating through energy-saving incentive programs for new construction and facility improvements that include *Energy Conscious Blueprint* and *Energy Opportunities*.

No other adverse impacts to energy are anticipated from the project. Therefore, no other mitigation is warranted or proposed.

3.20 Pesticides, Toxic or Hazardous Materials

3.20.1 Existing Conditions

3.20.1.1 Hazardous Materials

Under contract to CTDOT, CDR Group completed a Task 210 Surficial Site Investigation for the proposed parking garage site in February 2016 to supplement previous investigations conducted in 1999. Nine soil samples and two groundwater samples were collected from within the project limits and submitted to a state-certified analytical laboratory for analysis. The samples were collected to verify the absence or presence and location of subsurface contamination and to assess the potential pollution impacts to be encountered during construction activities for the project. The report concludes that "contaminants of concern are present in the soil at

concentrations exceeding CTDEEP Remediation Standard Regulations (RSRs).” The report goes on to say, “based on the results of the laboratory analyses performed on soil and groundwater samples for this Task 210 investigation and the results from the previous environmental investigations conducted at the Site, the entire project limits has been designated Areas of Environmental Concern (AOECs) due to the widespread existence of soil contaminated with various Semi-Volatile Organic Compounds (SVOCs), total arsenic, total lead, total mercury, leachable lead, and 4-4’-DDT. Based on the results of the environmental investigations, no groundwater area of environmental concern (GW-AOEC) has been designated within the project limits.” The contaminants were detected in the soil samples collected at depths of one to four feet below grade.

3.20.1.2 Solid Waste, Pesticides and Toxics

There are a number of trash receptacles located within the existing New Haven Parking Garage, within Union Station, just outside Union Station, and along Union Avenue. There are no trash receptacles currently within the existing surface parking lot itself, although there is a dumpster positioned in the northeast corner abutting the fence separating the site from the electric substation to the north and railroad tracks to the east. During a February 19, 2016 site visit, there was evidence that patrons use the receptacles in the vicinity of the project site.

Solid waste from these receptacles is collected and transferred by a licensed hauler to a licensed disposal facility. The quantity of solid waste generated in the garage is relatively minor and is limited to solid waste collected in on-site trash receptacles located around the facility. Vehicle and railway rolling stock and track maintenance activities are performed at other facilities located within the adjacent railyard.

Based on the available information, there has been no known use of herbicides, pesticides, or toxic materials at the existing parking lot site. There is the potential that maintenance along the existing railroad right of way has involved the use of herbicides. Furthermore, the adjacent rail yard is a known user of various toxic materials used in the operations of the rail yard facility.

3.20.2 Impact Evaluation

3.20.2.1 Hazardous Materials

Under the No Action alternative, the project area would remain an Area of Environmental Concern, and the widespread existence of soil contaminants would remain unchanged.

The Proposed Action will require excavation of existing ground to construct the foundations for the proposed parking garage, bridge connections, and stair and elevator core structures. It is anticipated the excavated materials will not be used for fill on-site, and will be properly disposed of off-site.

Task 310 Plans, Specifications and Estimate will be required to assess the construction activities associated with the project, including management, storage, and disposal of contaminated soil and worker health and safety, in order to ensure compliance with all applicable local, state, and federal laws, regulations, and guidance.

3.20.2.2 *Solid Waste, Pesticides and Toxics*

Under the No Action alternative, existing solid waste generation, pesticide use, and toxic material conditions would remain unchanged.

The Proposed Action is anticipated to result in increased amounts of solid waste generated as compared to existing conditions as a result of the expanded parking capacity. More trash receptacles will be on-site than under the present conditions. Solid waste will continue to be disposed by a licensed waste hauler at a permitted facility. The Proposed Action will not require the use of pesticides or herbicides, and building materials will be required to meet current local, state, and federal codes and regulations relative to toxicity and exposure potential.

3.20.3 *Mitigation*

3.20.3.1 *Hazardous Materials*

As indicated in CTDEEP's December 2015 scoping comment letter (Appendix A), soil excavation for the Proposed Action should include a protocol for sampling and analysis of potentially contaminated soil. Soil with contaminant levels that exceed the applicable criteria of the Remediation Standard Regulations, and that is not hazardous waste, is considered to be special waste. The disposal of special wastes, as defined in section 22a-209-1 of the RCSA, requires written authorization from the Waste Engineering and Enforcement Division prior to delivery to any solid waste disposal facility in Connecticut.

The Waste Engineering & Enforcement Division has issued a *General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer)*. It establishes a uniform set of environmentally protective management measures for stockpiling soils when they are generated during construction where contaminated soils are typically managed (held temporarily during characterization procedures to determine a final disposition). Temporary storage of less than 1,000 cubic yards of contaminated soils (which are not hazardous waste) at the excavation site does not require registration, provided that activities are conducted in accordance with the applicable conditions of the general permit. Registration is required for on-site storage of more than 1,000 cubic yards for more than 45 days or transfer of more than 10 cubic yards off-site.

3.20.3.2 *Solid Waste, Pesticides and Toxics*

No impacts from solid waste, pesticides, or toxics are anticipated following construction of the Proposed Action. Therefore, no mitigation is necessary or proposed.

3.21 **Soils and Geology**

3.21.1 *Existing Conditions*

According to the U.S. Geological Survey (USGS) "Surficial Materials Map of Connecticut" (1992), the site soils consist of artificial fill, described as "earth materials and manmade materials that have been artificially emplaced." According to the Task 210 Surficial Site Investigation report prepared by Maguire Group (1999) for the subject parcel, the soil underlying the site was found to consist of fill, including sand, ash, cinders, brick, and gravel, underlain by reddish brown sand. The reddish brown sand is explained by the United States Department of Agriculture Soil Conservation Service's older 1978 "Surficial Materials Map of Connecticut," which indicates that soil in the vicinity of the site consists of the Pennwood-Manchester

formation. The Pennwood-Manchester formation is described as reddish, excessively drained sandy soil with a sandy and gravelly substratum.

According to the Bedrock Geological Map of Connecticut, compiled by John Rodgers in 1985, the bedrock unit underlying the site is New Haven Arkose, which is red-brown, poorly-sorted arkosic sandstone.

3.21.2 Impact Evaluation

The No-Action Alternative will maintain the area in its present condition, and, therefore, will have no adverse impacts on soils or geology.

The Proposed Action will not alter existing conditions and will not result in adverse impacts to soils or geology. The site is predominately comprised of a paved surface parking lot. The underlying soil consists of fill underlain by reddish brown sand. No bedrock was encountered during the Maguire Group's 1999 site investigations which included soil borings.

3.21.3 Mitigation

There will be no adverse impacts to soils or geology; no mitigation is proposed or warranted.

3.22 Secondary and Cumulative Impacts

Secondary (or indirect) impacts are those which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Secondary impacts may include induced growth and other induced changes in the pattern of land use or growth rate that would in turn, affect environmental resources. The baseline for evaluating potential secondary impacts is the existing and reasonably foreseeable expected environment, which is described in the No-Action Alternative.

Cumulative impacts are the impacts upon the environment which result from the incremental effect of a project when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The resources considered in the Secondary and Cumulative Effects analysis are predicated on the findings of the resource assessment for direct effects above. Thereby, for any resource for which it was determined there could be some direct impact, the potential for indirect and cumulative effects will also be evaluated. Resources for which there would be some direct impact include;

- Coastal Flood Hazard Area (100-year floodplain)
- Stormwater/Water Quality
- Hazardous Materials

Relevant past, present, and reasonably foreseeable future actions that could result in a cumulative effect in concert with the Proposed Action include:

Local Development Projects:

- The Church Street / Columbus Avenue Extension
- Route 34 Downtown Crossing Project and future development plans along the Boulevard: Full build will consist of 1,000 residential units, 200K sq. ft. of office space, 70K sq. ft. of retail. It will be coordinated with development at the former Coliseum site. Phase 2 of Route 34 Downtown Crossing is in 30% design.
- Former Coliseum site: Phase 1 consists of 50 residential units and a 160-190 room hotel. The Phase 1 construction period is from 2017-2019.
- Church Street/Union Avenue: \$600 million investment is planned on the west side of Union Avenue over the next 8-10 years. It is likely the police station on Union Avenue and public offices on Meadow Street will relocate.
- 10 sites with planned development in the Medical District
- Wooster/Ninth Square: 500 additional residential units by 2016-17

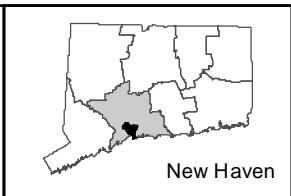
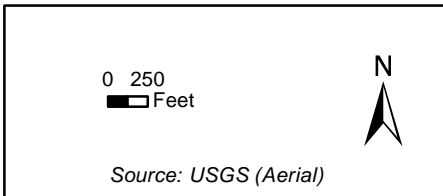
Transportation/Infrastructure Projects

- Farmington Canal Greenway: Phase IV, from Canal Dock to Brewster Street, is being constructed by O&G and will be off-street.
- Eight (8) projects for the upgrade of the New Haven Rail Yard are either in construction or design.
- State Street commuter rail station enhancements

3.22.1 Methodology

The methodology for the assessment of cumulative impacts considers the following:

1. Applicable geographic boundary: The geographic boundary for the indirect and cumulative impacts (ICE) analysis is shown in Figure 3.22-1; it will be the area considered to have potential for some influence on conditions in the study area. For this analysis, that area is considered to include:
 - Area within a ½ mile radius of Union Station as the influence area for long-term transit-related development
 - All of the City of New Haven downtown as mapped by the City of New Haven
 - Additionally, the boundary will include the drainage area surrounding Union Station as depicted in the recently completed drainage study



Proposed Overall ICE Analysis Influence Area

UNION STATION PARKING GARAGE EIE
 Connecticut Department of Transportation
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FIGURE 3.22-1

2. Appropriate timeline for framing the analysis in the context of past, present, and reasonably foreseeable future development.
 - The timeframe for the historical analysis will begin in 1985 at the original opening date of the existing Union Station parking garage and Union Station improvements
 - The future time frame will be 2028, ten years past the anticipated construction completion date of end of 2018 for the new garage and related improvements
3. Data and sources of information regarding relevant development that could contribute to indirect and cumulative effects include:
 - Historical development patterns: data from previous studies and consultation with the City of New Haven
 - State and municipal planned and programmed infrastructure or economic development projects
 - Planned and programmed private development projects which can reasonably be expected to be built

3.22.2 Impacts

3.22.2.1 Secondary Impacts

No indirect or secondary impacts are anticipated with the Proposed Action. Changes to the Proposed Action site are not expected to have any secondary effect on hazardous materials or stormwater flows that would in turn impact water quality or the CFHA.

3.22.2.2 Cumulative Impacts

There is some potential for cumulative effects on the CFHA, and water quality with the Proposed Action. The ongoing redevelopment activity in the core of New Haven could result in an increase in impervious surface area as well as encroachments on 100-year floodplains and the CFHA which occur across the area. The enhancements to the State Street Station in combination with the Proposed Action are anticipated to have the cumulative effect of stimulating subsequent infill development in dense TOD form. This could increase the area of impervious surfaces again, somewhat. This, which when added to the small new encroachment on the 100-year floodplain/CFHA associated with the new garage could result in an adverse cumulative effect on floodplain functions. A cumulative impact to water quality could also occur as stormwater flows from the Proposed Action are added to any new untreated stormwater runoff from new impervious surfaces at redeveloped parcels, in particular new parking lots or facilities.

It can be expected that given the urban environment, much of the anticipated redevelopment in the vicinity of the Proposed Action will occur on properties that contain hazardous materials. Yet, it can also be expected that any contaminated soils would be remediated as part of the redevelopment process. Therefore, the Proposed Action would have a beneficial cumulative effect with respect to the presence of hazardous materials over time.

3.23 Construction-Related Impacts

The Proposed Action will include construction of: the new parking garage, vehicular bridge connections, stair/elevator core and connections to the existing garage to the south, existing garage modifications to facilitate vehicular connections and pedestrian improvements, new central management office space, site and access improvements, and other ancillary

improvements. An evaluation of the construction-phase impacts and mitigation measures are described in this section. Discussion of existing conditions at the site is not relevant to this section. Additionally, the No-Action Alternative includes no construction and is therefore not discussed in this section.

3.23.1 Impact Evaluation

3.23.1.1 Traffic

Impacts are anticipated to the typical daily traffic flow and circulation patterns in and around the project site and Union Station during construction. These construction period impacts will occur as a result of closing the existing parking lot and displacing parking, temporarily closing travel lanes on Union Avenue and establishing detours in the area, and temporarily changing access to the existing garage. These impacts may contribute to temporary increases in travel delay for vehicles traveling the roadway network.

3.23.1.2 Parking

As the Proposed Action is being constructed on the existing 260-space surface parking lot at Union Station, temporary parking accommodations will be required to replace these spaces until parking is available in the new garage. A temporary parking assessment is being conducted to identify one or more viable locations where a total of approximately 300 parking spaces are available to offset the loss of parking in the surface lot. Initial findings indicate a total parking supply of more than 1,500 parking spaces at viable locations. These locations include adjacent commuter rail stations in West Haven and Branford, and existing parking facilities in downtown New Haven from which there is relatively convenient pedestrian and/or transit access to Union Station.

Parking in the existing garage will also be impacted on a limited basis to accommodate structural and building system modifications needed to connect the new garage to the existing garage. In addition, on-street parking on Union Avenue could be temporarily impacted for short durations due to lane closures, construction vehicle staging, and utility work for the project.

3.23.1.3 Pedestrians and Bicyclists

During construction there are expected to be temporary closures of existing sidewalks on Union Avenue and temporary displacement of existing bicycle parking facilities at Union Station.

3.23.1.4 Local Transit

During construction there are expected to be temporary disruptions to transit access to Union Station.

3.23.1.5 Air Quality

Potential construction air quality impacts can occur due to the use of diesel-powered construction vehicles. Diesel air emissions include carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter (PM₁₀ and PM_{2.5}). Emissions from construction equipment are anticipated to be significantly less than the total emissions from other industrial and transportation sources in the region, and therefore, are expected to be insignificant with respect to compliance with the

NAAQS. However, potentially localized air quality impacts could occur as a result of diesel exhausts from construction equipment in the vicinity of the project site.

Roadway traffic disruptions due to lane closures, detours, and construction vehicles staging on Union Avenue can cause congestion which can increase motor vehicle exhaust emissions. These impacts will be mitigated by implementing appropriate traffic management techniques during the construction period.

Fugitive dust emissions can occur during demolition, ground excavation, material handling and storage, movement of equipment at the site, and transport of material to and from the site.

Fugitive dust is most likely to occur during periods of intense activity and would be accentuated by windy and/or dry weather conditions.

3.23.1.6 Noise

Noise from construction activities was evaluated for the Proposed Action in accordance with FTA Qualitative Noise Assessment procedures stipulated in Chapter 12 of FTA's *Transit Noise and Vibration Impact Assessment* (FTA-VA-90-1003-06, May 2006). A qualitative noise analysis was deemed appropriate for this project for several reasons, including the distance of the nearest noise sensitive land use from the proposed garage site. The closest noise sensitive land use, a residential building, is approximately 400 feet away from the proposed garage site. Furthermore, construction activity is anticipated to be of moderate intensity, including earthwork, foundation work, building erection, and materials transport. Finally, ambient noise of the surrounding urban environment is already high and in effect will mask the construction noise. Noise levels in the vicinity of Union Station are anticipated to be approximately 72.9 dB (Ldn) based on 2010 noise measurements in the vicinity of the station.

Table 3.23-1 provides typical noise emission levels in A-weighted decibels (dBA) 50 feet from various types of construction equipment. These are the types of construction equipment, among others, that will be used to prepare the site, and construct the new parking garage and associated improvements.

Table 3.23-1: Noise Emission Levels from Construction Equipment

Equipment	Typical Noise Level (dBA) 50 ft. from Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Mobile	83
Dozers	85
Generator	81
Graders	85
Jack Hammer	88
Loader	85
Paver	89
Pile Driver (Impact)	101
Pile Driver (Sonic)	96
Rock Drill	98
Roller	74
Saw	76
Shovel	82
Spike Driver	77
Truck	88

Source: FTA, *Transit Noise and Vibration Impact Assessment*, FTA-VA-90-1003-06, May 2006. Based on EPA Report (“Noise from Construction Equipment and Operations, Building Equipment and Home Appliances” NTID300.1, December 31, 1971), measured data from railroad construction equipment taken during the Northeast Corridor Improvement Project, and other measured data.

In general, noise levels from construction equipment are reduced by 6 dBA for each doubling of distance from the construction equipment noise source. For example, an impact pile driver with a noise level of 101 dBA at 50 feet will have a noise level of 95 dBA at 100 feet, 89 dBA at 200 feet, 83 dBA at 400 feet, 77 dBA at 800 feet, and so forth. Buildings and other barriers located between a construction noise source and a sensitive noise receptor shield and therefore further reduce the intensity of construction noise.

The closest noise sensitive land uses to the site are located at the intersection of Union and Columbus Avenues. The residential building at this intersection is approximately 400 feet from the site. The distance between these closest residences and the site represents three doublings of the 50-foot noise measurement distance or the equivalent of an 18 dBA reduction in construction equipment noise levels. At this distance, the loudest impulse noise, the impact pile driver, is reduced from 101 to 83 dBA, and continuous noise, such as from a truck, is reduced from 88 dBA to 70 dBA. Given the distance of the construction activity from noise sensitive land uses and the existing ambient noise levels at the study area (measured in 2010 to be 72.9 dBA), only minor and temporary (short-duration from impulse noise) adverse impacts are anticipated from construction noise.

3.23.1.7 Stormwater and Water Quality

Construction period stormwater management facilities will be appropriately designed in conformance with the Connecticut Stormwater Quality Manual (CTDEEP, 2004). A general permit for stormwater discharge during construction will be required from the CTDEEP, since more than one acre will be disturbed.

3.23.1.8 Solid Waste, Toxics, Pesticides

Construction machinery, fuels, maintenance fluids, paints, solvents, and other hazardous or toxic construction materials may be present at the site during construction period, with potential for exposure to workers and the public.

Furthermore, construction of the project will generate trash and debris that will require proper management and disposal.

3.23.1.9 Hazardous Materials

Based on the results of the laboratory analyses performed on soil samples for the 2016 Task 210 investigation and the results from the previous environmental investigations conducted at the Site, the entire project limits have been designated AOECs due to the widespread existence of soil contaminated with various SVOCs, total arsenic, total lead, total mercury, leachable lead, and 4-4'-DDT.

Task 310 Plans, Specifications and Estimate will be required to assess the construction activities associated with the project, including management, storage, and disposal of contaminated soil and worker health and safety, in order to ensure compliance with all applicable local, state, and federal laws, regulations, and guidance.

3.23.1.10 Safety

CTDOT has adopted a policy statement (dated August 10, 2007) on work zone safety. This policy statement is modeled after FHWA's Work Zone Safety and Mobility Rule. The Department's objectives in establishing the work zone safety policy are to:

1. Provide a high level of safety for both workers and the public.
2. Minimize congestion and community impacts.
3. Provide both maintenance forces and contractors adequate access to their work area and to efficiently conduct their work.

FHWA's Work Zone Safety and Mobility Rule will be adhered to in accordance with CTDOT's *Policy on Systematic Consideration and Management of Work Zone Impacts* (CTDOT, 2007).

3.23.1.11 Utilities

Adequate utility service is available in the project area to facilitate construction activities. Planned, temporary electrical outages may be required to connect new construction to existing service. It is not currently anticipated that sewer, water, telephone, or gas lines would need to be relocated to accommodate construction, although temporary disruptions in service could occur if relocation is required.

3.23.2 Mitigation

3.23.2.1 Traffic

Impacts to traffic during the construction period will be mitigated through implementation of a traffic management plan, including construction phasing to minimize disruptions to traffic, establishing haul routes and staging areas, defining permissible hours of work, signage, detours and uniformed traffic-control personnel and/or other traffic controls to direct traffic.

3.23.2.2 Parking

Construction-phase parking mitigation measures should also be included in a traffic management plan for the project. A public information program should be implemented to advise of changes to parking availability during major construction activities.

Adequate temporary parking accommodations will be identified in advance of closing the existing surface parking lot for construction. It is anticipated that a program of parking options will be promoted to Union Station patrons; the program is likely to include: parking at CTDOT's rail commuter stations at West Haven and Branford, and parking at one or more existing facilities in the area. At a minimum, temporary parking must be serviced by transit or be located within a reasonable walking distance of Union Station to minimize patron inconvenience as much as possible..

3.23.2.3 Pedestrians and Bicyclists

Pedestrian traffic will be re-routed appropriately around work areas with wayfinding signage. Temporary bicycle parking facilities will be provided at location to be determined at the station.

3.23.2.4 Local Transit

Coordination with transit service providers for any anticipated disruptions to bus service to minimize impacts.

3.23.2.5 Air Quality

Potential air quality impacts from diesel exhausts will be addressed through the proper operation and maintenance of construction equipment, and prohibition of excessive idling of engines. Section 22a-174-18(b)(3)(c) of the Regulations of Connecticut State Agencies limits the idling of mobile sources to three minutes.

Potential air quality impacts from fugitive dust will be addressed through the following mitigation measures:

- Reducing exposed erodible earth area to the extent possible through appropriate construction phasing. Stabilization of exposed earth with grass, pavement, or other cover as early as possible.
- Application of stabilizing agent to the work area.
- Covering, shielding, or stabilizing stockpiled material as necessary.
- Use of covered haul trucks
- Limiting dust-producing construction activities during high wind conditions.

- Rinsing of construction equipment with water or any other equivalent method to minimize drag-out of sediment by construction equipment onto the adjacent roads
- Street sweeping of roads within the construction area.

3.23.2.6 Noise

While construction noise is exempt under Section 22a-69-1.8(g) of the RCSA, construction documents will require the contractor to limit the duration and intensity of noise generated by construction to the greatest extent practicable. To mitigate the potential impacts during construction, noise abatement measures in accordance with CTDOT Form 816 will be included in construction specifications. Such measures include appropriate mufflers on all construction vehicles and restrictions on hours of operation. Daytime construction will be maximized and nighttime construction activities will be limited to the greatest extent practicable. Time tables for nighttime construction will be communicated to the City and surrounding residents and businesses. The City of New Haven Noise Ordinance is contained within Section 18-19 of the City's Zoning Regulations. While State of Connecticut projects are not required to comply with local zoning, the operation of the Proposed Action will be conducted in a manner that meets the objectives of the City's noise regulations to the extent feasible.

3.23.2.7 Stormwater and Water Quality

To mitigate potential surface water quality degradation during construction, a stormwater pollution control plan will be designed and implemented in accordance with the 2002 Connecticut Guidelines for Erosion and Sedimentation Control (CT DEEP, 2002). The measures taken will prevent and minimize sedimentation, siltation, and/or pollution of nearby surface water bodies..

3.23.2.8 Solid Waste, Toxics, and Pesticides

Construction solid waste and debris will be segregated on-site and reused or recycled to the extent possible with the remainder properly disposed in a landfill.

Construction machinery, fuels, maintenance fluids, paints, solvents, and other hazardous or toxic construction materials may be present at the site during construction periods. These materials will be managed following appropriate best management practices, regulatory programs, and manufacturer recommendations to prevent adverse impacts.

3.23.2.9 Hazardous Materials

Because the entire project limits have been designated AOECs, Task 310 Plans, Specifications and Estimate will be required to assess the construction-related activities associated with the project and to ensure compliance with all applicable local, state, and federal laws, regulations, and guidance.

3.23.2.10 Safety

FHWA's Work Zone Safety and Mobility Rule will be adhered to in accordance with CTDOT's *Policy on Systematic Consideration and Management of Work Zone Impacts* (CTDOT, 2007).

3.23.2.11 Utilities

If disruptions in utility service are anticipated during construction, the timing and duration of these disruptions will be coordinated with the affected population.

4. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

The unavoidable adverse impacts from the Proposed Action are similar to those that typically accompany redevelopment projects in an urbanized area. In this case, an existing surface parking lot is proposed to be converted to a new parking garage, retaining the current use of the land and consistent with the surrounding community character. For the Proposed Action, unavoidable adverse impacts include the following:

- Filling a limited area of an existing 100-year floodplain/coastal flood hazard area;
- Increased traffic volumes at the Proposed Action site and on area roadways; and
- Temporary construction-related impacts including increased noise from construction equipment, temporary traffic diversions or lane closures and handling of potentially contaminated soils.

The use of the site for the new parking garage facility is consistent with the transportation uses adjacent to the parcel and does not result in any displaced land uses or secondary development effects. The unavoidable adverse environmental impacts associated with the Proposed Action are minimal given the project's overall community and transportation benefits.

Where practical, the Proposed Action includes appropriate mitigation measures to offset potential adverse impacts, as summarized in Section 6.

5. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible and irretrievable commitment of resources associated with the Proposed Action consists of resources that remain committed to a project through its lifespan (i.e., irreversible commitment) or those that are consumed or permanently impacted during project construction and operation as a result of the Proposed Action (i.e., irretrievable commitment).

Irreversible and irretrievable resources that would be committed to the Proposed Action include:

- Energy
- Construction materials
- Human labor
- Financial expenditures

Energy will be consumed in construction and operation of the new parking garage and site improvements. A variety of natural, synthetic, and processed construction materials will be utilized to construct the facility. The dedication of human labor to the construction and operational phases of the new parking garage represents an irretrievable expenditure of time and production that is thus unavailable for other purposes. Finally, the expenditures required, once committed, are no longer available for other purposes and, once spent, cannot be regained.

6. SUMMARY OF MITIGATION MEASURES

The Proposed Action is anticipated to have some adverse impacts as compared to the No-Action Alternative. The impacts will be mitigated using the measures as described in this document and summarized in Table 6-1.

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Land Use, Zoning and Local & Regional Development Plans	<ul style="list-style-type: none"> • No adverse Land Use impacts. Modest beneficial impacts anticipated from improved conditions for development. • No Zoning impacts. • Consistent with Local & Regional Development Plans. 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.1.3</i>		
Consistency with State Plan	<ul style="list-style-type: none"> • Consistent with State Plan of Conservation and Development. 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.2.3</i>		
Air Quality	<ul style="list-style-type: none"> • No adverse Air Quality impacts. 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.3.3</i>		
Noise	<ul style="list-style-type: none"> • No Noise impacts, except during the construction period (see below). 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.4.3</i>		
Local Transit Considerations	<ul style="list-style-type: none"> • No adverse Transit impacts. Modest beneficial impacts anticipated from improved conditions for transit. 	<ul style="list-style-type: none"> • No mitigation warranted or proposed.
<i>Section 3.5.3</i>		

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Traffic and Parking	<ul style="list-style-type: none"> • Vehicular delay is anticipated to increase at some study intersections. However, no additional locations are anticipated to operate at overall LOS F. • Beneficial impacts on parking with overall increased number of spaces. 	<ul style="list-style-type: none"> • Proposed mitigation consists of signal timing/phasing improvements at the following intersections: <ul style="list-style-type: none"> ○ Church Street South & Columbus Avenue ○ Church Street South & Union Avenue ○ Union Avenue & Columbus Avenue/Meadow Street ○ Union Avenue/State Street and Water Street
<i>Section 3.6.3</i>		
Pedestrian and Bicycle Considerations	<ul style="list-style-type: none"> • Modest beneficial impacts for pedestrians anticipated from overall improved access. Existing bike parking, storage & amenities will be impacted. 	<ul style="list-style-type: none"> • Bicycle parking, storage & amenities will be replaced. Proposed Action will be designed in consideration of future plans for the area.
<i>Section 3.7.3</i>		
Cultural Resources	<ul style="list-style-type: none"> • No Cultural Resource Impacts. 	<ul style="list-style-type: none"> • As design plans advance, they will be provided to SHPO for review. If construction activities uncover the remains of a structure and/or archaeological resource that has the potential to be historically significant, CTDOT's archaeologist will be called and the resource will be evaluated. Consultation with SHPO will be initiated as deemed appropriate by the qualified archaeologist.
<i>Section 3.8.3</i>		
Visual Resources	<ul style="list-style-type: none"> • No Visual Resource Impacts. 	<ul style="list-style-type: none"> • CTDOT will seek to reuse a portion of the decorative metal fencing currently located along Union Avenue in the site design of the Proposed Action.
<i>Section 3.9.3</i>		

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Socioeconomic Resources	<ul style="list-style-type: none"> No adverse impacts on population, housing trends, housing choice, or EJ populations. Beneficial impacts from increase in commuter parking. 	<ul style="list-style-type: none"> Due to the presence of a substantive percentage of Hispanic and LEP populations in the study area, CTDOT will provide meeting materials in Spanish and translation in Spanish, if requested, for the public involvement activities
<i>Section 3.10.3</i>		
Safety and Security	<ul style="list-style-type: none"> No Safety and Security impacts. 	<ul style="list-style-type: none"> No mitigation warranted or proposed.
<i>Section 3.11.3</i>		
Agricultural Land and Soils	<ul style="list-style-type: none"> No Agricultural Land and Soils impacts. 	<ul style="list-style-type: none"> No mitigation warranted or proposed.
<i>Section 3.12.3</i>		
Endangered, Threatened, or Special Concern Species or Habitats	<ul style="list-style-type: none"> Clearing of several sycamore trees containing cavities, which may provide suitable breeding/nesting habitat for rare avian species. 	<ul style="list-style-type: none"> Implementation of time-of-year restriction on construction. Clear trees in winter-fall months.
<i>Section 3.13.3</i>		
Water Resources and Water Quality	<ul style="list-style-type: none"> Potential adverse impacts to water quality from stormwater discharge. 	<ul style="list-style-type: none"> Stormwater pollution control plan and flood management certification will be completed. Runoff will be collected and treated in appropriate systems.
<i>Section 3.14.3</i>		
Wetlands	<ul style="list-style-type: none"> No Wetlands Impacts. 	<ul style="list-style-type: none"> No mitigation warranted or proposed.
<i>Section 3.15.3</i>		
Hydrology & Floodplains	<ul style="list-style-type: none"> Minor adverse impacts anticipated to the 100-year floodplain/Coastal Flood Hazard Area. 	<ul style="list-style-type: none"> Minimize the volume of fill required on-site to achieve the design flood elevation.
<i>Section 3.16.3</i>		
Wild & Scenic Rivers, Navigable Waters, and Coastal Resources	<ul style="list-style-type: none"> No Wild & Scenic River or Navigable Waters Impacts. Minor adverse impacts anticipated to the coastal floodplain (CFHA). 	<ul style="list-style-type: none"> Minimize the volume of fill required on-site to achieve the design flood elevation.
<i>Section 3.17.3</i>		

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Public Utilities and Services	<ul style="list-style-type: none"> Increased demand (relative to existing) on public utilities. 	<ul style="list-style-type: none"> New utility service connections for electric, water, sewer and telephone. Potential new connection for gas.
<i>Section 3.18.3</i>		
Energy Requirements	<ul style="list-style-type: none"> No Energy Impacts. 	<ul style="list-style-type: none"> CTDOT will incorporate energy-efficient lighting and equipment into the design of the Proposed Action to help reduce the net increase in energy consumption associated with the new parking structure and systems.
<i>Section 3.19.3</i>		
Pesticides, Toxic or Hazardous Materials	<ul style="list-style-type: none"> No adverse impacts from solid waste, pesticides or toxic materials. Potentially contaminated soils on-site. Temporary handling of toxic & hazardous waste during the construction period (see below). 	<ul style="list-style-type: none"> Sampling, analysis and proper disposal of potentially contaminated soil. Excavated soils will be managed consistent with <i>General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer)</i>.
<i>Section 3.20.3</i>		
Soils and Geology	<ul style="list-style-type: none"> No Soils and Geology Impacts. 	<ul style="list-style-type: none"> No mitigation warranted or proposed.
<i>Section 3.21.3</i>		
Construction-Related		
<i>Section 3.23</i>		
Traffic	<ul style="list-style-type: none"> Disruption in normal traffic flow and circulation patterns, resulting in minor travel delays. 	<ul style="list-style-type: none"> Implement traffic management plan including construction phasing and parking (see below). Establish haul routes and staging areas. Define permissible hours of work and detour routes. Post detour wayfinding signage. Direct traffic with uniformed traffic-persons or other traffic controls.

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Parking	<ul style="list-style-type: none"> • Impacts from loss of 260-space parking lot. • Parking in existing garage impacted on limited basis for construction of garage connections. • On-street parking impacted for short durations due to lane closures, construction vehicle staging, and utility work. 	<ul style="list-style-type: none"> • Provide temporary parking accommodations. • Implement a public information program to notify public about major project progress and changes to parking availability.
Pedestrians & Bicyclists	<ul style="list-style-type: none"> • Temporary closures of existing sidewalks on Union Avenue. • Displacement of bicycle parking facilities at Union Station. 	<ul style="list-style-type: none"> • Re-route pedestrian traffic, with wayfinding signage. • Provide temporary bicycle parking facilities.
Transit	<ul style="list-style-type: none"> • Temporary disruptions to bus service. 	<ul style="list-style-type: none"> • Coordinate with transit service providers to minimize impacts.
Air Quality	<ul style="list-style-type: none"> • Localized impacts from diesel-powered construction vehicle exhaust, motor vehicle exhaust from traffic congestion, and fugitive dust emissions. 	<ul style="list-style-type: none"> • Manage emissions through proper operation and maintenance of construction equipment. • Prohibit excessive idling of engines. • Manage fugitive dust control through best management practices.
Noise	<ul style="list-style-type: none"> • Minor adverse impacts from construction noise are anticipated. 	<ul style="list-style-type: none"> • Limit duration and intensity of noise by using mufflers. Daytime construction will be maximized and nighttime construction activities will be limited to the greatest extent practicable.

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Stormwater and Water Quality	<ul style="list-style-type: none"> • Potential water quality degradation from stormwater discharge. 	<ul style="list-style-type: none"> • Implement stormwater pollution control plan developed in accordance with 2002 Connecticut Guidelines for Erosion and Sedimentation Control (CTDEEP, 2002). • Prevent and minimize sedimentation, siltation, and/or pollution of nearby surface water bodies and off-site wetlands. • Design in conformance with the Connecticut Stormwater Quality Manual (CTDEEP, 2004).
Hazardous Materials	<ul style="list-style-type: none"> • Potential impacts from construction machinery fuels, maintenance fluids, paints, solvents, and other hazardous/toxic materials. • Project area is considered an “Area of Environmental Concern” 	<ul style="list-style-type: none"> • Task 310 Plans, Specifications and Estimate will be required to assess the construction-related activities associated with the project and to ensure compliance with all applicable local, state, and federal laws, regulations, and guidance. • Potentially contaminated soils will be managed consistent with <i>General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer)</i>.
Safety	<ul style="list-style-type: none"> • Avoid and minimize impacts to construction workers and the public. 	<ul style="list-style-type: none"> • Adhere to CTDOT’s policy on work zone safety.
Utilities	<ul style="list-style-type: none"> • Temporary utility outages anticipated to connect new services, install new or relocate infrastructure. 	<ul style="list-style-type: none"> • Coordinate outages with utility providers and communicate plans with the City and affected public.

7. COST BENEFIT ANALYSIS

The capital cost of the Proposed Action is estimated to be approximately \$60 million. This cost includes construction of: the new parking garage with a 50-year service life, vehicular bridge connections, stair/elevator core and connections to existing garage, existing garage modifications to facilitate vehicular connections and pedestrian improvements, new central management office space, site and access improvements, and other ancillary improvements. This cost also includes an allocation for railroad force account work and public utility modifications to facilitate construction.

To help reduce energy consumption and costs over the life of the facility, CTDOT will incorporate energy-efficient lighting and equipment into the design of the Proposed Action. In doing so, the State will be eligible for financial rebates from United Illuminating through energy-saving incentive programs for new construction and facility improvements that include *Energy Conscious Blueprint* and *Energy Opportunities*. Any financial rebates that CTDOT pursues under these programs would be distributed by United Illuminating upon commissioning the proposed facility.

While the funds expended for construction are a cost to the State of Connecticut, this expenditure will result in short-term benefits for the local and regional construction industry by creating demand for construction-related jobs, resources, and products. Other tangible benefits of the Proposed Action will include:

- Expanding the availability of parking supply for Union Station by 740 spaces;
- Generating new parking revenues; and
- Creating new permanent (non-construction) jobs and employment opportunities through expanded parking facilities.

In addition, intangible benefits of the Proposed Action could include:

- Increasing rail ridership and improving access to passenger rail services by expanding the availability of parking at Union Station;
- Increasing transit use by improving intracity bus accommodations at the station;
- Increasing the availability of parking at other Union Station satellite parking locations in support of Downtown economic development goals;
- Reducing the investment required of the City to implement needed parking improvements, potentially in support of future TOD in the Union Station area.

8. POTENTIAL CERTIFICATES, PERMITS AND APPROVALS

This section identifies potential permits, approvals, certifications, and registrations that may be required for completion of the Proposed Action.

The following state permits are anticipated to be required for the Proposed Action:

- CTDEEP, Remedial Action Work Plan
- CTDEEP, Coastal Consistency Review
- CTDEEP, Flood Management Certification
- CTDEEP, General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities
- CTDEEP, General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer).
- Office of the State Traffic Administration, Administrative Decision or Major Traffic Generator Certificate
- Office of the State Building Inspector, Building Permit and Certificate of Occupancy (for “Threshold Limit” Building)

No federal or local permits are anticipated to be required.

9. EIE DISTRIBUTION LIST

The following state and local agency offices received a copy of this EIE for review and for availability to the public:

- **Connecticut State Representatives (House Districts 92 - 97)**
Patricia Dillon (92)
Toni Edmonds Walker (93)
Robyn Porter (94)
Juan Candelaria (95)
Roland Lemar (96)
Robert Megna (97)
Legislative Office Building
Hartford, CT 06106-1591
- **Connecticut State Senators (Senate Districts 10 & 11)**
Gary Holder-Winfield (10)
Martin Looney (11)
Legislative Office Building
Hartford, CT 06106-1591
- **Mayor, City of New Haven**
Toni Harp
165 Church Street
New Haven, CT 06510
- **Deputy Economic Development Administrator, City of New Haven**
Michael Piscitelli
165 Church Street, 4R
New Haven, CT 06510
- **Board of Alders, City of New Haven**
Tyisha Walker, President
225 Winthrop Avenue
New Haven, CT 06511
- **Chief Administrative Officer, City of New Haven**
Michael Carter
165 Church Street, 3R
New Haven, CT 06510
- **Economic Development Administrator, City of New Haven**
Matthew Nemerson
165 Church Street, 4R
New Haven, CT 06510
- **City Engineer, City of New Haven**
Giovanni Zinn
200 Orange St., 5th floor
New Haven, CT 06510

- **City Plan Director, City of New Haven**
Karyn Gilvarg
165 Church Street, 5th floor
New Haven, CT 06510
- **Director of Livable City Initiative, City of New Haven**
Serena Neal-Sanjurjo
165 Church Street, 3rd floor
New Haven, CT 06510
- **Director of Transportation of Traffic and Parking Department, City of New Haven**
Doug Hausladen
200 Orange St., ground floor
New Haven, CT 06510
- **Director, New Haven Parking Authority**
Doug Hausladen (Interim)
200 Orange St., ground floor
New Haven, CT 06510
- **Board of Directors, New Haven Parking Authority**
Tony Bialecki, Chair
50 Union Avenue, 2nd Floor East
New Haven, CT 06519-1752
- **Hill to Downtown Steering Committee**
c/o Jorge Perez
24 Cassius St
New Haven, CT 06519
- **Hill South Community Management Team**
c/o Sarah McIver
410 Howard Avenue
New Haven, CT 06519
- **Connecticut Department of Energy and Environmental Protection**
Rob Klee, Commissioner
79 Elm Street
Hartford, CT 06106
- **Connecticut Department of Public Health**
Dr. Raul Pino, Commissioner
410 Capitol Avenue
Hartford, CT 06134
- **Council on Environmental Quality**
Ms. Susan D. Merrow, Chair
79 Elm Street
Hartford, CT 06106
- **Connecticut Department of Construction Services**
Melody A. Currey, Commissioner
165 Capitol Avenue
Hartford, CT 06106

- **Connecticut Office of Policy and Management**
Mr. Benjamin Barnes
450 Capitol Avenue
Hartford, CT 06106
- **CT Commission on Culture and Tourism/State Historic Preservation Office**
One Constitutional Plaza, Second Floor
Hartford, CT 06103
- **Connecticut Office of the State Traffic Administration**
Connecticut Department of Transportation
2800 Berlin Turnpike
Newington, CT 06111
- **Connecticut Department of Economic and Community Development**
505 Hudson Street
Hartford, CT 06106
- **Connecticut State Library**
Mr. Kendall Wiggin
231 Capitol Avenue
Hartford, CT 06106
- **Connecticut Department of Transportation, Office of Communications**
2800 Berlin Turnpike
Newington, CT 06111
- **Connecticut Rail Commuter Council**
PO Box 4256
Camp Avenue Station
Stamford, CT 06907
- **New Haven Free Public Library**
133 Elm Street
New Haven, CT 06510
- **South Central Regional Council of Governments**
127 Washington Avenue, 4th Floor West
North Haven, CT 06473

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APPENDIX A

Public Scoping Notice and Related Material

Scoping Notice

Public Scoping Meeting Summary

Agency Scoping Review Letters



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Susan D. Merrow
Chair

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Environmental Monitor Archives



November 17, 2015

Scoping Notices

1. The Hamlet on East Street South, Suffield
2. City of Waterbury Water Pollution Control Facility Comprehensive Facility Evaluation, Waterbury
3. **New Deadline for Comments!** Various Bridge Rehabilitations / Route 8 North Bound Temporary Bypass, Waterbury
4. **NEW!** New Parking Garage at Union Station, New Haven
5. **NEW!** Intersection Improvements on Route 74 and Route 195, Tolland

Post-Scoping Notices: Environmental Impact Evaluation (EIE) Not Required

1. Tarrifville Fire Department Water Storage Tank Replacement, Simsbury
2. Asnuntuck Community College New Manufacturing Center, Enfield

Environmental Impact Evaluations

1. **Comments Deadline to be Extended!** Old Lyme Coastal Wastewater Management Plan, Old Lyme
2. Norwich Department of Public Utilities Combined Sewer Overflow Long Term Control Plan, Norwich

State Land Transfers

1. **NEW!** 8 Summit St. Stonington

The next edition of the Environmental Monitor will be published on **December 8, 2015.**

[Subscribe to e-alerts](#) to receive an e-mail when the Environmental Monitor is published.

Notices in the Environmental Monitor are written by the sponsoring agencies and are published unedited. Questions about the content of any notice should be directed to the sponsoring agency.

Scoping Notices

"Scoping" is for projects in the earliest stages of planning. At the scoping stage, detailed information on a project's design, alternatives, and environmental impacts does not yet exist. Sponsoring agencies are asking for comments from other agencies and from the public as to the scope of alternatives and environmental impacts that should be considered for further study. Send your comments to the contact person listed for the project by the date indicated.

The following Scoping Notices have been submitted for review and comment.

1. Revised Notice of Scoping for The Hamlet on East Street South

Municipality where proposed project might be located: Suffield

Address of Possible Project Location: 898 East Street South, Suffield, Connecticut

Project Description: Dakota Partners Inc. is seeking state financial assistance for Phase II of a housing development project at 898 East Street South, Suffield, CT. The overall proposed activity consists of 75 townhouses and 96 apartments for a total of 171 units on approximately 29.72 acres of land. Phase II activity consists of 9 one bedroom and 27 two bedroom apartment units located within three 12 unit buildings and 60 surface parking spaces on approximately 3.85 acres of vacant land. The overall proposed activity will also include a community building and a footpath which will connect the campus to the adjacent Stony Brook River to the north.

Project Maps:

Click here to view a [Location Map](#) of the project area.

Click here to view a [Phasing Plan](#) of the project area.

Written comments from the public are welcomed and will be accepted until the close of business on Friday, November 20, 2015. Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting. Such requests must be made by Friday, October 30, 2015.

Written comments and/or requests for a Public Scoping Meeting should be sent to:

Name: Helen Muniz
Agency: Department of Housing
Address: 505 Hudson Street, Hartford, CT 06106
Fax: 860 270-8032
E-Mail: helen.muniz@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Helen Muniz
Agency: Department of Housing
Address: 505 Hudson Street, Hartford, CT 06106
Fax: 860 270-8032
E-Mail: helen.muniz@ct.gov

2. Notice of Scoping for City of Waterbury Water Pollution Control Comprehensive Facility Evaluation

Municipality where proposed project would be located: Waterbury

Project Location: 210 Municipal Road, Waterbury, CT 06708

Project Description: The City of Waterbury Water Pollution Control Department is undertaking a comprehensive analysis of current operations at the Waterbury Water Pollution Control Facility (WPCF) to determine an overall roadmap for a long term plan for improvements. Issues to be addressed include operational upgrades required to meet new NPDES permit limits on phosphorous and metals, long term wet weather capacity, new Title V permits that would require capital improvements to the sludge incinerator, limitations on landfilling ash at the current location, and a desire to have a more sustainable operation with improved energy efficiency and potentially on-site energy generation. The plan will also address public concerns associated with the operation of a merchant incinerator in the most economically, socially and environmentally sound manner.

Project Maps: [Click here to view a project location map.](#)
[Click here to view a project site plan.](#)

A Draft Comprehensive Engineering Report for Phosphorus Removal is available. It can be reviewed by clicking here.

Additional information about the project can be viewed in person at:

Department of Energy and Environmental Protection
Bureau of Water Protection & Land Reuse (2nd floor)
79 Elm Street
Hartford, CT 06106

The comment period has been extended.

Written comments from the public are welcomed and will be accepted until the close of business on: December 22, 2015

Written comments should be sent to:

Name: Ann Straut
Agency: Department of Energy & Environmental Protection
Bureau of Water Protection & Land Reuse
Address: 79 Elm Street
Hartford, CT 06106-5127
Phone: 860-424-3137
Fax: 860-424-4067
E-Mail: ann.straut@ct.gov

If you have questions about scoping for this project, contact Ms. Straut, as directed above.

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Any person with a disability who may need a communication aid or service may contact the agency's ADA Coordinator at 860-424-3194 or at deep.hrmed@ct.gov. Any person with limited proficiency in English, who may need information in another language, may contact the agency's Title VI Coordinator at 860-424-3035 or at deep.aaooffice@ct.gov. ADA or Title VI discrimination complaints may be filed with DEEP's EEO Manager at (860) 424-3035 or at deep.aaooffice@ct.gov.

3. Notice of Scoping for Various Bridge Rehabilitation at Route 8/ I-84 "Mixmaster" Interchange including Construction of Route 8 NB Temporary Bypass

Municipality where proposed project might be located: Waterbury

Address of Possible Project Location: Route 8 / Route I-84 Interchange

Project Description: The Connecticut Department of Transportation proposes to rehabilitate Bridge Nos. 03190A, 03190B, 03190C, 03190D, 03190E, 03190F, 03191A, 03191B, 03191D, and 03191E which are part of the Route 8/ I-84 "Mixmaster" Interchange in the City of Waterbury.

The proposed project consists of deck repair, steel repair, substructure repair, joint repair, parapet modifications and general repair to bridge drainage, and signage. Bridge No. 03190A, carrying Route 8 Northbound, will have the entire concrete deck replaced. Because of this, a temporary bypass will be utilized to relocate Route 8 Northbound while the concrete deck is being replaced. The proposed alignment for this Temporary Bypass, two lane urban expressway, is approximately 3/4 mile long with three (3) temporary bridges. The alignment from south to north will begin the Temporary Bypass on existing Route 8 Northbound just north of the Bank Street Overpass. The Temporary Bypass will end on existing Route 8 Northbound approximately 350 feet north of the Freight Street overpass. The Route 8 Northbound Exit 30 On Ramp, and the Route 8 Northbound Exit 32 Off Ramp will be closed during the deck replacement of Bridge No. 03191A, eliminating access from Route 8 Northbound to I-84. See map for proposed temporary bypass below.

In order to avoid conflicts with the Temporary Bypass and to maintain local traffic flow, Southbound Riverside Street will temporarily be converted to a bidirectional roadway with one lane in each direction between Sunnyside Avenue and Freight Street. This will temporarily relocate Northbound Riverside Street onto the eastern lane of Southbound Riverside Street. Northbound Riverside Street between Sunnyside Avenue and Freight Street will be utilized for the Temporary Bypass.

In order to mitigate for the loss of access from Route 8 Northbound to I-84 due to the exit closures listed above, a new single lane northbound and southbound will be constructed at and within the Exit 35 Right of Way. This will allow a Median U-turn to be constructed within the infield connecting the existing left lanes of the northbound and southbound roadways (Watertown Connector/Route 73). This will allow traffic that utilizes the Temporary Bypass to complete the connections to Interstate 84.

Project Maps: Click [here](#) to view a map of the project area.
Click [here](#) to view a map of the proposed temporary bypass.
Click [here](#) to view maps of the proposed U-Turn.

Written comments from the public are welcomed and will be accepted until the close of business on: **December 9, 2015 (if the scheduled meeting is postponed to **December 10, 2015**, comments will be accepted until the close of business on **December 31, 2015**).**

There will be a Public Scoping Meeting for this project at:

DATE: **Wednesday, November 18, 2015**

TIME: Doors open at 6:30 PM, the presentation will begin at 7:00 PM

PLACE: Crosby Hill School Auditorium, 300 Pierpont Road, Waterbury, CT

NOTES: In case of inclement weather, the meeting will be rescheduled to December 10, 2015

Additional information about the project can be viewed in person at or online at:

The Connecticut Department of Transportation, 2800 Berlin Turnpike, Room 3303, Newington, CT 06131

and

City of Waterbury Clerk's Office, 235 Grand Street, Waterbury, CT 06702

Written comments should be sent to:

Name: Mr. Mark W. Alexander, Transportation Assistant Planning Director

Agency: Connecticut Department of Transportation
Bureau of Policy and Planning

Address: 2800 Berlin Turnpike
Newington, CT 06131

Fax: 860-594-3028

E-Mail: dot.environmentalplanning@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Mr. Robert P. Brown, P.E., Project Manager

Agency: Connecticut Department of Transportation
Bureau of Engineering and Construction

Address: 2800 Berlin Turnpike
Newington, CT 06131

Phone: 860-594-3207

E-Mail: Robert.Brown@ct.gov

Other information: The location is ADA accessible. If language assistance is needed, please contact the Department of Transportation's Office of Communications at (860) 594-3062 before November 11, 2015.

4. Notice of Scoping for New Parking Garage at Union Station

Municipality where proposed project might be located: New Haven

Address of Possible Project Location: Union Avenue, New Haven, CT 06519

Project Description: The Connecticut Department of Transportation (Department) is proposing to construct a new multi-level parking facility for Union Station in the City of New Haven. The project area is State of Connecticut property located north of the station and is currently being used as a commuter parking lot. The proposed parking facility will accommodate approximately 1000 parking spaces, thereby expanding commuter parking at the station to address existing and future parking needs. The facility will be designed with consideration to the historic significance, scale, and aesthetic quality of the station building, and will be limited to seven parking levels. The project also proposes new pedestrian accommodations through the existing garage to enhance access to the station from the proposed parking facility. Direct access to the rail platforms from the proposed facility via a future pedestrian bridge is also being considered in the planning and design stages of this project.

Project Map: Click [here](#) to view a map of the project area.

Written comments from the public are welcomed and will be accepted until the close of business on: Thursday December 31, 2015.

There will be a Public Scoping Meeting for this project at:

DATE: Tuesday, **December 15, 2015** (inclement weather date of December 16, 2015)

TIME: 6:30 - 8:00 p.m. for drop-in informational session. Brief presentation at 7:00 p.m.

PLACE: Union Station Balcony, Union Avenue, New Haven, CT 06519

NOTES: The meeting location is accessible to persons with disabilities. Deaf and hearing impaired persons wishing to attend this meeting and requiring an interpreter may make arrangements by contacting the Department's Office of Communications at 860-594-3062 (voice only) at least five days prior to the meeting.

Written comments should be sent to:

Name: Mr. Mark W. Alexander - Transportation Assistant Planning Director

Agency: State of Connecticut Department of Transportation
Bureau of Policy and Planning

Address: 2800 Berlin Turnpike, Newington, CT 06131

Fax: 860-594-3028

E-Mail: dot.environmentalplanning@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this

project, contact:

Name: Mr. Keith A. Hall - Transportation Supervising Engineer
Agency: State of Connecticut Department of Transportation
Bureau of Engineering and Construction
Address: 2800 Berlin Turnpike, Newington, CT 06131
Phone: 860-594-3301
Fax: 860-594-3375
E-Mail: Keith.A.Hall@ct.gov

The agency expects to release an Environmental Impact Evaluation for this project, for public review and comment in Spring 2016

5. Notice of Scoping for Intersection Improvements on Route 74 and Route 195 near the Tolland Green

Municipality where proposed project might be located: Tolland

Address of Possible Project Location: Route 74 between the intersections with Old Stafford Road and Route 195 (Marrow Road) near the historic Tolland Green.

Project Description: The purpose of this project is to address capacity concerns and vehicular and pedestrian safety concerns at the intersections listed above while creating gateway features on Route 74 and Route 195 to calm traffic prior to entering the Town Green area.

Route 195 will be widened approximately 300 feet south of Old Post Road to accommodate a splitter island to slow vehicles entering and leaving the Town Green area. It is also suggested that the existing gateway signage to the Historic Town Green be moved closer to the Southerly Gateway to improve the sign's effectiveness.

Extending north from the Southerly Gateway, the widening of Route 195 will accommodate an exclusive left-turn lane at Old Post Road. The receiving northbound lane will require realignment, which will have minor impacts to the southwest corner of the Town Green. The southerly leg of the intersection will be widened to allow for: two travel lanes, a left-turn lane, and two 4-foot shoulders. On the northern leg of the intersection, the existing southbound shoulder will be narrowed to shorten the distance of the crosswalk. Minor realignments to both legs of Old Post Road will be required due to the modification on Route 195 and new proposed signal.

The existing configuration of the intersections of Route 74 at Route 195 and at Old Stafford Road will be realigned. The easterly leg of Route 74 will be realigned to the south to form a new stop controlled "T" type intersection with Route 195. The approach to Route 74 from Old Stafford Road will be realigned to the west to form a "T" type intersection. Both intersections will be side-street, stop-sign controlled. The mid-block crosswalk, currently south of the existing Route 74/195 intersection, will be relocated north to the intersection. A raised island will also be installed south of the new Route 74/195 intersection to provide additional traffic calming.

Roadway widening and realignment will be utilized westward from the intersection of Route 74 and Old Stafford Road to provide traffic calming. In order to avoid impacting historic homes in the area, the new horizontal curvature and widening will be such as to realign the roadway away from the historic properties. Drainage modifications will be required as a result of the widening and realignment. Full-depth reconstruction of the pavement structure is proposed for the entire project.

Project Map: Click [here](#) to view a map of the project area.

Click [here](#) to view proposed project conceptual plans.

Written comments from the public are welcomed and will be accepted until the close of business on: Friday December 24, 2015 (If the scheduled meeting is postponed to December 15, 2015, comments will be accepted until the close of business on December 31, 2015).

There will be a Public Scoping Meeting for this project at:

DATE: Thursday, December 10, 2015 (inclement weather date Tuesday December 15, 2015)

TIME: 7:00 P.M.

PLACE: Hicks Memorial Municipal Center, Conference Room A

21 Tolland Green, Tolland, CT

NOTES: Plans will be available at the Hicks Memorial Municipal Center two weeks prior to the meeting.

Written comments should be sent to:

Name: Mr. Mark W. Alexander, Transportation Assistant Planning Director
Agency: Connecticut Department of Transportation

Bureau of Policy & Planning
Address: 2800 Berlin Turnpike
 Newington, CT 06131
Fax: 860-594-3028
E-Mail: dot.environmentalplanning@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Mr. Joseph D. Arsenault
Agency: Connecticut Department of Transportation
 Bureau of Engineering and Construction
Address: P.O. Box 317546
 Newington, CT 06131
Phone: 860-594-3471
E-Mail: Joseph.D.Arsenault@ct.gov

Other information: The meeting facility is ADA accessible. If language assistance is needed, please contact the Department of Transportation's Office of Communications (voice only) at 860-594-3062 at least 5 business days prior to the meeting.

Post-Scoping Notices: Environmental Impact Evaluation Not Required

This category is required by the October 2010 revision of the [Generic Environmental Classification Document](#) for State Agencies. A notice is published here if the sponsoring agency, after publication of a scoping notice and consideration of comments received, has determined that an Environmental Impact Evaluation (EIE) does not need to be prepared for the proposed project.

The following Post-Scoping Notices have been submitted for publication in this edition.

1. Post-Scoping Notice for Tariffville Fire District Water Storage Tank Replacement

Municipality where project will be located: Simsbury
CEPA Determination: On September 8, 2015 the Department of Public Health (DPH) published a [Notice of Scoping](#) to solicit public comments for this project in the *Environmental Monitor*. Based on the DPH's environmental assessment of this project which includes [comments](#) provided by the DEEP dated October 9, 2015, it has been determined that the project does not require the preparation of an Environmental Impact Evaluation (EIE) under CEPA. The DPH will coordinate with the Tariffville Fire District to ensure that the recommendations by the DEEP are implemented.

The agency's conclusion is documented in a [Memorandum of Findings and Determination](#) and an [Environmental Assessment Summary](#).

If you have questions about the project, you can contact the agency at:

Name: Mr. Eric McPhee
Agency: Department of Public Health – Drinking Water Section
Address: 450 Capitol Avenue, MS #51 WAT
 P O Box 340308
 Hartford, CT 06134-0308
Phone: 860-509-7333
Fax: 860-509-7359
E-Mail: dph.sourceprotection@ct.gov

What happens next: The DPH expects the project to go forward. This is expected to be the final notice of the project to be published in the *Environmental Monitor*.

2. Post-Scoping Notice for Asnuntuck Community College New Manufacturing Center (BI-CTC-488)

Municipality where project will be located: Enfield

CEPA Determination: On May 19, 2015 the Department of Administrative Services published a [Notice of Scoping](#) to solicit public comments for this project in the *Environmental Monitor*. The DAS and Board of Regents have taken those comments into consideration and has concluded that the project does not require the preparation of Environmental Impact Evaluation under CEPA.

The agency's conclusion is documented in a [Record of Environmental Consideration](#).

If you have questions about the project, you can contact the agency at:

Name: Jeff Bolton, Supervising Environmental Analyst
Agency: Department of Administrative Services
Address: 165 Capitol Avenue, Room 483, Hartford, CT 06106
Phone: 860-713-5706
Fax: 860-713-7251
E-Mail: Jeffrey.bolton@ct.gov

What happens next: The agencies expect the project to go forward. This is expected to be the final notice of the project to be published in the *Environmental Monitor*.

EIE Notices

After Scoping, an agency that wishes to undertake an action that could significantly affect the environment must produce, for public review and comment, a detailed written evaluation of the expected environmental impacts. This is called an [Environmental Impact Evaluation](#) (EIE).

The following EIE Notice has been submitted for review and comment.

1. Environmental Impact Evaluation for Old Lyme Coastal Wastewater Management Plan

Municipality where proposed project would be located: Old Lyme

Addresses of Possible Project Locations: Shoreline communities located south of and along Route 156 between Miami Beach Association and Old Lyme Shores Beach Association, and the Route 156 corridor to East Lyme

Project Description: The Beach Associations of Old Lyme Shores, Old Colony Beach and Miami Beach have conducted independent engineering studies showing that the prevalent conditions in the project area such as the age and location of existing onsite wastewater treatment systems, high density of development, lack of adequate space and overall challenging subsurface conditions, such as shallow groundwater, have rendered the onsite wastewater treatment systems economically and technically unfeasible for long term wastewater renovation.

A centralized gravity sewer system to be constructed by the three Beach Associations has been identified the most cost effective and technically feasible solution. Wastewater from the associations would be collected via gravity pipes and conveyed through one shared pump station and force main. It is currently envisioned that the centralized pump station would be located within Miami Beach Association. Wastewater from Old Colony Beach Association would be transported to the Miami Beach Association through an easement located within Sound View. The pipe traversing across Sound View would enable this community to tie-in, should Old Lyme join the Associations in the future. Wastewater would be conveyed along Route 156 to East Lyme and then through the existing collection systems of East Lyme and Waterford for final treatment at the New London Water Pollution Control Facility.

Project Maps: [Click here to view the areas to be sewered.](#)
[Click here to view the proposed sewer system.](#)
[Click here to view the proposed conveyance system.](#)

The EIE and additional information about the project can be viewed in person at:

Department of Energy and Environmental Protection
 Bureau of Water Protection & Land Reuse (2nd floor)
 79 Elm Street
 Hartford, CT 06106

The public can view a copy of this EIE at:

Old Lyme Town Clerk
 Old Lyme Memorial Town Hall
 52 Lyme Street
 Old Lyme, CT 06360

The EIE can also be found online at the DEEP website by clicking here.

The request for public hearing from the Sound View Beach Association in Old Lyme has been withdrawn. Accordingly, a public hearing will not be held. The deadline for comments has been extended until the close of business on **December 16, 2015.**

Written comments about this EIE should be sent to:

Name: Carlos Esguerra
Agency: Department of Energy & Environmental Protection
 Bureau of Water Protection & Land Reuse
Address: 79 Elm Street
 Hartford, CT 06106-5127
Phone: 860-424-3756
Fax: 860-424-4067

E-Mail: carlos.esguerra@ct.gov

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Any person with a disability who may need a communication aid or service may contact the agency's ADA Coordinator at 860-424-3194 or at deep.hrmed@ct.gov. Any person with limited proficiency in English, who may need information in another language, may contact the agency's Title VI Coordinator at 860-424-3035 or at deep.aao@ct.gov. ADA or Title VI discrimination complaints may be filed with DEEP's EEO Manager at (860) 424-3035 or at deep.aao@ct.gov.

2. Environmental Impact Evaluation for Norwich Combined Sewer Overflow Control Plan

Municipality where proposed project would be located: Norwich

Project Location: The Greenville, Eastside, Thamesville, Laurel Hill and Downtown areas of Norwich

Project Description: Norwich is a combined sewer overflow (CSO) community, where both sanitary sewage and stormwater are carried in a single pipe. During rainfall events of sufficient intensity and duration, the capacity of the collection system is overwhelmed and excess flows discharge to nearby rivers via built-in overflows in the collection system. The overflows were designed to prevent the combined sewer flows from backing up into basements and surcharging onto the streets.

The collection system will undergo a separation which will involve the construction of a new sewer parallel to the existing combined sewer, thereby segregating the sources. After completion of a separation, one dedicated stormwater sewer will transport runoff directly to the local receiving waters, while the other sewer will be dedicated to carrying wastewater to the wastewater treatment plant for treatment prior to discharge into the river.

The CSO Long Term Control Plan recommends complete separation of all remaining combined sewer areas in Norwich, with the separation projects to be implemented in a phased approach, over a 20 year period. The highest priority areas would be done first, with the option to reevaluate the final phase of separation as the project progresses, based on environmental improvements, changes in regulations and new technological solutions that may emerge. Such adjustments to this plan that could occur during the implementation period and that are within the scope of the current project may not require an additional EIE.

The proposed sewer separation project will be conducted according to a "Five-Phase Implementation Plan." The separation plan is structured to give the highest environmental benefits at the beginning of the program. At the end of the first phase, in year 4 of the "Five-Phase Implementation Plan," the Greenville area separation will be completed, which is projected to eliminate half of the CSO discharge volume. At the end of the third phase, in year 8, over 98% of the CSO discharge volume will be eliminated. In year 15 of the program, after the first four separation phases are completed, over 99% of the CSO discharge volume (on an annual basis for the typical year) will be removed.

As the separation projects proceed, opportunities to provide an enhanced environmental outcome with the strategic placement of green infrastructure will be considered. It should be noted, however, that the great majority of project areas where separation work will be done are underlain by bedrock ledge and other geologic formations that generally are not conducive to the application of green infrastructure technologies.

Project Maps: [Click here to view a table outlining the Five-Phase Implementation Plan](#)
[Click here to view a figure depicting the Five-Phase Implementation Plan](#)

The EIE and additional information about the project can be viewed in person at:

Department of Energy and Environmental Protection
Bureau of Water Protection & Land Reuse (2nd floor)
79 Elm Street
Hartford, CT 06106

The public can view a copy of this EIE at:

Norwich City Clerk
100 Broadway
Norwich, CT 06360

The [EIE can also be found online at the DEEP website by clicking here.](#)

Written comments on this EIE are welcomed and will be accepted until the close of business on: [December 4, 2015](#)

Any person can ask the sponsoring agency to hold a Public Hearing on this EIE by sending such a request to the address below. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Hearing. Such requests must be made by [October 30, 2015](#).

Written comments about this EIE and/or requests for a Public Hearing should be sent to:

Name: Stela Marusin
Agency: Department of Energy & Environmental Protection
Bureau of Water Protection & Land Reuse
Address: 79 Elm Street
Hartford, CT 06106-5127
Phone: 860-424-3742
Fax: 860-424-4067
E-Mail: stela.marusin@ct.gov

If you have questions about a public hearing or questions about this project, contact Ms. Marusin, as directed above.

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Any person with a disability who may need a communication aid or service may contact the agency's ADA Coordinator at 860-424-3194 or at deep.hrmed@ct.gov. Any person with limited proficiency in English, who may need information in another language, may contact the agency's Title VI Coordinator at 860-424-3035 or at deep.aaoffice@ct.gov. ADA or Title VI discrimination complaints may be filed with DEEP's EEO Manager at (860) 424-3035 or at deep.aaoffice@ct.gov.

State Land Transfer Notices

Connecticut General Statutes [Section 4b-47](#) requires public notice of most proposed sales and transfers of state-owned lands. The public has an opportunity to comment on any such proposed transfer. Each notice includes an address where comments should be sent. [Read more about the process.](#)

The following State Land Transfer Notice has been submitted for publication in this edition.

1. Notice of Proposed Land Transfer, Stonington

Complete Address of Property: 8 Summit Street, Stonington

Commonly used name of property or other identifying information: N/A

Number of acres to be transferred: 4.4

[Click to view map of property location](#)

Description of Property

Below is some general information about the property. It should not be considered a complete description of the property and should not be relied upon for making decisions. If only a portion of a property is proposed for transfer, the description pertains only to the portion being transferred.

Brief Description of Historical and Current Uses: Vacant building and parcel. No known past use. **The property to be transferred contains the following:**

Structures: Buildings in use Buildings not in use No Structures

Other Features: Wooded land Nonagricultural fields Active agriculture

Paved areas Ponds, streams, other water, wetlands

Water Supply: Public water supply On-site well Unknown

Waste Disposal: Served by sewers On-site septic system Unknown

[Click to view aerial view of property](#)

The property is in the following municipal zone(s):

Residential Industrial Commercial Institutional

Other:

Not zoned Not known

Special features of the property, if known: Unknown

Value of property, if known:

If checked, value is not known.

Type of Sale or Transfer:

Sale or transfer of property in fee

Sale or transfer of partial interest in the property (such as an easement). Description of interest:

Proposed recipient, if known: Unknown

Proposed use by property recipient, if known: Unknown

The agency is proposing to transfer the property with the following restrictions on future uses:

If checked, the state is not currently proposing restrictions on future uses.

Reason the State of Connecticut is proposing to transfer this property: The subject property is no longer needed by the state.

Comments from the public are welcome and will be accepted until the close of business on December 17, 2015.

Comments may include (but are not limited to) information you might have about significant natural resources or recreation resources on the property, as well as your recommendations for means to preserve such resources.

Written comments* should be sent to:

Name: Patrick O'Brien
Agency: Office of Policy and Management
Address: 450 Capitol Avenue MS#52 ASP
Hartford, CT 06106-1379
E-Mail: Patrick.Obrien@ct.gov

E-Mail submissions are preferred.*Please send a copy of comments to:**

Shane Mallory, DAS
165 Capitol Ave, G-1
Hartford, CT 06106
shane.mallory@ct.gov

(Comments from state agencies must be on agency letterhead and signed by agency head. Scanned copies are preferred.)

What Happens Next?

To find out if this proposed transfer is the subject of further notices, check future editions of the Environmental Monitor. [Sign up for e-alerts](#) to receive a reminder e-mail on Environmental Monitor publication dates.

The Adobe Reader is necessary to view and print Adobe Acrobat documents, including some of the maps and illustrations that are linked to this publication. If you have an outdated version of Adobe Reader, it might cause pictures to display incompletely. To download up-to-date versions of the free software, click on the Get Acrobat button, below. This link will also provide information and instructions for downloading and installing the reader.



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79 Elm Street Hartford, CT 06106 / Phone: 860-424-4000

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Department of Transportation

City of Hew Haven
Project No. 301-0114
Parking Garage at Union Station

CEPA Scoping Meeting Held at
Union Station Business Center
50 Union Avenue
New Haven, Connecticut
December 15, 2015

Minutes

Present:

CTDOT

Jim Fallon – Principal Engineer, Facilities and Transit

Keith A. Hall – Project Manager

John Wyskiel – Project Engineer

Mark Alexander, Assistant Director, Policy and Planning

Tom Doyle, Planner

Rod Bascom and Jeff Parker, Clough Harbour & Associates

Norm Goldman, Desman Associates

Laurel, Stegina, Debbie Hoffman, and Michael Coulom, Fitzgerald & Halliday

Members of the Public

Sammy Parry, Park New Haven

Matthew Nemerson, City of New Haven Economic Development

Win Davis, Town Green District, City of New Haven Special Services

Aaron Goode, DWSCMT

Josh Erlange

Lt. Hosey, NHPolice Department

Mary O’Leary, New Haven Register

Sal DeCola, Ward 18

Presentation:

The open house format was setup by 6:30 including signs in the main waiting area directing folks to elevator to access meeting location on balcony. Several individuals arrived and asked questions before the brief presentation began at 7:00 pm. Mr. Hall provided a brief overview of the reason the DOT and consultant team were here making a presentation before turning it over to Jeff Parker to walk through the presentation boards. Attendees were informed of the design progress that had been made to date along with the schedule for holding a public hearing on the CEPA Environmental Impact Evaluation (EIE) document in the Spring. Following the presentation was an informal question and answering period.

Public Comments and Questions:

A crowd of about 8 persons excluding DOT officials were in attendance. Discussion from City officials centered on their known desire to include an intermodal facility for buses on the ground level of the parking garage. DOT reiterated the commitments it had made in a letter to Mayor Harp in October to allow for future bus dropoff areas in front of the new facility when other redevelopments lead to Union Avenue widening. DOT also pointed out traffic data collection efforts that had taken place and discussed the traffic impact evaluation that would be part of the EIE.

Mr. Nemerson also confirmed City desire to extend the ped bridge further south past its connection with the Component Change Out Shop for prospective future development.

Questions regarding how parking supply was determined and the likely cost of the facility were also asked. Parking supply has been established by virtue of previous studies done in conjunction with City parties. DOT emphasized that a new study is not required to assess a number and that based on qualitative analysis dictates the need to build this seven level facility. In response to funding question, it was emphasized that given that only very initial design had taken place that it was not possible to identify a cost to construct at this time. It was noted that up to \$50 million was targeted for this garage and separate pedestrian bridge under the Governor's 5 year ramp up plan.

During the meeting, the audience was reminded that the deadline for comments is December 31, 2015. One attendee completed a comment form which is attached.

Adjournment:

The meeting adjourned at approximately 8:15 pm.

**COMMENT FORM
PUBLIC SCOPING MEETING
STATE PROJECT NO. 301-114
UNION STATION PARKING GARAGE
NEW HAVEN, CT**

Please provide any written comments below:

This garage needs to better reflect its urban location and the multi-modal needs of the Greater New Haven community. Specifically: TRANSIT.

CT Transit needs a better hub for transfer activity for greater New Haven. The New Haven Green is ill-equipped to handle the activity and provides transit riders a third-class experience without rest rooms, HVAC and shelter. This garage project could and SHOULD link CT Transit with RAIL in a much more integrated fashion.

The presentors brought up problems with bus turning radius' and not wanting to "go to tall" with the facility as reasons NOT to include transit/bus hub in the first floor of this project. New Haven would welcome this facility being taller and if this is a preliminary scoping meeting - please come up with a new design that better incorporates and links Rail & Transit. Car drivers are NOT the only people who take the train and this project could better reflect their needs. Thanks for your considerations.

Name:

Win Davis

win@downtownnewhaven.com

Address:

900 Chapel St. Suite 703

Telephone:

203 401-4245

Check here if you would like a response via telephone.

Please submit any comments that you may have by **December 31, 2015**

- Mail: Please seal the form with tape – do not use staples – and affix postage
- E-mail: dot.environmentalplanning@ct.gov

Parker, Jeff

From: Hall, Keith A <Keith.A.Hall@ct.gov>
Sent: Thursday, December 17, 2015 9:50 AM
To: Parker, Jeff
Cc: Wyskiel, John
Subject: FW: New Union Station Parking Garage

From: DOT Environmental Planning
Sent: Thursday, December 17, 2015 9:32 AM
To: Hall, Keith A; Alexander, Mark W; Doyle, Thomas H; DeIPapa, Stephen V
Cc: Fleming, Kevin
Subject: FW: New Union Station Parking Garage

FYI...

From: Josh Erlanger
Sent: Wednesday, December 16, 2015 3:13 PM
To: DOT Environmental Planning
Cc: Roland.Lemar@cga.ct.gov; MayorHarp@newhavenct.net
Subject: New Union Station Parking Garage

I wanted to send some feed back on the new Union Station Parking Garage DOT meeting from last night (12/16/2015). I think it was clear to anyone at the meeting that the singular focus for the design of the new garage is to accommodate as many suburban train commuters as possible. There is not a single design element that factors in economic or transportation benefits for the city of New Haven. I realize we have been fighting for this garage for a decade but with the addition of the West Haven Station and more stations coming online it has and will become less of a problem. I would humbly ask that if this design is not significantly altered to benefit the residence of New Haven in some meaningful way that the garage not be built at all. Let's save the land and money for a better use.

Thanks

Josh Erlanger

Parker, Jeff

From: Hall, Keith A <Keith.A.Hall@ct.gov>
Sent: Wednesday, December 23, 2015 1:14 PM
To: Parker, Jeff
Subject: Fw: Follow-up to Union Station Garage #2 EIS Scoping meeting

From: Fallon, James A
Sent: Monday, December 21, 2015 1:21:13 PM
To: Redeker, James P; Hall, Keith A
Cc: Harley, Thomas A.; Hill, Scott A; Barry, Anna M
Subject: FW: Follow-up to Union Station Garage #2 EIS Scoping meeting

Commissioner - I think Keith mentioned to you the continued feedback from the City regarding incorporation of bus functionality in the new parking garage. We have the email below as well as the link to the NH register article from the scoping meeting.

Just so you're aware of the continued dialogue.

Jim

From: Matthew Nemerson [<mailto:mnemerson@newhavenct.gov>]
Sent: Friday, December 18, 2015 6:31 PM
To: Fallon, James A; keith.hall@ct.gov<<mailto:keith.hall@ct.gov>>
Cc: Mike Piscitelli; Douglas Hausladen; Tomas Reyes
Subject: Follow-up to Union Station Garage #2 EIS Scoping meeting

Dear Jim and Keith,

Thanks for your presentation and good humor this week with the USTC Garage meeting.

I'm sure we are really much closer to agreement than it may seem and we are very appreciative and excited that the project itself is so close to finally becoming a reality.

Not sure what the next steps are, but I am sure this will all work out through good existing lines of communications between the Mayor, Governor and Commissioner.

Thanks again for all your work on this project.

Have a great Holiday!

Matthew

Matthew Nemerson
Economic Development Administrator
City of New Haven - Toni N. Harp Mayor
Office 203-946-2366
Cell 203-901-3950
Personal Cell 203-444-6482
mnemerson@newhavenct.gov<<mailto:mnemerson@newhavenct.gov>>

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH



Raul Pino, M.D., M.P.H.
Acting Commissioner

Dannel P. Malloy
Governor
Nancy Wyman
Lt. Governor

December 29, 2015

Mark W. Alexander
Transportation Assistant Planning Director
State of Connecticut Department of Transportation
Bureau of Policy and Planning
2800 Berlin Turnpike
Newington, CT 06131

Re: Notice of Scoping for New Parking Garage at Union Station

Dear Mr. Alexander:

The Drinking Water Section of the Department of Public Health has reviewed the above-mentioned project for potential impacts to any sources of public drinking water supply. This project does not appear to be in a public water supply source water area; therefore, the Drinking Water Section has no comments at this time.

Sincerely,

A handwritten signature in black ink that reads "Patricia Bisacky".

Patricia Bisacky
Environmental Analyst 3
Drinking Water Section



Phone: (860) 509-8000 • Fax: (860) 509-7184 • VP: (860) 899-1611
410 Capitol Avenue, P.O. Box 340308
Hartford, Connecticut 06134-0308
www.ct.gov/dph

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STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF ENVIRONMENTAL REVIEW

79 ELM STREET, HARTFORD, CT 06106-5127

To: Mark W. Alexander - Transportation Assistant Planning Director
DOT - Environmental Planning, 2800 Berlin Turnpike, Newington, CT 06131

From: David J. Fox - Senior Environmental Analyst **Telephone:** 860-424-4111

Date: December 30, 2015 **E-Mail:** david.fox@ct.gov

Subject: Parking Garage at Union Station, New Haven

The Department of Energy & Environmental Protection has received the Notice of Scoping announcing preparation of an Environmental Impact Evaluation for construction of a 1000-space parking garage at Union Station in New Haven. As with the parking garage previously proposed to the south of the station, the Department endorses construction of a new parking garage given the need to increase the parking supply on the New Haven Line. Increased transit ridership will reduce fuel consumption and regional emissions of air pollutants that result from automobile usage. The following commentary is submitted for your consideration.

The proposed project is within Connecticut's coastal boundary as defined by section 22a-94 of the Connecticut General Statutes (CGS) and is subject to the provisions of the Connecticut Coastal Management Act (CCMA), sections 22a-90 through 22a-112. In accordance with CGS section 22a-100, state actions within the coastal boundary that may significantly affect the environment must be consistent with the standards and policies of the CCMA. The EIE should discuss the project's consistency with any applicable CCMA standards and policies. One coastal management concern which should be addressed in future phases of the planning process is the provision of adequate controls to mitigate potential stormwater impacts.

Stormwater management for parking garages typically should involve two separate collection systems designed to treat the runoff from different types of parking areas. Any exposed parking levels will produce a high volume of runoff with relatively low concentrations of pollutants. Runoff from such areas should be directed to the storm sewer system and the collection system should include controls to remove sediment and oil or grease. A hydrodynamic separator, incorporating swirl technology, circular screening technology or engineered cylindrical sedimentation technology, is recommended to remove medium to coarse grained sediments and oil or grease. The treatment system should be sized such that it can treat stormwater runoff adequately. The Department recommends that the treatment system be designed to treat the first inch of stormwater runoff. Upon installation, a maintenance plan to remove sediment and oil or grease should also be implemented.

Interior levels of the garage will produce a low volume of runoff with relatively high concentrations of pollutants. In addition, the need for cleaning of the garage must be considered and floor washwater cannot be directed to a stormwater sewer system. Runoff from interior

areas should be directed to the sanitary sewer system, again with appropriate treatment. An oil separator tank with a capacity of at least 1000 gallons is required. A licensed waste oil hauler must clean the tank at least once a year. A list of certified haulers can be obtained from the Bureau of Materials Management & Compliance Assurance at 860-424-3366 or on-line at: [Waste Transporters](#). The discharge of floor washwater is covered under a *General Permit for Miscellaneous Discharges of Sewer Compatible Wastewater* as building maintenance wastewater. Registration is required for discharges greater than 5000 gallons per day. For further information concerning stormwater management, contact the Permitting & Enforcement Division at 860-424-3018. A fact sheet describing the permit and the registration form may be downloaded at: [Miscellaneous Discharge GP](#).

The project site is within the 100-year flood zone on the community's Flood Insurance Rate Map. Therefore, the project must be certified by as being in compliance with flood and stormwater management standards specified in section 25-68d of the CGS and section 25-68h-2 through 25-68h-3 of the Regulations of Connecticut State Agencies (RCSA).

The parking garage plans should include amenities to accommodate bicyclists at the railroad station. Adding bicycle parking to the station would be a low-cost, space-saving method of increasing train ridership. Long-term bicycle parking should provide commuters a secure and weather-protected place to store their bicycles. The Department urges that provision of appropriate bicycle storage be included in the design for the parking garage.

In order to reach 2050 greenhouse gas reduction targets, the state must address the contribution of mobile sources to emissions, which is just over 40 percent, by transforming its vehicle fleet. As a founding member of the International Zero Emission Vehicle Alliance, Connecticut is committed to building out the publicly available electric vehicle charging infrastructure. Therefore, we recommend that Level 2 electric vehicle charging stations be included at 3% of the parking spaces in the project design. Increasing the availability of public charging stations will facilitate the introduction of the electric vehicle technology into the state and serve to alleviate the present energy dependence on petroleum and improve air quality.

The Department typically encourages the use of newer off-road construction equipment that meets the latest EPA or California Air Resources Board (CARB) standards. If that newer equipment cannot be used, equipment with the best available controls on diesel emissions including retrofitting with diesel oxidation catalysts or particulate filters in addition to the use of ultra-low sulfur fuel would be the second choice that can be effective in reducing exhaust emissions. The use of newer equipment that meets EPA standards would obviate the need for retrofits.

The Department also encourages the use of newer on-road vehicles that meet either the latest EPA or CARB standards for construction projects. These on-road vehicles include dump trucks, fuel delivery trucks and other vehicles typically found at construction sites. On-road vehicles older than the 2007-model year typically should be retrofitted with diesel oxidation catalysts or diesel particulate filters for projects. Again, the use of newer vehicles that meet EPA standards would eliminate the need for retrofits.

Additionally, Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies (RCSA) limits the idling of mobile sources to 3 minutes. This regulation applies to most vehicles such as trucks and other diesel engine-powered vehicles commonly used on construction sites. Adhering to the regulation will reduce unnecessary idling at truck staging zones, delivery or truck dumping areas and further reduce on-road and construction equipment emissions. Use of posted signs indicating the three-minute idling limit is recommended. It should be noted that only DEEP can enforce Section 22a-174-18(b)(3)(C) of the RCSA. Therefore, it is recommended that the project sponsor include language similar to the anti-idling regulations in the contract specifications for construction in order to allow them to enforce idling restrictions at the project site without the involvement of the Department.

The Natural Diversity Data Base, maintained by DEEP, contains no records of extant populations of Federally listed endangered or threatened species or species listed by the State, pursuant to section 26-306 of the Connecticut General Statutes, as endangered, threatened or special concern in the project area. This information is not the result of comprehensive or site-specific field investigations. Also, be advised that this is a preliminary review. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEEP for the proposed site. Consultation with the Natural Diversity Data Base should not be substituted for on-site surveys required for environmental assessments. The extent of investigation by competent biologist(s) of the flora and fauna found at the site would depend on the nature of the existing habitat(s). If field investigations reveal any Federal or State listed species, please contact the DEEP Geologic & Natural History Survey at 860-424-3540.

Development plans in urban areas that entail soil excavation should include a protocol for sampling and analysis of potentially contaminated soil. Soil with contaminant levels that exceed the applicable criteria of the Remediation Standard Regulations, that is not hazardous waste, is considered to be special waste. The disposal of special wastes, as defined in section 22a-209-1 of the RCSA, requires written authorization from the Waste Engineering and Enforcement Division prior to delivery to any solid waste disposal facility in Connecticut. If clean fill is to be segregated from waste material, there must be strict adherence to the definition of clean fill, as provided in Section 22a-209-1 of the RCSA. In addition, the regulations prohibit the disposal of more than 10 cubic yards of stumps, brush or woodchips on the site, either buried or on the surface. A fact sheet regarding disposal of special wastes and the authorization application form may be obtained at: [Special Waste Fact Sheet](#)

The Waste Engineering & Enforcement Division has issued a *General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer)*. It establishes a uniform set of environmentally protective management measures for stockpiling soils when they are generated during construction or utility installation projects where contaminated soils are typically managed (held temporarily during characterization procedures to determine a final disposition). Temporary storage of less than 1000 cubic yards of contaminated soils (which are not hazardous waste) at the excavation site does not require registration, provided that activities are conducted in accordance with the applicable conditions of the general permit. Registration is required for on-site storage of more than 1000 cubic yards for more than 45 days or transfer of more than 10 cubic yards off-site. A fact sheet describing the general permit, a copy of the general permit and registration forms are available on-line at: [Soil Management GP](#)

Thank you for the opportunity to review this project. If there are any questions regarding these comments, please contact me.

cc: Keith A. Hall, DOT
Jeff Caiola, DEEP/TWRD
Robert Hannon, DEEP/OPPD
Louis Corsino, DEEP/APSD
Carol Szymanski, DEEP/OLISP



STATE OF CONNECTICUT
OFFICE OF POLICY AND MANAGEMENT
INTERGOVERNMENTAL POLICY DIVISION

December 31, 2015

Mr. Mark W. Alexander
State of Connecticut Department of Transportation
Bureau of Policy and Planning
2800 Berlin Turnpike, Newington, CT 06131

Re: Notice of Scoping:
New Parking Garage at Union Station

Dear Mr. Alexander:

The Office of Policy and Management (OPM) has reviewed DOT's Notice of Scoping for New Parking Garage at Union Station and submits the following comments:

- According to the scoping notice, a garage accommodating approximately 1000 parking spaces will replace the surface lot adjacent to the existing parking garage. If that many additional vehicles enter the neighborhood, what are the implications for motor vehicle travel on nearby roads as well as for people traveling by other modes?

Beyond the garage's impact on mobility, what design and construction features are being incorporated into the project to avoid detracting from other neighborhood functions? Union Station and the surrounding neighborhoods have been the focus of numerous planning activities by the City and others. For instance, there is a proposal to convert a portion of the Route 34 corridor into a boulevard and to make Union Avenue a "complete street." Are there opportunities to mitigate existing motor vehicle impacts in the neighborhood as part of parking garage project?

- How has DOT evaluated the potential change in parking demand at Union Station that will result from Hartford Line rail service enhancements? In addition to the impact of increased Hartford line ridership on the number of people choosing to board trains in New Haven, parking facilities are being expanded at other rail stations along the New Haven-Hartford-Springfield line. To what extent might the addition of parking spaces at nearby stations reduce demand for parking in New Haven?

How many additional vehicles must use the expanded New Haven parking facility to generate enough revenue to cover the garage's long-term costs? Review of the "Annual O&M Costs and Reserve Assumptions" for King County, WA's *Right Size Parking Calculator* (<http://www.rightsizeparking.org>) suggests that New Haven's substantially higher cost is in the range that is necessary to maintain the long-term viability of a parking garage, even assuming full occupancy and ignoring initial construction costs (see http://www.rightsizeparking.org/RSP_Parking_Rev_Cost_Memo.pdf).

Parking costs vary widely among nearby Metro North stations:

Station	Permit cost/period	~Annual Cost
New Haven	\$95/month	\$1140
West Haven	\$300/6 months	\$600
Milford	\$275/year	\$275

Sources: <http://www.parknewhaven.com/DETAILS.aspx?id=20&zoom=14>
<http://www.ct.gov/dot/cwp/view.asp?A=1373&Q=528126>
<http://www.milfordtransit.com/trainstation.htm>

With annual parking costs apparently varying by \$800 at stations only 10 miles apart, pricing at one facility might be a powerful incentive for people to drive further to park at a more-distant station. Not only is there a potential environmental consequence, it might also affect the long-term viability of individual facilities.

Thank you for the opportunity to respond to this Notice of Scoping and please feel free to contact me if you have any questions.

Sincerely:



Bruce Wittchen
Office of Policy & Management
450 Capitol Ave, MS# 54ORG
Hartford, CT 06106
(860) 418-6323
bruce.wittchen@ct.gov



Toni N. Harp
Mayor

City of New Haven
Office of the Economic Development Administrator
165 Church Street
New Haven, Connecticut 06510



Matthew Nemerson
Economic Development
Administrator

December 31, 2015

Mark Alexander
Transportation Assistant Planning Director
Connecticut Department of Transportation
2800 Berlin Turnpike
P.O. BOX 317546
Newington, CT 06131-7546

RE: Union Station Second Garage

Dear Mr. Alexander:

I am writing to follow up more formally on the CEPA process after the public information session which took place on December 15, 2015. Thank you again for the opportunity to participate and provide comment on this important project.

1. **Traffic Management:** The City is concerned that the design of the new garage will absorb capacity on Union Avenue unless the project properly plans, design and implements improvements to the traffic control system. You will recall that the City expressed concerns about the traffic report prepared in 2011 in part because the report relied too heavily on national experience, rather than situational experience at the existing garage. Moving forward, the City continues to prioritize Complete Streets and bike/pedestrian mobility and we therefore encourage a comprehensive and thoughtful approach to Union Avenue. Please consider and incorporate the 10% design plan prepared by CDM in 2014 and the access circulation concepts prepared by PARK New Haven in 2015. From an environmental perspective, congestion mitigation and air pollution will be mitigated as well through this work.

2. **Intermodal Circulation:** The circulation in the drop-off/pick up area for the Union Station and the two adjacent garages must be considered together so that there is adequate capacity for the busiest times. Consideration should be given to a more orderly staging of taxis and buses. As per our letter of August 31, 2015, the bus depot concept is very important and should be considered as a stand-alone alternative. It is worth noting that concepts were prepared for Connecticut DOT by Medina in 2011 that showed a ground floor appropriately designed for intercity buses, shuttles and other uses. Likewise, Medina reserved space in the new garage for a full-service bike station, based on a scope prepared by the City and it would be good to maintain that element in the project.



InfoNewHaven.com

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Alexander 123115

3. Historic Preservation and Architecture: The State's commitment to a high quality, architecturally consistent design is truly appreciated and we look forward to seeing that through to implementation. On a related note, the City encourages full documentation of archeological resources based on Union Station's historically-significant location.

Thank you again for your time and effort on this project. We look forward to further discussion as the project continues to move forward.

Sincerely,



Michael Piscitelli, AICP
Deputy Economic Development Administrator

cc: Toni Harp, Mayor
Matthew Nemerson, Economic Development Administrator
Karyn Gilvarg, AIA, Executive Director, City Plan
Doug Hausladen, Director, Transportation, Traffic and Parking
file

APPENDIX B

List of Technical Reports

These Technical Reports are available for public review and can be requested from the Connecticut Department of Transportation:

Traffic Impact Study Technical Report

Air Quality Analysis Technical Report

APPENDIX C

Agency Correspondence

SHPO Consultation Documentation



STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546



Transmittal:

From: Mandy Ranslow, Transportation Planner
Date: July 20, 2015
Through: Mark W. Alexander, Transportation Assistant Planning Director
To: Daniel T. Forrest, State Historic Preservation Officer

Project: State No.: 301-TBD
F.A.P. No.: N/A
Project Title: Union Station Parking Garage
Town: New Haven

Subject: SHPO Consultation Documentation

Description of Activity:

The Connecticut Department of Transportation (CTDOT) proposes to construct a new parking garage to provide additional commuter parking at Union Station in New Haven. This project was originally Scoped in the Environmental Monitor on June 3, 2008 and November 16, 2010 as a 1500 space parking garage, and it was anticipated that federal money would be used. Since that time the scope has been reduced to a less than 1000 space parking garage funded with only state dollars.

The site is 1.5 acres and is currently paved bituminous commuter parking for about 250 cars. It is located directly north of the existing parking garage for Union Station and is bounded by Union Avenue on the west, State of Connecticut property on the north, the railroad (Northeast Corridor) on the east, and the existing Union Station parking garage on the south.

While the design of the new parking garage has yet to begin, based on past concept efforts, the new facility will seek to incorporate a mix of building materials in its construction. At its core, the garage will be fabricated of precast members to help speed construction and ensure quality and durability. The architect envisions using façade treatments to balance historic and contemporary elements of adjacent structures and create a linear campus of structures along Union Avenue so to speak. As the design process evolves, the City, interested residents and commuters will have opportunity to help influence the final aesthetic.

Technical Review of Project:

New Haven Union Station, constructed in 1919-1920 and designed by Cass Gilbert, was listed on the National Register of Historic Places in 1975. The primary significance of the structure is its association with railroad history and the growth of the City (Criteria A). Union Station is also significant because it was designed by Cass Gilbert, a leading architect of his time (Criteria C).

The proposed garage is not within a listed historic district, however, the New Haven Rail Yard and rail corridor are considered eligible for the National Register of Historic Places. The proposed garage will not directly impact these resources.

The proposed parking garage will have the same general massing and size as the extant parking lot adjacent to Union Station. The proposed parking garage will have very little visual impact on Union Station because of the extant parking garage between it and the Station. It does not appear that the proposed project will have an adverse effect on above-ground historic properties.

The parking garage to the north of Union Station was constructed in the 1985. In 1982 an archaeological reconnaissance survey was completed in the footprint of the extant garage (*Archaeological Reconnaissance Survey, New Haven Station, NPS NADB #CT-7, CHPC No. 41*). A geological and historical context was compiled and several boring cores were analyzed. Though it was predicted that pre-contact sites could be present 6-26 feet below the fill, no further archaeological investigations were recommended due to the significant filling of the area and that the garage would have no basement.

An alternative to locate a new parking lot to the south of and adjacent to Union Station was reviewed by the State Historic Preservation Office (SHPO) in 2009. A SHPO letter dated May 5, 2009 states that the project “appears to have no adverse effect on cultural resources” and required that SHPO review the proposed design for the garage and connector and that a professional archaeological assessment survey be completed.

A Phase IA Assessment Survey was completed in January 2011 by Archaeological Consulting Services. The geological and historic context of the project area was described, and no further archaeological investigations were recommended. These recommendations were based on the prior disturbance of the area by utilities and most especially because of the filling of marshland that took place at this location.

The current proposed project is to construct a new garage to the north of the existing garage, further away from Union Station. The first floor of the garage will be on a concrete slab with footings on piles. One of the borings (no. 7U) analyzed in the 1982 report falls within the current project area. Boring 7U revealed fill down to ten feet and alluvial sand to twenty feet. This is characteristic of the entire project area, which was marshland prior to the mid-19th century when it was filled in for the railroad and greater access to Long Wharf.

A few significant transportation-related archaeological sites have been identified in the New Haven Rail Yard. Site 93-25/Long Wharf, 93-24A/Spring Street Roundhouse, and 93-24B/Lamberton Street Roundhouses are located outside the project area. Historic maps and aerial photos show no structures located within the project area (Figures 1-4). The project area is currently used as a parking lot, as it has been since the early 20th century (Figure 5).

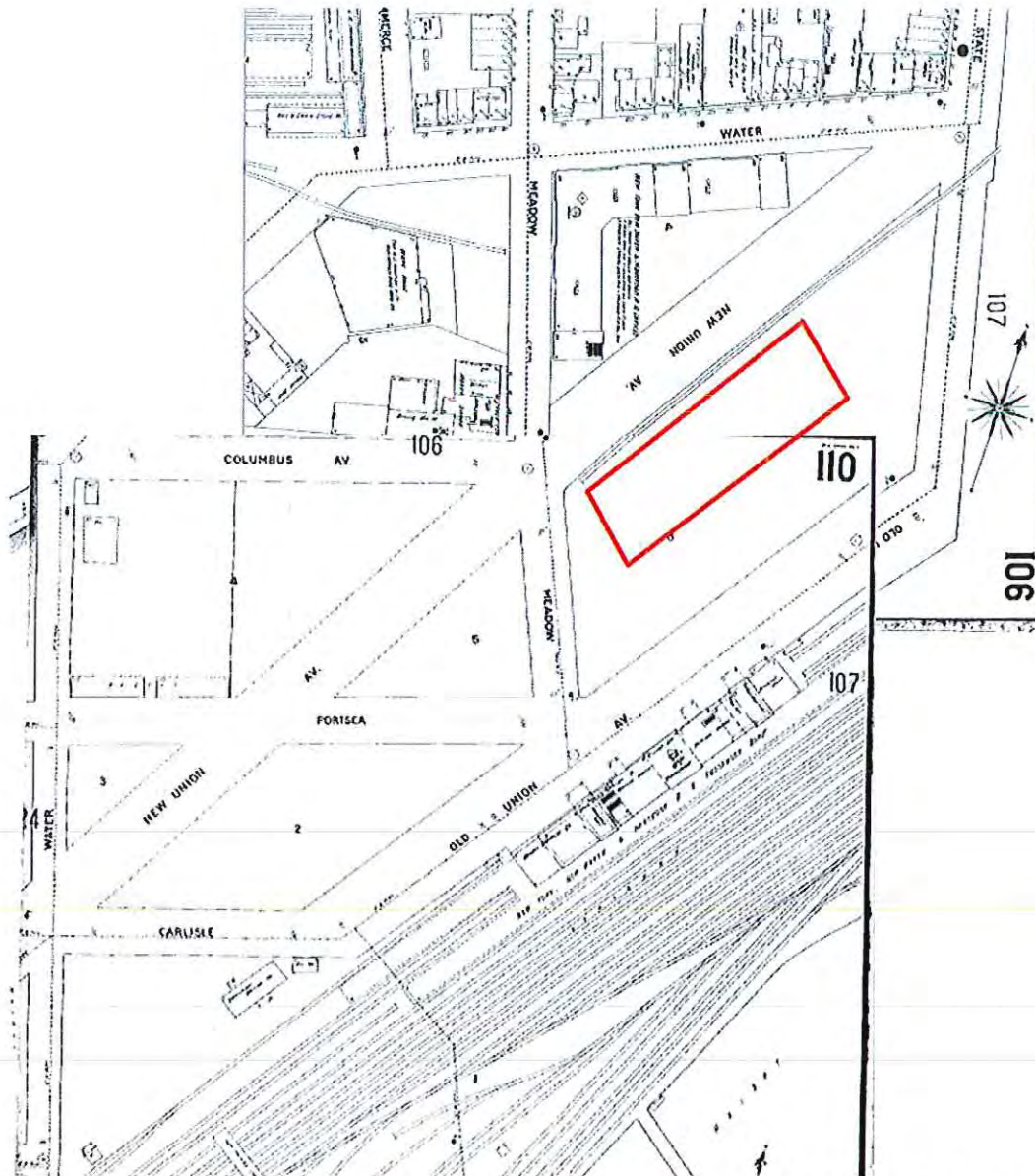


Figure 1: 1901 Sanborn (Vol. 2 Sheets 106 & 110) with Project Area in Red (courtesy of CT State Library)

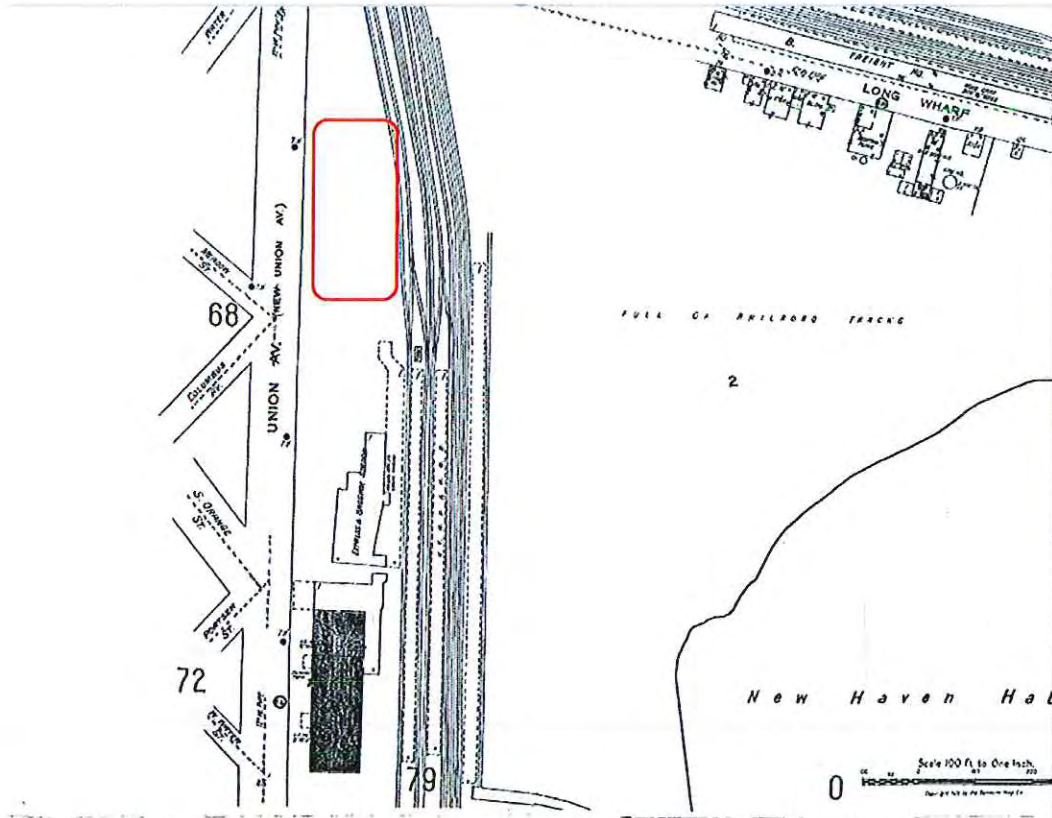


Figure 2: 1923-1924 Sanborn (Vol. 1 Sheet 93) with Project Area in Red (courtesy of CT State Library)

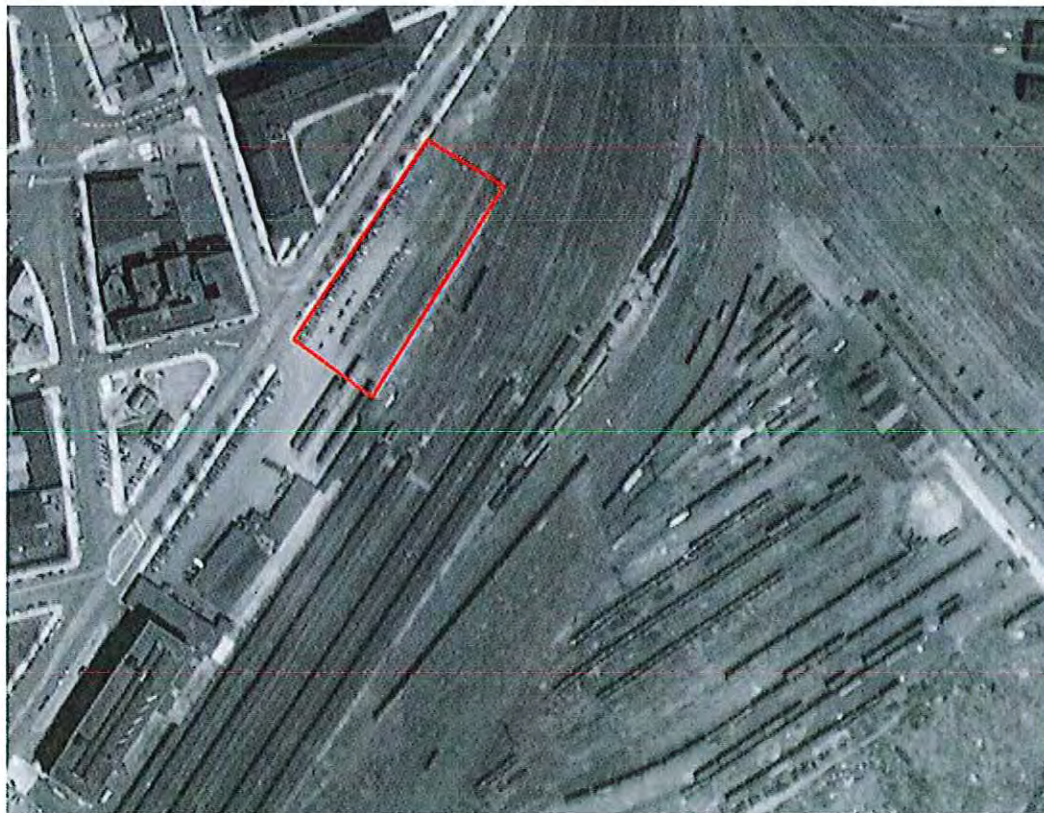


Figure 3: 1934 Aerial Photo with Project Area in Red (courtesy of CT State Library)

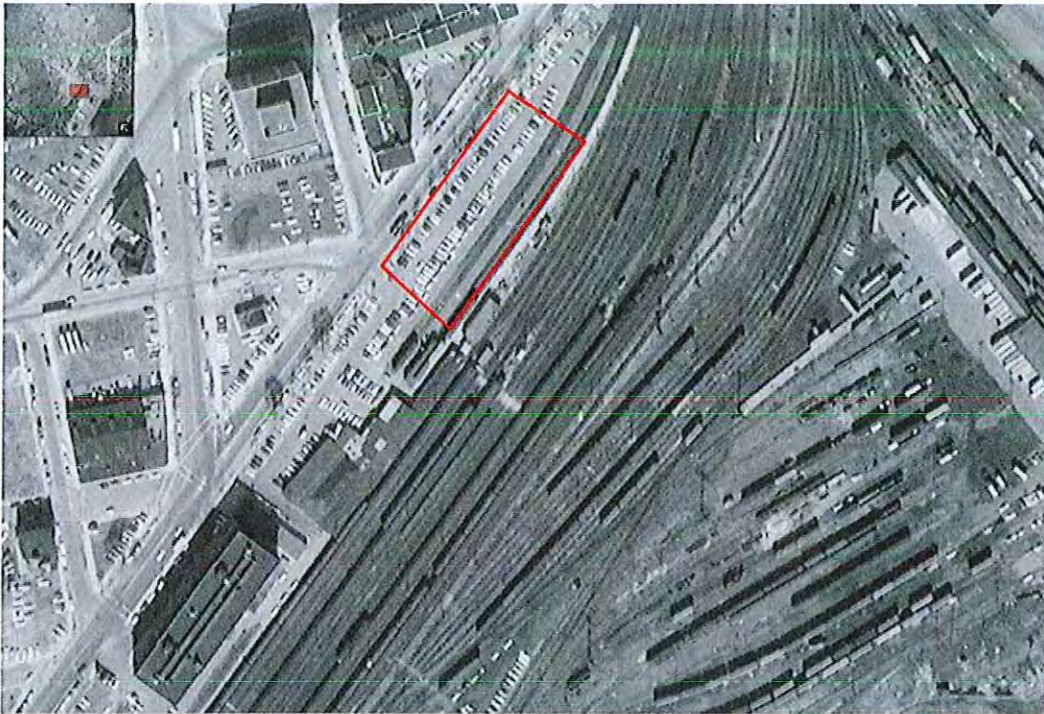


Figure 4: 1965 Aerial Photo with Project Area in Red (courtesy of CT State Library)

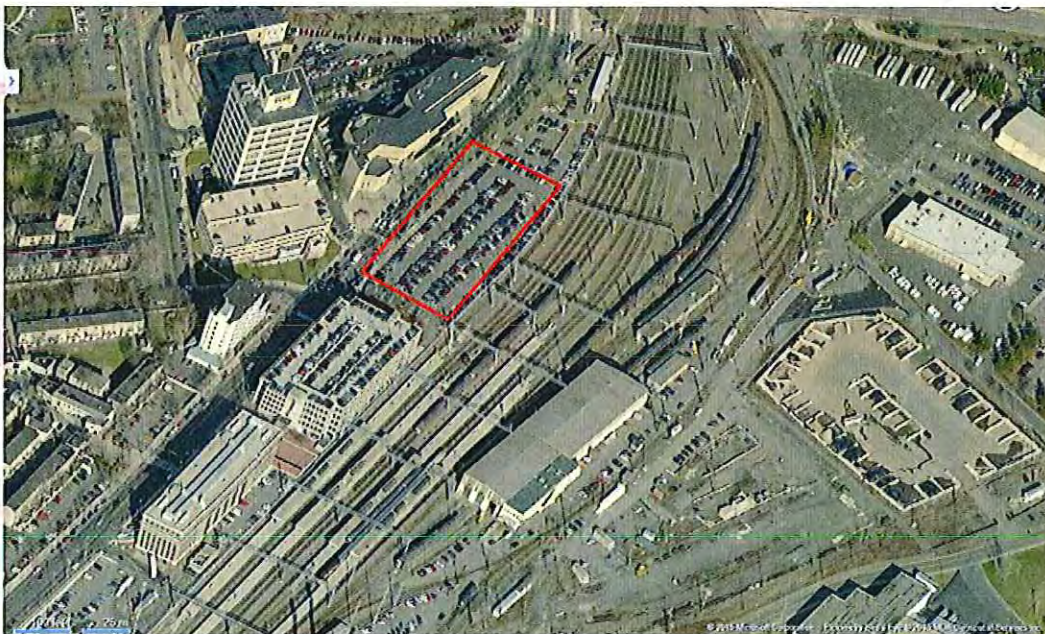


Figure 5: 2015 Aerial Photo with Project Area in Red (courtesy of Bing Maps)

Two archaeological surveys in proximity to the project area have determined the area to have low archaeological sensitivity. It can be reasonably inferred that the current project area also has very limited potential to contain intact, eligible archaeological sites, and the limited deep ground disturbance included in this project does not warrant further archaeological investigations.

Recommendation:

CTDOT's Office of Environmental Planning recommends that the proposed project will have no adverse effect on historic properties. This project is subject to review under the Connecticut Environmental Policy Act. As design plans become more developed (30%) they will be provided to SHPO for comment.

Attached Documents:

- SHPO Letter – May 5, 2009
- Historic Review Maps
- Photos
- Supporting Documents – Environmental Review Request, “Phase IA Archaeological Assessment Survey of the Union Station Parking Garage (South) in the City of New Haven, Connecticut” 2011, Archaeological Consulting Services, Union Station National Register Nomination Form & Photos, and preliminary plans

SHPO Use Only

Based on the information provided to the State Historic Preservation Office, we:

Concur Do Not Concur (additional comments attached)

with DOT's Office of Environmental Planning's opinion that there will be no adverse effect on historic properties by this undertaking (Project No. 301-TBD in New Haven).

Mary B. Dunne

9.8.15

Mary B. Dunne
Deputy State Historic Preservation Officer

Date



Department of Economic and
Community Development

Connecticut
still revolutionary