



ENVIRONMENTAL ASSESSMENT/Draft SECTION 4(f) EVALUATION CEPA ENVIRONMENTAL IMPACT EVALUATION Routes 7/15 Interchange, Norwalk, Connecticut



Federal Highway Administration
U.S. Department of Transportation



Connecticut Department of Transportation

May 2023



GENERAL INFORMATION ABOUT THIS DOCUMENT

What's in this document:

The Connecticut Department of Transportation (CTDOT) and the Federal Highway Administration (FHWA) have prepared this Environmental Assessment/Environmental Impact Evaluation (EA/EIE) which examines the potential environmental impacts of the alternatives being considered for the Project located in the City of Norwalk, CT. The CTDOT is proposing to use funds from FHWA for this local/state roadway project. This document explains why the project is being proposed, what alternatives have been considered, how the existing environment could be affected by the project, the potential impacts of each of the alternatives and the proposed avoidance, minimization, and/or mitigation measures of these impacts.

What you should do:

Please read this document. Additional copies of this document and the related technical studies are available may be viewed at the agencies/addresses below:

CTDOT

2800 Berlin Turnpike
Newington, CT 06111

FHWA CT Division Office

450 Main Street, Suite 612
Hartford, CT 06103

Connecticut State Library

231 Capitol Avenue
Hartford, CT 06106

Norwalk City Hall

125 East Avenue
Norwalk, CT 06851

Norwalk Public Library

Main Branch
1 Belden Avenue
Norwalk, CT 06850

Norwalk Public Library

South Norwalk Branch
10 Washington Street
Norwalk, CT 06854

WestCOG

One Riverside Road
Sandy Hook, CT 06482

Copies of the document may be downloaded at www.ct.gov/environmentaldocuments or on the Route 7/15 Interchange project website at: <http://7-15norwalk.com>.

A public hearing will be held on Wednesday, August 16, 2023 at 6:00 – 9:00 pm in the Norwalk City Hall at 125 East Avenue in Norwalk, CT. The meeting is ADA accessible. Language assistance and/or ADA accommodations are provided at no cost to the public and efforts will be made to respond to timely requests for assistance. Persons needing language assistance or ADA accommodations may request assistance by contacting the Department's Language Assistance Line at (860) 594-2109, at least five (5) business days prior to the meeting. Persons having a hearing and/or speech disability may dial 711 for the Telecommunications Relay Service (TRS) and instruct the operator to contact (860) 594-2243.

Let us know what you think. If you have any comments about the Project, please attend the



public hearing and/or send your written comments to Mr. Kevin Carifa by August 31, 2023.

Comments can be mailed to DOT – Environmental Planning, addressed to Mr. Kevin Carifa, Transportation Planning Director at CTDOT, 2800 Berlin Turnpike, Newington, CT 06131 and postmarked by August 31, 2023. Alternatively, comments can be submitted before the close of business on August 31, 2023 via the project website at <http://7-15norwalk.com/ea-comments>.



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Executive Summary

The Connecticut Department of Transportation (CTDOT) and the Federal Highway Administration (FHWA) propose to construct improvements to the US Route 7 (Route 7) and State Route 15 (Route 15) interchange (Routes 7/15) and to improve interconnections with local roads in the City of Norwalk (Norwalk), Connecticut (Project).

E-1 OVERVIEW OF PROJECT SITE

The Project is located in the northern portion of Norwalk at the interchange of Routes 7/15 (Interchange 39) and includes the interchange of Route 15 with Main Avenue (Interchange 40); Route 719 (Main Avenue); and Glover Avenue/Creeping Hemlock Drive in the vicinity of Main Avenue. The proposed limits of construction (Project Site) extends along Route 15 from approximately 0.5 miles west of Route 7 to approximately 0.5 miles east of Main Avenue and along Route 7 from approximately 0.5 miles south to approximately 0.5 miles north of Route 15. The Project Site is illustrated in Figure E1.1.1.

Route 15

The segment of Route 15 in which the Project is located is also known by its original name, the Merritt Parkway. It is listed in the National Register of Historic Places (NRHP) for its significance in the areas of landscape design, transportation and architecture. It is also designated as a National Scenic Byway and State Scenic Road. Within the Project Site, Route 15 carries traffic over Perry Avenue, Route 7 and Main Avenue, as well as the Norwalk River and Metro North Railroad. This portion of Route 15 includes four historic bridges that are contributing resources to the National Register listing. Also within the Project Site is the Glover Avenue Bridge, which has been determined to be individually eligible for listing in the NRHP.

Route 7

The segment of Route 7 in which the Project is located is a four-lane limited access expressway. Within the Project Site, Route 7 carries traffic over New Canaan Avenue (Route 123), over the Norwalk River, and under Route 15.

Existing Interchanges

Interchange 39 provides partial connections between Route 7 and Route 15. Interchange 40, a second nearby interchange, provides connections in all directions between Route 15 and Main Avenue. This interchange is located approximately 1,500 feet east of the Route 7 and Merritt Parkway interchange and the Norwalk River. On Route 7, Interchange 2 provides connections in all directions between Route 7 and Route 123.

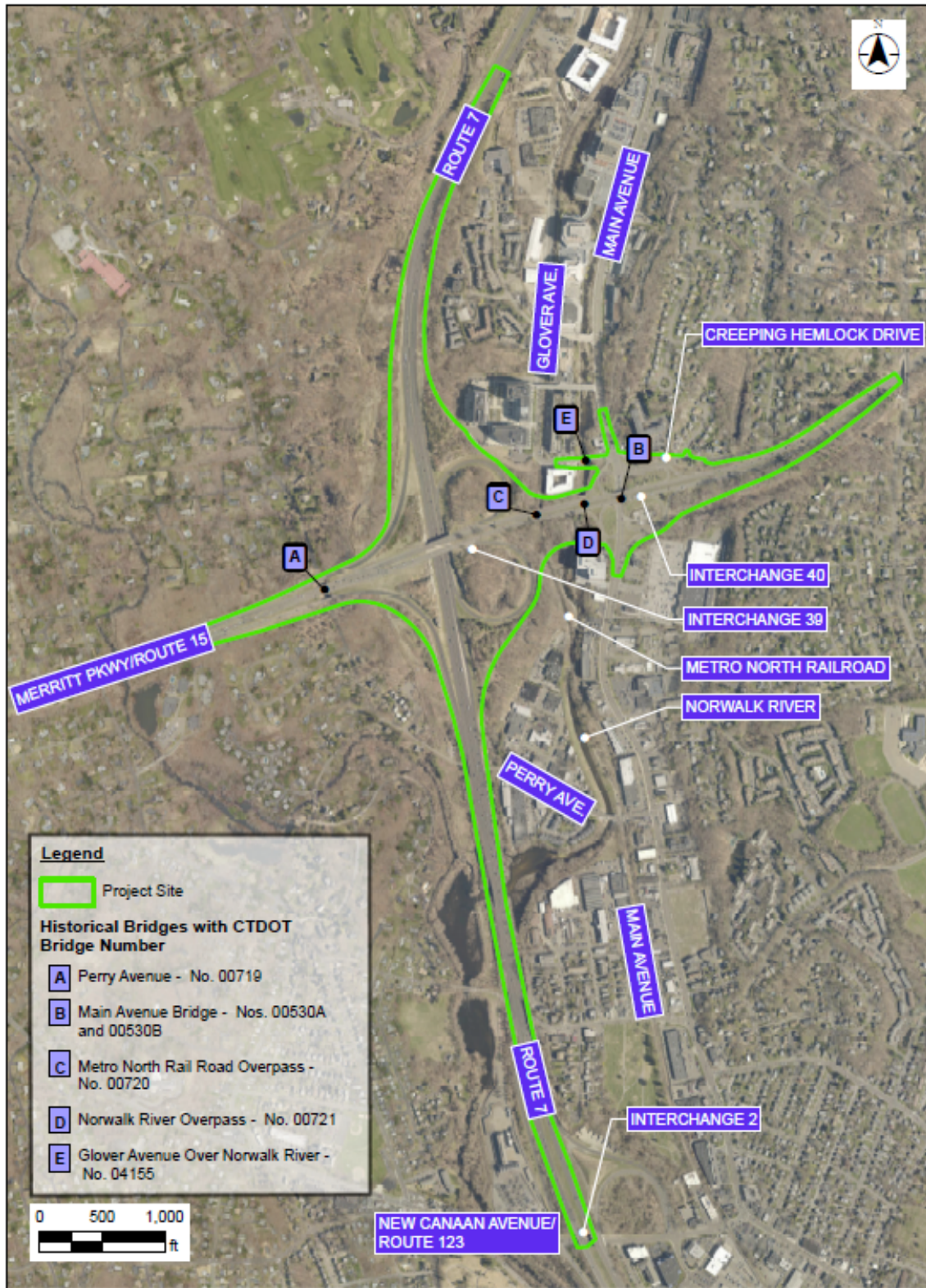


Figure E1.1.1 Project Site



Local Roadways

Main Avenue is currently a four-lane urban minor arterial that parallels Route 7 and the Norwalk River and extends north and south of the Routes 7/15 interchange. Main Avenue forms a skewed, five-legged signalized-intersection with Glover Avenue, Creeping Hemlock Drive, and the southbound Route 15 on-ramps. The southbound Route 15 off-ramp to southbound Main Avenue is also within the footprint of the intersection and provides STOP-controlled access onto southbound Main Avenue. There are also two other ramps providing access to and from Main Avenue from Route 15 and they are located approximately 300 feet east of the intersection via Creeping Hemlock Drive (Figure E1.1.2).



Figure E1.1.2 Route 15 / Main Avenue Interchange

Glover Avenue is a two-lane local road that intersects with Main Avenue approximately 300 feet north of the Route 15. From its intersection with Main Avenue, Glover Avenue spans westward for 600 feet before making a 90 degree turn to the north and continuing nearly a mile before intersecting with Grist Mill Road.

Creeping Hemlock Drive also follows a roughly L-shaped alignment that intersects with Main Avenue. It proceeds eastward from Main Avenue for approximately 0.3 miles to an intersection with the southbound Route 15 ramps before continuing northward into the Creeping Hemlock neighborhood.

E-2 PROJECT HISTORY AND PRIOR ASSESSMENT

A brief history of prior assessments of the Routes 7/15 interchange is summarized here in order to provide context for the alternatives assessed as part of this Environmental Assessment/



Environmental Impact Evaluation (EA/EIE).

In the early 1990s a project to address deficiencies at the Routes 7/15 interchange was initiated and in 2000, the EA/EIE was approved. In 2005, when the project was in the early stages of construction, litigation of the project resulted in a stoppage of work. In 2006, following a court ruling, the construction contract was cancelled when the court found the project's administrative record did not adequately document that avoidance, minimization and mitigation alternatives associated with impacts to resources within the project area had been fully analyzed.

Following the court's decision and resultant construction cancellation, CTDOT undertook a review of the original design alternatives and assessed new alternatives. During this time, CTDOT formed and worked with a public stakeholder group which included representatives from neighboring residents and the lawsuit's lead plaintiff, the Merritt Parkway Conservancy (MPC). After reaching consensus with the stakeholder group on a new design alternative, CTDOT presented it in an open public forum in February 2009. The new design concept was well received by the greater public.

At that time, there was not sufficient funding available for reinitiating the project, but it was anticipated that the strategic plan of the state's transportation system would continue to identify this infrastructure investment as a future need. The Department filed a letter with FHWA cancelling the project and its associated Environmental Assessment/Finding of No Significant Impact (EA/FONSI) in 2013.¹ It was acknowledged that if a future project were to be undertaken, CTDOT would prepare new studies based on current needs and deficiencies and a new National Environmental Policy Act (NEPA) environmental review would be conducted.

This 2021 EA/EIE represents the new NEPA document and presents the new studies required for the reinitiated Route 7/Route 15 interchange project. The 2009 community endorsed alternative was evaluated and screened during the current Project's scoping process and is identified as Alternative 21D in this EA/EIE.

E-3 PURPOSE AND NEED

The purpose of the Project is to:

- improve roadway system linkage between Route 7 and Route 15 at Interchange 39;
- improve the mobility for vehicles at both the Route 15 interchanges at Route 7 and at Main Avenue (No. 39 & No. 40), and to improve the mobility for all users (motorists, pedestrians, and cyclists) along the immediate adjacent local roadway network (Main

¹ Timothy Sullivan (CTDOT) letter to Amy Jackson Grove (FHWA), *Notice of Intent to Cancel NEPA and Close Project Accounts, State Project Nos. 102-269/312, FAP No. 0007(117) Routes 7/15 Norwalk*, dated November 6, 2013.



Avenue, Glover Avenue, and Creeping Hemlock Drive, and;

- improve safety in the vicinity of these interchanges.

CTDOT and FHWA are proposing the Project to address deficiencies of the existing interchanges and streets in the vicinity of the interchanges. A description of the various Project Needs is below.

Roadway System Linkage

The existing Route 15 and Route 7 Interchange configuration does not provide all connections between Route 7 and Route 15, specifically the following connections:

- Southbound ² Route 15 to northbound Route 7
- Southbound Route 15 to southbound Route 7
- Northbound Route 7 to northbound Route 15
- Southbound Route 7 to northbound Route 15

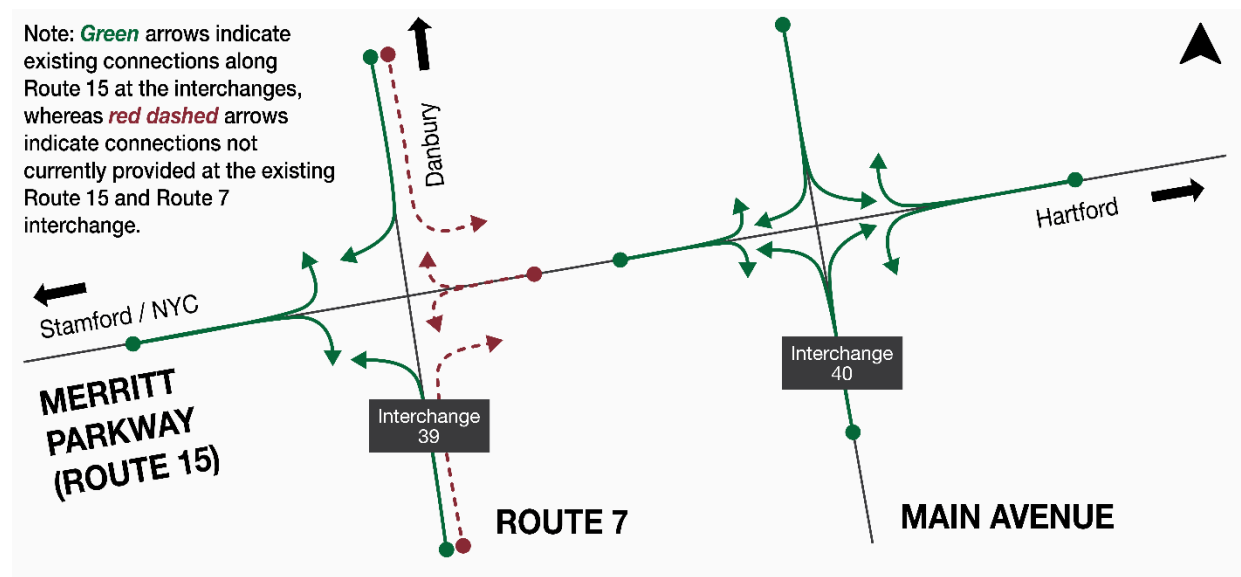


Figure E1.1.3 Existing Needs (Roadway System Linkage)

Existing roadway system linkage needs are depicted in Figure E1.1.3. Existing connections along Route 15 at the interchanges with Route 7 and Main Avenue are depicted in green whereas connections not currently provided at the existing Routes 7/15 interchange are depicted in red.

² Route 15 runs generally southwest to northeast. By convention, Route 15 directions are referred to as “northbound” (northeast) and “southbound” (southwest).



Mobility - Vehicular

Interchange 39 currently provides partial connections between Route 7 and Route 15. Connections between Route 7 and Route 15 to and from the north are not provided.

Interchange 40, a second nearby interchange, provides connections in all directions between Route 15 and Main Avenue. However, connections between Route 7 and Main Avenue do not exist in the vicinity of Interchange 39 or Interchange 40.

Mobility – Other Users – (Bike/Pedestrian/Transit)

There are no bicycle facilities in the Project Site, and shoulder widths are less than one foot on Main Avenue. Sidewalks only exist in short, discontinuous segments along Main Avenue. Only one small roadway segment, along with Glover Avenue, is fully in compliance with the U.S. Americans with Disabilities Act (ADA). Sidewalks, curb ramps, and crosswalks within this area are missing and/or lacking safety features for visually or hearing-impaired pedestrians, reducing access and mobility for users with disabilities.

Safety

The existing Main Avenue and Route 15 Interchange ramps have substandard acceleration and deceleration lanes, steep changes in grade, sharp curves, and limited sight distance. These factors contribute to a high number of crashes.

Other Desirable Outcomes for the Project

The list below summarizes other desirable outcomes that were identified for consideration during the alternative analyses screening process, including the Project needs and input provided by stakeholders.

- Reduce congestion
- Provide long term serviceability of the affected roadways within the Project vicinity
- Optimize the value gained from public investment in the Project
- Integrate the Project roadways and landscape with the environment and neighborhood context.

E-4 ALTERNATIVES INCLUDING THE PROPOSED PROJECT

This section describes the reasonable alternatives identified for assessment in this EA/EIE.

No Build Alternative

Under the No Build Alternative, no substantial improvements to the operation, linkages, and capacity of the existing interchanges would be performed nor would significant corridor landscape improvements occur beyond routine maintenance and/or spot safety improvements currently performed by CTDOT. The intersection and interchange geometry would remain as they currently exist within the Project Site (Figure E1.1.4).



LEGEND

00721 EXISTING BRIDGE

EXISTING SIGNAL



Figure E1.1.4 No Build Alternative (Existing Conditions)



Alternative 26

Alternative 26 would complete the connections at Interchange 39 with traffic movements between Route 7, Route 15, and Main Avenue (Figure 1.1.5). This alternative would introduce two signalized intersections along Route 7 to complete the partial interchange. A modified diamond interchange with Route 15 would retain the existing loop ramp in the northeast quadrant and the existing direct connector ramp in the southwest quadrant to optimize traffic operations at the two signalized intersections.

The loop ramp in the northeast quadrant would be reduced in size from the existing larger ramp, a change made possible by slower speeds on the reclassified Route 7 from a freeway to a signalized arterial. Three northbound and three southbound lanes would be necessary at the signalized Route 7 ramp intersections, with turn lanes at each Route 7 intersection approach. No powerline tower relocations are required for Alternative 26.

The dual historic Route 15 bridges (Bridge #00530 A & B) over Main Avenue (Interchange 40) would be replaced and the bridge spans extended to allow for a widened roadway section. In addition, Main Avenue would be lowered to provide the required vertical bridge clearance. The increased span would provide space below for a wider Main Avenue and allow for the construction of additional left turn lanes to provide for left-turn movements and provide wider sidewalks and incorporation of bike facilities. This would facilitate the Project's purpose related to improved mobility of both vehicles and other users (pedestrians, bicyclists, transit users). In addition to the existing signal at Glover Avenue and Main Avenue, two new signalized intersections would be provided along Main Avenue for a total of three-closely spaced signalized intersections. Glover Avenue would be widened, and a replacement bridge would be constructed over the Norwalk River. Creeping Hemlock Drive would be realigned to the north and widened. A new signalized intersection would be provided along Creeping Hemlock Drive at the existing westbound Merritt Parkway off-ramp.

The four existing tight-loop ramps at Interchange 40 would be eliminated. Elimination of the existing ramps in the southwest quadrant of the Main Avenue interchange would allow for an eastbound weaving lane between an eastbound Route 7 entry ramp and an improved exit loop ramp in the southeast quadrant of the Route 7 interchange. In the westbound direction, the tight Route 15 exit loop ramp in the northwest quadrant would be eliminated. To avoid further weaving on the westbound Merritt Parkway for the southbound Main Avenue movement, an independent ramp would be located between the westbound weaving lane and the new residential building to the north.

In addition to the new ramps and roadways noted above, Alternative 26 would require the construction of four new bridges and the replacement of two existing historic bridges (Route 15 over Main Avenue and Glover Avenue over Norwalk River) to incorporate new or widened roadways or ramps.



Figure 1.1.5 Alternative 26



Alternative 21D

Alternative 21D would complete the connections at Interchange 39 with traffic movements between Route 7, Route 15, and Main Avenue (Figure E1.1.6). The existing Routes 7/15 interchange loop ramps would be retained in the easterly quadrants as would the direct connections in the westerly quadrants. The four remaining Routes 7/15 interchange movements would be achieved with semi-direct connections. Several towers of a power line may require relocation.

The dual historic Route 15 bridges (Bridge #00530 A & B) over Main Avenue (Interchange 40) would be replaced and the bridge spans extended to allow for a widened roadway section. In addition, Main Avenue would be lowered to provide the required vertical bridge clearance. The increased span would provide space below for a wider Main Avenue and allow for the construction of additional left turn lanes to provide for left-turn movements and provide wider sidewalks and incorporation of bike facilities. This would facilitate the Project's purpose related to improved mobility of both vehicles and other users (pedestrians, bicyclists, transit users). In addition to the existing signal at Glover Avenue and Main Avenue, two new signalized intersections would be provided along Main Avenue for a total of three-closely spaced signalized intersections. Glover Avenue would be widened, and a replacement bridge would be constructed over the Norwalk River. Creeping Hemlock Drive would be realigned to the north and widened. A new signalized intersection would be provided along Creeping Hemlock Drive at the existing westbound Merritt Parkway off-ramp.

The four existing tight-loop ramps at Interchange 40 would be eliminated. Elimination of the existing ramps in the southwest quadrant of the Main Avenue interchange would allow for an eastbound weaving lane between an eastbound Route 7 entry ramp and an improved exit loop ramp in the southeast quadrant of the Route 7 interchange.

In the westbound direction, the tight Route 15 exit loop ramp in the northwest quadrant (to southbound Main Avenue) would be eliminated. Longer Route 15 ramp acceleration and deceleration lanes would also be provided. The westbound entrance ramp would be built between a recently constructed residential apartment building and Route 15. As currently conceived, the new ramps would be at or below the elevation of Route 15.

In addition to the new ramps and roadways noted above, this alternative would require the construction of eleven new bridges and modifications or replacements of three existing bridges for expanded roadways and/or ramps. This includes replacement of two historic bridges (Route 15 over Main Avenue and Glover Avenue over Norwalk River).



Figure E1.1.6 Alternative 21D



PREFERRED ALTERNATIVE

In evaluating each alternative, CTDOT and FHWA considered the Project's purpose and need, engineering complexities, constructability, estimated construction and maintenance costs, and potential environmental impacts. In consideration of comments solicited from the public and input from the Project's Project Advisory Committee (PAC) on screening criteria and assessments, CTDOT and FHWA have identified **Alternative 26** as the preferred alternative. As described throughout this document and summarized below, this alternative best addresses the Project's purpose and need while minimizing the environmental impacts.

No Build Alternative

While the No Build Alternative would avoid impacts, including direct impacts to archaeological resources and visual and historical resources, it would not meet the Project's purpose and need, and would not accomplish the other desirable outcomes identified for the Project as described in Section E-3.

Build Alternatives

Alternatives 26 and 21D would both address the Project needs and have similar level of environmental impacts. However, this EA/EIE has identified benefits and adverse effects that differ in type and magnitude between the Build Alternatives and which provide a basis to select a Preferred Alternative.

Based on the current conceptual design, Alternative 26 would impact two of three archaeological sites that were recommended as NRHP-eligible in Phase II testing, however, data recovery may be utilized at sites that cannot be avoided by construction. Alternative 21D would not impact any of the three archaeological sites.

Alternative 26 has substantial advantages over Alternative 21D, including:

- Notably fewer impacts to wetland resources in terms of the number, total area, and linear feet of wetlands and streams impacted compared to Alternative 21D.
- Less impact to wildlife habitat and less increase in impervious cover within the watershed.
- Fewer ramps and bridges and thus more modestly scaled and more in keeping with the context of the Parkway than Alternative 21D.
- Greatest opportunity to preserve and enhance natural features and systems of the Merritt Parkway landscape, integrate the roadway into a park-like setting with appropriate topography and planting clusters, reduce maintenance, and design access and egress ramps as Parkway amenities, by virtue of its compact footprint of built elements.
- Preliminary capital construction cost estimates are approximately \$109 million for Alternative 26 compared to \$207 million for Alternative 21D. In addition, a Benefit-Cost



Analysis found that Alternative 26 is projected to yield the greatest multiple of benefits to costs with a benefit/cost ratio of 3.89 (more beneficial) whereas Alternative 21D is projected to yield a ratio of 2.37 (less beneficial).

In summary, Alternative 26 would meet the goals with substantial advantages compared to Alternative 21D. Although impacts to archaeological resources are anticipated with Alternative 26, methods to mitigate those impacts have been identified. Therefore Alternative 26 has been identified as the Preferred Alternative.

E-5 PROJECT IMPACTS

Environmental resources/factors evaluated and potentially affected by the Project in this EA/EIE are listed in Table E1.1.1, together with anticipated actions, potential benefits or impacts to these resources, and proposed mitigation measures for adverse effects.



Table E1.1.1 Benefits and Impacts of Project Actions

| Resource | Project Build Actions | 21D Benefits/Impacts and Mitigation | 26 Benefits/Impacts and Mitigation | No Build Benefits/Impacts and Mitigation |
|--|---|---|---|---|
| Traffic | Removal of bridges/ramps, construction of new ramps/bridges, modified lane widths and signals | 10 locations would operate below an acceptable Level of Service (LOS) during the AM peak hour and 9 locations below an acceptable LOS during the PM peak hour. Safety issues would be addressed. Redesigned ramps would provide standard acceleration and deceleration lanes. | 10 locations would operate below an acceptable LOS during the AM peak hour and 8 locations below an acceptable LOS during the PM peak hour. Safety issues would be addressed. Redesigned ramps would provide standard acceleration and deceleration lanes. | Numerous areas of congestion during peak hours under the No Build condition. 23 locations would operate below an acceptable ³ LOS during the AM peak hour, with 18 below an acceptable LOS during the PM peak hour. Existing safety issues would remain. |
| Bicycles and Pedestrians | Reconfigured local roadways and connections, new sidewalks and signals | Alternative would include upgraded pedestrian and bicycle facilities along Main and Glover Avenues which would facilitate connections to the planned bike lane improvements near the new Merritt 7 train station. | Alternative would include upgraded pedestrian and bicycle facilities along Main and Glover Avenues which would facilitate connections to the planned bike lane improvements near the new Merritt 7 train station. | Alternative would not include new or improved pedestrian or bicycle facilities. Bicycle and pedestrian activity levels are anticipated to remain limited due to lack of existing infrastructure and connectivity, and safety concerns. |
| Air Quality and Greenhouse Gas Emissions | Reconfigured roadways resulting in changes to vehicle emissions | Air quality modeling results indicate: <ul style="list-style-type: none"> • lower emissions of volatile organic compounds, nitrogen oxides, mobile air toxics, and greenhouse gasses than the No Build condition. • no increase in carbon monoxide emissions. | Air quality modeling results indicate: <ul style="list-style-type: none"> • lower emissions of volatile organic compounds, nitrogen oxides, mobile air toxics, and greenhouse gasses than the No Build condition. • no increase in carbon monoxide emissions. | Vehicular traffic emissions, including greenhouse gas emissions, would continue to increase with projected increases in vehicle miles traveled (VMT). |
| Noise | Reconfigured roadways resulting in changes to vehicle traffic | Highway traffic noise would not substantially increase at any of the evaluated receptors. Compared to No Build, the levels would remain the same or decrease slightly (1-2 dBA). Although the NAC is approached/exceeded in 1 location, initial analysis shows noise abatement is not considered reasonable. | Highway traffic noise would not substantially increase at any of the evaluated receptors. Compared to No Build, the levels would remain the same or increase/decrease by no more than 1 dBA. Although the NAC is approached/exceeded in 1 location, initial analysis shows noise abatement is not considered reasonable. | Noise levels would remain the same at most evaluated receptors, with increases of 1 dB(A) predicted at two receptors. ⁴ Although the NAC is approached/exceeded in 1 location, initial analysis shows noise abatement is not considered feasible or reasonable. |
| Rare/Threatened/Endangered Species | Construction activities in potential plant/wildlife habitat | Time of year restrictions (no unconfined in-stream work between April 1 and June 30) may be required as part of the permitting process for activities during construction to avoid and minimize impacts to anadromous fish runs in the Norwalk River. | Time of year restrictions (no unconfined in-stream work between April 1 and June 30) may be required as part of the permitting process for activities during construction to avoid and minimize impacts to anadromous fish runs in the Norwalk River. | No change |
| Wetlands | Construction activities in wetland areas | Permanent impacts to approximately 3 acres (AC) of wetlands, approximately 120 linear feet (LF) of intermittent streams, and approximately 650 LF of perennial streams. Permanent impacts to the Norwalk River are not expected. | Permanent impacts to approximately 1.4 AC of wetlands, approximately 40 LF of intermittent streams, and approximately 410 LF of perennial streams. Permanent impacts to the Norwalk River are not expected. | No direct impacts. Indirect impacts from existing infrastructure, including roadway runoff and siltation, and inhibition of wildlife movement, would continue. |
| Groundwater | Construction activities | Potential groundwater pollutants during construction would be managed per Norwalk First Taxing District and Department of Public Health guidance. During operation, no new contamination sources would be added and no mitigation would be required. | Potential groundwater pollutants during construction would be managed per Norwalk First Taxing District and Department of Public Health guidance. During operation, no new contamination sources would be added and no mitigation would be required. | No change |
| Surface water | Construction activities; increased impervious surfaces | The Project would adhere to the requirements of Connecticut's Construction Stormwater General Permit, which requires developers and builders to implement a Stormwater Pollution Control Plan to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a project after construction is complete. | The Project would adhere to the requirements of Connecticut's Construction Stormwater General Permit, which requires developers and builders to implement a Stormwater Pollution Control Plan to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a project after construction is complete. | No change |

³ A location is generally assumed to operate acceptably if it achieves a level of service (LOS) rating of D or better.

⁴ A change of 3 dB(A) or less is considered to be undetectable to the human ear in an outdoor environment.



| Resource | Project Build Actions | 21D Benefits/Impacts and Mitigation | 26 Benefits/Impacts and Mitigation | No Build Benefits/Impacts and Mitigation |
|--|--|---|---|--|
| Floodplains | Construction activities | Alternative would have little impact on the 100-year floodplain and would not promote additional floodplain development. | Alternative would have little impact on the 100-year floodplain and would not promote additional floodplain development. | No impact to the floodplain or floodway. |
| Historic & Archaeological Resources | Ground disturbing activities including excavation, trenching, grading, pile driving | Alternative would have no impact to any of the three archaeological sites that were recommended as eligible for listing on the NRHP in the Phase II testing. | Alternative is anticipated to impact two of the three archaeological sites that were recommended as NRHP-eligible in the Phase II testing. | No impact |
| Visual Impact Assessment | Removal and replacement of historic/scenic roadway elements; reconfiguring existing roadway geometry | Alternative imparts more overall noticeable visual impact on the Project Site than Alternative 26 as it includes more constructed features that add to the overall “highway” feel of the Project Site. | Alternative has fewer ramps and bridges than Alternative 21D and thus the cumulative visual impact to the Project Site can be considered lower than that of Alternative 21D. | No change |
| Merritt Parkway Landscape (Scenic Byway) | Removal and replacement of scenic landscape elements | Alternative’s larger footprint provides less opportunity to preserve and enhance natural features and systems, integrate the roadway into a park-like setting with appropriate topography and planting clusters, reduce maintenance, and design access and egress ramps as Parkway amenities. | Alternative’s compact nature provides the greatest opportunity to preserve and enhance natural features and systems, integrate the roadway into a park-like setting with appropriate topography and planting clusters, reduce maintenance, and design access and egress ramps as Parkway amenities. | No effect on the Parkway, but also no opportunities for remediating past circumstances that have diminished the Parkway’s defining characteristics |
| Hazardous Materials | Ground disturbing activities including excavation, trenching, grading, pile driving | No active spills, superfund sites or brownfields were identified within the Alternative’s footprint. Standard construction practices would address hazardous materials if encountered during construction. | No active spills, superfund sites or brownfields were identified within the Alternative’s footprint. Standard construction practices would address hazardous materials if encountered during construction. | No change |
| Benefit Cost Analysis | Site preparation, fill and grading activities. Bridge, ramp, and lane removal/construction | Benefits are greater than costs by a factor of 2.37. | Benefits are greater than costs by a factor of 3.89. | No benefits are generated by the No Build Alternative. |
| Climate Change and Resiliency | Reconfigured roadways resulting in changes to vehicle traffic | New structures would be designed based on more recent storm models/rainfall intensities and make the interchange more resilient to climate change-induced storm events. | New structures would be designed based on more recent storm models/rainfall intensities and make the interchange more resilient to climate change-induced storm events. | No change |
| Environmental Justice (EJ) | All above actions plus general construction activities, in EJ and Title VI communities in the Project vicinity | No disproportionately high and adverse human health or environmental effects to minority or low-income populations. | No disproportionately high and adverse human health or environmental effects to minority or low-income populations. | No negative and disparate impacts |



Public Participation

A Public Involvement Plan (PIP) was developed for this Project. Public outreach and involvement efforts included a CEPA scoping meeting and Open House on October 17, 2017. The scoping session was posted in the Connecticut Environmental Monitor on (October 3, 2017) and was also noticed in multiple local media. CTDOT selected a public scoping meeting venue that met ADA compliance regulations and was easily accessible by bus, Metro-North Railroad, automobile and pedestrian routes. An additional public information meeting was held on October 23, 2019. CTDOT was available to respond to comments and questions throughout the process. Questions/comments and responses are reflected in the documentation in Appendix N.

Launched in August 2016, the Project website offers a publicly-available resource for information on the Project overview, history, schedule, and a documents library, which contains meeting materials and various Project documents. CTDOT also distributes Project newsletters with updates and ways for the public to reach out to the Project Team.

In addition, CTDOT formed a PAC in March 2017 which was composed of approximately 25 individuals representing a variety of local stakeholders including local neighborhood groups, interest groups, economic development groups, municipalities, transit providers, and major landowners / developers. The PAC has met throughout the course of the Project, providing key local knowledge as the study team progressed with the development of this document along with input on screening the alternatives.

Opposition to the Project

While there has been no opposition to the Project as a whole, and recognition that improvements to the interchange area are needed, there is a split in support to the alternatives being considered. Concerns and opposition associated with Alternative 26 include air, noise, and safety concerns with proposed traffic signals on Route 7. Concerns and opposition associated with Alternative 21D include modification of the original design intent of the Merritt Parkway and associated ramps. Additionally, stakeholders have noted concerns whether the 'No Build' alternative would be duly considered in this EA/EIE.

Intergovernmental Coordination

As part of NEPA and the CEPA compliance process, coordination with regulatory agencies has been initiated for input to clearly define the regulatory requirements for the Project. Table E1.1.2 provides an overview of Intergovernmental Coordination and Status.



Table E1.1.2 Agency Regulatory Coordination and Status

| Permit/Process | Agency | Status |
|---|--|---|
| Section 404 Permit for filling or dredging waters of the United States. | U.S. Army Corps of Engineers (ACOE) | Concurrence on the Least Environmentally Damaging Practicable Alternative as part of NEPA/404. Application for Section 404 permit would be made after FONSI approval. |
| Air Quality Conformity Determination | FHWA | Request for determination to be submitted following selection of a preferred alternative. |
| Section 106 Memorandum of Agreement (MOA) | Connecticut State Historic Preservation Office (CTSHPO) | MOA expected following the circulation of the draft EA-EIE. |
| Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities (Connecticut General Statutes (CGS) §22a-430b / §402 of the Clean Water Act (CWA))* | Connecticut Department of Energy and Environmental Protection (CTDEEP) | Request for approval submitted following final design and prior to commencement of construction activities. |
| Floodplain Management Certification (CGS 25-68b - 25-68h), Inland Wetland and Watercourses Permitting on the State level | CTDEEP | Application for Flood Management Certification and Inland Wetland approval to be requested during the permitting stage of the Project, after a preferred alternative has been chosen and designed |
| Water Quality Certification (§401 of the CWA)* | CTDEEP | Request for approval submitted during final design and prior to commencement of construction activities. |

* Federal program administered at the State level



1.0 PURPOSE AND NEED

The Connecticut Department of Transportation (CTDOT) and the Federal Highway Administration (FHWA) propose to construct improvements to the US Route 7 (Route 7) and State Route 15 (Route 15) interchange (Routes 7/15) and to improve interconnections with local roads in the City of Norwalk (Norwalk), Connecticut (Project). This section describes the Project setting, purpose and need, the environmental analysis framework, documentation of the analysis, and intergovernmental coordination necessary for project implementation.

1.1 PROJECT SETTING

The Project is located in the northern portion of Norwalk at the interchange of Routes 7/15 (Interchange 39) and includes the interchange of Route 15 with Main Avenue (Interchange 40); Route 719 (Main Avenue); and portions of Glover Avenue/Creeping Hemlock Drive near Main Avenue. The proposed limits of construction (Project Site) extend along Route 15 from approximately 0.5 miles west of Route 7 to approximately 0.5 miles east of Main Avenue and along Route 7 from approximately 0.5 miles south to approximately 0.5 miles north of Route 15. The Project Site is illustrated in Figure 1.1.1.

Route 15

The segment of Route 15 in which the Project is located is also known by its original name, the Merritt Parkway. Merritt Parkway is listed in the National Register of Historic Places (NRHP) for its significance in the areas of landscape design, transportation and architecture. It is also designated as a National Scenic Byway and State Scenic Road. Within the Project Site, Route 15 carries traffic over Perry Avenue, Route 7 and Main Avenue, as well as the Norwalk River and Metro North Railroad. This portion of Route 15 includes four historic bridges that are contributing resources to the National Register listing (Figure 1.1.1). Also within the Project Site is the Glover Avenue Bridge (No. 04155 identified as “E”), which has been determined to be individually eligible for listing in the NRHP.

Route 7

The segment of Route 7 in which the Project is located is a four-lane limited access expressway. Within the Project Site, Route 7 carries traffic over New Canaan Avenue (Route 123), over the Norwalk River, and under Route 15.

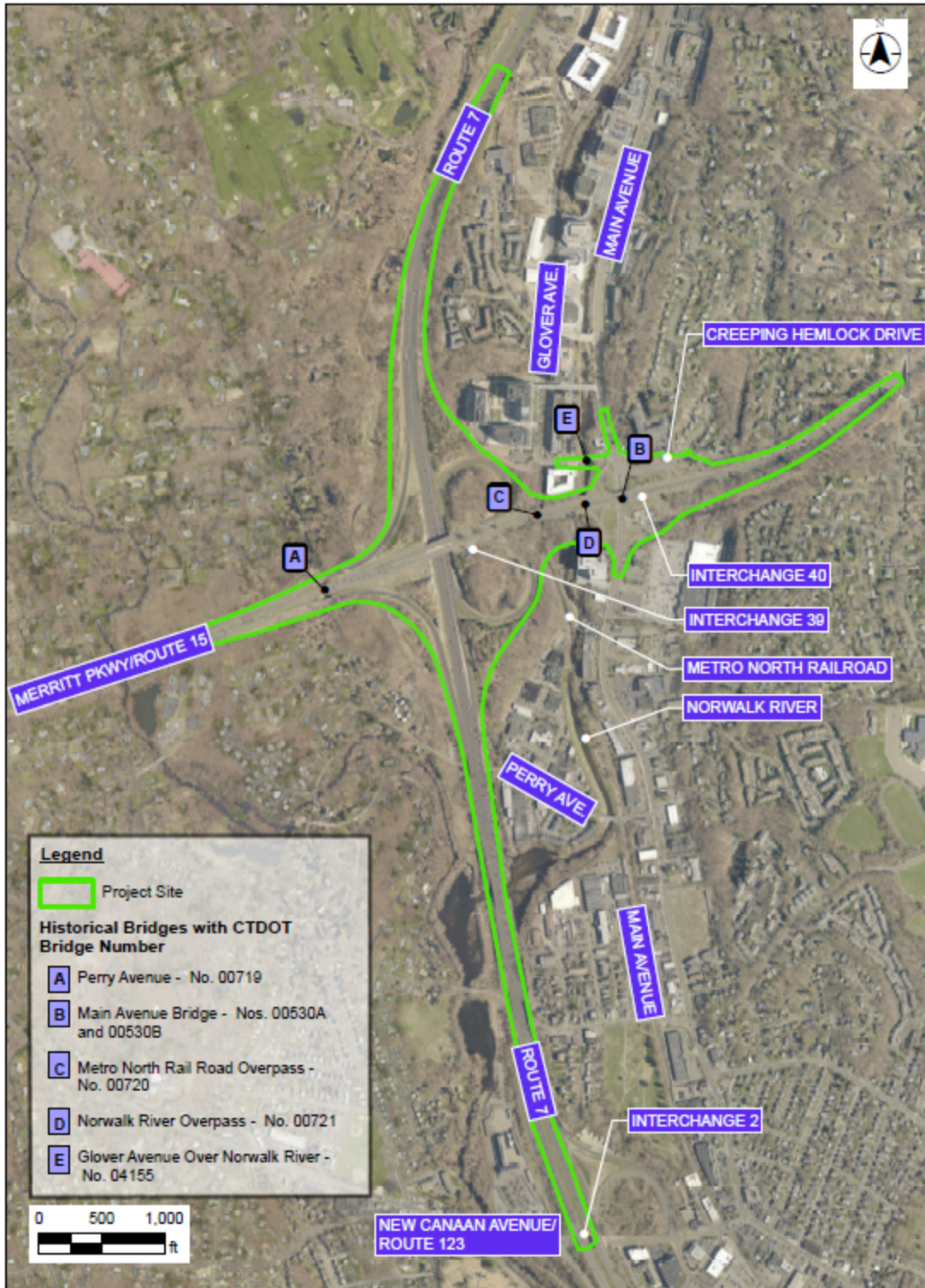


Figure 1.1.1 Project Site



Existing Interchanges

Interchange 39 provides partial connections between Route 7 and Route 15. For example, drivers on southbound Route 15 cannot directly connect to Route 7. Drivers on Route 7 cannot directly connect to northbound Route 15. Interchange 40, a second nearby interchange provides connections in all directions between Route 15 and Main Avenue. This interchange is located approximately 1,500 feet east of the Route 7 and Route 15 interchange and the Norwalk River. On Route 7, Interchange 2 provides connections in all directions between Route 7 and Route 123. Drivers are forced to use Interchange 2 on Route 7, local roadways, and Interchange 40 on Route 15 to make the incomplete connections between Route 7 and Route 15.

Local Roadways

Main Avenue is a four-lane urban minor arterial that parallels Route 7 and the Norwalk River and extends north and south of the Routes 7/15 interchange. Main Avenue forms a skewed, five-legged signalized-intersection with Glover Avenue, Creeping Hemlock Drive, and the southbound Route 15 on-ramps (Figure 1.1.2).

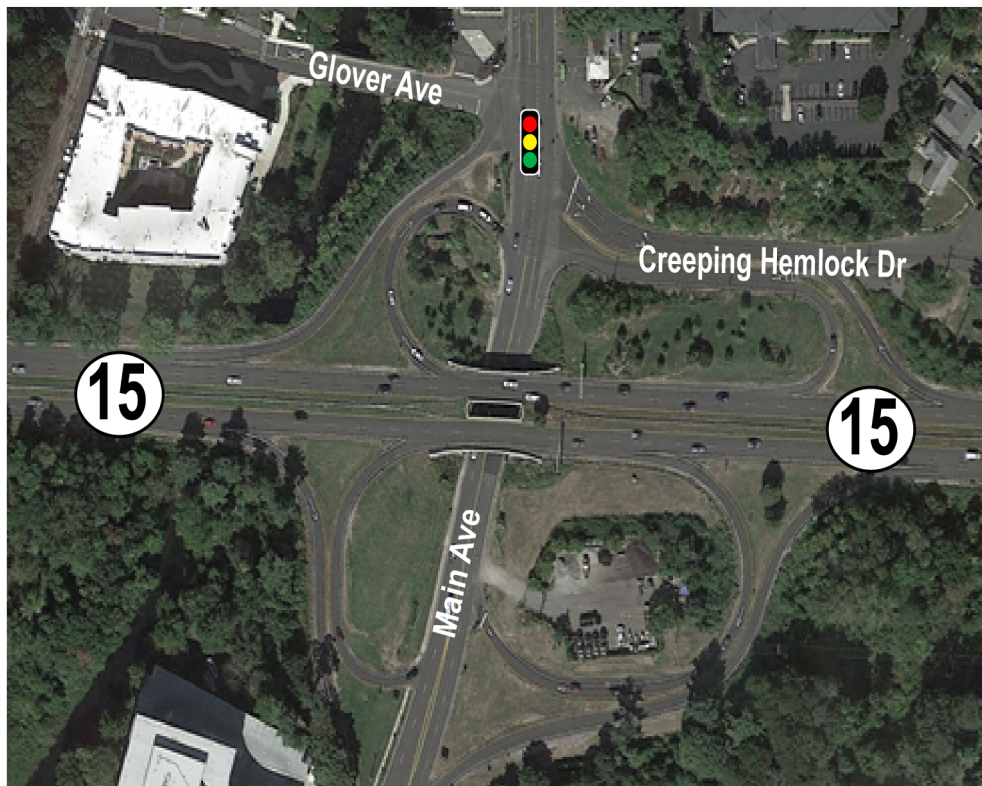


Figure 1.1.2 Route 15 / Main Avenue Interchange

The southbound Route 15 off-ramp to southbound Main Avenue is also within the footprint of



the intersection and provides STOP-controlled access onto southbound Main Avenue. There are also two other ramps providing access to and from Main Avenue from Route 15 and they are located approximately 300 feet east of the intersection via Creeping Hemlock Drive.

Glover Avenue is a 2-lane local road that intersects with Main Avenue approximately 300 feet north of the Route 15. From its intersection with Main Avenue, Glover Avenue spans westward for 600 feet before making a 90 degree turn to the north and continuing nearly a mile before intersecting with Grist Mill Road.

Creeping Hemlock Drive also follows a roughly L-shaped alignment that intersects with Main Avenue. It proceeds eastward from Main Avenue for approximately 0.3 miles to an intersection with the southbound Route 15 ramps before continuing into the Creeping Hemlock neighborhood.

1.1.1 Project History and Prior Assessment⁵

A brief history of prior assessments of the Routes 7/15 interchange is summarized here in order to provide context for the alternatives whose assessment is described in Chapter 2.0.

In the early 1990s a project to address deficiencies at the Routes 7/15 interchange was initiated and in 2000, the Environmental Assessment/Environmental Impact Evaluation (EA/EIE) was approved. In 2005, when the project was in the early stages of construction, litigation of the project resulted in a stoppage of work. In 2006, following a court ruling, the construction contract was cancelled when the court found the project's administrative record did not adequately document that avoidance, minimization and mitigation alternatives associated with impacts to resources within the project area had been fully analyzed.

Following the court's decision and resultant construction cancellation, CTDOT undertook a review of the original design alternatives and assessed new alternatives. During this time, CTDOT formed and worked with a public stakeholder group which included representatives from neighboring residents and the lawsuit's lead plaintiff, the Merritt Parkway Conservancy (MPC). After reaching consensus with the stakeholder group on a new design alternative, CTDOT presented it in an open public forum in February 2009. The new design concept was well received by the greater public.

At that time, there was not sufficient funding available for reinitiating the project, but it was anticipated that the strategic plan of the state's transportation system would continue to identify this infrastructure investment as a future need. The Department filed a letter with

⁵ This document provides supplemental information for the reader in footnotes. References to source documents are linked to endnotes, that are demarcated by square brackets [##] and numbered in order of first appearance in the text.



FHWA cancelling the project and its associated Environmental Assessment/Finding of No Significant Impact (EA/FONSI) in 2013.⁶ It was acknowledged that if a future project were to be undertaken, CTDOT would prepare new studies based on current needs and deficiencies and a new National Environmental Policy Act (NEPA) environmental review would be conducted.

This 2021 EA/EIE represents the new NEPA document and presents the new studies required for the reinitiated Route 7/Route 15 interchange project. The 2009 community endorsed alternative was evaluated and screened during the current project's scoping process and is identified as Alternative 21D in this EA/EIE.

1.1.2 Project Advisory Committee

This EA was developed in consultation with a Project Advisory Committee (PAC), which was composed of approximately 25 individuals representing a variety of local stakeholders including local neighborhood groups, interest groups, economic development groups, municipalities, transit providers, and major landowners/developers. The PAC has met throughout the course of the project, providing key local knowledge as this EA/EIE was developed.

In addition to supporting the development of the Project's purpose and need, the PAC assisted with evaluation of Project alternatives (discussed further in Chapter 2.0). Many of the current PAC members were part of an earlier PAC which met during the prior assessment described in Section 1.1.1, and were able to provide context from earlier evaluations to the current design proposals. Details about PAC membership and meetings are provided in Appendix A3.

1.2 PROJECT PURPOSE AND NEED

The purpose of the Project is to:

- improve roadway system linkage between Route 7 and the Route 15 at Interchange 39;
- improve the mobility for vehicles at both the Route 15 interchanges at Route 7 and at Main Avenue (No. 39 & No. 40), and to improve the mobility for all users (motorists, pedestrians, and cyclists) along the immediate adjacent local roadway network (Main Avenue, Glover Avenue, and Creeping Hemlock Drive, and;
- improve safety in the vicinity of these interchanges.

CTDOT and FHWA are proposing the project to address deficiencies of the existing interchanges and streets in the vicinity of the interchanges. A description of Project Needs is below.

ROADWAY SYSTEM LINKAGE

The existing Route 15 and Route 7 Interchange configuration does not provide all connections

⁶ Timothy Sullivan (CTDOT) letter to Amy Jackson Grove (FHWA), *Notice of Intent to Cancel NEPA and Close Project Accounts, State Project Nos. 102-269/312, FAP No. 0007(117) Routes 7/15 Norwalk*, dated November 6, 2013.



between Route 7 and Route 15, specifically the following connections:

- Southbound ⁷ Route 15 to northbound Route 7
- Southbound Route 15 to southbound Route 7
- Northbound Route 7 to northbound Route 15
- Southbound Route 7 to northbound Route 15

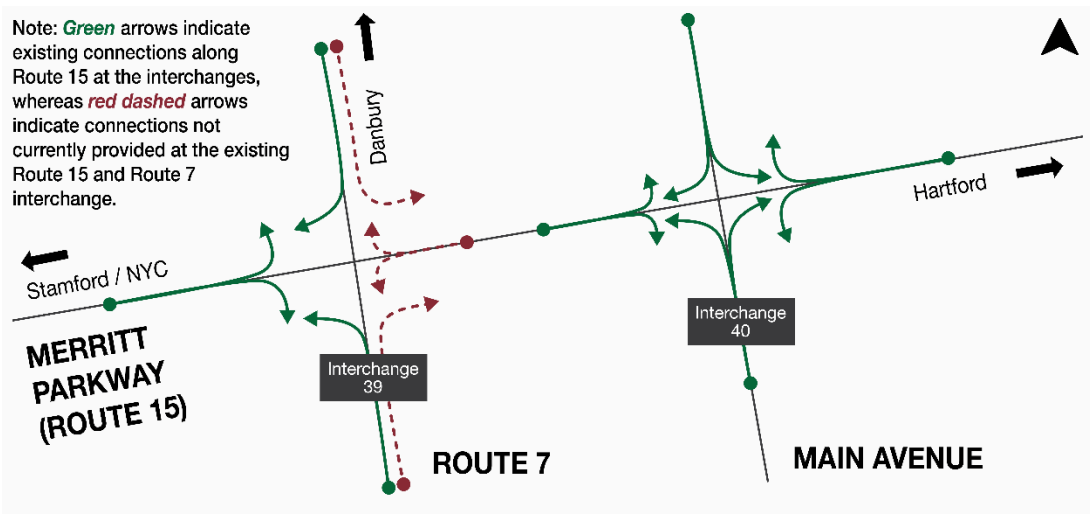


Figure 1.2.1 Existing Needs (Roadway System Linkage)

Existing roadway system linkage needs are depicted in Figure 1.2.1. Existing connections along Route 15 at the interchanges with Route 7 and Main Avenue are depicted in green whereas connections not currently provided at the existing Route 15 and Route 7 interchange are depicted in red.

Currently, there are approximately 250 vehicles during the weekday morning peak hour and approximately 125 vehicles during the weekday evening peak hour that use the Main Avenue corridor to connect between Route 7 and Route 15. This is approximately 5 to 15 percent of the traffic currently using the Main Avenue corridor between CT 123 and CT 15 during either peak hour. These additional vehicles contribute to current peak hour congestion along the Main Avenue corridor (Level of Service ⁸ (LOS) D/E).

⁷ Route 15 runs generally southwest to northeast. By convention, Route 15 directions are referred to as “northbound” (northeast) and “southbound” (southwest).

⁸ Level of Service (LOS) is a qualitative measure used to describe the quality of traffic operations of a roadway. Varying levels of congestion and delay are translated into a letter rating that ranges from A (free flow conditions; no delays) to F (breakdown in traffic flow; substantial delays).



MOBILITY - VEHICULAR

Existing vehicular mobility needs are identified in Figure 1.2.2.

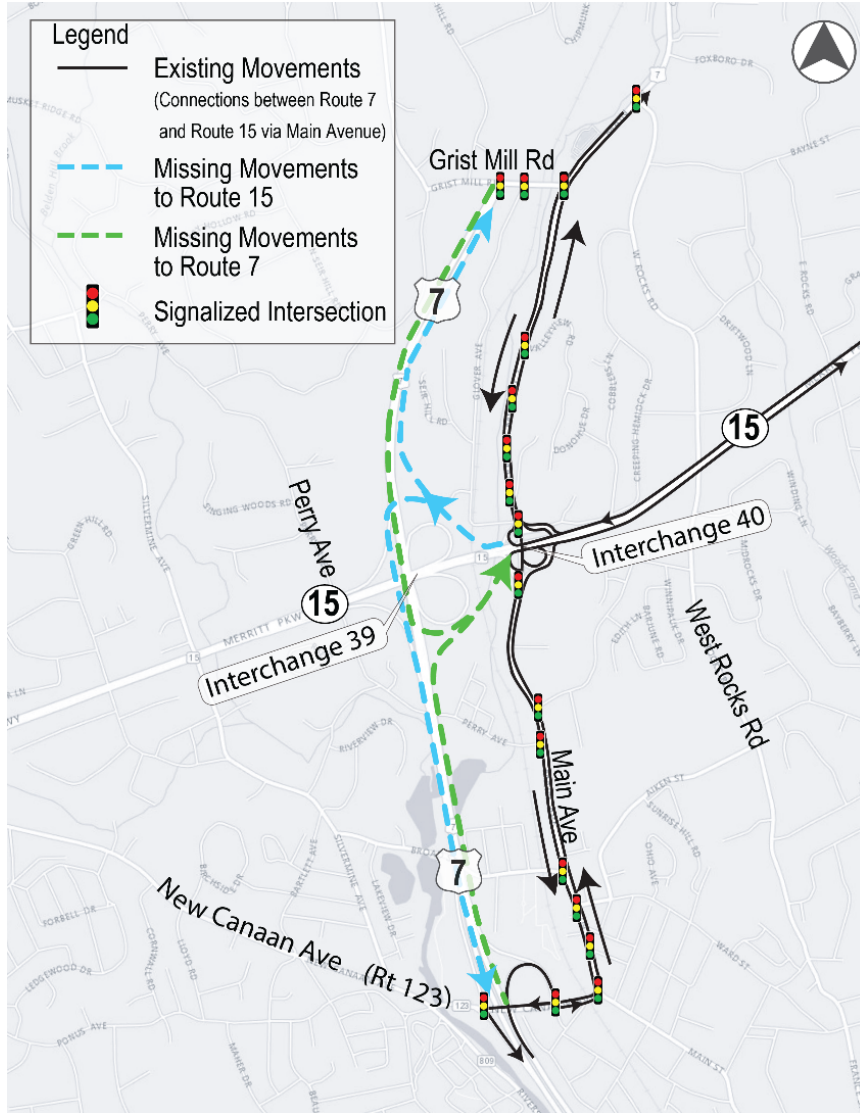


Figure 1.2.2 Existing Needs (Mobility-Vehicular)

Interchange 39 currently provides partial connections between Route 7 and Route 15. Connections between Route 7 and Route 15 to and from the north are not provided.

Interchange 40, a second nearby interchange, provides connections in all directions between Route 15 and Main Avenue. However, connections between Route 7 and Main Avenue do not exist in the vicinity of Interchange 39 or Interchange 40.



Because of the missing connections at Interchange 39, motorists must use local roadways to connect between Route 7 and Route 15. Southbound Route 15 motorists must use the Main Avenue interchange (40) to access Route 7 northbound (north of Grist Mill Road) and Route 7 southbound (south of Route 123/New Canaan Avenue). Similarly, motorists on Route 7 have no direct access to northbound Route 15. Southbound Route 7 motorists must continue on Main Avenue and use Interchange 40 to access northbound Route 15. Northbound Route 7 motorists must exit at the Route 123/New Canaan Avenue interchange and travel via Main Avenue to access northbound Route 15.

MOBILITY – OTHER USERS (BICYCLES/PEDESTRIANS/TRANSIT)

Bicycle and pedestrian facilities in the project vicinity are limited, despite substantial pedestrian activity during the weekday mid-day time period in the vicinity of the office buildings on the west side of Main Avenue. There are no bicycle facilities in the study area, and shoulder widths are less than one foot wide on Main Avenue. Several segments of the roadway, particularly in the area around the Main Avenue and Creeping Hemlock intersection, have no sidewalks on one or both sides. Only one small roadway segment, along with Glover Avenue, is fully in compliance with the U.S. Americans with Disabilities Act (ADA). Sidewalks, curb ramps, and crosswalks within this area are missing and/or lacking safety features for visually or hearing-impaired pedestrians, reducing access and mobility for users with disabilities.

SAFETY

The existing Main Avenue and Route 15 interchange ramps have substandard acceleration and deceleration lanes, steep changes in grades, sharp curves, and limited sight distance. These are all conditions that contribute to a high number of crashes. Crash analyses were performed to determine how crash patterns at the interchanges compare to other locations along the 37-mile Merritt Parkway portion of the Route 15 corridor. Crashes per 0.5-mile segment were summarized based on crash records obtained through the Connecticut Crash Data Repository for the four-year period from January 2015 through December 2018.

As shown in Figure 1.2.3 the highest density of crashes along the entire Merritt Parkway corridor occurs at the Exit 40 interchange with Main Avenue. It is the only location which has more than 300 crashes within a 0.5-mile segment within the four-year analysis period.

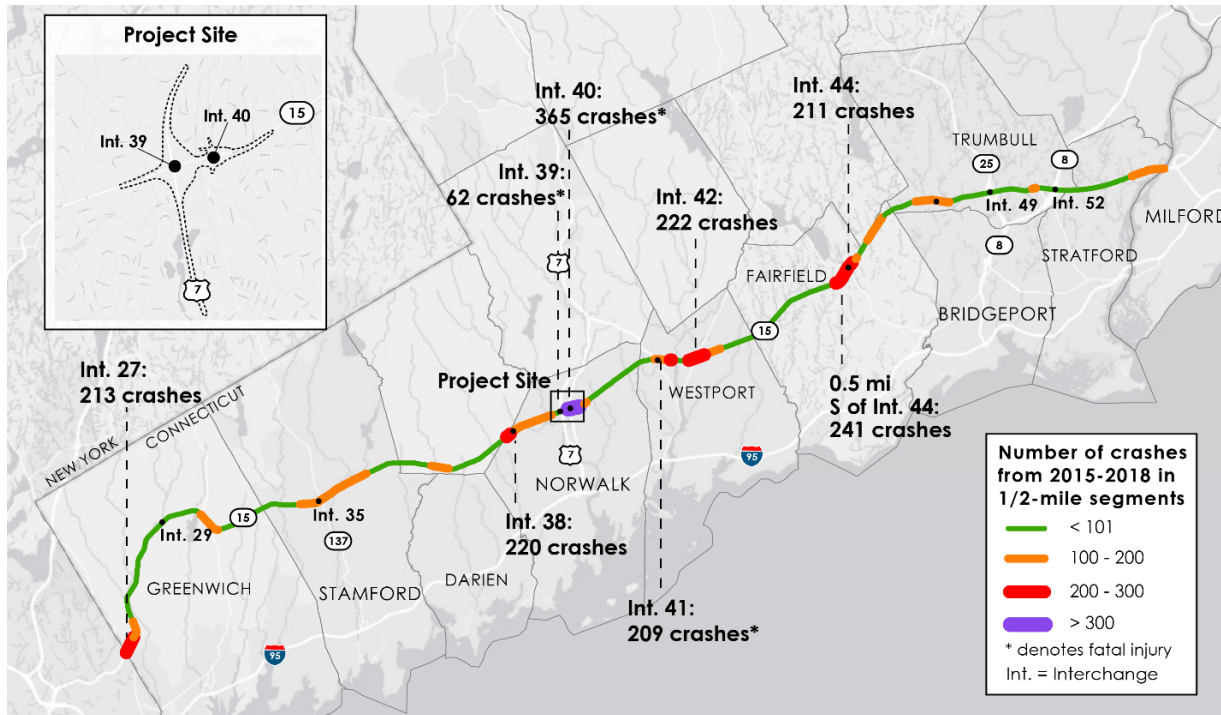


Figure 1.2.3 Existing Needs (Safety - Merritt Parkway/Route 15 Crash Summary (2015-2018))

Other Desirable Outcomes for the Project

Other broad desirable outcomes for this project were identified based upon input from stakeholders and the PAC. It should be noted that as the process progressed, additional and more specific desirable outcomes were also identified (Section 2.0). The initial desirable outcomes include the following:

1. Reduce Congestion:

- i) Minimizing vehicular congestion at the Main Avenue/Glover Avenue/Creeping Hemlock Drive intersection and the ramps connecting to/from Route 15 at Main Avenue.

2. Provide Long Term Serviceability of the Affected Roadways within the Project Vicinity:

- i) Creating opportunities for improved connections to existing and reasonably foreseeable alternative modes of transportation within the Project Site. (i.e. surface transit, Metro-North Railroad (MNR), bicyclists/pedestrians, etc.)
- ii) Coordinating with the City of Norwalk toward a workable solution that is compatible with city and regional initiatives.

3. Optimize the Value Gained from Public Investment in the Project:

- i) Utilizing cost-effective solutions that maximize capital investment over the lifespan of the project.



- ii) Reducing maintenance costs of the affected bridges and roadways.
- iii) Minimizing the impact of construction on the traveling public and local communities to the extent practicable.
- iv) Implementing sustainable practices.

4. Integrate the Project Roadways and Landscape with the Environment and Neighborhood context:

- i) Creating a design that is consistent with the Merritt Parkway’s historic and scenic character and design. Design intent includes preserving and restoring existing historic bridges and structures to the extent practical as documented in the NRHP nomination and State Scenic Road designation, following guidelines in the *Merritt Parkway Guidelines for General Maintenance and Transportation Improvements*⁹, *Merritt Parkway Landscape Master Plan*¹⁰, and *Merritt Parkway Bridge Restoration Guide*¹¹
- ii) Preserving, enhancing, and/or rehabilitating surviving historic landscape where practical or, where the landscape has been markedly altered, creating a new landscape design that is consistent with the Merritt Parkway’s original design intent.

1.3 ENVIRONMENTAL ANALYSIS

Environmental resources/factors potentially affected by the Project and evaluated in this EA/EIE are listed in Table 1.3.1, together with anticipated actions, potential benefits or impacts to these resources, and proposed mitigation measures for negative impacts.

⁹http://dot.si.ct.gov/dotsi/lib/dotsi/publications/hywdesign/merrit_parkway_guidelines_for_general_maintenance_&_transpos.pdf

¹⁰ Appendix I3

¹¹ http://dot.si.ct.gov/dotsi/lib/dotsi/publications/hywdesign/merrit_parkway_bridge_restoration_guide.pdf



Table 1.3.1 Benefits and Impacts of Project Actions

| Resource Areas | Project Actions | Identified Benefits and Impacts | Mitigation |
|--|---|---|--|
| Traffic | Removal of bridges/ramps, construction of new ramps/bridges, modified lane widths and signals | Improved LOS; traffic volumes; vehicle miles traveled (VMT); travel times; safety | None required |
| Bicycles and Pedestrians | Reconfigured local roadways and connections, new sidewalks and signals | Improved accessibility and safety. | None required |
| Air Quality and Greenhouse Gas Emissions | Reconfigured roadways resulting in changes to vehicle emissions | Reduced vehicle emissions in Project vicinity | None required |
| Noise | Reconfigured roadways resulting in changes to vehicle traffic | Noise levels would not increase substantially at the evaluated receptors. In some cases they would decrease. | Noise levels at one receptor are currently and would remain above established thresholds. Abatement measures were considered; none found to be feasible or reasonable. |
| Rare/Threatened/Endangered Species | Construction activities in potential plant/wildlife habitat | No potential habitat for rare, threatened, or endangered species was identified. | None required |
| Wetlands | Construction activities in wetland areas | Placement of fill and grading. | Impacts to wetlands would be mitigated per state and federal requirements. |
| Groundwater | Construction activities in aquifer protection area. | Storage of fuel or chemicals, during construction. During operation, no new contamination sources would be added and no mitigation would be required. | Potential groundwater pollutants during construction would be managed per Norwalk First Taxing District and Department of Public Health guidance. |



| Resource Areas | Project Actions | Identified Benefits and Impacts | Mitigation |
|--|--|---|---|
| Surface Water | Ground disturbing activities during construction. Post construction increase in impervious surface. | Impacts could occur during construction due to soil disturbance and sedimentation. Post-construction impacts could occur due to increased impervious surface areas or concentrated flows. | The Project would be in accordance with State permit requirement and best management practices to eliminate/minimize impacts during construction and operation. |
| Floodplains | Construction activities | No impacts identified. | None required |
| Historic & Archaeological Resources | Ground disturbing activities including excavation, trenching, grading, pile driving | Potential to disturb archaeological resources. Section 106 consultation. | Unavoidable adverse impacts would be addressed through an interagency Memorandum of Agreement (MOA). Mitigation measures would be agreed upon during ongoing agency and stakeholder consultation. |
| Visual Impact Assessment | Removal and replacement of historic/scenic roadway elements; reconfiguring existing roadway geometry | Loss or degradation of historic/scenic resources; impact on views from existing historical locations. | To be developed during MOA process. |
| Merritt Parkway Landscape (Scenic Byway) | Removal and replacement of scenic landscape elements | Loss or degradation of scenic landscape | To be developed during MOA process. |
| Hazardous Materials | Ground disturbing activities including excavation, trenching, grading, pile driving | No impacts identified. If contamination is identified during construction, it would be addressed per Connecticut Department of Energy and Environmental Protection (CTDEEP) requirements. | None required. |



| Resource Areas | Project Actions | Identified Benefits and Impacts | Mitigation |
|-------------------------------------|---|---|----------------|
| Project Cost | Funding required for construction and maintenance. | Typically, a project is considered viable if the benefit/cost ratio (B/C) is greater than 1.0. Higher B/C ratios indicate greater benefits compared to project costs. Alternative 26 has a B/C ratio of 3.9 while Alternative 21D has a calculated B/C ratio of 2.4. | None required. |
| Climate Change & Resiliency | Reconfigured roadways resulting in changes to vehicle traffic | Project is located outside identified areas of inundation based on projected sea level rise for 2050. Project would locally improve safe travel during extreme events. | None required |
| Environmental Justice (EJ) | All above actions plus general construction activities, in EJ and Title VI communities in the Project vicinity. | Evaluation per FHWA guidance did not identify high and disproportionate adverse impacts to EJ communities. However, community outreach will provide information to local communities, including EJ neighborhoods and businesses to help them plan and minimize inconveniences and delays during construction. | None required. |
| All resources – during construction | Site preparation, fill and grading activities. Bridge, ramp, and lane removal and construction. | Potential typical construction noise, dust, traffic delays, visual impacts will be minimized by best management practices and will be short term. | None required |



1.4 OTHER ACTIONS AT THE PROJECT LOCATION

There are two CTDOT actions (i.e. current projects) at the project location which are summarized below. CTDOT would look to incorporate improvements related to these actions during design.

Investigation and Identification of Methods to Improve Notification of Height Restrictions on the Merritt Parkway: Under direction of the Connecticut General Assembly under Section 13a-26a of the Connecticut General Statutes (CGS), CTDOT performed a study to investigate and identify methods to improve notification of height restrictions on Route 15. This study, completed in 2019, recommended several types of improvements aimed at keeping overheight vehicles off of Route 15.

Merritt Parkway (Route 15) Safety Improvements, Resurfacing, Enhancements and Bridge Improvements: This project involves roadway improvements, safety improvements, and aesthetic enhancements for a 6.5-mile segment of Route 15 in both directions from Route 124 in New Canaan to Newtown Turnpike in Westport. The northern section of this project (Project 0102-0368; Main Avenue in Norwalk to Newtown Turnpike in Westport) and is in construction and is scheduled for completion in 2022. The southern section of this project (Project 0102-0296; Main Avenue in Norwalk to Route 124 in New Canaan) is in design and construction is scheduled to begin in 2023.

There are no other CTDOT actions (i.e., completed studies, pending projects) outside the scope of this EA/EIE that would reasonably be anticipated to affect the Project within the Project Site.

1.5 ENVIRONMENTAL DOCUMENTATION

The NEPA/Connecticut Environmental Policy Act (CEPA) process provides for the consideration of environmental resources in agency decision-making. This EA/EIE provides the information that is necessary for decision makers to make informed decisions about the potential environmental effects.

After public review and comment, CTDOT and FHWA will review the public and agency comments and respond to comments as necessary. To complete the NEPA process, CTDOT and FHWA will determine whether a FONSI is appropriate and if mitigation is needed for any of the impacts. The FONSI decision is based upon a determination that all potential impacts are either insignificant or can be reduced to insignificant levels through the implementation of disclosed avoidance, minimization and/or mitigation measures. If all impacts are determined to be less than significant, then a FONSI can be prepared. If not, then CTDOT and FHWA must prepare an Environmental Impact Statement (EIS)/EIE.

Completion of the CEPA process will proceed in parallel with the NEPA process. Following incorporation of responses to public comments, CTDOT and FHWA will prepare a concise public



Record of Decision (ROD) summarizing the findings of the EIE and stating CTDOT and FHWA’s decision on whether to go forward with the Project. CTDOT will forward that ROD to the Connecticut Office of Policy and Management (OPM) for a determination of adequacy. If OPM finds the ROD inadequate, OPM will return it with a description of corrective actions to CTDOT. If OPM finds the ROD adequate, they will issue that finding, concluding the EIE process.

1.6 AGENCY REGULATORY COORDINATION

As part of the NEPA and CEPA compliance process, coordination with regulatory agencies has been initiated for input to clearly define the regulatory requirements for the Project. Table 1.6.1 provides an overview of Intergovernmental Coordination and Status.

Table 1.6.1 Agency Regulatory Coordination and Status

| Permit/Process | Agency | Status |
|--|--|---|
| Section 404 Permit for filling or dredging waters of the United States. | U.S. Army Corps of Engineers (ACOE) | Concurrence on the Least Environmentally Damaging Practicable Alternative as part of NEPA/Section 404. Application for Section 404 permit would be made after FONSI approval. |
| Air Quality Conformity Determination | FHWA | Request for determination to be submitted following selection of a preferred alternative. |
| Section 106 Memorandum of Agreement (MOA) | Connecticut State Historic Preservation Office (CTSHPO) | MOA expected following the circulation of the draft EA-EIE. |
| Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities (CGS §22a-430b / §402 of the Clean Water Act (CWA))* | Connecticut Department of Energy and Environmental Protection (CTDEEP) | Request for approval submitted following final design and prior to commencement of construction activities. |
| Floodplain Management Certification (CGS 25-68b - 25-68h) Also Inland Wetland and Watercourses Permitting on the State level. | CTDEEP | Application for Flood Management Certification and Inland Wetland approval to be requested during the permitting stage of the project, after a preferred alternative has been chosen and designed |
| Water Quality Certification (§401 of the CWA)* | CTDEEP | Request for approval submitted during final design and prior to commencement of construction activities. |

* Federal program administered at the State level



1.7 OUTLINE OF THE FOLLOWING EA/EIE SECTIONS

This EA/EIE has been prepared using a systematic, interdisciplinary assessment process designed to provide decision makers with an organized analysis of the potential environmental consequences of implementing the range of reasonable alternatives, including the No Build and Preferred Alternatives. An outline of the chapters in this document is provided below.

Chapter 2 analyzes the reasonableness of identified alternatives. Screening criteria are identified and alternatives are evaluated against the criteria to determine whether they are reasonable. Alternatives determined to be unreasonable are eliminated from further analysis. Reasonable alternatives are carried forward in the environmental document and further analyzed for their potential environmental impacts.

Chapter 3 describes the resources potentially affected by the Project and provides the analysis of potential impacts and mitigation measures for the reasonable alternatives and the No Build alternative.

Chapter 4 discusses potential indirect, irreversible, and cumulative impacts.

Chapter 5 provides information on public involvement in this assessment.

Chapter 6 contains a summary description of the draft Section 4(f) evaluation.

Chapter 7 summarizes environmental commitments and mitigation identified in this assessment.

Chapter 8 provides a list of preparers.

Chapter 9 provides an EA/EIE circulation list.

Chapter 10 provides a list of acronyms and abbreviations.

Chapter 11 provides a list of references used in the preparation of this EA/EIE.



2.0 ALTERNATIVES INCLUDING THE PROPOSED PROJECT

The alternative analysis in this section provides a discussion of the screening criteria that were used to identify reasonable alternatives able to meet the purpose and need as described in Chapter 1.0. The reasonable alternatives have been carried forward for more detailed study in this EA/EIE, and the unreasonable alternatives have been eliminated from further consideration. This section also identifies the locally preferred alternatives and describes opposition to the project.

2.1 PROPOSED PROJECT

The Project is located at the interchange of State Route 15 (Route 15) and US Route 7 (Route 7) in the City of Norwalk. As more fully described in Chapter 1.0, the purpose of the project is to improve:

- roadway system linkage between Routes 7 and 15 at Interchange 39;
- mobility for vehicles at both the Route 15 interchanges at Route 7 and at Main Avenue;
- mobility for all users (motorists, pedestrians, and cyclists) along the immediate adjacent local roadway network (Main Avenue, Glover Avenue, and Creeping Hemlock Drive) and;
- safety in the vicinity of these interchanges.

2.2 IDENTIFICATION OF THE RANGE OF ALTERNATIVES

As detailed in the history of this project in Chapter 1.0, various design concepts were developed for the Routes 7/15 intersection from the mid-1990's through 2009. Given the intervening decades since the initial proposals, existing conditions including traffic, development, community and ecological settings, and regulatory requirements have undergone extensive changes. Therefore, rather than dismiss all prior proposed concept designs, CTDOT and FHWA opted to review previous alternatives as well as potential new alternatives to ensure that a thorough screening would be performed and to confirm that none of the previously dismissed alternatives address the Project purpose and need and other considerations (e.g. conceptual ecological effects, costs, integrating the improvements into the environment/neighborhood context, etc.), identified by the 2009 PAC for a previous interchange improvement proposal as well as those identified by current stakeholders.

Working with the PAC, a two-level screening process was developed to evaluate potential alternatives. Only those identified as reasonable are carried forward for detailed study in this EA/EIE. The screening process included the 24 alternatives considered in previous interchange improvement proposals, a newly developed alternative (Alternative 26) plus the No Build for a total of 26 alternatives. For informational purposes, conceptual layouts of the previous



alternatives considered can be found in Appendix A2. It should be noted that, subsequent to the identification of Alternative 21C as the previous PAC's consensus alternative in 2009, a number of geometric refinements to the original Alternative 21C alignment concept were investigated and included in the revised alignment that is now designated as Alternative 21D in this EA/EIE.

Given the narrow existing cross sections of local roadway networks, tight radii of loop ramps, and substandard acceleration and deceleration lanes that currently exist within the ROW, extensive development adjacent to existing ROW, topography, and an inability to reduce required proposed cross sections to accommodate projected traffic volumes, no prudent and feasible avoidance alternatives were found that could minimize potential harm to historic and/or archeological resources while still addressing the roadway linkages, mobility improvements (motorist, bicycle and pedestrians) and safety improvements called for in the Project's purpose and need.

2.2.1 Level 1 Screening: Identify Reasonable Alternatives

Level 1 screening was used to qualitatively evaluate the range of possible alternatives and differentiate between those that are reasonable and unreasonable. Associated evaluation metrics were established and a color coded 'grading' system developed (Table 2.2.1) to assess the ability of an alternative to fully meet (green/vertical striping), moderately meet (yellow/horizontal striping) or not meet (black) the Project's purpose and need. As a foundation for interpreting the following table, the criteria are defined below.

Roadway System Linkage: This criterion addresses the specific project purpose of improving the direct linkage (currently missing in part) between Route 7 and Route 15.

Mobility: This criterion addresses improving and facilitating vehicular, pedestrian and cyclist movements and traffic flow through the interchange and local road network areas. It addresses specific new connections between Route 7 and Main Avenue along with local roadway improvements that can serve not only vehicles but pedestrians and cyclists. None of the proposed alternatives preclude mobility improvements for pedestrians and cyclists, therefore all alternatives were assumed equivalent in assessing those aspects of mobility. This left vehicular connections as the sole basis for evaluating mobility at this level of screening.

Safety: This criterion provides a qualitative evaluation of potential geometric deficiencies in alternatives that could reasonably be expected to lead to greater crashes in the area.



Table 2.2.1 Level 1 Screening Criteria (Purpose & Need)




| P&N Criteria | Meets  | Moderately Meets  | Does Not Meet  |
|---|---|---|--|
| Roadway System Linkage: Provide linkage between Route 7 and Route 15 | Connections are made in all directions to/from Route 7 and Route 15. | N/A | Connections are not made in all directions to/from Route 7 and Route 15. |
| Mobility: Improve mobility for vehicles at project interchange areas | Vehicular connections provided between Main Avenue and Route 7 and all connections are maintained between Route 15 and Creeping Hemlock Drive. Local road network improvements are proposed. | Vehicular connections provided between Main Avenue and Route 7 but not all connections are maintained between Route 15 and Creeping Hemlock Drive. Local road network improvements may or may not be proposed. | Vehicular connections are not provided between Main Avenue and Route 7 and/or no connections are maintained between Route 15 and Creeping Hemlock Drive. The local road network is not improved. |
| Safety Considerations: Safety in vicinity of Interchanges 39 and 40 | No geometric deficiencies (e.g., inadequate distances, tight ramps) are proposed. | Some geometric deficiencies (e.g. short weaving distances between ramps) are maintained or adjacent on- and/or off-ramps are proposed. | Many geometric deficiencies (e.g. short weaving distances, inadequate acceleration/deceleration lanes) are proposed or past assessments specifically denoted safety concerns. |
| <p>Note: Meets indicates that an alternative fully addresses the criterion. Moderately Meets indicates that an alternative addresses the criterion, but in a limited way. Does Not Meet indicates that an alternative does not address the criterion and is thus eliminated from consideration as a reasonable alternative.</p> | | | |



Table 2.2.2 Results of Level 1 Screening

| ALTERNATIVES | 1 | 2A | 3 | 4 | 5 | 6 | 7A | 8 | 9 | 10 | 11 | 12A | 13 | 14 |
|--|----------------------|-------------------|----------------------|-------------------|-------------------|----------------------|----------------------|----------------------|----------------------|-------------------|-------------------|----------------------|-------------------|-------------------|
| Purpose & Need | | | | | | | | | | | | | | |
| Roadway System Linkage between Route 7 and Route 15 | Meets P&N | Meets P&N | Meets P&N | Meets P&N | Meets P&N | Meets P&N | Meets P&N | Does Not Meet P&N | Meets P&N | Meets P&N | Does Not Meet P&N | Meets P&N | Meets P&N | Meets P&N |
| Improve mobility for all users (motorists, pedestrians, and cyclists) at interchange areas | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Meets P&N | Does Not Meet P&N | Does Not Meet P&N |
| Safety in vicinity of Interchanges 39 and 40 | Moderately Meets P&N | Meets P&N | Moderately Meets P&N | Meets P&N | Meets P&N | Moderately Meets P&N | Moderately Meets P&N | Moderately Meets P&N | Moderately Meets P&N | Meets P&N | Meets P&N | Moderately Meets P&N | Meets P&N | Meets P&N |

| ALTERNATIVES (Continued) | 15 | 16 | 17 | 18 | 19B | 20B | 21D | 22 | 23 | 24B | 25 | 26 | No Build | |
|--|----------------------|----------------------|----------------------|-------------------|-------------------|-----------|----------------------|----------------------|----------------------|---|-------------------|-------------------|-------------------|-------------------|
| Purpose & Need | | | | | | | | | | | | | | |
| Roadway System Linkage between Route 7 and Route 15 | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Meets P&N | Meets P&N | Meets P&N | Meets P&N | Meets P&N | Meets P&N | 24B was refined and advanced as 21C, then further refined and advanced as 21D | Meets P&N | Meets P&N | Does Not Meet P&N | |
| Improve mobility for all users (motorists, pedestrians, and cyclists) at interchange areas | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Does Not Meet P&N | Meets P&N | Meets P&N | Does Not Meet P&N | Does Not Meet P&N | | Does Not Meet P&N | Does Not Meet P&N | Meets P&N | Does Not Meet P&N |
| Safety in vicinity of Interchanges 39 and 40 | Moderately Meets P&N | Moderately Meets P&N | Moderately Meets P&N | Does Not Meet P&N | Does Not Meet P&N | Meets P&N | Moderately Meets P&N | Moderately Meets P&N | Moderately Meets P&N | | Meets P&N | Meets P&N | Meets P&N | Does Not Meet P&N |

Key to Table 2.2.2

| Ability to Meet Purpose and Need | |
|----------------------------------|----------------------|
| Meets P&N | Meets P&N |
| Moderately Meets P&N | Moderately Meets P&N |
| Does Not Meet P&N | Does Not Meet P&N |

A description of each alternative and the specific reasoning for eliminating the 21 Build Alternatives is summarized in Appendix A2.



Most of the identified alternatives did not meet one or more of the project’s purpose and need criteria, thereby eliminating them from further consideration and analysis in this EA/EIE. A detailed summary of results for alternatives not meeting purpose and need criteria is provided in Appendix A2. The final results of the Level 1 Screening were summarized and are presented below.

Table 2.2.3 Final Level 1 Screening Results

| Criteria | Alternative | | | | |
|---|-------------|-------|--------|-------|----------|
| | 12A | 20B | 21D | 26 | No Build |
| Roadway System Linkage: Linkage between Route 7 and Route 15 | Green | Green | Green | Green | Black |
| Mobility: Improve mobility for all users (motorists, pedestrians, and cyclists) at project interchange areas | Green | Green | Green | Green | Black |
| Safety Considerations: Safety in vicinity of Interchanges 39 and 40 | Yellow | Green | Yellow | Green | Black |

Key to Table 2.2.3

| Ability to Meet Purpose and Need | |
|----------------------------------|--------|
| Meets P&N | Green |
| Moderately Meets P&N | Yellow |
| Does Not Meet P&N | Black |

The four Build Alternatives identified in Table 2.2.3 were then carried forward to the Level 2 screening to be further evaluated on how they might meet other desirable outcomes supported by the community. The No Build Alternative was advanced to the more detailed evaluation described in Chapter 3.0, as required by CEPA and NEPA.

2.2.2 Level 2 Screening (Other Considerations)

Level 2 screening was used to determine which of the alternatives best meet the other desirable outcomes identified for the Project.

The initial purpose and need statement developed by CTDOT and FHWA with input from agencies and the PAC identified a number of Other Desirable Outcomes for the project (Chapter 1.0). Secondary screening criteria were developed by CTDOT and FHWA with input from the PAC and stakeholders (both 2009 and current) to further evaluate the reasonableness of alternatives carried forward from the Level 1 screening. Criterion with high priority for the local community, broadly related to traffic flow, costs, integrating Project elements into the environment/neighborhood context, and minimizing harm to historical resources, were also considered as part of the development of secondary screening criteria.



Similar to the Level 1 screening, evaluation metrics were established and a color coded ‘grading’ system was developed to assess the ability of an alternative to “Meet a Desirable Outcome” (green), “Moderately Meet a Desirable Outcome (yellow), ‘Does Not Sufficiently Meet a Desirable Outcome” (red), or “Critical Flaw” (black). The Level 2 criteria and evaluation metrics developed by CTDOT and FHWA with input from the PAC are defined as follows and presented in Table 2.2.4. The criteria defined below are grouped according to the corresponding Desirable Outcomes identified in Chapter 1. Similar to Level 1 screening, a ‘black’ grade was deemed an immediate cause for elimination of an alternative.

Desirable Outcomes – Reduce Congestion; Provide Long Term Serviceability of the Affected Roadways within the Project Vicinity

Compatibility with Regional Initiatives: This criterion summarized a number of concerns and issues raised by local and regional agencies (Western Connecticut Council of Governments (WestCOG), City of Norwalk), specifically that a focus of the Route 7 corridor should be to serve travelers moving through the area and not impeding traffic flow (see PAC meeting #7 and #8 minutes in Appendix A3).

Desirable Outcome – Optimize the value gained from Public Investment in the Project

Construction Costs: This criterion serves to compare relative anticipated initial construction costs of the four build alternatives being evaluated in Level 2. It is not based on detailed construction costs, but rather on a comparison of conceptual new infrastructure (based on road miles, bridges etc.) needed for each alternative. More road miles and bridges required would identify with higher construction costs whereas fewer road miles and bridges requiring construction would identify with lower construction costs.

Maintenance Costs: This criterion assesses anticipated ongoing maintenance costs of new infrastructure (bridges, roadway miles) and compares the relative number of bridges and roadway miles needing maintenance, with less infrastructure suggesting lower maintenance costs.

Construction Duration: This criterion was developed based on PAC concerns regarding the overall duration of construction. It compares the alternatives based on anticipated duration of construction. For purposes of this criterion, duration is a relative measure based on number of roadway miles and bridges expected to be constructed. Therefore, an alternative requiring more roadway miles/bridges than another would have a longer duration and an alternative with fewer miles/bridges would require a shorter duration.



Desirable Outcome – Integrate the Project Roadways and Landscape with the Environment and Neighborhood context

Integrating Project Roadways into the Environment/Neighborhood Context: This criterion addresses the desire for an alternative that is consistent with the original historic design and scale of Route 15. This means that an alternative with a smaller footprint and fewer/shorter ramps offering more greenspace would be preferred by PAC members and stakeholders.

Elevated Ramps: While the previous criterion addresses the horizontal footprint and extent of ramps, this criterion addresses the vertical elevation of ramps relative to the Merritt Parkway. This was included due to PAC concerns that elevated ramps would not keep with the original context of Parkway design. It is noted that while an alternative might meet the stated purpose of the project, the PAC opposed any otherwise reasonable alternative that could not address this stakeholder concern.

Proposed Norwalk River Crossings: This criterion evaluates the number of proposed bridge crossings of the Norwalk River and was included due to PAC concerns regarding the potential effects the project construction could have on the river and associated wetland areas. The criterion suggests it is reasonable to expect that the more river crossings an alternative requires the more potential for effecting the river and wetland areas.

Proximity of New Ramps/Roadways to Neighborhoods: This criterion assesses the number of neighborhoods adjacent to the project in each quadrant of the Project Site (Northeast, Northwest, Southwest, Southeast) where concept layouts suggest new roadways would extend closer to that neighborhood compared to existing roadway limits.

Avoidance of Archaeologically Sensitive Locations: Based on the Phase I/II Cultural Resource Survey findings which identified potential resource locations, the PAC concurred that it was desirable to add a criterion showing avoidance of archaeological sites identified within the Project Site to the greatest extent practicable.



Table 2.2.4 Level 2 Criteria (Other Desirable Outcomes)

| Criteria | Meets Desirable Outcome | Moderately Meets Desirable Outcome | Does Not Sufficiently Meet Desirable outcome | Critical Flaw |
|---|--|--|--|---------------|
| Compatible with Regional Initiatives | Traffic operations are free flow and optimize traffic flow through corridor | - | Traffic controlled by signals; some delay in traffic flow through corridor | - |
| Construction Costs | Much lower relative to the other potential alternatives | - | Much higher relative to the other potential alternatives | - |
| Maintenance Costs | Least amount to be maintained | Moderate amount to be maintained | Greatest amount to be maintained | - |
| Construction Duration (roadway miles and new bridges required) | Minimal | Moderate | Greatest | - |
| Integrating Project Roadways into Environment / Neighborhood Context | No new ramps/roadways in proximity to Merritt Parkway | Simplified and compact interchange footprint, more greenspace | Complex and more extensive interchange footprint, less greenspace | - |
| Ramps/roadways elevated higher than the Merritt Parkway | None | - | - | One or more |
| Proposed Crossings of Norwalk River – crossings required | No crossings required | Fewest anticipated crossings required | Most anticipated crossings required | - |
| Proximity of New Ramps/Roadways (and direction of development) to Neighborhoods | Fewest Quadrants (Northeast, Southeast, Southwest, Northwest) where expanded development extends closer to neighborhoods | Some Quadrants (Northeast, Southeast, Southwest, Northwest) where expanded development extends closer to neighborhoods | Most Quadrants (Northeast, Southeast, Southwest, Northwest) where expanded development extends closer to neighborhoods | - |
| Ability to avoid archaeologically sensitive locations | Avoidance to the greatest extent practicable. | Avoidance may not be possible | Avoidance unlikely | - |

Through a series of workshops CTDOT, the consultant team and the PAC applied the criteria to the various alternatives and a color-coded grading system was created to visually show the



ability of the four build alternatives to meet the other desirable outcomes identified for this project (see PAC Meetings #7 & #8 in Appendix A3). The summary results are shown in Table 2.2.5. As noted above, the No Build Alternative does not meet the Project purpose and need, and was therefore the PAC workshops focused on grading Build Alternatives. However, grading of the No Build Alternative is provided for comparison to the screening results.

Table 2.2.5 Level 2 Screening Results

| Criteria | Alt 12A | Alt 20B | Alt 21D | Alt 26 | No Build |
|--|---------|---------|---------|--------|----------|
| Compatible with Regional Initiatives | Green | Red | Green | Red | Red |
| Construction Costs | Red | Yellow | Yellow | Green | Green |
| Maintenance Costs | Red | Yellow | Yellow | Green | Yellow |
| Construction Duration / Impacts to Public | Red | Red | Red | Yellow | Red |
| Integrating Project Roadways into Environment / Neighborhood Context | Red | Red | Red | Yellow | Red |
| Elevated Ramps | Grey | Green | Green | Green | Green |
| Potential Impacts to Norwalk River | Red | Red | Red | Yellow | Green |
| Proximity of New Ramps / Roadways to Neighborhoods | Yellow | Red | Yellow | Green | Green |
| Direct Archaeological Resources Impacts | Yellow | Yellow | Yellow | Red | Green |

Key to Table 2.2.5

| Meets Goal | Moderately Meets Goal | Does Not Sufficiently Meet Goal | Critical Flaw |
|------------|-----------------------|---------------------------------|---------------|
| Green | Yellow | Red | Grey |

Based on the evaluation and grading exercises, the consensus for each of the four reasonable alternatives is provided below.

- Alternative 12A does not meet the other desirable outcome to Integrate the Project Roadways and Landscape with the Environment and Neighborhood context. Specifically, this alternative proposes the construction of elevated ramps above Route 15 which is not contextually consistent with Route 15 or the proximate neighborhood.
- Alternative 26 met the highest number of screening criteria for build alternatives and had the fewest instances of not sufficiently meeting the desirable outcome.
- Alternative 20B was found to only meet a desirable outcome for one criterion and had the most criteria that it did not sufficiently meet a desirable outcome.
- Alternative 21D was found to not have met the second fewest number of criteria, and to have met the second most criteria.
- The No Build met the highest number of screening criteria, but as previously discussed



did not meet the purpose and need of the project.

Based on the above, Alternatives 12A and 20B were eliminated from further evaluation, and Alternative 21D (being the previous consensus alternative from 2009) and Alternative 26 were identified as reasonable alternatives and are fully evaluated along with the No Build Alternative in this EA/EIE.

2.3 REASONABLE ALTERNATIVES

This section describes each of the reasonable alternatives carried forward for assessment in this EA/EIE.

No Build Alternative

Under the No Build Alternative, no substantial improvements to the operation, linkages, or capacity of the existing interchanges would be performed, nor would substantial corridor landscape improvements occur beyond routine maintenance and/or spot safety improvements currently planned by CTDOT. The intersection and interchange geometry would remain as they currently exist within the Project Site (Figure 2.3.1, next page)



Figure 2.3.1 No Build Alternative (Existing Conditions)



Alternative 26

Alternative 26 would complete the connections at Interchange 39 with traffic movements between Route 7, Route 15, and Main Avenue (Figure 2.3.2). This alternative would introduce two signalized intersections along Route 7 to complete the partial interchange. A modified diamond interchange with Route 15 would retain the existing loop ramp in the northeast quadrant and the existing direct connector ramp in the southwest quadrant to optimize traffic operations at the two signalized intersections.

The loop ramp in the northeast quadrant would be reduced in size from the existing larger ramp, a change made possible by slower speeds on the reclassified Route 7 from a freeway to a signalized arterial. Three northbound and three southbound lanes would be necessary at the signalized Route 7 ramp intersections, with turn lanes at each Route 7 intersection approach. No powerline tower relocations are required for Alternative 26.

The dual historic Route 15 bridges (Bridge #00530 A & B) over Main Avenue (Interchange 40) would be replaced and the bridge spans extended to allow for a widened roadway section. In addition, Main Avenue would be lowered to provide the required vertical bridge clearance. The increased span would provide space below for a wider Main Avenue and allow for the construction of additional left turn lanes to provide for left-turn movements and provide wider sidewalks and incorporation of bike facilities. This would facilitate the Project's purpose related to improved mobility of both vehicles and other users (pedestrians, bicyclists, transit users). In addition to the existing signal at Glover Avenue and Main Avenue, two new signalized intersections would be provided along Main Avenue for a total of three-closely spaced signalized intersections. Glover Avenue would be widened, and a replacement bridge would be constructed over the Norwalk River. Creeping Hemlock Drive would be realigned to the north and widened. A new signalized intersection would be provided along Creeping Hemlock Drive at the existing westbound Merritt Parkway off-ramp.

The four existing tight-loop ramps at Interchange 40 would be eliminated. Elimination of the existing ramps in the southwest quadrant of the Main Avenue interchange would allow for an eastbound weaving lane between an eastbound Route 7 entry ramp and an improved exit loop ramp in the southeast quadrant of the Route 7 interchange. In the westbound direction, the tight Route 15 exit loop ramp in the northwest quadrant would be eliminated. To avoid further weaving on the westbound Merritt Parkway for the southbound Main Avenue movement, an independent ramp would be located between the westbound weaving lane and a new residential building to the north.

In addition to the new ramps and roadways noted above, Alternative 26 would require the construction of four new bridges and the replacement of two existing historic bridges (Route 15 over Main Avenue and Glover Avenue over Norwalk River) to incorporate new or widened roadways or ramps.



Figure 2.3.2 Alternative 26



Alternative 21D

Alternative 21D would complete the connections at Interchange 39 with traffic movements between Route 7, Route 15, and Main Avenue (Figure 2.3.3). The existing Routes 7/15 interchange loop ramps would be retained in the easterly quadrants as would the direct connections in the westerly quadrants. The four remaining Routes 7/15 interchange movements would be achieved with semi-direct connections. Several towers of a power line may require relocation.

The dual historic Route 15 bridges (Bridge #00530 A & B) over Main Avenue (Interchange 40) would be replaced and the bridge spans extended to allow for a widened roadway section. In addition, Main Avenue would be lowered to provide the required vertical bridge clearance. The increased span would provide space below for a wider Main Avenue and allow for the construction of additional left turn lanes to provide for left-turn movements and provide wider sidewalks and incorporation of bike facilities. This would facilitate the project's purpose related to improved mobility of both vehicles and other users (pedestrians, bicyclists, transit users). In addition to the existing signal at Glover Avenue and Main Avenue, two new signalized intersections would be provided along Main Avenue for a total of three-closely spaced signalized intersections. Glover Avenue would be widened and a replacement bridge would be constructed over the Norwalk River. Creeping Hemlock Drive would be realigned to the north and widened. A new signalized intersection would be provided along Creeping Hemlock Drive at the existing westbound Merritt Parkway off-ramp.

The four existing tight-loop ramps at Interchange 40 would be eliminated. Elimination of the existing ramps in the southwest quadrant of the Main Avenue interchange would allow for a long eastbound weaving lane between an eastbound Route 7 entry ramp and an improved exit loop ramp in the southeast quadrant of the Route 7 interchange.

In the westbound direction, the tight Route 15 exit loop ramp in the northwest quadrant (to southbound Main Avenue) would be eliminated. Longer Route 15 ramp acceleration and deceleration lanes would also be provided. The westbound entrance ramp would be built between a recently constructed residential apartment building and Route 15. As currently conceived, the new ramps would be at or below the elevation of Route 15.

In addition to the new ramps and roadways noted above, this alternative would require the construction of eleven new bridges and modifications or replacements to three existing bridges for expanded roadways and/or ramps. This includes replacement of two historic bridges (Route 15 over Main Avenue and Glover Avenue over Norwalk River).



LEGEND

-  PROPOSED SIGNAL
-  NEW BRIDGE
-  REPLACEMENT BRIDGE
-  NEW ROAD

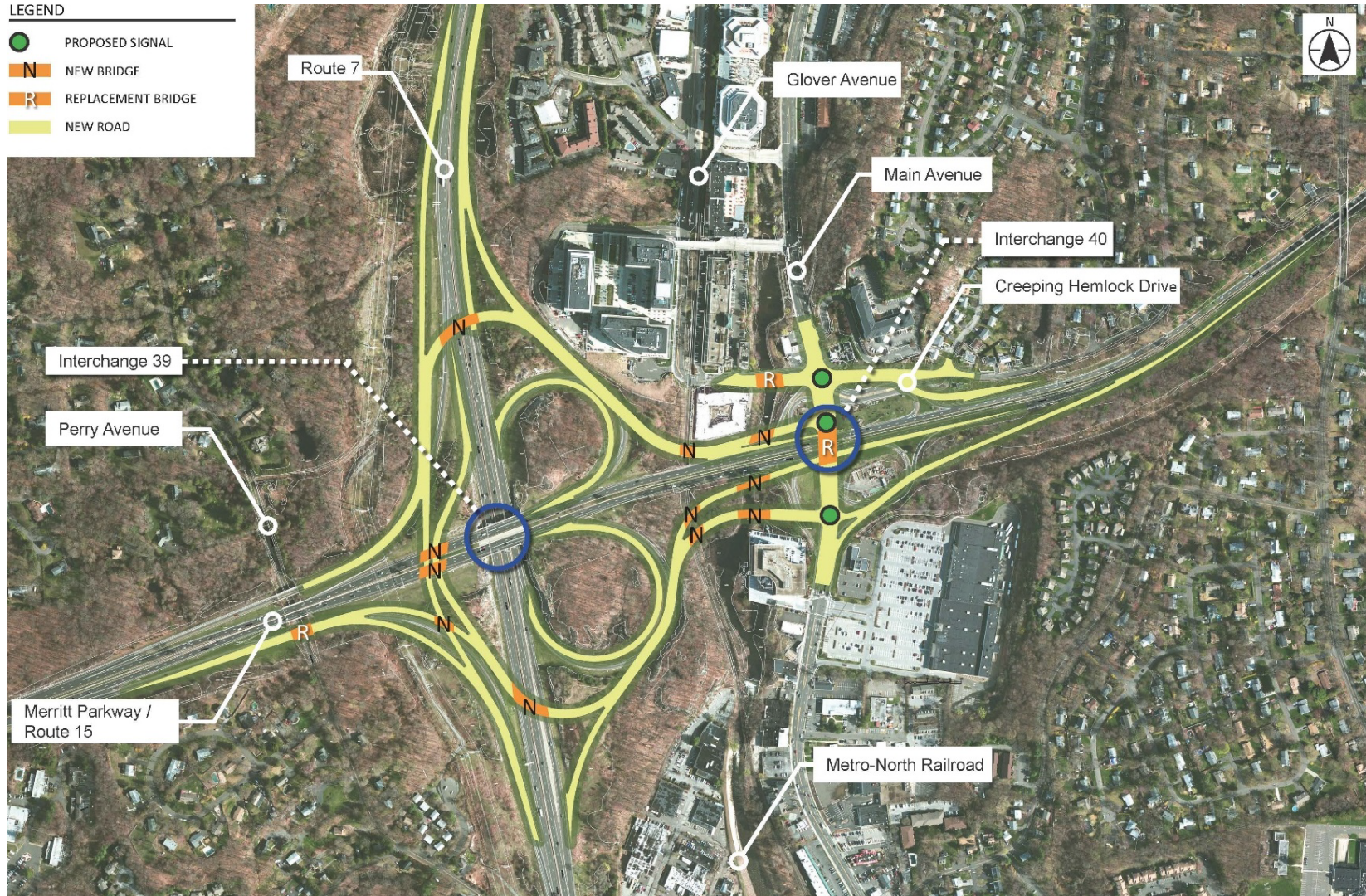


Figure 2.3.3 Alternative 21D



2.4 COMPARISON OF ALTERNATIVES

This section presents a comparison of the No Build and Build Alternatives based on the evaluation of impacts presented in Section 2.3.

A key point in evaluating respective impacts is that while both Alternatives 21D and 26 make the required linkages between Route 7 and the Merritt Parkway, their conceptual design approaches are different. Alternative 21D makes all connections between Route 7 and Route 15 via free flow ramps while Alternative 26 proposes the use of two (2) new signalized intersections along Route 7 to provide connections.

In addition, Alternative 26 has a more compact footprint than Alternative 21D, resulting in fewer bridges and reduced impervious pavement areas to be constructed. Table 2.4.1 summarizes the relative extent of new/replacement construction for both Alternatives.

Table 2.4.1 Alternatives 21D and 26 Construction Comparison

| Alternative | Road Miles | Bridge Length | Bridges | Total Ramps Length | Norwalk River Crossings |
|-------------|------------|---------------|---------|--------------------|-------------------------|
| 21D | 5.6 | 1,700 | 14 | 17,300 | 5 |
| 26 | 4.5 | 800 | 7 | 8,800 | 3 |

A summary of impacts for the No Build and two Build Alternatives is presented in Table 2.4.2. A more detailed description of existing conditions, Project actions, impacts and mitigation are presented for these resources in Chapter 3.0.



Table 2.4.2 Summary of No Build and Build Alternatives Impacts and Mitigation

| Resource | Project Build Actions | 21D Benefits/Impacts and Mitigation | 26 Benefits/Impacts and Mitigation | No Build Benefits/Impacts and Mitigation |
|--|---|---|---|--|
| Traffic | Removal of bridges/ramps, construction of new ramps/bridges, modified lane widths and signals | 10 locations would operate below an acceptable Level of Service (LOS) during the AM peak hour and 9 locations below an acceptable LOS during the PM peak hour. Safety issues would be addressed. Redesigned ramps would provide standard acceleration and deceleration lanes. | 10 locations would operate below an acceptable LOS during the AM peak hour and 8 locations below an acceptable LOS during the PM peak hour. Safety issues would be addressed. Redesigned ramps would provide standard acceleration and deceleration lanes. | Numerous areas of congestion during peak hours under the No Build condition. 23 locations would operate below an acceptable ¹² LOS during the AM peak hour, with 18 below an acceptable LOS during the PM peak hour. Existing safety issues would remain. |
| Bicycles and Pedestrians | Reconfigured local roadways and connections, new sidewalks and signals | Alternative would include upgraded pedestrian and bicycle facilities along Main and Glover Avenues which would facilitate connections to the planned bike lane improvements near the new Merritt 7 train station. | Alternative would include upgraded pedestrian and bicycle facilities along Main and Glover Avenues which would facilitate connections to the planned bike lane improvements near the new Merritt 7 train station. | Alternative would not include new or improved pedestrian or bicycle facilities. Bicycle and pedestrian activity levels are anticipated to remain limited due to lack of existing infrastructure and connectivity, and safety concerns. |
| Air Quality and Greenhouse Gas Emissions | Reconfigured roadways resulting in changes to vehicle emissions | Air quality modeling results indicate: <ul style="list-style-type: none"> • lower emissions of volatile organic compounds, nitrogen oxides, mobile air toxics, and greenhouse gasses than the No Build condition. • no increase in carbon monoxide emissions. | Air quality modeling results indicate: <ul style="list-style-type: none"> • lower emissions of volatile organic compounds, nitrogen oxides, mobile air toxics, and greenhouse gasses than the No Build condition. • no increase in carbon monoxide emissions. | Vehicular traffic emissions, including greenhouse gas emissions, would continue to increase with projected increases in vehicle miles traveled (VMT). |
| Noise | Reconfigured roadways resulting in changes to vehicle traffic | Highway traffic noise would not substantially increase at any of the evaluated receptors. Compared to No Build, the levels would remain the same or decrease slightly (1-2 dBA). Although the NAC is approached/exceeded in 1 location, initial analysis shows noise abatement is not considered reasonable. | Highway traffic noise would not substantially increase at any of the evaluated receptors. Compared to No Build, the levels would remain the same or increase/decrease by no more than 1 dBA. Although the NAC is approached/exceeded in 1 location, initial analysis shows noise abatement is not considered reasonable. | Noise levels would remain the same at most evaluated receptors, with increases of 1 dB(A) predicted at two receptors. ¹³ Although the NAC is approached/exceeded in 1 location, initial analysis shows noise abatement is not considered feasible or reasonable. |
| Rare/Threatened/Endangered Species | Construction activities in potential plant/wildlife habitat | Time of year restrictions (no unconfined in-stream work between April 1 and June 30) may be required as part of the permitting process for activities during construction to avoid and minimize impacts to anadromous fish runs in the Norwalk River. | Time of year restrictions (no unconfined in-stream work between April 1 and June 30) may be required as part of the permitting process for activities during construction to avoid and minimize impacts to anadromous fish runs in the Norwalk River. | No change |
| Wetlands | Construction activities in wetland areas | Permanent impacts to approximately 3 acres (AC) of wetlands, approximately 120 linear feet (LF) of intermittent streams, and approximately 650 LF of perennial streams. Permanent impacts to the Norwalk River are not expected. | Permanent impacts to approximately 1.4 AC of wetlands, approximately 40 LF of intermittent streams, and approximately 410 LF of perennial streams. Permanent impacts to the Norwalk River are not expected. | No direct impacts. Indirect impacts from existing infrastructure, including roadway runoff and siltation, and inhibition of wildlife movement, would continue. |
| Groundwater | Construction activities | Potential groundwater pollutants during construction would be managed per Norwalk First Taxing District and Department of Public Health guidance. During operation, no new contamination sources would be added and no mitigation would be required. | Potential groundwater pollutants during construction would be managed per Norwalk First Taxing District and Department of Public Health guidance. During operation, no new contamination sources would be added and no mitigation would be required. | No change |
| Surface water | Construction activities; increased impervious surfaces | The Project would adhere to the requirements of Connecticut's Construction Stormwater General Permit, which requires developers and builders to implement a Stormwater Pollution Control Plan to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a project after construction is complete. | The Project would adhere to the requirements of Connecticut's Construction Stormwater General Permit, which requires developers and builders to implement a Stormwater Pollution Control Plan to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a project after construction is complete. | No change |

¹² A location is generally assumed to operate acceptably if it achieves a level of service (LOS) rating of D or better.

¹³ A change of 3 dB(A) or less is considered to be undetectable to the human ear in an outdoor environment.



| Resource | Project Build Actions | 21D Benefits/Impacts and Mitigation | 26 Benefits/Impacts and Mitigation | No Build Benefits/Impacts and Mitigation |
|--|--|---|---|--|
| Floodplains | Construction activities | Alternative would have little impact on the 100-year floodplain and would not promote additional floodplain development. | Alternative would have little impact on the 100-year floodplain and would not promote additional floodplain development. | No impact to the floodplain or floodway. |
| Historic & Archaeological Resources | Ground disturbing activities including excavation, trenching, grading, pile driving | Alternative would have no impact to any of the three archaeological sites that were recommended as eligible for listing on the NRHP in the Phase II testing. | Alternative is anticipated to impact two of the three archaeological sites that were recommended as NRHP-eligible in the Phase II testing. | No impact |
| Visual Impact Assessment | Removal and replacement of historic/scenic roadway elements; reconfiguring existing roadway geometry | Alternative imparts more overall noticeable visual impact on the Project Site than Alternative 26 as it includes more constructed features that add to the overall “highway” feel of the Project Site. | Alternative has fewer ramps and bridges than Alternative 21D and thus the cumulative visual impact to the Project Site can be considered lower than that of Alternative 21D. | No change |
| Merritt Parkway Landscape (Scenic Byway) | Removal and replacement of scenic landscape elements | Alternative’s larger footprint provides less opportunity to preserve and enhance natural features and systems, integrate the roadway into a park-like setting with appropriate topography and planting clusters, reduce maintenance, and design access and egress ramps as Parkway amenities. | Alternative’s compact nature provides the greatest opportunity to preserve and enhance natural features and systems, integrate the roadway into a park-like setting with appropriate topography and planting clusters, reduce maintenance, and design access and egress ramps as Parkway amenities. | No effect on the Parkway, but also no opportunities for remediating past circumstances that have diminished the Parkway’s defining characteristics |
| Hazardous Materials | Ground disturbing activities including excavation, trenching, grading, pile driving | No active spills, superfund sites or brownfields were identified within the Alternative’s footprint. Standard construction practices would address hazardous materials if encountered during construction. | No active spills, superfund sites or brownfields were identified within the Alternative’s footprint. Standard construction practices would address hazardous materials if encountered during construction. | No change |
| Benefit Cost Analysis | Site preparation, fill and grading activities. Bridge, ramp, and lane removal/construction | Benefits are greater than costs by a factor of 2.37. | Benefits are greater than costs by a factor of 3.89. | No benefits are generated by the No Build Alternative. |
| Climate Change and Resiliency | Reconfigured roadways resulting in changes to vehicle traffic | New structures would be designed based on more recent storm models/rainfall intensities and make the interchange more resilient to climate change-induced storm events. | New structures would be designed based on more recent storm models/rainfall intensities and make the interchange more resilient to climate change-induced storm events. | No change |
| Environmental Justice (EJ) | All above actions plus general construction activities, in EJ and Title VI communities in the Project vicinity | No disproportionately high and adverse human health or environmental effects to minority or low-income populations. | No disproportionately high and adverse human health or environmental effects to minority or low-income populations. | No negative and disparate impacts |



As part of the scoping and environmental analysis carried out for the project, the following environmental resources were considered but were determined to not exist within the Project Site or to have no potential issues or adverse impacts. Therefore, these resource areas are not further discussed in this document.

Land Use and Zoning: The Project is consistent with existing zoning and use policies and no change of zoning or use is proposed.

Consistency with Local, Regional, and State Conservation and Development (C&D) Policies: The Project is supported in local, regional, and state planning documents. It also contributes to State of Connecticut C&D goals [1], including: “Ensure the safety and integrity of existing infrastructure over its useful life through the timely budgeting/or maintenance, repairs and necessary upgrades” and “Ensure that the planning, design, construction, and operation of state and local highways accommodate municipal plans and the needs of all users, to the extent possible.” In addition, the Project incorporates C&D goals related to incorporating sound stormwater management design and attaining air quality standards.

Coastal Consistency: The Project is not located within a coastal consistency zone.

Rights of Way (ROW): There are no substantial ROW takings or acquisitions proposed as part of the Project. Impacts would be limited to potential sliver takings or easements for sloping and/or minor grading during construction.

Navigable Waters: There are no navigable waters within the limits of the Project. A US Coast Guard (USCG) Navigability Determination was issued for the Norwalk River on May 20, 2021. This is included in Appendix N3.

Prime Farmland: No prime farmland is located in the vicinity of the Project Site.

Energy Use: Project would decrease vehicle energy use due to decreased traffic congestion. Energy used in construction, including energy to produce construction materials (e.g. asphalt), is typically much less than, and would tend to be offset by, the associated post-construction vehicle energy use [2].

Recreation, Parks, Section 6(f): Section 6(f) of the Land and Water Conservation Fund (LWCF) Act (16 USC 4601-4 to 46011) requires that all properties “acquired or developed, either partially or wholly, with LWCF funds shall not be converted to a use other than public outdoor recreation without the approval of the Secretary of the Department of the Interior. According to the National Park Service (NPS) no 6(f) properties exist within the Project construction limits.

2.4.1 Locally Preferred Alternative

Over the course of the Project’s public outreach and stakeholder engagement process, support



emerged for both Build Alternatives. Comments received in support of Build Alternative 26 referenced minimal impacts to the Merritt Parkway and opportunities for additional green space. Comments received in support for Alternative 21D referenced more direct free flow traffic connections without the need to add traffic signals to Route 7.

2.4.2 Opposition to the Project

While there has been no opposition to the Project as a whole, and there is recognition that improvements to the interchange area are needed, there is a split in support to the alternatives being considered. Concerns and opposition associated with Alternative 26 include air, noise, and safety concerns with proposed traffic signals on Route 7. Concerns and opposition associated with Alternative 21D include modification of the original design intent of the Merritt Parkway and associated ramps. Additionally, stakeholders have noted concerns as to whether the ‘No Build’ alternative would be duly considered in this EA/EIE.

2.5 PREFERRED ALTERNATIVE

In evaluating each alternative, CTDOT and FHWA considered the Project’s purpose and need, engineering complexities, constructability, estimated construction and maintenance costs, and potential environmental impacts. In consideration of comments solicited from the public and input from the Project’s PAC on screening criteria and assessments, CTDOT and FHWA have identified **Alternative 26** as the preferred alternative. As described throughout this document and summarized below, this alternative best addresses the project’s purpose and need while minimizing the environmental impacts.

While the No Build Alternative would avoid certain impacts, including direct impacts to archaeological resources, historic resources, and visual impacts, it would not meet the Project needs and would not accomplish the other desirable outcomes identified for the Project.

Alternatives 26 and 21D would each address the Project needs and have similar level of environmental impacts. However, this EA/EIE has identified benefits and adverse effects that differ in type and magnitude between the Build Alternatives and which provide a basis to select a Preferred Alternative.

Based upon the current conceptual design, Alternative 26 would impact two of the three archaeological sites that were recommended as NRHP-eligible in the Phase II testing, however, data recovery may be utilized at sites that cannot be avoided by construction. Alternative 21D would not impact any of the three sites.

Alternative 26 has substantial advantages over Alternative 21D, including:

- Notably fewer impacts to wetland resources in terms of the number, total area, and linear feet of wetlands and streams impacted compared to Alternative 21D.



- Less impact to wildlife habitat and less increase in impervious cover within the watershed.
- Greatest opportunity to preserve and enhance natural features and systems of the Merritt Parkway landscape, integrate the roadway into a park-like setting with appropriate topography and planting clusters, reduce maintenance, and design access and egress ramps as Parkway amenities, by virtue of its compact footprint of built elements.
- Preliminary capital construction cost estimates are approximately \$109 million for Alternative 26 compared to \$207 million for Alternative 21D. In addition, a Benefit-Cost Analysis found that Alternative 26 is projected to yield the greatest multiple of benefits to costs. Alternative 26 has a benefit/cost ratio of 3.89 (more beneficial) whereas Alternative 21D is projected to yield a ratio of 2.37 (less beneficial).

In summary, Alternative 26 would meet the goals with substantial advantages compared to Alternative 21D. Although impacts to archaeological resources are anticipated with Alternative 26, methods to mitigate those impacts are available. Therefore **Alternative 26** has been identified as the Preferred Alternative.



3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

For each of the resources evaluated in this EA/EIE, information relevant to understanding the existing conditions within the study area, as well as potential impacts and avoidance, minimization or mitigation measures, are provided below.

- Background information, including purpose and scope of the analysis as well as the regulatory context.
- Assessment methodology, including the rationale for defining the boundaries of individual resource study areas. Study area boundaries for specific resources varies depending on whether project impacts may extend outside the construction footprint (Project Site). The Project Site represents the combined limits of proposed roadway improvements of the two evaluated Build Alternatives (Alternatives 21D and 26).
- Description of existing conditions with respect to the resource.
- Description and evaluation of potential impacts due to the Project.
- Description of avoidance, minimization or mitigation measures, if need is identified.

Impacts and potential mitigation are described and evaluated in each section for each of the alternatives identified in Section 2.3. For some resources, the appropriate geographical limits of analysis is the Project Site as shown in Figure 1.1.1. In cases where impacts could have a greater or lesser geographical extent, appropriate limits for that analysis (“study area”) are described in the respective section.

3.1 TRAFFIC

The traffic assessment summarized in this section evaluated existing traffic operations (2016) and projected traffic operations for the design year (2045) for the No Build Alternative and the two Build Alternatives (Alternative 26 and 21D). The design year is used to assess projected traffic impacts 20 years after the estimated completion of the Project (2025). The analysis is presented in further detail within the Analysis, Needs, and Deficiencies Report prepared for this Project (Appendix B). The traffic assessment conservatively assumed projected traffic growth would be realized (i.e., traffic volumes would fully recover from the COVID-19 pandemic) and that other planned development projects included in the assessment are completed as expected. The traffic assessment did not account for emerging technologies such as autonomous vehicles given the uncertainty of their implementation and of their effects to the transportation network.

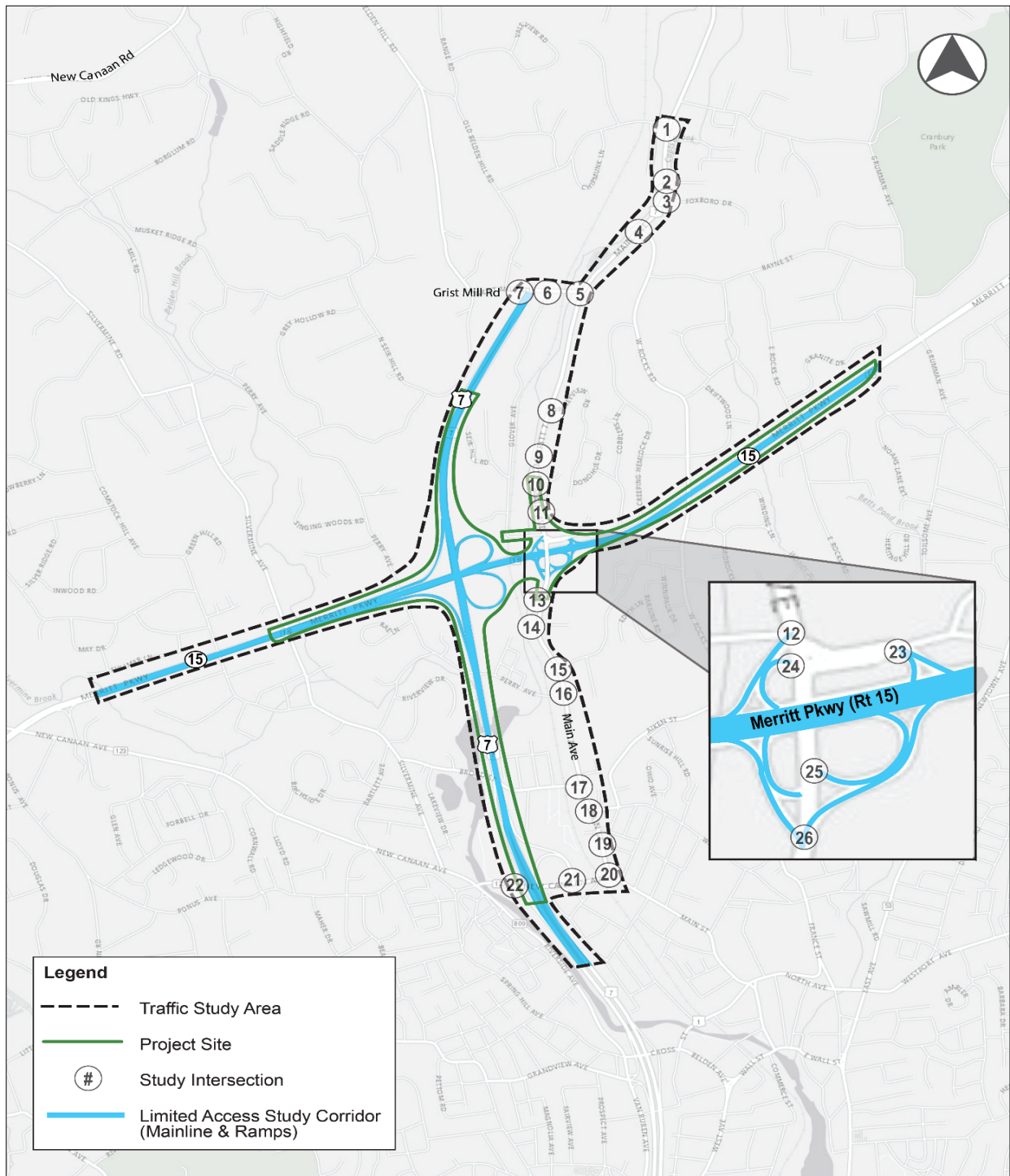


Figure 3.1.1 Traffic Study Area



Based on a review of the project location and the surrounding roadway network, the study area for the traffic assessment (traffic study area) was designed to identify and analyze the full extent of traffic impacts resulting from the Project. The study area (Figure 3.1.1) extends beyond the Project Site and includes local intersections (signalized and unsignalized) along the Main Avenue, Grist Mill Road, and New Canaan Avenue corridors as well as mainline and ramp segments along Route 7 and Route 15 in proximity to Interchanges 39 and 40. Local roadways were used to complete the missing movements/connections at the Routes 7/15 interchange (Figure 3.1.2).

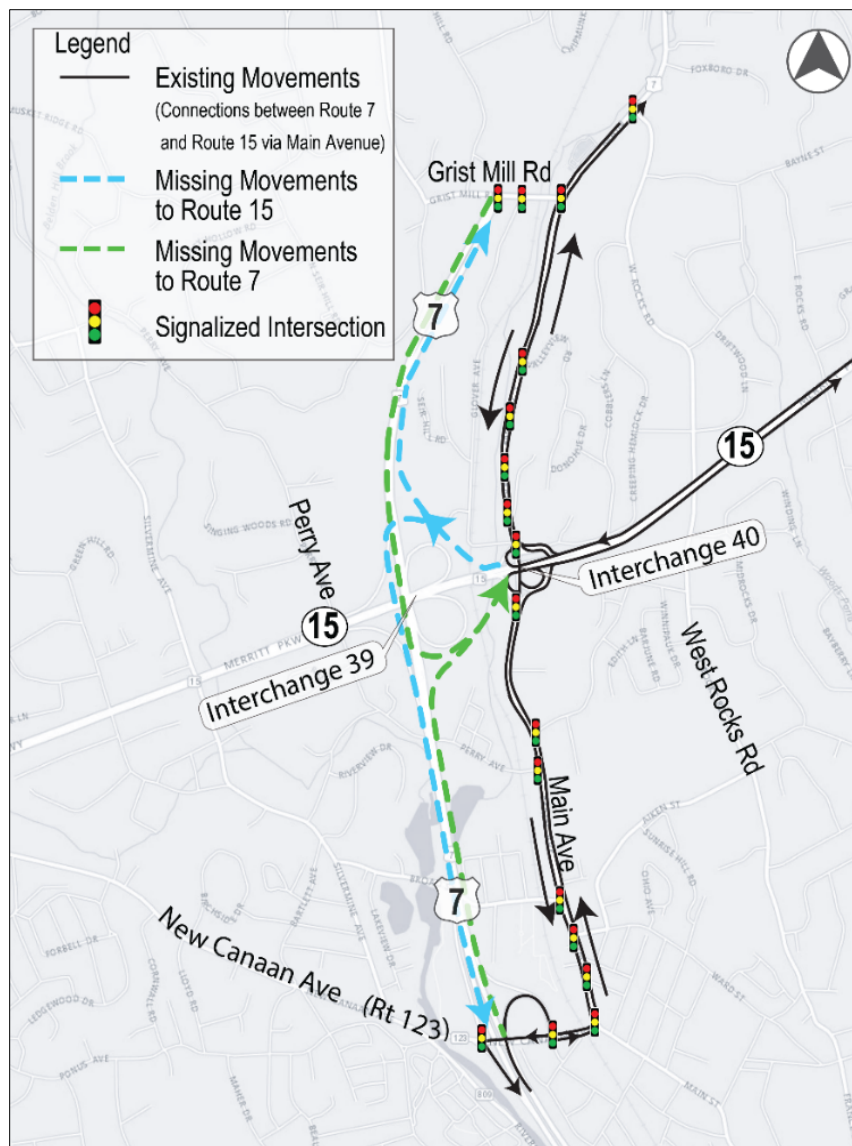


Figure 3.1.2: Routes 7/15 Interchange - Missing Movements



Traffic conditions are described in terms of Level of Service (LOS), which ranges from LOS A (Excellent) to LOS F (Failing). Generally, LOS D is considered the threshold above which roadways and intersections must operate or be considered deficient. For this traffic impact assessment, any roadways or intersections operating at LOS E or LOS F were considered deficient.

Safety conditions were also part of the traffic impact assessment. Crash records obtained through the Connecticut Crash Data Repository for the three-year period from January 2015 through December 2017 were used to quantify the number of crashes within the traffic study area. The data were used to document existing crash patterns and identify potential safety improvements that could be incorporated into the Build Alternatives.

3.1.1 Existing Conditions

Existing (2016) traffic conditions within the traffic study area were evaluated through traffic volumes, intersection geometry, origin-destination data, and vehicle crash history. Peak hour turning movement counts, vehicular classification counts, bicycle counts, pedestrian counts, and speed data were collected for two weekdays in September 2016 (with additional counts collected in October 2016, December 2016, and October 2018) during the morning and evening peak periods. Existing traffic operations were analyzed during the weekday morning (8:00AM to 9:00AM) and evening (5:00PM to 6:00PM) peak hours, when traffic flow is at its highest.

Vehicular origin-destination data were also collected during one weekday in September 2016 from specified origins (roadways entering the traffic study area) to specified destinations (roadways leaving the traffic study area) in order to quantify the number of vehicles that currently make the missing movements at the Routes 7/15 interchange.

An analysis of origin-destination data indicates that up to 250 peak hour vehicles use the Main Avenue corridor from points north and south to make the connection (missing movements) between Route 7 and Route 15. Table 3.1.1 and Figure 3.1.3 summarize the results of the existing conditions capacity analyses. A total of ten locations during the weekday morning peak hour and a total of five locations during the weekday evening peak hour are considered deficient.



Table 3.1.1 Summary of Locations that Operate Below LOS D, Existing Conditions (2016)

| Analysis Element | AM Peak Hour | PM Peak Hour |
|---|--------------|--------------|
| Intersections and Ramp Segments | 8 | 5 |
| Mainline (Limited Access Corridor) Segments | 2 | 0 |
| Total | 10 | 5 |

Note 1: Locations that operate below LOS D under existing conditions are shown in red on Figure 3.1.3.

Note 2: Mainline (Limited Access Corridor) segments include Route 15 and Route 7 south of Grist Mill Road.

Crash records obtained through the Connecticut Crash Data Repository for the three-year period from January 2015 through December 2017 were reviewed to document existing crash patterns and identify potential safety improvements that could be incorporated into Build alternatives. A total of 317 crashes have occurred within approximately 0.25-mile of Interchanges 39 and 40. The existing Main Avenue and Route 15 interchange ramps have inadequate acceleration and deceleration lanes, steep grades, sharp curves, and limited sight distance that contribute to a high number of crashes.

Detailed capacity analysis results and crash data summaries are provided in Appendix B.



Routes 7/15 Interchange
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Traffic



Figure 3.1.3 2016 Existing Conditions - Level of Service



Additional crash analyses were performed to determine how crash patterns at the interchanges compare to other locations along the 37-mile Merritt Parkway portion of Route 15. Crashes per 0.5-mile segment were summarized based on crash records from the Connecticut Crash Data Repository for the four-year period from January 2015 through December 2018. The highest density of crashes along the Merritt Parkway portion of the Route 15 corridor occurs at Interchange 40 (Figure 3.1.4).

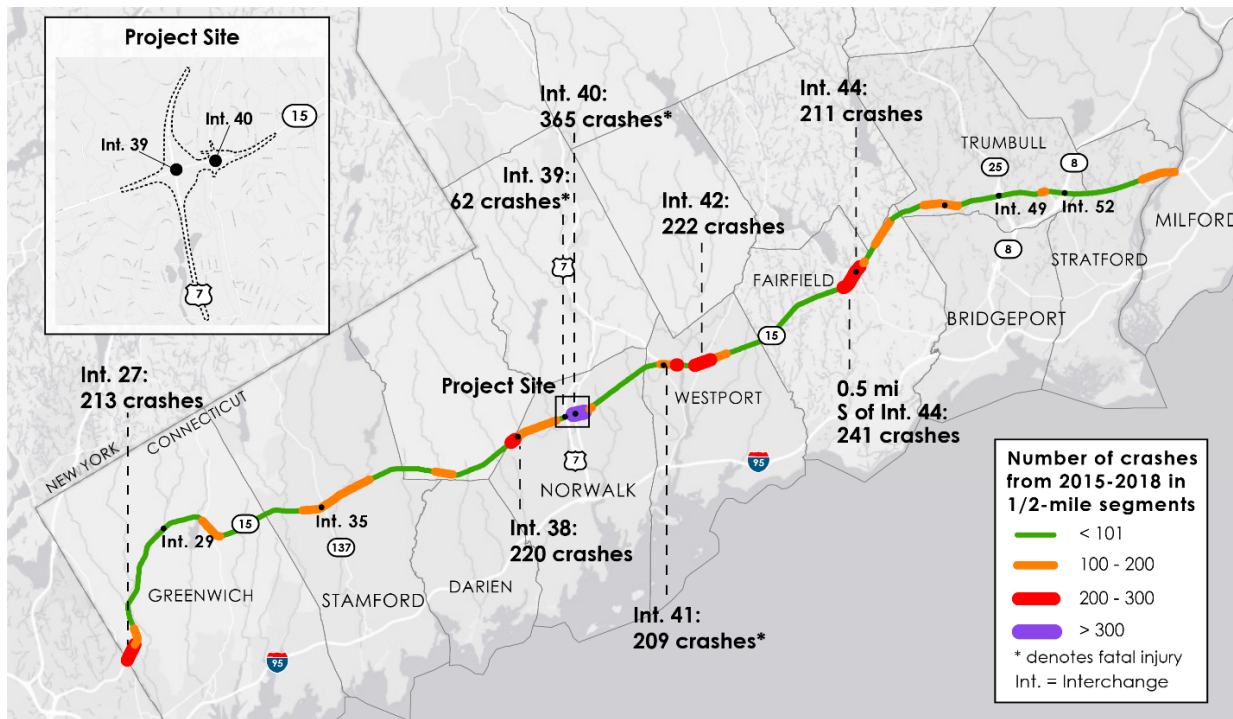


Figure 3.1.4 Route 15 (Merritt Parkway Portion) Crash Summary (2015-2018)

3.1.2 Potential Impacts

Potential impacts for the No Build and Build Alternative are assessed based on projected traffic operations for the 2045 design year using LOS data. As with existing conditions, traffic operations were analyzed during the weekday morning and evening peak hours. Detailed capacity analysis results are provided in Appendix B.

Projected traffic volumes were developed by estimating background traffic growth for the traffic study area and applying traffic volumes associated with planned developments within the traffic study area. Projected traffic growth between the existing and projected analysis years was developed using CTDOT's travel demand model, which uses trip generation, trip distribution, mode choice, and travel assignment to forecast daily and peak hour traffic volumes. Planned developments that are expected to generate significant increases in traffic



within the traffic study area were identified as: Grist Mill Village (150-174 Glover Avenue), The Village Commercial Development (272-280 Main Avenue), and the SoNo Collection Mall (100 North Water Street). Traffic volumes associated with these three projects were included in the traffic impact assessment. Other projects or planned developments that are not approved, funded, or scheduled to be completed prior to the completion of this project were not included in the traffic impact assessment. Projected traffic volumes along Route 7, Route 15, and Main Avenue are comparable under the No Build Alternative, Alternative 21D, and Alternative 26.

Based on a review of projected 2045 traffic volumes, it is anticipated that traffic utilizing Main Avenue to connect between Route 7 and Route 15 under the No Build Alternative would no longer use Main Avenue given the new connections proposed under either Build Alternative.

Table 3.1.2 and Figure 3.1.5 through Figure 3.1.7 summarize the results of the projected 2045 capacity analyses. A review of microsimulation models developed to supplement the capacity analyses validated the findings of the analyses and also confirmed that the improvements to Route 15 are limited to both interchanges. Conditions along both Route 7 and Route 15 entering and exiting the traffic study area are not expected to change as a result of the Project.

Table 3.1.2 Summary of Locations Projected to Operate Below LOS D, 2045 Design Year

| Analysis Element | AM Peak Hour | | | | PM Peak Hour | | | |
|---|---------------|---------------|---------------|--------------|---------------|---------------|---------------|--------------|
| | 2016 EXISTING | 2045 NO BUILD | 2045 ALT. 21D | 2045 ALT. 26 | 2016 EXISTING | 2045 NO BUILD | 2045 ALT. 21D | 2045 ALT. 26 |
| Intersections and Ramp Segments | 8 | 16 | 7 | 7 | 5 | 14 | 6 | 6 |
| Mainline (Limited Access Corridor) Segments | 2 | 7 | 3 | 3 | 0 | 4 | 3 | 2 |
| Total | 10 | 23 | 10 | 10 | 5 | 18 | 9 | 8 |

Note 1: Locations projected to operate below LOS D in the 2045 Design Year are shown in red on Figure 3.1.5 through Figure 3.1.7.

Note 2: Mainline (Limited Access Corridor) segments include Route 15 and Route 7 south of Grist Mill Road under 2016 Existing Conditions, 2045 No Build Conditions, and 2045 Build Alternative 21D. Under Alternative 26, Mainline (Limited Access Corridor) segments include Route 15 and Route 7 south of Route 15 (south of the proposed traffic signals under this Build Alternative).

Detailed capacity analysis and microsimulation model results are provided in Appendix B.

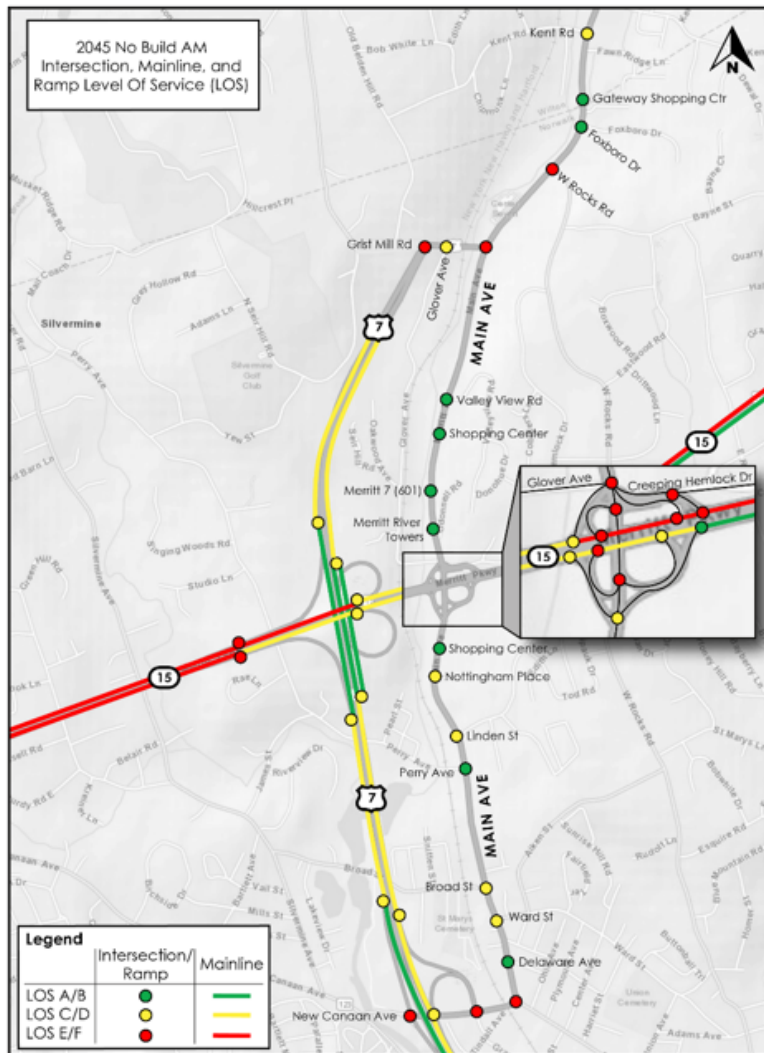


Figure 3.1.5 2045 Design Year Levels of Service (AM Peak Hour and PM Peak Hour) – No Build Alternative



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Traffic

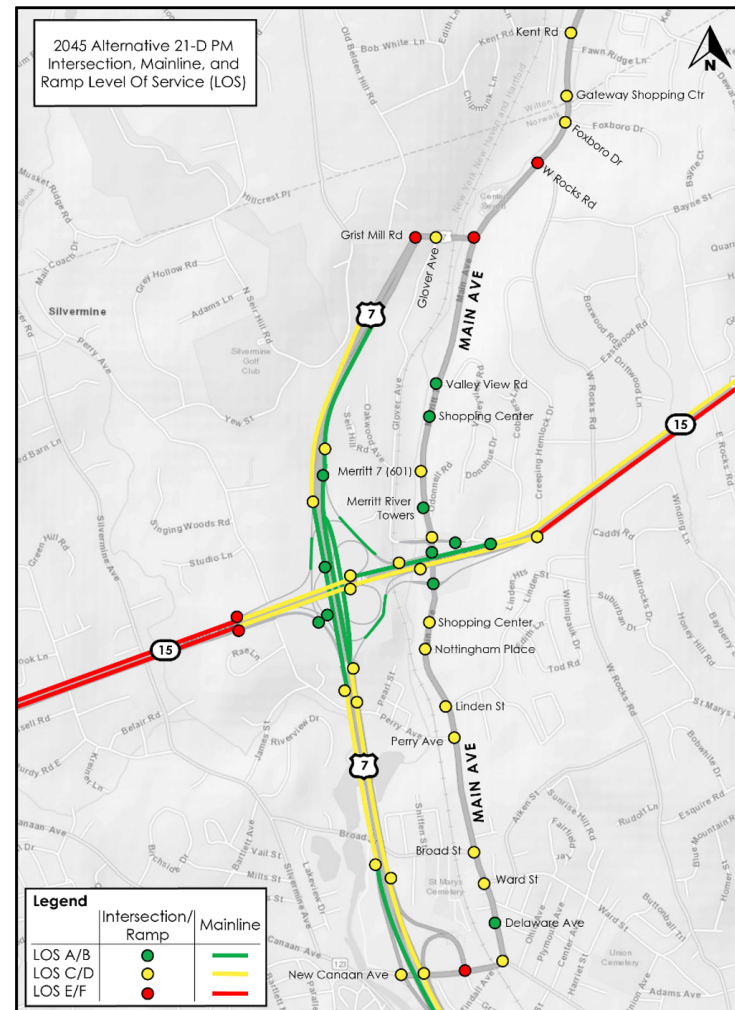
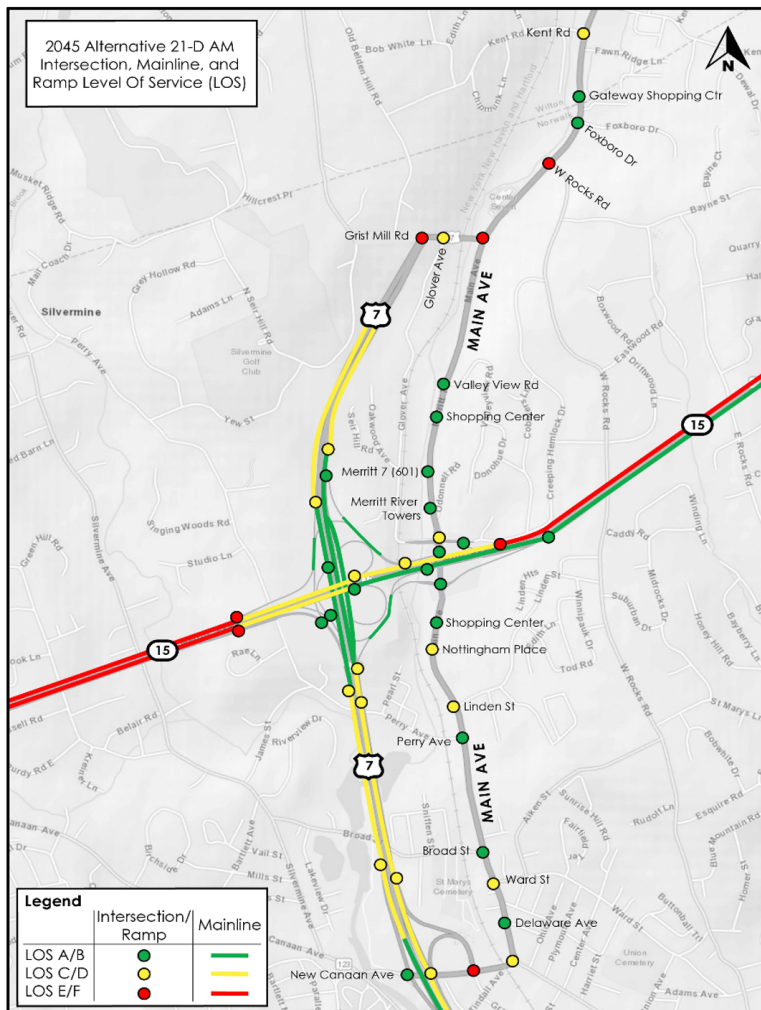


Figure 3.1.6 2045 Design Year Levels of Service (AM Peak Hour and PM Peak Hour) – Alternative 21D

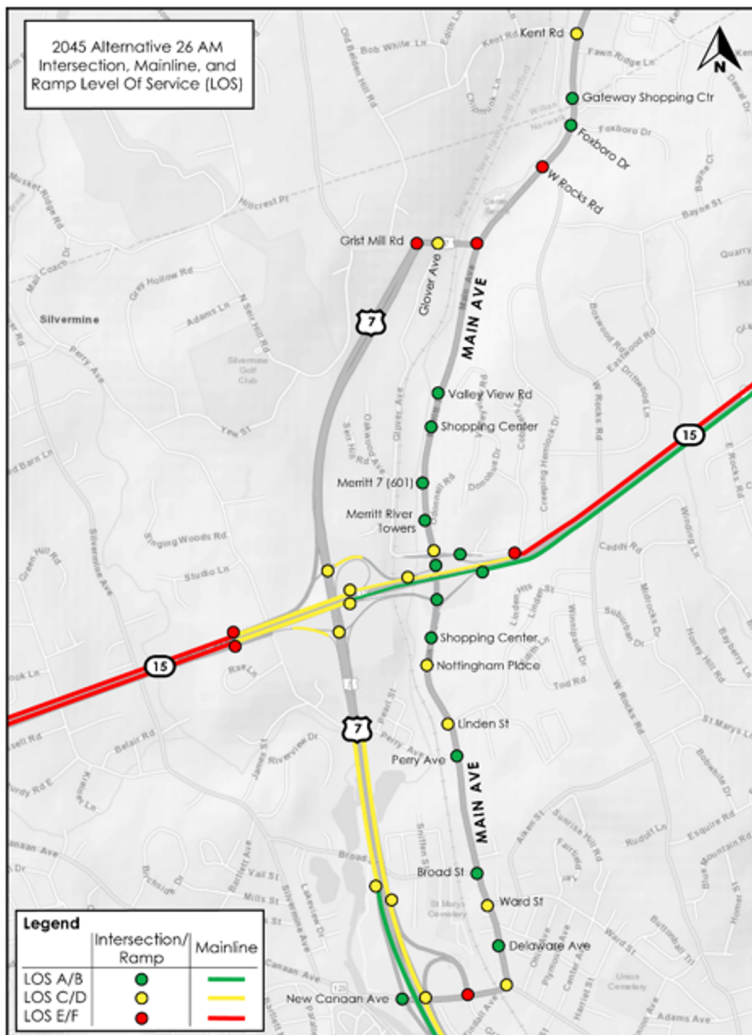


Figure 3.1.7 2045 Design Year Levels of Service (AM Peak Hour and PM Peak Hour) – Alternative 26



No Build Alternative

Under the No Build Alternative, future traffic conditions are projected to worsen due to projected traffic growth within the traffic study area. Travel times are expected to increase due to projected increases in congestion. In 2045, 23 locations would be considered deficient during the weekday morning peak hour and 19 locations would be considered deficient during the weekday evening peak hour under the No Build Alternative.

Under the No Build Alternative, it is anticipated the number of crashes would increase as traffic volumes increase. The existing stop-controlled on-ramps to Route 15 from Main Avenue would remain as they are today. CTDOT planned safety improvements for Route 15 (a separate project) would not resolve all of the safety issues previously identified.

Build Alternatives

Both Build Alternatives are projected to provide comparable improvements to traffic operations through reductions in deficient locations in the design year when compared to the No Build Alternative. With both Build Alternatives, a total of 10 locations are projected to be deficient during the weekday morning peak hour. During the weekday evening peak hour, a total of eight locations are projected to be deficient with Alternative 26 and nine locations are projected to be deficient under Alternative 21D.

Alternative 26 proposes to complete the missing movements using new signalized intersections (with turn lanes for some of the high-volume turning movements), in comparison to Alternative 21D which proposes to complete the missing movements at the Routes 7/15 interchange using free-flow connections. As such, Alternative 21D is projected to generally provide faster travel times for the missing interchange movements when compared to the No Build Alternative. In most cases, Alternative 26 is also projected to provide faster travel times for the missing interchange movements when compared to the No Build Alternative, albeit to a lesser extent.

Both Build Alternatives propose to address safety concerns by reconfiguring the Main Avenue interchange by removing and redesigning the existing stop-controlled on-ramps from Main Avenue onto Route 15 which would provide standard acceleration and deceleration lanes, and by providing full access between Routes 7 and 15 at Interchange 39. Furthermore, the Main Avenue corridor would provide additional accommodations for pedestrians and bicyclists.

3.1.3 Mitigation Measures

No significant adverse impacts have been identified for either Build Alternative. Both Build Alternatives provide comparable improvements to traffic operations and safety in the traffic study area. Therefore, no mitigation is required.

3.2 BICYCLES AND PEDESTRIANS

This section provides a safety assessment of bicycle and pedestrian facilities with and without



the project. The area of focus for the analysis is the Project Site. Additional details regarding the assessment are provided in Appendix C.

Current bicycle and pedestrian planning efforts and ADA [3] requirements were considered to establish the regulatory setting and ensure that the proposed project improvements are consistent with the goals, policies, and plans for bicycles and pedestrians within the Project and vicinity. Plans reviewed include:

- City of Norwalk Citywide Plan of Conservation and Development (2019-2029) [4];
- Norwalk Pedestrian and Bicycle Transportation Plan [5];
- Main Avenue Transportation Study [6]; and
- Norwalk River Valley Trail Routing Study [7].

Regulatory and design guidelines reviewed include:

- NACTO Design Guides [8];
- CTDOT Highway Design Manual [9]; and
- ADA requirements for these pedestrian and bicycle facilities.

3.2.1 Existing Conditions

Main Avenue provides limited amenities for pedestrians and no bicycle-specific facilities. Sidewalks along Main Avenue are limited, disjointed, and do not meet current design standards. Similarly, Glover Avenue has limited pedestrian facilities and no bicycle facilities. Creeping Hemlock Drive does not include pedestrian facilities near its intersection with Main Avenue.

Bicyclists and pedestrians are prohibited from both Route 15 and Route 7. As such, no facilities or amenities for pedestrians and bicyclists exist within the ROW of these transportation corridors.

There are several bus stops along Main Avenue for service provided by the Norwalk Transit District. Additionally, the Merritt 7 Train Station is located on Glover Avenue. These transit facilities generate demand for pedestrian and bicycle facilities as the bus stops do not have available parking, and the train station provides only limited parking. Transit system users that exit at the train station or bus stops are required to walk or bike to nearby offices, businesses, and residences.



3.2.2 Potential Impacts

Build Alternatives

Both Build Alternatives would provide the same level of bicycle and pedestrian infrastructure improvements/amenities along Creeping Hemlock Drive, Glover Avenue, and Main Avenue. These improvements would include an enhanced sidewalk network and modern bicycle facility amenities designed to support City and regional planning projects, including the Norwalk River Valley Trail, Norwalk Pedestrian and Bicycle Plan, Main Avenue Study, and Norwalk's Plan of Conservation and Development. Bicycle facilities would include shared roadway markings, bicycle lanes, buffered bicycle lanes, and a side path in response to traffic and roadway conditions. These facilities are anticipated to have no adverse impact on traffic operations or pedestrian mobility. The facilities are expected to meet an existing demand for bicycle mobility along the corridor and improve safety for existing users.

Pedestrian enhancements along the Main Avenue corridor and on intersection roadways in the project area include new sidewalks on both sides of Main Avenue, new curb ramps, new crosswalk markings, lighting enhancements, and new pedestrian crossing signals. Sidewalks would be separated from the roadway to the extent feasible to improve pedestrian comfort. The proposed side path on Creeping Hemlock Drive would provide a shared pedestrian and bicycle facility along that corridor, where no sidewalk currently exists, improving the safety of users who currently walk or bicycle in the roadway.

The improvements would provide safer bicycling and walking conditions to access transit, local businesses, and places of employment. Both alternatives would facilitate connections to the planned bike lane improvements on Glover Avenue and the new Merritt 7 train station. These improvements would likely induce more pedestrian and bicycle trips by improving access to these destinations. As such, both Build Alternatives include improvements that would benefit bicyclists and pedestrians by improving existing connections, adding new connections, and above all, enhancing the safety of this segment for the public in this area..

No Build Alternative

The No Build Alternative involves continuous maintenance of the existing, limited pedestrian and bicycle infrastructure by CTDOT. It does not include the construction of new or improved bicycle and pedestrian amenities along Main Avenue, Glover Avenue, or any other nearby or contiguous roadway. As such, under the No Build Alternative, bicycle and pedestrian infrastructure would remain unchanged and not meet current design standards. Activity levels are anticipated to remain limited because of the lack of infrastructure and connectivity, and due to the inherent safety issues of the existing congested setting.

3.2.3 Mitigation Measures

Neither Build Alternative is anticipated to cause significant negative impacts to existing bicycle



and pedestrian resources as both Build Alternatives would provide the same positive benefits for bicyclists and pedestrians. Therefore, no mitigation is required.

3.3 AIR QUALITY

The U.S. Environmental Protection Agency (EPA) promulgates National Ambient Air Quality Standards (NAAQS). Projects that require federal approval must be consistent with the federal standards as well as State of Connecticut air quality goals. State/federal regulations and guidelines also address greenhouse gas emissions (GHGs).

Three types of analysis were completed to assess changes in air quality resulting from construction and operation of the Project:

- Mesoscale emissions inventories;
- Microscale dispersion modeling; and
- A qualitative analysis of Mobile Source Air Toxics (MSATs).

The methodologies used to perform the above types of analysis are described in Appendix D.

3.3.1 Existing Conditions

The Project is located within Fairfield County. Currently, Fairfield County is designated to be a maintenance area for fine particulate (PM_{2.5}) and a nonattainment area for ozone. Additionally, this area of the county is designated an attainment/maintenance area for the air pollutant carbon monoxide (CO). As the mandated 20-year maintenance period ended in May of 2019, it is anticipated that the EPA will redesignate the area to be in attainment of the carbon monoxide standard in the future.

3.3.2 Potential Impacts

Air pollutant emissions due to construction activities would be temporary (i.e., short-term). Emissions from project-related construction equipment and vehicles would be minimized according to CTDOT's Standard Specifications for Roads, Bridges, Facilities and Incidental Construction [10]. Over the long-term, the results of the analysis demonstrate that:

- Both Build Alternatives would result in lower emissions of the precursors to ozone (O₃) when compared to the No Build Alternative.
- The Project would not substantially increase the number of diesel vehicles or emissions of PM_{2.5} at any of the evaluated intersections.
- Concentrations of CO would be well below the NAAQS under all Alternatives.
- Both Build Alternatives would reduce the total vehicle miles traveled and resultant



emissions of MSATs compared to the No Build Alternative.

- Greenhouse gas (GHG) emissions would decrease for both Build Alternatives compared to the No Build Alternative.
- The Project is included in the 2015 State Transportation Improvement Program which was evaluated and approved by the EPA. Therefore, the Project is in compliance with the Clean Air Act's Transportation Conformity Rule requirements.

3.3.3 Mitigation Measures

With the exception of short-term impacts resulting from construction activities, the Project would reduce air pollutant, MSAT, and GHG emissions when compared to the No Build Alternative. Therefore, no mitigation is required.



3.4 NOISE

Federally funded highway projects must evaluate measures to reduce traffic noise, referred to as abatement, if the predicted noise level in the design year would approach, meet, or exceed established thresholds, called Noise Abatement Criteria (NAC) [11]. Abatement measures must also be considered when predicted levels in the design year would increase substantially when compared to existing levels. CTDOT's process for evaluating traffic noise is described in their 2017 Noise Policy [12]. The NAC are stated in decibels on the A-weighted scale (dB(A)).

Vibration

The Project is not anticipated to lead to unusual types or amounts of vibration. Furthermore, with the exception of the Merritt Parkway, which itself is part of the Project, historic properties are not located close to the area of construction. Therefore, following FHWA guidance [13], vibration is not required and is not further considered in this analysis.

3.4.1 Existing Conditions

Based on field measurements and analysis at 19 receptor locations (Figure 3.4.1), the existing traffic noise level within the Project ranges from 51 to 71 dB(A) with levels exceeding the NAC at Receptor 7 (a One Glover Apartment residence). Additional details of the analysis are provided in Appendix E.

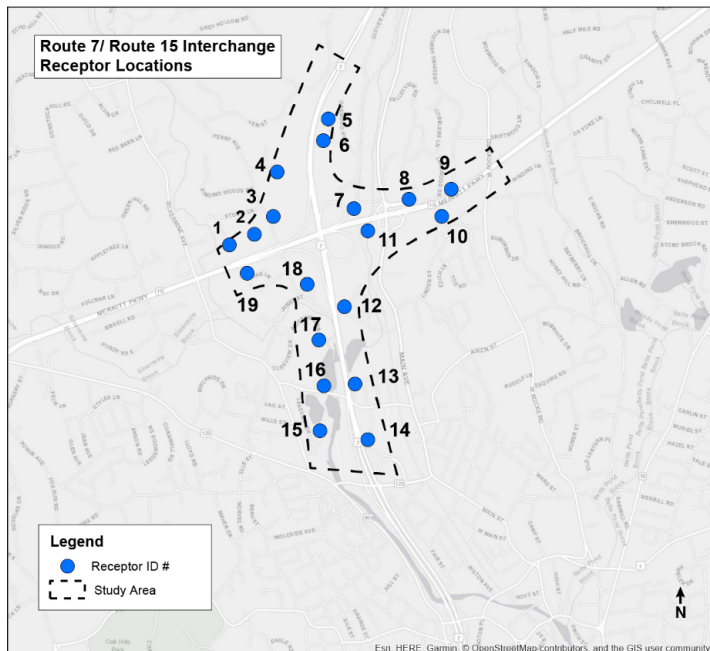


Figure 3.4.1 Noise Receptor Locations



3.4.2 Potential Impacts

Under the No Build Alternative, noise levels at all receptors would remain the same or increase no more than 2 dBA when compared to existing levels. Under both Build Alternatives, noise levels at all receptors would either decrease 1 to 2 dB(A), remain the same, or increase no more than 1 dBA when compared to existing levels. Notably, in an outdoor environment, increases in traffic noise of 1 dB(A) are not considered detectable to the human ear. Traffic noise levels at Receptor 7 would not increase under any Alternative. However, as in the existing condition, noise levels at Receptor 7 are predicted to exceed the NAC under all Build and No Build Alternatives.

Noise impacts during construction would be short term and subject to the requirements for minimization and limits in CTDOT's *Standard Specifications for Roads, Bridges and Incidental Construction* (Form 817 [10]).

3.4.3 Mitigation Measures

As noted above, noise levels at Receptor 7 would not increase under any Alternative compared to existing conditions. However, because the noise level would exceed the NAC, evaluation of abatement strategies at this receptor is required. Although a number of abatement strategies were evaluated for the impacted receptor, none were determined to be both feasible and reasonable. CTDOT's final recommendation regarding noise abatement would be made during the project's final design and public involvement process.

3.5 RARE/THREATENED/ENDANGERED SPECIES

This section evaluates the potential for the Project to impact rare, threatened, and endangered (RTE) species. In order to meet requirements of the federal and Connecticut Endangered Species Acts and state protections, it is necessary to identify whether RTE species and/or their habitats are present. The study area for RTE species coincides with the Project Site, excluding the area south of Glover Avenue in which work would be conducted in the existing Route 7 right of way, as shown in Figure 3.5.1. This area represents the limits of physical disturbance anticipated to potentially impact RTE species.



3.5.1 Existing Conditions

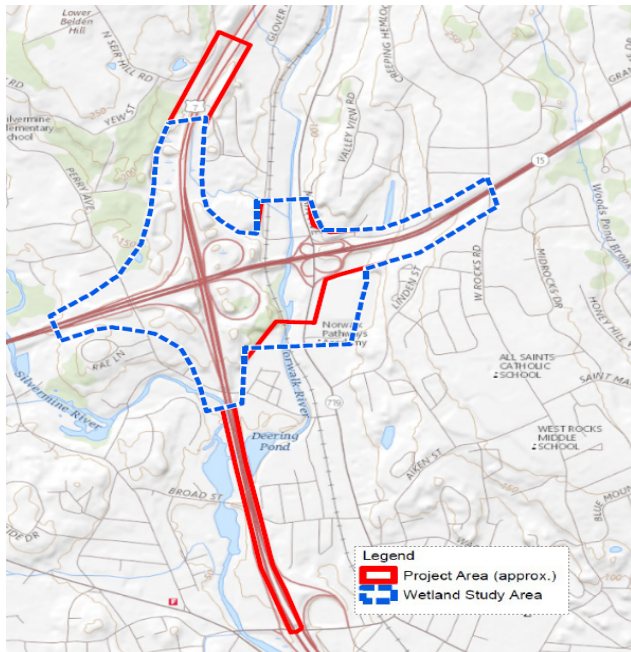


Figure 3.5.1 RTE Study Area

The Project Site is located in a primarily urban landscape. Rare plant surveys were conducted by a qualified botanist within the Project Site to identify the general ecology/habitats present within the Project Site; evaluate each habitat’s potential to support RTE plant populations; and to locate existing populations of RTE plant species, if present. No rare plants were observed during the surveys. Survey results are included in Appendix F1.

The 2020 CTDEEP Natural Diversity Data Base (NDDDB) mapping for the City of Norwalk shows no state or federally listed species or critical habitat within the Project Site [14] (Appendix F2). On June 22, 2022, CTDOT and FHWA received an Official Species List of federal threatened and endangered species from the U.S. Fish and Wildlife Service (USFWS) (Appendix F4). The list identified one federally listed threatened species that may be present within the Project Site: northern long-eared bat (*Myotis septentrionalis*; NLEB). NLEB habitat includes forested areas for roosting and caves for hibernation. The USFWS defers to individual states for identification of habitat, including hibernacula or maternity roost trees. There are no known maternity roosts in the Project Site. The nearest hibernacula identified in Connecticut is located in Greenwich, to the southwest of Norwalk [15](Appendix F2). On November 30, 2022, the Service published a final rule to reclassify the NLEB as an endangered species. The rule went into effect on March 31, 2023. The USFWS also identified the Monarch Butterfly (*Danaus plexippus*) as a current candidate for listing.



The CTDEEP Fisheries Division was contacted regarding the potential for RTE aquatic species to occur in the Project Site (Appendix F3). CTDEEP indicated that the federal and state listed endangered Atlantic sturgeon (*Acipenser oxyrinchus*) and shortnose sturgeon (*Acipenser brevirostrum*) have not been and are not anticipated to be documented in the vicinity of the Project Site following the removal of the Flock Process Dam. Blueback herring (*Alosa aestivalis*), a Species of Special Concern in Connecticut, have been documented in the Norwalk River in the vicinity of the confluence with the Silvermine River located in the southern portion of the Project Site.

3.5.2 Potential Impacts

No Build Alternative

The No Build Alternative would not involve site disturbance, and therefore no impacts on existing ecological resources would be anticipated. Indirect habitat fragmentation impacts resulting from adjacent development unrelated to this project, including the spread of non-native invasive species, would continue under the No Build Alternative.

Build Alternatives

Both Alternatives 26 and 21D include work within developed areas north of Route 15 and within fragments of undeveloped forests south of the Parkway, including riparian areas associated with the Norwalk River. Some tree cutting and land disturbance is anticipated under either Build Alternative. The natural communities and habitats have been degraded and fragmented as a result of adjacent land uses including roadways, railways, and commercial developments as well as the continued spread of non-native invasive species. Therefore, minimal impacts on RTE species are anticipated for either alternative as a result of the Project. Potential impacts to wetlands and watercourses are discussed in Section 3.6.

As mentioned in Section 3.5.1, the Project Site is not located within an NDDB mapped area (as of December 2020; Appendix F2). State NDDB maps are updated every six months. If any state listed species are documented within the Project Site prior to construction of the Project, then CTDEEP would be consulted and the NDDB process would be reinitiated.

As discussed above, federally listed RTE species are not anticipated to occur within the Project Site as confirmed by field surveys; therefore, impacts to federal terrestrial or aquatic RTE species are not anticipated. However, based on the identification of NLEB in the USFWS Official Species List for the Project Site, CTDOT prepared an effects determination using the NLEB key within the Information for Planning and Consultation (IPaC) system. The IPaC key assists users in determining whether a federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO) [16]. The PBO addresses activities excepted from "take" prohibitions applicable to the NLEB under the Endangered



Species Act of 1973 (ESA)¹⁴. USFWS issued a verification letter on July 22, 2022, stating that analysis of Project activities with respect to NLEB is complete and requirements under the ESA have been met. The verification is effective for one year from the date of the letter. Following the Service's rule to reclassify the NLEB from threatened to endangered, CTDOT prepared an updated effects determination using the IPaC system. USFWS issued a verification letter on April 20, 2023 stating that the analysis of Project activities with respect to NLEB is complete under the interim guidelines. FHWA and CTDOT will continue to be responsible for updating the IPaC information as required throughout the Project, including identification of species, such as the Monarch Butterfly, that could be listed over the course of the Project construction.

As mentioned in Section 3.5.1, blueback herring, a Species of Special Concern in Connecticut, may occur in the Norwalk River within the Project Site. Stormwater discharge to the Norwalk River during construction activities has the potential to temporarily impact fish runs by degrading water quality in receiving waters (i.e., increasing turbidity and water temperature in the River). No permanent in-water structures are planned; therefore, permanent impacts to blueback herring are not anticipated.

3.5.3 Mitigation Measures

Erosion and sediment control measures would be installed as part of the Project to minimize runoff to water and wetland resource areas, including the Norwalk River and other streams within the Project Site. As Project design progresses, Essential Fish Habitat coordination and Endangered Species Act (ESA) Section 7 consultation would be conducted with National Oceanic and Atmospheric Administration (NOAA) Fisheries. If in-water work is required during construction, temporary protections may be installed around resource areas during new ramp/bridge construction for both Alternatives 26 and 21D. In addition, appropriate construction sequencing and water handling methods, including maintaining fish passage, would be followed to reduce potential impacts associated with construction activities, in accordance with the Stormwater Pollution Prevention Plan for the Project. Time of year restrictions (no unconfined in-stream work between April 1 and June 30) may be required as part of the permitting process for activities during construction to avoid and minimize impacts to anadromous fish runs in the Norwalk River.

As noted above, FHWA and CTDOT will continue to maintain consistency of the Project with the NLEB PBO. FHWA and CTDOT will also continue to monitor the NDDB and IPaC databases for new or updated listings of species that may occur within the Project Area and will coordinate with CTDEEP and USFWS as required to address applicable state and federal requirements as design and construction progress.

¹⁴ 87 Stat.884, as amended; 16 U.S.C. 1531 et seq.



Given the proposed minimization measures and time of year restrictions, if required, and ongoing monitoring of and adherence to ESA requirements, no additional mitigation measures specifically directed towards terrestrial or aquatic RTE species are proposed.

3.6 WETLANDS

This section evaluates the potential for the Project to impact wetland resources. The study area for wetlands is the Project Site, excluding the area south of Glover Avenue in which work would be conducted in the existing Route 7 ROW (Figure 3.6.1). This area represents the limits of physical disturbance anticipated to potentially impact wetlands. Wetlands and watercourses are regulated under the federal CWA as Waters of the United States and in Connecticut are regulated under the Inland Wetlands and Watercourses Act (CGS Sections 22a-36 through 22a-45).

3.6.1 Existing Conditions

Wetland and watercourse delineations were conducted by wetland/soil scientists with qualifications meeting the requirements at CGS Section 22a-38(5) and CTDEEP criteria [17] within the Project Site in September 2016, October 2019, and March 2021. Delineations were conducted in accordance with CGS Section 22a-38(15), the ACOE *Wetlands Delineation Manual* [18] and the *Northcentral and Northeast Region Latest Regional Supplement* [19]. Wetland functions and values were assessed for each delineated wetland in accordance with the ACOE *Highway Methodology Workbook Supplement* [20]. Reports summarizing the 2016, 2019 and 2021 delineations, including descriptions of wetlands (and their functions and values) and watercourses within the study area, are included in Appendix G1, Appendix G2 and Appendix G3.

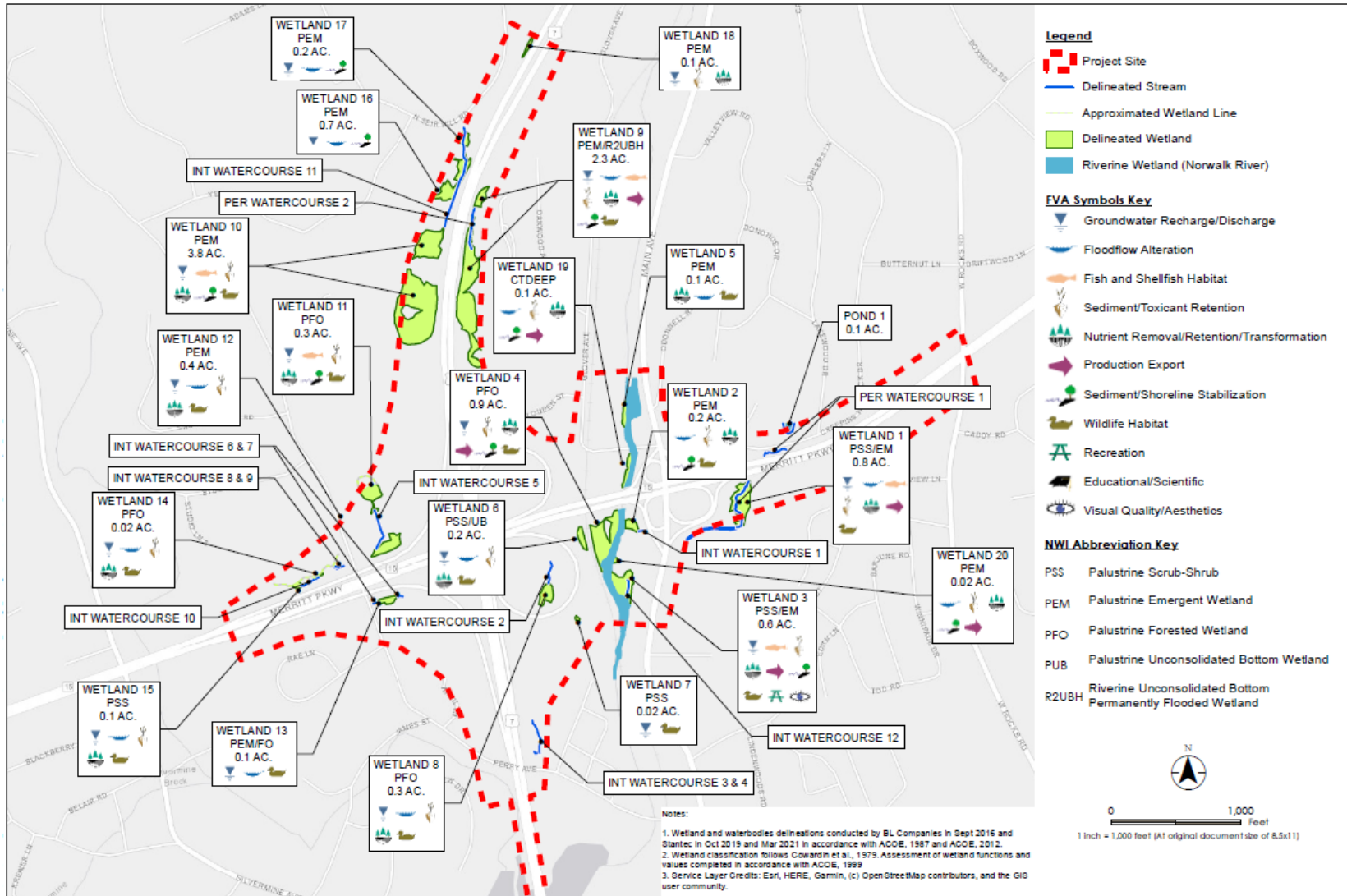


Figure 3.6.1 Existing Wetlands



20 palustrine (vegetated freshwater) wetlands covering approximately 11 AC, a pond, 12 intermittent watercourses, and three perennial watercourses (including portions of the Norwalk River) were identified during the delineations. These resources occur throughout the Project Site and either directly abut or are bisected by some form of development. Remaining undisturbed forested buffers associated with these resources are generally less than 500 feet wide. Delineated wetlands range from small, isolated pockets less than 0.1 AC in size to larger, more expansive complexes approximately four AC in size (Appendix G1 - Appendix G3).

The wetlands and watercourses identified within the Project Site (Figure 3.6.1) meet the parameters of federal and state regulated wetlands and watercourses, with the exception of Wetland 19 which meets the criteria to qualify as a wetland under the Connecticut Inland Wetland and Watercourses Act, but does not meet the three parameters required to be regulated as a jurisdictional wetland under the federal CWA. Isolated wetland and watercourse features within the Project Site without a direct hydrological conveyance to navigable waters are presumed jurisdictional based on their potential capacity to provide a significant nexus to a navigable water based on the December 2, 2008 US EPA and Department of the Army joint memorandum “Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States & Carabell v. United States*”. However, federal jurisdiction and presence of Waters of the United States, including the presence of a significant nexus, have not been confirmed by the ACOE for the delineated wetlands and watercourses in accordance with the CWA¹⁵.

Based upon characteristics including size, landscape position, and vegetation community, each wetland within the Project Site provides some wetland functions and values (Appendix G1, Appendix G2, and Appendix G3). Small and isolated wetlands were identified as providing limited capacity and opportunity for flood flow alteration and wildlife habitat. The larger wetland complexes associated with a watercourse provided the most functions including groundwater recharge/discharge, flood flow alteration, fish habitat, sediment/toxicant retention, nutrient removal/retention/transformation, production export, sediment/shoreline

¹⁵ On August 30, 2021, the U.S. District Court for the District of Arizona issued an order vacating and remanding the Navigable Waters Protection Rule (NWPR) in the case of *Pascua Yaqui Tribe v. U.S. Environmental Protection Agency*. Given this decision, the US EPA and US ACOE are no longer implementing the NWPR, and instead are interpreting “waters of the United States” consistent with the pre-2015 regulatory regime, while a new definition is finalized. To that end, a proposed rule was published in the Federal Register on December 7, 2021 that clarified and formalized the jurisdictional status consistent with the pre-2015 definition. The comment period for this proposed rule closed on February 7, 2022. The USEPA and USACOE continue to interpret “waters of the US” consistent with the pre-2015 definition.



stabilization, and wildlife habitat.

Surrounding land use and development have influenced each of the wetlands to some degree. Watercourses within the Project Site have also been influenced by surrounding development. The Norwalk River, which flows south through the Project Site, includes riparian habitat, especially north of the Merritt Parkway, that has been extensively altered by adjacent development. Development and land use also have altered the river itself. North of Route 15, retaining walls are present along the western bank of the river, and south of the Route 15 remnant railroad bridge footings are present in the river. The two other perennial watercourses within the Project Site originate from stormwater conveyance structures.

3.6.2 Potential Impacts

The following potential impacts have been identified based on the conceptual plans for the Build Alternatives and conservative assumptions regarding construction and grading. Final impacts would be determined during project design.

Potential permanent and temporary impacts to wetlands and watercourses are depicted in Figure 3.6.2 (Alternative 21D) and Figure 3.6.3 (Alternative 26) and enumerated in Appendix G4 Table G-1. Potential permanent impacts to wetland functions and values are depicted in Figure 3.6.2 (Alternative 21D) and Figure 3.6.3 (Alternative 26) and enumerated in Appendix G4, Table G-2.

No Build Alternative

The No Build Alternative would not introduce new site disturbance at the Routes 7/15 interchange or interconnections with local roads and would not entail impacts on existing wetland resources. Indirect impacts resulting from existing infrastructure, including roadway runoff and siltation, and inhibition of wildlife movement, would continue under the No Build Alternative.

Build Alternatives

Proposed construction would permanently impact approximately 3 AC across 10 wetlands for Alternative 21D and approximately 1.4 AC across 6 wetlands for Alternative 26. Proposed construction would temporarily impact less than 0.05 AC across 3 wetlands for Alternative 21D and less than 0.01 AC across 2 wetlands for Alternative 26.

Proposed construction would permanently impact approximately 120 linear feet (LF) of intermittent streams, and approximately 650 LF of perennial streams for Alternative 21D. Proposed construction would permanently impact approximately 40 LF of an intermittent stream, and approximately 410 LF of perennial streams for Alternative 26. Proposed construction would temporarily impact a portion of a perennial watercourse for Alternatives 21D and 26 and approximately 0.5 AC and 0.4 AC of impacts to the Norwalk River for Alternatives 21D and 26, respectively.

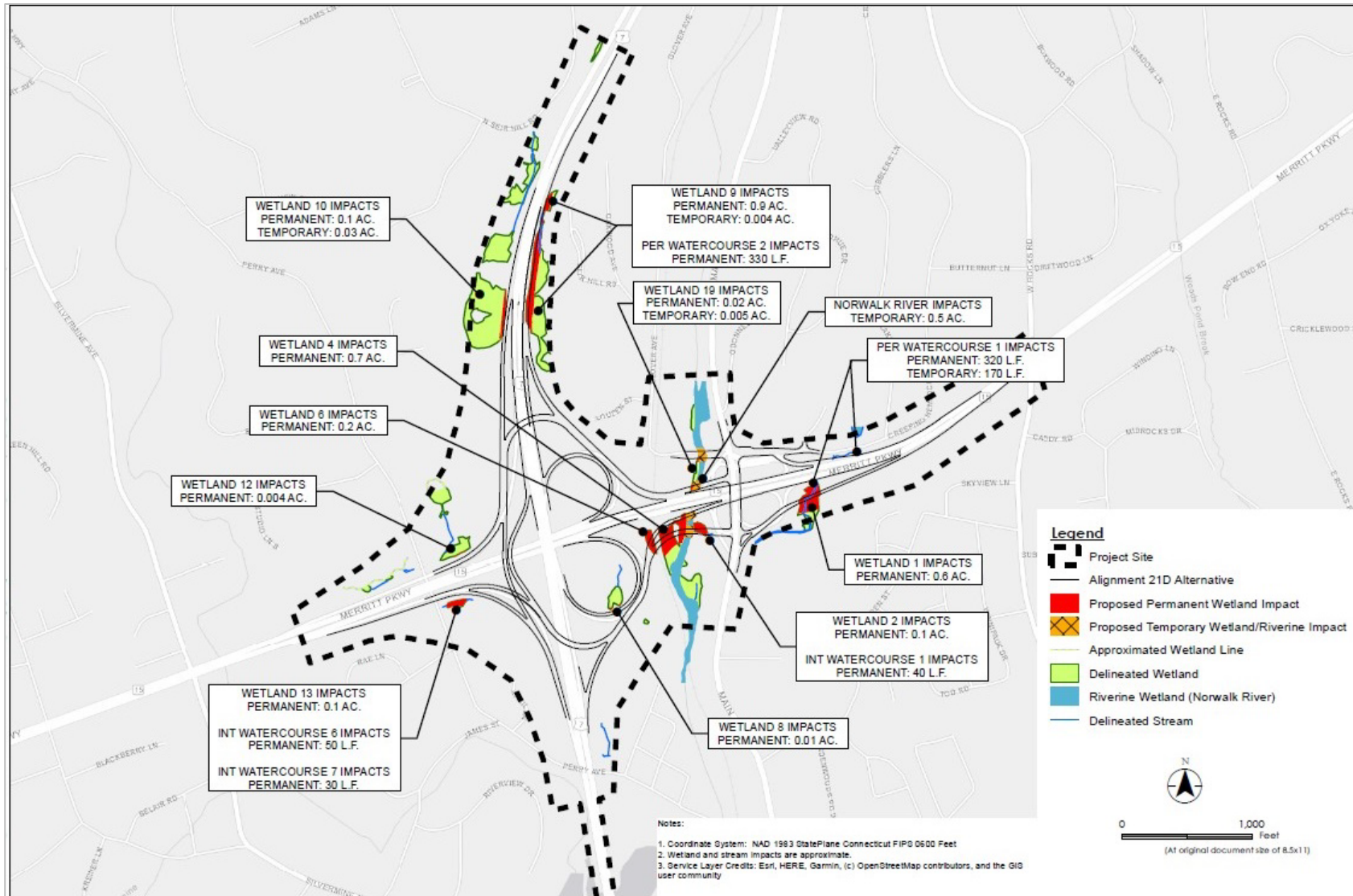


Figure 3.6.2 Wetland Impacts - Alternative 21D

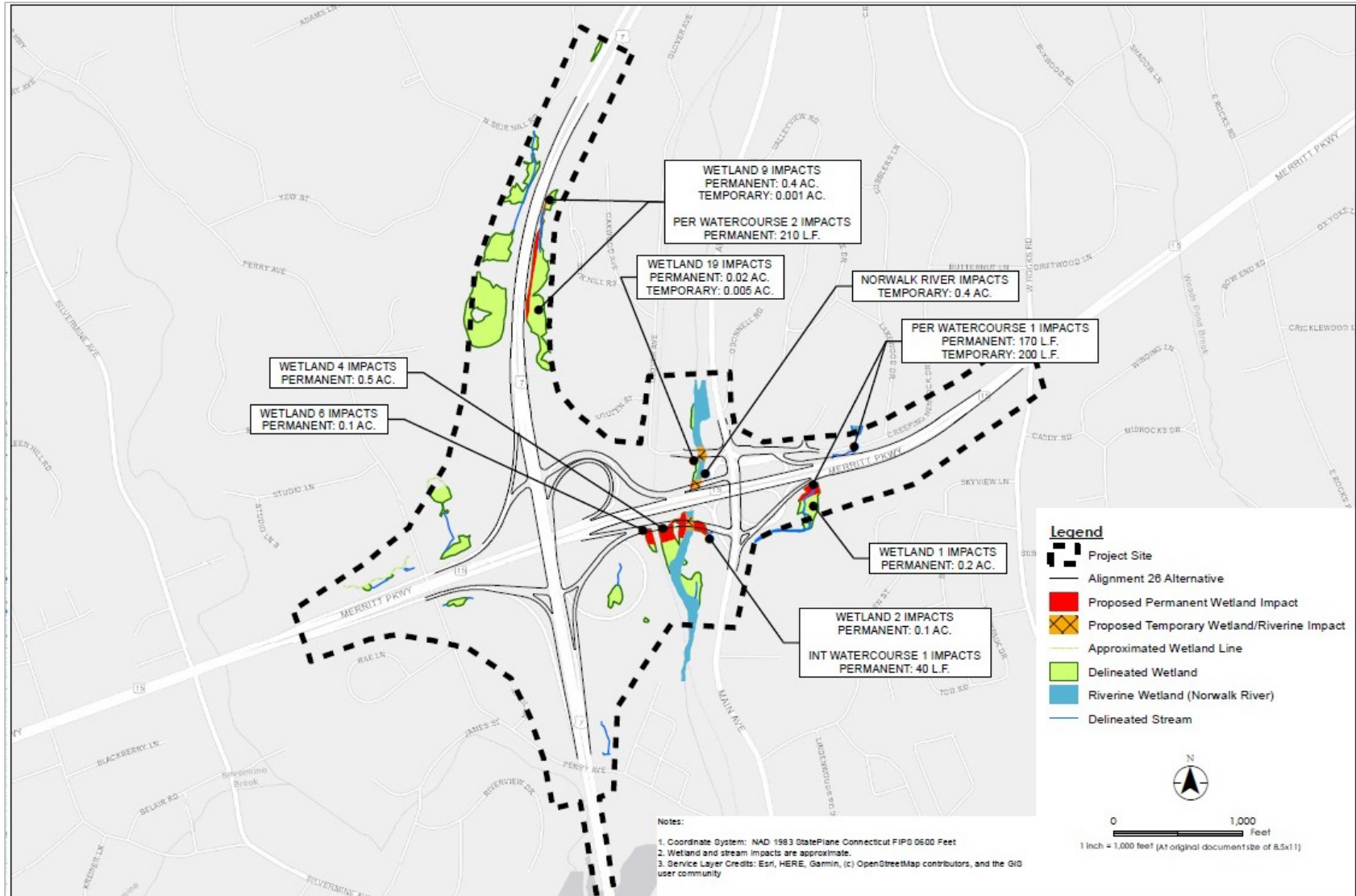


Figure 3.6.3 Wetland Impacts - Alternative 26



3.6.3 Mitigation Measures

CTDOT would avoid and minimize wetland and watercourse impacts during design. Any mitigation needs following those avoidance measures would be identified and agreed upon in conjunction with the appropriate regulatory agencies, including the ACOE and CTDEEP.

3.7 GROUNDWATER

A portion of the Project is located within the Kellogg-Deering Aquifer Protection Area (APA). The APA consists of a 10-AC municipal well field and adjacent areas that are currently subject to institutional controls under the EPA Superfund program. The wellfield is administered and managed by the First Taxing District (Water Department).

3.7.1 Existing Conditions

The Kellogg-Deering Well Field supplies about 50 percent of Norwalk's public drinking water supplies. Groundwater sampling identified a significant source of contamination below the eastern edge of the site. Following construction of the site's long-term remedy, groundwater treatment and environmental monitoring are ongoing [21].

3.7.2 Potential Impacts

No new potential pollutant sources would be created under either the No Build or Build Alternatives. In the case of either Build Alternative, certain potential construction activities, including storage of hazardous materials and petroleum products, may be necessary onsite. Norwalk first Taxing District would be consulted to provide specific source protection recommendations. Construction would be conducted in accordance with the Department of Public Health's "General Construction Best Management Practices for Sites within a Public Drinking Water Supply Area".

3.7.3 Mitigation Measures

Potential groundwater pollutants during construction would be managed per Norwalk First Taxing District and Department of Public Health guidance. During operation, no new contamination sources would be added and no mitigation would be required.

3.8 SURFACE WATER

Surface water discharges from the Project Site are subject to permit requirements for stormwater discharges, including requirements to meet standards for discharges to impaired waters.



3.8.1 Existing Conditions

Existing surface water bodies within the Project Area are described in Section 3.6.1. Overall surface water drainage discharges to the segment of the Norwalk River designated as CT7300-00-01. This segment is listed CTDEEP's 2020 list of waterbodies with habitat impairments for fish or other aquatic or wildlife [22]. The identified cause of impairment is sedimentation and/or siltation; however a total maximum daily load has not been established.

3.8.2 Potential Impacts

Impacts could occur during construction due to soil disturbance, earth moving, and equipment use, including sedimentation or siltation. Post-construction impacts could occur due to increased impervious surface areas or concentrated flows.

3.8.3 Mitigation Measures

The Project design would be in accordance with the General Permit for the Discharge of Stormwater from CTDOT Separate Stormwater Discharge Systems (TS4) to the maximum extent practicable to mitigate any potential increases to current impairments (sedimentation/siltation) identified on the 303(d) list for the segment of the Norwalk River that traverses the Project area (ID CT7300-00_01). Additionally, the project would incorporate the requirements of the Construction Stormwater General Permit due to siltation/sedimentation impairment. Currently CTDOT does not have an overall watershed plan as part of their MS4 program, though they are progressing with the U.S. Geological Survey (USGS) to model their overall system to identify where specific retrofit projects are most effective. However, CTDOT does have requirements for individual construction project to use Best Management Practices to reduce pollutants of concern which would be incorporated in the Project.

Specific stormwater management and monitoring practices would be identified during Project design, including practices to mitigate sedimentation or siltation to the Norwalk River. Plan preparers and monitors would possess the qualifications required by the permit and applicable local requirements.

3.9 FLOODPLAINS

Executive Order (EO) 11988 requires federal agencies to avoid long and short-term adverse impacts associated with the occupancy and modification of floodplains to the extent practicable, and to avoid support of floodplain development wherever there is a practicable alternative.

3.9.1 Existing Conditions

The Fairfield County Federal Emergency Management Agency (FEMA) Flood Insurance Rate



Map encompassing the Project Site (Map Number 09001C0393G) was last revised on October 16, 2013. The Flock Process Dam was formerly located approximately 0.2 miles downstream of the Route 15 bridge over the Norwalk River. In 2018 the dam was removed. In order to reflect the dam's removal, a hydraulic model was prepared to show updated existing/no build conditions (Figure 3.9.1). Details regarding the model and results are provided in Appendix H. A levee is located south of the former dam.

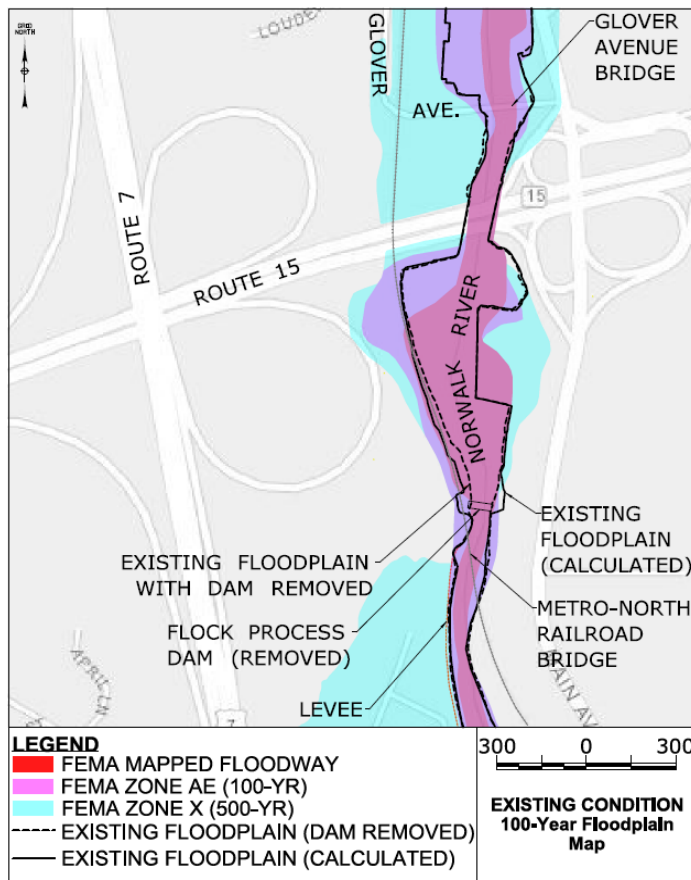


Figure 3.9.1 Existing Conditions / No Build Alternative: 100-year Floodplain Map (Flock Process Dam removed)

3.9.2 Impacts

Work within the regulated floodplain would require obtaining Flood Management Certification approval from CTDEEP during the permitting stage of the project, after a preferred alternative has been chosen and designed.

The No Build Alternative would not result in any improvements to the roadway network around the existing interchange. As such, there would be no impact on areas within the floodplain or floodway.



Due to the clear-span structures proposed for the new highway ramps, both Build Alternatives would have little impact on the 100-year floodplain. Additionally, the work would not promote additional floodplain development since no developments can be made along a highway ramp.

No impacts are anticipated to the levee south of the project area. Site assessments would be made as design progresses and any instability found (or anecdotally provided) within the channel or along the embankments would be assessed as part of the final design. Scour analysis would be completed following the Hydraulic Engineering Circular (HEC)-18 procedure (as amended by the CTDOT Drainage Manual) at each bridge spanning a watercourse. Scour countermeasures, as required, would be included in the project design. Scour countermeasure designs would follow HEC-23.

3.9.3 Mitigation

Both Build Alternatives would comply with floodplain standards. Therefore, no mitigation is required.

3.10 HISTORIC & ARCHAEOLOGICAL RESOURCES

Federal and state statutes require public projects to evaluate their effects on historic properties, which include archaeological sites and historic districts as well as individual buildings, structures (such as historic bridges), and objects. Historic properties also include places of traditional cultural or religious importance to Native American tribes and other groups.

Section 106 of the National Historic Preservation Act of 1966, as amended (54 USC 306108), requires that federally funded or permitted projects take into account the effects of their undertakings on historic properties, defined as those that are listed in or eligible for listing in the NRHP.

This section addresses archaeological and above-ground historic resources, including the Merritt Parkway itself. Review of project effects under Section 106 is related to, yet distinct from, consideration of the Merritt Parkway¹⁶ as a designated Connecticut Scenic Road and National Scenic Byway (Section 3.12). It is also separate from the Visual Impact Assessment (Section 3.11), which compares and evaluates existing and proposed views potentially affected by the Project, including views of historic properties discussed below.

Area of Potential Effects

The study area for evaluating the potential impacts to historic and archaeological resources is

¹⁶ This EA/EIE generally refers to the Merritt Parkway as Route 15, consistent with the Project title. However, this section uses the roadway's historical name for consistency with the cultural discussion.



the Area of Potential Effects (APE) presented in the *Public Report, Phase I and II Cultural Surveys* (Appendix I1). When that report was initiated, the project included four Build Alternatives, two of which have since been removed from consideration. Accordingly, the APE has been adjusted to reflect the construction limits of Alternates 21D and 26 (Project Site) and extends to include geographic areas with the potential to be impacted by impacted by construction-related activities, such as temporary equipment staging and access areas. In addition, the APE includes areas that may be subject to indirect effects such as changes in traffic, noise levels, or visibility of resources that could affect the integrity of setting, feeling and association of historic properties (Figure 3.10.1).

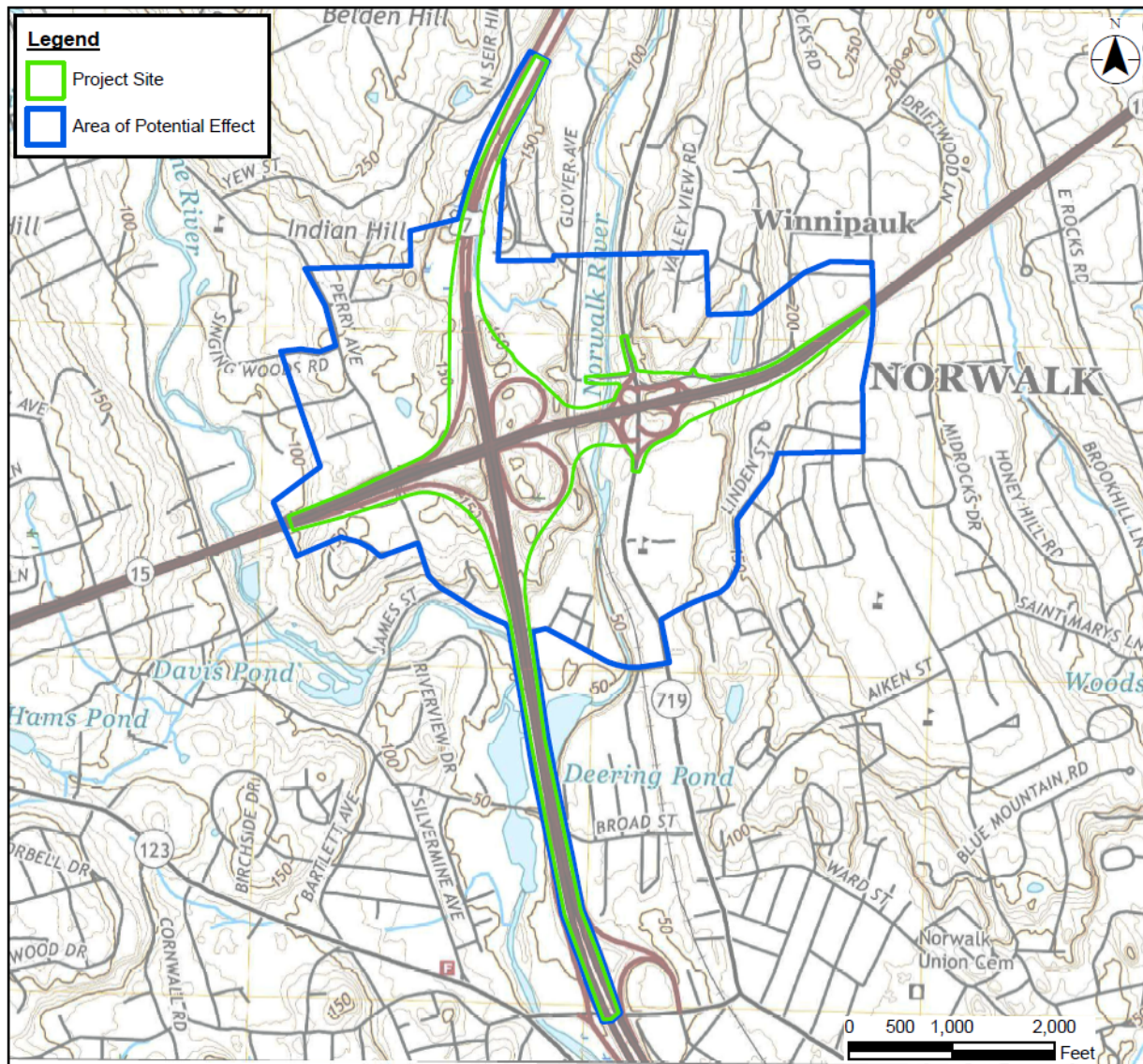


Figure 3.10.1 APE for Historic Properties



Archaeological and Above-Ground Historic Properties Surveys

The surveys conducted to identify and evaluate archaeological and above-ground historic properties are described in detail in *Public Report: Phase I and II Cultural Resource Surveys* (Appendix I1). The surveys were conducted between the Fall of 2017 and the Summer of 2019. The report contains a complete discussion of survey methodology and evaluation criteria.

3.10.1 Existing Conditions

This section describes existing conditions for archaeological resources and historic resources, inclusive of historic districts and bridges.

EXISTING CONDITIONS: ARCHAEOLOGICAL RESOURCES

One of the 45 Pre-European-contact-period Native American sites recorded in Norwalk identified by the Phase IA documentary research was found within the existing interchange between the Merritt Parkway and Main Avenue (the site is no longer intact). Its location speaks to the overall sensitivity of the area and suggests that other archaeological sites might lie in the immediate vicinity on comparable landforms that have undisturbed soils. Although the Phase IA walkover/soil probe testing determined that much of the APE has been disturbed, seven discrete areas of intact soils were identified and were assessed as having moderate to high potential for both Pre-contact Native American sites and historical-period sites. The shovel test pit testing in Phase IB identified ten archaeological sites within these areas of sensitivity. Two are relatively late historical-period refuse areas that were evaluated as not significant. The other eight are Pre-contact Native American sites.

As a result of the Phase II evaluation of the ten sites, three Pre-contact Native American sites, primarily dating to the Middle and Late Archaic periods (8,000 to 2,700 years ago), were recommended as NRHP-eligible. The sites are designated Site 103-57, Sites 103-58/103-60, and Sites 103-61/103-62 (in two cases, the Phase II testing determined that what had been identified in the Phase IB as two separate sites was in fact a single continuous site)¹⁷. The eligible sites produced a large number of artifacts, including many that are diagnostic of particular periods. Tools like hammerstones, projectile points, and stone cores and debitage (i.e., waste flakes from tool-making or resharpening) indicate the area was used for hunting, tool production and maintenance, and probable plant- and animal-resource processing (Appendix I1).

¹⁷ For the protection of archaeological resources, exact locations are not publicly released.



Figure 3.10.2 Artifacts recovered during archaeological testing (l.-r.): Hudson River chert scraper, quartz scraper, base to a Neville-type projectile point

The APE, overlooking the Norwalk River on a relict stream terrace, was an excellent location for Pre-contact-period peoples and was reoccupied seasonally for thousands of years. Seasonal fish runs would have drawn people to the river, and plant resources near the river marshes also offered food, medicine and reeds for mats as well as a plethora of animals and migratory waterfowl. The coast, with its abundant resources, was close. The river and coast were also routes of transportation for trade and communication with other Native groups.

The three sites that are recommended as NRHP-eligible were assessed as qualifying under Criterion D, the ability to yield information important in history or prehistory, because there is relatively little known about sites of this age and type in Norwalk and the vicinity. These ancient sites can provide important information about Pre-contact Native American occupation and use of landforms in the project vicinity over several thousand years. The sites have strong potential to yield additional important information about past lifeways.

EXISTING CONDITIONS: ABOVE-GROUND HISTORIC RESOURCES

Background research and field inspection identified the following above-ground historic properties within the APE:

- Merritt Parkway, listed as an historic district in the NRHP in 1991 at the national level of significance because it is an early and influential example of the parkway concept and because of its landscape-design qualities. Several bridges that are contributing elements to the Parkway were also identified: Perry Avenue Bridge (Bridge No. 719), Metro-North Bridge (Bridge No. 720), Norwalk River Bridge (Bridge No. 721), Main Avenue Bridge (Bridges Nos. 530A and 530B), and West Rocks Road Bridge (Bridge No. 722).
- Glover Avenue Bridge (Bridge No. 4135) is a two-span stone-arch bridge dating to 1912



(Figure 3.10.3). The bridge (formerly known as the Belden Hill Avenue Bridge) was determined to be eligible for the NRHP as part of the 1991 statewide historic bridge survey.



Figure 3.10.3 Glover Avenue Bridge (Bridge No. 4135), looking southeast.

- A small historic district, the Verneur Pratt Historic District, 114-116 Perry Avenue, listed in the NRHP in 2011, lies within the APE. The district includes a ca. 1788 Georgian-style house and a ca. 1800 barn/laboratory associated with microfilm-innovator Verneur Pratt.
- 2 Singingwoods Road is a mid-19th century wood-frame house that has been identified as potentially NRHP-eligible by CTSHPO.
- 129 Perry Avenue is a mid-19th century wood-frame house that has been identified as potentially NRHP-eligible by CTSHPO.
- Metro North Norwalk River Bridge (Bridge No. 8202R) is a 1905 two-span steel plate-girder bridge supported by stone masonry abutments and pier. The bridge could contribute to a potential linear historic district along the former Danbury & Norwalk line, as confirmed by CTSHPO.

Two other nearby historic districts, the Silvermine Center Historic District (listed on the NRHP in 2009, including an earlier individually listed property, Bridge No. 4130) and the Silvermine Avenue Historic District (approved for NRHP study by CTSHPO but not yet acted upon by the State Historic Preservation Review Board) lie outside the APE. Moreover, technical studies of visual impacts (Section 3.11), traffic (Section 3.1), air quality (Section 3.3), and noise (Section 3.4) indicate that impacts would not extend to these two historic districts, so no further consideration was given to them in the assessment of above-ground historic properties.



3.10.2 Potential Impacts

This section describes potential impacts to archaeological resources and historic resources. For further details, please refer to the Public Report: Phase I and II Cultural Resource Surveys included as Appendix I1 to this document.

ARCHAEOLOGICAL RESOURCES

Of the three archaeological sites that were recommended as NRHP-eligible in the Phase II testing, two would be directly impacted by Alternative 26. In contrast, Alternative 21D will not impact any of the three NRHP-eligible sites. These conclusions, summarized in Table 3.10.1, are based upon the current conceptual state of design. Further refinement of the alternatives in subsequent design phases could call for slight changes in alignments for the ramps and other new construction; more extensive cuts and fills; and additional temporary access roads, staging areas, drainage facilities, and utilities. In that case, any of the three eligible sites could be adversely affected.

Table 3.10.1 Anticipated Effects on NRHP-Eligible Archaeological Sites

| Site | Time Period | Alternative 21D | Alternative 26 | No Build |
|---------------------|------------------------------|-----------------|----------------|-----------|
| Site 103-57 | Middle/Late Archaic/Woodland | No Impact | Impact | No Impact |
| Sites 103-58/103-60 | Late Archaic | No Impact | Impact | No Impact |
| Site 106-61/103-62 | Middle Archaic | No Impact | No Impact | No Impact |

POTENTIAL IMPACTS: ABOVE-GROUND HISTORIC PROPERTIES

Merritt Parkway: The fundamental historic character of the Merritt Parkway is that its design provided the motorist with the experience of driving through a park-like setting. The two-lane width of the original Parkway's travel directions allowed close-up views of the landscaping. Potential widening of the Parkway with additional lanes would cause the landscaping to appear further from a traveling vehicle, resulting in the motorist driving past a park-like setting rather than through one. By dividing the Parkway into two travel directions with a generous planted median enhances the park-like experience; reducing or eliminating the median transforms the original two-lane surroundings to four or even more lanes, more like a modern-day interstate.

The detailed inventory, prepared with the Phase I and II Cultural Resource Surveys, compiled at five separate vantage points, indicated this section of the Parkway is not the most intact portion of the Merritt Parkway NRHP Historic District. Since the original construction of the Parkway, added lanes, inconsistent signage and guiderail treatments, reduction of the median, modern development in close proximity to the right-of-way, and inappropriate, lost, or overgrown plantings have all affected its historic character. Nevertheless, some sense of its park-like essence remains, particularly at the eastern end of the Project Site and dispersed throughout in the form of rock outcroppings, plant massing, and lawn parcels.



Both Alternatives 21D and 26 may have the effect of diminishing what remains of the Parkway's historic landscape characteristics. Although specific effects will not be known until the Project proceeds to a more detailed level of design, at this stage it appears that Alternative 26 would have a somewhat lesser impact because the added lanes associated with new ramps are shorter than those required by Alternative 21D. This is the only substantial difference between Alternatives 21D and 26.

Perry Avenue Bridge: The Perry Avenue Bridge, a single-span, rigid-frame concrete bridge with an arched opening for the roadway, is a contributing resource to the Merritt Parkway NRHP historic district. Two concrete steel-girder bridges constructed as part of the 1990 interchange project flank the structure and already have a significant visual impact on the resource's integrity of setting. Alternatives 21D and 26 would not directly impact the bridge, and neither would adversely affect the bridge's already-compromised setting.

Metro-North Bridge: The Metro-North Bridge, a rigid-frame concrete bridge that carries the Merritt Parkway over the MNR line (at that time, the New York, New Haven & Hartford Railroad), is a contributing resource to the Merritt Parkway NRHP historic district. At present, the bridge is readily visible from Glover Avenue. As currently planned, both Build Alternatives would retain the bridge but would result in an indirect adverse effect as construction of a new ramp would obscure the bridge from view from Glover Avenue, diminishing its integrity of setting.

Norwalk River Bridge: The Norwalk River Bridge, a three-span concrete arch bridge, is a contributing resource to the Merritt Parkway NRHP historic district. At present, the public has a clear view of the bridge's north elevation from Glover Avenue. As currently planned, both Build Alternatives would retain the bridge but would result in an indirect adverse effect as construction of a new ramp would obscure the bridge from view from Glover Avenue, diminishing its integrity of setting.

Main Avenue Bridge: The Main Avenue Bridge, a stone-faced concrete structure consisting of twin spans, each carrying two lanes of traffic over Main Avenue (Route 719), is a contributing resource to the Merritt Parkway NRHP historic district. Alternatives 21D and 26 would both replace this bridge, resulting in a direct adverse effect (Figure 3.10.4).



Figure 3.10.4 Main Avenue Bridge (Bridge Nos. 560A and 560B), looking north.

West Rocks Road Bridge: The West Rocks Road Bridge over the Merritt Parkway is a single-span steel rigid-frame structure built in 1938 and is a contributing resource to the Merritt Parkway NRHP historic district. Neither of the alternatives would directly affect the bridge, and since all anticipated roadway changes terminate well west of the bridge, there would be no effect on the bridge's integrity of setting.

Verneur Pratt Historic District: The District would not be affected by Alternative 26. Alternative 21D would bring the interchange slightly closer to the rear (east) boundary of the district by creating a new ramp leading from Route 7 southbound to Route 15 southbound, but the visual effect of the closer proximity of the interchange would not result in a diminishment of the district's integrity of setting.

Glover Avenue Bridge: The Glover Avenue Bridge has been determined individually eligible for inclusion in the NRHP. Alternatives 21D and 26 would replace the bridge, resulting in a direct adverse effect.

2 Singing Woods Road: Alternatives 21D and 26 would not have an impact on this property.

129 Perry Avenue: Alternatives 21D and 26 would not have any effects on this property.

Metro-North Norwalk River Bridge (Bridge No. 8202R): Alternatives 21D and 26 would not have any effects on the bridge.

Impacts on historic properties are summarized in Table 3.10.2.



Table 3.10.2 Anticipated Effects on Above-Ground Historic Properties

| Historic Property | Alternative 21D | Alternative 26 | No Build |
|--|---------------------------------|---------------------------------|------------|
| Merritt Parkway Historic District (Designed Landscape) | Adverse Effect* | Adverse Effect* | No Effect* |
| Perry Avenue Bridge | No Effect | No Effect | No Effect |
| Metro-North Bridge | Adverse Effect (visual/setting) | Adverse Effect (visual/setting) | No Effect |
| Norwalk River Bridge | Adverse Effect (visual/setting) | Adverse Effect (visual/setting) | No Effect |
| Main Avenue Bridge | Adverse Effect (replacement) | Adverse Effect (replacement) | No Effect |
| West Rocks Road Bridge | No Effect | No Effect | No Effect |
| Verneur Pratt Historic District | No Effect | No Effect | No Effect |
| Glover Avenue Bridge | Adverse Effect (replacement) | Adverse Effect (replacement) | No Effect |
| 2 Singing Woods Road | No Effect | No Effect | No Effect |
| 129 Perry Avenue | No Effect | No Effect | No Effect |
| Metro-North Norwalk River Bridge | No Effect | No Effect | No Effect |

*Both Alternative 21D and Alternative 26 have the potential to impact character-defining features of the Parkway if the final designs include widening of the roadway, additional lanes, and/or reduction of existing medians or other planted areas. The No Build Alternative would not affect the Parkway, nor would it present any opportunities for remediating past circumstances that have diminished the Parkway’s defining characteristics.

3.10.3 Mitigation Measures

Mitigation of impacts for both archaeological and above-ground historic properties have been addressed in a MOA between ACHP, FHWA, CTSHPO, and CTDOT. In addition to these agencies, the Section 106 Consulting Parties were invited to participate in the preparation of the MOA process and formulation of mitigation measures. Of these, eight requested to be Concurring Parties¹⁸. FHWA and CTDOT continued to engage Consulting Parties and Interested Parties who

¹⁸ The Section 106 concurring parties are: Connecticut Chapter of American Society of Landscape Architects, Merritt Parkway Conservancy, National Trust for Historic Preservation, Norwalk Association of Silvermine Homeowners, Norwalk Historical Commission, Norwalk Historical Society, Norwalk Preservation Trust, and Preservation Connecticut.



did not opt to be Concurring Parties and kept them informed of developments in the Section 106 process.

Consultation meetings to discuss mitigation measures with the Concurring Parties/Tribes were held on September 29, 2022 and March 27, 2023. Comments provided by parties and at the consultation meetings were evaluated for inclusion in the MOA as agreed between the Consulting Parties/Tribes. The MOA includes stipulations for minimizing impacts on the Merritt Parkway's landscape features and for context-sensitive design of the new bridges that would replace the Main Avenue Bridge and the Glover Avenue Bridge.

Finally, the MOA will stipulate that in the final design for the project, CTDOT shall follow, as far as possible, the guidelines in "Merritt Parkway Landscape Assessment Guidelines" (March 2020). The guidelines anticipate opportunities for remediating past circumstances that have diminished the Parkway's defining characteristics. Acceptance of modifications by the Concurring Parties/Tribes was confirmed prior to finalization and signature of the MOA, which is provided in Appendix P.

3.11 VISUAL IMPACT ASSESSMENT

This section summarizes the Visual Impact Assessment (VIA) of the Project. The assessment identifies the Project area's visual character, key views, and viewer-group sensitivities. Project effects on viewer groups with high sensitivity to visual changes (especially residents and pedestrians), and new elements that would affect the setting of historic properties, were of particular concern. Development of the study area, or Area of Visual Effect (AVE) included desktop review, field observations, and topographical modeling of possible visual impacts resulting from altered Route 7 and Merritt Parkway¹⁹ entrance and exit ramps and modifications to surface streets including Main Avenue. Boundaries were determined by several constraining factors, including physical constraints of landforms which limit views, along with additional sightline restrictions of buildings and vegetation. The physical limitations of human sight, in terms of viewers' location, proximity, and lighting conditions, were also taken into account. Virtual and in-person site visits were conducted to review the visual character of the area. The assessment was conducted in conformance with FHWA *Guidelines for the Visual Assessment of Highway Projects* (2015). The VIA report is included in Appendix J.

Affected viewer groups in these areas would primarily include residents, retail and office workers and roadway users (motorists, pedestrians, bicyclists). Photo locations for the VIA were selected to represent historic, environmental, and neighborhood character resources. The AVE and selected photo locations are shown relative to the No Build and Build Alternative layouts in

¹⁹ This EA generally refers to the Merritt Parkway as Route 15, consistent with the Project title. However, this section uses the roadway's historical name for consistency with the historical discussion.



Figure 3.11.1 (No Build/Alternative 26) and Figure 3.11.2 (No Build/Alternative 21D).

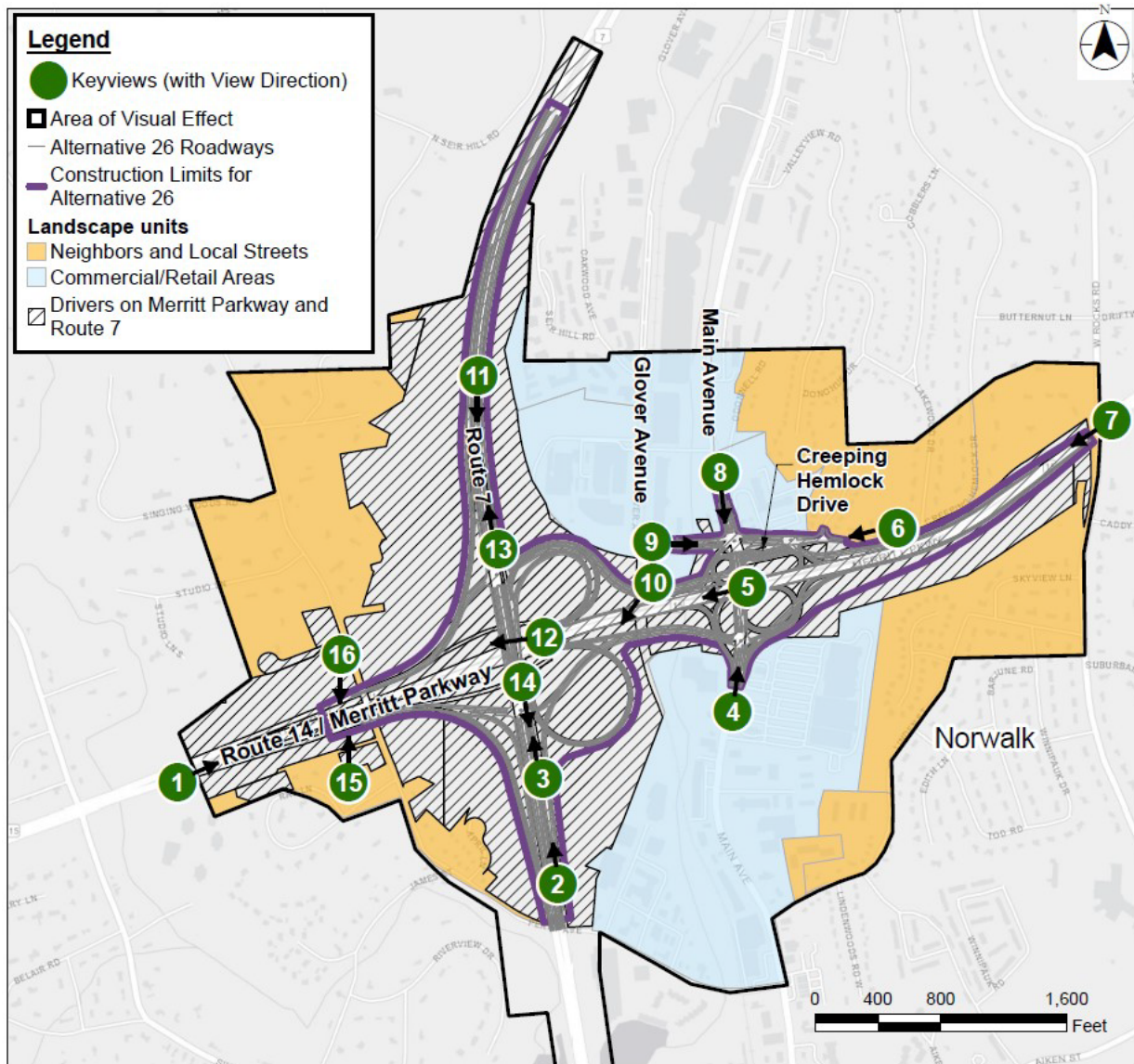


Figure 3.11.1 VIA Viewpoint Locations - Alternative 26

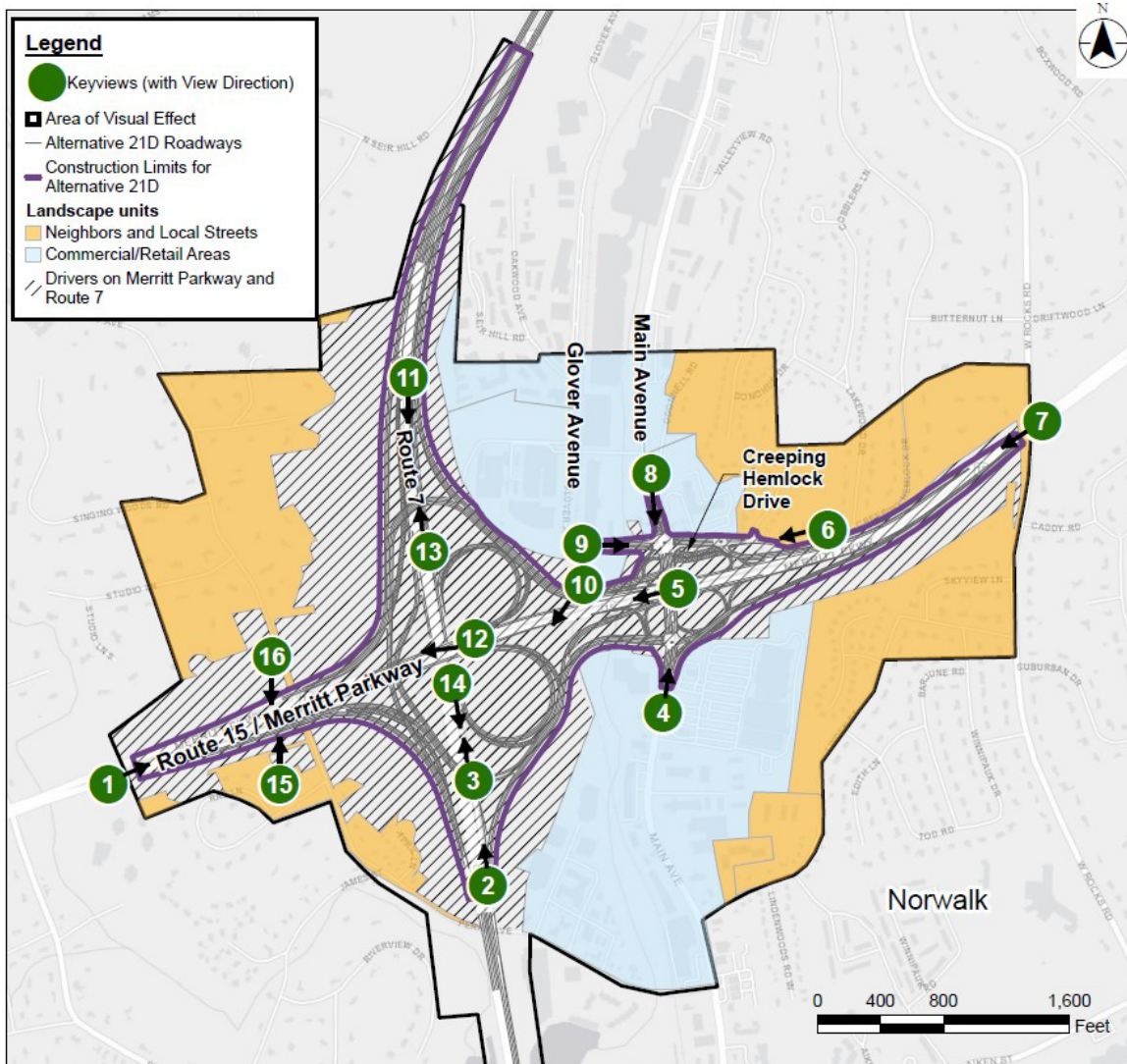


Figure 3.11.2 VIA Viewpoint Locations - Alternative 21D

3.11.1 Existing Conditions

Visual Character and Quality of the AVE

The visual character of the AVE is of a suburban/semi-rural nature with built-up commercial and retail zones, typical suburban residential neighborhood developments and semi-rural wooded areas that are older and less densely populated. The visual character exhibited by both the Merritt Parkway and Route 7 within the AVE is of a limited access, multi-lane, high speed roadway located within a rolling, wooded landscape with occasional views to the surrounding context. The visual character specific to the Merritt Parkway, with its unique bridge architecture, horizontal and vertical alignment and programmed landscape views from the



Roadway, contribute to it being listed on the NRHP (Figure 3.11.3).



Figure 3.11.3 Typical Merritt Parkway Visual Character

Route 7 within the AVE has the visual character typically associated with a limited access interstate highway (Figure 3.11.4).



Figure 3.11.4 Typical Route 7 Visual Character

Substantial rock outcrops and changes of grade exist along Route 7 and within the cloverleaf ramps of the Merritt Parkway/Route 7 interchange.

Viewer Groups and Viewer Exposure

Four major viewer group types have been identified based on observations of land use and circulation patterns. While some of these viewer groups share similar if not identical views, the groups differ in their degree of sensitivity to the surrounding views due to the viewer's activity, awareness and duration of viewing time. These viewer groups include:

- Motorists on the Merritt Parkway and Route 7
- Motorists on Local Streets



- Residents and Pedestrians/Bicyclists
- Retail, Commercial and Office Workers and Customers.

These viewer groups and their visual context are described in more detail in Appendix J.²⁰

Visual Environment of Landscape Units

FHWA guidelines [23] defines Landscape Units as, “Defined areas within the AVE that have similar visual features and homogeneous visual character and frequently, a single viewshed; an ‘outdoor room.’ Typically, this is the spatial unit used for assessing visual impacts.” This VIA identifies three landscape units:

- The roadways and the immediate spaces flanking the Merritt Parkway or Route 7;
- Neighborhoods and local streets immediately surrounding the Project Site; and
- Commercial and Retail Areas adjacent to the Project Site.

Appendix J provides an analysis of each of the three landscape units, including for each unit:

- a general description of the unit;
- the viewer group(s) considered;
- the viewer’s perspectives (viewer position);
- the features viewed by each group; and
- comments on the quality of the view.

Of note, the existing visual environment of the Parkway which constitutes the No Build Alternative includes views that have been altered since the Parkway was originally conceived and constructed. Many important viewsheds that were part of the Parkway’s original visual character have changed since the roadway’s creation. For example, within the AVE, the addition of the Merritt View office building and the One Glover Apartments residential building into the immediate landscape of the Parkway have altered and degraded the visual character of the road from its original conception. However, while the Merritt Parkway landscape context has been altered since its high point in the 1950s, the overall visibility of several of the noteworthy natural and man-made features that originally comprised the Parkway’s character are still intact and contributing to the visual character of the Parkway.

²⁰ Riders on the MNR trains were not included as a viewer group. The existing MNR corridor is heavily vegetated and the views beyond the Right-of-Way are limited. Neither alternative would have a direct, head-on view of the proposed alternative. Rather, the rider will see a momentary sideways view of the project area. Viewers within the MNR Merritt 7 station area would have no views of either Build Alternative.



3.11.2 Potential Impacts

No Build Alternative

Under the No Build Alternative, the Project would not be constructed and potential Project-related impacts to view quality within the AVE would not occur. This is not to suggest that the existing visual landscape would not change or evolve over time as the natural patterns of societal development and progress continue. The No Build Alternative simply means that there would be no project-induced changes to the existing visual landscape. Under the No Build Alternative, Project-related mitigation to enhance the landscape and scenic resources would not be necessary.

Build Alternatives

To better communicate the potential impacts of the Build Alternatives compared to existing (No Build) conditions, CTDOT commissioned the creation of a virtual 3-D model of the Project. The model combined current topographical survey information with aerial photography of the corridor to depict existing conditions. 3-D simulations of Alternatives (21D and 26) were then prepared for virtual viewing within the model. Once completed, the model was able to assist evaluation of Project alternatives by analysts as well as the public in several ways:

- Viewers were able to pick familiar viewpoints to see and “ground truth” the model based on their own experience.
- Because the existing context and the two design alternatives were modeled in three dimensions, viewers had the capability to select a viewpoint anywhere within the project Site and then rotate 360° to look around in any direction that might be of interest to them. “Build” vs. existing conditions from that viewpoint could then be readily seen and analyzed.
- The model also had the ability to be viewed at multiple eye heights as the viewer desired. The viewer could see what a proposed alternative would look like for a viewer standing on the ground (e.g. five-foot eye height) and then see it from a low bird’s eye perspective or high flyover angle for a more “global” view.

The ability to select desired viewpoints enabled resident stakeholders to readily assess how an alternative might or might not potentially impact their particular neighborhood. Use of the model offered a powerful tool to further the public’s understanding of concepts, issues and spatial relationships that may not be that easy to interpret based only on engineering plans and sections.

Examples of conceptual views of the Build Alternatives as generated by the model (prior to landscaping and detailing) are provided in Figure 3.11.5 and Figure 3.11.6. Both Build Alternatives propose widening Main Avenue to provide turning lanes and improved bicycle and



pedestrian facilities on Main Avenue and therefore, both Build Alternatives would include the full replacement of both Merritt Parkway mainline structures over Main Avenue. Both Build Alternatives propose replacement of the Glover Avenue bridge over the Norwalk River along with the realignment of Creeping Hemlock Drive, thus necessitating substantial rock cut back.

Alternative 21D (Figure 3.11.5) can be considered the more “built out” of the two Build Alternatives as it includes a new fly-over bridge over Route 7 that requires substantial rock cuts that Alternative 26 does not have, along with all new connecting ramps to facilitate all the required movements between the Merritt Parkway, Route 7 and Main Avenue in a traditional highway interchange configuration.

Alternatively, Alternative 26 (Figure 3.11.6) takes a less typical “highway design improvement” approach to making these connections with the conversion of Route 7 from a typical high-speed interstate highway configuration with standard acceleration and deceleration loop ramps to an at-grade urban arterial with intersections and traffic signals.

Overall, Alternative 21D imparts more noticeable visual impact as compared to Alternative 26 because it includes more constructed features that add to the overall “highway” feel of the AVE. While both build alternatives impart various visual impacts in certain areas, some in common with each other, Alternative 26 has fewer ramps and bridges than Alternative 21D so the cumulative visual impact to the AVE can be considered lower than that of Alternative 21D.



Figure 3.11.5 Build Alternative 21D Conceptual View



Figure 3.11.6 Build Alternative 26 Conceptual View



Potential Impacts of Project on Viewpoints from within the Landscape Units

For each Build Alternative, sixteen viewpoints have been identified (Figure 3.11.1 and Figure 3.11.2) as important points-of-view from where potential changes to the existing visual conditions should be evaluated. These viewpoints represent the most critical views for the various viewer groups. It is noted that the existing visual environment of the Parkway of today which constitutes the No Build Alternative include views that has been altered since the Parkway was originally conceived and executed.

Many important viewsheds that were part of the Parkway's original visual character have been changed since the roadway's creation. Specifically, within the Project area, the addition of the Merritt View office building and the One Glover Apartments residential building into the immediate landscape of the Parkway have altered and degraded the visual character of the road from how it was first envisioned. The potential impacts of the Project upon viewers from within the three Landscape Units and the sixteen selected viewpoints are anticipated to vary with sensitivity to the view and the extent that the view would be modified.



Figure 3.11.7 Existing and Proposed Alternative 26 views at Viewpoint #2

Figure 3.10.1 Appendix J describes the potential view for both of the Build Alternatives from each viewpoint location. It then describes potential visual impacts caused by that alternative at that location for each of the view groups previously described above. Included in the appendix are illustrations which depict the effects of the Project on each viewpoint. An example, showing existing and proposed conditions for Viewpoint #2 is provided in Figure 3.11.7. These renderings, combined with the technical documentation in Section 3.8 (Historic & Archeological Resources), provide the basis for determining the potential visual impact on each viewpoint. The results are summarized in Table 3.11.1.

For the purposes of this Project's Visual Impact Assessment's evaluation and assessment of the potential for a visual impact, the following definitions apply:



- A positive impact is a change to the existing visual environment’s character that improves, enhances or upgrades the overall visual character of the AVE. It is not simply avoiding a degradation of a view shed or visual resource but rather, it improves or betters the existing condition. For example, the change of Route 7 from the look of an interstate to one of a simpler urban arterial can be seen as an improvement to the area’s visual character.
- A negative impact is a change that causes a degradation to and/or a lessening of the overall visual character of the affected area in question. For example, the change to the visual resource of the existing Merritt Parkway bridge over Main Avenue is removed and a much larger bridge is constructed in its place is considered a negative visual impact.

Table 3.11.1 summarizes identified beneficial and adverse visual impacts. Viewpoints where impacts were none, neutral, or minor are not included here, but are discussed in Appendix J. Numbers in parentheses refer to the viewer groups or historic structures affected:

- (a) Motorists on the Merritt Parkway and Route 7
- (b) Motorists on Local Streets
- (c) Residents and Pedestrians
- (d) Retail, Commercial and Office Workers and Customers
- (e) Historic Structures

Table 3.11.1 Summary of Visual Impacts by Key View Number and Alternative

| # | Alt | Beneficial Impacts | Adverse Impacts and Affected Viewer Groups / Historic Structures |
|---|-----|--|---|
| 1 | 21D | - | Additional pavement for widened bridge over Perry Avenue (a). New exit ramp one lane closer to Rae Lane – vegetative buffer remains (c) |
| | 26 | - | - |
| 2 | 21D | - | - |
| | 26 | More modestly scaled, at-grade urban arterial roadway (a) | - |
| 4 | 21D | Diminished views of CTDOT staging area (2). Addition of sidewalks/bike lanes (c). Improved landscape (d) | Widening of Main Avenue (b,c,d). Removal of Main Avenue Bridge (c,d,e). |
| | 26 | Diminished views of CTDOT staging area (2). Addition of sidewalks/bike lanes (c). Improved landscape (d) | Widening of Main Avenue (b,c,d). Removal of Main Avenue Bridge (c,d,e). |



| # | Alt | Beneficial Impacts | Adverse Impacts and Affected Viewer Groups / Historic Structures |
|----|-----|---|--|
| 5 | 21D | - | Widening of the Parkway, addition of new on-ramp connection, and alterations to Main Avenue Bridge's parapet (a). Alteration of Main Avenue bridge parapet. |
| | 26 | - | Widening of the Parkway, addition of new on-ramp connection, and alterations to Main Avenue Bridge's parapet (a). Alteration of Main Avenue bridge parapet. Less pronounced than 21D due to shorter length of ramps. |
| 6 | 21D | - | Addition of 5-lane road with substantial rock removal and elimination of buffer between Creeping Hemlock Road and Parkway (b,c). |
| | 26 | - | Addition of 5-lane road with substantial rock removal and elimination of buffer between Creeping Hemlock Road and Parkway (b,c). |
| 8 | 21D | New sidewalks (c). | - |
| | 26 | New sidewalks (c). | - |
| 9 | 21D | - | Removal of NRHP listed twin arch masonry structure bridge over Norwalk River (b,c,d,e). |
| | 26 | - | Removal of NRHP listed twin arch masonry structure bridge over Norwalk River (b,c,d,e). |
| 10 | 21D | - | Blocked view of Parkway mainline bridge structure (b). Addition of a new ramp structure (c). Complete obstruction of views of Parkway mainline bridge structure (e) |
| | 26 | - | Blocked view of Parkway mainline bridge structure (b). Addition of a new ramp structure (c). Complete obstruction of views of Parkway mainline bridge structure (e) |
| 11 | 21D | - | - |
| | 26 | More modestly scaled, at-grade urban arterial roadway (a) | - |
| 12 | 21D | - | Removal of rock outcrops and additional pavement for widening bridge over new ramps (a) |
| | 26 | - | Additional pavement for widening bridge over new ramps (a) |
| 13 | 21D | - | Additional pavement for widening bridge over new ramps (a) |



| # | Alt | Beneficial Impacts | Adverse Impacts and Affected Viewer Groups / Historic Structures |
|----|-----|---|--|
| | 26 | More modestly scaled, at-grade urban arterial roadway (a) | - |
| 14 | 21D | - | New flyover highway ramp (a) |
| | 26 | - | Rock outcrop removal (a) |

3.11.3 Mitigation Measures

Mitigation of visual impacts have been addressed in a MOA between ACHP, FHWA, CTSHPO, and CTDOT. In addition to these agencies, the Section 106 Consulting Parties were invited to participate in the preparation of the MOA process and formulation of mitigation measures. Of these, eight requested to be concurring parties²¹. FHWA and CTDOT continued to engage consulting parties and interested parties who did not opt to be concurring parties and kept them informed of developments in the Section 106 process.

Consultation meetings to discuss mitigation measures with the Concurring Parties/Tribes were held on September 29, 2022, and March 27, 2023. Comments provided by parties and at the consultation meetings were evaluated for inclusion in the MOA as agreed between the Consulting Parties/Tribes. The MOA includes stipulations for minimizing impacts on the Merritt Parkway’s landscape features and for context-sensitive design of the new bridges that would replace the Main Avenue Bridge and the Glover Avenue Bridge.

Acceptance of modifications by the Concurring Parties/Tribes was confirmed prior to finalization and signature of the MOA, which is provided in Appendix P.

3.12 MERRITT PARKWAY LANDSCAPE (SCENIC BYWAY)

This section addresses the scenic landscape of the Merritt Parkway.²²

Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470f), requires that federally funded or permitted projects take into account the effects of their undertakings on properties, such as the Merritt Parkway, that are listed in or eligible for listing

²¹The Section 106 concurring parties are: Connecticut Chapter of American Society of Landscape Architects, Merritt Parkway Conservancy, National Trust for Historic Preservation, Norwalk Association of Silvermine Homeowners, Norwalk Historical Commission, Norwalk Historical Society, Norwalk Preservation Trust, and Preservation Connecticut.

²² This EA generally refers to the Merritt Parkway as Route 15, consistent with the Project title. However, this section uses the roadway’s historical name for consistency with the historical discussion.



in the NRHP.

The study area for evaluating the potential impacts to historic resources includes the Project Site and extends to include areas with the potential for impacts to traffic, noise, visual resources, and resources impacted by construction-related activities, such as temporary equipment staging and access areas (

Figure 3.12.1).

In addition, the study area includes locations that may be subject to indirect effects arising from project activities that could impact the integrity of setting, feeling and association of historic resources, such as the visual effect created by the construction of new access ramps. The study area for the scenic byway matches those for Historic Resources and the VIA.

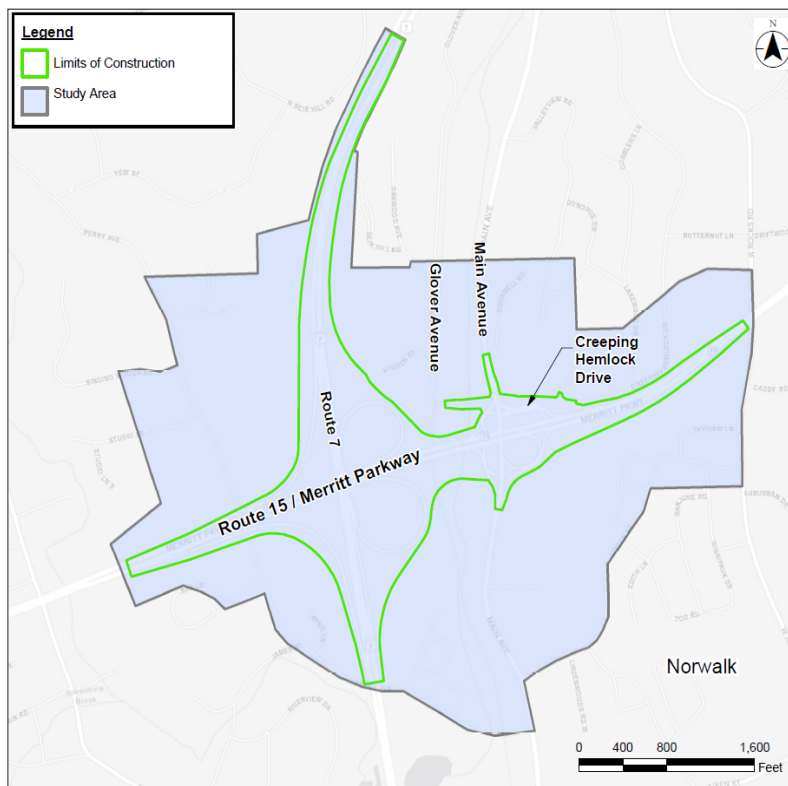


Figure 3.12.1 Study Area for Scenic Byway

3.12.1 Existing Conditions



The Merritt Parkway is a designated Connecticut Scenic Road and National Scenic Byway²³ extending 37 miles from the New York state line in Greenwich to the Housatonic River in Stratford. Constructed between 1934 and 1942 to relieve commuter congestion on the Boston Post Road, the Parkway is a divided four-lane road with limited access. The Parkway features unique aesthetic elements, notably the original bridges, each with their own architectural design. Both the Parkway's architectural design and scenic setting have contributed to its listing in the NRHP.

Preservation of the Parkway is supported through the efforts of CTDOT as well as other state and federal agencies. In addition, the MPC is a nonprofit organization working in partnership with other stakeholders to revitalize and celebrate the Merritt Parkway. In order to monitor compliance with the Merritt Parkway Guidelines, CTDOT also created the Merritt Parkway Advisory Committee (MPAC), which currently includes representatives of the following entities: FHWA; CTDOT; the Connecticut State Historic Preservation Office; Preservation Connecticut; the Connecticut Chapter of the American Society of Landscape Architects; the Connecticut Society of Architects; Western Connecticut Council of Governments; the Connecticut Metropolitan Council of Governments; each of the eight towns along the Parkway corridor; and the MPC.

In 1994 the Merritt Parkway Working Group prepared the Merritt Parkway Guidelines for General Maintenance and Transportation Improvements (Guidelines)²⁴ [24], which provides recommendations for design, maintenance, and review of Parkway structural elements, landscape, and facilities. The Guidelines emphasize the historic, scenic, and natural elements of the Parkway.

Additional recommendations for the landscape are provided in the *Merritt Parkway Landscape Master Plan* prepared for CTDOT in 1994 [25], provided in Appendix I4. These guidelines inform the design principles and assessment criteria defined herein that are referenced in determining impacts and potential mitigation required for each alternative in the EA.

The portion of the Merritt Parkway within the Project Site has undergone a myriad of modifications since the Parkway's original opening and the documented pinnacle era of the Parkway's landscape, circa 1950 -1960 (Figure 3.12.2).

²³ The National Scenic Byway program was established by Congress in 1991 and is administered by FHWA to preserve and protect scenic but often less-traveled roads and promote tourism and economic development. https://www.fhwa.dot.gov/hep/scenic_byways

²⁴ Available at: http://dot.si.ct.gov/dotsi/lib/dotsi/publications/hywdesign/merrit_parkway_guidelines_for_general_maintenance_&_transpos.pdf



The corridor has experienced development encroachment, loss and degradation of landscape planting hierarchy and diversity, disrupted and abruptly terminated view corridors, and alteration of materials inconsistent with the historic character of the Parkway. Major areas of alteration and past construction, visible today, present opportunities for landscape rehabilitation.



Figure 3.12.2 Aerial view of Merritt Parkway in ca 1940 (upper) and 2019 (lower).



Appendix I2 provides photographic examples of intact and compromised features of the existing Merritt Parkway and adjacent access and egress ramps in the Project Site.

3.12.2 Potential Impacts

In 1996, the NPS released *Guidelines for Rehabilitating Cultural Landscapes* [26], which defines approach strategies when considering work within cultural landscapes. For this Project, rehabilitation is an appropriate course of action. The Project purpose and need recognizes that alterations to the Parkway, which is both a transportation corridor and a historic designed cultural landscape, are needed to assure the facility’s continued use. To do so consistent with the NPS Rehabilitation guidelines, alterations to the landscape may not radically change, obscure, or destroy character-defining spatial organization and land patterns or features and materials. When the Merritt Parkway was listed in the NRHP, consideration of cultural landscapes was a relatively new concept in historic preservation. Drawing guidance from sources at the national, state, and local level, this section articulates the character-defining features of the Merritt Parkway’s designed cultural landscape as follows. It recognizes the original design intent and also notes original design elements that have been compromised.

Character-Defining Features

The character defining features and attributes of the historic designed landscape, defined below, were identified to document and summarize potential impacts of the selected Project Alternatives to the Merritt Parkway cultural landscape (Table 3.12.1). They are categorized under key topic headings that emerged from the September 17, 2018 PAC and resident workshop (Appendix A3) and envelop the intent of the 1994 Master Plan goals.

Table 3.12.1 Cultural Landscape Character Defining Features

| Feature | Attributes |
|--|--|
| Views within, from, and to Parkway (all user groups) | Varied spatial organization with focal points and park-like experiences |
| | Views of ramp roadside landscape exhibit park-like characteristics |
| | Bridge structures are featured, yet integrated into planting design, vegetation, and topography |
| | Distant landscape views beyond right-of-way (pastoral, architecture, scenic vistas) |
| Vegetation and planting design | Width of roadside adequate for planting and creating and/or maintaining naturalized landscape character |
| | Frame views, complement bridge structures, and screen unsightly views |
| | Non-invasive species and palette complementary of Parkway setting |
| | Seasonal interest and clusters of native and specimen plant species that provide contrast between ground plane, understory, and canopy |



| Feature | Attributes |
|--------------------------|--|
| | Preserves existing vegetation that provides aesthetic, buffering and park-like value |
| Topography | Built road-sides transition into naturalized landscape |
| | Slight to moderate slopes on road-side conducive to views, planting, and landscape maintenance |
| Aesthetic Rehabilitation | Rehabilitate remnant, scarred and cluttered right-of-way areas to enhance Parkway character |
| | Engineered components (e.g. stormwater measures) do not detract from existing Parkway features |
| Circulation | Roadway footprint does not diminish existing Parkway character |
| | Fences and barriers do not detract from park-like and naturalized features |
| Amenities | Design vocabulary is consistent and recognizable as the Parkway |
| Sustainability | Planting areas provide suitable space and soil volume to allow for adequate plant growth |
| | Park-like landscape with ease of access for sustained maintenance |
| Natural features | Landscape reveals natural resources (eg. Watercourses, woodlands, rocky ledge) |
| Safety | Vegetation, planted areas and amenities do not obstruct critical sight lines |
| | Planting design and vegetated areas conform to CTDOT safety guidelines |

These criteria establish a framework for the assessment of existing site conditions and the two Build Alternatives in the context of the Merritt Parkway’s historic landscape character.

For this assessment, the No Build condition is represented by the current condition, depicted in Figure 3.12.2. Figure 3.12.3 and Figure 3.12.4 depict the location of selected impacts for Alternatives 21D and 26. Each figure is followed by a table that lists selected impacts whose locations are shown by letter references in the figures. Appendix I2 includes detailed evaluations of the No Build and Build Alternatives per each of the design criteria.

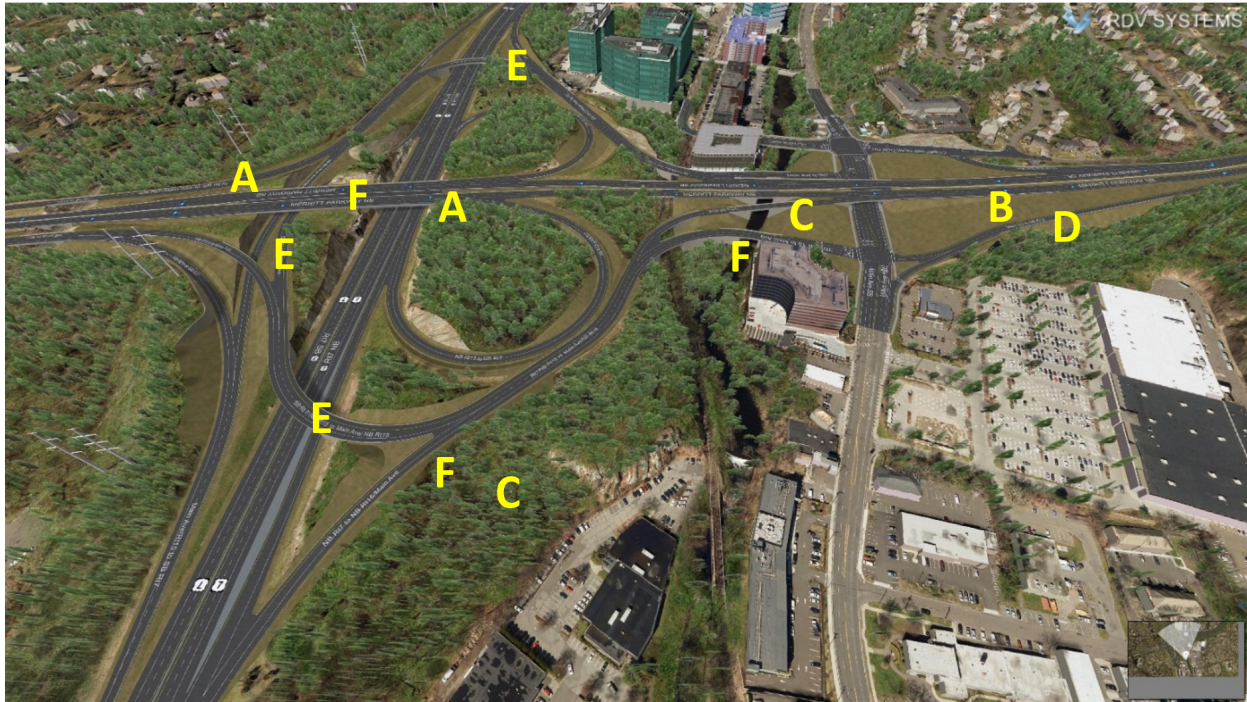


Figure 3.12.3 Design Criteria Impacts - Alternative 21D

| # | Resource | Impacts |
|---|--------------------------------|---|
| A | Views | Lane encroachment diminishes Parkway experience |
| | | Footprint of ramps fragment landscape |
| | | Distant landscape views from Parkway are diminished |
| B | Vegetation and planting design | Width of roadside adequate for planting and creating and/or maintaining naturalized landscape character |
| C | Topography | Built road-sides transition to naturalized landscape |
| | | Steep slopes limit planting impact |
| D | Aesthetic Rehabilitation | Rehabilitate remnant, scarred and cluttered right-of-way areas to enhance Parkway character |
| E | Circulation | Roadway footprint diminishes Parkway character |
| F | Natural features | Landscape reveals natural resources (watercourses, woodlands, rocky ledge) |

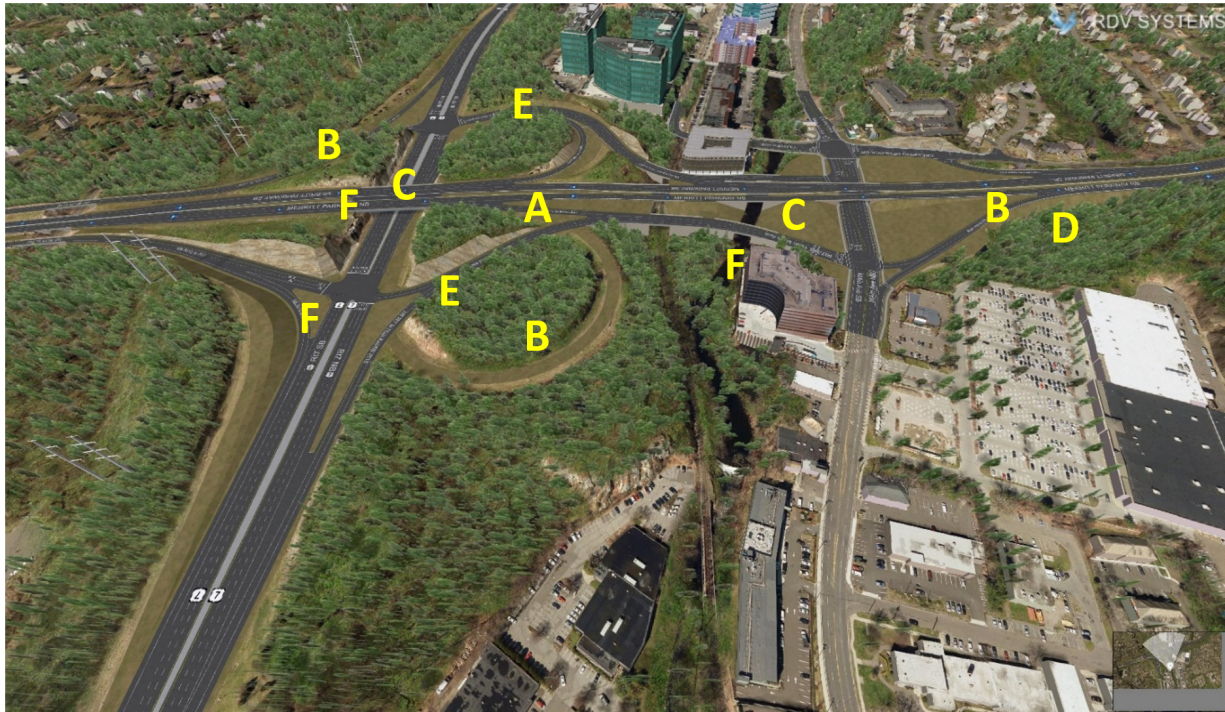


Figure 3.12.4 Design Criteria Impacts - Alternative 26

| # | Resource | Impacts |
|---|--------------------------------|---|
| A | Views | Lane encroachment diminishes Parkway experience |
| | | Compact alignment limits structures in Parkway viewsheds |
| B | Vegetation and planting design | Width of roadside adequate for planting and creating and/or maintaining naturalized landscape character |
| | | Preserves existing vegetation that provides aesthetic, buffering, and park-like values |
| C | Topography | Built road-sides transition to naturalized landscape |
| | | Steep slopes limit planting impact |
| D | Aesthetic Rehabilitation | Rehabilitate remnant, scarred and cluttered right-of-way areas to enhance Parkway character |
| E | Circulation | Roadway footprint does not diminish existing Parkway character |
| F | Natural features | Landscape reveals natural resources (watercourses, woodlands, rocky ledge) |

In summary, potential effects to the Merritt Parkway landscape vary between alternatives and hinge greatly on sustaining landscape attributes that have retained their integrity and rehabilitating the existing landscape and creating new features that contribute to the function



and historic character of the Parkway. Landscape, as referred to here, relates to views, vistas, planting design, topography, roadway amenities, natural features, and the sustainability and safety implications of these components. Alternative 26's compact nature provides the greatest opportunity to preserve and enhance natural features and systems, integrate the roadway into a park-like setting with appropriate topography and planting clusters, reduce maintenance, and design access and egress ramps as Parkway amenities.

The Project's purpose and need cannot be fulfilled without adding ramps and lanes to the study area (Merritt Parkway), including the reconfiguration of the existing interchange between the Parkway and Main Avenue. As described in Appendix I2, CTDOT, with substantial input from the public, developed a set of landscape guidelines that would be implemented in the final design ("Merritt Parkway Landscape Assessment Guidelines," March 2020) for this project. Key design principles, detailed in Appendix I2, include:

- Views within, from, and to the Parkway
- Vegetation and planting design
- Topography
- Amenities
- Aesthetic rehabilitation
- Circulation
- Sustainability
- Natural features
- Safety

3.12.3 Mitigation Measures

Mitigation of impacts for both archaeological and above-ground historic properties have been addressed in a MOA between ACHP, FHWA, CTSHPO, and CTDOT. In addition to these agencies, the Section 106 Consulting Parties were invited to participate in the preparation of the MOA process and formulation of mitigation measures. Of these, eight requested to be concurring parties²⁵. FHWA and CTDOT continued to engage consulting parties and interested parties who did not opt to be concurring parties and kept them informed of developments in the Section

²⁵The Section 106 concurring parties are: Connecticut Chapter of American Society of Landscape Architects, Merritt Parkway Conservancy, National Trust for Historic Preservation, Norwalk Association of Silvermine Homeowners, Norwalk Historical Commission, Norwalk Historical Society, Norwalk Preservation Trust, and Preservation Connecticut.



106 process.

Consultation meetings to discuss mitigation measures with the Concurring Parties/Tribes were held on September 29, 2022 and March 27, 2023. Comments provided by parties and at the consultation meetings were evaluated for inclusion in the MOA as agreed between the Consulting Parties/Tribes. The MOA includes stipulations for minimizing impacts on the Merritt Parkway's landscape features and for context-sensitive design of the new bridges that would replace the Main Avenue Bridge and the Glover Avenue Bridge.

Route 7 would also factor into the mitigation strategy within the study area. Integrating elements of the Merritt Parkway landscape on ramps connecting to Route 7 in areas of new construction and transitioning between the two highway corridors with complementary landscape design would be considered and implemented to the extent feasible. Measures may include enhancing view corridors and landscape surrounds, both existing and those impacted by proposed alternatives, at ramp connections between the Merritt Parkway and Route 7, views toward Route 7 from the Parkway, and views toward the Parkway from Route 7. Acceptance of modifications by the Concurring Parties/Tribes was confirmed prior to finalization and signature of the MOA, which is provided in Appendix P.

3.13 HAZARDOUS MATERIALS

Historical use and environmental records of properties within or adjacent to the Project Site were reviewed to determine the potential for encountering hazardous or contaminated sites during Project construction.

3.13.1 Existing Conditions

The evaluated parcels are depicted on Figure 3.13.1. Properties were assigned risk levels of low/medium/high based on past use, including use and storage of hazardous or regulated materials. Based on a review of the available information, spill cases and leaking underground storage tank cases associated with the "high risk" properties within the study area are considered closed by CTDEEP. Additional details are provided in Appendix K.

3.13.2 Impacts

The No Build Alternative would not result in any improvements to the roadway network around the existing interchange. As such, there would not be any hazardous or contaminated materials impacts. For either Build Alternative, CTDOT would collect soil and groundwater data to evaluate potential presence of contaminated soil and groundwater. If contamination were encountered within the construction area, CTDOT's Office of Environmental Compliance (OEC) would ensure that proper procedures are followed with respect to handling and disposal of materials and – if required – remediation. Procedures include:



- Encroachment permits are obtained from the City of Norwalk and CTDOT prior to start of the subsurface investigations within the City and State ROW.
- Once contamination within the ROW is evaluated and characterized, public notice would be completed, as necessary, prior to construction. Due to the limited available staging space in the area, in-situ waste characterization sampling and direct hauling methods would be considered and incorporated into Contract Specifications.
- If groundwater is determined to be contaminated, requiring special handling, the contractor would have multiple options including direct hauling to a CTDOT-approved treatment facility, and treatment/discharge to surface water or sanitary sewer under a CTDEEP general permit.

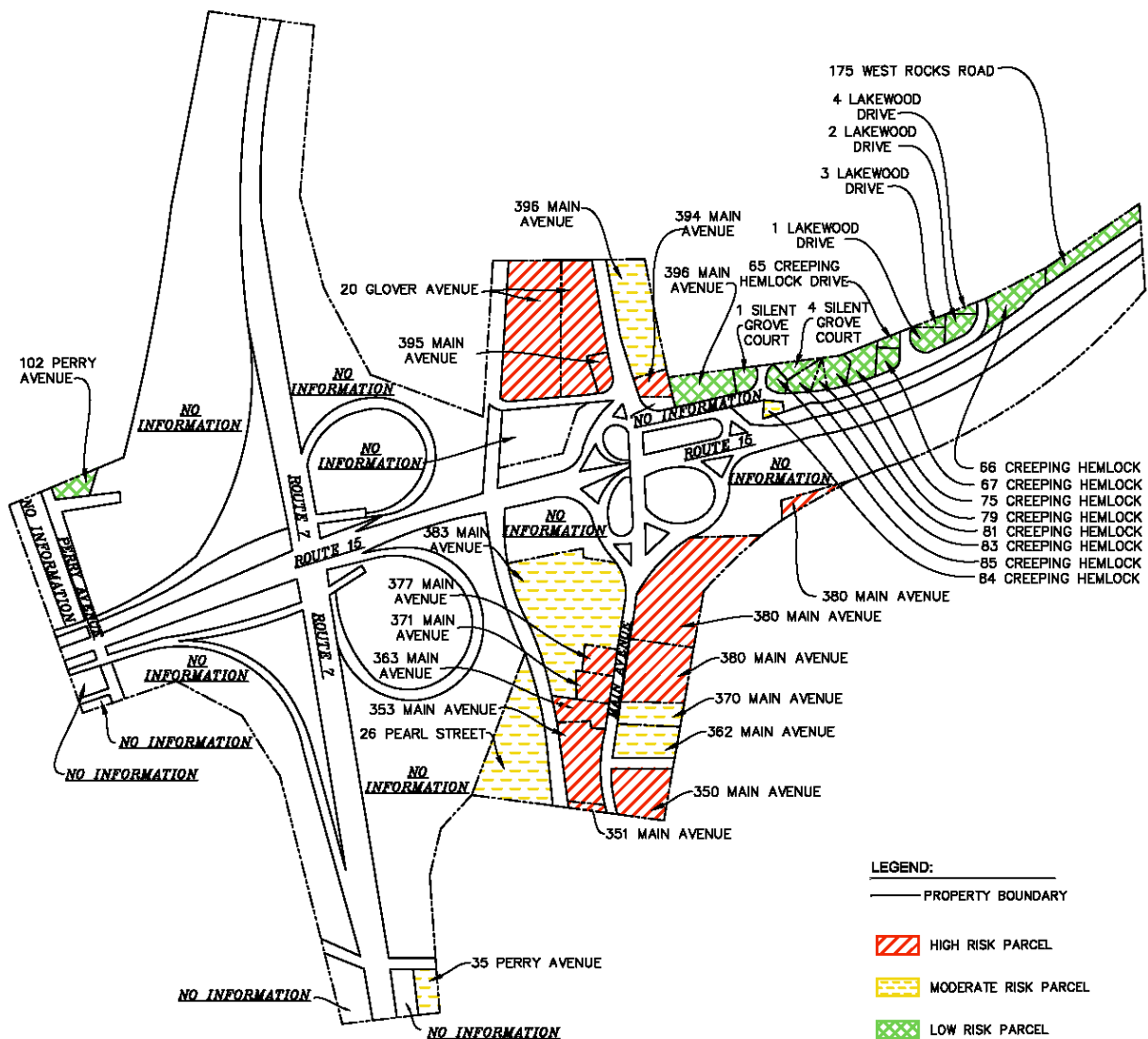




Figure 3.13.1 Parcels Evaluated for Potential Hazardous Materials

- In addition, CTDOT has established a Centralized Groundwater Treatment Facility in Norwalk, which is permitted with CTDEEP to handle, treat and discharge contaminated groundwater from DOT construction projects in the vicinity of Norwalk. The use of this facility can also be implemented as a mitigation measure.

3.13.3 Mitigation

No impacts associated with hazardous materials were identified and contingency measures would be implemented if contamination is encountered. Therefore no mitigation is required.

3.14 BENEFIT COST ANALYSIS

Benefits and costs associated with the Project are both quantifiable (tangible) and non-quantifiable (intangible).

3.14.1 Tangible Benefits and Costs

Construction and operation of either Build alternative would provide both short-term and long-term benefits to the local/regional construction industry by creating demand for construction related employment, products, and resources. Other anticipated tangible benefits of the Project would be:

- Travel time savings;
- Reductions in crashes;
- Reductions in operating costs for roadway users; and
- Reductions in vehicle emissions within the study area.

A Benefit-Cost Analysis (BCA) Report was prepared to evaluate the societal impacts associated with the Build Alternatives (Appendix L). Results are presented in Table 3.14.1. Typically, a project is considered viable if the benefit/cost ratio (B/C) is greater than 1.0. Higher B/C ratios indicate greater benefits compared to project costs. Alternative 21D has a calculated B/C ratio of 2.4 while Alternative 26 has a B/C ratio of 3.9. The No Build Alternative, which represents conditions should the project not be completed, generates no theoretical benefits. For that reason, a B/C ratio is not prepared for the No Build Alternative.



Table 3.14.1 BCA Results for Build Alternatives

| Financial Indicator | Undiscounted Benefits & Costs | | Discounted Benefits & Costs (5 Percent Rate) | |
|------------------------|-------------------------------|----------------|---|----------------|
| | Alternative 21D | Alternative 26 | Alternative 21D | Alternative 26 |
| Total Project Benefits | \$701,000,000 | \$629,000,000 | \$282,000,000 | \$253,000,000 |
| Total Project Costs | \$97,000,000 | \$56,000,000 | \$119,000,000 | \$65,000,000 |
| Net Present Value | | | \$163,000,000 | \$188,000,000 |
| B/C Ratio | - | - | 2.4 | 3.9 |

3.14.2 Intangible Benefits and Costs

The Project is expected to also result in intangible benefits. These benefits include increased transit ridership and improved multimodal connectivity along Main Avenue. Transportation improvements are expected to also provide an improvement to the local economy.

3.15 CLIMATE CHANGE AND RESILIENCY

Climate change and resiliency considerations with the potential to affect Project design include documented trends toward higher intensity/frequency storm events and sea level rise.

Extreme Weather Events

The design of new bridges would follow the CTDOT Drainage Manual, specifically for large structures. It is anticipated compliance with the drainage manual would be achieved, designing structures with a minimum of two-foot of underclearance from the low chord of the bridge to the design water surface elevation as well as a minimum of one-foot of freeboard between the water surface and roadway surface (or other applicable control). The design flow selection would follow CTDOT procedure, comparing sets of flows created with different methodology (FEMA, USGS StreamStats, etc.) and choosing the set of flows judged to be best for use. Additionally, bridge designs would make a practical attempt to comply with ACOE bridge design guidelines, including providing a clear span of 1.2 x bankfull width and providing an elevated wildlife shelf along each abutment.

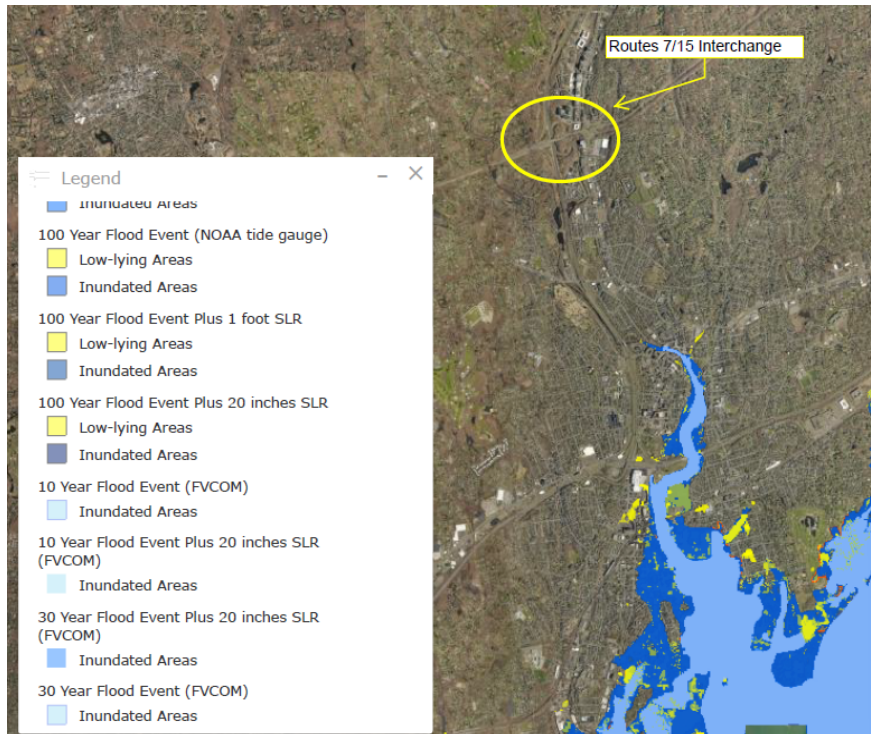


Figure 3.15.1 UConn Projected Sea Level Rise, 2050

Sea Level Rise

CGS Section 25-68o(b) requires CTDEEP to publish the sea level change scenario for the state prepared by the University of Connecticut (UConn) Marine Sciences Division. The scenario is based upon the NOAA Technical Report OAR CPO-1 and additional scientific data. The adopted sea level change scenario for Connecticut is 0.5 meter (1 foot 8 inches) higher than the national tidal datum in Long Island Sound by 2050 (Figure 3.15.1). This sea level change scenario is meant to guide municipalities and the state in preparing various emergency, evacuation, and conservation/development plans related to resiliency and climate changed-related inundation. UConn provides an online “Connecticut Shoreline Sea Level Viewer” inundation mapping tool based on a range of projections [27]. Based on the highest sea level scenarios for 2050, the Routes 7/15 interchange is located outside the inundation zones and therefore would not be directly affected by the projected seal level rise.

However, other resiliency considerations could potentially apply to the Project, including:

- Climate change-induced inundation events outside the Project Site could result in evacuations routed, at least in part, on either Route 7 or Route 15.
- The 2011 Connecticut Climate Change Preparedness Plan [28] identifies potential impacts to transportation systems and structures as a result of climate change, including localized flooding that could interrupt routine transportation needs, including transport



of commercial and agricultural goods to markets as well as getting the injured and sick to treatment facilities.

In either of these scenarios, both Build Alternatives would provide a localized, but beneficial improvement to traffic flow and accessibility.

As discussed in Section 3.3 both Build Alternatives would reduce vehicle energy use and greenhouse gas emissions that contribute to climate change.

Resiliency planning and design is often associated with flooding and coastal preparedness, but its definition and application can also be viewed in a broader context, extending to our built environment and encompassing our ability to overcome other unexpected events, disasters, and acts of nature. The Project design would contribute to the resiliency of the local community, the region, and State of Connecticut in many ways.

The land that encompasses the State's ROW, Route 7 and Route 15 serves as a vital regional transportation link. The corridor also performs important functions to enhance resiliency. Landscape areas provide habitat for pollinators, absorb stormwater, and reduce stormwater run-off to the Norwalk River and neighboring streets and grounds. Vegetated areas within the State's ROW cool the air within the surrounding urban heat island, sequester carbon and reduce the impact of harmful greenhouse gases. The Build Alternative designs consider maintenance needs of the interchange surrounds, to provide a functional landscape and aesthetically pleasing experience while minimizing energy consumption and service disruption.

Additionally, Route 15 serves a critical function as a connection to New York to the west and New Haven to the east. Resiliency means that the Route 15 corridor would continue to allow safe passage during or immediately following unexpected or extreme circumstances such as storms, collisions, or other events. It also means continuing to provide ecological services and reducing energy use and greenhouse emissions that contribute to climate change.

3.16 ENVIRONMENTAL JUSTICE

This section summarizes an evaluation of Environmental Justice (EJ) considerations related to the Project. Additional details are provided in Appendix M.

EO 12898 directs Federal agencies to identify and address, to the greatest extent practicable and permitted by law, disproportionately high and adverse human health or environmental effects to minority or low-income populations resulting from Federal projects. FHWA Order 6640.23A is the corresponding regulation for FHWA projects.

In addition, Title VI of the Civil Rights Act of 1964, as extended by EO 13166 [29] provides certain protections from discrimination to populations having limited English proficiency (LEP), including ensuring that these populations have adequate input to decision making process



during assessment of federally funded projects.

The study area for this analysis encompasses the Project Site, which consists of the construction area limits for the combined Build Alternatives (direct impacts) ²⁶ and study areas identified for noise, air quality, traffic, and visual impacts (indirect impacts). As described in Chapter 2.0, evaluation of other resources identified no substantial impacts, or impacts were limited to areas of soil disturbance within the construction area (i.e. wetland and subsurface archaeological resources) that would be mitigated through permitting or MOA processes.

The overall approach of this EJ analysis to identify:

- EJ communities present within the areas where Project impacts may occur;
- Impacts that may reasonably be anticipated to occur within those communities, and;
- Whether the impacts would be disproportionately high and adverse in EJ communities.

3.16.1 Existing Conditions

EJ and LEP populations were identified based on US Census data including the 2010 Census and the American Community Survey (ACS) from 2017 or closest available year. Minority population data were available at the “Block Group” unit level and low income population data were available at the “Census Tract” unit level.

Minority Populations: One Census Block Group that lies (partially) within the overall project study area was identified as an EJ community based on minority population (Figure 3.16.1.

²⁶ For purposes of this analysis, the extension of the Project Site south of Perry Avenue is excluded, because the work activities involve no ground disturbance (e.g. striping pavement), would be of very short duration, and are restricted to being within the Route 7 right-of-way.

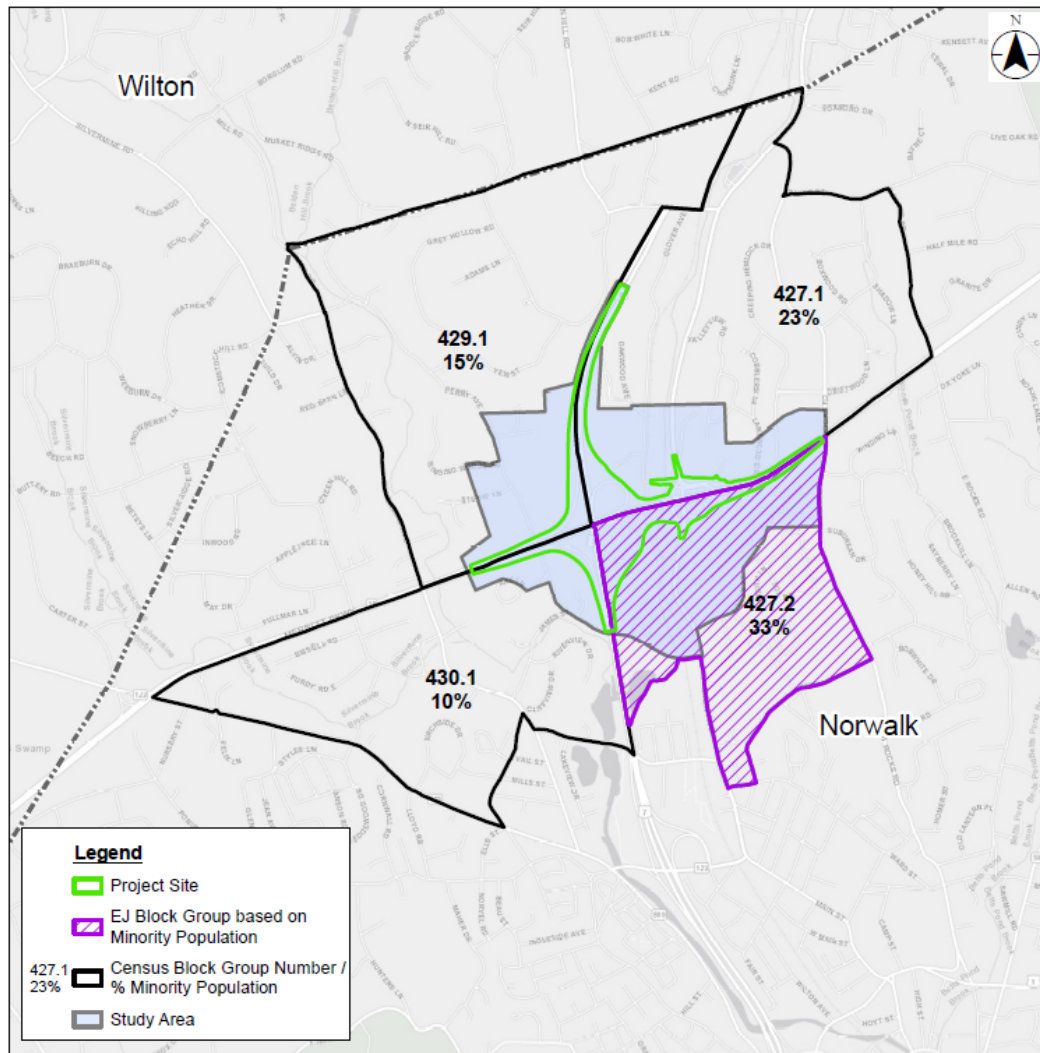


Figure 3.16.1 Minority Population by Block Group

Low Income Populations: No EJ Census Tracts based on poverty level were identified in the study area.

LEP Households: FHWA guidance [30] indicates that a project sponsor should provide written translations of vital documents for each eligible LEP language group that constitutes five percent or 1,000, whichever is less, of the population of persons likely to be affected. Neither the five percent nor the 1,000-person threshold is exceeded within the study area Census Tracts or within the study area as a whole for any language group.

3.16.2 Potential Impacts

Table 3.16.1 lists potential impacts of the Project as they relate to EJ communities.



Table 3.16.1 Potential Impacts of the Project, Post-Construction

| Resource | Benefit/Impact of Build vs. No Build Alternatives | Notes |
|--------------------|--|---|
| Traffic | <p>Both Build Alternatives would decrease congestion and improve safety, in turn leading to improved access to community facilities and businesses.</p> <p>Vehicle access to the study area during construction may sometimes be limited. However, access would be maintained throughout construction even if intermittently at a lower service level than normal. Local access to sidewalks, bus stops, and local business locations may also be interrupted temporarily. The impacts would be temporary and are not anticipated to rise to more than the “necessary nuisance” level typical of highway construction projects.</p> <p>The duration of overall temporary construction impacts would be greater for Alternative 21D. However, impacts on Main Avenue traffic would be the same for both Build Alternatives.</p> | <p>Benefits would accrue directly to local residents and commuters who travel Routes 7 and 15 and use local roads. During outreach to local businesses in July 2017, many stakeholders mentioned concerns about safety and congestion at the existing Routes 7/15 intersection that would be addressed by the project.</p> <p>CTDOT would provide timely updates to the neighbors and businesses within the study area in order to help them prepare and adjust to potential changes in traffic patterns/access, and short term nuisance dust and noise. Notices would be provided to Main Avenue businesses that serve the EJ community and through local media typically accessed by residents in the study area</p> <p>Specific measures to minimize effects on access during construction would be determined during final Project design, but would typically include detailed phasing and closure plans for roadways, phasing plans for sidewalk repairs to maintain access, design and placement of barriers such that access is maintained to local businesses.</p> |
| Air quality | <p>Air quality would slightly improve under both Build Alternatives. Potential nuisance dust and vehicle emissions could occur during construction. These impacts are typical of highway construction and control methods are routine and effective.</p> | <p>Slight benefits would accrue to both EJ and non-EJ populations following construction. Emissions during construction would be managed with standard practices such as use of water trucks to control dust and limiting equipment idling.</p> |



| Resource | Benefit/Impact of Build vs. No Build Alternatives | Notes |
|----------------------------|--|---|
| Noise | 1 dBA increase in post construction noise levels was identified in the northeast quadrant of the Routes 7/15 interchange; other receptors would experience the same or lower noise levels. | A 1 dBA increase would not be perceptible. The increase would occur outside the identified EJ communities and would therefore be neither high nor disproportionate. |
| Visual | Impacts would occur due to repair/replacement of existing historical bridges and construction of new ramps, both during and following construction. | Mitigation would be provided through a MOA designed to compensate for and/or ameliorate impacts to historical visual resources. Impacts would not disproportionately occur in EJ communities. |
| Community Resources | Improved traffic conditions would benefit local residents and businesses, as well as community services such as police and Emergency Medical Services. Improved pedestrian and bike infrastructure would make mobility in the study area safer, more accessible and appealing, as well as improving access to the Merritt 7 train station. With the exception of potential sliver takings or easements for sloping and/or minor grading during construction, no property takings would occur. No relocations of private or public facilities would occur. The Project would not create new barriers to community cohesion. | Benefits are likely to be greatest south of Route 15, where most of the shops and businesses that provide local services (grocery shopping, clothing, auto repair, restaurants) are located. The identified EJ communities are located in the southeast portion of the study area where these local benefits would primarily accrue. In addition, local residents within the study area who are employed at the Merritt 7 office complex northeast of the Project would experience improved commute times. |

The remaining step in this analysis is to evaluate whether impacts potentially have disproportionately high and adverse human health or environmental effects on these minority populations. The evaluation followed FHWA guidance for compliance with Title VI requirements [31], based on the “4/5” rule. The percentage of the comparison group potentially impacted in the study area is divided by the percentage of the minority group impacted. The resulting ratio is compared to 4/5, or 0.8. Ratios lower than 0.8 may indicate a disparate effect on the minority population. The comparison group is the white, non-Hispanic population. For the Black population, the calculated ratio was 0.67, which is less than the 0.8 threshold set by the 4/5 rule. For the Hispanic population, the ratio was 0.63, which is also less than 0.8. Therefore,



these populations could be disparately impacted by the Project. The ratio for the Asian population was 4.69, which did not indicate a disparate impact.

However, the impacts of both Build Alternatives within this area are limited to visual impacts and temporary construction impacts, which would be addressed as discussed above. In addition, FHWA guidance suggests evaluating project benefits that would also accrue to this population. Improvements in traffic and safety, in particular, would accrue to the local EJ populations to a greater degree than populations outside the study area.

The CTDOT EJ Order further suggests considering whether non-EJ communities are subject to similar impacts. In this case, Block Group 430.1 (non-EJ) is on the west side of Main Avenue and Block Group 427.1 (minority EJ) is located on the east side (Figure 3.16.1). Each would experience similar impacts, at similar levels, which suggests that the impacts are not disparate.

In the case of the No Build Alternative, while the potential construction impacts would not occur, the potential positive impacts would also not be provided to EJ populations.

LEP Populations Neither the five percent nor the 1,000-person threshold is exceeded within the study area. However, public participation efforts for this Project included specific outreach to Spanish speakers (the largest language group), including the following.

- Canvassing commercial retail and neighborhood gathering spaces within 0.25-mile of the Project Site to reach out to those that may not typically attend meetings or otherwise participate in the project.
- Contacting a diverse group of media outlets that reach a variety of cultural groups in the community.
- Offering a Spanish language translator and language assistance at the 2017 and 2019 public meetings.

SUMMARY OF IMPACTS

Based on the above discussion and analysis, the Build Alternatives 21D or 26 would not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23A. EJ communities would benefit from improved traffic conditions as well as upgraded pedestrian and bicycle facilities proposed with the Build Alternatives. It is anticipated that there would be temporary impacts to multi-modal traffic flow through the Main Avenue and Glover Avenue corridors during construction.

3.16.3 Mitigation Measures

Potential construction period mitigation measures would include the optimization of construction phasing to minimize disruptions to multi-modal traffic, the establishment of haul routes and staging areas, identification of permissible hours of work, ongoing coordination with



neighborhoods, businesses, schools, and transit providers (Norwalk Transit District, MNR, Norwalk Public Schools, and other private providers) within the study area, and the use of temporary traffic control devices to direct traffic and assist with pedestrian crossings as needed.

CTDOT is committed to providing timely Project updates to the neighborhoods, and businesses, and transit providers within the study area in order to help residents, and business owners, and commuters prepare and adjust to temporary construction activities, potential changes in vehicular, pedestrian, bicycle, and transit traffic patterns and access, and short term nuisance dust and noise. Continued care would be taken to provide notices directly to stakeholders Main Avenue businesses that serve the EJ community and through local media typically accessed by residents in the study area. CTDOT would coordinate with neighborhoods, businesses, and transit providers in subsequent design phases to minimize impacts to the extent possible.



4.0 INDIRECT, IRREVERSIBLE, AND CUMULATIVE IMPACTS

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The two Build Alternatives would have similar impacts on local short-term use of resources and similar benefits with respect to long-term productivity. With either alternative, the Project Site would be located within the general area of the existing interchange and no additional parcels would be acquired. The proposed transportation improvements are based on state and/or local comprehensive planning that considers the need for present and future traffic requirements within the context of present and future land use development and would result in safety improvements and reduced vehicle fuel use and emissions. Therefore, the local short-term impacts and use of resources by the Project are consistent with the maintenance and enhancement of long-term productivity for the local area, region, and state.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The Project involves a commitment of a range of natural, physical, human, and fiscal resources. Land use in the construction of the proposed facility is considered an irreversible commitment during the period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion would ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material are used. Additionally, large amounts of labor and natural resources are used in the making of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use would not have an adverse effect upon continued availability of these resources. Any construction would also require a substantial one-time use of both state and federal funds, which are not retrievable; savings in energy, time, and a reduction in accidents would offset this. In addition to the costs of construction and right-of-way would be costs for roadway maintenance, including pavement, roadside, litter/sweeping, signs and markers, electrical and storm maintenance.

The commitment of these resources is based on the concept that residents in the immediate area, region, and state would benefit from the improved quality of the transportation system and is consistent with local, regional, and state planning. These benefits would consist of improved accessibility and safety, which are expected to outweigh the commitment of these resources.

INDIRECT IMPACTS

Typical indirect impacts of highway projects include [32]:

- Encroachment on or alteration of the ecology, behavior and functioning of the physical



environment;

- Encroachment that affects neighborhood character through alteration of traffic patterns and access, or by relocation of homes, businesses, or public facilities; and
- Induced growth due to changes in time-cost of travel as a results of transportation improvements.

Environmental Encroachment/Alteration

For both Build Alternatives, impacts on the physical environment would be limited to the Project Site, which currently functions as a set of state highway interchanges, and would continue as same. The Project would not substantially change the overall ecological context of this area. Limited wetland impacts would occur, but these would be mitigated. Overall hydrology would continue to function in a manner similar to current conditions. No rare, threatened, or endangered animals or plant communities would be disrupted. No new industrial or potential pollution-producing activities would occur within the Project Site.

Encroachment on Neighborhoods – Accessibility and Relocations

The Project would affect traffic patterns and access to local shops and services, but the effect is anticipated to be beneficial. Drivers whose goal is to travel through the Routes 7/15 interchange to other destinations would be able to make connections through the interchange with greater safety and reduced travel time. With the reduction of through traffic on local roads, access and safety for residents traveling to local businesses and services would be substantially improved. In addition, pedestrian and bicycle facilities would be improved within the Project Site, enhancing connectivity along Main Avenue and local streets. No homes, businesses, or public facilities would be displaced by the Project.

Induced Growth

Transportation improvements can reduce the time-cost of travel, which can lead to increased development in the vicinity of the improvements, including development of vacant land or more intense development of the existing built environment. These effects can be especially pronounced in “greenfield” or lightly developed areas. In the case of the Project, immediately surrounding land is state-owned highway right of way that is not available for development. Other land in the vicinity is already developed and much of it is zoned single-family residential and not available for more intense or commercial use. Commercial zoning is also located east of Main Avenue and Route 7, including Business Zone B2 (smaller scale than Business B1 and limited to enumerated business uses) and Executive Office (consistent with existing office structures) The Build Alternatives design would not provide additional frontage roads, space, or access to utilities that would induce growth. While additional development or intensified use could potentially occur, the topography of available land, existing development, and zoning requirements would limit development extent.



CUMULATIVE IMPACTS

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the Project. Impacts that are merely possible or considered speculative are not reasonably foreseeable. Reasonably foreseeable can be defined as sufficiently likely that a prudent person would take it into account in making a decision.

A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

A cumulative impacts analysis considers those resources identified in the EA as having substantial direct or indirect impacts, identifies those that might contribute to a cumulative impact, and factors in other reasonably foreseeable actions that might affect those resources. As discussed in Chapter 3.0 and summarized in Chapter 2.0, resources for which potential negative impacts were identified are:

- Wetlands;
- Archaeological Resources;
- Visual Resources; and
- Scenic Byway.

Wetlands

Limited wetland impacts would potentially occur within the Project Site. These impacts would be mitigated in accordance with Section 401 and 404 of the CWA, ACOE and CTDEEP regulations. Other construction projects locally and regionally potentially impact wetlands and result in cumulative impacts. However, it is assumed that other construction projects are subject to the same or similar requirements for mitigation and therefore cumulatively address impacts.

Archaeological Resources

Excavation and soil disturbances would potentially impact below-ground archaeological resources. Mitigation would be provided as set forth in a MOA between FHWA, CTDOT and CTSHPO. While the Project would therefore contribute to an overall cumulative impact of construction projects across the state on archaeological resources, the impacts are also being addressed on a statewide basis through CTSHPO oversight and broad requirements for similar mitigations.

Visual Resources

Potential visual impacts as perceived by various viewer groups would result from new Project elements and impacts on existing structures, including historic bridges. Mitigation would be provided to the extent practicable by Project design, landscaping and approaches such as



choice of surface treatments of new and replaced structural elements. Other developments within the Project viewshed could contribute to a cumulative visual impact. Currently, no such projects were identified to be funded or with pending permits, with the exception of CTDOT's Project Nos. 0102-0368 and 0102-0296, which would provide safety improvements, resurfacing, aesthetic enhancements and bridge improvements for sections of the Merritt Parkway in Norwalk and Westport. This project would provide critical short-term safety concerns in the immediate area as well as providing some incremental improvements to the existing landscape features and is not anticipated to substantially add to the cumulative visual impact.

Scenic Byway

The Project would result in potential impacts to the scenic landscape of the Merritt Parkway. However, as noted in the *Public Report Phase I and II Cultural Resource Surveys* (Appendix I1), the Parkway landscape has deteriorated over time with expanded development in this specific corridor. Under either Build Alternative, mitigation would be provided as set forth in a MOA between FHWA, CTDOT and CTSHPO. Given the age and condition of the Merritt Parkway, other construction projects could reasonably be anticipated throughout its length. Mitigation is incapable of completely replacing original structures and landscaping in kind when repairs or alterations are required. Over time, even with mitigation, cumulative impacts to the landscape and historic structures of the Merritt Parkway are inevitable. However, experience gained through the assessment, design, and construction of the Project would be applicable to, and support better implementation of similar projects that may become necessary throughout the extent of the Merritt Parkway.



5.0 PUBLIC PARTICIPATION

This section summarizes the public involvement and agency coordination activities that occurred during the development of EA/EIE documentation for the Project. A detailed listing of individual activities is listed in Appendix N. In addition, Section 106 coordination progressed on a parallel path with EA/EIE coordination to ensure National Historic Preservation Act project compliance. A more detailed summary of Section 106 coordination activities is provided in Appendix N, including public and agency scoping materials, public meeting presentation and response materials, as well as invitations and responses from cooperating and participating agencies.

Throughout the planning and environmental documentation phase of the Project, and in accordance with NEPA and CEPA requirements and Section 106 consultation procedures, CTDOT and FHWA provided extensive public involvement and agency coordination opportunities. There were 8 PAC meetings, 1 Public Scoping Meeting, 1 Public Information Meeting and 33 stakeholder meetings.

5.1 PUBLIC INVOLVEMENT

This section provides a summary of the types of public involvement meetings held during the preparation and review of the EA/EIE.

CEPA Scoping Meeting

The CTDOT conducted a CEPA public scoping meeting on October 17, 2017, from 4:00 to 8:00 PM, at Norwalk City Hall, located at 125 East Ave, Norwalk, Connecticut per CEPA regulations. The scoping meeting began as an Open House at 4:00 PM, where informational boards were displayed around the room, each staffed by a member of the Project team. The public was encouraged to view the boards and ask questions. Following the open house portion of the scoping meeting, duplicate formal presentations were given at 5:30 PM and 7:30 PM. Each presentation was followed by a public comment listening session. All materials presented at the scoping meeting were made available on the Project website: www.7-15norwalk.com.

Approximately 42 people attended the public scoping session. Appendix N contains the meeting presentation and a summary of the meeting. The Project Team identified six main themes: Traffic and Transportation, Alternatives, Environmental, Purpose and Need, Public Involvement, and Financing.

A post-scoping notice was published in the CT Environmental Monitor on September 9, 2019 in accordance with amended CEPA regulations.

Project Website

CTDOT launched the project website, www.7-15norwalk.com, in August 2016 and updates the



website on a regular basis. The CTDOT website (www.ct.gov/dot) also provides a link to the Project website. The website also provides opportunities for the public to provide input and/or become involved through public meetings, direct mailings, or direct contact with the project team. CTDOT regularly maintains and updates social media activity including Facebook and Twitter accounts and responds to comments submitted via each platform.

Throughout project design and construction, CTDOT will continue to post design and construction updates on the project website.

Project Newsletter

CTDOT produced and distributed project newsletters over the course of the project. The newsletters addressed the current status of the project, as well as other information about the project, and ways for the public to get involved or provide comment to the Project team.

Additional Public Information Meetings

CTDOT also conducted a Public Information Meeting on October 23, 2019 in the Community Room in Norwalk City Hall. The meeting included CTDOT staff available to answer questions from 6:30 to 7 PM, followed by a formal presentation at 7:00 PM.

The focus of the meeting was a review of the two Build Alternatives that would be evaluated within the EA/EIE. The meeting also included an overview of the full range of alternatives considered during the Level 1 and Level 2 screening process, the role of the PAC, and a review of comments received during the public scoping process.

The public was provided the opportunity to ask questions and submit written comments during the meeting. A meeting summary was developed and posted on the project website, along with the meeting presentation.

Continued Public Outreach

CTDOT will continue to conduct community outreach through the remainder of the environmental documentation process and through project design and construction. Outreach will utilize the Project website, public meetings, open houses, and group presentations as appropriate. CTDOT will continue to coordinate with the City of Norwalk to identify community organizations and perform outreach to EJ and LEP groups.

5.2 AGENCY COORDINATION

This section describes the coordination process with federal, state, and local agencies involved in the development and review of the Project EA/EIE.



5.2.1 Initial Coordination

In early 2017, CTDOT invited the following agencies with requests to provide information and comments related to an initial conceptual plan for the Project:

- First District Water Department;
- Town of Norwalk;
- Town of Wilton;
- Western Connecticut Council of Governments;
- CTDEEP;
- CTSHPD;
- CTDPH;
- USACOE;
- USEPA; and
- USFWS.

Initial responses from these agencies were reviewed and addressed in the draft Purpose and Need statement and EA/EIE scope.

5.2.2 Agency Scoping

CTDOT held an agency scoping session on February 28, 2018. Prior to the meeting, CTDOT sent letters to agencies, seeking comments on the project scope and draft Purpose and Need statement. Several agencies responded with written comments (Appendix N). Both federal and state agencies participated in the agency scoping session and provided comments on the Purpose and Need statement and scope. They also identified issues and resource areas considered high priority and, therefore, should be focused on in the EA/EIE. They provided input regarding potential alternatives to be evaluated and also reviewed and confirmed permit requirements.

5.2.3 Other State, Tribal and Federal Coordination

CTDOT submitted requests to federal and state agencies for information specific to the environmental evaluations conducted for the EA/EIE. Since CTDOT's initial coordination meetings, CTDOT has conducted ongoing informational meetings with the federal and state agencies to apprise them of the status of the project and to solicit their input regarding their concerns about the project and permitting requirements. CTDOT will continue to meet with the agencies throughout project design and construction.

Federal, tribal and state agencies with permit authority, jurisdiction by law, special expertise or a role as interested parties are listed in Table 5.2.1. Lead Agencies are responsible for leading the environmental review. Involved agencies have permit authority with respect to the Project. Agency involvement in the Section 106 consultation process is further described in Section 5.4.



Table 5.2.1 State, Tribal and Federal Agencies

| Agency | Role |
|--|---|
| Lead Agency | |
| Federal Highway Administration | Lead Federal Agency |
| Connecticut Department of Transportation | Co-Lead Agency (w/ FHWA) |
| - Office of Environmental Planning | |
| - Office of Highway Design | |
| - Office of Landscape Design | |
| - Merritt Parkway Advisory Committee | |
| Involved State Agencies | |
| CT DEEP | Permit Authority |
| CT Office of Policy & Management | Permit Authority |
| Other Federal Agencies | |
| Department of the Interior | Jurisdiction by law |
| Federal Transit Administration | Special Expertise |
| US Environmental Protection Agency, Region 1 | Jurisdiction by law |
| US Fish & Wildlife Service, New England Field Office | Jurisdiction by law |
| Advisory Council on Historic Preservation | Jurisdiction by law |
| US Army Corps of Engineers, New England District | Jurisdiction by law |
| Mandatory Section 106 Consulting Parties | |
| CT State Historic Preservation Office | Special Expertise |
| Narragansett Indian Tribe | (Potentially) Interested Party |
| The Mohegan Tribe | (Potentially) Interested Party |
| Mashantucket (Western) Pequot Tribal Nation | (Potentially) Interested Party |
| Delaware Tribe of Indians | (Potentially) Interested Party |
| Delaware Nation | Interested Party §106 Consulting Party |

5.3 LOCAL COORDINATION

CTDOT’s ongoing coordination activities with the City of Norwalk include meetings with the Mayor, the Norwalk Planning and Engineering Departments, and the Norwalk Bike/Walk Commission to provide project updates and solicit municipal information. CTDOT has also met four times with Town of Wilton representatives, which included the First Selectwoman, Town Planner, Engineering Staff, and Police Department.



5.4 SECTION 106 COORDINATION

Project Historic Stakeholders

CTSHPO, local historical associations (CT Historical Trust, Norwalk Historical Commission, Norwalk Preservation Trust, and MPC), Preservation Connecticut, Tribal Nations, and other potential stakeholding parties will be invited to participate in the review of the project as Section 106 stakeholders. The 106 Consultation process has occurred concurrently to the NEPA and CEPA documentation process and is discussed in more detail in the Section 3.10 of the EA/EIE.

Section 106 Consulting Party Meetings

CTDOT and FHWA met with Section 106 Consulting parties three times during the project. Meetings were held on May 7th, 2019, January 15, 2021, and September 29, 2022. Additional consultation and discussion occurred throughout the project and is summarized in Appendix N6.



6.0 SECTION 4(F) EVALUATION

CTDOT and FHWA propose to construct the Project using federal funds provided by FHWA. Section 4(f) of the United States Department of Transportation Act of 1966, codified at 49 U.S.C. §303 with implementing regulations at 23 CFR Part 774, protects publicly owned land within parks, recreation areas, and wildlife/waterfowl refuges during federally funded construction projects. Historic resources, both publicly and privately owned, are also protected under Section 4(f) if they are listed in or determined eligible for listing in the NRHP.

FHWA may not approve the use, as defined in 23 CFR Part 774, of Section 4(f) property unless a determination is made that:

- There is no feasible and prudent alternative to the use of the property; and
- The proposed action includes all possible planning to minimize harm, as defined in 23 CFR §774.17, to the property resulting from that use; or
- The use, including any measures to minimize harm, would have a de minimis impact on the property. In the case of historic resources, a de minimis impact is one in which the State Historic Preservation Officer concurs in a finding of no adverse effect.

A draft Section 4(f) Evaluation for the NRHP-listed Merritt Parkway Historic District (including the Main Avenue Bridge) and the Glover Avenue Bridge (Bridge No. 04155), prepared pursuant to Section 4(f) and in accordance with FHWA policies and guidance., is included as Appendix O.

The draft Section 4(f) evaluation, which will be reviewed by FHWA, concludes that:

- there is no feasible and prudent avoidance alternative to the proposed Build alternatives; and
- the proposed action includes all possible planning to minimize harm to the Section 4(f) resources (i.e. the Merritt Parkway Historic District, including contributing components, and the Glover Avenue Bridge).

No publicly owned parks, recreation areas, or wildlife or waterfowl refuges are found within or adjacent to the Project Site.



7.0 ENVIRONMENTAL COMMITMENTS AND MITIGATION

CTDOT/FHWA will complete the commitments and mitigation summarized in 7.0 during design and construction of the Project.

| Resource | Commitments |
|-------------------------------|---|
| Traffic | <ol style="list-style-type: none"> 1. Provide missing movements. |
| Bicycles / Pedestrians | <ol style="list-style-type: none"> 1. Consider design elements that improve existing connections, add new connections, provide amenities, and enhance safety for bicyclists and pedestrians. 2. Share design iterations with local trail planning organizations, to identify opportunities to complement planned trail connections. |
| Noise | <p>Incorporate CTDOT’s final recommendation regarding noise abatement in final design.</p> |
| RTE Species | <ol style="list-style-type: none"> 1. Confirm NDDDB mapping at six-month intervals during design. If any state listed species are documented within the Project Site prior to construction of the Project, consult CTDEEP and reinitiate NDDDB process. 2. Maintain consistency of the Project with the NLEB PBO. Continue to monitor NDDDB and IPaC databases for new/updated listings of species that may occur within the Project Area and coordinate with CTDEEP and USFWS as required to address applicable state and federal requirements as design and construction progress. 3. Design and install erosion and sediment control measures to minimize runoff to water and wetland resource areas, including the Norwalk River and other streams within the Project Site. 4. As Project design progresses, conduct Essential Fish Habitat coordination and Endangered Species Act (ESA) Section 7 consultation with National Oceanic and Atmospheric Administration (NOAA) Fisheries. If in-water work is required during construction, installation of temporary protections may be required around resource areas during new ramp/bridge construction for both Alternatives 26 and 21D. 5. In addition, follow appropriate construction sequencing and water handling methods, including maintaining fish passage, to reduce potential impacts associated with construction activities, in accordance with the Stormwater Pollution Prevention Plan for the Project. 6. Time of year restrictions (no unconfined in-stream work between April 1 and June 30) may be required as part of the permitting process for activities during construction to avoid and minimize impacts to anadromous fish runs in the Norwalk River. |



| Resource | Commitments |
|----------------------|---|
| Wetlands | <ol style="list-style-type: none"> 1. Avoid and minimize wetland and watercourse impacts during design. 2. Any mitigation needs following those avoidance measures must be identified and agreed upon in conjunction with the appropriate regulatory agencies, including the ACOE and CTDEEP. |
| Groundwater | <ol style="list-style-type: none"> 1. Consult Norwalk first Taxing District and the Department of Public Health to provide specific aquifer protection recommendations for construction activities, including storage of hazardous materials and petroleum products onsite. 2. Conduct construction in accordance with the Department of Public Health’s “General Construction Best Management Practices for Sites within a Public Drinking Water Supply Area”. 3. No new potential pollutant sources will be created that would remain after construction. |
| Surface Water | <ol style="list-style-type: none"> 1. Design the Project in accordance with the General Permit for the Discharge of Stormwater from CTDOT Separate Stormwater Discharge Systems (TS4) to the maximum extent practicable to mitigate any potential increases to current impairments (sedimentation/siltation) identified on the 303(d) list for the segment of the Norwalk River that traverses the Project area (ID CT7300-00_01). 2. Incorporate the requirements of the Construction Stormwater General Permit due to siltation/sedimentation impairment. Currently CTDOT does not have an overall watershed plan as part of their MS4 program, though they are progressing with the U.S. Geological Survey (USGS) to model their overall system to identify where specific retrofit projects are most effective. However, CTDOT does have requirements for individual construction project to use Best Management Practices to reduce pollutants of concern which would be incorporated in the Project. 3. Identify specific stormwater management and monitoring practices during Project design, including practices to mitigate sedimentation or siltation to the Norwalk River. 4. Plan preparers and monitors must possess the qualifications required by the permit and applicable local requirements. |



| Resource | Commitments |
|------------------------------------|---|
| Floodplains | <ol style="list-style-type: none"> 1. New highway ramp bridges will be clear-span structures to minimize impacts to the 100-year floodplain. 2. Assess channels and embankments during design and address instabilities identified (or anecdotally provided) within the channel or along the embankments as part of final design. 3. Complete a scour analysis following the Hydraulic Engineering Circular (HEC)-18 procedure (as amended by the CTDOT Drainage Manual) at each bridge spanning a watercourse. Include scour countermeasures, as required, in the project design. Scour countermeasure designs will follow HEC-23. |
| Historic and Archaeological | <ol style="list-style-type: none"> 1. Implement mitigation of impacts for both archaeological and above-ground historic properties as specified in the MOA between FHWA, CTSHPO and CTDOT. 2. The MOA will include stipulations for minimizing impacts on the Merritt Parkway’s landscape features and for certain historically-sensitive design features for the new bridges that would replace the Main Avenue Bridge and the Glover Avenue Bridge. 3. The MOA will also stipulate that in the final design for the project, CTDOT shall follow, as far as possible, the guidelines in “Merritt Parkway Landscape Assessment Guidelines” (March 2020). |
| Visual | <ol style="list-style-type: none"> 1. Implement mitigation of visual impacts as specified in the MOA between FHWA, CTSHPO and CTDOT. 2. The MOA will include stipulations for minimizing impacts on the Merritt Parkway’s landscape features and for certain historically-sensitive design features for the new bridges that would replace the Main Avenue Bridge and the Glover Avenue Bridge. |



| Resource | Commitments |
|-------------------------------------|---|
| Merritt Parkway Scenic Byway | <ol style="list-style-type: none"> 3. Implement mitigation of impacts for the Merritt Parkway scenic landscape as specified in the MOA between CTDOT, FHWA and CTSHP. 4. The MOA will include stipulations for minimizing impacts on the Merritt Parkway’s landscape features and for certain historically-sensitive design features for the new bridges that would replace the Main Avenue Bridge and the Glover Avenue Bridge. 5. Route 7 would also factor into the mitigation strategy within the study area. Integrating elements of the Merritt Parkway landscape on ramps connecting to Route 7 in areas of new construction and transitioning between the two highway corridors with complementary landscape design would be considered and implemented to the extent feasible. Measures may include enhancing view corridors and landscape surrounds, both existing and those impacted by proposed alternatives, at ramp connections between the Merritt Parkway and Route 7, views toward Route 7 from the Parkway, and views toward the Parkway from Route 7. |
| Hazardous Materials | <ol style="list-style-type: none"> 1. Collect soil and groundwater data to evaluate potential presence of contaminated soil and groundwater. If contamination is encountered within the construction area, CTDOT’s Office of Environmental Compliance (OEC) will ensure that proper procedures are followed with respect to handling and disposal of materials and – if required – remediation. Procedures include: <ol style="list-style-type: none"> a. Obtain encroachment permits from the City of Norwalk and CTDOT prior to start of the subsurface investigations within the City and State ROW. b. Once contamination within the ROW is evaluated and characterized, complete public notice, as necessary, prior to construction. Due to the limited available staging space in the area, in-situ waste characterization sampling and direct hauling methods would be considered and incorporated into Contract Specifications. c. If groundwater is determined to be contaminated, requiring special handling, the contractor would have multiple options including direct hauling to a CTDOT-approved treatment facility, and treatment/discharge to surface water or sanitary sewer under a CTDEEP general permit. 2. CTDOT has established a Centralized Groundwater Treatment Facility in Norwalk, which is permitted with CTDEEP to handle, treat and discharge contaminated groundwater from DOT construction projects in the vicinity of Norwalk. The use of this facility can also be implemented as a mitigation measure. |



| Resource | Commitments |
|------------------------------|---|
| Environmental Justice | <ol style="list-style-type: none">1. Provide timely Project updates to the neighborhoods, and businesses, and transit providers within the study area in order to help residents, and business owners, and commuters prepare and adjust to temporary construction activities, potential changes in vehicular, pedestrian, bicycle, and transit traffic patterns and access, and short term nuisance dust and noise.2. Provide notices to Main Avenue businesses that serve the EJ community and through local media typically accessed by residents in the study area3. CTDOT will coordinate with neighborhoods, businesses, and transit providers in subsequent design phases to minimize impacts to the extent possible.4. Include measures in final design to minimize effects on access during construction. These may include detailed phasing and closure plans for roadways, phasing plans for sidewalk repairs to maintain access, design and placement of barriers such that access is maintained to local businesses.5. Manage emissions during construction with standard practices such as use of water trucks to control dust and limiting equipment idling.6. Ensure that MOA provisions to compensate for and/or ameliorate impacts to historical resources are implemented such that impacts do not occur disproportionately in EJ communities.7. Potential construction period mitigation measures include the optimization of construction phasing to minimize disruptions to multi-modal traffic, the establishment of haul routes and staging areas, identification of permissible hours of work, ongoing coordination with neighborhoods, businesses, schools, and transit providers (Norwalk Transit District, MNR, Norwalk Public Schools, and other private providers) within the study area, and the use of temporary traffic control devices to direct traffic and assist with pedestrian crossings as needed. |



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10.0 LIST OF ACRONYMS AND ABBREVIATIONS

| Acronym / Abbreviation | Name |
|------------------------|---|
| AC | acres |
| ACOE | U.S. Army Corps of Engineers |
| ACS | American Community Survey |
| ADA | U.S. Americans with Disabilities Act |
| AM | morning |
| APA | Aquifer Protection Area |
| APE | Area of Potential Effect |
| AVE | Area of Visual Effect |
| B/C | Benefit/Cost |
| BCA | Benefits-Cost Analysis |
| CEPA | Connecticut Environmental Policy Act |
| CFR | Code of Federal Regulations |
| CGS | Connecticut General Statutes |
| CO | carbon monoxide |
| CTDEEP | Connecticut Department of Energy and Environmental Protection |
| CTDOT | Connecticut Department of Transportation |
| CTSHPO | Connecticut State Historic Preservation Office |
| CWA | Clean Water Act |
| C&D | Conservation and Development |
| dB(A) | decibels on the A-weighted scale |
| EA | Environmental Assessment |
| EIE | Environmental Impact Evaluation |
| EIS | Environmental Impact Statement |
| EJ | Environmental Justice |
| EO | Executive Order |
| EPA | U.S. Environmental Protection Agency |
| ESA | Endangered Species Act |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FONSI | Finding of No Significant Impact |
| GHG | Greenhouse gas emissions |
| HEC | FHWA Hydraulic Engineering Circular |
| IpaC | Information for Planning and Conservation system |
| LEP | Limited English Proficiency |
| LF | Linear feet |
| LOS | Level of Service |
| LWCF | Land and Water Conservation Fund Act |



| Acronym / Abbreviation | Name |
|------------------------|---|
| MNR | Metro-North Railroad |
| MPAC | Merritt Parkway Advisory Committee |
| MPC | Merritt Parkway Conservancy |
| MOA | Memorandum of Agreement |
| MSAT | Mobile Source Air Toxics |
| NAAQS | National Ambient Air Quality Standards |
| NAC | Noise Abatement Criteria |
| NACTO | National Association of City Transportation Officials |
| NDDDB | Natural Diversity Data Base |
| NEPA | National Environmental Policy Act |
| NLEB | Northern long-eared bat |
| NOAA | National Oceanic and Atmospheric Administration |
| NPS | National Park Service |
| NRHP | National Register of Historic Places |
| NRVT | Norwalk River Valley Trail |
| OEC | Office of Environmental Compliance |
| OOC | Office of Construction |
| OPM | Office of Policy and Management |
| PAC | Project Advisory Committee |
| PIP | Public Involvement Plan |
| ROD | Record of Decision |
| Route 7 | United States Route 7 |
| Route 15 | State Route 15 / Merritt Parkway |
| Route 123 | State Route 123 |
| ROW | Right of Way |
| RTE | Rare, Threatened, and Endangered Species |
| SR | State Route |
| State C&D | State Conservation and Development |
| SWRPA | South West Regional Planning Agency |
| UConn | University of Connecticut |
| USC | U.S. Code |
| USCG | U.S. Coast Guard |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Services |
| USGS | U.S. Geological Survey |
| VIA | Visual Impact Assessment |
| VMT | Vehicle miles traveled |
| WestCOG | Western Connecticut Council of Governments |



11.0 REFERENCES

This document provides supplemental information for the reader in footnotes. References to source documents identified within the text of this EA/EIE document are provided below:

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