APPLICATION SUMMARY:
The request for Municipal Improvement (the “MI”) from the Board of Selectmen and the Department of Public Works, to make a major redesign of the intersection of Greenwich Avenue and Elm Street in downtown Greenwich.

The referral of this MI was submitted to Planning and Zoning on October 23, 2020 for the Department of Public Works. The Board of Selectmen, referred this application to the Commission on 11/12/2020.

COMMENTS AND RECOMMENDATIONS:
1. Per the Town’s Charter, major reconstruction of any Town Road, requires a Municipal Improvement (an “MI”) from the Board of Selectman, the Planning and Zoning Commission and then the Representative Town Meeting, prior to action by any Town Agency undertaking such work. The Commission would need to act on the MI prior to acting on the related site plan approval.

2. If the Commission grants approval of the MI, the next step would be to place the matter on the call of the Representative Town Meeting for acceptance and prior to any activity related to the plans to improve this intersection.

PROPOSAL:
The Department of Public Works (the “DPW”) has been studying possible opportunities to improve the, “…streetscape, retail environment and pedestrian experience” on Greenwich Avenue. An ongoing “Greenwich Avenue Streetscape” capital project is currently underway, and the DPW has identified an opportunity for possible improvements to Greenwich Avenue in a phased approach. The intersection of Greenwich Avenue and Elm Street, is a first Phase they would like the Commission to consider, with a focus on pedestrian safety improvements, the creation of new greenspace, and potential place building opportunities.

As the Commission is aware, the intersection is a two lane intersection, with the Avenue being two lanes with traffic moving one-way, southbound. East and West Elm Streets are also two-lanes but with traffic moving in both directions – east and west-bound.

Improvements to the intersection would focus on improving pedestrian safety and experience. The intersection would continue to be controlled by an “All-way” stop sign and/or Police Officer as is currently the case. Signalization of the intersection, though not proposed, would not be precluded by the design, if found to be warranted at a later date.
A “bulb-out” design is proposed for the intersection. This is design that would essentially extend the sidewalk and pedestrian area, into the paved roadway, and seeks to shorten the distance pedestrians must make to cross the lane (or lanes) of traffic. This would be done while maintaining two, full sized travel lanes on each roadway. Shortening the crosswalk lengths decreases pedestrian crossing time, while the bulb-outs provide better visibility for, and of, pedestrians while allowing persons to wait in a clearly identified area on the shoulder of the travel lane.

In addition to cross walk improvements, the entire intersection would be raised to create a raised intersection or ‘speed table’ at this location. The raised intersection is another safety improvement that helps to calm traffic, designates the intersection’s pedestrian zone, and removes the need for ramps and curbs at the intersection as the pedestrian crosswalk would be at grade or even with the sidewalk(s).

The improvements would also afford for more space at the intersection for landscaping, and street amenities, such as benches, bike racks, and trash receptacles. All existing trees, except for one in the area are proposed to remain. Four (4) existing light poles in the area would be relocated to bring the lighting in, towards the revised pedestrian surface and crosswalks, where lighting is needed. The additional curb space would reduce existing parking on Greenwich Ave, by five (5) parking spaces, a one (1) space lost north of the intersection and a four (4) space loss south of the intersection. With revisions to the roadway and curbing, changes to the location of some drainage structures in the area of the intersection will need to be modified to and two additional catch basins, to collect storm water, will be added.

**APPLICABLE REGULATIONS:**
This application was made pursuant to Section 99 of the Town Charter, which requires Municipal Improvement approval for major redesigns of Town roads.
TO: Katie DeLuca  
FROM: Fred Camillo  
DATE: Nov. 12, 2020  
SUBJECT: Greenwich Avenue – Elm Street intersection improvements Municipal Improvement Referral

At a meeting of the Board of Selectmen on November 12, 2020, the Board unanimously voted to approve the referral to the Planning and Zoning Commission of improvements to the intersection of Greenwich Avenue and Elm Street.

As you know, Section 99 of the Charter calls for a Municipal Improvement referral in conjunction with the “location, relocation, major redesign, extension or abandonment of any street or sewage disposal plant.” In this case, the Department of Public Works has developed plans for improvements to the aforementioned intersection. Consequently, it is the opinion of the Board of Selectmen that this requires an MI Referral to your Board under Section 99 of our Charter.

Thank you for taking this under consideration at your next Planning and Zoning Commission meeting.

cc: James Michel  
    Jason Kaufman

"The Town of Greenwich is Dedicated to Diversity and Equal Employment Opportunity"
Town of Greenwich  
Planning & Zoning Department  
Town Hall – 101 Field Point Road, Greenwich, CT 06830-2540  
Phone: (203)622-7894 – Fax: (203)622-3795

MUNICIPAL IMPROVEMENT APPLICATION

Project Name Greenwich Avenue & Elm Street Intersection Improvements

Applicant: Department or Agency Department of Public Works - Engineering Division

Address 101 Field Point Road, Greenwich, CT 06830

Contact Person Jason M. Kaufman, P.E., Senior Civil Engineer

Telephone 203-622-3839 Facsimile 203-992-8302

Authorized Agent / Department Head Signature

Date 10-22-20

If project involves real property, identify by

Location Intersection of Greenwich Avenue with E / W Elm Street

Tax Account Number(s) 01-1635/S, 01-1988/S, 01-2160/S, 01-1635/S Zone(s) CGBR

Property Owner / Responsible Department Department of Public Works

Previous related MI Numbers N/A

PROJECT DESCRIPTION:

Refer to attached "Greenwich Avenue & Elm Street Intersection Improvements Report", September 2020.

Summary of Outreach - Coordination with First Selectman's Office (June 2020 to August 2020), First Selectman's Re-Imagine Greenwich Committee (9/30/2020)

Adjacent Property Owners and Businesses (10/6/2020)

Attach additional sheets, if necessary

Staff-assigned MI Number

Form PZ MI App Staff-assigned SP Number
MUNICIPAL IMPROVEMENT GUIDELINES

SECTION 1 - PURPOSE

The intent of adopting guidelines for Municipal Improvements is to clarify Section 17 of the Special Acts relative to those items that need Planning and Zoning Commission approval under this section.

SECTION 2 - PROCEDURE

1. Application for Municipal Improvement shall be submitted in writing, in narrative form, addressed to the Planning and Zoning Commission, accompanied by a site plan with sufficient data to enable the Commission to make an informed decision. If before the Public Meeting the Commission decides that sufficient data has not been provided, the Commission may deny or postpone the item to a date certain but within 90 days from the date of submission.

2. The Planning and Zoning Commission will give adequate notice to each department or agency of the Town, whether or not the department is involved with the application.

3. Such department or agency will have up to a maximum of fourteen days to object to the proposal.

4. The Planning and Zoning Commission will give notice of the Public Meeting at which time the Municipal Improvement will be considered.

5. After the Public Meeting the Commission may approve, deny or modify the proposal.

SECTION 3 - DEFINITIONS

1. ABANDONMENT Ceasing occupancy of a building or use of a property, or relinquishing title or any other interest or right in or to a building or property either in whole or in part.

2. ACQUISITION Includes fee ownership or any other substantial interest e.g., easement, right of way, of Town land or buildings.

3. EXTENSION Enlargement, lengthening, expansion.

4. LEASE Includes any control over or interest in land or buildings by one other than a Town department or agency for any term of time and whether or not such control or interest is revocable by the Town.

5. LOCATION Positioning on a site or tract of land.

6. MAJOR REDESIGN Substantial or conspicuous revision in: a) Appearance, such as an addition or enlargement of public buildings roads, bridges, traffic improvements and signals, construction of Town buildings or structures, or full or partial demolition of Town buildings; b) Function, such as a change of use on public property; c) Content, such as a change of use in a public building.

7. RELOCATION Removable and establishment in whole or part in a new location.

SECTION 4 - NATURE OF MUNICIPAL IMPROVEMENT

The following are items, which have historically been submitted to the Planning and Zoning Commission for approval.
<table>
<thead>
<tr>
<th>Acquisition of land for golf course</th>
<th>Lease for library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition of land for parking lot</td>
<td>Lease of Town-owned land</td>
</tr>
<tr>
<td>Acquisition of land for playground</td>
<td>Location of Fire House</td>
</tr>
<tr>
<td>Acquisition of park land</td>
<td>Location of fire training tower</td>
</tr>
<tr>
<td>Acquisition of police administration building</td>
<td>Location of ice skating rink</td>
</tr>
<tr>
<td>Acquisition of school site</td>
<td>Location of new way or alley</td>
</tr>
<tr>
<td>Addition to Bruce Museum</td>
<td>Location of parks and trees building</td>
</tr>
<tr>
<td>Addition to firehouse</td>
<td>Location of parks maintenance building</td>
</tr>
<tr>
<td>Addition to Nathaniel Witherell</td>
<td>Marina-boat moorings and parking area</td>
</tr>
<tr>
<td>Addition to police building</td>
<td>Moderate cost rental housing location</td>
</tr>
<tr>
<td>Addition to school buildings</td>
<td>Multi-level parking facility</td>
</tr>
<tr>
<td>Addition to Town Hall</td>
<td>New road near school</td>
</tr>
<tr>
<td>Bridges</td>
<td>Pedestrian overpass</td>
</tr>
<tr>
<td>Channelized rotary traffic circles</td>
<td>Railroad station improvement</td>
</tr>
<tr>
<td>Closing portion of a public street</td>
<td>Release of air rights</td>
</tr>
<tr>
<td>Community Center site</td>
<td>Relocation of dog pound</td>
</tr>
<tr>
<td>Construction of lavatories in playgrounds and parks</td>
<td>Relocation of roads as a result of thru-way</td>
</tr>
<tr>
<td>Construction of marine police building</td>
<td>Relocation of Town Garage</td>
</tr>
<tr>
<td>Conversion of former high school for Town offices</td>
<td>Renewal of lease for boat club</td>
</tr>
<tr>
<td>Docking facilities</td>
<td>Replacement of sidewalks on Greenwich Avenue</td>
</tr>
<tr>
<td>Enlargement of incinerator</td>
<td>Sale of Town-owned land</td>
</tr>
<tr>
<td>Exchange of land for road realignment</td>
<td>Sewers / Sewer plant</td>
</tr>
<tr>
<td>Exchange of land for shopping center</td>
<td>Sidewalk construction</td>
</tr>
<tr>
<td>Extension of street</td>
<td>Street widening</td>
</tr>
<tr>
<td>Fuel and berthing facility</td>
<td>Town nursing home parking lot</td>
</tr>
<tr>
<td>Generator plant – Greenwich Point</td>
<td>Traffic Signals</td>
</tr>
<tr>
<td>Housing for the Elderly</td>
<td>Use of Town-owned land for private rifle club</td>
</tr>
</tbody>
</table>

SECTION 5 – EFFECTIVE DATE

These guidelines shall become effective upon their adoption by the Planning and Zoning Commission at a public meeting, which has been duly warned for said purpose.

Copies of such guidelines shall be distributed to each department and agency in and for the Town of Greenwich and copies thereof shall be filed in the office of the Planning and Zoning Commission. Such guidelines shall be deemed to be public information.

SECTION 6 – AMENDMENTS

These guidelines may be amended upon recommendation of any department head or agency of the Town of Greenwich as defined in Section 17 at a public meeting duly warned for said purpose.

Sec. 17. Municipal Improvements; Commission Approval Required. After the passage of this act no action, other than the making of studies or surveys, shall be taken by any town agency, the board of education or the housing authority of the town on any proposal involving (a) the location, relocation, major redesign, extension or abandonment of any street or sewage disposal plant; (b) the acquisition of land for, or the location, relocation, abandonment, sale, lease or major redesign of public real property or public buildings, including schools; (c) the extent and location of transportation routes and terminals whether publicly or privately owned; or (d) the location of public housing projects, until such proposal has been submitted to and approved by the commission or has been approved by the town meeting as herein provided.

Sec. 18. Municipal Improvements; Referral to Representative Town Meeting from Action of Commission. The failure of the commission to act upon any proposal, submitted to it pursuant to Section 17, within ninety days after such submission shall be deemed to constitute approval thereof; provided the commission may, by resolution adopted prior to the termination of said ninety-day period and for sufficient reasons to be stated in said resolution, defer approval for any length of time reasonably necessary. In the event of the approval or disapproval or deferral by the commission of any such proposal, the commission shall cause a notice of such action to be published in a newspaper having a general circulation in the town and the town agency, the board of education or the housing
TOWN OF GREENWICH
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

GREENWICH AVENUE AND ELM STREET
INTERSECTION IMPROVEMENTS

September 2020
TABLE OF CONTENTS

Background .................................................................................................................................... 3

Existing Conditions ....................................................................................................................... 3
Traffic and Pedestrian Counts ........................................................................................................ 3
Considerations ............................................................................................................................... 3

Proposed Improvements ............................................................................................................... 4
Crossing Distance .......................................................................................................................... 4
Raised Intersection ....................................................................................................................... 4
Green Space .................................................................................................................................. 4
Bike Racks ..................................................................................................................................... 5
ADA Accessibility ......................................................................................................................... 5
Parking ......................................................................................................................................... 5
Trees .............................................................................................................................................. 6
Lighting ......................................................................................................................................... 6
Drainage ......................................................................................................................................... 6
Cost Estimate ............................................................................................................................... 6

Attachment 1: Proposed Plan
Attachment 2: 2018 Traffic Count Data
Attachment 3: Traffic Review and Analysis Summary Memo
Attachment 4: Landscape Plan
Attachment 5: Cost Estimate
Background –

Greenwich Avenue (The Avenue) has long been studied for opportunities to improve streetscape, retail environment and pedestrian experience. While the ongoing Greenwich Avenue Streetscape capital project continues to gather input and establish some preliminary designs for consideration, the quickly changing environment due to COVID-19 pandemic has created an opportunity for improvements to The Avenue in a focused, and potentially phased approach. The Department of Public Works has taken a closer look at the intersection of Greenwich Avenue and Elm Street, with a particular focus on pedestrian safety improvements and creation of new greenspace with the goal of improving the pedestrian experience and building a sense of place.

The DPW Engineering Division has prepared the following summary analysis and proposed plan for intersection improvements to the intersection of Greenwich Avenue and Elm Street. The proposed plan is included in Attachment 1.

Existing Conditions –

Traffic and Pedestrian Counts

Under the Greenwich Avenue Streetscape capital project, Milone and MacBroom, Inc. (MMI) was contracted to study existing traffic patterns on Greenwich Avenue and the various cross streets. The data collected in September 2018 for the intersection of Greenwich Avenue and Elm Street is included in Attachment 2. The summary memo of this report is included in Attachment 3.

Greenwich Avenue is a two-lane roadway with one-way traffic travelling from north to south. There is forward angled parking on both sides of the roadway. Elm Street is a two-lane roadway with one-lane in each direction. There is parallel parking on the north side of the roadway. The intersection has all-way stop control. Crash history on Greenwich Avenue shows a majority of crashes from backing up and sideswipe movements. Pedestrian activity is highest during the afternoon peak hour. The posted speed limit on both Greenwich Avenue and Elm Street is 25 MPH.

Considerations

While there is ongoing discussion regarding the removal of police officers from Greenwich Avenue at the intersections with Elm Street and Arch Street, the focus of these intersection improvements is on improving the pedestrian safety and experience. This project would not preclude traffic signals if they were found to be warranted in the future, however the scope of this study did not include traffic signals. The proposed improvements work with the existing all-way stop control, or with an officer directing traffic.
The proposed improvements take into consideration existing trees and plantings, the decorative clock (to remain), existing amenities (newspaper rack, benches, trash receptacles) with the ability to replace as needed if new standards are developed for Greenwich Avenue or throughout Town.

**Proposed Improvements –**

**Crossing Distance**

The bulb-out intersection design provides shortened crossing distances for pedestrians. For Greenwich Avenue, average crossing distance will decrease from 61 feet to 36 feet with the proposed improvements, a 41% reduction. For Elm Street, average crossing distance will decrease from 40 feet to 38 feet, a 5% reduction. The Institute of Transportation Engineers (ITE) recommends utilizing an average pedestrian walking speed of 3.5 feet per second when designing intersections. The proposed improvement will shorten the crossing time by an average of 7 seconds for Greenwich Avenue and an average of 1 second for Elm Street. The ITE also recommends utilizing a pedestrian travel speed of 2.5 feet per second for elderly populations. Using this speed, the crossing speed is reduced by 10 seconds across Greenwich Avenue and by 1 second across Elm Street.

Additionally, shortening the crosswalks brings pedestrians closer to the travel lane while waiting for an opportunity to cross. This makes waiting pedestrians more visible to drivers and improves the visual connection between driver and pedestrian.

**Raised Intersection**

Another improved safety element of the proposed plan is introduction of a raised intersection. The raised intersection functions as a traffic calming measure to slow vehicles as they enter the intersection. It also makes drivers more aware that they are entering a pedestrian zone. The raised intersection will also benefit pedestrians due to the roadway being at a higher elevation than typical and there will be no need for ramps down to the roadway. Pedestrians are able to travel at a consistent elevation across the intersection which can be easier for many people to traverse. Another example of a raised intersection within the Town of Greenwich is at the intersection of Old Orchard Road and Split Timber Place which is the parent pick-up and drop-off location for North Mianus School.

**Green Space**

One objective of the proposed plan is to offer additional opportunity for planting and green space along Greenwich Avenue. Several new planting beds are incorporated into the plan. The Town of Greenwich Parks Department will be assisting in identifying plants that will be attractive, easily maintainable and low enough as to not obstruct sightlines for vehicles approaching the intersection. The proposed landscaping plan is included in Attachment 4.
The total green space in the proposed plan is approximately 2,200 SF. This is a net increase of 647% over the existing 340 SF of green space, which consists mostly of bare tree pits. This equates to approximately 1,860 SF of impervious surfaces being removed and replaced with green space.

**Bike Racks**

Bike activity along Greenwich Avenue is considered low. This is likely due to the volume of vehicles, steep slopes and angled parking. However, there have been requests for bike racks to be installed along Greenwich Avenue to encourage multi-modal transportation. The proposed plan incorporates 2 bike rack locations. Each rack is located on its own concrete pad, not within the pedestrian travel areas, and easily accessible from the sidewalk and adjacent roadway. The bike racks will be U-shape and have space for 2 bicycles at each bike rack.

**ADA Accessibility**

The proposed plan includes improved access to, and slope of ADA accessible parking spaces. This includes relocating 1 of the ADA accessible parking spaces in order to provide better access to both sides of Greenwich Avenue. The proposed plan includes a dedicated pedestrian ramp at each ADA accessible parking space to provide improved access to the sidewalk.

The elimination of traditional pedestrian ramps at each corner, due to the raised intersection, will improve accessibility throughout the intersection. Detectable warning panels will be located at each transition from sidewalk to roadway. The addition of stone curbing around the planting beds will better define these areas as well.

**Parking**

Much of the proposed bulb-outs and planting areas are located within areas of the roadway that are already striped for no parking. Parking on the north side of West Elm Street is proposed to change as follows – the existing loading zone location will be swapped with 4 existing parking spaces zone to allow trucks to better access the loading zone while the bulb-out is in place. There is no net change in parking on Elm Street.

On Greenwich Avenue, 5 parking spaces will be eliminated in order to provide safer pedestrian crossings and increased green space. Between Lewis Street and Elm Street there are currently 87 spaces, which will be reduced by 1 space (a 1.1% decrease). Between Elm Street and Arch Street/Havemeyer Pl. there are currently 94 spaces, which will be reduced by 4 spaces (a 4.3% decrease). Overall this results in a 2.8% reduction in parking within the 2 blocks between Lewis Street and Arch Street/Havemeyer Place.
**Trees**

As part of the Greenwich Avenue Streetscape capital project, MMI and the Tree Warden have been evaluating the health and condition of the street trees along Greenwich Avenue. Three trees within the project limits of the proposed project were identified to be in decent health and will be maintained and protected in place during construction. The newly expanded planting areas will include these existing tree locations. One tree, located on the northeast corner of the intersection, was identified for removal in the overall analysis of Greenwich Avenue street trees. This tree will be posted for removal by the Tree Warden. One or more additional trees may be planted in the new planting beds.

**Lighting**

With pedestrians being brought closer to the intersection, it will be important to bring the lighting closer to the crosswalks as well. Four existing light poles closest to the intersection will be relocated closer to the crosswalks. This will help illuminate the new areas of sidewalk and make pedestrians more visible to drivers as they approach the intersection.

**Drainage**

The location of bulb-outs on the northeast and northwest corners of the intersection necessitate relocating catch basins at these corners further to the north. In addition, raising the intersection requires the addition of 2 new catch basins in order to keep water from ponding on the north side of the intersection. The cost of these 4 catch basins and associated drainage pipes have been included in the cost estimate.

**Cost Estimate**

A cost estimate has been developed for the proposed plan and is included in Attachment 5.
DEPARTMENT OF PARKING SERVICES

MEMORANDUM

TO: Board of Selectmen

FROM: Jason Kaufman, P.E., Senior Civil Engineer

DATE: October 14, 2020

RE: Municipal Improvement
    Elm Street Intersection Improvements

AGENDA ITEM FOR 10/22/2020 BOARD OF SELECTMEN COMMITTEE – ACTING TRAFFIC AUTHORITY

The Department of Public Works, in coordination with the First Selectman’s Office, has developed plans for proposed intersection improvements for the intersection of Greenwich Avenue and Elm Street. In order to advance into the Municipal Improvement process, DPW would like to present the proposed plan to the Board of Selectman. If approved for advancement, DPW will present to the RTM, BET and Planning Board.

The intent of these streetscape improvements is to improve visibility of pedestrians, slow traffic entering the intersection, and beautify and create a sense of place. This project has the potential to be replicated at other intersections for a cohesive design along Greenwich Avenue. Enclosed for your review is the proposed plan along with a presentation highlighting the proposed changes.

CC: Amy Siebert, Commissioner of Public Works
    James W. Michel, Deputy Commissioner of Public Works
    Peter Kurpeawski, Public Works – Acting Highway Superintendent
    Mark Marino, Deputy Chief of Police
    Roderick Dioquino, Parking Services – Business Operations Supervisor
    Sgt. Patrick Smyth, Greenwich Police Department
    Barbara Heins, Executive Assistant to the First Selectman
Introduction

James W. Michel, P.E., Deputy Commissioner of Public Works

Jason M. Kaufman, P.E., Senior Civil Engineer

Eleanor Rogers, P.E., Civil Engineer II
Meeting Outline

- Project Objectives
- Existing Conditions
- Proposed Plan
- Proposed Improvements
- Cost and Schedule
Project Objectives

- Improve Pedestrian Safety
- Build Sense of Place
- Increase Green Space
- 2018 Downtown Road Safety Audit Recommendations
- Improve Accessibility for Persons with Disabilities
- Proof of Concept for Potential Improvements at other Greenwich Ave Intersections

Town of Greenwich
Department of Public Works
Engineering Division

October 2020
Inaugural National Pedestrian Safety Month
## Existing Conditions

### 2018 Traffic and Pedestrian Counts

<table>
<thead>
<tr>
<th></th>
<th>PM Peak Hour (4:30-5:30 PM)</th>
<th>AM Peak Hour (8:00 - 9:00 AM)</th>
<th>Saturday Midday (12:00 - 1:00 PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenwich Ave. Vehicles (southbound)</td>
<td>307</td>
<td>220</td>
<td>417</td>
</tr>
<tr>
<td>Elm St. Vehicles (westbound)</td>
<td>223</td>
<td>235</td>
<td>172</td>
</tr>
<tr>
<td>Elm St. Vehicles (eastbound)</td>
<td>247</td>
<td>224</td>
<td>244</td>
</tr>
<tr>
<td>Pedestrians (entire intersection)</td>
<td>311</td>
<td>174</td>
<td>804</td>
</tr>
</tbody>
</table>

* Counts were conducted in September 2018 while police were directing traffic at intersection

---

**Average Daily Traffic**

- Putnam Ave - 20,000 veh/day
- Sound Beach Ave - 8,000 veh/day
- Lake Ave / Glenville Rd / North St - 12,000 veh/day
- Greenwich Ave - 3,500 veh/day
- Local Roads <1,000

*For reference only, not based on any recent counts*
Existing Conditions

- Trees
- Decorative Clock
- ADA Accessible Parking
- Lighting
- Amenities
  - Newspaper Stands
  - Trash/Recycling Receptacles
  - Benches
Existing Plan
Proposed Improvements

- **Bulb Outs**
  - Increase visual connection between pedestrian and driver
  - Reduces average crossing distance and average crossing time*

<table>
<thead>
<tr>
<th></th>
<th>Average Crossing Distance</th>
<th>Average Crossing Time*</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Existing</td>
<td>Proposed</td>
<td>Existing</td>
</tr>
<tr>
<td>Greenwich Avenue</td>
<td>61 FT.</td>
<td>36 FT.</td>
<td>17.5 SEC.</td>
</tr>
<tr>
<td>East/West Elm Street</td>
<td>40 FT.</td>
<td>38 FT.</td>
<td>11.3 SEC.</td>
</tr>
</tbody>
</table>

* Based on the Institute of Transportation Engineers (ITE) recommendation of 3.5 ft/s crossing speed (2.5 ft/s can be used for elderly populations)
Proposed Improvements

- Raised Intersection
  - Stop sign at all approaches
  - Alerts drivers entering pedestrian zone
  - Reduces vehicle speed entering intersection
  - Improves visibility of pedestrians in crosswalk

Town of Greenwich
Department of Public Works
Engineering Division

October 2020
Proposed Improvements

- Green Space
  - Existing +/-340 SF green space increased by +/-1,860 SF to a total of +/-2,200 SF (547% increase)
  - Parks Department to assist with landscaping plan

Town of Greenwich
Department of Public Works
Engineering Division
Proposed Improvements

» Bike Racks

» Permanent installation

» Designated pad to avoid pedestrian interference

» Space for four bikes (2 at each corner)
Proposed Improvements

Elm St Parking
- Swap location existing loading zone on W Elm St with 4 existing parking spaces
- No change in parking quantity on E Elm St or W Elm St

Greenwich Ave Parking
- ADA accessible space relocated from SE corner to SW corner, ADA Accessible parking space at NE corner to remain
- Dedicated pedestrian ramp for each ADA accessible parking space
- Elimination of 4 parking spaces in order to provide safer pedestrian crossings and increased green space (2.2% reduction, 4 of 181)

Between Lewis St and Elm St
No net loss in parking spaces (0 of 87)

Between Elm St and Arch St/Havemeyer Pl
4.3% reduction (4 of 94)
Proposed Improvements

- **Lighting**
  - Relocate existing light poles closer to intersection
  - Improve visibility of pedestrians

- **Drainage**
  - Relocate catch basins and manhole on north side of intersection
  - Add 2 catch basins north of Elm St at low points created by raised intersection
Cost & Schedule

- Business access to be maintained
- Anticipated Start Date – Early Spring 2021
- Construction Duration – Approximately 8–12 weeks
- Cost Estimate – Approximately $300,000
Thank you....

Contact Information

Project Manager: Jason M. Kaufman, P.E., Senior Civil Engineer
Department of Public Works, Engineering Division
Jason.Kaufman@greenwichct.org
(203) 622-3839

Deputy Commissioner: James W. Michel, P.E.
Department of Public Works
James.Michel@greenwichct.org
(203) 622-7767