

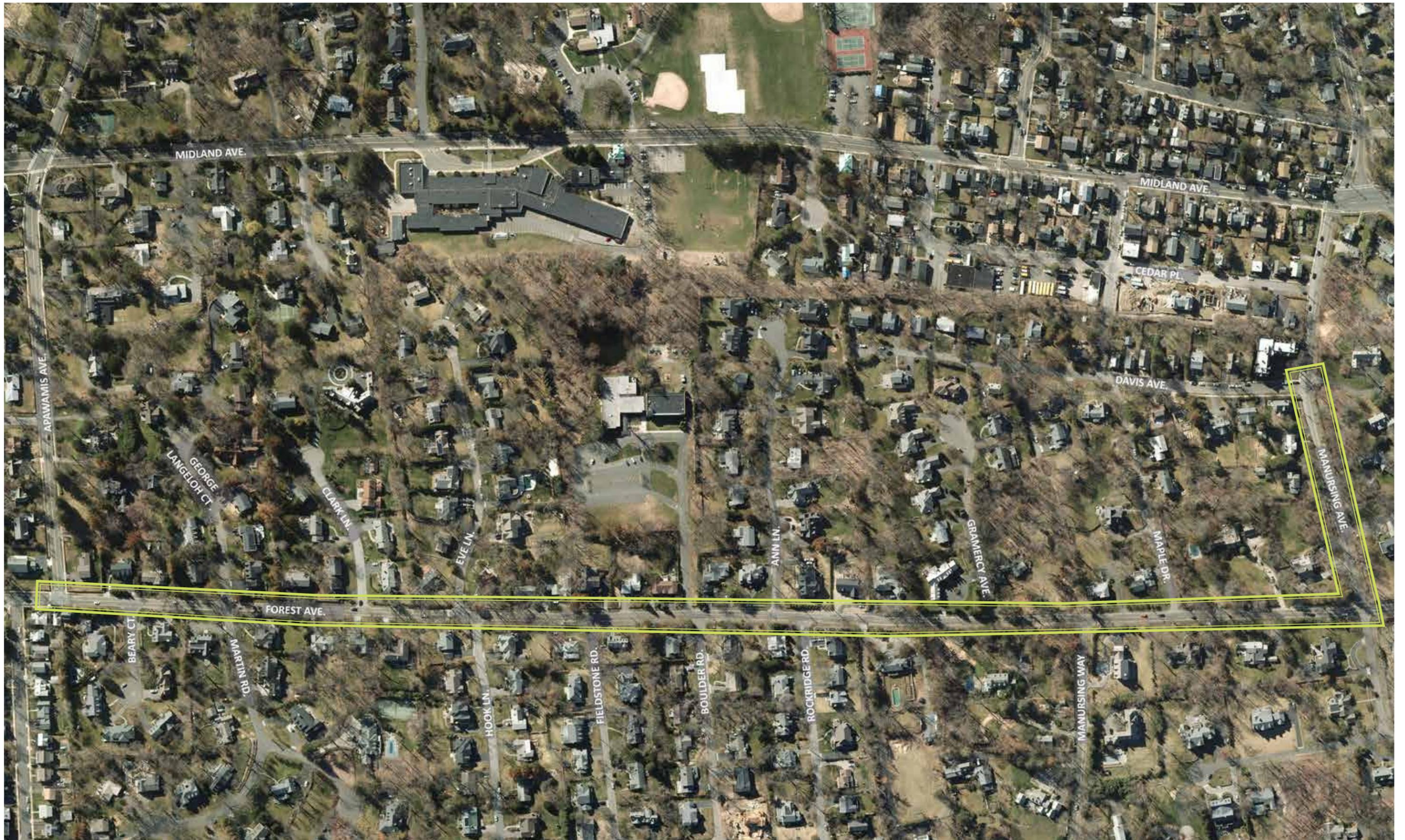


# FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY

Prepared for:  
City of Rye, New York  
July 1, 2016



STANTEC CONSULTING SERVICES  
55 CHURCH ST. SUITE 601  
NEW HAVEN, CT 06510-3014



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(Opposite page) Aerial photo with yellow line delineating the project study limits.



## CHAPTER

- Overview
- Process
- Public Involvement
- Acknowledgements

# PROJECT SUMMARY

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## Overview

In the spring of 2016 the City of Rye contracted with Stantec Consulting Services Inc. to prepare a pedestrian improvement study that would identify potential alternative improvement projects that better accommodate pedestrian needs in the roadway right-of-way of Forest Avenue and Manursing Avenue. The project scope includes the right-of-way along Forest Avenue between Apawamis Avenue and Manursing Avenue (approximately 3,700 linear feet) and along Manursing Avenue between Forest Avenue and Davis Avenue (approximately 650 linear feet). The study will be used to inform the City and the public of possible pedestrian improvement options and is meant to encourage a formal discussion as a design alternative is chosen by the City for future detailed engineering and implementation.

## Process

The City of Rye supplied a topographic and property boundary survey for the project area. The survey included the location of any visible structure within three (3) feet of the edge of the City right-of-way including: topography; pavement edges, centerline and elevation; curbs (including top and bottom of curb elevations); driveways and intersections; walls (face, width and elevation); fences; utility structures, manholes, gas/water valve boxes, sewer/drainage structures, fire hydrants, utility poles and guy wire supports; and trees and vegetation. Using the survey provided by the City of Rye, Stantec completed a walking tour and review of the vegetation, right-of-way conditions, materials and neighborhood character of the area.

Stantec developed options for potential pedestrian improvements for Forest Avenue and Manursing Avenue, including sidewalks with on-road bicycle lanes, off-road multi-use path and expanding the width of the roadway pavement shoulders to provide space for pedestrians. Each of the alternatives was designed with sensitivity to the needs of its prospective users, adjacent property owners, and potential environmental and traffic impacts. Options were evaluated, noting opportunities and constraints of each, incorporating a preliminary traffic review and identifying viable pedestrian improvements options from an active transportation and a pedestrian perspective.

Detailed preliminary plans (40%) for each of the viable alternatives were prepared with sufficient detail to properly assess project impacts, physical constraints and anticipated cost. A narrative discussing the challenges, issues and constraints of each alternative was included. The cost estimate for each option includes the costs for final design, construction documents and construction inspection.

## Public Involvement

One of the critical elements of the study was engaging the community and soliciting public input during the development process. An initial meeting was held prior to any refined routes being suggested to state the goals of the project as well as obtain stakeholder input on potential improvement options and community concerns and/or priorities. Subsequent to pathway development, a second public outreach session will be held to further provide the community with updates on routing, details, and typical sections and to solicit response to the alternatives.

## Acknowledgements

City of Rye, New York

- Marcus A. Serrano, City Manager
- Christian K. Miller, AICP, City Planner, Department of Planning
- Ryan Coyne, P.E., City Engineer, Department of Engineering/Public Works



# 2

## CHAPTER

- Overview
- Opportunities / Constraints
- Existing Conditions - 1
- Existing Conditions - 2
- Existing Conditions - 3
- Existing Conditions - 4

## EXISTING CONDITIONS ANALYSIS

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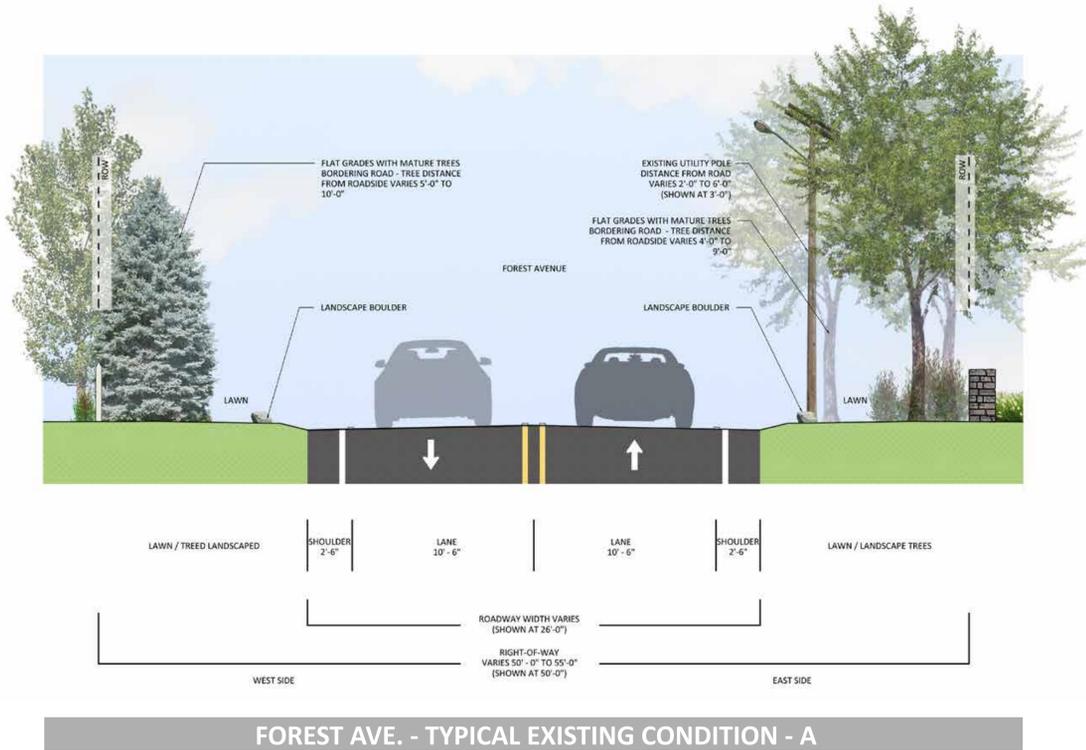
### Overview

Using the survey provided by the City of Rye, Stantec completed a walking tour of the Forest Avenue and Manursing Avenue site corridor and completed a review of vegetation, right-of-way conditions, materials and neighborhood character of the area. Using the information collected from the walking tour, Stantec prepared an existing conditions analysis of the Forest Avenue and Manursing Avenue corridors. The following are bullet points of observations regarding opportunities and constraints throughout the site:

### Opportunities/ Constraints

- Areas of wide lawn exist in some portions of the right-of-way.
- The southern portion of Forest Avenue has a good, open view corridor.
- The number of driveway crossings are similar on both sides of the roadway.
- Utility impacts exist on both east and west sides of Forest Avenue.
- While ledge exists on both east and west sides of Forest Avenue, the minimal quantity and type of rock outcrops on the east side offer more opportunity for integration of sidewalk and/or multi-use path.
- Mature tree and shrub locations within the right-of-way will be impacted by the potential sidewalk and/or multi-use path locations.
- Retaining walls exist on the west side of Forest Avenue between Ann Lane and Gramercy Avenue.
- Steep slopes exist on the west side of Forest Avenue after Gramercy Avenue and on the south side of Manursing Avenue.
- The intersection of Forest Avenue and Manursing Avenue has poor site lines, and vehicles tend to roll through the stop signs.
- Storm drainage issues exist in the corridor, especially between Fieldstone Road and Boulder Road.

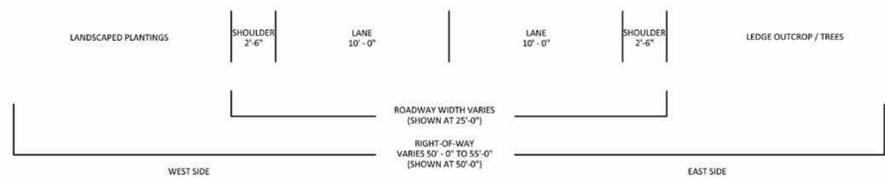
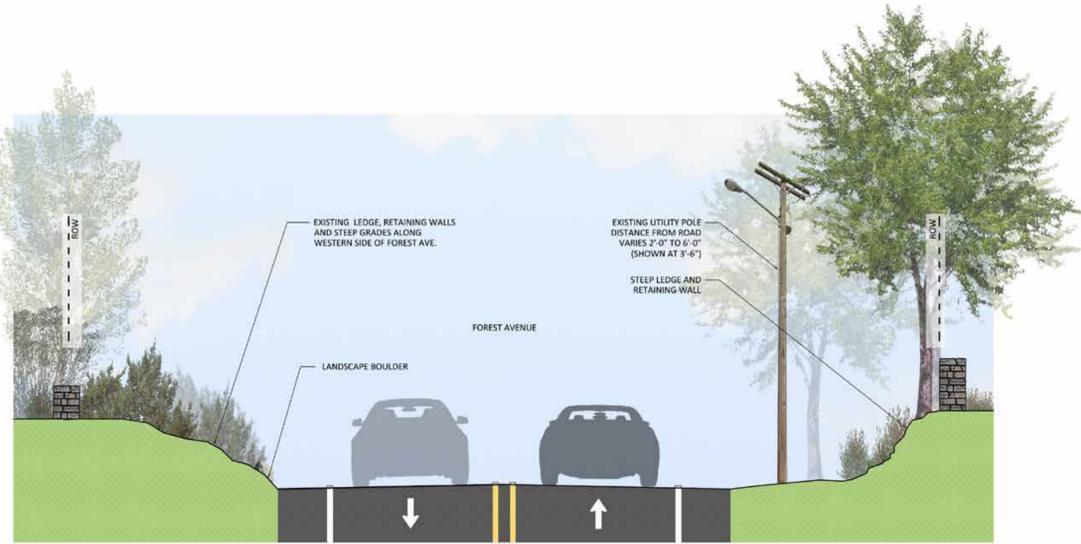
On the following plan sheets existing conditions are depicted for the location of overhead utility lines and poles, steep grade change/ledge, mature vegetation growing close to the road edge, and the location of existing condition images shown on the plans. Representative sections of the roadway existing conditions are also provided.



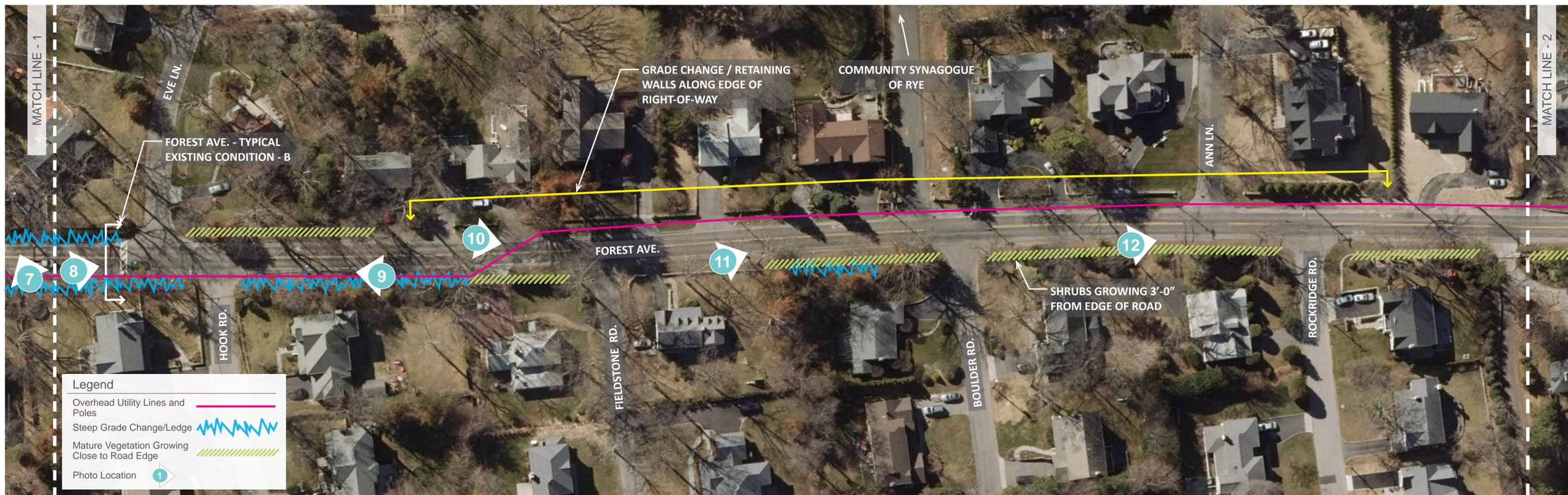
**EXISTING CONDITIONS - 1**

**FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY**





FOREST AVE. - TYPICAL EXISTING CONDITION - B



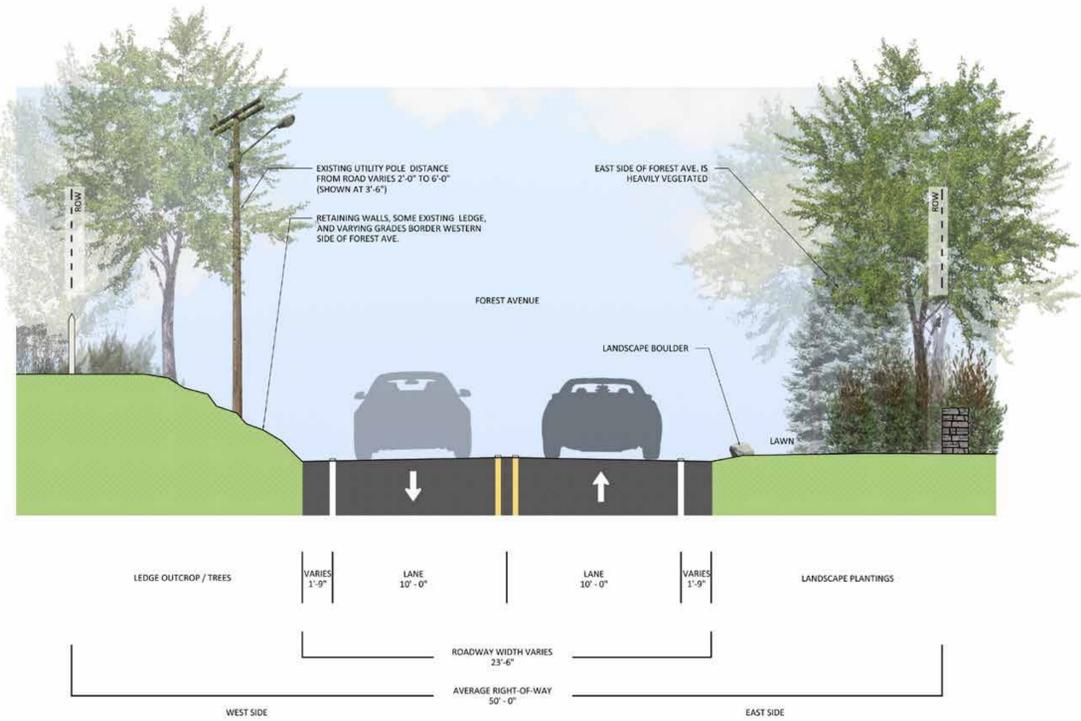
EXISTING CONDITIONS - 2



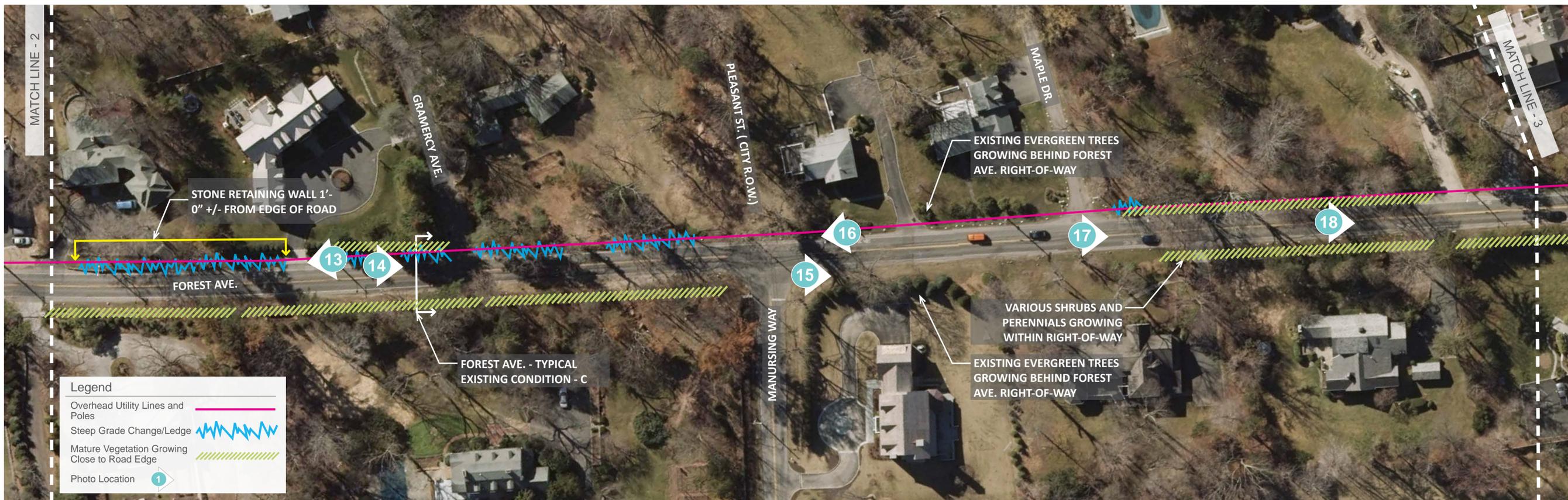
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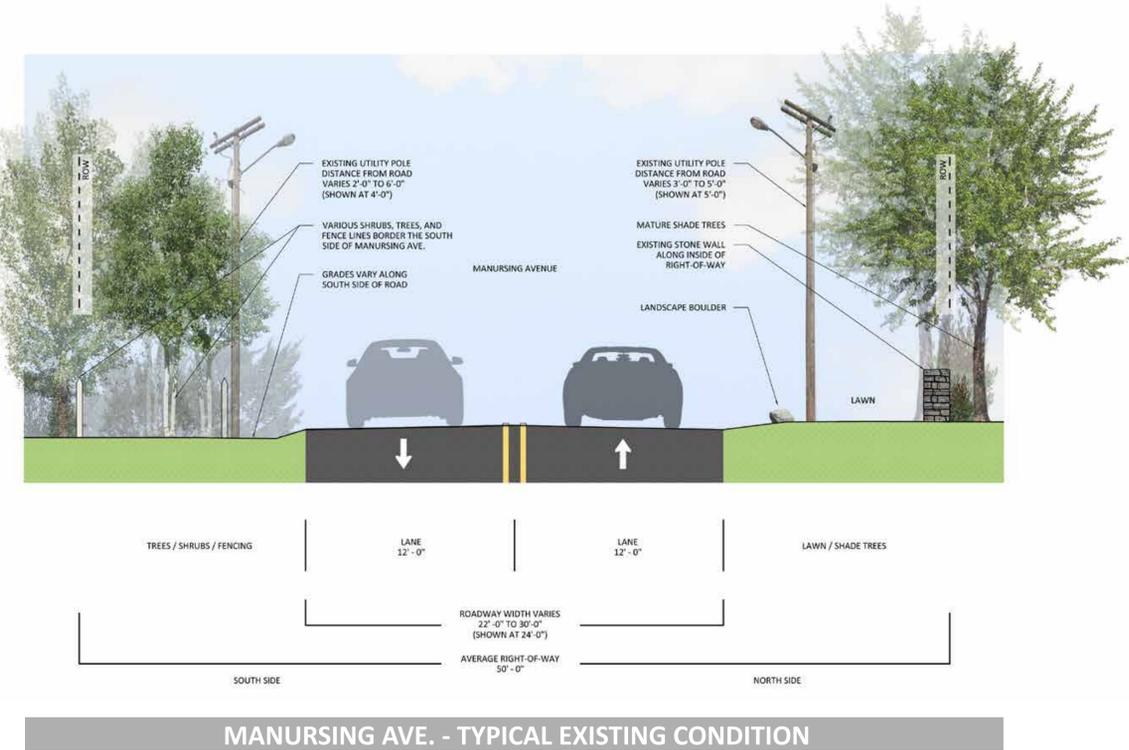
FOREST AVE. - TYPICAL EXISTING CONDITION - C



EXISTING CONDITIONS - 3

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**EXISTING CONDITIONS - 4**



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## CHAPTER

# 3

- Sidewalk (Alternating Sides) - Option A
- Multi-Use Path (Alternating Sides) - Option B
- Sidewalk on East Side Only - Option C
- Multi-Use Path on East Side Only - Option D

# PEDESTRIAN IMPROVEMENT OPTIONS

## Overview

Four pedestrian improvement options are outlined and discussed within this chapter. The final layout of these four options stems from extensive study of the existing site conditions, a review of various pedestrian improvement options with the City, and acknowledgement of the comments made by the Rye community.

The following sidewalk and path options have been labeled “A” through “D”. These labels are meant to serve as name recognition only. It is not Stantec’s intent to suggest one path or sidewalk option should be considered over the other; rather a path or sidewalk will be chosen based on the City’s decision after considering the opportunities and constraints of each option, reviewing the associated costs of each option, and reviewing how the options will impact Rye residents.

Typical site impacts along the Forest Avenue and Manursing Avenue corridor have been identified and are outlined to the right with a corresponding icon. See each plan for specific locations of site impacts.



### Utility Pole Relocation

Existing utility pole to be relocated. For multi-use paths, the distance between a utility pole and the pathway shall be a minimum of 2 feet.



### Catch Basin Relocation

Existing catch basin to be relocated.



### Fire Hydrant Relocation

Existing fire hydrant to be relocated. For multi-use paths, the distance between a fire hydrant and the pathway shall be a minimum of 2 feet.



### Road Centerline Shift

Newly painted road centerline and travel lanes to be shifted, allowing for additional room on one side of the road.



### Large Tree Removal

Existing mature tree to be removed due to proximity of proposed sidewalk or path. Significant root impacts expected to compromise the health of the tree.



### Small Tree Removal

Existing small tree to be removed due to proximity of proposed sidewalk or path. Significant root impacts expected to compromise the health of the tree.



### Potential Tree Root System Impact

Existing tree roots are in close proximity to proposed pathway, and care is to be taken to preserve the root system.



### Potential Shrub Root System Impacts

Existing shrub roots are in close proximity to proposed pathway, and care is to be taken to preserve the root system.



### Ledge or Grading

Locations with significant grading needs. Includes existing ledge, retaining walls, and sloping areas that will need to be addressed to make way for sidewalk or multi-use path construction.

# SIDEWALK (Alternating Sides)

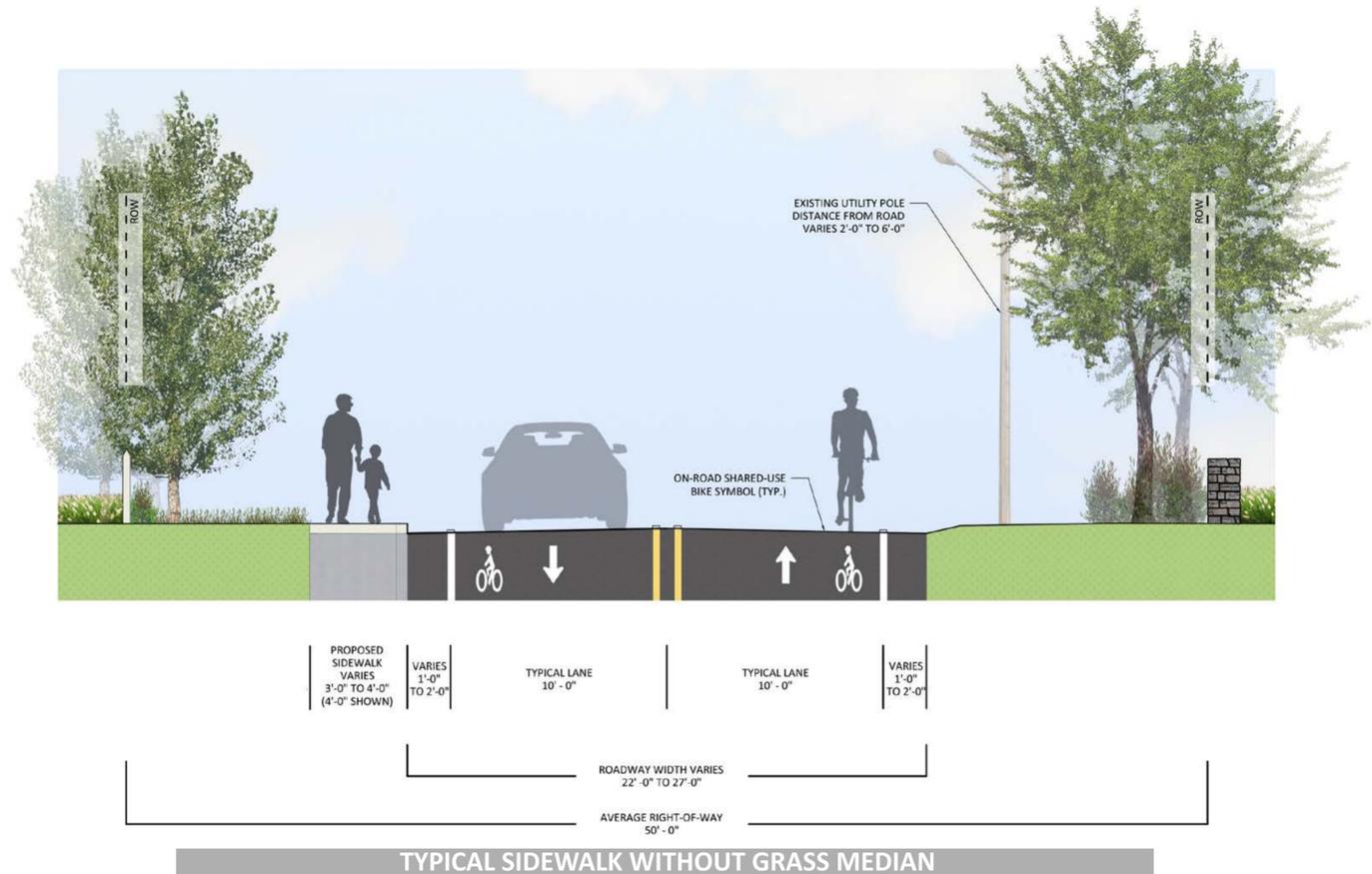
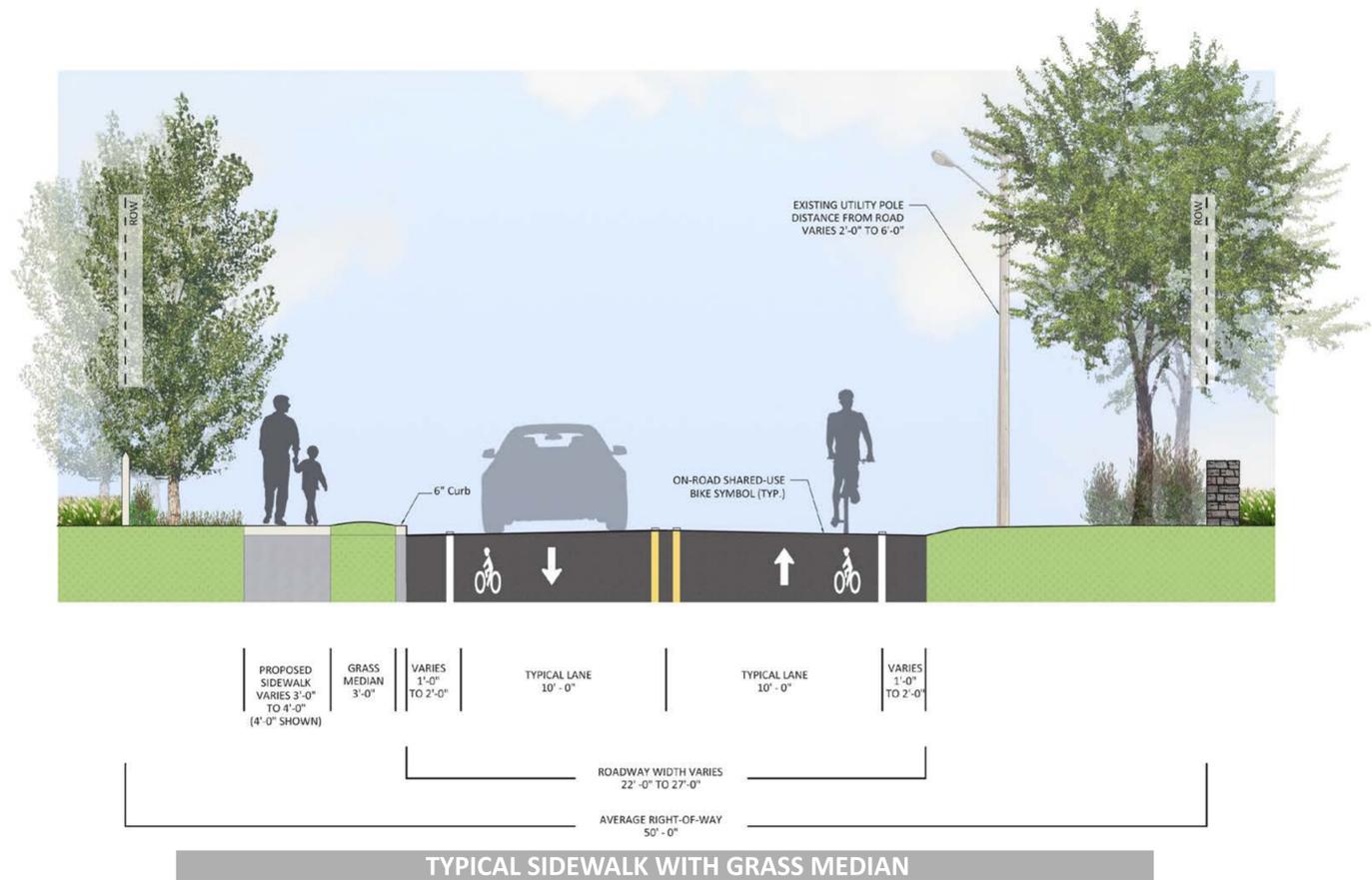
## OPTION A

### Overview

The sidewalk (alternating sides) begins along the west side of Forest Avenue at the intersection with Apawamis Avenue. The new sidewalk will begin where the existing sidewalk ends and then continues north towards Manursing Avenue. Where there is room, the sidewalk utilizes a grass median to provide separation from the street. At several locations, the sidewalk jogs and is placed adjacent to the curb to avoid existing mature trees (for example, between George Langeloh Court and Clark Lane). At the intersection of Forest Avenue and Eve Lane, crosswalks are proposed, and the sidewalk switches to the east side of Forest Avenue. The sidewalk remains on the east side of the roadway corridor as it continues north, making adjustments to its location to avoid existing trees and mature shrubs as needed. At the intersection of Forest Avenue and Eve Lane, crosswalks are proposed, and the sidewalk switches to the east side of Forest Avenue. The sidewalk remains on the east side of the roadway corridor as it continues north, making adjustments to its location to avoid existing trees and mature shrubs as needed. At the intersection of Manursing Avenue and Forest Avenue, the sidewalk crosses Manursing Avenue on the east side of the intersection, then crosses Forest Avenue on the north side. The sidewalk continues along the north side of Manursing Avenue before terminating at Davis Avenue. A new crosswalk is proposed to aid pedestrians in crossing the street and connecting to the existing sidewalk on the south side of Manursing Avenue. The objective of this option was to minimize vegetative impacts to Forest Avenue and Manursing Avenue as much as possible. Roadway travel lanes on Forest Avenue are 10' wide with 1' to 2' shoulders.

### Opportunities/Constraints:

- Concrete sidewalk width varies from 3' to 4'.
- In areas where there is adequate room along the roadside, a 3-foot grass median/snow-shelf has been incorporated.
- A 6" raised curb is to be incorporated onto the side of the road with the sidewalk.
- Minimal impacts to the existing vegetation are expected.
- The crosswalks at Apawamis Avenue, Eve Lane/Hook Road and Manursing Avenue provide potential traffic calming opportunities.
- Bicycles are to remain on-road and travel within the travel lane using the shared-use bicycle and sharrow pavement symbols.
- The centerline of the roadway shifts to allow for additional room to accommodate a sidewalk and grass median.



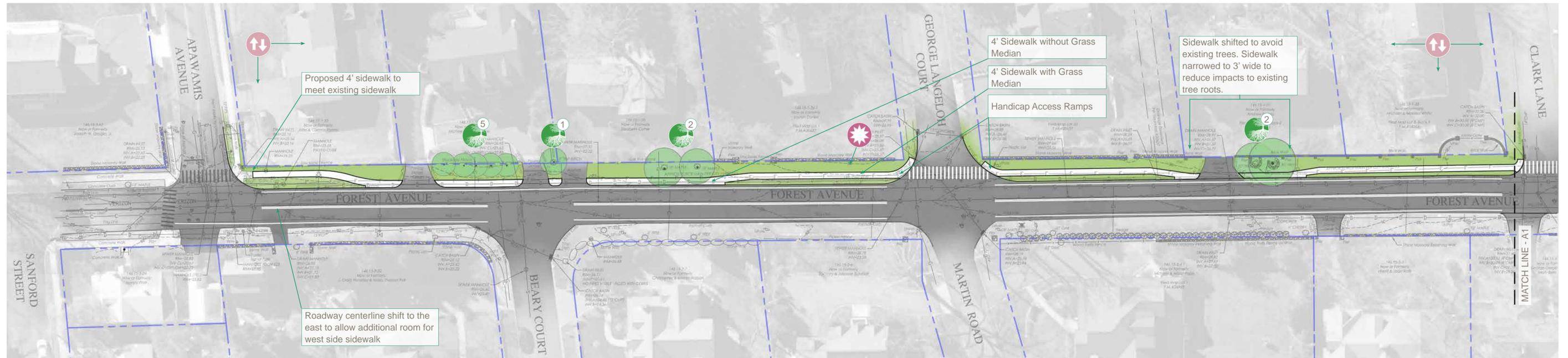
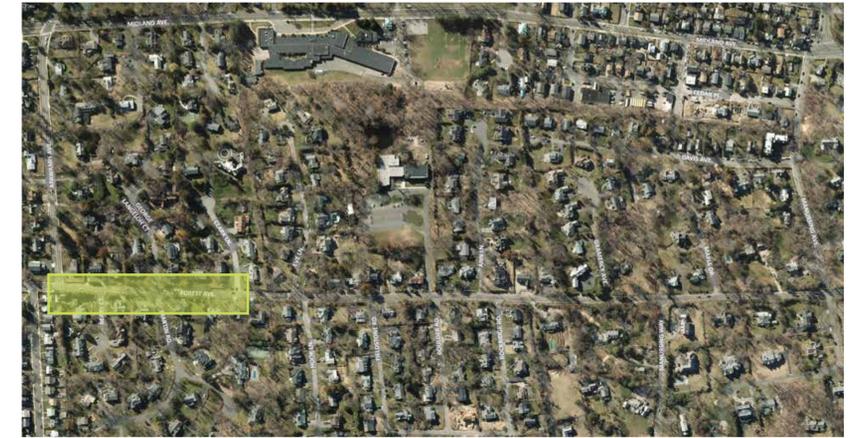
## SIDEWALK (ALTERNATING SIDES) - OPTION A

## FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY

**PRECEDENT IMAGES**



**KEY MAP**

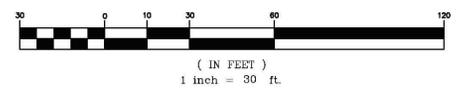


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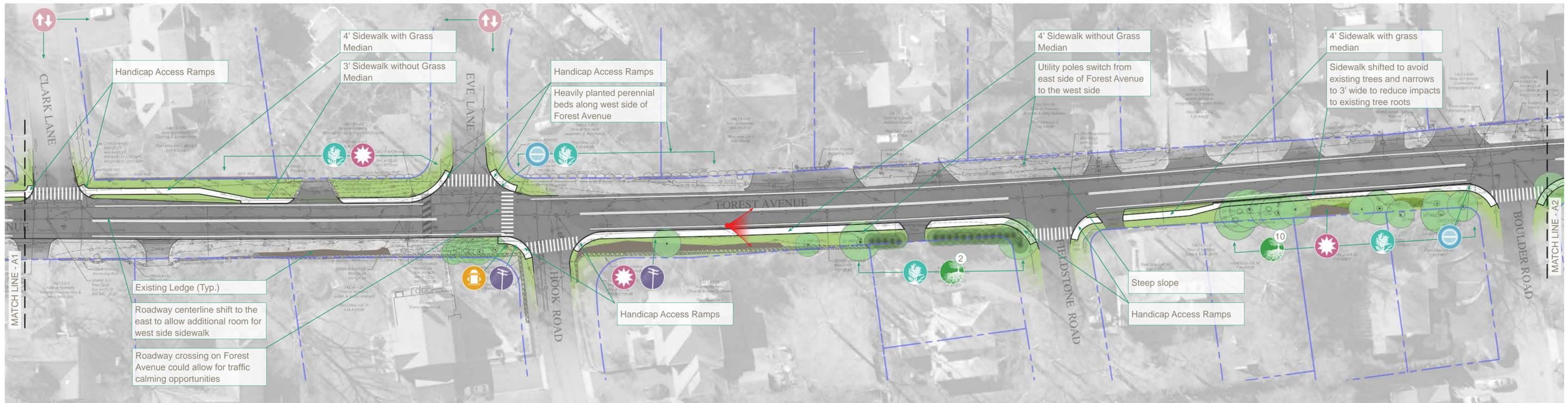
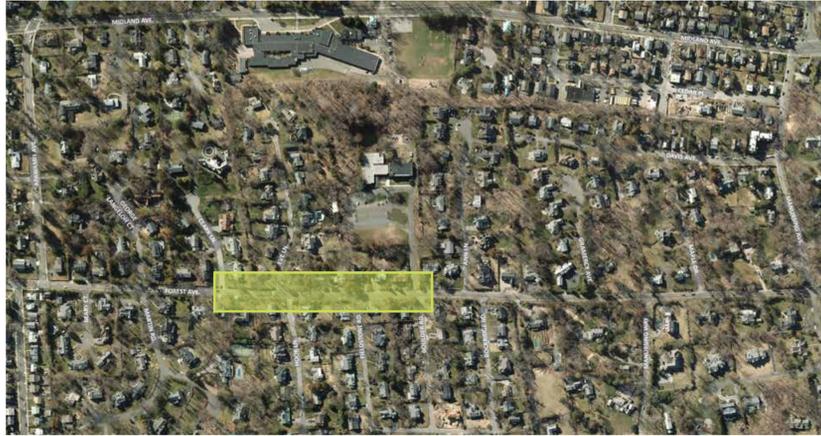
	Utility Pole Relocation		Large Tree Removal		Potential Shrub Root System Impacts		Crosswalk
	Catch Basin Relocation		Small Tree Removal		Ledge or Grading		Existing Tree
	Fire Hydrant Relocation		Potential Tree Root System Impact		Property Line		Existing Shrubs
	Road Centerline Shift		Indicates Number Impacted		Proposed Sidewalk/Multi-Use Path		Existing Lawn
					Roadway Pavement Markings		

**SIDEWALK (ALTERNATING SIDES) - OPTION A**

**FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY**



KEY MAP

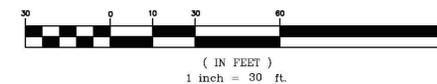


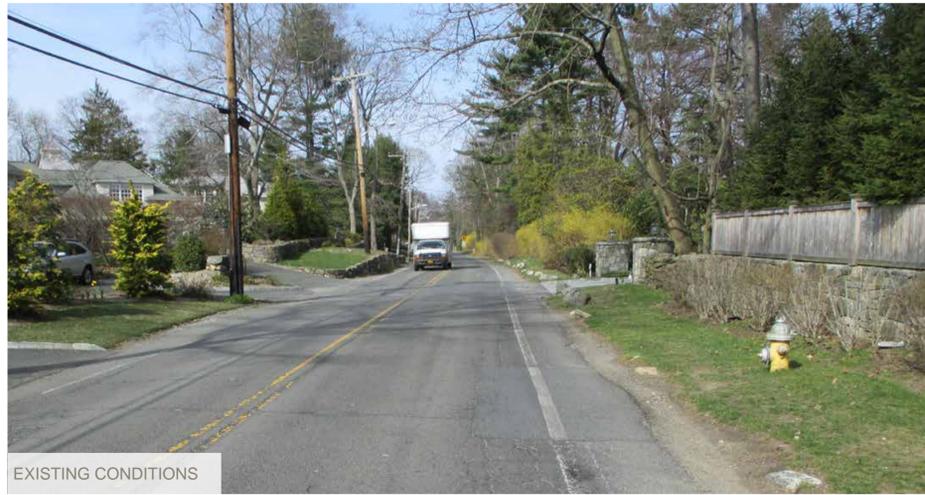
Legend

- |                         |                                   |                                     |                           |
|-------------------------|-----------------------------------|-------------------------------------|---------------------------|
| Utility Pole Relocation | Large Tree Removal                | Potential Shrub Root System Impacts | Crosswalk                 |
| Catch Basin Relocation  | Small Tree Removal                | Ledge or Grading                    | Existing Tree             |
| Fire Hydrant Relocation | Potential Tree Root System Impact | Property Line                       | Existing Shrubs           |
| Road Centerline Shift   | Indicates Number Impacted         | Proposed Sidewalk/Multi-Use Path    | Existing Lawn             |
|                         |                                   | Location & View of Photo Rendering  | Roadway Pavement Markings |

SIDEWALK (ALTERNATING SIDES) - OPTION A

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



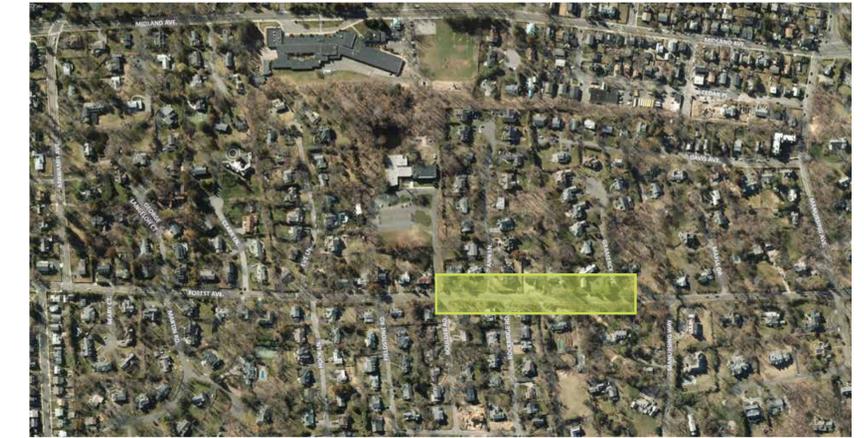


EXISTING CONDITIONS



PROPOSED 4' SIDEWALK

KEY MAP

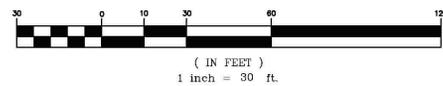


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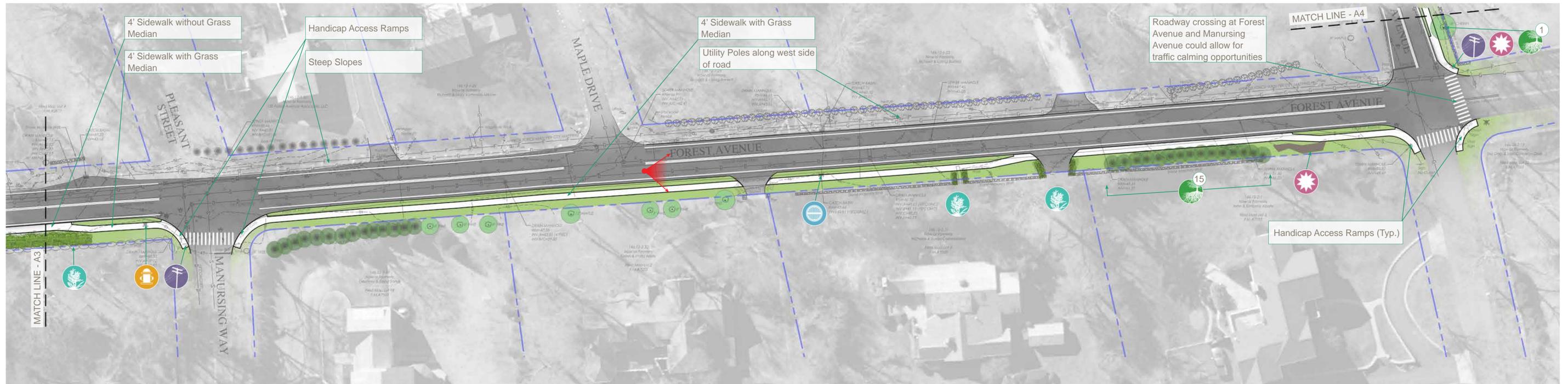
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|  | Utility Pole Relocation |  | Large Tree Removal                |  | Potential Shrub Root System Impacts |  | Crosswalk                 |
|  | Catch Basin Relocation  |  | Small Tree Removal                |  | Ledge or Grading                    |  | Existing Tree             |
|  | Fire Hydrant Relocation |  | Potential Tree Root System Impact |  | Property Line                       |  | Existing Shrubs           |
|  | Road Centerline Shift   |  | Indicates Number Impacted         |  | Proposed Sidewalk/Multi-Use Path    |  | Existing Lawn             |
|  |                         |  |                                   |  | Location & View of Photo Rendering  |  | Roadway Pavement Markings |

**SIDEWALK (ALTERNATING SIDES) - OPTION A**

**FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY**



KEY MAP

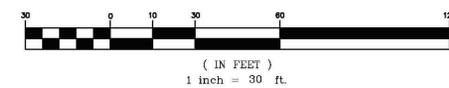


Legend

	Utility Pole Relocation		Large Tree Removal		Potential Shrub Root System Impacts		Crosswalk
	Catch Basin Relocation		Small Tree Removal		Ledge or Grading		Existing Tree
	Fire Hydrant Relocation		Potential Tree Root System Impact		Property Line		Existing Shrubs
	Road Centerline Shift		Indicates Number Impacted		Proposed Sidewalk/Multi-Use Path		Existing Lawn
					Location & View of Photo Rendering		Roadway Pavement Markings

SIDEWALK (ALTERNATING SIDES) - OPTION A

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY





KEY MAP



Total Estimated Road Corridor Impacts	Sidewalk (Alternating Sides)
Utility Pole Relocation	5
Catch Basin Relocation	6
Fire Hydrant Relocation	3
Road Centerline Shift	YES
Large Tree Removal	1
Small Tree Removal	1
Potential Tree Root System Impact	48
Potential Shrub Root System Impacts	14
Ledge / Grading Challenges	8
Number of Driveways Crossed	12

Legend

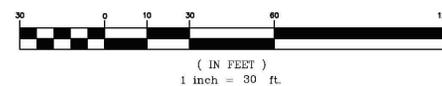
- Utility Pole Relocation
- Catch Basin Relocation
- Fire Hydrant Relocation
- Road Centerline Shift
- Large Tree Removal
- Small Tree Removal
- Potential Tree Root System Impact
- Indicates Number Impacted
- Potential Shrub Root System Impacts
- Ledge or Grading
- Property Line
- Proposed Sidewalk/Multi-Use Path
- Location & View of Photo Rendering
- Crosswalk
- Existing Tree
- Existing Shrubs
- Existing Lawn
- Roadway Pavement Markings

SIDEWALK (ALTERNATING SIDES) - OPTION A

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



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# MULTI-USE PATH (Alternating Sides)

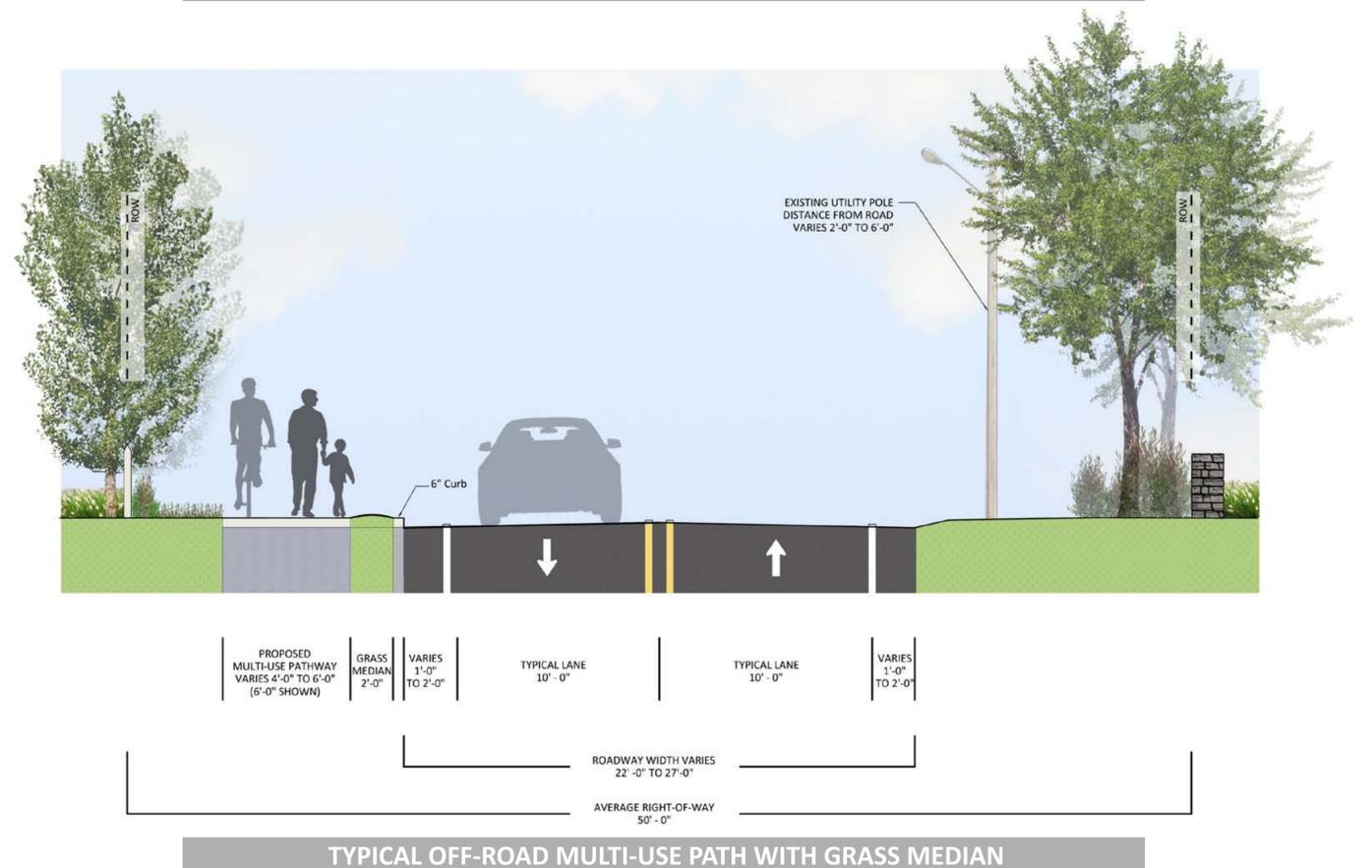
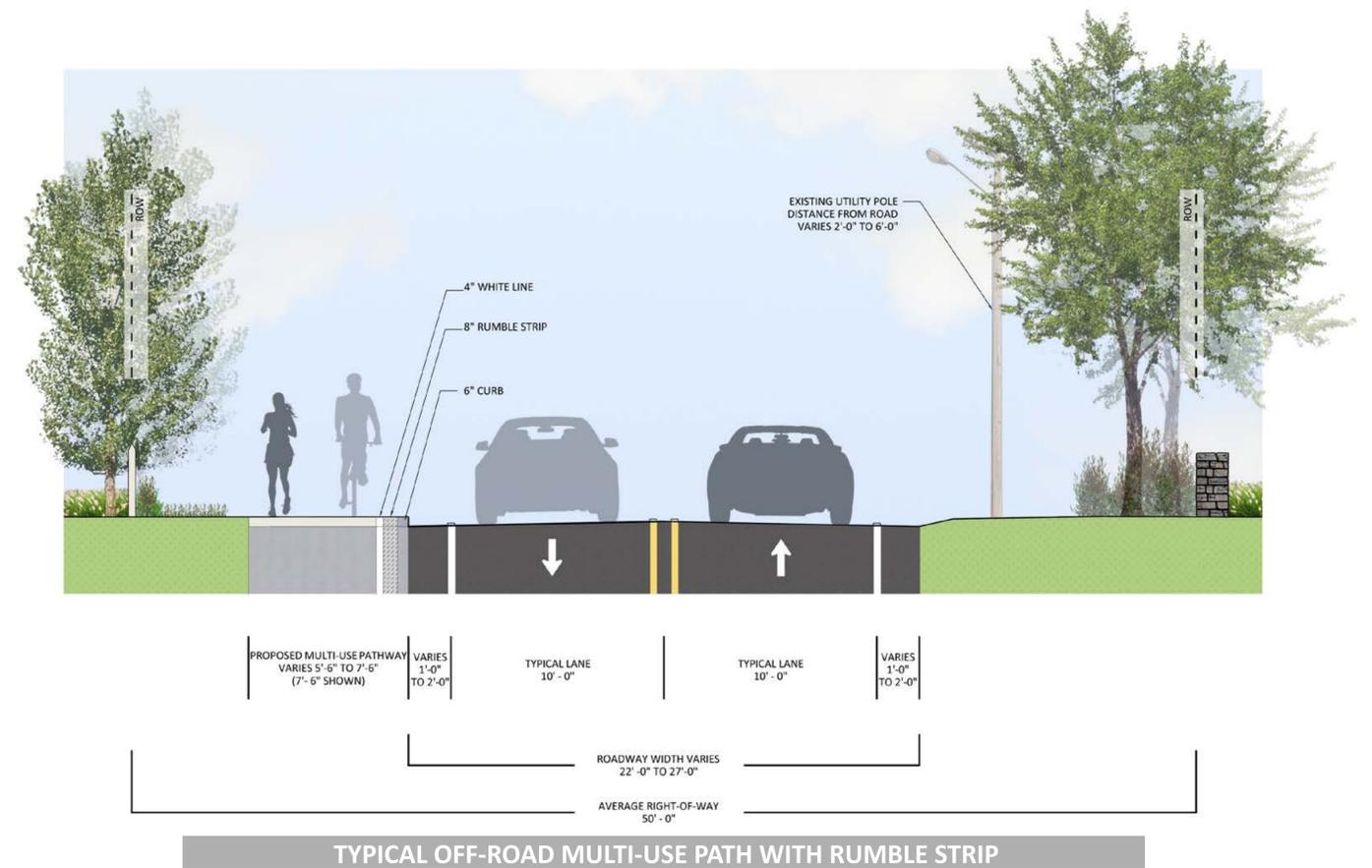
## OPTION B

### Overview

The multi-use path (alternating sides) begins along the west side of Forest Avenue at the intersection Apawamis Avenue. The new multi-use path merges with the existing Apawamis sidewalk and continues north along the west side of Forest Avenue. Where there is room, the path utilizes a grass median to provide separation from the street. At several locations, the multi-use path jogs and is placed adjacent to the curb to minimize impacts to existing mature trees (for example, between George Langeloh Court and Clark Lane). At these locations where the pathway is adjacent to the curb, a rumble strip is implemented as a visual safety guide. At the intersection of Forest Avenue and Clark Lane, crosswalks are proposed and the multi-use path switches to the east side of Forest Avenue. The multi-use path remains on the east side of the roadway corridor as it continues north, making adjustments to its location and/or width to avoid or minimize impacts to existing trees. At the intersection of Manursing Avenue and Forest Avenue, the path crosses Manursing Avenue on the east side of the intersection, then crosses Forest Avenue on the north side. The multi-use path continues along the north side of Manursing Avenue before terminating at Davis Avenue. A crosswalk is proposed to connect pedestrians to the existing sidewalk on the south side of Manursing Avenue. The objective was for minimal roadway character impact to Forest Ave. and Manursing Ave. while using a multi-use path at 6' wide. Roadway travel lanes on Forest Avenue are 10' wide with 1' to 2' shoulders. Option B is a possible option if the community is looking for completely off-road travel options for pedestrians and bicyclists.

### Opportunities / Constraints

- The multi-use path is a bituminous pathway with a standard width of 6' and changes to 4' wide at key locations to reduce impact to existing mature trees.
- In areas where there is adequate room along the roadside, a 2-foot grass median/snow-shelf has been incorporated.
- A 6" raised curb is to be incorporated onto the side of the road with the multi-use path.
- The crosswalks at Apawamis Avenue, Eve Lane/Hook Road and Manursing Avenue provide potential traffic calming opportunities.
- Impacts to existing infrastructure and vegetation are expected.
- A multi-use path accommodates both pedestrians and bicyclists.
- The centerline of the roadway shifts to allow for additional room to accommodate the multi-use path and grass median.



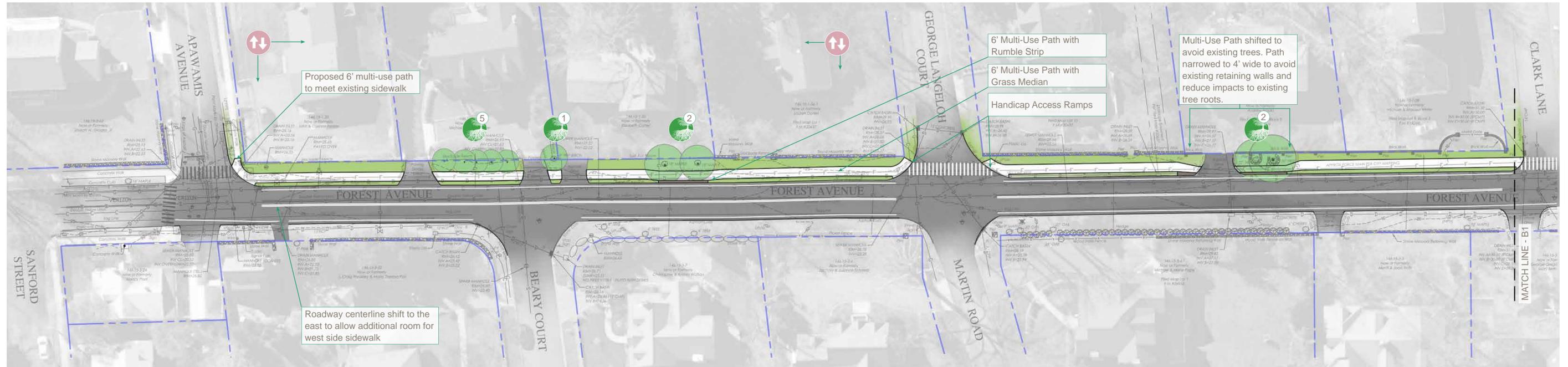
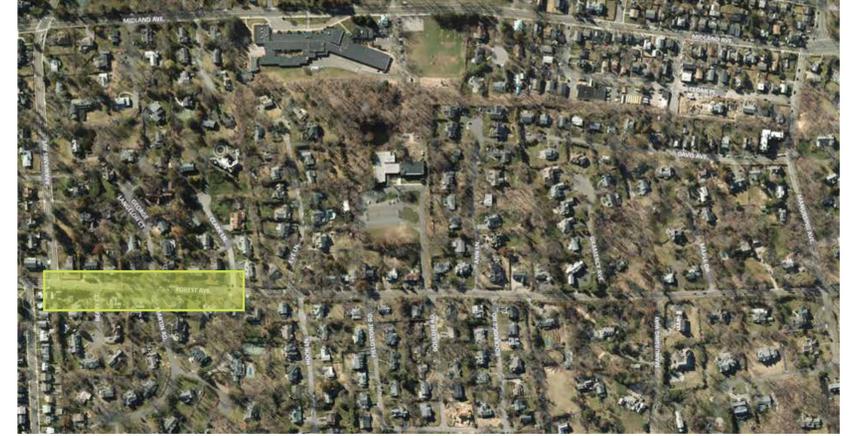
## MULTI-USE PATH (ALTERNATING SIDES) - OPTION B

## FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY

PRECEDENT IMAGES



KEY MAP



Legend

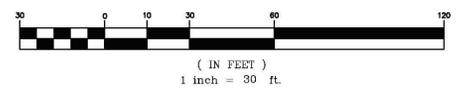
	Utility Pole Relocation		Large Tree Removal		Potential Shrub Root System Impacts		Crosswalk
	Catch Basin Relocation		Small Tree Removal		Ledge or Grading		Existing Tree
	Fire Hydrant Relocation		Potential Tree Root System Impact		Property Line		Existing Shrubs
	Road Centerline Shift		Indicates Number Impacted		Proposed Sidewalk/Multi-Use Path		Existing Lawn
					Roadway Pavement Markings		

MULTI-USE PATH (ALTERNATING SIDES) - OPTION B

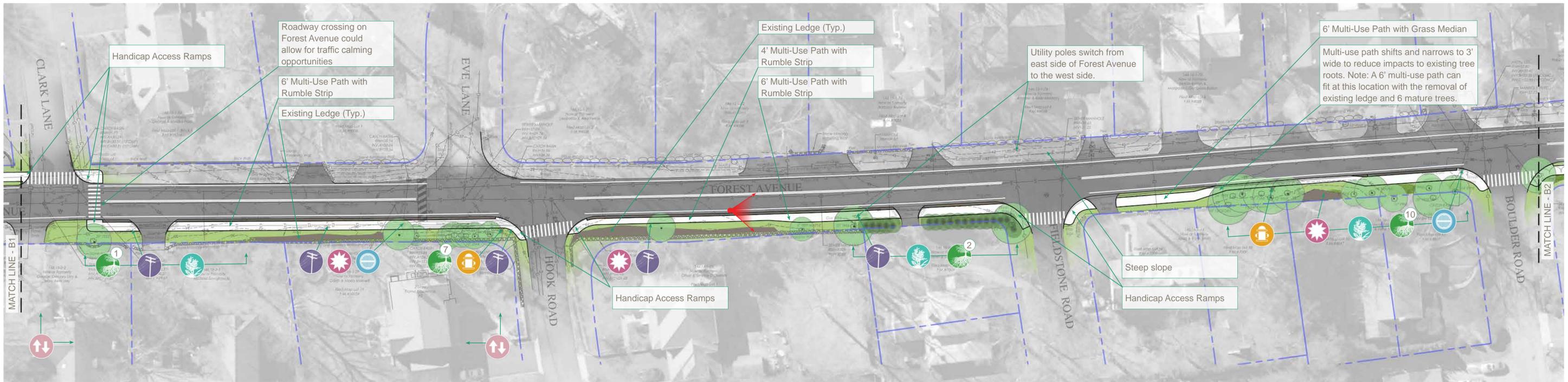
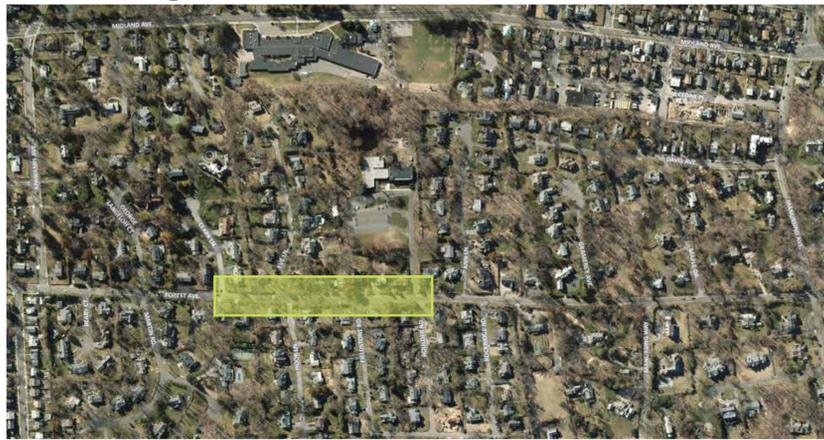
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KEY MAP

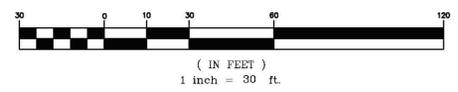


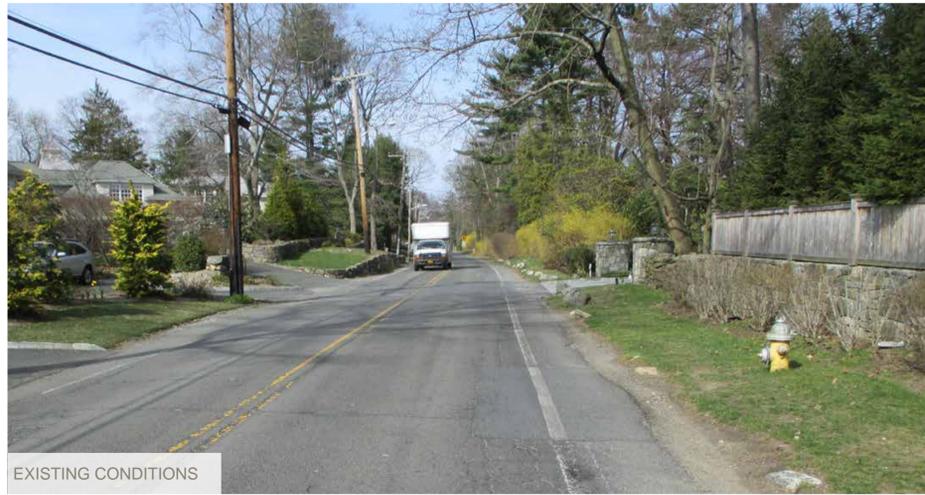
Legend

	Utility Pole Relocation		Large Tree Removal		Potential Shrub Root System Impacts		Crosswalk
	Catch Basin Relocation		Small Tree Removal		Ledge or Grading		Existing Tree
	Fire Hydrant Relocation		Potential Tree Root System Impact		Property Line		Existing Shrubs
	Road Centerline Shift		Indicates Number Impacted		Proposed Sidewalk/Multi-Use Path		Existing Lawn
					Location & View of Photo Rendering		Roadway Pavement Markings

MULTI-USE PATH (ALTERNATING SIDES) - OPTION B

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



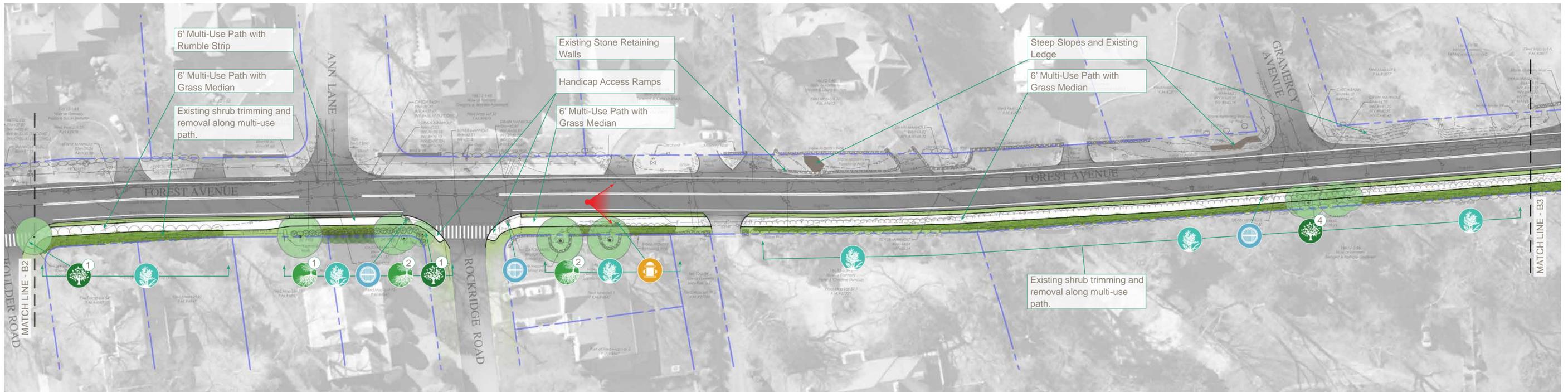
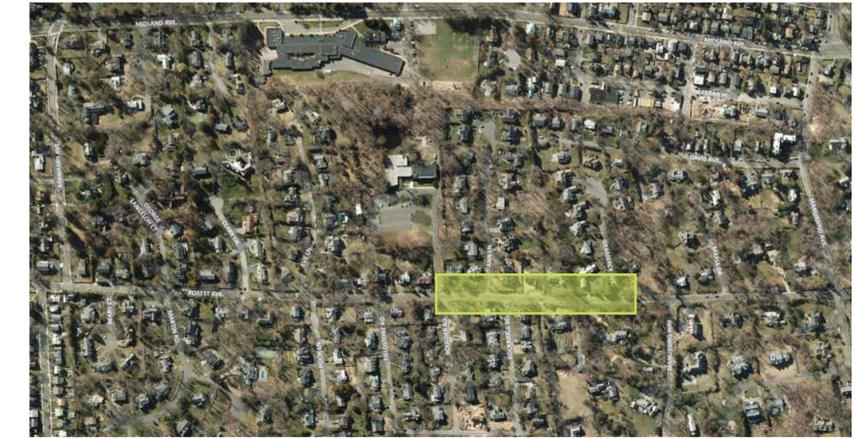


EXISTING CONDITIONS



PROPOSED 6' MULTI-USE PATH

KEY MAP

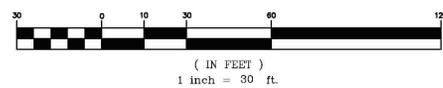


Legend

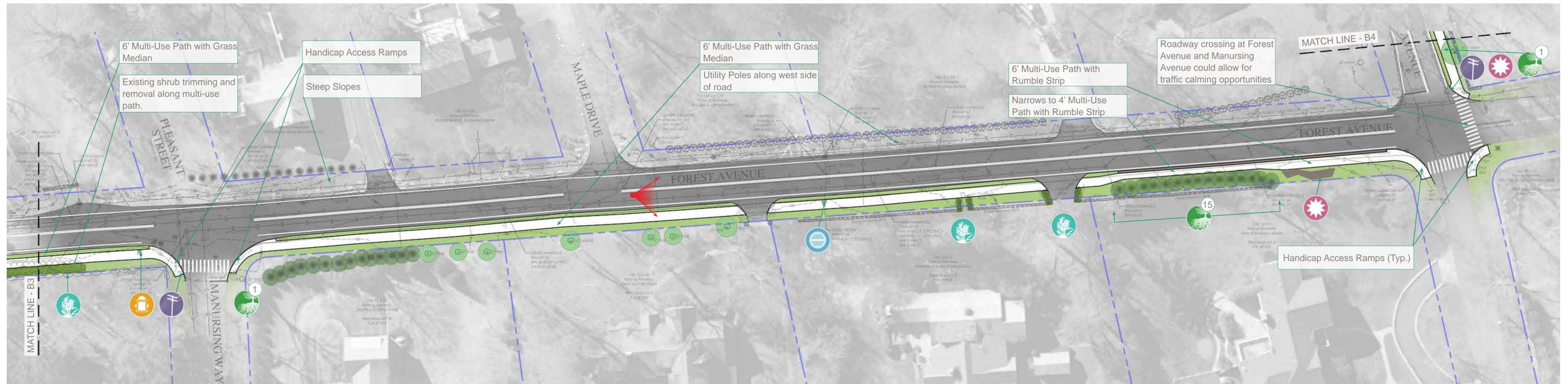
- |  |                         |  |                                   |  |                                     |  |                           |
|--|-------------------------|--|-----------------------------------|--|-------------------------------------|--|---------------------------|
|  | Utility Pole Relocation |  | Large Tree Removal                |  | Potential Shrub Root System Impacts |  | Crosswalk                 |
|  | Catch Basin Relocation  |  | Small Tree Removal                |  | Ledge or Grading                    |  | Existing Tree             |
|  | Fire Hydrant Relocation |  | Potential Tree Root System Impact |  | Property Line                       |  | Existing Shrubs           |
|  | Road Centerline Shift   |  | Indicates Number Impacted         |  | Proposed Sidewalk/Multi-Use Path    |  | Existing Lawn             |
|  |                         |  |                                   |  | Location & View of Photo Rendering  |  | Roadway Pavement Markings |

MULTI-USE PATH (ALTERNATING SIDES) - OPTION B

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



KEY MAP

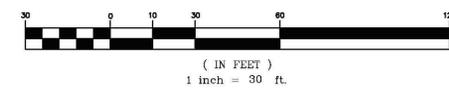


Legend

Utility Pole Relocation	Large Tree Removal	Potential Shrub Root System Impacts	Crosswalk
Catch Basin Relocation	Small Tree Removal	Ledge or Grading	Existing Tree
Fire Hydrant Relocation	Potential Tree Root System Impact	Property Line	Existing Shrubs
Road Centerline Shift	Indicates Number Impacted	Proposed Sidewalk/Multi-Use Path	Existing Lawn
		Location & View of Photo Rendering	Roadway Pavement Markings

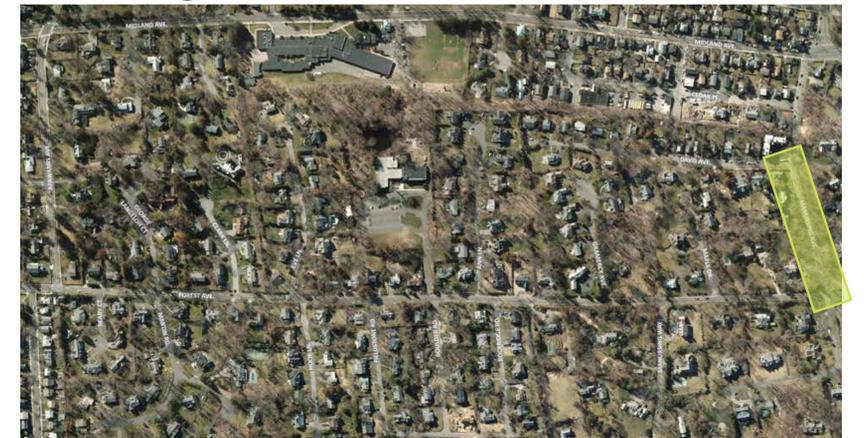
MULTI-USE PATH (ALTERNATING SIDES) - OPTION B

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY





KEY MAP



Total Estimated Road Corridor Impacts	Multi-Use Path (Alternating Sides)
Utility Pole Relocation	8
Catch Basin Relocation	8
Fire Hydrant Relocation	4
Road Centerline Shift	YES
Large Tree Removal	6
Small Tree Removal	1
Potential Tree Root System Impact	53
Potential Shrub Root System Impacts	13
Ledge / Grading Challenges	7
Number of Driveways Crossed	12

Legend

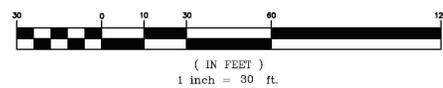
- Utility Pole Relocation
- Large Tree Removal
- Potential Shrub Root System Impacts
- Crosswalk
- Catch Basin Relocation
- Small Tree Removal
- Ledge or Grading
- Existing Tree
- Fire Hydrant Relocation
- Potential Tree Root System Impact
- Property Line
- Existing Shrubs
- Road Centerline Shift
- Indicates Number Impacted
- Proposed Sidewalk/Multi-Use Path
- Existing Lawn
- Location & View of Photo Rendering
- Roadway Pavement Markings

MULTI-USE PATH (ALTERNATING SIDES) - OPTION B

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



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# SIDEWALK ON EAST SIDE ONLY

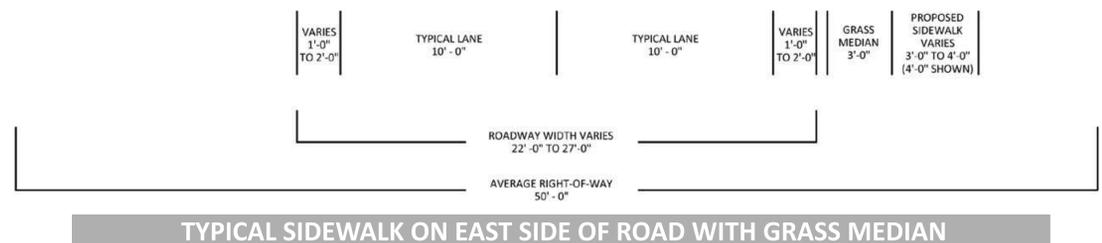
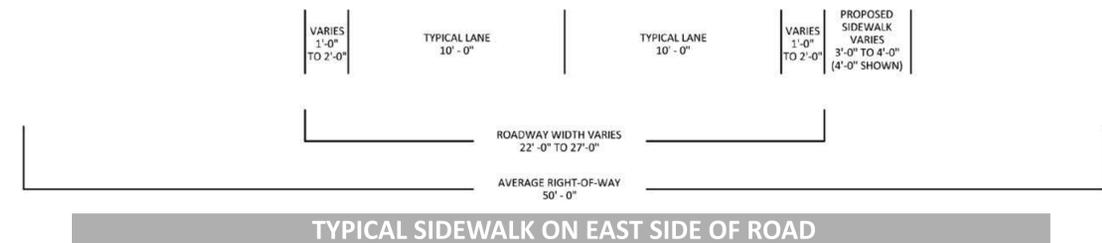
## OPTION C

### Overview

This sidewalk begins along the east side of Forest Avenue at the intersection Apawamis Avenue. The proposed sidewalk would connect to the existing walk on Forest Avenue and continue north towards Manursing Avenue. This option does not require pedestrians to cross Forest Avenue until the intersection of Manursing Avenue. Throughout the roadway corridor, Option C jogs and/or narrows to avoid existing mature trees. Option C has more linear footage of grass median/snow-shelf along the sidewalk compared to Option A. This results in additional shrub impacts in some locations. At the intersection of Manursing Avenue and Forest Avenue, the sidewalk crosses Manursing Avenue on the east side of the intersection, then crosses Forest Avenue on the north side. The sidewalk then continues along the north side of Manursing Avenue before terminating at Davis Avenue with crosswalks connecting to the existing sidewalk on the south side of Manursing Avenue.

### Opportunities/Constraints:

- Concrete sidewalk width varies from 3' to 4'.
- In areas where there are no mature trees along the roadside, a 3-foot grass median/snow-shelf has been incorporated.
- A 6" raised curb is incorporated along the east side of the road with the sidewalk.
- Impacts to existing vegetation are expected.
- Sidewalk crosses Forest Avenue once at Manursing Avenue.
- Impacts to existing infrastructure are expected.
- Bicycles are to remain on-road and travel within the travel lane using the shared-use bicycle and sharrow pavement symbols.
- The centerline of the roadway shifts to allow for additional room to accommodate the sidewalk and grass median.



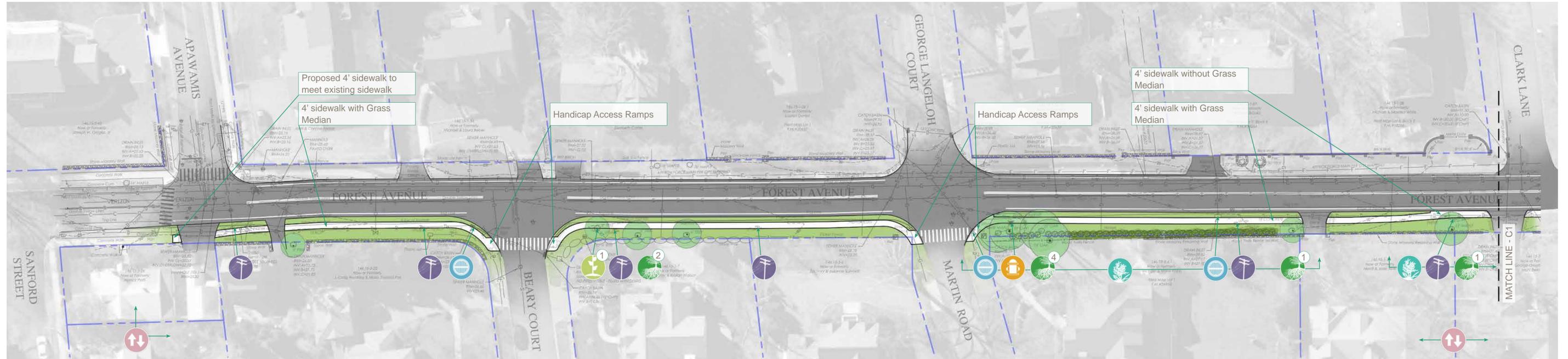
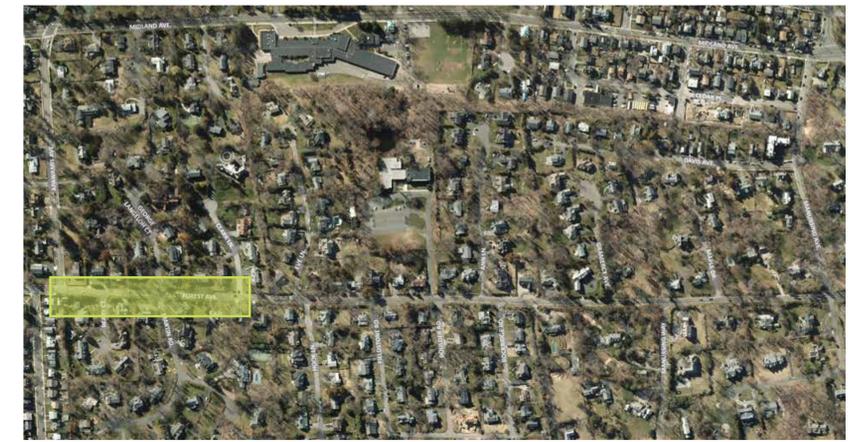
## SIDEWALK ON EAST SIDE ONLY - OPTION C

## FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY

**PRECEDENT IMAGES**



**KEY MAP**

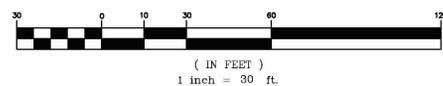


**Legend**

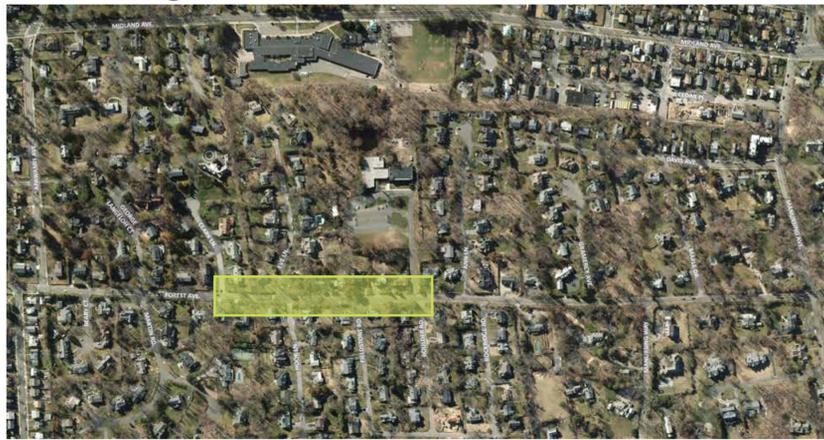
- |                         |                                   |                                     |                 |
|-------------------------|-----------------------------------|-------------------------------------|-----------------|
| Utility Pole Relocation | Large Tree Removal                | Potential Shrub Root System Impacts | Crosswalk       |
| Catch Basin Relocation  | Small Tree Removal                | Ledge or Grading                    | Existing Tree   |
| Fire Hydrant Relocation | Potential Tree Root System Impact | Property Line                       | Existing Shrubs |
| Road Centerline Shift   | Indicates Number Impacted         | Proposed Sidewalk/Multi-Use Path    | Existing Lawn   |
|                         |                                   | Roadway Pavement Markings           |                 |

**SIDEWALK ON EAST SIDE ONLY - OPTION C**

**FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY**



**KEY MAP**

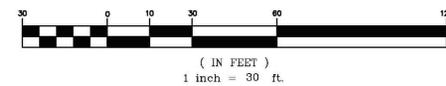


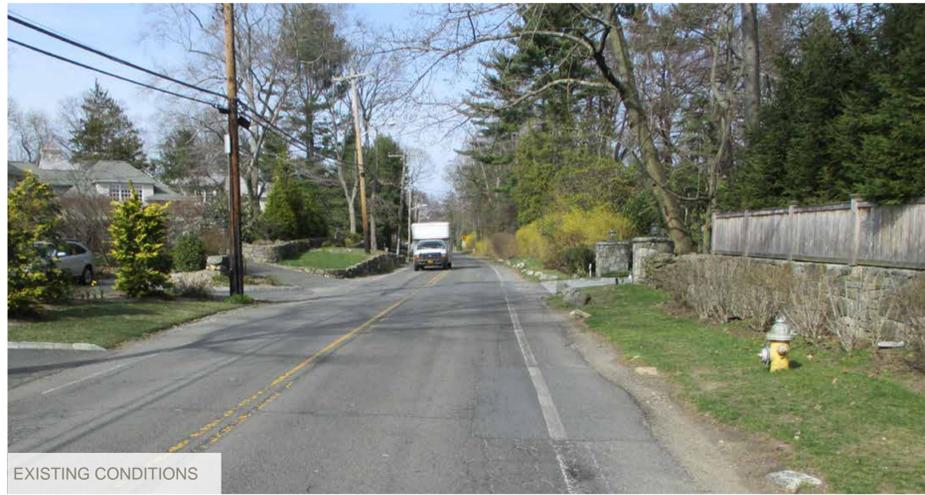
**Legend**

- |                         |                                   |                                     |                           |
|-------------------------|-----------------------------------|-------------------------------------|---------------------------|
| Utility Pole Relocation | Large Tree Removal                | Potential Shrub Root System Impacts | Crosswalk                 |
| Catch Basin Relocation  | Small Tree Removal                | Ledge or Grading                    | Existing Tree             |
| Fire Hydrant Relocation | Potential Tree Root System Impact | Property Line                       | Existing Shrubs           |
| Road Centerline Shift   | Indicates Number Impacted         | Proposed Sidewalk/Multi-Use Path    | Existing Lawn             |
|                         |                                   | Location & View of Photo Rendering  | Roadway Pavement Markings |

**SIDEWALK ON EAST SIDE ONLY - OPTION C**

**FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY**



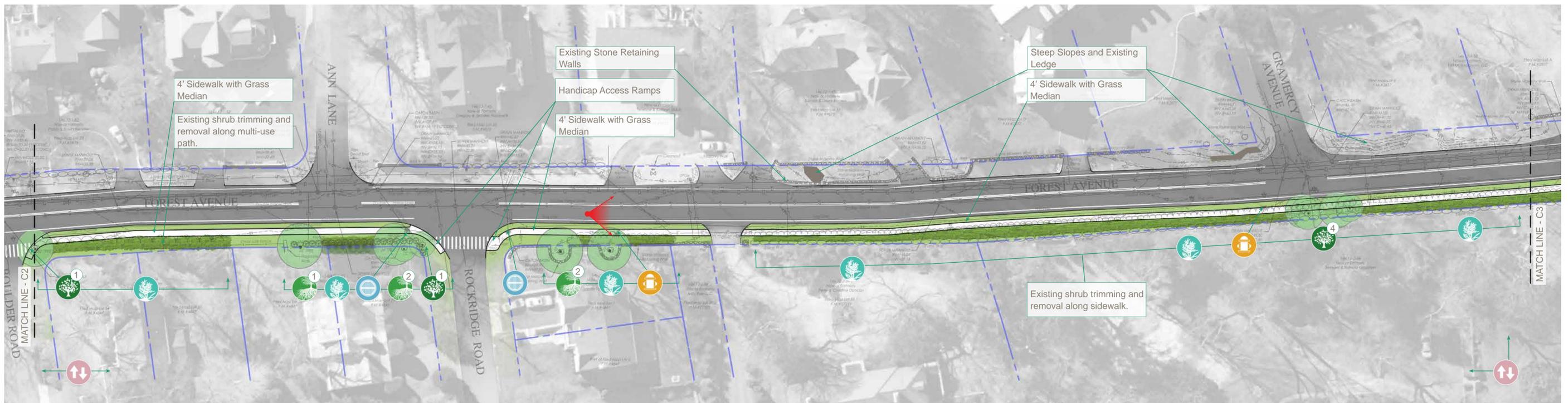
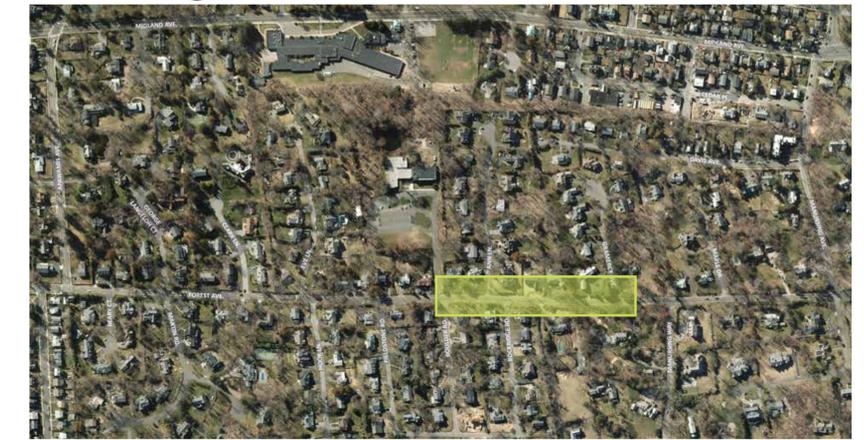


EXISTING CONDITIONS



PROPOSED 4' SIDEWALK

KEY MAP



Legend

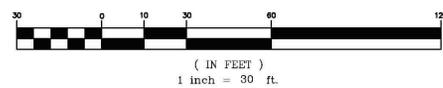
- Utility Pole Relocation
- Catch Basin Relocation
- Fire Hydrant Relocation
- Road Centerline Shift
- Large Tree Removal
- Small Tree Removal
- Potential Tree Root System Impact
- Indicates Number Impacted
- Potential Shrub Root System Impacts
- Ledge or Grading
- Property Line
- Proposed Sidewalk/Multi-Use Path
- Location & View of Photo Rendering
- Crosswalk
- Existing Tree
- Existing Shrubs
- Existing Lawn
- Roadway Pavement Markings

SIDEWALK ON EAST SIDE ONLY - OPTION C

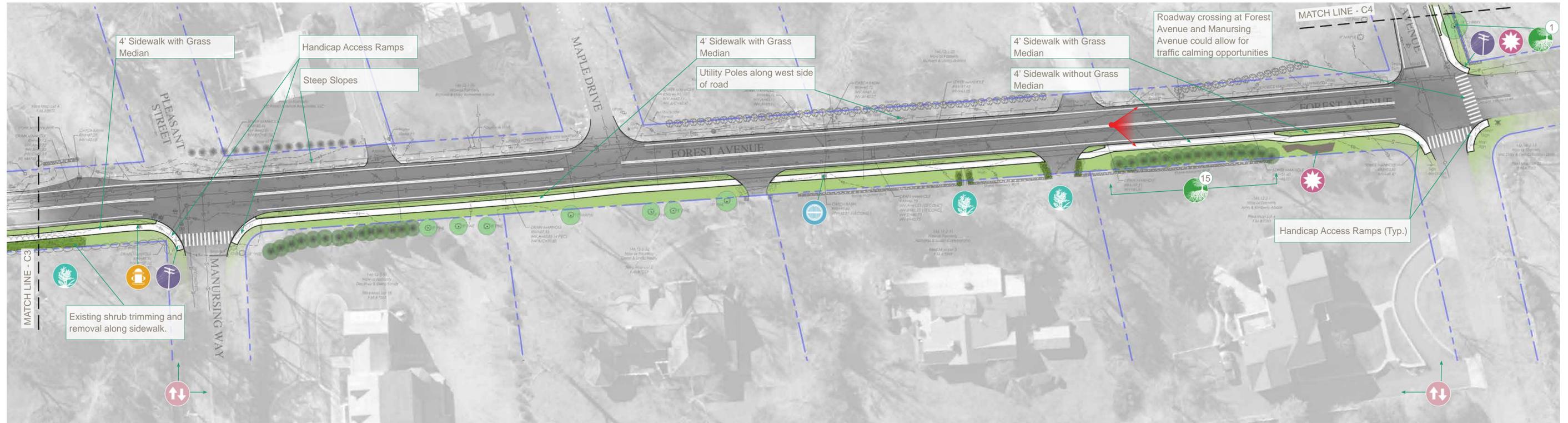
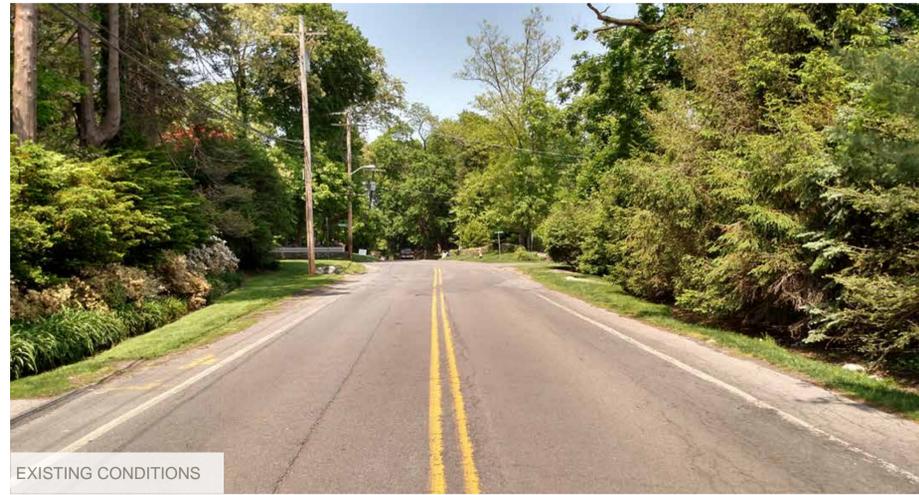
FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



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KEY MAP 

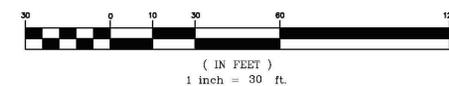


Legend

 Utility Pole Relocation	 Large Tree Removal	 Potential Shrub Root System Impacts	 Crosswalk
 Catch Basin Relocation	 Small Tree Removal	 Ledge or Grading	 Existing Tree
 Fire Hydrant Relocation	 Potential Tree Root System Impact	 Property Line	 Existing Shrubs
 Road Centerline Shift	 Indicates Number Impacted	 Proposed Sidewalk/Multi-Use Path	 Existing Lawn
		 Location & View of Photo Rendering	 Roadway Pavement Markings

SIDEWALK ON EAST SIDE ONLY - OPTION C

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY





KEY MAP



Total Estimated Road Corridor Impacts	Sidewalk on East Side Only
Utility Pole Relocation	12
Catch Basin Relocation	9
Fire Hydrant Relocation	5
Road Centerline Shift	YES
Large Tree Removal	6
Small Tree Removal	2
Potential Tree Root System Impact	42
Potential Shrub Root System Impacts	13
Ledge / Grading Challenges	8
Number of Driveways Crossed	12

Legend

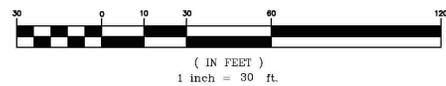
- Utility Pole Relocation
- Large Tree Removal
- Potential Shrub Root System Impacts
- Crosswalk
- Catch Basin Relocation
- Small Tree Removal
- Ledge or Grading
- Existing Tree
- Fire Hydrant Relocation
- Potential Tree Root System Impact
- Property Line
- Existing Shrubs
- Road Centerline Shift
- Indicates Number Impacted
- Proposed Sidewalk/Multi-Use Path
- Existing Lawn
- Location & View of Photo Rendering
- Roadway Pavement Markings

SIDEWALK ON EAST SIDE ONLY - OPTION C

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



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# MULTI-USE PATH ON EAST SIDE ONLY

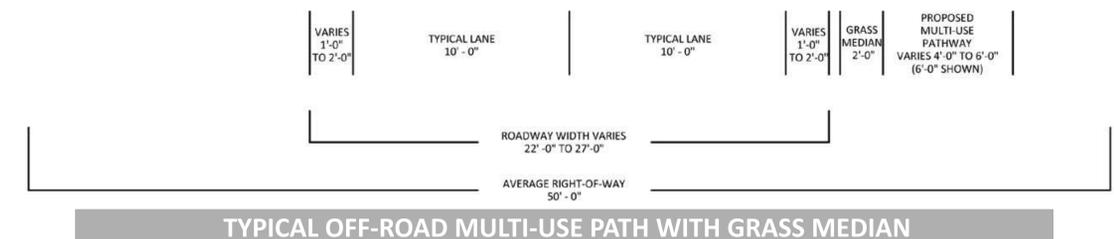
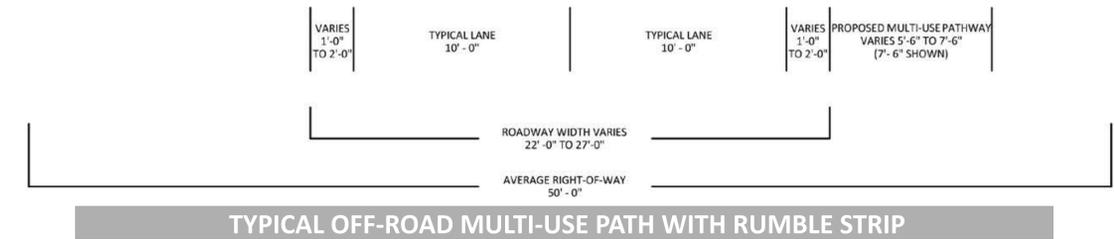
## OPTION D

### Overview

The multi-use path (along east side of Forest Avenue) begins along the east side of Forest Avenue at the intersection of Apawamis Avenue. The proposed multi-use path would connect to the existing walk on Forest Avenue and continue north towards Manursing Avenue. This path option does not require pedestrians to cross Forest Avenue until the intersection of Manursing Avenue. Throughout the roadway corridor, Option D jogs and/or narrows to avoid existing mature trees. At the intersection of Manursing Avenue and Forest Avenue, the path crosses Manursing Avenue on the east side of the intersection, then crosses Forest Avenue on the north side. The multi-use path continues along the north side of Manursing Avenue before terminating at Davis Avenue with a crosswalk to the existing sidewalk on the south side of Manursing Avenue. Roadway travel lanes on Forest Avenue are 10' wide with 1' to 2' shoulders. Option D is a possible option if the community is looking for completely off-road travel options for pedestrians and bicyclists.

### Opportunities / Constraints

- The multi-use path is a bituminous pathway with a standard width of 6' and narrows to 4' wide at key locations to reduce impact to existing mature trees.
- In areas where there are no mature trees along the roadside, a 2-foot grass median/snow-shelf has been incorporated.
- A 6" raised curb is to be incorporated along the multi-use path side of street.
- Impacts to existing vegetation are expected.
- The crosswalks at Apawamis Avenue and Manursing Avenue provide potential traffic calming opportunities.
- A multi-use path accommodates both pedestrians and bicyclists.
- The centerline of the roadway shifts to allow for additional room to accommodate the multi-use path and grass median.



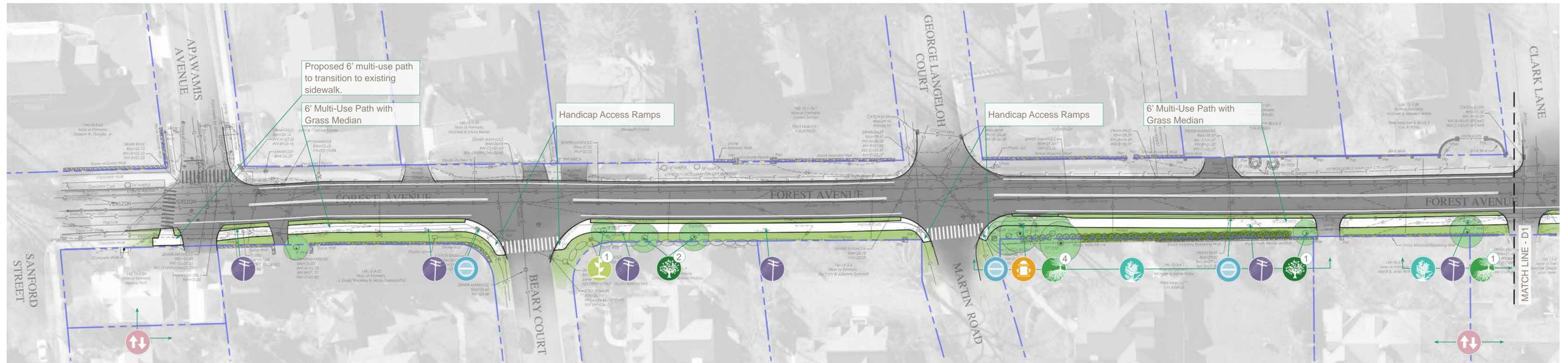
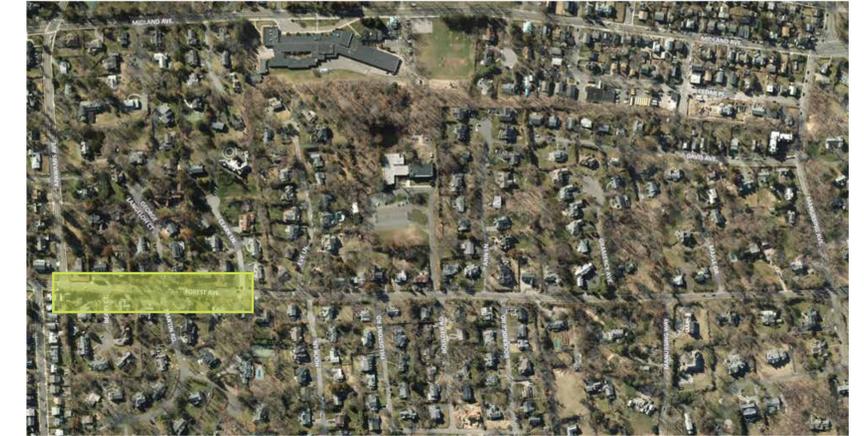
## MULTI-USE PATH ON EAST SIDE ONLY - OPTION D

# FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY

**PRECEDENT IMAGES**



**KEY MAP**



**Legend**

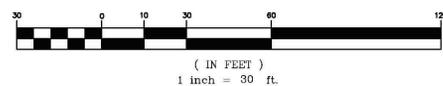
- |                         |                                   |                                     |                 |
|-------------------------|-----------------------------------|-------------------------------------|-----------------|
| Utility Pole Relocation | Large Tree Removal                | Potential Shrub Root System Impacts | Crosswalk       |
| Catch Basin Relocation  | Small Tree Removal                | Ledge or Grading                    | Existing Tree   |
| Fire Hydrant Relocation | Potential Tree Root System Impact | Property Line                       | Existing Shrubs |
| Road Centerline Shift   | Indicates Number Impacted         | Proposed Sidewalk/Multi-Use Path    | Existing Lawn   |
|                         |                                   | Roadway Pavement Markings           |                 |

**MULTI-USE PATH ON EAST SIDE ONLY - OPTION D**

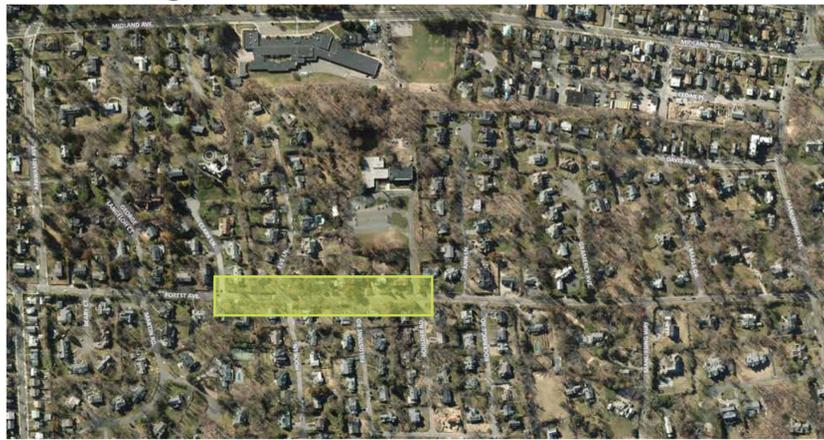
**FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY**



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KEY MAP

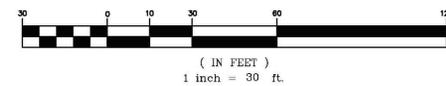


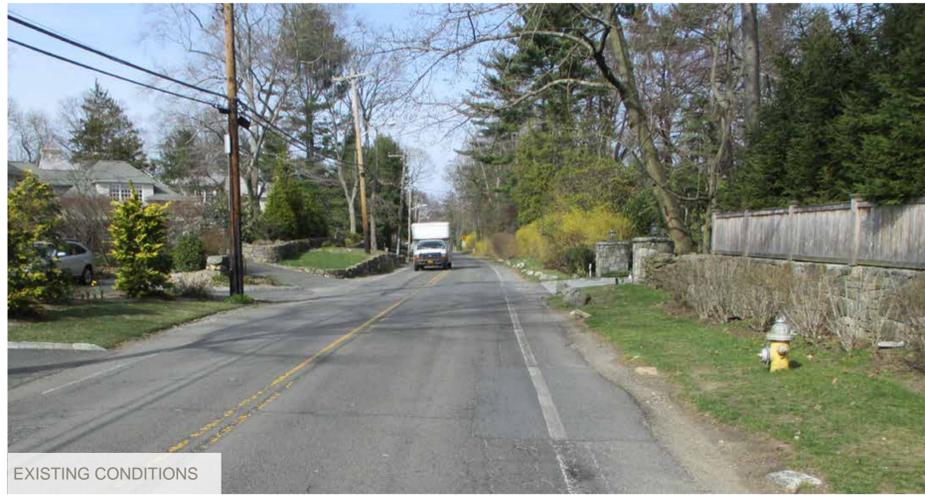
Legend

- |                         |                                   |                                     |                           |
|-------------------------|-----------------------------------|-------------------------------------|---------------------------|
| Utility Pole Relocation | Large Tree Removal                | Potential Shrub Root System Impacts | Crosswalk                 |
| Catch Basin Relocation  | Small Tree Removal                | Ledge or Grading                    | Existing Tree             |
| Fire Hydrant Relocation | Potential Tree Root System Impact | Property Line                       | Existing Shrubs           |
| Road Centerline Shift   | Indicates Number Impacted         | Proposed Sidewalk/Multi-Use Path    | Existing Lawn             |
|                         |                                   | Location & View of Photo Rendering  | Roadway Pavement Markings |

MULTI-USE PATH ON EAST SIDE ONLY - OPTION D

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



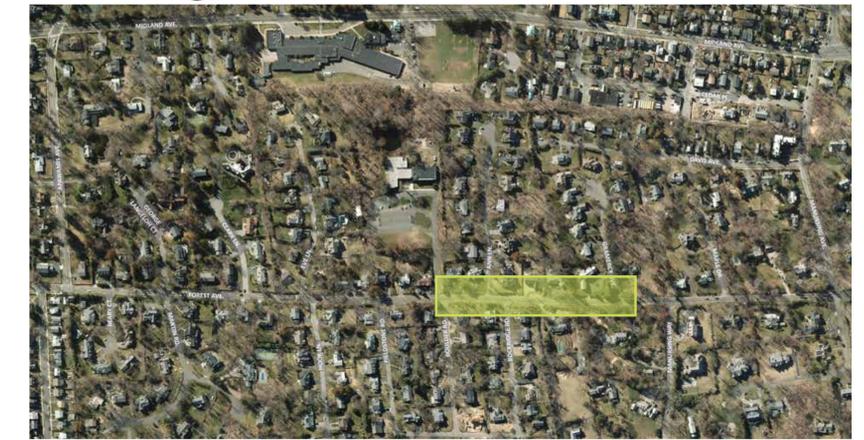


EXISTING CONDITIONS



PROPOSED 6' MULTI-USE PATH

KEY MAP

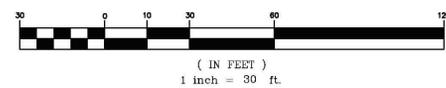


Legend

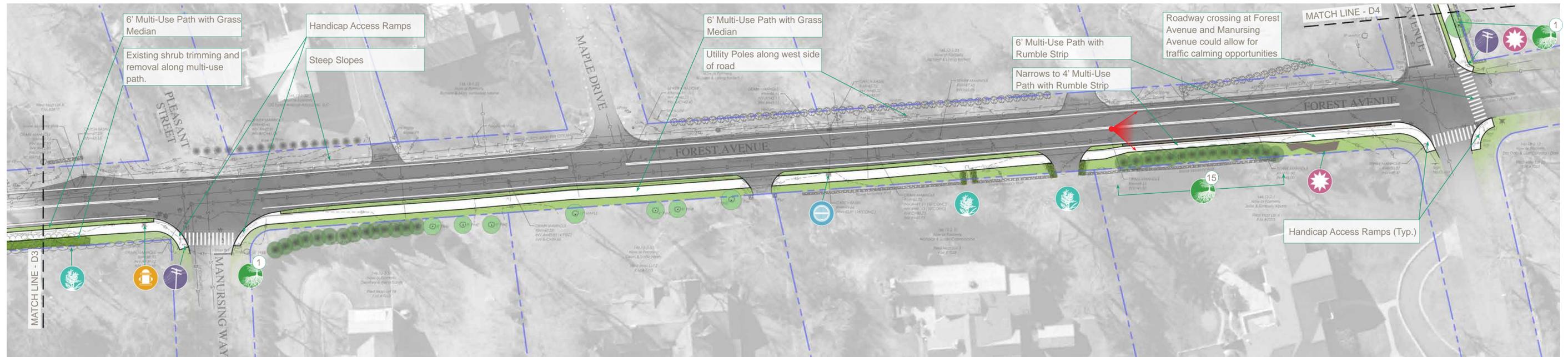
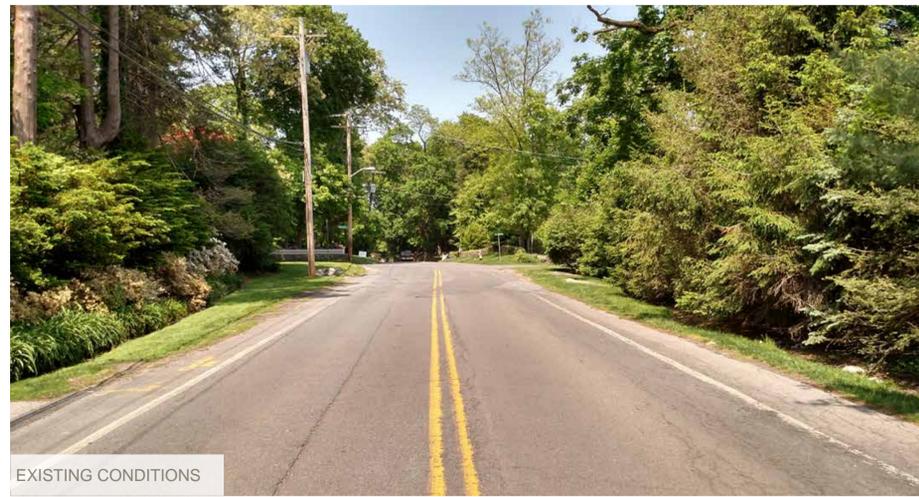
- |  |                         |  |                                   |  |                                     |  |                           |
|--|-------------------------|--|-----------------------------------|--|-------------------------------------|--|---------------------------|
|  | Utility Pole Relocation |  | Large Tree Removal                |  | Potential Shrub Root System Impacts |  | Crosswalk                 |
|  | Catch Basin Relocation  |  | Small Tree Removal                |  | Ledge or Grading                    |  | Existing Tree             |
|  | Fire Hydrant Relocation |  | Potential Tree Root System Impact |  | Property Line                       |  | Existing Shrubs           |
|  | Road Centerline Shift   |  | Indicates Number Impacted         |  | Proposed Sidewalk/Multi-Use Path    |  | Existing Lawn             |
|  |                         |  |                                   |  | Location & View of Photo Rendering  |  | Roadway Pavement Markings |

MULTI-USE PATH ON EAST SIDE ONLY - OPTION D

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



KEY MAP

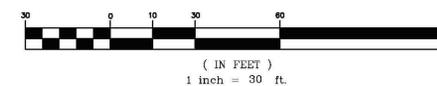


Legend

	Utility Pole Relocation		Large Tree Removal		Potential Shrub Root System Impacts		Crosswalk
	Catch Basin Relocation		Small Tree Removal		Ledge or Grading		Existing Tree
	Fire Hydrant Relocation		Potential Tree Root System Impact		Property Line		Existing Shrubs
	Road Centerline Shift		Indicates Number Impacted		Proposed Sidewalk/Multi-Use Path		Existing Lawn
					Location & View of Photo Rendering		Roadway Pavement Markings

MULTI-USE PATH ON EAST SIDE ONLY - OPTION D

FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY





KEY MAP

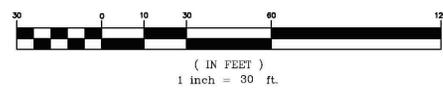


Total Estimated Road Corridor Impacts	Multi-Use Path on East Side Only
Utility Pole Relocation	14
Catch Basin Relocation	11
Fire Hydrant Relocation	5
Road Centerline Shift	YES
Large Tree Removal	11
Small Tree Removal	2
Potential Tree Root System Impact	48
Potential Shrub Root System Impacts	15
Ledge / Grading Challenges	7
Number of Driveways Crossed	12

Legend

- Utility Pole Relocation
- Large Tree Removal
- Potential Shrub Root System Impacts
- Crosswalk
- Catch Basin Relocation
- Small Tree Removal
- Ledge or Grading
- Existing Tree
- Fire Hydrant Relocation
- Potential Tree Root System Impact
- Property Line
- Existing Shrubs
- Road Centerline Shift
- Indicates Number Impacted
- Proposed Sidewalk/Multi-Use Path
- Existing Lawn
- Location & View of Photo Rendering
- Roadway Pavement Markings

MULTI-USE PATH ON EAST SIDE ONLY - OPTION D



FOREST AVENUE / MANURSING AVENUE PEDESTRIAN IMPROVEMENT STUDY



# 4

## CHAPTER

- Overview
- Traffic Counts
- Average Speeds
- Pedestrian Counts
- Traffic Calming Options
- Forest Avenue as a One-Way Road

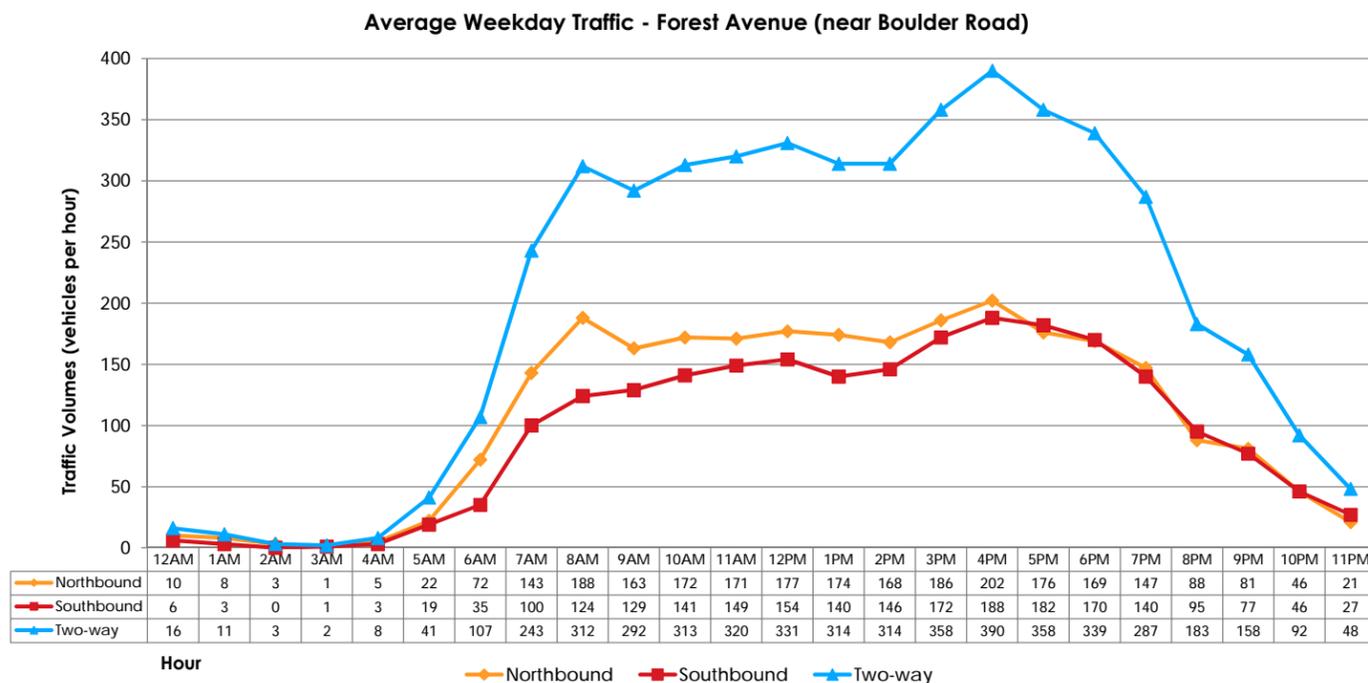
# TRAFFIC REVIEW

## Overview

In order to better accommodate pedestrian needs along Forest Avenue, Stantec performed a brief review of existing traffic conditions within the project limits. Our review, completed using a combination of publicly available traffic data, travel speed data provided to Stantec by the City of Rye, and sample pedestrian counts performed by Stantec, assisted in defining potential alternative options within the project limits.

## Traffic Counts

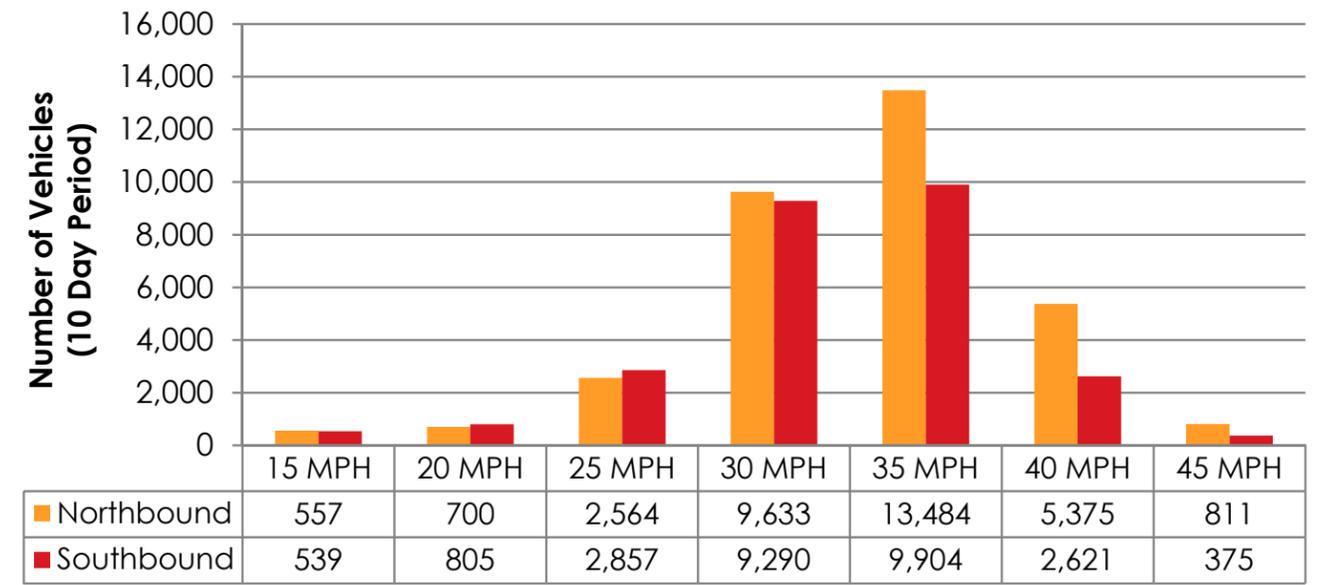
Forest Avenue is a City-maintained north-south two-lane roadway and serves as an alternative route into and out of Port Chester to the north. It is classified as an urban minor arterial. Approximately 5,000 vehicles use Forest Avenue on a typical weekday and, during peak periods, up to 400 vehicles per hour travel along Forest Avenue. A review of other adjacent roadways indicates that weekend traffic volumes are comparable to weekday traffic within the project limits.



## Average Speeds

The Forest Avenue corridor has a posted speed limit of 30 miles per hour. A review of speed data indicates more than 50 percent of traffic travel is at or above the posted speed limit. It should be noted that travel speeds were generally found to be consistent regardless of the day of the week.

**Travel Speed Distribution - Forest Avenue**



**Travel Speed (Upper Limit of Speed Group)**

Northbound Southbound

## TRAFFIC REVIEW

### Pedestrian Counts

Our assessment of existing conditions also included pedestrian counts along the Forest Avenue and Manursing Avenue corridor. Counts were conducted during a weekday while school was in session and on a weekend day. Field observations of pedestrian activity indicate that there is a variety of pedestrians using the corridor. The mix of pedestrians observed included joggers, walkers, pedestrians with strollers, pedestrians walking dogs, and pedestrians walking with children. Both adults and children were observed cycling along the corridor. It was noted that the number of adults seen biking was significantly above the number of children on bikes.

It was also noted that pedestrians traveled in both north and south directions along Forest Avenue, with many walkers and pedestrians with strollers using the mostly unobstructed right-of-way areas on the east side of Forest Avenue. It was observed that in locations where the roadway shoulder narrowed and there

were significant trees, vegetation or steep slopes, pedestrians generally crossed the road to travel along a more open, level road environment. As such, pedestrians were seen crossing the road at intersection locations as well as mid-block locations. Most bicyclists were found to be following the direction of vehicular traffic within the roadway travel lanes.

The lack of a sidewalk or multi-use path for pedestrians and/or cyclists coupled with vehicles traveling above the speed limit impacts both vehicular and pedestrian safety within the corridor.

### Saturday: May 21, 2016 (8:00am-1:00pm)

Pedestrian Type	Observed Counts					Daily Total	
	Time	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00		12:00-1:00
Jogger		6	11	11	5	7	40
Walker		14	13	13	10	10	60
Stroller		3	2	3	3		11
Dog Walker		1	8	9	2	3	23
Children walking						2	2
Children on Bikes			1				1
Adults on Bikes		20	8	20	8	12	68
<b>Hourly Totals</b>		44	43	56	28	34	205

### Wednesday: May 25, 2016 (7:00am-11:00am & 1:30pm-3:30pm)

Pedestrian Type	Observed Counts						Daily Total	
	Time	7:00-8:00	8:00-9:00	9:00-10:00	10:00-11:00	1:30-2:30		2:30-3:30
Jogger		9	4	9	4		1	27
Walker		9	12	11	6	12	6	56
Stroller				2	4	1	1	8
Dog Walker		5	2	7		4	2	20
Children walking		1	2				3	6
Children on Bikes			1			1		2
Adults on Bikes		5	5	13	6	6	8	43
<b>Hourly Totals</b>		29	26	42	20	24	21	162

# TRAFFIC REVIEW

## Traffic Calming Options

The addition of a sidewalk or multi-use path along Forest Avenue would significantly improve overall pedestrian safety along the corridor. However, additional measures can be taken to further calm traffic along Forest Avenue. Below are a few potential traffic calming options that can be implemented either along the entire Forest Avenue corridor or at the Forest Avenue intersections with Eve Lane and Manursing Avenue:

### Reduction of Posted Speed Limit to 25 MPH:

The reduction of the posted speed limit could further discourage through traffic from using Forest Avenue. It could also improve pedestrian safety and reduce the accident potential of the corridor.

### All-Way Stop Control (AWSC):

The installation of AWSC at selected locations would force vehicles going through the study area to come to a complete stop. This could reduce overall travel speeds and improve pedestrian safety at these intersections.

### Installation of Rectangular Rapid Flash Beacons:

The installation of rectangular rapid flash beacons on existing pedestrian crossing signs could increase pedestrian safety. The signs would be activated by a push-button and would only stay illuminated for a certain period of time (sufficient for a pedestrian to cross the street).

### Speed Table:

A speed table would further increase visibility for motorists as they approach a pedestrian crossing and could improve pedestrian safety.

It should be noted that additional engineering studies would be required to evaluate the feasibility of these traffic calming measures.

## Forest Avenue as a One-Way Road

Another possible option to accommodate pedestrian needs within the right-of-way could be the conversion of Forest Avenue into a one-way roadway. A one-way Forest Avenue would provide additional space for a dedicated bike lane and a wide sidewalk for pedestrians. However, there are limited cross roads connecting Midland Avenue and Forest Avenue, therefore a one-way roadway would also result in additional circulation for residents living along or adjacent to Forest Avenue as they enter or leave the area. Additionally, a one-way roadway would add additional traffic onto Midland Avenue, which is the only through-street to the west of Forest Avenue. It is recommended to retain the existing functionality of Forest Avenue as a two-directional roadway.

It is also recognized that the corridor is adjacent to an emergency coastal evacuation route using Playland Parkway. This further limits the option of a one-way roadway.

## PRECEDENT IMAGES





# 5

## CHAPTER

- Material Options
- Pathway Maintenance Overview
- Stormwater Collection and Management
- Opinion of Construction Cost Matrix Overview

# MATERIALS, MAINTENANCE AND OPINION OF COSTS

## Material Options

A review of possible material options has been made and is outlined as follows. Also, refer to Precedent Images found throughout this report.

### Pavements:

A concrete material is suggested for all sidewalk options, and bituminous concrete (asphalt) would better serve a multi-use path option. Any of the suggested options could benefit from decorative pavements, and paver detailing can add a higher level of design and enhance the visual aspects for user experience. Various types of pavers are also available that can serve as a rumble strip option.

### Crosswalks:

Crosswalk options include a standard painted bar design; or for additional interest, a decorative painted design can be incorporated. Decorative pavers for crosswalks have also been a successful way to assist pedestrians as they cross the street.

### Curbs:

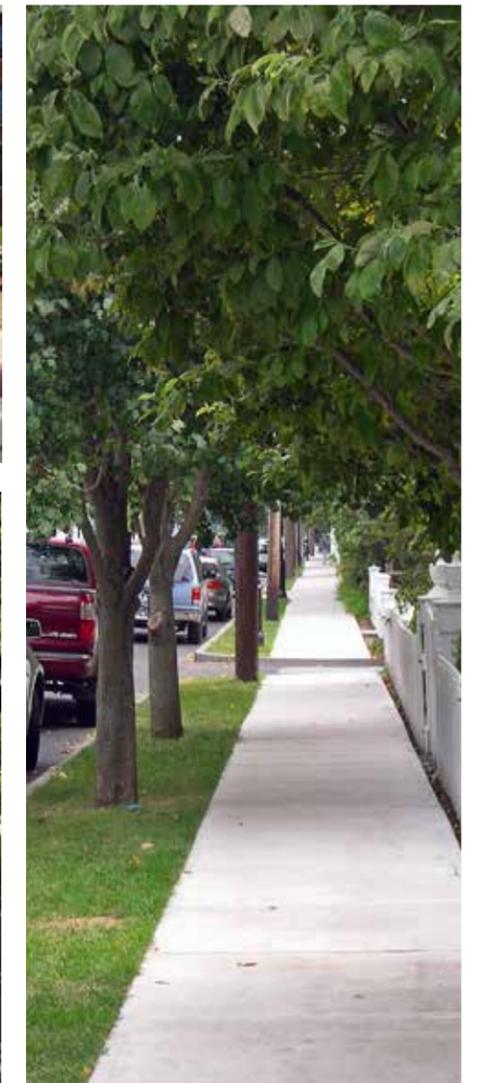
Curb options suggested for this improvement plan include either a granite curb or a concrete curb. The cost estimate included here in estimates a price for concrete curbing. Granite curbing is known to be more expensive but offers better resilience against snow plowing and roadway salt.

A mountable curb option was reviewed with the City and is an option that offers several opportunities. A mountable curb, otherwise known as a park curb, allows for maintenance vehicles to easily access a multi-use pathway in order to remove debris and snow.

### Signage:

Signage has been included in the cost estimate and will play a key role in establishing a safe pedestrian environment along Forest Avenue and Manursing Avenue. A typical sidewalk option would require stop signs for vehicles and pedestrian roadway crossing signs. Signage for a multi-use path would additionally include stop signs for multi-use path users on bikes, "Bike Route" signs with directional arrows, and "Pathway Narrows Ahead" signage. In addition, on-road pavement markings, such as bicycle symbols with sharrows, and appropriate multi-use path pavement striping should be incorporated in key locations.

## PRECEDENT IMAGES



# MATERIALS, MAINTENANCE AND OPINION OF COSTS

## Pathway Maintenance Overview

Whether the path is a sidewalk, a multi-use path, or a shared use bikeway within the existing roadway, a smooth surface needs to be provided and maintained. Care should be taken to eliminate potholes, eroded areas, other major surface irregularities and physical problems.

### Bituminous Concrete Multi-Use Path Surfacing (Asphalt)

The path’s proposed bituminous concrete surface is made up of a compacted stone base material with rolled and compacted asphaltic surfacing. Each spring and as needed during the year the surface should be reviewed for pot-holes and eroded areas. Path edges of the path should also be reviewed for damage from storm events that may have undermined the base, leaving the asphaltic surface cracked and/or unsupported.

### Concrete Sidewalk Surfacing

The sidewalk’s proposed concrete surface is made up of a compacted stone base material with formed and broom-finished concrete surfacing. Each spring and as needed during the year the surface should be reviewed for spalling, deterioration, and eroded areas. Path edges of the path should also be reviewed for damage from storm events that may have undermined the base, leaving the concrete surface cracked and/or unsupported.

### Sweeping

Yearly each spring the sidewalk and/or multi-use path should be swept as routine service as well as to remove sanding materials used during winter snow and ice storms. The adjacent roadway should have annual routine street sweeping each spring. Sidewalk and/or multi-use path shall be added to the annual sweeping list for maintenance each spring.

### Signs, Striping and Legends

It is very important that bikeway signs, striping, and legends are inspected regularly and be kept in a readable condition. Replace defective and obsolete signs as soon as possible. Depending on wear, repaint bike symbols on an annual basis. Repair problems with bike symbols and markings on a request basis through the City’s Engineering and/or Public Works Departments or through routine maintenance.

## Maintenance Funding

City will ultimately be responsible for the funding needed to cover maintenance and repairs to the Forest Avenue Pedestrian Improvements. As the pedestrian improvements are designed, they should be closely examined to minimize future maintenance costs. Maintenance of roadway markings should be linked to standard roadway maintenance funding.

## Maintenance Checklist and Schedule

Item Description	Frequency Interval of Inspection/Maintenance
Pavement Marking Replacement	1 – 3 years
Pavement Sweeping	Weekly-monthly/as needed
Remove Snow and Ice	Weekly/as needed
Clean Path Drainage Systems	1 year
Sign Replacement/Repair	1 – 3 years
Trash Disposal	Weekly/as needed
Graffiti Removal	Weekly-monthly/as needed
Shoulder and Grass Mowing	Weekly/as needed
Weed Control	Monthly/as needed
Tree, Shrub and Grass Trimming	5 months – 1 year
Pruning	1 – 4 years
Remove Fallen Trees	As needed
Irrigate/Water New Plants	Weekly-monthly/as needed until established

## MATERIALS, MAINTENANCE AND OPINION OF COSTS

### Stormwater Collection and Management

During the public meeting and meetings with the City, it was indicated that there are stormwater ponding and collection issues within the Forest Avenue study corridor. While not a primary goal of this study, these issues can be addressed once a pedestrian improvement design option is selected. The Forest Avenue roadway infrastructure/corridor will be reconstructed as part of the pedestrian improvement plan, at which point, design improvements to the existing storm drainage system will also be prepared.

Traditionally, the aim of a storm water management system has been to collect, conduct and dispose of storm water as efficiently and as quickly as possible. This method of storm water management can result in serious environmental degradation as stormwater accumulates sediment, debris, and other pollutants, as it flows over impervious surfaces. This untreated runoff will eventually discharge via the storm drainage system into the receiving water body, having potential adverse effects on plants, fish, animals and people.

As part of a responsible storm drainage system design we recommend a low impact environmental design including (where space allows): green engineering, bio-retention and rain garden systems. This approach, which incorporates water quality treatment prior to discharge and maximizes infiltration, is central to an effective design for stormwater management and environmental resource protection.

### Opinion of Construction Cost Matrix Overview

The construction cost estimates following here in account for all anticipated construction items and include associated contingencies and incidentals for this level of design. Generally when a design is developed further and additional design components are identified, the contingency and incidental costs are reduced. No right-of-way acquisition costs are anticipated or incorporated.

### EXISTING IMAGES



# OPINION OF CONSTRUCTION COSTS

## Option A - Cost Estimate

Forest Avenue Pedestrian Improvements Study  
 Preliminary Options Site Plans  
 07.01.2016

Preliminary Engineering Study  
 Opinion of Probable Construction Cost

Item No.	Item	Unit	Quantity	Unit Price	Price
<b>Option A - Sidewalk (Alternating Sides)</b>					
<i>A. Pedestrian Improvement Items</i>					
	Excavation	CY	1000	\$ 40.00	\$ 40,000
	Provisions for Excavation	CY	800	\$ 40.00	\$ 32,000
	Large Tree Removal	EA	0	\$ 2,000.00	\$ -
	Small Tree Removal	EA	0	\$ 1,000.00	\$ -
	Remove Bituminous Concrete Pavement	SF	11720	\$ 3.50	\$ 41,020
	Bituminous Pavement @ (2'-0" wide roadway patching)	SF	11720	\$ 6.90	\$ 80,868
	Bituminous Pavement @ (6'-0" wide)	SF	0	\$ 6.90	\$ -
	Concrete Pavement / Sidewalk	SF	16050	\$ 13.70	\$ 219,885
	6" Cast in Place Concrete Curb	LF	5860	\$ 50.50	\$ 295,930
	Curb Ramps and Tactile Warnings	EA	26	\$ 2,300.00	\$ 59,800
	Granite Paver Rumble Strip	SF	0	\$ 210.00	\$ -
	Catch Basin Replacement	EA	6	\$ 4,000.00	\$ 24,000
	12" HDPE Storm Drainage Pipe	LF	120	\$ 45.00	\$ 5,400
	Furnishing and Placing Topsoil, Amendments and Fertilizer/Turf Establishment	SY	2635	\$ 20.00	\$ 52,700
	Furnishing and Placing Grass Seed/Turf Establishment	SY	2635	\$ 2.00	\$ 5,270
	Landscape Plantings	LS	1	\$ 25,000.00	\$ 25,000
	Sign Face - Sheet Aluminum (Type III Reflective Sheeting)	SF	0	\$ 50.00	\$ -
	Rectangular Rapid Flashing Beacon (RRFB)	PAIR	4	\$ 39,200.00	\$ 156,800
	4" White Epoxy Resin Pavement Markings	LF	7430	\$ 1.00	\$ 7,430
	4" Double Yellow Epoxy Resin Pavement Markings	LF	3580	\$ 2.00	\$ 7,160
	12" White Epoxy Resin Stop Bar Pavement Markings	LF	170	\$ 4.00	\$ 680
	Bicycle Symbol w/ Sharrow	EA	30	\$ 590.00	\$ 17,700
<i>Total Bikeway Items ( Dollars)</i>					\$ 1,071,643
<i>B. Minor Items</i>					
	Provisional Items	25.0%	of	\$ 1,071,643.00	\$ 267,911
<i>C. Lump Sum Items</i>					
	Clearing and Grubbing @ 1.0%	LS	1	\$ 13,395.54	\$ 13,396
	Maintenance and Protection of Traffic @ 2.0%	LS	1	\$ 26,791.08	\$ 26,791
	Mobilization @ 5.0%	LS	1	\$ 66,977.69	\$ 66,978
	Construction Staking @ 1.0%	LS	1	\$ 13,395.54	\$ 13,396
<i>Total Lump Sum Items ( Dollars)</i>					\$ 120,560
<i>Incidentals @ 25%</i>					\$ 267,911
<b>Total Project Cost, Option A - Sidewalk (Alternating Sides) ( Dollars)</b>					<b>\$ 1,728,024</b>
					<b>Say: \$ 1,730,000</b>

# OPINION OF CONSTRUCTION COSTS

## Option B - Cost Estimate

Forest Avenue Pedestrian Improvements Study  
Preliminary Options Site Plans  
07.01.2016

Preliminary Engineering Study  
Opinion of Probable Construction Cost

Item No.	Item	Unit	Quantity	Unit Price	Price
<b>Option B - Multi-Use Path (Alternating Sides)</b>					
<i>A. Pedestrian Improvement Items</i>					
	Excavation	CY	1000	\$ 40.00	\$ 40,000
	Provisions for Excavation	CY	800	\$ 40.00	\$ 32,000
	Large Tree Removal	EA	6	\$ 2,000.00	\$ 12,000
	Small Tree Removal	EA	1	\$ 1,000.00	\$ 1,000
	Remove Bituminous Concrete Pavement	SF	9540	\$ 3.50	\$ 33,390
	Bituminous Pavement @ (2'-0" wide roadway patching)	SF	9540	\$ 6.90	\$ 65,826
	Bituminous Pavement @ (6'-0" wide)	SF	22400	\$ 6.90	\$ 154,560
	Concrete Pavement / Sidewalk	SF	0	\$ 13.70	\$ -
	6" Cast in Place Concrete Curb	LF	4770	\$ 50.50	\$ 240,885
	Curb Ramps and Tactile Warnings	EA	24	\$ 2,300.00	\$ 55,200
	Granite Paver Rumble Strip	SF	1500	\$ 210.00	\$ 315,000
	Catch Basin Replacement	EA	8	\$ 4,000.00	\$ 32,000
	12" HDPE Storm Drainage Pipe	LF	160	\$ 45.00	\$ 7,200
	Furnishing and Placing Topsoil, Amendments and Fertilizer/Turf Establishment	SY	2210	\$ 20.00	\$ 44,200
	Furnishing and Placing Grass Seed/Turf Establishment	SY	2210	\$ 2.00	\$ 4,420
	Landscape Plantings	LS	1	\$ 25,000.00	\$ 25,000
	Sign Face - Sheet Aluminum (Type III Reflective Sheeting)	SF	0	\$ 50.00	\$ -
	Rectangular Rapid Flashing Beacon (RRFB)	PAIR	4	\$ 39,200.00	\$ 156,800
	4" White Epoxy Resin Pavement Markings	LF	7800	\$ 1.00	\$ 7,800
	4" Double Yellow Epoxy Resin Pavement Markings	LF	3700	\$ 2.00	\$ 7,400
	12" White Epoxy Resin Stop Bar Pavement Markings	LF	160	\$ 4.00	\$ 640
	Bicycle Symbol w/ Sharrow	EA	30	\$ 590.00	\$ 17,700
<i>Total Bikeway Items ( Dollars)</i>					\$ 1,253,021
<i>B. Minor Items</i>					
	Provisional Items	25.0%	of	\$ 1,253,021.00	\$ 313,255
<i>C. Lump Sum Items</i>					
	Clearing and Grubbing @ 1.0%	LS	1	\$ 15,662.76	\$ 15,663
	Maintenance and Protection of Traffic @ 2.0%	LS	1	\$ 31,325.53	\$ 31,326
	Mobilization @ 5.0%	LS	1	\$ 78,313.81	\$ 78,314
	Construction Staking @ 1.0%	LS	1	\$ 15,662.76	\$ 15,663
<i>Total Lump Sum Items ( Dollars)</i>					\$ 140,965
<i>Incidentals @ 25%</i>					\$ 313,255
<b>Total Project Cost, Option B - Multi-Use Path (Alternating Sides) ( Dollars)</b>					<b>\$ 2,020,496</b>
					<b>Say: \$ 2,030,000</b>

# OPINION OF CONSTRUCTION COSTS

## Option C - Cost Estimate

Forest Avenue Pedestrian Improvements Study  
 Preliminary Options Site Plans  
 07.01.2016

Preliminary Engineering Study  
 Opinion of Probable Construction Cost

Item No.	Item	Unit	Quantity	Unit Price	Price
<b>Option C - Sidewalk (East Side Only)</b>					
<i>A. Pedestrian Improvement Items</i>					
	Excavation	CY	1000	\$ 40.00	\$ 40,000
	Provisions for Excavation	CY	800	\$ 40.00	\$ 32,000
	Large Tree Removal	EA	6	\$ 2,000.00	\$ 12,000
	Small Tree Removal	EA	2	\$ 1,000.00	\$ 2,000
	Remove Bituminous Concrete Pavement	SF	11580	\$ 3.50	\$ 40,530
	Bituminous Pavement @ (2'-0" wide roadway patching)	SF	11580	\$ 6.90	\$ 79,902
	Bituminous Pavement @ (6'-0" wide)	SF	0	\$ 6.90	\$ -
	Concrete Pavement / Sidewalk	SF	13900	\$ 13.70	\$ 190,430
	6" Cast in Place Concrete Curb	LF	5790	\$ 50.50	\$ 292,395
	Curb Ramps and Tactile Warnings	EA	22	\$ 2,300.00	\$ 50,600
	Granite Paver Rumble Strip	SF	0	\$ 210.00	\$ -
	Catch Basin Replacement	EA	9	\$ 4,000.00	\$ 36,000
	12" HDPE Storm Drainage Pipe	LF	180	\$ 45.00	\$ 8,100
	Furnishing and Placing Topsoil, Amendments and Fertilizer/Turf Establishment	SY	2985	\$ 20.00	\$ 59,700
	Furnishing and Placing Grass Seed/Turf Establishment	SY	2985	\$ 2.00	\$ 5,970
	Landscape Plantings	LS	1	\$ 25,000.00	\$ 25,000
	Sign Face - Sheet Aluminum (Type III Reflective Sheeting)	SF	0	\$ 50.00	\$ -
	Rectangular Rapid Flashing Beacon (RRFB)	PAIR	0	\$ 39,200.00	\$ -
	4" White Epoxy Resin Pavement Markings	LF	7850	\$ 1.00	\$ 7,850
	4" Double Yellow Epoxy Resin Pavement Markings	LF	3700	\$ 2.00	\$ 7,400
	12" White Epoxy Resin Stop Bar Pavement Markings	LF	140	\$ 4.00	\$ 560
	Bicycle Symbol w/ Sharrow	EA	30	\$ 590.00	\$ 17,700
<i>Total Bikeway Items ( Dollars)</i>					\$ 908,137
<i>B. Minor Items</i>					
	Provisional Items	25.0%	of	\$ 908,137.00	\$ 227,034
<i>C. Lump Sum Items</i>					
	Clearing and Grubbing @ 1.0%	LS	1	\$ 11,351.71	\$ 11,352
	Maintenance and Protection of Traffic @ 2.0%	LS	1	\$ 22,703.43	\$ 22,703
	Mobilization @ 5.0%	LS	1	\$ 56,758.56	\$ 56,759
	Construction Staking @ 1.0%	LS	1	\$ 11,351.71	\$ 11,352
<i>Total Lump Sum Items ( Dollars)</i>					\$ 102,165
<i>Incidentals @ 25%</i>					\$ 227,034
<b>Total Project Cost, Option C - Sidewalk (East Side Only) ( Dollars)</b>					<b>\$ 1,464,371</b>
					<b>Say: \$ 1,470,000</b>

# OPINION OF CONSTRUCTION COSTS

## Option D - Cost Estimate

Forest Avenue Pedestrian Improvements Study  
Preliminary Options Site Plans  
07.01.2016

Preliminary Engineering Study  
Opinion of Probable Construction Cost

Item No.	Item	Unit	Quantity	Unit Price	Price
<b>Option D - Multi-Use Path (East Side Only)</b>					
<i>A. Pedestrian Improvement Items</i>					
	Excavation	CY	1000	\$ 40.00	\$ 40,000
	Provisions for Excavation	CY	800	\$ 40.00	\$ 32,000
	Large Tree Removal	EA	11	\$ 2,000.00	\$ 22,000
	Small Tree Removal	EA	2	\$ 1,000.00	\$ 2,000
	Remove Bituminous Concrete Pavement	SF	10260	\$ 3.50	\$ 35,910
	Bituminous Pavement @ (2'-0" wide roadway patching)	SF	10260	\$ 6.90	\$ 70,794
	Bituminous Pavement @ (6'-0" wide)	SF	23000	\$ 6.90	\$ 158,700
	Concrete Pavement / Sidewalk	SF	0	\$ 13.70	\$ -
	6" Cast in Place Concrete Curb	LF	5130	\$ 50.50	\$ 259,065
	Curb Ramps and Tactile Warnings	EA	22	\$ 2,300.00	\$ 50,600
	Granite Paver Rumble Strip	SF	1520	\$ 210.00	\$ 319,200
	Catch Basin Replacement	EA	11	\$ 4,000.00	\$ 44,000
	12" HDPE Storm Drainage Pipe	LF	220	\$ 45.00	\$ 9,900
	Furnishing and Placing Topsoil, Amendments and Fertilizer/Turf Establishment	SY	2335	\$ 20.00	\$ 46,700
	Furnishing and Placing Grass Seed/Turf Establishment	SY	2335	\$ 2.00	\$ 4,670
	Landscape Plantings	LS	1	\$ 25,000.00	\$ 25,000
	Sign Face - Sheet Aluminum (Type III Reflective Sheeting)	SF	0	\$ 50.00	\$ -
	Rectangular Rapid Flashing Beacon (RRFB)	PAIR	0	\$ 39,200.00	\$ -
	4" White Epoxy Resin Pavement Markings	LF	7820	\$ 1.00	\$ 7,820
	4" Double Yellow Epoxy Resin Pavement Markings	LF	3550	\$ 2.00	\$ 7,100
	12" White Epoxy Resin Stop Bar Pavement Markings	LF	140	\$ 4.00	\$ 560
	Bicycle Symbol w/ Sharrow	EA	30	\$ 590.00	\$ 17,700
<i>Total Bikeway Items ( Dollars)</i>					\$ 1,153,719
<i>B. Minor Items</i>					
	Provisional Items	25.0%	of	\$ 1,153,719.00	\$ 288,430
<i>C. Lump Sum Items</i>					
	Clearing and Grubbing @ 1.0%	LS	1	\$ 14,421.49	\$ 14,421
	Maintenance and Protection of Traffic @ 2.0%	LS	1	\$ 28,842.98	\$ 28,843
	Mobilization @ 5.0%	LS	1	\$ 72,107.44	\$ 72,107
	Construction Staking @ 1.0%	LS	1	\$ 14,421.49	\$ 14,421
<i>Total Lump Sum Items ( Dollars)</i>					\$ 129,793
<i>Incidentals @ 25%</i>					\$ 288,430
<b>Total Project Cost, Option D - Multi-Use Path (East Side Only) ( Dollars)</b>					<b>\$ 1,860,372</b>
					<b>Say: \$ 1,870,000</b>



# 6

## CHAPTER

- Public Open House - Meeting Minutes
- Resident Comments sent to the City of Rye, NY

# APPENDIX

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## Public Open House - Meeting Minutes (April 13, 2016)

### Pedestrian Safety:

- Many residents expressed a safety concern regarding kids who use the road to walk and bike
- Seniors and young children need a safe place to walk
- Dangerous for dog walkers
- Kids travel to school using Forest Avenue
- Sight lines are an issue at the intersection of Manursing Ave. and Forest Ave.
- If a pedestrian is crossing the street, they need to be able to safely cross
- Questions regarding pedestrian crosswalks and flashing lights were asked

### Feedback on Options & Precedent Images:

- For all users – a wide shared path would be safer
- Rumble strip is a good idea to alert drivers
- A painted line and rumble strip may cause drivers to swerve towards that line
- There are many safety concerns
- Residents don't want green painted bike lanes - too urban
- A double sidewalk option is not realistic and may not be needed
- City Engineer directed Stantec to review a concept that weaves the road
- City Planner directed Stantec to focus on reasonable pedestrian options (multi-use path, sidewalk and widened shoulders)

### Traffic Concerns:

- Traffic issues – calming measures needed
- Are stop signs on Forest Avenue possible to slow people down?
- Stop signs at Manursing Way would be a good thing; not every intersection
- Some residents expressed that there has been an increase of traffic issues on Forest Avenue
- It was stated that cars are traveling too fast on the road; how could they be slowed down?
- Traffic calming measures such as speed bumps and raised crosswalks were discussed
- Has any review been made of making Forest Avenue a one-way road?
- Stantec stated the original scope includes a pedestrian improvement plan and did not include a detailed traffic analysis. A complete traffic study is a service that Stantec can provide.

### Maintenance:

- Snow removal on a sidewalk would be the responsibility of home owner
- It's important to keep Rye's roadway character
- The existing white landscape rocks along the roadway have pros and cons
- Parking along the roadway is sometimes an issue

### Drainage:

- Drainage issues; please address
- Water and drainage issues to be reviewed by Stantec

### Costs:

- Public asked about the cost of various improvement options
- Stantec will complete a cost estimate in the final report

### Final Thoughts:

- Stantec to reconvene with the City in a couple of weeks
- Traffic calming options could be incorporated along Forest Avenue
- City could pay for sidewalks
- City could maintain widened road with bike lanes or a multi-use path option

# APPENDIX

## Resident Comments Sent to the City of Rye, NY

**Hollis O'Rorke**

April 26, 2016

Hi,

I live just off Forest Ave, on Pleasant Street, and am strongly in favor of improving safety on Forest by providing space for pedestrians of all ages - this would benefit our children as well as all the adults who use Forest to exercise or walk their dogs. I would much prefer adding sidewalks to one or both sides (over the expanded shoulder options which don't seem as safe or effective to me).

Thank you for reviewing the proposals — I look forward to hearing the results and am hopeful it will move forward.

Hollis O'Rorke

**Colleen Margiloff**

April 20, 2016

To Whom It May Concern-

Please count this as our vote (and enthusiastic support) for separated, off-the-road sidewalks along Forest. From looking at the Stantec Study (many thanks for funding the study as well), Option number 3 is ideal. If you have spent anytime attempting to bike, run or walk along Forest, you are all too familiar with the terror that comes from that experience. Considering the pride we take in being a community, wouldn't it be so nice to know that our town's families, of all ages, have the opportunity to enjoy our beautiful neighborhoods? As it stands now, families feel limited in attempting to go from house to house, house to town, house to club via walking or bike because of the lack of safety they feel when traveling down Forest.

Please make this the utmost priority for Rye.

All the best,  
Colleen Margiloff

**JoAnne Nardone**

April 20, 2016

Dear City Council Members,

I support the Forest Avenue safe sidewalk plan and I am in favor of Options 3 or 4 because they are safer. Bikers and pedestrians are out of the street.

Thank you for your consideration.

Sincerely,  
JoAnne Nardone

**Alison Hudspeth**

April 19, 2016

Hello,

I am writing to express my strong support for pedestrian improvements along Forest Avenue. Although I believe all of the options outlined in the Stantec Study would be an improvement over the status quo, I most strongly support Option 1 because I think an off-road solution would most benefit families with young children. I live on Hook Road off of Forest and have three boys ages 6, 4, and 10 months. My 6 year old is a kindergartener at Midland and I would love to be able to walk to school with him, but I do not feel safe getting from Hook to Apawamis. I feel particularly unsafe when I am with all my children because the current bikelane on the shoulder is simply not wide enough to accommodate us, and drivers often seem to be whizzing past at more than 30mph. If a sidewalk were to exist, I would use it on a daily basis, not only to go to Midland but also to walk to Rye Town Park, to pick up my middle son at Rye Presbyterian, and to walk to town.

Sincerely,  
Alison Hudspeth

# APPENDIX

## Resident Comments Sent to the City of Rye, NY

**Kim Gordon**

April 17, 2016

Hello,

I am writing to support the completion of the sidewalk on Forest Avenue. It seems unbelievable to me that this has not been completed already. I actually saw someone pushing a wheelchair in the road where the sidewalk ran out. Are we just waiting for an accident or law suit? It would be nice to be proactive in this case and to acknowledge that it is not just for people who are out for a stroll but an important safety concern that the sidewalk be completed.

Sincerely,  
Kim Gordon

**Laura Beber**

April 18, 2016

We were unable to attend last week's meeting with regard to this. Would like to just put our say in that we are absolutely OPPOSED to this.

We have lived on Forest Avenue for over 13 years, had young children when we moved in, and grew up here. To put sidewalks on now after all the years would not only take away the landscape of what this street has always been, but would add much more traffic to a street that already has had an increase in traffic over the years.

Lastly, we feel that they would devalue the price of the homes greatly.

Sincerely,  
Laura Beber

**Leigh Hayden**

April 15, 2016

Yes in favor of a Forest ave sidewalk . Always!!! Who wouldn't it is so dangerous and getting busier ever day.

**Bette Cotter**

April 15, 2016

On April 13th, I attend the meeting regarding the sidewalks on Forest Avenue. After listening to the proposal, I am not in favor the proposed sidewalks.

Elizabeth Cotter

**Holly Simmons**

April 18, 2016

Hello,

We live on Grace Church St. near the corner of Forest Ave. I highly support the proposed plans for sidewalks along Forest and Manursing. I would love if they could even be extended to Grace Church St. so that my kids could safely bike or walk to school.

I would vote for something that is the least interruption to the existing vegetation and utilities. I don't see a need to have sidewalks on both sides of the street, but the last option in which there is minimal interruption as well as a way for kids to bike on a path would be so wonderful. There is no safe place to bike or walk on this side of town until we get down to Midland.

Thanks  
Holly

**Lewis Meyers**

April 18, 2016

Planning,

As a resident of Rye and a home owner at 15 Hook Road, I truly believe it is very important for the town to have one continuous sidewalk on at least one side of Forrest Ave. There is a tremendous amount of pedestrian traffic on Forrest both day and night. Without sidewalks for our spouses, friends and children it is only a matter of time before we have a terrible accident occur on this very busy road. Please do not delay, approve and begin the installment of sidewalks on Forrest.

Thank you,  
Lewis Meyers

**Rogol, Sally NEW**

April 19, 2016

Bart called today regarding forest Avenue presentation/discussion from last Wednesday. He had me do a little searching about the old master plan. Attached is a document referring to the forest Avenue trail way.

Sally

**Emily Keenan**

April 15, 2016

Please consider these photos as evidence of how dangerous Forest Avenue is.

# APPENDIX

## Resident Comments Sent to the City of Rye, NY

**Judith Keller**

April 17, 2016

Dear Rye Planning,

I live on grace church street and am looking at the plans. I do not understand why the plan stops at manuring ave. and does not continue down to the end of forest. I recall hearing at one time that it was too expensive to deal with this portion of roadway. In the meantime, it is the most dangerous section of forest ave. I assume that those with interests farther down forest or in that particular section were willing to forgo any safety improvement on that section of road for their own reasons. I feel that until you can improve the safety of the most dangerous section of road on forest any other plans for improvements should be postponed. In the meantime, someone will get seriously hurt on forest ave on this section of roadway. In essence, it makes no sense to tackle the easy problems first and leave the most dangerous for later. Spending our communities money wisely is very important.

Thanks for your consideration of this point of view.

Judy Keller

**Kelsey Johnson**

April 15, 2016

Dear Christian and the Stantec team,

Thank you for taking the time to present to the public this past Wednesday evening. An open dialogue is so important and I was personally pleased at the turnout and participation of a broad group. In addition to the comments I made/submitted at the public meeting, upon further reviewing the Stantec presentation, I have the following thoughts:

1) Options 2 and possibly 4 could be removed from the analysis given the strong resident feedback towards maintaining the current landscape of the road; these double-sided options seem less probable to move forward so may not be worth the effort to analyze in detail.

2) If possible add in analysis of options for a sidewalk and also multi-use path that do not switch sides of the road.

3) In all cases work more on visualization of what this will look like and offer detailed information on impact to landscape for each option (e.g. 0 trees removed, 20 rocks removed, etc) given this is a hot button issue around the project progressing.

Thanks for the continued work on this. I truly appreciate your effort and look forward to continued dialogue.

Thanks again,  
Kelsey Johnson

**Karen Meyers**

April 15, 2016

Dear Board,

I absolutely support the proposal to put sidewalks on Forest Avenue. The current set up on Forest Avenue is incredibly dangerous. I live on Hook Road and need to travel on Forest to leave my street. There is no room for children walking, strollers and dogs.

I am a mother of 3 and like to think of myself as a very careful driver. I am always cautious that there may be children near the street. I have lived on Hook Road since 2006. I have had 2 extremely close calls on Forest Avenue where I almost hit a child with my car. I had to pull over after one incident to stop myself from shaking. When there are no boundaries for people (especially children) to walk within, they seem to drift into the road. I have older children and am now doing the night time pick ups and can tell you that there are children walking in the road on Forest Avenue. It is very difficult to see them and if a car is coming in the opposite direction, it is a real challenge to drive around them.

I am also not sure if you are aware that the cut through paths that used to be at the top of Eve and Ann Lane have been closed by the new homeowners. These short cuts were a blessing as they allowed the children who live not just on those streets but on Martin, Hook, Fieldstone, Boulder and Rockridge to avoid long stretches of walking on Forest Avenue. They were able to cut straight through to Midland where there are sidewalks. Now that these cut throughs are closed, there are a lot more children forced to use Forest Avenue.

Please take this matter into serious consideration.

Thank you,  
Karen Meyers

**Cliona Cronin**

April 16, 2016

We wish to inform you that we anxiously await your decision for a side walk on Forest Avenue. We feel this is a necessary addition and requires your prompt attention.

Sincerely,  
Cliona Cronin & Norbert Galligan.

# APPENDIX

## Resident Comments Sent to the City of Rye, NY

Emily Keenan

April 15, 2016

To the Planning Committee -

I live on Eve Lane. I am the mother of four children, all of whom will attend Midland this fall. Currently, we live .2 miles from the school (as the crow flies) and yet the only way for me to get my children to and from school is to pull my gas-guzzling suburban out of the driveway twice a day, and clog up traffic on both Forest and Midland Avenue. I live .2 miles from the school and this is the only way to get my kids to school. This is because:

1. All of the cut-throughs in the back of Ann Lane and Eve Lane have closed. This is a huge change. For close to 50 years children who lived in this .7 mile stretch of Forest Avenue could safely walk up Ann Lane or Eve Lane and walk into the back of Midland, or if they were older kids they could then move safely along the sidewalks on Midland Avenue to get to RMS/RHS. These cut throughs are now closed. It is a game-changer for this area, and the town needs to either reopen these paths (take ownership and liability for these paths) or put a sidewalk on Forest Avenue.

2. With the cut throughs closed, the only option is to walk along Forest to get to school and as we all can agree, Forest Avenue between Apawamis and Manuring Avenues is NOT SAFE for anyone, least of all children, least of all small children.

If you're wondering how many children this effects, I have gone through the Midland directory and identified over 127 children (at Midland or with brothers and sisters at Midland) who are in this predicament. That's more than 20% of the Midland elementary school student body. This count of 127 does not include the families who would like to walk to the ECC, which is a preschool on Forest Avenue, or the families of children who attend RMS and RHS. The 127 is just children belonging to Midland Families.

So I estimate the actual number of children is 150 - 175 who are trapped in this area without a safe route to school. So that is 127 children who live between .1 and .7 miles from their school, and yet they cannot walk to school because there is no safe route. This is a terrible thing in a town that does not have bussing and encourages walking.

I am firmly in favor of the option to install at least one sidewalk with a curb and a buffer zone between the street and the sidewalk. Anything short of this would be an improvement, but one that still leaves Forest unsafe for walkers, runners, strollers, scooters, and children on bikes. Julie Killian mentioned at the end of the meeting on Wednesday that she is scared of her high school children driving home and veering off the road into the rocks along Forest Avenue. Exactly. Only I am not worried about the rocks. I am worried about the pedestrians that are on the side of the road during the day, and also at night. (The high school children often walk along Forest on weekend nights).

Last year, the Drive 25 campaign highlighted how dangerous accidents were for pedestrians when cars are moving greater than 30 miles per hour. The speed limit on Forest IS 30 mph, and we all know most people are

going 35 - 40. This is not just local traffic, but lots of commercial and construction traffic moving from 95 to Playland or out to Milton Point. In other words, huge vans and trucks moving 30 - 40 MPH.

So this .7 mile stretch of Forest between Apawamis and Manuring is congested with: local, commercial and construction traffic, 170 homes, 13 lanes on either side of the road, bikers, walkers, joggers, and strollers, and at least 127 children who would like to get to school. And yet it has no sidewalks to keep the pedestrians safe or to protect drivers from the unwanted consequences of their careless driving (of which there is much in the age of cell phones).

The result is that cars moving on Forest continually have to swerve into the opposite lane to move past bikers/joggers/strollers, and/or come to a complete stop in the middle of the Avenue if there is oncoming traffic that prevents them from pulling out. That is the cars that do give way to pedestrians. Often the dump trucks and commercial vehicles pass within 3 - 5 feet of me.

I have sent 5 photos in separate emails that I think illustrate how dangerous this current situation is and how desperate we are for a safe alternative.

I will add that my preference is for a sidewalk, but I am fully in favor of anything that makes Forest Avenue safer. I just want a safe option for my family and my neighbors. I am fully supportive of lowering the speed limit, putting in stop signs or stop lights, or even making Forest a One Way Street. Anything for safety's sake, as the current situation is dreadful and I am scared that the accident we all fear may happen any day.

Thank you so much for considering the options.

All the best,  
Emily Keenan

Steve Cadenhead

April 15, 2016

Christian/Ryan/Mayor Sack and Council,

I apologize for having to miss the presentation and discussion of the Forest Ave sidewalk study. I remain keenly supportive of this project. Residents have been clamoring for remediation for decades, and it's excellent that you're giving it focus. Based on my review of the Stantec presentation, and all else equal, I would strongly favor Option 3 (the off-road multi-use pathway). Keeping more distance between motorized and non-motorized users is almost always the best first step toward improving safety. Its wide path (the widest of all the proposals) should allow sufficient shared us among bidirectional pedestrians and cyclists.

Thanks again for addressing this long-running issue. Rye has the reputation of being a leader in the Sound Shore communities regarding its balanced approach to roadways use. This is a fine example of that at work again.

Kind regards,  
Steve

# APPENDIX

## Resident Comments Sent to the City of Rye, NY

**Xanthe Alban-Davies**

April 15, 2016

I am in strong favor of sidewalks in Forest Avenue. As a resident of Rye for 30 years I feel it is time for Rye to update Forest Avenue and make it SAFE and usable for our children and adults who walk on Forest Avenue. I am in favor of a sidewalk that protect the pedestrian from the onslaught of SUVs that barrel down the street. It is so dangerous and one that has a solution.

Xanthe Alban-Davies

**Jeremy Herz**

April 15, 2016

I continue to support putting in sidewalks on forest avenue. Walking on the roads is very dangerous as cars can't see; especially at night. I feel like any day there can be a major tragedy on forest Ave. Let's put in sidewalks to avoid this.

Jeremy Herz

**Carty, Elizabeth**

April 15, 2016

Dear Planning Committee,

I wish to document my continued support for pedestrian improvements along Forest Avenue. I believe a sidewalk on both sides of the road is the best option for improving pedestrian safety.

Thank you.  
Liz Carty

**Kristine Forsyth**

April 14, 2016

Hello,

I am writing to show my strong support for sidewalks on Forest Ave as well as addressing the speed limit and safety of pedestrians and drivers. I would like to support Option Number 2 - sidewalks on both sides of streets with designated crosswalk areas. And keeping the already existing bike lanes.

Thank you,  
Kristine Forsyth

**Jeanne Fogel**

April 14, 2016

Thank you for the progress update on this important issue. I support this project as its vital to our neighborhood's safety and long term appeal. I look forward to hearing more about the costs and feasibilities of these options. My needs would be sufficiently met by a walking sidewalk and bikes remaining on the road.

Thanks and keep up the good work  
Jeanne

**Maria Poli**

April 15, 2016

I attended April 13, 2016 presentation on Pedestrian Improvements on Forest Avenue. After listening to the pros and cons I am NOT in favor of the proposed sidewalks.

Maria Poli

# APPENDIX

## Resident Comments Sent to the City of Rye, NY

**Lena Mathisson**

April 14, 2016

To the Planning Commission and others involved in decisions about Forest Avenue sidewalks -

I have lived in Rye since 1998 and have walked many hundreds of miles through Rye in that time. It's good to see that there is progress in adding sidewalks to Forest Avenue.

There are so many walkers and joggers on Forest Avenue day and night, at all times of the year. Having a true sidewalk will make a real difference in safety for all, especially for people pushing strollers and walking children to school. I am glad that the City of Rye is not waiting for a tragedy before taking action on this.

While having the sidewalk alternate sides across Forest Avenue according to utility poles would make installation easier and less costly, the more often people would have to cross the street, the less often they would do it. In real world use, this option would still leave many pedestrians along the side of the road opposite the sidewalk that they are meant to use. All efforts should be made to make the sidewalk continuous on one or both sides of the street.

One of the difficult issues is what to do regarding cyclists. While children riding bikes belong on the sidewalk for safety, cyclists traveling at speeds of tens to twenties mph don't belong on a pedestrian path. Making a sidewalk for pedestrians and a widened shoulder to accommodate fast-moving cyclists would balance the various safety needs best.

Thank you for the time and effort that you have expended looking into this issue.

Lena Mathisson

**Stephen Rushmore**

April 14, 2016

I would like to send my support for a two sided expanded shoulder. I think it would be effective and not an eyesore.

Stephen

**Patricia Goldstein**

April 10, 2016

Since I will be out of town on April 13, I would like to express my disapproval in writing re the Forest Avenue pedestrian access . I have lived at 2 Manursing Way at the corner of Forest Avenue and Manursing WY for 48 years and at no time has there been a pedestrian problem on Forest Avenue between Apawamis and Manursing Avenues. Even with the bicycle path making the road narrower the traffic has not increased. And I look out at the road every day. A sidewalk will only increase pedestrian traffic which will certainly cause a problem. Not only for the runners but for the residents themselves. This is an ill thought idea which we seriously oppose.

Sincerely,  
Patricia and Bernard Goldstein

**Terence and Kathryn Stack**

April 10, 2016

Hi,

I hope you had a nice weekend. Thank you for the notice of the meeting on April 13 regarding sidewalks on Forest Avenue. I live on Forest Avenue and would like to attend the meeting; I have a pre-arranged commitment. Where can I view the plans? Do you know where the subject of the Forest Avenue Sidewalks is on the Council Agenda, and any idea what time the subject will be heard by Council on Wednesday evening? Maybe I could attend the meeting a little later.

Thank you for your help.

Sincerely,  
Kathryn Stack

**Caitlin Layng**

April 11, 2016

Dear Members of the Planning Committee,

I am unable to attend the Pedestrian Safety meeting on 4/13 but I wanted to express my strong support for a study to determine the best way to make Forest Avenue safer for walkers, runners and cyclists.

We live at 4 Fieldstone Road, less than a mile from Midland School, but I feel strongly that Forest Avenue is too dangerous during "rush hour" to walk my children to school. I know that I am not alone in this concern and I often think of how many people would choose to walk or bike to Midland if they felt they had a safer way to do so.

In a community that prides itself on becoming greener and healthier, this seems like a no-brainer. This Saturday afternoon, my husband and I took our five children on a family run, where we each pushed a double stroller and our oldest son (age 6.5) rode his bike. A friend and neighbor who shares my concerns took the attached pictures. These images are difficult for me to look at and make me feel irresponsible as a parent. In a community like Rye, we should not fear for our safety as we spend time exercising outdoors with our children.

I appreciate that adding sidewalks to Forest Avenue is a complex issue, but it seems like something that is long overdue and would greatly enhance the quality of life for Rye residents.

Please feel free to contact me at this email address or 967-1802 with any questions.

Regards,  
Caitlin Layng

# APPENDIX

## Resident Comments Sent to the City of Rye, NY

**John Leonard**

April 12, 2016

Dear Marcus, Christian, and Ryan:

As the Forest sidewalk proposal will apparently be discussed tomorrow, and I will be unable to make the meeting, I would like to discuss a related topic that should be addressed in any event, but that is particularly relevant to the usefulness of the sidewalk if it is to proceed. (I might note that I in general support the concept of a sidewalk, although I would like it to adapt as much as feasible to existing topography and to avoid any further removal of mature plantings beyond what the house-rebuilding industry has already done – ie a few hills and bends would be fine as far as I am concerned.)

For some years, I have used the walkway from the end of Eve Lane to the back of the Midland School property to vary my jogging route, which often involves Forest Ave. Last fall, with considerable displeasure I noticed that the contractor reconstructing the house to the left of the walkway (I believe 8 Eve Lane, but am not sure) had blocked it off with construction fencing in a way that seemed completely unnecessary from either a construction logistics or a public safety perspective (even assuming schoolchildren as the public). This spring, while the new landscaping appears to have respected the existence of a walkway, a gate has been installed (locked before 6 PM on the weekday I attempted to use the walkway), the pavement has been removed above the gate, and the pavement below the gate has been severely damaged, with no effort to remove now overhanging bramble bushes, and there is a ‘no trespassing, private property’ sign below the gate when approached from the school side. I would note that the walkway in pre-construction status is clearly visible in the overhead photos in the ‘Mapping’ section of the city’s website.

I do not know the exact legal status of the walkway, but my sense is that if there is not a formal deeded right-of-way, there may have been an easement required or granted as part of the original development of Eve Lane (the now removed pavement appeared consistent with the street’s paving), which may require research into the original documents from that time. If there is no evidence of an easement, there is also the question whether public use over many years de facto establishes a right of way (I do not know New York law on this point).

If there is indeed a claim of right to demand immediate reopening, removal of the gate, and restoration of the walkway to its usable pre-construction status (with the same ongoing maintenance responsibilities as those of us with sidewalks on the street right-of-way adjoining our properties), I would strongly encourage the City to act to preserve the public’s rights, without further delay.

More fundamentally, if the Forest Avenue sidewalk is to have any chance to take schoolchildren out of the daily SUV parades and encourage them to walk to school, it must have direct access to the school property – no child should be asked to (or will) walk around via Forest/Apawamis/Midland, or the equally circuitous route at the other end of Forest. If there is any doubt as to the legal status, the city should use its powers of eminent domain to reopen the walkway, and the School District might help by improving the access on their end of the walkway. It appears that many years ago there was also an access at the back of the Community

Synagogue (Villa Aurora) property, but I have never seen it in use in recent years; the City might also see if the Synagogue would be willing to grant access, with the ability to close a gate on an agreed list of religiously important days.

Please share my views as appropriate with your colleagues.

With best regards

John Leonard

**Andy Brooks**

April 12, 2016

While I will be unable to attend Wednesday evening’s discussion regarding Forest Avenue sidewalk, I would simply say that as a 20-year resident of Forest Avenue, of course there should be a sidewalk. In most nice neighborhoods in nice residential communities like Rye, this wouldn’t even be debated.

I have long advocated for something to be done to enhance/improve the safety along Forest Avenue, and a quality of life that should be taken for granted. Far too many motorists treat Forest Avenue as a highway to Playland, Rye Town park and beach, and to the Milton Point clubs, indifferent to what is a residential street without a sidewalk or even decent shoulders along it’s upper reaches. Why the neglect of Forest Avenue has prevailed unattended to by the City of Rye for so long utterly confounds me. Without a sidewalk or decent shoulders, pedestrian and biking traffic, heavily used, is at constant risk; an accident waiting to happen. And how about the kids walking too and from the schools; their safety?

While I’m at it, although not directly related to the sidewalk discussion is the physical condition of Forest Avenue itself; the pavement is in deplorably run down condition. It is incomprehensible to me why the road surface has been allowed to deteriorate into such shabby condition. Again, for a nice neighborhood in a nice suburban town this is hard to understand, and wholly an embarrassment (the comments we get from out of town family and guests).

Lastly, and more related to the Forest Avenue sidewalk, safety and quality of life in general, I’d like to point out that as far as I can tell, there has never been any enforcement of the speed limit on Forest Avenue by the City police force. Again, hard to fathom given heavy pedestrian traffic, no sidewalk and no shoulders on such a busy roadway. If we do nothing at all - Forest Avenue sidewalk or otherwise - can’t we at least have some focused enforcement of the 30 mph speed limit?

I think Forest Avenue residents deserve at least that at a minimum.

Thank you -

Andrew Brooks

# APPENDIX

## Resident Comments Sent to the City of Rye, NY

**APRIL 13<sup>TH</sup> 2016  
PRESENTATION TO CITY CONSULTANT  
ON PEDESTRIAN IMPROVEMENTS ON FOREST AVENUE**



**Summary of Rye resident feedback from 2015 door-to-door campaign**

420 Rye households signed the petition supporting a sidewalk on Forest Ave  
89 households signed within the proposed abutting neighborhoods  
21 households signed located directly on the proposed site

23 households located directly on the proposed site responded to our campaign:

- 21 support a sidewalk with the following specific caveats:
- 3 require speed issues to be addressed (e.g. reduce speed limit, add more stop signs)
  - 2 only support if it is one-sided/minimally impacts their property line
  - 1 only supports if drainage issues from path are properly studied/addressed

2 oppose a sidewalk with the following specific concerns:

- 1 opposes changes to visual landscape of the road
- 1 opposes the amenity believing it is unnecessary (e.g. feels traffic on road not heavy, pedestrians can easily continue to shoulder/shortcuts)

**Recommendations from Kelsey Johnson, 3 Rockridge Road, Rye, NY**

1. Pedestrian improvement should be off road (e.g formal sidewalk) given 1) the user group includes young children, dogs, and geriatric walkers all of whom need to be separated from the traffic flow and 2) the traffic flow is so heavy and fast-paced that true separation is required to ensure pedestrian/dog safety
2. Speed concerns should be addressed in the solution. The 30mph speed limit is not enforced along this corridor. Added stop signs or other measures may help calm traffic flow.
3. Sidewalk can be curved to avoid tree removal and hilly to allow for current rock formations. Goal is to get pedestrians off the road while maintaining the current landscape as much as possible.
4. Consultant should spend a few hours on a sunny Saturday/Sunday observing pedestrian and vehicular traffic trends to fully understand the heavy flow of both user groups along this corridor. The solution should anticipate that the pedestrian traffic flow will increase with improvements as a new user group of young children will be added to the existing flow
5. As a reminder we already an anonymous donor offering \$100,000 toward the sidewalk construction, with many more residents interested to donate. Once we know the ultimate cost we will gladly continue to work with the city to pair private capital with public funds to complete this crucial project.

**Specific comments supporting door-to-door caveat/concerns summary above:**

SUPPORTERS

“Not just because we've lived on Forest Avenue since 1996, but I can't imagine there being a higher priority issue for the City of Rye than calming Forest Avenue traffic and improving pedestrian safety. It seems too basic to ignore; Playland traffic, school commuting, beach traffic, Milton Point club traffic, but sadly in my view, the City of Rye seems to be completely unwilling to address these very real concerns.

I applaud you as Forest Avenue neighbors for trying to raise the visibility of this oncoming issue, which is both a safety issue as well as a quality of life concern. How many times have I written letters to the local papers pointing out again and again that this heavily traveled thoroughfare not only lacks sidewalks, but doesn't even have roadside shoulders.

While I couldn't more strongly support and advocate a Forest Avenue sidewalk, interim measures also need to be addressed. Enforcement of the 30 mph speed limit by Rye City police is non-existent, which is unacceptable. Why not extend the 25 mph speed limit along the entire length of Forest Avenue, not just Milton Point. Why not periodic stop

# APPENDIX

## Resident Comments Sent to the City of Rye, NY

signs; why not speed bumps. All these traffic calming measures exist in neighboring communities; why not Rye? Why can't we apply some creativity and resourcefulness to this problem rather than study them to death, ultimately doing nothing. Thank you for your advocacy, with which I am fully supportive.”

“I don't have any general disagreement with adding a sidewalk but of course I would prefer it was not on my side of the street. However, my concerns are about how the sidewalk is installed. We already have water runoff issues on my side of the street and I am concerned that adding more concrete would increase the runoff. I would need to be assured by the town that the slope and flow of any water caused by rain etc would not be directed towards our side. In addition I think they would need to put in drainage along with the new sidewalk.”

“Assuming the project is executed in a fashion that is non-invasive (eg. shift the road to one side and decrease the shoulders to accommodate a space for a pedestrian path we at {address on the proposed site} will be strongly supportive! I also believe it should be executed in conjunction with a speed limit reduction to 25mph and the addition of a cross-walk or two. On this basis we would also be pleased to make a small financial contribution to support the project; best if tax-deductible to the City. Perhaps you could think about engaging family's to 'by a (tax-deductible) brick' to support the project. We are likely to be equally unsupportive should the ultimate plan call for a side-walk or roadway that is basically attached to our property line at Forest Ave.”

“I would be in favor of a sidewalk on one side of the road but not both. Don't care which side. However, my wife and I would not support your effort if it does not include some sort of speed control on Forest. Either a light or a 4 way stop needs to be included in any sidewalk plan in the area you are talking about.”

### OPPOSERS

“We have lived {along the proposed site} for the last 46 years. Although the traffic has certainly increased since we moved in, we do not find it to be difficult at all. For the most part, it is light and can certainly never be called heavy (except when there is a rare blockage on Milton Road or Midland Avenue.

The reason that the sidewalk stopped when it did on Forest Avenue is that the large trees and underlying rock precluded continuing it. This is as true today as it was years ago. A sidewalk will only encourage pedestrians to walk along Forest Avenue which in and of itself would constitute even more danger than you say exists now.

We have a bike path on both sides of the road which helps to keep the cars toward the center of the road. In addition, the construction of a sidewalk would destroy much of the historic beauty of Forest Avenue including trees, stone walls...not to mention the incredible problems of creating the sidewalk itself. My children walked to Midland School and always knew the short cuts. I dare say the same will prevail for future students in spite of a sidewalk.”

