

Highland Avenue, Needham  
Needham Street, Newton  
Bridge No. N-04-002=N-12-002 (362) over the  
Charles River Corridor Project

## Needham Newton Corridor

# Public Informational Meeting

- Jan 10, 2018 @ 7 pm Needham
- Jan 11, 2018 @ 6 pm Newton
- Jan 12, 2018 @ 8 am Newton



# Agenda

1. Introduction
2. Construction Cost
3. Schedule
4. Right of Way
5. Project Update

# Introduction

## Speakers

Thomas H. Currier, P.E.

MassDOT Project Manager

Marie J. Sullivan, P.E.

Stantec Project Manager

Alan T. Cloutier, P.E., PTOE

Stantec Traffic Engineer



## Since we met last time.....

- Presented to Chambers of Commerce
- Monthly coordination meetings with Needham/Newton
  - MassDOT / Designers*
  - Town/City Officials*
  - Elected Officials*
- One-on-one meetings with abutters

## Tonight.....

- Present final design plans
- Highlight design changes to reflect current standards

# Construction Cost



Description	Cost
Office Estimate	\$16,000,000
Construction Contingencies, Traffic Police, Participating Utility Relocations, etc.	\$6,000,000
<b>Total Federal Participating Cost</b>	<b>\$22,000,000</b>

# Schedule



- Currently at Final Design
- **Advertisement** for Construction in **April 2019**
- Construction begins Fall 2019
- Construction completed Fall 2022

# Right of Way Impacts

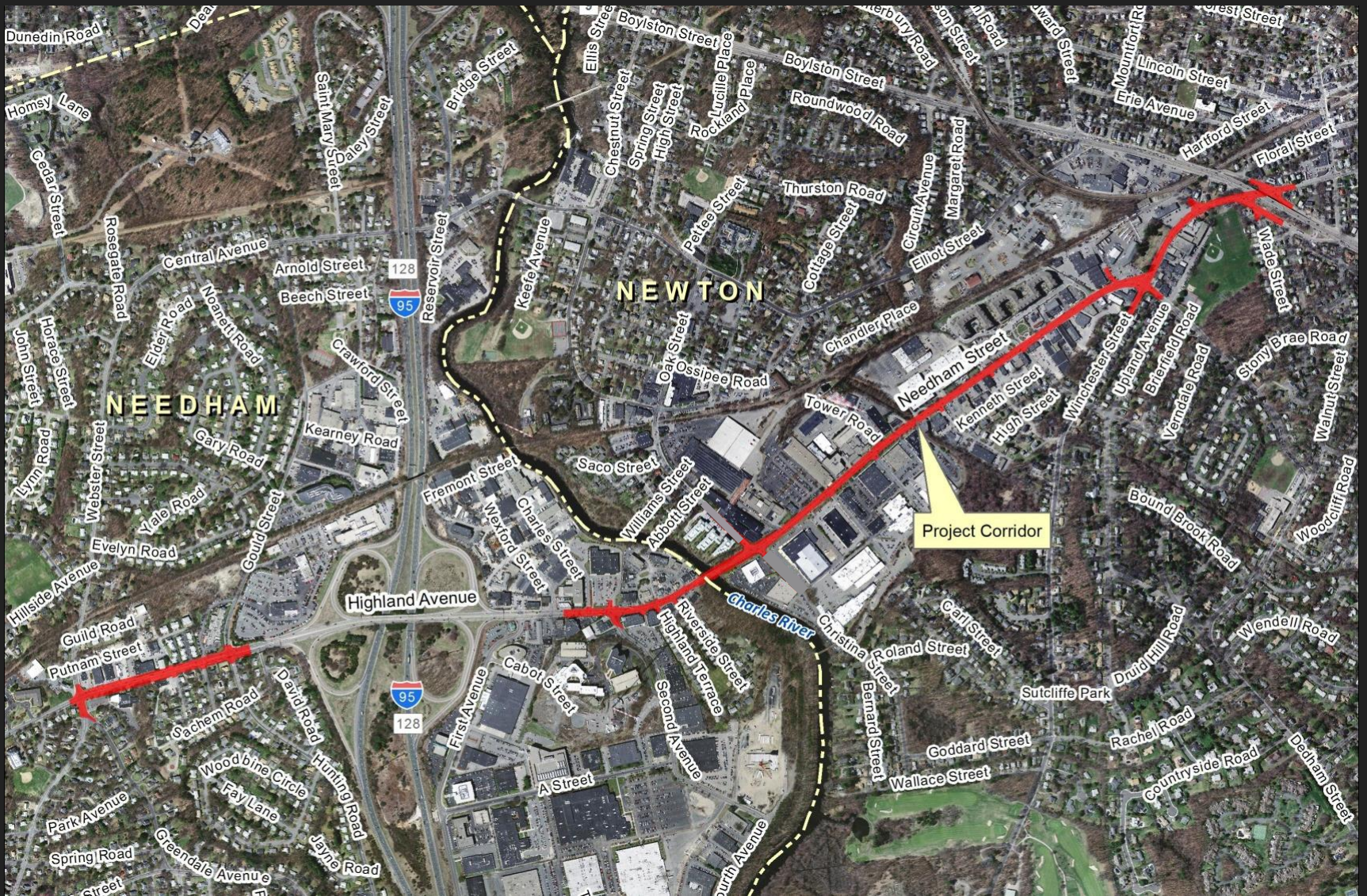
MassDOT will secure ROW

## Permanent

- Land Acquisitions
- Aerial Utility Easements
- Drainage Easements

## Temporary

- Construction Easements



Project Area





# Adjacent Projects



MassDOT is committed to providing Massachusetts residents and visitors with a variety of **safe and convenient** transportation choices.

**Stephanie Pollack**  
**Secretary of Transportation**

# Multimodal Design Approach

Balance the needs of **ALL** users in this mixed land use area



Pedestrians



Bicycles



Vehicles



Transit

# Existing Deficiencies



Unmarked crossings



Undefined sidewalks



Wide driveway openings



Narrow shoulders  
No designated bike lane



Non-compliant crossings



Parking perpendicular to road

# Project Goals

## To Improve **Pedestrian Accommodations**

- Continuous designated sidewalks
- Designated crosswalks
- ADA and MA AAB compliant (detectable panels)
- Pedestrian friendly, park once



## To Provide **Bicycle Accommodations**

- 5 foot wide raised bike lane
- Shared use paths



# Project Goals

## To Improve **Traffic Operations/ Safety**

- Exclusive turn lanes
- Two-way left turn lanes
- Protected phasing at signals
- Reduce conflict points
  - Consolidate driveway openings
  - Eliminate “backing out” onto street
  - Install raised medians



## To Improve **Transit**

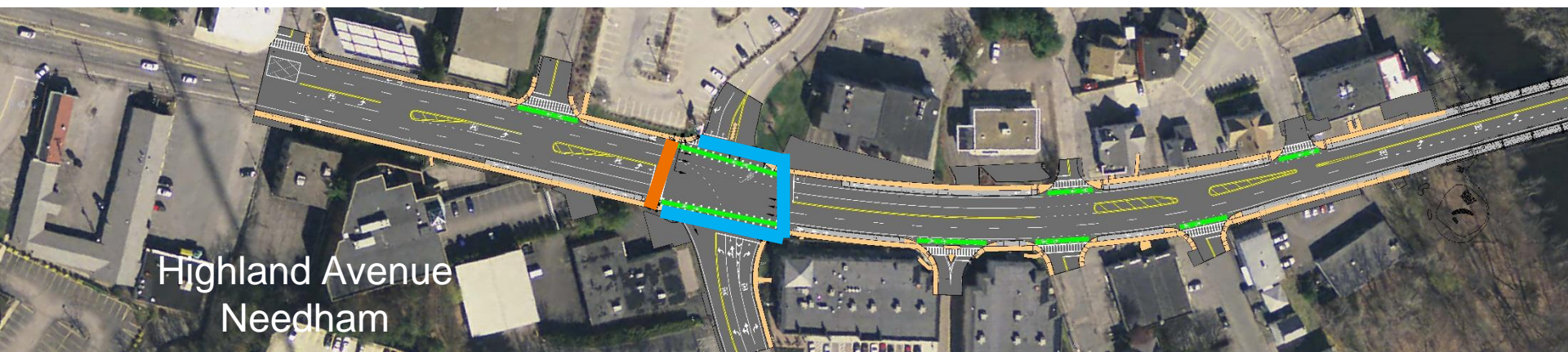
- Adjust locations to optimize service





# Crosswalk Locations

Legend:  
Existing to remain  
New  
Being eliminated



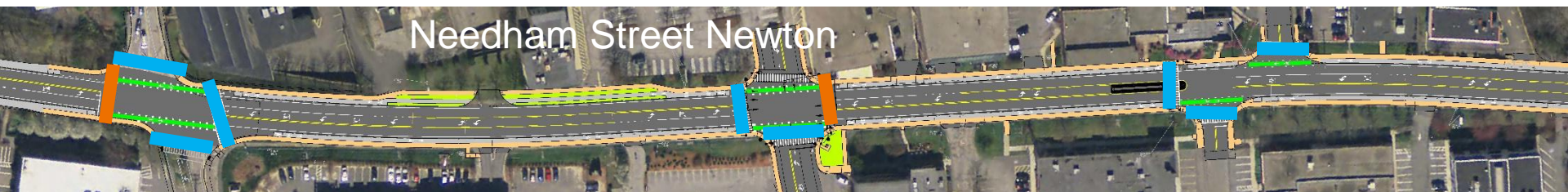


# Crosswalk Locations

Legend:

Existing to remain

New







# Flashing Beacons at Midblock Crosswalks

- Located at the three unsignalized mainline crossings
- Pushbutton with voice message





# Trail Connections

Charles River Reservation  
Needham



Upper Falls Greenway  
Newton





# Why Separated/Raised Bike Lanes ?



EXAMPLE  
Western Avenue,  
Cambridge



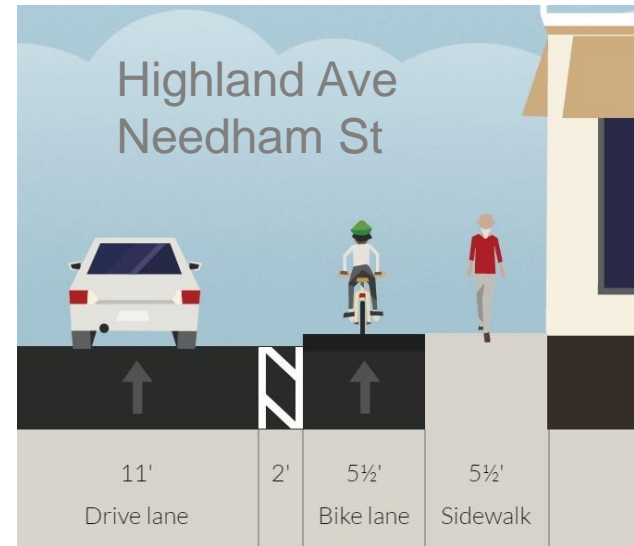
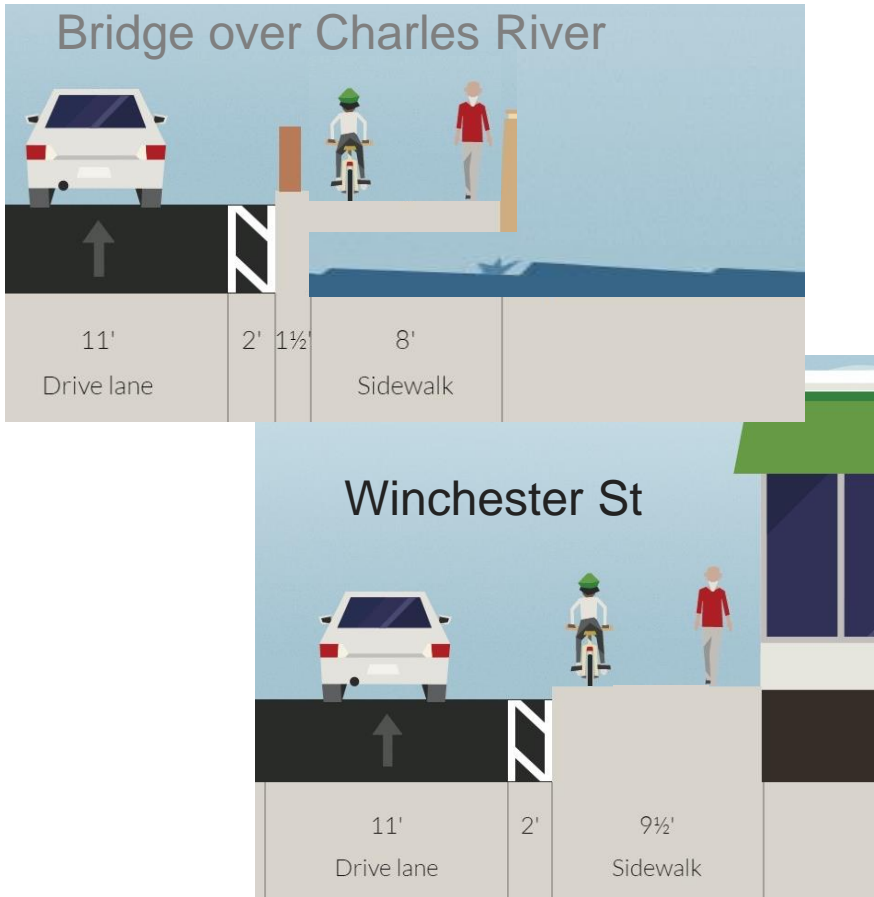
## \* Research has shown:

- \* Attracts more people to bicycling
- \* Preferred by bicyclists and motorists over on-road facilities
- \* Improves safety for all road users

EXAMPLE  
Vassar Street, Cambridge



# Bike Lane Cross Section



Raised Bike Lane

Shared Use Path  
(bikes & pedestrians)



# Proposed Bike Lane/Sidewalk Material

## **Raised Bike Lane / Sidewalk**

Granite curbing

Asphalt pavement (bike lane)

Granite Paver (detectable for a cane)

Cement concrete (ped lane)

## **Shared Use Path**

Granite curbing

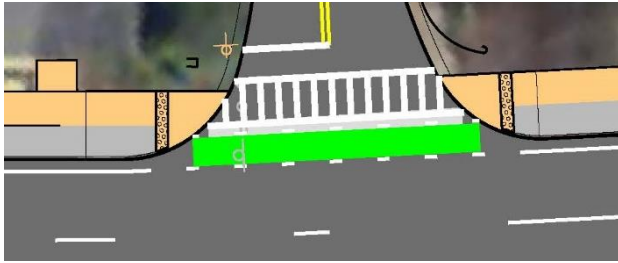
Asphalt pavement



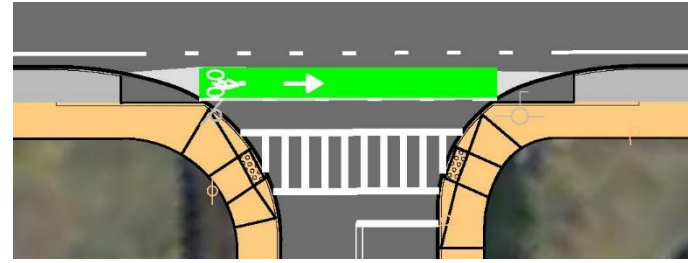
*EXAMPLE of raised bike lane*



# Typical Bike / Ped Crossing



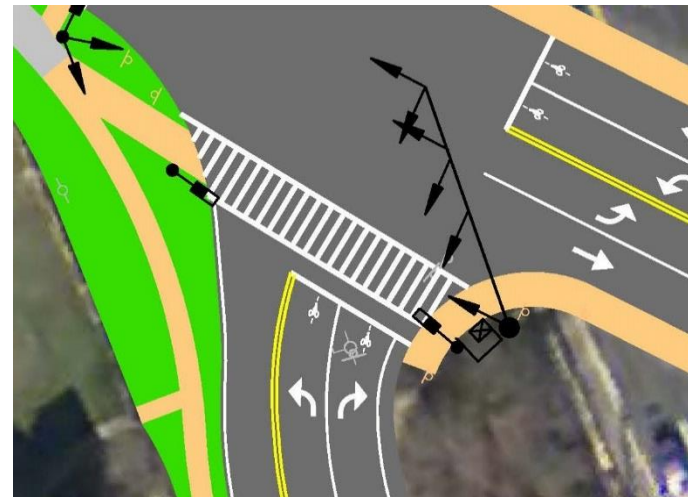
Unsignalized  
No side street walks



Unsignalized  
With side street walks



Signalized  
Separated bike lane



Signalized  
Shared use path



# Traffic Operations

- All new traffic signals equipment
- Proper clearance intervals
- Adaptive signal control
- Additional lanes west of interchange
- Left turn pockets added





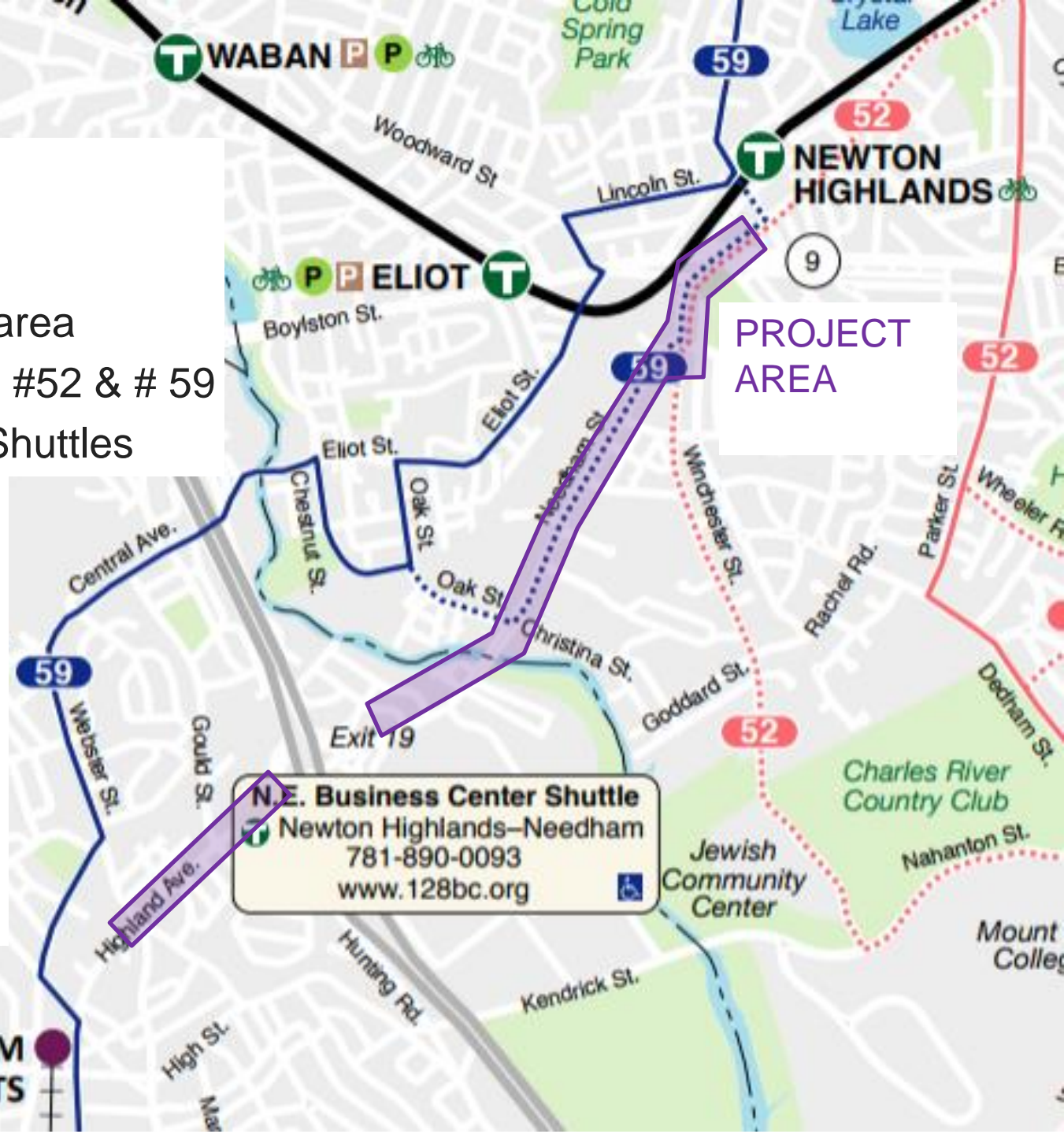
# Transit

Routes within project area

- Public - MBTA Bus #52 & # 59
- Private – Various Shuttles

Connections in area

- Commuter Rail
- Subway





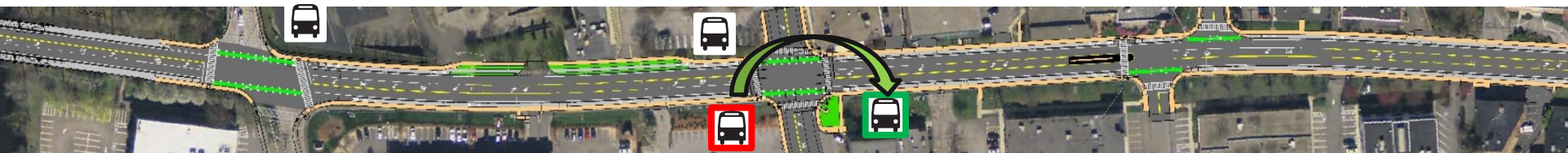
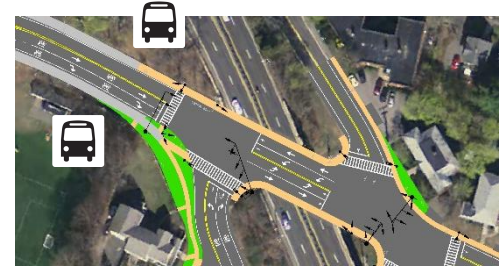


# MBTA Bus Stop Locations

Coordinating with MBTA

**Relocating** Bus 59 stop to “far side” of intersection at

- Needham Street NB @ Charlemont Street
- Needham Street NB @ Jaconnet Street



Some are being shifted less than 75 feet

- Needham Street SB @ Easy Street
- Winchester Street SB @ Needham Street
- Winchester Street SB @ Route 9 Ramp

Corridor Elements

# Highland Avenue – Webster to Hunting

- Roadway widening
- Raised bike lane/sidewalk installation
- Signal replacements
- Some permanent land takings



# Highland Avenue at Webster Street

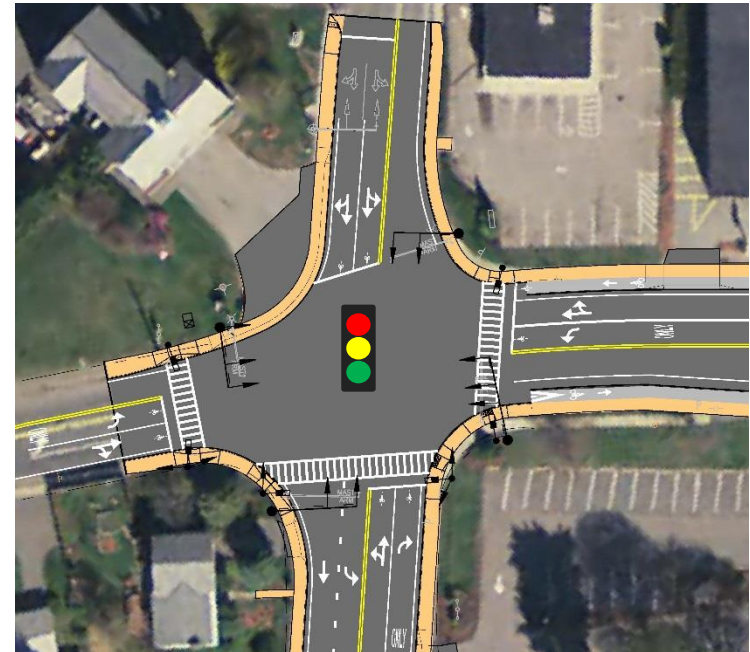
## Existing Deficiencies

NB right conflict

Insufficient clearance intervals

## Proposed

New signal and timing



# Highland Avenue at Hunting Road / Gould Street

## Existing Deficiencies

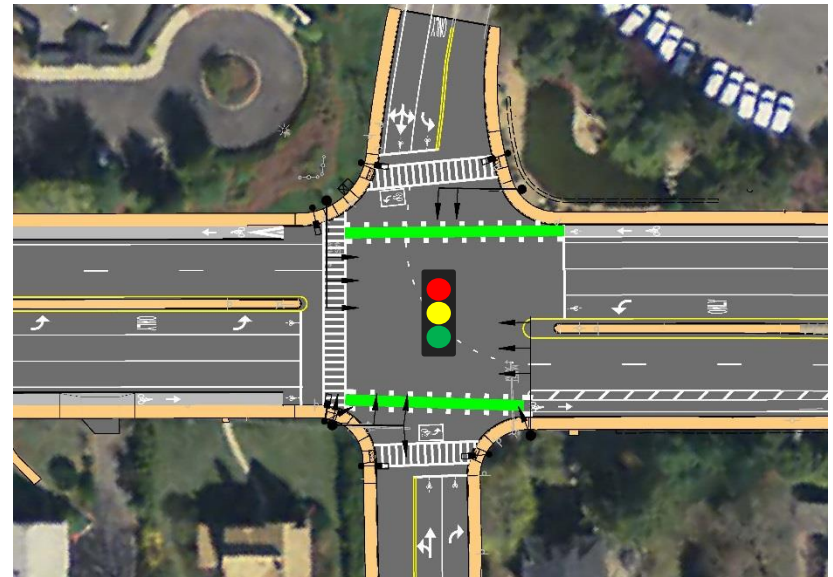
High crash location

Insufficient clearance intervals  
(yellow/red)



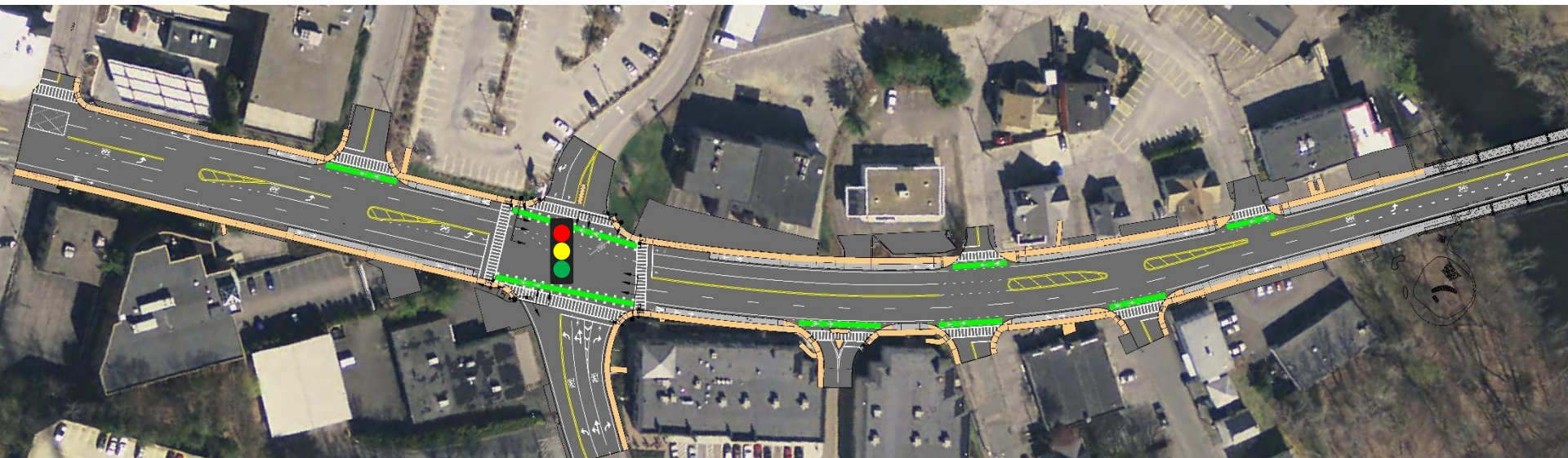
## Proposed

New signal equipment and  
timing



# Highland Avenue Wexford Street to Charles River

- Roadway widening / full depth construction
- Raised bike lane / sidewalk installation
- Signal replacement
- Permanent land takings



# Highland Avenue at Charles Street

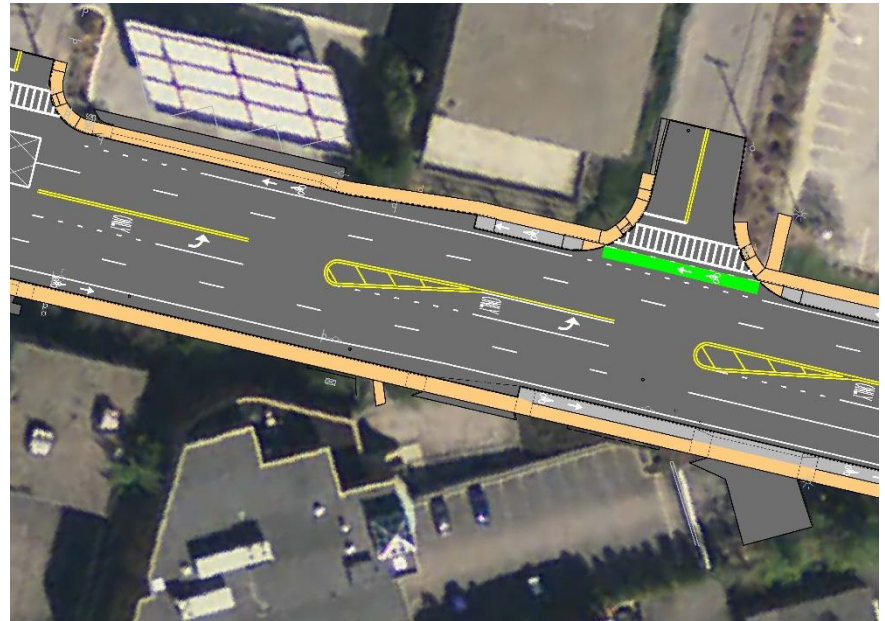
Existing

Conflicting left turns



Proposed

Left turn pocket

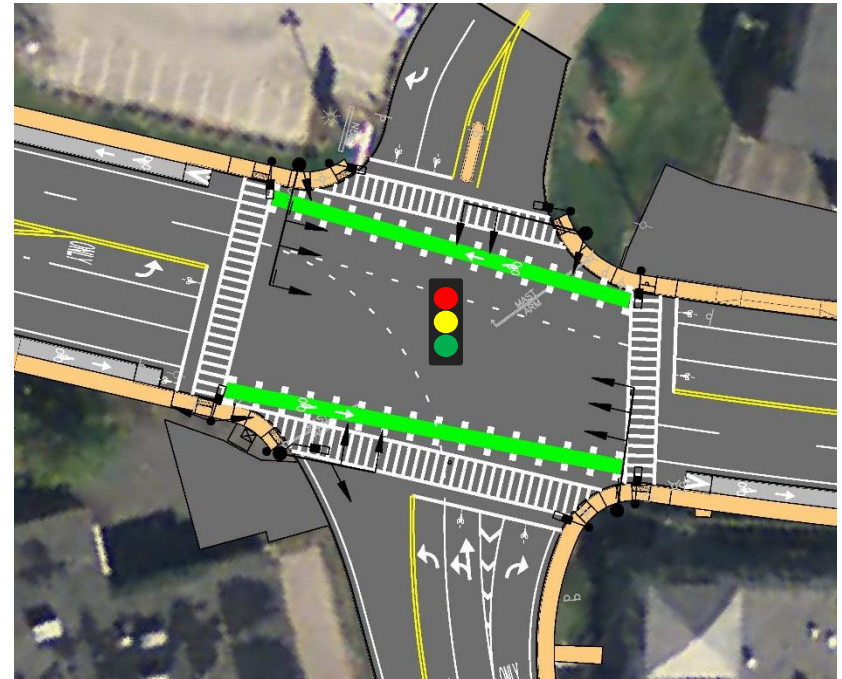


# Highland Avenue at Second Avenue

Existing Deficiencies  
Congestion



Proposed  
Exclusive left turns  
New signal and timing

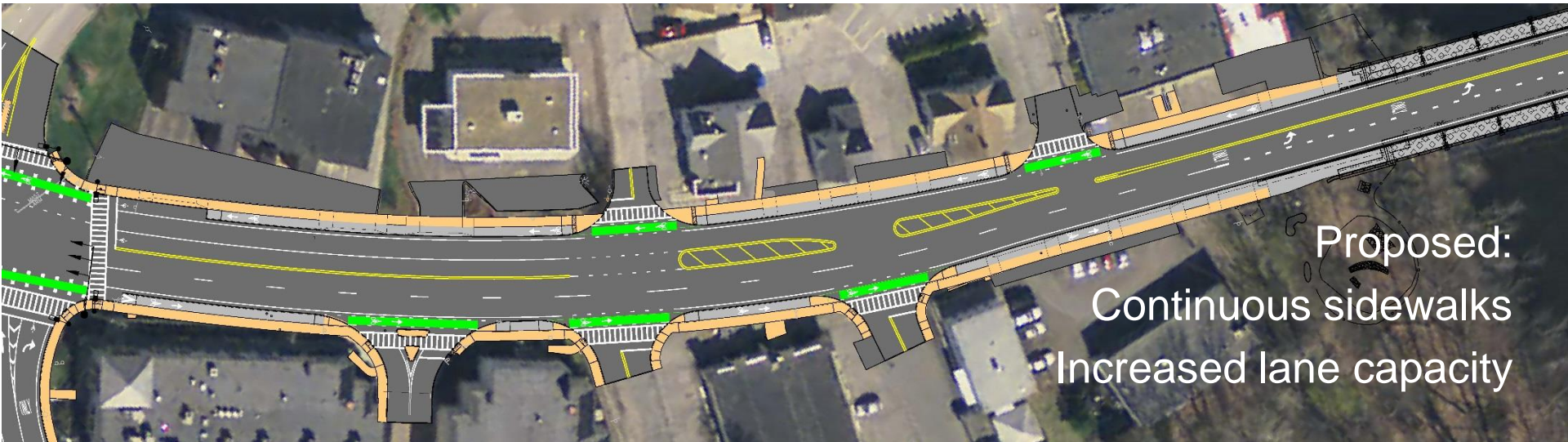




# Highland Avenue Second Avenue to Charles River

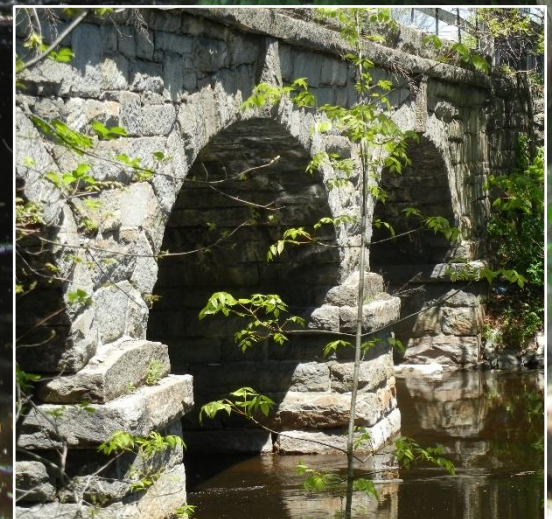


Existing Deficiencies:  
Undefined edge of road/walk  
Lane capacity



Proposed:  
Continuous sidewalks  
Increased lane capacity

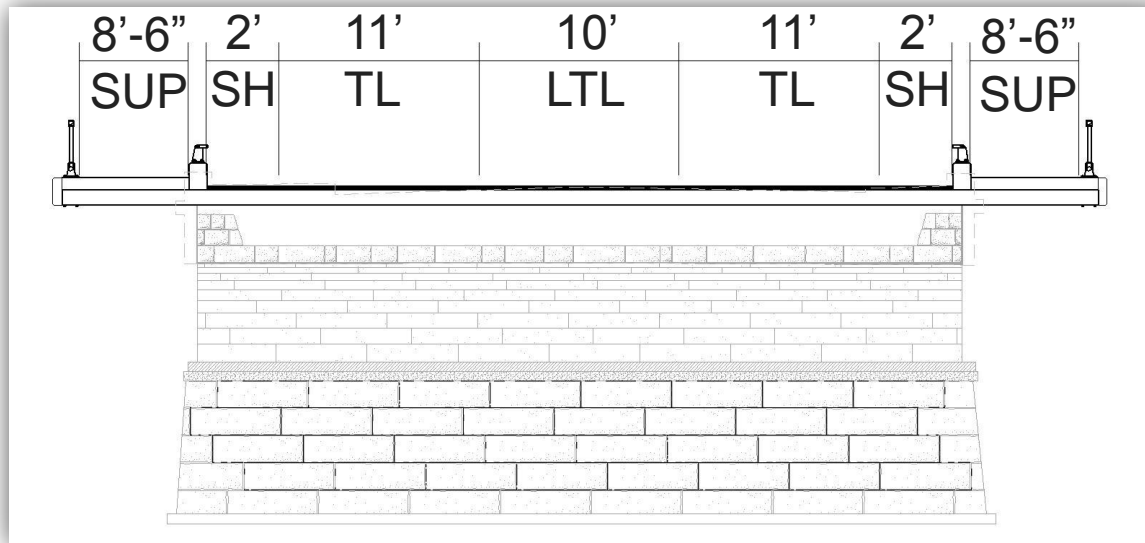
# Existing Bridge over Charles River



- Constructed in 1875
- Individually listed on the National Register of Historic Places
- Structurally sound
- Railings do not meet current safety standards

# Proposed Bridge over Charles River

- Maintain existing bridge substructure
- Rebuild “top” of Bridge to provide three lanes, shoulders, and new shared use path with ornamental rails



# Proposed Bridge over Charles River



Existing



Proposed

# Needham Street, Newton

- Roadway widening / full depth construction
- Raised bike lane / sidewalk installation
- Signal replacement / new signal installation



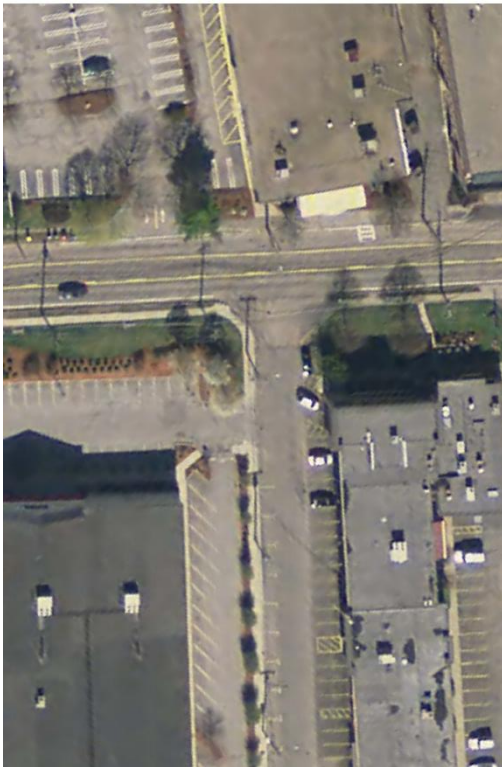
# Northland Development

- New Traffic Signal at Charlemont Street
- Multi use path to neighborhoods and Upper Falls Greenway



# Needham Street at Charlemont Street

Existing Conditions



Proposed  
Realignment  
New signal



# Needham Street at Avalon Driveways

## Secondary Entrance

limited access  
right in – right out



## Main Entrance

(across from Columbia)  
all access



# Easy Street / National Lumber

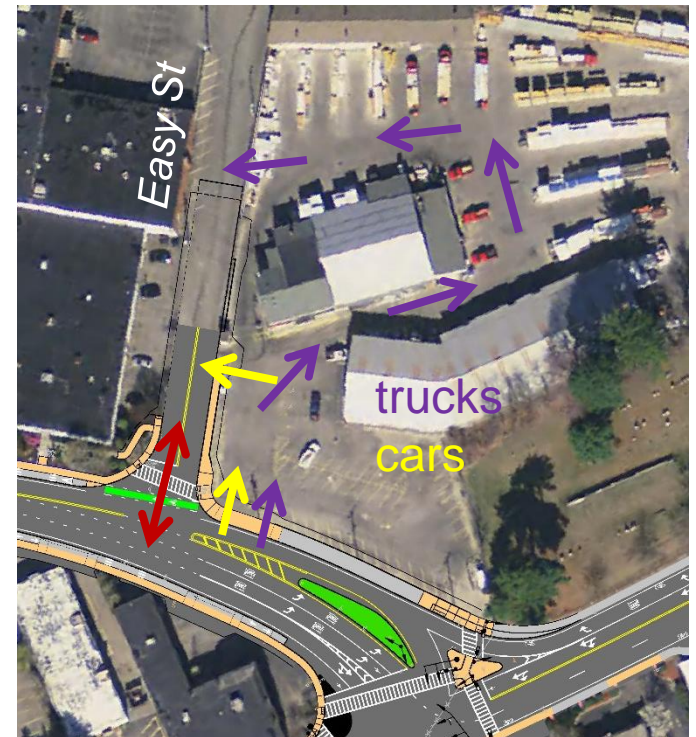
## Existing

In/out on Needham Street  
Adjacent to Easy Street



## Proposed

Reconfigured driveways  
IN from Needham Street  
OUT onto Easy Street



# Needham Street / Winchester Street / Dedham Street Intersection

## Existing Deficiencies

Poor Operations

Double Left Does Not Operate Properly

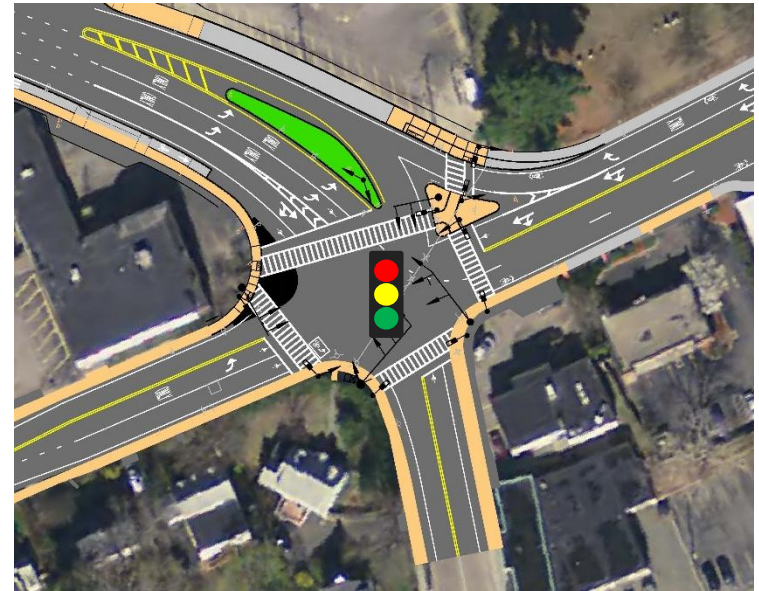
High Crash Location

## Proposed

New signal

New lane configurations

New crosswalk on Needham St



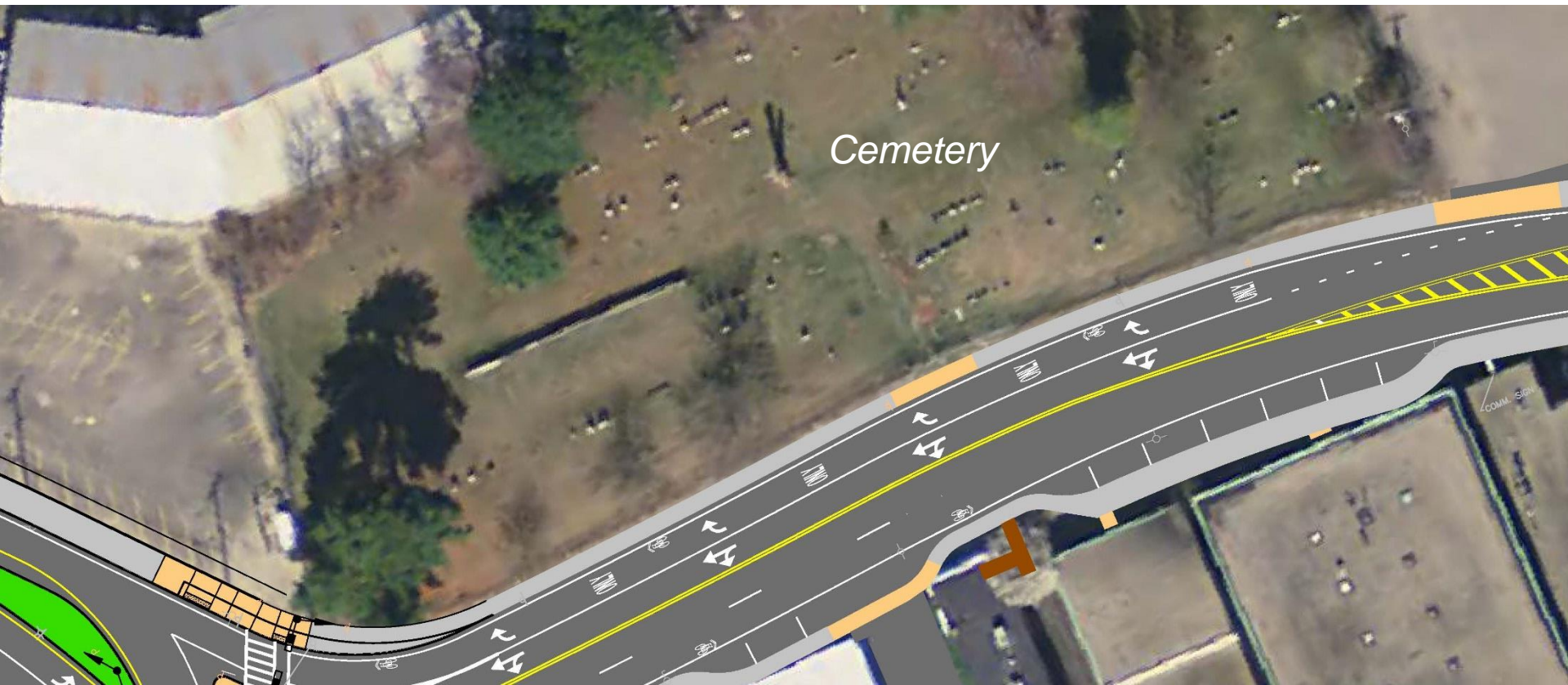
# Winchester Street, Newton

- Roadway widening / full depth construction
- Shared Use Path for bikes and pedestrians
- Signal replacement / new signal installation
- Parking pockets



# Evergreen Cemetery (South Burying Ground)

- Established in 1804
- Individually-Listed National Register Historic Property
- No impacts to cemetery property



# Newton Highlands Playground

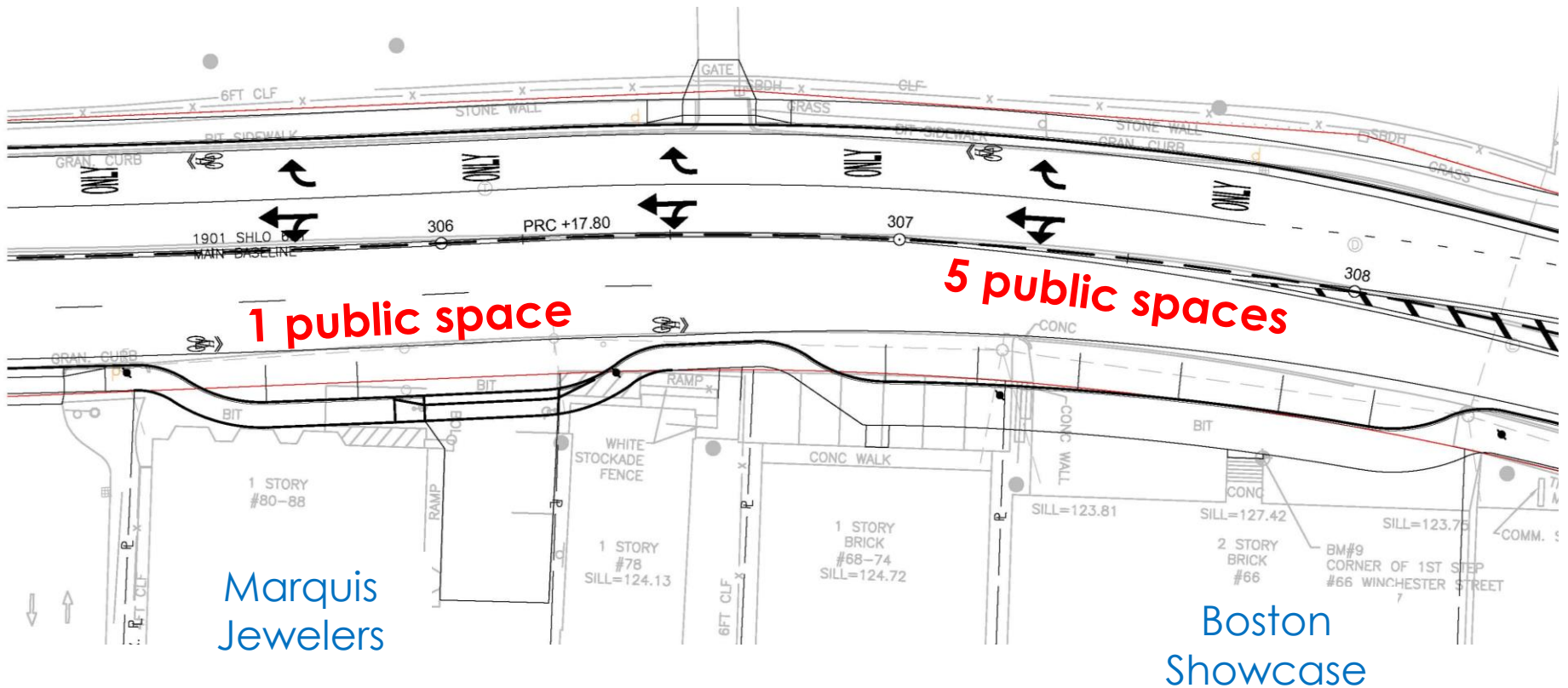
- Designated public open space
- Change in use restricted by State Article 97 and Federal Section 4(f) regulations



# Parking Pockets

#82 Winchester St - Marquis Jewelers

#66 Winchester St – Boston Showcase



# Winchester Street at Curtis Street

## Existing

Wide open entrance

Driveways on both corners

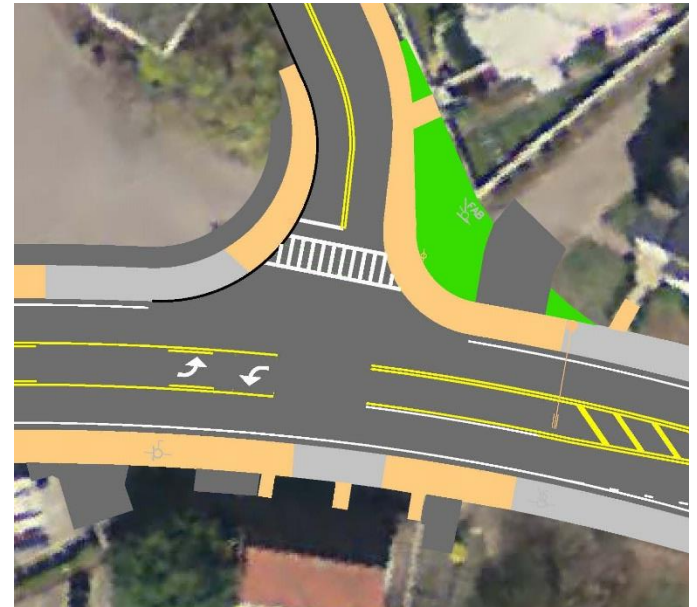


## Proposed

Narrow road entrance

Relocate commercial driveway

Relocate private driveway



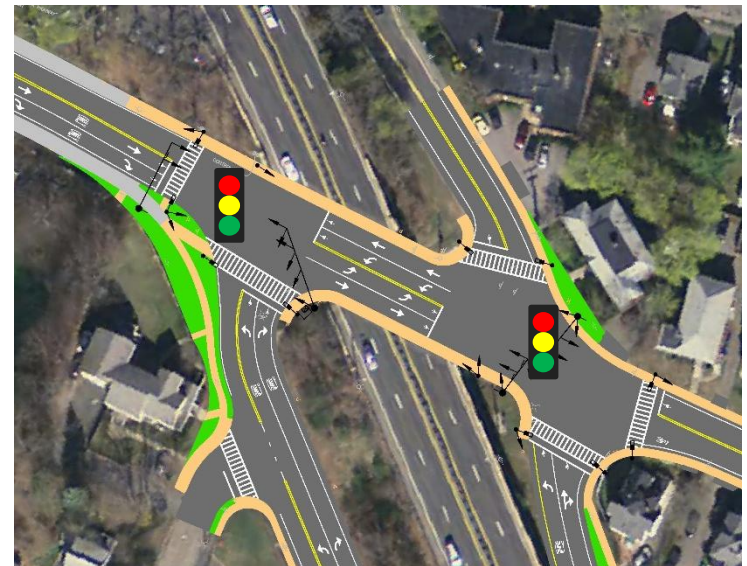
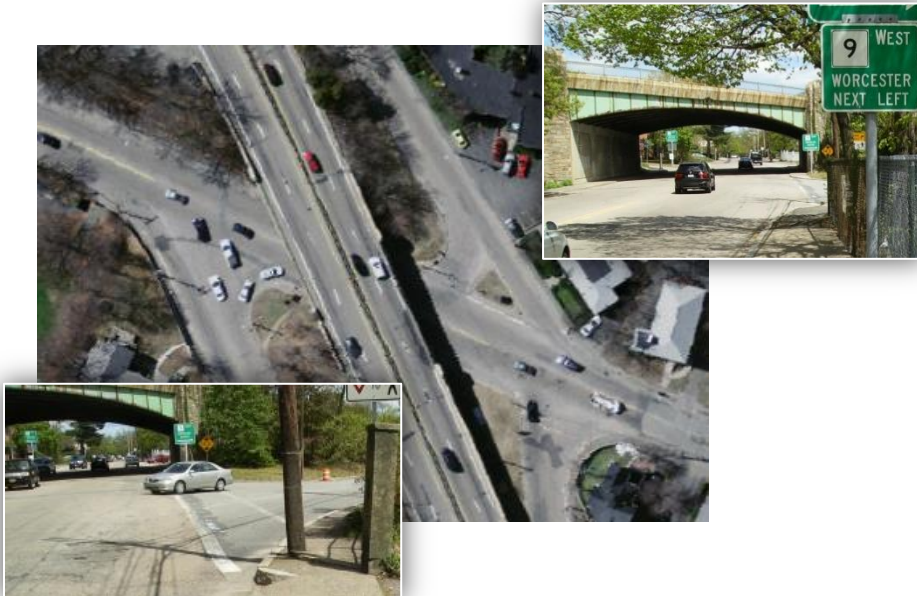
# Winchester Street at Route 9 Ramps

## Existing

- No designated crosswalks across Winchester Street
- Ramps are under stop control
- Long delays and queues for turning onto Winchester Street

## Proposed

- Provides 5 designated ped crossings
- Maintains bridge carrying Route 9
- Two New Traffic Signals





# Traffic Management

- Staged construction
- Maintain one lane minimum in each direction
- Access to abutting properties will be maintained at all times
- No detours planned
- Public awareness



# Summary

## Pedestrian Accommodations

- Continuous sidewalks

- More and improved crosswalks across mainline

## Bicycle Accommodations

- Raised bike lanes

- Shared use walks

## Traffic Operations / Safety

- Reduced conflict points

- Narrowed curb cuts

- Upgrade and new traffic signals

- Revised timing and phasing

## Transit

- Bus stop locations

# Questions

## Please

- state your name
- spell your last name
- state your address

*prior* to asking your question



## MassDOT Contact Information

Tom Currier, MassDOT Project Manager

Phone: (857) 368 – 9348

Email: [Thomas.Currier@dot.state.ma.us](mailto:Thomas.Currier@dot.state.ma.us)

Appendix

# Supplemental Info

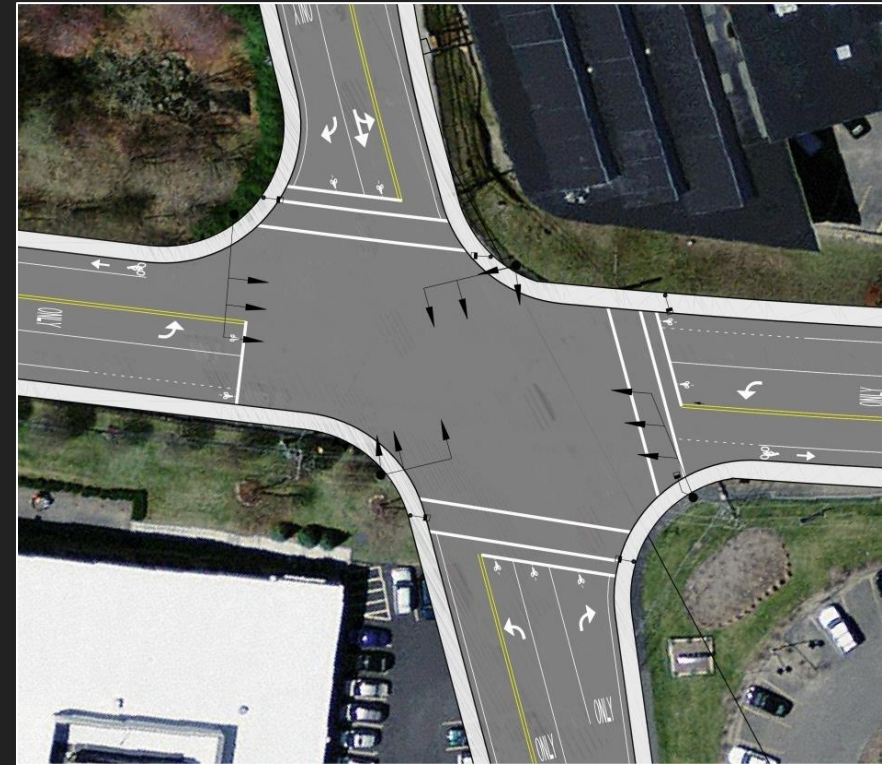
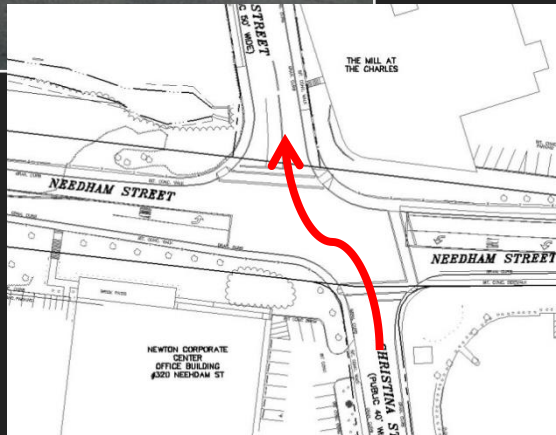


New signal at First Avenue  
Will allow left turns out of First Avenue  
Construction is substantially complete

Adjacent Project – Highland Avenue  
First Avenue to Wexford Street, Needham



2012/04/27



Scheduled for construction  
Spring 2018

Adjacent Project - Needham Street at  
Christina Street / Oak Street, Newton

# Highland Avenue at Mills Road / Cross Street

## Existing Deficiencies

Stop control

Mainline merge/diverge

## Proposed

Maintain stop control

Consistent mainline

