

# Newton Carriageway / Commonwealth Avenue (Route 30) Reconstruction Project

*Presented by*

**Nicole Freedman**

*Director of Transportation Planning*

*City of Newton*

**Kayla Sousa**

*Project Manager, Civil Engineer*

*Howard Stein Hudson*

*Presented to*

**The City of Newton**

**September 9, 2021**



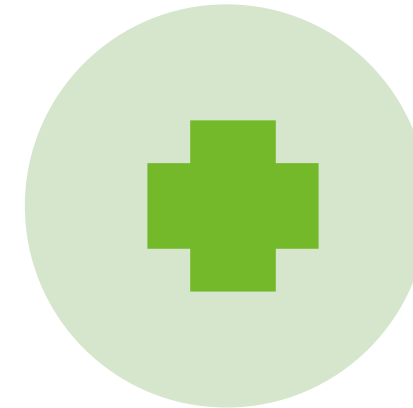
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# Agenda



**Project Context & Location**



**Project Purpose**



**Project Scope**



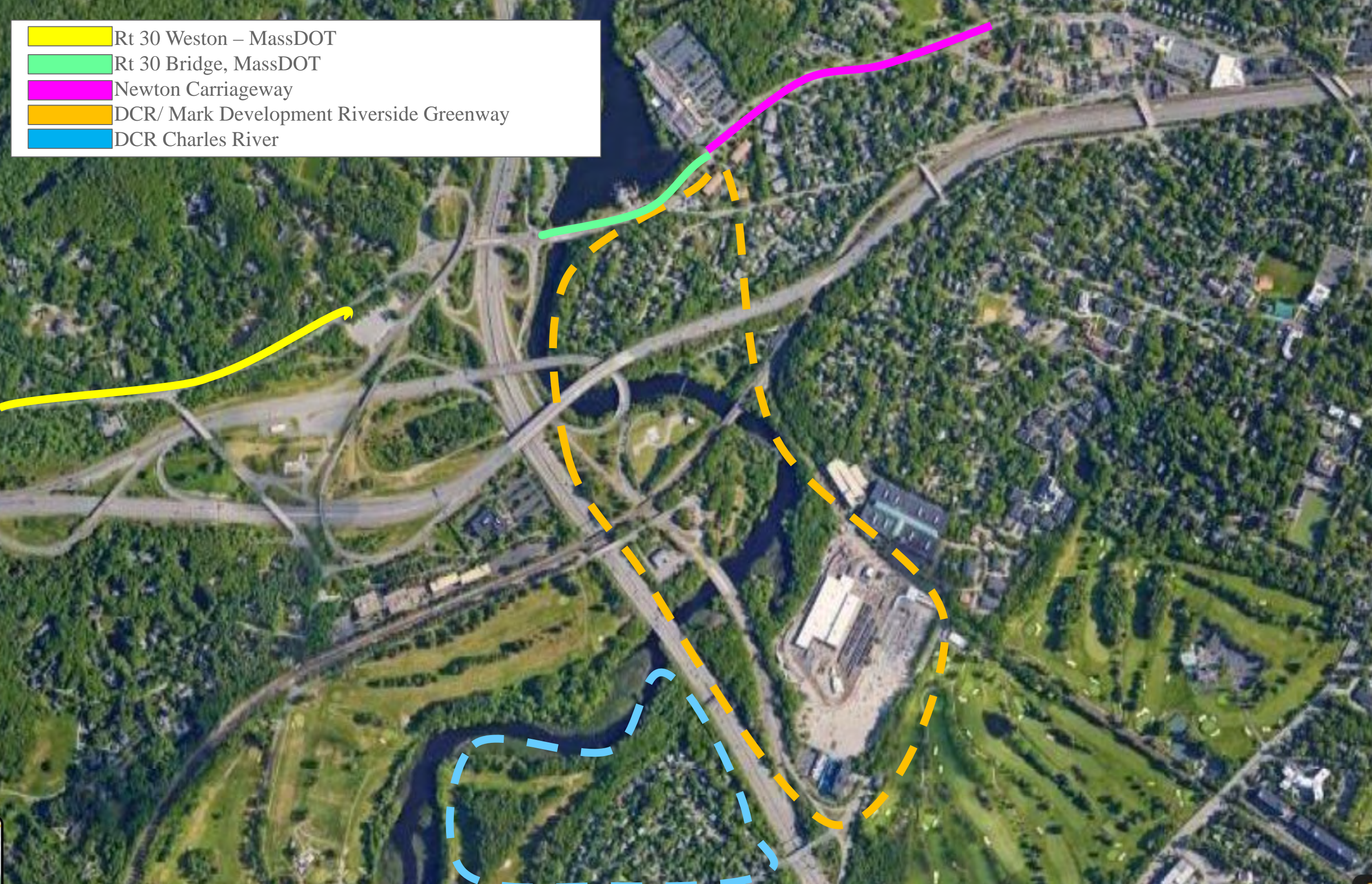
**Ash Street Intersection  
Alternatives**





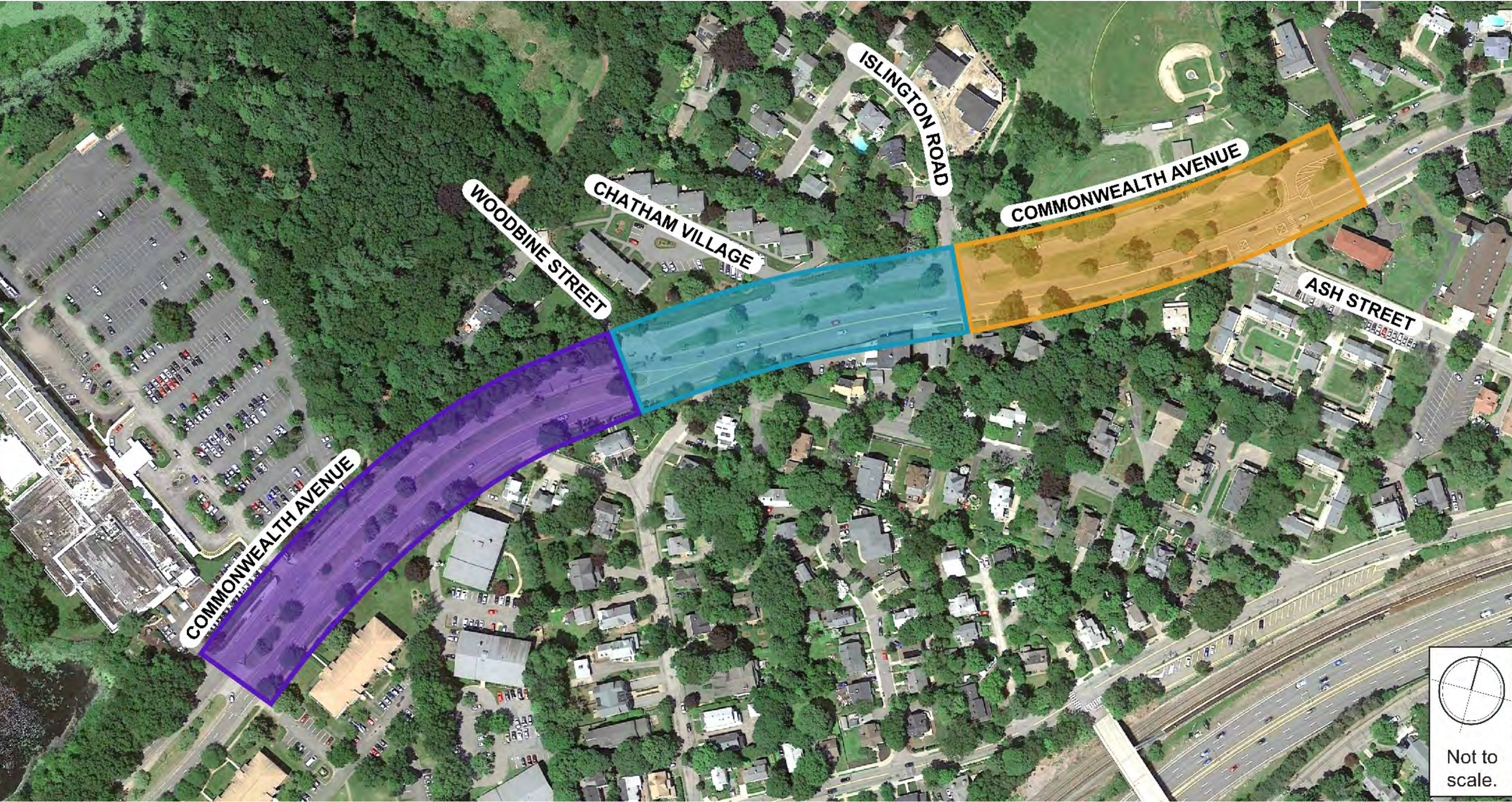
# Project Area Context – Other Planned Projects

- Rt 30 Weston – MassDOT
- Rt 30 Bridge, MassDOT
- Newton Carriageway
- DCR/ Mark Development Riverside Greenway
- DCR Charles River





# Project Location



Not to scale.



# Existing Issues: Ash Street

- **Safety: Confusing and Unsafe Layout for Drivers**
  - Wide turns allow drivers to go fast
  - Ash Street and Carriageway approaches do not line up





# Existing Issues: Ash Street

- ***Complete Streets Accommodations:*** Lack of bicycle facilities and lack of accessible pedestrian accommodations





# Existing Issues: Corridor-wide

- ***Complete Streets Accommodations:*** Lack of accessible pedestrian facilities and protected bicycle facilities
- ***Environmental:*** Excessive pavement on carriageway and limited connections with green space and the Charles River





# Existing Issues: Lyons Field and the Carriageway

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- ***Complete Streets Accommodations:*** Lack of pedestrian and bicycle connections
- ***Safety:*** No sidewalk or crossings at Carriageway; disorganized parking
- ***Environmental:*** Excessive pavement and poor connections to green space



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# Project Goals

- **Safety** | Improve Ash Street intersection and all crossings
- **Complete Streets Accommodations** | Improve bicycle and pedestrian safety and connectivity, and ADA compliance
- **Environmental** | Increase green space and access to Charles River





# Preferred Alternative: Full Project



Project Goals	Design Features
Safety	Reconstruct Ash Street intersection, raised crossings at side streets
Complete Streets Accommodations	Convert carriage road to pedestrian and bicycle facilities Improve sidewalk on the south side, reconstruct sidewalks
Environmental	Increase green space [2,900' square feet of new green space]





- **September 5, 2019: Planning Study Kickoff**
- **October 18, 2019: Concept Design Public Information Session**
  - Feedback led to Preferred Alternative and Proposed Cross Section
- **May 13, 2020: Project is funded by MassDOT**
- **November 20, 2020: 25% Design Submitted to MassDOT**
- **April 20, 2021: Comment Resolution Meeting with MassDOT**
  - It was determined that a signal at Ash Street could not be retained
- **May 2021: Newton Historical Commission – Received Letter of Support**
- **September 2021: Pre 25% Concept Design Public Information Session**





# Preferred Alternative: Project Scope



- Commonwealth Avenue WB relocated south of median
- MBTA Bus Stop Improvements at the Marriot

- Conversion of carriage road to pedestrian and bicycle facilities
- Side Streets and Driveways Extended

- Ash Street Intersection Reconstruction
- Lyon's Field Improvements
- Carriageway Open



# Marriott to Woodbine Street: Proposed Design

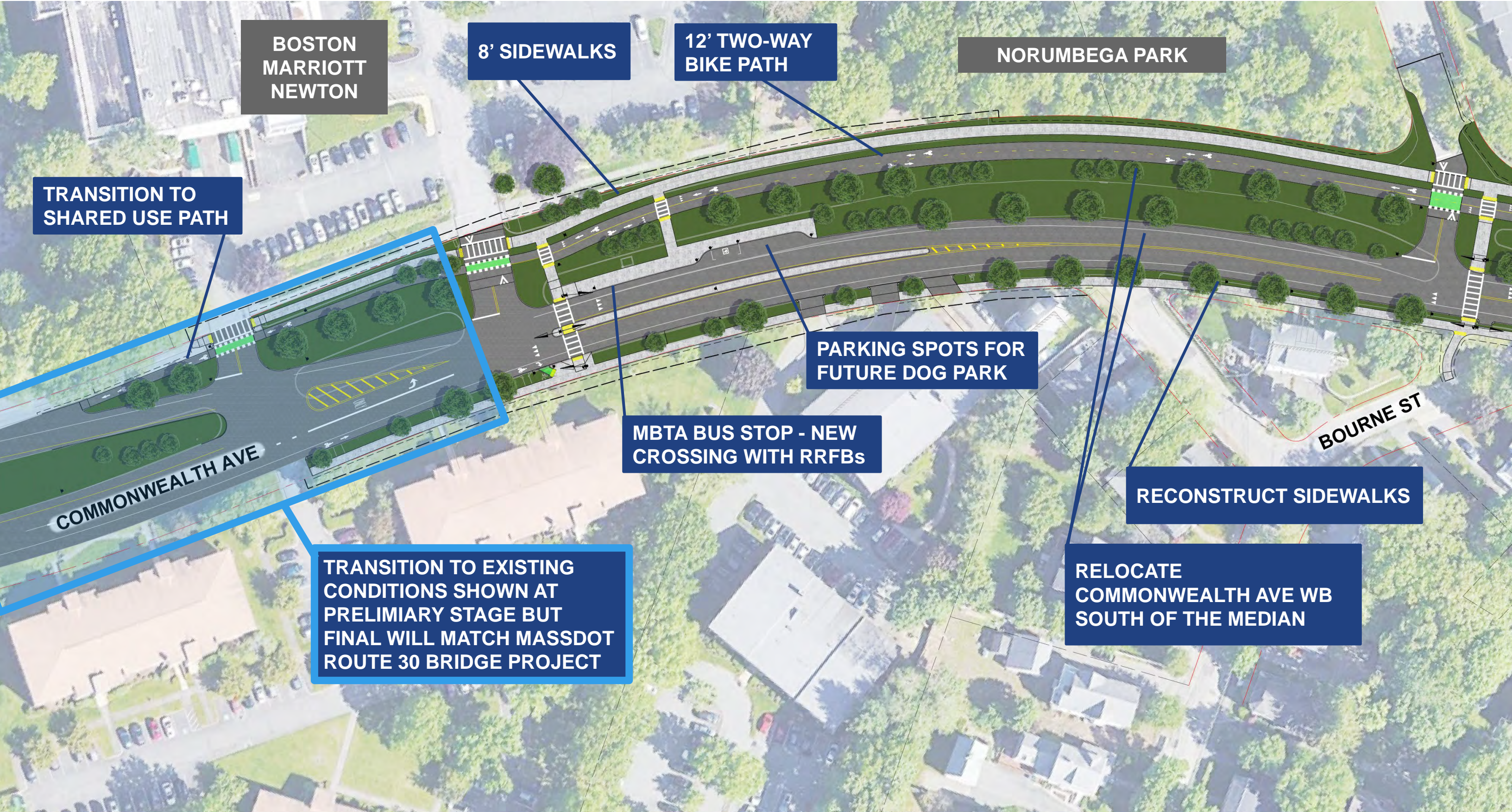
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# Marriott to Woodbine Street: Proposed Design



**BOSTON MARRIOTT NEWTON**

**8' SIDEWALKS**

**12' TWO-WAY BIKE PATH**

**NORUMBEGA PARK**

**TRANSITION TO SHARED USE PATH**

**PARKING SPOTS FOR FUTURE DOG PARK**

**MBTA BUS STOP - NEW CROSSING WITH RRFBS**

**RECONSTRUCT SIDEWALKS**

**RELOCATE COMMONWEALTH AVE WB SOUTH OF THE MEDIAN**

**TRANSITION TO EXISTING CONDITIONS SHOWN AT PRELIMINARY STAGE BUT FINAL WILL MATCH MASSDOT ROUTE 30 BRIDGE PROJECT**

**COMMONWEALTH AVE**

**BOURNE ST**



# Woodbine Street to Islington Road: Proposed Design

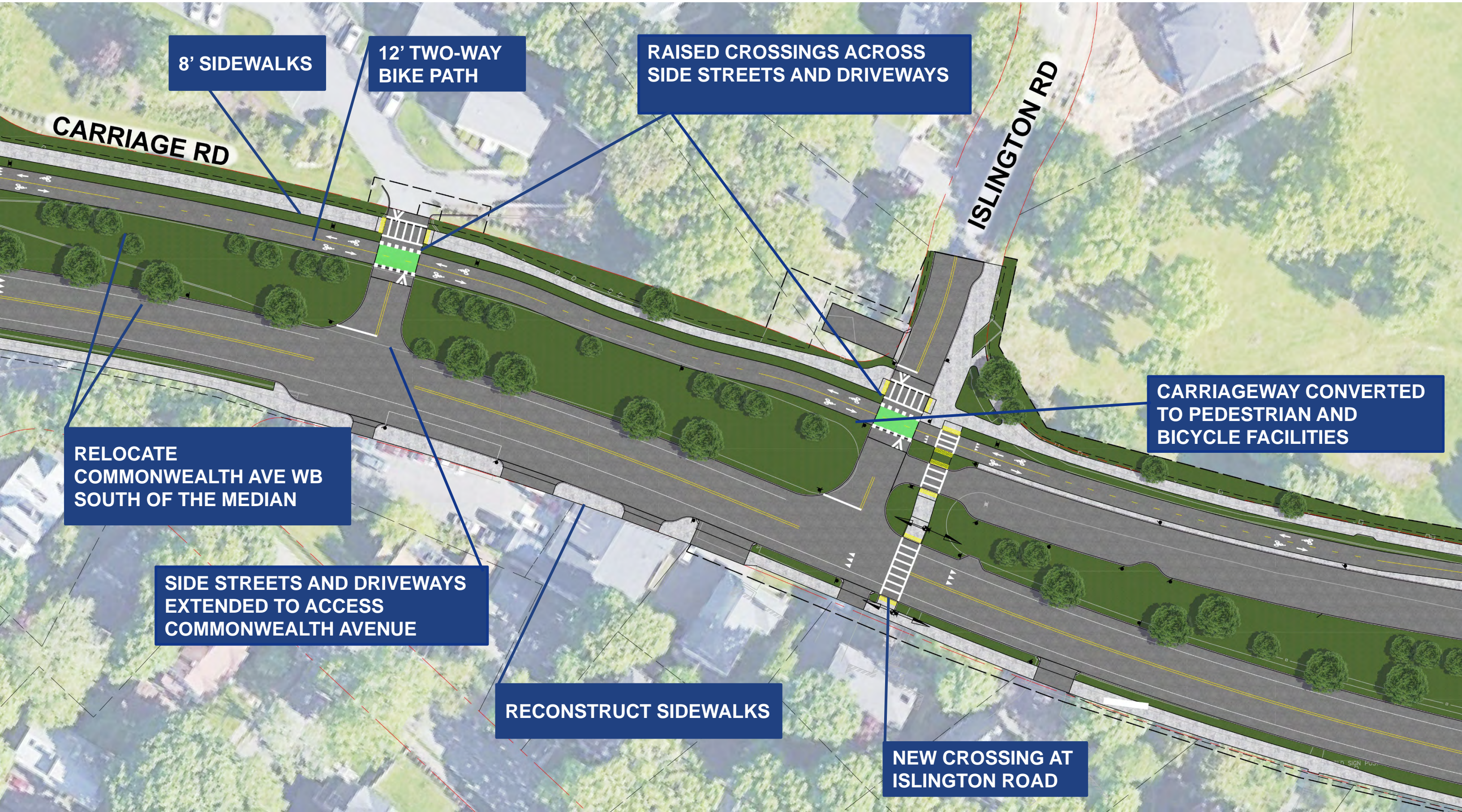
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# Woodbine Street to Islington Road: Proposed Design



8' SIDEWALKS

12' TWO-WAY BIKE PATH

RAISED CROSSINGS ACROSS SIDE STREETS AND DRIVEWAYS

ISLINGTON RD

CARRIAGE RD

CARRIAGEWAY CONVERTED TO PEDESTRIAN AND BICYCLE FACILITIES

RELOCATE COMMONWEALTH AVE WB SOUTH OF THE MEDIAN

SIDE STREETS AND DRIVEWAYS EXTENDED TO ACCESS COMMONWEALTH AVENUE

RECONSTRUCT SIDEWALKS

NEW CROSSING AT ISLINGTON ROAD

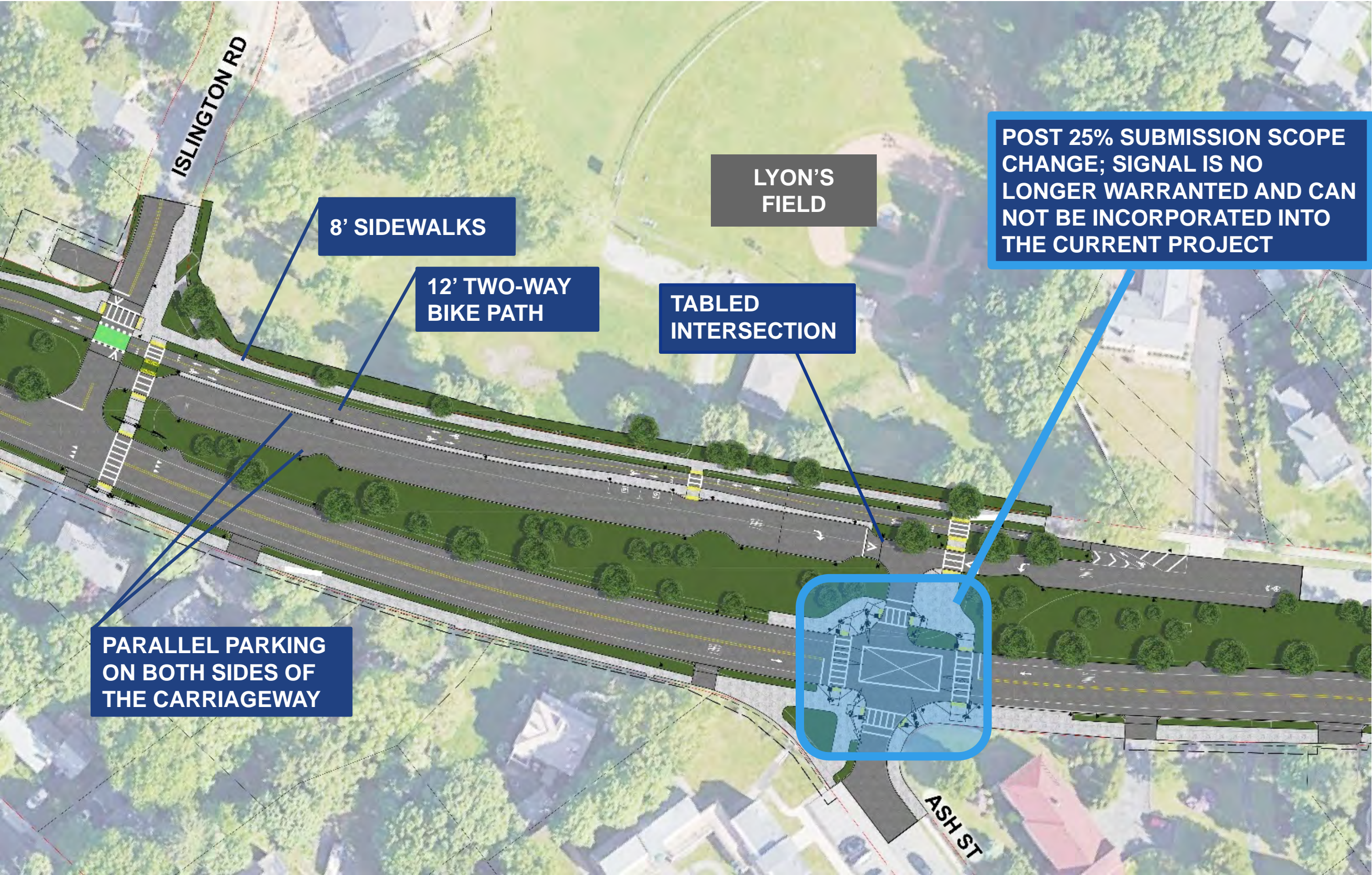


# Islington Road to Ash Street: Proposed Design





# Islington Road to Ash Street: Proposed Design



8' SIDEWALKS

12' TWO-WAY BIKE PATH

TABLED INTERSECTION

POST 25% SUBMISSION SCOPE CHANGE; SIGNAL IS NO LONGER WARRANTED AND CAN NOT BE INCORPORATED INTO THE CURRENT PROJECT

PARALLEL PARKING ON BOTH SIDES OF THE CARRIAGEWAY

LYON'S FIELD





# Rendering: Proposed Cross-Section at Lyons Field





# Rendering: Proposed Cross-Section at Lyons Field





# Ash Street Signal Warrant Analysis

Warrant		Analysis Result
1	Eight-Hour Vehicular Volume	Not met*
2	Four-Hour Vehicular Volume	Not met*
3	Peak Hour	N/A
4	Pedestrian Volume	Not met*
5	School Crossing	N/A
6	Coordinated Signal System	N/A
7	Crash Experience	N/A
8	Roadway Network	N/A
9	Intersection Near a Grade Crossing	N/A

\*Data analyzed from traffic counts taken February-March 2020 and June-July 2021.

MUTCD Warrants #3, and #5 through #9 were not applicable to this intersection and not analyzed.





# Ash Street Signal Warrant Analysis

Warrant		Threshold for Controlling Factor	Threshold Volume	# Hours Threshold Met	Analysis Results
1	Eight-Hour Vehicular Volume	Volume on one minor street during eight individual hours	75 veh/hour	0*	Not met
2	Four-Hour Vehicular Volume	Volume on one minor street during four individual hours	80 veh/hour	0*	Not met
4	Pedestrian Volume (4-Hour)	Volume of pedestrians crossing the major street per hour over four hours	107 ped/hour	0**	Not met
4	Pedestrian Volume (Peak-Hour)	Volume of pedestrians crossing the major street during one peak hour	133 ped/hour	0**	Not met

- \*The maximum vehicular volume during any hour for Winter 2020 and Summer 2021 was 45 and 29 vehicles per hour, respectively.
- \*\*The maximum pedestrian volume during any hour for Winter 2020 and Summer 2021 was 6 and 14 pedestrians per hour, respectively.

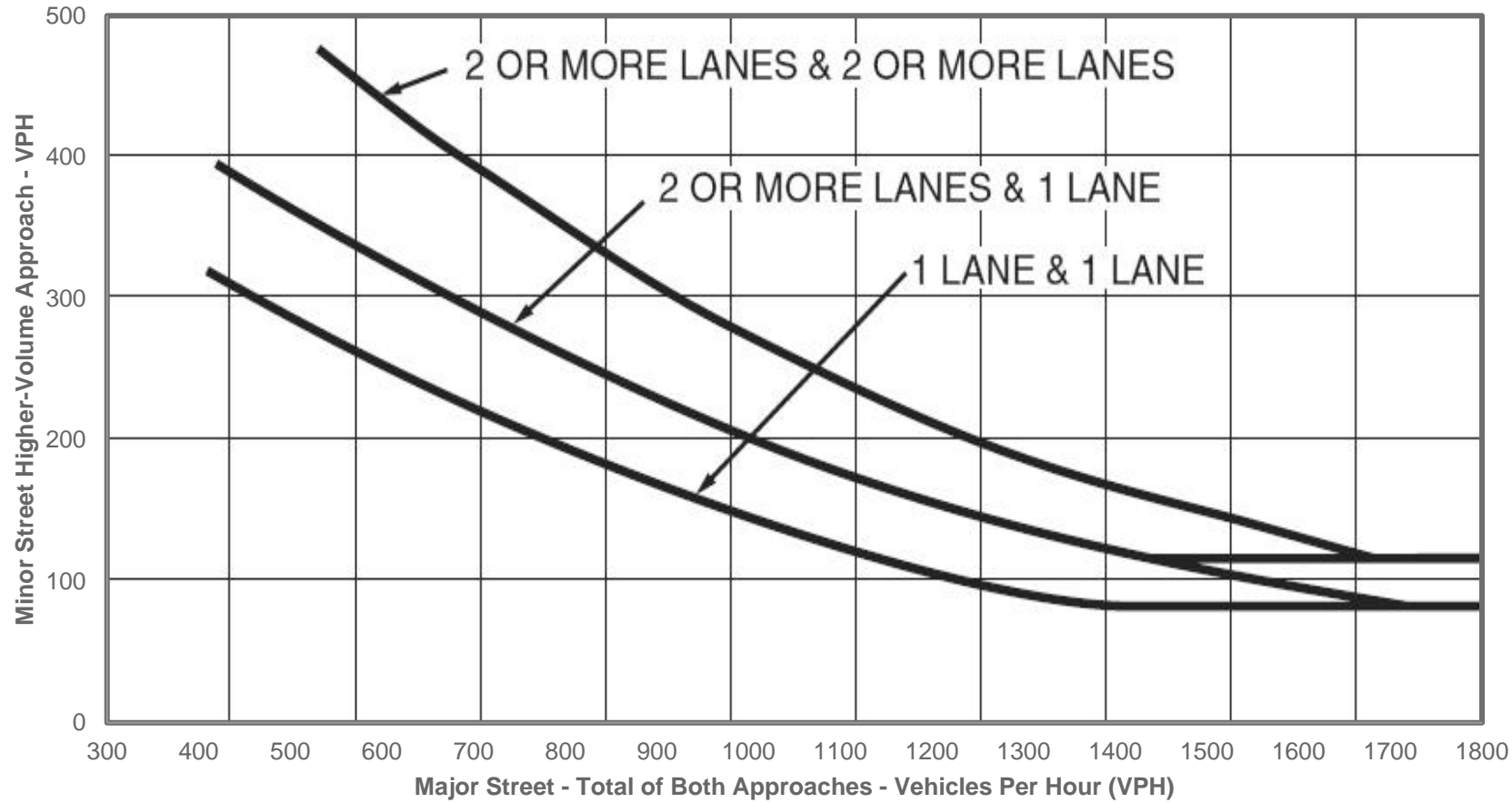




# Four-Hour Warrant

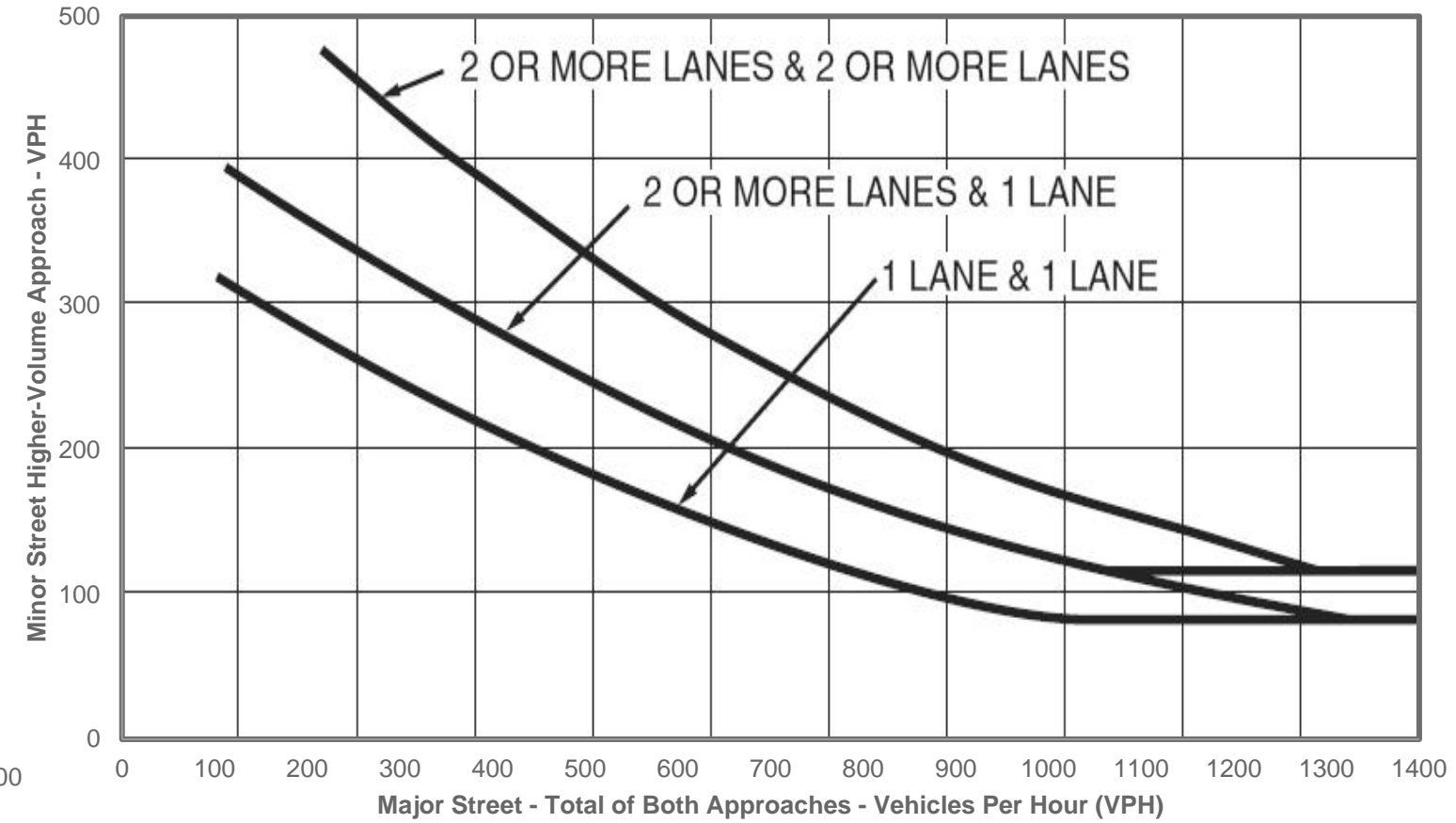
## February/March 2020 Data:

MUTCD Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



## June 2021 Data:

MUTCD Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



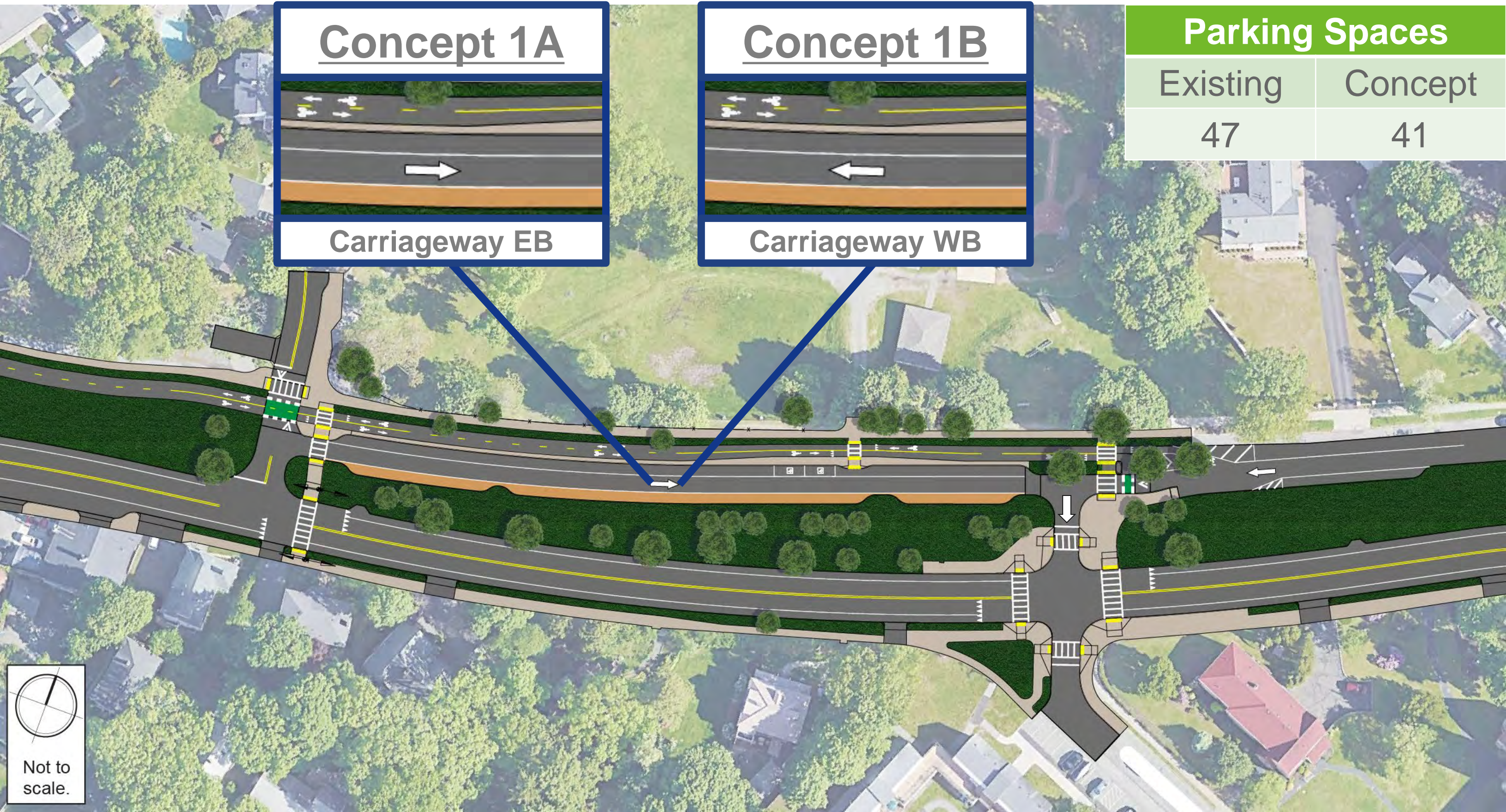


# What This Means & Next Steps

- **There were 3 attempts to meet the Signal Warrant**
  1. Late February/Early March 2020: Traffic Counts Taken – does not meet warrants
  2. May 2021: Utilized historical Bluetooth-based data called Streetlight – not accepted by MassDOT
  3. June 2021/July 2021: New Traffic Counts Taken – does not meet warrants
  
- **What does this mean for funding?**
  - State funding cannot be used on a project that installs or reconstructs an unwarranted signal
  - The City cannot pay for the signal on this project or install it afterward
  - Removing the signal from the project will remove many improvements from the Lyon's Field area
  
- **Next Steps**
  - The City wants feedback on concepts that reconstruct Ash Street as an unsignalized intersection



# Concept 1: Ash Street Approach Open



**Concept 1A**

**Concept 1B**

**Carriageway EB**

**Carriageway WB**

## Parking Spaces

Existing	Concept
47	41



Not to scale.



# Concept 2: Ash Street Approach Closed



## Parking Spaces

Existing	Concept
47	43

Carriageway WB

PROPOSED RRFB



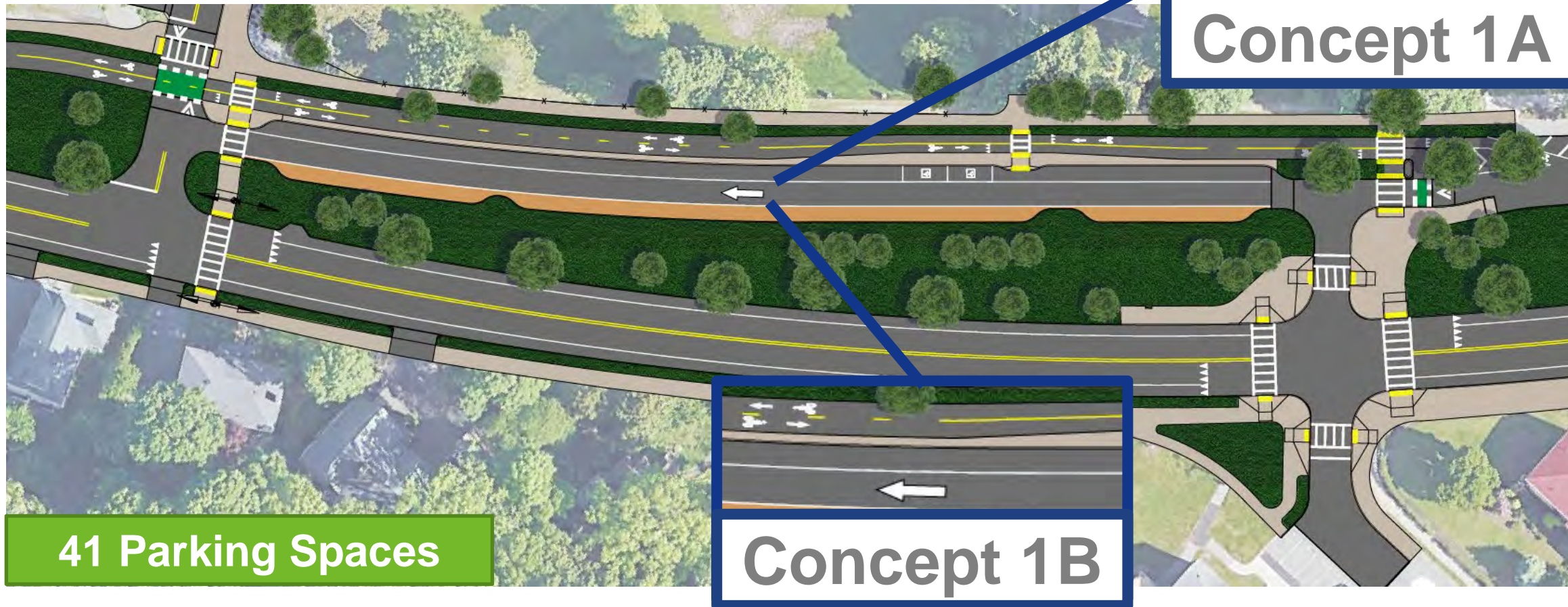
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# Ash St Concepts Comparison



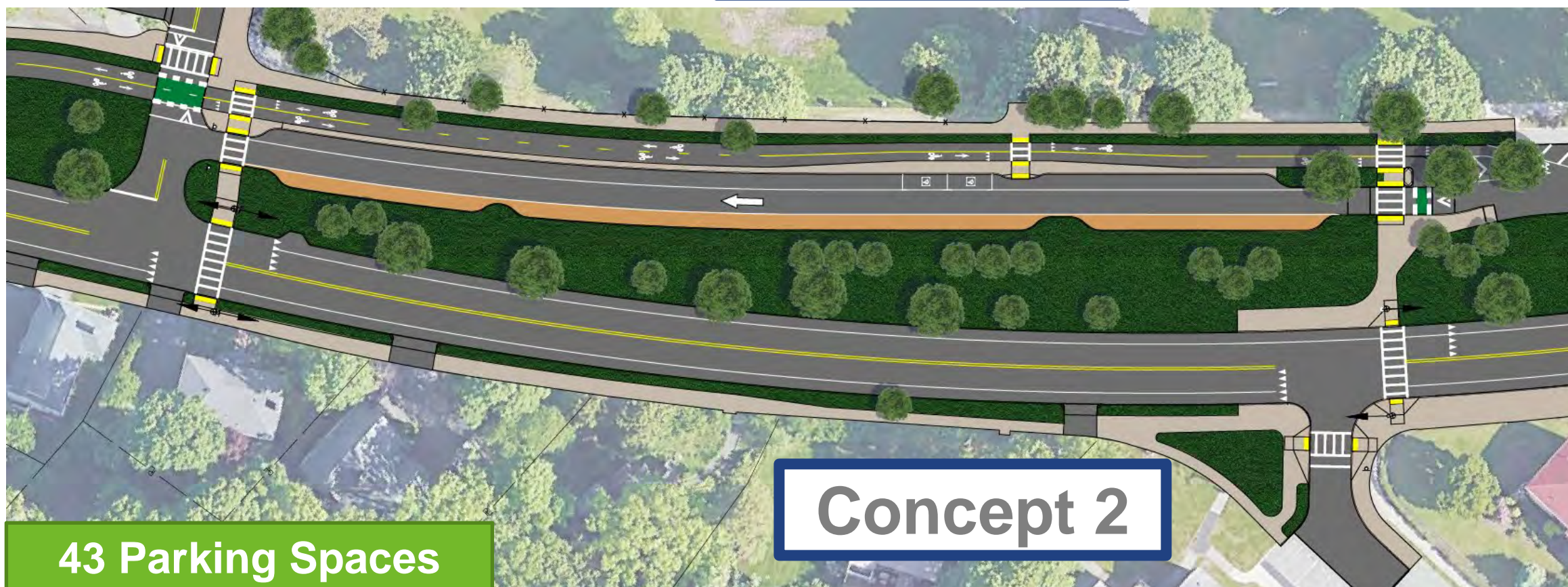
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Concept 1A

Concept 1B

41 Parking Spaces



Concept 2

43 Parking Spaces

## Concept 1A Pros:

1. Familiar (existing) circulation
2. Access to Lyons Field from east and west

## Concept 1B Pros:

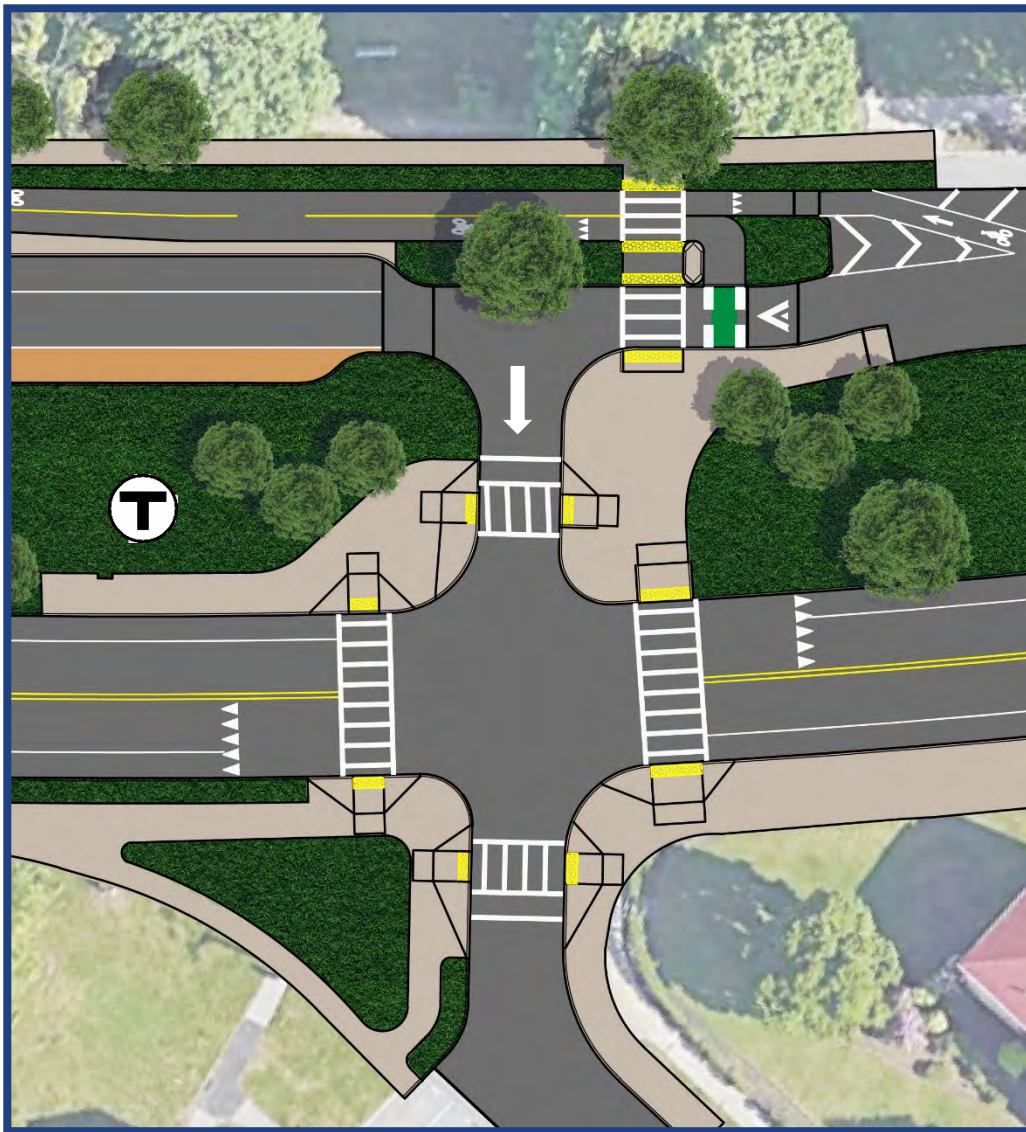
1. Removes head-on vehicle conflict
2. Eliminate wrong-way driving
3. Consistent with rest of carriageway

## Concept 2 Pros:

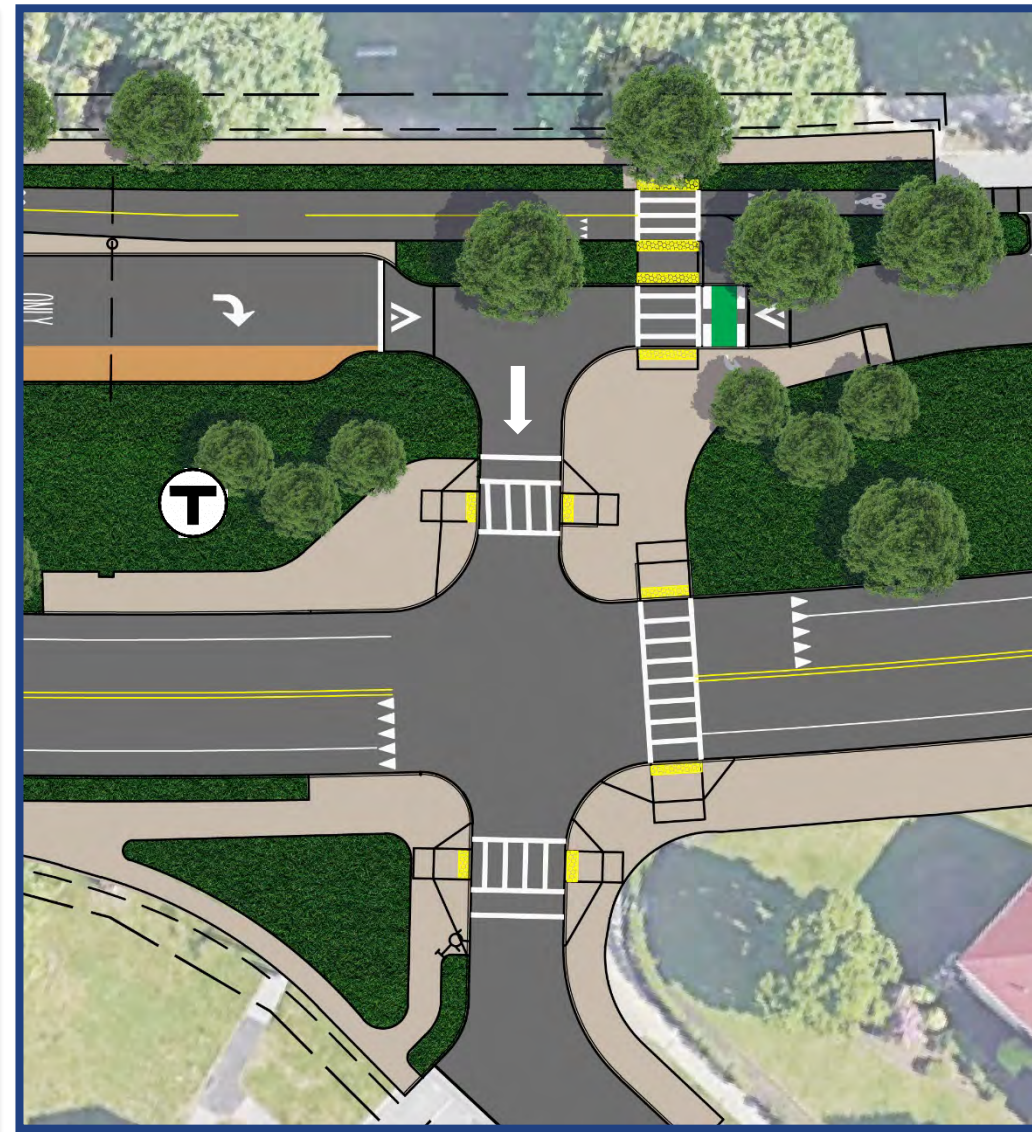
1. Fewer conflicts for pedestrians at crossing
2. More green space
3. Most parking
4. Same #1- #3 of Concept 1B



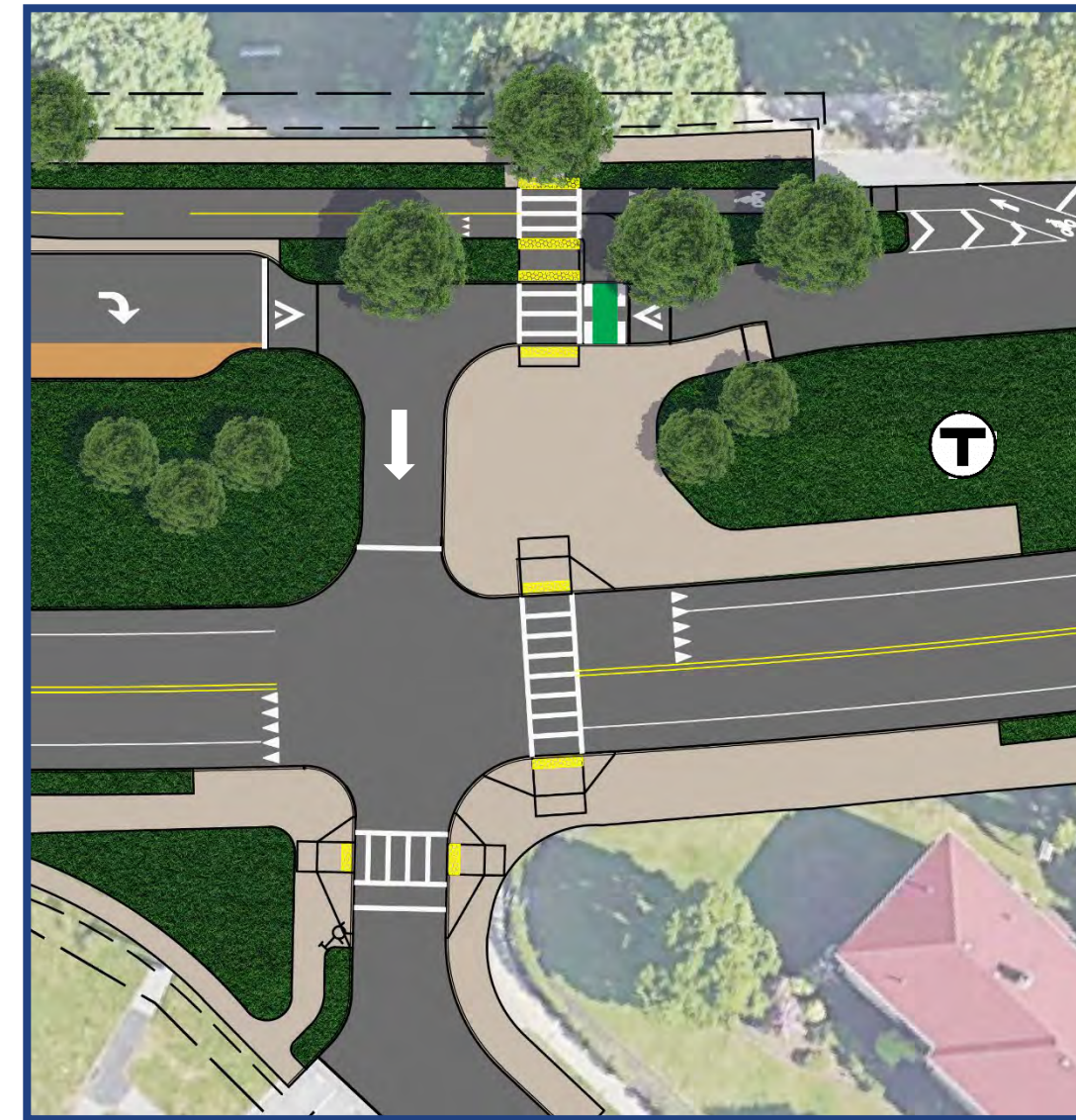
# Concept 1 Sub-alternatives



- “Far-Side” Bus Stop
- All Crosswalks
- No RRFB



- “Far-Side” Bus Stop
- 3 Crosswalks
- RRFB



- “Near-Side” Bus Stop
- 2 Crosswalks
- RRFB





# Anticipated Project Timeline



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Revised 25%  
Design Submittal:  
October 2021

75% Design  
Submittal:  
April 2022

Construction Starts on  
Adjacent Rte. 30  
Bridge Project:  
Spring 2023\*

Newton Public  
Information  
Session:  
September 2021

MassDOT 25% Design  
Public Hearing:  
Jan/Feb 2022

Final Design  
Submittal:  
January 2023

Anticipated  
Construction Start:  
Summer 2023

**Next milestone:**  
Preferred concept  
selected based on  
public input



# Evaluating Circulation Alternatives



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- We want to know which concept the community prefers
  - Discuss at tonight's meeting and offer feedback online by 9/17
  - [hsh.mysocialpinpoint.com/newton-carriageway](https://hsh.mysocialpinpoint.com/newton-carriageway)

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Drag to comment > Make a Comment Something I Like Ideas and Suggestions

Return

### Preference Survey

Which concept do you prefer?

What is your preferred concept?

Feel free to click outside of this box to view any of the concepts again. Your answer won't be recorded until you hit submit.

Concept 1A  Concept 1B  Concept 2

Optional: Reasoning / Details

If you care to offer any thoughts about why you prefer this concept, please feel free to use this box. You can also add specific comments to the map for any concept.

I prefer this concept because...

Email

Agree to terms and conditions

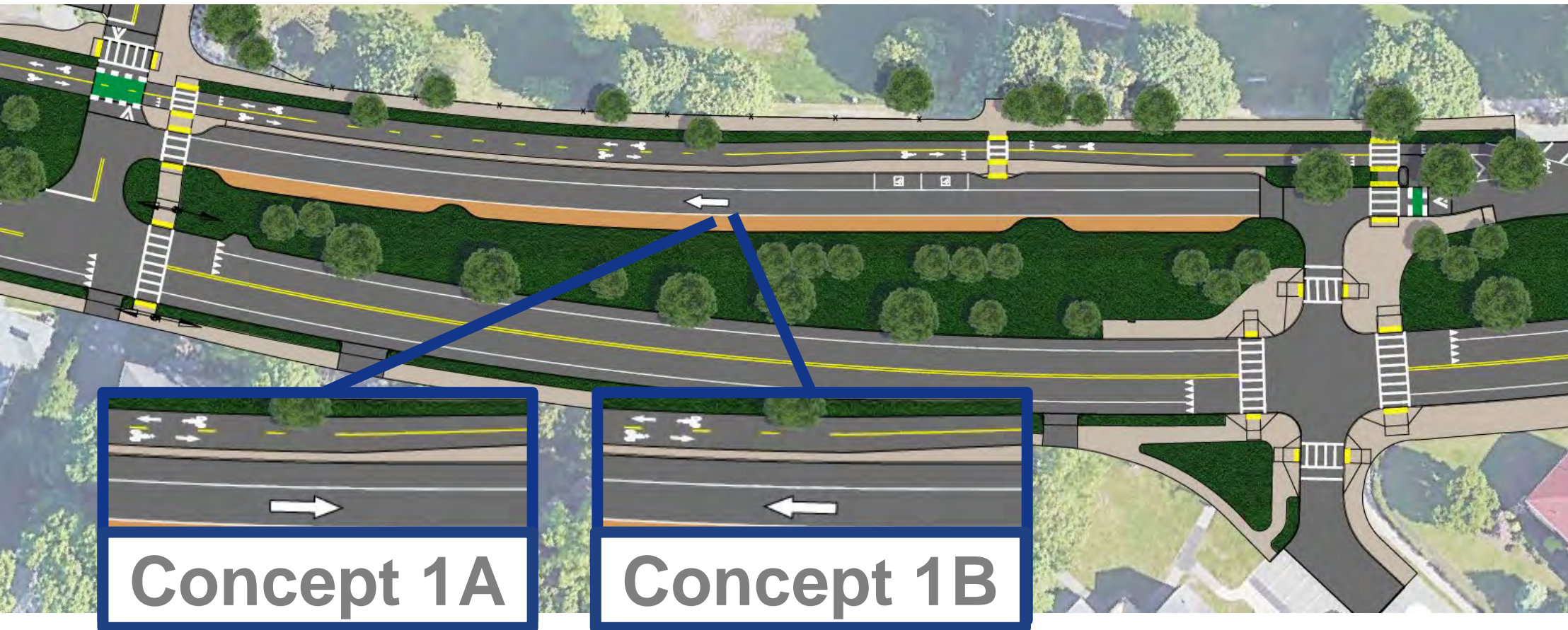
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# Discussion: Preferred Concept



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Concept 1A

Concept 1B



Concept 2

## ■ Which Option: 1A, 1B, or 2?

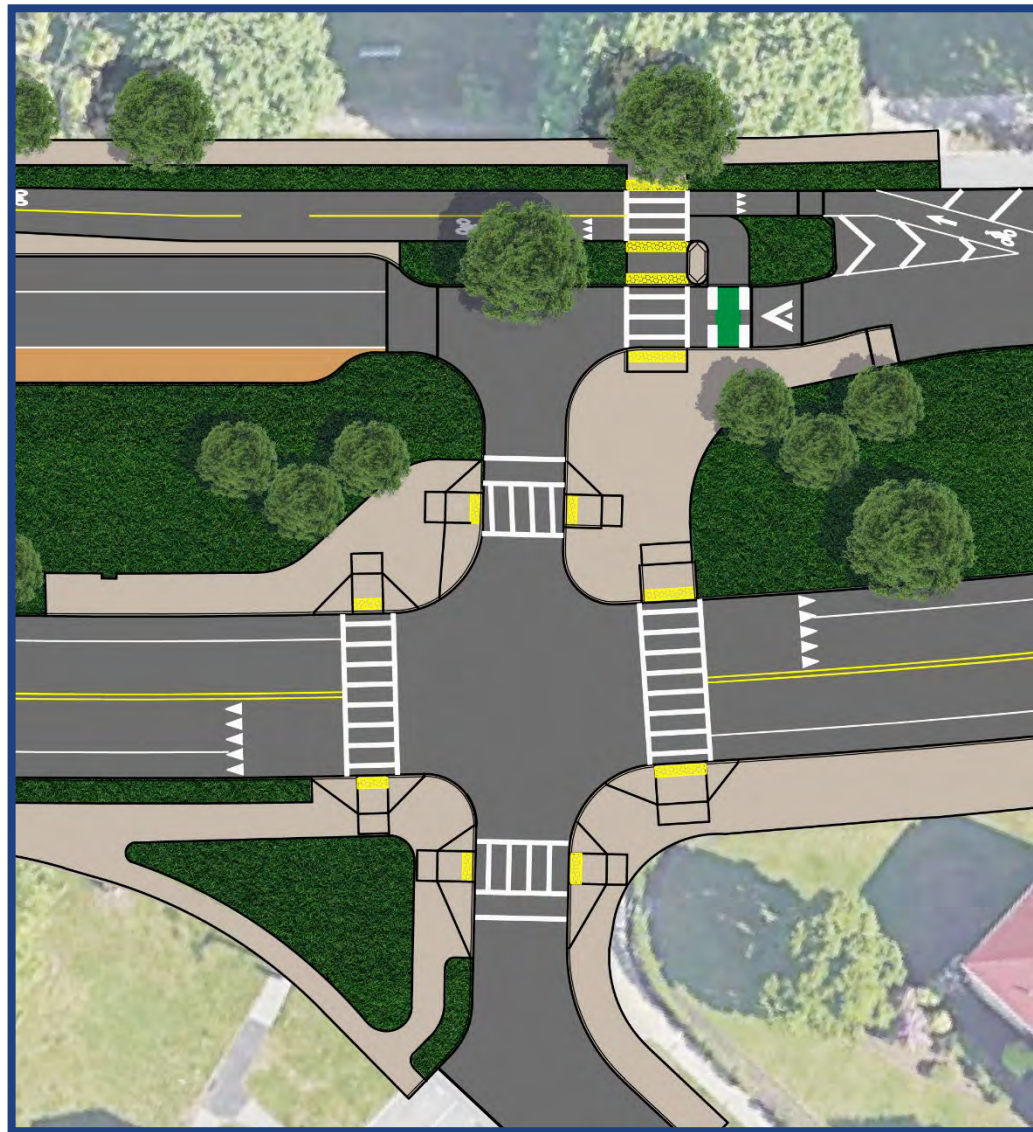
- Ash Street Open vs Closed
- Eastbound vs Westbound

## ■ For Option 1:

- Bus stop location?
- Crosswalk layout?



# Discussion: Concept 1 Subalternatives



- “Far-Side” Bus Stop
- All Crosswalks
- No RRFB



- “Far-Side” Bus Stop
- 3 Crosswalks
- RRFB



- “Near-Side” Bus Stop
- 2 Crosswalks
- RRFB





# Thank you!

FOR MORE INFORMATION OR TO SUBMIT COMMENTS:

**Nicole Freedman**

City of Newton Director of Transportation Planning

[nfreedman@newtonma.gov](mailto:nfreedman@newtonma.gov)

*OR*

[hsh.mysocialpinpoint.com/newton-carriageway](https://hsh.mysocialpinpoint.com/newton-carriageway)



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