# Intro + Context

Welcome

Study Overview

How We Got Here

Planning & Development

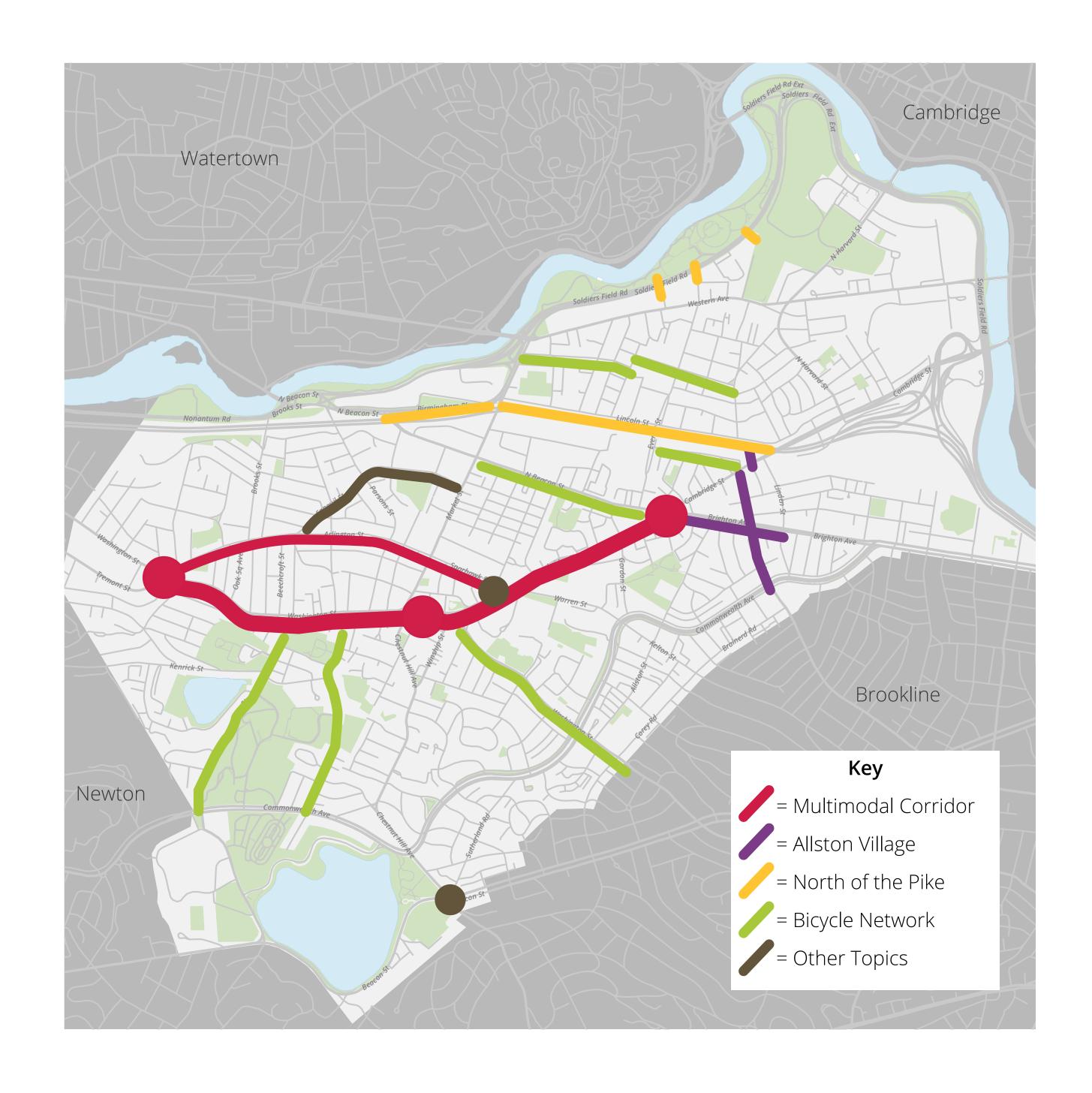
Ongoing City
Transportation Projects

Western Avenue Corridor + Rezoning Study

## Welcome!

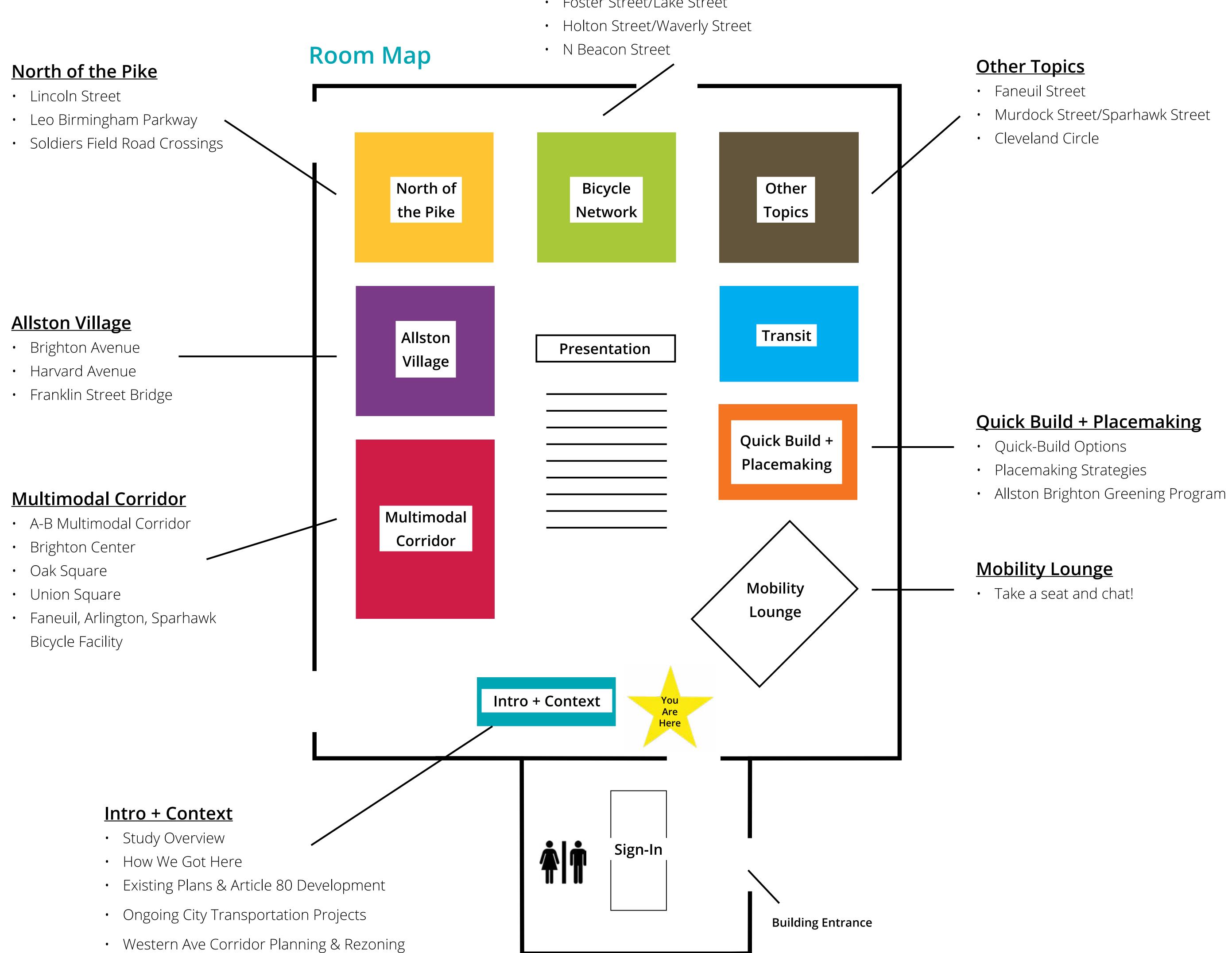
#### Tonight's Open House

- After working with the community to determine where to analyze transportation improvements, we have a **preliminary set of recommendations to share**
- You will have the opportunity to comment on the different options we have and guide the next round of refining these recommendations
- Share your comments with us and help shape the Allston-Brighton Mobility Study!
- See Room Map below for a guide to the room



#### **Bicycle Network**

- Bicycle Network Map
- Washington Street (South of Brighton Center)
- Foster Street/Lake Street





## Study Overview

#### **Study Focus**

- Improve mobility for all users.
- Focus on short-term (0-3 years) and medium-term (3-10 years) transportation improvements.
- Help manage the impacts of development.

#### **Study Area**



Allston-Brighton is one of the fastest developing areas in the City of Boston. Population: 71,148 (from the 2013-2017 ACS Survey)

#### **Study Goals**

Below are the goals for the A-B Mobility Study. These have been developed based on public comments and review of existing citywide and neighborhood plans.

- 1. Increase **safety for all modes**--pedestrian, bicycles, transit and passenger vehicles-- while working towards a Vision Zero<sup>1</sup> Boston.
- 2. Guided by the Boston Complete Streets<sup>2</sup>, **allocate space in streets** in order to safely and comfortably accommodate **diverse users**.
- 3. Increase the **sustainability** of the transportation system by emphasizing walking, biking and transit.
- 4. Improve **equity** in transportation by increasing opportunities for affordable transportation.
- 5. Identify corridors and intersections for **priority accommodations for buses**, where demand is greatest.
- 6. Create a more attractive and comfortable walking and bicycling environment by **improving streetscapes** and establishing active spaces.
- 7. **Enhance parking and permit regulations** to encourage efficiency in utilization of parking.
- 8. Create a transportation system that enhances mobility while accommodating local and regional growth.
- 9. Identify strategic opportunities where proposed **new development** can **mitigate its transportation impacts** by funding or building or otherwise providing appropriate mobility improvements.

<sup>1</sup>Vision Zero Boston is our commitment to focus the City's resources on proven strategies to eliminate fatal and serious traffic crashes in the City by 2030. https://www.boston.gov/transportation/vision-zero

<sup>2</sup>Adopted by the City of Boston in 2013, Boston Complete Streets Design Guidelines offer detailed guidance on making our street more engaging, sustainable and safe for all users. https://bostoncompletestreets.org/

#### **Study Timeline**

= Major Task

= Community Engagement

#### Fall 2018

Kick off Study; Background research and model building

#### Summer/Fall 2019

Develop and analyze transportation improvement options

#### We Are Here

#### Spring 2020

Draft Transportation Action Plan

#### Winter-Spring 2018-19

Identify issues; Confirm principles and goals

#### Winter 2019-20

Refine and prioritize transportation improvement options

#### Summer 2020

Final Transportation Action Plan

#### Ongoing

······Transportation improvement implementation support; Coordination with partner agencies



## How We Got Here

#### Kick-Off Open House - September 2018

The A-B Mobility Team introduced the scope of the A-B Mobility Study as well as examples of the types of improvements that would be explored. We heard about the importance of safe street crossings, frequent and reliable transit, better bike infrastructure, effective parking capacity management, and connectivity to open space.

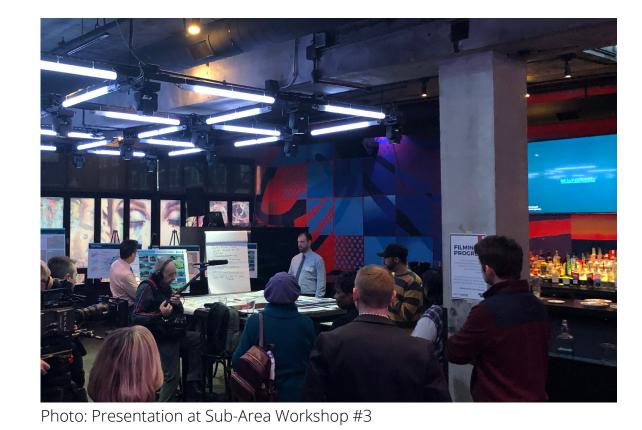




#### **Community Workshops - Spring 2019**

At these workshops, community members brainstormed preferred mobility solutions for different locations throughout Allston-Brighton. There were 3 sub-area workshops focused on specific geographies.





#### Open House - January 2019

At this meeting, the A-B Mobility Team presented a summary of community comments that were received to date.

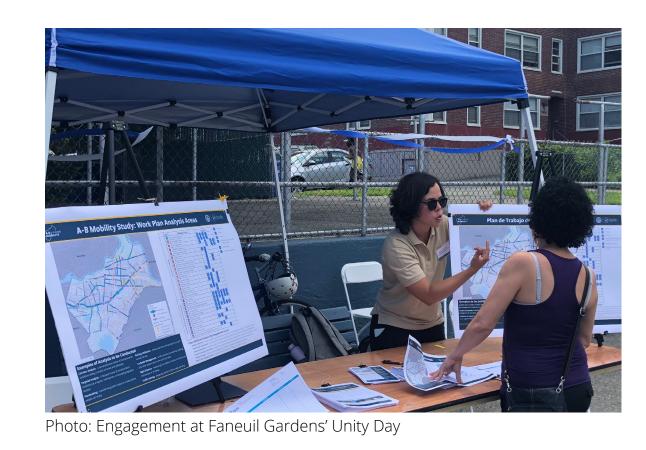
Additionally, the Team presented a map of draft priority locations for potential improvements and draft Study goals for public comment.





Work Plan for Analysis - July 2019

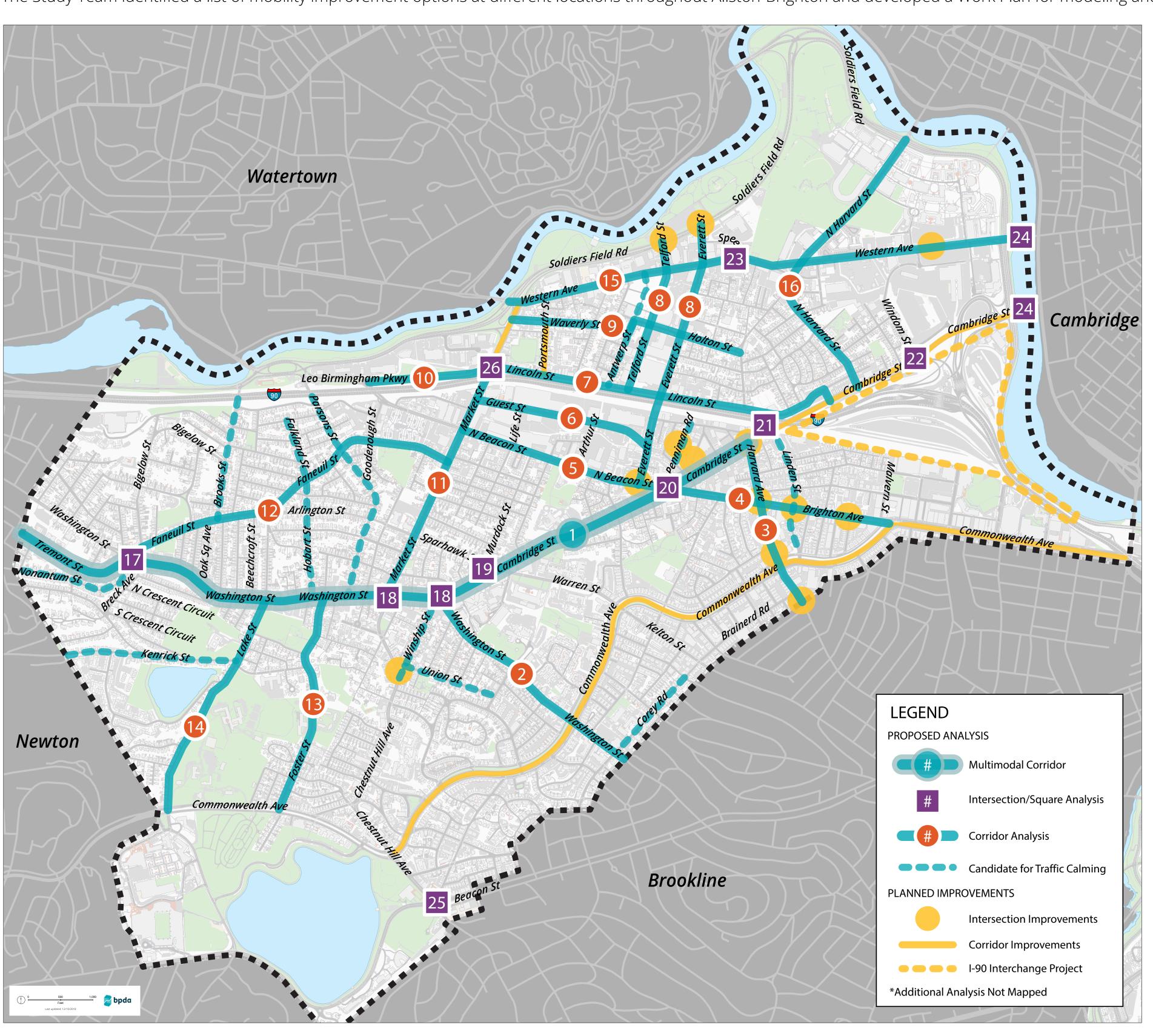
Resulting from the initial round of community engagement, the A-B Mobility Study Team put together a draft work plan of analysis areas (see below). Throughout the month of July, the Team engaged with the Allston-Brighton community to determine if these were the right areas to recommend transportation improvements.





### Work Plan of Analyzing Recommendations

The Study Team identified a list of mobility improvement options at different locations throughout Allston-Brighton and developed a Work Plan for modeling and analyzing them.



	<u>Key</u>	<u>Analysis Area</u>	<u>Topics</u>
	1	Multimodal Corridor	
	2	Washington Street	
	3	Harvard Avenue	
	4	Brighton Avenue	
	5	North Beacon Street	\$\frac{1}{2}
S	6	Guest Street	Ø\$
ılysi	7	Lincoln Street	
Ana	8	Everett Street/Telford Street	
dor	9	Waverly Street/Holton Street	Ø\$
Corridor Analysis	10	Leo Birmingham Parkway	\$\frac{1}{2}
0	11	Market Street	
	12	Faneuil Street	
	13	Foster Street	
	14	Lake Street	
	15	Western Avenue	
	16	North Harvard Street	
	17	Oak Square	
SİS	18	Brighton Center	
are Analysis	19	Murdock Street/Sparhawk Street	
re Ai	20	Union Square	
quai	21	I-90 Pedestrian Bridge	
n/S(	22	Windom Street	
ctio	23	Speedway Avenue	\$\frac{1}{2}
Intersection/Squ	24	River Crossings	
Int	25	Cleveland Circle	
	26	Leo Birmingham Pkwy/Market St/Lincoln St	

\*Some Additional Analysis (Not Mapped) Will Include:

Soldiers Field Road - Targeted analysis focused on improving pedestrian and bicycle connectivity across Soldiers Field Road

New Transit Connections - Transit analysis focused on identifying possible new services for underserved neighborhoods

Transit Enforcement - Analysis focused on identifying locations to pilot automated enforcement for bus stops and transit lanes

Transit Passenger Information - Analysis focused on identifying locations to pilot enhanced customer information

Shuttle Strategy - Analysis focused on developing a strategy for a publicly accessible shuttle network

Electric Bus Charging Station - Analysis to identify location(s) for charging future electric bus fleet

= Placemaking

= Curbside Regulations

= Transit



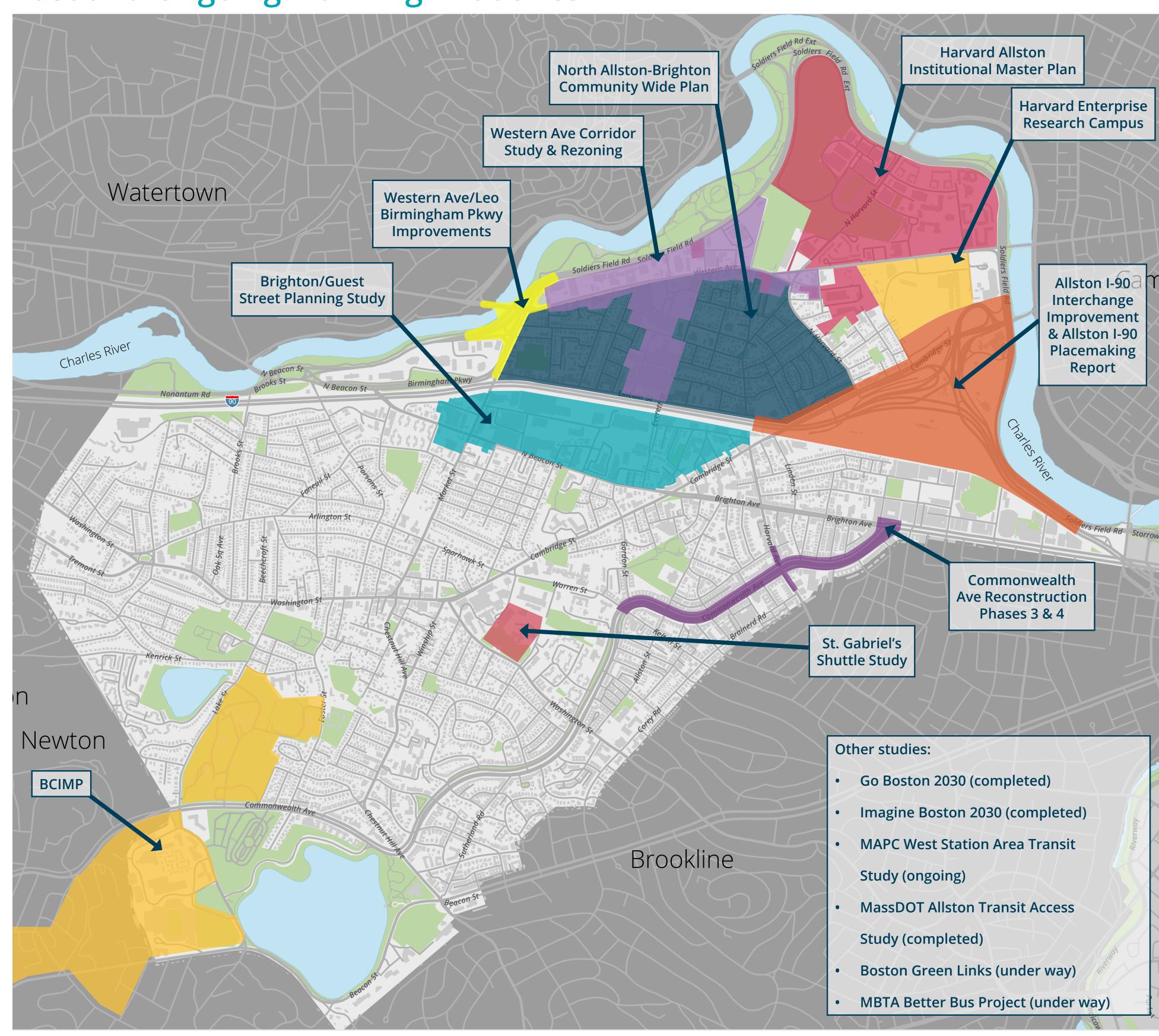
## Existing Planning & Pending Development

#### Planning

The Allston-Brighton Mobility Study builds on previous & ongoing planning initiatives in Allston-Brighton.

- Parts of Allston-Brighton have been studied before
- The focus of this study is to provide realistic and implementable recommendations, informed and guided by past planning efforts
- Work will not be duplicated: the Allston-Brighton Mobility Study is building on these plans in crafting a comprehensive Final Transportation Action Plan for Allston-Brighton

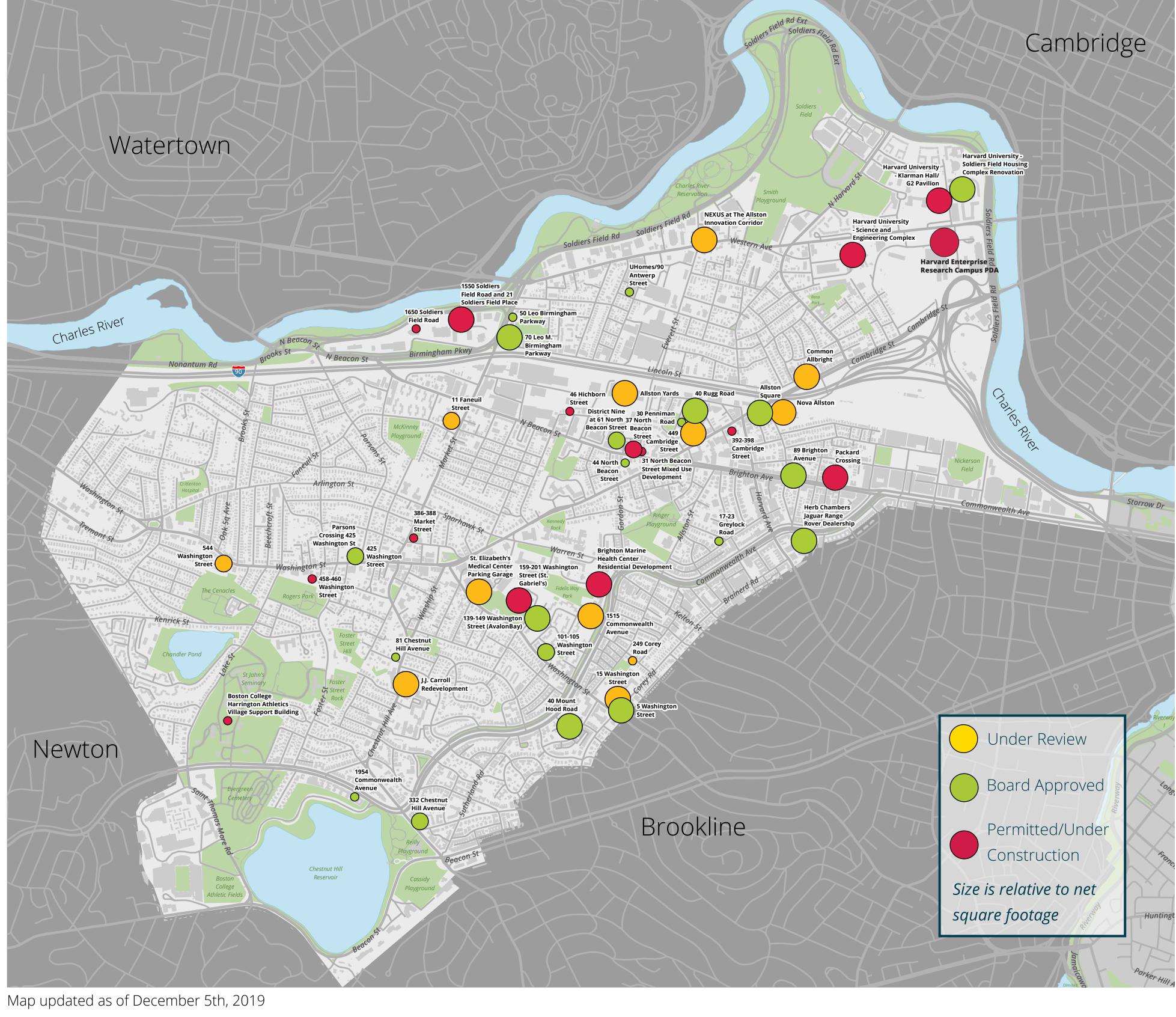
#### Past and Ongoing Planning Initiatives



#### Article 80 Development

- Some areas in particular within Allston-Brighton have seen significant new development and growth in recent years.
- Based on projects currently going through the City's Article 80 review process, approved, or under construction, approximately 8 million square feet of new development is anticipated in Allston-Brighton.
- Managing the impacts of these developments and taking advantage of their investments to create key transportation improvements for the community are a focus of the Allston-Brighton Mobility Study.

#### Projects Under Article 80 Review, Approved, or Under Construction





## Ongoing City Transportation Projects

#### **Cambridge Street Safety Improvements**

Working with the Massachusetts Department of Transportation, the Boston
Transportation Department is designing safety improvements for Cambridge Street.
The plans include only those changes that can be accomplished in the near-term, not major construction.

#### Project elements include:

- A crosswalk at the on-ramp. It is located on the south side of Cambridge Street, between North Harvard Street and Sorrento Street
- Shortened mixing zones between bicyclists and right-turning drivers.
- Physical separation for the bicycle lanes. The width is enough to support street sweeping and snow plowing equipment.



Image: proposed changes on Cambridge Street at Harvard Ave and the Cambridge Street Bridge.

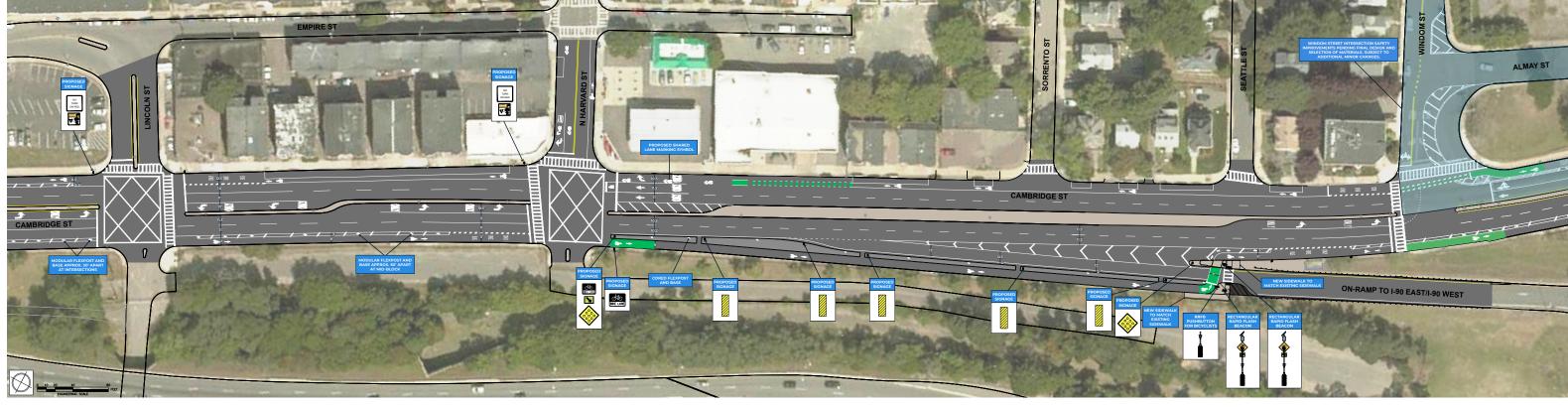


Image: proposed changes on Cambridge Street from Lincoln Street to Windom Street.



Image: proposed changes on Cambridge Street from Windom Street to Soldiers Field Road.

#### Commonwealth Avenue Phases 3 + 4

Boston Public Works is redesigning Commonwealth Avenue between Brighton Ave and Warren/Kelton Streets. The redesign includes the Commonwealth Avenue and Harvard Avenue intersection. This intersection will be the centerpiece of the project with a goal of revitalizing this busy commercial and transit hub.

#### Project elements include:

- Separated bicycle facilities
- Improved sidewalks and crosswalks
- Better access to the MBTA Green Line
- Enhanced historic landscape features, and
- Innovative sustainable features



Image: Rendering of Comm Ave/Harvard Ave plaza (East).



Image: Rendering of Comm Ave/Harvard Ave plaza (West).



Image: Plan view of Comm Ave/Harvard Ave plaza.

#### Brighton Avenue Bus + Bike Lanes

The Boston Transportation Department has recently implemented dedicated bus + bike lanes along Brighton Avenue between Union Square and Packards Corner. These bus lanes are in effect 24/7 and help the more than 14,000 MBTA bus passengers traveling this route.

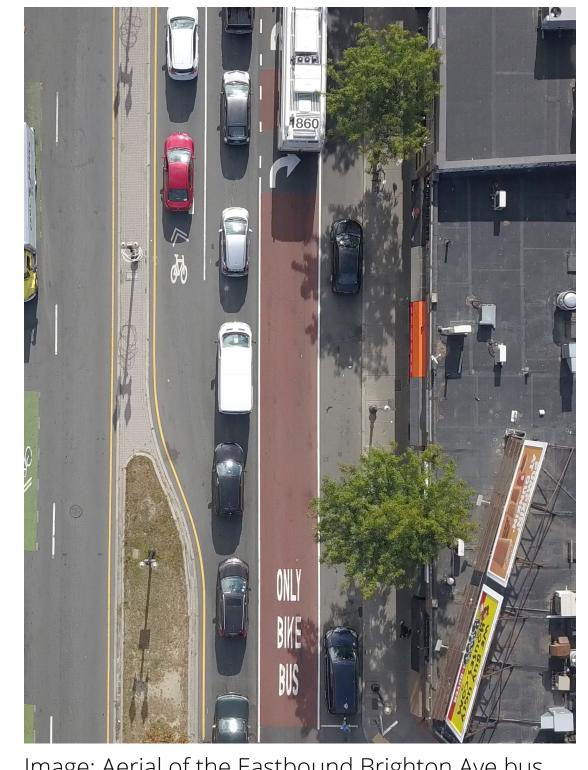


Image: Aerial of the Eastbound Brighton Ave bus lane (taken in Summer of 2019).

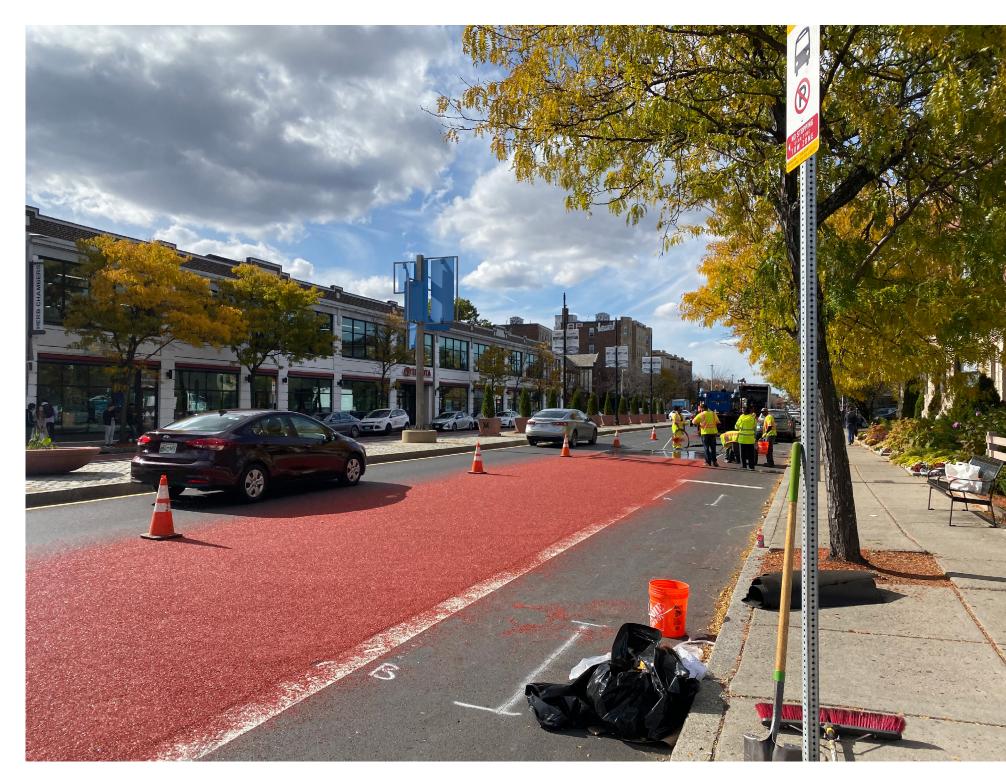


Image: Installation of the Westbound Brighton Ave bus lane.



## Western Ave Corridor Study & Rezoning

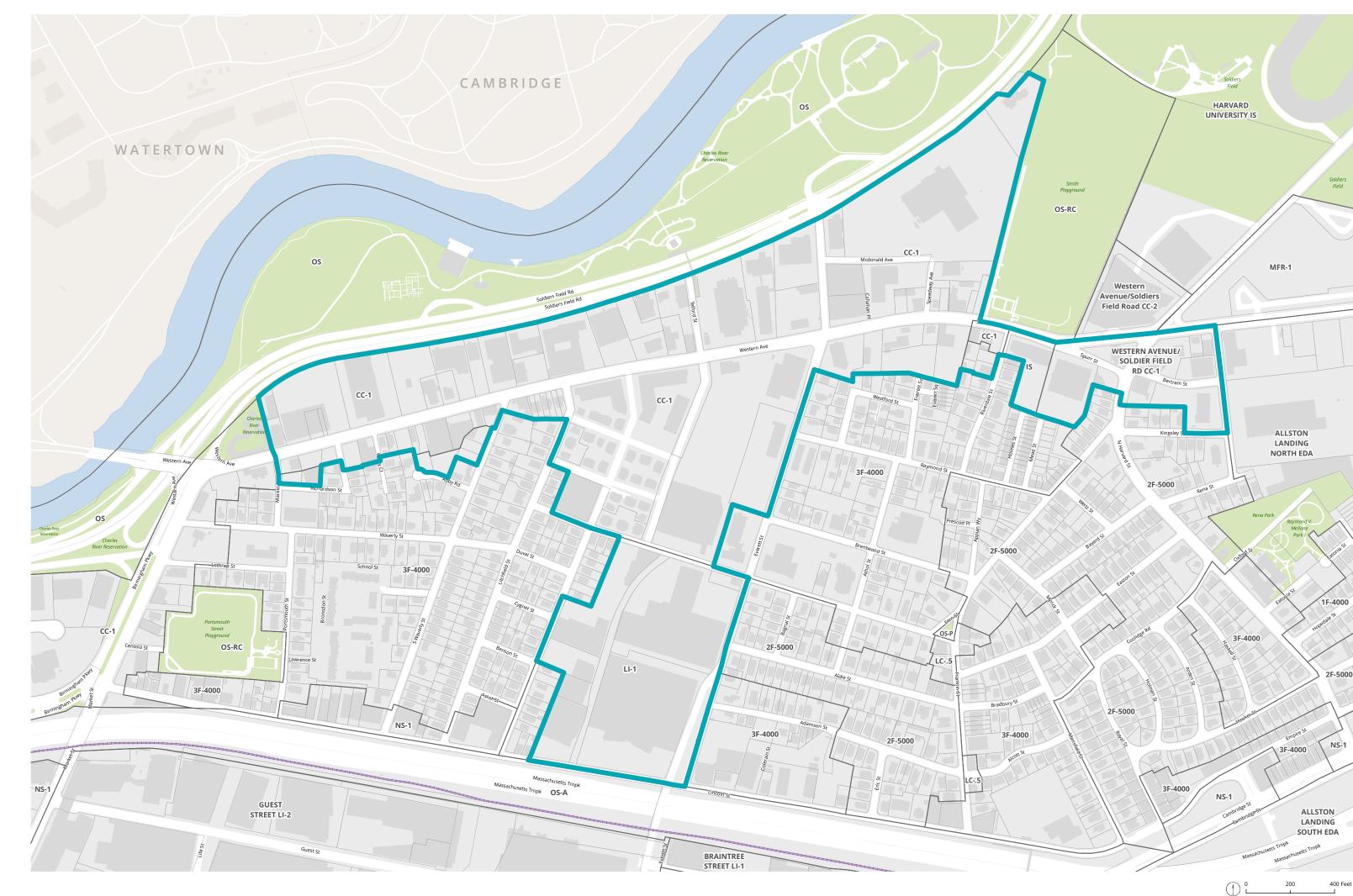
#### **About the Study**

The Western Avenue Corridor Study and Rezoning will have three primary outcomes:

- New or modified zoning to reflect the planning work already completed, as well as new analysis regarding the appropriate density of new development, where additional height might be appropriate, the mix of uses (residential vs. commercial), and how to leverage development to create benefits.
- A vision to transform Western Avenue in both the short and longer terms with key Complete Streets features such as a high-quality pedestrian environment, better bus service, and improved bicycle facilities.
- Coordination with the Allston-Brighton Mobility Study on transportation improvements.

For more information, visit the website: bit.ly/westerncorridor

#### Map of Study Area



The boundaries indicated here correspond approximately to the zoning subdistricts. The inclusion or exclusion of particular properties should not be interpreted as indicating any conclusions about those properties on the part of the BPDA.



The Study will recommend opportunities for tactical and permanent public realm enhancements, such as those shown in this picture of downtown Boston. Image Source: Howard Stein Hudson



The Study will produce a design for short-term and long-term improvements to Western Avenue, including opportunities for better bicycle infrastructure, such as on Western Avenue in Cambridge. Image Source: BPDA



In conjunction with the Allston-Brighton Mobility Study, the Study will recommend strategies for improving bus service. Image Source: BPDA

#### Kick-Off Open House - September 2019

The Study Team announced the Western Avenue Corridor Study and Rezoning with a series of informational boards. Attendees were encouraged to provide input on shaping the vision of the Study.



#### Workshop - October 2019

At this meeting, the Study Team led small-group discussions to brainstorm and prioritize different elements on Western Ave. These included elements such as planting zones, cafe seating, bike lanes, bus lanes, parking, and more.





#### Walking/Biking Tour - October 2019

Community members were invited to go on a walking or biking tour with BPDA Staff to discuss challenges and opportunities associated with Western Ave.





#### Open House - December 2019

At this open house, community members were able to prioritize benefits they want to see come from the project. Options ranged from artist housing, open space, transportation improvements, and more.









# Multimodal Corridor

Multimodal Corridor

**Brighton Center** 

Oak Square

Union Square

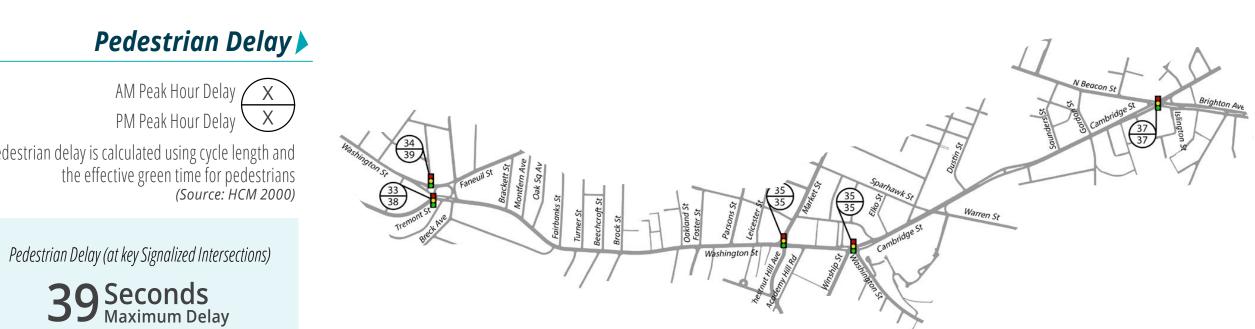
Faneuil, Arlington, Sparhawk Bicycle Facility

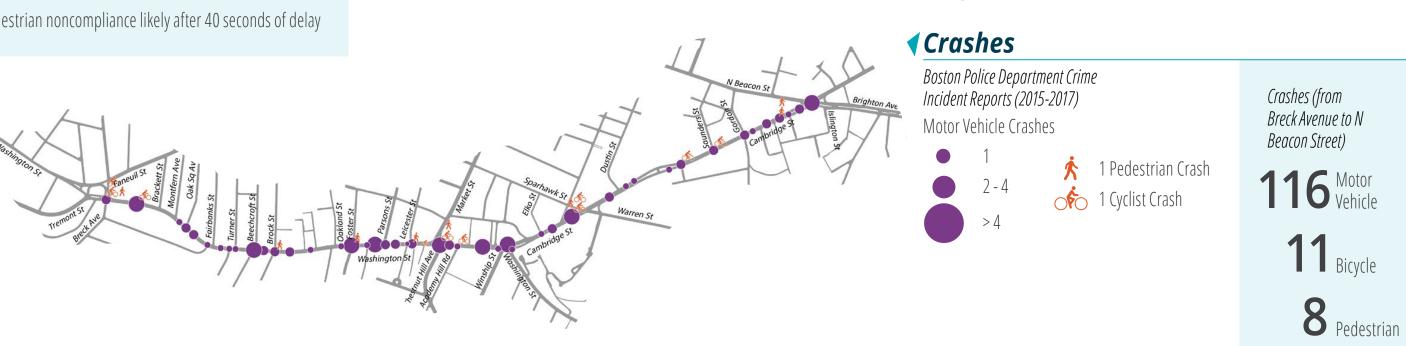
## A-B Multimodal Corridor

### **Existing Conditions & Analysis**



## **◆** Bicycle Level of Traffic Stress (LTS) LTS (from Breck Avenue to N Beacon Street) LTS 3 Tolerable for confident cyclists







#### WHY?

- Reduce transit delays
- Improve comfort and safety for bicyclists
- Improve pedestrian safety at existing crossing locations
  - Bike lanes are faded along Washington Street between Oak Square and Brighton Center Community Update #1 07/22/19

Lack of crosswalks on Washington - can they be signalized? Area Workshop 3 - Brighton Public Library 03/18/19

Parklet in parking spaces [Washington

St near Brighton Center]

Area Workshop 3- Brighton Public Library 03/18/19

57 bus is bunching on Washington St due to congestion Community Update #3 07/31/19

Short term parking

for Uber Eats delivery [Washington Street in front of Pizza Etc] Area Workshop 3 - Brighton

Add comfortable pedestrian crossings

**Provide short-term parking options** 

Improve placemaking throughout the corridor

Public Library 03/18/19

Every day cars park in MBTA

bus stops during rush hour

Area Workshop 3 - Brighton

Public Library 03/18/19

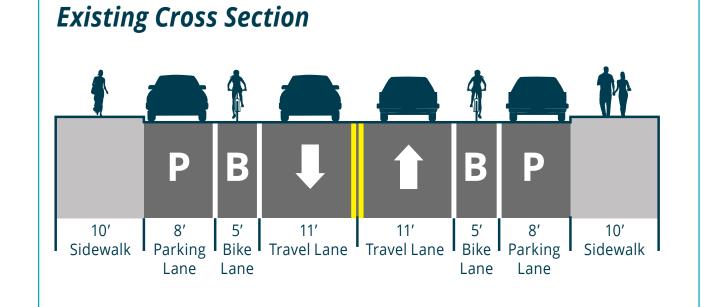
#### Recommendations & **Options**

#### **EXISTING \***



Washington St looking West Towards Market St

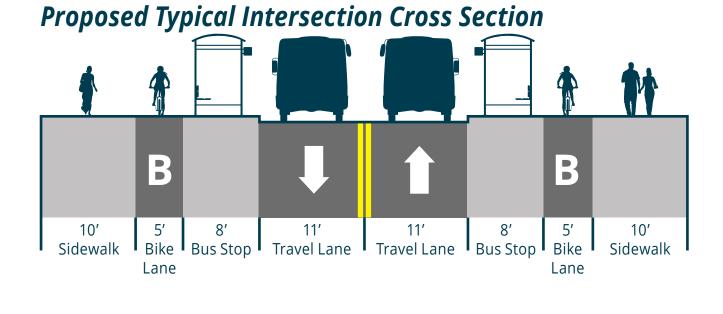


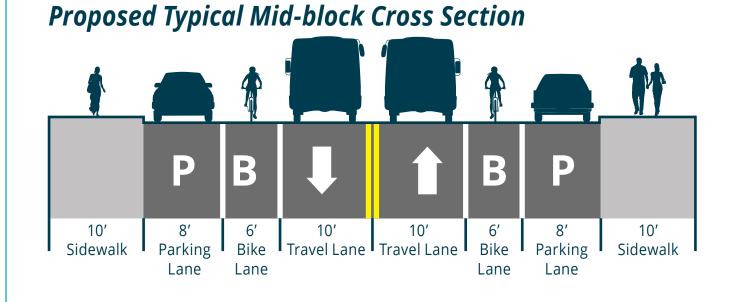


#### OP7/ON IN-LANE BUS STOPS

Option A proposes curb extensions at intersections and mid-block crossings where feasible on the A-B Multimodal Corridor. Curb extensions are created by extending the sidewalk at corners or mid-block to increase safety, calm traffic, and provide space for placemaking. At bus stops, curb extensions allow buses to stop in the travel lane and eliminate the need to pull in and out of traffic.



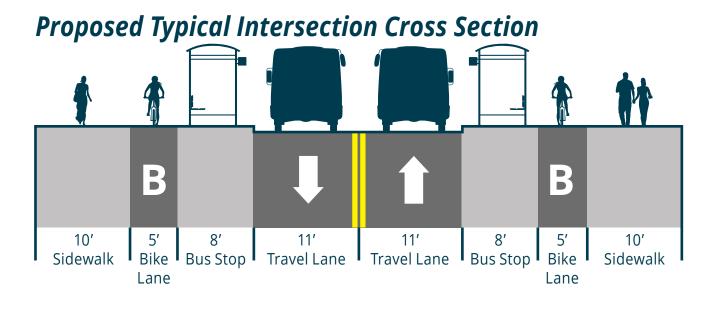


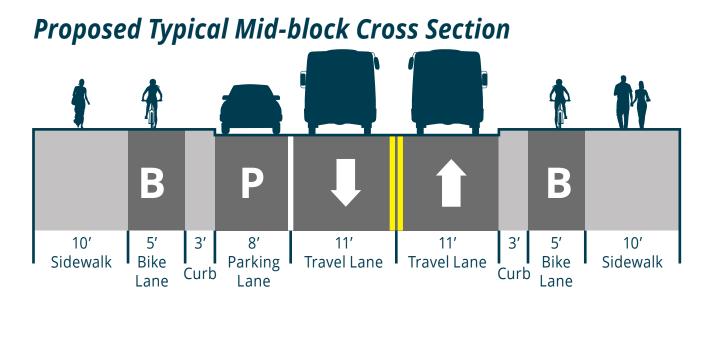


#### OPTION **SEPARATED BIKE LANES**

Option B proposes separated bike lanes on the A-B Multimodal Corridor. Separated bike lanes are for the exclusive use of bicyclists and provide added separation that enhances the experience of bicycling on urban streets.



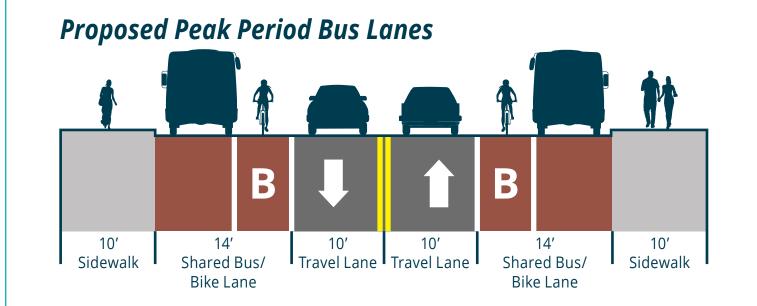


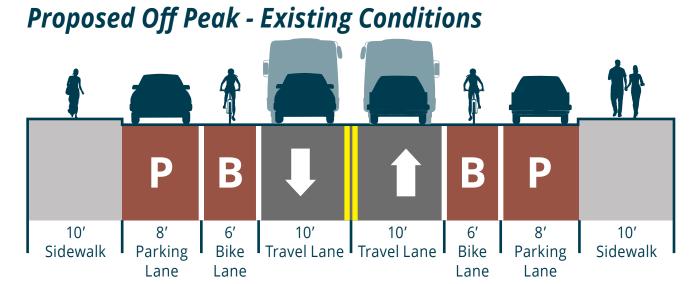


## **PEAK PERIOD BUS LANES\***

Option C proposes peak period bus lanes on the A-B Multimodal Corridor. Dedicated bus lanes make it possible to increase the frequency and reliability of bus service. Additionally, dedicated bus lanes can increase bus ridership and help reduce congestion on adjacent travel lanes. A low stress bicycle facility on Faneuil St/Arlington St/Sparhawk St would complement Option C.







\*Refer to the FAS Bike Facility poster for a low stress option that complements Option C - Peak Period Bus Lanes

## **PERFORMANCE**

	<b>MEASURES </b>		
Safety			
Pedestrian Comfort	No Change  ↑ Better		
<b>Bicyclist Comfort</b>	Better		
Transit		••00	
Parking	Worse	•000	
Vehicle Delay			

#### Calms traffic and physically narrows the intersections Provides additional pedestrian space and narrows the crossing distance Creates physical separation at intersections

Improves bus travel time by reducing the time needed for loading and unloading Maintains existing parking except near curb extensions Causes minor increases in travel time for motorists

Calms traffic and physically narrows the roadway and intersections Provides additional pedestrian space and narrows the crossing distance Creates physical separation throughout the corridor Improves bus travel time by reducing the time needed for loading and unloading Maintains parking on one side of the street

■ ○ ○ ○ Causes minor increases in travel time for motorists

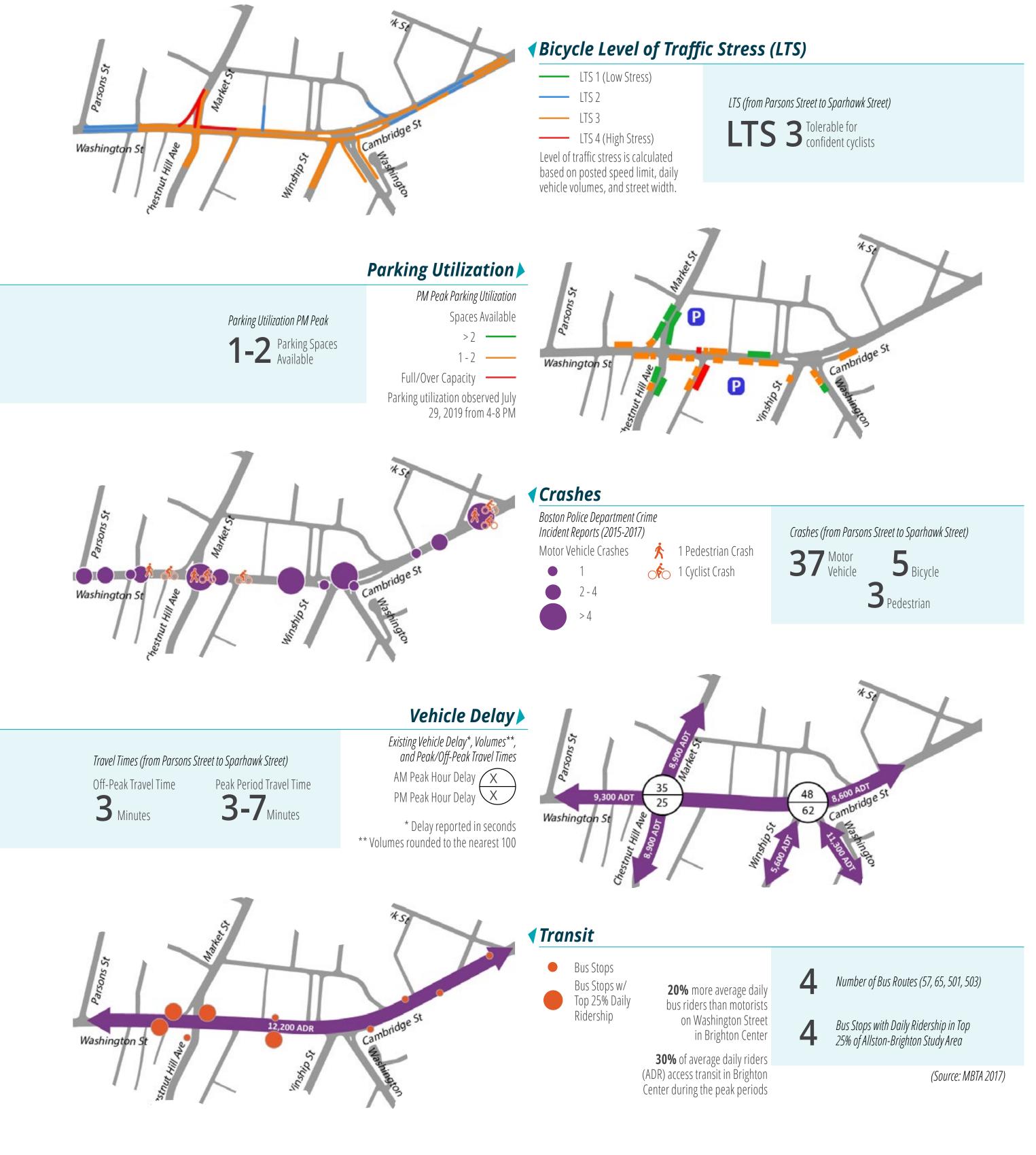
Maintains the existing cross section along the roadway and at intersections Maintains existing pedestrian space and crossing distance ● ● ○ ○ Provides the minimum width without physical separation Improves travel time and reliability by providing dedicated bus lanes ■ ○ ○ ○ Maintains parking during the off peak periods ● ● ○ Slightly improves travel time for motorists



## Brighton Center

#### **Existing Conditions & Analysis**





#### Recommendations & **Options**

#### **EXISTING \***

#### Market St/Washington St





Source: Google Streetview



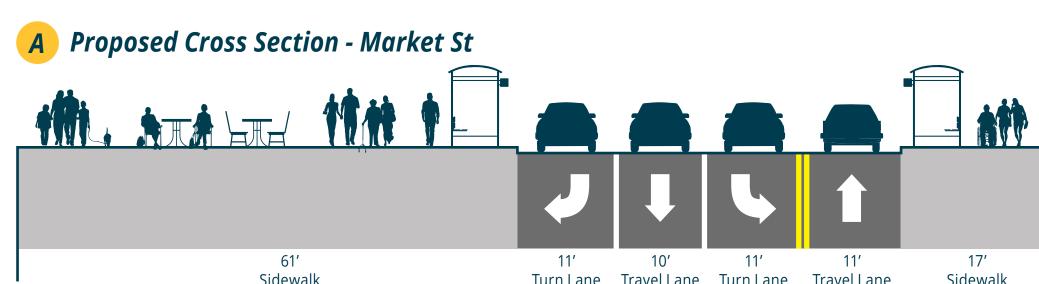
## **MARKET STREET -**

#### **REMOVAL OF CHANNELIZED RIGHT**

This concept proposes the removal of the existing southbound channelized right turn lane on Market Street. Southbound right turns will be permitted in the proposed configuration. The excess roadway space from the channelized right turn will be repurposed to provide additional space for pedestrians, placemaking, and relocated bus stops. A bus bulb-out is proposed on the east side of Market Street for northbound buses. The options proposed for Concept 1 and Concept 2 are not mutually exclusive.



Proposed Bus Stop Relocation Existing Cross Section - Market St The tit Sidewalk Sidewalk Parking Turn Lane Median Island Travel Lane Travel Lane Turn Lane



#### **PERFORMANCE MEASURES ₹**

Safety			
Pedestrian Comfort	No Change  ↑ Better		
Bicyclist Comfort	Detter		
Transit		••••	
Parking	↓ Worse	•000	
Vehicle Delay			

# Turn Lane Travel Lane Turn Lane Travel Lane

#### ● ● ○ Calms traffic and physically narrows Market Street ■ ■ ○ Narrows the crossing distance and improves pedestrian delay

Maintains existing transit infrastructure ● ○ ○ ○ Maintains existing parking supply except along the previous southbound channelized right turn

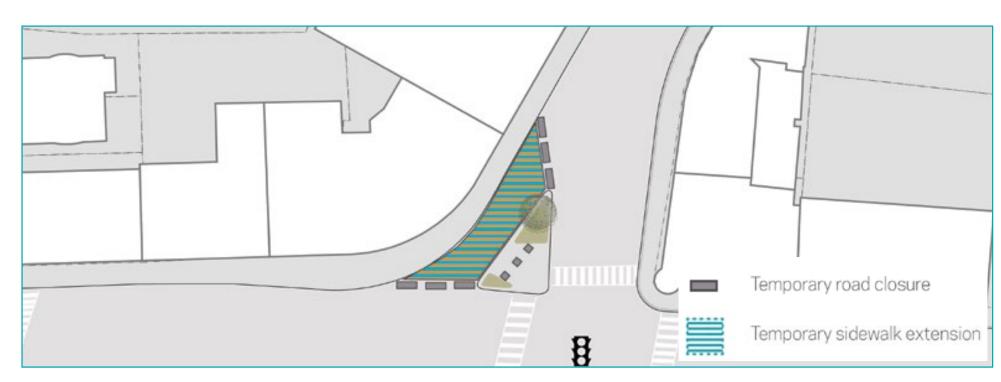
Maintains existing bicycle infrastructure

● ● ○ ○ Causes minor increase in delay for vehicles turning right from Market Street onto Washington Street

#### **PLACEMAKING**

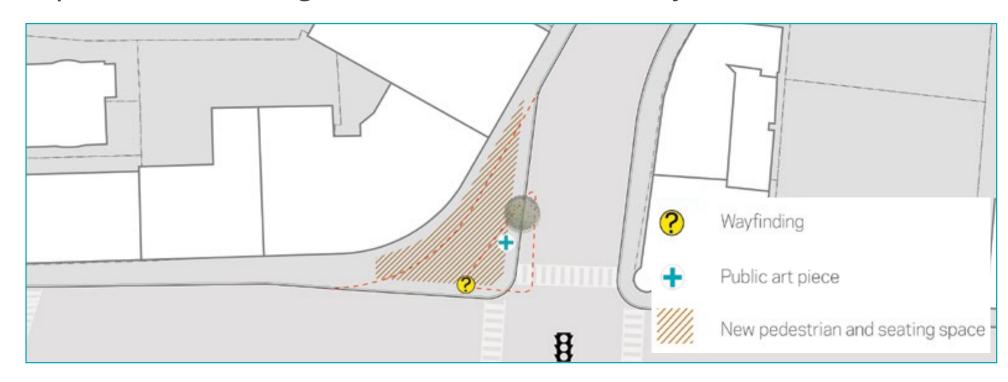
#### **Quick-Build Placemaking Option**

Using traffic barriers, close off the southbound Market Street channelized right turn lane to create a new seating and retail spill-out area. Raised planters could contribute to an inexpensive greening of the space, and surface repainting and temporary seating would also help draw people to Brighton Center.



#### **Long-Term Placemaking Option**

Temporary interventions would serve to inform more permanent investments. The pavement behind the barriers could be replaced with new curb and permanent plantings, including new trees and a rain garden. Examples from Davis Square in Somerville and Brattle Square in Harvard Square could serve as guides for improvements resulting from the reduction of roadways at corners.



#### Long-Term Placemaking Examples









## Brighton Center - Continued

## Recommendations & Options

#### **EXISTING \***

Washington St/Winship St/Cambridge St

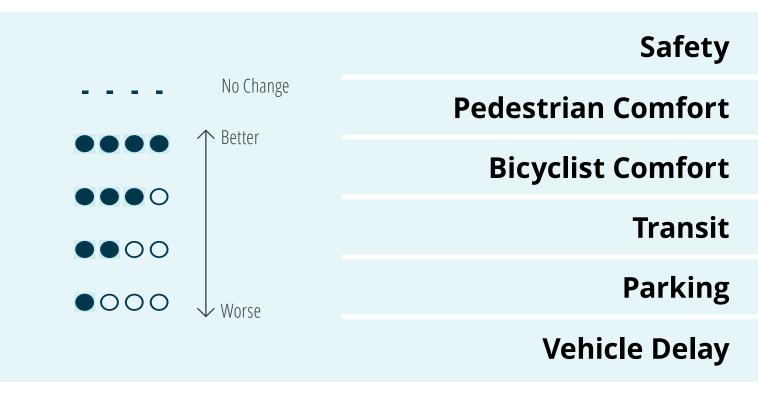


Winship St looking North



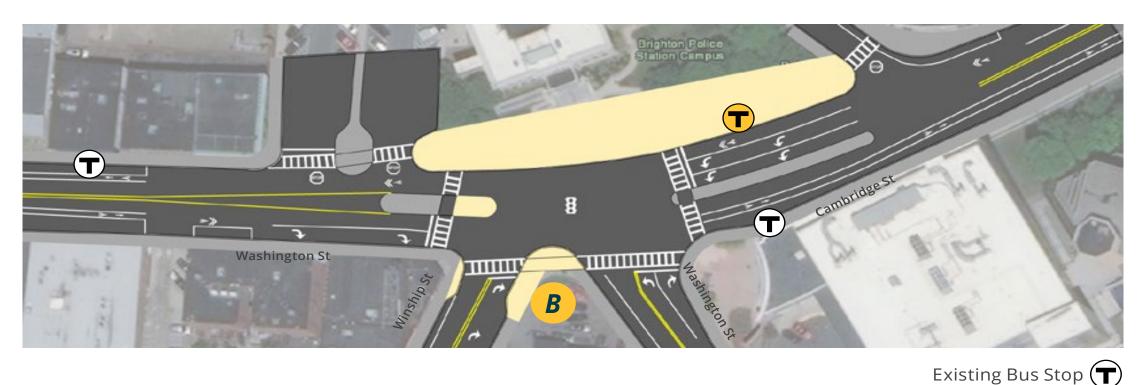
Source: Google Streetview

#### PERFORMANCE MEASURES ¥



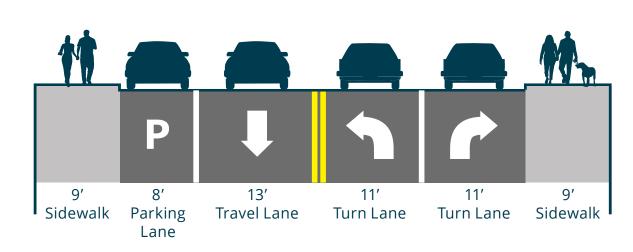
# WASHINGTON STREET/WINSHIP STREET/CAMBRIDGE STREET - CURB EXTENSIONS

This concept proposes curb extensions where feasible to increase safety, calm traffic, and provide space for bus stops and placemaking. This concept also proposes restricting northbound left turns from Winship Street to shorten crossing distances and calm traffic. The options proposed for Concept 1 and Concept 2 are not mutually exclusive.

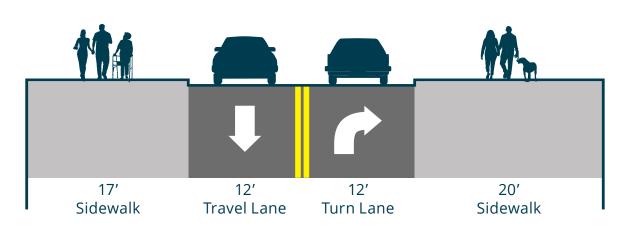


Proposed Bus Stop Relocation

Existing Cross Section - Winship St





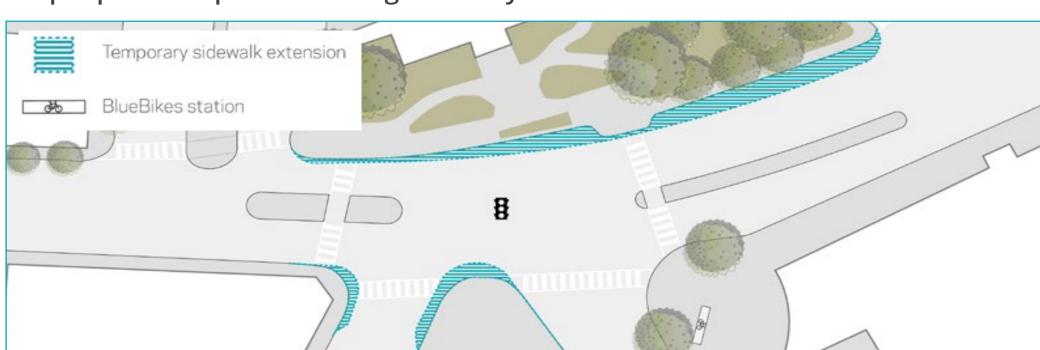


•••0	Calms traffic and physically narrows Winship Street
•••0	Narrows the crossing distance and improves pedestrian delay
	Maintains existing bicycle infrastructure
	Maintains existing transit infrastructure
	Maintains existing parking supply
•000	Changes circulation patterns for vehicles currently turning left from Winship Street onto Washington Street

#### **PLACEMAKING**

#### **Quick-Build Placemaking Option**

Using paint, develop temporary curb extensions to improve safety, create more pedestrian areas, and provide more places for people to stop and sit along this busy corridor.

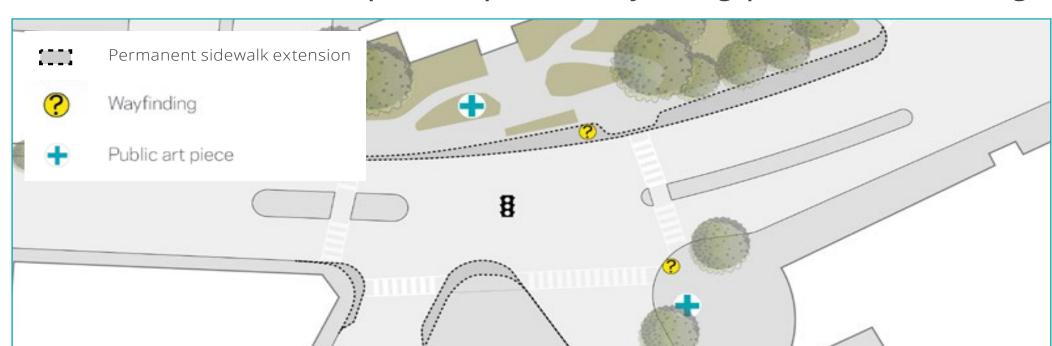


#### Quick-Build Placemaking Examples



#### Long-Term Placemaking Option

Temporary interventions would serve to inform more permanent investments. New curb extensions would provide space for wayfinding, public art, and seating.



#### Long-Term Placemaking Examples



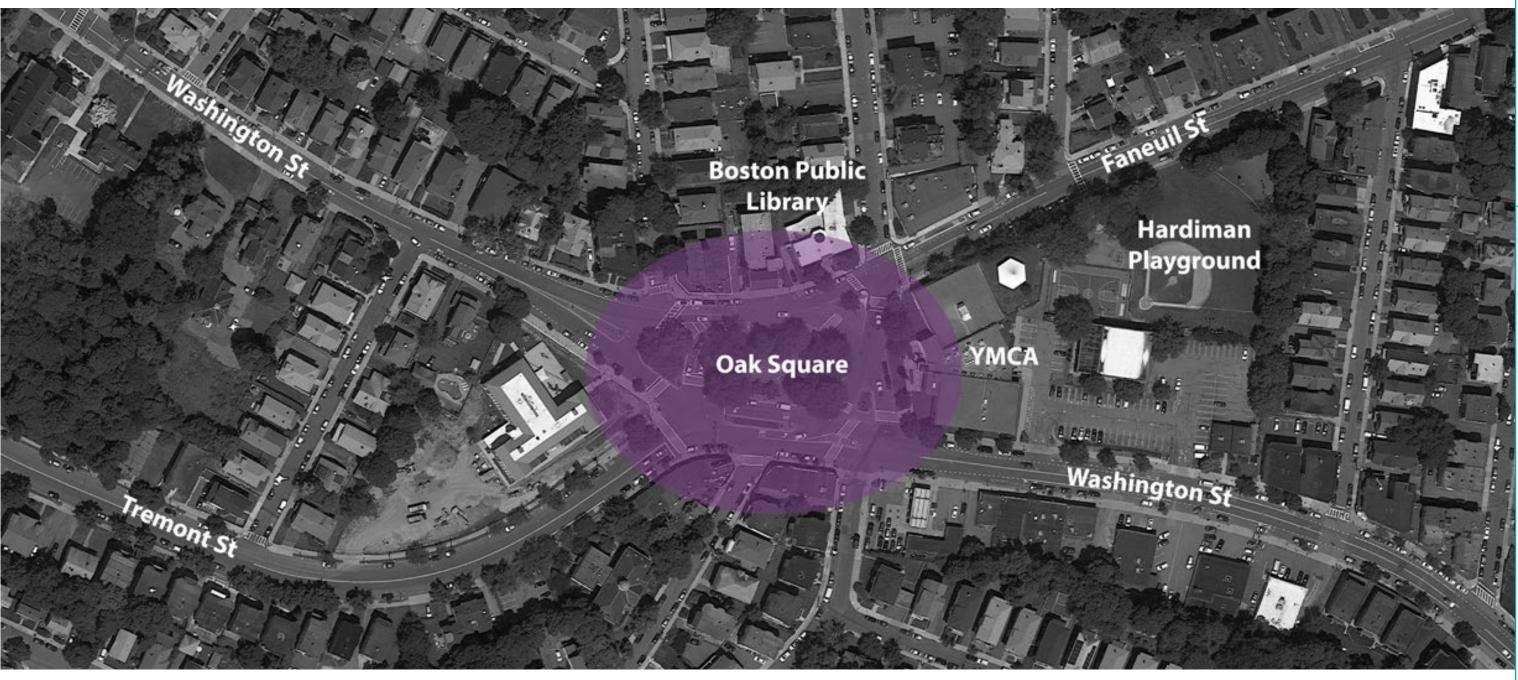






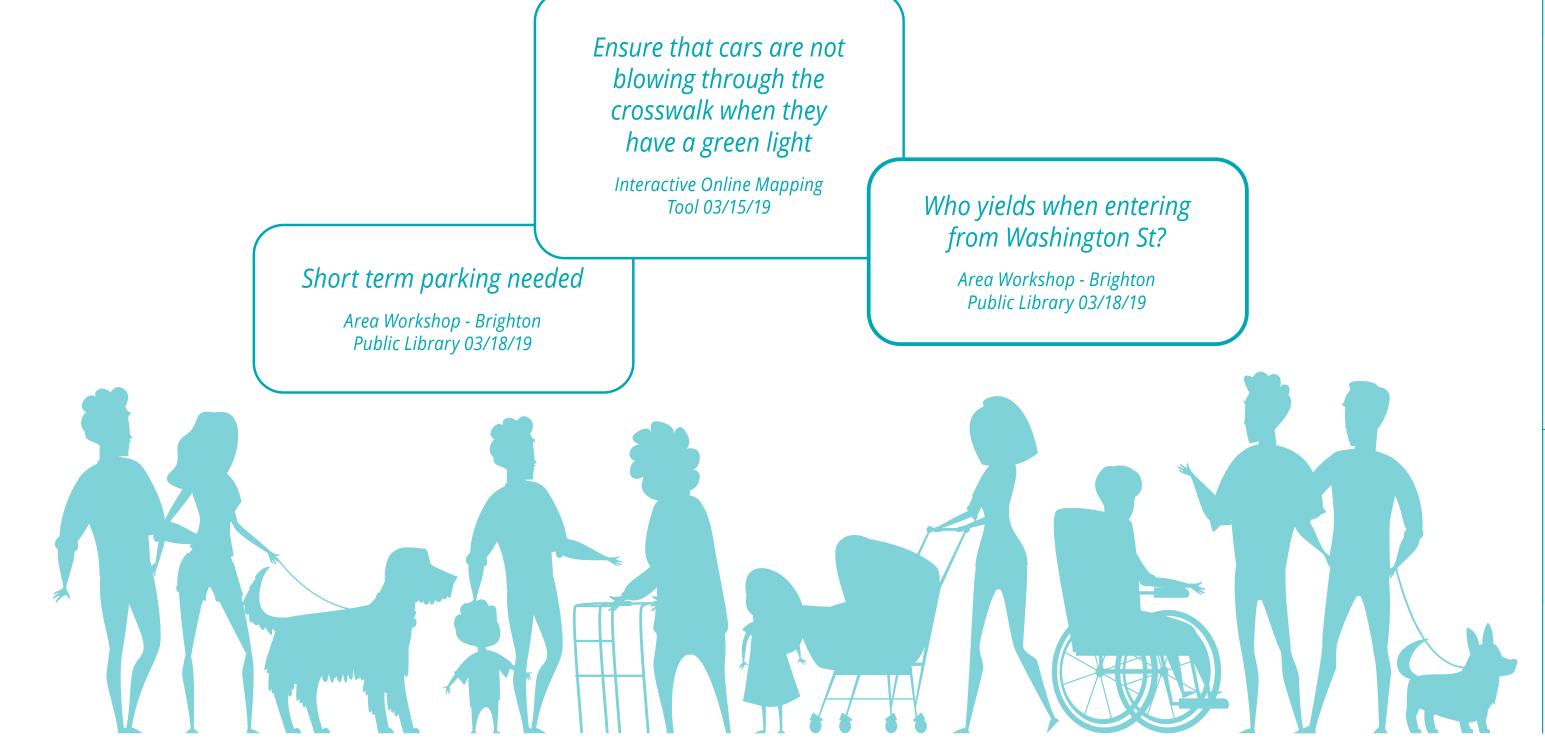
## Oak Sqaure

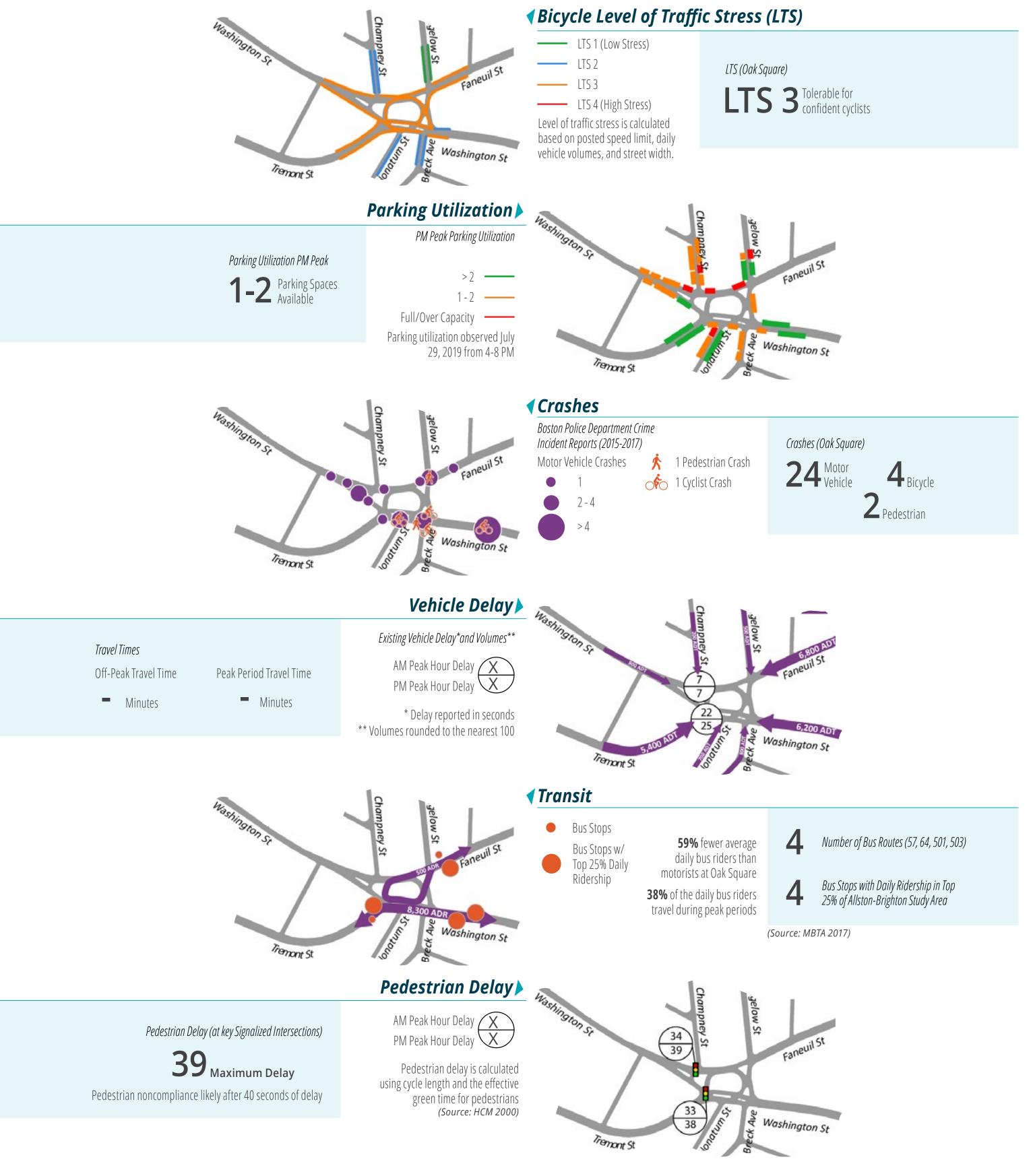
#### **Existing Conditions & Analysis**



#### WHY?

- Improve pedestrian safety at existing crossing locations
- Add comfortable pedestrian crossings
- Provide short term parking
- Reduce confusion and conflicts between modes





#### Recommendations & **Options**

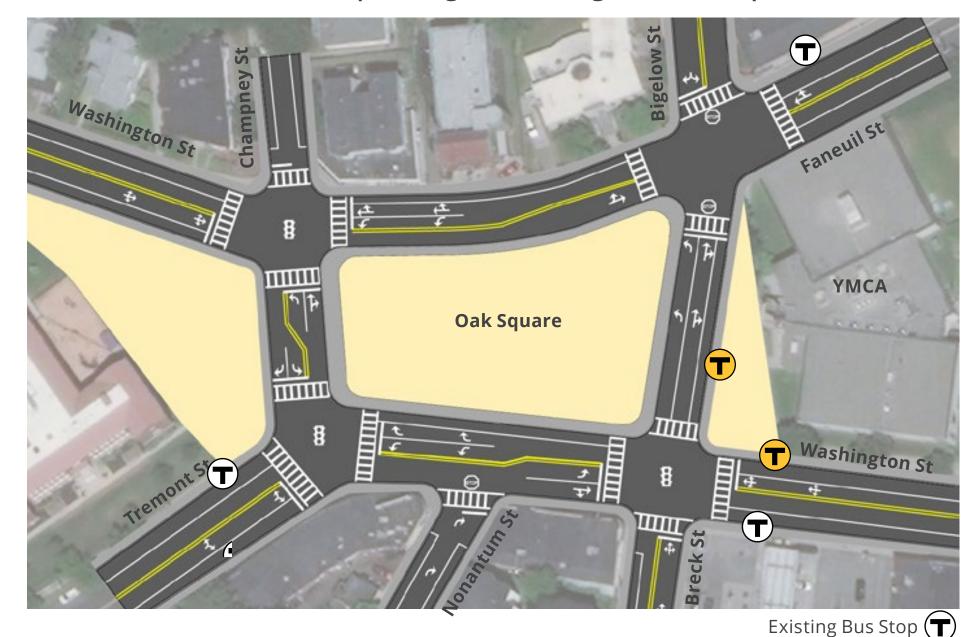
#### **EXISTING \***



Existing Bus Stop

#### **REALIGNING TREMONT STREET/CHAMPNEY** STREET/WASHINGTON STREET

Option A proposes to realign Tremont Street, Champney Street, and Washington Street to simplify vehicle movements, improve circulation, and enhance pedestrian access to Oak Square. Excess and new roadway space from the re-design will be re-purposed to provide additional placemaking opportunities. Bicycle accommodations can be implemented based on the selected A-B Multimodal Corridor option. Additionally, Option A proposes relocating bus stops on the 57 and 64 routes to facilitate transfers and/or route selection for passengers heading to Union Square.



Proposed Bus Stop Relocation

#### **PLACEMAKING**

The conversion of the park space into a more meaningful central green space would both calm traffic and improve access. New pedestrian or open space adjacent to the Community Center would offer opportunities for a play space expansion. Permanent wayfinding along Washington Street aimed at pedestrians and cyclists would both improve legibility and help define Oak Square as a unique space. Similarly, a water feature and public art installations at key corners of the green space will signal arrival in the square and help define the square's identity.

#### Long-Term Placemaking Option



#### Long-Term Placemaking Examples









#### **PERFORMANCE MEASURES ¥**

Safety		
Pedestrian Comfort	No Change ↑ Better	
Bicyclist Comfort	, Derrei	
Transit		
Parking		

● ● ○ Calms traffic and simplifies vehicle movements ● ● ○ Narrows the crossing distance and improves pedestrian delay Maintains existing bicycle infrastructure Maintains existing transit infrastructure ● ● ○ ○ Maintains existing parking supply except near proposed intersection realignments



## Oak Square - Continued

## Recommendations & Options

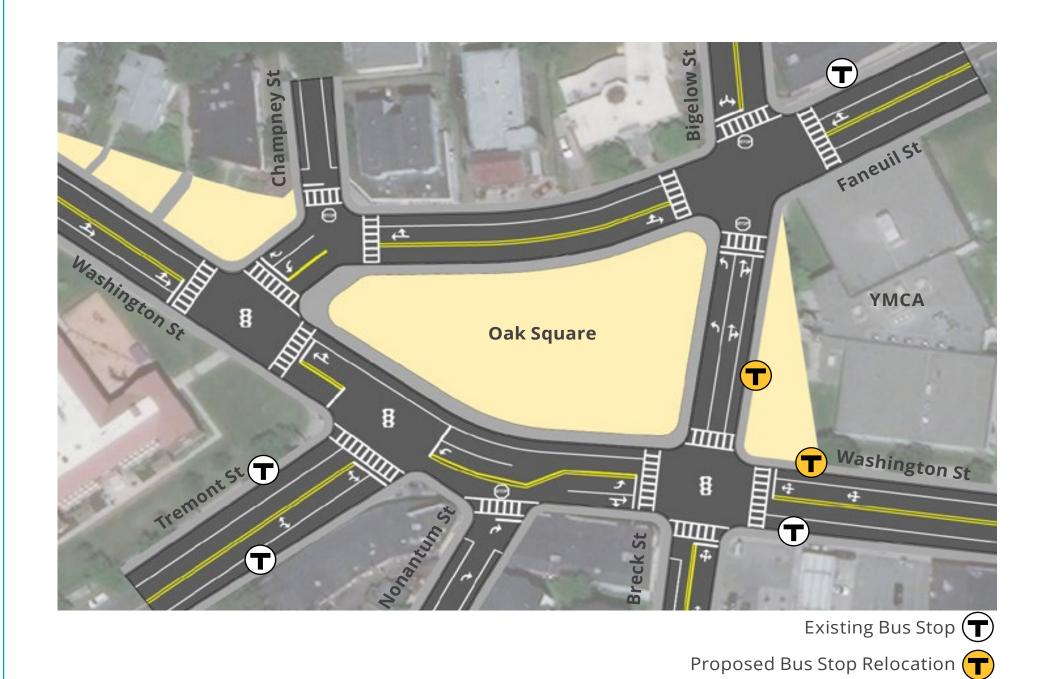
#### **EXISTING**





#### REALIGNING FANEUIL STREET AND WASHINGTON STREET

Option B proposes to realign Faneuil Street and Washington Street to simplify vehicle movements, improve circulation, and enhance pedestrian access to Oak Square. Excess and new roadway space from the re-design will be re-purposed to provide additional placemaking opportunities. Bicycle accommodations can be implemented based on the selected A-B Multimodal Corridor option. Additionally, Option B proposes relocating bus stops on the 57 and 64 routes to facilitate transfers and/or route selection for passengers heading to Union Square.



#### **PLACEMAKING**

As in Option A, Option B creates a more significant central green space that provides better opportunities for gathering and rationalizes travel through the square. A similar amount of pedestrian space is created compared to Option A, but instead of serving the Community Center it fronts residences and, to a limited extent, retail on the south side of the square. The irregular shape of the open space could provide justification of a wider range of uses dependent on location. Pedestrians have more direct through-access along Washington Street.

#### Long-Term Placemaking Option



#### Long-Term Placemaking Examples









## PERFORMANCE MEASURES ¥



## Union Square

#### **Existing Conditions & Analysis**

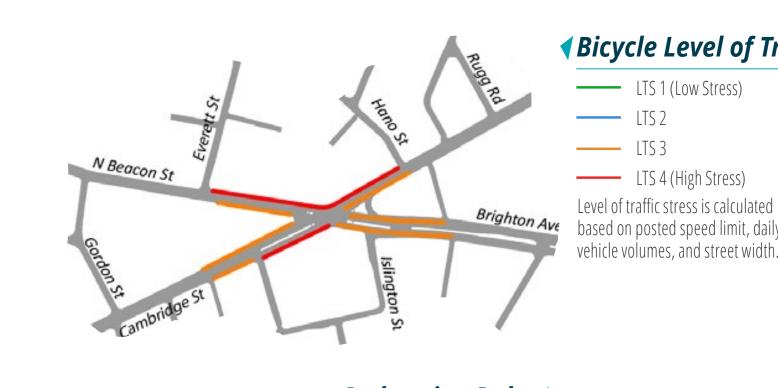


Pedestrian signals in Union Square only get

people to medians and islands, not all the way

across the intersection, in a single phase

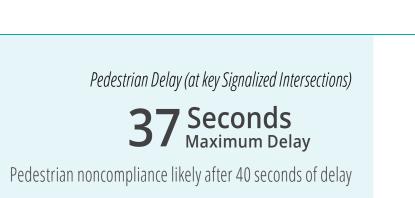
January Open House – 01/30/19





LTS 4 (High Stress)



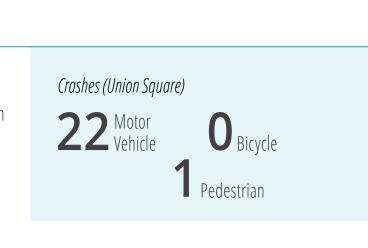






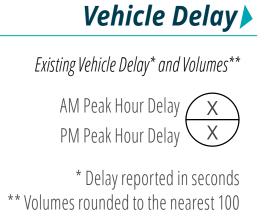


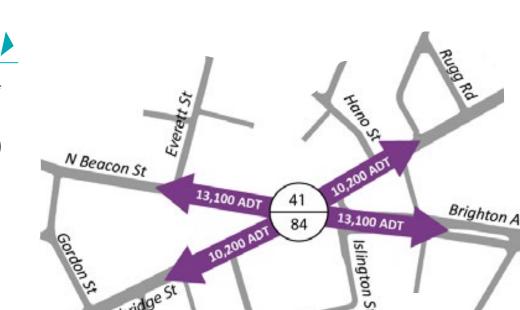




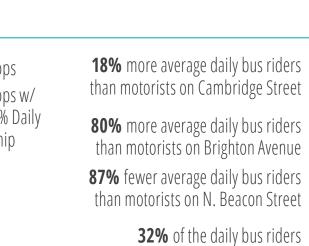


Minutes

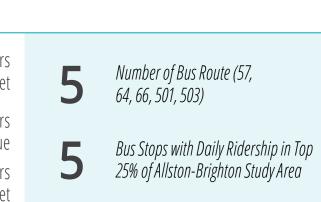








travel during peak periods



#### Recommendations & Options

**Activate public spaces** 

Jazz up the side of Jackson Mann with

murals and art to activate space

Area 2 Workshop – Tavern Allston – 02/28/19

#### **EXISTING \***



Brighton Ave looking West



Cambridge St looking North

Source: Google Streetview



#### **PERFORMANCE MEASURES ¥**

Safety	
Pedestrian Comfort	No Change  ↑ Better
Bicyclist Comfort	Better  Better
Transit	
Parking	• OOO Jawassa

Improve vehicle traffic safety and reduce delay

Peds are pushed into the street

when buses queue at Jackson Mann

Area 2 Workshop – Tavern Allston – 02/28/19

Low visibility when turning right from

Cambridge St onto Brighton Ave

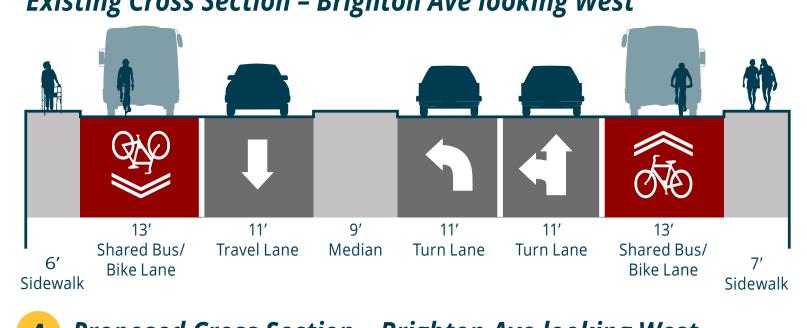
Area 2 Workshop – Tavern Allston – 02/28/19

#### **INTERSECTION REALIGNMENT**

This option proposes to redistribute the travel lanes on the east leg of Brighton Avenue. The proposed lane configuration removes the median on the east leg to allow westbound and eastbound left turning motorists to go simultaneously. The reconfiguration shortens the pedestrian crossing distance and allows pedestrians to cross each approach in one stage. Longterm options should consider re-aligning the intersection to remove the skew and improve operations. Placemaking elements are proposed to promote a sense of community and activate the existing space. Additionally, this options proposes the removal of the eastbound bus stop on Brighton Avenue.



Existing Cross Section - Brighton Ave looking West



A Proposed Cross Section – Brighton Ave looking West

- - - Maintains existing parking supply

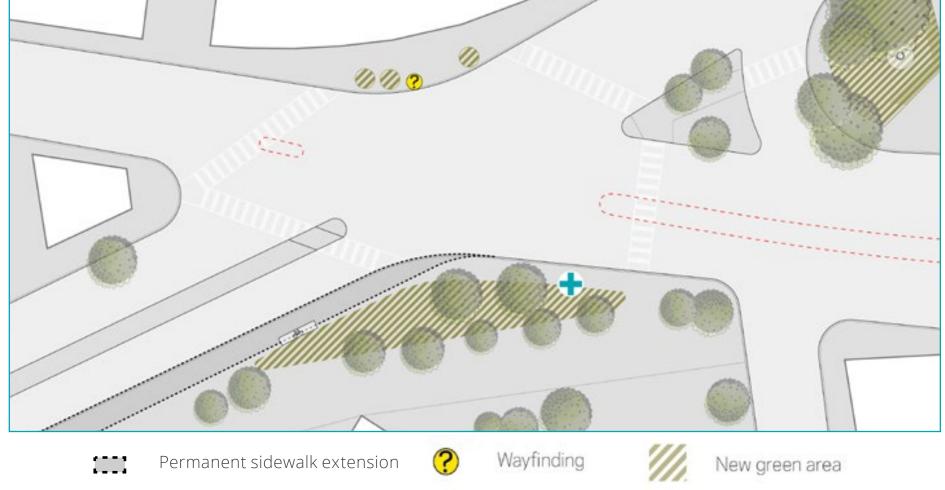


#### **PLACEMAKING**

Near-term investments at Union Square should focus on the plaza outside Jackson/Mann K-8 School. The addition of raised planters closer to the intersection would add green space, with areas for sidewalk art and pop-up activities along the former busway.

Many of the near-term interventions can be used as pilots for larger, long-term improvements. Temporary planters should be converted to full planting areas and rain gardens, and pop-up or sidewalk art make way for a more permanent landmark public art installation in the plaza.

#### **Placemaking Options**



#### Quick-Build Placemaking Examples

BlueBikes station



Long-Term Placemaking Examples





Public art piece Previous sidewalk removed



## FAS Bike Facility

(Faneuil St, Arlington St, Sparhawk St)

#### **Existing Conditions & Analysis**



#### WHY?

Provide a comfortable and safe bicycle facility that parallels the Cambridge Street and **Washington Street Multimodal Corridor** 

07/22/19

**Complement Option C - Peak Period Bus Lanes** proposed for the Multimodal Corridor

Add bike lanes down the middle [of Cambridge St] Open House Kick-Off Meeting 09/12/18 Need bike lanes along the **Multimodal Corridor** Community Update #1

Better bike facilities on Washington Area Workshop – Brighton Public Library







#### **Recommendations &** Options

#### **EXISTING**

Arlington St looking West Towards Oak Square



Arlington St/S Hobart St

Source: Google



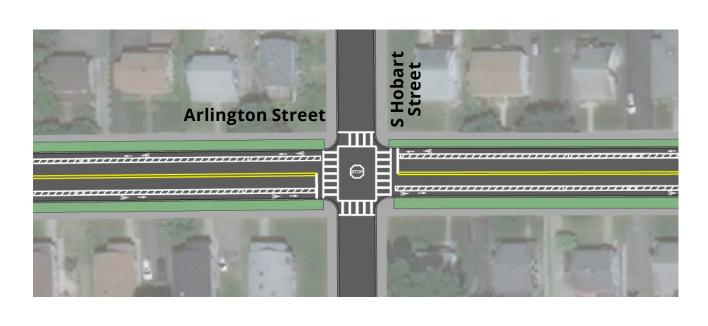
Existing Cross Section Parking Travel Lane Travel Lane Parking

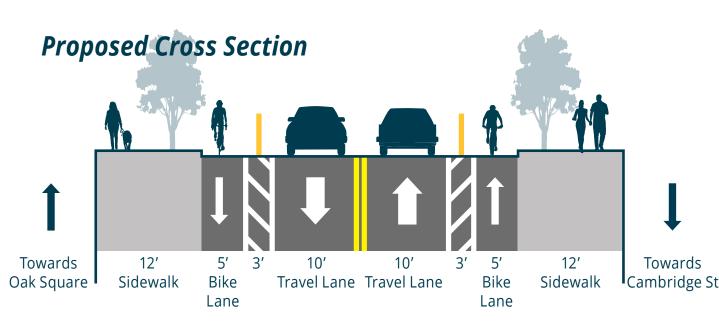
## OPTION

#### SEPARATED BIKE LANES

Option A proposes separated bike lanes on Faneuil Street, Arlington Street, and Sparhawk Street. Separated bike lanes are for exclusive use of bicyclists and provide added separation that enhances the experience of bicycling on urban streets. The width of the separated bike lanes will vary depending on the street's cross section and will not be feasible where the existing cross section on the corridor is less than 34 feet.

The proposed FAS Bike Facility options complement Option C -Peak Period Bus Lanes for the AB Multimodal Corridor

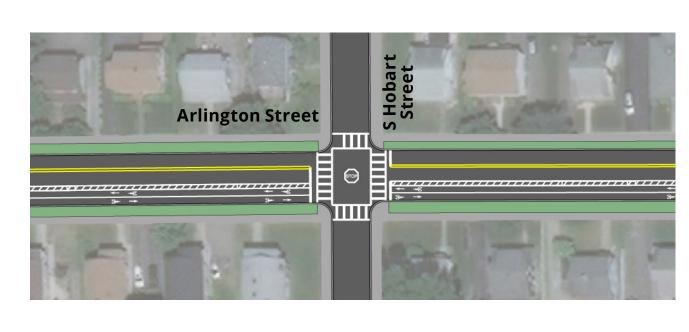


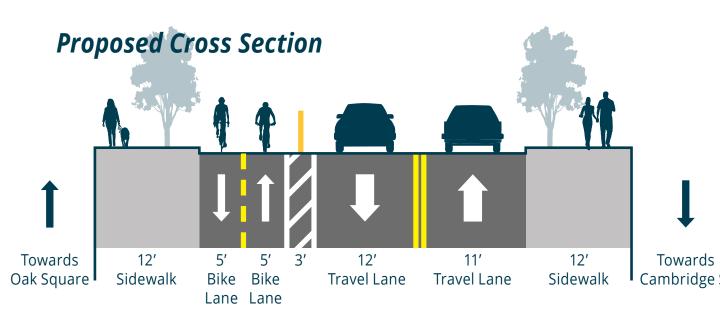




#### TWO-WAY CYCLE TRACK

Option B proposes a two-way cycle track on Faneuil Street, Arlington Street, and Sparhawk Street. Cycle tracks are for exclusive use of bicyclists and provide added separation that enhances the experience of bicycling on urban streets. Two-way cycle tracks are typically installed on streets where the necessary roadway space for separated bike lanes on both sides of the street is limited. The width of the two-way cycle track will vary depending on the street's cross section and will not be feasible where the existing cross section on the corridor is less than 31 feet.



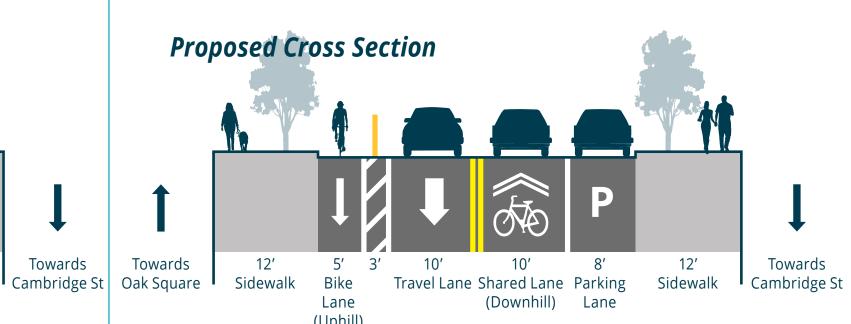




Option C proposes a separated, climbing bike lane on the uphill sections of Faneuil Street, Arlington Street, and Sparhawk Street. Climbing bike lanes provide

added separation and improve comfort on uphill roadway sections. Shared lane markings would be installed on the downhill sections. The width of the climbing lane will vary depending on the street's cross section and will not be feasible where the existing cross section on the corridor is less than 27 feet.



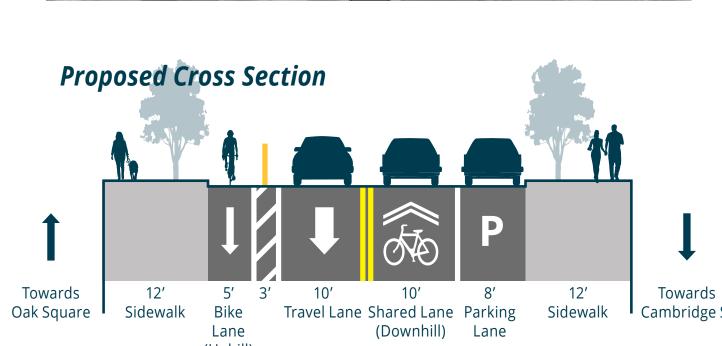


#### **PERFORMANCE MEASURES ₹**

Safety			
Pedestrian Comfort	NoChange  ↑ Better		
Bicyclist Comfort	Detter		
Transit			
Parking	V Worse	•000	
Vehicle Delay	✓ worse		

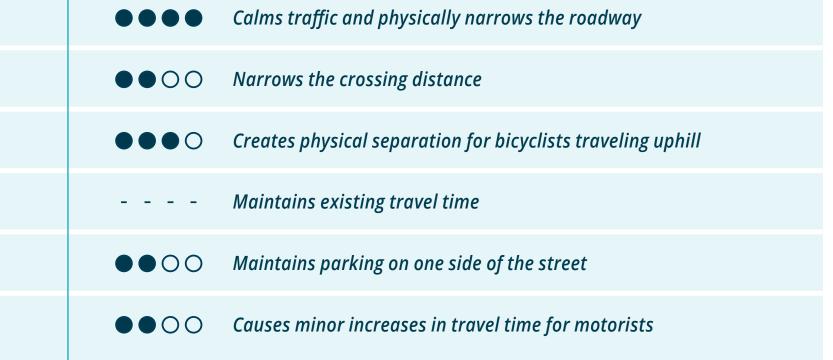
#### **FEASIBLE LOCATIONS FOR OPTIONS ₹** All Options Feasible Only Option C Feasible S Hobart Street

	Stage			ш	S
••••	Calms traffic and physically narrows the roadway	••••	Calms traffic and physically narrows the roadway	••••	Calms traffic and
•••0	Narrows the crossing distance	•••0	Narrows the crossing distance	••00	Narrows the cro
••••	Creates physical separation throughout the corridor	••••	Creates physical separation throughout the corridor	•••0	Creates physical
	Maintains existing travel time		Maintains existing travel time		Maintains existi
•000	Re-purposes existing parking spaces on both sides of the street for separated bike facilities	•000	Re-purposes existing parking spaces on both sides of the street for separated bike facilities	••00	Maintains parki
••00	Causes minor increases in travel time for motorists	••00	Causes minor increases in travel time for motorists	••00	Causes minor in





**ELEVATION** 





# Allston Village

Brighton Avenue

Harvard Avenue

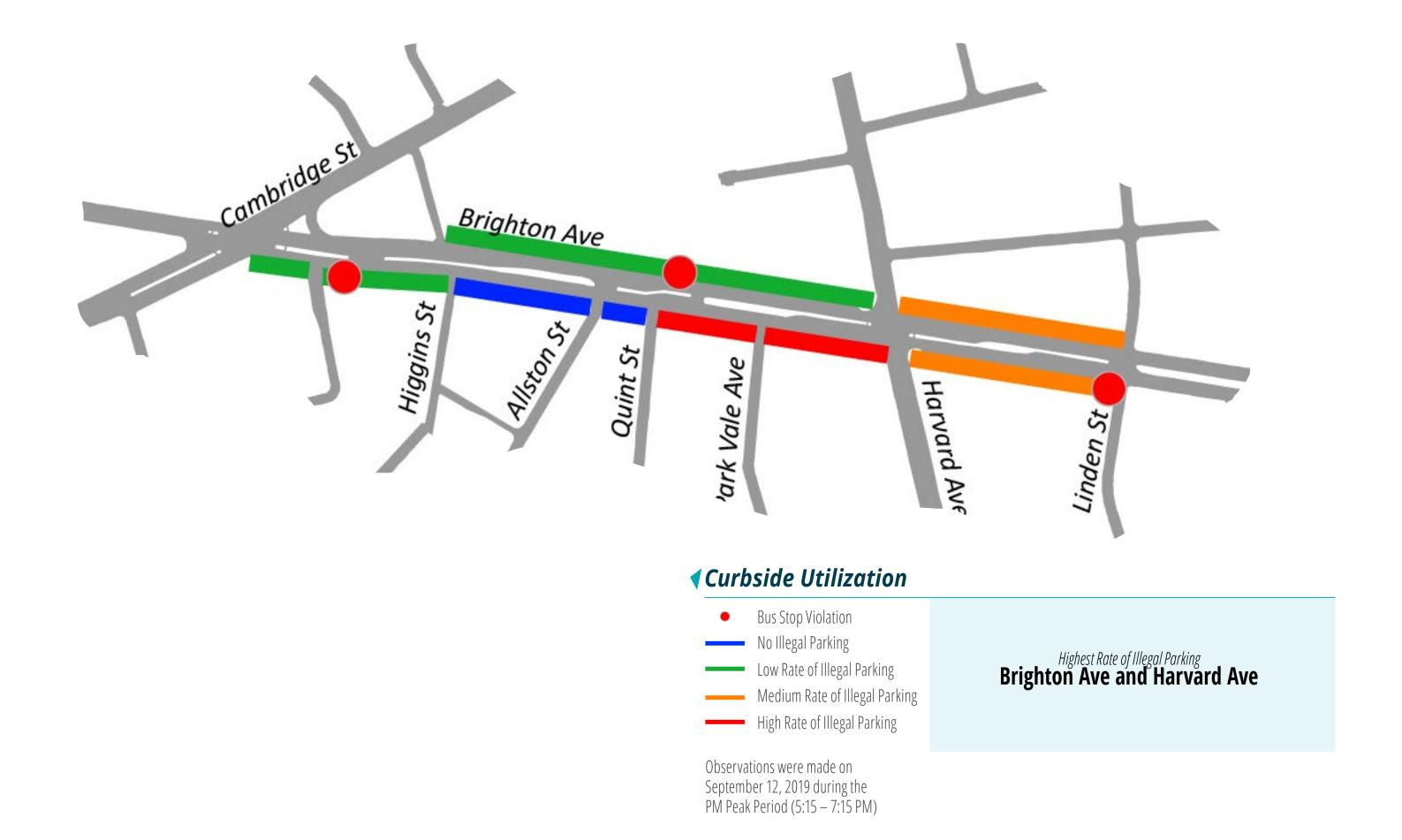
Franklin Street Bridge

## Brighton Avenue

### **Existing Conditions & Analysis**



#### WHY? Reduce transit delays Reallocate curbside parking to provide space for other uses (e.g., short-term parking, loading/unloading, deliveries, etc.) Blocked Bus Stops on Brighton Ave @ Harvard Ave -Delivery trucks use the existing eastbound, far side bus Pick-up/drop-off on north side of Brighton stop on Brighton Ave regularly. This blocks bus users Ave between Harvard Ave and Linden St from boarding and alighting at the designated stop. Open House Kick-off Meeting 09/12/18 January Open House 01/30/19 On the outbound side of Brighton Ave [at Harvard St] there are constantly cars double parked in the right lane. This double parking in an active lane of traffic causes congestion and problems for all. Community Member Email Bus only travel lanes on Brighton Ave during rush hour January Open House 01/30/19



#### Recommendations & **Options**

#### **EXISTING \***



Existing Bus Stop



**Brighton Ave looking East** 

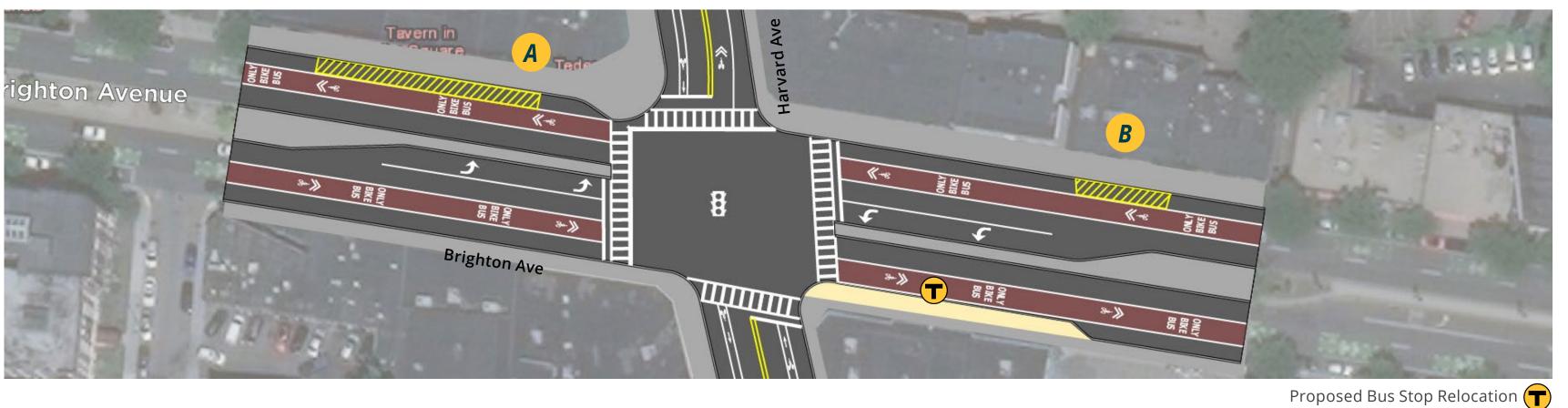


#### **PERFORMANCE MEASURES ₹**

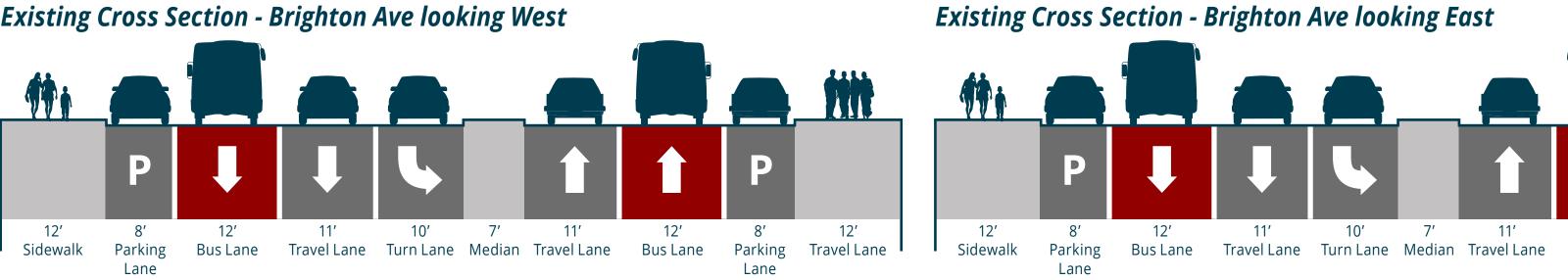
Safety	
Pedestrian Comfort	No Change
Bicyclist Comfort	Better
Transit	••••
Parking	• O O O Worse
Vehicle Delay	

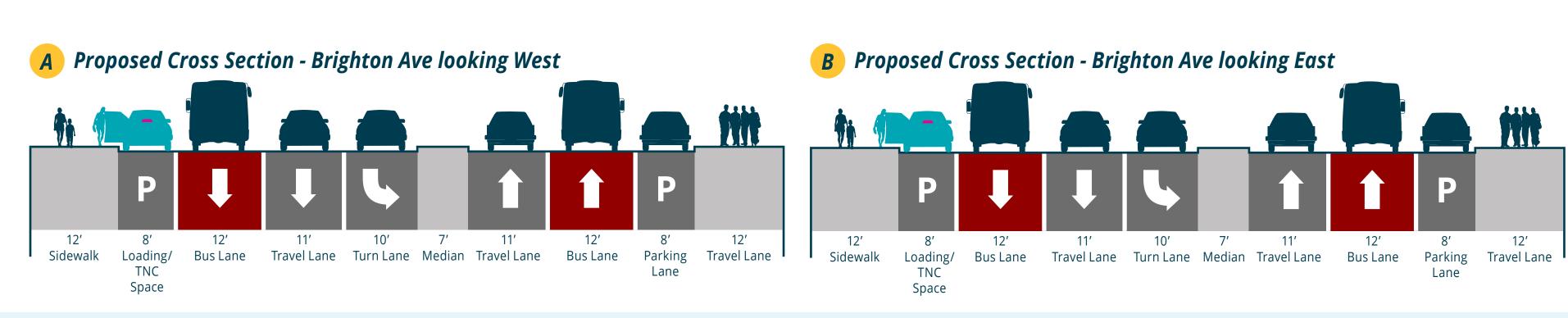
#### **FLEX ZONES**

This option proposes re-purposing existing parking spaces to develop flexible curb zones. Rather than designating fixed uses for all portions of the roadway, flex zones accommodate different functions along segments of the road. Flex zones can serve short-term parking, loading/ unloading, deliveries, or TNC drop-off/pick-up. The flex zones highlighted below have been identified by BTD as loading/TNC zones. In addition, a 15 Minute Limit parking spot in front of Dunkin' Donuts has been identified by BTD. The existing near side eastbound bus stop is proposed to be relocated far side. A bus bulb out is proposed to improve bus operations. Finally, the feasibility of center-running dedicated bus lanes on Brighton Ave should be analyzed to determine if additional roadway space can be re-purposed for other uses (e.g., separated bike lanes).



Existing Cross Section - Brighton Ave looking West





•••0	Improves safety related to curbside loading activities
	Maintains existing pedestrian infrastructure
	Maintains existing bicycle infrastructure
•••0	Improves transit speed and reliability by reducing double parking
•••0	Improved turnover and availability of parking near business
•••0	Improved vehicle travel time on through streets by reducing double parking



## Harvard Avenue

#### **Existing Conditions & Analysis**



#### WHY?

- **Double parking and loading slows traffic**
- Major transit corridor but often very slow

Need for short-term parking





#### Recommendations & **Options**

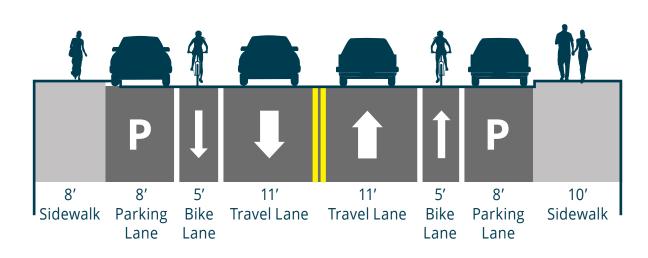
#### **EXISTING \***



Existing Bus Stop Source: Google



Source: Google Streetview **Existing Cross Section** 



#### **PERFORMANCE MEASURES ₹**

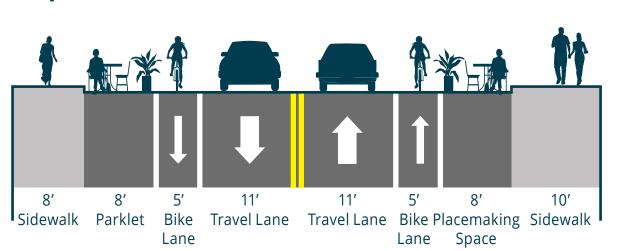
		Safety
	No Change  ↑ Better	Pedestrian Comfort
	Detter	Bicyclist Comfort
••••		Transit
•000	↓ Worse	Parking
		Vehicle Delay

#### **BUS STOP RELOCATION AND CURB EXTENSIONS**

Option A proposes relocating the existing bus stop pair on Harvard Avenue south of Brighton Avenue and re-purposing the space with curb extensions. Curb extensions are created by extending the sidewalk at corners to increase safety, calm traffic, and provide space for placemaking. Short and long-term placemaking options are discussed in greater detail in the section to the right. The existing bus stop pair would be relocated to the corner of Harvard Avenue and Commonwealth Avenue.



**Proposed Cross Section** 

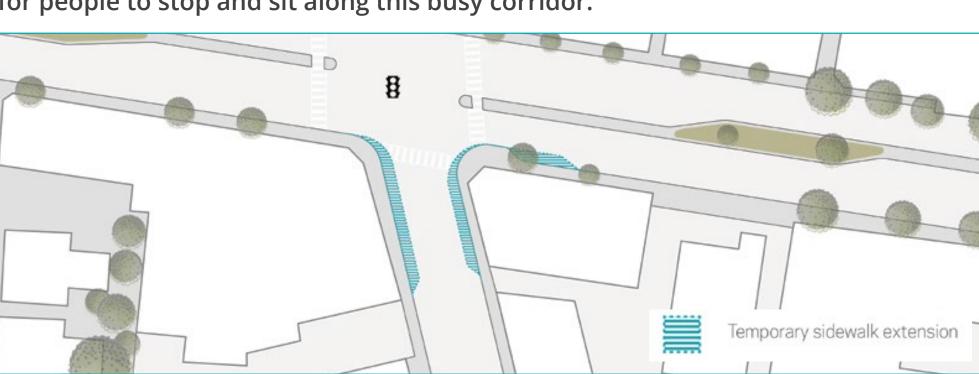


#### ■ ■ ○ Calms traffic and physically narrows the intersection • • • O Provides additional space for pedestrians and narrows the crossing distance Maintains existing bicycle infrastructure ● ● ○ Bus stop relocation reduces passenger delay ● ● ○ ○ Maintains existing parking except near bus stop relocation ● ● ○ ○ Causes minor increases in travel time for motorists

#### **PLACEMAKING**

#### **Quick-Build Placemaking Option**

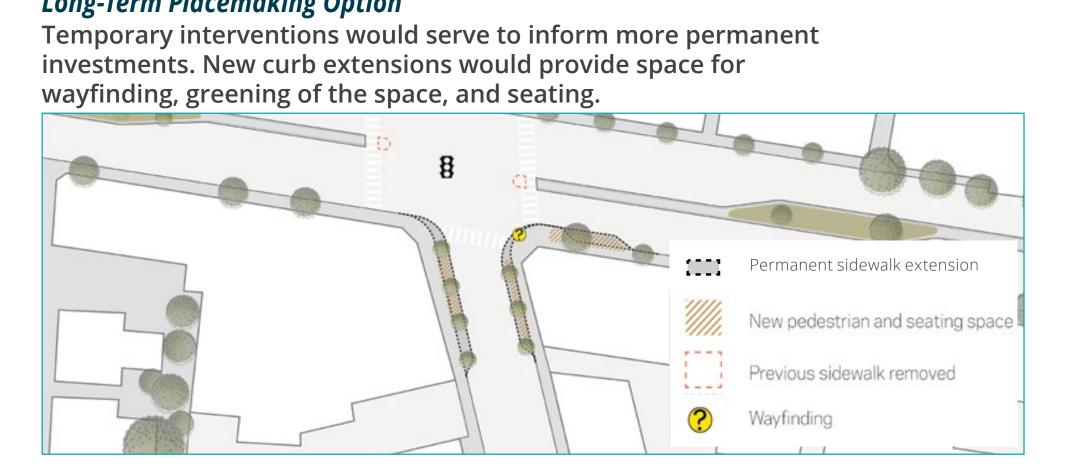
Using paint, develop temporary curb extensions to improve safety, create more pedestrian areas, and provide more places for people to stop and sit along this busy corridor.



Quick-Build Placemaking Examples



Long-Term Placemaking Option











## Harvard Avenue - Continued

#### Recommendations & **Options**

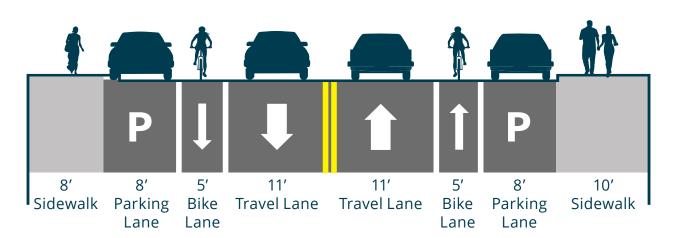
#### **EXISTING \***



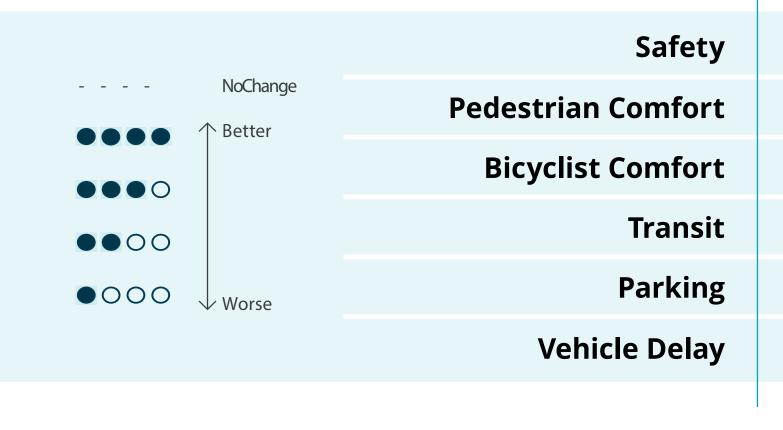
Harvard Ave looking North



**Existing Cross Section** 



#### **PERFORMANCE MEASURES ₹**

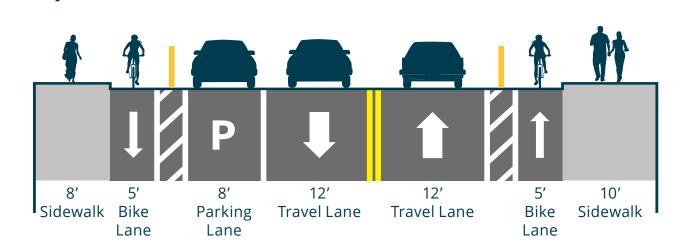




Option B proposes separated bike lanes on Harvard Avenue from Commonwealth Avenue to Cambridge Street. Harvard Avenue is an important street for bicyclists because it provides direct north/south access. Separated bike lanes are for the exclusive use of bicyclists and provide added separation that enhances the experience of bicycling on urban streets. On-street parking would be removed from one side of the street to provide physical separation and improve comfort for bicyclists.



**Proposed Cross Section** 



■ ■ Calms traffic and physically narrows the roadway

■ ■ ■ Creates physical separation throughout the corridor

■ ○ ○ ○ Causes minor increases in travel time for motorists

Maintains existing travel time

● ○ ○ ○ Maintains parking on one side of the street

● ● ○ Narrows the crossing distance

## **DEDICATED BUS LANES AND PEDESTRIAN PLAZA**

Option C proposes dedicated bus lanes and a pedestrian plaza on Harvard Avenue between Commonwealth Avenue and Brighton Avenue. This portion of Harvard Avenue would be closed to vehicular traffic except to allow access to the Allston Public Parking lot and Glenville Terrace. Deliveries to commercial areas would be permitted during off-peak hours. Dedicated bus lanes make it possible to increase the frequency and reliability of bus service, as well as increase bus ridership. A quick-build option would be to provide a dedicated peak period bus lane in the northbound direction.

The new open space can create more pedestrian areas and provide places for people to stop and sit along this busy corridor. The many restaurants would benefit from outdoor seating that would enhance business and the pedestrian experience.



Long-Term Placemaking Examples







NOTE: Deliveries on Harvard Ave are permitted during off-peak hours.

Proposed Bus Stop Relocation 🕇

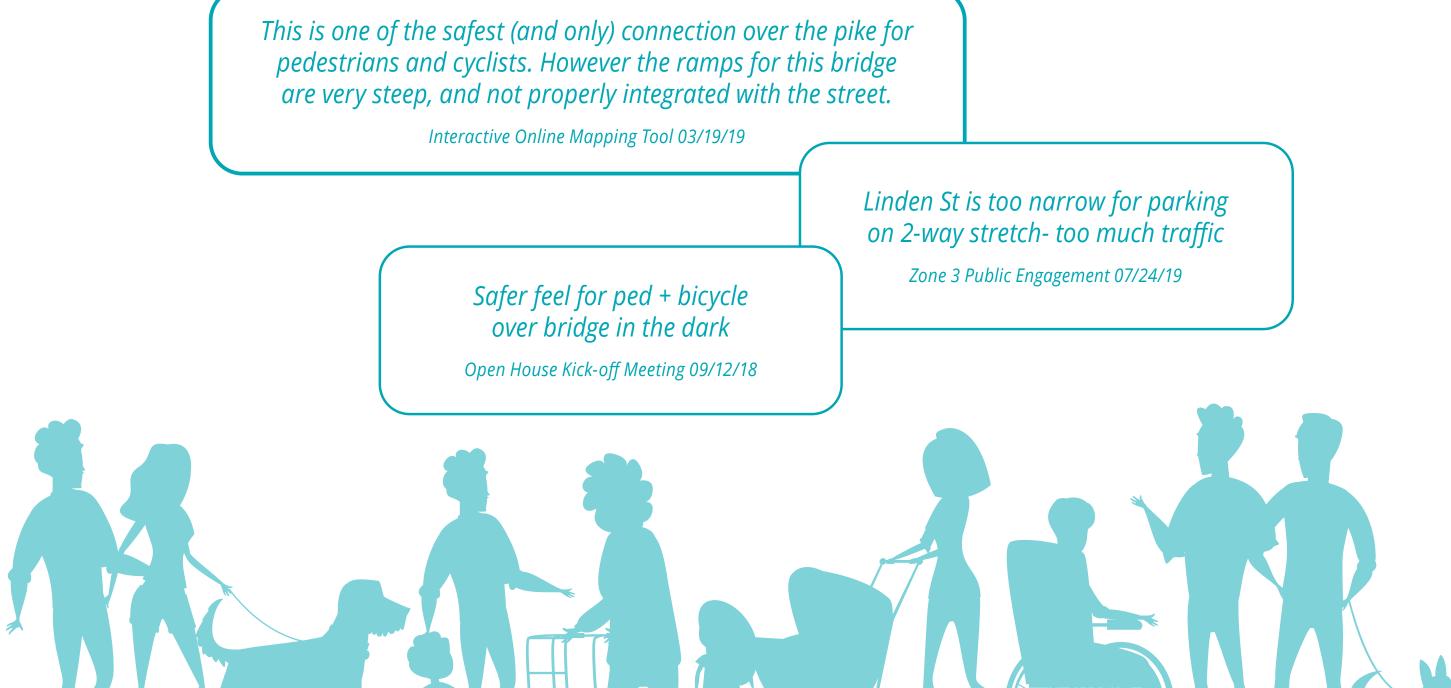
••••	Calms traffic and physically narrows the roadway
••••	Creates additional pedestrian areas with limited vehicular exposure
••00	Creates a shared bus/bike lane with limited motor vehicle interactions
••••	Improves travel time and reliability by providing dedicated bus lanes
•000	Maintains access to existing public parking lot
•000	Causes vehicle delay associated with traffic diversion

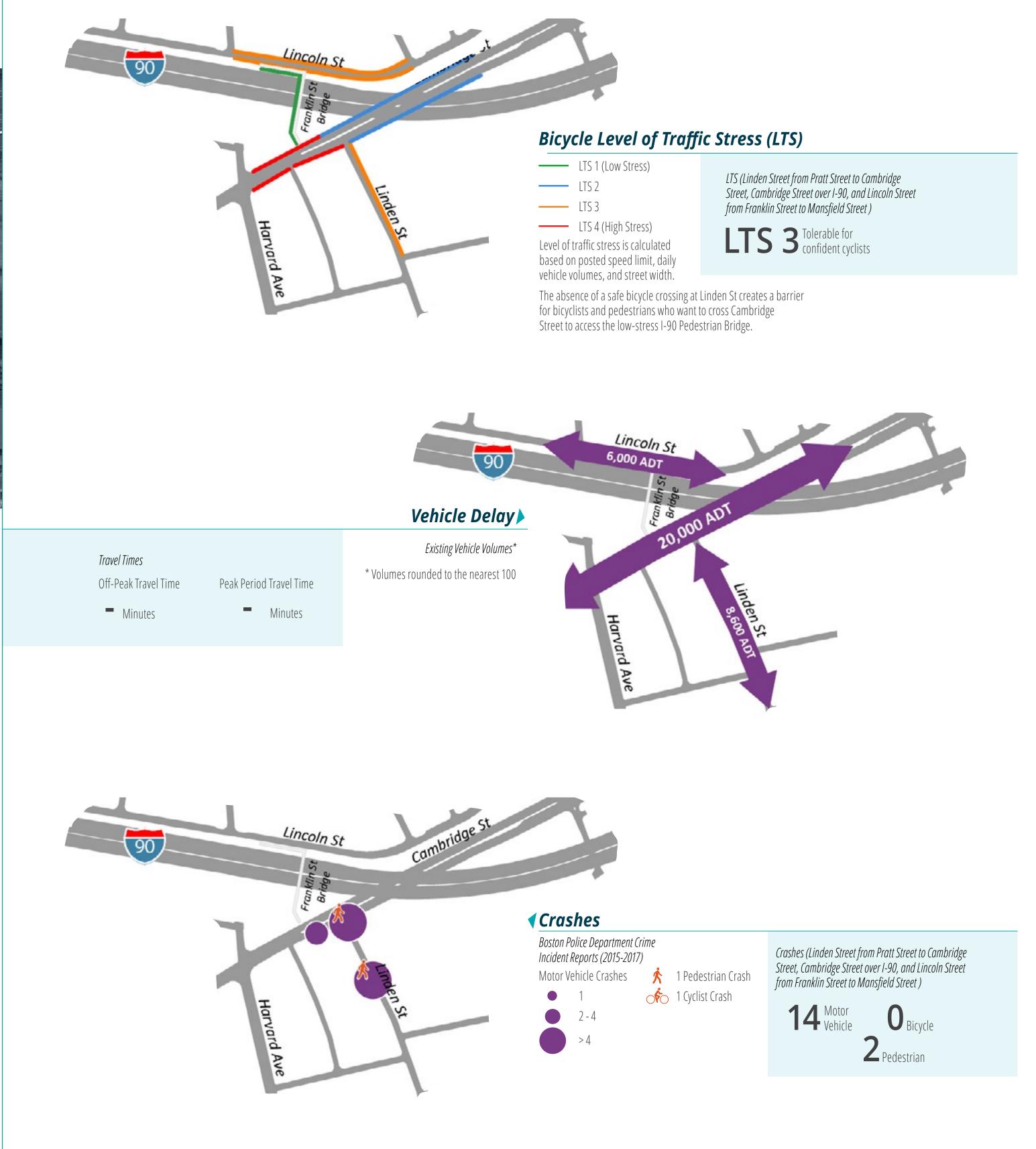
## Franklin Street Bridge

#### **Existing Conditions & Analysis**









#### Recommendations & Options

#### **EXISTING \***



Franklin St Bridge - View from Cambridge St



Source: Google Streetview



#### **PERFORMANCE MEASURES ₹**

Source: Google Streetview

Safety	
Pedestrian Comfort	No Change  Better
Bicyclist Comfort	
Transit	
Parking	Worse
Vehicle Delay	

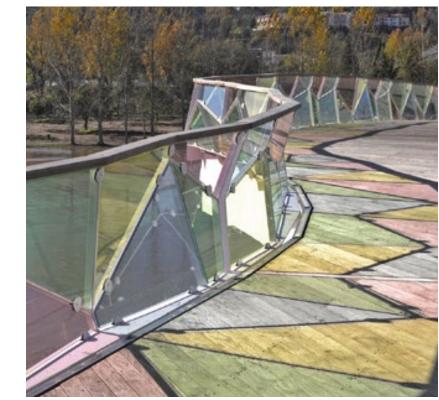
#### FRANKLIN STREET BRIDGE **PLACEMAKING**

This concept proposes pathway illumination, pedestrian lighting, and public art to improve safety, facilitate pedestrian and bicycle access, and reinforce a sense of place.

#### Placemaking Examples







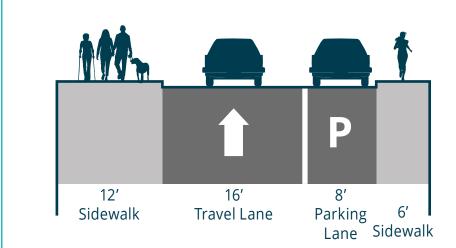


## LINDEN STREET TWO-WAY TRAFFIC

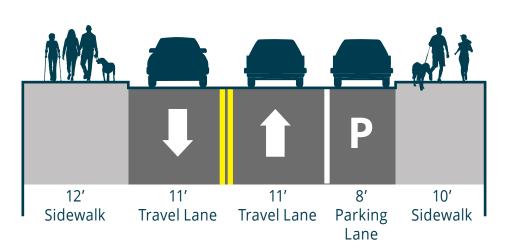
This concept proposes two-way traffic on Linden Street to improve motorist operations and circulation. The existing median permits right-in right-out movements from and onto Cambridge Street and reduces the frequency and severity of conflicts. Long-term plans should consider signalization of the intersection, as well as pedestrian and bicycle facilities across Cambridge Street.



**Existing Cross Section** 



#### **Proposed Cross Section**



Provides additional illumination and enhance security	● ○ ○ ○ Introduces two-way traffic and extends the roadway
Maintains access across I-90	Coc Extends the crossing distance
Maintains physical separation for bicyclists	Maintains existing conditions
Maintains existing transit infrastructure - no transit on the Franklin Street Bridge	Maintains existing travel times - no transit on the Linden Street
Maintains existing parking supply - no parking on the Franklin Street Bridge	Maintains existing parking supply
Maintains existing vehicle delay - no vehicles on the Franklin Street Bridge	● ● ○ Improves access and travel time for motorists



# North of the Pike

Lincoln Street

Leo Birmingham
Parkway

Soldiers Field Road Crossings WHY?

Slow vehicle speeds

Increase comfort and safety of pedestrian crossings

Speeding on Lincoln St

Area Workshop - Florentino Community Center 02/13/19

Revisit one-way discussion [at

Lincoln Street west of Portsmouth

Street] previously had with BTD

Area Workshop - Florentino Community Center 02/13/19

Full separated bike lane

for length of Lincoln St

Area Workshop - Florentino Community Center 02/13/19

## Lincoln Street

#### **Existing Conditions & Analysis**



Improve vehicle circulation

Reduce cut-through traffic

What can be done to calm

traffic on Lincoln Street?

Community Update #1 07/22/19

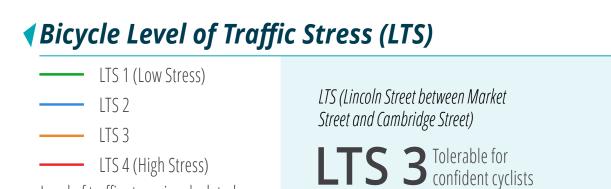
Sight distance issues

on Lincoln Street at

many intersections

Community Update #1 07/22/19





#### Pedestrian Delay

Pedestrian Delay (at key Signalized Intersections) 34 Seconds
Maximum Delay Pedestrian noncompliance likely after 40 seconds of delay

AM Peak Hour Delay X PM Peak Hour Delay X Pedestrian delay is calculated using cycle length and the effective (Source: HCM 2000)





vehicle volumes, and street width.

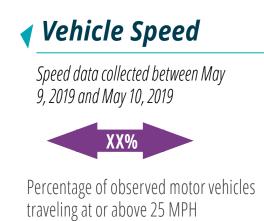




Vehicle Delay Existing Vehicle Delay\*, Volumes\*\*, and Peak/Off-Peak Travel Times AM Peak Hour Delay X PM Peak Hour Delay X \* Delay reported in seconds \*\* Volumes rounded to the nearest 100







Number of Observed Motor Vehicles Traveling at or above than 25 MPH east of Portsmouth Street 4,200

\*Vehicles rounded to the nearest 100

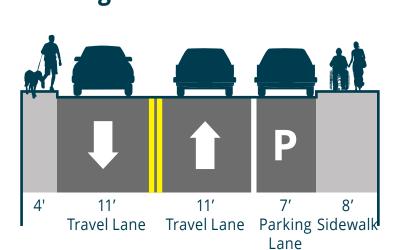
#### Recommendations & **Options**

#### **EXISTING \***

Lincoln St looking West



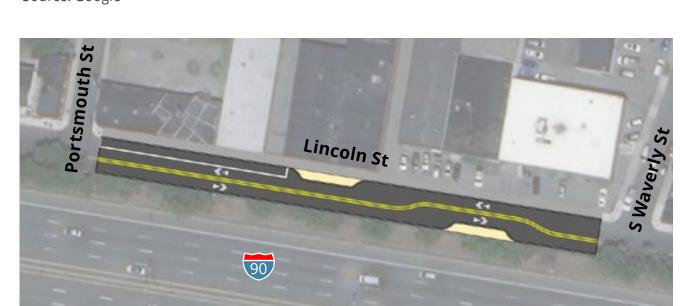
**Existing Cross Section** 



### CONCEPT **CHICANES**

This concept proposes chicanes throughout Lincoln Street. A chicane is a horizontal deflection in the road created by offsetting parking or adding offset curb extensions. They are designed to slow traffic and potentially discourage cut-through traffic. An example of a chicane between Portsmouth Street and S Waverly Street is provide below.



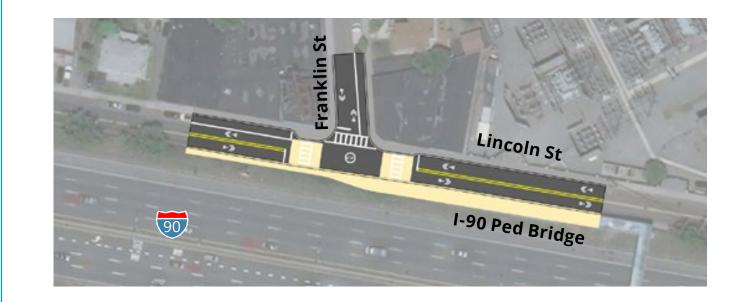


Long-term concepts on Lincoln Street should consider the feasibility of using existing MassDOT right of way on the south side of the street for a separated bicycle facility.

#### I-90 PED BRIDGE ACCESS **IMPROVEMENTS**

This concept proposes improvements to the access ramps for the Franklin Street Ped Bridge on Lincoln Street. In addition to widening the landing, this concept proposes a raised intersection at Lincoln Street and Franklin Street to increase safety and calm traffic. This concept can be implemented in conjunction with the chicanes and the two-way conversion at Market Street.





#### **ONE-WAY TO TWO-WAY CONVERSION** LINCOLN STREET AND **MARKET STREET**

This concept proposes converting Lincoln Street between Market Street and Portsmouth Street from one-way to two-way traffic. At the intersection, the conversion would require additional right-of-way. This concept would improve vehicle circulation and potentially reduce neighborhood cut-through traffic.

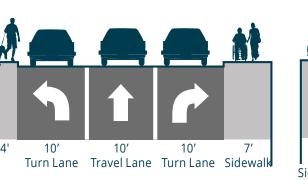




Existing Bus Stop ( Proposed Bus Stop Relocation

Existing Cross Section -Looking West at Lincoln St and Market St

**Proposed Cross Section -**Looking West at Lincoln St and Market St





#### **PERFORMANCE MEASURES ¥**

	Safety	••••	Calms traffic and physically narrows the roadway
No Change  Better	Pedestrian Comfort	••••	Narrows the crossing distance
	Bicyclist Comfort		Maintains existing bicycle infrastructure
••••	Transit		Maintains existing conditions - no transit on Lincoln Street
Worse	Parking		Maintains existing parking supply
	Vehicle Delay	•000	Causes minor increases in travel time for motorists

•••0	Calms traffic	•••0	Calms traffic with two-way conversion
••••	Improves accessibility and makes pedestrians more visible		Maintains existing pedestrian infrastructure
	Maintains existing bicycle infrastructure	•••0	Improves access and reduces wrong way riding
	Maintains existing transit infrastructure - no transit on Lincoln Street		Maintains existing transit infrastructure - no transit on Lincoln Street
	Maintains existing parking supply		Maintains existing parking except near the approaches
••00	Causes minor increases in travel time for motorists	•••0	Improves circulation for motorists



## Leo M. Birmingham Parkway

#### **Existing Conditions & Analysis**

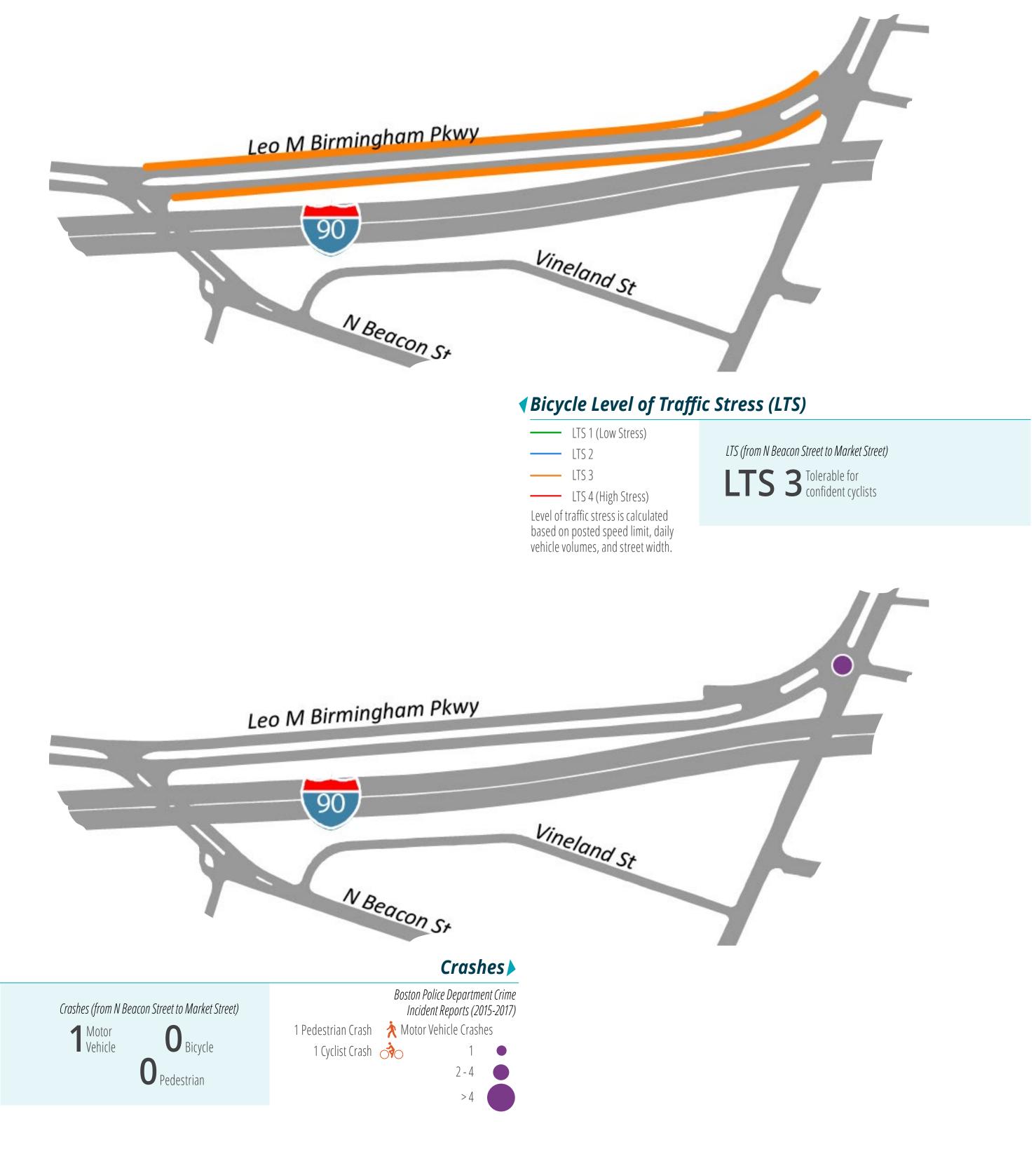


#### WHY?

- Provide comfortable and safe pedestrian facilities
- Provide comfortable and safe bicycle facilities
- Improve comfort and safety of pedestrian crossings

The intersection at Lincoln St and Leo Birmingham Pkwy should have four pedestrian crosswalks. It only has two. Interactive Online Mapping Tool 03/15/19

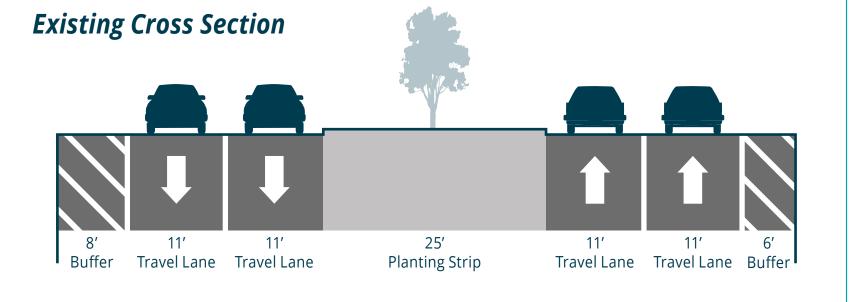




#### Recommendations & **Options**

#### **EXISTING \***

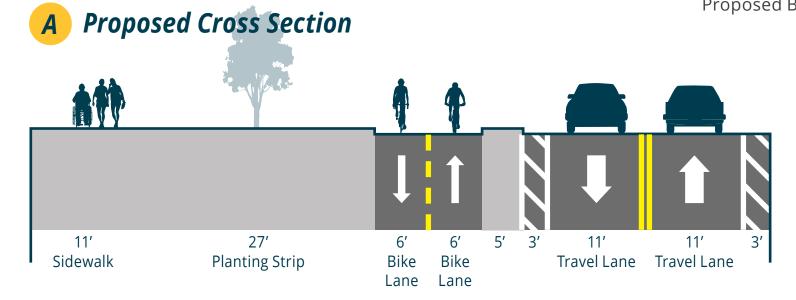




#### **RE-PURPOSE NORTH CARRIAGEWAY**

Option A proposes a road diet on Leo M. Birmingham Parkway. This option closes the north carriageway to vehicular traffic and proposes re-purposing the space for pedestrians, bicycles, and placemaking.

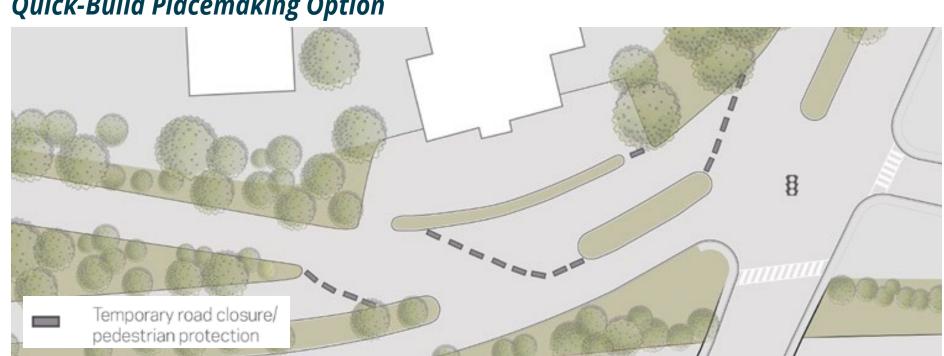




#### **PLACEMAKING**

Using simple traffic barriers, the northern carriageway on Leo M. Birmingham Parkway can be closed off to create new space for bicyclists and pedestrians. These temporary interventions would serve to inform more permanent investment. The pavement behind the barriers could be replaced with new curb, pedestrian space, a two-way separated bicycle facility, and added green space with seating areas.

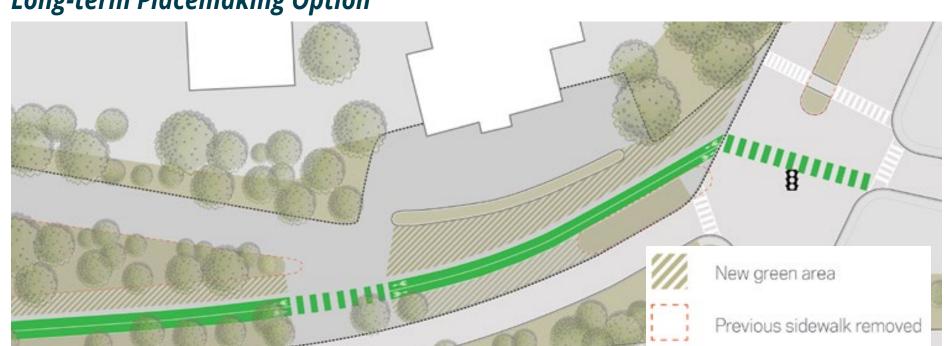
#### **Quick-Build Placemaking Option**



#### Quick-Build Placemaking Example



Long-term Placemaking Option



Long-term Placemaking Examples





#### **PERFORMANCE MEASURES ₹**

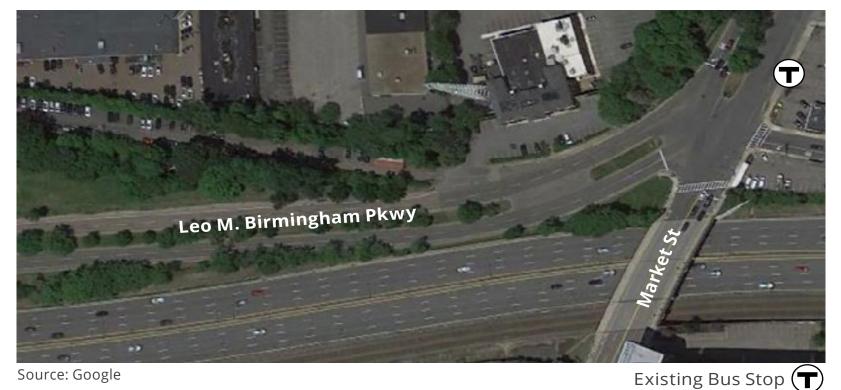
	Safety	••••	Calms traffic and physically narrows the roadway
No Change  Better	Pedestrian Comfort	••••	Narrows the crossing distance and adds sidewalks
	Bicyclist Comfort	••••	Creates physical separation throughout the corridor
	Transit		Maintains existing travel time
• O O O Worse	Parking		Maintains existing parking supply
	Vehicle Delay		Maintains existing travel time for motorists

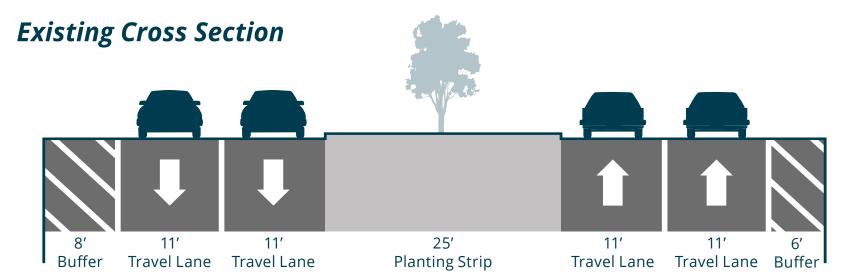


## Leo M. Birmingham Parkway - Continued

## Recommendations & Options

#### **EXISTING \***

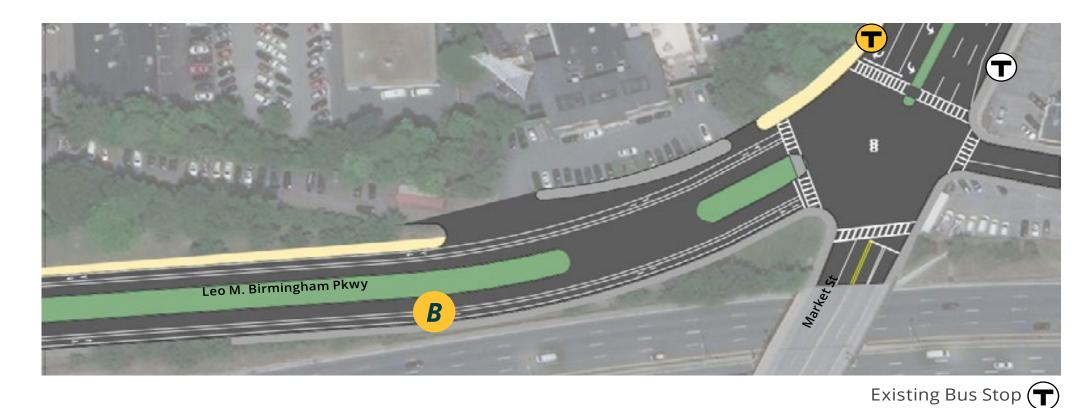


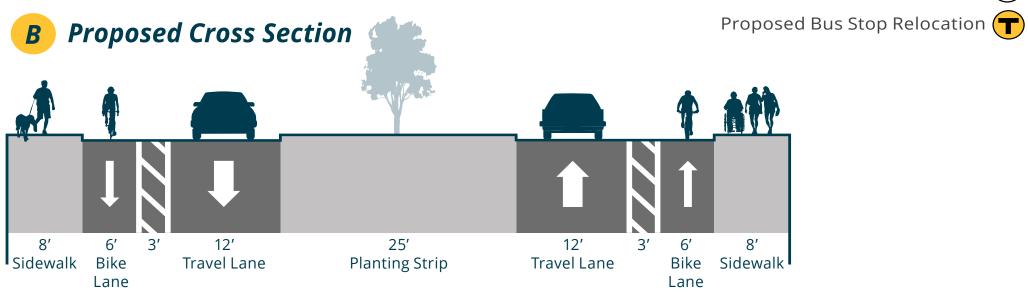




#### SEPARATED BIKE LANES

Option B proposes a road diet on Leo M. Birmingham Parkway. This option reduces the existing roadway configuration from two to one lane per direction, adds sidewalks on either side, and installs separated bike lanes. Unlike option A, this Option does not provide space for placemaking.



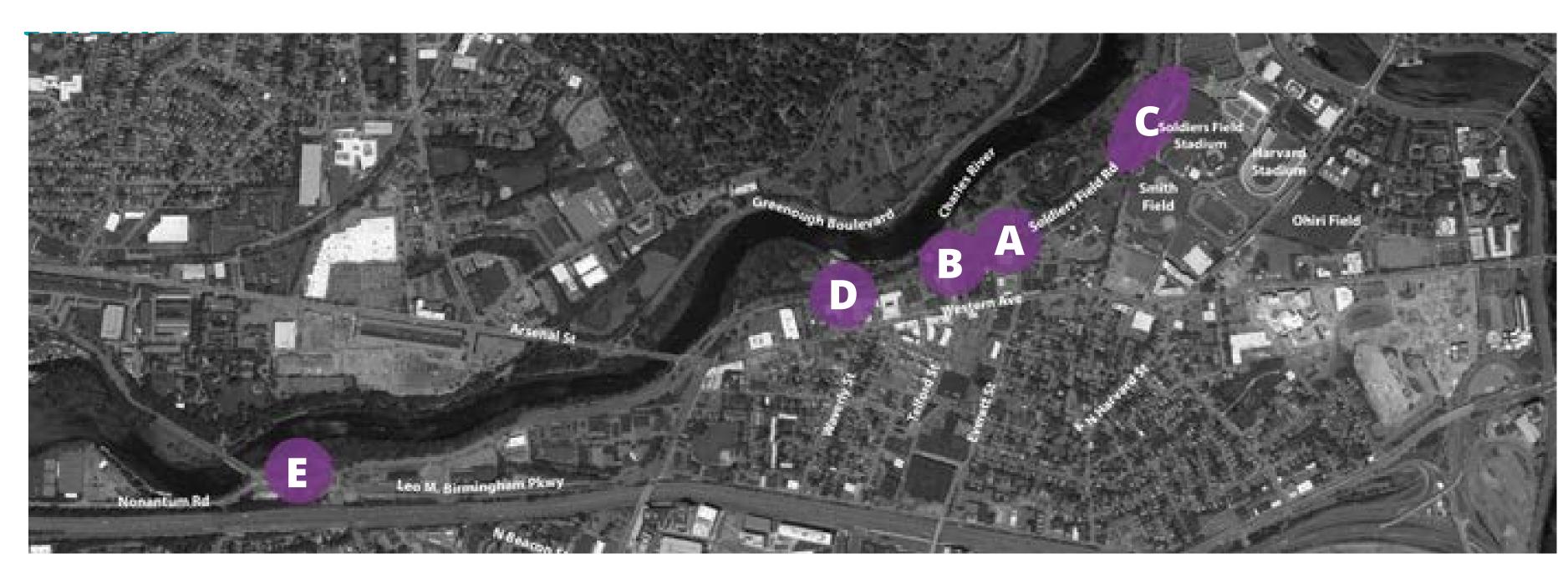


#### PERFORMANCE MEASURES ¥



••••	Calms traffic and physically narrows the roadway
••••	Narrows the crossing distance and adds sidewalks
••••	Creates physical separation throughout the corridor
	Maintains existing travel time
	Maintains existing parking supply
	Maintains existing travel time for motorists

## Soldiers Field Road



#### WHY?

- Improve comfort and safety of bicycle crossings
- Improve comfort and safety of pedestrian crossings

More ped overpasses
-difficult to cross!

Open House Kick-off Meeting 09/12/18

Need at grade cross walk

Open House Kick-off Meeting 09/12/18

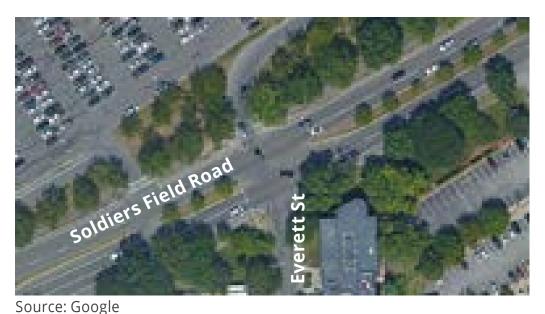
Improve bike crossing to Charles river greenway

Open House Kick-off Meeting 09/12/18





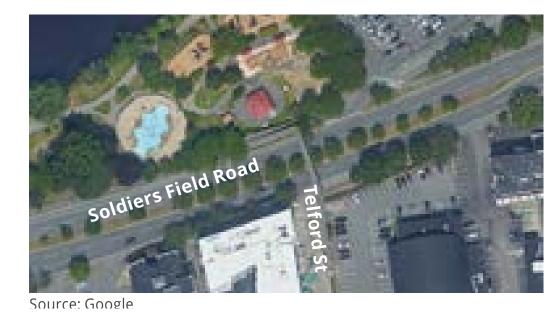
#### **EVERETT STREET INTERSECTION**







#### TELFORD STREET PEDESTRIAN BRIDGE





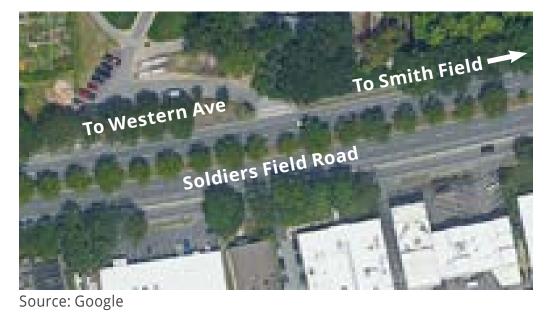
SMITH FIELD





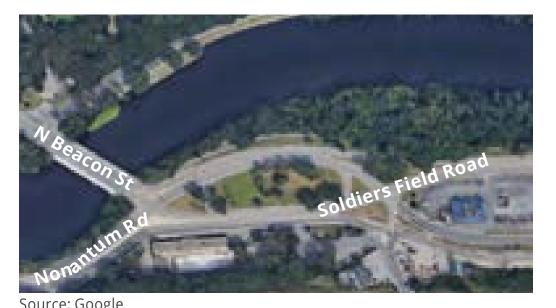
Source: Google Street







N BEACON ST/SOLDIERS FIELD/
NONANTUM RD







# Bicycle Network

Bicycle Network Map

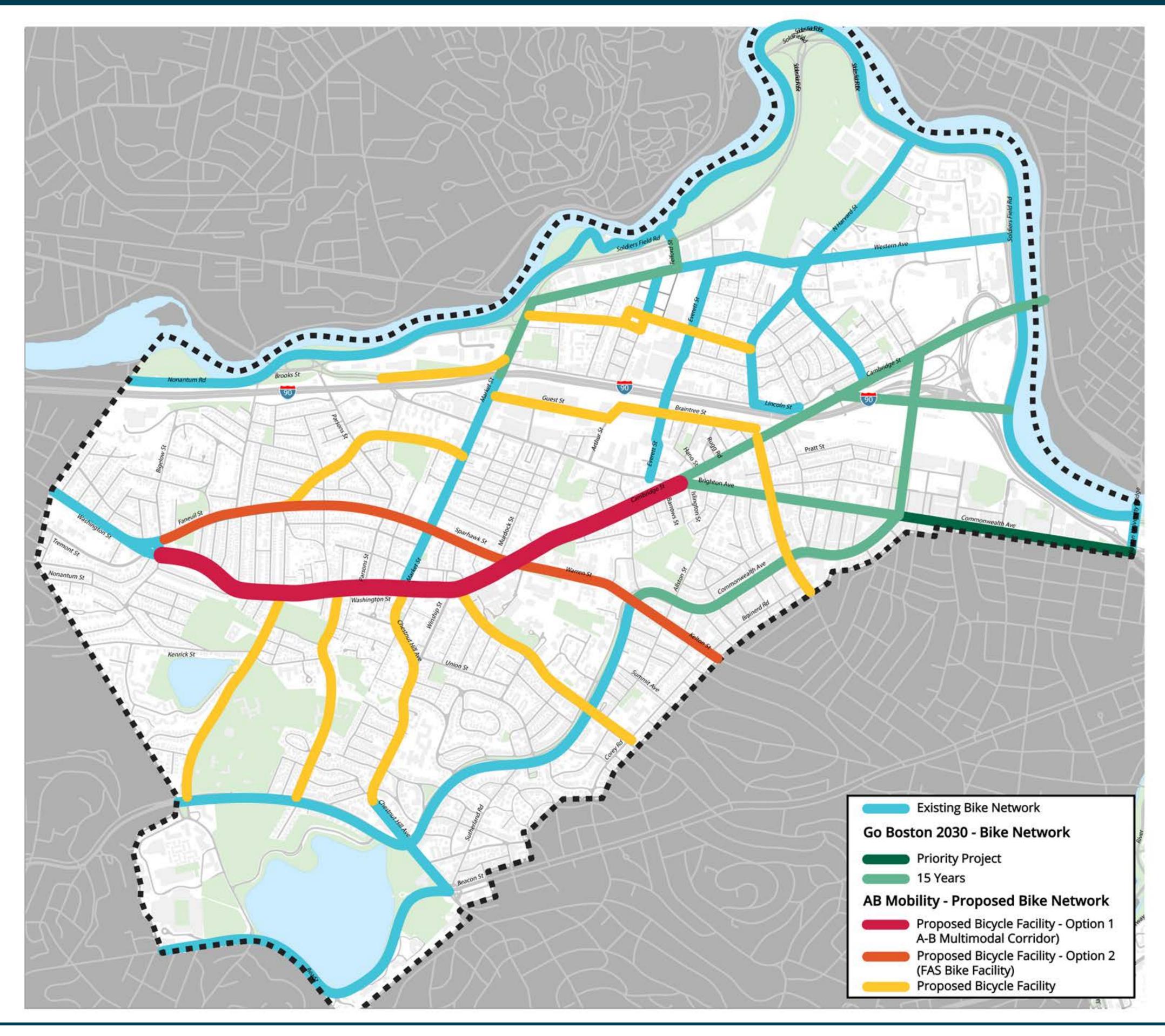
Washington Street (South of Brighton Center)

Foster/Lake Streets

Holton/Waverly Streets

N Beacon/Braintree/Guest Streets

## General Recommendations





## Washington Street

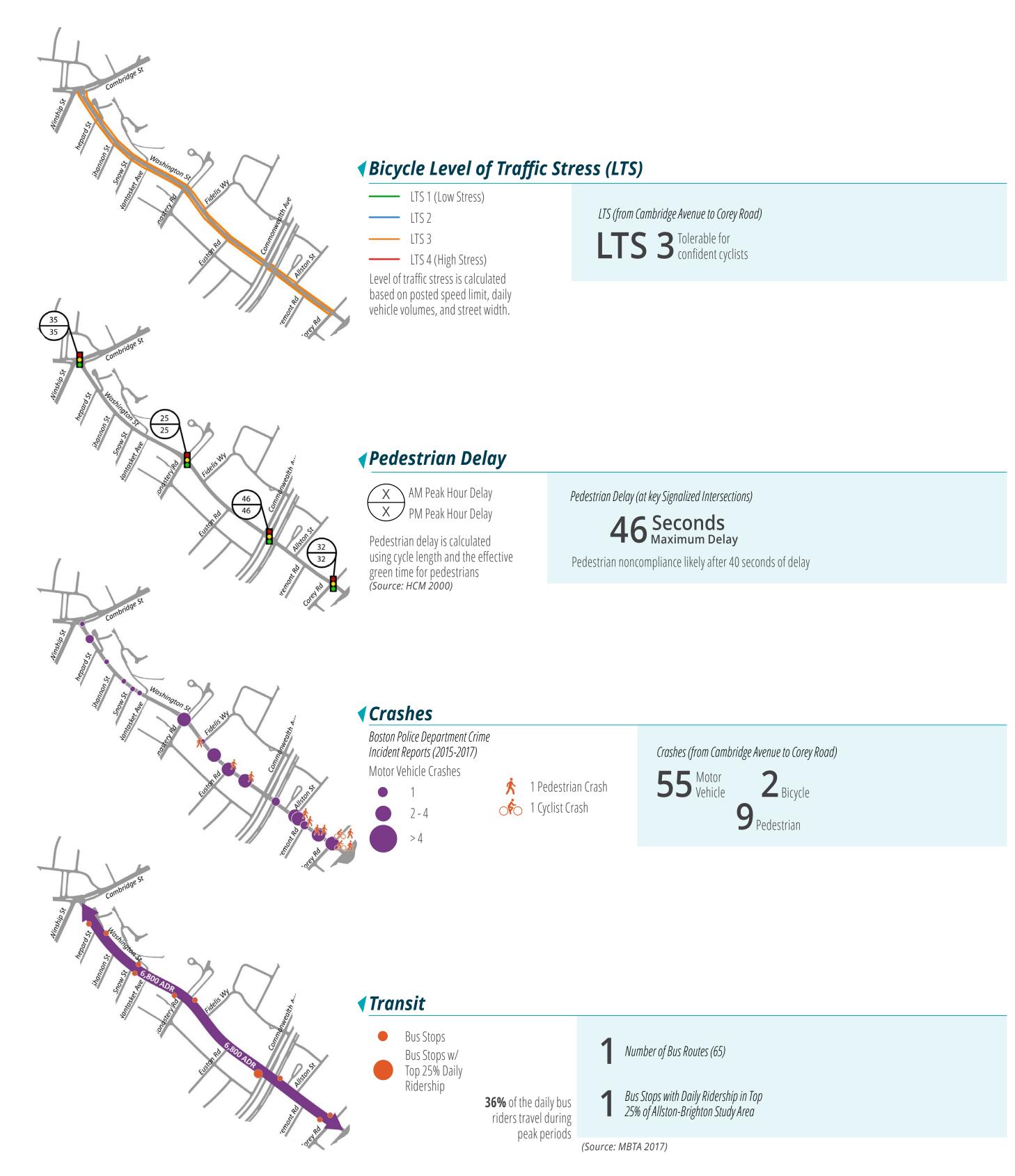
### **Existing Conditions & Analysis**



#### WHY?

- **Calm traffic**
- Improve comfort and safety of bicycle facilities
- Provide comfortable and safe pedestrian crossings
- Improve visibility





#### Recommendations & Options

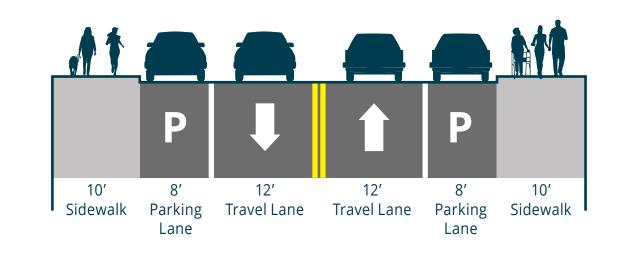
#### **EXISTING \***



Existing Bus Stop (**T**)



**Existing Cross Section** 

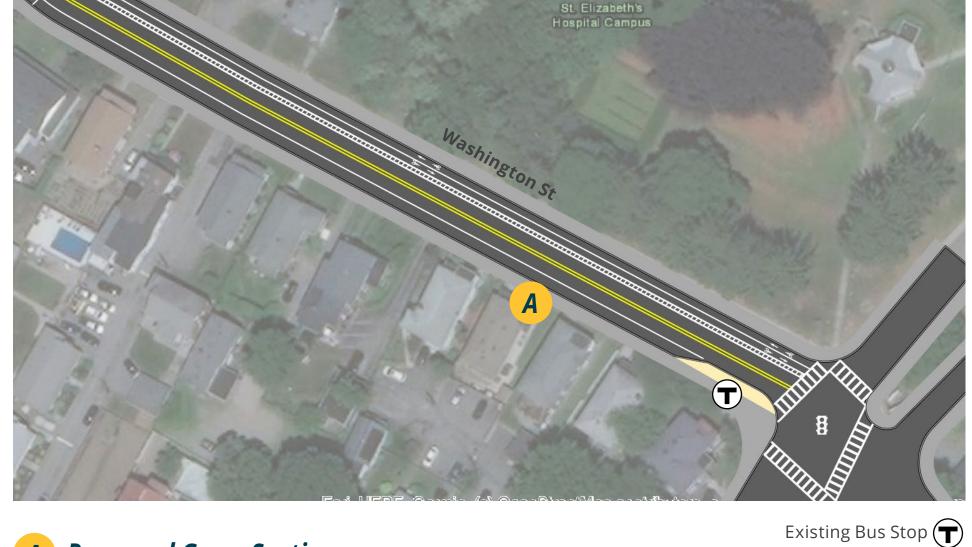


#### **PERFORMANCE MEASURES ₹**

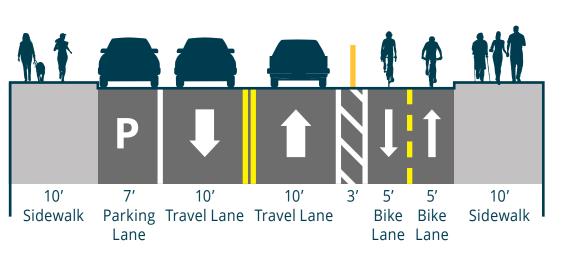


## **TWO-WAY CYCLE TRACK**

This option proposes a two-way cycle track on Washington Street between Cambridge Street and Commonwealth Avenue. Cycle tracks are for exclusive use of bicyclists and provide added separation that enhance the experience of bicycling on urban streets. The narrower travel lanes and proposed bicycle facility narrow the roadway and help calm traffic. A transition between the two-way cycle track and in road bike facilities on Washington Street will be required at Cambridge Street/Washington Street/Winship Street and Commonwealth Avenue/Washington Street. Bicycle signals, directional islands, green crossings, and two-stage queue boxes should be used to clearly communicate how bicyclists are intended to enter and exit the cycle track.

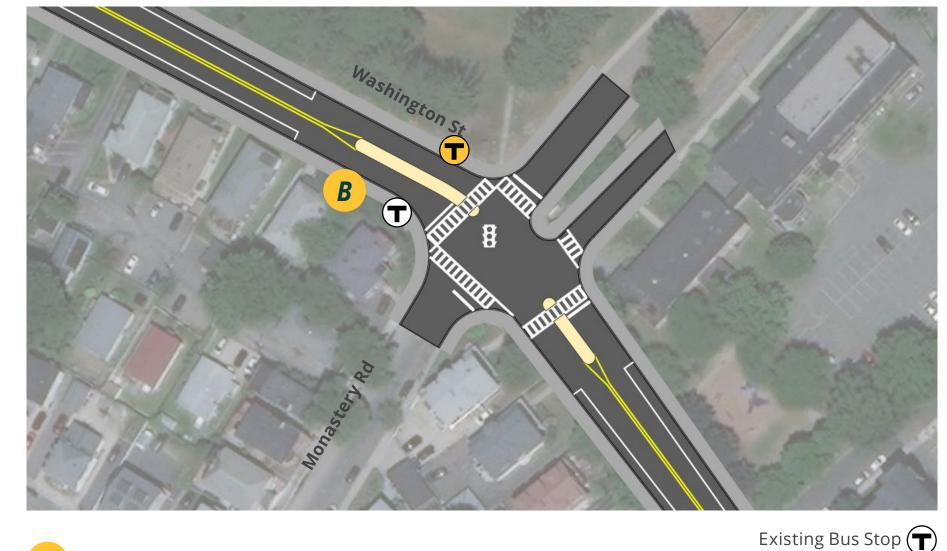


A Proposed Cross Section



#### PEDESTRIAN SAFETY ISLANDS

Option B proposes pedestrian safety islands at marked crosswalks and where feasible on Washington Street. A pedestrian safety island reduces the crossing distance and the exposure time experienced by a pedestrian in the intersection. Additionally, this options narrows the cross section at intersections and helps calm traffic. Option B proposes relocating the outbound 65 bus stop far side to improve stop spacing and accessibility.



Travel Lane Sidewalk

Proposed Bus Stop Relocation

B Prop	osed Cros	s Section	n	
<b>1</b>				111
			1	
10′	15′	10′	15′	10'

● ● ○ Calms traffic and physically narrows the roadway	● ● ● ● Calms traffic and physically narrows the roadway
● ● ○ Narrows the crossing distance	●●● Narrows the crossing distance at intersections
● ● ● Creates physical separation throughout the corridor	Maintains existing bicycle facilities
Maintains existing travel time	Maintains existing travel time
● ○ ○ ○ Maintains parking on one side of the street	●●●○ Maintains existing parking supply except near pedestrian safety islands
■ ○ ○ Causes minor increases in travel time for motorists	●●○○ Causes minor increases in travel time for motorists





## Lake Street and Foster Street

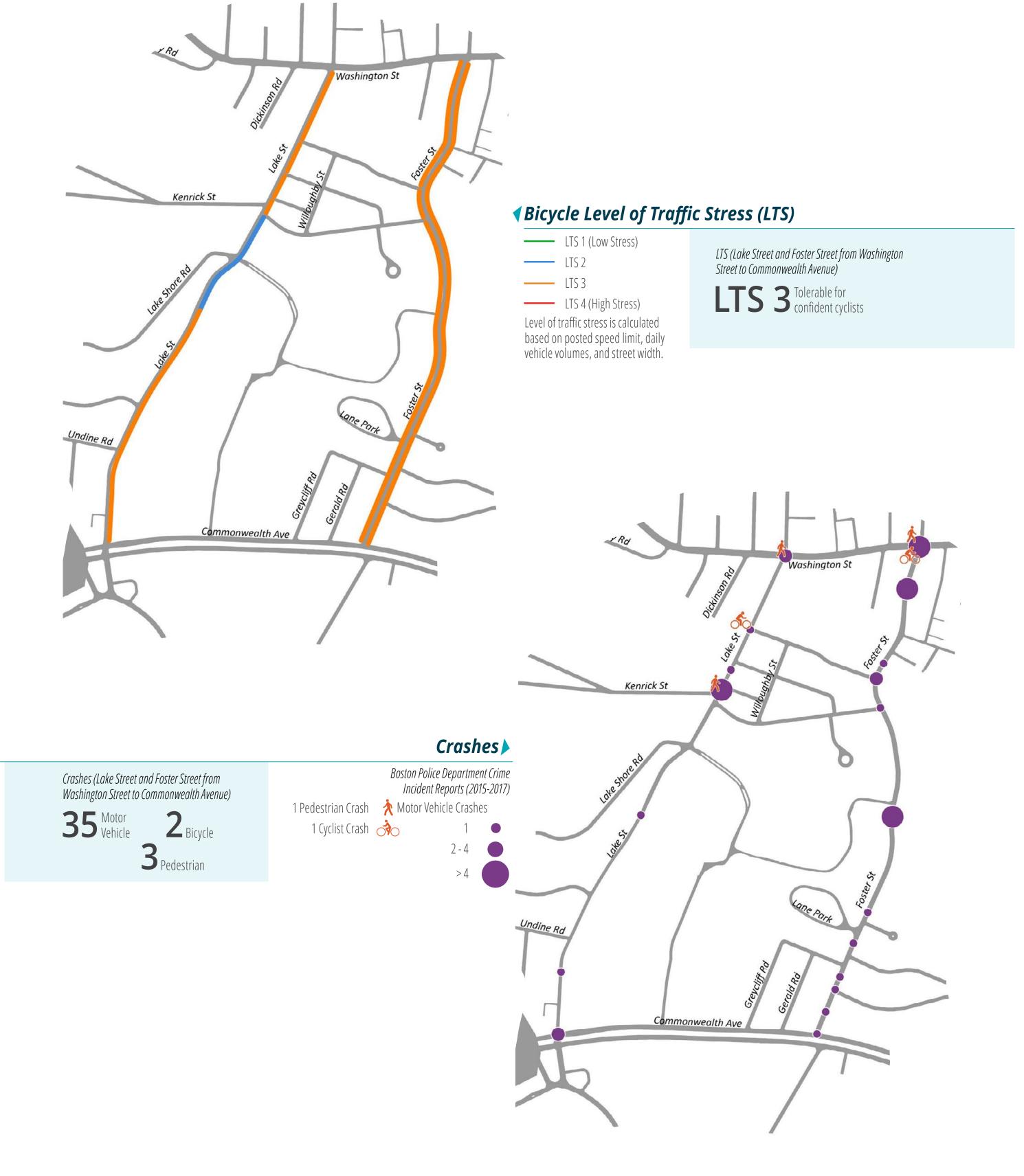
#### **Existing Conditions & Analysis**



#### WHY?

- Improve comfort and safety for bicyclists
- Provide comfortable facility for southbound bicycle traffic
- Strengthen bicycle connections to Boston College and improve crossings
- Calm traffic





## Recommendations & Options

#### **EXISTING \***

Lake St



Foster St

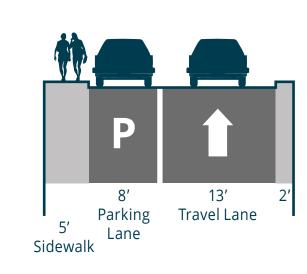


# LAKE STREET SEPARATED BIKE LANE

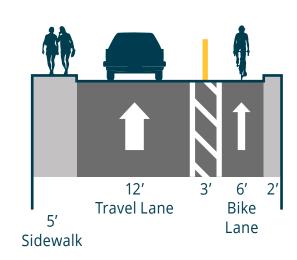
This option proposes a separated bike lane couplet on Lake Street and Foster Street. A northbound separated bike lane is proposed for Lake Street. Separated bike lanes are for the exclusive use of bicyclists and provide added separation that enhance the experience of bicycling. The width of the separated bike lane, including the buffer, will vary between 7 and 9 feet depending on the street's cross section. The narrower travel lanes and proposed bicycle facility narrow the roadway and help calm traffic.



Existing Cross Section



A Proposed Cross Section



#### PERFORMANCE MEASURES ¥

•	UKL5 '	IVILAS	
Safety			
Pedestrian Comfort	No Change  Better		
<b>Bicyclist Comfort</b>			
Transit		••00	
Parking	Worse	•000	
Vehicle Delay			

# Sidewalk Calms traffic and physically narrows the roadway Narrows the crossing distance and improves pedestrian delay

Creates physical separation for northbound bicyclists

- - - - Maintains existing conditions - no transit on Lake St
 Maintains parking except on the narrowest sections
 Causes minor increases in travel time for motorists

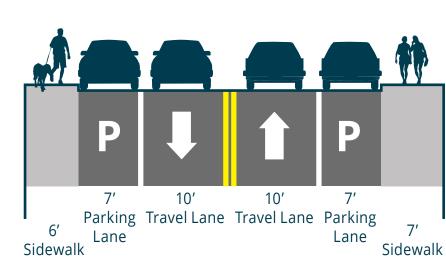
# FOSTER STREET SEPARATED

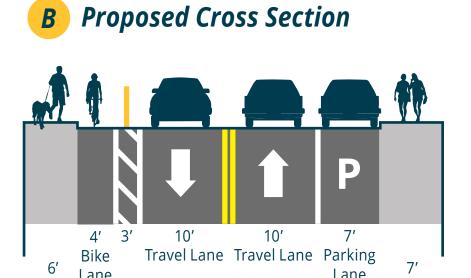
**BIKE LANE** 

This option proposes a separated bike lane couplet on Lake Street and Foster Street. A southbound separated bike lane is proposed for Foster Street. Separated bike lanes are for the exclusive use of bicyclists and provide added separation that enhances the experience of bicycling. The width of the separated bike lane, including the buffer, will vary between 7 and 9 feet depending on the street's cross section. The narrower travel lanes and proposed bicycle facility narrow the roadway and help calm traffic.



Existing Cross Section





	Calms traffic and physically narrows the roadway
	Narrows the crossing distance and improves pedestrian delay
••••	Creates physical separation for southbound bicyclists
	Maintains existing conditions - no transit on Foster St
000	Maintains parking on one side of the street

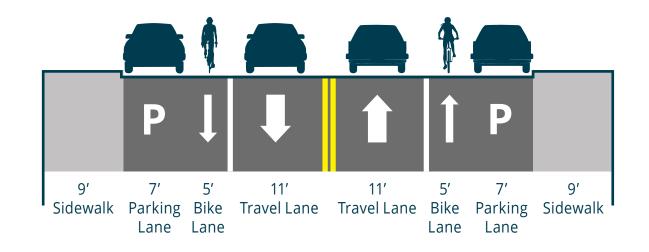
■ ○ ○ ○ Causes minor increases in travel time for motorists

CHESTNUT HILL AVENUE SEPARATED BIKE LANE

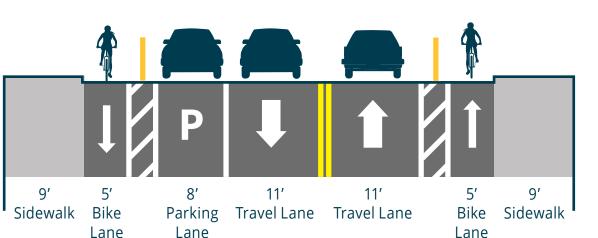
Option B proposes an alternative bicycle route to the separated bike lane couplet proposed for in Option A for Lake Street and Foster Street. Separated bike lanes are for the exclusive use of bicyclists and provide added separation that enhances the experience of bicycling.



Existing Cross Section



**C** Proposed Cross Section



•••0	Calms traffic and physically narrows the roadway
•••0	Narrows the crossing distance and improves pedestrian delay
••••	Creates physical separation for bicyclists
	Maintains existing conditions
•000	Maintains parking on one side of the street
••00	Causes minor increases in travel time for motorists





## Waverly Street and Holton Street

### **Existing Conditions & Analysis**

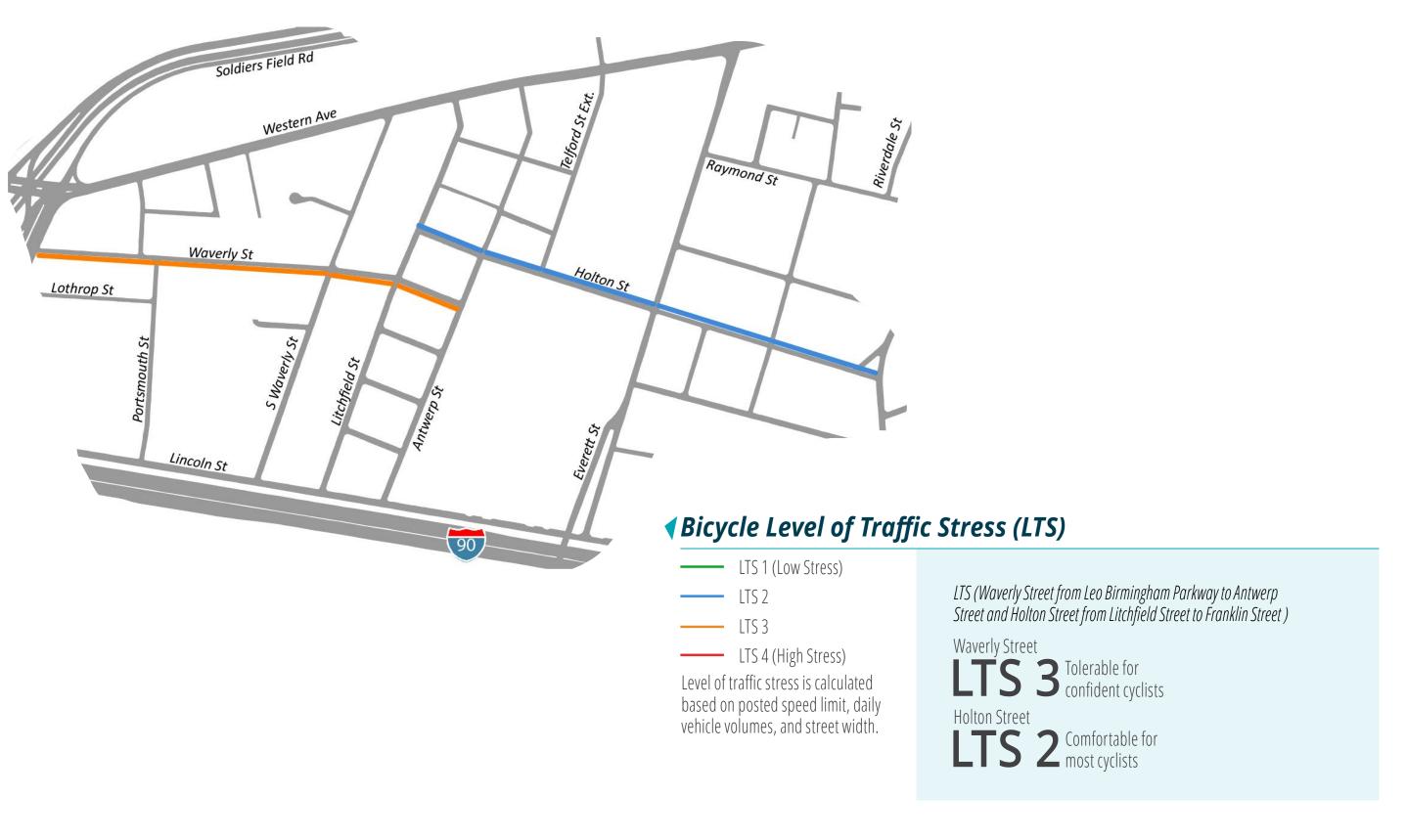


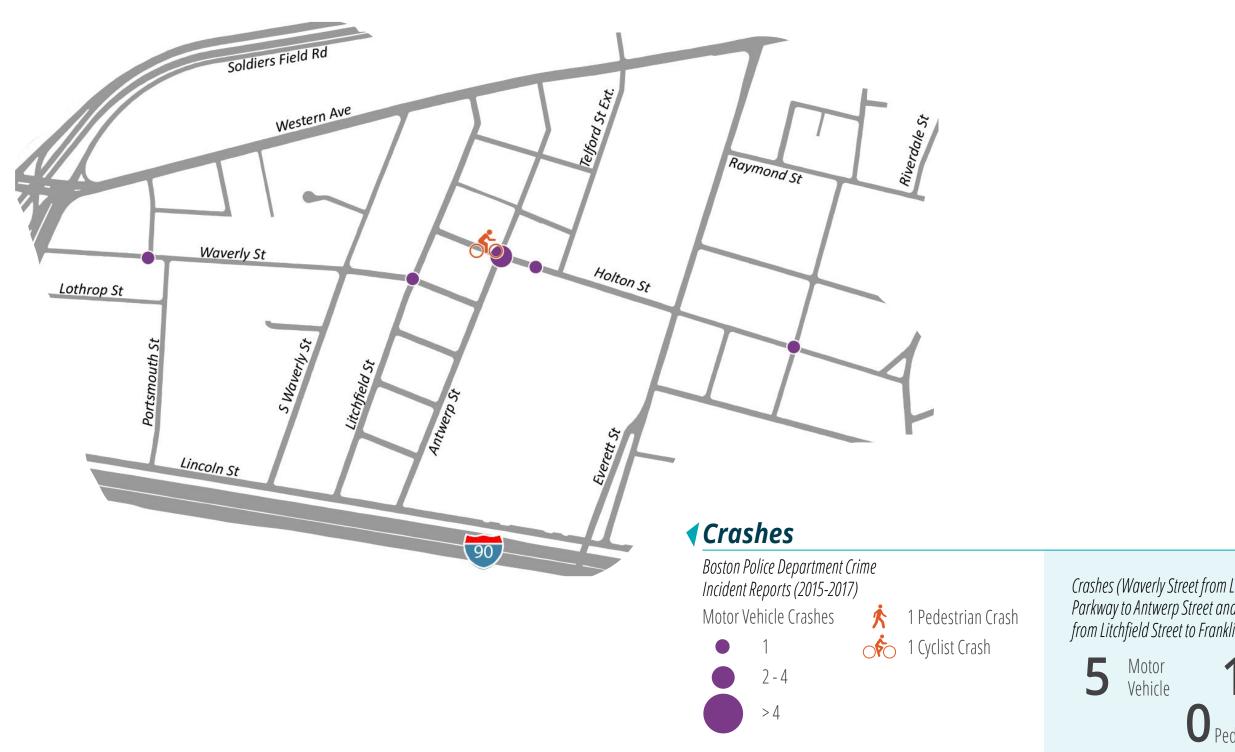
#### WHY?

- Improve bicycle comfort, safety, and wayfinding
- Provide safe eastbound bicycle travel on Holton Street
- **Calm traffic at key intersections**

Bikes go contra-flow illegally on Holton St to get to school Area Workshop - Florentino Community Center 02/13/19







## Crashes (Waverly Street from Leo Birmingham Parkway to Antwerp Street and Holton Street from Litchfield Street to Franklin Street )

#### Recommendations & Options

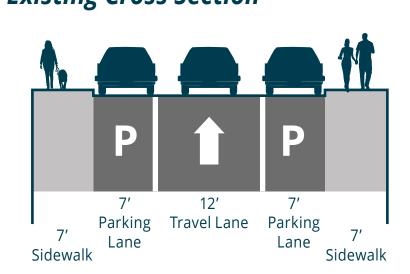
#### **EXISTING \***



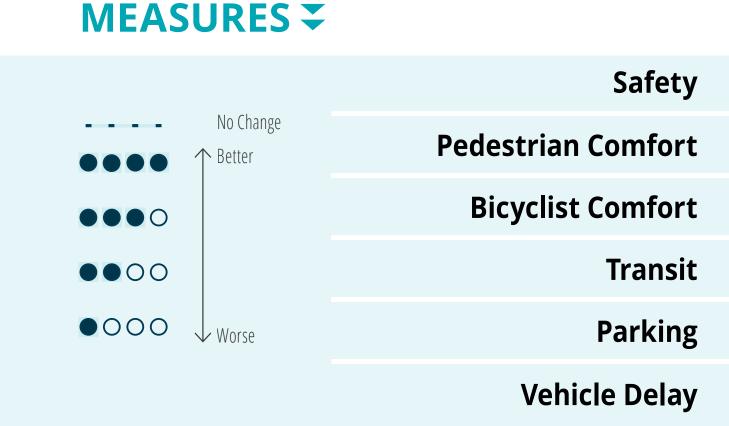
Holton St looking West



#### **Existing Cross Section**

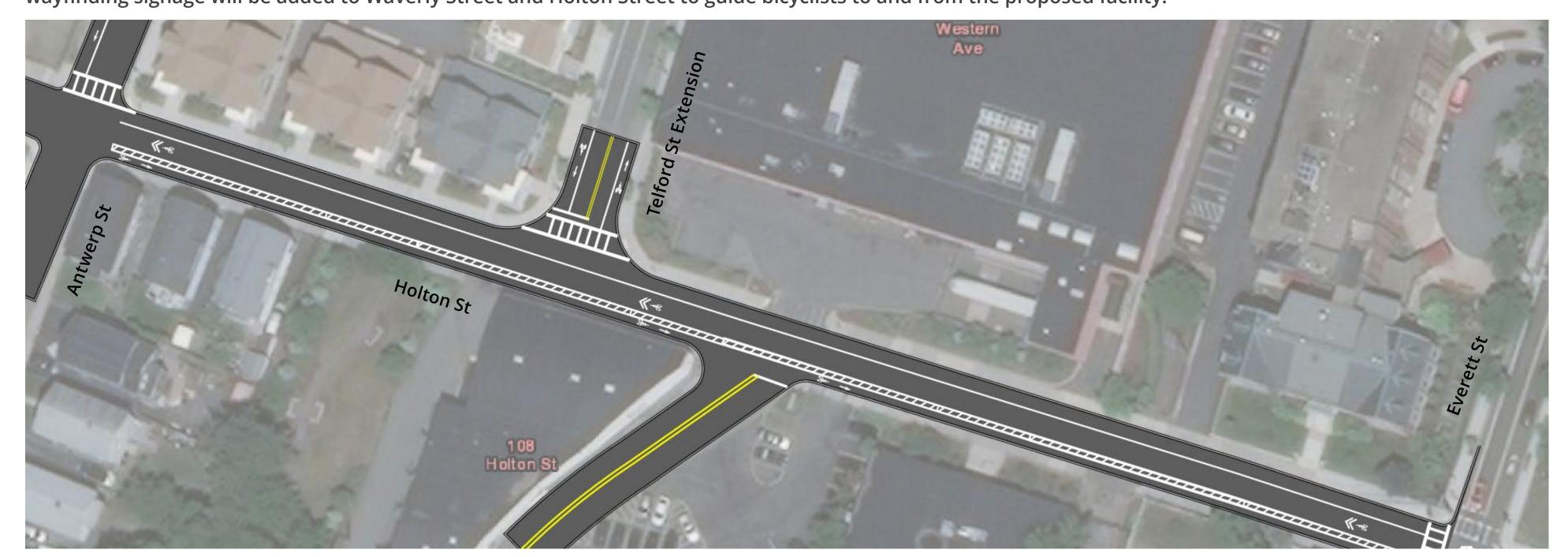


#### **PERFORMANCE**

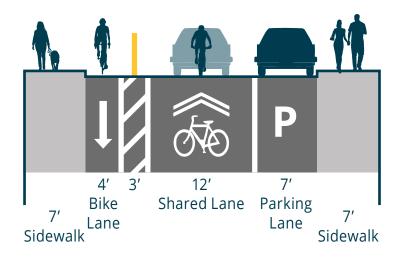


#### **HOLTON STREET CONTRA-FLOW BIKE LANE**

This option proposes a contra-flow bike lane on Holton Street between Antwerp Street and Everett Street. Contra-flow bike lanes reduce dangerous wrong-way riding and are designed to allow bicyclists to ride in the opposite direction of motor vehicle traffic. Bicycle wayfinding signage will be added to Waverly Street and Holton Street to guide bicyclists to and from the proposed facility.



#### **Proposed Cross Section**





	Creates physical separation for bicyclists traveling in the opposite direction
	Maintains existing conditions - no transit on Holton Street or Waverly Street
•000	Maintains parking on one side of the street

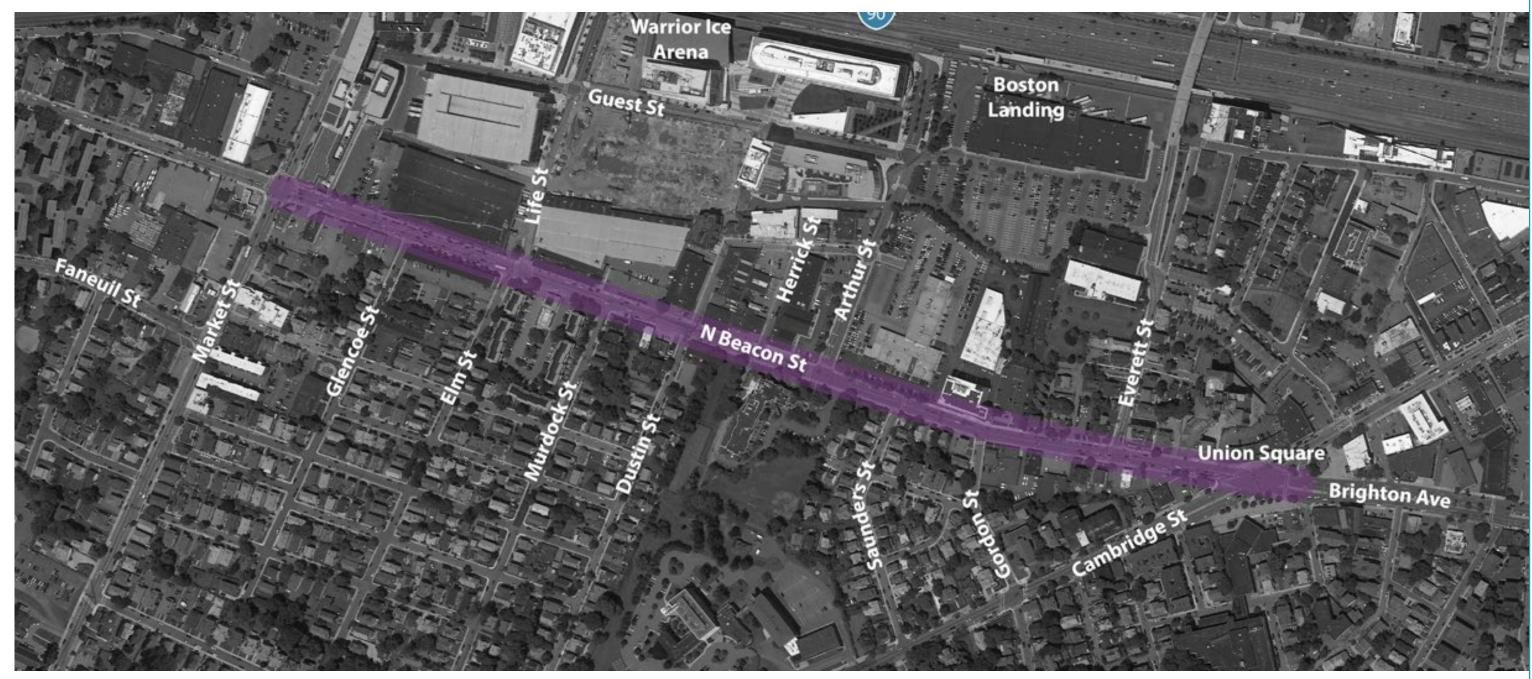
■ ■ ○ Narrows the crossing distance and improves pedestrian delay

Maintains existing travel time for motorists



## N. Beacon Street

#### **Existing Conditions & Analysis**

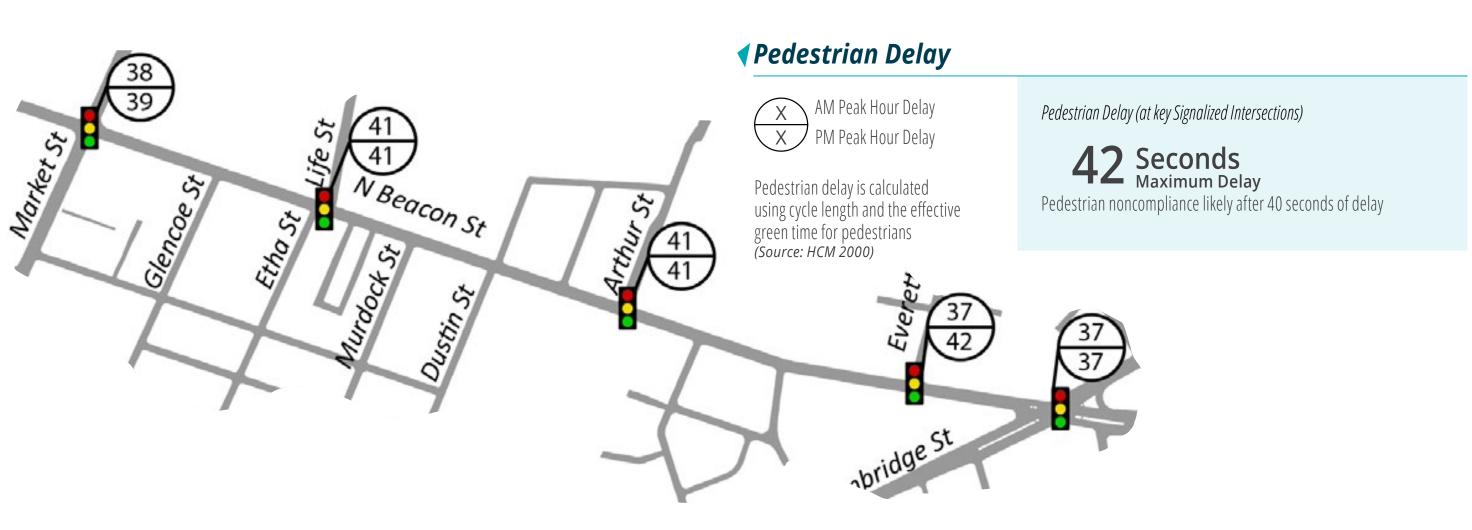


## WHY? Improve comfort and safety Improve comfort and safety Add pedestrian crossings of bicycle facilities of pedestrian crossings

Ped and traffic lights conflicts at N Beacon St and Market St Faneuil Gardens 07/13/19 N Beacon St lanes are not well-marked Create crosswalk Community Update #2 07/30/19 Interactive Online Mapping Tool 02/26/19





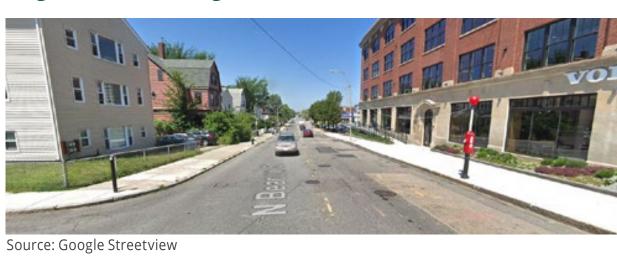


#### Recommendations & **Options**

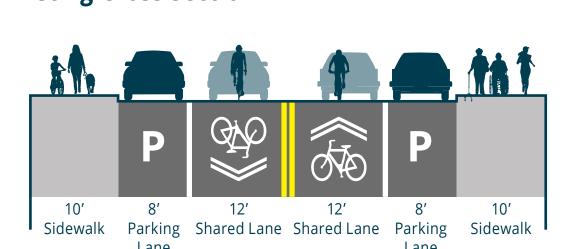
#### **EXISTING \***



Brighton St looking West



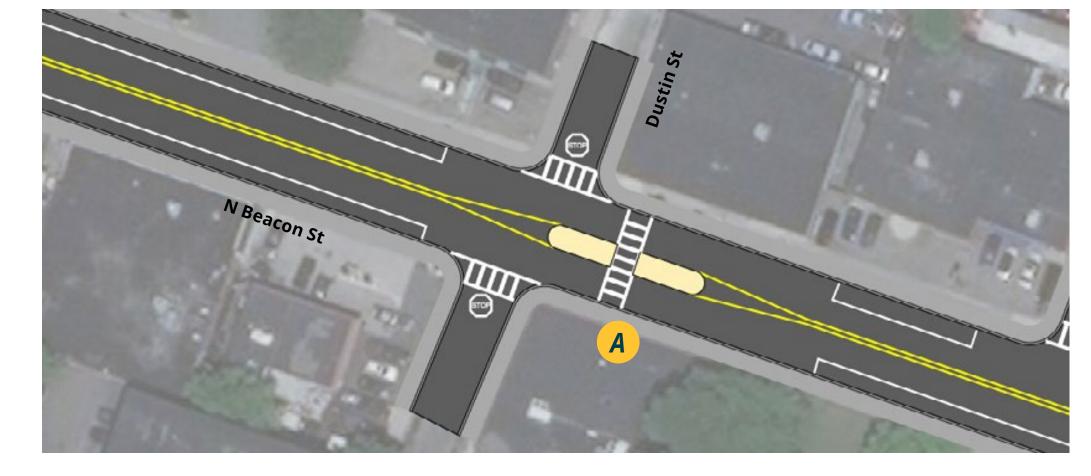
**Existing Cross Section** 



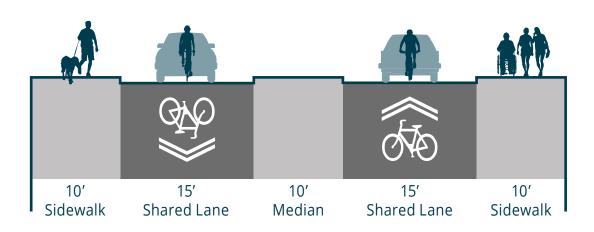
## CONCEPT

#### PEDESTRIAN SAFETY ISLANDS

Concept 1 proposes pedestrian safety islands at marked crosswalks and where feasible on N. Beacon Street. A pedestrian safety island reduces the crossing distance and the exposure time experienced by a pedestrian in the intersection. This concept also proposes a marked crosswalk at Glencoe Street. Marked crosswalks provide pedestrians with a designated location to safely cross the street. Concept 1 and Concept 2 are not mutually exclusive.



A Proposed Cross Section



■ ○ ○ ○ Causes minor increases in travel time for motorists

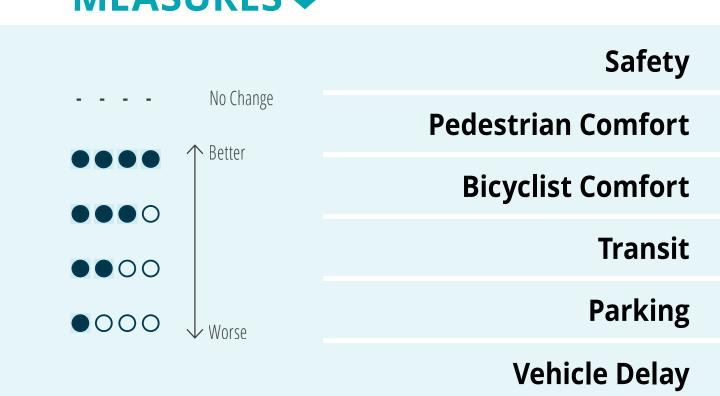


#### **BRAINTREE STREET/GUEST STREET BICYCLE CONNECTION**

N. Beacon Street is currently tolerable for confident bicyclists. Options for separated bicycle facilities on N. Beacon Street would require the removal of on-street parking. The Braintree Street/Guest Street bicycle facility provides a comparable, low stress alternative to N. Beacon Street. Concept 1 and Concept 2 are not mutually exclusive.



#### **PERFORMANCE MEASURES ₹**



● ● ○ Calms traffic and physically narrows the roadway at intersections	● ● ○ Calms traffic and physically narrows the roadway
● ● ○ Narrows the crossing distance and adds pedestrian islands	● ● ○ Narrows the crossing distance
Maintains existing bicycle facilities	● ● ○ Provides low stress bicycle facility
Maintains existing travel time	Maintains existing transit infrastructure - no transit on Braintree Street/Guest Street
● ● ○ Maintains existing parking supply except near pedestrian safety islands	Maintains existing parking supply



■ ○ ○ ○ Causes minor increases in travel time for motorists

# Other Topics

## Faneuil Street

Murdock/Sparhawk Streets

Cleveland Circle

## Faneuil Street

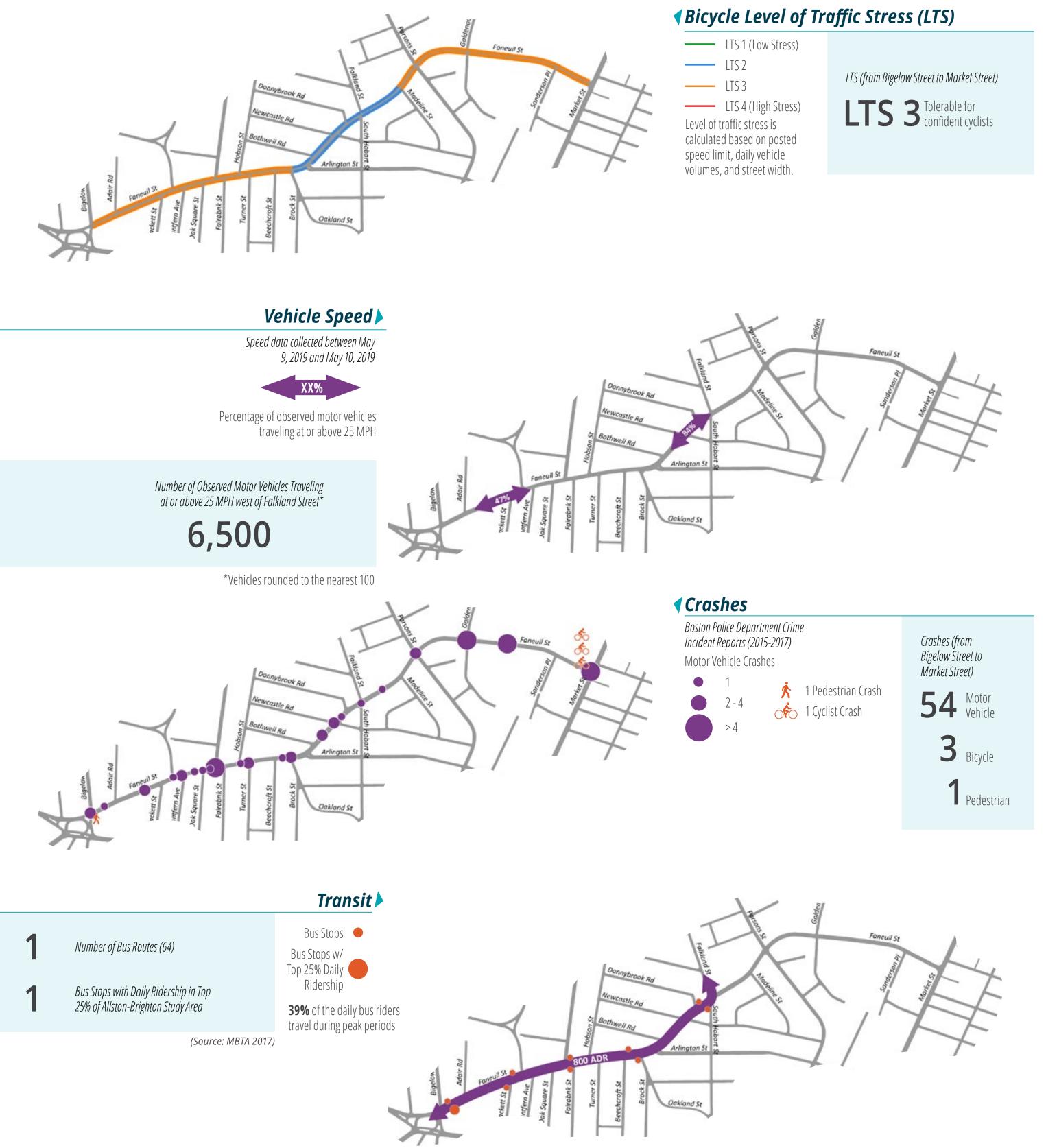
#### **Existing Conditions & Analysis**



#### WHY?

- Improve comfort and safety of bicycle facilities
- **Increase transit speeds**
- Improve comfort and safety of pedestrian crossings
- Calm traffic





#### Recommendations & Options

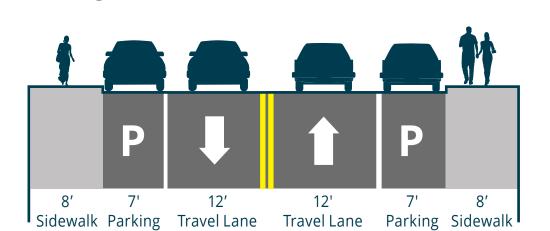
#### **EXISTING**



Faneuil St looking West

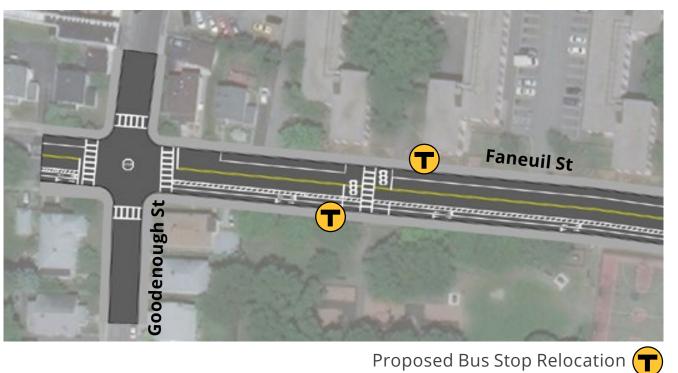


**Exiting Cross Section** 

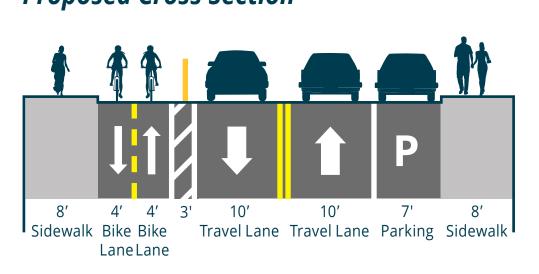


#### **TWO-WAY CYCLE TRACK\***

This option proposes a two-way cycle track on the south side of Faneuil Street. Cycle tracks are for exclusive use of bicyclists and provide added separation that enhances the experience of bicycling on urban streets. The narrower travel lanes and proposed bicycle facility reduce the width of the roadway and help calm traffic. Parking would generally remain on one side of the street. Parking would remain on both sides of the street where the cross section measures at least 48 feet.



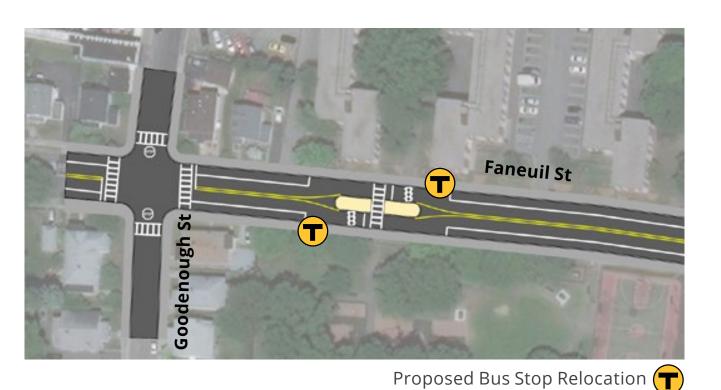
**Proposed Cross Section** 



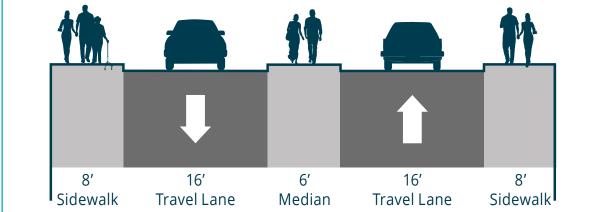
\*Option A for Faneuil Street would connect to the FAS Bike Facility at Faneuil Street and Arlington Street. The FAS Bike Facility Options include a Two-Way Cycle Track, Separated Bike Lanes, and Climbing Bike Lane. Refer to the FAS Bike Facility Board for additional details.

#### PEDESTRIAN SAFETY ISLANDS

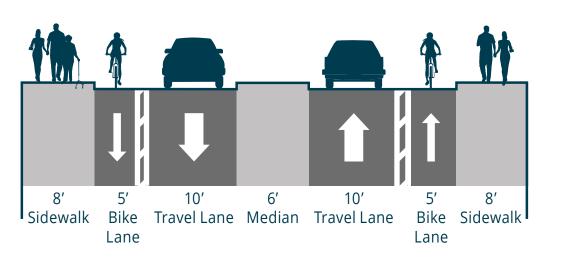
Option B proposes pedestrian safety islands at marked crosswalks on Faneuil Street. A pedestrian safety island reduces the crossing distance and the exposure time experienced by pedestrians in the intersection. Additionally, this option narrows the width of the roadway at intersections and helps calm traffic. Pedestrian safety islands can be complemented with a striped bike lane.



**Proposed Cross Section** 



Proposed Cross Section with Bike Lane





#### **FANEUIL STREET AND ARLINGTON STREET INTERSECTION RECONFIGURATION**

This concept proposes a mini roundabout at the intersection of Faneuil Street and Arlington Street. Mini roundabouts calm traffic, improve safety, and reduce delay for motorists.





Existing Bus Stop Proposed Bus Stop Relocation

#### **PERFORMANCE MEASURES ¥**

Safety	
Pedestrian Comfort	No Change  Better
<b>Bicyclist Comfort</b>	
Transit	••••
Parking	• O O O Worse
Vehicle Delay	

•••0	Calms traffic and physical
•••0	Narrows the crossing dist
••••	Creates physical separation
	Maintains existing transit
•000	Maintains parking on one

	Calms traffic and physically narrows the roadway	•••0	Calms traffic and physically narrows the roadway
	Narrows the crossing distance	••••	Narrows the crossing distance at intersections
••••	Creates physical separation throughout the corridor		Maintains existing bicycle infrastructure
	Maintains existing transit infrastructure		Maintains existing transit infrastructure
000	Maintains parking on one side of the street	•••0	Maintains existing parking supply except near pedestrian safety islands
	Causes minor increases in travel time for motorists	••00	Causes minor increases in travel time for motorists

••••	Calms traffic at the intersection
	Maintains existing pedestrian infrastructure
•••0	Improves the comfort of bicyclists
	Maintains existing transit infrastructure
•000	Maintains existing parking except near the roundabout approaches
••••	Improves travel time for motorists





## Murdock Street & Sparhawk Street

## Existing Conditions, Analysis, Recommendations, & Options



#### WHY?

 Clarify signage and striping Calm traffic

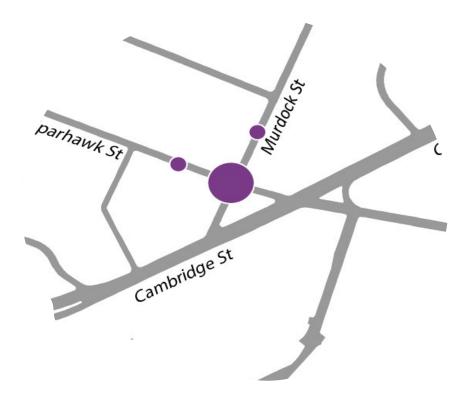
**Improve visibility** 

Drivers sometimes turn from Sparhawk St onto Murdock St going the wrong way down a one way road. Better signage and enforcement is needed. Interactive Online Mapping Tool 03/20/19

> This intersection is very dangerous. Traffic from Murdock St at times does not stop despite the stop sign. I've seen multiple T-Bone car crashes at this intersection. Interactive Online Mapping Tool 01/31/19



#### **RESEARCH FINDINGS**



#### Crashes

Boston Police Department Crime
Incident Reports (2015-2017)

Motor Vehicle Crashes

1 Pedestrian Crash
1 Cyclist Crash

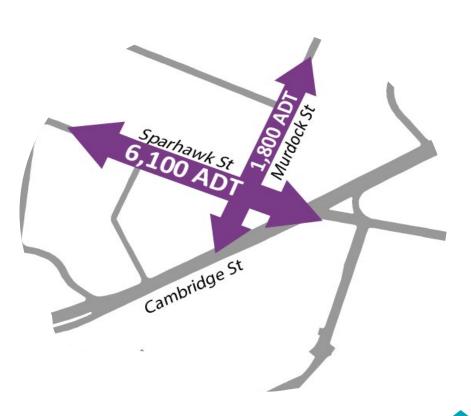
2 - 4

Crashes (Murdock St at Sparhawk St)

Motor

e **O** Bicycle

Pedestrian



Daily Vehicle Volumes

\* Volumes rounded to the nearest 100

#### **CURB EXTENSIONS**

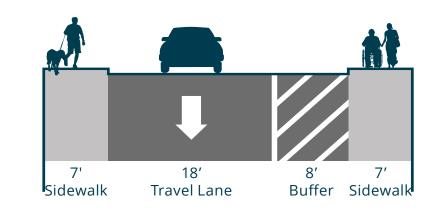
This option proposes formalizing the existing striped curb extension with a vertical element (e.g., flex posts, curbs) on the east side of the intersection. Curb extensions are created by extending the sidewalk at corners to increase safety and calm traffic. Additionally, this option proposes converting the control to all-way stop, as well as re-striping, adding signage (e.g., intersection warning signs, turn prohibition signs, pedestrian warning signs), and improvements to visibility (e.g., trimming vegetation).

#### **EXISTING \***

#### Murdock St looking North



#### **Existing Cross Section**

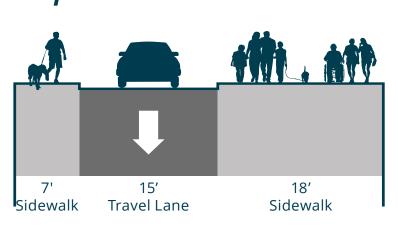


ource: Google Streetview

#### **PROPOSED**



#### **Proposed Cross Section**



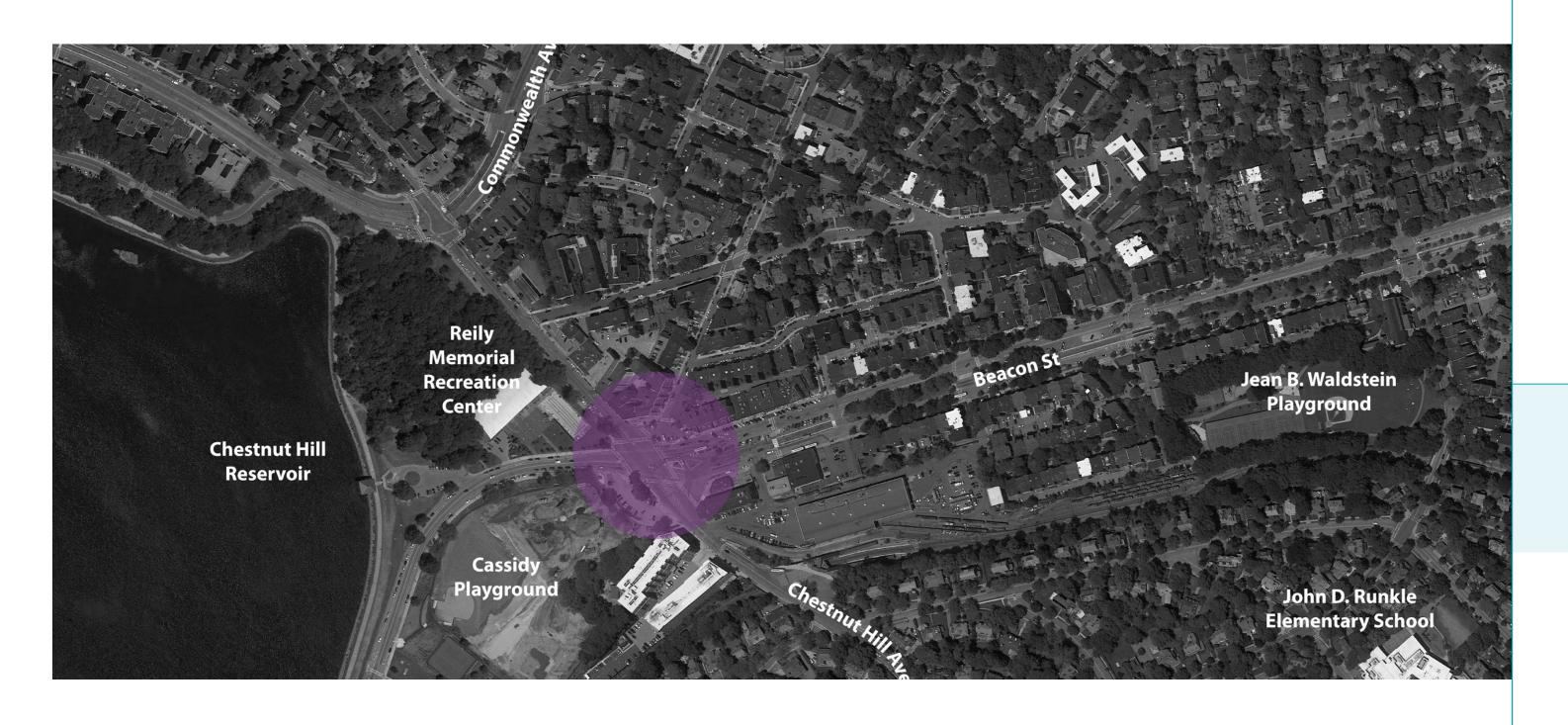
#### PERFORMANCE MEASURES ¥





## Cleveland Circle

#### **Existing Conditions & Analysis**

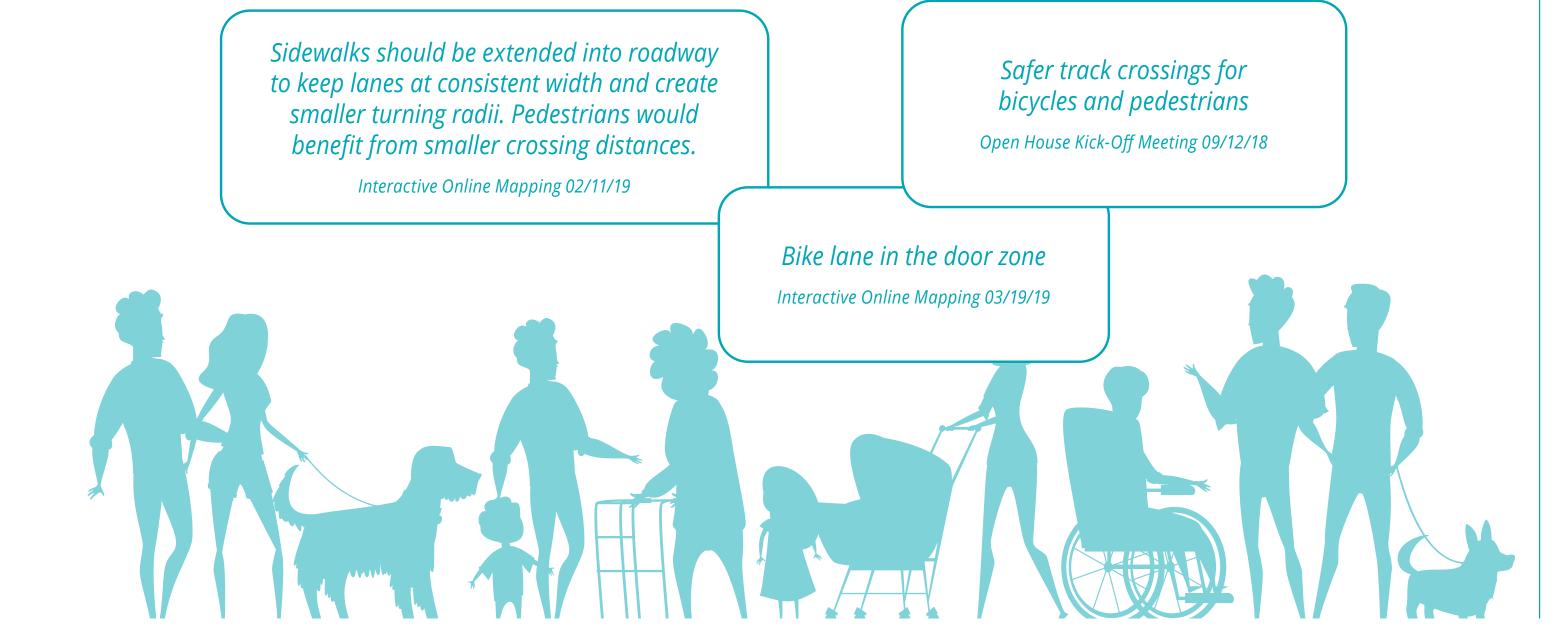


#### WHY?

Improve comfort and safety of bicycle facilities

Improve clarity of striping and signing for all modes

Improve comfort and safety of pedestrian crossings



#### **RESEARCH FINDINGS**



**◆ Bicycle Level of Traffic Stress (LTS)** 

LTS 1 (Low Stress)

LTS 2

LTS 3

LTS 4 (High Stress)

LTS (Beacon Street and Chestnut Hill Ave)

LTS 3 Tolerable for confident cyclists

LTS4(HighStress)

Level of traffic stress is calculated based on posted speed limit, daily vehicle volumes, and street width.

Pedestrian Delay

PedestrianDelay(atkeySignalizedIntersections)

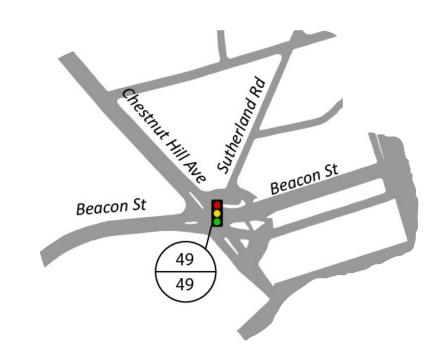
49 Seconds
Maximum Delay

Pedestriannoncompliancelikelyafter40secondsofdelay

AM Peak Hour Delay

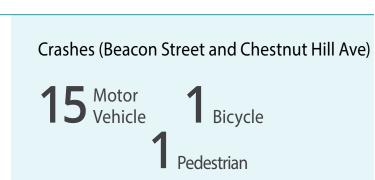
PM Peak Hour Delay

Pedestrian delay is calculated using cycle length and the effective green time for pedestrians









## Recommendations & Options

#### **EXISTING \***



Beacon St looking West

Source: Google



Existing Transit Stop

Source: Google Streetview

Chestnut Hill Ave looking South



## CURB EXTENSIONS AND BUS BULBS

This concept proposes curb extensions at key locations at Cleveland Circle. Curb extensions are created by extending the sidewalk at corners or mid-block to increase safety, calm traffic, and provide space for placemaking. At bus stops, curb extensions allow buses to stop in the travel lane and eliminate the need to pull in and out of traffic. In addition to the curb extensions, this concept proposes limiting access to the side streets adjacent to Cleveland Circle to improve safety and create additional placemaking opportunities.



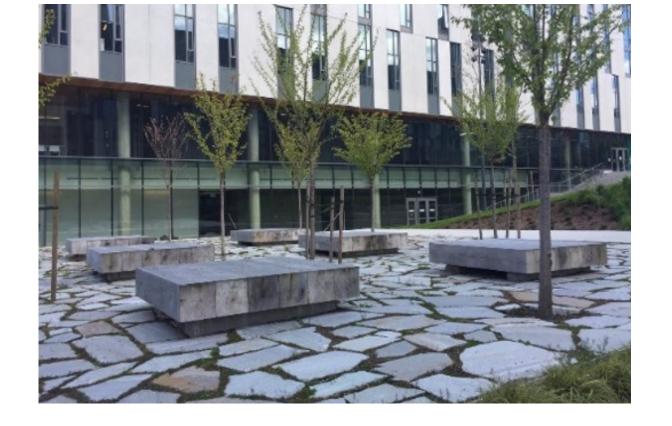
Existing Transit Stop

#### PLACEMAKING

The conversion of the parking space into a more meaningful central space would both calm traffic and improve safety. New pedestrian or open space adjacent to Sutherland Road would offer opportunities for green space, wayfinding, public art, and/or seating to activate the space and reinforce Cleveland Circle's identity.

#### Placemaking Examples







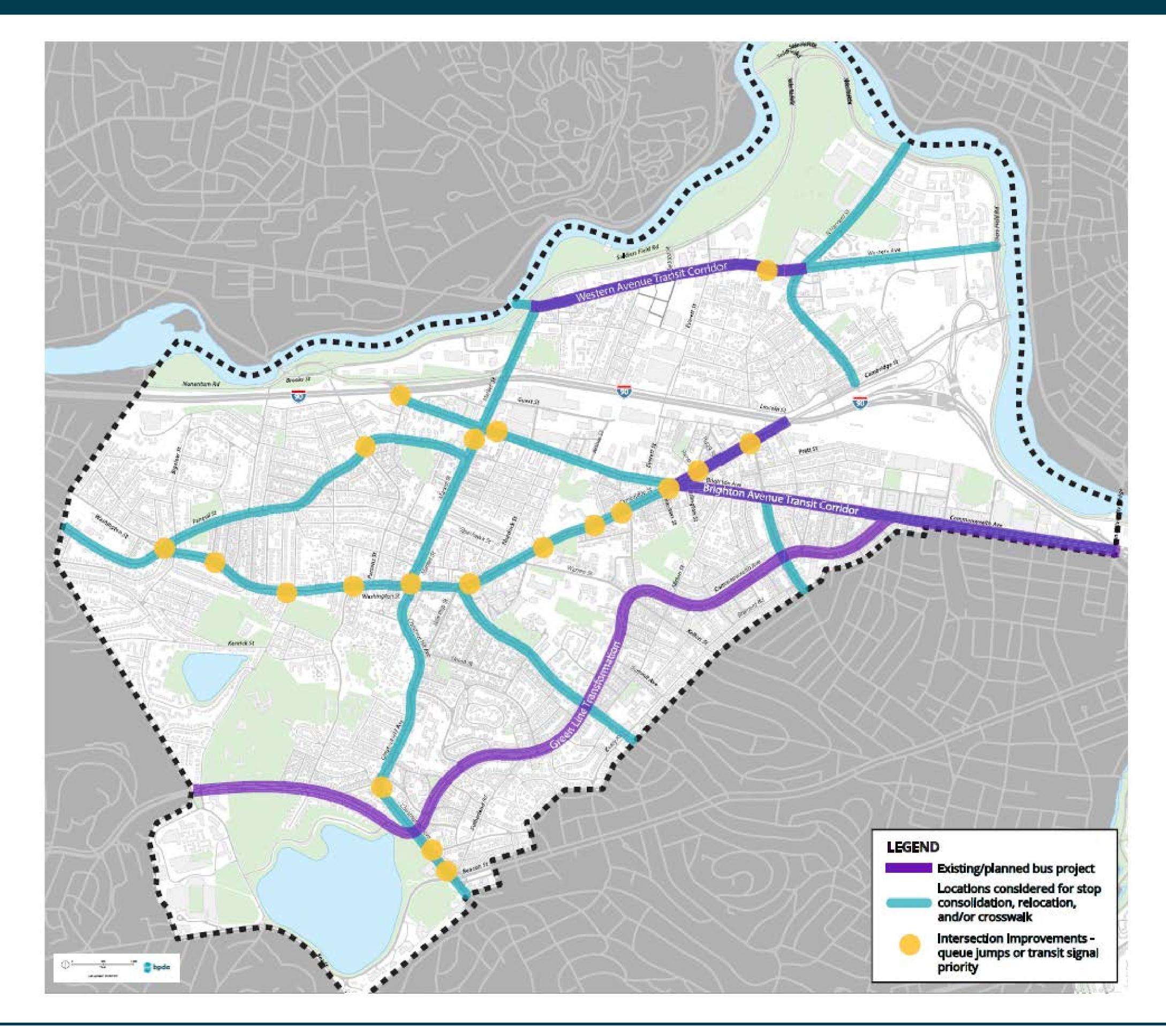


## PERFORMANCE MEASURES

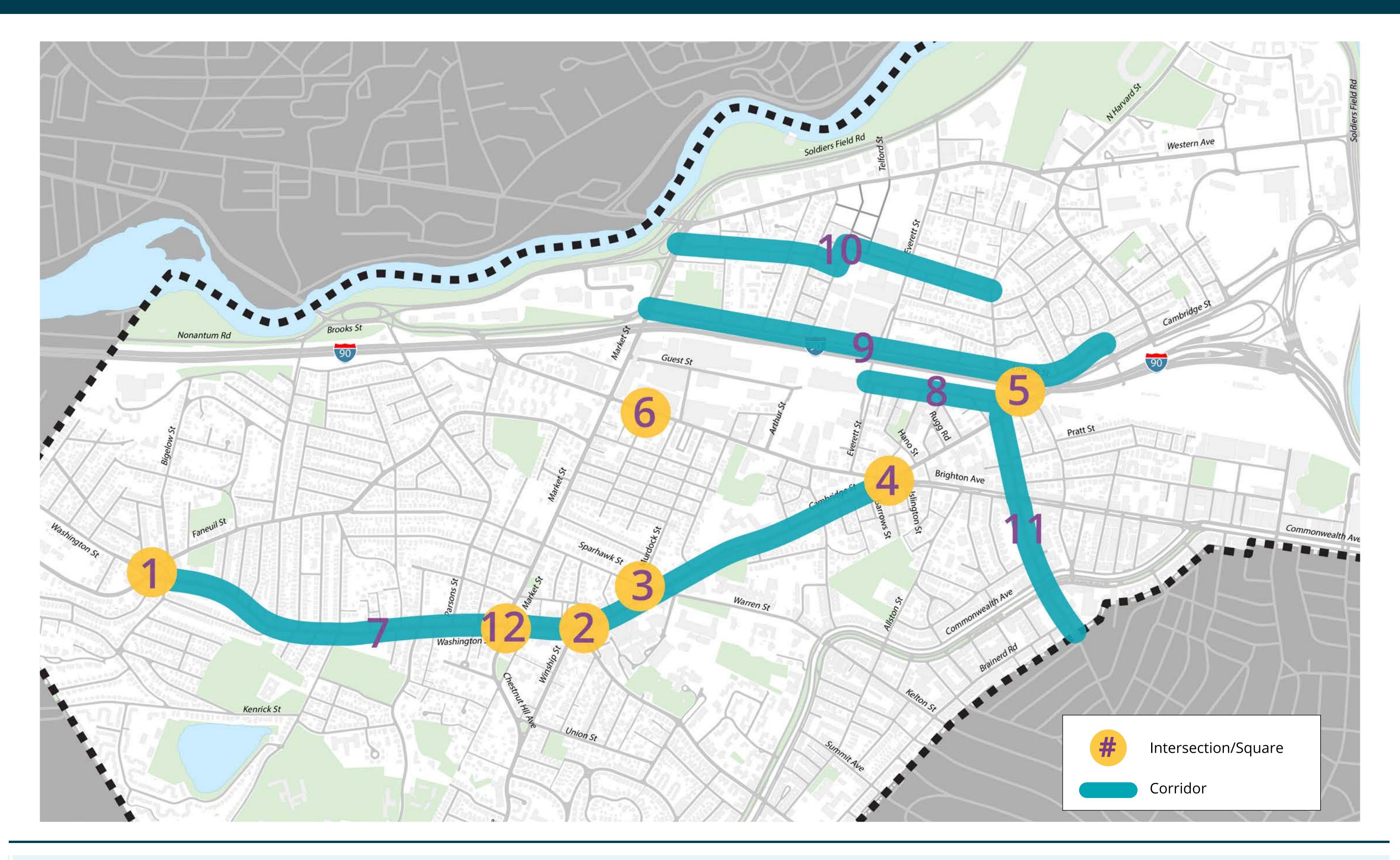
WEASC	JKES $\overline{}$			
		Safety		Calms traffic and physically narrows the roadway
	NoChange Better	Pedestrian Comfort		Narrows the crossing distance and improves pedestrian delay
		Bicyclist Comfort		Maintains existing bicycle infrastructure
••00		Transit	••00	Improves boarding areas and consolidates bus stops
•000	· Worse	Parking	•000	Maintains existing parking supply except along Sutherland Road
		Vehicle Delay	••00	Causes minor increases in travel time for motorists



## General Recommendations



## Quick Build



1	Oak Square	• Create loading/food delivery zones in front of Pizza Etc and Thai North
2	Cambridge St/Washington St/Winship St	<ul> <li>Add turn lane markings and overhead signs to clarify left turn on Cambridge St</li> <li>Add wayfinding for public off-street parking</li> </ul>
3	Murdock St/Sparhawk St	<ul> <li>Install larger stop signs</li> <li>Add flex posts to reinforce existing striped curb extension</li> </ul>
4	Union Square	• Turn on pedestrian signal every phase (pedestrian recall)
5	Franklin Street Bridge	• Placemaking (e.g., lighting, benches, artwork) along the bridge and at the end points
6	N Beacon St/Glencoe St	• Add crosswalk across N Beacon Street
7	Multimodal Corridor	<ul> <li>Add peak period bus lanes</li> <li>Paint crosswalks and bike crossing markings at intersections</li> </ul>
8	Braintree St	• Add contraflow bike lanes on Braintree Street
9	Lincoln St	• Add parking chicane to calm traffic
10	Waverly St and Holton St	• Add directional signs to guide bicyclists between Waverly and Holton
11	Harvard Ave	<ul> <li>Create loading/food delivery zones</li> <li>Create parklets (outdoor seating) in parking spaces</li> </ul>
12	Washington St/Market St	• Construct public plaza using temporary/tactical materials



## Placemaking Strategies

Placemaking is an approach to the planning, design, and programing of public realm that focuses on the users and their experience of the place, aiming to enhance the experience of living, working, playing in, or just passing through a place by creating memorable, engaging, and useful public spaces.

One advantage of placemaking is that its strategies can be deployed and tested temporarily, to assess the performance of the spaces in terms of activation, functionality and appeal. Temporary or "pop up" placemaking can help identify implementation opportunities and challenges. Placemaking recommendations for specific locations can be found at various topic stations around the room.

#### Reinforcing the Identity



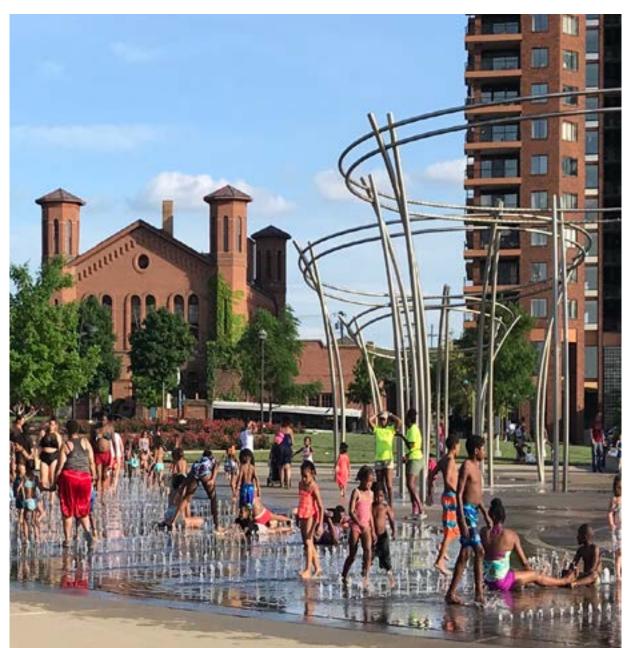
Public art (street art in blank walls, public spaces, and pedestrian crossings)



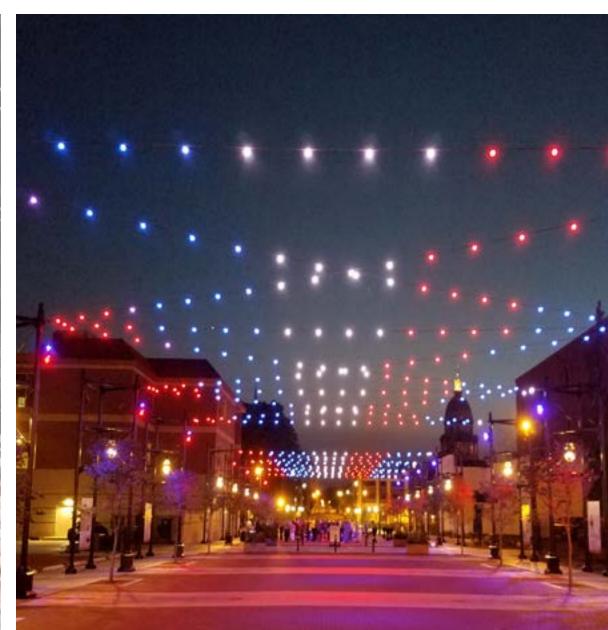
Iconic elements (seating, lighting, wayfinding, etc.)



Interactive/ Educational



Experiential features



Lighting

#### **Activating and Programing**



Pop-up uses



Temporary closures



Playful spaces



Street edge activation



Connected with public transportation

## **Diversity of Public Spaces**



Welcoming to all ages



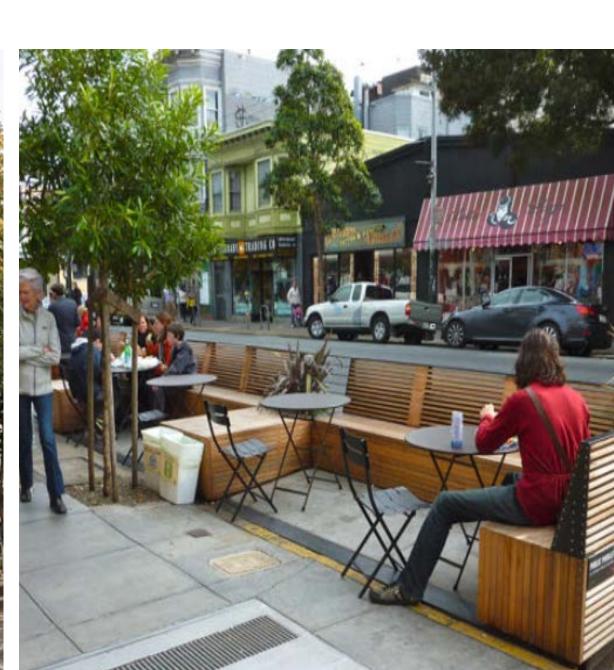
Public space configuration tests



Flexible spaces



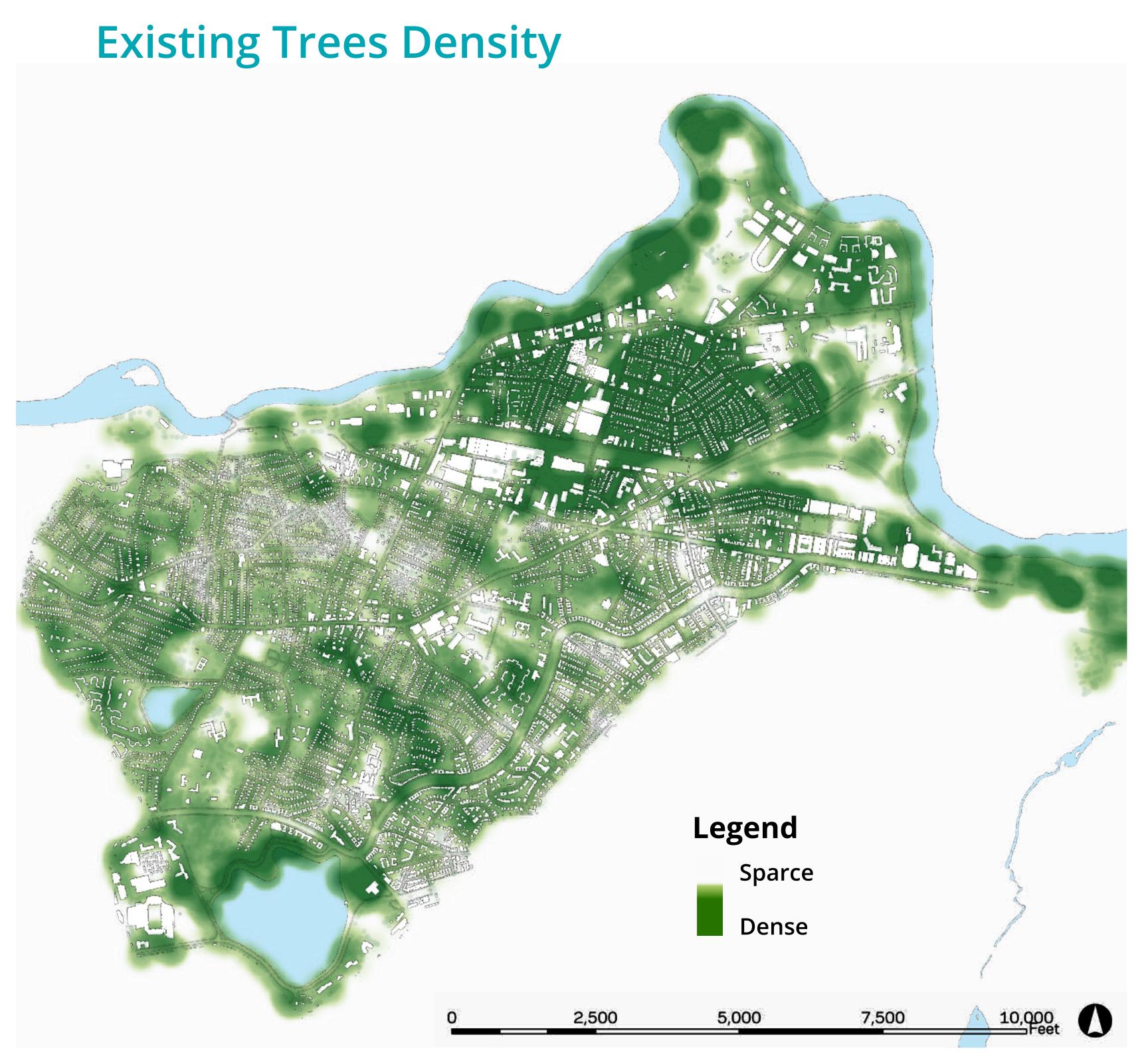
Complementary spaces (soft and hardscaped)



Parklets



## Allston-Brighton Greening Program

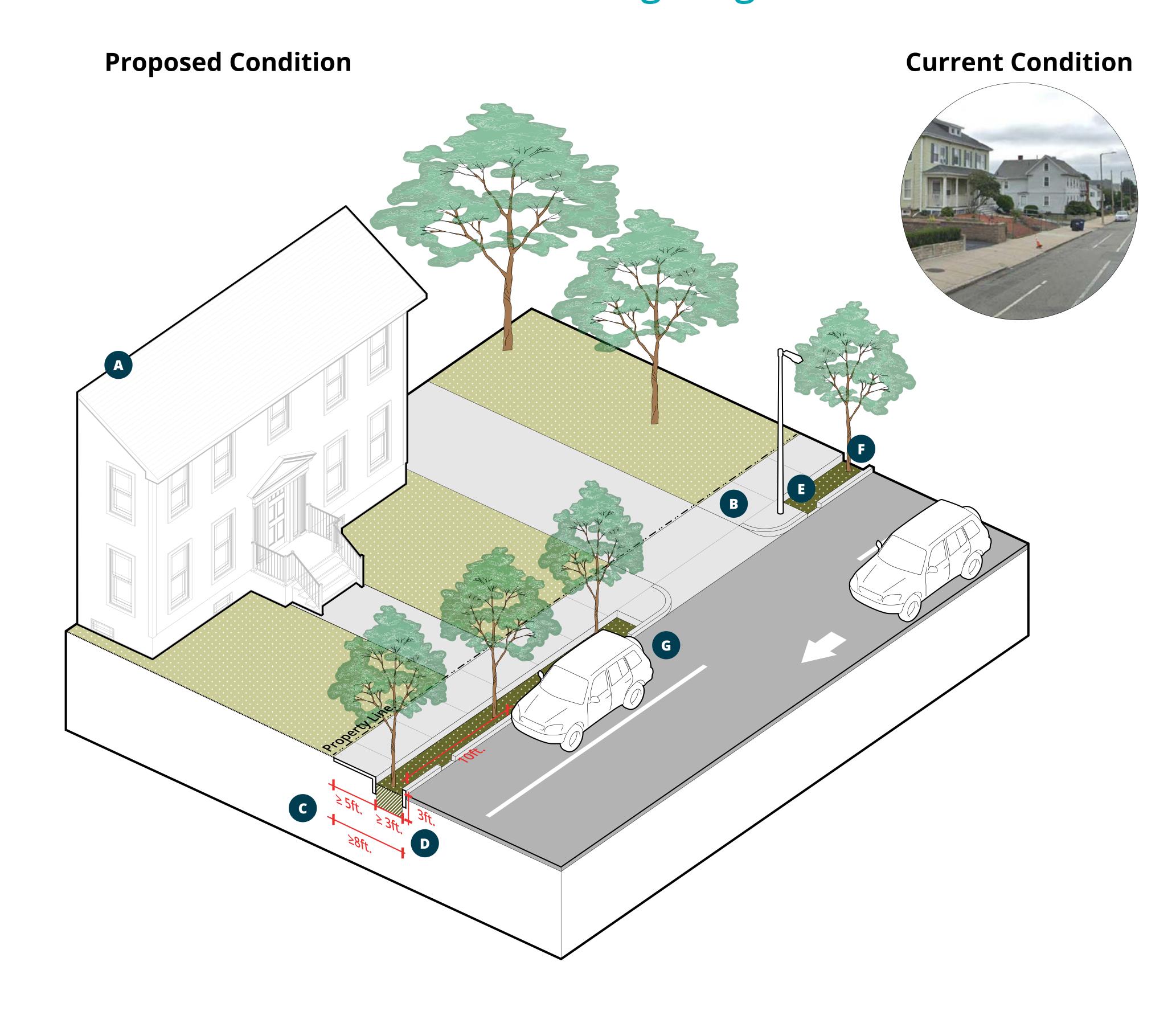


## Potential Streets for Greening Program



\*Candidate streets will be further evaluated according to the criteria below

### **Recommendations for Greening Program**



#### **Proposed Criteria for Adding Street Trees**

- In residential or low pedestrian volume commercial areas
- B Less than 60% of the sidewalk currently planted with trees along it
- Distance from curb to property line is greater than 8ft. (to allow minimum 5ft. clear unobstructed sidewalk and 3 ft. tree trench)
- Trench lengths of minimum 10ft. per tree and depths of at least 3ft. (or soil volume of at least 30sq ft. per tree)
- Distance from street light pole is greater than 10ft. (to prevent trees from blocking light)
- No underground or overhead utilities (especially natural gas or power lines)
- Parking uses at curb

  (no travel lanes at curb edge to avoid damaging the trees)

#### **General recommendations**

- Large species recommended to maximize shade potential
- Choose from City approved street tree list
- Use approved soil mix
- Irrigation program for first year

