

City of Cambridge
Community Development Department

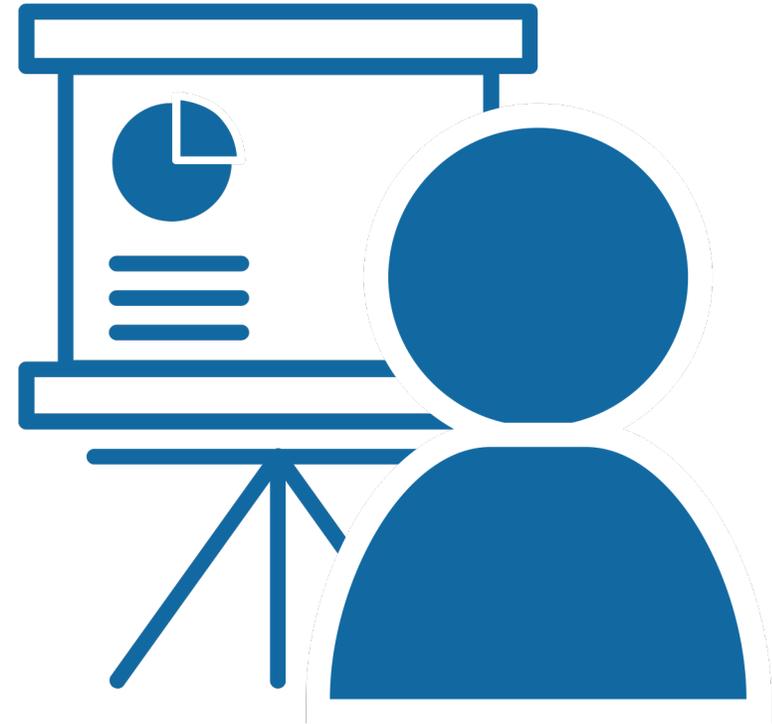
Pedestrian Committee Meeting

January 27, 2021



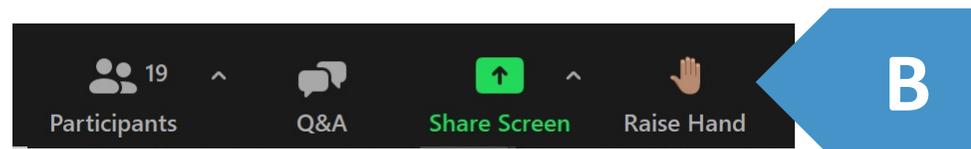
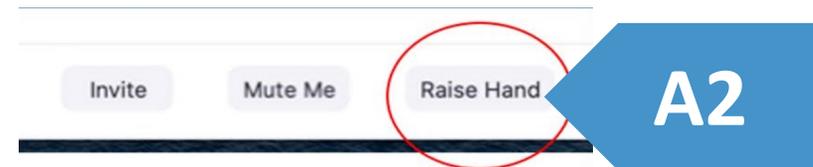
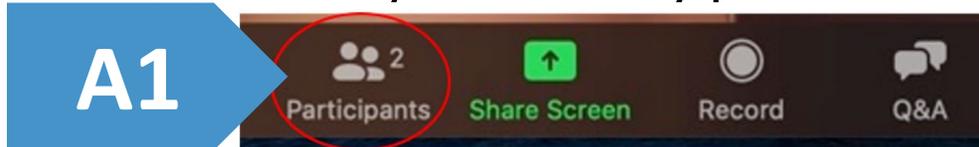
Meeting Agenda

1. Agenda Review, Zoom Protocol, Minutes
2. All About Signals
3. Project Updates
 1. TP&T
 2. DPW
 3. Other Projects
4. Committee Work
5. DCR Memorial Drive Phase III
6. Public Comment
7. Upcoming Meetings



Committee Member Instructions

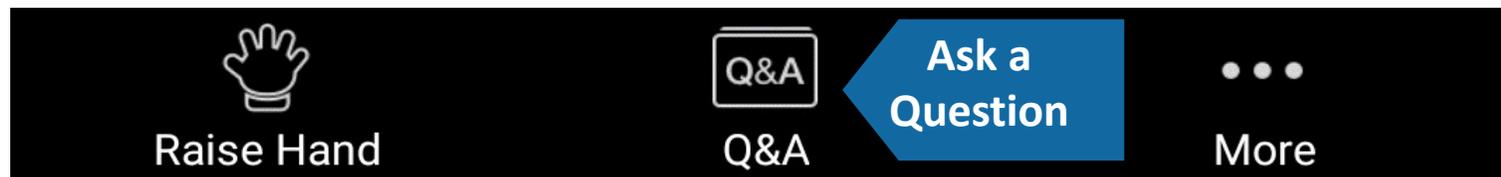
- Committee members may speak and show webcam video
 - Please show video when speaking
- Use "Raise Hand" button to help manage discussion
 - Located at the bottom of the Participants panel (See A1-2 below) OR at the bottom of the screen (see B below)
 - *9 to Raise Hand by phone
- Please stay muted unless speaking
 - *6 to mute/unmute by phone



Public Comment Instructions

- Members of the public are muted and cannot show webcam video
- Public can write questions or ask for assistance in Q&A window at any time
 - Questions may be submitted at any time and will be addressed as time allows, during discussion/comment periods
- During the Public Comment period, use the "Raise Hand" button to signal you have a question/comment. A staff member will then enable you to unmute yourself.
 - *9 to Raise Hand by phone
 - *6 to Mute/Unmute by phone
- Please be respectful! Participants will be removed for inappropriate behavior

Bottom Panel of
Zoom Screen





Minutes



All About Signals

Dana Benjamin (TP&T), dbenjamin@cambridgema.gov



Cambridge Traffic Signals

PRESENTATION TO CAMBRIDGE
PEDESTRIAN ADVISORY COMMITTEE

JOSEPH E. BARR, DIRECTOR

DANA BENJAMIN, E.I.T., TRAFFIC ENGINEER

Overview of Cambridge Signals

- ▶ 178 owned by City
 - ▶ 130 stop-and-go
 - ▶ 18 flashers
 - ▶ 30 school zone flashers
- ▶ 31 owned by DCR
- ▶ 3 owned by MassDOT



Reporting Problems

- ▶ Commonwealth Connect smartphone app (aka See Click Fix)
- ▶ Traffic Dept website:
<https://www.cambridgema.gov/traffic/contactforms/trafficengineering>
- ▶ Email
 - ▶ dbenjamin@cambridgema.gov
- ▶ Telephone
 - ▶ 617.349.4729

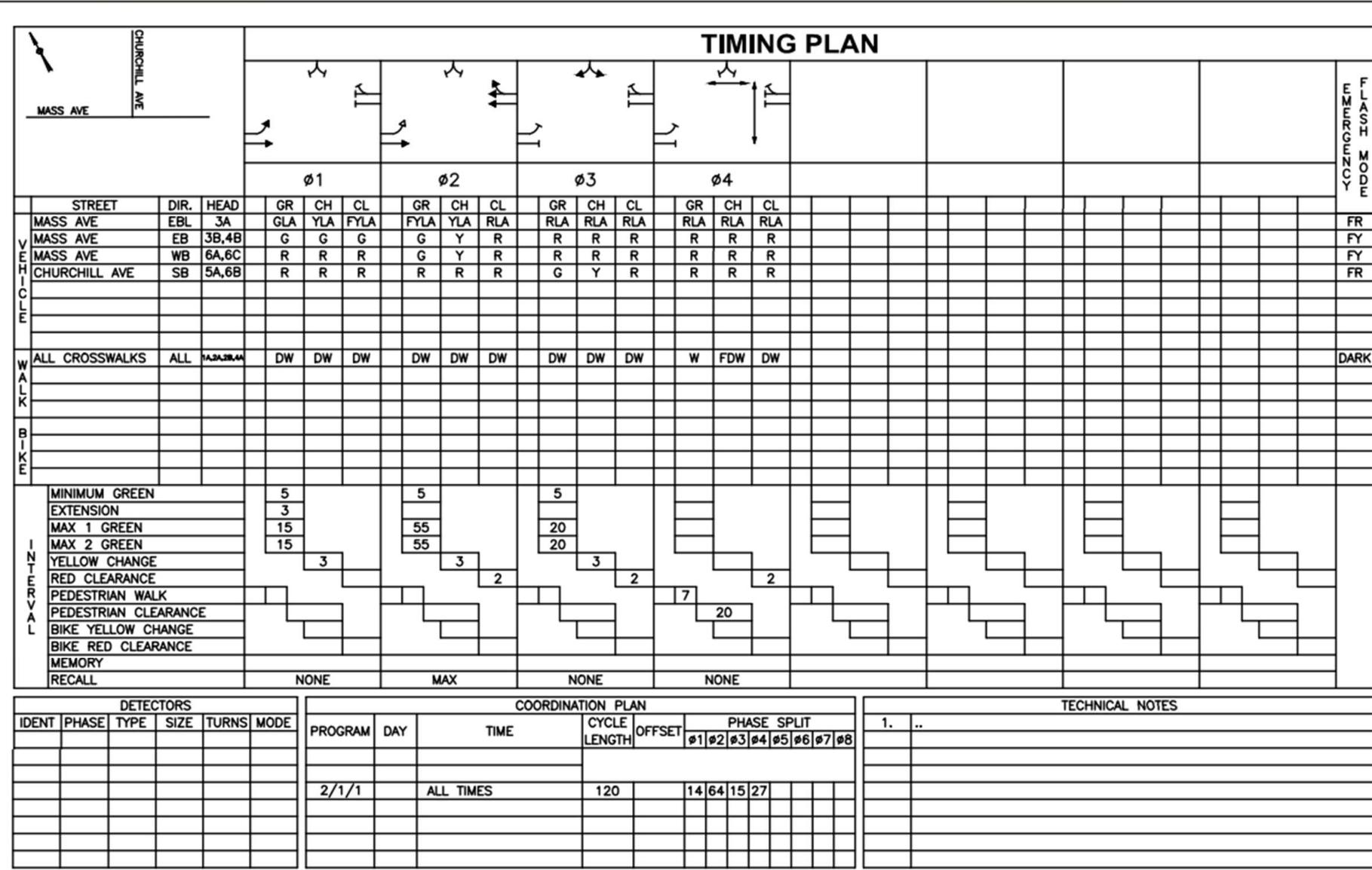


Signal Jargon

- ▶ **Interval** – The red, yellow, or green duration of a signal indication (pedestrian intervals : WALK, FDW, DW)
- ▶ **Clearance/Change Interval** – The combined length of the yellow and all-red intervals (pedestrian clearance: FDW + all-red)
- ▶ **Phase** – The total duration of the green, yellow, red intervals for a specific traffic movement
- ▶ **Cycle** – The time it takes to complete an entire traffic sequence (the sum of the phases).
- ▶ **Actuation/Actuated** – When a phase is triggered via some type of detection (for vehicles: traffic loops, cameras. For pedestrians: push-buttons)
- ▶ **Recall** – When a phase is set to always occur during every cycle. Used at intersections without detection.



Phase Diagram (2/2)



Recent Improvements

- ▶ Left-turn “jug-handle” – Mass Ave @ Cameron Ave & Cedar St
- ▶ Cabinet consolidation in Harvard Sq



Active/Short Term Work

- ▶ Accessible Pedestrian Signal (APS) installations
 - ▶ Harvard @ Winsdor St
 - ▶ Somerville Ave @ White St
- ▶ Rectangular Rapid Flash Beacon (RRFB) installations
 - ▶ Magazine St @ Upton St
 - ▶ Mass Ave @ Plympton St
 - ▶ Garden St @ Mass Ave
 - ▶ Concord Ave @ Bond St
 - ▶ #157 Walden St (upcoming)
- ▶ Speed Feedback Signs
 - ▶ Concord Ave (near #46 Concord)

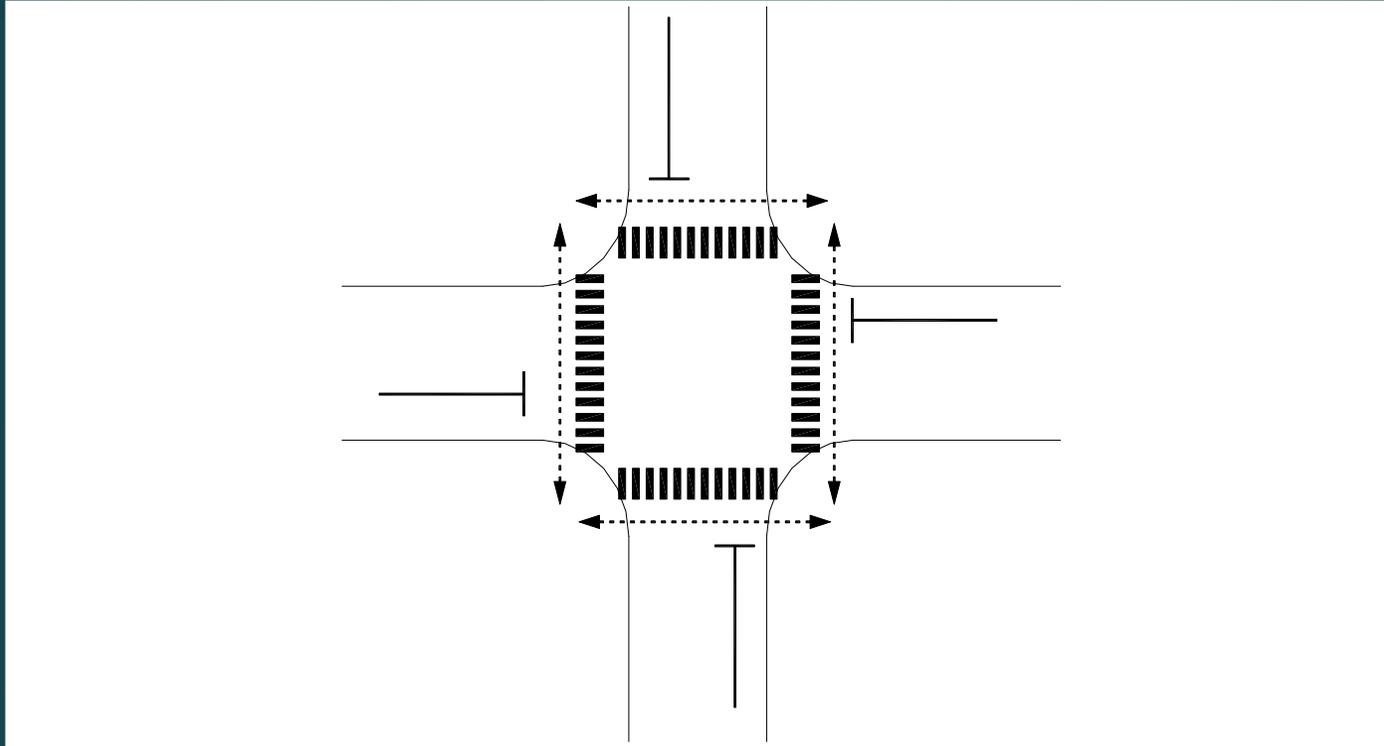


Types of Traffic Signal Operation – Ped Phase

- ▶ Concurrent
- ▶ Exclusive
- ▶ Pedestrian only



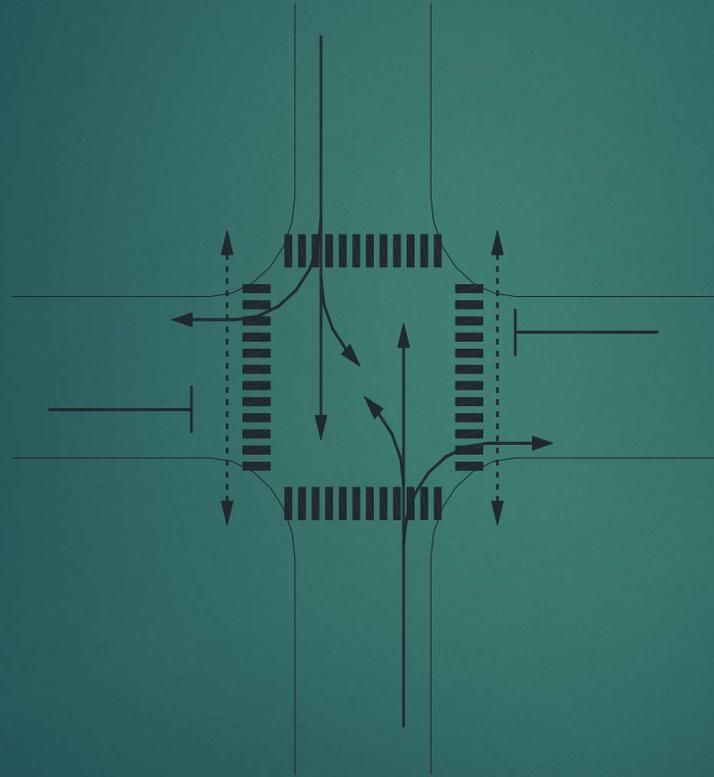
Exclusive Pedestrian Phasing



Exclusive Pedestrian Phasing

- ▶ Advantage
 - ▶ No conflict between lawful pedestrians walking under WALK/flashing DON'T WALK and vehicles
- ▶ Disadvantages
 - ▶ High delay to pedestrians
 - ▶ Short WALK interval (7 seconds)
 - ▶ Non-compliance from pedestrians (many cross concurrently)
 - ▶ Severe effect on vehicle operations

Concurrent Pedestrian Phasing



Concurrent Pedestrian Phasing

- ▶ Advantages
 - ▶ Reduces delay to pedestrians
 - ▶ Increases compliance to WALK signals
 - ▶ Increases vehicle throughput of intersection
 - ▶ Longer WALK interval
- ▶ Disadvantage
 - ▶ Left- and right-turning vehicles conflict with pedestrians

Leading Pedestrian Interval (LPI)

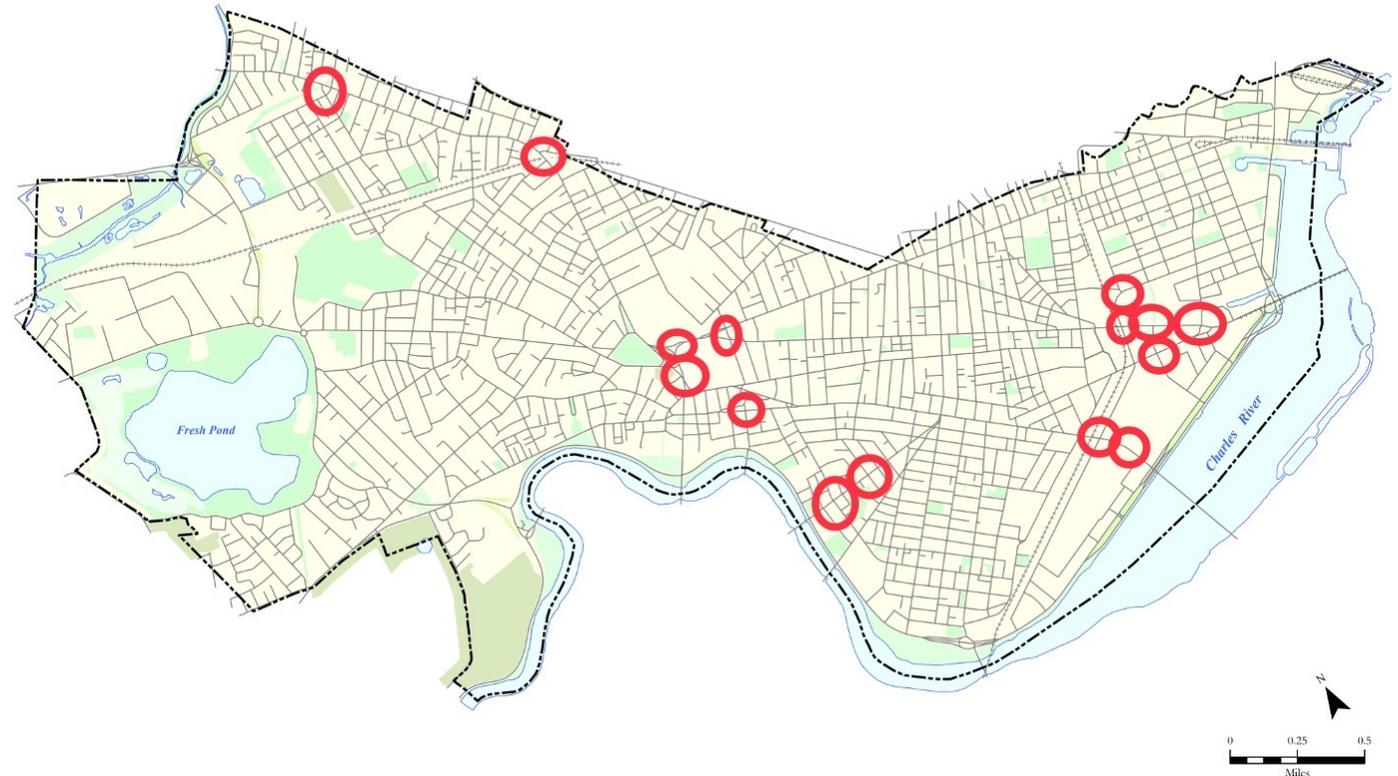
- ▶ Between 3 and 5 seconds long
- ▶ Provides the pedestrian a head start
- ▶ Turning vehicles much more likely to yield to a pedestrian already in the middle of the crosswalk
- ▶ Cost to vehicle operations is very low

TP&T Traffic Signal Policy

- ▶ 90-second cycle length peak/75 off-peak
- ▶ Concurrent pedestrian phasing with LPI (except at busy T intersections and those with very high vehicle volumes)
- ▶ Pedestrian phase will be set to occur every cycle and buttons removed (where possible)
- ▶ Never use “flashing mode”

Bicycle Signals

- Operate similarly to vehicle traffic signals
- Locations:
 - Mass Ave / Cedar
 - 77 Mass Ave
 - Cambridge St / Mass Ave
 - Western Ave / Putnam
 - Western Ave / Howard
 - Mass Ave / Vassar
 - Mass Ave / Church st
 - Ames St/Main St
 - Broadway / 3rd St
 - Broadway / Ames
 - Mass Ave/ Somerville Ave
 - Mt Auburn St/ De Wolfe
 - Broadway/ Galileo Galilei Way
 - Binney St/ Fulkerson
 - Quincy St/ Cambridge St
 - Quincy St/ Broadway





Questions?

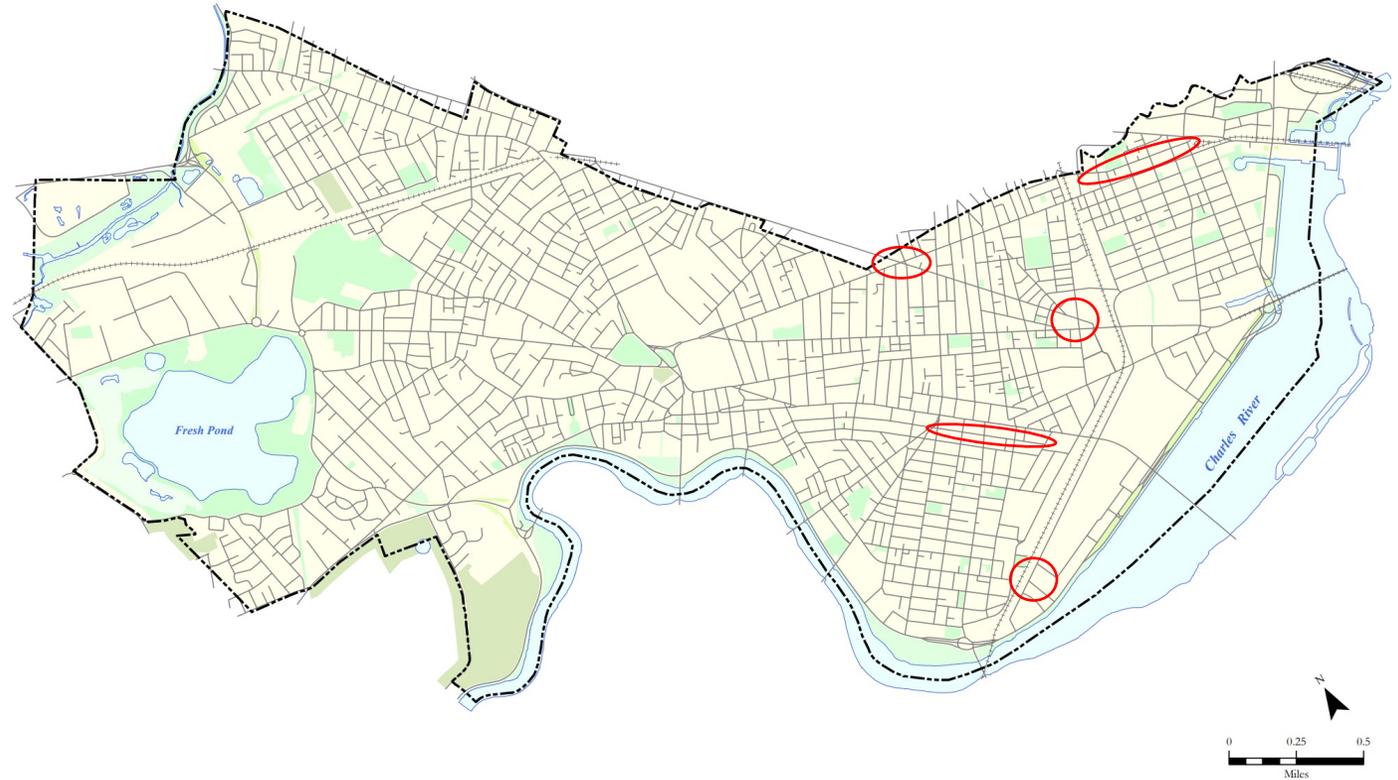


DPW Updates

Brian McLane (DPW), bmclane@cambridgema.gov

DPW Updates

- Franklin St from Landsdowne St to River St. – Brick sidewalk construction on going.
- Gore Street- water service installation in progress; sidewalk work resumes in spring; project will continue until Fall 2022
- Inman Sq.- drainage work scheduled for Inman St and Fayette St as weather allows. sidewalk and roadway work resumes in spring
- Long term sidewalk closures due to construction at 301 Vassar and the corner of Portland and Hampshire



DPW Updates

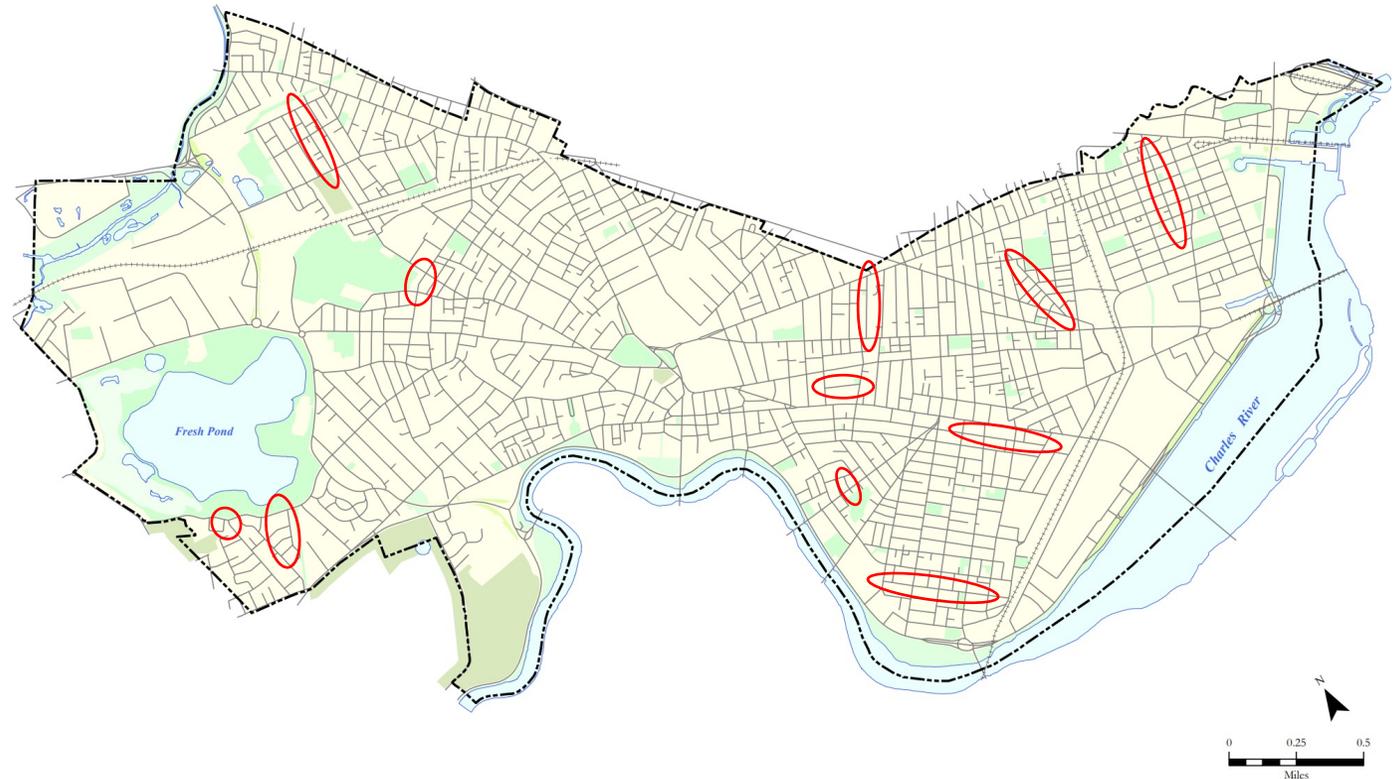
Upcoming Projects

- Port Infrastructure Project- design and community engagement on-going; Working group meeting 1/12/2022 at 9am
- River St- preparing bid docs
- Willard St – preparing bid docs
- MassAve4 separated bike lane project- design has started; utility investigations by DPW and utility companies



DPW Updates

- Chapter 90, Contract 24 – preparing bid docs.
 - Park Ave. – Huron to Holworthy
 - Walden St.- Sherman to Garden
 - Webster St. – Lincoln to Hampshire
 - Chestnut St. – Sidney to Pleasant
 - Dodge St.- Western Ave to Callendar
 - Huron at Cushing Plaza (green infrastructure)
- Chapter 90, Contract 25- design and community engagement.
 - Green St- Pearl to Landsdowne
 - Maple St- Broadway to Cambridge
 - Centre St – Dana to Hancock
 - Montgomery St – Harvey to Rindge
 - Sciarappa St- Charles to Winter





DCR Memorial Drive Phase III

<https://eeaonline.eea.state.ma.us/EEA/MEPA-eMonitor/home>



December 15, 2021

Memorial Drive Reconstruction

Environmental Notification Form

Submitted to:

Executive Office of Energy and
Environmental Affairs
MEPA Office
100 Cambridge Street - Suite 900
Boston, MA 02114

Prepared for:

Department of Conservation &
Recreation
251 Causeway Street - Suite 900
Boston, MA 02114

Prepared by:

Stantec Consulting Services, Inc.
226 Causeway Street - 6th Floor
Boston, MA 02114

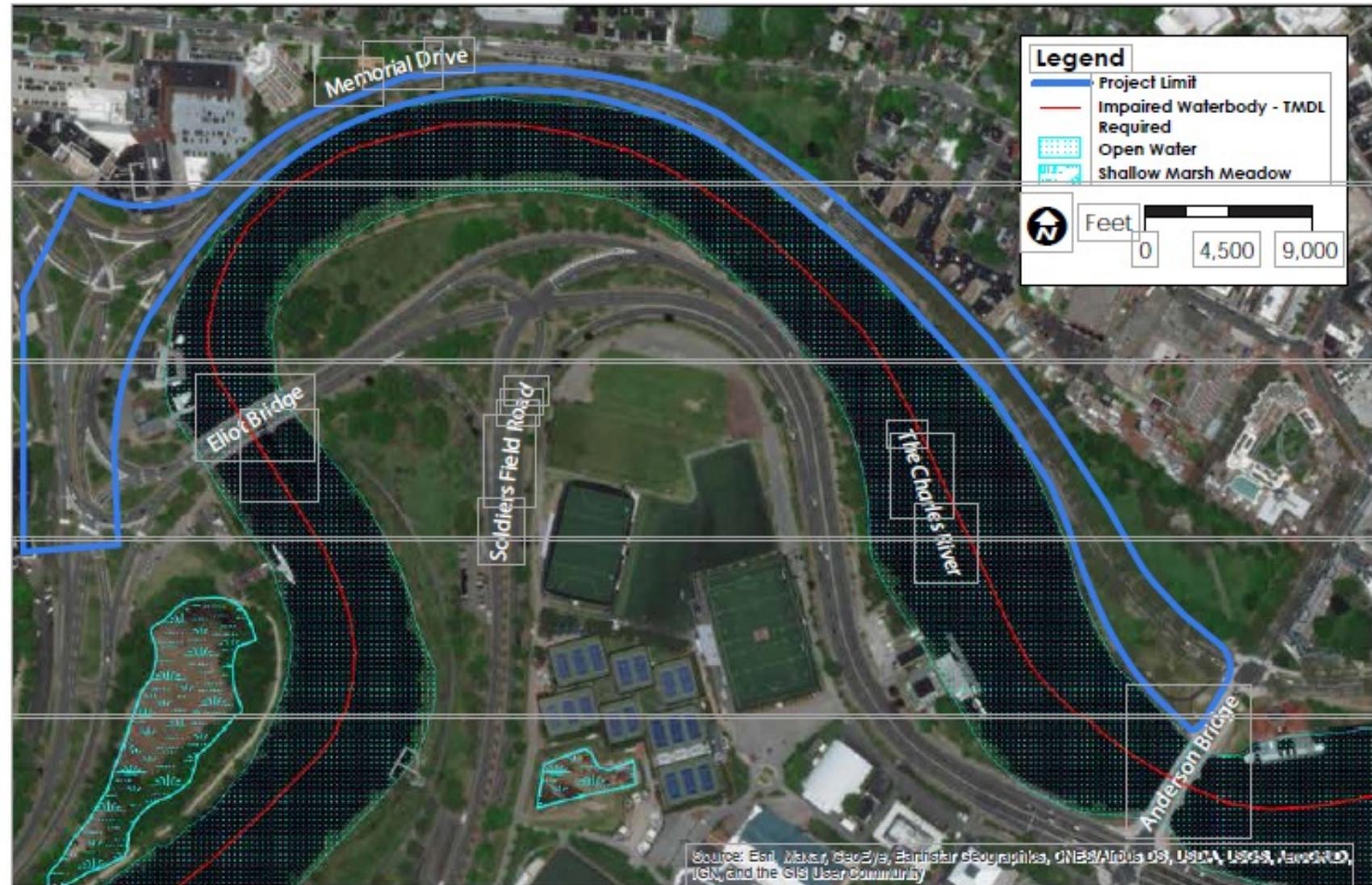
Site Context



Map Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs, ArcGIS Online, ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 2: Project Location
DCR Cambridge - Memorial Drive Reconstruction
Eliot Bridge to N. Harvard St. Bridge

Site Context



Map Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs, ArcGIS Online, ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 3: Wetland Resources / Impaired Waters
DCR Cambridge - Memorial Drive Reconstruction
Eliot Bridge to N. Harvard St. Bridge



Project Description – Overview

The Massachusetts Department of Conservation and Recreation (DCR) is proposing to construct a shared multi-use path, a separate aggregate path, and parkland improvements along an approximately 0.8-mile section of Memorial Drive from Eliot Bridge east to the intersection of Memorial Drive and John F. Kennedy Street. DCR will implement a “road diet” along this section of Memorial Drive reducing the existing four lane cross section (two lanes each way) to one thru travel lane in each direction, thereby providing an opportunity to reallocate a portion of the existing paved roadway to multi-use paths and parkland uses.

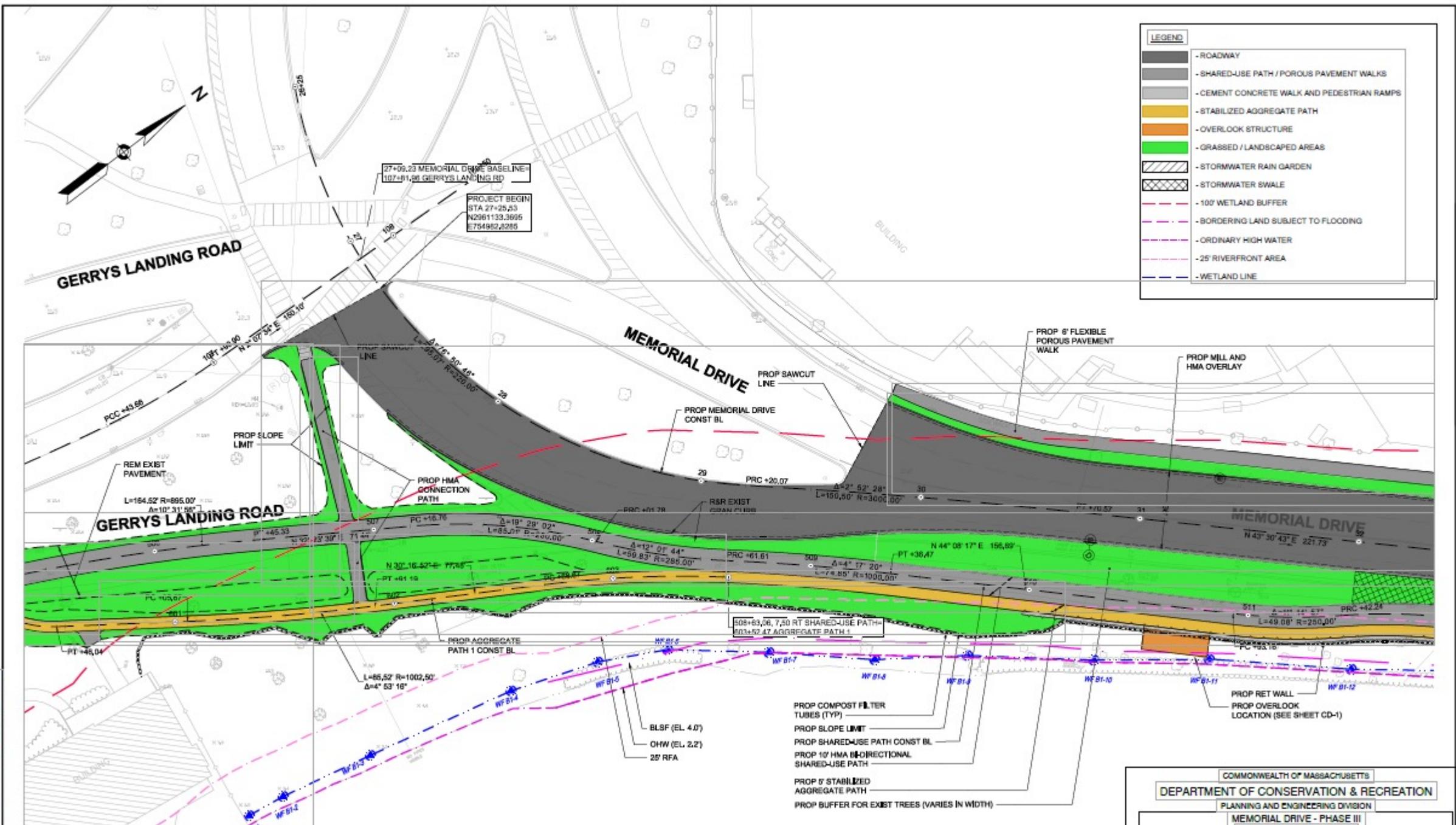
- Road Diet Reduction of the existing 40- to 43-foot wide four-lane roadway to a 26-foot-wide two-lane cross-section consisting of two 10-foot-wide lanes with 3-foot-wide shoulders
- Trees – maintain 140 existing, add 50, remove 11 (some in poor condition)
- Landscaping
- Dr. Paul Dudley White Bike Path
- Running path
- Flexible sidewalk (north side)
- Additional crossings for people walking and bicycling
- Stormwater treatment
- Parkland Design



Project Description – Walking and Bicycling Facilities

The Project includes a substantial redesign of the greenway between the narrowed roadway and the Charles River to accommodate new bicycle and pedestrian infrastructure. This enhanced greenway will feature a **10-foot wide shared-use path** 0.8 mile in length (for cyclists and others who desire a hard surface) and a **5-foot-wide aggregate path**. The new shared use path replaces the existing 6.5-foot-wide path and will span the entire Project Site from Eliot Bridge to the intersection of John F. Kennedy Street along the greenway. The 5-foot-wide aggregate path generally will be located next to the new multi-use path while in some sections diverging closer to the Charles River depending on terrain and a desire to avoid existing trees.

The Project includes replacement of the existing sidewalk on the north side of Memorial Drive with a new ADA-compliant **5-foot-wide sidewalk constructed using flexible porous pavement**. The Project includes pedestrian crossing enhancements including a new pedestrian path connecting the multi-use path to the intersection of Gerry's Landing Road and Memorial Drive. Additionally, there would be **two mid-block bicycle and pedestrian crossings** within the section of Memorial Drive between Mt Auburn Hospital and John F Kennedy Street.

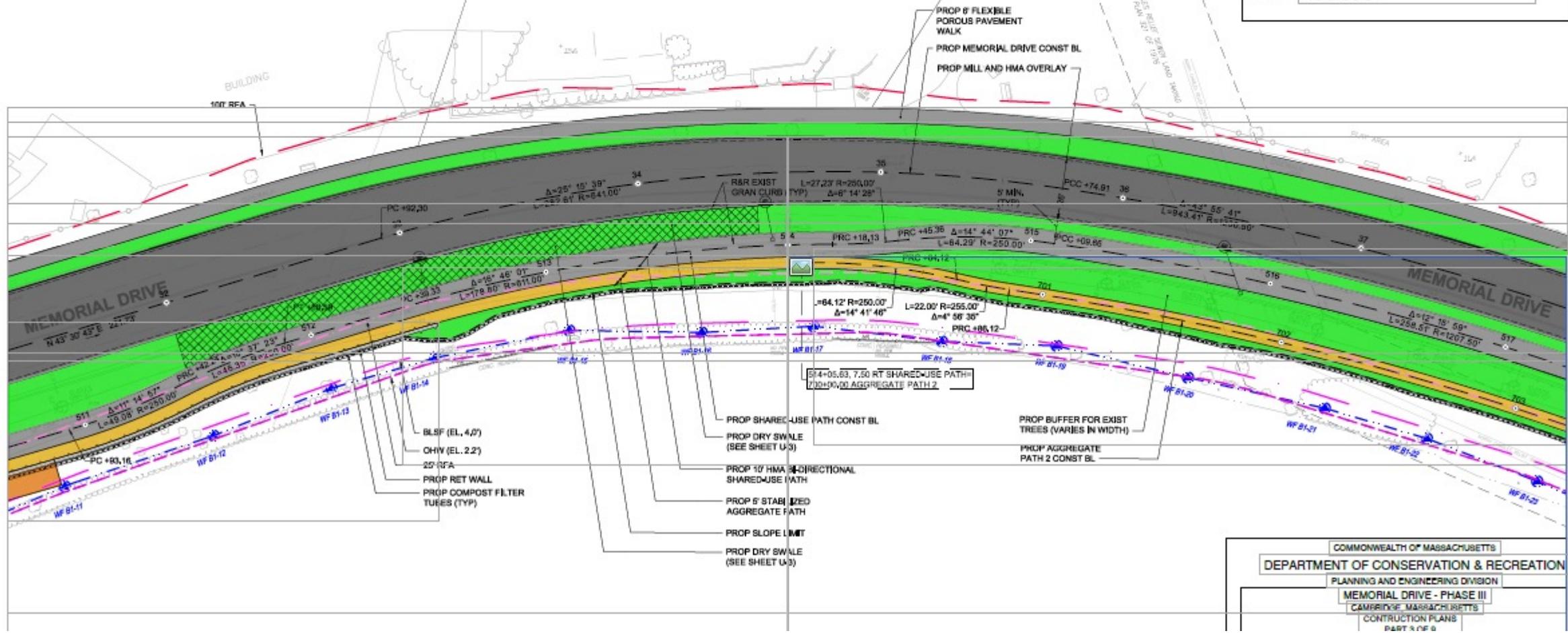


LEGEND	
	- ROADWAY
	- SHARED-USE PATH / POROUS PAVEMENT WALKS
	- CEMENT CONCRETE WALK AND PEDESTRIAN RAMPS
	- STABILIZED AGGREGATE PATH
	- OVERLOOK STRUCTURE
	- GRASSED / LANDSCAPED AREAS
	- STORMWATER RAIN GARDEN
	- STORMWATER SWALE
	- 100' WETLAND BUFFER
	- BORDERING LAND SUBJECT TO FLOODING
	- ORDINARY HIGH WATER
	- 25' RIVERFRONT AREA
	- WETLAND LINE

- PROF COMPOST FILTER TUBES (TYP)
- PROF SLOPE LIMIT
- PROF SHARED-USE PATH CONST BL
- PROF 10' HMA BI-DIRECTIONAL SHARED-USE PATH
- PROF 5' STABILIZED AGGREGATE PATH
- PROF BUFFER FOR EXIST TREES (VARIES IN WIDTH)



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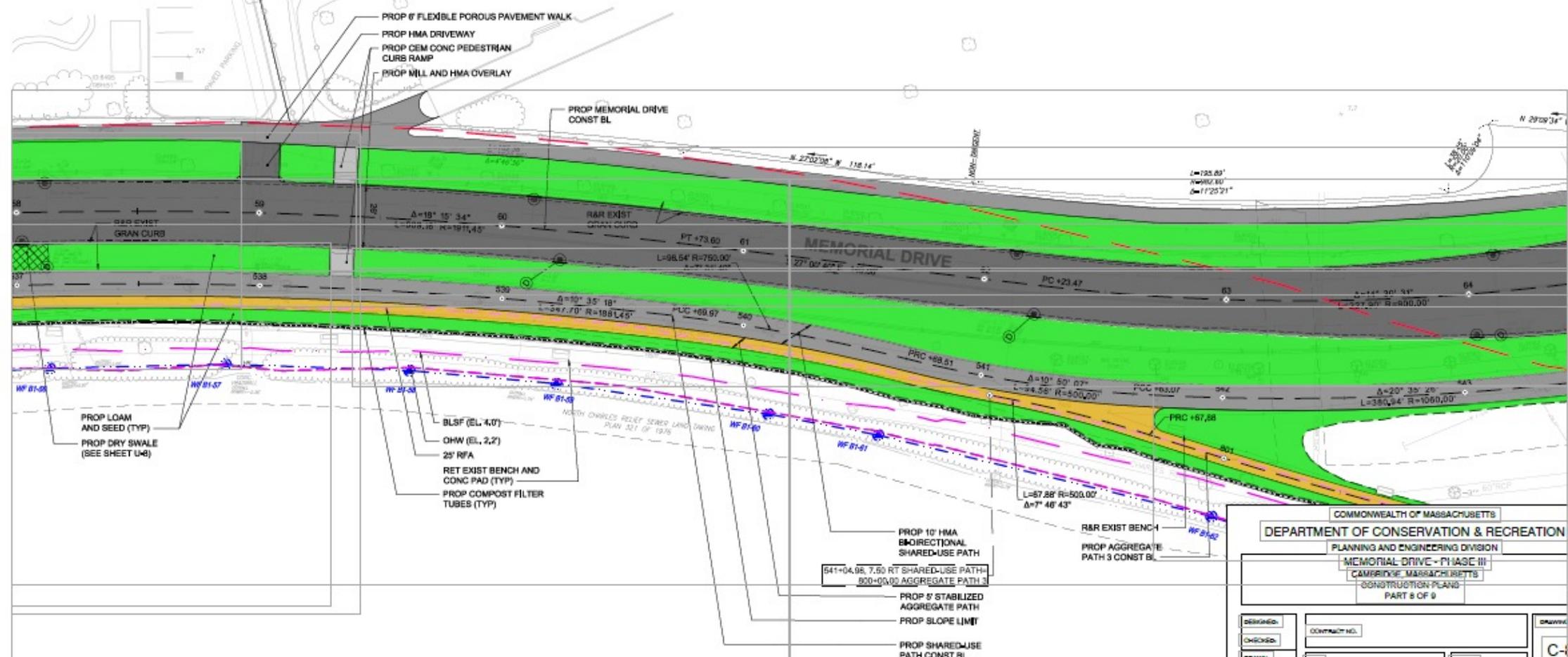
COMMONWEALTH OF MASSACHUSETTS
 DEPARTMENT OF CONSERVATION & RECREATION
 PLANNING AND ENGINEERING DIVISION
 MEMORIAL DRIVE - PHASE III
 CAMBRIDGE, MASSACHUSETTS
 CONSTRUCTION PLANS
 PART 3 OF 3

**ATTACHMENT G: River Overlook Example
(Northern Strand Trail)**





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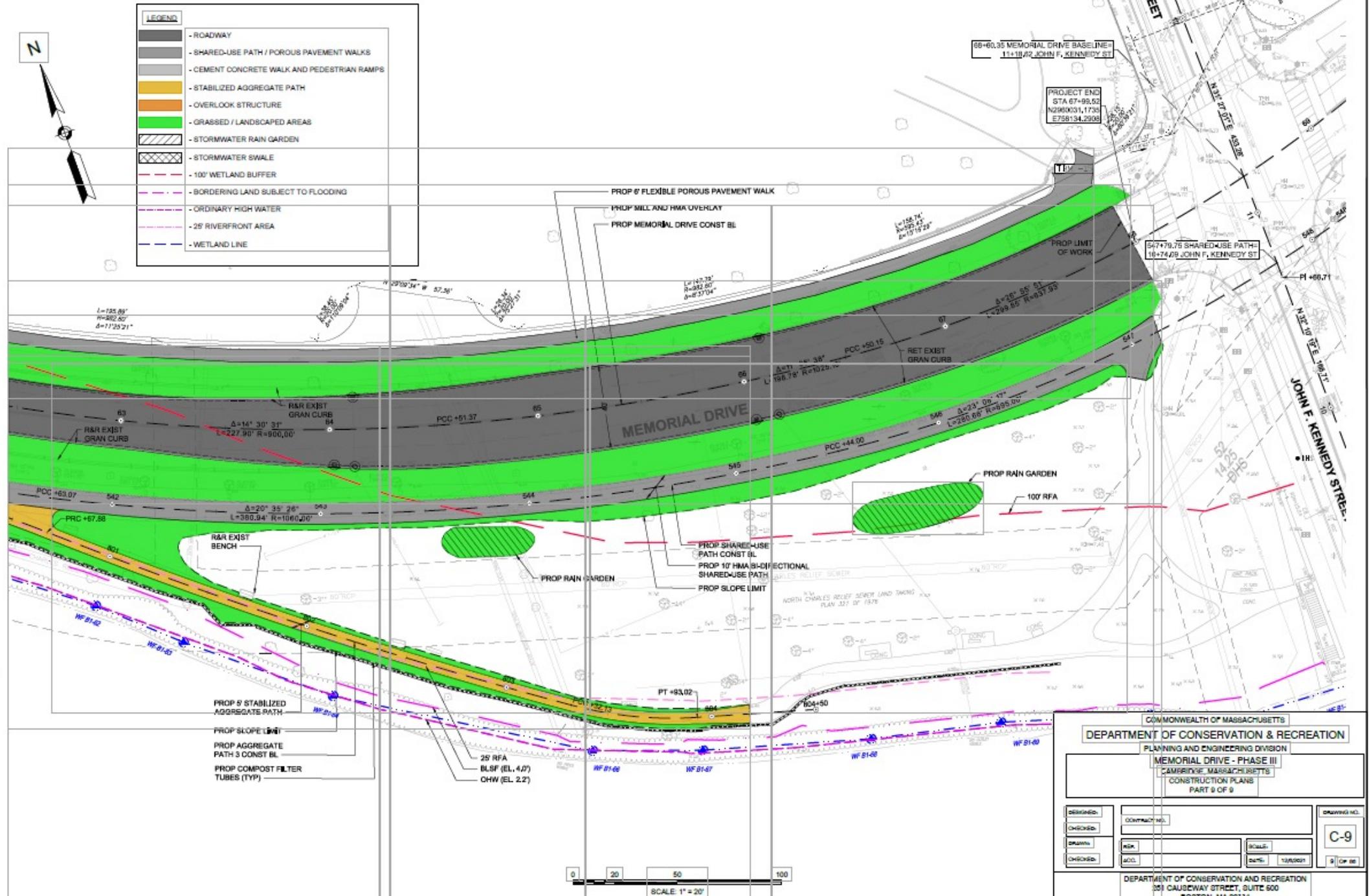


COMMONWEALTH OF MASSACHUSETTS
 DEPARTMENT OF CONSERVATION & RECREATION
 PLANNING AND ENGINEERING DIVISION
 MEMORIAL DRIVE - PHASE III
 CAMBRIDGE, MASSACHUSETTS
 CONSTRUCTION PLANS
 PART 8 OF 9

DESIGNED BY	CONTRACT NO.	DRAWING NO.
CHECKED BY	DATE	SHEET NO.
DRAWN BY	SCALE	



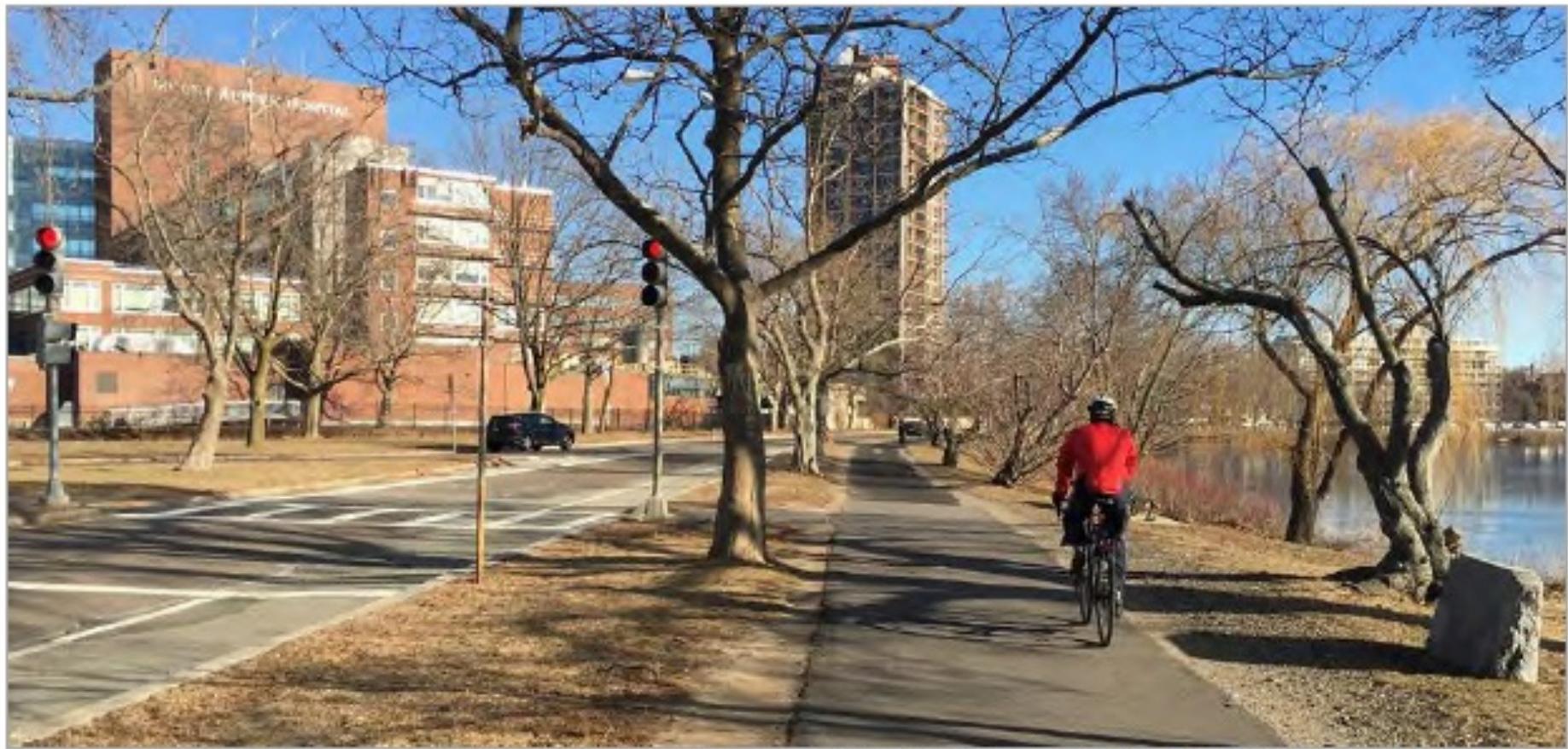
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COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION & RECREATION
PLANNING AND ENGINEERING DIVISION
MEMORIAL DRIVE - PHASE III
CAMBRIDGE, MASSACHUSETTS
CONSTRUCTION PLANS
PART 9 OF 9

DESIGNED:	CONTRACT NO.:	DRAWING NO.:
CHECKED:		C-9
DRAWN:	SCALE:	9 OF 99
CHECKED:	DATE: 10/20/21	

DEPARTMENT OF CONSERVATION AND RECREATION
351 CAUSEWAY STREET, SUITE 500
BOSTON, MA 02114





Work Plan

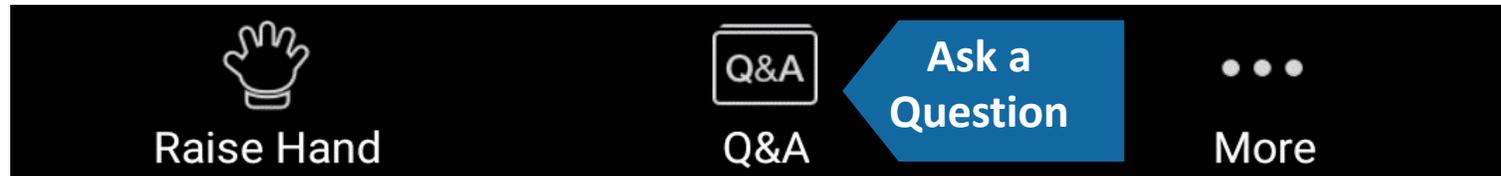


Public comment

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Bottom Panel of
Zoom Screen





Select Upcoming Meetings and Events

"Our Cambridge Street" Community Workshops

Thursday, February 3, 2022 6:00 PM

And

Thursday, February 17, 2022 6:00 PM

The City of Cambridge will be two community workshops as part of their ongoing "Our Cambridge Street" planning. This study looks at Cambridge Street between Inman Square and Lechmere Station, an area identified in the City's Envision Cambridge plan as an area where sensitive and sustainable growth could provide opportunities for affordable housing, support local businesses, enhance walking and bicycling, and improve the public realm more generally.

Session 1- Crafting a Vision, on February 3rd, will be a summary of survey feedback and serve as a visioning session to help develop a shared vision statement for the area being studied.

Session 2 – Priorities and Possibilities, on February 17th, will bring the conversation deeper and discuss priorities and possibilities for the corridor. This will include focused discussions on complex topics and opportunities to bring questions and ideas about Cambridge Street to experts within the City of Cambridge and its planning team.

[RSVP here](#) and visit [the project's website](#) for more information about "Our Cambridge Street".

Bicycle Committee Meeting

Wednesday, February 9, 2021 5:30 PM -7:30 PM

A regular meeting of the Bicycle Committee.

Joint Transportation Committees Meeting

Wednesday, February 16, 2022 5:30 PM – 7:30 PM

A joint meeting of the Transit Advisory Committee, Bicycle Committee, and Pedestrian Committee.

Pedestrian Committee Meeting

Thursday, February 24, 2022 6:00 PM – 8:00 PM

A regular meeting of the Pedestrian Committee.



Thank You