



GREEN LINE EXTENSION PROJECT



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GLX Project Public Meeting
March 10, 2020
Multicultural Arts Center, Cambridge

Agenda

Welcome & Introduction

- Terry McCarthy, MBTA / GLX Stakeholder Engagement

Project Overview

- John Dalton, MBTA / GLX Program Manager

Construction Plans for 2020

- T.J. Steinhilber, Structures Manager, GLX-C

MBTA Bus Operations

- Melissa Dullea, MBTA

Comments / Questions

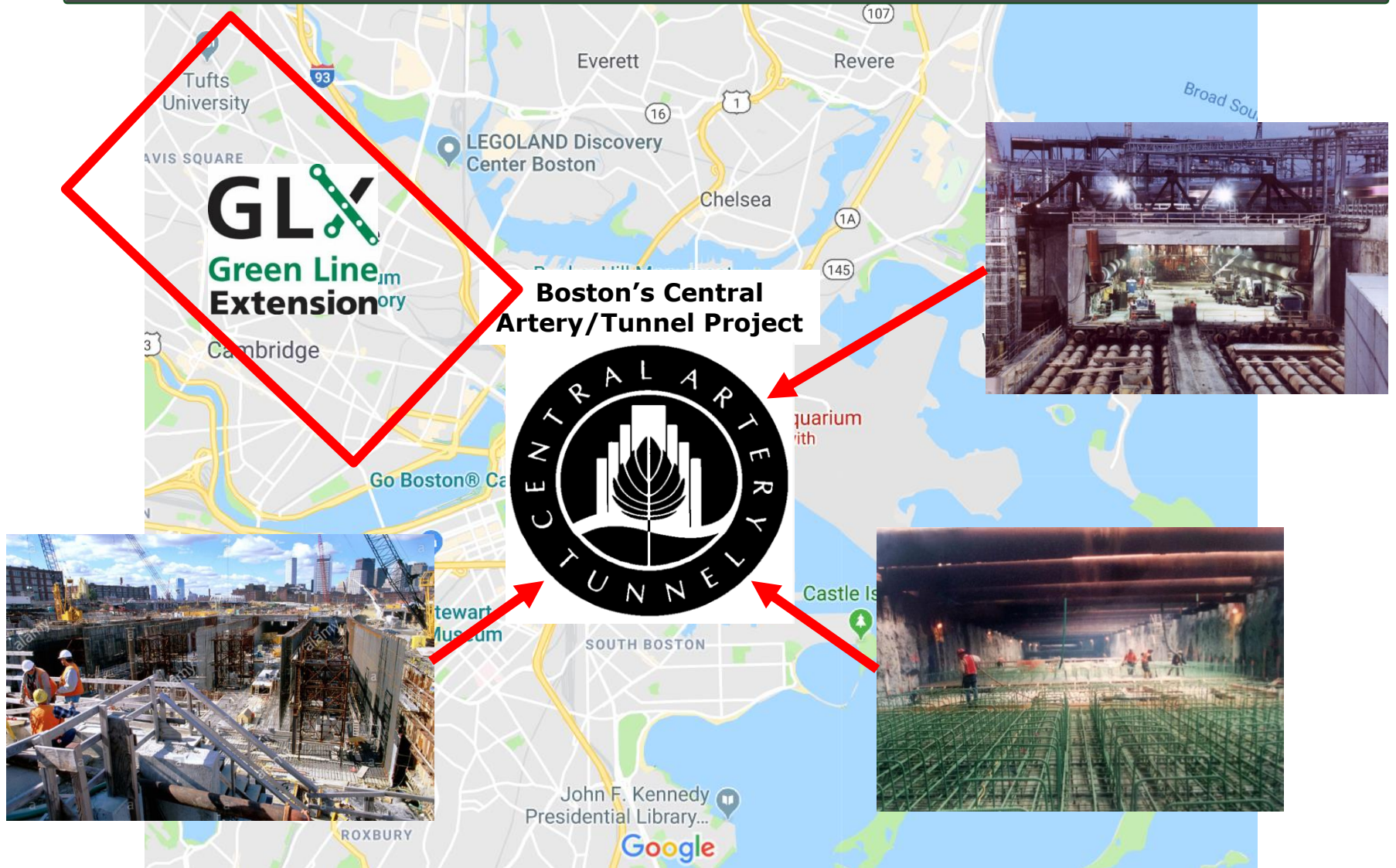




GLX Overview



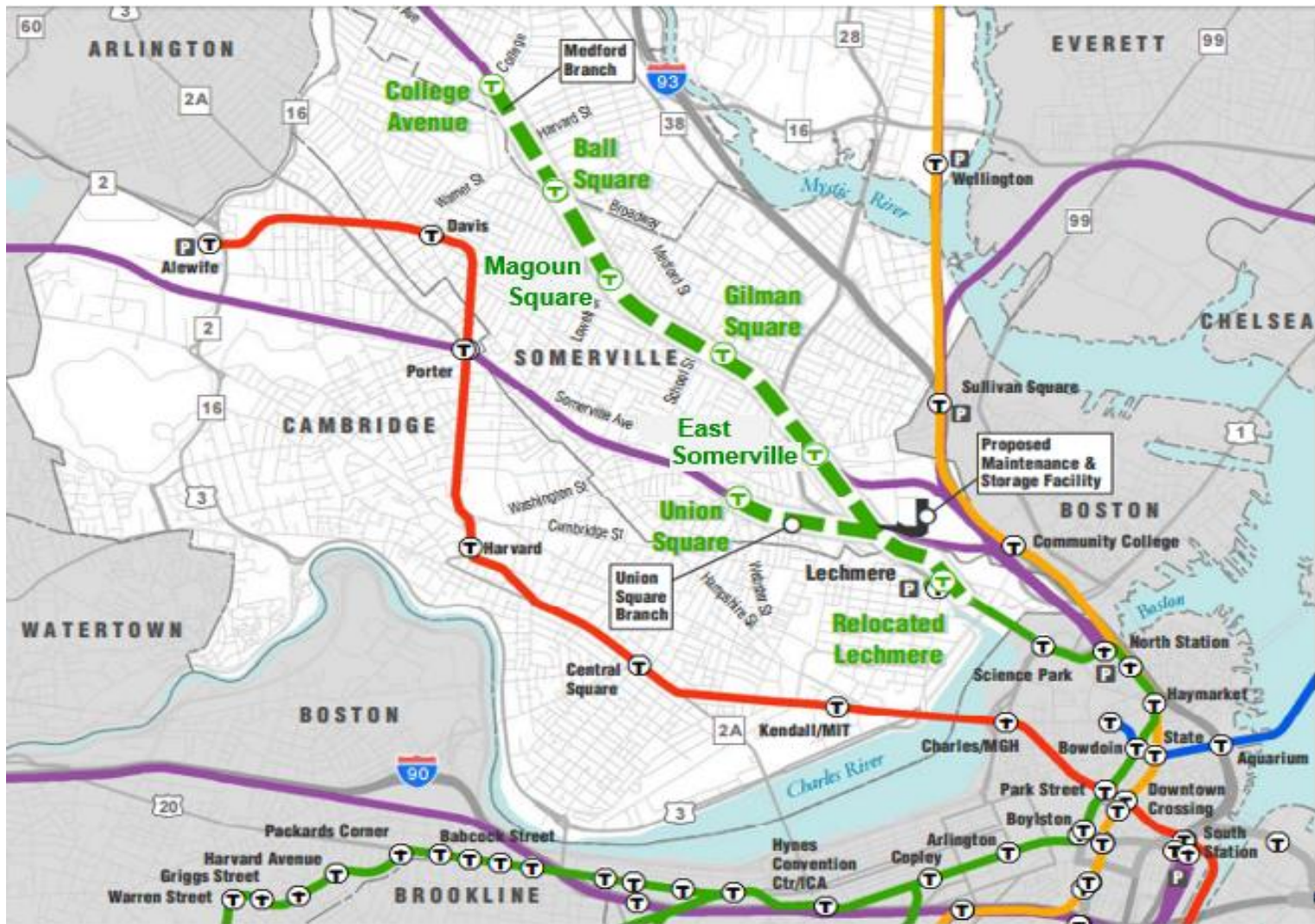
Genesis of GLX Project



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GLX Project Area



GLX Summary Fact Sheet

- **Seven light-rail GLX stations**
 - Relocated Lechmere Station
 - 5 on Medford Branch
 - 1 on Union Square Branch
- **Conforms with all environmental commitments and committed scope elements as established in the Full Funding Grant Agreement (FFGA)**
- **Includes a multiuse community path**
- **Procurement of 24 Green Line light rail vehicles**
- **Vehicle Maintenance Facility (VMF)**
- **Program Budget - \$2.3Bn**



Construction Update

Lechmere Area - Old and New



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Construction Update

Red Bridge / Boston Engine Terminal Area



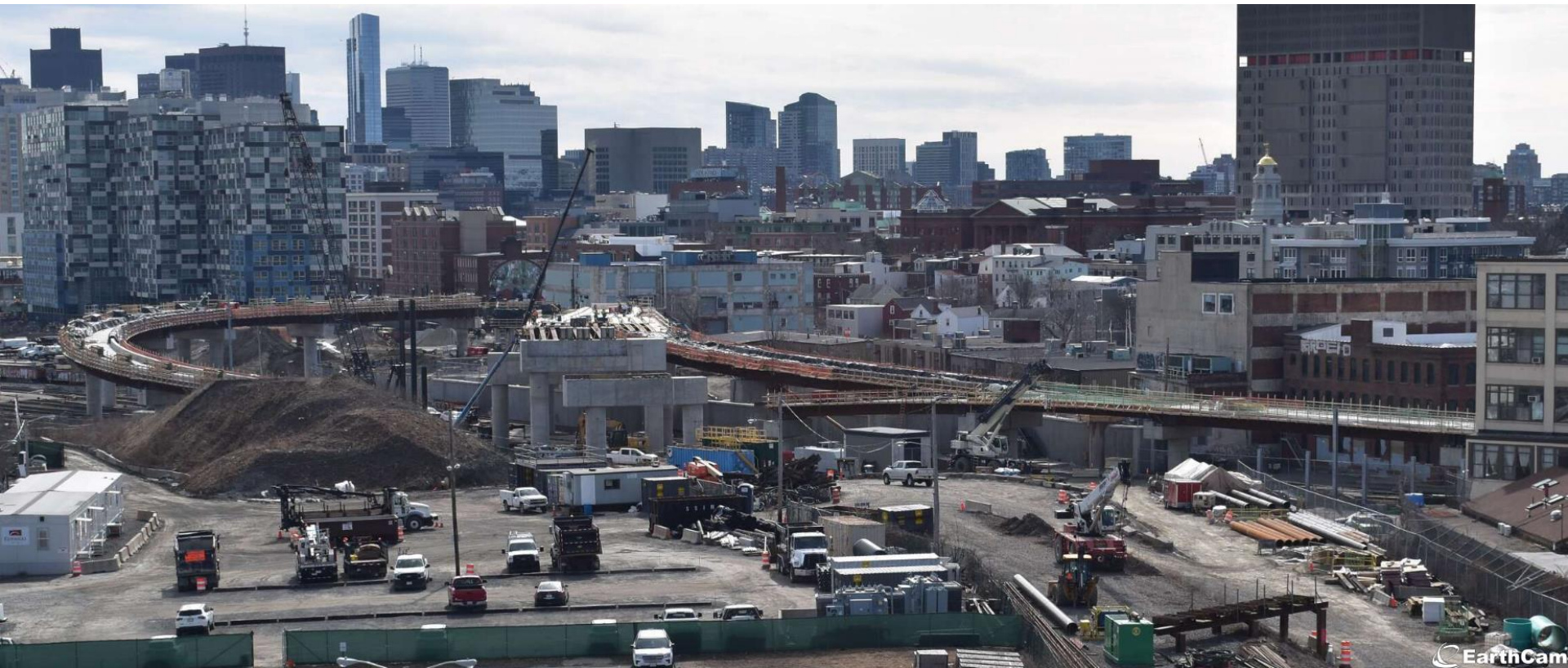
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Construction Update

Red Bridge / Fitchburg Viaducts



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Lechmere Station & Viaduct *Demolition & Replacement*



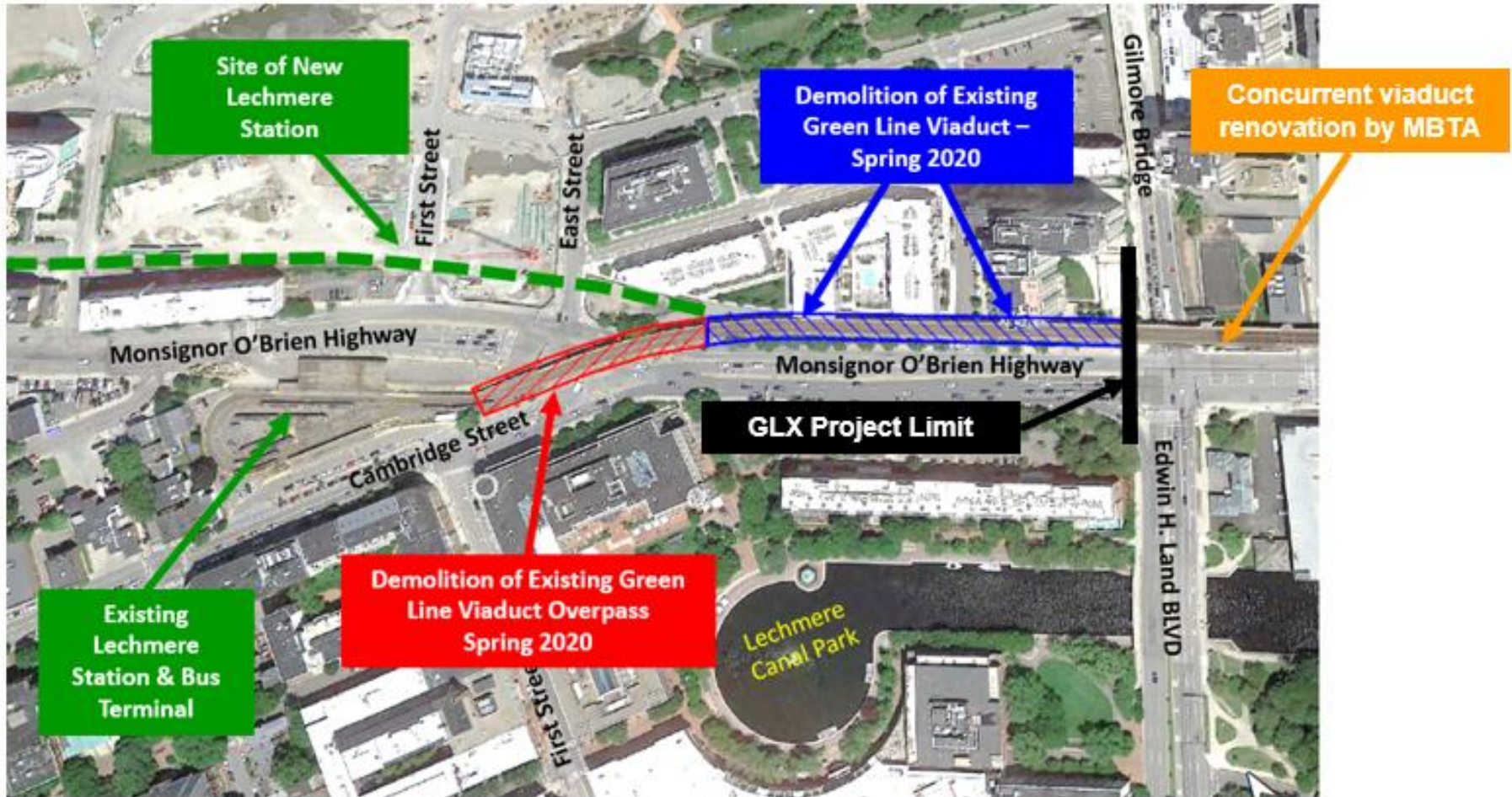
Lechmere Station & Viaduct Alternate Service

Lechmere Station will be closed to Green Line service for approximately one year beginning Spring of 2020 to remove, rebuild, and relocate a viaduct section and station

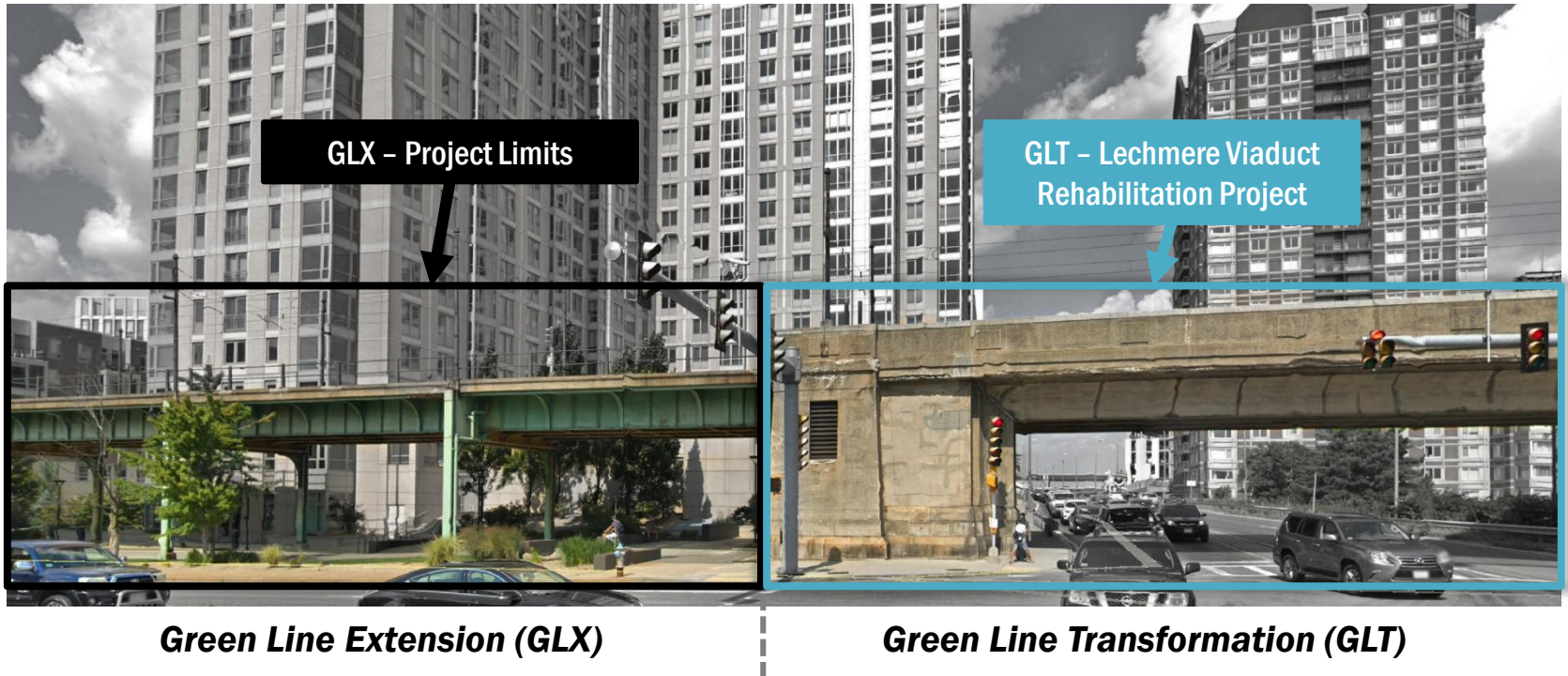
- Existing commuter bus routes (69, 80, 87, & 88) will continue to provide service to the existing bus garage at Lechmere Station during Green Line service outage
- Green Line service between Lechmere Station and North Station will be diverted to a replacement bus service
- Weekday average Green Line trips to/from Lechmere Station and Science Park is approximately ~14,000
- Initial estimates indicate 12 to 14 buses will be required during peak periods



Lechmere Station Demolition & New Viaduct Section



Lechmere Project Limits



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GLT Lechmere Viaduct Rehabilitation Project



Physical Conditions

- The existing railing, deck, and stringer conditions warrant replacement due to extensive chloride intrusion and map cracking of the concrete
- Additional concrete and steel repairs necessary to extend the life of the structure



Strength Requirements

- The structure's current load rating indicates the concrete arches are **below statutory requirements**, restricting the number of simultaneous revenue vehicles and work cars on the viaduct



Planned Lechmere Viaduct Outreach

Target Audience

- Commuting public
- Neighboring cities/towns (>1M People)
- 84 media outlets
- 29 Hospitals and medical facilities
- 26 Colleges/Universities
- Chamber of Commerce & large employer database
- Regional bus companies
- MBTA ridership (Alerts)

Tactics/Approach

- Variable Message Signs (VMS)
- Reboot Your Route campaign
- Email blasts (More than 7,300 registered recipients)
- MassDOT social media
- Public Service Announcements
- Municipal websites
- News media engagement



Next steps

Alternative service:

- Continue coordination with MassDOT, Boston, and Cambridge on stop location, replacement bus routing, and bus priority feasibility
- Finalize operating party for alternate bus service (MBTA or 3rd party provider) - RFP process underway



Construction Plans for 2020

- **TJ Steinhilber – GLXC Structures Discipline Lead**
- **Presentation Overview**
 - Scope of Work – Overview
 - Where are we now, where will we be?
 - Lechmere Viaduct – Gilmore Bridge to East Street
 - Demolition
 - Pier Cap/Structural Steel Installation
 - Superstructure Installation
 - Track Build/Systems Installation/Testing

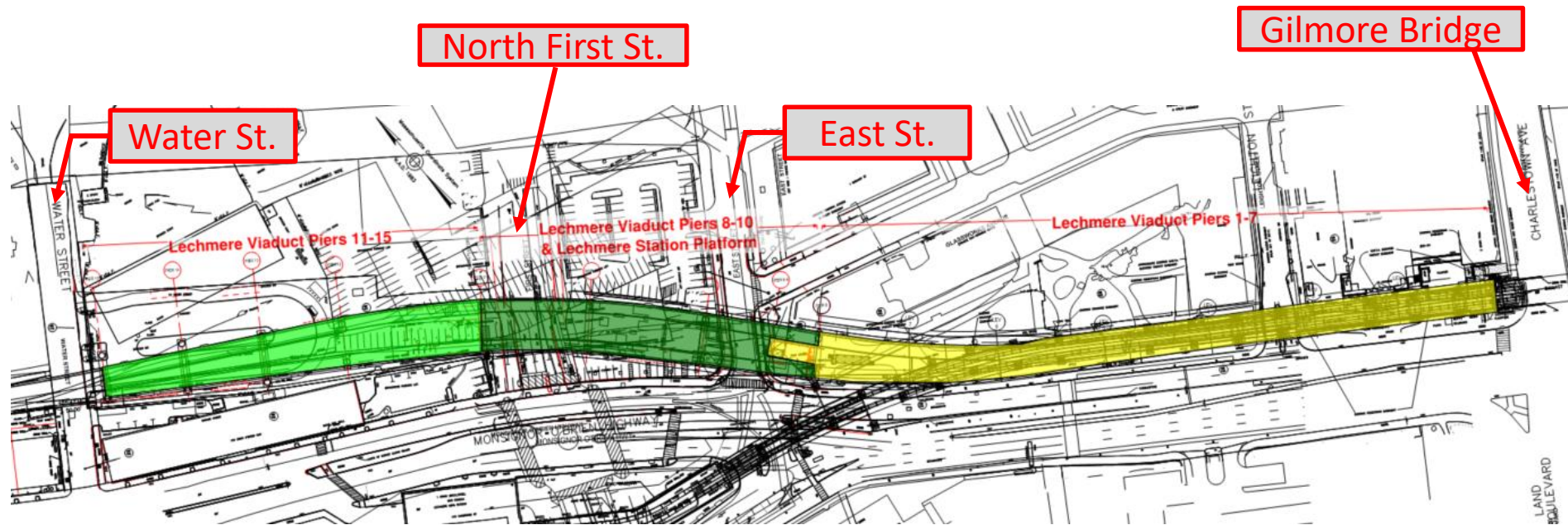


Construction Plans for 2020

Where are we now?

- **Three Different Areas**

- Lechmere Viaduct – Gilmore Bridge to East St.
- Lechmere Viaduct – East St. to North First St.
- Lechmere Viaduct – North First St. to Water St.

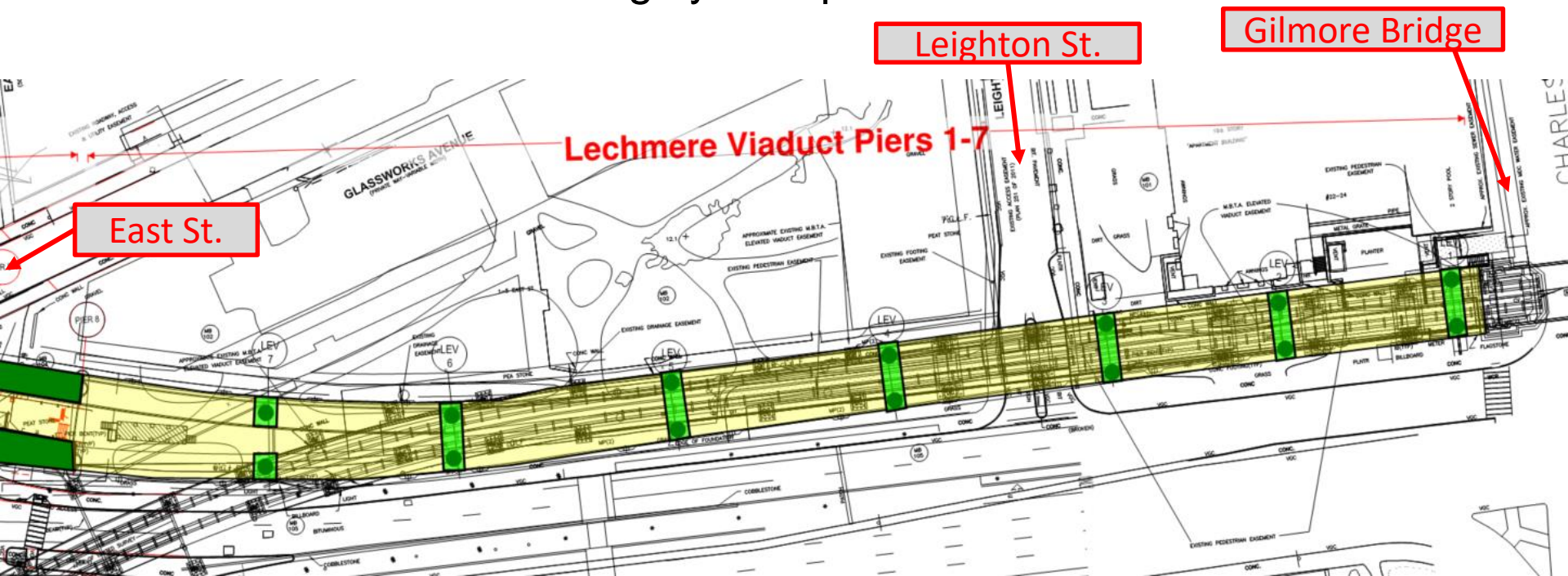


Construction Plans for 2020

Work to be completed prior to demolition

Lechmere Viaduct – Gilmore Bridge to East Street

- Foundation Prep/Excavation Complete
- Foundations (Micropile) Installation Complete
- Column Installation Largely Complete



Construction Plans for 2020

Existing Lechmere Viaduct – Gilmore Bridge to Lechmere Station

- **Work Period # 1 Demolition**

- Work will start from Lechmere station towards Gilmore Bridge
- Work Hours
 - Monday through Friday
 - Friday (after rush hour ~ 9PM) through Monday Morning (prior to rush hour ~3 AM)
 - Outbound lane closures expected, Hwy 28
 - Demolition and haul off

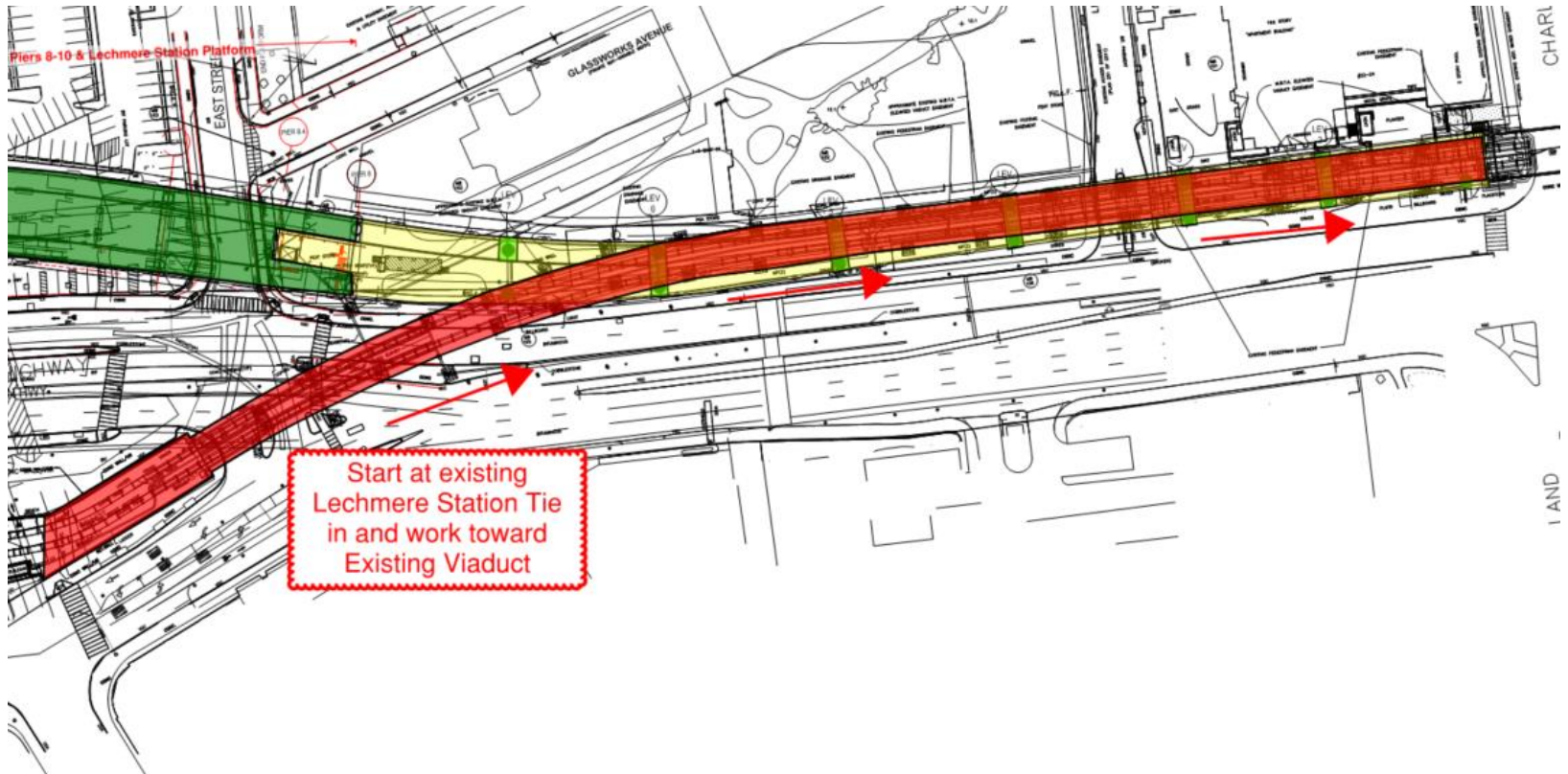


Construction Plans for 2020

Lechmere Viaduct Demolition / Replacement

- **Work Period # 1 Demolition**

- Work will start from Lechmere Station and work toward Gilmore Bridge



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Construction Plans for 2020

Lechmere Viaduct – Gilmore Bridge to East Street

- **Work Period # 2 Pier Cap and Structural Steel Installation**

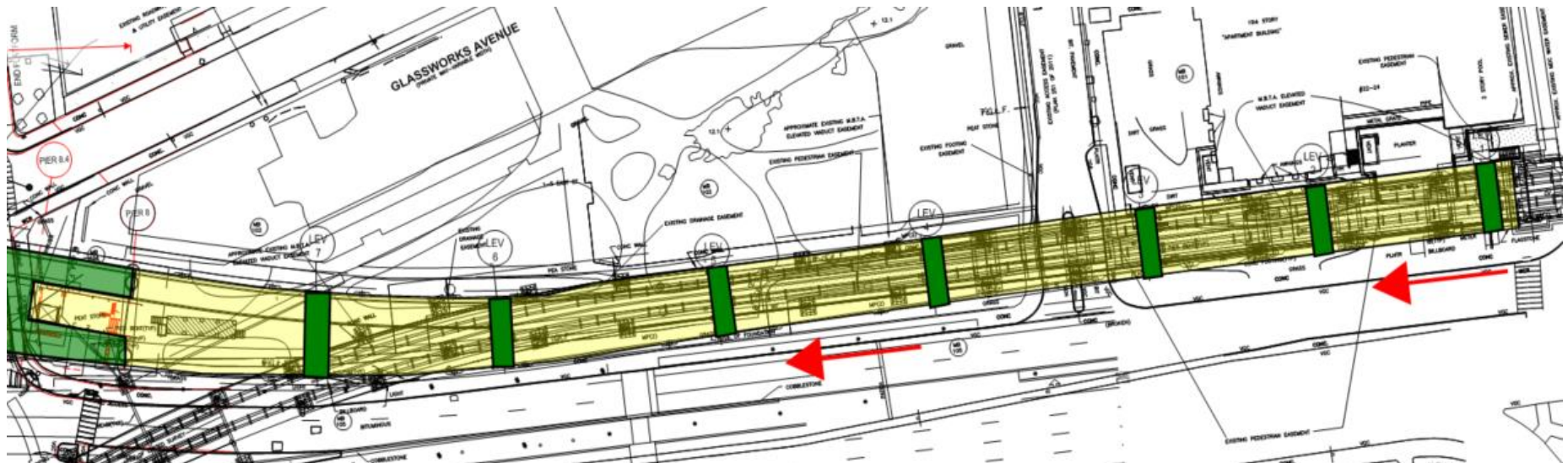
- Work will start from Charlestown Ave and work towards East Street
- Work Hours
 - Monday through Friday
 - ☐ Performing work to increase weekend work efficiency
 - ☐ Performing grouting and curing activities
 - ☐ Bolting up structural steel, installing decking
 - Friday (after rush hour ~ 9PM) through Monday Morning (prior to rush hour ~3 AM)
 - ☐ Outbound lane closures expected - Hwy 28



Construction Plans for 2020

Lechmere Viaduct – Gilmore Bridge to East Street

- **Work Period # 2 Pier Cap and Structural Steel Installation**
 - Once demo is complete, Precast Pier Cap 1-6 Installation begins and cast-in-place Pier Cap 7 begins
 - Will start from Charlestown Ave and work towards East Street



Construction Plans for 2020

Lechmere Viaduct – Gilmore Bridge to East St.

- **Work Period # 3 Superstructure Construction**

- Once Structural steel erection, decking and deck formwork is out in front, superstructure construction will begin.
- Will start from Charlestown Ave and work towards East Street
- General sequence
 - ☐ Rebar installation
 - ☐ Deck Pour/Cure
 - ☐ Parapet Form/Pour/Cure
 - ☐ Overhead Catenary System (OCS) Pole Foundation Form/Pour/Cure
 - ☐ Joint/Waterproof Installation
- Work Hours
 - ☐ Monday through Friday
 - ☐ Weekends



Construction Plans for 2020

Lechmere Viaduct – Gilmore Bridge to East St.

- **Work Period # 3 Superstructure Construction**

- Once Structural steel erection, decking and deck formwork is out in front, superstructure construction will begin.
- Will start from Charlestown Ave and work towards East Street



Construction Plans for 2020

Lechmere Viaduct – Gilmore Bridge to East St.

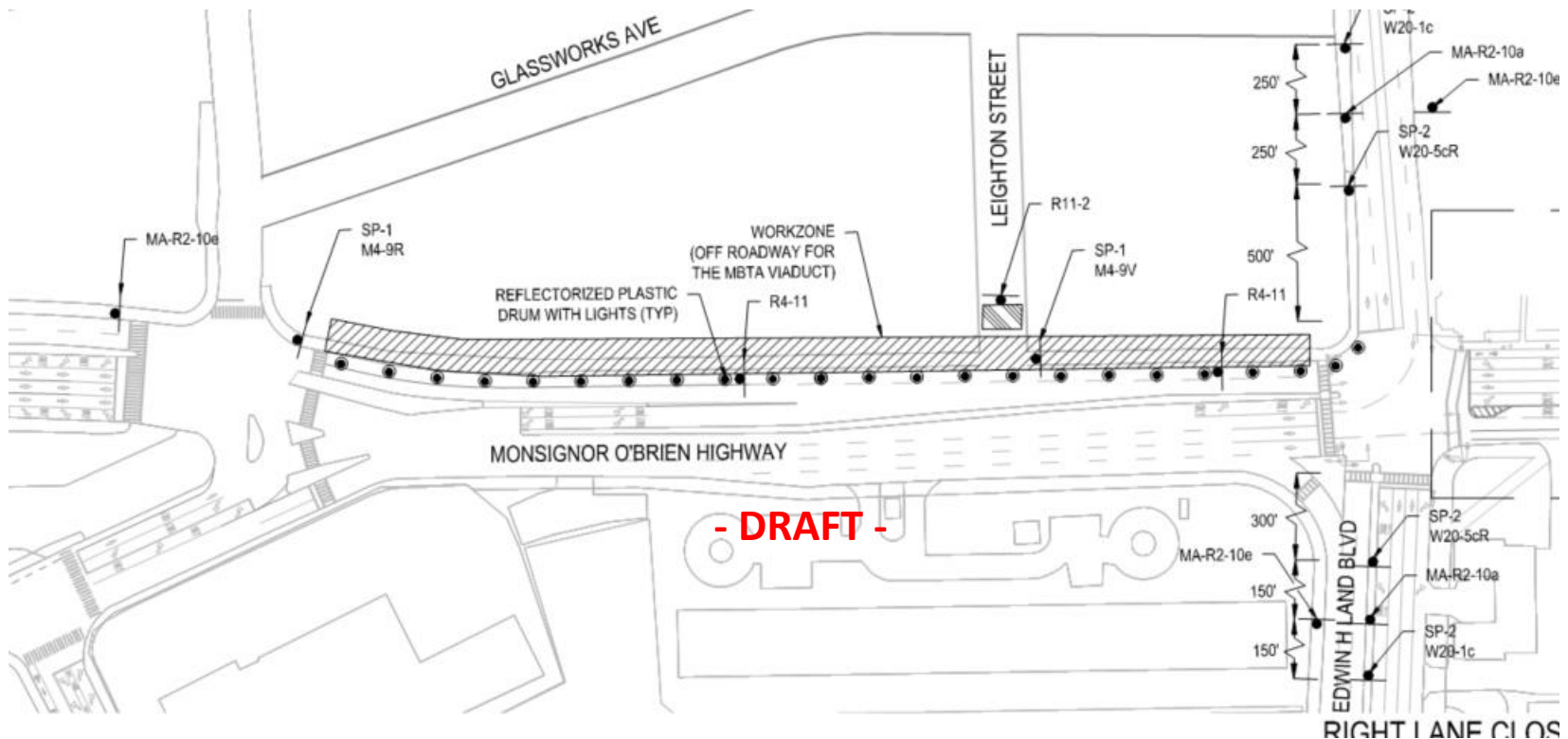
- **Work Period # 4 Track Build/Systems Install/Testing**
 - Will start from Charlestown Ave and work towards East Street
 - General sequence
 - ☐ Ballast/Track Install
 - ☐ Systems Infrastructure/Poles
 - ☐ Testing
 - ☐ Service Start
 - Work Hours
 - ☐ Monday through Friday
 - ☐ Weekends



Construction Plans for 2020

Lechmere Viaduct – Gilmore Bridge to East Street

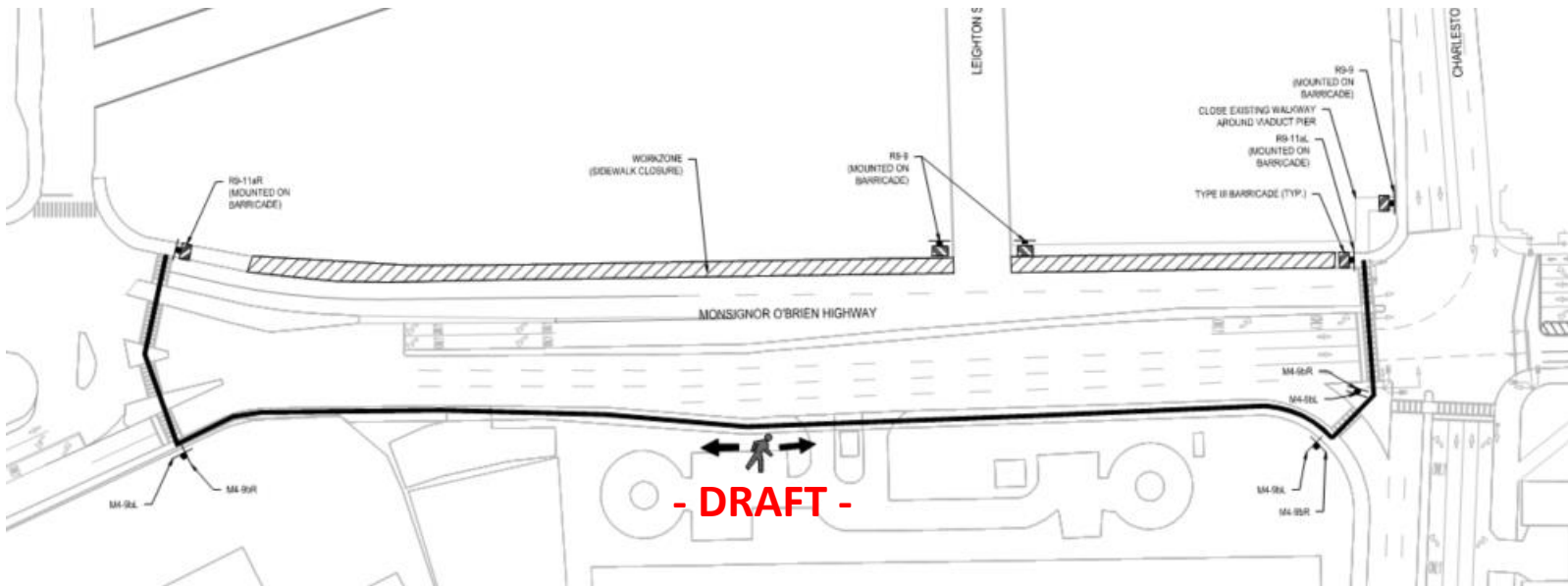
- Vehicular and Pedestrian Traffic Detour Plan During All Work Periods
- Single Lane Closure (Right Lane Outbound Hwy 28)
 - Vehicular Detour



Construction Plans for 2020

Lechmere Viaduct – Gilmore Bridge to East St.

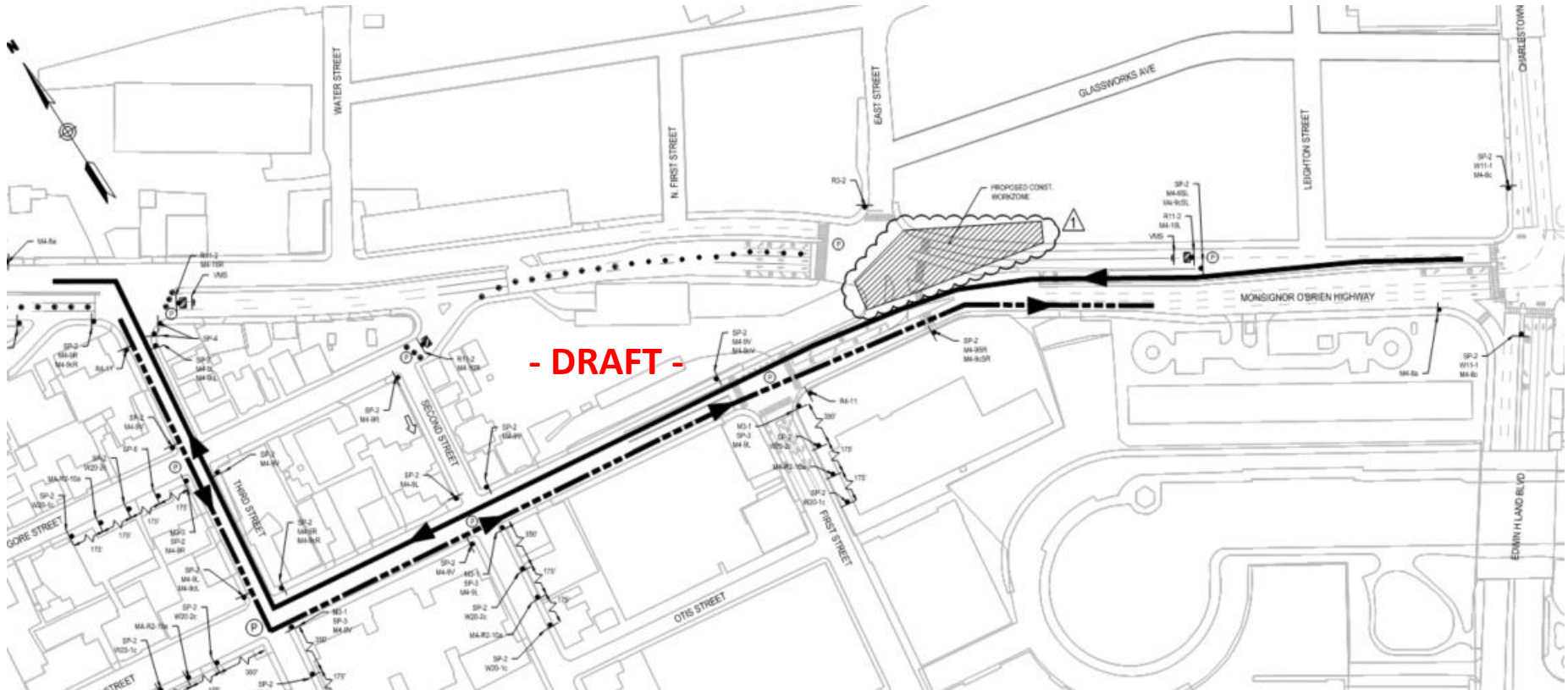
- Vehicular and Pedestrian Traffic Detour Plan During All Work Periods
- Single Lane Closure (Right Lane Outbound Hwy 28)
 - Pedestrian Detour



Construction Plans for 2020

Lechmere Viaduct – Gilmore Bridge to East Street

- Vehicular and Pedestrian Traffic Detour Plan During All Work Periods
- Demolition of Existing Viaduct over Hwy 28, Closure
 - Vehicular Detour



Construction Plans for 2020

Lechmere Viaduct – Gilmore Bridge to East St.

- Vehicular and Pedestrian Traffic Detour Plan During All Work Periods
- Demolition of Existing Viaduct over Hwy 28 / Closure
 - Pedestrian Detour



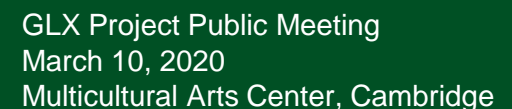
Construction Plans for 2020


Lechmere Viaduct – Gilmore Bridge to East St.

- **Vehicular and Pedestrian Traffic Detour Plan During All Work Periods**
- **Complete Closure of Outbound Hwy 28 (Weekends)**
 - Vehicular Detour
 - Pedestrian Detour will follow same route as previous slide.



- **Vehicular and Pedestrian Traffic Detour Plan During All Work Periods**
- **Complete Closure of Outbound Hwy 28 (Weekends)**
 - Vehicular Detour



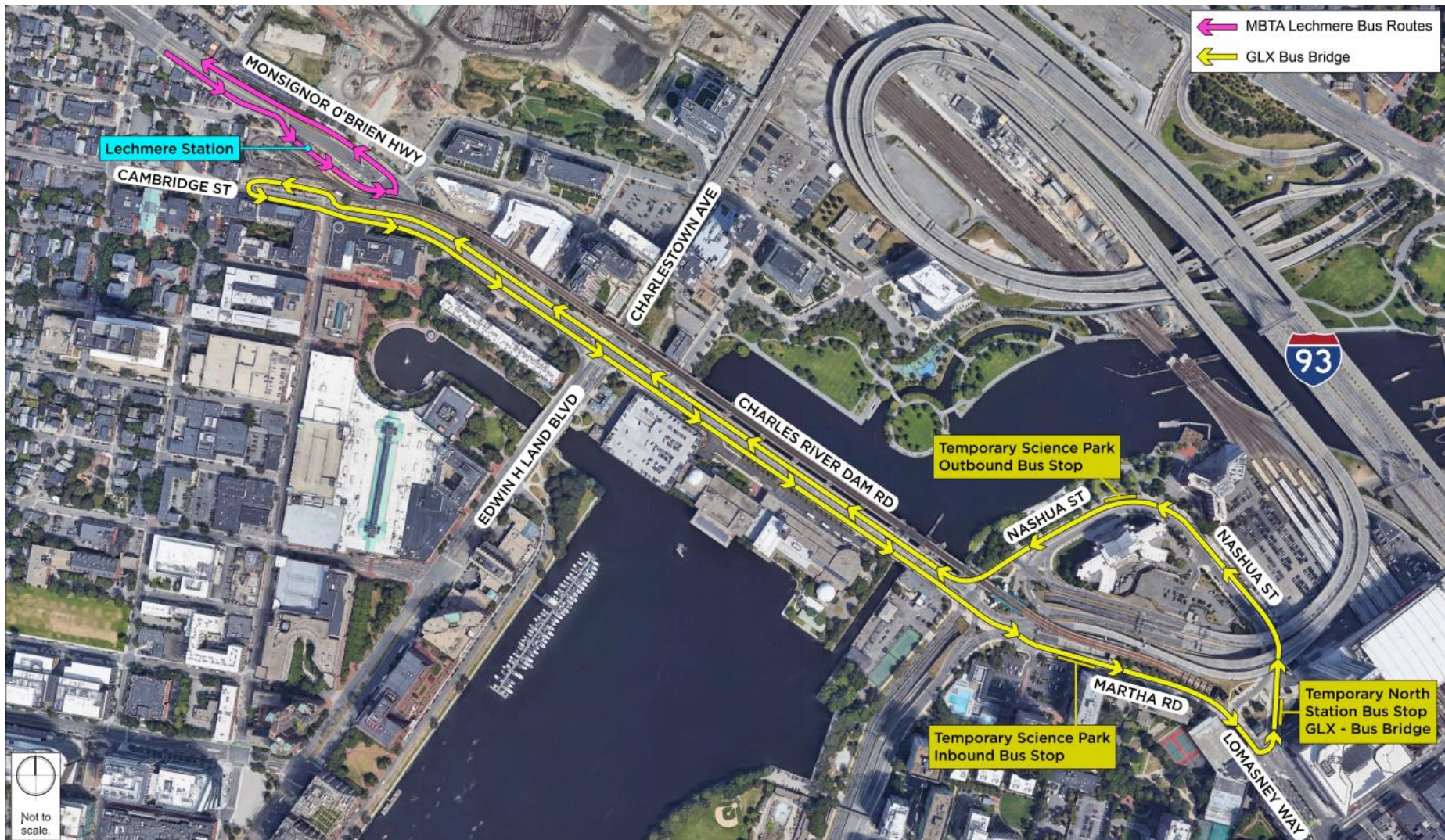


Lechmere to North Station

Bus Replacement Planning



Lechmere Bus Replacement Service



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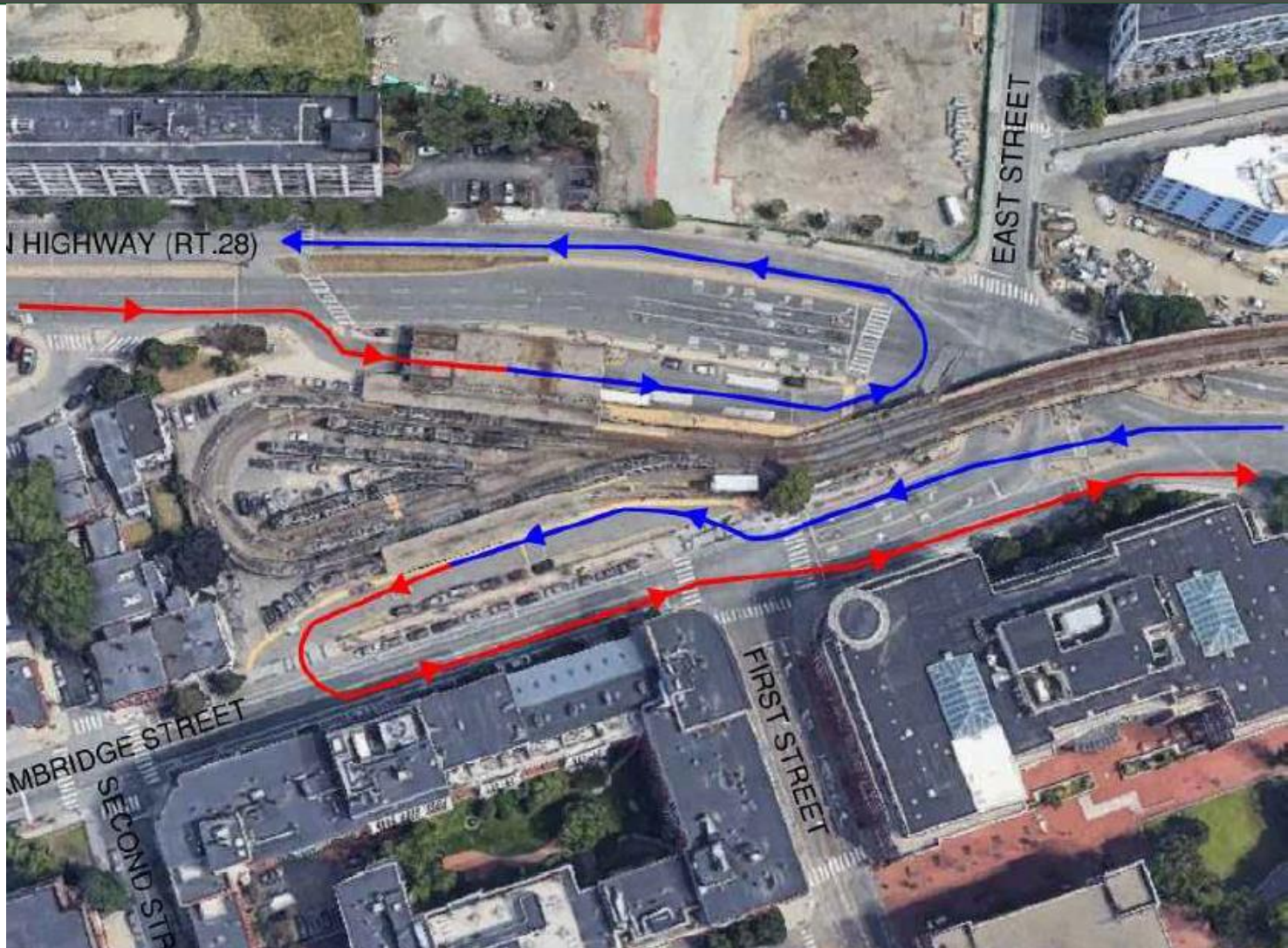
Lechmere Bus Replacement Service

Lechmere Station Operations

- Bus Routes 69, 80, 87, and 88 continue to follow current routes
- Existing Bus Garage and Operator Facilities to remain until new bus loop and new Lechmere Station are fully functional



Lechmere Bus Replacement Service



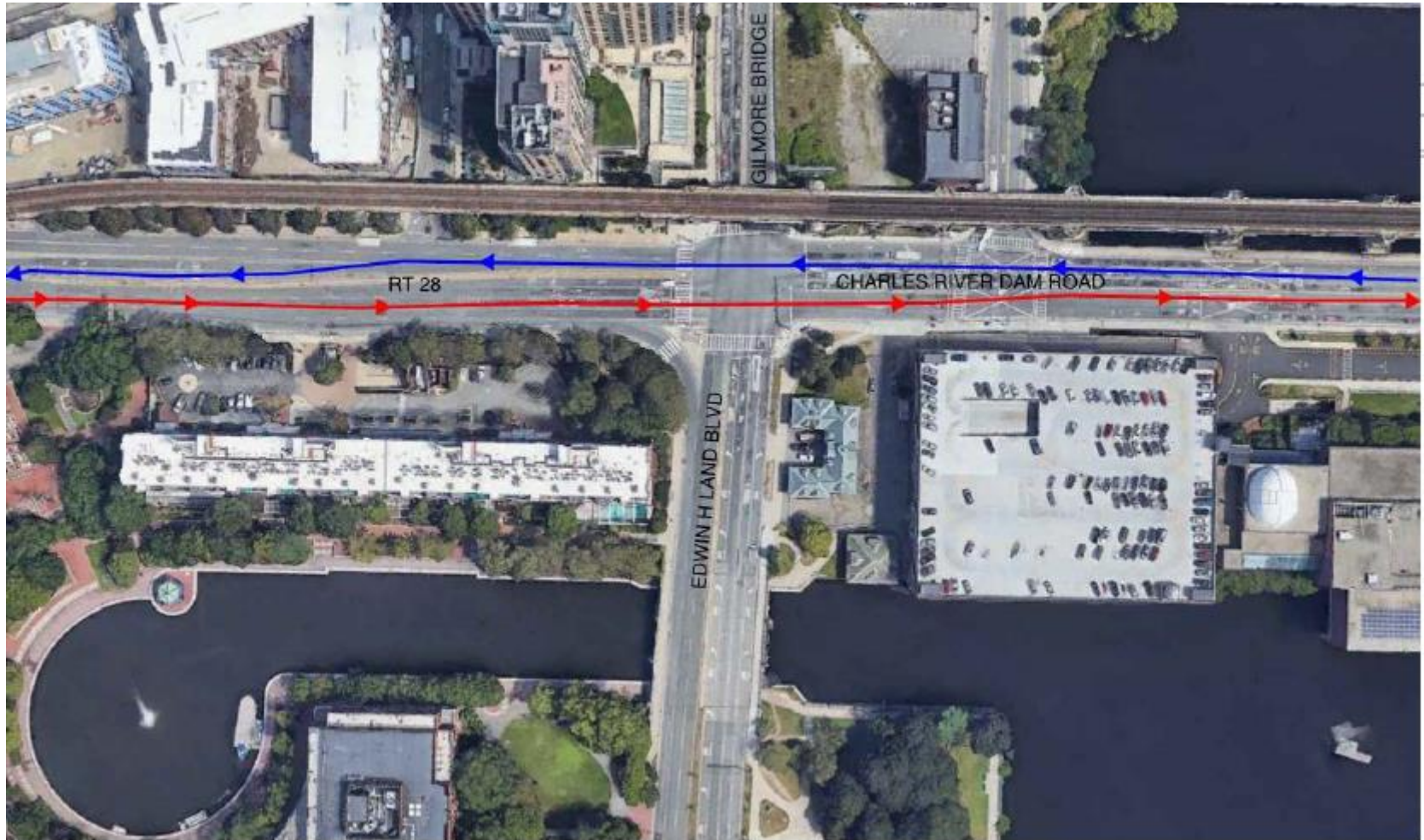
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Lechmere Bus Replacement Service

Charles River Dam Road



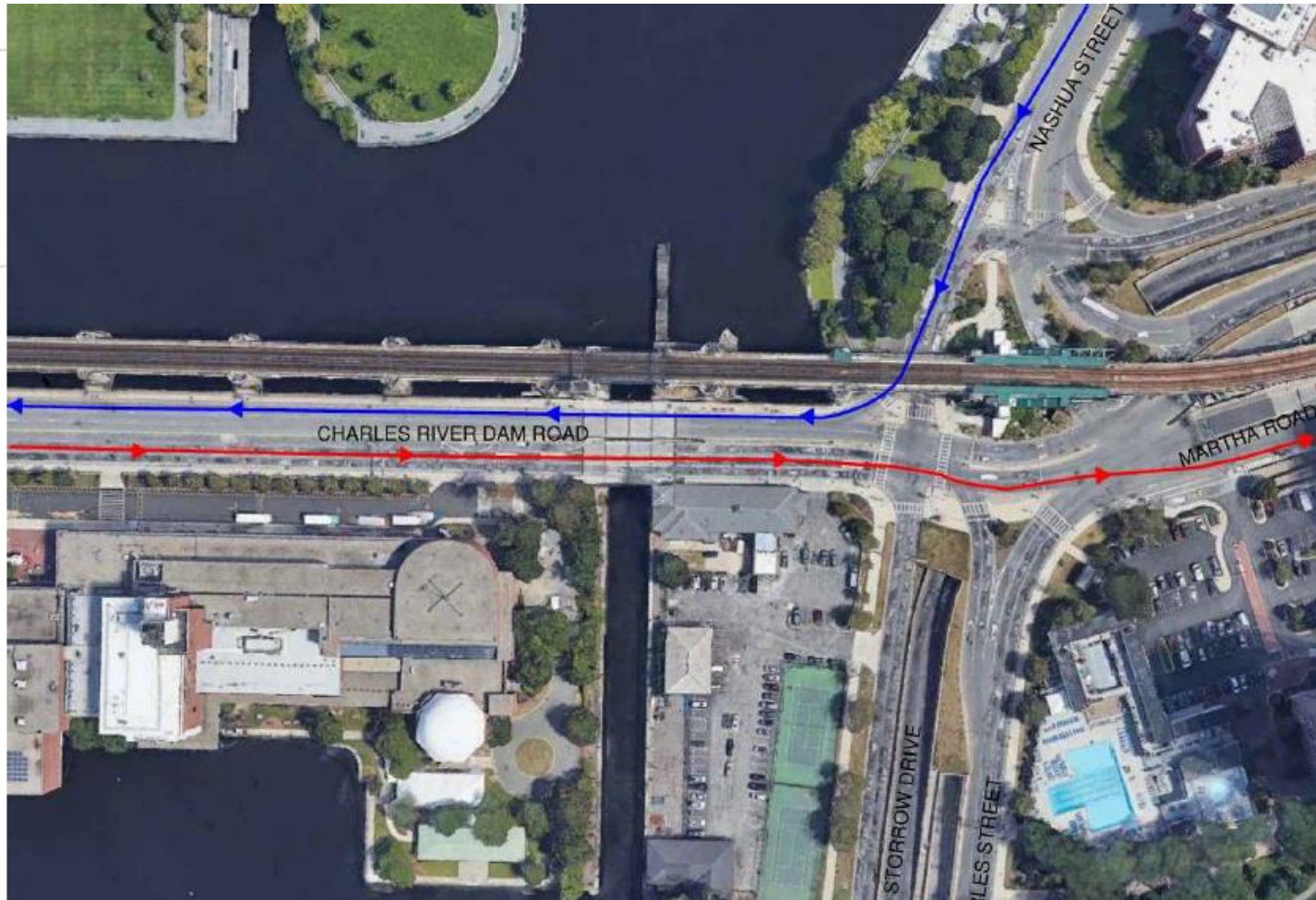
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Lechmere Bus Replacement Service

Leverett Circle



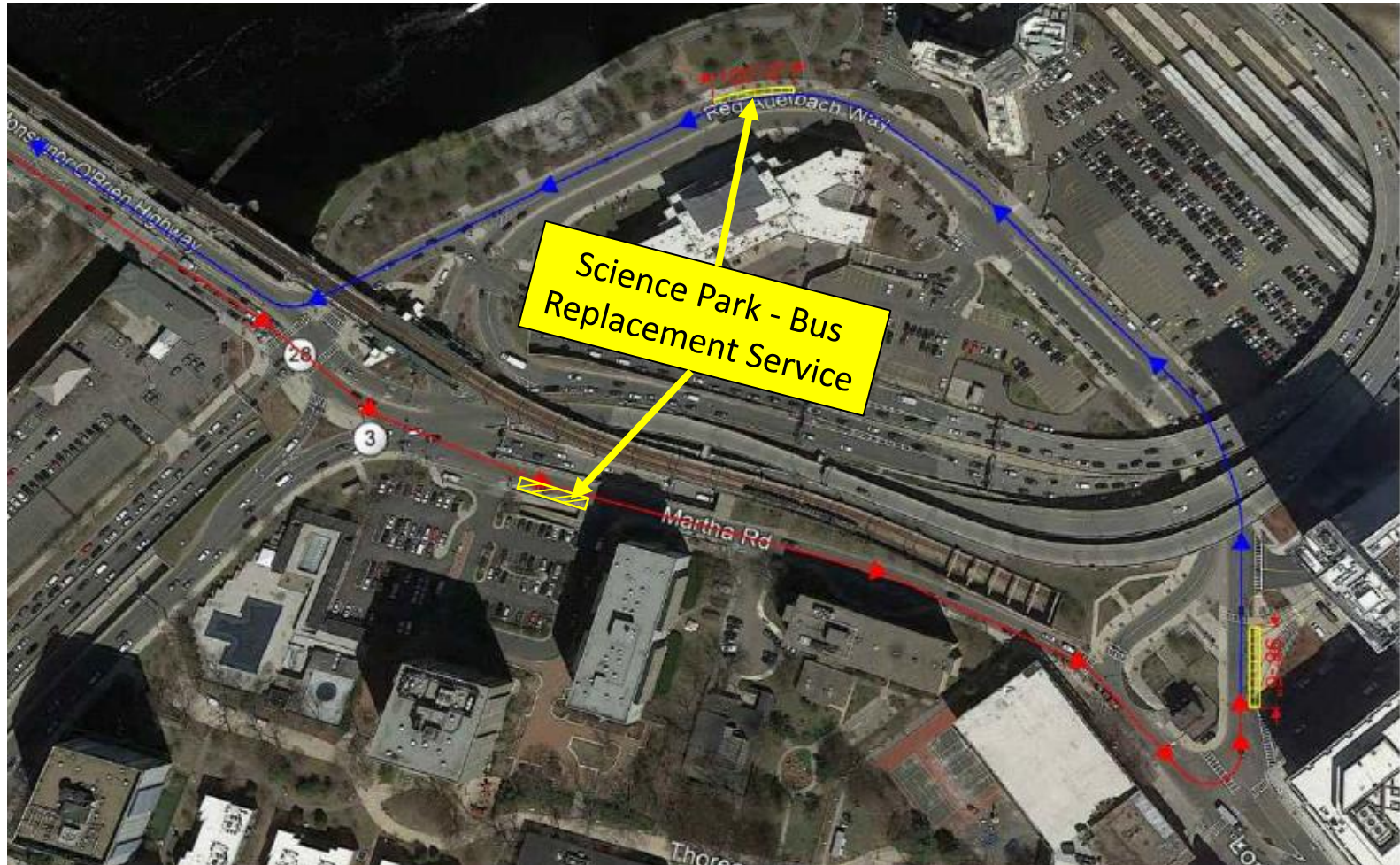
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Lechmere Bus Replacement Service

Science Park – Proposed Bus Stop



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Lechmere Bus Replacement Service

North Station – Proposed Bus Stop



Q & A

