MassDOT
Office of Transportation Planning

Tobin Bridge Long-Term Strategic Planning Study

Working Group Meeting #2

Charlestown Public Library | January 15, 2025, at 2:00 p.m.
and virtual via Zoom

TOBIN BRIDGE
PLANNING STUDY

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- The meeting will be open to questions and answers at the end of the presentation.

All questions and comments are welcome and appreciated, however we do request that you refrain from any disrespectful comments.

Agenda

1 Welcome and Introduction

2 Existing Conditions

3 Future Conditions Development

4 Future Conditions Scenario Planning Discussion

5 Public Comment

6 Schedule and Next Steps

MAURICE J. TOBIN MEMORIAL BRIDGE
LONG-TERM STRATEGIC PLANNING STUDY

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Meeting With You Today

- **MassDOT**
  - Patrick Snyder (Project Manager)

- **Consultant Team**
  - Michael Regan (VHB – Project Manager)
  - Niki Hastings (VHB – Mobility)
  - Holly Palmgren (VHB – Environmental)
  - Jon Trementozzi (Landwise – Land Use and Economic Development)
  - Erica Blonde (HNTB – Public Engagement)

Study Goals & Objectives

Improve Access, Safety, and Mobility for Local Communities

Enhance Sustainability of Corridor Infrastructure and the Surrounding Area

Improve Regional Connectivity

Develop Actionable Next Steps

Evaluation Criteria

Evaluation criteria are the standards by which the alternatives will be measured against the goals and objectives

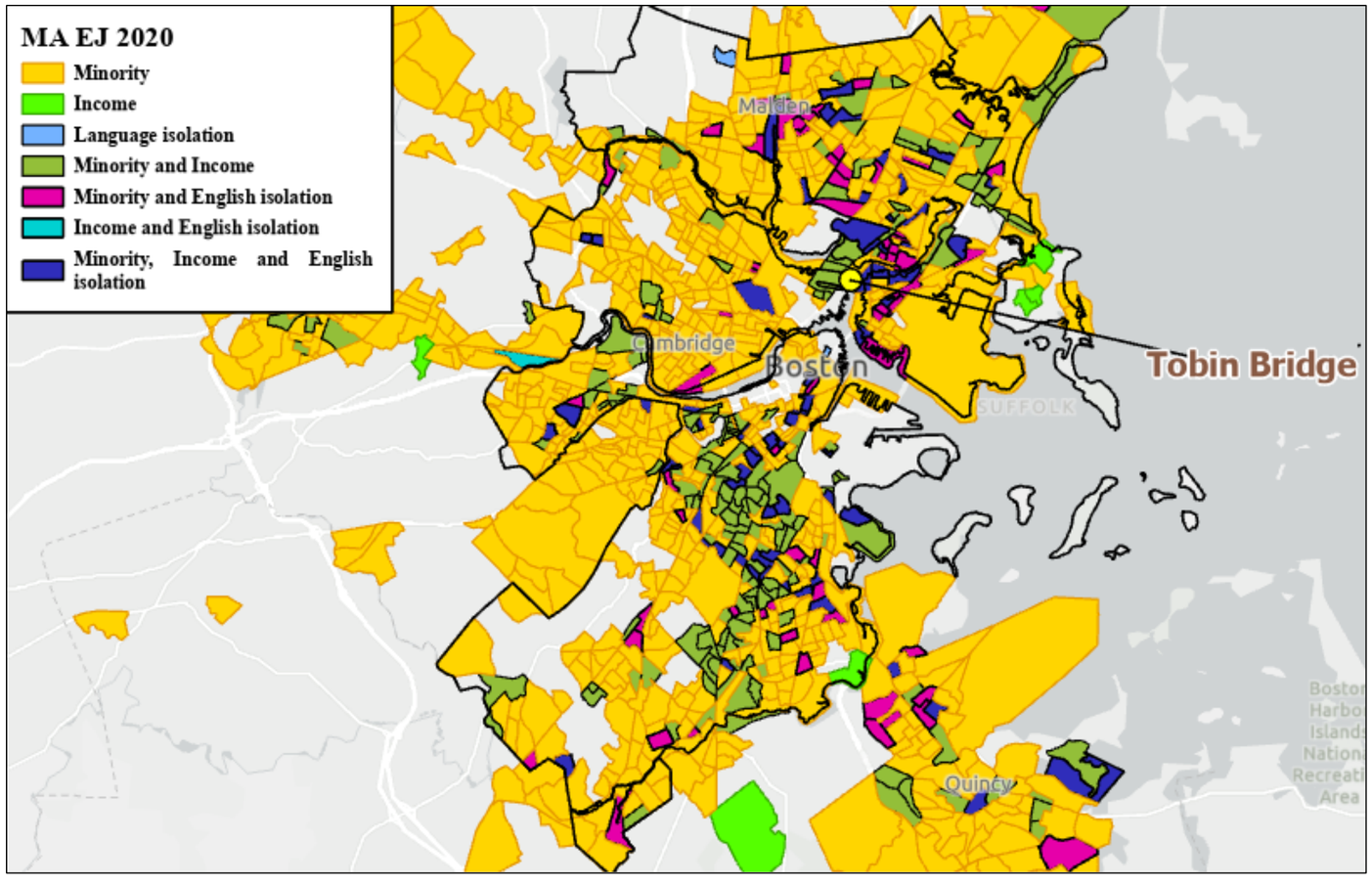
- Social Equity
- Mobility and Accessibility for Transportation Modes
- Safety for Roadway Users
- Economic and Land Use Impacts
- Climate Change Resilience and Mitigation
- Health Effects
- Environmental Effects
- Cost and Cost Effectiveness
- Feasibility of Construction

Existing Conditions

Regional Study Area Demographic and Equity Summary

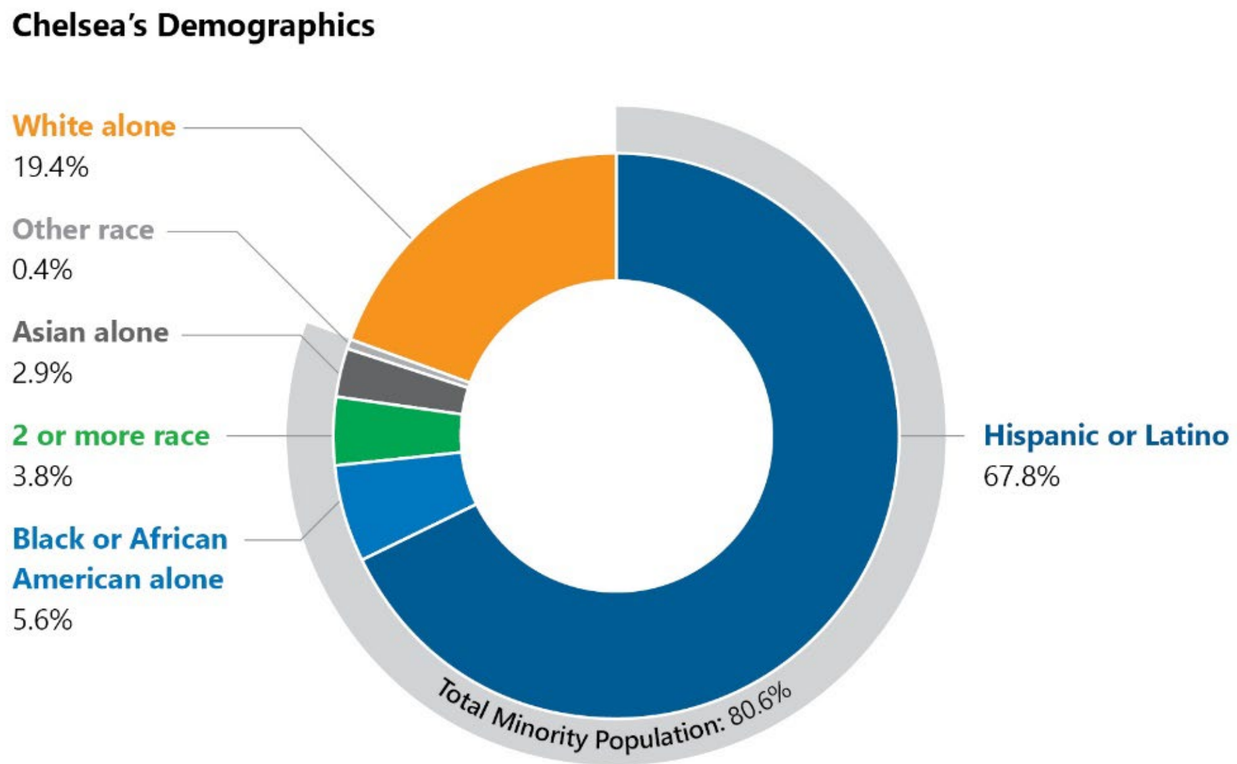
- **Regional Significance**: The Tobin Bridge serves as a vital link for surrounding cities and towns
- **Transit Dependency**: A significant portion of households do not have access to a vehicle (28.9%)
- **Economic Disparities**: Poverty rates vary across the region, with certain areas experiencing higher levels of economic hardship compared to state averages
- **Environmental Inequities**: Communities near major infrastructure face challenges related to air and noise pollution

Regional Study Area
Environmental Justice Designations



Chelsea Demographic and Equity Summary

- **Cultural Diversity**: Chelsea's population is predominantly Hispanic or Latino (67.8%)
- **Economic Challenges**: Approximately 21.4% of residents live below the poverty line, significantly higher than the state average of 10.4%
- **Housing Under Pressure**: 48% of Chelsea households are cost-burdened, with 72.6% living in renter-occupied housing
- **Transit Reliance**: With a substantial portion of households with no access to a vehicle (28.8%), many residents depend on public transit options

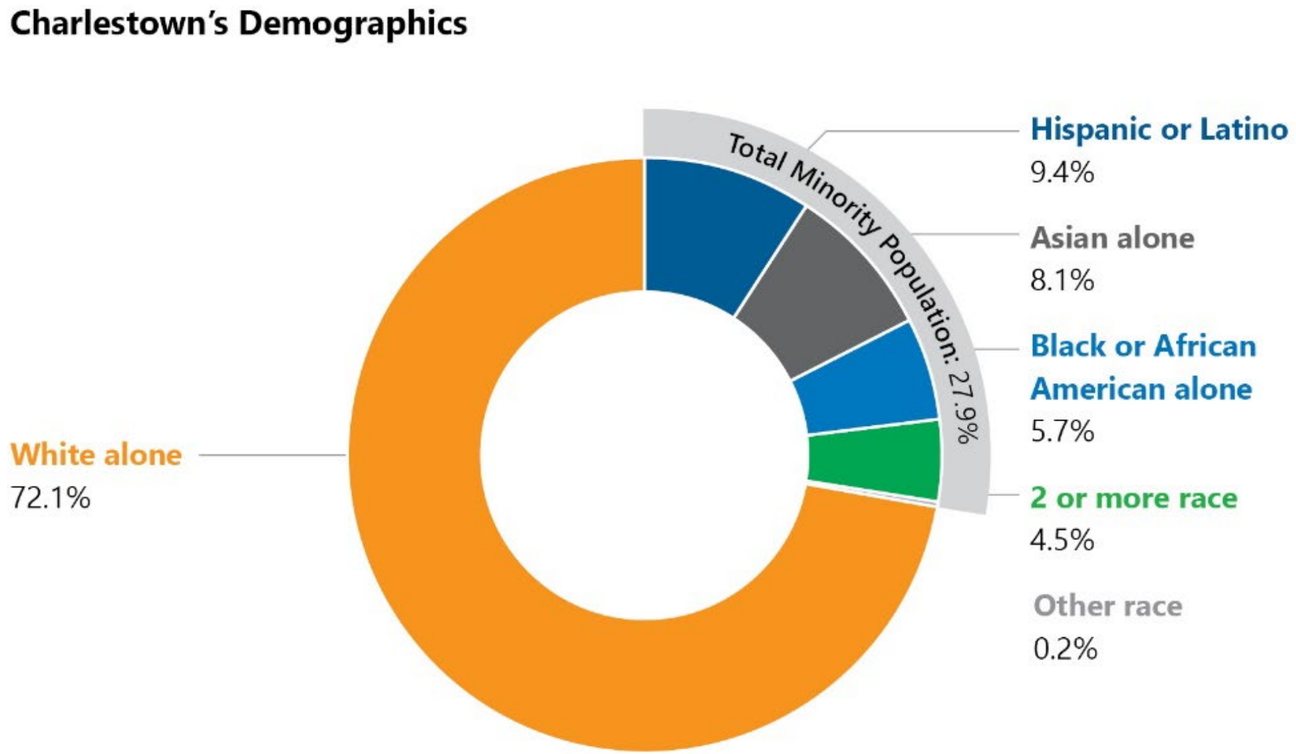


Charlestown Demographic and Equity Summary

- **Economic Revitalization**: Neighborhood transformation has introduced new investments and amenities

- **Persistent Cost Burdens**: 29% of Charlestown households remain cost-burdened, spending over 30% of their income on housing, highlighting continued affordability challenges

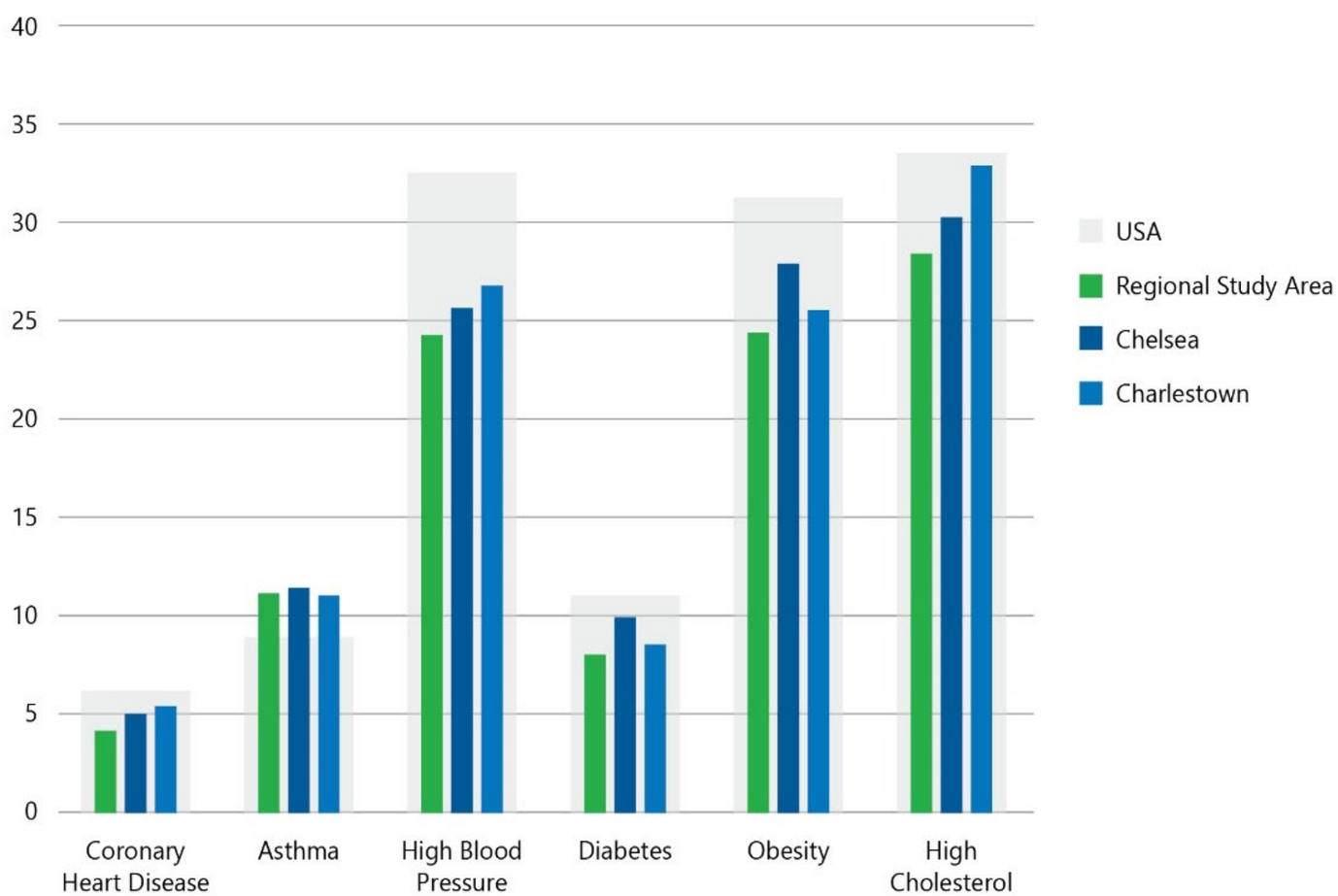
- **Transit Access**: Access to the Orange Line and multiple bus routes facilitates connectivity within Boston



Public Health Conditions Summary

- **Overall Risk**: The Local Study Area has a similar average risk to the Regional Study Area and the Boston Metro Area

- **Chronic Health Conditions**: The Local Study Area has approximately a 0.5 – 2.5 percent higher prevalence of chronic health conditions compared to the Regional Study Area



Source: CDC's PLACES dataset

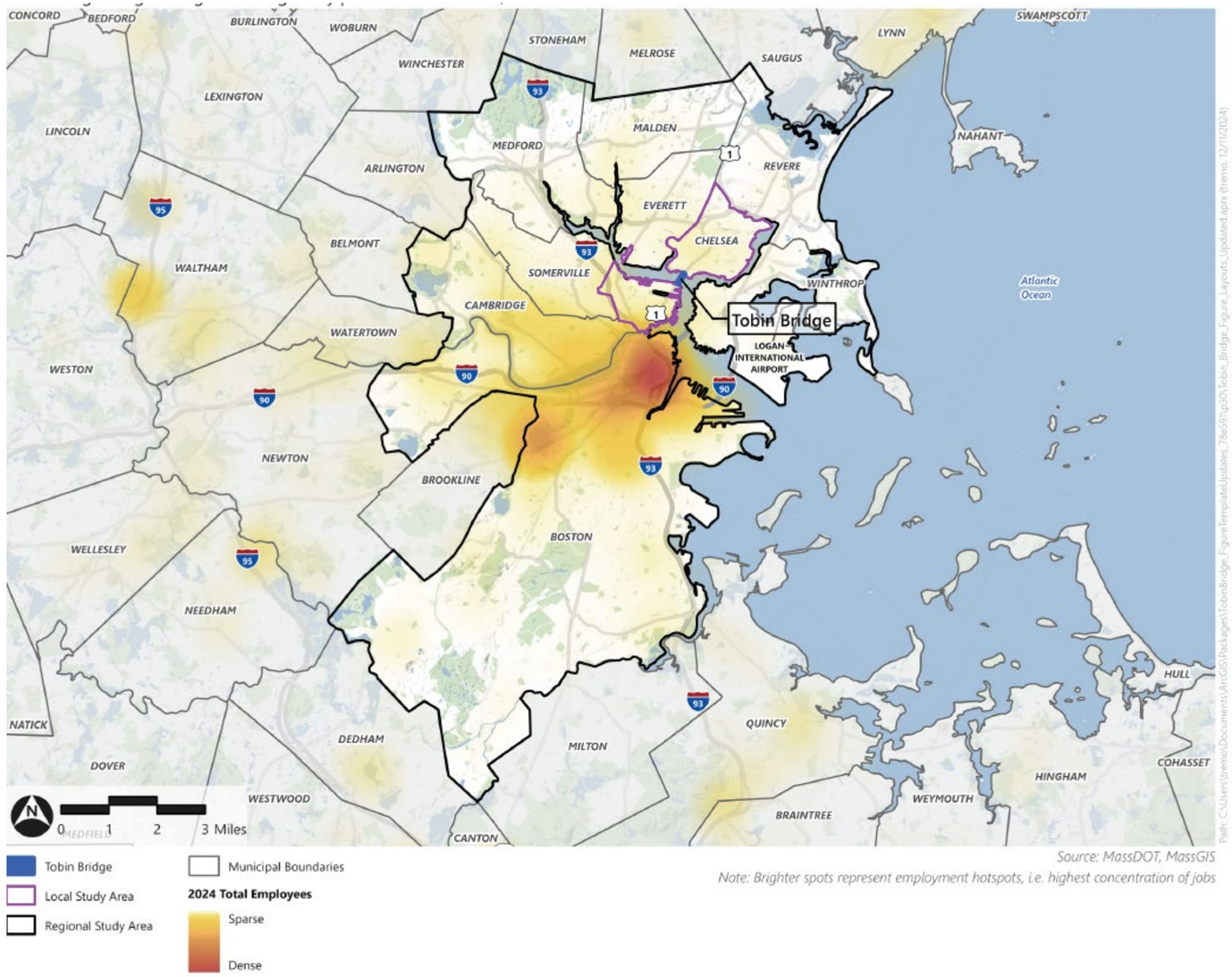
Current Land Use (1)

- **Link to Opportunity**: The bridge connects residents to jobs, hospitals and higher education institutions based south and west of the bridge

- **Designated Port Area**: Water dependent industrial uses located within the DPA, such as international shipping, provide goods and services, and generate direct and indirect jobs

- **Major Employers:** Include City of Chelsea, Massachusetts Information Technology Center, Market Basket, Mass. Water Resources Authority, Kayem Foods, Spaulding, Boston Public Works, RSM International, Bunker Hill Community College, MGH Charlestown, Autoport

Regional Employment Density



Source: MassDOT, MassGIS
Note: Brighter spots represent employment hotspots, i.e. highest concentration of jobs

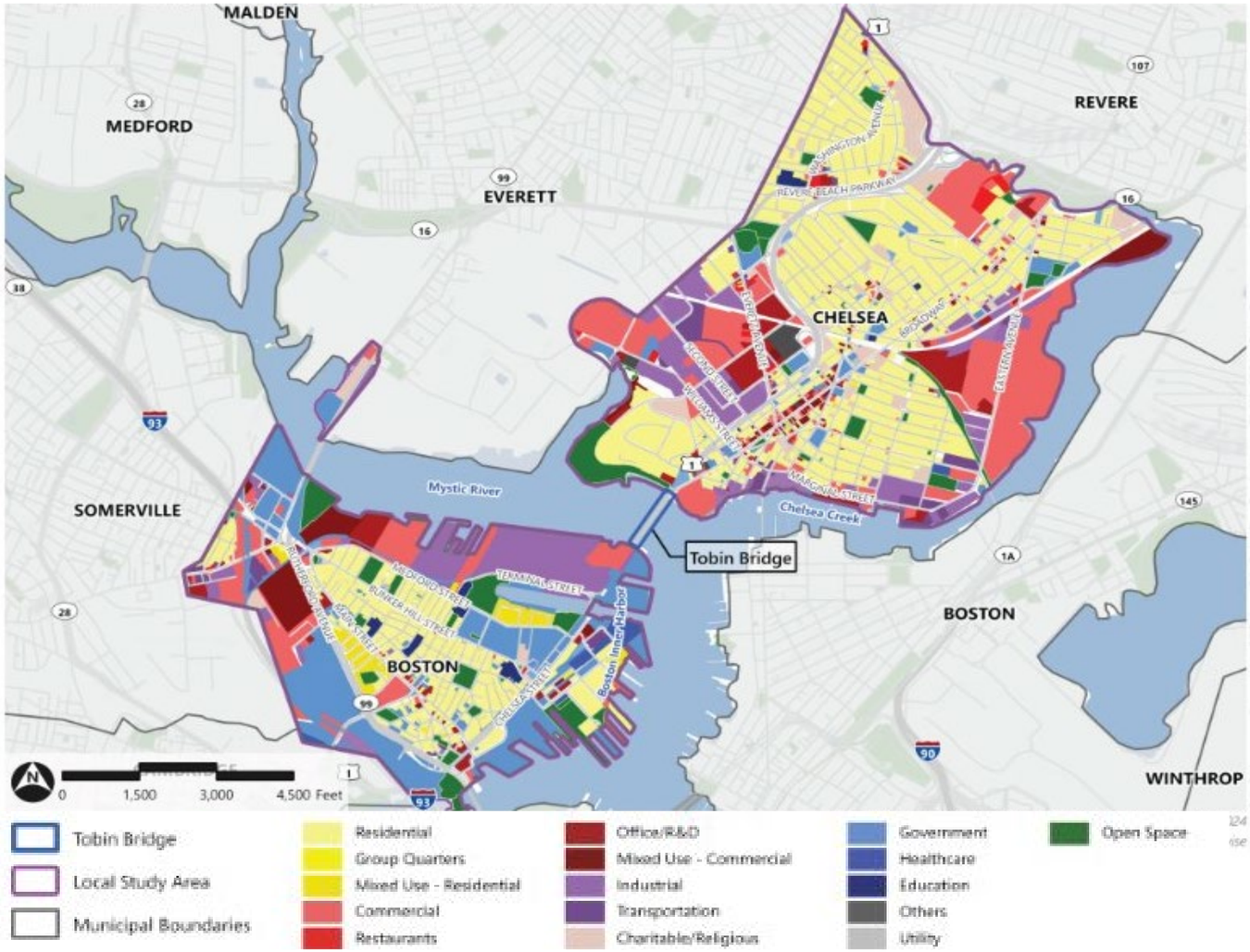
Current Land Use (2)

- **Land Use Rapidly Evolving** : Current market dynamics include a critical need for housing, a pandemic-weakened office market, oversupply of lab space, and mixed-use urban development around transit hubs

- **Office Uses Impacted**: As we approach 5-years since the start of the pandemic, data indicates the office market is slowly recovering, and remote work is here to stay but largely in hybrid formats

- **Housing Production**: The region is making a push to ramp up the development of housing. There are approximately 6,900 units planned or in construction within the Local Study Area

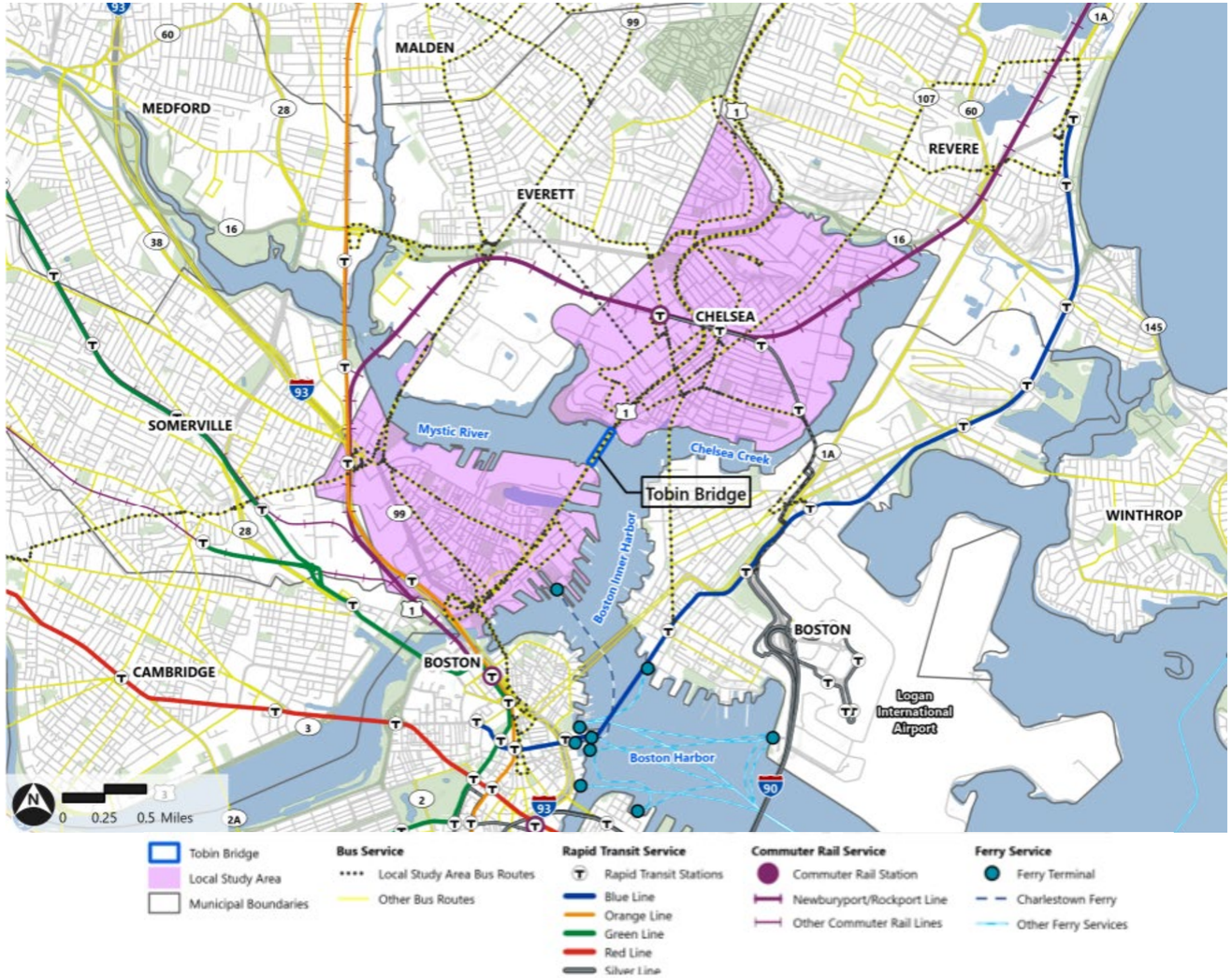
Local Study Area Existing Land Uses



Mobility: Transit and Active Transportation

- MBTA Bus Routes 111, 426, and 428 cross the Tobin Bridge with dedicated bus lane southbound
- MBTA SL3 and Commuter Rail provide supplemental transit connections
- Tobin Bridge lacks sidewalks and bicycle facilities and is a significant gap in the regional pedestrian and bicycle networks
- Active transportation facilities within Chelsea and Charlestown are limited and do not extend to neighboring communities
- Several Local Study Area corridors are risk sites for pedestrian and/or bicycle crashes

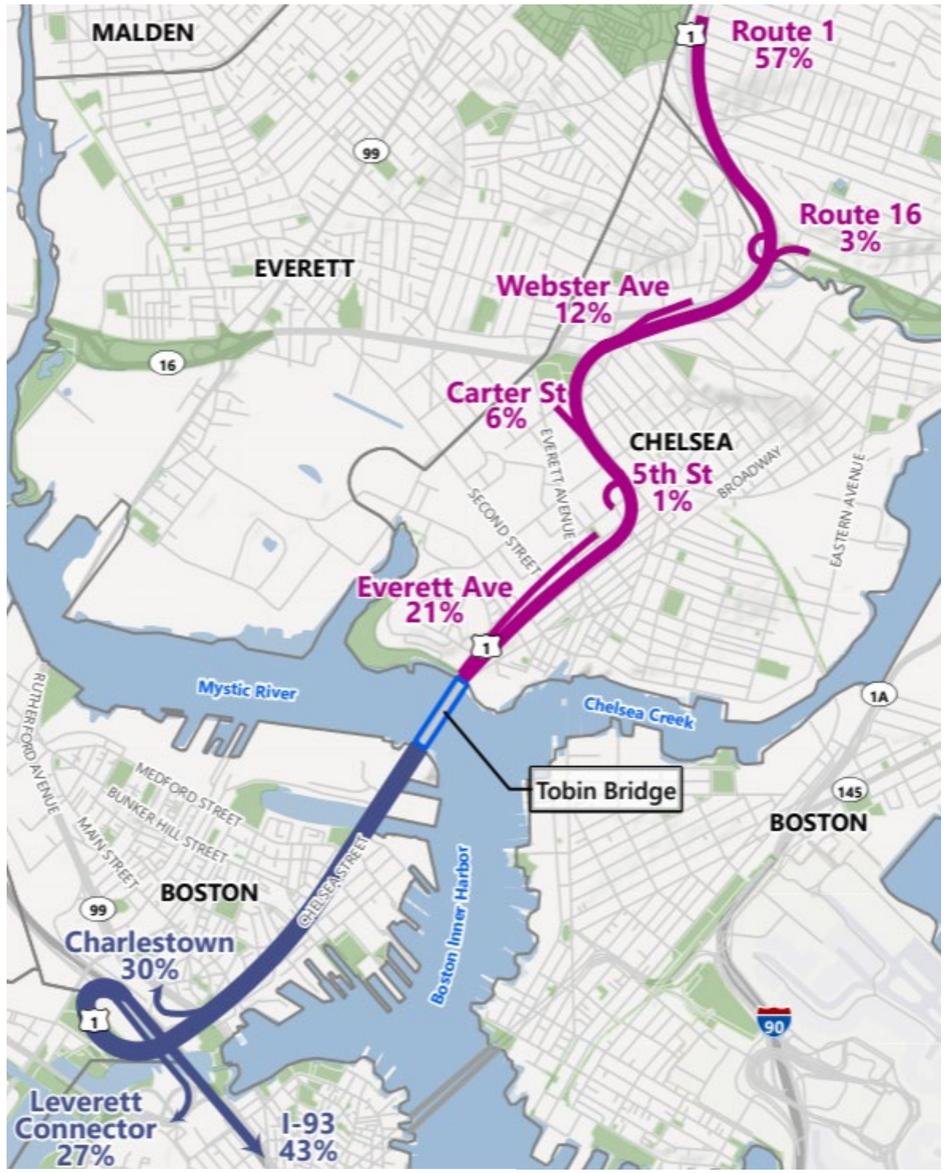
Local Study Area – Transit Services (Winter 2025)



Mobility: Vehicle Connectivity and Reliability

- Vital regional corridor and part of a larger system
- Serves commuter populations between the North Shore and Boston: 60 percent of vehicle trips from/to Route 1 north of Route 16
- Lacks direct connection to I-93 North
- Congestion and travel time reliability issues, especially southbound, where 43% of trips from the Tobin Bridge are destined for I-93
- Much of the Local Study Area in Chelsea experiences higher crash rates in comparison to the region

Daily Ramp Origins/Destinations: Tobin Bridge Southbound Vehicles



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Environmental Resources (1)

- Comprehensive assessment of the environmental resources in the Local Study Area will help inform any requirements for permitting and mitigation as alternatives are considered

- Resources inventoried include:

✓ Cultural Resources
✓ Natural Resources
✓ Open Space
✓ Hazardous Materials
✓ Navigable Waterways
✓ Chapter 91
✓ Designated Port Area
✓ Floodplain
✓ Air Quality
✓ Noise

Environmental Resources (2)

Cultural Resources

- Archaeological: Local Study Area contains 34 recorded archeological sites, primarily in Charlestown

- Historic: Local Study Area contains 15 National Historic Landmark / National Register districts, 7 National Historic Landmark / National Register properties, 2 local landmarks

- Tobin Bridge is eligible for listing on the National Register of Historic Places
  - Alternatives will require review and coordination through the Section 106 consultation process

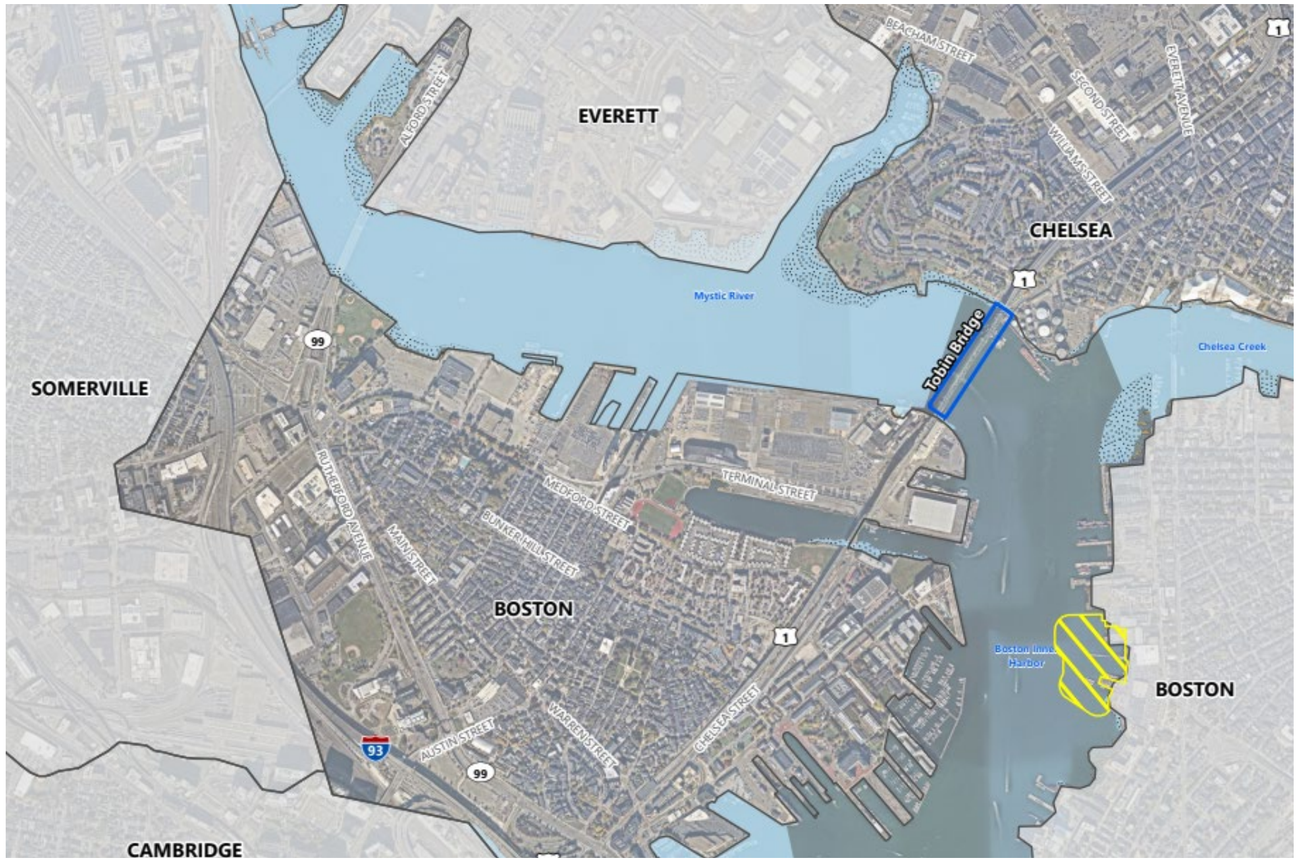
View of Tobin Bridge from Barry's Playground, Charlestown

Environmental Resources (3)

Natural Resources

- Wetlands and Rare Species: Minimal wetland or rare species areas identified in Local Study Area
- Essential Fish Habitats and Fisheries: includes various fish species, including winter flounder and bluefish
- No Areas of Critical Environmental Concern (ACEC) identified in the study area

Wetlands and Listed Species Habitat Areas



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Environmental Resources (4)

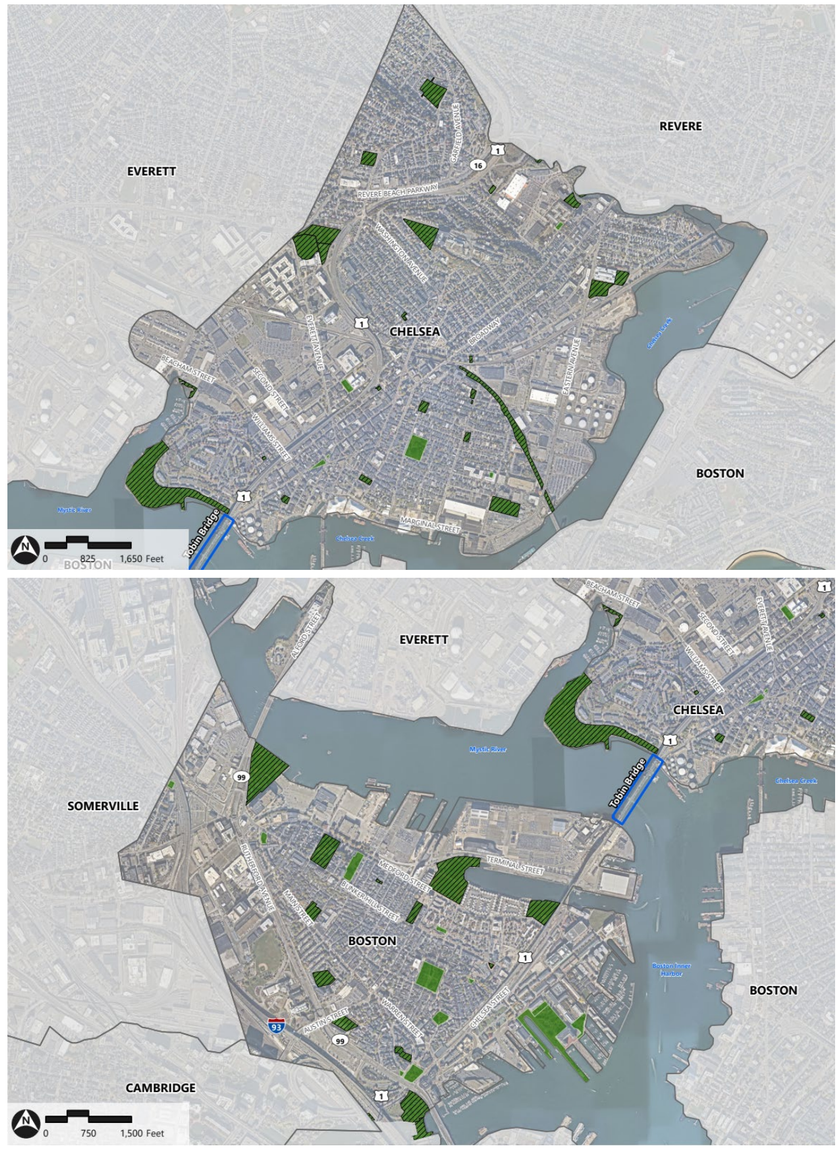
Existing Protected & Open Space

- City of Chelsea: Numerous protected and recreational open spaces, such as Mary O'Malley Waterfront Park and Chelsea Greenway, many of which are safeguarded under Article 97 and Sections 4(f) and 6(f) protections

- Charlestown: Key protected spaces within Charlestown, including Paul Revere Park and Barry Playground, are protected by regulations like Article 97, Chapter 91, and the Wetlands Protection Act

Article 97
Chapter 91, The Massachusetts Public Waterfront Act

Existing Protected & Open Space



Tobin Bridge
Local Study Area
Municipal Boundaries
Open Space
Open Space Protected Under Article 97

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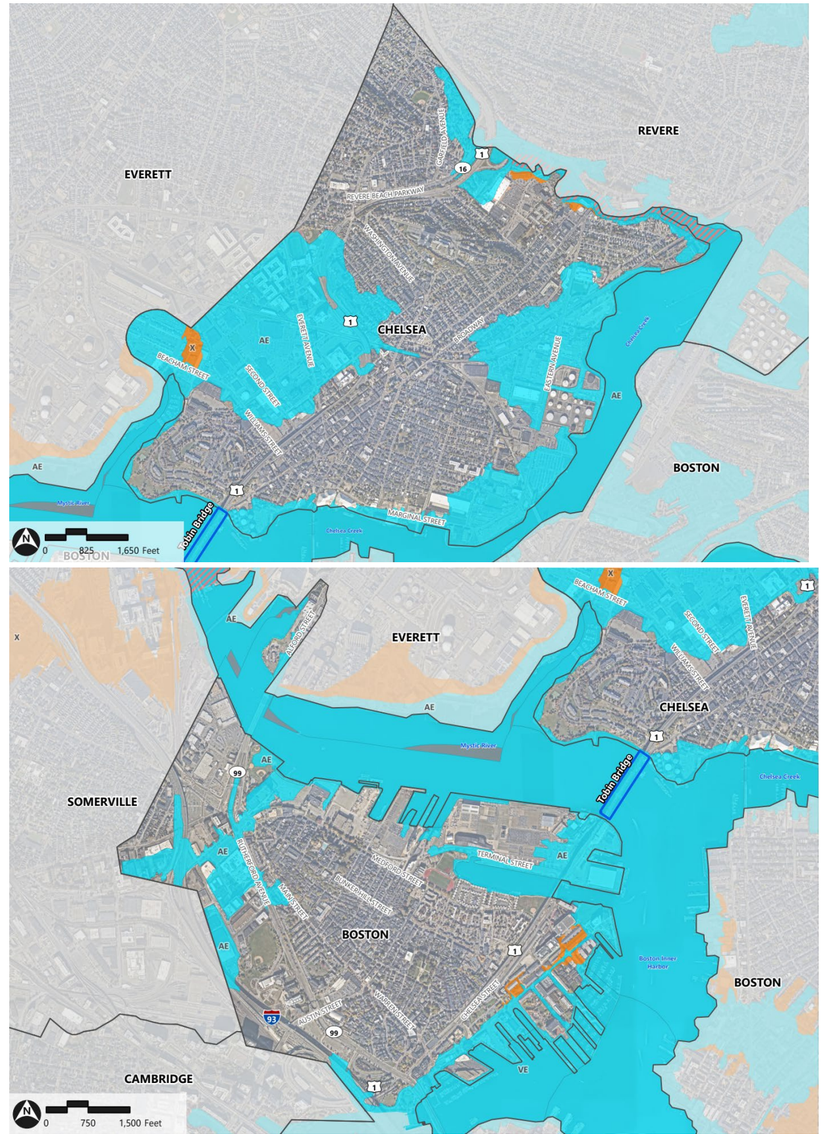
Environmental Resources (5)

Floodplain

- Portions of the Local Study Area are within the designated 100-year floodplain, including areas near Mill Creek in Chelsea and along the Mystic River and Boston Harbor in Charlestown, mapped as Zone AE Regulatory Floodways by FEMA

- Floodplains near major infrastructure, including Route 1 and the Boston Autoport, indicate potential for flooding during extreme weather events

Local Study Area Floodplain



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Environmental Resources (6)

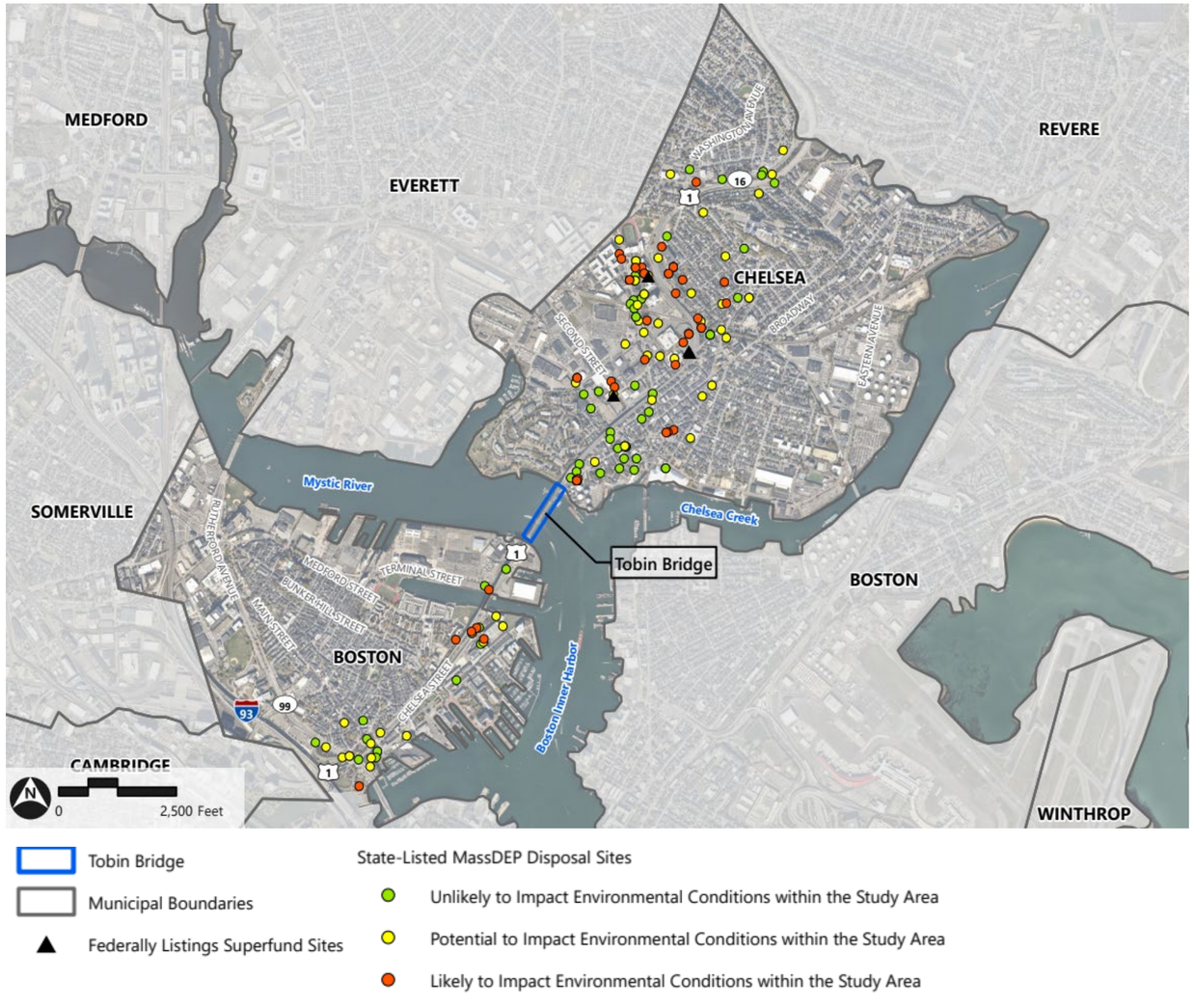
Hazardous Materials

- Local Study Area contains 225 state-listed disposal sites with varying regulatory statuses

- 102 sites are unlikely to impact environmental conditions, 69 have potential or likely impacts due to residual concentrations of hazardous materials in soil or groundwater

- No Superfund sites were identified within the Local Study Area

Existing Hazardous Materials Environmental Listing Locations



Environmental Resources (7)

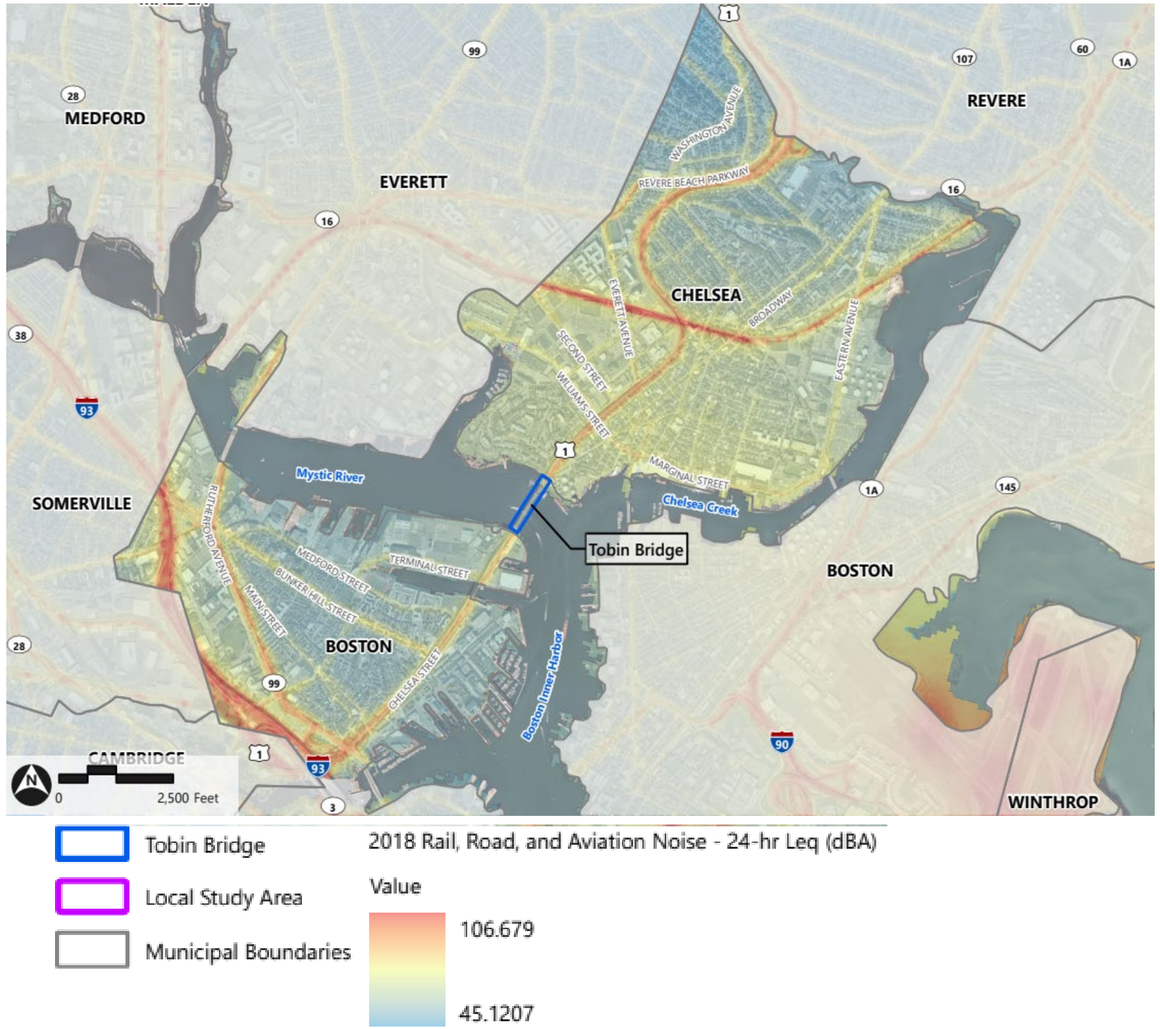
Noise and Air Quality

- The noisiest areas are those near major roadways or MBTA rail, such as the commuter line running through Chelsea or the MBTA rail yard in Somerville

- The EPA regulates hazardous air pollutants, including greenhouse gas (GHGs), as they can endanger public health

- The local and regional study areas are within attainment areas that meet or exceed the national standard for air quality

Local Study Area Noise Levels

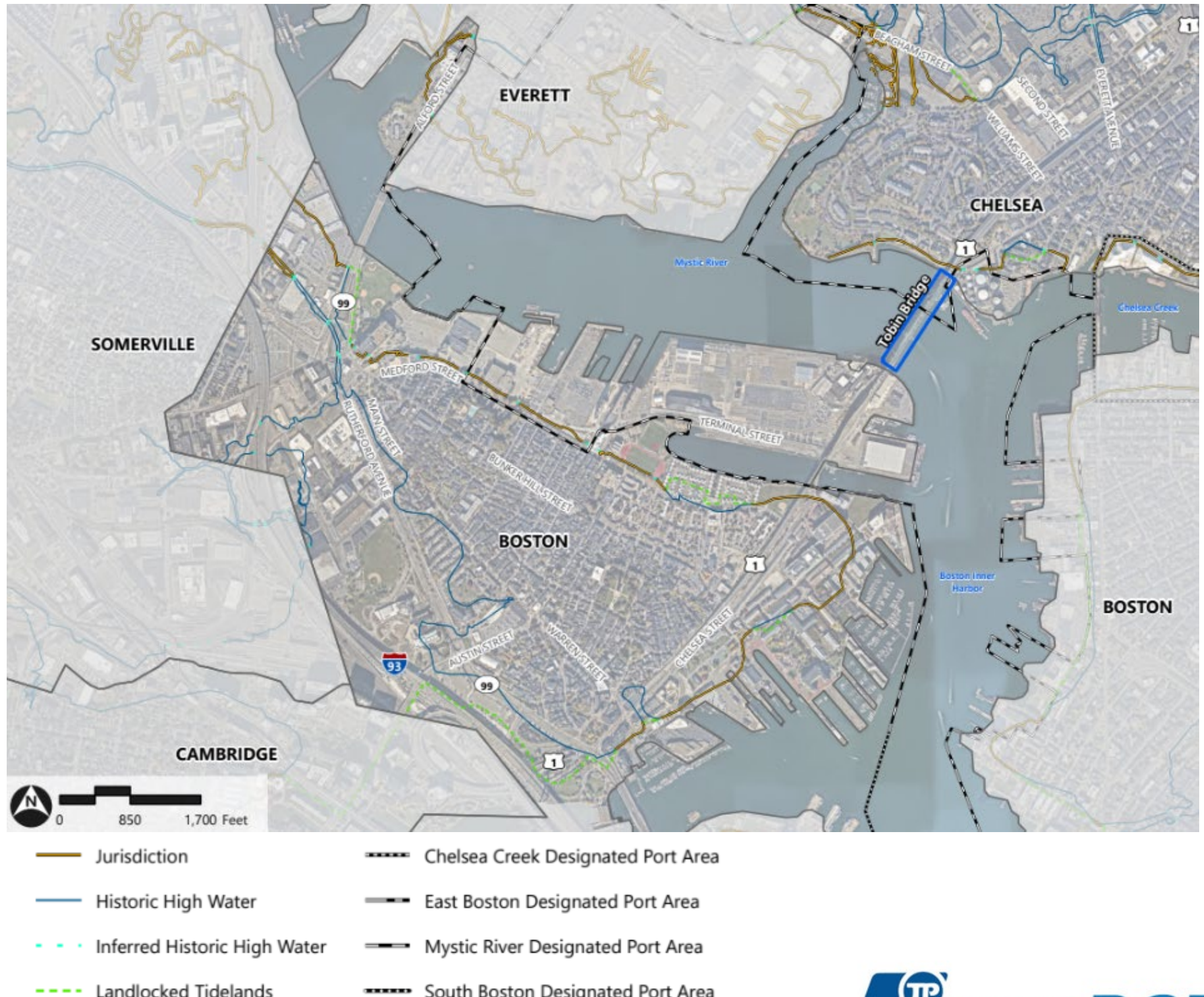


Environmental Resources (8)

Navigable Waterways and Designated Port Area (DPA)

- The Tobin Bridge traverses the Mystic River and is proximal to a variety of waterbodies
- Portion of Local Study Area lies within the Mystic River DPA which is one of the ten DPAs established by the Commonwealth to promote and protect water-dependent industrial uses
- Approximately 130 acres are within jurisdictional filled and flowed tidelands governed by Chapter 91

Chapter 91 and Designated Port Areas



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Future Conditions

Future Conditions Development

- As a long-term strategic planning study, the key next step is to project our existing conditions to a 2050 future condition

- Alternatives will be evaluated using these 2050 future conditions

- Various factors and assumptions are used to develop future conditions. Four key assumptions to discuss today involve:

    1. Future Roadway and Transit Conditions
    2. Future Travel Demand Forecast
    3. Future Land Use and Demographic Projections
    4. Future Climate Change and Sea Level Rise Forecast

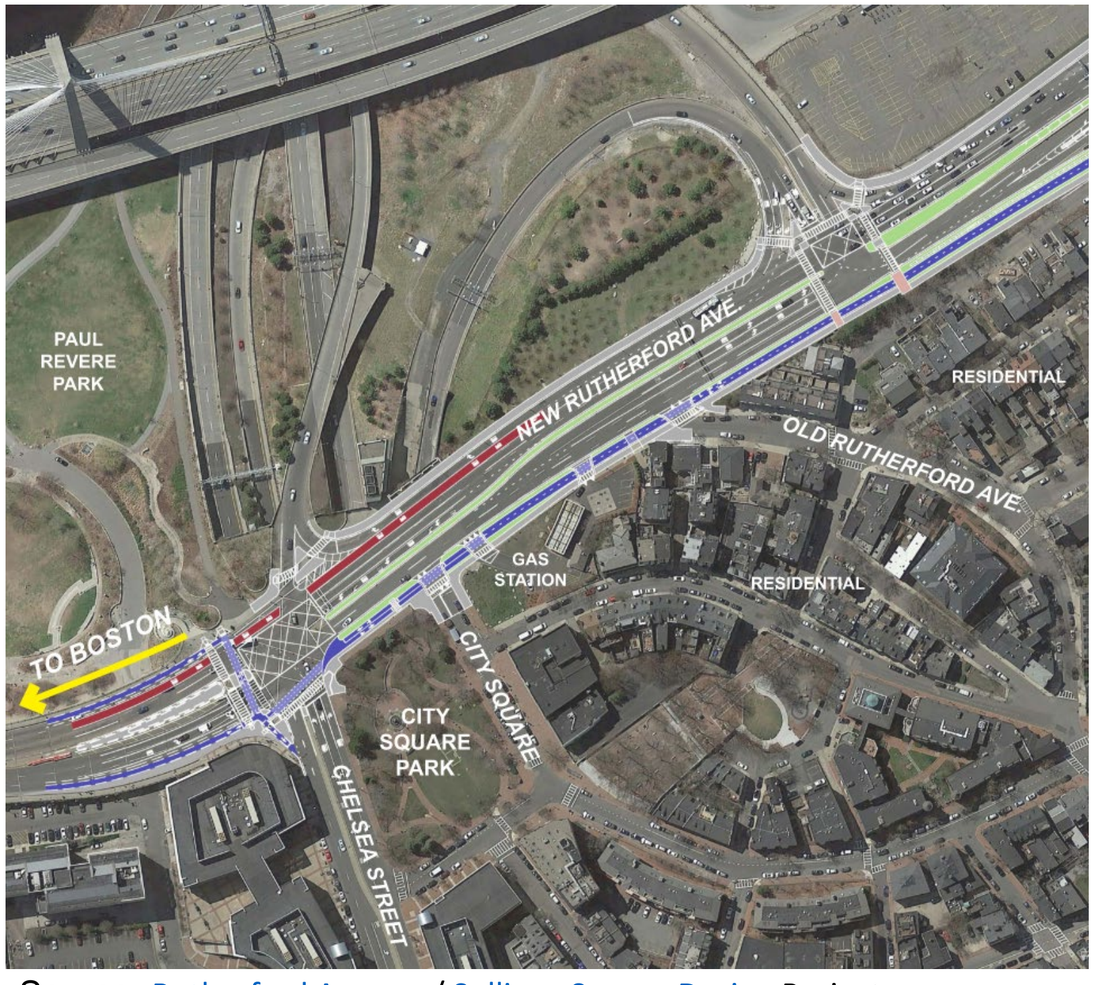
Future Roadway and Transit Conditions

- Determine planned major infrastructure projects and transit service improvements in place by 2050 based on available documentation

- These projects set the baseline from which alternatives will build upon

- Coordinating to confirm/adjust future assumptions

City of Boston
Rutherford Avenue / Sullivan Square Design Project



Source: Rutherford Avenue / Sullivan Square Design Project

Future Travel Demand Forecast and Model

- Central Transportation Planning Staff (CTPS) of the Boston Region MPO maintain the statewide travel demand model
- Model forecasts interaction of transportation supply and demand
  1. **Supply**: Modeled on *Future Roadway and Transit* Assumptions
  2. **Demand**: Generated by *Land Use Forecasts* within Traffic Analysis Zones (TAZs), expressed as changes to employment, households, and population

Travel Demand Forecast Transportation Analysis Zones

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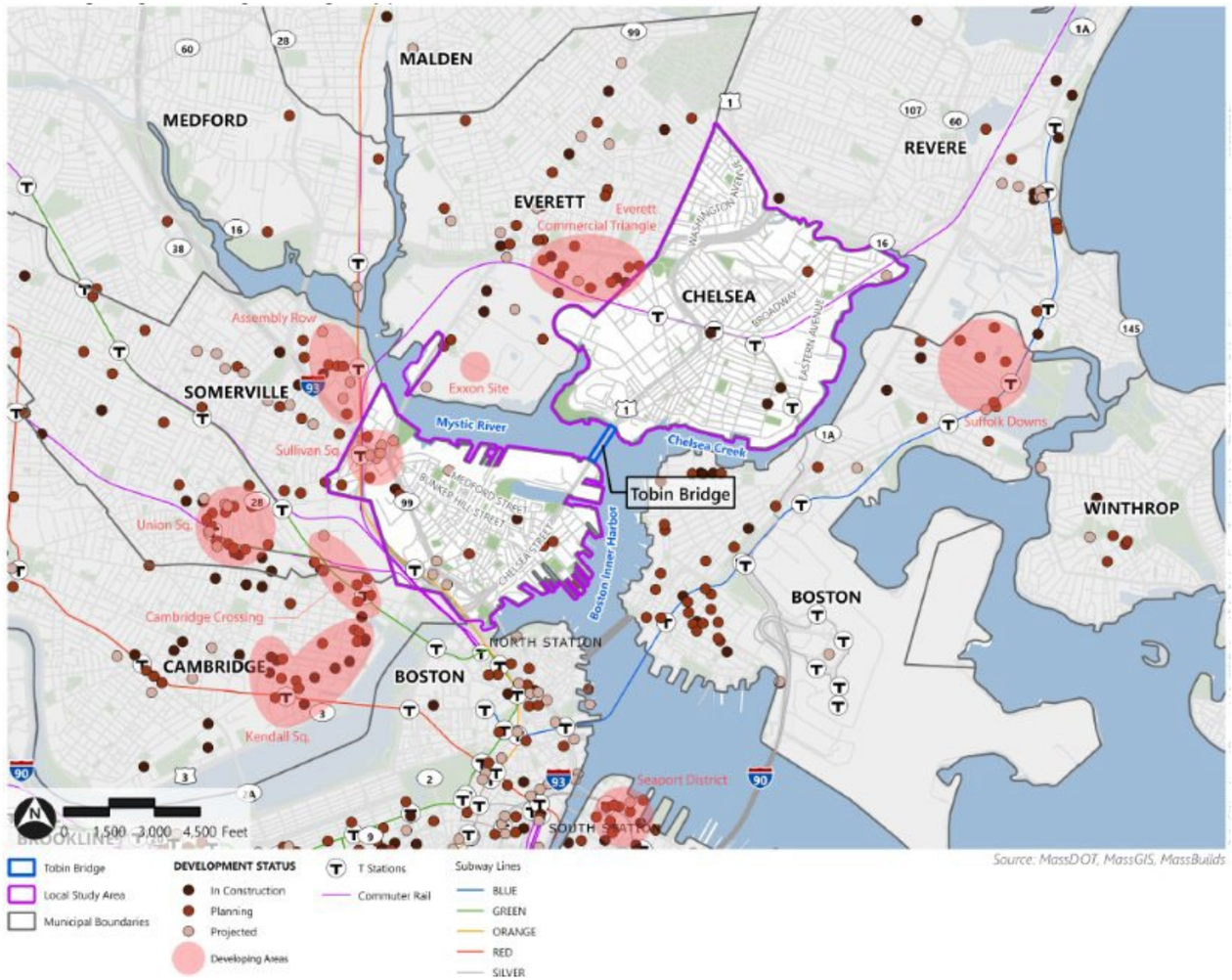
Future Land Use and Demographic Projections

- Develop using available data 2050 growth scenarios for the Regional and Local Study Areas

- Focuses on estimating land use growth via changes to the following demographics:
  1. Population
  2. Households
  3. Employment

Future Development Projects



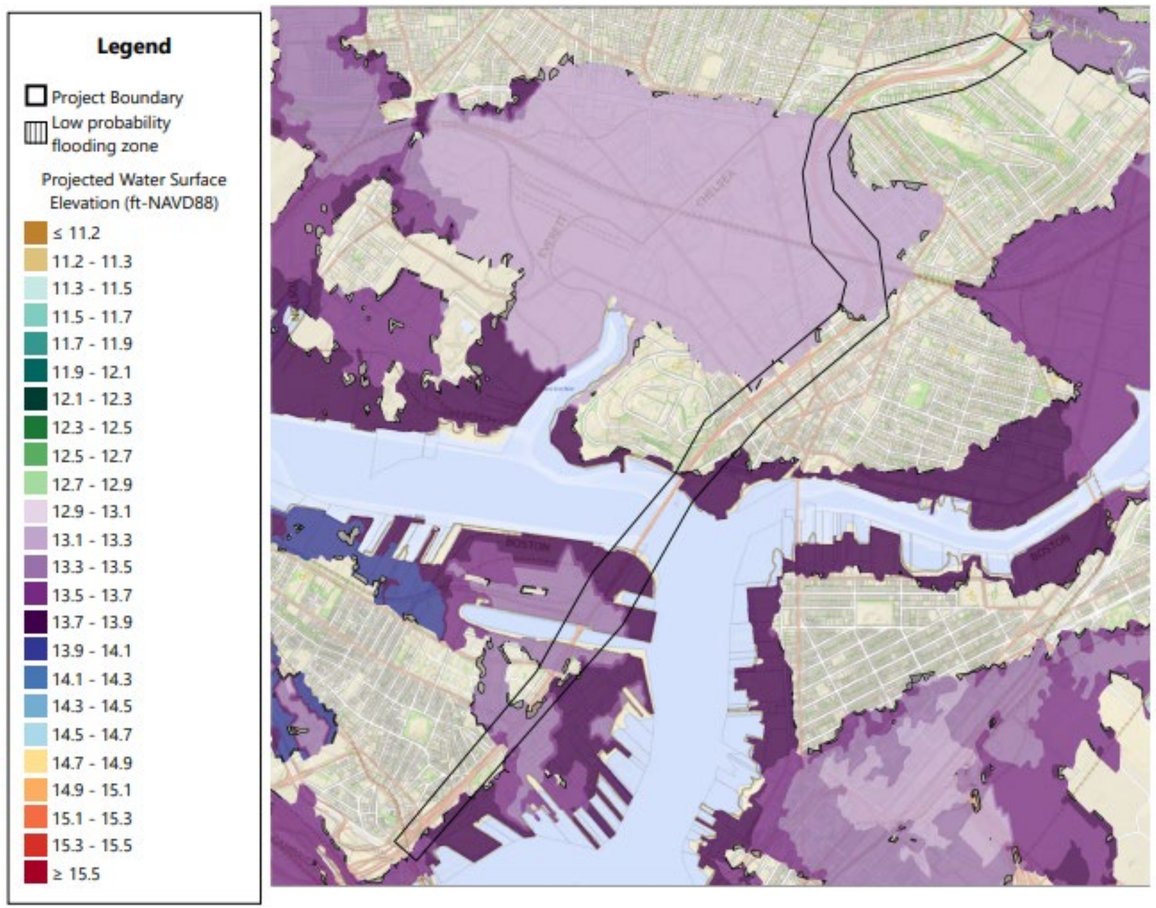
Source: MassDOT, MassGIS, MassBuilds

Future Climate Change and Sea Level Rise (SLR) Forecast (1)

- Estimated Sea Level Rise (SLR) will be an important criteria to establish to evaluate conceptual bridge and resiliency alternatives

- A review of existing reports and studies shows a large variation in the projected SLR in the region of the Local Study Area for 2050 and 2070, ranging from 1.5 inches[1] to 4.2 feet[2]

2050 Water Surface Elevation Projection



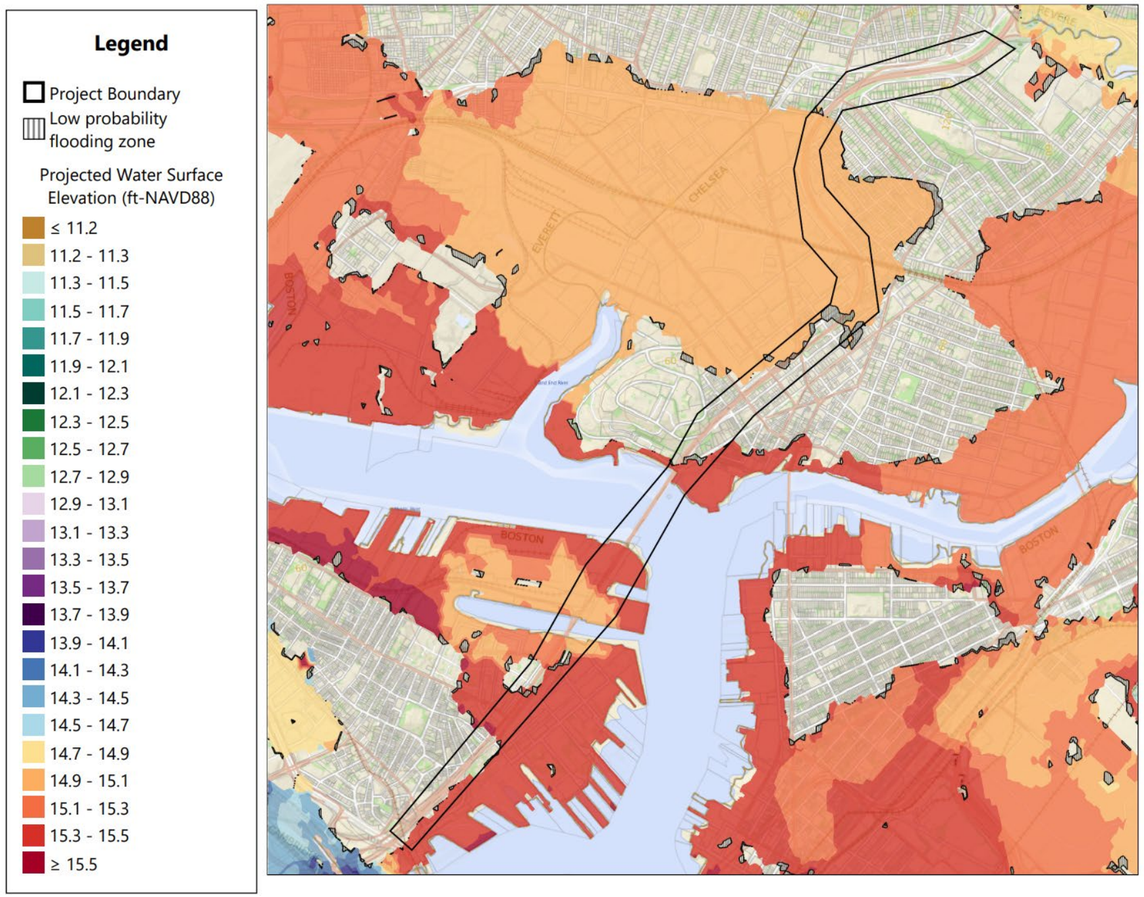
[1] Climate Ready Boston
[2] Climate Change Impacts and Projections for the Greater Boston Area (UMass Boston)

Future Climate Change and Sea Level Rise (SLR) Forecast (2)

- Estimated Sea Level Rise (SLR) will be an important criteria to establish to evaluate conceptual bridge and resiliency alternatives

- A review of existing reports and studies shows a large variation in the projected SLR in the region of the Local Study Area for 2050 and 2070, ranging from 1.5 inches[1] to 4.2 feet[2]

2070 Water Surface Elevation Projection



[1] Climate Ready Boston
[2] Climate Change Impacts and Projections for the Greater Boston Area (UMass Boston)

Future Conditions Scenario Planning Discussion

Future Conditions Scenario Planning

- **Goal**: Review and discuss options for the four key future conditions assumptions with Working Group

    1. Future Roadway and Transit Conditions
    2. Future Travel Demand Forecast
    3. Future Land Use and Demographic Projections
    4. Future Climate Change and Sea Level Rise Forecast

- **Outcome**: Key assumptions before the development of Future Conditions

Future Roadway and Transit Conditions (continued)

- Through research and document review, the following key future roadway and transit projects were identified.

  - Bill Russell (North Washington St) Bridge *(in progress)*
  - Downtown Broadway Chelsea *(in progress)*
  - Rutherford Avenue / Sullivan Square
  - Encore Casino Mitigation
  - Sweetser Circle Improvements
  - McGrath Boulevard
  - MBTA Bus Network Redesign
  - Lower Broadway Everett Transit Priority Corridor Project
  - Various bus lane projects within the Regional Study Area

Future Travel Demand Forecast

- The travel demand model uses demographic and employment data from Metropolitan Area Planning Council (MAPC)
- MAPC provides estimates for Massachusetts, segmented by zones
- MAPC demographic assumptions for 2019 and 2050 are used as a starting point for this project

Travel Demand Model Forecasts Annual Percent Growth (2019-2050)			
	Chelsea	Charlestown	Regional Study Area
Employment	0.28%	0.33%	0.36%
Households	0.25%	1.38%	0.63%
Population	0.10%	1.44%	0.55%

Future Land Use and Demographic Projections

- Available data used to develop two growth scenarios for the Regional and Local Study Areas as a comparison and check of the MPO's demographic projections

- The **first scenario "Past Trend"** is based off observed growth patterns over the past 10 years

- The **second scenario "Household Growth"** is based off projections which forecast lower levels of employment growth than historically observed, with stronger levels of household growth

Future Land Use and Demographic Projection Comparison – Local Study Area

Local Study Area Growth Comparison

	Travel Demand Model	Past Trend Scenario	Household Growth Scenario
Chelsea			
Employment	0.28%	0.61%	0.34%
Households	0.25%	1.55%	1.60%
Population	0.10%	1.49%	1.14%
Charlestown			
Employment	0.33%	0.61%	0.24%
Households	1.38%	1.07%	1.07%
Population	1.44%	1.52%	0.63%

- Based on ongoing or upcoming development within the Local Study Area, which growth option most closely aligns with your expectations for growth over the next 25 years?
- Do the annual growth projections for population, households, employment align with your expectations?

Future Land Use and Demographic Projection Comparison – Regional Study Area

Regional Study Area Growth Comparison

	Travel Demand Model	Past Trend Scenario	Household Growth Scenario
Employment	0.36%	0.97%	0.42%
Households	0.63%	1.01%	0.67%
Population	0.55%	1.01%	1.07%

- Based on ongoing or upcoming development within the Regional Study Area, which growth option most closely aligns with your expectations for growth over the next 25 years?

- Do the annual growth projections for population, households, employment align with your expectations?

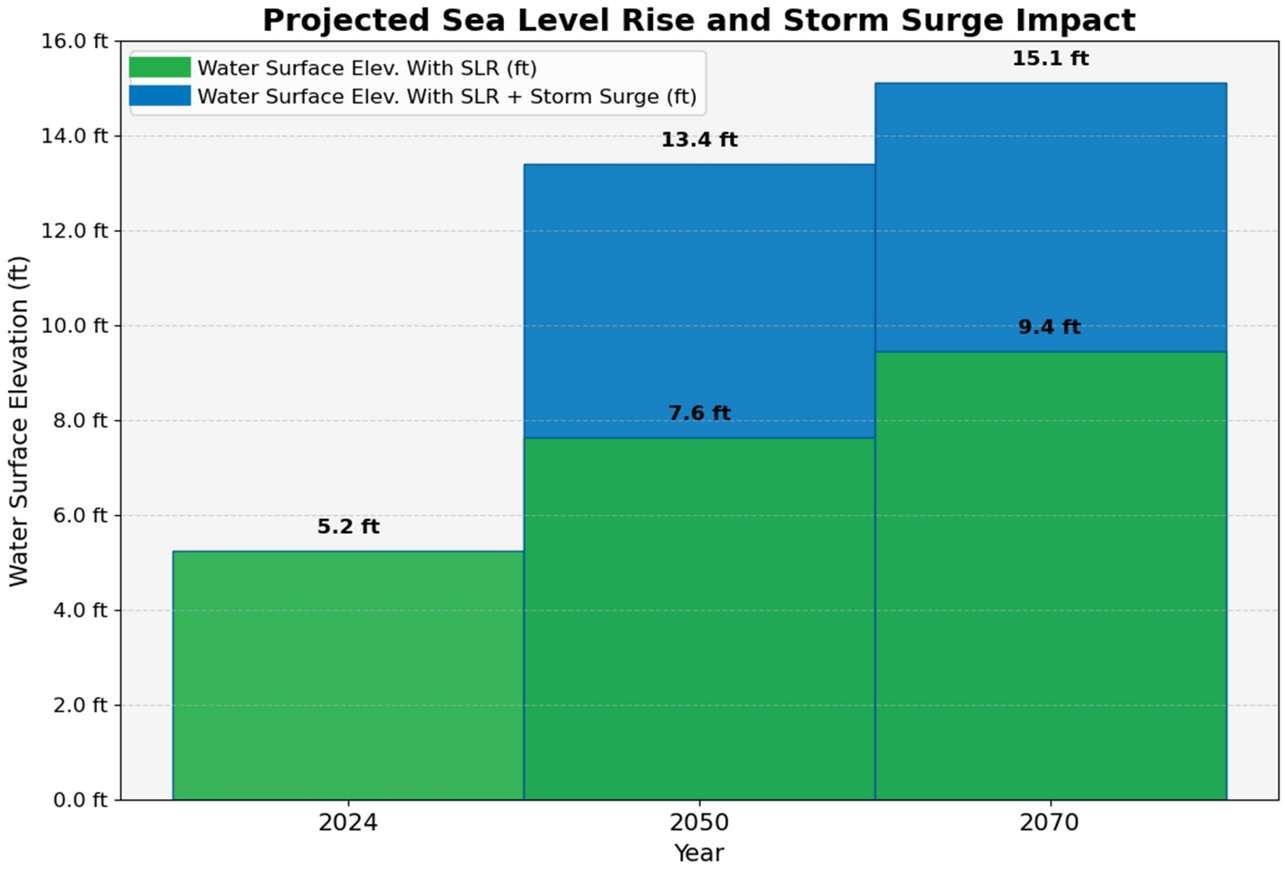
Future Climate Change and Sea Level Rise (SLR) Forecast

- The current water surface elevation of the Mystic River is 5.24 ft according to the NOAA Tides and Currents data
- The ResilientMA Action Team Climate Resilience Design Standard Tool (RMAT) integrates the best available statewide climate change projections, including the Mass Coastal Flood Risk Model (MC-FRM). The RMAT was run for this study and the surface water elevation outputs are shown in the next slide
- Model predicts SLR increases of 2.4 ft by 2050 and 4.2 ft by 2070
- Model indicates that those values would increase by approximately 5.7’ to account for largest design storm surge

Future Climate Change and Sea Level Rise (SLR) Forecast Discussion

- Tobin Bridge planning alternatives will use conservative approach to determine bridge height due to:
  - Importance of the bridge to regional mobility and safety
  - Long (75 to 100 years) lifespan of new infrastructure

- Future preliminary design will determine exact bridge height based on a combination of SLR, storm surge and required marine vessel height clearances



Public Comment

Public Comment: Hybrid Meeting Process

- In-Person and Virtual moderators will work together to ensure that attendees in both spaces can share their questions and comments

- Moderators will take a few comments at a time in one space and then switch throughout the public comment period

- If multiple people ask the same question, moderators will inform the audience how many asked and answer the question once

Please be advised that all Q&A and comments are subject to disclosure for public records, therefore use these functions for project-related business only

Public Comment: In-Person Attendees

- Use Microphone provided and please line up three (3) at a time to allow for virtual audience to participate

- Please state your name before your question or comment

- Please share only **1** question or comment at a time, limited to **2** minutes, to allow others to participate

Please be advised that all Q&A and comments are subject to disclosure for public records, therefore use these functions for project-related business only

Public Comment: Virtual Attendees

- Submit your questions and comments using the Q&A button

- "Raise your hand" to be unmuted for verbal questions

- Please state your name before your question

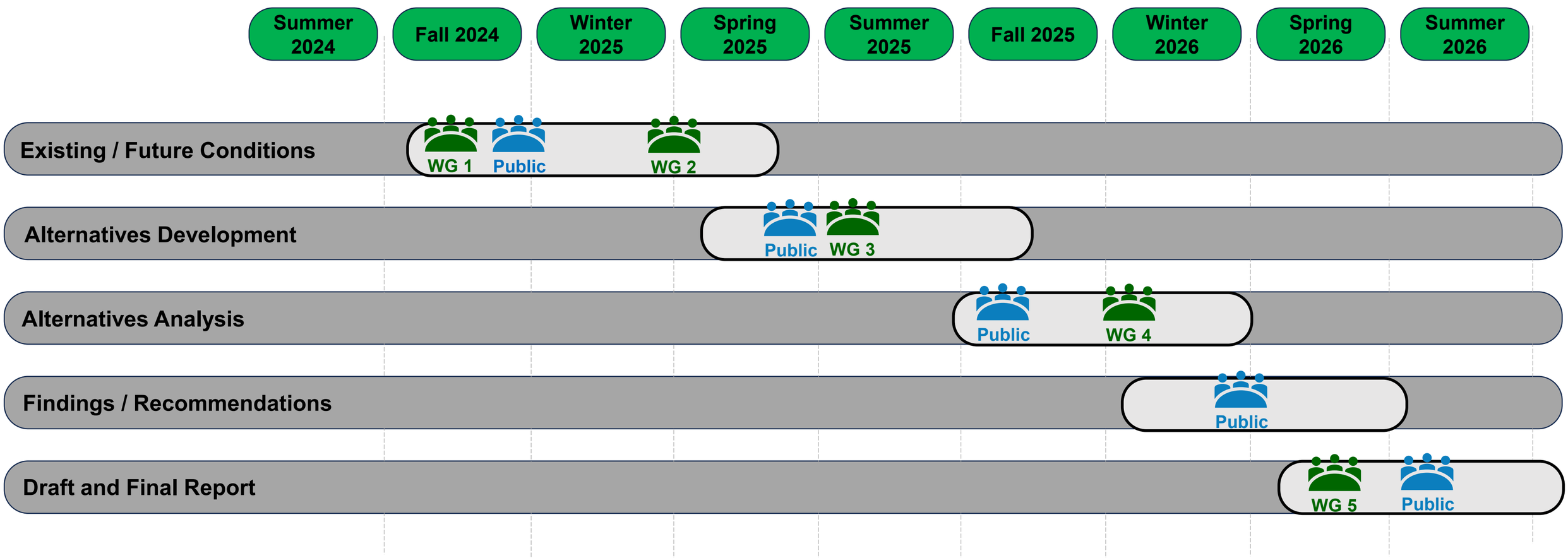
- Please share only **1** question or comment at a time, limited to **2** minutes, to allow others to participate

- To ask a question via phone, dial *9 and the moderator will call out the last digits of your phone number and unmute your audio when it is your turn

Please be advised that all Q&A and comments are subject to disclosure for public records, therefore use these functions for project-related business only

Schedule and Next Steps

Study Schedule (anticipated)



5 Working Group meetings and 5 Public meetings across duration of study

WG — *Working Group Meeting*

Public — *Public Meeting*

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Public Involvement Plan

Outreach Approach and Methods

- Working Group meetings (5)
- Public Information meetings (5)
- Equity Focus Group meetings (3)
- Online engagement

Study Website / Contact Information:
Patrick L. Snyder, Project Manager
Address: 10 Park Plaza, Suite 4150, Boston, MA 02116
Email: planning@dot.state.ma.us

https://www.mass.gov/maurice-j-tobin-bridge-long-term-strategic-planning-study

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Next Steps

- Equity Focus Group meetings
  - Recruitment ongoing
  - 1st meeting by early March 2025
- Public Meeting #2 – Early Spring 2025
- Working Group #3 – Late Spring 2025

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Thank You

Study Website:
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