



Public Informational Meeting #3

Alternatives & Draft Recommendations

Wednesday January 18, 2023



Zoom Controls

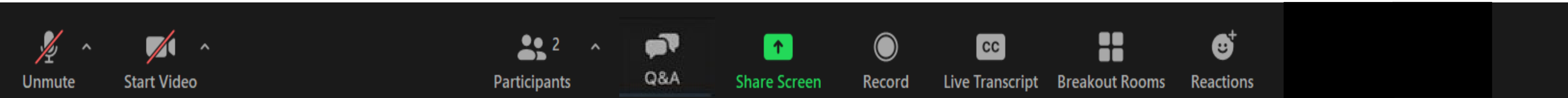


- Drop down menu to check microphone and speakers
- Ask a question and share comments
- Raise your hand - *9 for users dialing in; Alt+Y
- Closed captioning is generated by CART Services
- If you are unable to access the internet or are having technical problems, please call into the meeting at 309-205-3325, Webinar ID: 890 6390 0416
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- All parts of this meeting are considered public record.
- By continuing attendance with this virtual public meeting, you are consenting to participate in a recorded event.
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Important notes

- Your microphone and camera are automatically disabled upon entering the meeting.
- The meeting will be open to questions and answers at the end of the presentation.
- Your feedback is important.

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- All MassDOT activities, including public meetings, are free of discrimination.
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- We welcome the diversity from across our entire service area. If you have any questions or concerns, please visit <https://www.mass.gov/nondiscrimination-in-transportation-program> to reach the Office of Diversity and Civil Rights.

Thank you for joining our meeting. We appreciate your participation!

Agenda

- **Public Meeting #2 Recap**
- **Alternatives Development & Analysis**
- **Draft Recommendations**
- **Breakout Rooms**
- **Next Steps**
- **Public Comment**



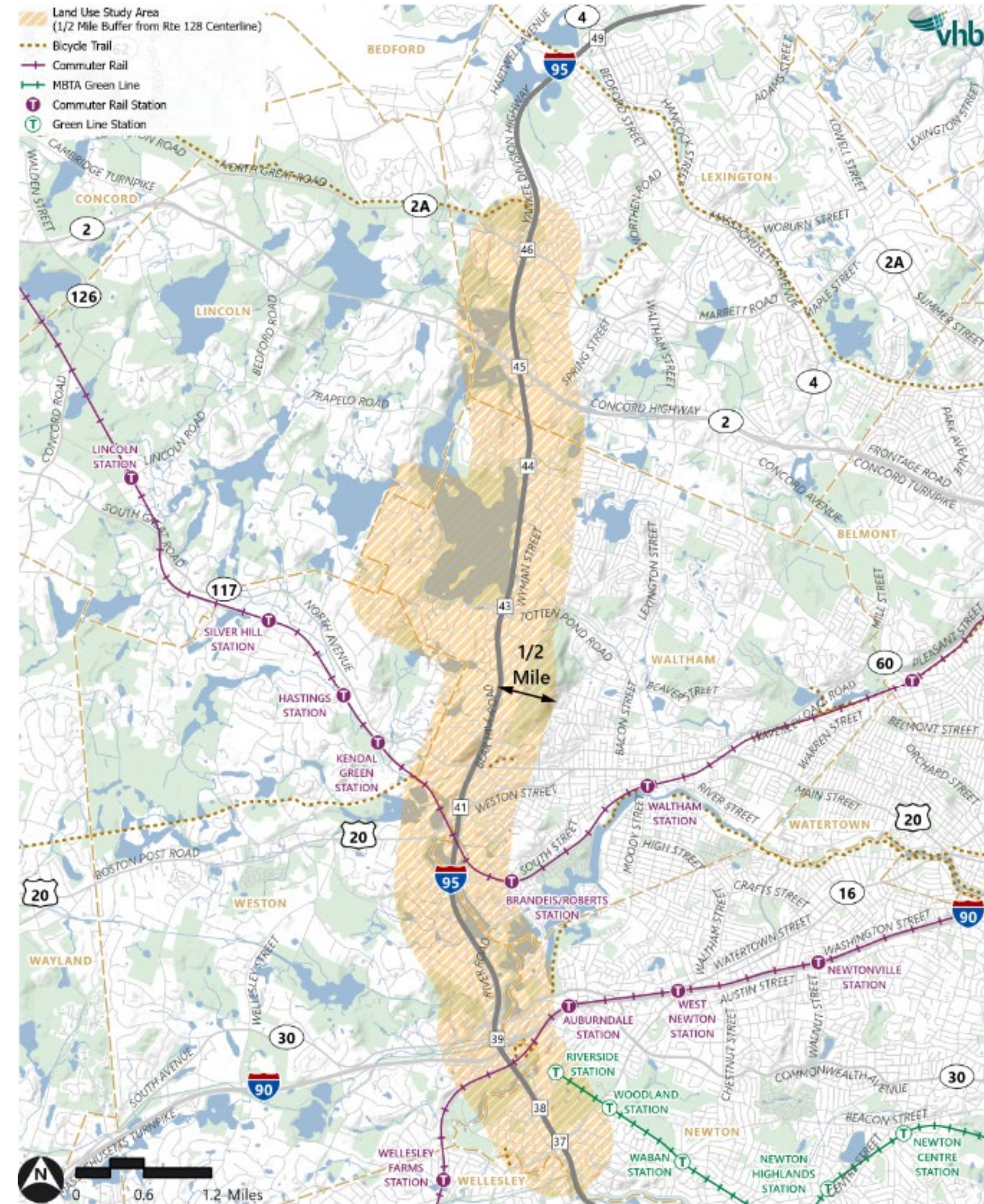
Route 128/I-95
LAND USE & TRANSPORTATION STUDY

Project Overview

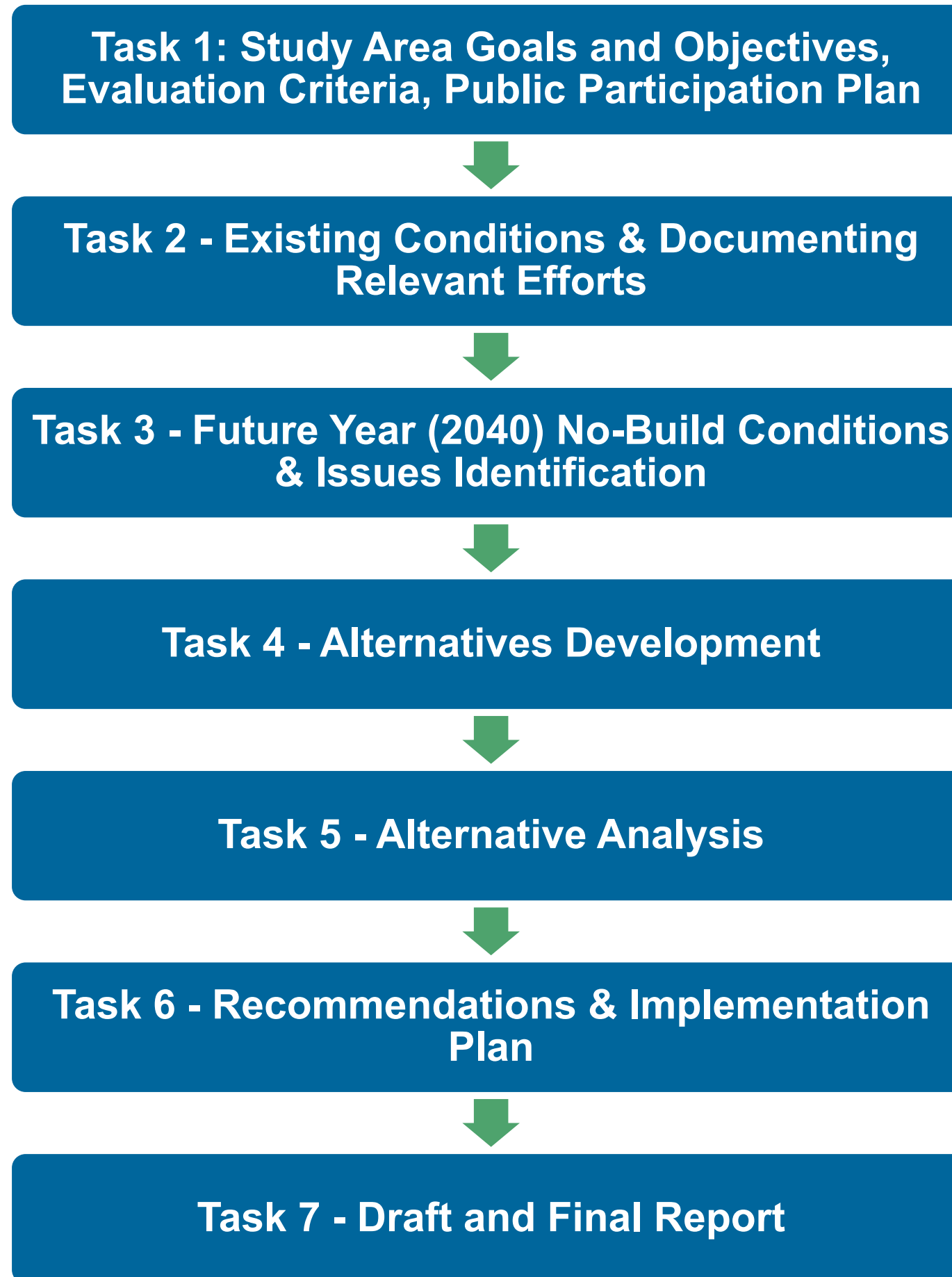
The Route 128/I-95 Land Use and Transportation Study will establish the future land use, housing, and economic development assumptions.

The study area includes Route 128/I-95 between Newton and Lexington.

The study will develop and analyze alternatives, present recommendations, and develop an implementation plan.

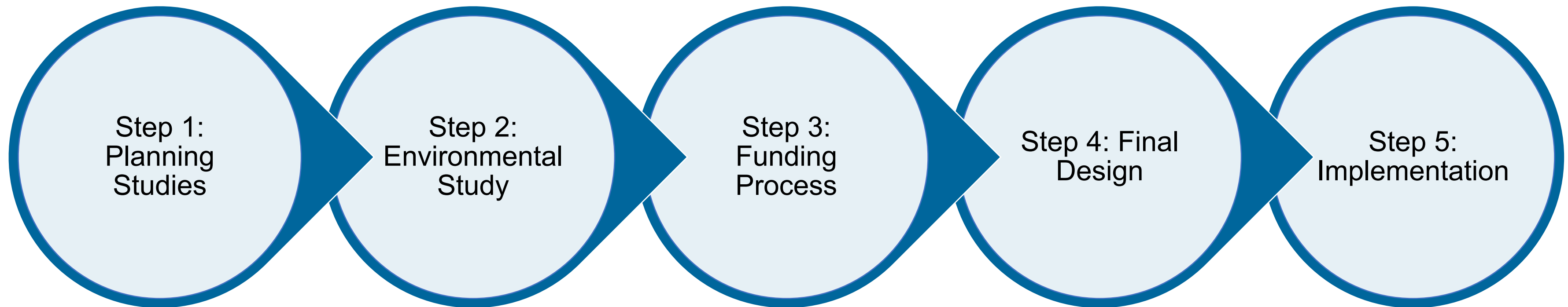


Study Process



 **We are here**

MassDOT Project Development Process





Public Meeting #2 Recap

In 1-2 words, what is your vision for the future of Route 128/I-95?

Mentimeter



Meeting Summary

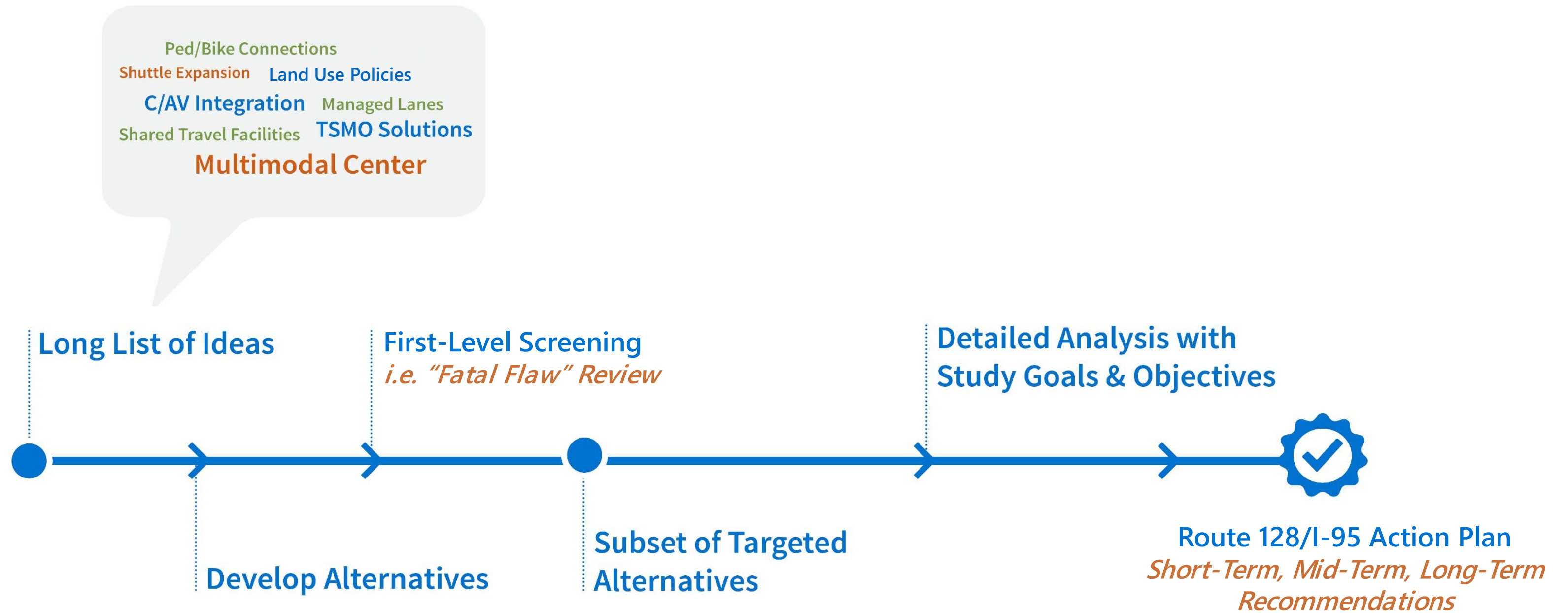
- Over 45 attendees with 24 questions answered live
- Meeting Agenda
 - Welcome
 - Public Meeting #1 Recap
 - Future Conditions Review
 - Issues, Opportunities & Constraints
 - Alternatives Development
 - Next Steps
 - Public Comment
- Study Team asked attendees 3 poll questions using Mentimeter





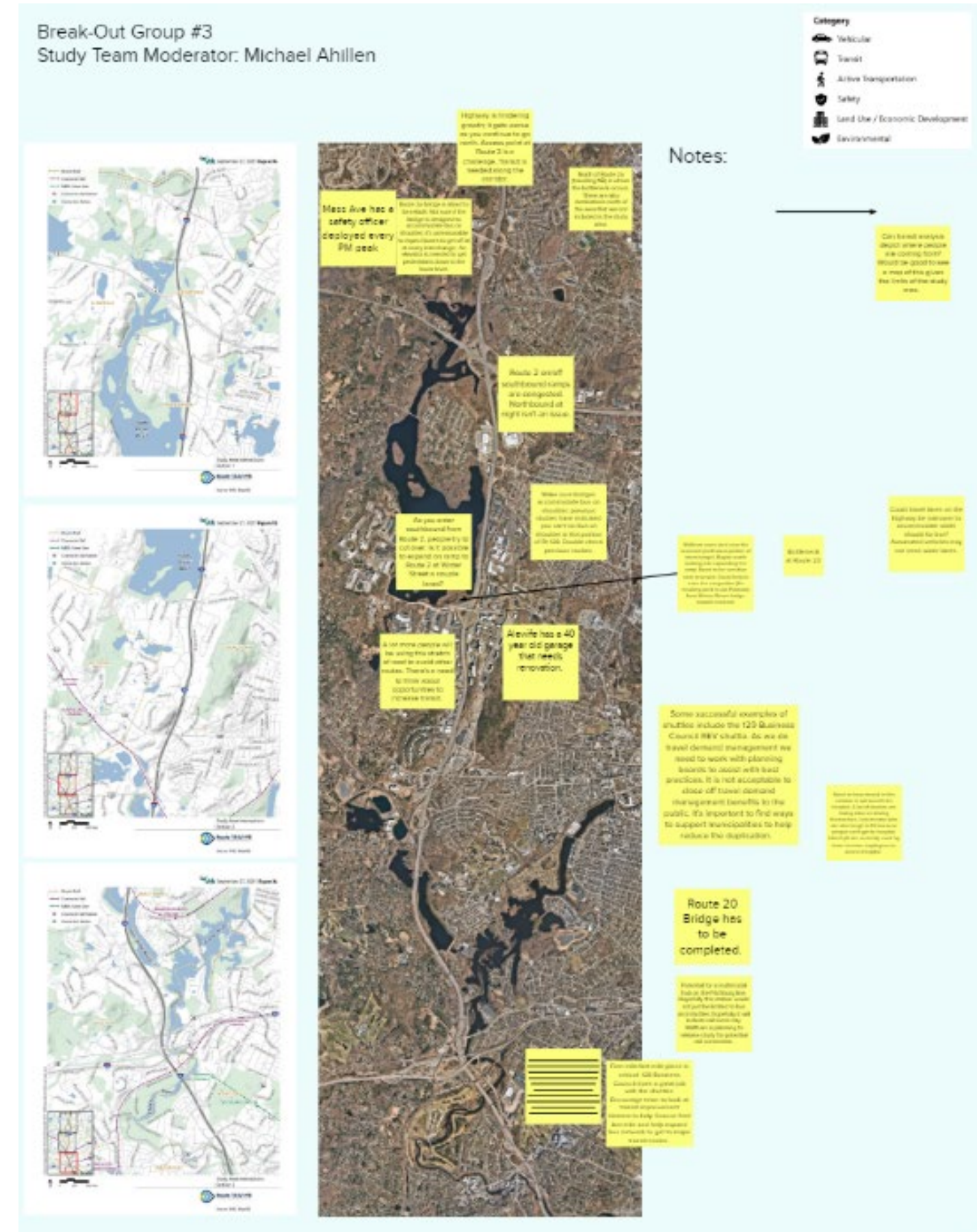
Alternatives Development & Analysis

Alternatives Process



Alternatives Development

- Based on a review of:
 - Existing & Future Conditions Analysis
 - Input from the Working Group
 - Discussions with MassDOT & MBTA
 - Public outreach process
 - Online mapping tool



Working Group Alternatives Development Mural Board

Alternatives Categories

- Land Use/Economic Development (LU)
- Transportation
 - Vehicular (V)
 - Transit (T)
 - Active Transportation (AT)
 - Safety (S)
 - General (GT)
- Environmental (E)

**100+ ideas
generated**

**80+ alternatives
developed**

First-Level Screening

- Based on established goals and objectives
- Where applicable, considered a high-level assessment of feasibility given the physical constraints of the area.
- Resulted in the following:
 - 54 advanced for further study
 - 19 discarded
 - 11 immediate actions

Table 4-X Transit Alternatives Screening

ID	Alternative	Benefits & Impacts to Goals & Objectives					Next Step
		Improve Access, Safety, and Mobility for All	Support Strategic Land Use and Economic Vitality	Advance Social Equity Throughout	Contribute Environmental and Health Benefits	Develop Recommendations with Lasting Benefits	
T-1	Provide Additional Transit Service in Northern Portion of Study Area	●	●	●	●	○	Advance
T-2	Relocate MBTA Route 76 Marrett Road opposite Wilson Road Inbound Bus Stop	Immediate Action					
T-3	Extend Sidewalk for MBTA Route 61 Bus Stop on Smith St South of Trapelo Road	Immediate Action					
T-4	Extend Shuttle Network in West Waltham	●	●	○	●	○	Advance
T-5	Create Fitchburg Line Multimodal Hub	●	●	●	○	○	Advance
T-6	Consider Transit Connection between West Waltham and Worcester Line/Green Line	●	●	○	●	○	Advance ¹
T-7	Consider Green Line Extension Along Route 128/I-95 Corridor	○	●	○	○	○	Discard
T-8	Consider Increased East-West Bus Service	●	●	○	●	○	Advance
T-9	Implement Managed Lane: Bus on Shoulder	●	●	○	●	○	Advance ²
T-10	Install Transit Signal Priority	●	○	●	○	○	Advance
T-11	Expand Transit Service Span/Increase Frequency for Passengers Outside Commuter Peaks	●	●	●	●	○	Advance
T-12	Expand Shuttle Access for All Passengers	●	●	●	●	○	Advance

Note: Using Harvey Balls and colors to convey relative performance against goals and objectives.
 1 – Advance for shuttle service only
 2 – Advance in key areas to support shuttle service
 ● - Benefit ○ - Neutral ○ - Impact

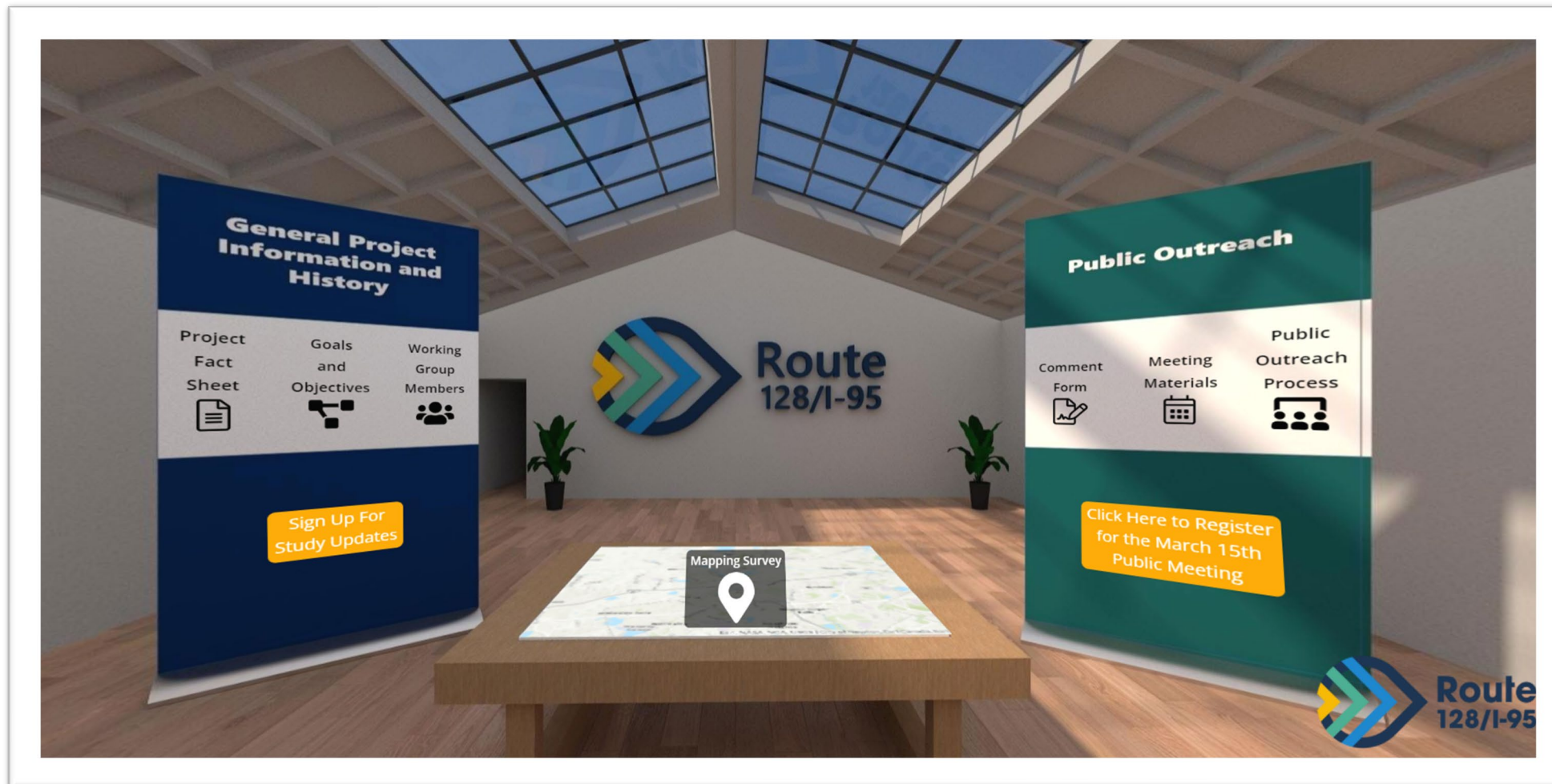
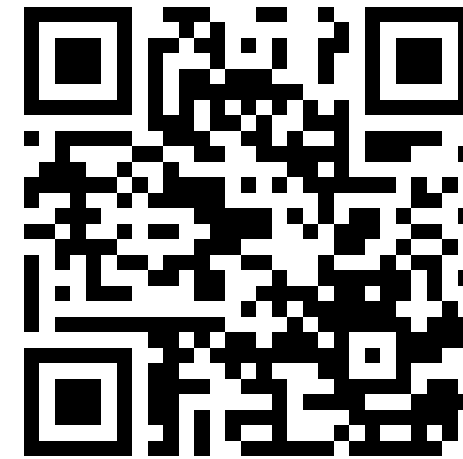
Example First-Level Screening Table

Draft Immediate (0-1 Year) Recommendations (for discussion with responsible parties)

ID	Alternative	Responsible Parties
V-24	Route 16 at Quinobequin Road: Extend Westbound Left-Turn Lane	MassDOT, DCR
V-25	Route 16 at Quinobequin Road: Extend Southbound Two-Lane Approach on Quinobequin Road	MassDOT, DCR
T-2	Relocate MBTA Route 76 Marrett Road opposite Wilson Road Inbound Bus Stop <i>(in progress)</i>	MassDOT, MBTA
T-3	Extend Sidewalk for MBTA Route 61 Bus Stop on Smith Street South of Trapelo Road	City of Waltham, MBTA
AT-6	Trapelo Road at Route 128/I-95 Southbound Off-Ramp: Restripe Crosswalks	MassDOT
AT-7	Trapelo Road at Smith Street: Install Crosswalk Across Eastbound Approach	MassDOT
AT-9	Route 16 at Route 128/I-95 Northbound Ramps and Quinobequin Road: Restripe Crosswalks	MassDOT, DCR
S-2	Route 16 at Quinobequin Road: Install Advance Signage and Lane Markings for Lane Designations	MassDOT, DCR
S-3	Route 16 at Beacon Street: Install "No Turn on Red" Signage for Northbound Approach	MassDOT
S-4	Route 16 at Quinobequin Road: Install Flashing Yellow Arrows	MassDOT, DCR
S-6	Review Speed Data on Study Area Roadways	MassDOT, Study Area Municipalities

Evaluation Criteria

- Evaluation criteria tied to each of the five study goals.
- Refer to project website for more information (see QR to the right)



Route 128/I-95 Land Use & Transportation Study

Route 128/I-95 Study Framework

Goals, Objectives & Evaluation Criteria

Route 128/I-95 Land Use and Transportation Study specific goals, objectives, and evaluation criteria were developed and refined in conjunction with the Working Group. Goals define the general intentions and purposes for conducting the study based on the issues that have to be addressed. Objectives describe ways that the goals could be accomplished. The evaluation criteria are used to measure how well – qualitatively and quantitatively – each alternative meets the goals and objectives.

Study Specific Goals, Objectives & Evaluation Criteria (1 of 2)

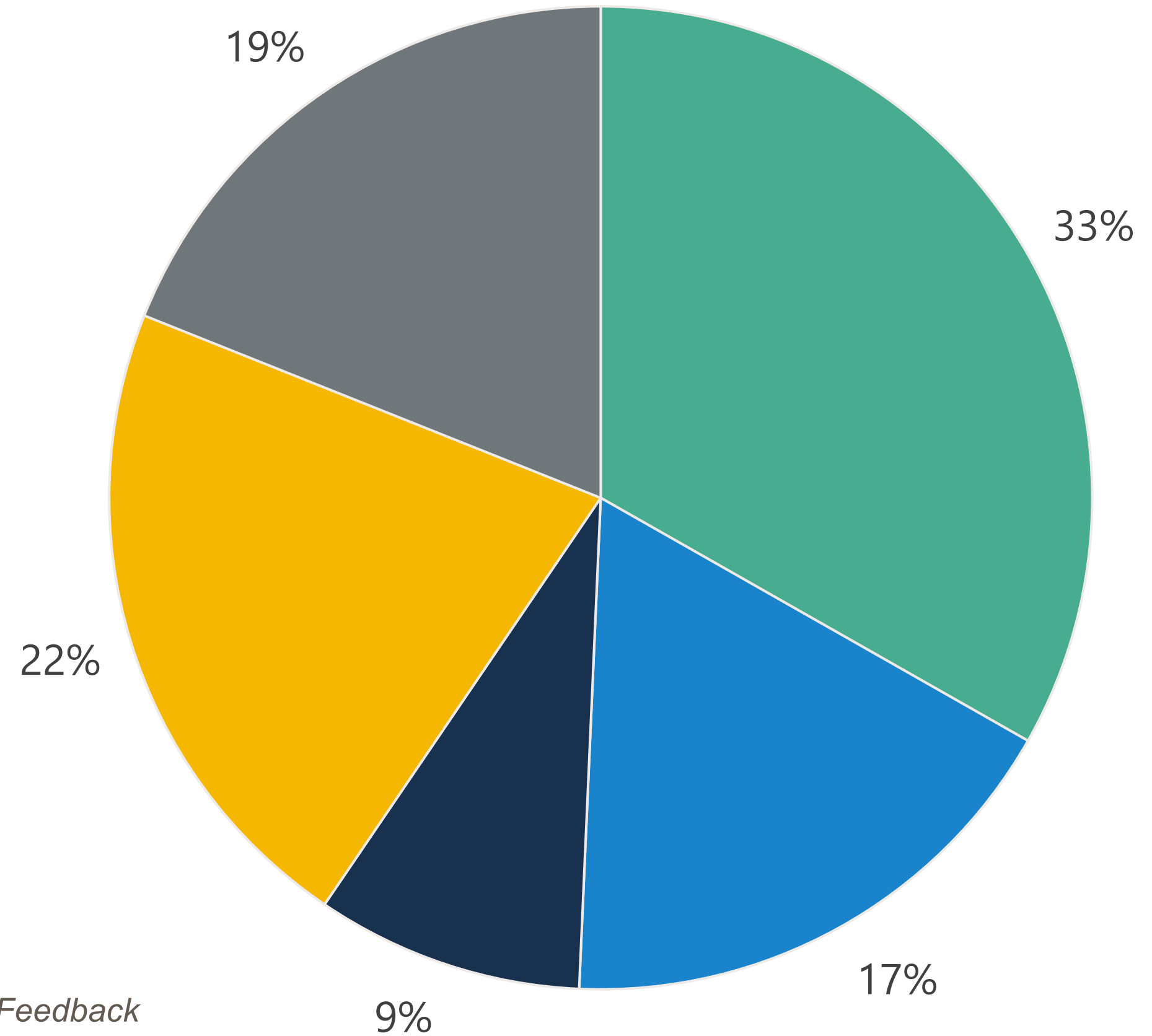
Goals/Objectives	Evaluation Criteria
Improve Access, Safety, and Mobility for All	
<ul style="list-style-type: none"> > Induce a mode shift > Minimize multimodal delays & improve reliability > Enhance safety > Integrate technologies & improve customer experience > Contribute to state of good repair 	<ul style="list-style-type: none"> > Mode share/person trips by mode > Quality, location, and connectivity of pedestrian/bicycle and transit accommodations > Improved vehicle travel times and operations > Improved transit travel times and operations > Potential for crash reductions > Meeting MassDOT and local geometric design standards
Support Strategic Land Use and Economic Vitality	
<ul style="list-style-type: none"> > Encourage strategies to support mobility and accessibility > Provide connectivity & capacity to support access to jobs > Support local and regional plans > Promote placemaking 	<ul style="list-style-type: none"> > Access to jobs > Impacts to businesses (labor force impacts, property values, increased jobs creation) > Tax base impacts (effects on jobs and employment) > Advances local and regional land use priorities
Advance Social Equity Throughout	
<ul style="list-style-type: none"> > Advance programs/policies that improve transportation choice > Equitably distribute both benefits and burdens > Address lack of housing diversity, affordability, and access > Maintain an open and inclusive process > Protect and preserve adjacent residential neighborhoods 	<ul style="list-style-type: none"> > Mode share/person trips by mode > Effects on environmental (e.g., air quality, noise, water quality) and social conditions (e.g., economic activity, traffic and safety) in environmental justice communities compared to non-environmental justice communities > Effects on the local/regional housing stock > Effects on community cohesion/disruption or division > Meaningful involvement of environmental justice populations in the planning process

Goals, Objectives, and Evaluation Criteria Table

Alternatives Scoring

Study Goal Weighting

- Improve Access, Safety, and Mobility for All
- Support Strategic Land Use and Economic Vitality
- Advance Social Equity Throughout
- Contribute Environmental and Health Benefits
- Develop Recommendations with Lasting Benefits



Source: Working Group and Public Informational Meeting Feedback

Alternatives Themes



Improve Regional Mobility



Expand Transportation Choice



Align Policies with Mobility Goals



Plan for the Future

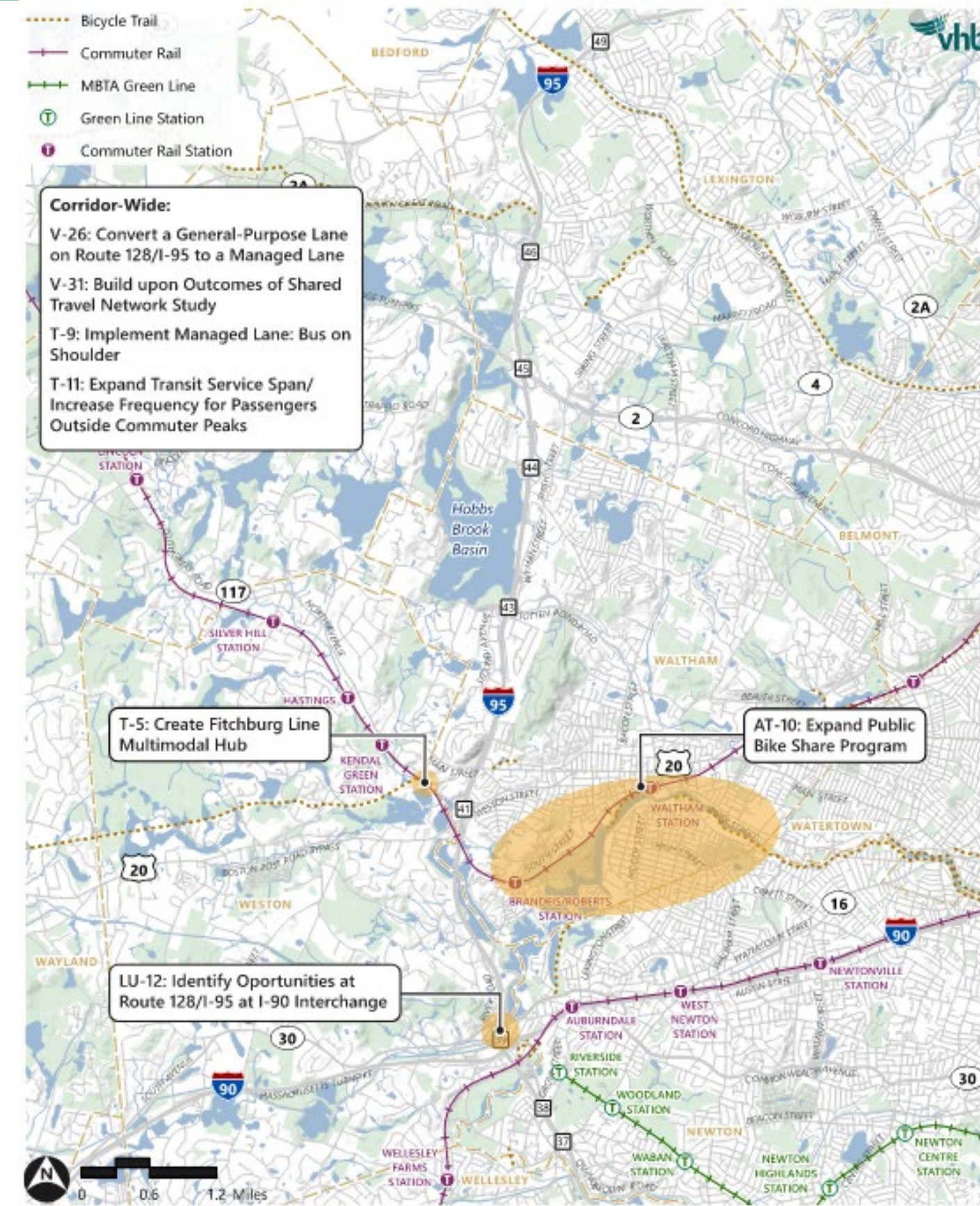


Address Congestion & Improve Safety

Improve Regional Mobility

More reliable and robust multimodal access between the region and the Study Area are critical to address congestion, decrease emissions, and protect adjacent neighborhoods

- T-5: Create Fitchburg Line Multimodal Hub
- LU-12: Identify Opportunities at Route 128/I-95 at & I-90 Interchange
- T-11: Expand Transit Service Span/Increase Frequency for Passengers Outside Commuter Peaks
- AT-10: Expand Public Bike Share Program
- V-31: Build upon Outcomes of Shared Travel Network Study
- T-9: Implement Managed Lane: Bus on Shoulder
- V-26: Convert a General-Purpose Lane on Route 128/I-95 to Managed Lane

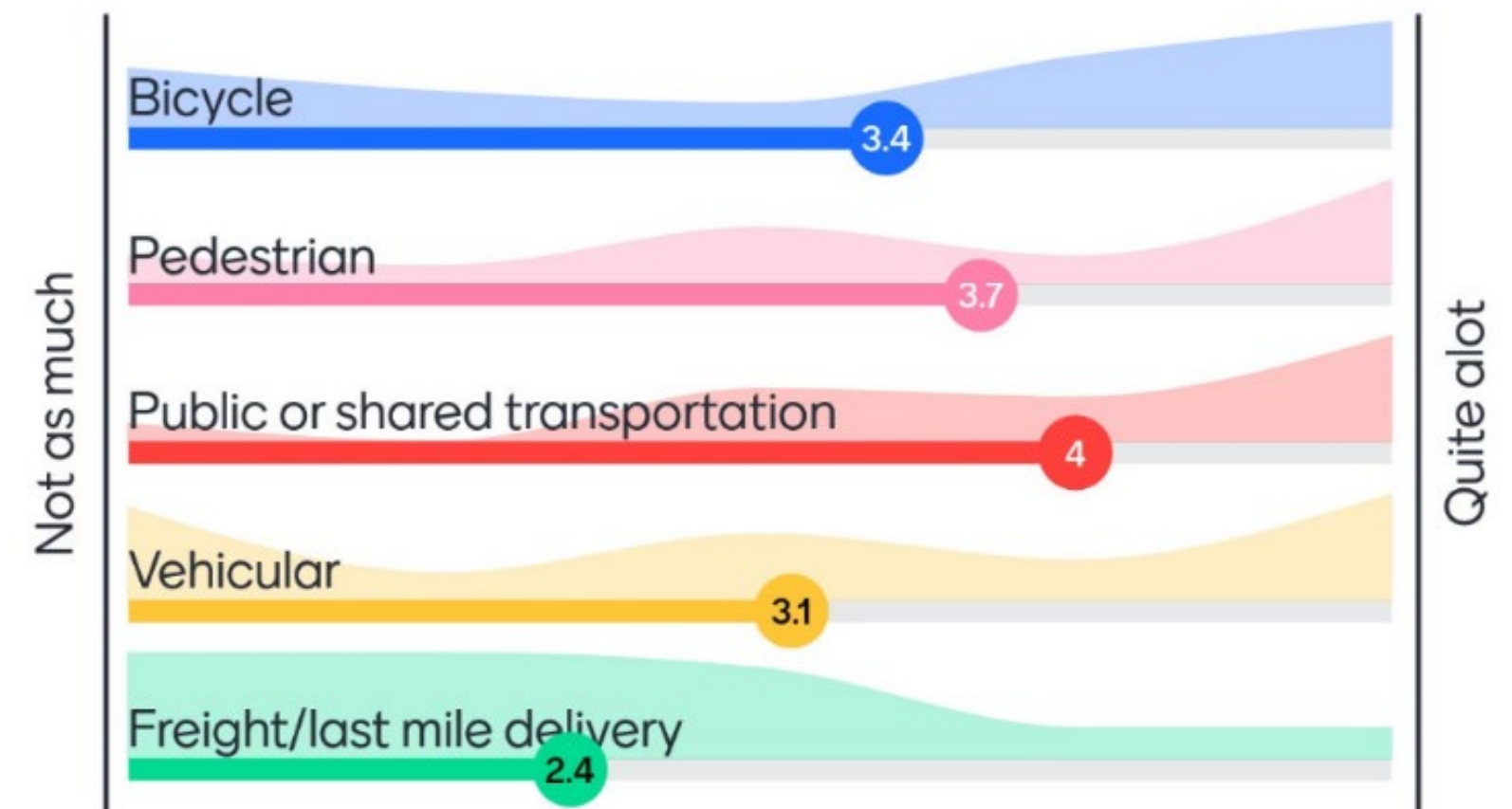


Expand Transportation Choice (1 of 2)

Expanding and diversifying multimodal options will help the corridor realize its full potential as an economic engine for the region and, as importantly, serve to protect near-by neighborhoods from unintended traffic impacts from this growth

- AT-5: Construct Lower Falls Shared Use Path
- T-1: Provide Additional Transit Service in Northern Portion of Study Area
- T-12: Expand Shuttle Access for All Passengers
- T-6: Consider Transit Connection between West Waltham and Worcester Line/Green Line
- AT-4: Improve East-West Bicycle Connections within Waltham
- T-8: Consider Increased East-West Bus Service

How important are the following modal investments in this particular corridor?

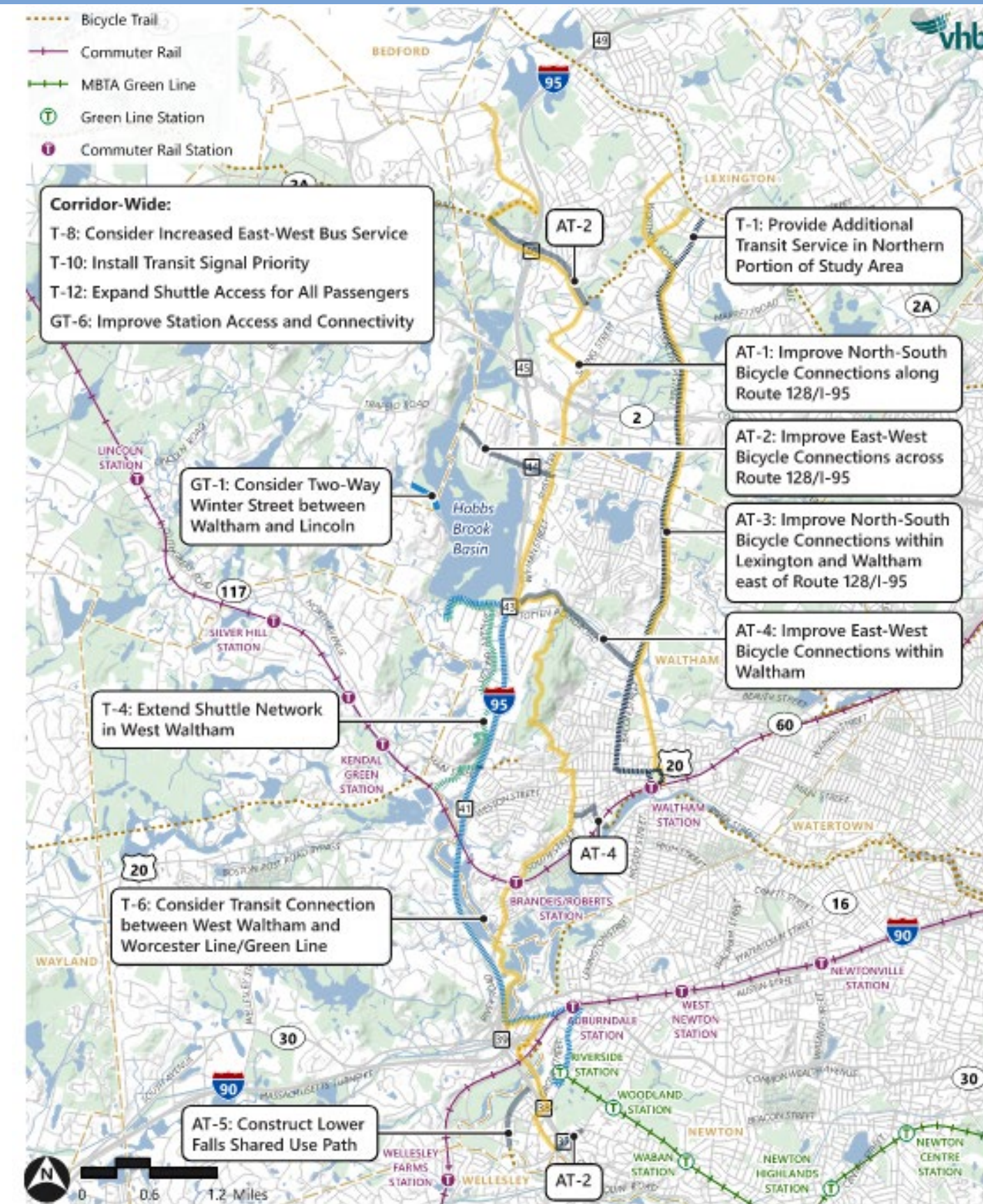


Source: Public Informational Meeting #2 Poll Results

Expand Transportation Choice (2 of 2)

Expanding and diversifying multimodal options will help the corridor realize its full potential as an economic engine for the region and, as importantly, serve to protect near-by neighborhoods from unintended traffic impacts from this growth

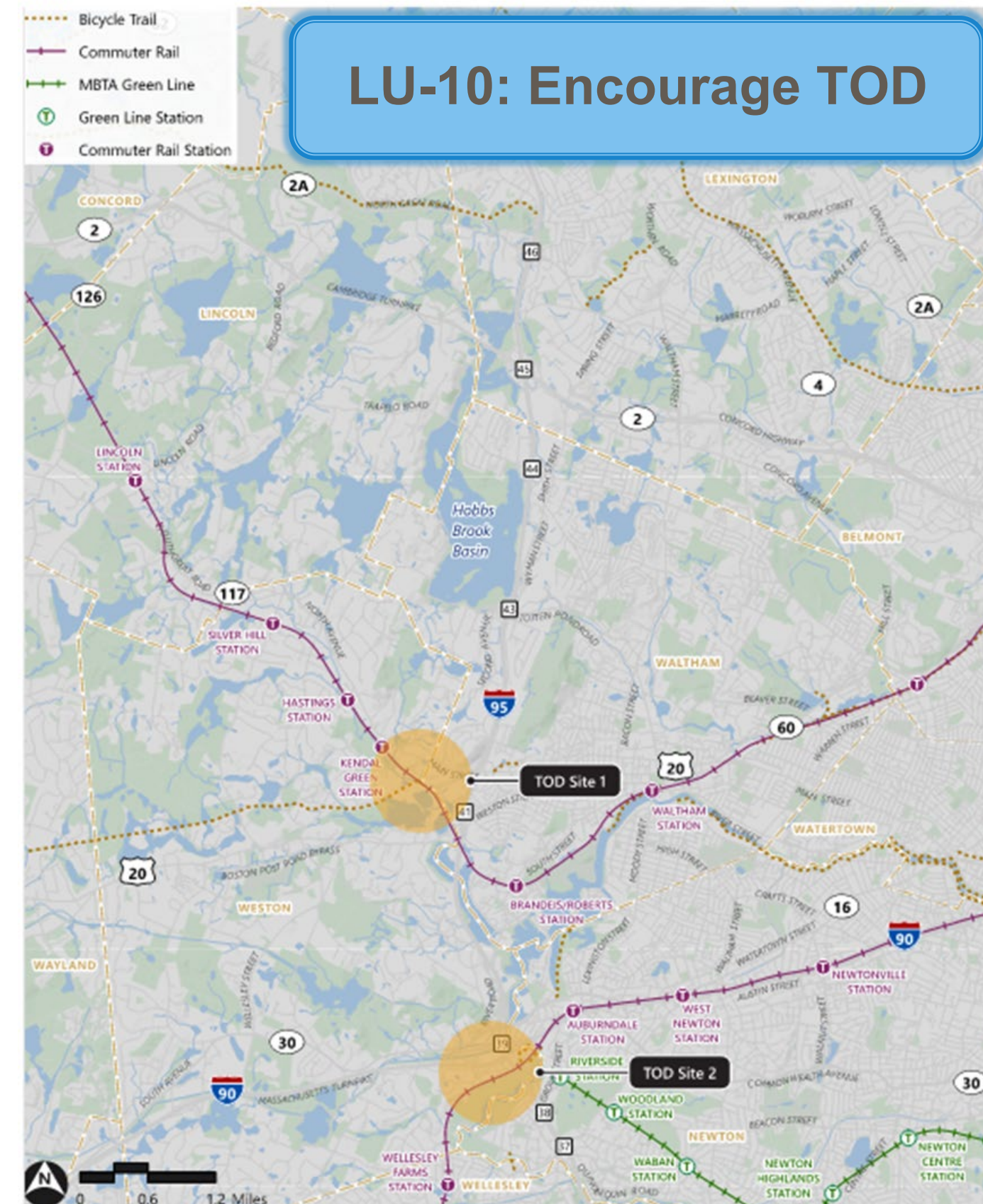
- GT-6: Improve Station Access and Connectivity
- T-4: Extend Shuttle Network in West Waltham
- AT-2: Improve East-West Bicycle Connections across Route 128/I-95
- AT-3: Improve North-South Bicycle Connections within Lexington and Waltham east of Route 128/I-95
- AT-1: Improve North-South Bicycle Connections along Route 128/I-95
- T-10: Install Transit Signal Priority
- GT-1: Consider Two-Way Winter Street between Waltham and Lincoln



Align Policies with Mobility Goals

The connection between land use and transportation demands has been highlighted throughout this study. Changes to existing policies to better align with larger mobility goals and infrastructure investments compliment other alternatives.

- LU-10: Encourage TOD
- LU-9: Encourage Mixed-Use Development
- LU-8: Encourage Workforce and Affordable Housing
- LU-3: Remove or Revise Parking Minimums
- LU-6: Improve Public Gathering Spaces
- LU-7: Improve Cambridge Reservoir Access
- LU-5: Improve Open Space Network
- GT-7: Develop Regional TDM Plan
- LU-2: Implement Resident and Small Business Protection
- LU-1: Conduct Market Analysis





Plan for the Future

How we live, work, and play is rapidly transforming. Future-focused alternatives for the Study Area seek to embrace current and leverage emerging technologies, support renewable energy, and address sustainability and resiliency challenges.

- V-29: Consider Transportation Systems Management and Operations (TSMO) Strategies
- V-28: Consider Connected/ Autonomous Vehicle Technologies
- E-2: Reduce Amount of Impervious Area and Increase Vegetative Cover
- E-3: Provide Flood Storage and Stormwater Treatment Areas
- GT-8: Install Electric Vehicle Infrastructure - Public
- E-1: Improve Hobbs Brook Reservoir Water Quality
- E-4: Limit Development within Flood-Prone Areas
- LU-4: Implement Solar Energy Program Expansion
- GT-9: Install Electric Vehicle Infrastructure - Private

V-29: Consider TSMO Strategies

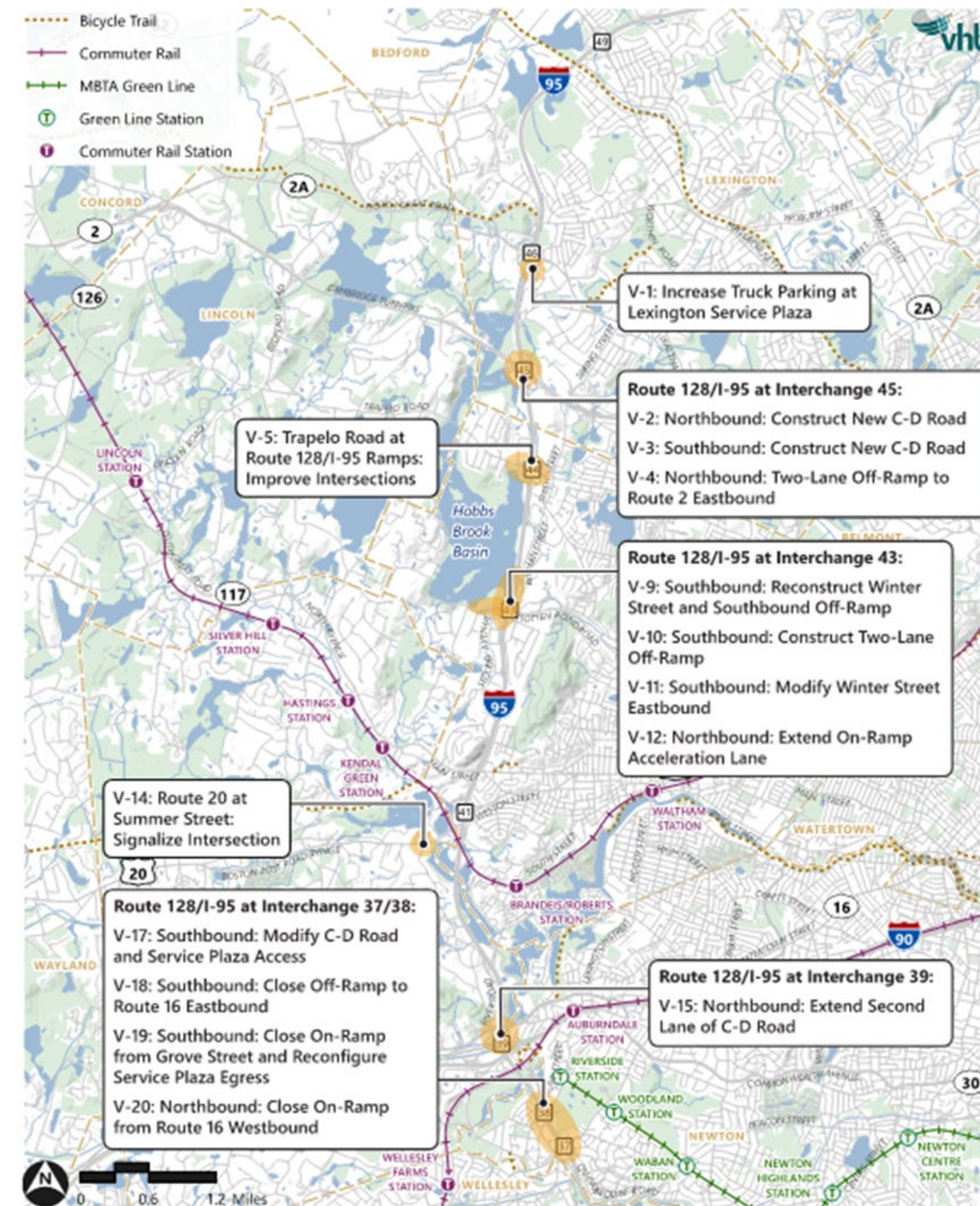
- MassDOT is currently advancing efforts around TSMO to mitigate congestion.
- Opportunity to consider deploying TSMO strategies on the Route 128/I-95 corridor, potentially as a pilot.
- Prepares to leverage technology to support transportation needs.



Address Congestion & Improve Safety (1 of 2)

While we can't build our way out of vehicular congestion, we acknowledge the need to support vehicular traffic within and through the study area. Physical infrastructure investments focus on addressing congestion, reliability, and safety issues.

- V-5: Trapelo Road at Route 128/I-95 Ramps: Improve Intersection
- V-20: Route 128/I-95 Northbound Interchange 37: Close On-Ramp from Route 16 Westbound
- V-19: Route 128/I-95 SB Interchange 37B/38: Close On-Ramp from Grove Street and Reconfigure Service Plaza Egress
- V-3: Route 128/I-95 Southbound at Interchange 45: Construct New C-D Road
- V-17: Route 128/I-95 Southbound Interchange 37/38: Modify C-D Road and Service Plaza Access
- V-10: Route 128/I-95 Southbound Interchange 43: Construct Two Lane Off-Ramp
- V-18: Route 128/I-95 Southbound Interchange 37/38: Close Off-Ramp to Route 16 Eastbound

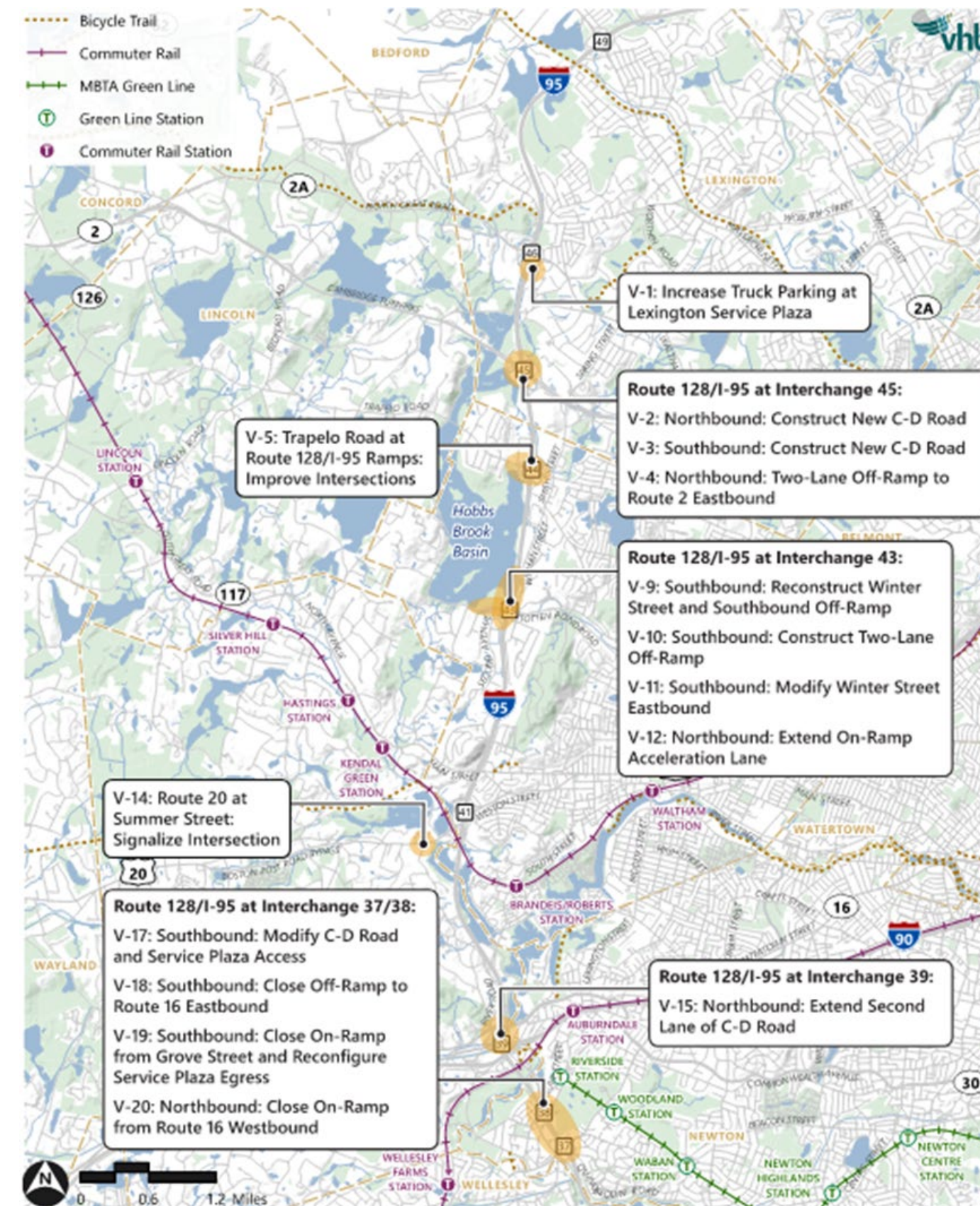




Address Congestion & Improve Safety (2 of 2)

While we can't build our way out of vehicular congestion, we acknowledge the need to support vehicular traffic within and through the study area. Physical infrastructure investments focus on addressing congestion, reliability, and safety issues.

- V-14: Route 20 at Summer Street: Signalize Intersection
- V-15: Route 128/I-95 Northbound Interchange 39: Extend Second Lane of C-D Road
- V-1: Increase Truck Parking at Lexington Service Plaza
- V-4: Route 128/I-95 Northbound Interchange 45: Two-Lane Off-Ramp to Route 2 Eastbound
- V-12: Route 128/I-95 Northbound Interchange 43: Extend On-Ramp Acceleration Lane
- V-9: Route 128/I-95 Southbound Interchange 43: Reconstruct Winter Street and Southbound Off-Ramp
- V-2: Route 128/I-95 Northbound between Interchanges 44 and 46: Construct New C-D Road
- V-11: Route 128/I-95 Southbound Interchange 43: Modify Winter Street Eastbound





**Draft
Recommendations**

Draft Recommendations

- Draft recommendations for each alternative are based on the analyses to date
 - Advance (all or in part)
 - Monitor
 - Discard
- Discussions with stakeholders refined recommendations
- Public input will further refine
- Study Team will develop an Implementation Plan

Table 6-1 Recommended Action Plan – Commitment Matrix and Implementation Timeframe

Alternative	Construction Cost ¹	Possible Funding Source(s)	Facilitating Organizations					Implementation Timeframe (Years)										Next Steps					
			MassDOT	MBTA	DCR	Town of Watertown	EEA	Short-Term					Medium-Term					Long-Term	Next Steps	Responsible Party	Notes		
								1	2	3	4	5	6	7	8	9	10	10+					
1. Bicycle Lanes east of School Street	\$75,000 to \$2,100,000 ²	• State Complete Streets • State Chapter 90 • Private developer			X	X															Advance to final design. Seek funding source(s).	Town	No environmental review/permitting anticipated. Preferable to coordinate with athenahealth bike lanes.
3. Cross Connectivity between the Greenway and Charles River	Variable	• Paths being advanced by others • Town funds for shared lane markings			X	X															Support path development by others. Determine support for Complete Streets elements on neighborhood streets.	Town	No environmental review/permitting anticipated. May be required if formal crossings of Charles River Road are developed
6. Soldier's Field Road Gateway Improvements	\$1,500,000 to \$2,500,000	• Town funds • Private developer • State Transportation Improvement Program	X		X	X	X								Permitting and Design	Construction					Advance design. Stakeholder outreach. Research permitting requirements.	Town	ROW acquisition anticipated. Will require additional public and stakeholder outreach.
7. Watertown Square Gateway Improvements	\$950,000 to \$1,500,000 ³	• Town funds • Private developer • State Transportation Improvement Program	X	X	X	X	X							Permitting and Design	Construction						Advance design. Engage DCR. Study Charles River Road cut-through traffic impacts.	Town	ROW acquisition anticipated. Will require additional public and stakeholder outreach.
10. North Beacon Street Express Bus	Variable	• Area stakeholders • MBTA • TMA		X		X										Pilot Program	Full Service				Establish pilot program.	Town/MBTA	Potential ROW acquisition for transit stops.
11. Transit Signal Priority	\$250,000 + Upgrades ⁴	• Town funds • Private Developer		X		X															Advance system design. Coordinate bus stop modifications. Identify signal upgrades.	Town/MBTA	ROW acquisition or easements anticipated for relocation of bus stops.
14. Transit Shelters	\$30,000/ location	• Town funds • Private Developer • MBTA		X		X															Determine installation & maintenance responsibility. Initiate easement process.	Town/MBTA	All locations require small easements from property owners (ROW acquisition).
15. Transit Service Improvements to Existing Routes	\$3,600,000 ⁵	• MBTA		X		X								With Existing Fleet	With Expanded Fleet						Further analysis and refine as part of the MBTA's bus service planning process and bus improvement plan initiative.	MBTA	Alternative 15 cost estimates are intended solely for purposes of comparing alternatives within the context of this study and are not for budgeting purposes. Capital and operating costs will depend on the allocation of MBTA resources across all system routes based on systemwide priorities.
17. Adaptive Signal Control	\$250,000 to \$500,000 ⁶	• Town funds • Private Developer		X		X								Planning/ Implementation	Refinement/Upgrades	Maintenance					Advance system design. Identify signal upgrades. Further evaluate Watertown Square operations.	Town	

MassDOT - Massachusetts Department of Transportation, MBTA - Massachusetts Bay Transportation Authority, DCR - Department of Conservation and Recreation, EEA - Executive Office of Energy and Environmental Affairs
 Information on state funding sources can be found at the following locations: Complete Streets (mass.gov/massdot/completestreets), Chapter 90 (mass.gov/massdot/chapter90), State Transportation Improvement Program (stip.mass.gov)
 1 Construction cost estimates in 2017 dollars. Estimates do not include survey, design fees, right-of-way (ROW) acquisition, permitting, drainage improvements, or utility modifications (if necessary).
 2 Lower cost estimate includes removal of paint markings and restriping only. Higher cost estimate includes cold pavement/overlays in addition to restriping.
 3 Costs may be increased by signal system upgrades/modifications, hardscape/landscape design, pedestrian lighting, site furnishings.
 4 New traffic signal cabinet assembly may be required at some locations. The cost of a new assembly is approximately \$40,000 per location. If the intersection is recommended for both transit signal priority and adaptive signal control, this cost is incurred only once.
 5 Estimate includes capital cost only for additional vehicles anticipated for medium-term recommendations, and excludes capital costs associated with expanded fleet storage and maintenance facilities. Incremental operating costs are estimated at \$200,000 and \$800,000 per year for short-term and medium-term recommendations, respectively.
 6 Ultimate cost will be dependent on type of communication and server choice.

Example Implementation Plan
 Source: Arsenal Street Corridor Study

Implementation Plan

- Short Term – 0 to 5 years
 - Minimal to no permitting required
 - Relatively low cost and uncomplicated design
- Medium Term – 5 to 10 years
 - May require some permitting
 - Higher cost and more intensive design
- Long Term – over 10 years
 - Moderate to extensive permitting
 - High cost and substantial design

Implementation Plan Elements

- Order of Magnitude Cost Estimates
- Facilitating Organizations
- Timeframe



Breakout Rooms

Breakout Rooms – Purpose & Setup

- Objectives:
 - Present details of study alternatives
 - Collect feedback to inform recommendations
- Rooms based on the five alternative themes
- Study Team will present alternatives in each theme and take notes on the discussion



Room #1: Improve Regional Mobility



Room #2: Expand Transportation Choice



Room #3: Align Policies with Mobility Goals



& Plan for the Future



Room #4: Address Congestion & Improve Safety

Breakout Rooms - Logistics

- Participants will be **sent to a Breakout Room** based on registration poll question.
- We will be in breakout rooms for **30-40 minutes**.
- At any point, you may **switch to another breakout room** by clicking “Leave Breakout Room” but be careful to only leave the room, not the meeting.
- We will convene everyone back in the main room.



Room #1: Improve Regional Mobility



Room #2: Expand Transportation Choice



Room #3: Align Policies with Mobility Goals



& Plan for the Future



Room #4: Address Congestion & Improve Safety

Breakout Rooms – Report Back



Room #1: Improve Regional Mobility



Room #2: Expand Transportation Choice



Room #3: Align Policies with Mobility Goals

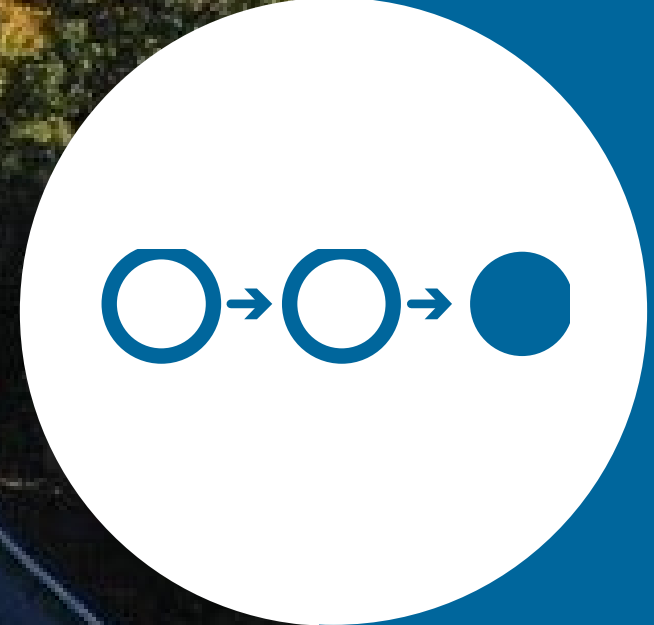


& Plan for the Future



Room #4: Address Congestion & Improve Safety

What did we hear in the Breakout Rooms?



Next Steps

Our next steps



Finalize
Recommendations
(Winter 2023)

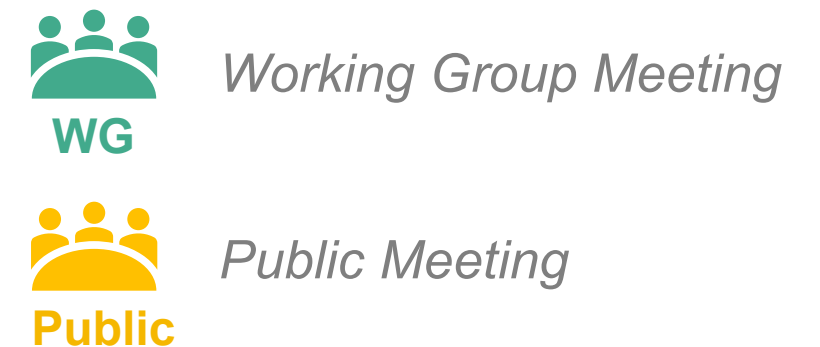


Working Group
Meeting #6
Final
Recommendations
(Spring 2023)



Public Comment on
Draft Report
(Spring 2023)

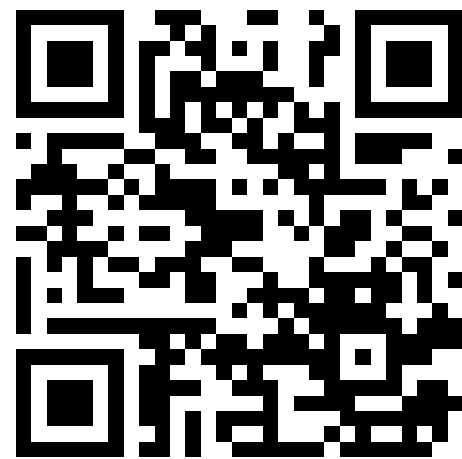
Schedule



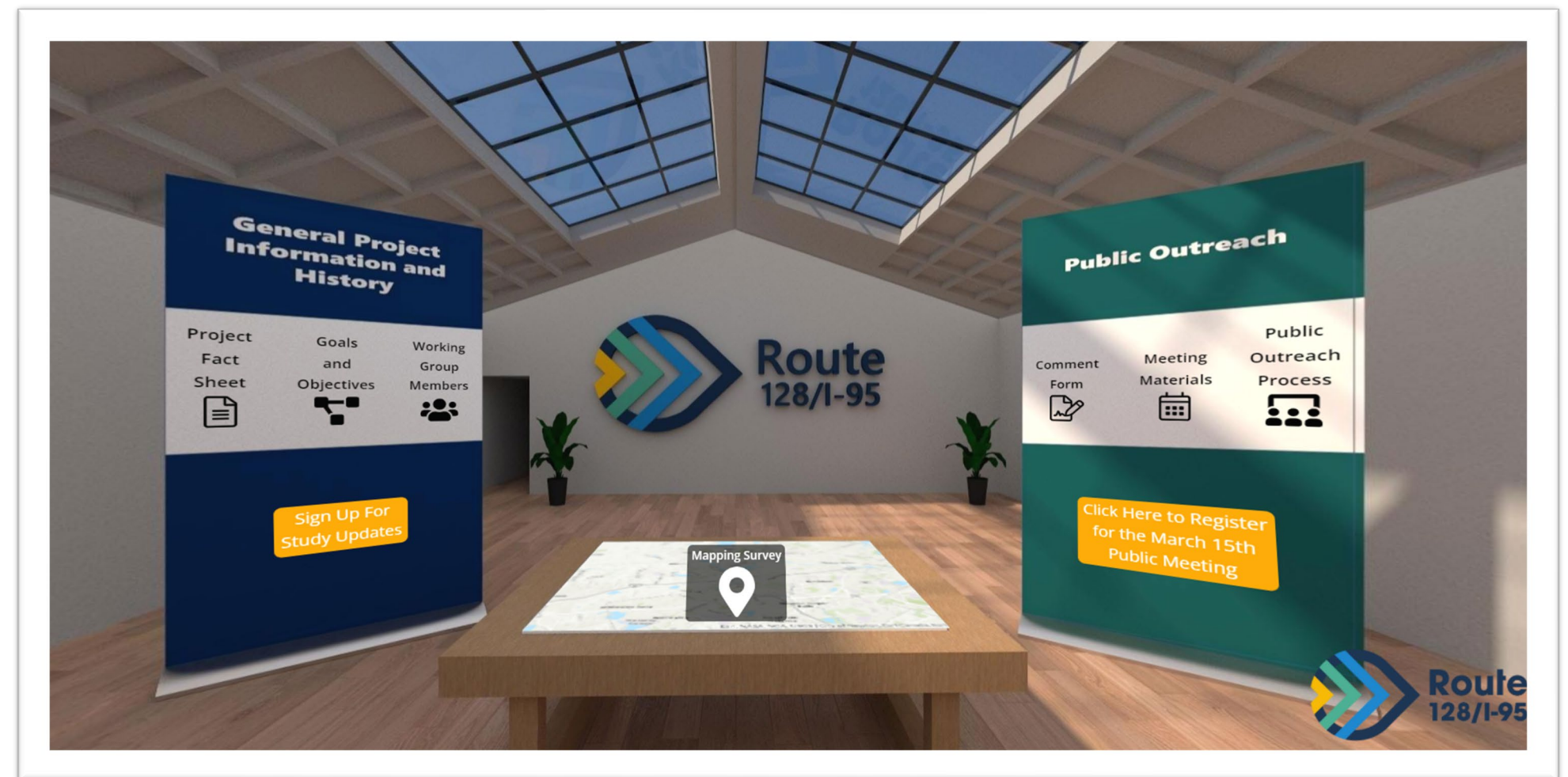
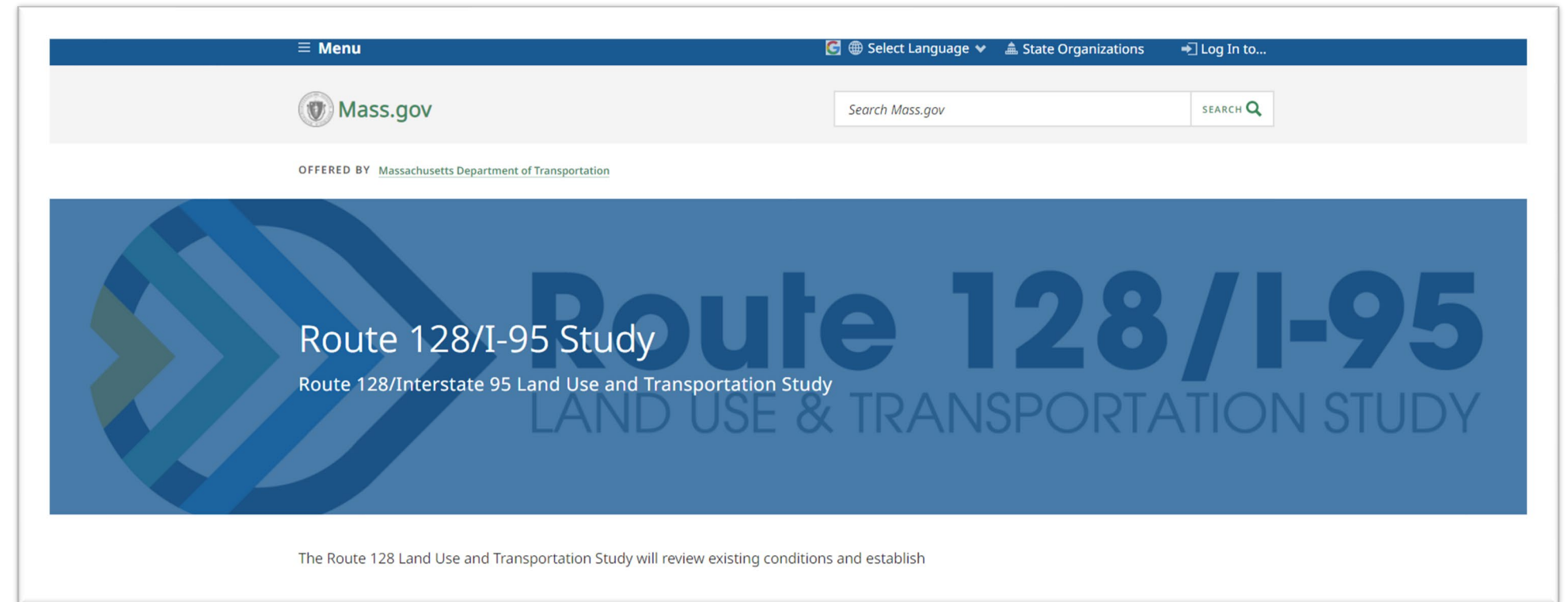
Online Engagement

- MassDOT Project Website
<https://www.mass.gov/route-128i-95-study>
 - Sign up for Study updates
 - General project information

- Virtual Room for online engagement
 - Linked from MassDOT Project Website
 - Comment form and mapping survey
 - Project information, documents, and materials



Virtual Room QR Code





Public Comment

Share Your Questions and Comments



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



- “Raise your hand” to be unmuted for verbal questions; Alt+Y



- 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 4-digits of your phone number and unmute your audio when it is your turn.



- Please take a moment to take the survey on your experience after this meeting

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



Route 128/I-95
LAND USE & TRANSPORTATION STUDY

Thank You

Project Website

<https://www.mass.gov/route-128i-95-study>

Liz Williams – Project Manager

liz.williams@state.ma.us

