SL – Extension

Alternatives Analysis

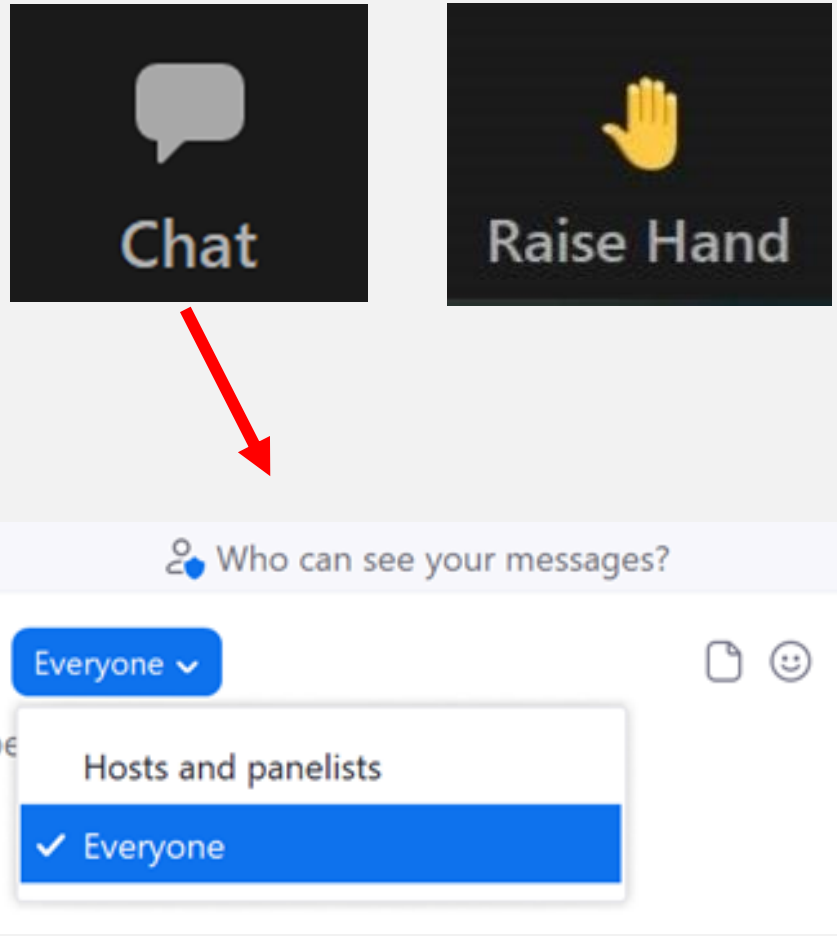
External Working Group Meeting

Tier 2 Evaluation Results

November 29, 2022

Working Group Participation

- Press the **Raise Hand** button. Please wait for the moderator to recognize you before unmuting yourself and speaking.
- During the discussion of alignments, please share typed feedback in the **Chat** feature. Be sure to select ***To: Everyone***



Note: *if you are not using the latest software of Zoom, you may have to click the* ***Participants*** *button to access the Raise Hand feature.*

AGENDA

01| Welcome and project updates

02| Alternatives analysis results

03| Public outreach – what we've heard and next steps

Meeting Purpose

Today we review evaluation results for our seven shortlisted alternatives.

We also want to discuss how to best share results with the community over the coming months.

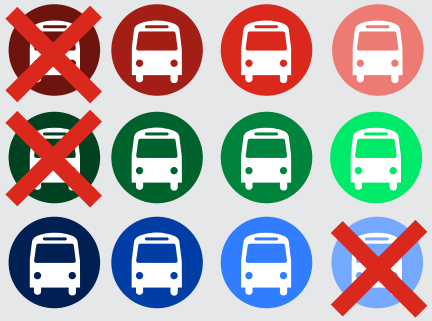
Project Purpose

The **purpose** of the Silver Line Extension Alternatives Analysis is to **assess the feasibility, utility, and cost** of various alignment and service frequency options of an extension of the Silver Line, providing **high quality transit** from Chelsea through Everett and on to Somerville, Cambridge and/or Boston.

Project Evaluation Process

We are here

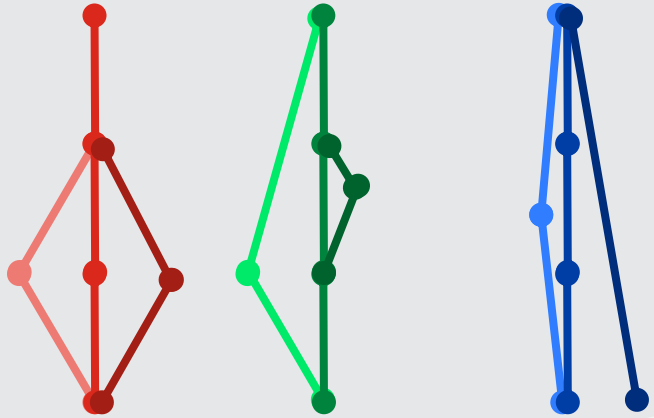
Screening



Review a wide host of ideas and remove all those that don't meet the project's purpose

Tier 1 Evaluation

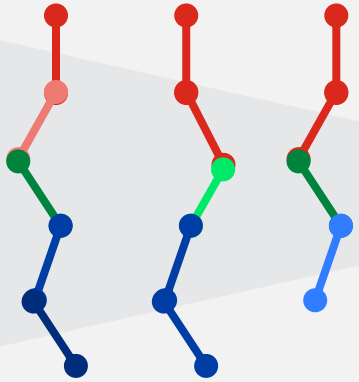
Section A | Section B | Section C



Test different alignments within each section

Tier 2 Evaluation

Entire Route



Test best alignments as complete route

LPA

NOTE: Alignments shown above are illustrative, and not intended to represent any specific alignments!

Project Updates – Technical Process

We last met in the Spring to present our Tier 1 evaluation results and to present a draft set of Tier 2 alternatives. Since then, we have:

- ✓ Participated in a meeting hosted by MAPC to discuss analyzing an alternative that would offer a one-seat ride between Chelsea and Kendall
- ✓ Developed this alternative (Alternative 7)
- ✓ Defined all shortlisted alternatives for cost estimating and modeling
- ✓ Coordinated with CTPS on ridership modeling, air quality, and environmental justice evaluation
- ✓ Evaluated all shortlisted alternatives against our goals and objectives

Project Updates – Outreach Process

Over this past summer and fall we have conducted outreach to stakeholders and communities in our project area:

- ✓ Led 5 outreach events in Everett, Chelsea, and Somerville
  - ✓ Everett Harvest Festival
  - ✓ Bellingham Square
  - ✓ Sullivan Square
  - ✓ Malden Center
  - ✓ Chelsea Station
- ✓ Developed and opened a community online feedback form (mbta.com/slxfeedback) and a project fact sheet (available in 3 languages)

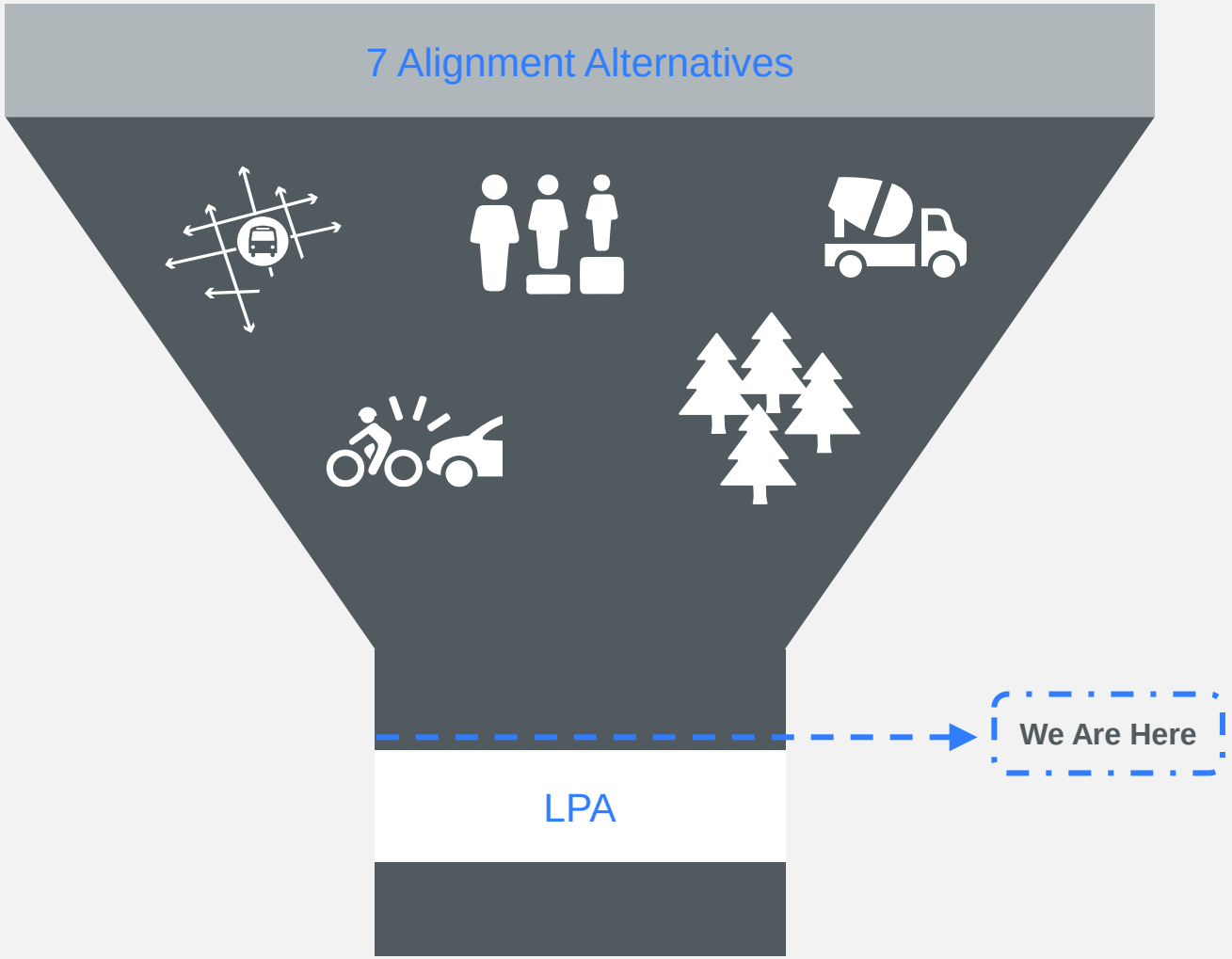
Tier 2 Evaluation

Goal Refresher and our Shortlisted Alternatives

What is the Tier 2 Alternatives Analysis?

The Tier 2 analysis assessed 7 complete alignment and service concepts. It involves a detailed review of the alternatives against our **5 goal areas**.

We anticipate recommending a Locally Preferred Alternative (LPA) in Winter 2023.



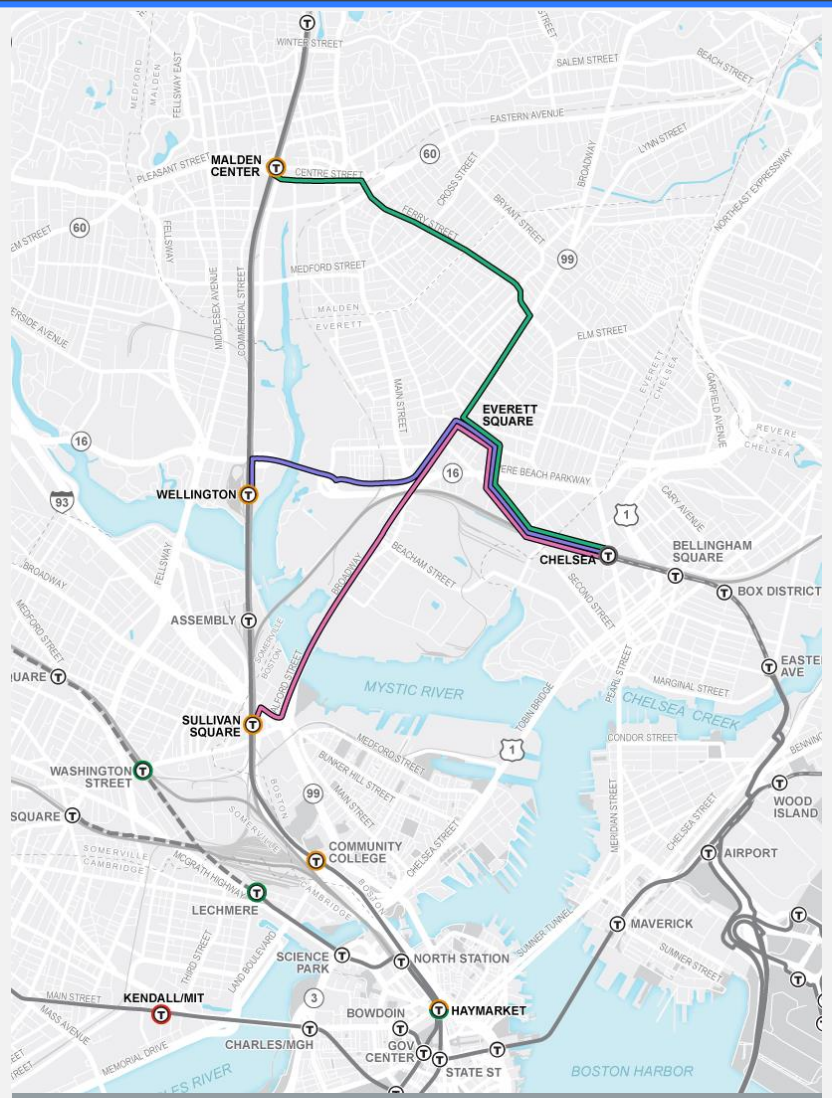
We Have Two Groupings of Alternatives

SL3 Extensions:

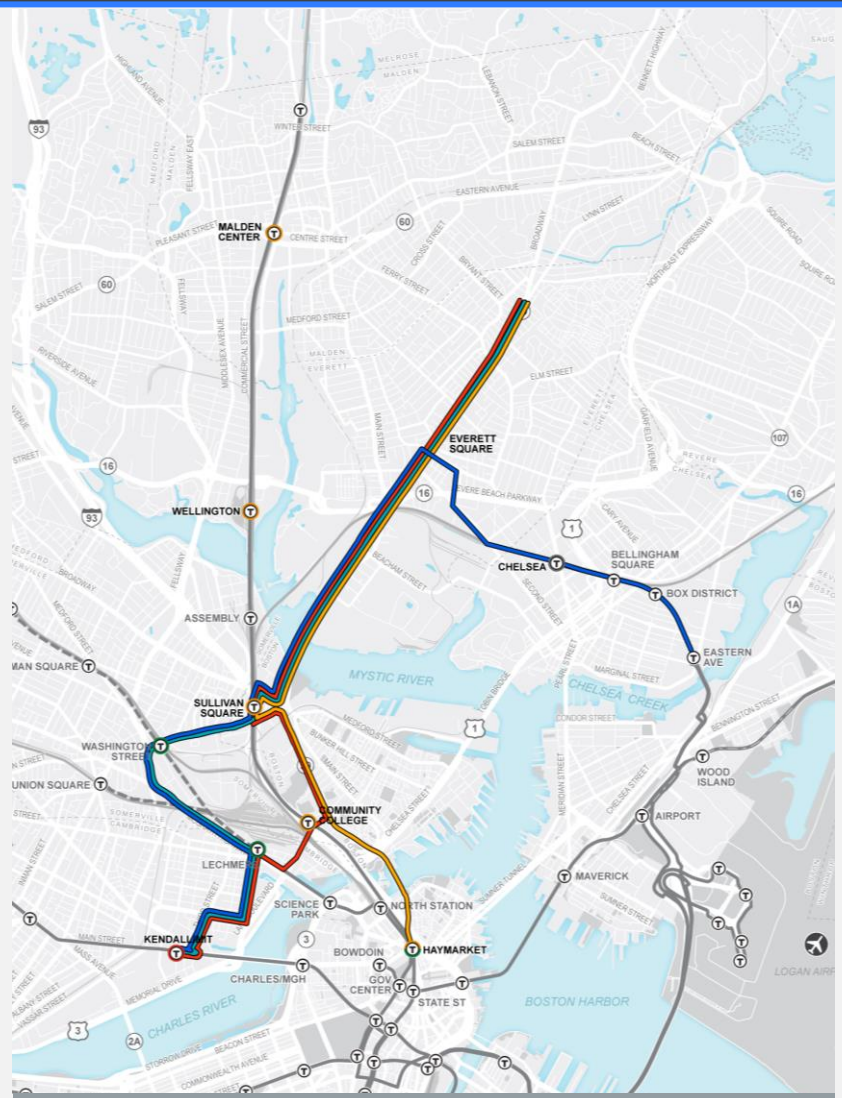
- **Alternative 1:** to Malden Center
- **Alternative 2:** to Wellington
- **Alternative 3:** to Sullivan

SL6 New Silver Line Service:

- **Alternative 4:** SL6 to Kendall *via* Sullivan and McGrath
- **Alternative 5:** SL6 to Kendall *via* Rutherford and Gilmore
- **Alternative 6:** SL6 to Downtown *via* Rutherford
- **Alternative 7**: SL6 to Kendall *from* Chelsea *via* Sullivan and McGrath

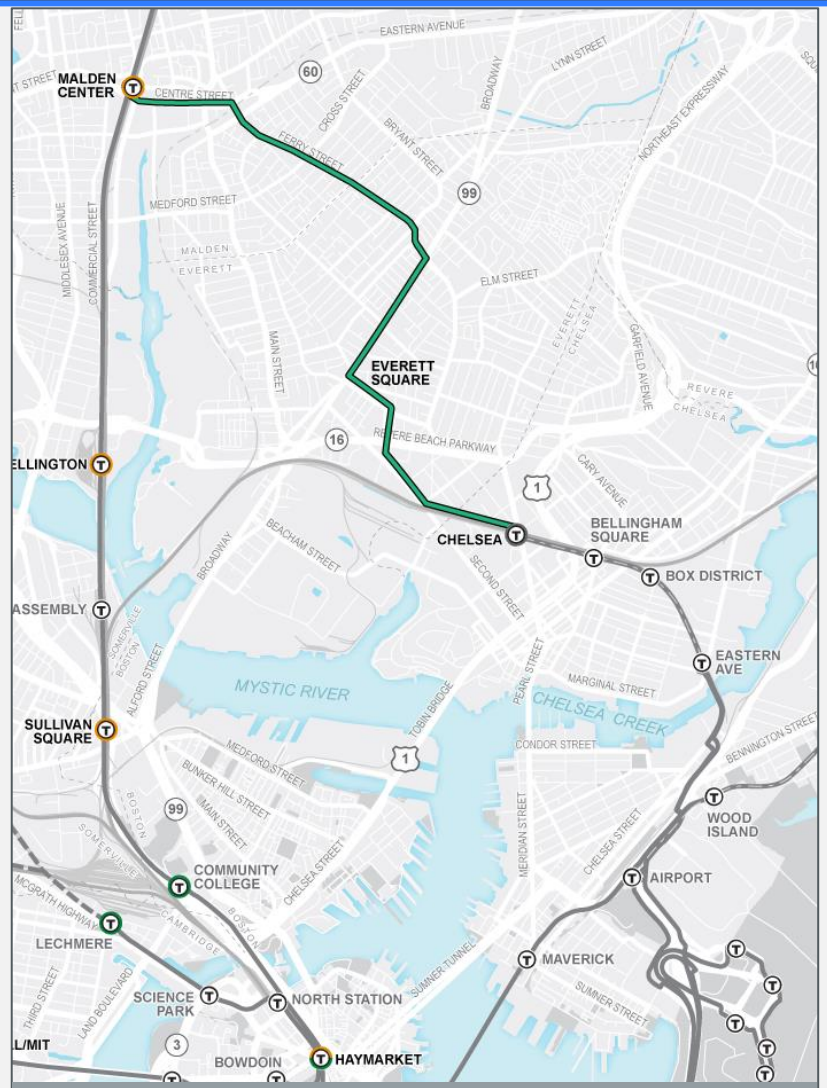


SL3 Extension Alternatives

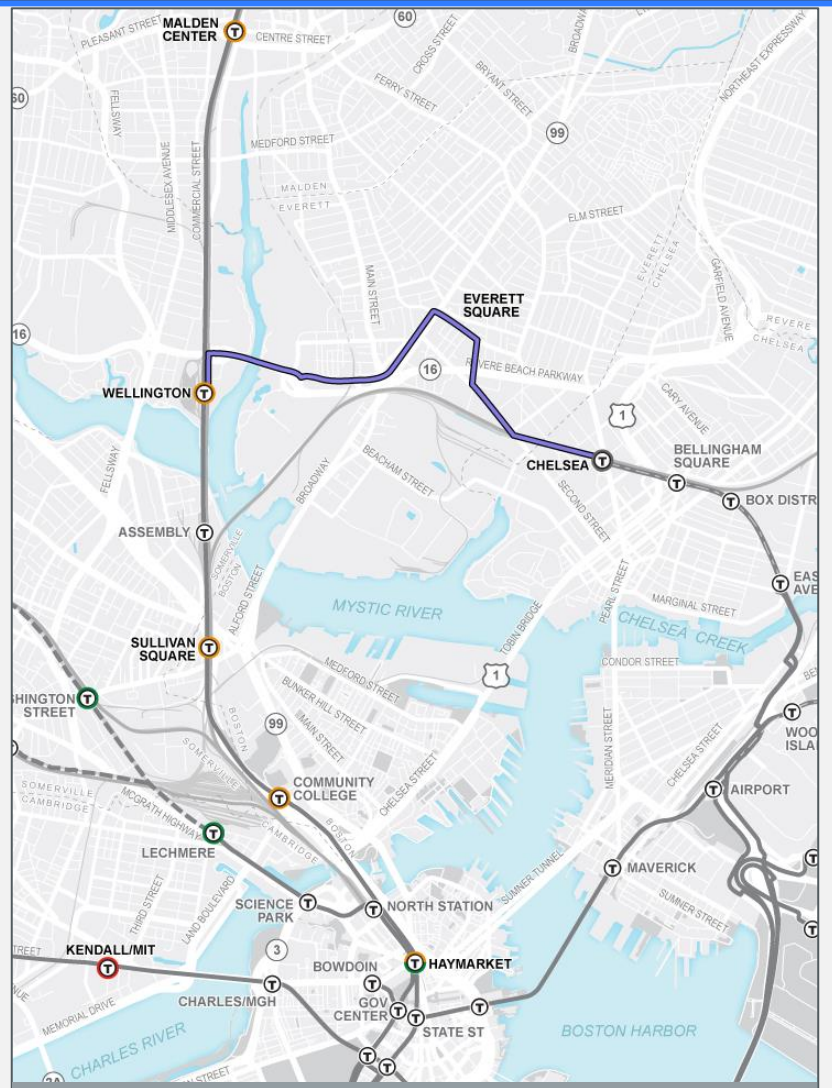


SL6 Alternatives

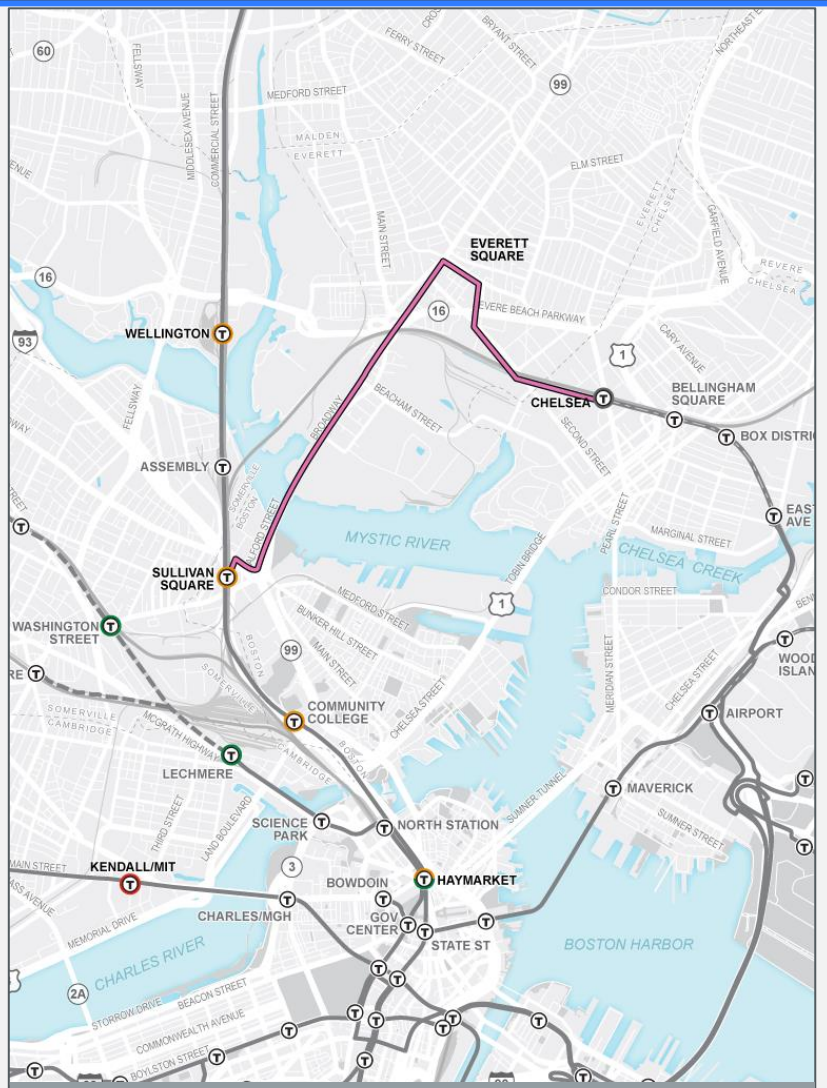
SL3 Alternatives Extend to the Orange Line



Alt. 1: SL3 to **Malden Center**

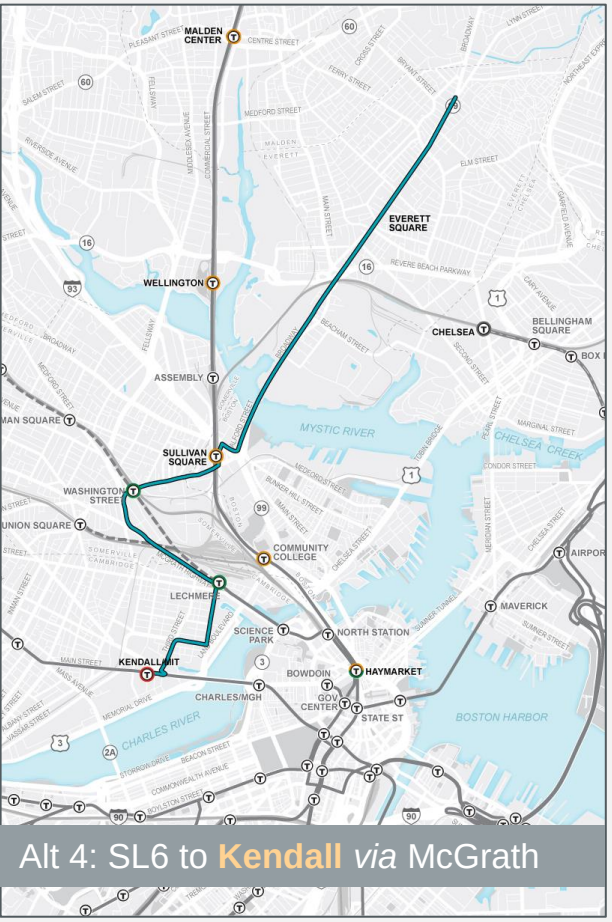


Alt. 2: SL3 to **Wellington**

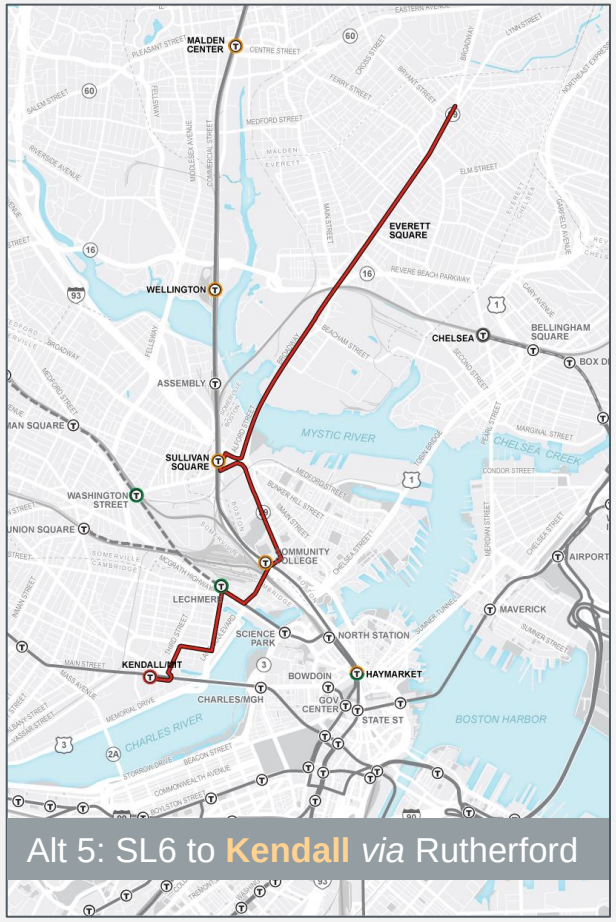


Alt. 3: SL3 to **Sullivan**

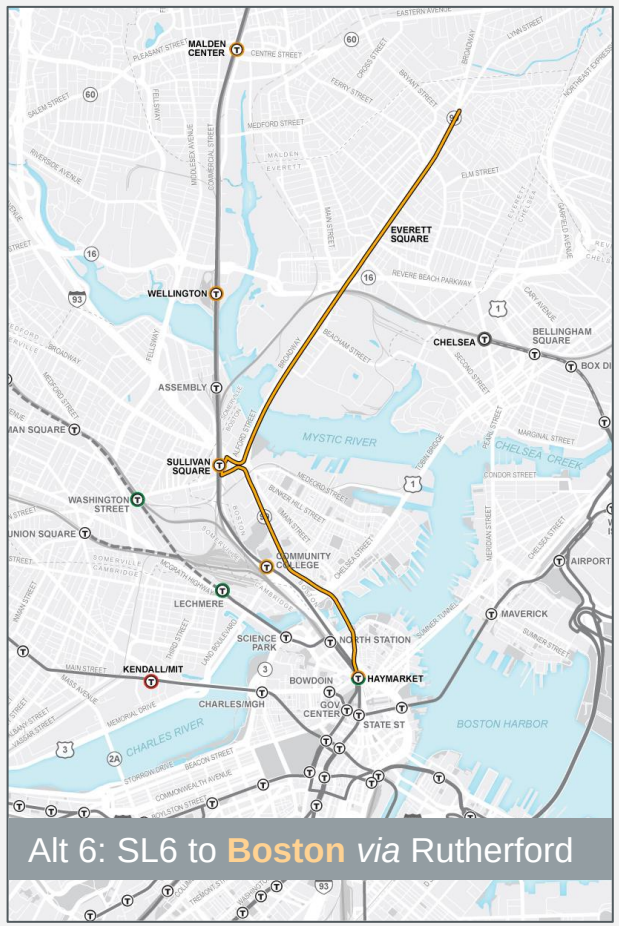
SL6 New Service Alternatives



Alt 4: SL6 to **Kendall** *via* McGrath

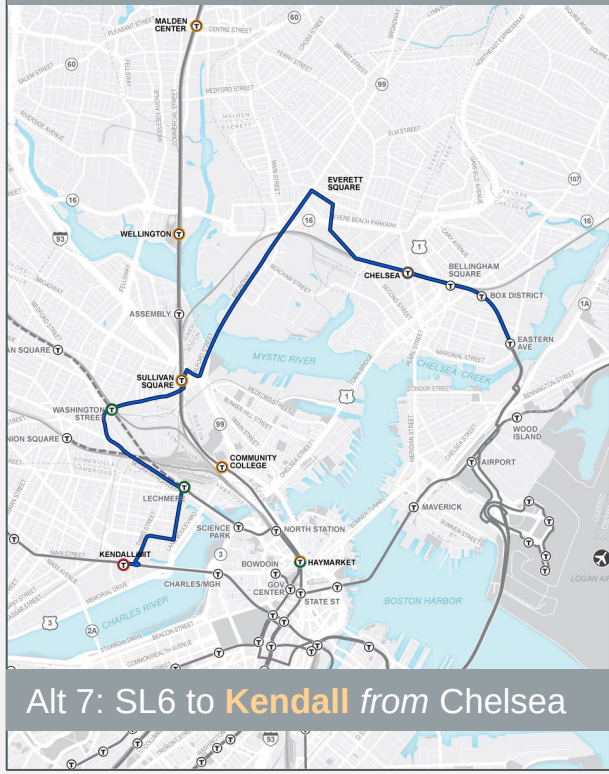


Alt 5: SL6 to **Kendall** *via* Rutherford



Alt 6: SL6 to **Boston** *via* Rutherford

This new alternative we added following our last EWG Meeting in the spring.



Alt 7: SL6 to **Kendall** *from* Chelsea

NOTE: SL6 Alternatives 4, 5, and 6 also assume an extension of SL3 to Everett Square. Alternative 7 includes this as part of its primary alignment, though it begins at Eastern Avenue in Chelsea to avoid the requirement for any Chelsea-originating trips to transfer at Chelsea station.

Our Goal Areas

The major themes that guide our work

Expand Mobility and Access

Advance Equity

Improve Safety

Support Climate Change Resilience and Sustainability

Advance Feasible and Implementable Solutions

massDOT Office of Transportation Planning

Tier 2 Metrics

Expand Mobility and Access

- Total daily ridership
- Access to jobs
- Comparison of transit to drive time
- Affordable housing access
- Potential for transit-oriented development

Advance Equity

- Total daily ridership for equity population
- Access to jobs for equity population
- Reduction in bus delay for routes
- Whether the alternative serves top equity travel flows

Improve Safety

- Connection to existing or planned pedestrian network
- Connection to existing or planned bicycle network

Support Climate Change Resilience and Sustainability

- Change in transit mode split
- Change in greenhouse gas emissions

Advance Feasible and Implementable Solutions

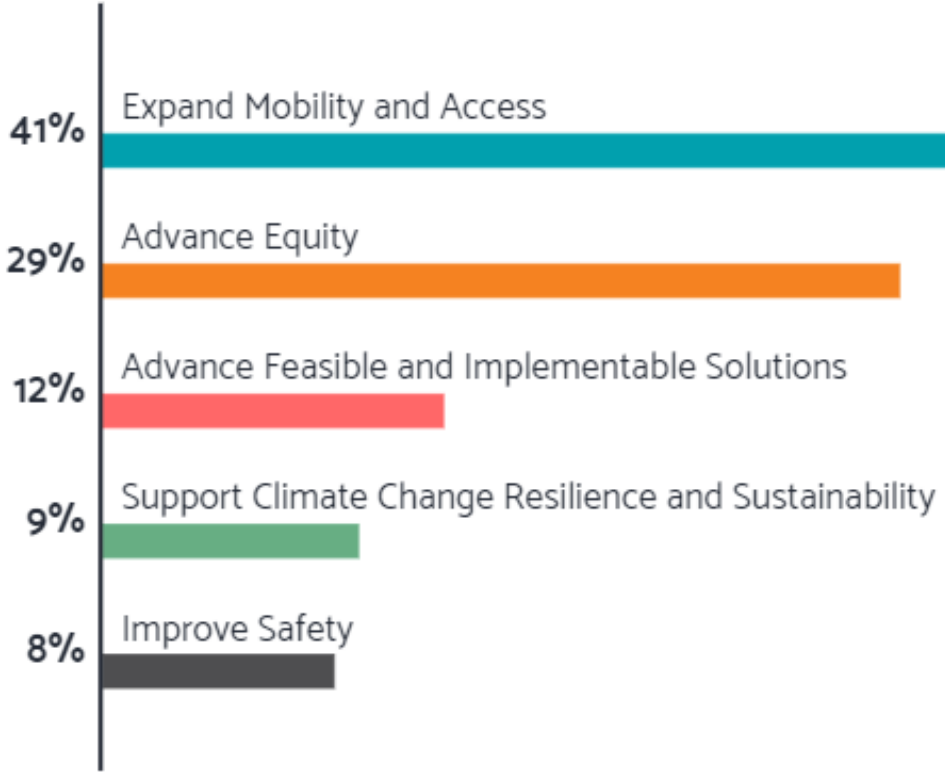
- Ability to phase over time
- Ability to include as part of other efforts upcoming or currently underway
- Extent of transit priority
- Cost effectiveness

Goal Prioritization

Should we weight some metrics higher than others?
If so, how should the metrics and goal areas be weighted?

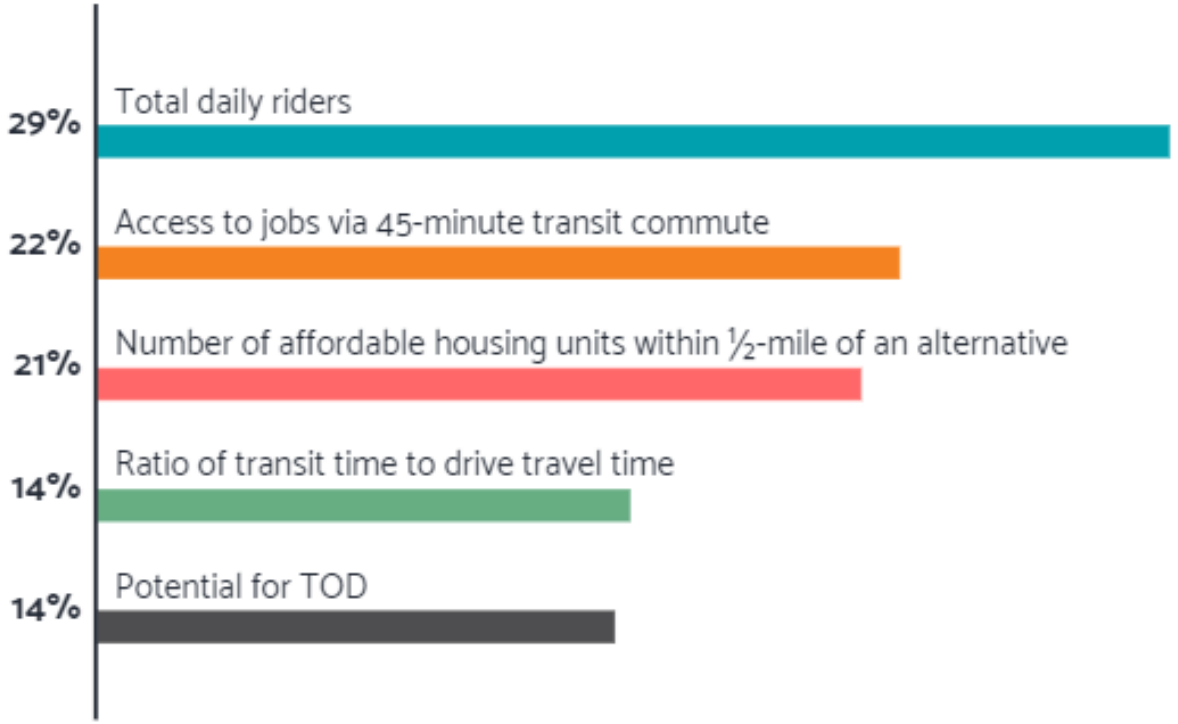
Goal Prioritization Results

How should we prioritize our Goal Areas?



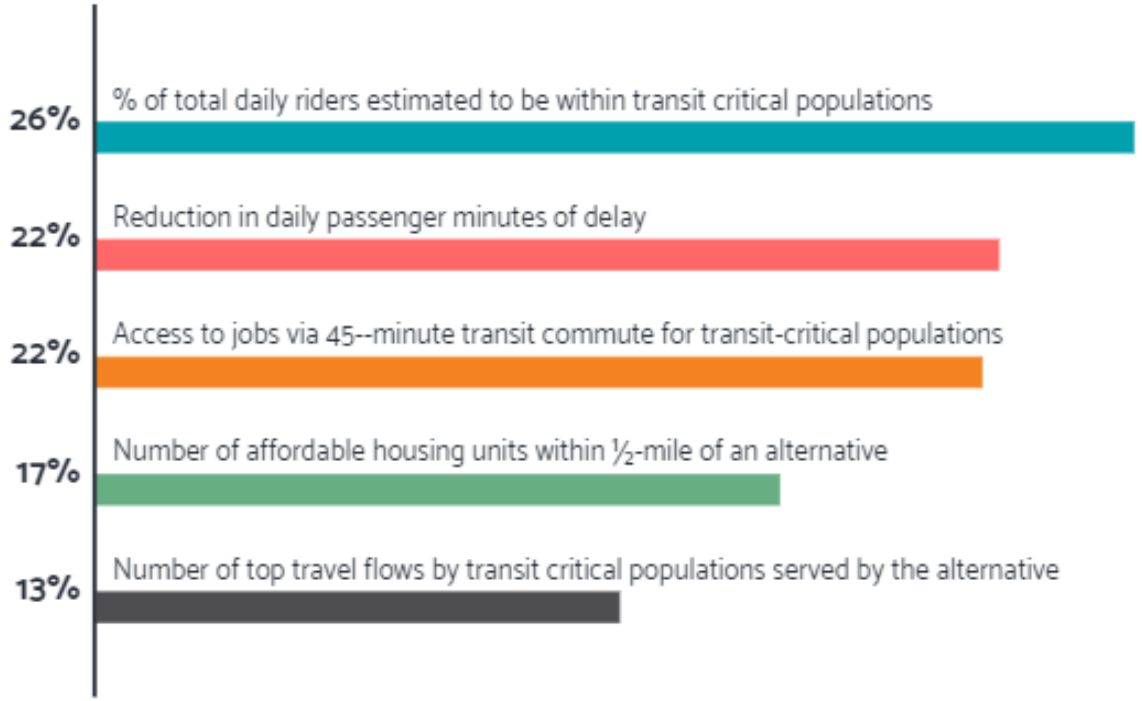
Goal Prioritization Results

How should we prioritize the following metrics?
Expand Mobility and Access



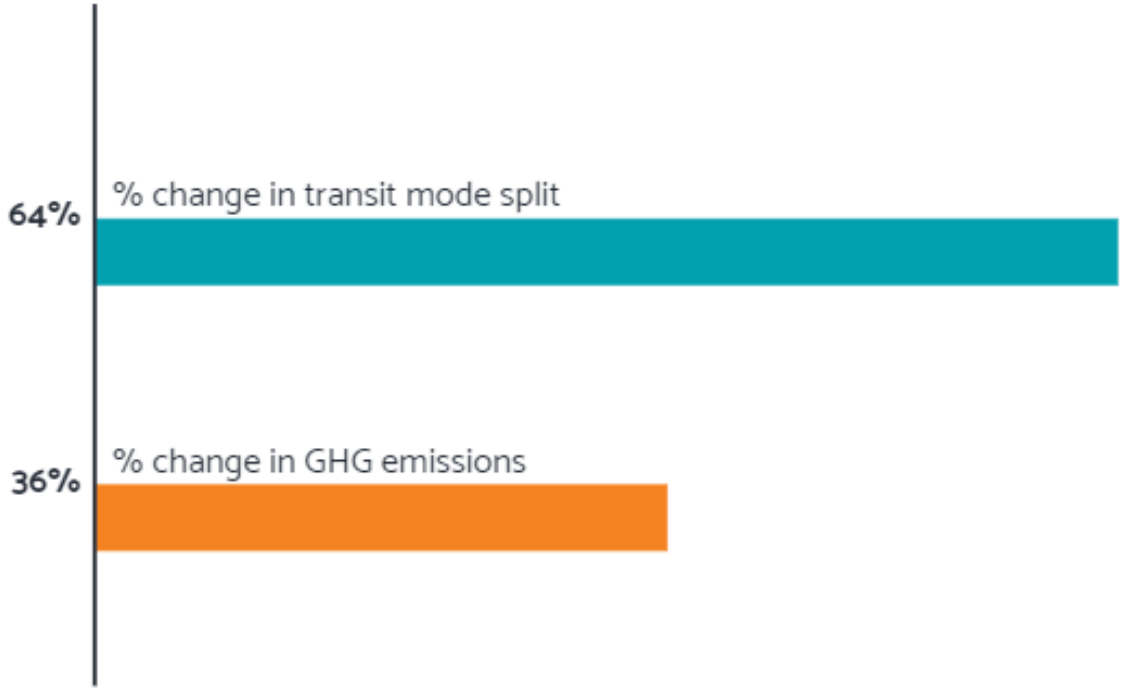
Goal Prioritization Results

How should we prioritize the following metrics? Advance Equity



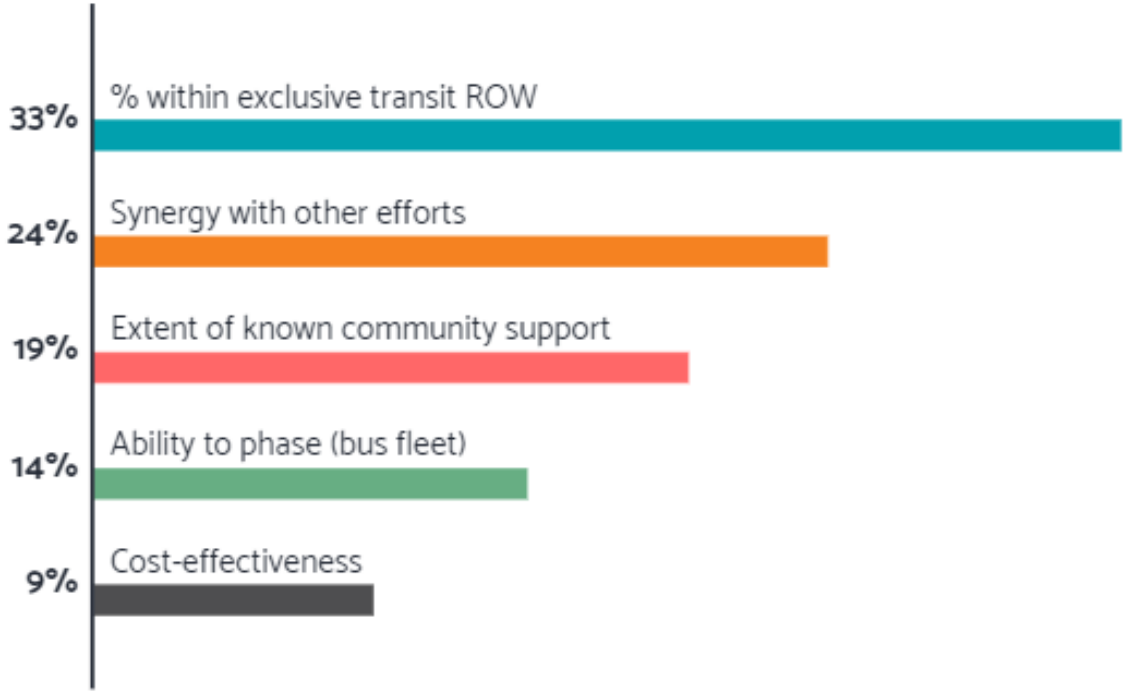
Goal Prioritization Results

How should we prioritize the following metrics? Climate Resilience and Sustainability



Goal Prioritization Results

How should we prioritize the following metrics? Feasible and Implementable Solutions



Tier 2 Metrics – Key Differentiators

Expand Mobility and Access

- **Total daily ridership**
- Access to jobs
- **Comparison of transit to drive time**
- Affordable housing access
- Potential for transit-oriented development

Advance Equity

- **Total daily ridership for equity population**
- Access to jobs for equity population
- **Reduction in bus delay for routes**
- Whether the alternative serves top equity travel flows

Improve Safety

- Connection to existing or planned pedestrian network
- Connection to existing or planned bicycle network

Support Climate Change Resilience and Sustainability

- Change in transit mode split
- Change in greenhouse gas emissions

Advance Feasible and Implementable Solutions

- **Ability to phase over time**
- Ability to include as part of other efforts upcoming or currently underway
- **Extent of transit priority**
- **Cost effectiveness**

Tier 2 Metrics – Metrics that Did NOT Differentiate

Expand Mobility and Access

- Total daily ridership
- **Access to jobs**
- Comparison of transit to drive time
- Affordable housing access
- Potential for transit-oriented development

Advance Equity

- Total daily ridership for equity population
- **Access to jobs for equity population**
- Reduction in bus delay for routes
- **Whether the alternative serves top equity travel flows**

Improve Safety

- **Connection to existing or planned pedestrian network**
- **Connection to existing or planned bicycle network**

Support Climate Change Resilience and Sustainability

- **Change in transit mode split**
- Change in greenhouse gas emissions

Advance Feasible and Implementable Solutions

- Ability to phase over time
- Ability to include as part of other efforts upcoming or currently underway
- Extent of transit priority
- Cost effectiveness

Tier 2 Evaluation

Assumptions

Evaluation Tools

Tool or Model	Metrics
CTPS Model	• Ridership • Environmental Justice • Greenhouse gas emissions • VMT • Mode split
Remix	• Access • Operating costs
Basis of Design Report	• Capital costs • Level of transit priority • Ability to phase
Other Spreadsheet Models	• Travel time estimates • Ratio of transit to drive time • Fleet planning
GIS Analysis	• Access to affordable housing • TOD potential

CTPS Model Assumptions

- The CTPS model was used for ridership, VMT changes, air quality and GHG emissions, and environmental justice analysis
- CTPS is scoped for 8 model runs in total
  - 7 model runs for Tier 2 Evaluation
  - 1 additional model run for the LPA(s)
- Key model assumptions
  - 2040 analysis year
  - Increased land use projections beyond what was in the CTPS 2040 model to account for a rapidly growing study area (see Underlying Assumptions slide)
  - Existing bus network
  - For most of the SL6 Alternatives, assumes SL3 will be extended to Everett Square

Underlying Assumptions

- We began with the land use assumptions from the Lower Mystic Working Group Study
- We added those projects in the development pipeline within the study area
  - Projects that have been completed, are under construction, have been approved or where the approval process has been substantially completed
  - Land use modeling is not being limited to regional control caps
- This resulted in a substantial increase in jobs and population beyond what was already in the CTPS 2040 model

	Employment	Household	Population
CTPS 2040	288,800	141,410	300,965
SLXAA 2040 Model	341,040	151,310	324,030

Tier 2 Evaluation

Analysis Results

Key Findings: All SL3 Extension Alternatives

- All alternatives increase Silver Line ridership by a lot (between a 90% and 150% increase compared to the future no build)
- All alternatives increase the extent of bus transit priority, especially between Chelsea station and Everett Square
- The SL3 can be extended to the Orange Line with its existing fleet
- The capital investment that goes into Silver Line Extension is expected to improve safety along the alignment and at stations
- Each alternative provides access to a tremendous amount of jobs in the peak hour and at midday
- Transit mode share did not vary greatly across alternatives

Summary of Key Findings – SL3 Extensions

			SL3		
			MALDEN CENTER	WELLINGTON	SULLIVAN
GOAL	OBJECTIVE	METRIC	Alternative 1	Alternative 2	Alternative 3
Mobility + Access					
Expand Mobility and Access	Optimize potential ridership	Total daily riders	SL3 Build: 30,900 +/- No-Build: +18,500	SL3 Build: 23,900 +/- No-Build: +11,400	SL3 Build: 27,800 +/- No-Build: +15,400
	Connect residents directly with jobs, services, and other daily activities	Number of jobs accessible via 45-minute transit commute (Average by stop during AM peak, midday)	AMP (312,000) - MID (300,000)	AMP (352,000) - MID (338,000)	AMP (347,000) - MID (344,000)
	Provide transit travel times that takes a similar amount of time or is faster than driving	Ratio of transit time to drive travel time (AM peak, midday)	68%	97%	61%
	Provide transit connections to existing and planned affordable housing	Number of affordable housing units within ½-mile of an alternative	681	265	487
	Provide transit service to areas with current or future growth in housing and jobs	TOD Propensity Score (based on 10 criteria, max score of 58)	36	Results being finalized	30
Equity					
Advance Equity	Provide new transit service for people who already rely on transit to get around	Percentage of commuters to jobs accessible by a 45--minute transit commute who rely on transit	AMP (26%) - MID (27%)	AMP (27%) - MID (28%)	AMP (28%) - MID (28%)
	Provide new transit service for people who already rely on transit to get around	Average reduction in daily passenger minutes of delay on bus routes that overlap with the alternative	-1.1	-1.9	-2.9
	Make sure people who are likely to rely on transit have transit that matches how much service they need and when	Number of travel flows with more than 5,000 daily trips (weighted by low-income and minority trips) served by the alternative	9	7	7
Safety					
Improve Safety	Address identified transportation safety issues along project corridors	Ability for Alternative to provide a connection to an existing **pedestrian** facility or to retain width for a new facility that is continuous, comfortable, and safe	0% of stops have flagged road segments for ped access concerns	0% of stops have flagged road segments for ped access concerns	20% of stops have flagged road segments for ped access concerns
		Ability for Alternative to provide a connection to an existing **bicycle** facility or to retain width for a new facility that is continuous, comfortable, and safe	63% of stops accessible by bike	18% of stops accessible by bike	47% of stops accessible by bike
Sustainability					
	Increase the number of trips taken by transit in the study area	% change in transit mode split (10 OD Pairs)	Auto: 69% (NB:71%) (-1.8%) Transit: 21% (NB:19%) (1.8%)	Auto: 69% (NB:71%) (-1.9%) Transit: 21% (NB:19%) (2.0%)	Auto: 68% (NB:71%) (-2.5%) Transit: 21% (NB:19%) (2.3%)
Theme: Feasible + Implementable Solutions					
Advance Feasible and Implementable Solutions	Potential to Phase: Find opportunities to provide incremental value as resources become available	Number of Silver Line buses needed to operate the alternative (Estimated fleet surplus or deficit)	Vehicles required: 13 (Estimated fleet surplus: 4 vehicles)	Vehicles required: 12 (Estimated fleet surplus: 6 vehicles)	Vehicles required: 12 (Estimated fleet surplus: 6 vehicles)
	Synergy with Other Efforts: Explore potential to leverage investments with other processes upcoming or underway	Extent to which investment could be included within other efforts upcoming or currently underway	Low	Low	Medium
	Transit Priority: Ability for Silver Line to offer highly reliable bus rapid transit service	Extent of Silver Line that could operate within exclusive transit ROW	65%	55%	80%
	Cost-Effectiveness: Serve as a steward for local funds by furthering concepts that provide the highest benefit for cost	Planning-level cost estimate	Medium (3) ($130m)	High (5) ($90m)	High (5) ($95m)

Alternative 1: Malden Center

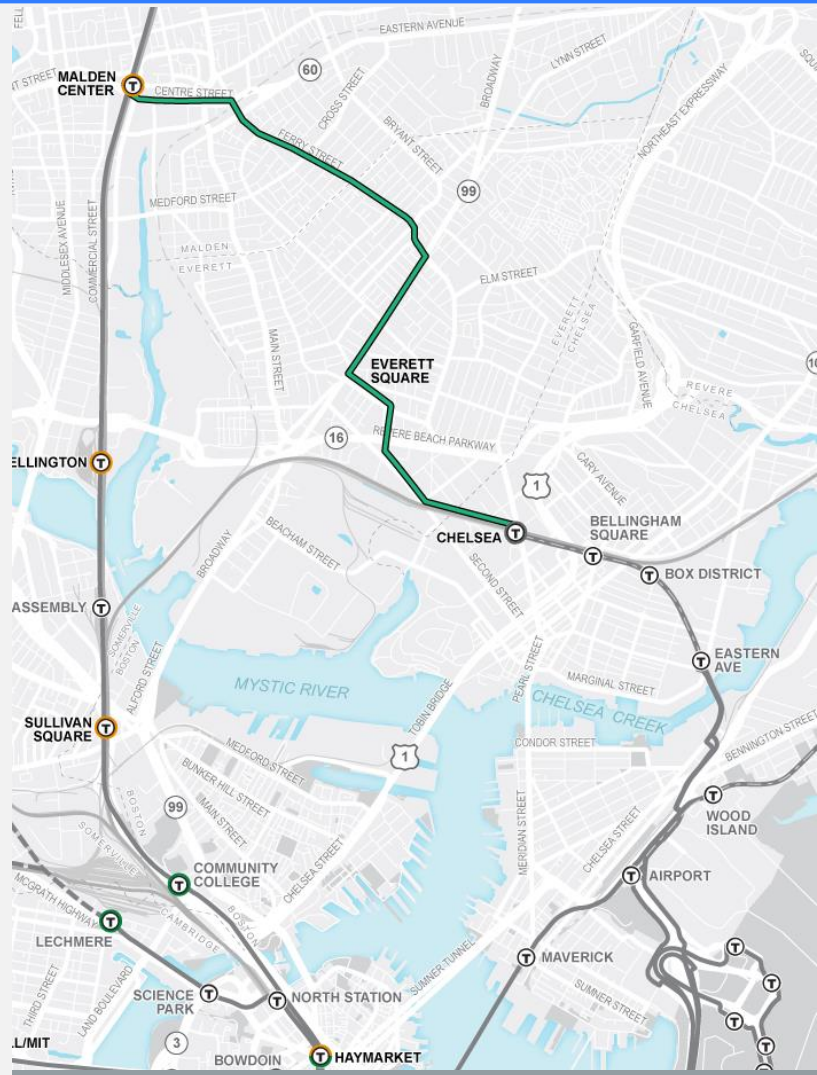
High-Level Findings

Where this alternative performs well

- Total ridership
- Serving travel patterns most used by transit critical populations

Where this alternative does not perform well

- Transit travel times – when compared to drive times
- Extent of transit priority (travel time reliability)
- Cost-effectiveness



Alt. 1: SL3 Ext to Malden Center

Alternative 2: Wellington

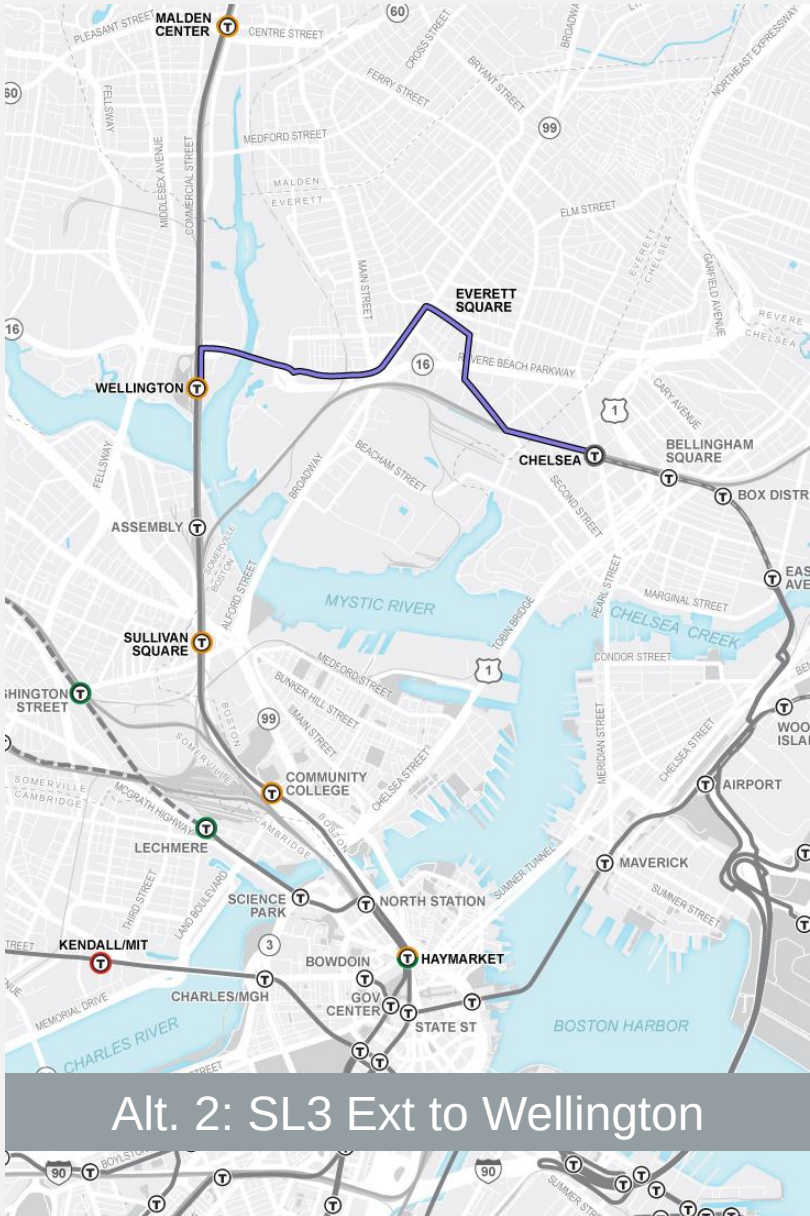
High-Level Findings

Where this alternative performs well

- Cost-effectiveness

Where this alternative does not perform well

- Total daily riders
- Transit travel times – when compared to drive times
- Extent of transit priority (travel time reliability)



Alt. 2: SL3 Ext to Wellington

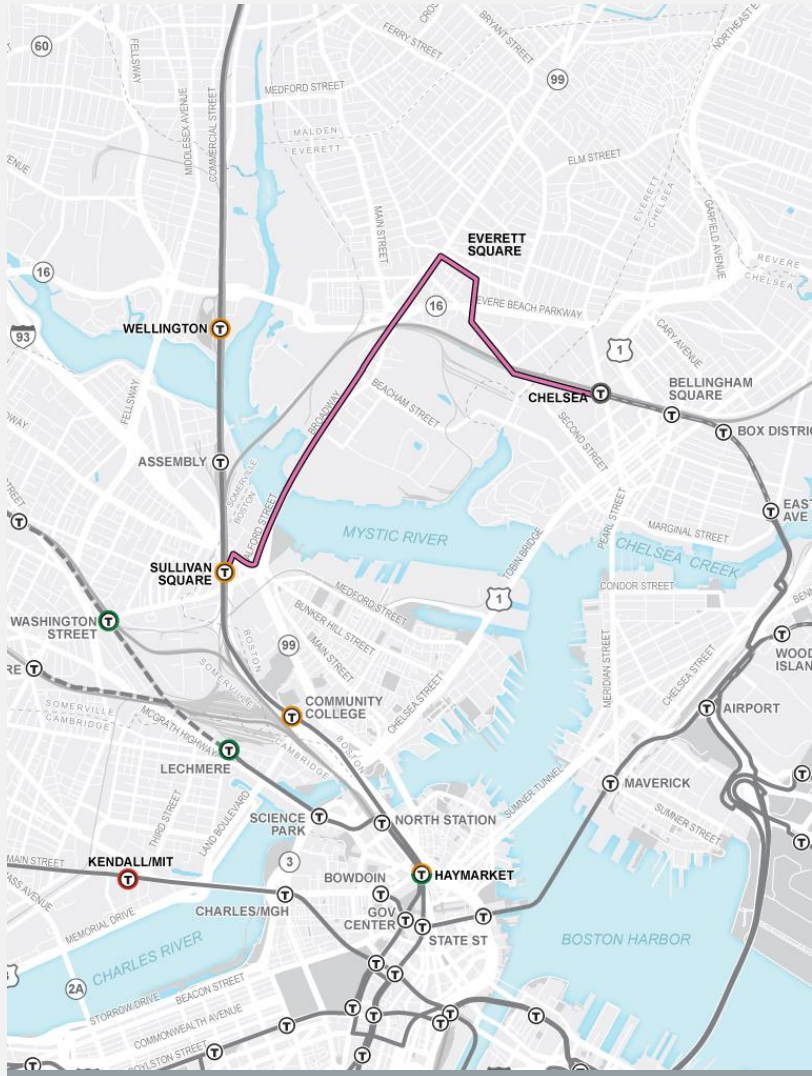
Alternative 3: Sullivan

High-Level Findings

Where this alternative performs well

- Total daily riders
- Transit travel times
- Transit travel time reliability
- Reduction in bus delay
- Cost-effectiveness

Where this alternative does not perform well



Alt. 3: SL3 Ext to Sullivan

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			MALDEN CENTER	WELLINGTON	SULLIVAN
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Safety					
Improve Safety	Address identified transportation safety issues along project corridors	Ability for Alternative to provide a connection to an existing **pedestrian** facility or to retain width for a new facility that is continuous, comfortable, and safe	0% of stops have flagged road segments for ped access concerns	0% of stops have flagged road segments for ped access concerns	20% of stops have flagged road segments for ped access concerns
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Sustainability					
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Discussion

Questions on our analysis – making sure it makes sense

Key Findings: All SL6 Alternatives

- All alternatives provide a tremendous access to jobs via transit and without much difference between the peak hour and midday
- All alternatives increase the extent of bus transit priority which results in reduced travel time delay, for *all* transit that can use the bus lanes
- The capital investment that goes into the SL6 alternatives is expected to improve safety along the alignment and at stations
- All the SL6 alternatives result in a greater transit mode share (and reduced auto mode share)
- All SL6 alternatives rely on major investments made by others (Sullivan Square, Rutherford Avenue, McGrath Highway)

Summary of Key Findings – SL6 Alternatives

GOAL	OBJECTIVE	METRIC	SL6 KENDALL VIA MCGRATH Alternative 4	SL6 KENDALL VIA RUTHERFORD Alternative 5	SL6 HAYMARKET Alternative 6	SL6 KENDALL FROM CHELSEA Alternative 7
Mobility + Access						
	Optimize potential ridership	Total daily riders	SL6 Build: 33,800 SL3 Build: 17, 100 +/- SL3 No-Build: +4,700	SL6 Build: 32,300 SL3 Build: 17, 100 +/- SL3 No-Build: +4,700	SL6 Build: 21,800 SL3 Build: 17,300 +/- SL3 No-Build: 4,800	SL6 Build: 38,500 SL3 Build: 9,100 +/- SL3 No-Build: -3,300
Expand Mobility and Access	Connect residents directly with jobs, services, and other daily activities	Number of jobs accessible via 45-minute transit commute (Avergae by stop during AM peak, midday)	AMP (414,000) - MID (413,000)	AMP (420,000) - MID (420,000)	AMP (429,000) - MID (425,000)	AMP (418,000) - MID (406,000)
	Provide transit travel times that takes a similar amount of time or is faster than driving	Ratio of transit time to drive travel time (AM peak, midday)	75%	75%	74%	65%
	Provide transit connections to existing and planned affordable housing	Number of affordable housing units within ½-mile of an Alternative	2355	1978	3434	2122
	Provide transit service to areas with current or future growth in housing and jobs	TOD Propensity Score (based on 10 criteria, max score of 58)	34	33	38	32
Equity						
Advance Equity	Provide new transit service for people who already rely on transit to get around	Percentage of commuters to jobs accessible by a 45--minute transit commute who rely on transit	AMP (29%) - MID (29%)	AMP (29%) - MID (29%)	AMP (29%) - MID (29%)	AMP (28%) - MID (29%)
	Provide new transit service for people who already rely on transit to get around	Average reduction in daily passenger minutes of delay on bus routes that overlap with the alternative	-7.0	-6.1	-7.0	-4.8
	Make sure people who are likely to rely on transit have transit that matches how much service they need and when	Number of travel flows with more than 5,000 daily trips (weighted by low-income and minority trips) served by the alternative	4	4	4	11
Safety						
Improve Safety	Address identified transportation safety issues along project corridors	Ability for Alternative to provide a connection to an existing **pedestrian** facility or to retain width for a new facility that is continuous, comfortable, and safe	21% of stops have flagged road segments for ped access concerns	30% of stops have flagged road segments for ped access concerns	30% of stops have flagged road segments for ped access concerns	25% of stops have flagged road segments for ped access concerns
		Ability for Alternative to provide a connection to an existing **bicycle** facility or to retain width for a new facility that is continuous, comfortable, and safe	90% of stops accessible by bike	81% of stops accessible by bike	89% of stops accessible by bike	75% of stops accessible by bike
Sustainability						
	Increase the number of trips taken by transit in the study area	% change in transit mode split (10 OD Pairs)	Auto: 67% (NB:71%) (-3.3%) Transit: 22% (NB:19%) (3.1%)	Auto: 67% (NB:71%) (-3.3%) Transit: 22% (NB:19%) (3.0%)	Auto: 68% (NB:71%) (-2.8%) Transit: 22% (NB:19%) (2.5%)	Auto: 67% (NB:71%) (-3.4%) Transit: 22% (NB:19%)
Theme: Feasible + Implementable Solutions						
Advance Feasible and Implementable Solutions	Potential to Phase: Find opportunities to provide incremental value as resources become available	Number of Silver Line buses needed to operate the alternative (Estimated fleet surplus or deficit)	Vehicles required: 16 (Estimated fleet deficit: 13 vehicles)	Vehicles required: 15 (Estimated fleet deficit: 11 vehicles)	Vehicles required: 13 (Estimated fleet deficit: 9 vehicles)	Vehicles required: 18 (Estimated fleet deficit: 13 vehicles)
	Synergy with Other Efforts: Explore potential to leverage investments with other processes upcoming or underway	Extent to which investment could be included within other efforts upcoming or currently underway	High	Medium	Medium	High
	Transit Priority: Ability for Silver Line to offer highly reliable bus rapid transit service	Extent of Silver Line that could operate within exclusive transit ROW	75%	80%	90%	80%
	Cost-Effectiveness: Serve as a steward for local funds by furthering concepts that provide the highest benefit for cost	Planning-level cost estimate	Medium-Low (2) ($150m)	Medium (3) ($140m)	Medium-High (4) ($120m)	Low (1) ($170m)

Alt 4: SL6 Everett to Kendall *via McGrath*

High-Level Findings

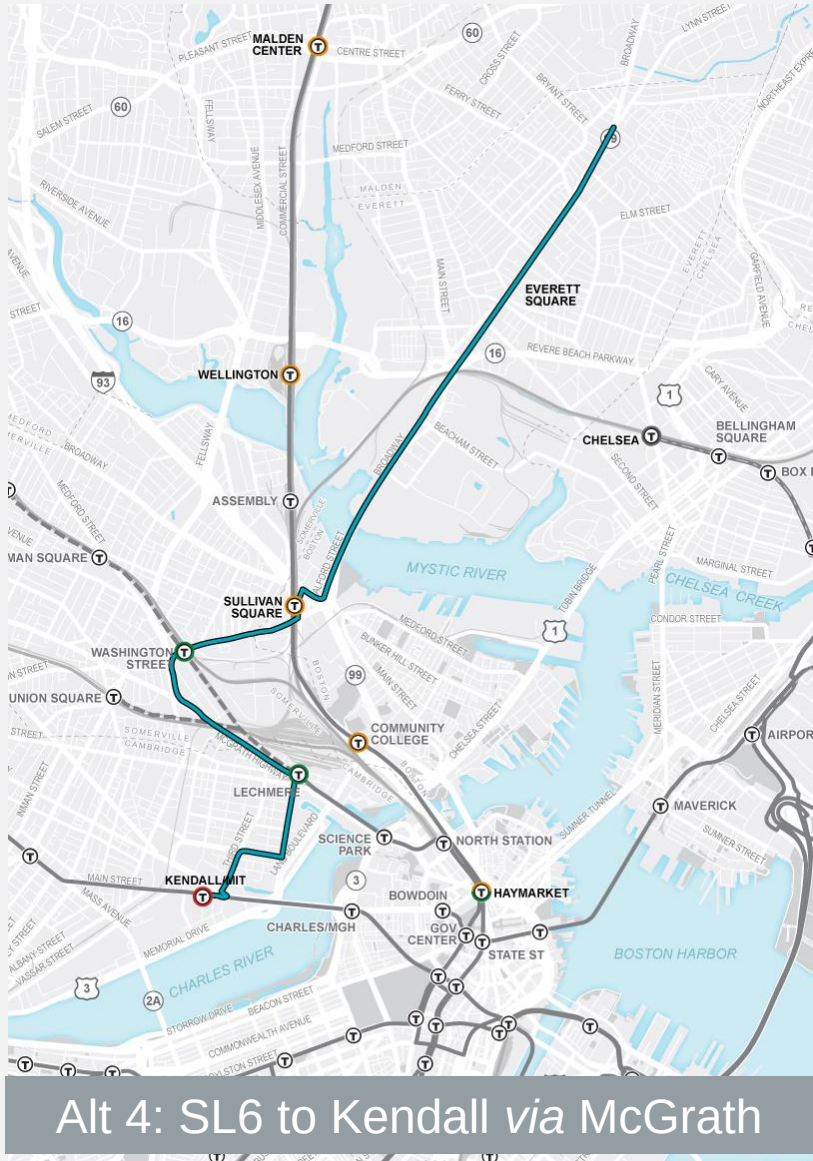
Where this alternative performs well

- Reduction in bus delay
- Connections with the regional bicycle network
- Extent of transit priority (travel time reliability)
- Potential for cost sharing

Where this alternative does not perform well

- Serving a known travel flow for transit critical populations
- Fleet requirements
- Travel time (slowdowns along Ames and Broadway)

Competing Rapid Transit Travel Time
Weekday Midday
- Sullivan to Kendall via Orange and Red lines: 20 mins
- Sullivan to Kendall via SL6 Alt 4: 13 mins



Alt 4: SL6 to Kendall *via* McGrath

Alt 5: Everett to Kendall *via Rutherford*

High-Level Findings

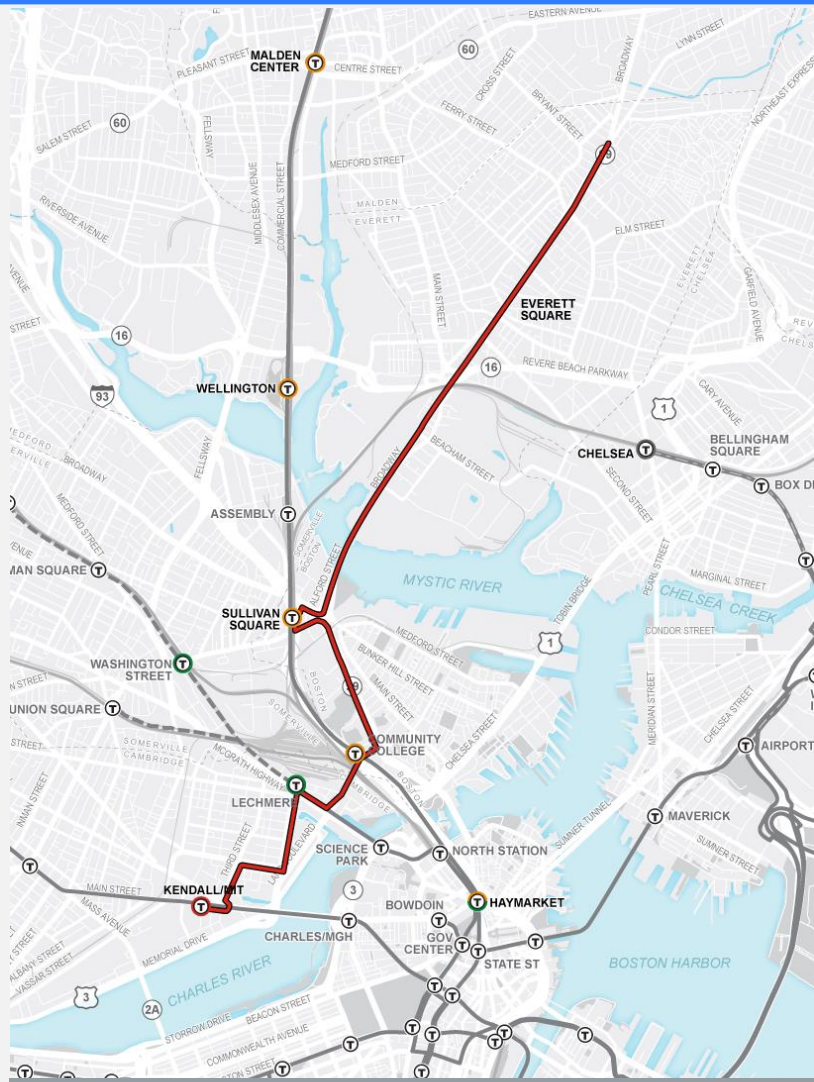
Where this alternative performs well

- Extent of transit priority (travel time reliability)

Where this alternative does not perform well

- Serving a known travel flow for transit critical populations
- Travel time (slowdowns along Ames and Broadway)

Competing Rapid Transit Travel Time
Weekday Midday
- Sullivan to Kendall via Orange and Red lines: 20 mins
- Sullivan to Kendall via SL6 Alt 5: 11 mins



Alt 5: SL6 to Kendall *via* Rutherford

Alt 6: Everett to Boston *via Rutherford*

High-Level Findings

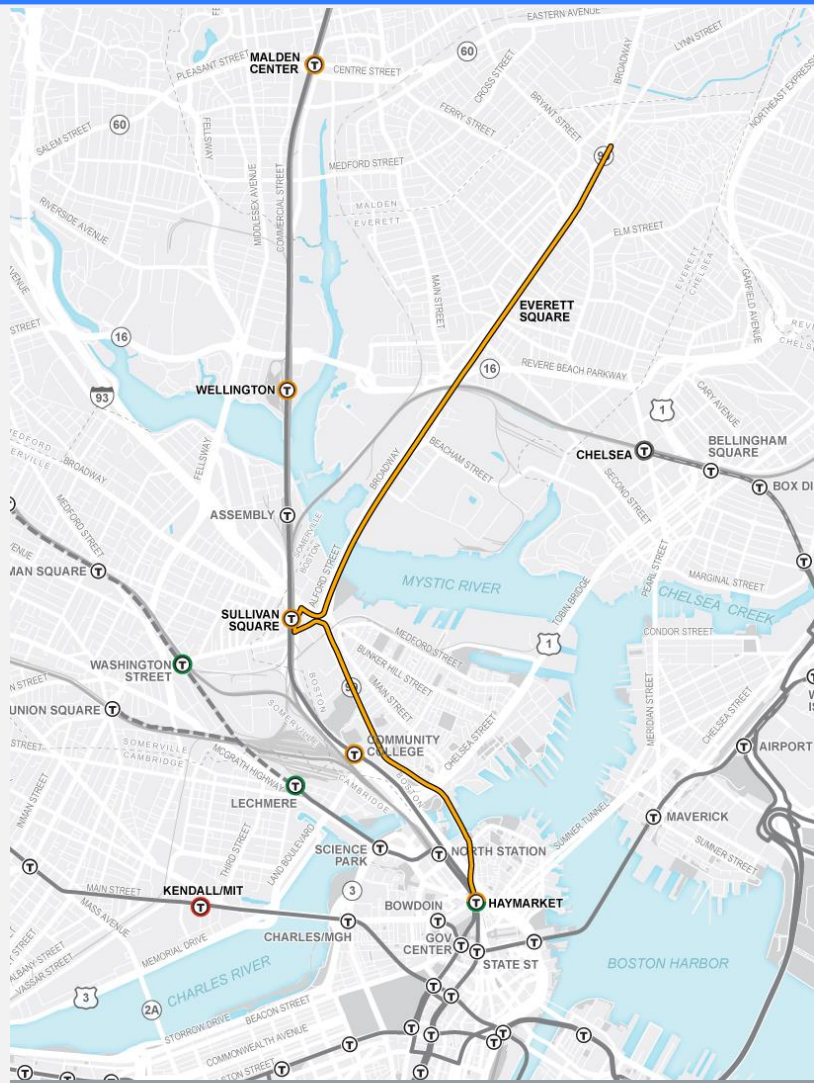
Where this alternative performs well

- Extent of transit priority (travel time reliability)
- Access to jobs
- Access for residents in affordable housing
- Potential for TOD
- Reduction in bus delay
- Connections with the regional bicycle network
- Potential for cost sharing

Where this alternative does not perform well

- Total ridership
- Cost effectiveness

Competing Rapid Transit Travel Time
Weekday Midday
- Orange Line from Sullivan to Haymarket: 5 min
- Sullivan to Haymarket via SL6 Alt 6: 8 mins



Alt 6: SL6 to Boston *via* Rutherford

Alt 7: *Chelsea* to Kendall *via McGrath*

High-Level Findings

Where this alternative performs well

- Extent of transit priority (travel time reliability)
- Total daily riders
- Potential for cost sharing

Where this alternative does not perform well

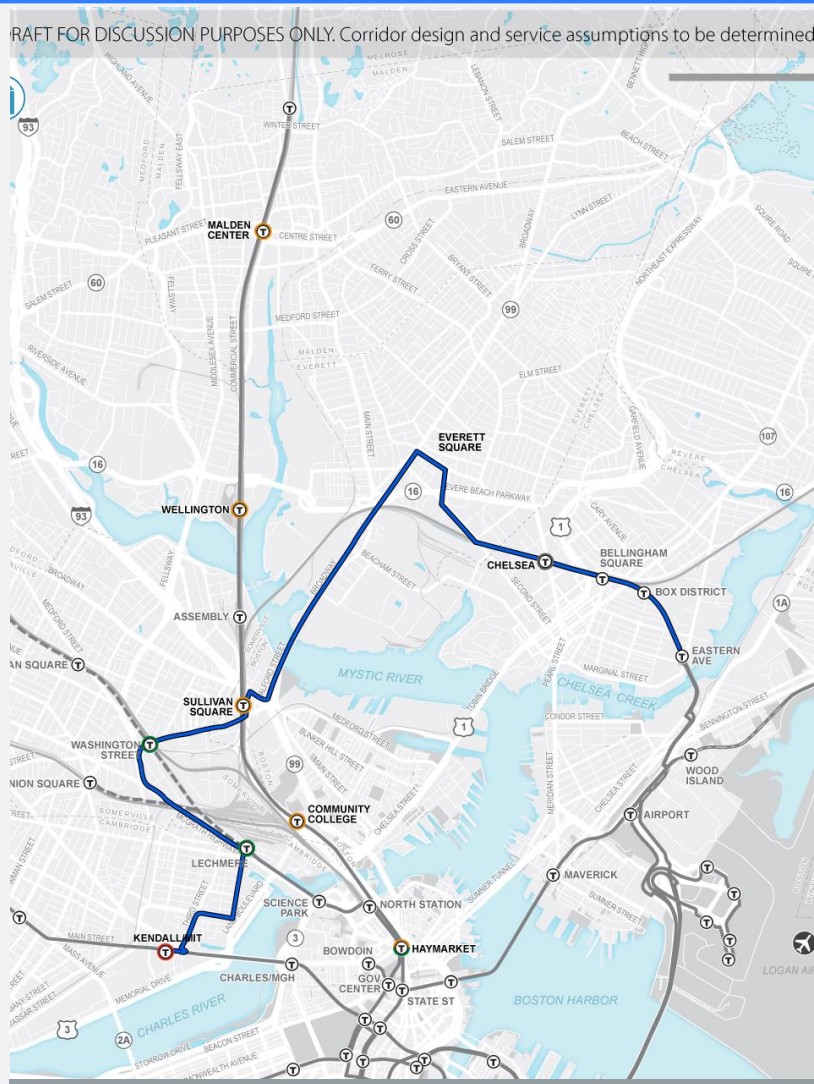
- Fleet requirements
- Cost-effectiveness

Competing Rapid Transit Travel Time

A)Weekday Midday
- Sullivan to Kendall via Orange and Red lines: 20 mins

B) Midday
- SL3 from Chelsea to South Station: 27 min
- South Station to Kendall: 10 min

C) Sullivan to Kendall via SL6 Alt 7: 13 mins



Alt 7: SL6 to Kendall *from* Chelsea

Summary of Key Findings – SL6 Alternatives

GOAL	OBJECTIVE	METRIC	SL6 KENDALL VIA MCGRATH Alternative 4	SL6 KENDALL VIA RUTHERFORD Alternative 5	SL6 HAYMARKET Alternative 6	SL6 KENDALL FROM CHELSEA Alternative 7
Mobility + Access						
	Optimize potential ridership	Total daily riders	SL6 Build: 33,800 SL3 Build: 17, 100 +/- SL3 No-Build: +4,700	SL6 Build: 32,300 SL3 Build: 17, 100 +/- SL3 No-Build: +4,700	SL6 Build: 21,800 SL3 Build: 17,300 +/- SL3 No-Build: 4,800	SL6 Build: 38,500 SL3 Build: 9,100 +/- SL3 No-Build: -3,300
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	Provide transit travel times that takes a similar amount of time or is faster than driving	Ratio of transit time to drive travel time (AM peak, midday)	75%	75%	74%	65%
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Discussion

Questions on our analysis – making sure it makes sense

Community Outreach

Ongoing efforts and next steps

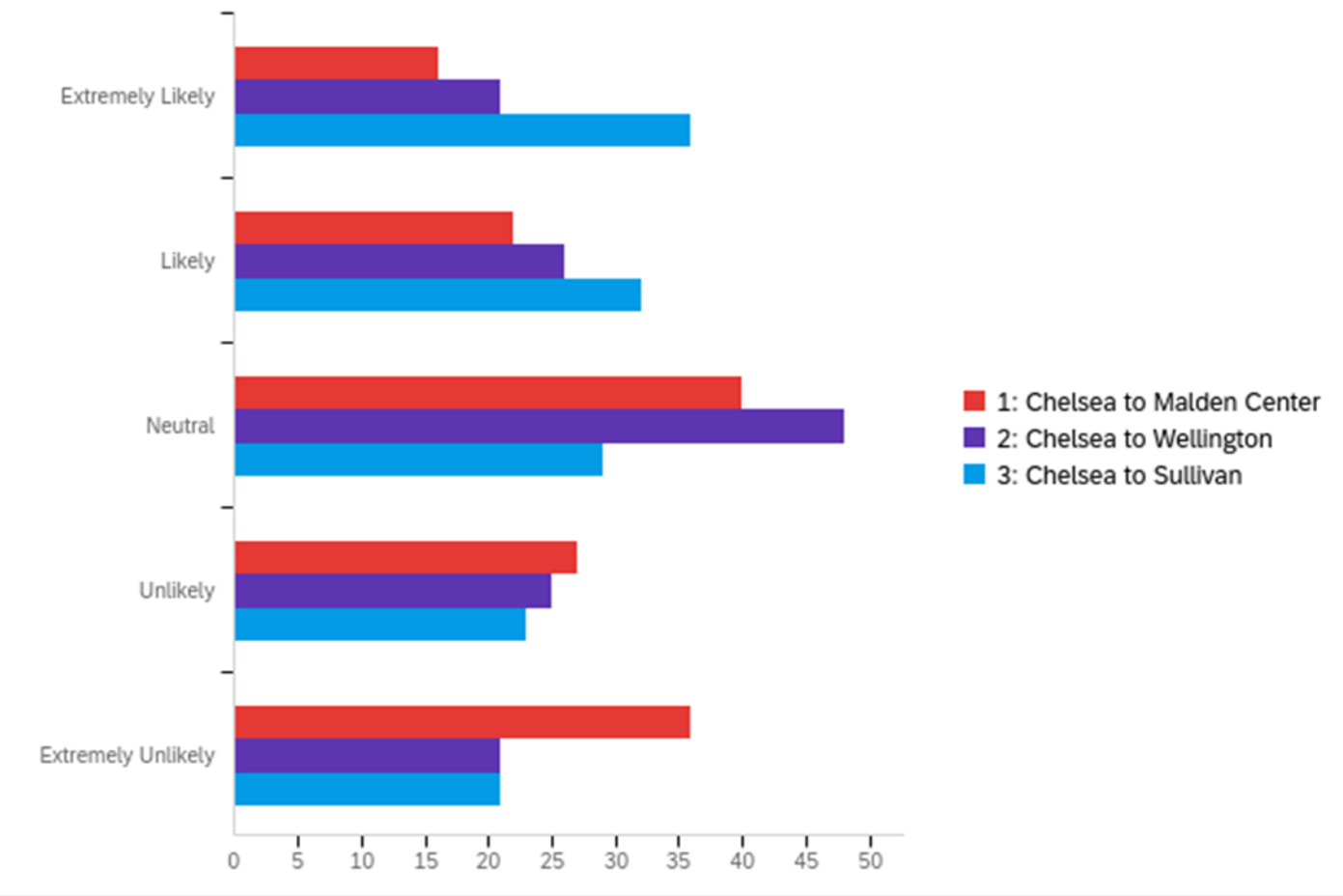
Outreach Process

Over this past summer and fall we conducted outreach to stakeholders and the study area communities:

- ✓ Led 5 outreach events in Everett, Chelsea, and Somerville
  - ✓ Everett Harvest Festival
  - ✓ Bellingham Square
  - ✓ Sullivan Square
  - ✓ Malden Center
  - ✓ Chelsea Station
- ✓ Developed and opened a community online feedback form and a project fact sheet (available in 3 languages)

Online Feedback Form Results to Date – SL3 Alternatives

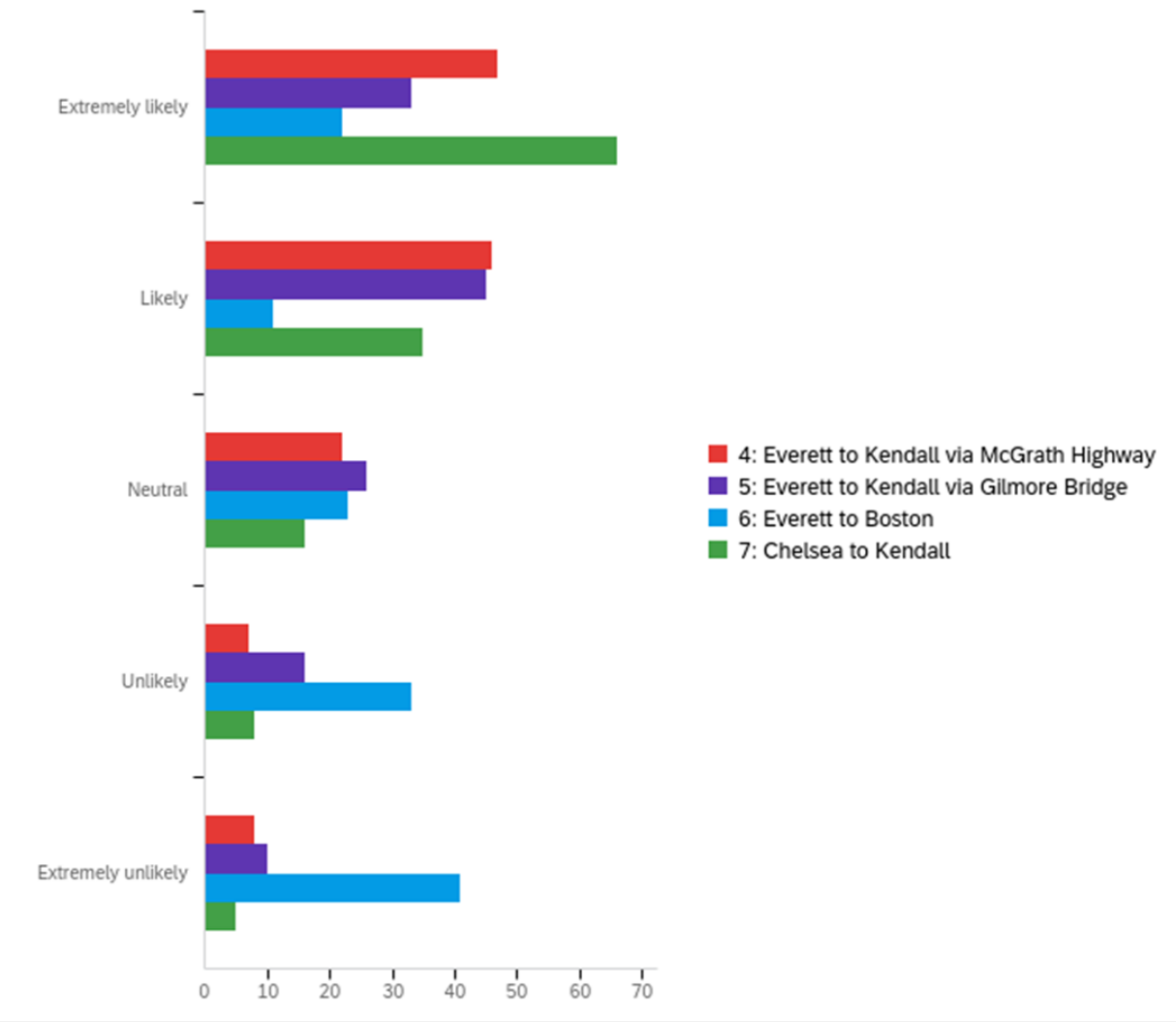
Please let us know how likely you would be to use each of the SL3 alternatives:



- 141 Respondents (as of 11/22/22)
- Respondents viewed Alternative 3 as the one they are most likely to use

Online Feedback Form Results to Date – SL6 Alternatives

Please let us know how likely you would be to use each of the SL6 alternatives:

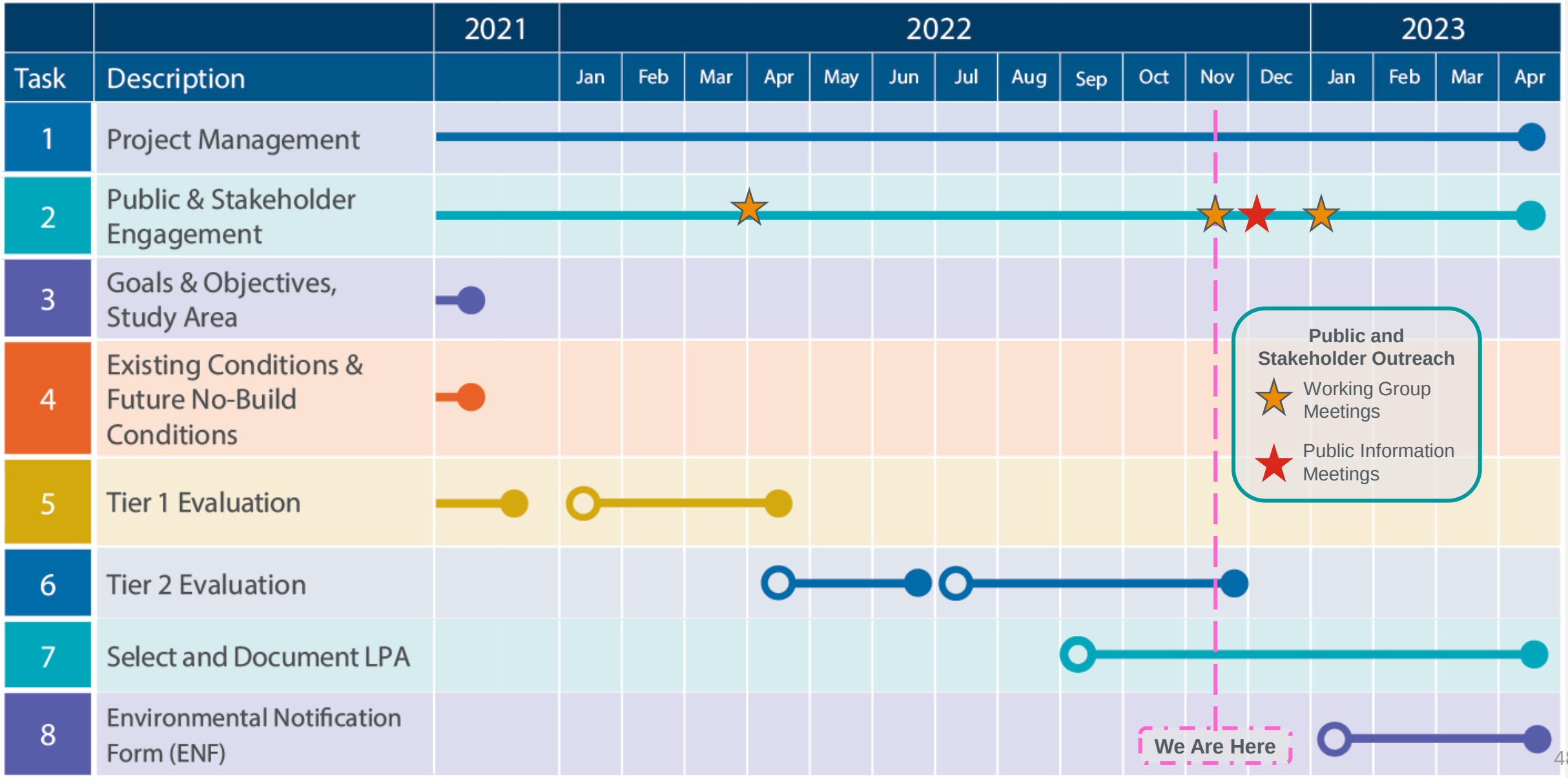


- 130 Respondents (as of 11/22/22)
- Respondents viewed Alternatives 7 and 4 as the ones they are most likely to use

Next Steps

- Our third Online Feedback Form is live at mbta.com/slxfeedback
- Public Meeting #3 is December 13, 2022
  - https://www.mbta.com/events/2022-12-13/silver-line-extension-alternatives-analysis-public-meeting-3
- Final External Working Group meeting and Public meeting to be held this Winter

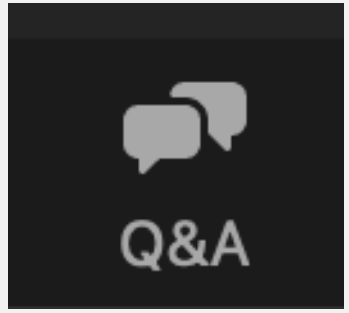
Overall Project Schedule



Public Comment

Public Comment

- Please share only one question or comment at a time
- Use the "**Q+A**" button to submit a typed question or comment
- Press the "**Raise Hand**" button to share your question or comment verbally. Wait for the moderator to recognize and unmute you before speaking.
- If you have joined by phone only, you may "raise your hand" by pressing the star button and then nine (*9)
- *After you speak, we will lower your hand and you will be muted to allow the team to respond and provide opportunities for others to participate*



***Chat** is reserved for Working Group only*

***Members of the public**: please use the Q&A feature*

- Comments may also be sent to SLX@mbta.com.

THANK YOU!

Doug Johnson

slx@mbta.com