

# **Massachusetts Bay Transportation Authority**

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## **Plan for Accessible Transit Infrastructure (PATI)**

### **Preview of 2019 Recommendations**

Presentation to the FMCB

April 1<sup>st</sup>, 2019



# Agenda

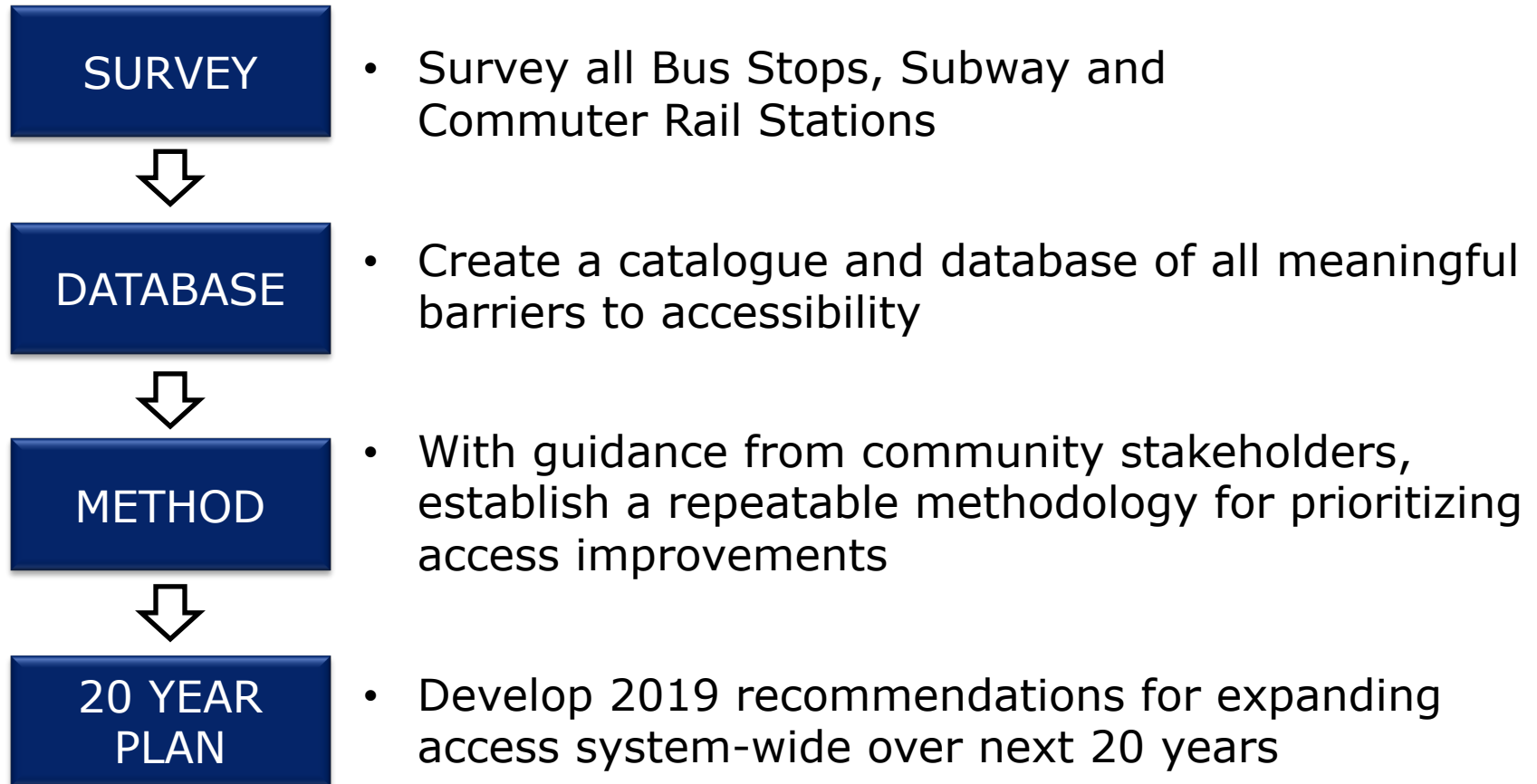
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- **Overview**
- **Methodology for Identifying Priorities**
- **Recommended Priorities by Mode**
- **Progress to Date**
- **Additional Impact of PATI**
- **Appendix: 20 Year Plan**



## Primary Goals

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# PATI Surveys and Database

## Stations:

**177**

Station Reports

**17624**

Elements Surveyed

**26004**

Photos Captured

## Bus:

**7690**

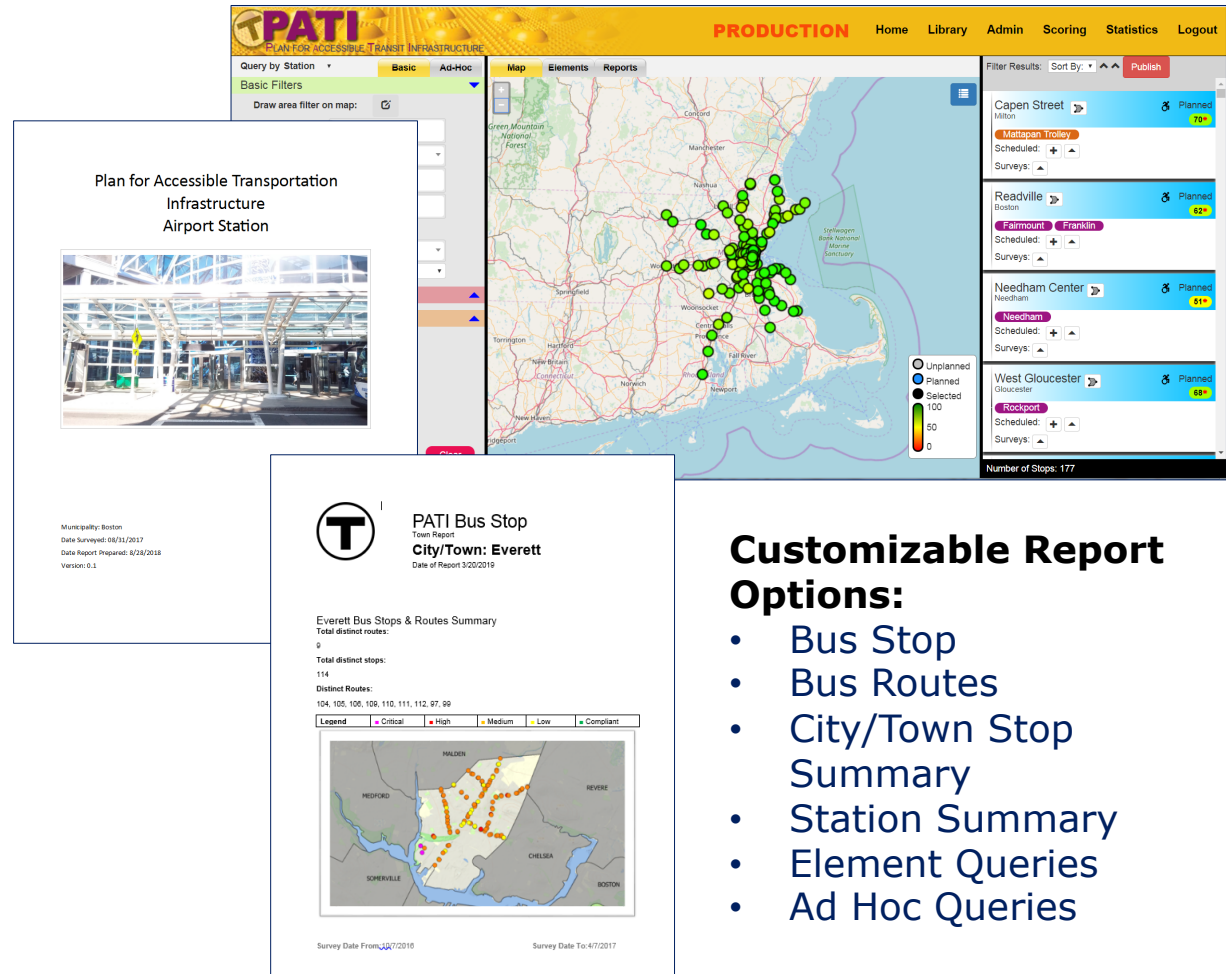
Bus Stops Surveyed

**51**

Towns Impacted

**184**

Routes Covered



## Customizable Report Options:

- Bus Stop
- Bus Routes
- City/Town Stop Summary
- Station Summary
- Element Queries
- Ad Hoc Queries





# Snapshot of Barriers—Bus Stops

Out of **7690 stops**, **84%** have at least one significant barrier:

- **20%** Have less than 4'-0" wide sidewalk for length of bus stop
  - **6%** Have a sidewalk less than 36"
- **18%** Have a landing pad too narrow for bus ramp to easily deploy
- **2%** Have an amenity blocking the path of travel
- **14%** Are located near a crossing with a missing curb ramp
- **Only 8%** have a shelter

Missing curb ramp



No Landing Pad





# Snapshot of Barriers--Stations

## No Access Aisles



## Low Scoring Ramp

### **RAPID TRANSIT + COMMUTER RAIL**

Most accessible stations are host to numerous serious barriers, impacting:

- Accessible parking
- Elevator/Escalator
- Sidewalk/curb ramps
- Door issues
- Track-crossings
- Restrooms
- Ramps to platforms
- Detectable Warning Panels
- Call Boxes

### **COMMUTER RAIL**

- **32** stations remain inaccessible
- **58** stations have mini-high, but not full-high platforms

### **RAPID TRANSIT**

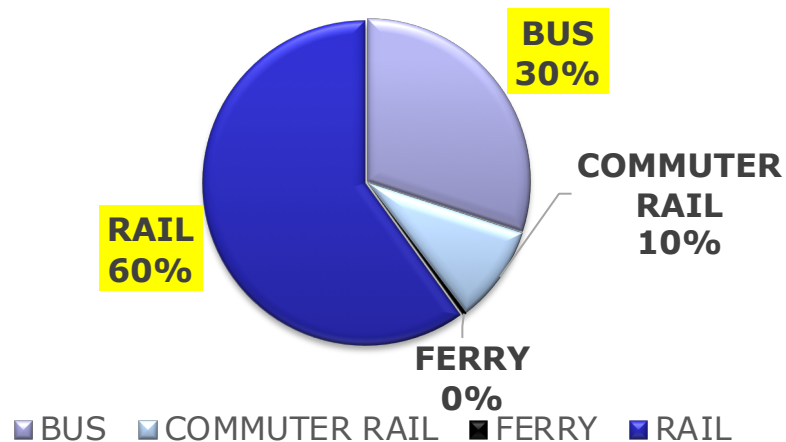
- **5** subterranean stations remain inaccessible
- **32** street-level stops remain inaccessible
  - 31 Green Line Surface
  - 1 Mattapan Trolley



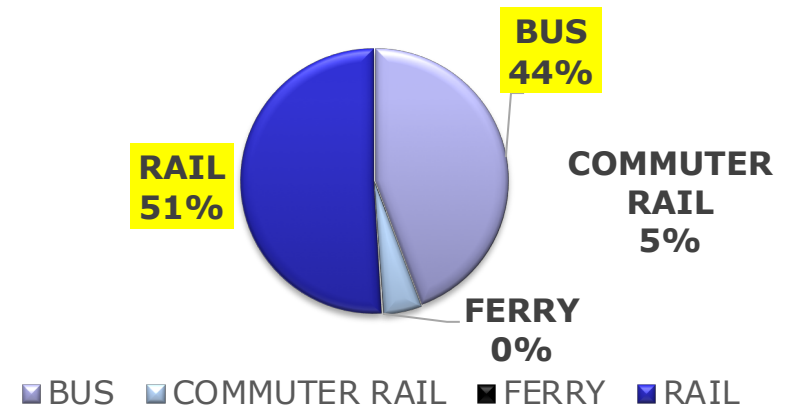
## Choosing between Modes

- Customers expect and regulatory realities call for continuous progress across all modes
- Community stakeholders emphasize importance of Bus & Subway network over Commuter Rail

**Avg. Weekday  
Ridership CY 2017**

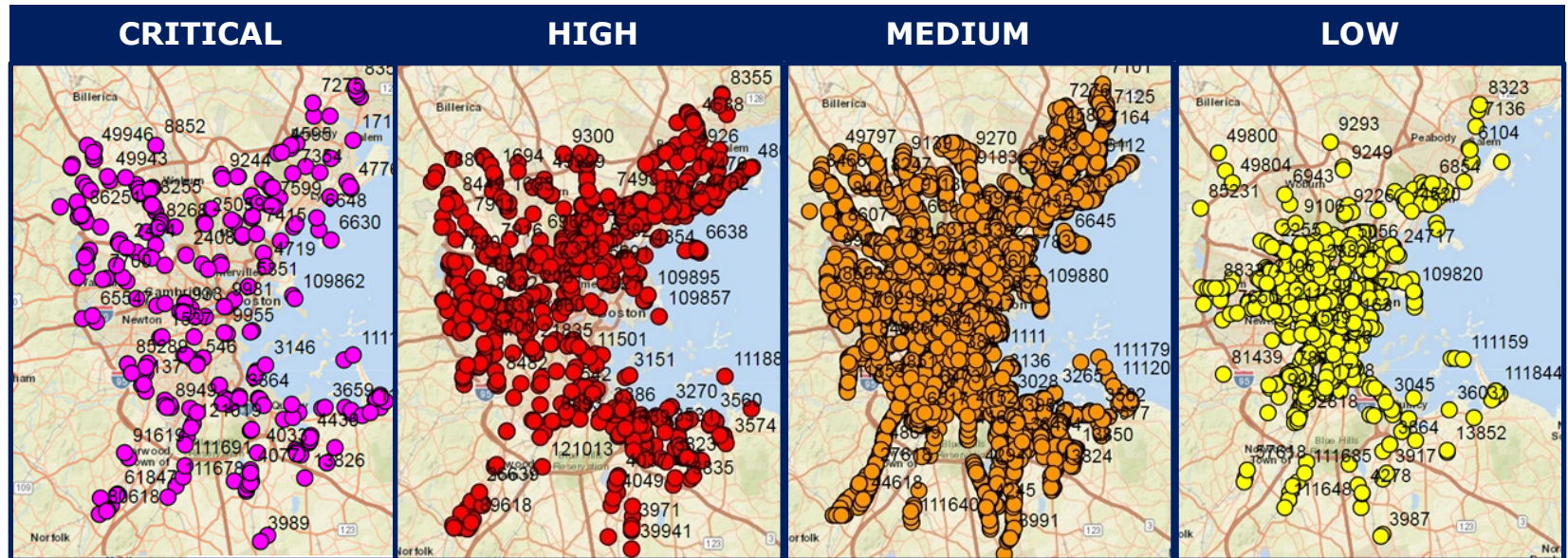


**Avg. Weekday  
Ridership CY 2017  
for Senior/TAP**





# Choosing between Bus Stops



- Start with degree of barriers—critical, high, medium and low
- Examine ridership—opportunity for consolidation
- Further prioritize by high ridership, municipal coordination & known complaints
- Coordination with other bus initiatives





# Bus Stop Priorities

**Emphasis on addressing most critical stops to ensure basic safety and usability.**

**Bus stops to be addressed include:**

- 273 Critical Stops to be eliminated or reconstructed
- 600+ High Priority Stops to be triaged





## Choosing between Stations

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- **Accessibility Impact Score— How Important is the location to people with disabilities?**
  - General Ridership
  - Census Data within ¼ mile radius – seniors and people with disabilities
  - Location's Minority and Low income status
  - Rate of RIDE pick-ups/drop-offs within ¼ mile
  - Proximity of other accessible station
- **Cost/Benefit Score—How much are we resolving with this investment?**
  - Degree of Barrier
  - Project Cost
  - Will project address other serious non-access issues?
- **Overall Readiness—Can project move forward and eliminate barriers quickly?**



## Station Priorities—System-Wide

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**Emphasis on addressing moderate barriers system-wide to ensure that accessible stations remain safe and usable.**

**System-Wide programs to be established include:**

- Install automatic door openers at each station
- Apply yellow contrast nosings to stairways
- Repair serious sidewalk/curb ramp defects in/around stations
- Ensure adequate accessible parking at all lots
- Address barriers in public restrooms
- Install detectable warnings at all CR platforms where lacking
- Repair mini-high platforms
- Repair track crossings



## Station Priorities—Rapid Transit

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### **Tier I:**

- Wollaston
- BU West, St. Paul, Pleasant, Babcock (B Line)
- Symphony
- Red/Orange Connection at DTX
- Packard's Corner (B Line)
- Eliot, Chestnut Hill, Beaconsfield, Waban (D Line)

### **Considerations:**

- Highest Impact
- 3/5 remaining subway stations
- Large operational benefit
- D Line does not require municipal coordination





## Station Priorities—Rapid Transit

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### **Tier II:**

- Boylston\*
- Bowdoin\*
- Griggs, Alston, Warren, Sutherland, Chiswick, Chestnut Hill Ave, South St (B Line)
- Hawes, Kent, St Paul, Summit Ave, Brandon Hall, Fairbanks, Tappen, Dean, Englewood (C Line)
- Fenwood, Mission Park, Riverway, Back of the Hill (E Line)

### **Tier III:**

- Adjust Platforms system-Wide to Provide Level Boarding with Type 10 Vehicle

### **Considerations:**

- All stops on B, C & E Lines require significant municipal coordination
- Level board cannot be achieved until Type 10 arrives

*\*subject to results of conceptual design*



## Station Priorities—Commuter Rail

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### **Tier I:**

- Chelsea
- Natick
- Auburndale/Newtonville/W. Newton
- Winchester
- Wellesley Square
- Melrose Highlands
- Endicott
- Walpole
- West Medford
- Franklin/Dean

### **Considerations:**

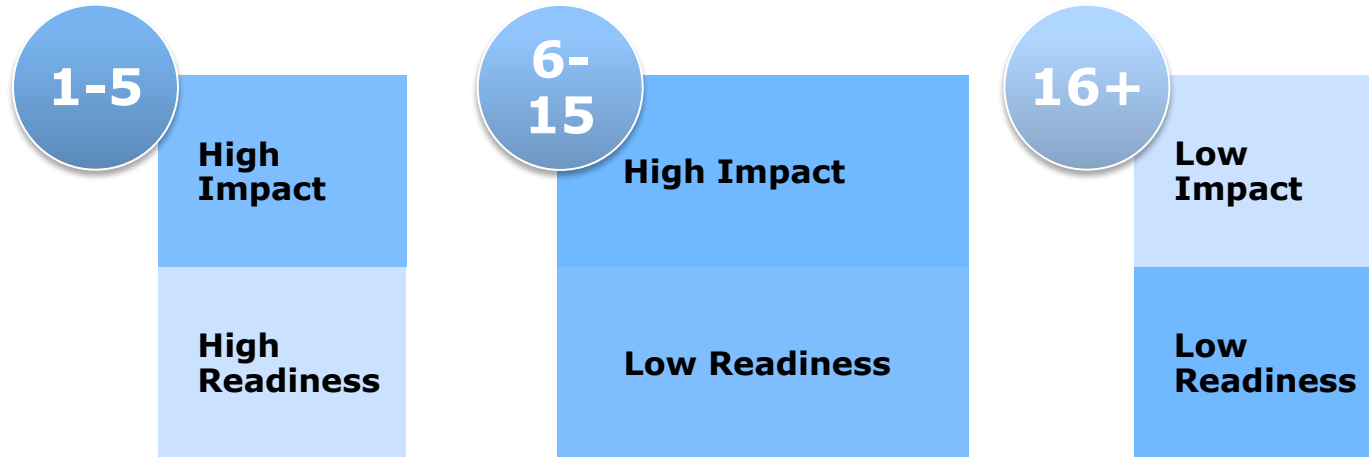
- Highest Impact Score
- Significant SGR issues at most

### **Tier II/ Tier III:**

- Remaining priorities dependent on rail vision and any opportunities for consolidation
- Work with FTA to phase in access more quickly via mini-highs at lower priority locations
  - Expand to full-high once every station is usable



# Implementation Strategy & Must Haves



- Steady pipeline of designs to ensure on-going project readiness
- Proper scoping from Day 1 to maximize SGR/Access overlap
- Support and coordination from municipalities regarding Green Line & Bus Stops



# Bus Stop Projects Underway

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## **Critical Bus Stops:**

**143** PATI bus stops were identified for closure:

- 46 stops have already been closed due to very low/no ridership and missing signage
- Remaining stops require a higher level of municipal coordination

**130** PATI bus stops were identified for reconstruction:

- 130 stops will be reconstructed between April and October 2019  
(*Construction work will combine Critical stops with 50 previously identified high priority stops*)
- 40 remaining stops will be designed in 2019, constructed Spring 2020

## **High Priority Bus Stops:**

**600+** stops are being reviewed and triaged for concept level designs in 2019

## **All Other Stops: Municipal Coordination**

Report packets for each municipality with bus service will include bus stop survey results as well as list of grant opportunities for stop reconstruction



# Station Projects Underway

Project	Duration	Project Budget
<b>Minor-Moderate Barriers</b>	Ongoing	5 mil
<b>Elevators</b>	Ongoing	100+ mil
<b>Wollaston</b>	Summer 2019 opening	45 mil
<b>Symphony</b>	2019-20 Design	40 mil
<b>Hynes</b>	2019-21 Design	45 mil
<b>BU West/St. Paul &amp; Babcock/Pleasant St – B Line</b>	2019-21 Construction	30 mil
<b>Newton Highlands – D Line</b>	Follows D Line Track/Signal est. 2021-23 Construction	23 mil
<b>Ruggles</b>	Phase 1 – Construction to 2021, Phase 2 – 2019-2020 Design	Phase 1: 43 mil Phase 2: TBD
<b>Oak Grove</b>	Construction Winter 2019-2023	35 mil
<b>Forest Hills</b>	2019-20 Design	22 mil
<b>Mansfield</b>	Fall 2019 opening	11 mil
<b>Chelsea</b>	2019-21 Construction	35 mil
<b>Natick</b>	2018-2019 Design	4 mil
<b>Winchester</b>	2019-2020 Design	39+ mil



# Additional Impact of PATI

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## **Google Mapping Update**

- Boston was named one of six cities in the world to offer accessible transit navigation.
- The Customer Technology Department took PATI bus data and translated it into an algorithm that allows for MBTA bus stops to be included in planning an accessible transit trip

## **Governor Baker's Council to Address Aging**

- The Council's Transportation Work Group used statistics to identify stops with most frequent boarding with Senior Charlie and TAP cards and overlaid PATI data on accessibility of such bus stops in gateway cities.

## **City of Boston Age Strong Commission**

- Using PATI data, 45 bus stops were submitted for "Main Street" improvements

## **Vision Zero**

- MassDOT Highway Division, looking to develop systemic safety improvements for pedestrians, used the PATI bus stop data to assist with prioritizing locations based on crash data, pedestrian boarding/alighting activities and risk factors



## PATI External Engagement Committee

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- Access Advisory Committee to the T (AACT)
- Boston Center for Independent Living (BCIL)
- Daniels-Finegold vs. MBTA Plaintiffs
- Disability Policy Consortium
- Greater Boston Legal Services (GBLS)
- Massachusetts Office on Disability (MOD)
- Mass Senior Action Council
- Massachusetts Institute for Technology (MIT)
- Rider's Transportation Access Group (R-TAG)
- Transportation for Massachusetts (T4MA)
- WalkBoston



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**THANK  
YOU**





## Short-term Recommendations (1-5 years)

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### Bus Improvements

- Reconstruct 130 Critical Stops
- Design and reconstruct 50 remaining Critical Stops
- Design and reconstruct portion of 600+ high priority bus stops

### Rapid Transit Improvements

- Renovate highest impact stations & those legally required
  - Wollaston, Symphony, BU stops, Newton Highlands, Forest Hills, Oak Grove, Ruggles
- Advance Design of remaining D Line Stops
  - Waban, Elliot, Chestnut Hill, Beaconsfield
- Develop conceptual design for Boylston
- Develop conceptual designs for street-level stops
  - B, C & E Line stops can't be handled as one offs
- Downtown Crossing elevator design
- Implement first phase of minor-moderate programs at high-impact accessible stations for example:
  - Door Openers Program
  - Restroom improvement Program
  - Path of Travel Program
- Advance design work on elevators and contingency work



## Short-term Recommendations (1-5 years)

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### **Commuter Rail Improvements**

- Renovate most high-impact stations
  - Mansfield Construction
  - Chelsea
  - Natick
  - Winchester
- Design portion of high priority stations
  - Auburndale, Newtonville, West Newton, etc.
- Implement first phase of minor-moderate programs at high-impact accessible stations
  - Sidewalk/Curbramp Work
  - Install Detectable Warnings
  - Mini-High Improvement Program
  - Etc.



## Medium-term Recommendations (6-15 years)

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### Bus Improvements

- Resolve all High priority stops
- Corridor Improvement Plan
  - Municipal coordination and partnerships

### Rapid Transit Improvements

- Rebuilt remaining D Line Stations
- Boylston Design & Construction
- Bowdoin Design & Construction
- Downtown Crossing Elevators Construction
- Move next wave of redundant/replacement elevators into construction
- Begin modernizing street-level Green Line stops
  - Identify priorities by lining up work with City projects
    - B Line Construction
    - C Line Construction
  - Raise all Green Level platforms to provide level boarding with Type 10s

### Commuter Rail Improvements

- Design Tier I & Tier II Commuter Rail Stations
- Construct Tier I Stations
- Advance Design & Construction of Tier II Commuter Rail Stations
- Advance Designs of Tier III Commuter Rail Stations



# Long-term Recommendations (16-20 years)

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## **Bus Improvements**

- Resurvey of Bus Network

## **Rapid Transit Improvements**

- Continue to design/rebuild elevators as needed

## **Commuter Rail Improvements**

- Construct Tier III Commuter Rail Stations
- Expand Existing Mini-highs to Full-Highs/Station Upgrades