Greater Boston Chamber of Commerce Transportation Policy Agenda

Greater Boston
Chamber of Commerce

Congestion

Economic and population surges in the state are stressing the system

Infrastructure Condition

Historical underinvestment in some areas has resulted in poor conditions

Future-Ready System

Need to adapt to pressures and changes in climate, economy, and technology

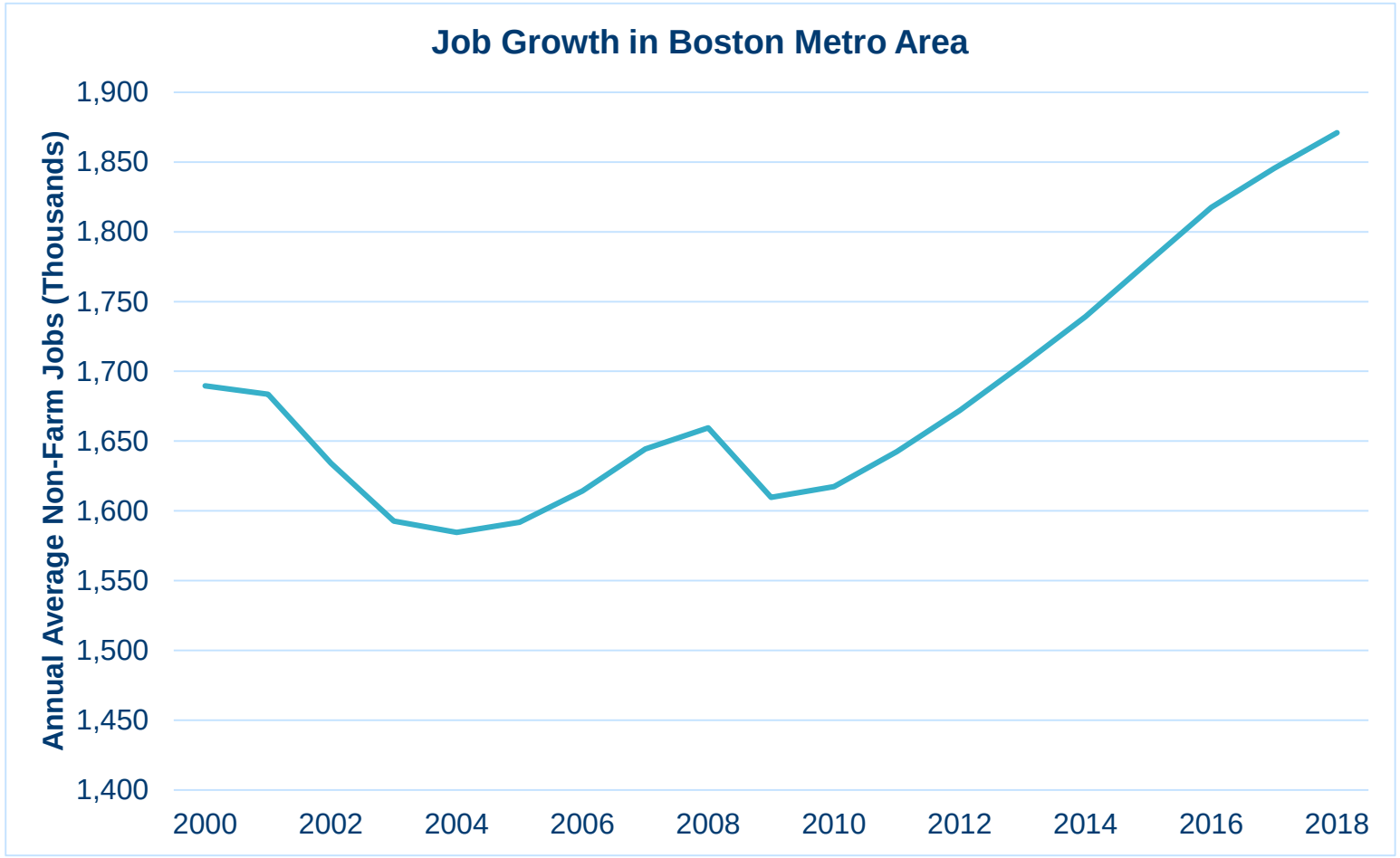
Long-Term Gaps

Financial projections show capital and operating gaps in the future, even without additional investments

Congestion

Economic and population surges in the state are stressing the system

Economic & Population Surge = Congestion

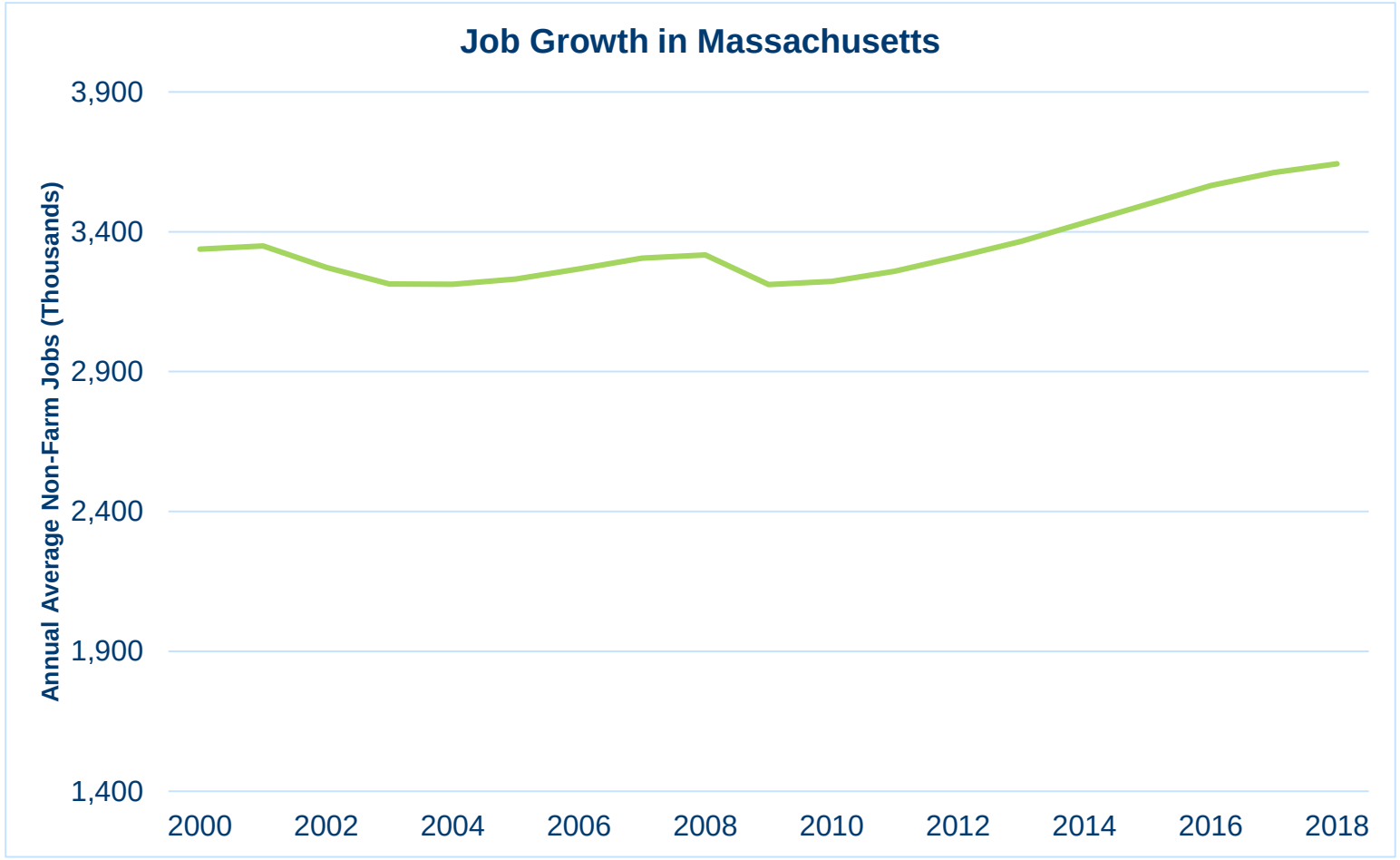


Source: U.S. Bureau of Labor Statistics

"[I]t takes drivers **longer to travel during the morning peak period than it did five years ago along nearly every roadway segment** along the major corridors coming into Greater Boston."

Congestion in the Commonwealth, Report to the Governor, 2019, MassDOT

Economic & Population Surge = Congestion

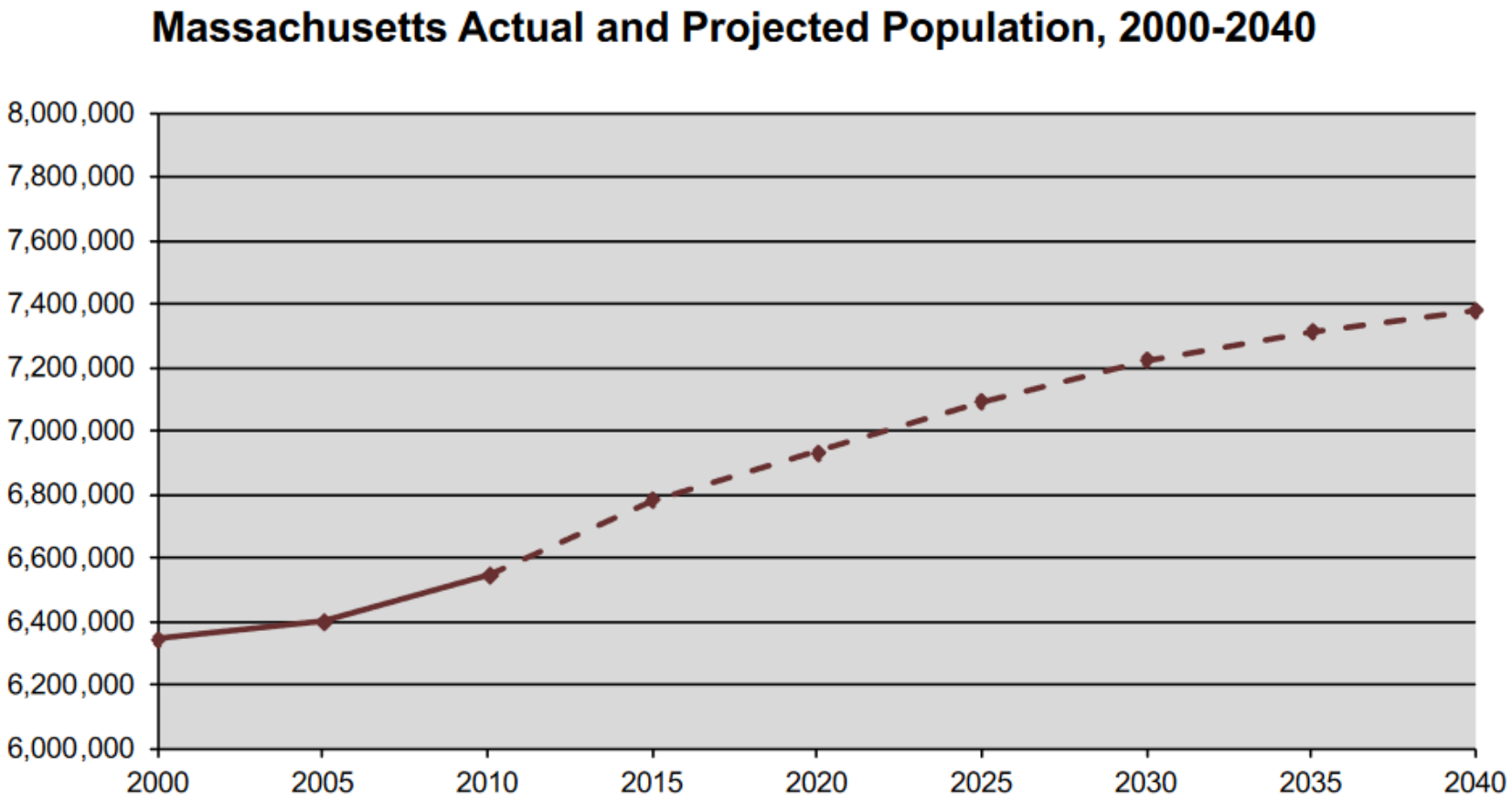


"But travel times have grown in low-density places outside of the Boston region as well…**increased roadway volumes are slowing drivers down all over the state**."

Congestion in the Commonwealth, Report to the Governor, 2019, MassDOT

Source: U.S. Bureau of Labor Statistics

Economic & Population Surge = Congestion



"After decades of little or no growth, the Commonwealth is projected to have significantly more people, homes, and jobs by 2040: **approximately 600,000 new residents between now and 2040**."

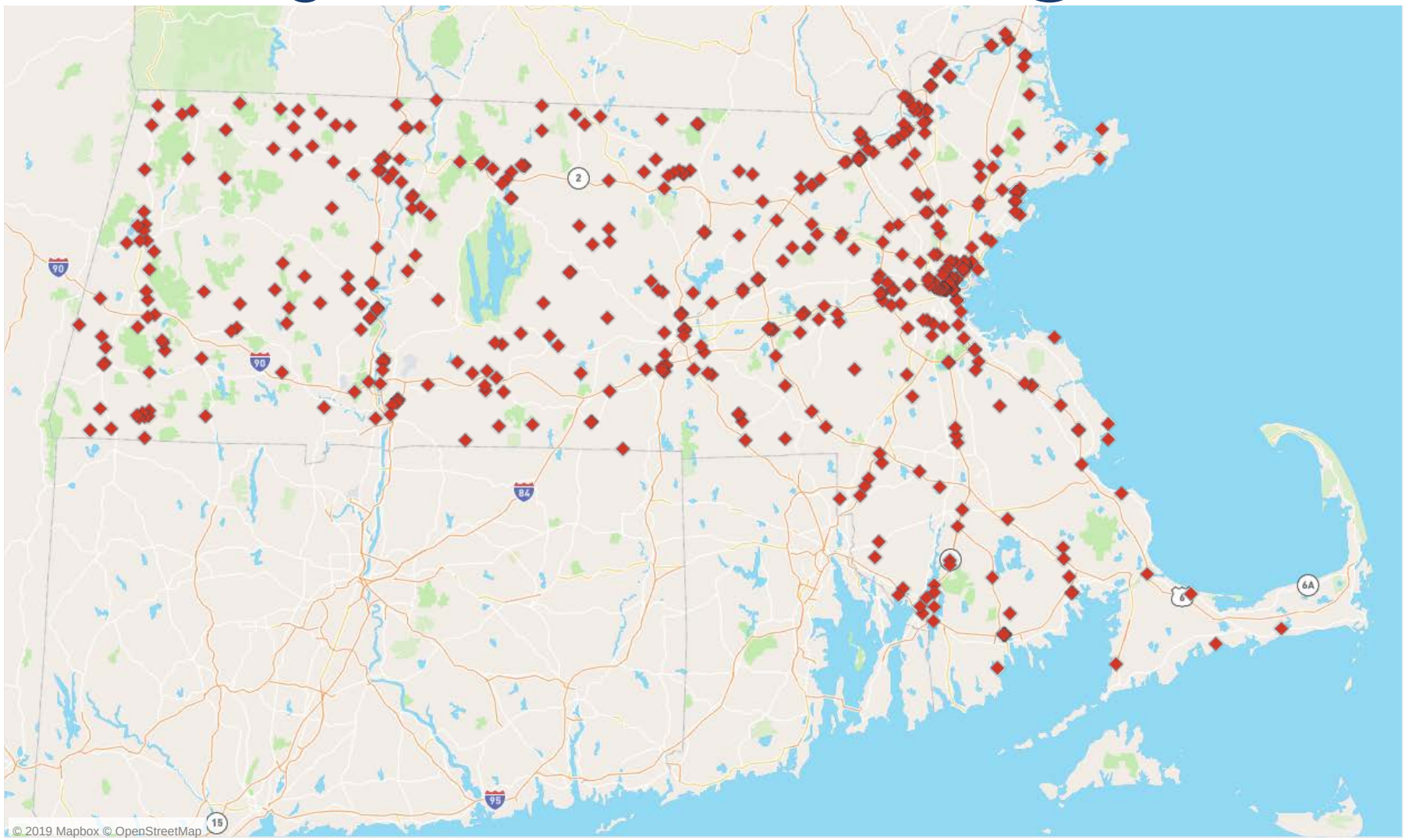
Commission on the Future of Transportation in the Commonwealth, 2018

Source: UMass Donahue Institute, Long-Term Population Projections for Massachusetts Regions and Municipalities

Infrastructure Condition

Historical underinvestment in some areas has resulted in poor conditions

Structurally Deficient Bridges



Source: Federal Highway Administration, National Bridge Inventory, 2018

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Structurally Deficient Bridges

State	% of Bridge Roadway Rated Poor
Rhode Island	23.9%
West Virginia	14.0%
Connecticut	11.9%
Massachusetts	**11.8%**
Illinois	11.1%
New York	10.1%
Iowa	10.1%
Michigan	9.3%
North Carolina	9.1%
Wyoming	9.1%

Nearly 500 bridges in MA, totaling almost 12% of bridge roadways, are rated poor. This is the **4th worst in the country.**

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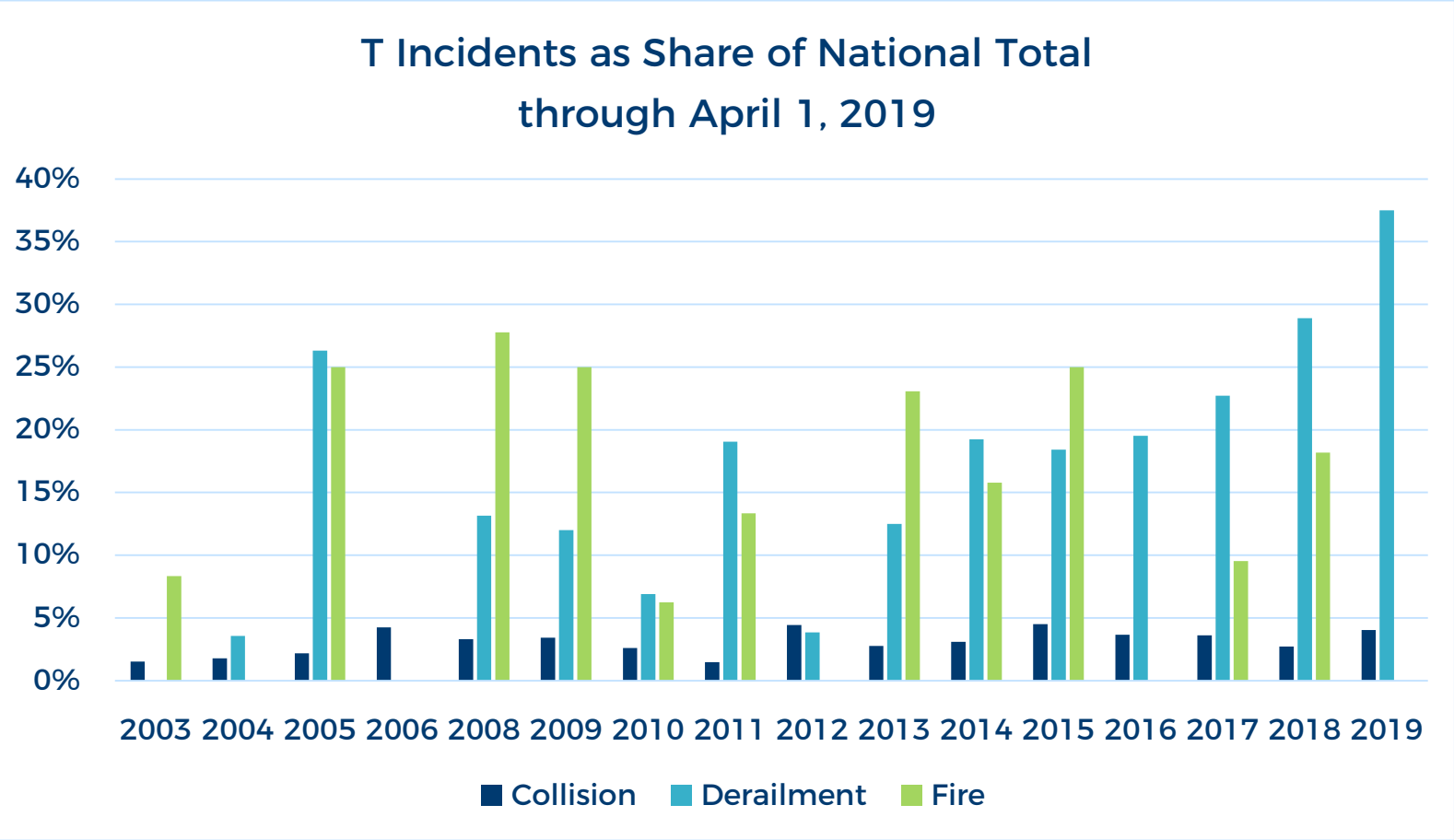
Source: Federal Highway Administration, National Bridge Inventory, 2018

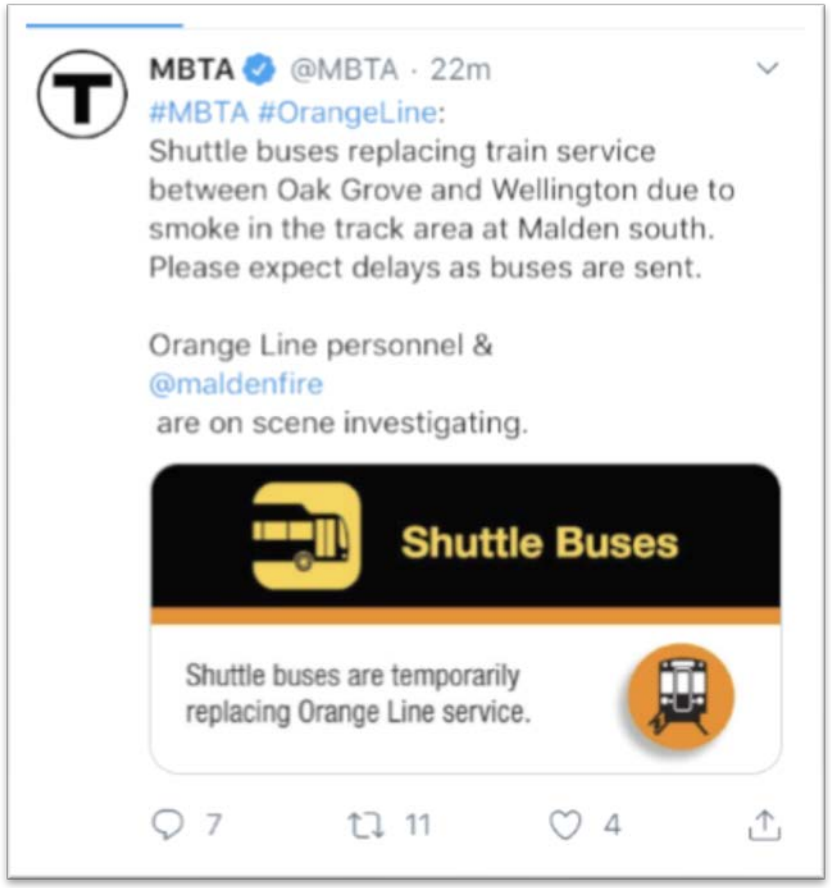
MBTA Incidents



The MBTA experiences a **disproportionate share of derailments** compared to other transit systems nationally.

Source: Federal Transit Administration, National Transit Database, Safety & Security Major-Only Time Series Data, April 2019, reported 8/1/19

Equipment/Mechanical Delays, September

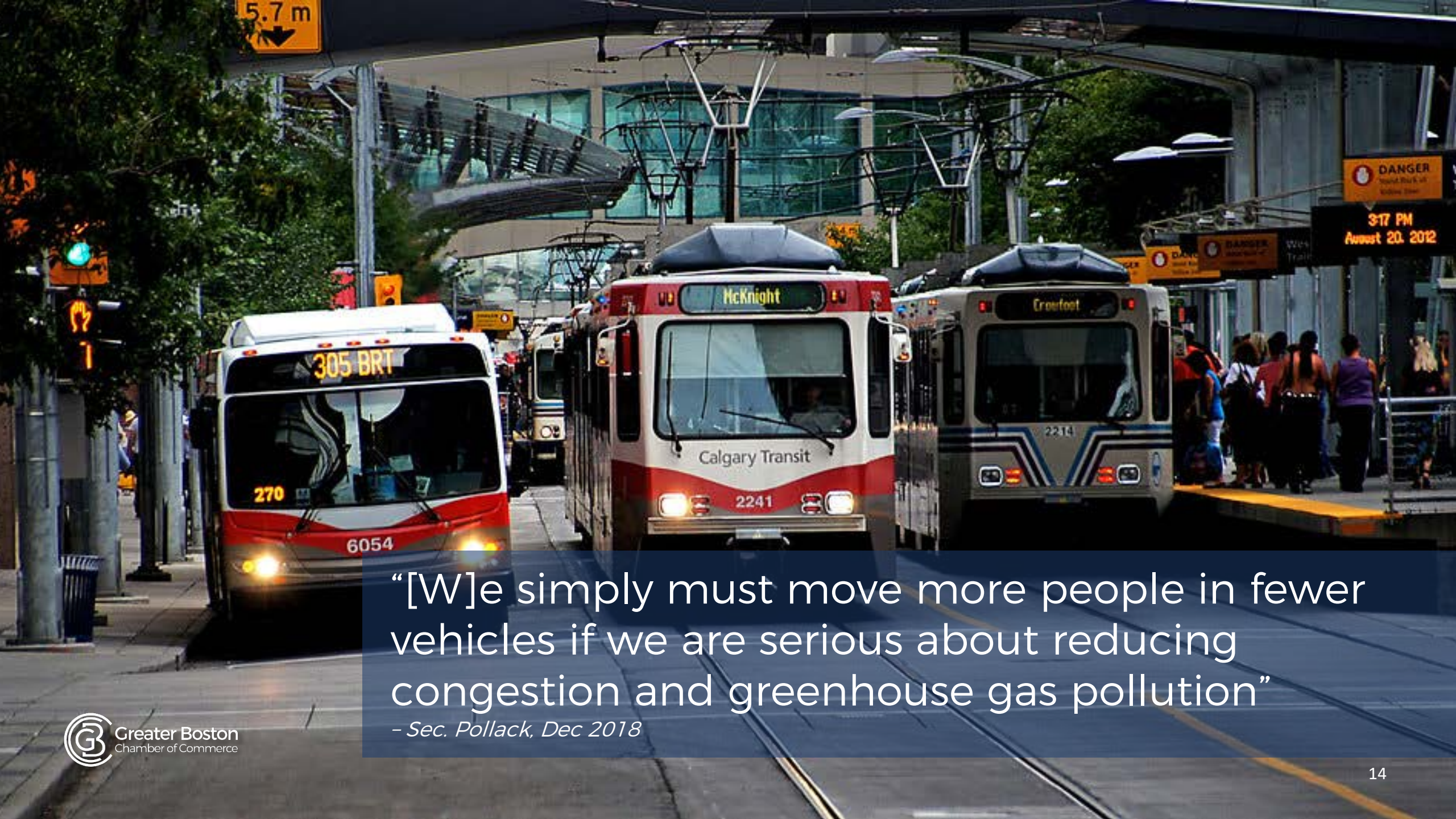


Source: MBTA and MBTA Commuter Rail Twitter feeds, September 1-18, 2019.


MBTA Commuter Rail @MBTA_CR
Providence Train 800 (5:00 am from Providence) is operating 5-15 minutes behind schedule between Providence and South Station due to a mechanical issue.
5:12 AM · Sep 11, 2019 · TweetDeck
MBTA @MBTA
Orange Line trains entering/departing Oak Grove experiencing delays of up to 10 minutes because of a signal problem. Some northbound trains may stand at or between stations.
3:42 PM · Sep 12, 2019 · mbta-send-tweet-app
MBTA @MBTA
Westbound Green Line D trains delayed 15 minutes as we remove a train from service with its brakes holding at Hynes.
9:33 PM · Sep 11, 2019 · mbta-send-tweet-app
MBTA @MBTA
#MBTA #BlueLine: Delays of up to 10 minutes due to a signal problem near Beachmont on the westbound.
10:02 AM · Sep 12, 2019 · TweetDeck
MBTA @MBTA
Orange Line trains skip Sullivan Square because of insufficient lighting caused by a power problem
10:01 PM · Sep 9, 2019 · mbta-send-tweet-app
MBTA Commuter Rail @MB... · Sep 10
Update: Middleborough Train 023 (5:57 pm from South Station) is now operating 10-15
MBTA @MBTA
Blue Line experiencing delays of up to 20 minutes due to disabled train at Maverick westbound.
12:34 AM · Sep 10, 2019 · mbta-send-tweet-app
MBTA Commuter Rail @MBT... · Sep 4
Worcester Train 514 (10:35 am from Worcester) is operating 5-15
MBTA @MBTA
Orange Line trains delayed 15 minutes because of a train at North Station with an air problem. Some trains standing at stations.
4:43 PM · Sep 10, 2019 · mbta-send-tweet-app
MBTA Commuter Rail @MBTA_CR
Rockport Train 104 (6:30 am from Rockport) has not yet departed Rockport and is currently 15-25 minutes behind schedule due to a mechanical issue.
6:45 AM · Sep 13, 2019 · Sprout Social
#MBTA #RedLine - Braintree Branch: Delays of up to 10 minutes due to a train with a mechanical problem.
The train will be taken out of service at JFK/UMass.
6:30 AM · Sep 12, 2019 · TweetDeck
MBTA @MBTA
Northbound Red Line trains delayed up to 15 minutes because of a train with a door problem at Harvard.
01 PM · Sep 11, 2019 · mbta-send-tweet-app
MBTA @MBTA
Northbound Red Line trains may experience a gap in service because of train with a mechanical problem at Andrew
2:47 PM · Sep 10, 2019 · mbta-send-tweet-app
MBTA @MBTA · Sep 2
#OrangeLine: Delays to a disabled train at Mass Ave.
MBTA @MBTA · Sep 7
MBTA @MBTA · Sep 5
Middleborough/Lakeville) is operating 5-15 minutes behind schedule between Holbrook/Randolph and South Station due to a door operating issue.

Future-Ready System

Need to adapt to pressures and changes in climate, economy, and technology



"[W]e simply must move more people in fewer vehicles if we are serious about reducing congestion and greenhouse gas pollution"

– Sec. Pollack, Dec 2018

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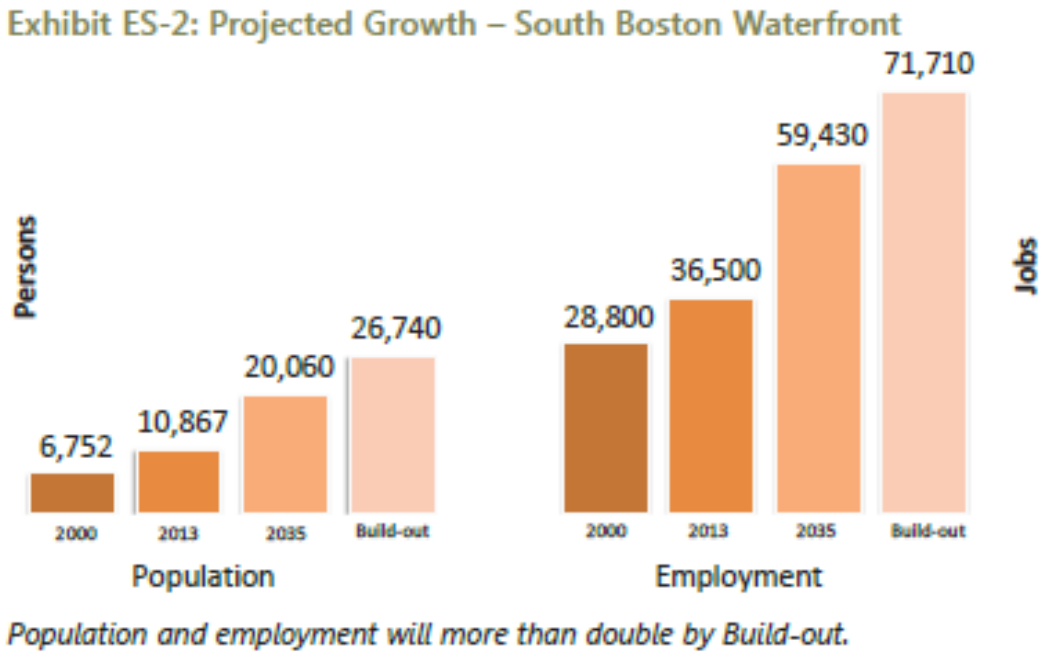
Future Ready System

- Climate
  - Transportation accounts for largest share of emissions
- Economy and commerce
  - Existing and future job and activity centers
  - Shift to e-commerce = more delivery traffic
- Technology
  - 80 million TNC rides in MA in 2018
  - Mobility as a service



Source: South Boston Waterfront Sustainable Transportation Plan, Jan 2015

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Future Ready System Needs

- **Climate Resiliency**
  - The current CIP is limited to planning for climate resilient infrastructure; it does not adapt existing or fund specific climate resiliency initiatives.
- **Decarbonization/electrification**
  - Meeting the state's carbon emission goals in the Global Warming Solutions Act will require widespread adoption of carbon-neutral vehicles for the MBTA and MassDOT. Electrification of the commuter rail may also be required to meet the emission goals.
- **Municipal Roadways**
  - Bond bill authorizes (but does not commit) $100 million over 10 years for additional municipal roadway funding.
- **Regional Rail**
  - The Commuter Rail Vision project is charged with making recommendations to reinvent the MBTA commuter rail system.
- **Additional Rail Expansion**
  - The capital plan does not include funding for construction and, in many cases, design of additional rail expansion projects that have been proposed. This includes the South Station Expansion, Red-Blue connector, additional extensions of the Green Line, and a potential east-west rail connection with Springfield and Boston.

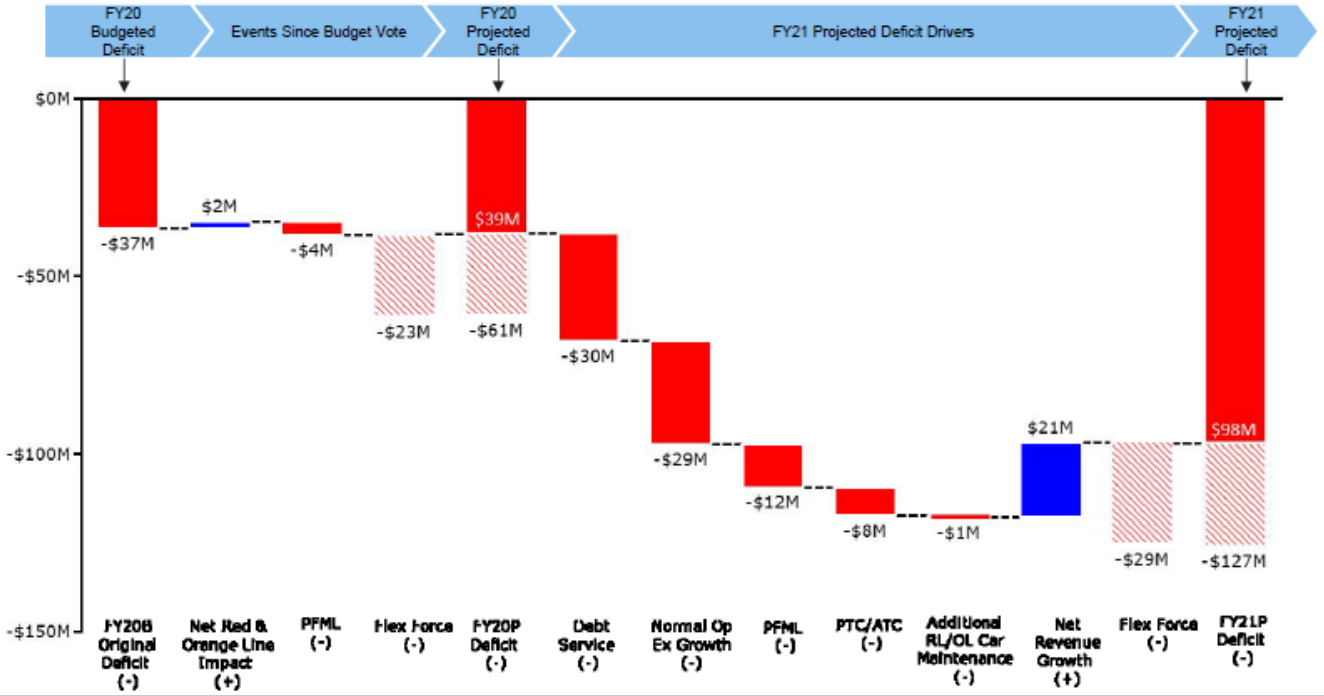
Long-Term Gaps

Financial projections show capital and operating gaps in the future, even without additional investments

MBTA Operating Gap in 2020 and 2021

FY19 Operating Budget Summary

Budget Drivers: FY20-21



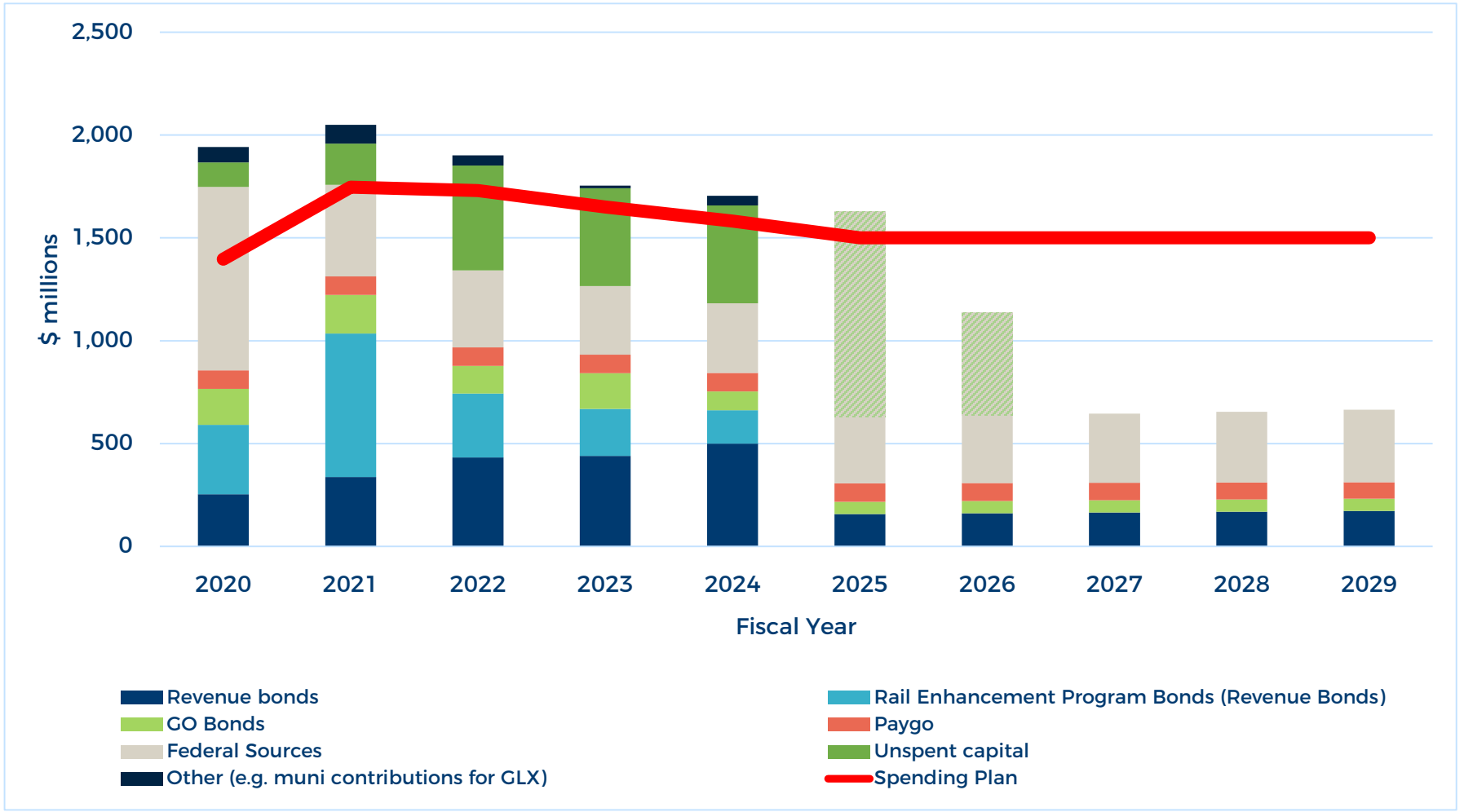
Draft for Discussion and Policy Purposes Only 18

*Due to rounding, numbers presented throughout this slide may not add up precisely to the totals provided

The MBTA projects **operating deficits of $39 million and $98 million** for FYs 2020 and 2021.*

*At the FMCB meeting on October 7, 2019, the FY 2020 projected deficit was increased to $53 million. No updated projection was provided for FY 2021.
Source: FY19 Operating Budget, Fiscal Year 2019 Financial Review, Report to Fiscal and Management Control Board, August 12, 2019.

MBTA Capital Gap by 2025



Operating deficits and other factors will affect **capital spending capacity**.

Source: Massachusetts Taxpayers Foundation, based on Green Line Extension Finance Plan, MBTA CIPs, and MTF's own analysis

MassHighway Funding Gap (2019-2028)

	Need	Gap
State-owned bridges	$6.5 billion	$2.9 billion
Non-interstate Pavement	$2.25 billion	$1.2 billion
Tunnels	$1.43 billion	$0.4 billion
Operations, Maintenance & Debt Service	-	$2.0 billion ($0.5-3.9 billion)*
Total		**$6.5 billion**

Source: A Better City, An Update on Transportation Finances, based on analysis of MassDOT financial documents, Asset Management Reports, expected expenditures.

*Based on projection models from the UMass Donahue Institute. The $2 billion estimate uses the baseline assumptions.

Unfunded Major Projects

Congestion	Infrastructure Condition	Future Ready System
I-495 – I-90 Interchange **$300-$400 million**	Cape Cod Bridge Projects **$1 billion**	North-South Rail Link **$8-18 billion**
South Station Expansion **$1.4 billion**	Identified Bridge Repair Gap **$2.9 billion**	Rail Vision Recommendations **$3-33 billion**
I-90 Allston Multi-Modal **$1.1 billion**	Pavement Repair Backlog **$1.4 billion** (2014)	Electrified Bus System **$1 billion Infrastructure** **$2 billion on Buses**
West Station **$95 million**	I-91 Reconstruction **?**	Red-Blue Connector **$200-350 million**

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*Not a comprehensive list. Most recent cost in public documents, in some cases costs have increased since completion of study

What are the **impacts** and **risks** of leaving these **unaddressed**?

“…congestion is now reducing access to jobs in Greater Boston, particularly within I-495…”

Congestion in the Commonwealth, Report to the Governor

"Weather not only wears on infrastructure, but **infrastructure has physical reactions to extreme weather** conditions."

Commission on the Future of Transportation in the Commonwealth

"At the rate of bridge investment proposed by the 19-23 CIP, MassDOT **does not expect to achieve the 10% condition threshold within the next five years**."

2018 Performance and Asset Management Advisory Council Annual Report

The state's competitiveness is at risk as **25 other states have increased their investments in transportation infrastructure** since 2014.

"[A]n aging and **crumbling transportation system** is not only slowing Americans down, it's **reducing productivity**, undermining our ability to move products across the country and around the world, and **increasing congestion and air pollution**."

U.S Chamber of Commerce

What can be done?

Ramp Up Capacity & Workforce Planning

Implement short- and long-term plans to get projects out the door successfully

Oversight

Ensure the state can meet its goals

Leverage Technology & Employers

Additional tools to address challenges

Future-Ready Revenues

Link pricing and behavior and prepare for changes driven by technology and innovation

Link Revenue to Investments

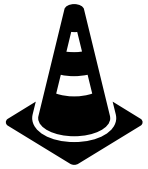
Allocate revenues to priority areas

Ramp Up Capacity & Workforce Planning

Project Delivery in the Bond Bill

Public Private Partnerships (P3s)

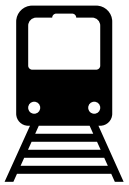
Agreements with private entities to construct assets that the agency(ies) manage



Procurement

Can use a cost-plus-time procurement method for projects

Public bidding threshold increase to $100k



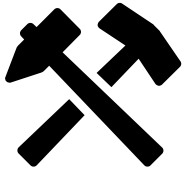
Personnel

New positions and job descriptions

Contracting

Flexibility in contracting, including “best value” options instead of requiring low-cost awards

Bulk job orders to perform maintenance and other tasks



Allow a single contractor for the full process or any combination of: engineering, designing, building, financing operation, and maintenance of infrastructure, technology, and services

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Workforce Planning

- Supplement project delivery capacity
  - Broader use of Owner's Project Managers (OPMs)
- Determine obstacles to building internal capacity
  - Once pinpointed, determine whether MassDOT/MBTA has ability to make needed changes
- Implement the changes or determine split between internal/external execution

Oversight

MBTA Governance

- Retain aspects of the FMCB that added the most value, including dedicated board, regular public reporting, and external strategic guidance for the T
- Staggered terms to provide consistency across GMs and administrations
- Strong General Manager system

Monitoring Results

- Annual public transportation oversight hearing by Legislature
- Taxpayer board to ensure spending is executed as designed in legislation (Los Angeles Model)

Leverage Technology & Employers

Transportation Technology Transformation Initiative (T3I)

- Create an accelerator specifically for using technology to solve transportation problems
  - Modeled after Transit Tech Lab, a public-private partnership and accelerator in NYC
- Recommended by the Commission on the Future of Transportation
  - "…leverage private resources to solve some of Massachusetts' intractable transportation problems by fostering collaboration through targeted public investments."

Employer Mobility Programs

- Transportation Management Associations
- Commute
  - Telework programs; flexible hours or shifts
  - Coordinate car/vanpools; provide carpools with preferential parking
- Cost
  - Pre-tax transit benefits
  - Charge parking fees
- Rideshare
  - Create corporate rideshare/carshare accounts
  - Existing State Rideshare Program
- Employer Mobility Challenge

Future-Ready Revenues

From Concept to Cutting Edge

- Create a plan for a robust, high-tech, statewide electronic system that is flexible and can adapt to tolls, demand pricing, congestion pricing, and more
- Use a one-year formal process to create a comprehensive plan including:
  - Where to place gantries
  - How to price
  - What can be done within limits for federal highway tolling

21st Century Roadway Pricing Task Force

- Identify physical, technological, and legal requirements for statewide tolling
- Create tolling scenarios that include:
  - Annual revenue estimates
  - Options within limits for federal highway tolling
  - Cost to administer/net revenue ratio estimate
  - Cost to implement
  - Geographic and economic equity impacts
  - Long-term considerations
  - Effect on region's affordability and emissions

21st Century Roadway Pricing Task Force

- Limited to 1 year, with a set deadline for recommendations (e.g. Dec 1, 2020)
- Private citizen co-chairs appointed by Speaker and Senate President
- Members may include:
  - elected officials; Sec. of Transportation; business/employer representatives; subject matter experts (engineer, planner, environmental, financial, cybersecurity, etc.)
- Consider outside consultant to manage project

Gas Tax

Challenge Addressed	Congestion; Future-Ready
Behavior Influence	May discourage driving or encourage carpooling, both of which can decrease congestion and reduce emissions that drive climate change
Estimated Revenue	$30 million per 1¢ increase
Long-Term Revenue Considerations	Improving fuel economy/MPGs; effect of shift to electric vehicles
Impact on Users	Equity concerns – geographical because it is tied to distance and social because it is regressive
Implementation Difficulty	Easily implemented with a high net revenue (i.e. low administrative costs to the state)
Other Notes	Gas tax revenues are dedicated to transportation Federal gas tax debate

Transportation & Climate Initiative (TCI)

Challenge Addressed	Congestion; Future-Ready
Behavior Influence	May discourage driving or encourage carpooling, both of which can decrease congestion and reduce emissions that drive climate change
Estimated Revenue	Total ranges from $150 million to $450 million based on a 5¢ to 15¢ gas tax increase Bond bill authorizes up to ½ for transportation, so $75 million to $225 million
Long-Term Revenue Considerations	Improving fuel economy/MPGs; effect of shift to electric vehicles; agreement with multi-state consortium
Impact on Users	Framework suggests it will be a gas tax in effect (levied on "fossil component of finished motor gasoline and on-road diesel fuel") Equity concerns that are the same as gas tax
Implementation Difficulty	Requires agreement among several states on numerous items like rate, the point at which the tax/fee is applied, and the distribution of funds among states
Other Notes	Revenues may be split to support three policy areas – transportation, climate preparedness, and emissions reductions Layered on existing gas tax

MA Gas Tax Context

State	Gas Tax - Fuel	Gas Tax – Diesel
New Hampshire	23.83¢	23.83¢
Massachusetts	26.54¢	26.54¢
Vermont	30.94¢	32¢
Rhode Island	35¢	35¢
Connecticut	39.31¢	46.5¢
New York	45.41¢	45.05¢
Federal	18.4¢	24.4¢

The U.S. Chamber of Commerce is advocating to increase the federal gas tax by 25¢ over five years.

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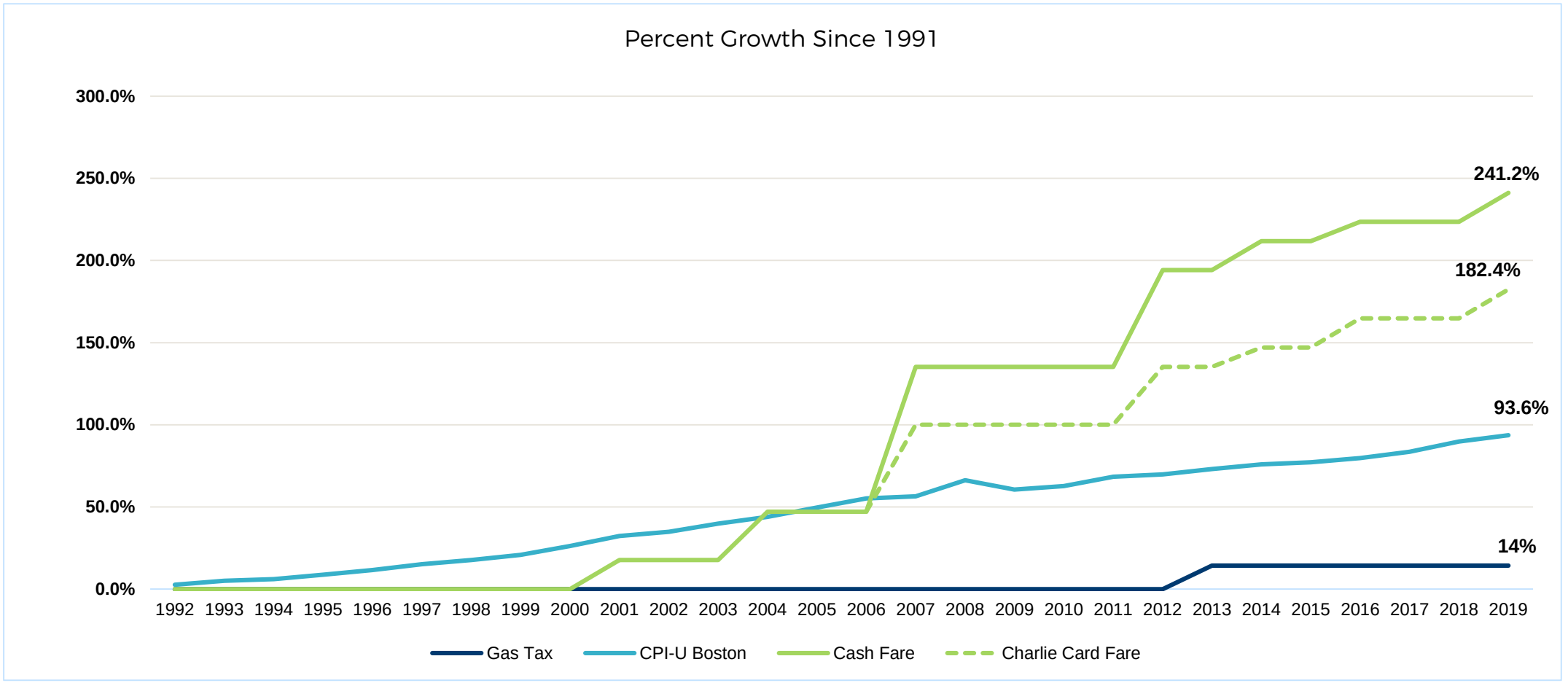
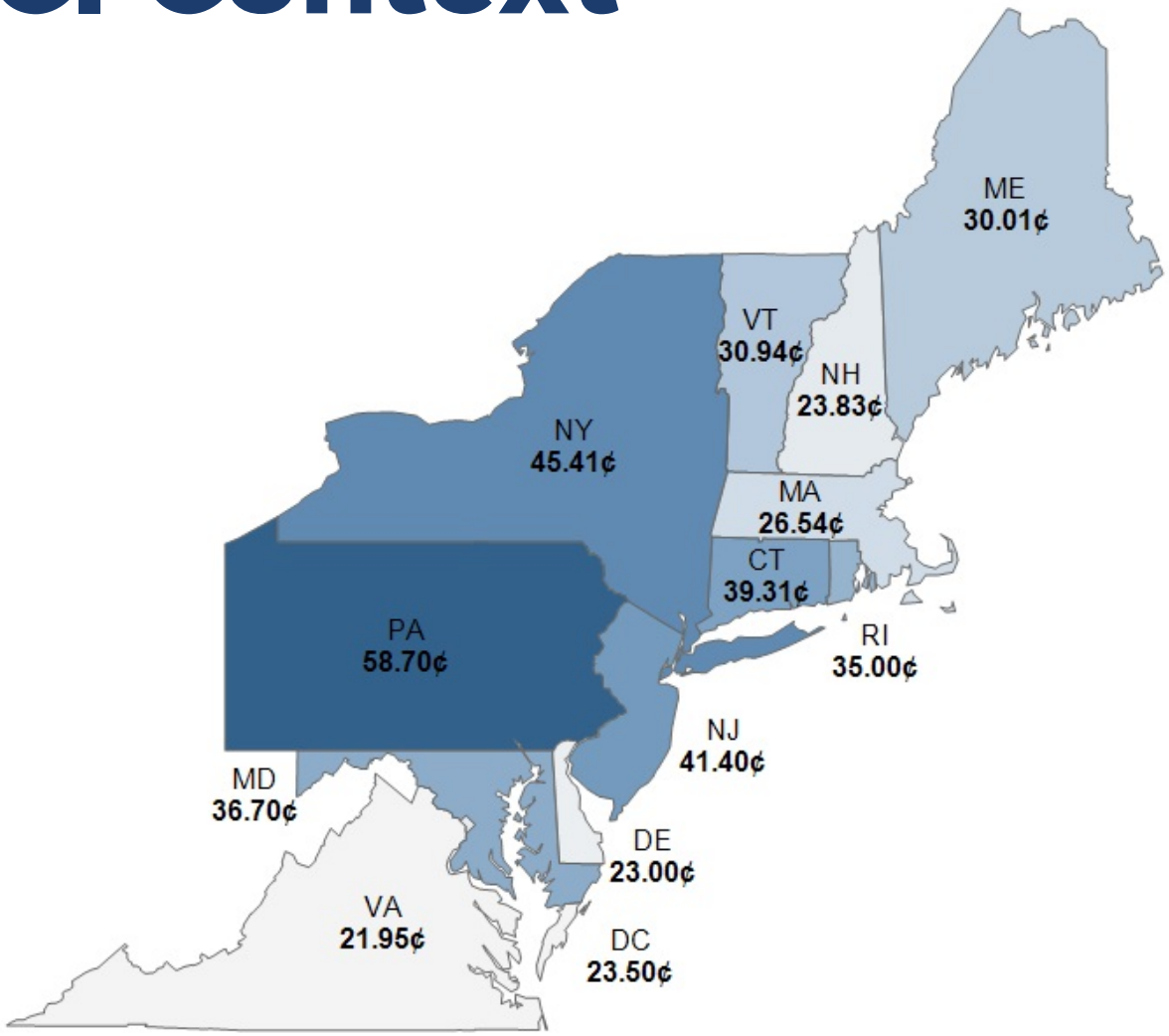
Gas tax rates include Underground Storage Tank and other fees.

MA Gas Tax Context



Source: BLS CPI-U Boston Metro Area, July, Not Seasonally Adjusted
Gas tax excludes the Underground Storage Tank Fee, MBTA Fare for One-Way Rapid Transit Trip

TCI Context



The earliest implementation for TCI is 2022 and some states in the TCI consortium have gas taxes significantly higher than MA's, which may impact rate decisions. For example, Pennsylvania's gas tax is more than double the MA gas tax.

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Gas Tax Increase

Increase	Revenue Gas Tax	Maximum Transportation Revenue TCI*
5¢	$150 Million	$75 Million
10¢	$300 Million	$150 Million
15¢	$450 Million	$225 Million
20¢	$600 Million	$300 Million
25¢	$750 Million	$375 Million

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*Represents the TCI revenue directed to transportation efforts in the Governor's Bond Bill. TCI revenue is intended to be spent on infrastructure improvements that would reduce emissions or make transportation more climate resilient.

TNC (Ride Share) Fees

Challenge Addressed	Congestion; Future-Ready
Behavior Influence	Encourage shared riding among ride-share users (rather than solo rides); reduce “deadhead” driving
Estimated Revenue	Per ride fare would be based on approx. 81 million TNC rides that originated in MA in 2018
Long-Term Revenue Considerations	Ride share use is increasing so revenue may rise; depends on viability of TNC in long-term
Impact on Users	May affect users who have limited transportation alternatives
Implementation Difficulty	Requires changing current 20¢ per ride fee; collection method unchanged
Other Notes	Logan Airport implemented new TNC fees and pickup/dropoff locations

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TNC stands for Transportation Network Companies, which are ride share services.

TNC Fees

Trip Type	Solo	Example	Shared	Example
Standard	Base Fee	$1	¼ Base	25¢ per shared rider
Luxury Car Surcharge	2X base	$2	N/A	N/A
Peak Hours 8-10am & 4-6pm	3X Base	$3 for standard $5 for luxury	.75X Base	75¢ per shared rider

TNC Distribution :

- 10% on trip-originating city infrastructure
- 10% to Commonwealth Transportation Fund
- 80% to public transit (MBTA & RTAs)

TNC Fees

Base Fee	Low-End Annual Revenue Estimate* (80M rides)	What it pays for
20¢ (Current)	$16M	$8 Million to Municipal Infrastructure $4 Million to Taxi Industry** $4 Million to Commonwealth Transportation Fund
$1	$80 M	$8 Million to Municipal Infrastructure $8 Million to Commonwealth Transportation Fund $64 Million to Transit
$1.20	$96 M	$9.6 Million to Municipal Infrastructure $9.6 Million to Commonwealth Transportation Fund $76.8 Million to Transit
$1.70	$136 M	$13.6 Million to Municipal Infrastructure $13.6 Million to Commonwealth Transportation Fund $108.8 Million to Transit
$2.20	$176M	$17.6 Million to Municipal Infrastructure $17.6 Million to Commonwealth Transportation Fund $140.8 Million to Transit

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*Low end annual revenue estimate assuming 80 million solo trips at the base fare

**Massachusetts is the only state that directs TNC revenue to the taxi industry. The fee for the taxi industry will be redirected to the Commonwealth Transportation Fund after January 1, 2022. The entire fee will sunset on January 1, 2027.

Bonding Capacity

New Annual Revenue	New Revenue Bond Capacity (one-time)	New GO Bond Capacity (one-time)
$10 million	$153.8 million	$192.3 million
$100 million	$1.54 billion	$1.92 billion
$250 million	$3.85 billion	$4.81 billion
$500 million	$7.96 billion	$9.62 billion
$750 million	$11.54 billion	$14.42 billion
$1 billion	$15.38 billion	$19.23 billion

Assumes 30-year bonds, 5% coupon AA- rating or better, and revenue bonds will have 1.25x debt service coverage requirement

Revenue Structure

Roadway Pricing	TBD based on findings of Roadway Pricing Task Force
Gas Tax	Increase 15¢ over three years; open to 2¢ diesel split
TCI	Depending of design of the program, a maximum of 10¢, not in lieu of gas tax
TNC	Increase per ride fee to between $1.20 to $1.70 Additional surcharge for luxury rides Additional surcharge during peak travel periods Fee would be passed along to rider
Equity	Equity, both geographic and social, comes from how revenue is spent as well as how it is raised

Link Revenue to Investments

Where the revenue is distributed

New revenue linked to specific investment allocations, such as:

- public transit expansion and modernization;
- climate adaptability;
- state highways and local roads; and
- fare balancing for MBTA.

For more information, please contact:

James E. Rooney, President & CEO
Carolyn Ryan, Senior Vice President, Policy & Research, cryan@bostonchamber.com
Ben Stuart, Senior Research & Data Analyst, bstuart@bostonchamber.com

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