Greater Boston Chamber of Commerce
Transportation Policy Agenda
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

“It 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*

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**Job Growth in Boston Metro Area**

Source: U.S. Bureau of Labor Statistics
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
Structurally Deficient Bridges

<table>
<thead>
<tr>
<th>State</th>
<th>% of Bridge Roadway Rated Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhode Island</td>
<td>23.9%</td>
</tr>
<tr>
<td>West Virginia</td>
<td>14.0%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>11.9%</td>
</tr>
<tr>
<td><strong>Massachusetts</strong></td>
<td><strong>11.8%</strong></td>
</tr>
<tr>
<td>Illinois</td>
<td>11.1%</td>
</tr>
<tr>
<td>New York</td>
<td>10.1%</td>
</tr>
<tr>
<td>Iowa</td>
<td>10.1%</td>
</tr>
<tr>
<td>Michigan</td>
<td>9.3%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>9.1%</td>
</tr>
<tr>
<td>Wyoming</td>
<td>9.1%</td>
</tr>
</tbody>
</table>

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

Source: Federal Highway Administration, National Bridge Inventory, 2018
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.
Source: MBTA and MBTA Commuter Rail Twitter feeds, September 1-18, 2019.

Equipment/Mechanical Delays, September
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
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
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.
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.

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)

<table>
<thead>
<tr>
<th>Category</th>
<th>Need</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-owned bridges</td>
<td>$6.5 billion</td>
<td>$2.9 billion</td>
</tr>
<tr>
<td>Non-interstate Pavement</td>
<td>$2.25 billion</td>
<td>$1.2 billion</td>
</tr>
<tr>
<td>Tunnels</td>
<td>$1.43 billion</td>
<td>$0.4 billion</td>
</tr>
<tr>
<td>Operations, Maintenance &amp; Debt Service</td>
<td>-</td>
<td>$2.0 billion ($0.5-3.9 billion)*</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$6.5 billion</strong></td>
</tr>
</tbody>
</table>

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

### Unfunded Major Projects

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

*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

**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
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

<table>
<thead>
<tr>
<th>Challenge Addressed</th>
<th>Congestion; Future-Ready</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior Influence</td>
<td>May discourage driving or encourage carpooling, both of which can decrease congestion and reduce emissions that drive climate change</td>
</tr>
<tr>
<td>Estimated Revenue</td>
<td>$30 million per 1¢ increase</td>
</tr>
<tr>
<td>Long-Term Revenue Considerations</td>
<td>Improving fuel economy/MPGs; effect of shift to electric vehicles</td>
</tr>
<tr>
<td>Impact on Users</td>
<td>Equity concerns – geographical because it is tied to distance and social because it is regressive</td>
</tr>
<tr>
<td>Implementation Difficulty</td>
<td>Easily implemented with a high net revenue (i.e. low administrative costs to the state)</td>
</tr>
<tr>
<td>Other Notes</td>
<td>Gas tax revenues are dedicated to transportation Federal gas tax debate</td>
</tr>
<tr>
<td><strong>Challenge Addressed</strong></td>
<td>Congestion: Future-Ready</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><strong>Behavior Influence</strong></td>
<td>May discourage driving or encourage carpooling, both of which can decrease congestion and reduce emissions that drive climate change</td>
</tr>
<tr>
<td><strong>Estimated Revenue</strong></td>
<td>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</td>
</tr>
<tr>
<td><strong>Long-Term Revenue Considerations</strong></td>
<td>Improving fuel economy/MPGs; effect of shift to electric vehicles; agreement with multi-state consortium</td>
</tr>
<tr>
<td><strong>Impact on Users</strong></td>
<td>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</td>
</tr>
<tr>
<td><strong>Implementation Difficulty</strong></td>
<td>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</td>
</tr>
<tr>
<td><strong>Other Notes</strong></td>
<td>Revenues may be split to support three policy areas – transportation, climate preparedness, and emissions reductions. Layered on existing gas tax</td>
</tr>
</tbody>
</table>
### MA Gas Tax Context

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

<table>
<thead>
<tr>
<th>State</th>
<th>Gas Tax - Fuel</th>
<th>Gas Tax – Diesel</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Hampshire</td>
<td>23.83¢</td>
<td>23.83¢</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>26.54¢</td>
<td>26.54¢</td>
</tr>
<tr>
<td>Vermont</td>
<td>30.94¢</td>
<td>32¢</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>35¢</td>
<td>35¢</td>
</tr>
<tr>
<td>Connecticut</td>
<td>39.31¢</td>
<td>46.5¢</td>
</tr>
<tr>
<td>New York</td>
<td>45.41¢</td>
<td>45.05¢</td>
</tr>
<tr>
<td>Federal</td>
<td>18.4¢</td>
<td>24.4¢</td>
</tr>
</tbody>
</table>

Gas tax rates include Underground Storage Tank and other fees.
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
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.
Gas Tax Increase

<table>
<thead>
<tr>
<th>Increase</th>
<th>Revenue Gas Tax</th>
<th>Maximum Transportation Revenue TCI*</th>
</tr>
</thead>
<tbody>
<tr>
<td>5¢</td>
<td>$150 Million</td>
<td>$75 Million</td>
</tr>
<tr>
<td>10¢</td>
<td>$300 Million</td>
<td>$150 Million</td>
</tr>
<tr>
<td>15¢</td>
<td>$450 Million</td>
<td>$225 Million</td>
</tr>
<tr>
<td>20¢</td>
<td>$600 Million</td>
<td>$300 Million</td>
</tr>
<tr>
<td>25¢</td>
<td>$750 Million</td>
<td>$375 Million</td>
</tr>
</tbody>
</table>

*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

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

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

<table>
<thead>
<tr>
<th>Trip Type</th>
<th>Solo</th>
<th>Example</th>
<th>Shared</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard</strong></td>
<td>Base Fee</td>
<td>$1</td>
<td>¼ Base</td>
<td>25¢ per shared rider</td>
</tr>
<tr>
<td><strong>Luxury Car Surcharge</strong></td>
<td>2X base</td>
<td>$2</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Peak Hours 8-10am &amp; 4-6pm</td>
<td>3X Base</td>
<td>$3 for standard</td>
<td>.75X Base</td>
<td>75¢ per shared rider</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Base Fee</th>
<th>Low-End Annual Revenue Estimate* (80M rides)</th>
<th>What it pays for</th>
</tr>
</thead>
</table>
| 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 |

*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

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

<table>
<thead>
<tr>
<th>New Annual Revenue</th>
<th>New Revenue Bond Capacity (one-time)</th>
<th>New GO Bond Capacity (one-time)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10 million</td>
<td>$153.8 million</td>
<td>$192.3 million</td>
</tr>
<tr>
<td>$100 million</td>
<td>$1.54 billion</td>
<td>$1.92 billion</td>
</tr>
<tr>
<td>$250 million</td>
<td>$3.85 billion</td>
<td>$4.81 billion</td>
</tr>
<tr>
<td>$500 million</td>
<td>$7.96 billion</td>
<td>$9.62 billion</td>
</tr>
<tr>
<td>$750 million</td>
<td>$11.54 billion</td>
<td>$14.42 billion</td>
</tr>
<tr>
<td>$1 billion</td>
<td>$15.38 billion</td>
<td>$19.23 billion</td>
</tr>
</tbody>
</table>
## Revenue Structure

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

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Ben Stuart, Senior Research & Data Analyst, bstuart@bostonchamber.com