Massachusetts Bay Transportation Authority

Report from the General Manager

Fiscal and Management Control Board
May 11, 2020
## Safety Initiatives Update

### Strengthen Safety Culture
- Implement a Safety Management System
  - Transit Safety Plan development is on track
  - The plan will be presented to the FMCB for approval in June
- Align MBTA around safety as a core value
  - Strategic Planning Committee is working with the Safety Initiatives project management team to ensure proper alignment with Strategic Plan

### Perform Preventative Maintenance and Inspections at the Highest Level and Establish a QA/QC Department
- Perform an independent inspection of Power, Right of Way, and Track Conditions
  - All inspections have been completed
  - All immediate risks/defects have been addressed
- Calibrate all tools and components at all facilities
  - All tool calibration is up to date
  - Tools are being entered into the Trapeze Asset Management System
  - Calibration Program Procedure is being updated to reflect new process

### Better Inform Employees and the Public About Safety Performance
- Communicate safety performance regularly with employees
  - The GM is sharing regular written and video updates with the workforce on issues related to COVID-19, such as PPE, rear-door boarding, and temperature screening
  - A deep-dive presentation on safety and internal communications will be presented to the FMCB on May 21

### Restructure Safety Department to Meet Goals for Safety Oversight and SMS Implementation
- Hire unfilled positions and subject matter expert positions
  - 22 positions have been approved for hire
  - 6 candidates have accepted offers
  - The search for a new Chief Safety Officer continues
Construction Restart Overview May 2020

Leverage low ridership in May while restrictions are in place due to COVID-19 directives

**Current Ridership**

<table>
<thead>
<tr>
<th>May 2020</th>
<th>June 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL</td>
<td></td>
</tr>
<tr>
<td>-85%</td>
<td></td>
</tr>
<tr>
<td>GL</td>
<td></td>
</tr>
<tr>
<td>-94%</td>
<td></td>
</tr>
<tr>
<td>RL</td>
<td></td>
</tr>
<tr>
<td>-92%</td>
<td></td>
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<tr>
<td>OL</td>
<td></td>
</tr>
<tr>
<td>-91%</td>
<td></td>
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<tr>
<td>CR</td>
<td></td>
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<tr>
<td>-91%</td>
<td></td>
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</table>

**Benefits of Full Closure**

- Advance work now and prevent impacts to businesses and communities when restrictions are lifted
- Accomplish more work in less time*
- Reduce manpower resources needed to accomplish work*

**Ongoing Construction Activity**

- Blue Line (Airport to Bowdoin) 14-Day Closure
  - Harbor Tunnel Infrastructure Improvements
  - May 18-31

- Lowell (N. Station to Anderson) 7-Day Closure
  - Supporting GLX
  - May 18-24

**Efficiency of Approach**

- Usable Work
- Setup/Breakdown Time
- Weekend Diversions
- Continuous Full Closure

*Ongoing Construction Activity*

- Drawbridge Replacement - 2022
- GLX Lechmere Viaduct - 2021

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Report from the General Manager
Blue Line | 14-Day Full Closure

**Airport to Bowdoin**

**Acceleration** | May 18 - 31 (14 Days)

**Track Replacement**: Replace 85-lb rail and install new truck pad  
**Tunnel Repairs**: Structural repairs, crack injection & waterproofing  
**Aquarium Station**: Drainage rehabilitation and work at Long Wharf  
Emergency Egress

**Benefits**
- Decrease rate of tunnel degradation and stray current risk  
- Eliminate current speed restrictions from worn rail  
- Accomplish work while ridership is low and fewer travelers to airport

**Savings** | Reduced Impacts on Riders and Communities

<table>
<thead>
<tr>
<th>Service</th>
<th>Proposed</th>
<th>Weekend Diversions</th>
<th>Savings</th>
</tr>
</thead>
</table>
| **14 Days** | During May 2020 | 120 Days  
7 diversions scheduled over four months | **106 Days Saved** |

**Alternative Service** (private coaches)

1. **Local Shuttles** between Airport and Bowdoin  
2. **Express Shuttles** direct between Airport and Government Center

Total Number of Shuttles (1:1 local and express):
- 74 Weekday
- 21 Weeknight Early Access
- 23 Sat
- 17 Sun

May 2020

**Inbound**

**Outbound**

8,292 Riders Utilizing Transit during COVID-19

*Shuttle coordinators will monitor ridership to ensure adequate number of shuttles are available to support social distancing guidelines*
GLX/Commuter Rail | 7-Day Full Closure

Cost Recovery | May 18 – May 24 (7 Days)

Reducing schedule risks:
- Install two (2) critical cross-track drainage lines beneath Tufts Interlocking in Medford
- Reduces schedule risk to achieving on-time revenue service on the GLX Medford Branch

Savings | Reduced Impacts on Riders and Communities

<table>
<thead>
<tr>
<th>Proposed</th>
<th>Cost Recovery</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Days</td>
<td>$2 Million</td>
<td>$2 Million Saved</td>
</tr>
</tbody>
</table>

Benefits
- Mitigate safety underneath a critical interlocking
- Bring results to riders sooner

Service Impact
- May 18, 2020 – May 24, 2020
  - Full weekday and weekend closure

Alternative Service
- Shuttle Buses provided North Station – Anderson RTC
  - Number of Buses: TBD Weekday | TBD Sat | TBD Sun

Savings | Reduced Impacts on Riders and Communities

- Shuttle coordinators will monitor ridership to ensure adequate number of shuttles are available to support social distancing guidelines
MBTA By the Numbers
MBTA by the Numbers

Red Line
- 218 Vehicles
- 22 Stations/Stops

Green Line
- 206 Vehicles
- 66 Stations/Stops

Orange Line
- 120 Vehicles
- 20 Stations/Stops

Blue Line
- 112 Vehicles
- 12 Stations/Stops

Mattapan Line
- 10 Vehicles
- 8 Stations/Stops

Bus
- 1,055 Vehicles
- 9 Garages
- 7,690 Bus Stops
- 175 Bus Routes
- 3,244 Bus Route Miles

Commuter Rail
- 90 Locomotives
- 137 Stations
- 420 Coaches
- 394 Track Miles
- 5 North Side Lines
- 7 South Side Lines
- Operated by Keolis

Ferry
- 12 Boats (3 owned by the MBTA)
- 7 Terminals
- 3 Routes
- Operated by Boston Harbor Cruises
Employee Availability Is Key Driver of Service Availability

- The MBTA has **6,385 employees**, including 2,683 operators of passenger vehicles.
- The MBTA has 158 overall positive cases among employees:
  - 68 confirmed active cases
  - 8 unconfirmed cases
  - 81 recoveries
  - 1 loss of life
- The MBTA has 1,163 cumulative leaves related to COVID-19:
  - 690 closed cases
  - 473 open cases
- 25% of bus operators are not available on a typical day over the last week; primarily due to COVID-19 related leave
Ridership
Overall Ridership Trends

• **Subway** ridership increased slightly last week but remains. Validations at gated stations averaged about 42,000 last week, about 7% higher than the previous week.

• **Bus** ridership also increased slightly last week. Weekday ridership averaged 93,000 trips last week.

• **Commuter Rail** ridership continues to be very low.

• **The RIDE** trips have declined to a steady 16% of baseline ridership.
Report from the General Manager

Weekday Ridership by Line and Mode - Indexed to Week of 2/24

Estimated % of baseline ridership

- Green Line
- Blue Line
- Orange Line
- Red Line
- Silver Line
- Commuter Rail (mTicket Activations)
- the RIDE trips

3/10: State of Emergency Declared
3/17: Restaurants and bars closed, gatherings limited to 25 people MBTA service reduced
3/24: Non-essential businesses closed
MBTA buses had an average of 392,000 trips during the baseline week.
Bus Ridership: Top 20 Routes

Top 20 Bus Routes Ridership, Baseline (2/24-2/28/20) vs. 5/7/20

<table>
<thead>
<tr>
<th>Route</th>
<th>Baseline, 2/24-2/28/20</th>
<th>7-May-20</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>-77%</td>
<td>77%</td>
</tr>
<tr>
<td>66</td>
<td>-80%</td>
<td>80%</td>
</tr>
<tr>
<td>28</td>
<td>-64%</td>
<td>64%</td>
</tr>
<tr>
<td>23</td>
<td>-68%</td>
<td>68%</td>
</tr>
<tr>
<td>SL5</td>
<td>-63%</td>
<td>63%</td>
</tr>
<tr>
<td>39</td>
<td>-79%</td>
<td>79%</td>
</tr>
<tr>
<td>111</td>
<td>-73%</td>
<td>73%</td>
</tr>
<tr>
<td>32</td>
<td>-78%</td>
<td>78%</td>
</tr>
<tr>
<td>57</td>
<td>-81%</td>
<td>81%</td>
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<tr>
<td>22</td>
<td>-67%</td>
<td>67%</td>
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<tr>
<td>SL3</td>
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<tr>
<td>SL1</td>
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<tr>
<td>70</td>
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<tr>
<td>9</td>
<td>-91%</td>
<td>91%</td>
</tr>
<tr>
<td>116</td>
<td>-74%</td>
<td>74%</td>
</tr>
<tr>
<td>73</td>
<td>-90%</td>
<td>90%</td>
</tr>
<tr>
<td>86</td>
<td>-84%</td>
<td>84%</td>
</tr>
<tr>
<td>SL2</td>
<td>-93%</td>
<td>93%</td>
</tr>
<tr>
<td>16</td>
<td>-78%</td>
<td>78%</td>
</tr>
</tbody>
</table>
Report from the General Manager

Gated Rapid Transit Stations

Daily Validations at Gated Stations, March 24 – May 7

<table>
<thead>
<tr>
<th>Line</th>
<th>Change in validations from baseline to May 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Line</td>
<td>-85.1%</td>
</tr>
<tr>
<td>Green Line</td>
<td>-94.1%</td>
</tr>
<tr>
<td>Orange Line</td>
<td>-91.1%</td>
</tr>
<tr>
<td>Red Line</td>
<td>-91.8%</td>
</tr>
<tr>
<td>Silver Line</td>
<td>-95.2%</td>
</tr>
<tr>
<td>Total Gated Stations</td>
<td>-91.4%</td>
</tr>
</tbody>
</table>
Ridership by Time of Day

• During the baseline, there are significant, defined peaks on every line.
• Roughly 30,000 validations occurred during both the 8:00-8:30 AM period and the 5:00-5:30 PM period.
• There is also a smaller peak at around 3 PM when school gets out, especially on the Orange Line.

• During the week of March 24-27, peaks are less defined and occur earlier than normal.
• In the morning, most taps occur from 7-7:30 AM or 6-6:30 AM, while 8-8:30 AM has fewer validations.
• In the afternoon, most taps occur from 3-4:30 PM, rather than the usual peak at 5 PM.
• This seems to correspond with the traditional 3 PM and 7 PM shift change times at hospitals.
Protecting Employees and Riders
Face Coverings

• Governor Baker has issued an executive order requiring the use of face coverings in public places, including on all MBTA vehicles, stations, and stops.
  • The order went into effect on May 6 and applies to both MBTA customers and employees.
  • A “face covering” can be anything that covers your face, nose, and mouth, such as a scarf.
• The MBTA has launched a public awareness campaign called “Ride Safer” to spread the word about the order and encourage customers to wear face coverings.
• How will the MBTA enforce the order at stations and on vehicles?
  • The only exception to the order is for people unable to wear a mask due to a medical condition. MBTA employees are specifically prohibited from asking riders about medical conditions.
  • While we expect customers to comply, the MBTA will not refuse service to people who are not wearing face coverings.
Personal Protective Equipment

Face Coverings
- Received major shipment of masks last week, which are being verified to insure they meet quality standards
- Second mask kitting session scheduled for Wednesday, May 13
  - 60,000 masks to be kitted to cover all employees physically reporting to work
- Procurement of 125,000 reusable cloth face coverings in process to provide front line employees with 10 coverings each and office staff with 5 each
- Face shields in the process of being ordered for employees that cannot socially distance
  - 15,000 to be donated by P&G/Gillette
  - 3,000 to be ordered for OHS
  - 1,000 compatible with hard hats

Hand Sanitizer
- Expected delivery of wall-mounted hand sanitizer dispensers and Refill bladders have been delayed; Procurement is coordinating with the vendors to try to get these orders delivered as soon as possible
- Hand sanitizer filling continues at Everett, with a pair of 275-gallon drums in use for filling personal size containers
Employee Health Testing

- Employees continue to be screened for fevers at bus and rail facilities
- In addition to the testing site at Foxboro, the MBTA is now offering free, voluntary testing for employees at sites in Lowell and West Springfield.
Report from the General Manager

Enhanced Decontamination Protocols

Stations and Facilities

• Disinfecting touch points in high-traffic facilities twice a day
• Disinfecting touch points on surfaces such as handrails, fare gates, and fare vending machines in subway stations once every four hours
• Hired additional vendors for disinfecting using chemical fogging, electrostatic sprayers and manual disinfecting wipes/solutions

Bus and Rail Vehicles

• Decontaminating all revenue vehicles nightly with disinfecting wipes
• Performing mid-day decontamination at layover locations daily by wiping down operator cabs and high-touch locations
• Wiping down cab, farebox, and entrance for first/second shift bus pullbacks
• Performing electrostatic fogging for 100% decontamination every 2 weeks of all bus vehicles
• Isolating and electrostatic decontamination of any vehicle reported as operated by an employee who tested positive for COVID-19
Service Delivery, Social Distancing, and Responses
We don’t know if the initial challenge will be transit crowding, transit under-use, or a combination of the two.

Boston Globe/Suffolk University Poll:

% of Massachusetts residents comfortable riding buses, subways, and commuter trains once these “activities are allowed”

- Yes: 79.2%
- No: 18%
- Undecided: 2.8%

*Note: poll did not ask if respondents were previous T riders. More work is necessary to understand T customer concerns and preferences.
Transit Riders Are Likely to Return Cautiously

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
<th>UNDECIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would you be comfortable riding buses, subways and commuter trains when it is allowed?</td>
<td>18.0%</td>
<td>79.2%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Would you be comfortable riding buses, subways and commuter trains if there were an effective treatment but NOT a vaccine for COVID-19?</td>
<td>41.2%</td>
<td>56.6%</td>
<td>2.2%</td>
</tr>
<tr>
<td>If there were a vaccine for COVID-19, would you be comfortable riding buses, subways and commuter trains?</td>
<td>72.4%</td>
<td>25.4%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

SOURCE: Suffolk University PRC/WGBH/Boston Globe Poll of Massachusetts residents conducted April 29-May 2, 2020

IBM Institute for Business Value polled 25,000 US consumers in April, 2020 “and found shifting attitudes toward personal mobility, event attendance, retail, and remote work....More than 20% of respondents who regularly used public transit said that they no longer would, with a further 28% saying they would use public transportation less often.”

Source: Consulting.us
Preparing to Ramp Up Service

- Continue to provide best-in-class disinfecting and cleaning to protect employees and riders
- FY21 budget assumes that the MBTA will need to run its full service schedule across all modes, even while ridership (and therefore fare revenue) will not reach pre-pandemic levels even by the end of that fiscal year
- Beginning to analyze the risk that transit will be seen as “too crowded,” as “crowding” is redefined to address employee and customer concerns
- Crowding depends on demand (how many riders return to the different transit modes) and supply or capacity
- The MBTA's ability to supply capacity is affected by
  - **Workforce availability**: COVID-19 is currently limiting daily availability, particularly of bus drivers
  - **Vehicle capacity**: how many riders can fit on a bus or subway or commuter rail car before it is too crowded?
  - **Throughput**: how many vehicles are providing service over the course of an hour or the day?
Keeping a Close Eye on Buses

• Durability of ridership/customers with fewer alternatives

• Analyzing different scenarios for both the return of ridership and for how many passengers can use a bus without feeling “crowded,” in order to be ready if as ridership comes back

• For example, if ridership grows back to 50% of baseline, but social distancing expectations effectively lower vehicle capacity to 20 passengers per bus (rather than 53):
  • 1200+ trips per weekday, or 9% of all weekday trips, would be “crowded”
  • 51% of crowded trips would be on key bus routes, despite these routes accounting for only 34% of total bus trips
  • 13% of Key Bus Route trips would be over capacity
Adopting Supply-Side Strategies

- Analysis of ridership patterns and projected crowding based on different ridership return rates
- Prioritize service levels where we see current higher rates of ridership and where we expect demand to be greatest using demographic data
  - Decay of ridership provides plausible returning ridership scenarios
- Plan for “Run-as-Directed” supply to address crowding where feasible
- Examine operational tactics to address crowding (e.g. short turns on the Blue Line)
- Plan proactively to address dropped trips and protect Key Bus Routes
- Increase available supply by adding off-peak service, including mid-day
- Examine supply redistribution (e.g. longer headways on low ridership routes; temporary suspension of low ridership routes)
- Examine supply substitution – use of incentives and real time information where supply is available on other modes
- Increase throughput on bus – more dedicated bus lanes
Strategies to Reshape Commuting Patterns in Metro Boston

• Reduce all commuting, addressing both potential transit crowding and renewed traffic congestion
  • Telecommuting options: work from home (WFH), partial WFH
• Spreading the peak to reduce both traffic congestion and transit crowding at “rush hour”
  • Staggered start/end times
  • Alternate work week schedules (7 days work weeks, more weekend work)
• Provide alternatives to both transit and single-occupant vehicle commuting
  • Carpooling/vanpooling/shared vehicle modes for longer trips
  • Cycling and walking for shorter trips
• Incentivize switching from overcrowded modes/routes to modes/routes where excess capacity exists
  • Communicate real-time traffic congestion and transit crowding information so commuters can make smarter decisions about how to commute on any given day
  • Fare policy initiatives
To Our Essential Workforce:

THANK YOU!