



**Massachusetts Bay
Transportation Authority**

Forging Ahead Service Updates

Fiscal and Management Control Board

March 8, 2021

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Summary

- Forging Ahead is the MBTA's process to **prioritize and ensure frequent and reliable service for essential services** (high ridership potential and highly transit critical)
- Forging Ahead 12/14/21 vote was contingent on **environmental review submittal and completion of Title VI Equity Analysis**
 - Environmental Notification Form (ENF) filed with MEPA on 2/1/21
 - Title VI Equity analysis on aggregate Forging Ahead changes has found no disparate impacts or disproportionate burdens
- Even after March & April schedule changes, including the reintroduction of possible service cuts, **MBTA will still operate more than 85% of pre-COVID service system-wide**, far above current ridership (~30% of pre-COVID) and on par with other large transit agencies
 - For the majority of those using essential services, service continue to be very similar to the of Fall 2020
- **The MBTA has started planning for rebuilding service**, but does not expect that ridership will reach pre-COVID levels in FY22
- **Changes made in Forging Ahead are not permanent**, but when we build back, the system will not look the same as it did prior to COVID. The MBTA will try to better serve our communities and riders and will leverage strategic efforts like Bus Network Redesign and Rail Transformation



Service Vote on December 14, 2021



Forging Ahead MEPA Process to Date

- Environmental Notification Form (ENF) filed with MEPA on 2/1/21; Found here: mbta.com/forging-ahead
 - ENF identifies changes in pollutants and air quality resulting from changes as well impacts on EJ communities
 - MEPA Consultation Session held on February 23rd
 - 20 Day Comment period ended on March 2nd
 - MEPA will issue a certificate on the ENF on March 10th
 - MBTA anticipates that the certificate will certify successful completion of environmental requirements in the statute



Equity Analysis

- MBTA must comply with Title VI of the Civil Rights Act of 1964. This requires large transit providers to conduct a Title VI service equity analysis to evaluate whether the planned change would have a discriminatory impact on the basis of race, color, or national origin.
- MBTA contracted with Central Transportation Planning Staff to conduct this analysis based upon **all the potential service reductions** voted upon by the FMCB on December 14, 2020.
- Based upon our Disparate Impact/Disproportionate Burden (DI/DB) Policy delineates a service equity analysis based on changes to Route Vehicle Hours (RVH) and access to service, measured by route length.
- The **MBTA's threshold** for determining when adverse effects of major service changes may result in disparate impacts on minority and/or disproportionate burdens on low-income populations is **20 percent**.



DI/DB Results

- CTPS analyzed with both the Route Length and RVH, and both proportional allocation and full allocation, using a 20% threshold.
- “The results of the service equity analysis indicate that implementation of the combined changes through summer 2021 Forging Ahead service changes will **not result in disparate impacts to minority populations, disparate benefits to nonminority populations, disproportionate burdens to low-income populations, or disproportionate benefits to non-low-income populations.**”
- **Note:** the analysis was based on the proposed service changes going into effect as voted on Dec 14, 2020.



Proposed Vote

- **WHEREAS**, on December 14, 2020, the FMCB approved certain service changes for Fiscal Year 2021 (the “Service Changes”) as part of the Forging Ahead process, an effort that the MBTA initiated as a result of the effects of the COVID-19 pandemic to focus its limited resources on its most transit-critical riders; and
- **WHEREAS** the Service Changes are considered a major service change pursuant to the Federal Transit Administrator (FTA) Title VI Circular 4702.1B, triggering a Service Equity Analysis (the “Equity Analysis”) to determine whether the implementation of the proposed service changes will result in disparate impacts to minority populations or disproportionate burdens to low-income populations; and
- **WHEREAS** the FMCB’s approval on those Service Changes was subject to, among other things, the Authority’s submission of an environmental notification form as required under M.G.L. ch. 161A, s. 5(d) (the “ENF”) and the Authority’s completion of and the FMCB’s approval of such Equity Analysis; and
- **WHEREAS** the Authority submitted the ENF; and
- **WHEREAS** the Equity Analysis has been completed for the Service Changes in accordance with the Authority’s Disproportionate Impact/Disproportionate Burden Policy; and
- **WHEREAS** the results of the Equity Analysis found that the implementation of the Service Changes will not result in disparate impacts to minority populations, disparate benefits to nonminority populations, disproportionate burdens to low-income populations, or disparate benefits to non-low-income populations; and
- **WHEREAS** the FMCB is aware of and has considered the Equity Analysis for the Service Changes;
- **NOW, THEREFORE, IT IS VOTED THAT:**
- The FMCB hereby approves the Title VI Service Equity Analysis for the Service Changes and directs the Authority, through the General Manager, to take all steps necessary to provide notice of such acceptance to FTA, as appropriate.

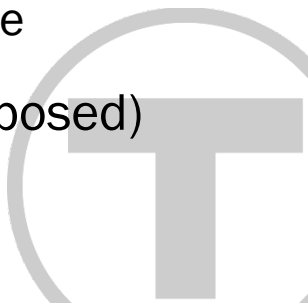


Mitigations Since December 14, 2021



Changes to Service Plan since 12/14

- Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (CRRSAA) from December 27, 2020 federal aid received after 12/14/20 FMCB vote on Forging Ahead Service Changes
- Federal relief funding was used to cover operating expenses, avoiding implementation of some proposed service changes
- Approximately 1/4 to 1/3 of Bus changes will not be implemented (originally planned for Summer 2021)
 - Bus continues to be most durable mode
 - Spring changes front-loaded less impactful frequency reductions versus deeper frequency reductions originally planned for summer
 - Summer will target **88-90% of pre-COVID service hours**, though distribution of bus service will continue to look different, with some potential changes in summer to respond to crowding/demand as possible
- Commuter Rail will continue to operate in late evening (vs. stopping at 9 PM as originally proposed)

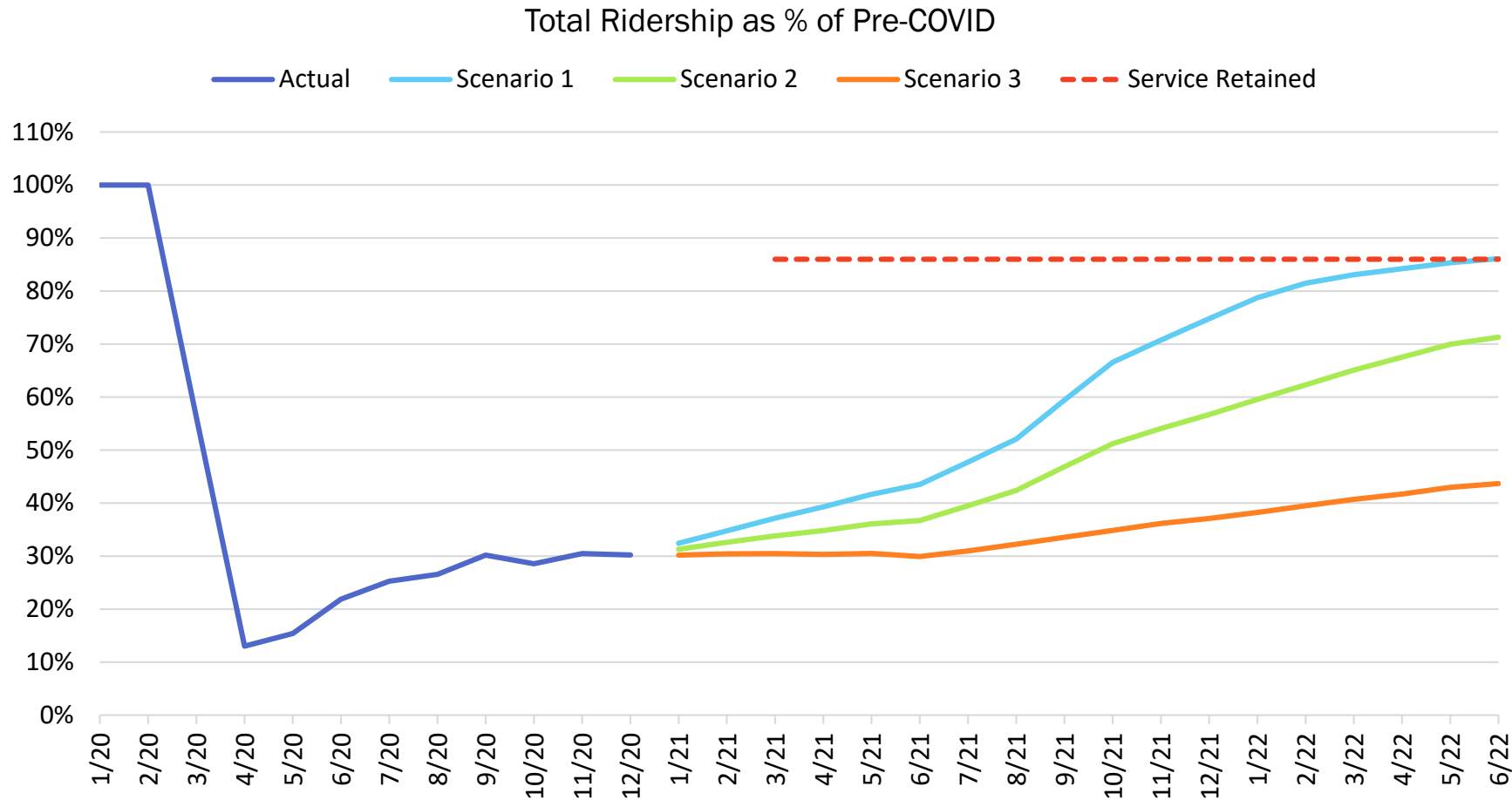


Comparing December Vote to Spring Implementation

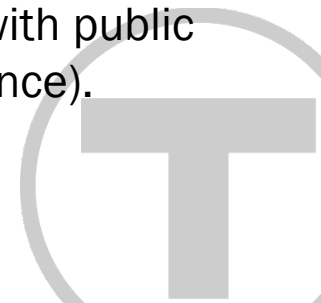
Mode	FY21 Service Proposal	Status as of 3/8 <i>(upcoming changes contingent on Title VI equity analysis and environmental review)</i>
	FMCB Service Changes voted 12/14	
Bus	<ul style="list-style-type: none"> No change to hours of operation Suspend 20 routes, consolidate 16, shorten 4 <i>20% frequency reduction system-wide non-essential routes</i> <i>5% frequency reduction system-wide essential routes</i> 	To be partially implemented on March 14 th
Rapid Transit	<ul style="list-style-type: none"> No changes to hours of operation or footprint 20% frequency reduction to Green, Orange, and Red Line Up to 5% reduction to Blue Line 	To be implemented on March 14 th
Commuter Rail	<ul style="list-style-type: none"> Maintain partial weekend service Worcester, Providence. Newburyport/Rockport, Middleboro and Fairmount; suspend on low ridership lines <i>End weekday service at 9 PM</i> Reduce peak and weekday service Close 5 stations 	<p>Weekend reductions already in place</p> <p>New schedules to be implemented on April 5th</p>
Ferry	<ul style="list-style-type: none"> Suspend Charlestown and Hingham direct service Reduce weekday Hingham/Hull ferry 	Implemented in January
The RIDE	<ul style="list-style-type: none"> Adjust scheduling window from 30 to 40 minutes Adjust ADA to Premium based on fixed route changes Adjust hours of operation of Premium service to match Commuter Rail span 	To be implemented with Bus and Commuter Rail changes

Red text = Modified by availability of CRRSAA funds

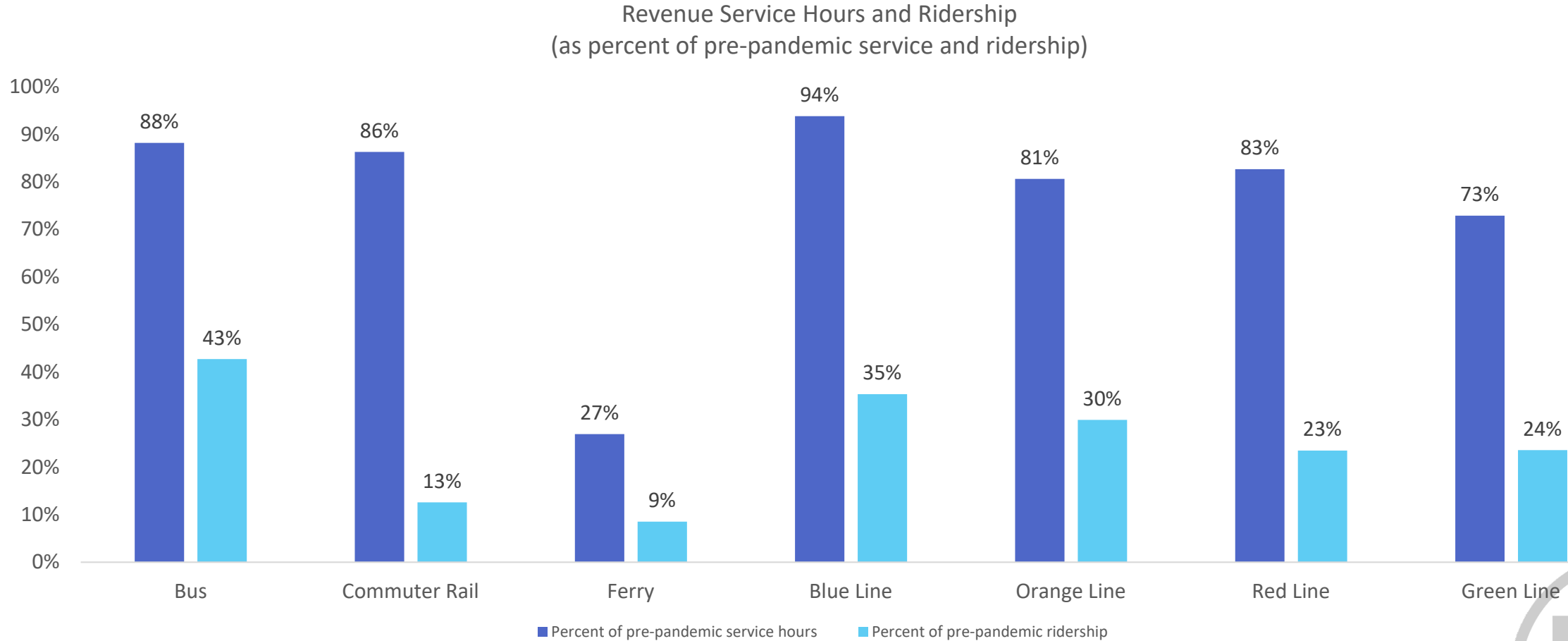
Spring 2021 retains 86% of pre-pandemic service level



At the Spring 2021 service level, we would be able to serve ridership demand even in the most optimistic scenario through FY22 (assuming the service is well matched to the demand by mode, service, and time of day) once social distancing is relaxed (consistent with public health guidance).



Spring 2021 Service Retention by Mode



Building Back and the Future



Recap of Forging Ahead Principles

- Forging Ahead process **prioritizes frequent and reliable service for essential services** (high ridership potential and highly transit critical)
- For **majority of those using essential services**, service will be very similar to Fall 2020 service
- **Majority of changes are reducing service frequency**, as opposed to decreasing span or access. However, a small percentage of riders will be stranded (<1% of system-wide). Meaningfully, this means that it will be easier to restore service by adding frequency
- Continue to **optimize for flexibility and optionality when possible** so that MBTA is well-positioned to increase service frequency when appropriate, consistent with the timing of post-vaccine economic reopening, the return of ridership and availability of revenue
- The changes made are **not permanent**, but when we build back, the system will not look the same as it did prior to COVID, but **will try to better serve our communities and riders**



High-Level Plan to rebuild & redesign service

As MBTA plans to rebuild service, two processes in parallel – (a) short-term focused on transition into COVID abatement and (b) longer-term focused on post-pandemic system

- **(a) Service through end of 2021:** Continue to support essential service through pandemic and begin to transition to post-pandemic (pending COVID abatement)
 - Be there when transit is needed as region re-opens and more people take more trips on transit
 - Continue to manage crowding and support social distancing
 - Begin restoration of access (e.g. routes that serve schools, weekend commuter rail) and frequency
 - Maintain operational flexibility to respond to crowding and demand as feasible
 - Engage with public on initiatives like Bus Network Redesign to consider post-pandemic service and system
- **(b) Redesigning service for CY 2022 and beyond – envisioning a post-pandemic system:**
 - The MBTA will try to build a system that will better serve our communities and riders and will leverage strategic efforts like Bus Network Redesign and Rail Transformation, along with new analysis on ridership and other trends
 - Regional Rail being tested in new Commuter Rail schedules
 - Bus Network Redesign to start extensive public engagement this spring/summer



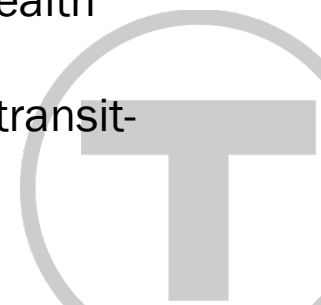
Key planning assumptions for rest of 2021

Current assumptions for MBTA to plan on for late summer / fall. These assumptions will be reviewed regularly, and will be adjusted to adapt to new data, indicators, trends and ridership

- Ridership will begin to pick up by fall
- Partial return to work expected between September and December (in accordance with range of OTP/MassDOT scenarios)
- Primary & secondary schools and universities re-open for full in-person learning
- Ridership will not meet pre-COVID levels in FY22, especially for downtown-oriented work trips, and time of day trip-making patterns may change
- Continue to support social distancing as consistent with public health guidance

Goal for Fall 2021:

- **Continue to serve and prioritize our existing essential riders with frequent and reliable transit**
- **Make riding transit a good experience for those who start traveling again** (consistent with public health guidance)
 - Research points to transitions in travelers' work/school/home life as ideal times to reinforce transit-riding habits—but also times when people may permanently switch to other modes



High-level Service Plan by mode based on goals

Mode	Summer	Fall
Bus	<ul style="list-style-type: none"> Do not implement remainder of Forging Ahead reductions Restore some frequency, based on ridership and crowding observed in Spring Target 90% of pre-COVID service hours (vs. 88% in Spring) 	<ul style="list-style-type: none"> Restore additional frequency and some routes Target between 90-93% of pre-COVID service hours
Rapid Transit	<ul style="list-style-type: none"> Restore some frequency, based on ridership and crowding observed in Spring Maintain some run-as-directeds to respond to any spot crowding (e.g. return of nighttime or weekend events) 	<ul style="list-style-type: none"> Assess and adjust on Red, Blue, and Orange Line Target opening GLX and Green Line at 85% of pre-COVID service levels (<i>approx. 7 to 9 minutes between trains at peak</i>)
Commuter Rail	<ul style="list-style-type: none"> Continue with Regional Rail model started with April 5 schedules, with modifications as necessary to support ridership 	
Ferry	<ul style="list-style-type: none"> Continue with January schedules, with modifications as necessary to support ridership 	
RIDE	<ul style="list-style-type: none"> Changes as impacted by other modes 	
<p>Continue to preserve operational flexibility to add service as necessary and possible</p>		

Next Steps

- **March 14th and April 5th** (pending Title VI equity analysis and environmental review): Implement Spring service changes and monitor ridership / crowding
- **By end of March:** Finalize summer service plan for Bus and Rapid Transit
- **Throughout April:** Develop preliminary Fall service plan based on today's framework and principles, in alignment with FY22 budgeting process
- **Spring/Summer:** Begin more extensive outreach on Bus Network Redesign



APPENDIX



Title VI Equity Analysis Methodology

- Used 2015-2017 MBTA Systemwide Passenger Survey, rather than census data because route structure changes largely affect existing riders which the survey represents well.
- Two methods were used to account for the effects of COVID-19 on Rider Demographics since the Rider Survey:
 - “Proportionate Allocation”- uses demographic data directly from the survey, allocating a proportion of routes by the percent of the demographic by route.
 - “Full Allocation”- uses a route by route assessment to determine if the ratio of riders on one route is greater than the 34% of minority riders Systemwide.
- Comparisons were made using the Spring 2020 schedule using both Revenue-Vehicle Hours and Route Length



Spring 2021 Subway Service Changes

- Frequency on the Green Line, Orange Line, and Red Line will be reduced by up to 20%.
 - **Red Line** weekday peak goes from every 9 to every 11 mins. on the branches and every 4.7 to 5.5 on trunk. Midday goes from every 14 to 16 on branches and from every 7 to every 8 mins on trunk.
 - **Orange Line** goes from every 7 to every 8 mins. in peaks and every 9 to every 11 mins. in midday.
 - **Green Line** (depending on branch), goes from every 6-8 mins in peaks to every 7-10, and midday goes from every 7-8 to 9-10 mins.
- Frequency on the Blue Line will be reduced by up to 5%.
 - Peaks go from every 5 to every 5.5 mins., and midday goes from every 9.5 to 10 mins. Some parts of the afternoon actually get more service, not less.
- Visit www.MBTA.com/schedules/subway to view subway schedules in late February

Changes will go into effect on March 14th.



Spring 2021 Bus Service Changes

What remains the Same:

- **Nearly 80 routes** will continue to operate at or close to pre-COVID service levels
- **More than 20 routes** will continue to operate at higher than pre-COVID service levels, including routes 16, 22, 23, 28, 104, 106, 109, 111, 116 and 117
- Some service hours are being reserved for operational flexibility to respond quickly to ridership returning and/or improve reliability

For additional details, please visit www.MBTA.com/servicechanges.



Spring 2021 Bus Service Changes

Once spring service changes are implemented, the MBTA will be running ~90% of pre-COVID bus service hours

What's changing	Routes affected
Routes with increased frequency	236
Routes with decreased frequency	10, 11, 21, 29, 31, 39, 47, 61, 71, 73, 77, 89, 93, 96, 101, 112, 134, 220, 222, 225, 501, 504
Routes with some increased frequency and decreased frequency throughout the day	1, 16, 32, 57, 70
Suspended routes <i>If your route or stop is affected, please use the MBTA trip planner to plan alternative service.</i>	18, 52, 55, 68, 79, 212, 221, 465, 710

For additional details, please visit www.MBTA.com/servicechanges.

Changes will go into effect on March 14th.



Spring 2021 Bus Service Changes (cont.)

Once spring service changes are implemented, the MBTA will be running ~90% of pre-COVID bus service hours

What's changing	Routes affected
<p>Routes being consolidated <i>If your route or stop is affected, please use the MBTA trip planner to plan alternative service.</i></p>	<p>24 & 27, 136 & 137, 214 & 216, 217</p>
<p>Routes with changes to hours of service (span)</p>	<p>67, 85, 131</p>
<p>Routes with routing changes <i>If your route or stop is affected, please use the MBTA trip planner to plan alternative service.</i></p>	<p>211, 435</p>
<p><i>Routes with trip changes</i> <i>If your route or stop is affected, please use the MBTA trip planner to plan alternative service.</i></p>	<p>9, 19, 36, 42, 45, 60, 80, 105, 108, 202, 240</p>

For additional details, please visit www.MBTA.com/servicechanges.

Changes will go into effect on March 14th.



Preserving Essential Services

Mode	Highly Transit Critical	Less Transit Critical
High Ridership Potential FY22	Blue Line, Orange Line, Red Line, Green Line (trunk), Mattapan line, many bus routes, Fairmount CR line	Some bus routes
Low Ridership Potential FY22	Some bus routes, some Commuter Rail service, Charlestown ferry*	Hingham/Hull ferry, some bus routes, some Commuter Rail service

- Goal of this framework is to preserve service at or above Service Delivery Policy levels for all services in the High Ridership and High Transit Critical quadrant
- Service Delivery Policy was approved by FMCB in 2017 and quantifies MBTA’s target minimum acceptable service level by mode across multiple metrics (incl. hours of operation, frequency, crowding)

*Charlestown Ferry was initially considered as part of essential service, but after further examination, has been moved to low ridership based on further review of Fall 2020 ridership



Integrated timeline for internal & external activities

	January	February	March	April	May	June/July 1
Service Adjustments (customer facing)	<ul style="list-style-type: none"> • Commuter Rail: reduced Winter schedules including reduced weekend service • Ferry: Suspend Charlestown and Hingham direct services; reduce Hingham/Hull service 		<ul style="list-style-type: none"> • Bus: frequency adjustments, some route restructuring/suspension • Rapid Transit: reduce peak and off-peak service on Red, Orange, Green lines; minor modifications to Blue Line service • The RIDE: Most changes • Commuter Rail: Revised schedules, including stopping service at 9 PM 			<ul style="list-style-type: none"> • Bus: Remainder of frequency adjustments and route restructuring • Rapid Transit: Potential further frequency adjustments
FY22 Budget Planning	<ul style="list-style-type: none"> • Detail November results, updates as needed 	<ul style="list-style-type: none"> • Detail December results • Policy guidance for FY22 Budget 	<ul style="list-style-type: none"> • Preliminary view of FY22 budget 		<ul style="list-style-type: none"> • Statutory deadline for preliminary itemized FY22 budget followed by submission to Advisory Board 	<ul style="list-style-type: none"> • Statutory deadline for final itemized FY22 budget
FY22 Service Planning		<ul style="list-style-type: none"> • Finish Title VI equity analysis • Update quarterly ridership projections • Revise scenarios based on updated data 	<ul style="list-style-type: none"> • Finish environmental review • Finalize plan for June/July Bus & Rail service changes • Decide on any additional service adjustments based on updated scenarios 		<ul style="list-style-type: none"> • Update quarterly ridership projections • Finalize plan for Fall service changes 	

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

