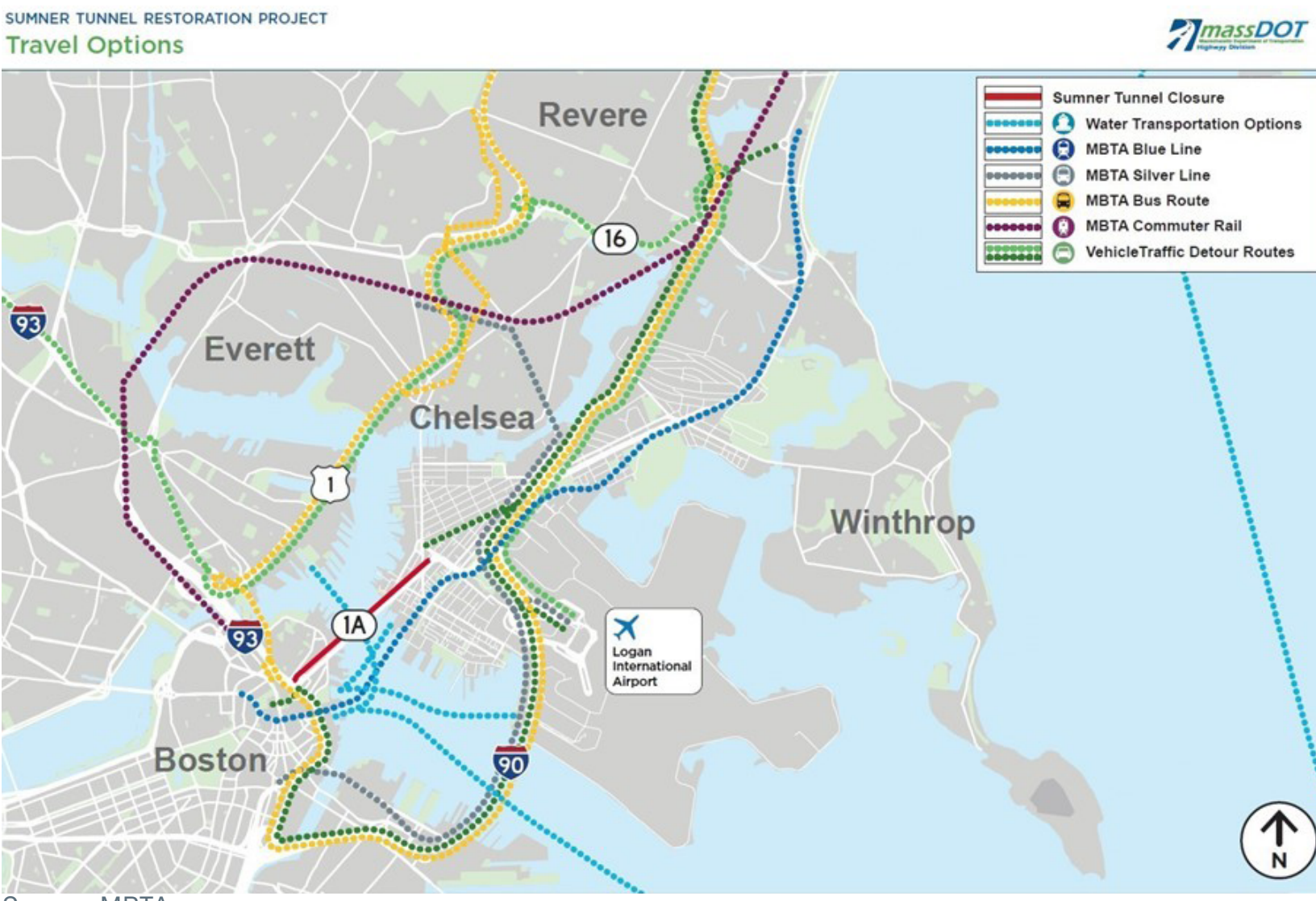
REPORT | MAY 2024



Source: MBTA

THE LIGHT AT THE END OF THIS TUNNEL

LESSONS LEARNED FROM THE SUMNER TUNNEL CLOSURE FOR THE MBTA, COMMUTERS, & OUR REGION

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Data Disclaimer

A Better City used publicly available data, when possible, to report ridership changes during the Sumner Tunnel Closure. When data was not available, A Better City accessed the data presented by the MBTA to present the Sumner Tunnel alternative service results. The methodology is explained below.

The MBTA used a hypothetical baseline that blends travel growth over the past year with seasonal July and August travel declines. For transit in particular, this baseline is an estimate based on the average percentage change in ridership between June and July-August across all subway lines in 2022 and 2019 (excluding the Orange Line during August 2022 construction closure). Due to maintenance closures, analyses do not include data for the Blue Line closure period across half of May and June 2022, nor for the Orange Line closure in August and September 2022. The hypothetical baseline as calculated for Commuter Rail, following the above logic, returns ridership and parking numbers similar to June 2023; June 2023 is used as the Commuter Rail baseline throughout these analyses.

What Can We Learn?
Lessons from the Sumner Tunnel Closure

Executive Summary

In July and August of 2023, the Massachusetts Department of Transportation (MassDOT) closed the Sumner Tunnel for two months to complete the first of two seasons of full closure critical restoration work. The tunnel connects East Boston and Logan Airport to Downtown Boston. It also links Route 1A to I-93 and Storrow Drive. On average, approximately 40,000 vehicles travel through the tunnel daily.[1] Before the full tunnel shutdown, MassDOT anticipated significant impacts on traffic throughout the region and required a comprehensive mitigation plan beyond traffic diversion, including mode shift to public transportation alternatives—bus, commuter rail, ferry, and subway—to serve the impacted area and communities.[2]

MassDOT and the Massachusetts Bay Transportation Authority (MBTA) developed an extensive preparatory process including six working groups[3] with representatives from the public and private sector. The working groups met for almost four months prior to the closure to develop a cohesive mitigation plan. A Better City served as a Co-chair of the Business Group subcommittee and also played a leadership role on issues related to transit, mobility, and communications with the public.

The Transit and Mobility Working Group recommendations provided the basis for the Healey-Driscoll Administration's #DitchTheDrive campaign, a complete package of incentives that included communication tools; service delivery improvements; as well as pricing strategies to promote mode shift out of cars, highlight the benefits of public transit, and encourage public transit use during the closure.[4]

The Sumner Tunnel two-month closure was a success with MassDOT delivering the stated project repair goals on time.[5] All signs suggest that the #DitchTheDrive campaign also achieved notable results—the MBTA and MassDOT estimate that 10% of drivers shifted to public transit with some modes attracting more riders than others (see Table 1).[6] It appears that tight project management and innovative mitigation options can serve as a foundation to tackle ongoing infrastructure projects to build a stronger network roads, tunnels, and public transit that works together to meet the needs of the entire Greater Boston region.

As Greater Boston and the region prepare for this summer's Sumner Tunnel closure, what lessons can we learn from the mitigation planning process and implementation as well as the incentives offered during the shutdown? This paper provides an overview of ridership gains across modes, identifies clear

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[1] MassDOT estimate Transit and Mobility sub-working group.
[2] MassDOT anticipated traffic to divert evenly through three primary routes: Everett, Charlestown, and the Ted Williams Tunnel
[3] Principals (overseeing five sub-working groups), Public Safety, Transit Users/Mobility, Traffic Freight/Cargo, Business, and Communications & Outreach.
[4] https://files.constantcontact.com/88fa4207001/ab3f889f-5786-4da6-868d-a8a657fccf1e.pdf?rdr=true
[5] MassDOT structured contract with incentives/disincentives for Design-Build team to ensure compliance with contract timelines (see page 11)
[6] Presentation to the MBTA Board of Directors, "Sumner Closure: Fall 2023 Travel Behavior Analysis", October 24, 2023

#DitchTheDrive winners, and offers recommendations to improve the process for this summer's closure and future MBTA diversions.

Table 1: Average Ridership Change During Sumner Tunnel Closure July-August 2023 Compared to June 2023

Mode	Weekday	Weekend
Blue Line	5%	12%
Blue Line - Airport Station	24%	24%
Newburyport/Rockport Commuter Rail	17%	41%
Chelsea Buses	-1%	8%
Silver Line Buses	0%	-1%
East Boston Ferry	21%	187%

Source: MBTA Data Portal and https://massdot.app.box.com/s/jaqn3wmvk04ghci8c26ek3kuf0vyn7am

Recommendations

The following recommendations highlight areas where MassDOT and the MBTA can improve mitigation for the 2024 Sumner Tunnel closure. These recommendations build on, in some cases, the solid efforts from last year, as well as integrate new ideas to deepen the short- and long-term impact of mode shift stemming from closure traffic diversion.

1. **Shorten Closure Time**: Given last year's success and the disruption to the region resulting from the MBTA's ongoing Track Improvement Program, consider innovative strategies to shorten the duration of the full closure in 2024 to reduce the impact on Greater Boston.
2. **Establish Inclusive Stakeholder Engagement and Communication Strategy:** Broaden stakeholder engagement to ensure all groups have a voice, particularly the business community, higher education, and medical institutions. Finalize the mitigation plan early and communicate clearly to the public in advance of and during the closure. Highly visible multilingual signage, including inside and outside of stations, is key.
3. **Create Effective Data Collection Tool to Accurately Track and Report Mitigation Impacts:** Develop methodology and create a system to collect quantitative and qualitative ridership data, including baseline ridership numbers and rider survey questions, to effectively assess mitigation impacts. Institute ridership counts at select stations along the Commuter Rail prior, during, and after the closure to gather more granular information on mode shift trends. Moreover, publish all data on a publicly available platform during the closure.
4. **Enhance Strategic Approach to Mitigation to Drive Sustained Mode Shift:** Define mode shift goals by service area in advance of the closure that build off last year's success and design mitigation actions to support and bolster goals that will last beyond this repair project. For example, in addition to fare changes, improve service frequency and advertise schedule changes on the Newburyport/Rockport line during peak hours and throughout the day. Further, increase access to parking to support higher levels of mode shift.
5. **Implement Innovative Multimodal Mitigation Solutions:** Engage with external stakeholders to develop and cement offerings with Transportation Network Companies (TNCs) like Uber/Lyft and GPS providers like Google Maps and Waze, as well as take stock of lessons learned from last year's closure to determine if mitigation actions could be rolled out more broadly. Maintain

close relationship with MBTA Station Access team to ensure robust multimodal connections and efficient TNC pick up/drop off areas. Develop a plan to expand and install infrastructure to increase Bluebikes at stations, as well as resources to enable Bluebikes ridership.

6. **Execute Post-Closure Transition Strategy:** Develop and execute a strategy that maintains positive messaging and encourages sustained use of public transit alternatives beyond the closure, for example, consider testing fare and schedule changes prior to and proceeding the closure to collect ridership information and assess mode shift habits, or adding in time-limited incentives across the system following the closure to further retain and encourage mode shift.

Box 1: #DitchTheDrive Winners

Clear #DitchTheDrive Winners

While the comprehensive package of #DitchTheDrive mitigation actions was an overall success, there were some strategies that yielded deeper results that policymakers should seek to replicate.

- ✓ **Communication and Outreach Efforts on Potential Traffic Impacts:** Some of the early and robust communication and outreach efforts that accompanied the #DitchTheDrive campaign paid off. MassDOT and the MBTA enhanced relationships with external partners like Massport, TNCs, and Waze to warn residents and visitors of the shutdown and possible traffic disruption. Airlines were emailing passengers encouraging them to take public transit, Massport rolled out a suite of mitigation measures, etc. In addition, Massport piloted variable signs indicating time savings from rerouting to public transit alternatives.
- ✓ **Zone 1A Pricing ($2.40) on Newburyport/Rockport Commuter Rail Line:** Pricing incentives and deeper congestion as well as longer travel times resulted in spikes in weekday and weekend ridership in July-August 2023 on the Newburyport/Rockport Commuter Rail line and some sustained ridership increases post-closure when compared to June 2023.
- ✓ **Service Delivery Improvements (new Lynn Ferry) as well as Pricing Incentives (Free East Boston Ferry) on Ferry:** Increased access to ferry service and pricing incentives brought more riders to the ferry system on weekends and during the weekday.
- ✓ **Free Fares and Service Delivery Improvements on Blue Line and Better Communication at Airport Station:** Free fares and service delivery improvements on the Blue Line resulted in ridership increases, especially on the weekend, and when compared to the same period in 2022. Massport worked closely with the MBTA to improve wayfinding at Airport Station as well as access to terminals with additional shuttle buses.
- ✓ **Enhanced Service on the Sliver Line and Congestion Mitigation:** Massport supported enhanced Silver Line service and implemented congestion mitigation measures which resulted in reduced travel times for SL3 riders and gave the SL3 priority to dedicated bus lanes.

Shining a Light on Successes and Spotlighting Lessons Learned for the 2024 Closure

All Signs Point to Successful #DitchTheDrive Campaign

MassDOT kept the project on track with tight project management to prevent delays. MassDOT and the MBTA came together to provide a range of incentives and alternative transportation options to urge drivers to #DitchTheDrive. Together, these made the closure a success.

Tight Project Management Prevents Delays

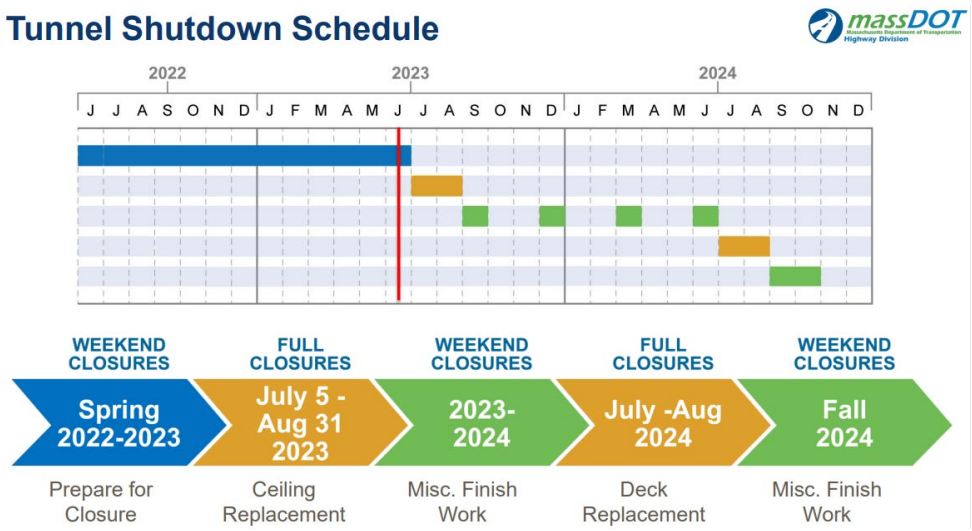
MassDOT Deserves an A+ For Staying on Schedule

The Sumner Tunnel was built in the 1930s and is a critical asset to the Greater Boston region. It connects Boston's city center to neighborhoods on the other side of the Harbor and provides direct access to

Boston's Logan Airport for residents, commuters, and many industries transporting goods. At almost 100 years old, the tunnel needs a full restoration to continue to serve as a safe, viable, part of the Massachusetts highway network.

The restoration project addresses critical repairs, some of which can be done during the weekend and some that require full closure. The extended closure this summer from July 5-August 31, 2023, focused on big ticket items, like removing and replacing the Tunnel's ceiling, as well as upgrades to tunnel computer systems, wires, lighting, repairing and fireproofing walls, amongst others. Full details on the project scope can be found here. Considering the age of this tunnel and the fact that the contractors completed this phase of work on schedule, MassDOT deserves an A+ for a successful summer.

Figure 1: Tight Project Management Kept Sumner Tunnel Closure on Track



Source: https://www.mass.gov/doc/massdot-pim-presentation-sumner-tunnel-62023-and-62123/download

The Planning Process and Timing Matters

Communicate Early and Often

The sub-working group model for the July-August 2023 Sumner Tunnel closure worked on the transit and mobility side. The combination and expertise of members, with sound leadership from the MBTA and MassDOT, allowed for an open exchange of ideas and discussion of workable mitigation options. Each person brought proposals and people to the table that added value to the process and would strengthen the final mitigation plan. Starting the planning process well in advance of the shutdown gave the sub-working group time to engage external partners. In some cases, mitigation strategies required more time, i.e., alternative TNC pick-up and drop-off strategies. The alternative travel option, #DitchTheDrive, was published a month before work began to give system users time to plan ahead.

For the Summer 2024 closure, tweaks can be made to the process to engage different stakeholders, in particular TNCs and online wayfinding companies (e.g., Waze, Google Maps). Further, MassDOT and the MBTA should consider adding public transit to the MassDOT alternative route online tool.

Broader Incentives Capture More System Users

A One-Size-Fits-All Approach May Weaken Impact

The MBTA and MassDOT developed a mitigation approach that used three main incentives to promote mode shift: pricing incentives, service changes, and communication. Success varied by mode with more robust ridership increases on modes most directly impacted by the Sumner Tunnel closure; however, data suggest the campaign was largely successful with the biggest wins on the Commuter Rail, ferry services, and discounted & free parking to access public transit alternatives. During the closure, only aggregate data for the Blue Line, Orange Line, Silver Line, and Chelsea buses was publicly facing making it difficult to interpret the true impact of #DitchTheDrive incentives on mode shift and ridership trends. The final data show that some of the measures at the aggregate level yielded lower results than expected, i.e., overall increase in Blue Line ridership, but that station-level data show increases for some modes that support higher mode shift to specific areas such as Logan Airport.

Commuter Rail	Blue Line	Ferry	Bus	Parking	Comm. & Outreach
Zone 1A Fares Newburyport /Rockport Line	Free Blue Line Service Delivery Improvement	New Ferry Routes Service Delivery Improvement Free/ Reduced Fare	Free Chelsea Buses, including 111 Service Delivery Improvement on Silver line	Free or Reduce Parking at Select MBTA Lots	Traffic Impacts Mitigation Options TNC and Wayfinding

Pricing Incentives

Pricing Incentives for Some Modes Were Successful at Getting Greater Bostonians to #DitchThe Drive

The MBTA offered a range of pricing incentives across several modes to encourage mode shift and public transit use. The Blue Line and East Boston Ferry were free throughout the closure, passengers benefited from Zone 1A pricing ($2.40 one-way) along the entire the Newburyport/Rockport Commuter Rail line, and the Lynn Ferry also offered a reduced fare with Zone 1A pricing. In addition to transit fare incentives, the MBTA reduced parking rates at some Newburyport/Rockport Commuter Rail parking lots and made parking along the entire Blue Line free. Ridership increases varied by mode with the largest gains, based on final MBTA data, on the Commuter Rail and Ferry as well as Airport Station on the Blue Line.[7]

[7] https://massdot.app.box.com/s/21j0q5di9ewzl0abt6kdh5x8j8ok9964?sortColumn=date&sortDirection=DESC

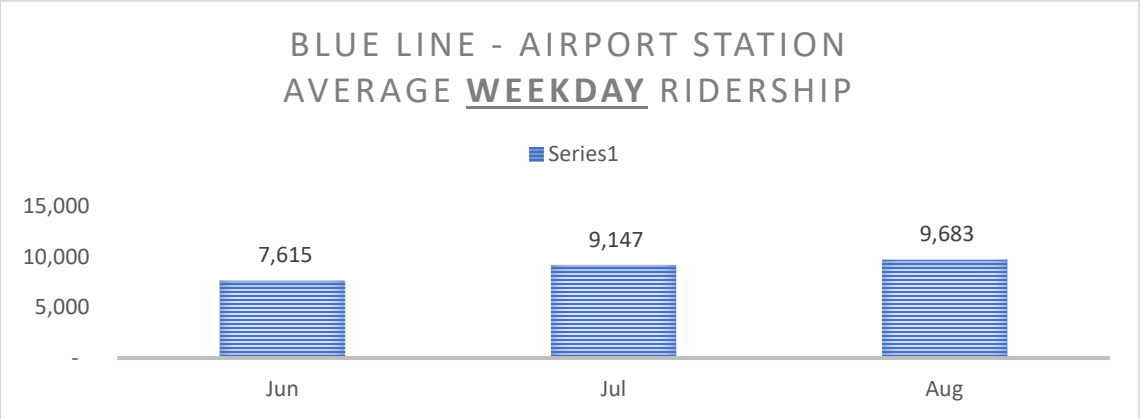
Photo credit @MBTA_KylieKlein_KK4

Blue Line

Ridership on the Blue Line increased in July and August 2023 because of free fares and service improvements. Overall, average weekday ridership across the entire Blue Line increased by less than 10% in July and August 2023 when compared to June 2023. However, fare gates and other entry points were open during the closure which may have prevented accurate passenger counts; therefore, this may not accurately reflect ridership increases.

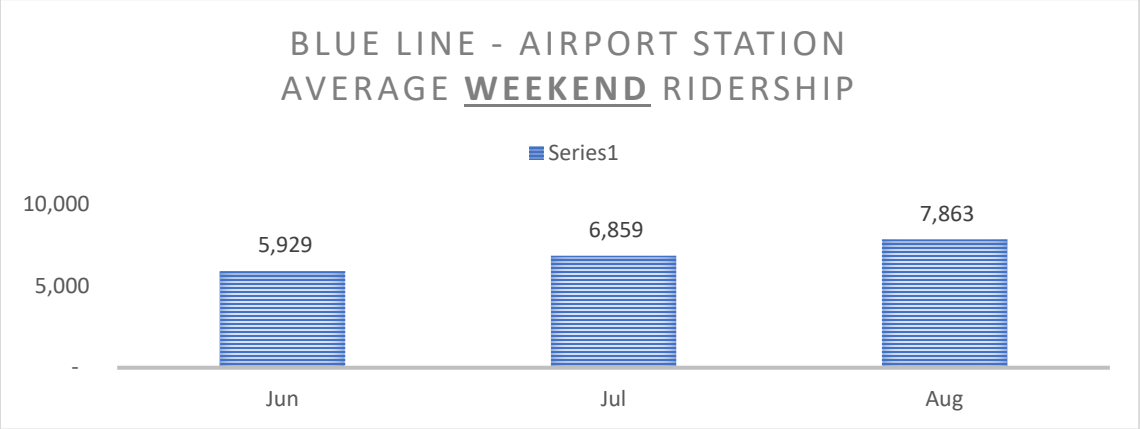
The growth in ridership was much more significant at the station level both during the weekday and the weekend, particularly at Airport Station. During the weekday average weekday ridership at Airport Station was 20% higher in July 2023 and 27% higher in August 2023 compared to June 2023. On the weekend, the increase was less pronounced in July 2023 (16%) than in August 2023 (33%) when compared to June 2023.

Figure 2: Average Weekday Ridership - Blue Line - Airport Station



Source: https://massdot.app.box.com/s/21j0q5di9ewzl0abt6kdh5x8j8ok9964?sortColumn=date&sortDirection=DESC

Figure 3: Average Weekend Ridership - Blue Line - Airport Station



Source: https://massdot.app.box.com/s/21j0q5di9ewzl0abt6kdh5x8j8ok9964?sortColumn=date&sortDirection=DESC

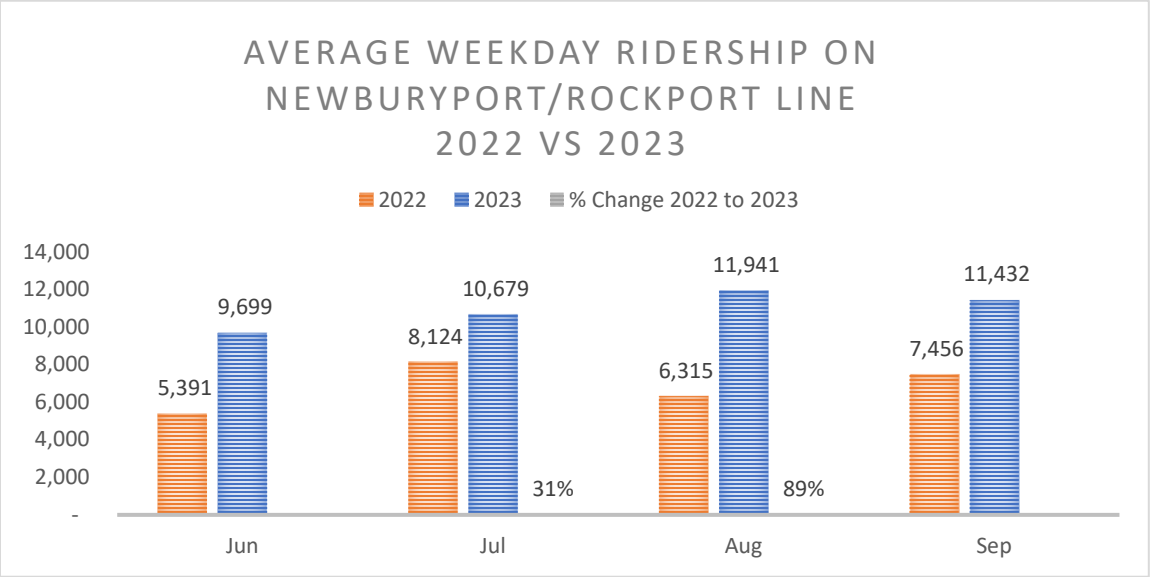
Photo Credit @Michael Day – Boston North Station, MA - Flickr

Commuter Rail

The MBTA reduced fares to $2.40 (one-day) or a Zone 1A fare on the entire Newburyport/Rockport Commuter Rail line for the entirety of the Sumner Tunnel Closure. This resulted in savings of up to $10.35 one-way, or $20.70 roundtrip for riders coming from the end of the line (Zone 8).

The pricing incentives yielded very positive results with sharp ridership increases in July and August 2023 compared to the same period in 2022 **with a 60% increase in total average weekday ridership during the entire closure**, a 31% increase in average weekday ridership in July 2023, and an 89% increase in average weekday ridership in August 2023.

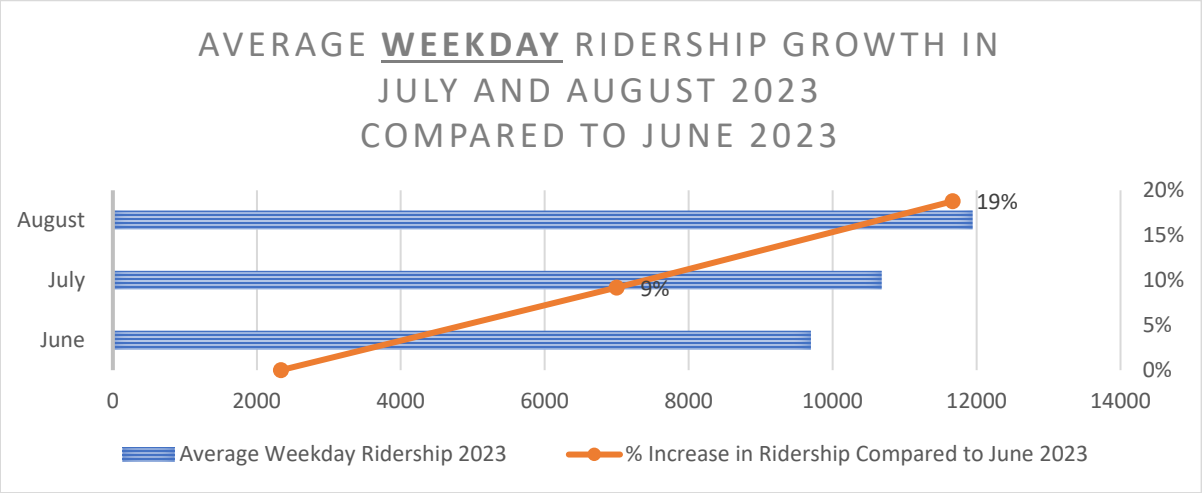
Figure 4: Average Weekday Ridership - Newburyport/Rockport Line



Source: https://mbta-massdot.opendata.arcgis.com/datasets/MassDOT::mbta-commuter-rail-ridership-by-service-date-and-line/explore

There was also visible growth in average weekday on the line when compared to June 2023, with a 9% increase in average weekday ridership in July 2023, a 19% increase in average weekday ridership in August 2023 compared to June 2023. Further, average weekday ridership grew 10% in August 2023 compared to July 2023.

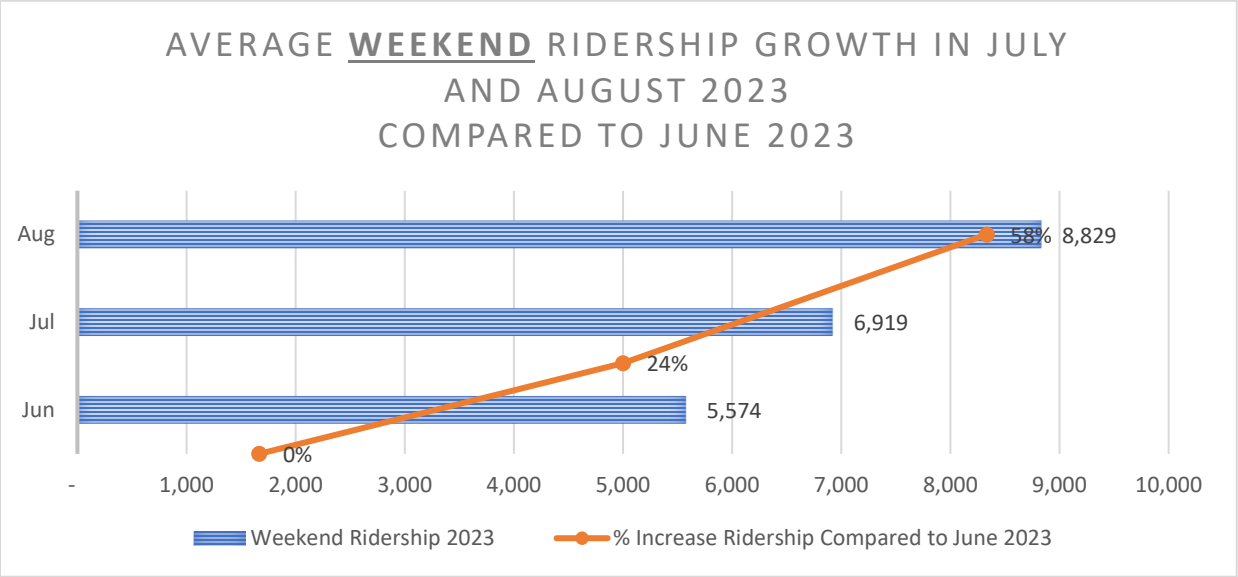
Figure 5: Average Weekday Ridership Growth Newburyport/Rockport Line



Source: https://mbta-massdot.opendata.arcgis.com/datasets/MassDOT::mbta-commuter-rail-ridership-by-service-date-and-line/explore

The analysis shows that the pricing incentives also impacted ridership growth on weekends. When compared to ridership in June 2023, there was a 24% increase in July and a 58% increase in August 2023. Ridership also grew 28% in August 2023 as compared to July 2023.

Figure 6: Average Weekend Ridership Growth Newburyport/Rockport Line



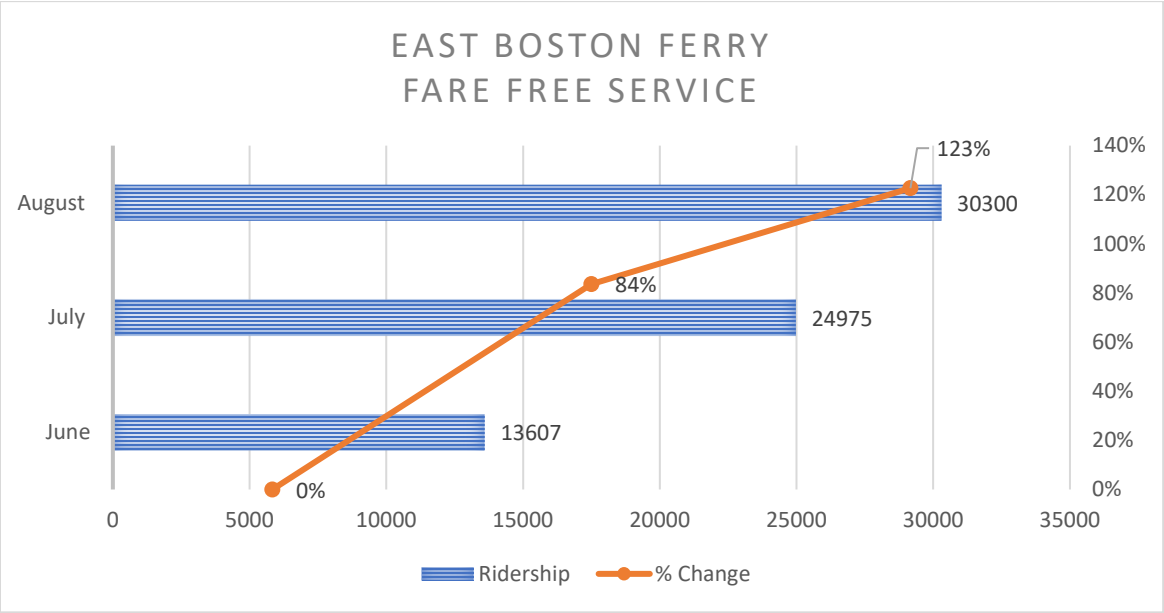
Source: https://mbta-massdot.opendata.arcgis.com/datasets/MassDOT::mbta-commuter-rail-ridership-by-service-date-and-line/explore

Photo Credit @ABCstock – Water Shuttle

Ferry Services

To support the Sumner Tunnel Closure, the MBTA added new ferry routes serving Lynn and made ferry service on the East Boston route free. The service enhancements and pricing incentives resulted in significant increases in ridership with an 84% increase in ridership in July compared to June and an additional 21% increase in ridership in August compared to July on the East Boston ferry. Weekday ridership on the East Boston ferry accounted for 62% of total ridership in July and 60% in August with weekend ridership on the East Boston ferry averaging 38% and 40% of total ridership in July and August respectively. Pricing incentives ($2.40 one day) coupled with service improvements impacted ridership on the Lynn and Winthrop ferries, including a 12% increase in ridership on the Winthrop Ferry from July to August 2023.

Figure 7: East Boston Ferry Ridership



Source: https://massdot.app.box.com/s/jaqn3wmvk04ghci8c26ek3kuf0vyn7am

Bus Service

The MBTA made five bus routes serving Chelsea free (Routes 111, 112, 114, 116, 117) during the Sumner Tunnel closure as well as at all ungated stations along the SL3 route. Ridership remained relatively level in July and August on all Chelsea routes despite pricing incentive. This may be due to the transit-dependent nature of these bus routes. Similarly, the SL bus routes did not see significant ridership change.

Figure 8: Chelsea Buses - Ridership

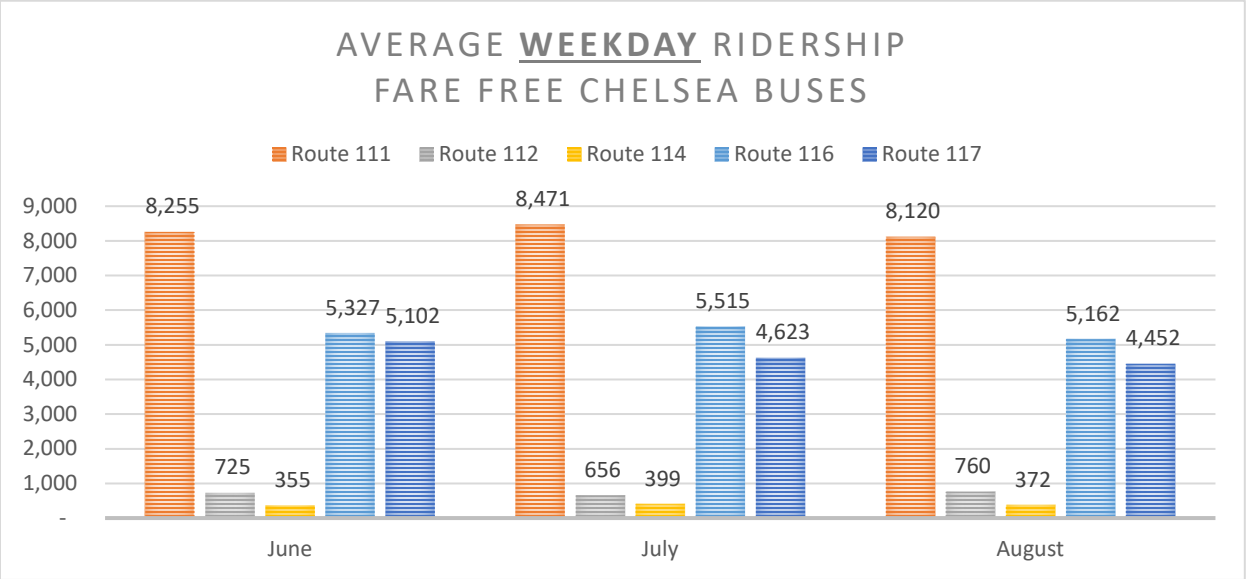


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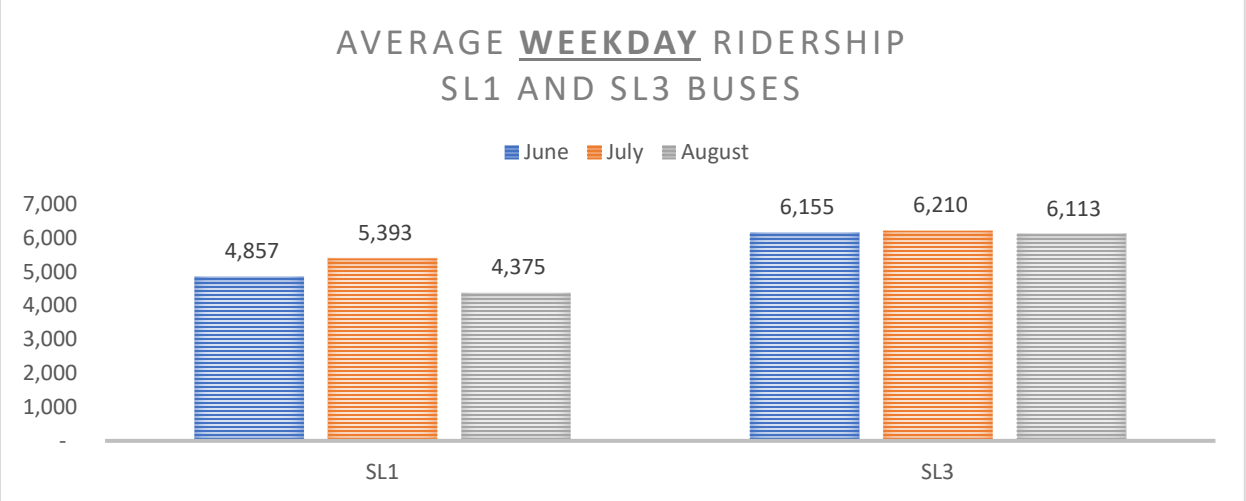
Figure 9: SL1 and SL3 Ridership



Source: https://massdot.app.box.com/s/jaqn3wmvk04ghci8c26ek3kuf0vyn7am

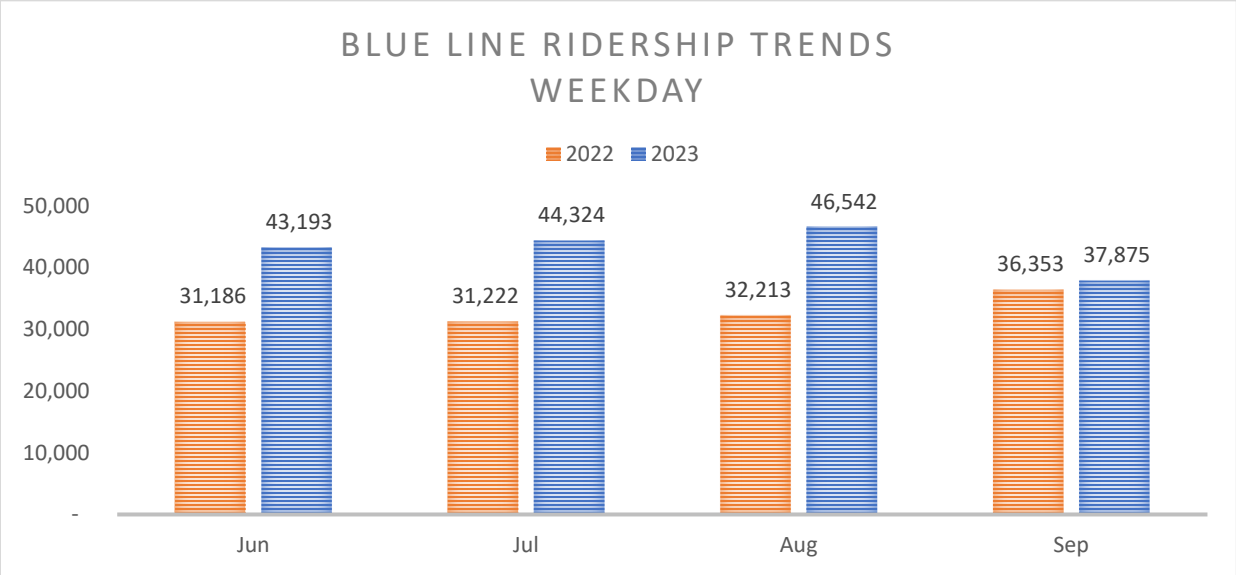
SERVICE CHANGES

New Service and Improved Service Resulted in Higher Ferry and Blue Line Ridership

The MBTA made targeted service improvements prioritizing critical work on the Blue Line to address speed, frequency, and reliability. This work and the addition of a train at midday resulted in reliable 6-

minute headways (at peak) on the Blue Line with relatively quick travel times. This resulted in ridership increases in July and August 2023 when compared to the same period in 2022.

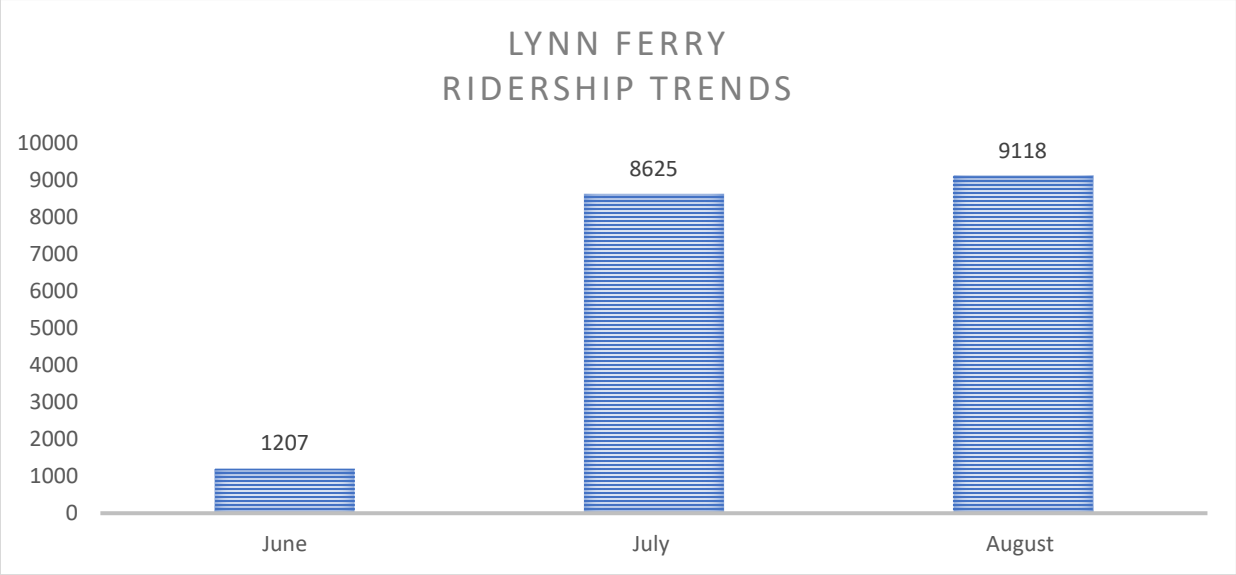
Figure 10: Blue Line Ridership Trends



Source: https://massdot.app.box.com/s/21j0q5di9ewzl0abt6kdh5x8j8ok9964?sortColumn=date&sortDirection=DESC

To mitigate negative impacts of the Sumner Tunnel closure, the MBTA also launched new Ferry service from the North Shore (Lynn, Massachusetts), adding a viable water transportation option to people in Marblehead, Swampscott, and Lynn during the Sumner Tunnel closure. Ridership increased by more than 600% from June to July 2023 with slightly higher ridership in August 2023 when compared to July.

Figure 11: Lynn Ferry Ridership



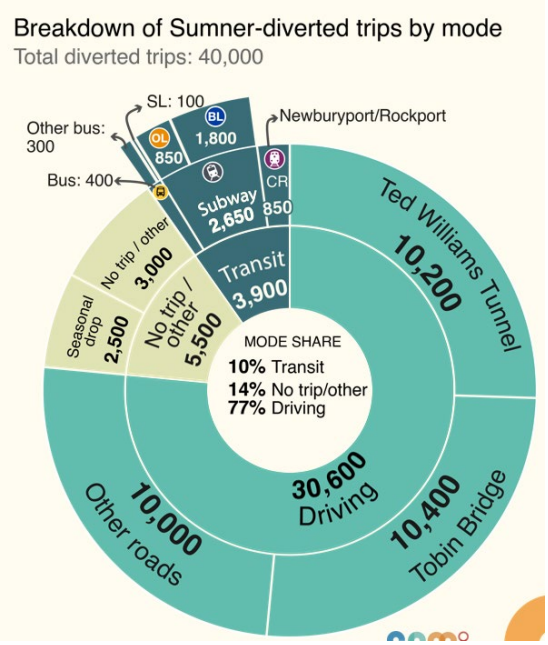
Source: https://massdot.app.box.com/s/jaqn3wmvk04ghci8c26ek3kuf0vyn7am

Ridership on the Lynn ferry was just over 1,000 in June 2023 and increased more than 600% in July to 8,625 riders and 9,188 riders in August.

COMMUNICATION

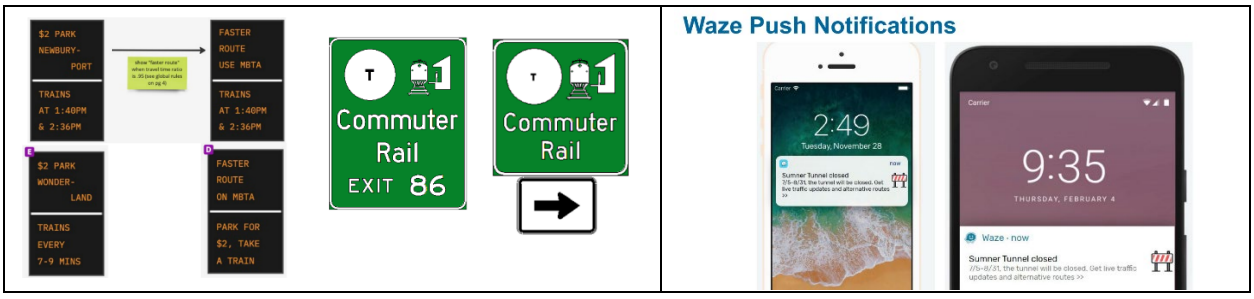
Traffic Counts ↓10% on Primary Harbor Crossings Compared to June 2023

Prior to the closure, MassDOT conducted extensive public outreach with the help of an external communications consultant to raise awareness on the two-month Sumner Tunnel closure and listen to public concern. Once the mitigation plan was announced in June 2023, MassDOT and the MBTA launched a multimedia campaign using social media to publicize the closure, announce mitigation options, and once the closure was underway, showcased officials ditching the drive. Another effective communication strategy was the use of portable MassDOT variable message signs to provide information on MBTA modes, including travel time savings from mode shift. MassDOT also engaged with Waze to request push [8]notifications be sent to their users traveling in the area to keep alternative routes.



Source: [Presentation to the MBTA Board of Directors, "Sumner Closure: Fall 2023 Travel Behavior Analysis", October 24, 2023]

Table 2: Communication Plays a Role in Reducing Traffic Via Mode Shift to Public Transportation



Source: MassDOT

[8] Major Congestion and travel times as compared to June 2023 were part of the Sumner Tunnel Closure experience along the primary alternative routes—RT-1A SB (Bell Circle and Ted Williams West Portal) and US-1 SB (Copeland Circle and I-93)—and travel to and from the Airport. Preliminary traffic data published by MassDOT suggest that on average during the weekday peak morning hour commute the alternative routes experience major congestion throughout the closure for approximately 75% of the time between 5:00-10:00 a.m. As reported by Massport, major congestion affecting the airport was constant from 5:30 a.m. to 10:30 p.m.

Traffic counts were down on average by 10% compared to June 2023 for all primary harbor crossings. It is too early to determine the exact reason, but it could suggest mode shifting to alternative public transit options promoted by the state's #DitchTheDrive campaign. MassDOT plans to further analyze the data to better understand the reason behind lower traffic counts. They may also consider surveying Sumner Tunnel users for more granular and specific information on what alternatives, if any, they chose during the July-August closure.

Table 3: Traffic Counts Down on Major Harbor Crossings during Closure by 10% Compared to June 2023

Harbor Crossing	June 2023 Traffic Counts	Average Traffic Counts (July-August 2023)	% Change from June 2023	Overall Trend
Sumner/Callahan Ted Williams Tunnel WB/EB Tobin Bride SB/NB	259,434	234,013	-10%	▲

Source: MassDOT Sumner Tunnel Daily Updates, August 2023

Box 2: Massport Took Bold Actions to Mitigate Traffic Disruption during Sumner Tunnel Closure

Mode Shift at Logan Airport

Massport data for alternative transportation modes during the Sumner Tunnel Closure also show that mode shift took place due to incentives and robust transit alternative options.

Logan Express use increased by 19% between June and July 2023 (combined employee and passenger use). Other private transit carriers serving New Hampshire, Vermont, and the South Coast area may have grown 11% or more during the closure as compared to June 2023.

Blue Line counts at Airport Station, on average, increased by 28% compared to pre-closure and observational evidence suggests that Logan Airport Shuttles ridership increased in both the inbound and outbound directions.

Massport also observed a doubling of passengers using MBTA ferries serving Logan Airport. Other positive outcomes include reduced travel times for SL3 riders during periods of congestion due to mitigation measures put in place by Massport to give the SL3 priority to dedicated bus lanes.

Source: Personal Communication

Conclusion

TAs Greater Boston prepares for the July-August 2024 Sumner Tunnel closure there are lessons that MassDOT and the MBTA can apply to improve alternative service mitigation, promote sustained mode shift, and reduce the impact on the region and MBTA ridership. The following recommendations provide

some ideas for how to structure and monitor the mitigation plan in 2024. These build on, in some cases, the solid efforts from last year, as well as integrate new ideas to deepen the short- and long-term impact of mode shift stemming from closure traffic diversion.

Recommendations

The following recommendations highlight areas where MassDOT and the MBTA can improve mitigation for the 2024 Sumner Tunnel closure. These recommendations build on, in some cases, the solid efforts from last year, as well as integrate new ideas to deepen the short- and long-term impact of mode shift stemming from closure traffic diversion.

1. **Shorten Closure Time**: Given last year's success and the disruption to the region resulting from the MBTA's ongoing Track Improvement Program, consider innovative strategies to shorten the duration of the full closure in 2024 to reduce the impact on Greater Boston.
2. **Establish Inclusive Stakeholder Engagement and Communication Strategy:** Broaden stakeholder engagement to ensure all groups have a voice, particularly the business community, higher education, and medical institutions. Finalize the mitigation plan early and communicate clearly to the public in advance of and during the closure. Highly visible multilingual signage, including inside and outside of stations, is key.
3. **Create Effective Data Collection Tool to Accurately Track and Report Mitigation Impacts:** Develop methodology and create a system to collect quantitative and qualitative ridership data, including baseline ridership numbers and rider survey questions, to effectively assess mitigation impacts. Institute ridership counts at select stations along the Commuter Rail prior, during, and after the closure to gather more granular information on mode shift trends. Moreover, publish all data on a publicly available platform during the closure.
4. **Enhance Strategic Approach to Mitigation to Drive Sustained Mode Shift:** Define mode shift goals by service area in advance of the closure that build off last year's success and design mitigation actions to support and bolster goals that will last beyond this repair project. For example, in addition to fare changes, improve service frequency and advertise schedule changes on the Newburyport/Rockport line during peak hours and throughout the day. Further, increase access to parking to support higher levels of mode shift.
5. **Implement Innovative Multimodal Mitigation Solutions:** Engage with external stakeholders to develop and cement offerings with Transportation Network Companies (TNCs) like Uber/Lyft and GPS providers like Google Maps and Waze, as well as take stock of lessons learned from last year's closure to determine if mitigation actions could be rolled out more broadly. Maintain close relationship with MBTA Station Access team to ensure robust multimodal connections and efficient TNC pick up/drop off areas. Develop a plan to expand and install infrastructure to increase Bluebikes at stations, as well as resources to enable Bluebikes ridership.
6. **Execute Post-Closure Transition Strategy:** Develop and execute a strategy that maintains positive messaging and encourages sustained use of public transit alternatives beyond the closure, for example, consider testing fare and schedule changes prior to and proceeding the closure to collect ridership information and assess mode shift habits, or adding in time-limited incentives across the system following the closure to further retain and encourage mode shift.