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MBTA Commuter Rail Fare Reform Evaluation

A Better City

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Introduction

MBTA ridership has recovered significantly since plummeting at the start of the pandemic, and Commuter Rail in particular has had impressive ridership recovery. What still lags, though, is the MBTA's revenue made from fares, which is about 40% lower than its pre-pandemic level. Farebox recovery ratio is even worse, currently 60% lower than 2019 numbers. Rethinking the way that the Commuter Rail's fares are structured is vital for bringing more farebox revenue to the system. The MBTA can look to peer agencies in the US to see what fare products and initiatives they've taken on in order to attract more ridership.

The MBTA Commuter Rail fare system is composed of 11 zones, with Zone 1A – the urban core which is priced like the subway – and Zones 1-10 which progress outward from Boston. Commuters are offered savings with a monthly pass, a bundle of 5 single-day passes, and a whole-weekend pass.

Zone	One-Way
1A	$2.40
1	$6.50
2	$7
3	$8
4	$8.75
5	$9.75
6	$10.50
7	$11
8	$12.25
9	$12.75
10	$13.25

Peer Agency Fare Policies

Peer agencies like Metra, SEPTA, and LIRR have 4, 5, and 8 zones respectively, making the MBTA's zone system complex in comparison. The MBTA's Zone 1A currently includes stations in very residential areas, while leaving out some higher-density neighborhoods in and around Boston. Given the drastic jump in the system's pricing structure, whereby fares go from $2.40 to $6.50 between sometimes close-by stops, the setup of Zone 1A has caused much frustration. That said, the MBTA system is unique in the US in having so many stations in the urban core which are priced like rapid transit, which makes MBTA service well positioned for a shift to Regional Rail. Traveling within comparable agencies' innermost zones costs double or triple their city's rapid transit fares.

This disparity in pricing within core zones presents diverging opportunities for the MBTA. If increasing Commuter Rail fare revenue, currently still far below pre-pandemic levels, is the MBTA's main goal, then increasing the fare inside Zone 1A would ease their fare-box problems. This would, however, conflict with the agency's messaging about affordability and disturb an important system feature – that is that the Commuter Rail costs the same as the subway within the inner zone. If the MBTA's priorities lie with transforming the system to a Regional Rail model, then keeping the price for trips within Zone 1A at $2.40 – and expanding stations within the zone – is vital. For the Commuter Rail system to become an everyday mobility option used beyond commuting, its fares must be competitive with rapid transit in its densest areas, at the very least. The Fairmount Line, for example, sits entirely in Zone 1A except for its terminal and serves as an emerging example of what MBTA Regional Rail could look like: frequent service in a dense corridor with the financial and functional ease of a subway line. Even

raising the 1A price to $3 would make Dorchester-Mattapan communities already burdened by MBTA fares choose between slow bus trips or a Commuter Rail ticket that costs 75% more than the bus.

The MBTA does not offer a weekly or daily pass for the entire system, like many regions do. In 2020, the MBTA introduced the 5-day "Flex Pass," which allows for 5 days of all-day discounted Commuter Rail travel within a 30-day period – meeting the needs of commuters only coming into Boston a few times a week. LA's Metrolink offers a similar product, while others only sell bundled one-way tickets. Starting in 2018, the MBTA has also sold $10 passes valid for an entire weekend. This pass has been lauded as a key contributor to post-pandemic ridership recovery. Comparing the Commuter Rail's weekend ridership to that of Metro-North and LIRR's, though, shows us that post-lockdown weekend ridership booms are not unique to the MBTA, and that the Commuter Rail's increase was not primarily driven by the Weekend Pass. Rather, increased service and better marketing for weekend leisure travel on the Commuter Rail were large contributors to the increase.

In addition to using zone-based fares, LIRR and Metro-North use peak and off-peak prices. These peak fares, around 35% higher than off-peak ones, apply for weekday trains arriving in New York City between 6 and 10 a.m. or leaving between 4 and 8 p.m. Providing less expensive tickets for workers reverse-commuting and for passengers riding Commuter Rail midday or at night could incentivize ridership. Beyond providing riders with more flexibility, this pricing model could also be a move towards Regional Rail and away from the MBTA being just a 9-to-5 commuter service. This proposal is evaluated in detail in the next section.

As an alternative to interzone fares, SEPTA charges a flat, $4 fare to travel between zones outside of the downtown core. A shift to SEPTA's model could expand the Commuter Rail's usage and reputation beyond just suburb-to-downtown service, instead making the MBTA a provider of greater regional mobility. This policy is difficult to financially evaluate due to the lack of publicly-available data around interzone travel on the Commuter Rail.

Many US commuter rail systems offer a pass or a discount on single tickets for higher education students, generally providing 50% off fares. The MBTA offers Semester Passes, which colleges can opt into and allow students to buy a Commuter Rail pass up to a certain zone at a lackluster 11% discount. Given how rich the Greater Boston area is with colleges and universities, many of which are located in outlying suburbs, providing a pass or discount for college students with a more attractive discount like 50% could bring in more student ridership. A policy like this could make it more realistic for college students to take the Commuter Rail, providing them with mobility that many students at more rural colleges don't have. Only 3 colleges/universities in Greater Boston subsidize passes up to 50% for their students: MIT, UMass Boston, and New England College of Optometry.

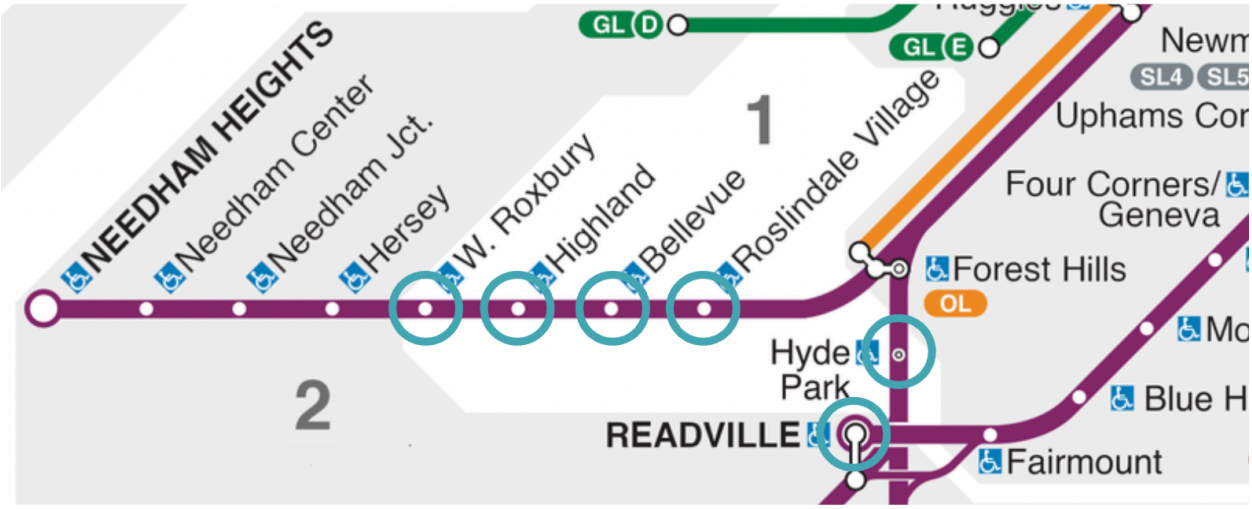
A Regional Rail model for the Commuter Rail network would require more steps towards fare integration. As an example, passengers on LA's Metrolink and Toronto's GO commuter rails are given

free transfer to their respective downtown transit systems – as well as outlying RTAs – when they use a transit card. SEPTA's monthly passes automatically include unlimited travel on the bus and urban rail systems while maintaining a cheaper break-even price per month than the MBTA. If Commuter Rail riders want to include unlimited MBTA travel, they must pay an additional $10 onto their monthly pass. This is, however, a much cheaper rate compared to major systems like Metra, LIRR, and Metro-North, which charge $30-47 for unlimited local transfers.

Below, three proposals to reform the MBTA's fare structure are evaluated in depth.

Option 1: Shift All Stations in the City of Boston to Zone 1A

This longstanding proposal would see 4 stations in West Roxbury and Roslindale along the Needham Line as well as Hyde Park and Readville Stations be priced at Zone 1A fares.



5 Stations located in the City of Boston are highlighted on the map, shown in Zone 1 and 2.

Financial Impact

Below are estimates for yearly loss given this reform of Zone 1A, using 2024 ridership data. These figures only account for station-to-core travel, as information on interzone trips is unavailable. The MBTA is not public about the rate at which Commuter Rail riders use monthly passes versus other fare media, so this rate is estimated at 60-80%. Rough estimates of price elasticity are also included.

Station	Zone	Line	Yearly Loss (60% rate)	Yearly Loss (80% rate)	% of CR Revenue	Revenue Increase (+3-5% Ridership)
Roslindale	1	Needham	$970k	$890k	0.7%	$18-31k
Bellevue	1	Needham	$570k	$530k	0.4%	$11-18k
Highland	1	Needham	$550k	$510k	0.4%	$11-18k
W. Roxbury	1	Needham	$560k	$510k	0.4%	$11-18k
Hyde Park	1	Franklin, Providence	$660k	$610k	0.5%	$13-21k
Readville	2	Fairmount, Franklin, Providence	$1.45m	$1.35m	1 - 1.1%	$24-41k
Total			**$4.7m**	**$4.4m**	**3.3 - 3.6%**	**$88-146k**

Estimated annual cost of shifting stations to Zone 1A. Source: Fall 2024 MBTA Ridership by Stop Dataset.
*Modeling shows more loss assuming 60% Monthly Pass usage because 1A passes are much more expensive per-trip than Zone 1 or 2 passes. The MBTA provides less of a discount for a Zone 1A pass (in comparison to a month's worth of one-way tickets) than other zones.

Shifting all Boston Stations to Zone 1A would cost the MBTA between $4.7 and $4.4 million every year, about 3.3-3.6% of their yearly revenue. Breaking down this number, we can see the large price tag of

shifting Readville Station as opposed to stations like Roslindale Village and Hyde Park, which would be inexpensive given their impact.

Social Effect and Perception

While some stations make more sense than others to charge Zone 1A fares, the proposal to make all of Boston covered by 1A has always been largely symbolic and politically-motivated. While Boston is made up of many low-income and transit-dependent neighborhoods, some of which are outside Zone 1A, it is not the only city with those needs. If Zone 1A reform prioritized community need and economic equity, all five of these Boston stations would not be top options to bring into the core zone. The Boston-to-1A proposal is rather a push by Boston city officials and representatives, reasoning that Boston is the hub of the system and therefore all the city should be included in Zone 1A. In other words, the five City of Boston stations may be a packaged deal when it comes to political pressure, though that doesn't have to be advocates' or the MBTA's approach.

As previously mentioned, Boston has many more stations in its 'urban core' zone than peer commuter rail systems nationwide and is unmatched in charging subway prices within that core zone. This makes a clearer path for a shift to Regional Rail, which is far more effective at providing fast, frequent service to stations in an urban setting – in addition to the suburbs. Making Zone 1A reform would be laying the groundwork for the dramatic shift in system philosophy that the MBTA has planned out.

The four Zone 1 stations along the Needham Line are great examples of where Regional Rail service would excel in comparison to current options. These Roslindale and West Roxbury stations are located very close together, a quality which EMU trains are far more efficient than diesel locomotives at serving rapidly. These neighborhoods are in the sphere of the City of Boston, but the state of current bus routes and the price of Commuter Rail make access to the core lengthy and difficult. Traveling from West Roxbury to Back Bay requires a 17-minute bus ride followed by platform wait time and 11 minutes on the Orange Line, whereas a one-seat ride on the Needham line only takes 17. Currently, though, commuters are much more likely to pick the longer trip, which only costs $2.40, as opposed to a shorter, easier trip that costs $6.50. Nimbler, Regional Rail-type service could make this area far better connected to the rest of Boston. Together, bringing these stations into Zone 1A would cost the MBTA about 2.4 million dollars per year, assuming the shift would bring a ridership increase of 3% at the very least. In the long term, losing about 1.8% of yearly revenue in exchange for a fare structure that's more built for Regional Rail is worth it, saying nothing of the additional fare revenue the MBTA could gain.

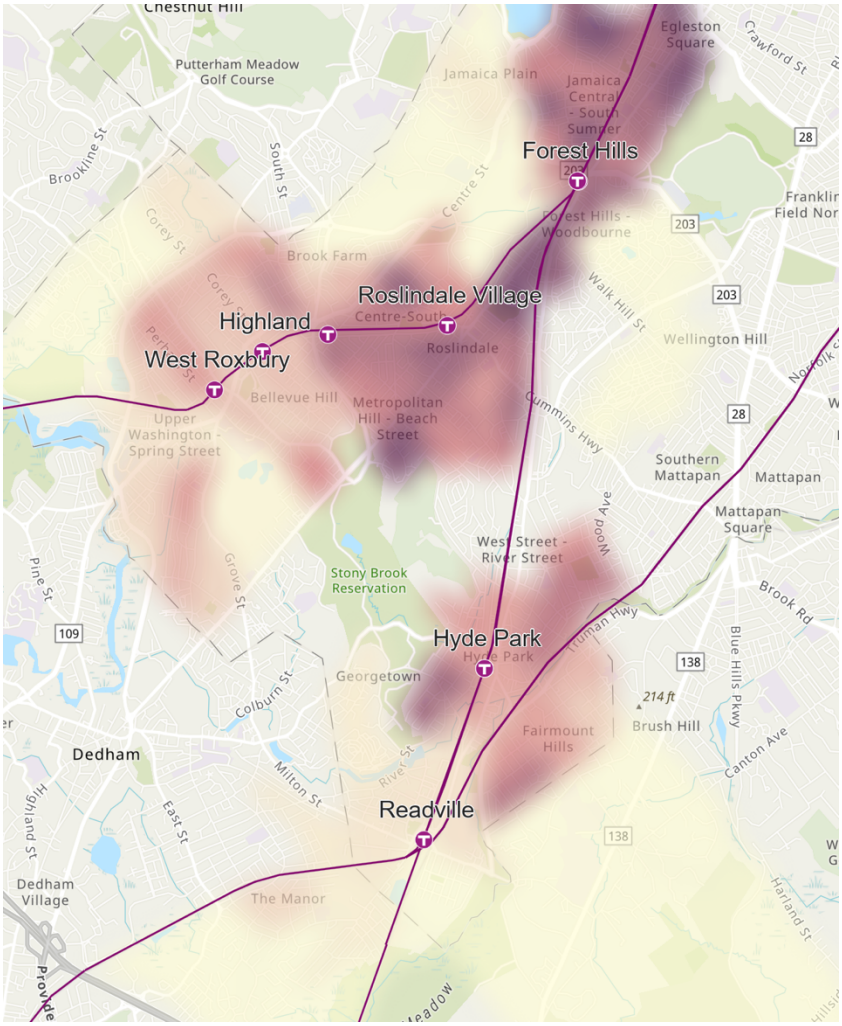
Roslindale Village Station is a prime candidate for the core zone in a Regional Rail model because of its location within a downtown area and the density that surrounds it. The station is surrounded by housing and population density comparable to other Boston Zone 1A stations. This opens up the possibility for riders around Roslindale Village to walk to the station, rather than park, and take the

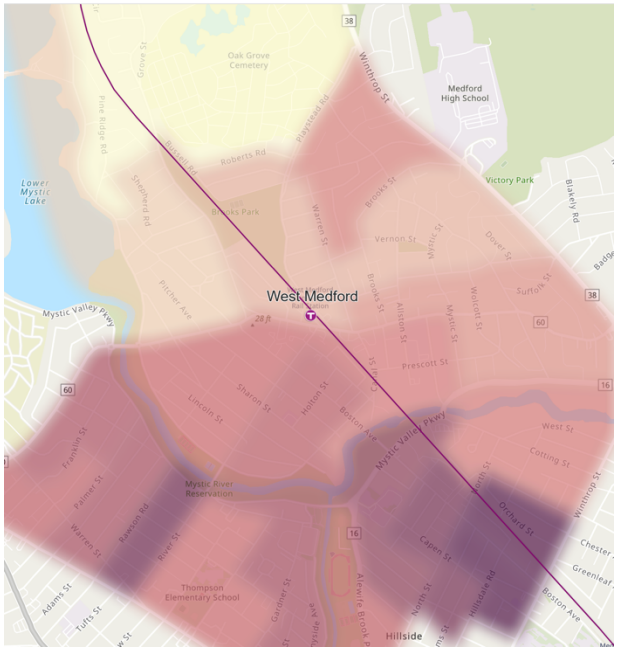
Needham Line to work or appointments as they would with rapid transit. Changing fares to reflect this need is vital. Roslindale Village Station should be a main candidate for a Zone 1A pilot, given its significant upside for ridership growth.

The maps below show population concentration, housing unit density, and rates of single-family homes in the areas surrounding these 5 stations, as well as Zone 1A stations Forest Hills and West Medford for comparison.

Hyde Park Station is located less than a 10-minute walk from Fairmount Station, which is included in Zone 1A. Depending on where you board a train in the Hyde Park area, you could pay $2.40, $6.50, or $7 for a one-way ticket. The station is adjacent to a section of Hyde Park Ave which is rich in retail, though it has much more housing sprawl than many Zone 1A stations and other candidates for 1A discussed in this paper. The sharp fare disparity within the Hyde Park neighborhood has drawn criticism over equity concerns and fare structure coherency. While this may not be as high a priority as many other potential Zone 1A pilots, it is an area that the MBTA must address.

Readville Station exhibits a less pressing need to be included in Zone 1A. The stop is located in a low-density industrial area with less demand for rapid-like service. Under a system philosophy that resembles Regional Rail more, it would be sensible for this station – which isn't part of the urban core but isn't an outlying suburb either – to not be charged $7 to access the rest of Boston. That said, it isn't a top priority for a Zone 1A pilot.

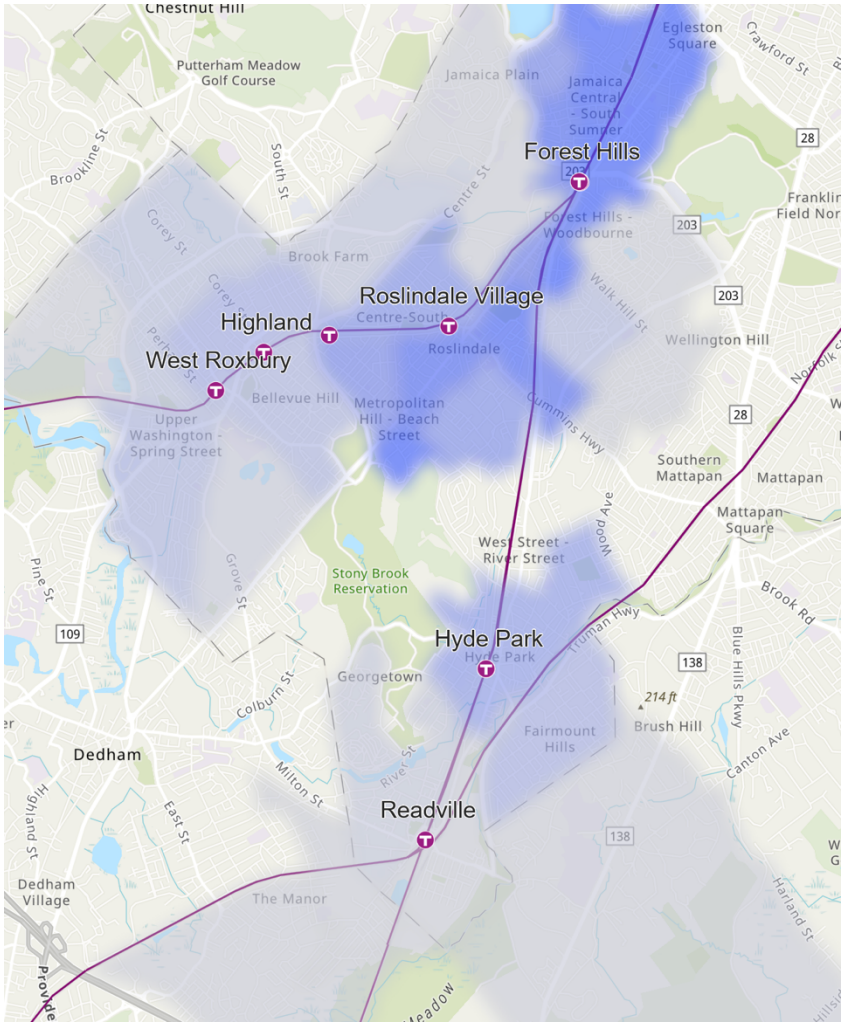


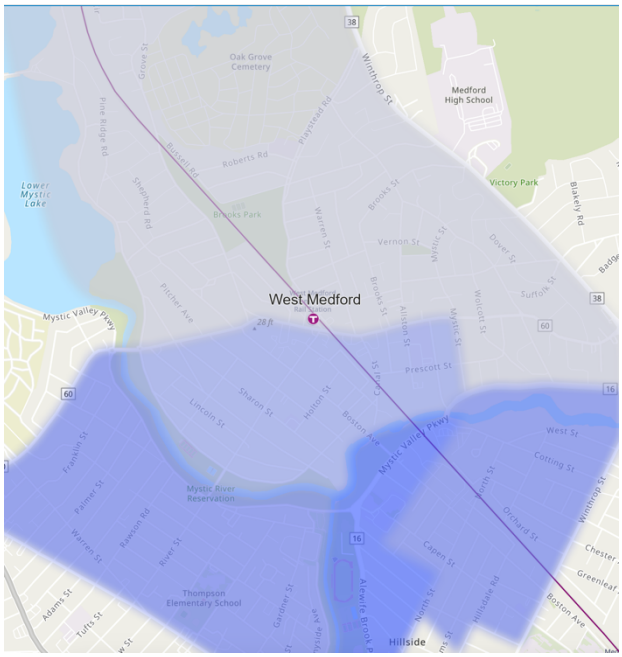


Population Density

- > 0.007
- 0.0043
- < 0.0016

Residents per square meter (population density) by census block group surrounding the 5 City of Boston Stations, compared with 1A stations Forest Hills and West Medford. Darker-shaded areas have higher density, yellow-shaded areas have the least. Source: 2020 Census Data.

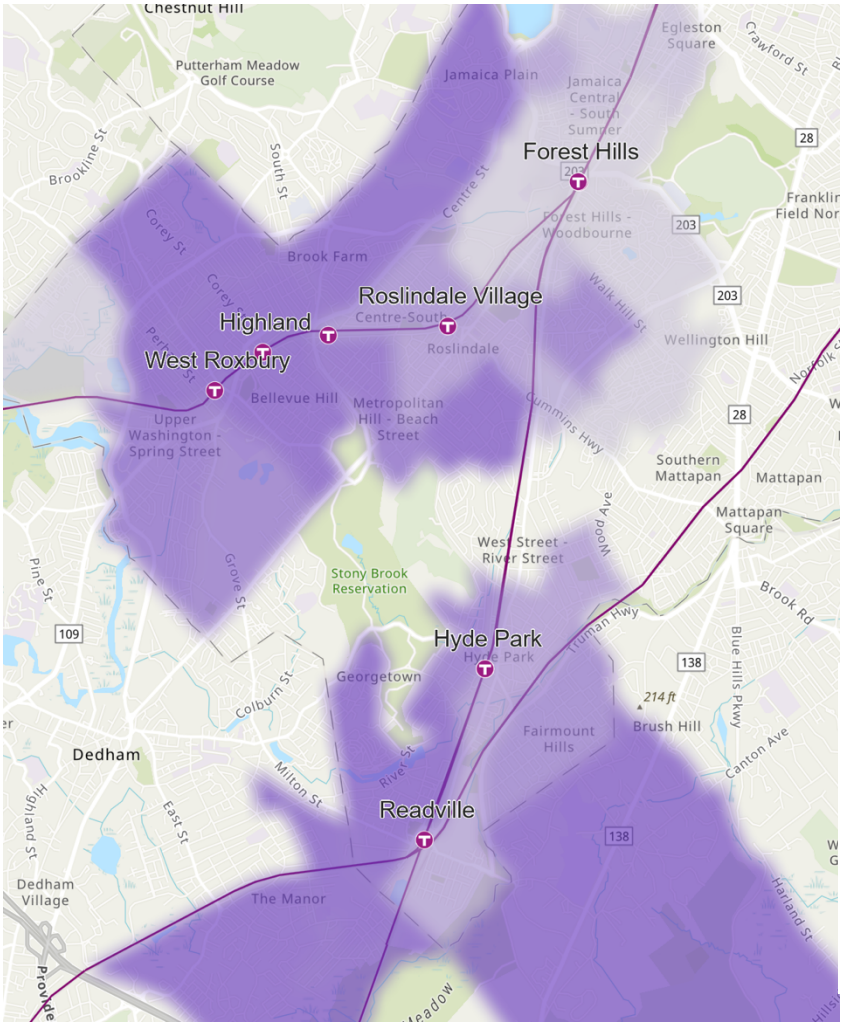


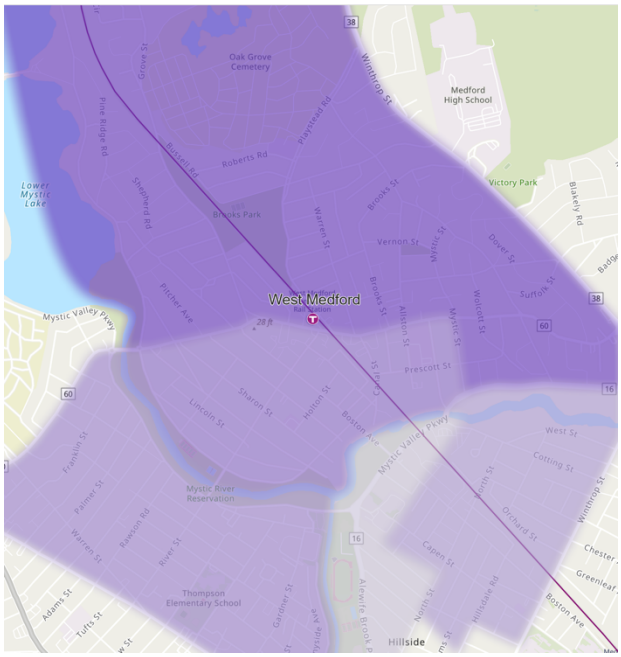


Units Per Sq Meter

- > 0.0031
- 0.00192
- < 0.0008

Housing units per square meter (housing density) by census tracks around the 5 City of Boston Stations, compared with 1A stations Forest Hills and West Medford. Darker-shaded areas have higher density, lighter-shaded areas have the least. Source: 2023 ACS Census Bureau Data.



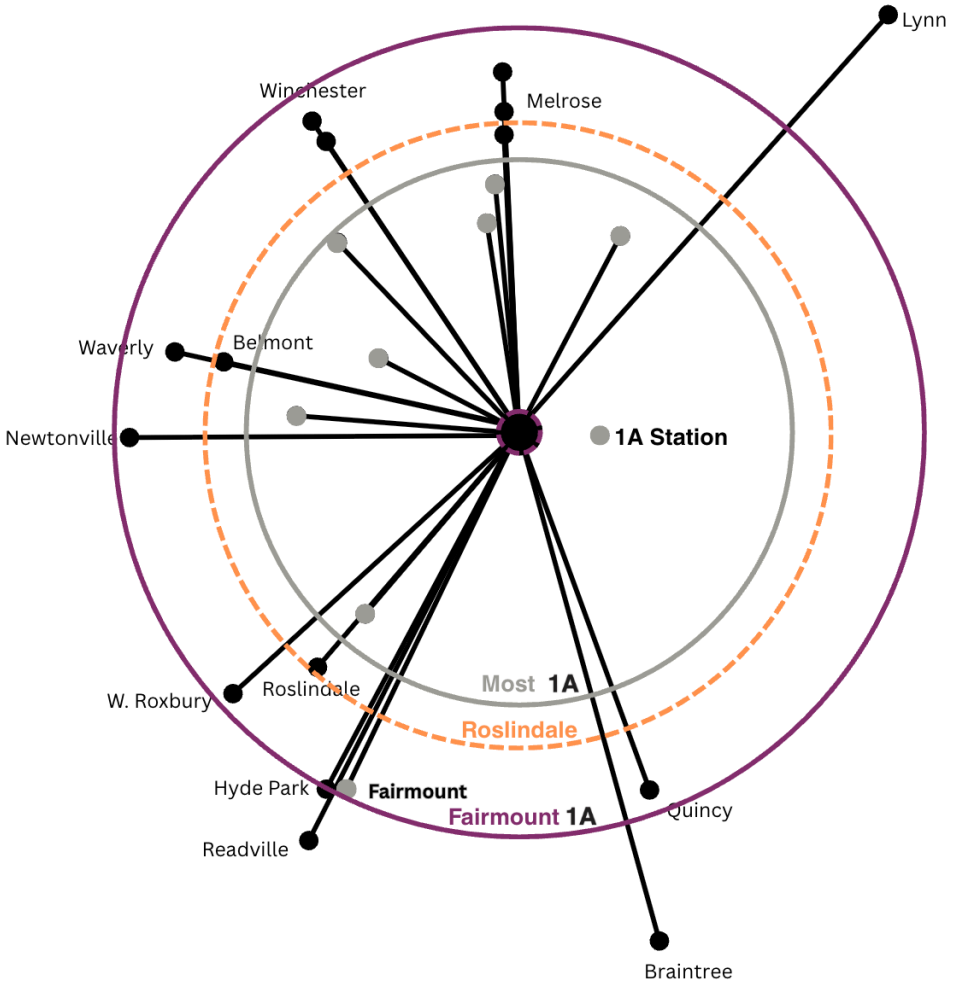


Percent of Structures with Only 1 unit

- > 0.6
- 0.358
- < 0.1

Percent of structures by census tract that are single-family, 1-unit (rate of single-family homes) surrounding the 5 City of Boston Stations, compared with 1A stations Forest Hills and West Medford. Darker-shaded areas have higher density, lighter-shaded areas have the least. Source: 2023 ACS Census Bureau Data.

Another important question is how the MBTA balances distance-based and needs-based fares. The visual below shows the track distances from the core of nearby stations in Zones 1 and 2 to their respective terminals in Boston. The orange and purple circles show the track distances to Roslindale Village and Fairmount Stations, for comparison to other stations. Current Zone 1A stations have grey dots.



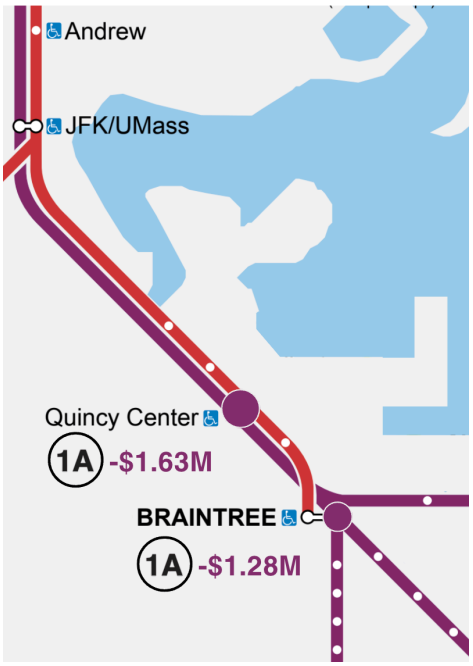
Track distance to South Station or North Station. Source: MBTA Bluebook Ridership and Service Statistics, 2014.

While a fare change for a station like Roslindale would make a lot of sense because of its mobility and equity benefits, it opens the question of why wealthier suburbs like Melrose or Belmont, which are closer to the core, shouldn't be included in Zone 1A as well. Commuter Rail fares as they stand make up a smaller portion of families' income in these close-by suburbs, and their zoning, housing density, and car ownership don't demand core-type service the same way. This does not mean those areas shouldn't receive frequent service that attracts commuters and general riders, but they aren't a top priority from an equity and mobility perspective, nor in the sense of pushing the system towards Regional Rail.

The MBTA already structures their fare zones to prioritize equity and Regional Rail compatibility, in fact. All stations on the Fairmount Line except Readville are priced as Zone 1A, despite the line extending to Hyde Park and covering a track distance far longer than many inner suburbs. This is a sensible policy, as this corridor has greater economic needs, has been historically excluded from rapid transit, and has local stations surrounded by density. The MBTA prioritizes these stops because they're becoming an example of what much of the system could be like with rapid Commuter Rail service. Fairmount Line riders, for example, can tap a CharlieCard to get on the train rather than buying a ticket – resembling the kind of frictionless, approachable travel that a subway provides. If the MBTA were to shift certain stations in the City of Boston to Zone 1A for equity reasons or to create a fare policy prepared for Regional Rail, it wouldn't be setting a new precedent. The zone system we have now is not completely distance-based, and it doesn't need to be as long as it's sensible and forward-looking.

Option 2: Shift Zone 1A to Cover Entire Subway Service Area

The success that the MBTA has seen in providing free or reduced fares at key Commuter Rail stops during major subway shutdowns in the past few years has led some advocates to call for Zone 1A to include all stations within the service area of the rapid transit system. Bringing 2 stations along the Braintree Branch and the 3 stations adjacent to the end of the Riverside Branch into Zone 1A would make what's now an unattractive $6.50-7 commute into one that costs the same as the subway.



Financial Impact

Again using 2024 ridership data, we can get an approximate idea for the financial implications of this reform.

Station	Zone	Line	Yearly Loss (60% rate)	Yearly Loss (80% rate)	+3-5% Ridership
Quincy Center	1	Kingston, SCR, Greenbush	$1.59M	$1.66M	+ $15-30k
Braintree	2	Kingston, SCR	$1.26M	$1.31M	+ $12-20k
Newtonville	1	Worcester	$1.08M	$1.13M	+ $12-20k
W. Newton	2	Worcester	$700k	$730k	+ $6-12k
Auburndale	2	Worcester	$480k	$500k	+ $4-8k
Total			**$5.11M**	**$5.34M**	**$47-90k**

Estimated annual cost of shifting stations to Zone 1A. Does not include interzone revenue changes and assumes 60-80% Monthly Pass usage. Source: Fall 2024 MBTA Ridership by Stop Dataset.

Expanding Zone 1A to cover these 5 stations would cost the MBTA about $5.1-5.3 million dollars every year.

System Transformation Effects

Along the Red Line, it is currently unrealistic to expect many riders coming from Quincy or Braintree to pick the Commuter Rail's much more expensive fare in exchange for slightly faster, less frequent service. Leveling the playing field economically, however, may bring riders from the Red Line to the Commuter Rail, more likely at Braintree than in Quincy. Trains from Braintree provide time savings significant enough to attract drivers and Red Line riders, while travel times from Quincy are barely faster than the Red Line. Time and frequency improvements won't be coming anytime soon, either, because of severe infrastructure limitations on the Old Colony Lines. Still, an average of over 600 Quincy-area riders choose the Commuter Rail over the Red Line on weekdays according to 2024 MBTA ridership data, meaning some demand exists, especially if more barriers were to be removed. To adjust Braintree's fare zone, the MBTA must take on about $1.6 million in farebox losses to shift Quincy to 1A in addition to the $1.3 million for Braintree.

Mode	Quincy Center - Downtown	Braintree - Downtown	Newton/Weston - Downtown
CR	15-20 min	20-25 min	19 min
Red/Green Line	19 min	26-29 min	39 min

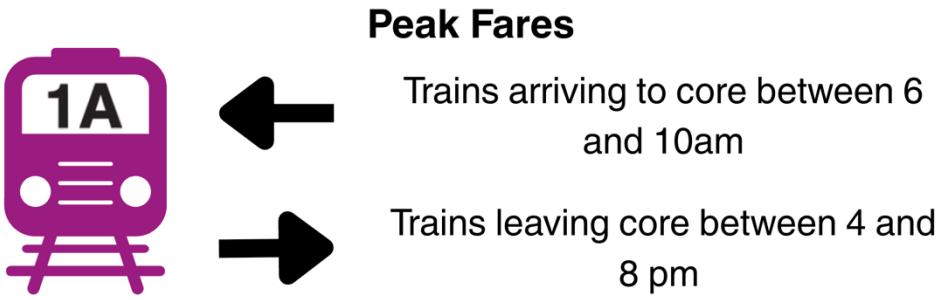
Comparison average of travel times from the 3 outlying stops to South Station.

Adjusting Commuter Rail fares for riders in Newton, however, would make the Worcester Line a much more feasible option. Service on the line already provides 100% time savings over the Green Line, the latter of which is inaccessible for riders in the north of Newton, closer to I-90. Additionally, the MBTA has expressed their intention to invest in service improvements on the Worcester Line, including better frequency and faster travel times. The price tag for these 3 stations is roughly $2.3 million per year, with lots of potential for ridership induction.

Any mode shift of current Red or Green Line riders to the Commuter Rail will not bring the MBTA additional revenue, as the fare between 1A stations is the same as rapid transit. Regardless, it isn't coherent fare policy for the Old Colony Lines to be using the same route and stops as the Red Line while charging 270% of the price. As the MBTA undergoes a transformation towards their Regional Rail goals, it's advantageous for the agency to gain momentum in the form of increased ridership and proof that riders are using the Commuter Rail in new ways. Providing affordable, realistic options for commuters in Quincy, Braintree, and Newton also increases capacity and reduces crowding. All of these factors may not be immediately pressing, but they need to be addressed if the MBTA is to follow through on its goals in the long term.

Option 3: Institute Off-Peak Fares

Using New York's model for peak and off-peak pricing, the Commuter Rail could incentivize ridership apart from the traditional rush-hour commute. Metro-North and Long Island Rail Road currently charge 35% higher one-way fares during the morning (6-10 a.m.) and evening (4-8 p.m.) rush hours than during midday, night, and weekend trips. Comparing ticket price per mile travelled, Metro-North and LIRR's off-peak fares are very similar to MBTA fares. The Commuter Rail could see increased ridership from lowering midday and evening travel fares, though the system's circumstances would require the MBTA to approach peak/off-peak pricing differently than New York. Four different approaches are evaluated, all of which maintain Metro-North and LIRR's practice that off-peak tickets cost ¾ of the peak ticket price.



No Peak Change, Cheaper Off-peak: Off-peak fares would be set 25% lower than their current cost, while trips during peak time would cost the same. Example Zone 2 fare: $7 trip becomes $5.25 off-peak.

Slight Peak Hike, 20% Cut to Off-peak: Off-peak prices would shift down by 20% of their current level, and peak trips would be raised by 5% of the current base fare. Example Zone 2 fare: $7 trip becomes $5.50 off-peak and 7.25 on-peak.

Bigger Peak Increase, Less Off-peak Savings: Peak fares would cost 10% more than the current base price, and off-peak tickets would drop 15%. Example Zone 2 fare: $7 trip becomes $6 off-peak and 7.75 on-peak.

Adjust Monthly Pass Rates to Peer Standard: If the Commuter Rail were to use peak and off-peak fares, it would need its Monthly Pass cost to reflect a middle ground between the two one-way rates. The MBTA already provides industry-low monthly savings to its commuters, offering 25-30% savings for a full-time commuter as opposed to around 40-45% for most LIRR and SEPTA zones – in other words, 15-16 commuting days to break-even as opposed to 12-13. This proposal brings the MBTA closer to peer fare structures, lower prices to provide 35% monthly savings to a rider commuting full time. Even

with a higher peak price, this rate would still lag behind LIRR in commuter savings. Reforms to the monthly pass could be executed independently of the three proposals above.

Financial Impact

Using the above models and 2024 MBTA ridership data, we're able to get a rough estimate for the degree of financial impact that each peak/off-peak model would have.

	-25% Off-peak, Normal Peak	-20% Off-peak, +5% Peak	-15% Off-peak, +10% Peak	Lower Monthly Rate: Peer Standard Break-even Cost
60% Monthly Pass Use Rate	-$7M	-$3M	+$1.25	-$11.5M
80% Monthly Pass Use Rate	-$3.5M	-$1.5M	+$620K	- $15.3M
+3% Ridership	+$315-625k	+$330-670k	+$315-625k	+$2.5-3.3M

Estimated annual cost of charging different rates for peak and off-peak travel, using MNR/LIRR peak windows. Ridership induction only includes additional off-peak rides, assuming no change in peak ridership. Source: Fall 2024 MBTA Ridership by Stop Dataset.

Reducing ticket prices for off-peak times, without raising prices for peak fares, would lose the MBTA about 2.6-5.3% of their yearly Commuter Rail revenue. Two options are evaluated if the MBTA wanted to recoup some of this revenue loss by raising peak prices – the more aggressive hike results in gained single-ticket revenue, whereas a 5% peak increase cuts the agency's loss by over half. The more significant losses would come from lowering monthly pass rates. The Commuter Rail would see about 8.6-11.5% less Monthly Pass revenue per year were they to lower prices to approach peer systems.

System Transformation

Significantly lower ticket prices for those travelling early in the morning, during midday, or at night could attract new riders to the Commuter Rail that currently find it infeasible. As it stands, the Commuter Rail is perceived as a service bringing white-collar workers from the suburbs to downtown during the morning rush hour and back out in the evening. Instituting peak and off-peak fares makes the service a more useful option for reverse commuters and people commuting during off-hours. The frequencies and travel times that the MBTA is aiming for would meet these users' needs much better, but only if affordability needs are met. As an example, the "urban rail" philosophy called for in the former FMCB's endorsement of Regional Rail would make getting from Chelsea to Downtown during off-peak an easy process – making that economically feasible for riders is an important first step.

Social Effect and Perception

Blue-collar and service jobs are much more likely to demand non-standard commutes, making cheaper off-peak fares a step towards greater equity in the Commuter Rail's fare policy.

While only lowering off-peak prices without a counterbalancing peak fare change would be a significant hit to the Commuter Rail budget, now does not seem like the right political moment to be raising fares. Additional economic barriers for mobility, on top of worsening affordability issues and fear of an economic downturn, is not something the MBTA needs on its public perception. While the Commuter Rail is gaining more goodwill and positive awareness because of service increases and their plans to electrify, causing the choice to switch to the Commuter Rail even harder by hiking prices would impede whatever momentum they have now. The system will have to raise prices in the coming years given that their fares have stayed level for so long, so rolling peak and off-peak fares into that fare hike process could make the move easier politically. Choosing the second option, which raises fares slightly during peak and still provides significant reductions during off-peak is the most sensible in terms of revenue impacts and public perception.

Summary

Securing long-term, stable funding for the MBTA will allow the agency to set clear priorities for how the Commuter Rail will be transformed. Investing in the system and making key changes to how the MBTA collects fares is the path to gaining back revenue. Below I outline a few key interventions that will be most impactful in setting the system up for Regional Rail and bringing more ridership to the MBTA:

- **Roslindale Village Zone 1A Pilot:** Evaluate ridership increases when Roslindale commuters pay subway fares to reach Downtown Boston.
- **Auburndale, West Newton, Newtonville Zone 1A Pilot:** Temporarily bring the three Worcester Line stations into Zone 1A to gauge ridership capture in Newton.
- **Peak / Off-peak Fare Pilot**: When the MBTA raises fares, test a 6-month increase of peak fares by 5% and lowering of off-peak fares by 20%. Study the impacts of different savings rates on the Monthly Pass as part of the same process.
- **Study the Financial and Technological Implications of Fare Integration**: With a new CharlieCard being implemented, the case for free transfers from the Commuter Rail to the bus and subway needs to be made.