



Welcome!

This is a Public Meeting on the Bus Network Redesign.

Please settle in!

The meeting will start shortly.



Better
Bus
Project

Making transit
better together

Bus Network Redesign

December 8, 2022



Diversity and Civil Rights

English

All MBTA activities, including public meetings, are free of discrimination. The MBTA complies with all federal and state civil rights requirements preventing discrimination on the basis of race, color, national origin, limited English proficiency, and additional protected characteristics. We welcome the diversity from across our entire service area. If you have any questions or concerns, please visit www.mbta.com/titlevi to reach the Office of Diversity and Civil Rights.

Spanish

Todas las actividades de MBTA, incluidas las reuniones públicas, están libres de discriminación. La MBTA cumple con todos los requisitos de derechos civiles federales y estatales que impiden la discriminación por motivos de raza, color, origen nacional, dominio limitado del inglés y características protegidas adicionales. Damos la bienvenida a la diversidad de toda nuestra área de servicio. Si tiene alguna pregunta o preocupación, visite www.mbta.com/titlevi para comunicarse con la Oficina de Diversidad y Derechos Civiles.

Chinese

MBTA 的所有活动，包括公开会议，都没有歧视。MBTA 遵守所有联邦和州公民权利要求，防止基于种族、肤色、国籍、有限的英语能力和其他受保护特征的歧视。我们欢迎来自我们整个服务领域的多样性。如果您有任何问题或疑虑，请访问 www.mbta.com/titlevi 联系多元化和民权办公室。

Welcome

English

Thank you for joining the meeting! We appreciate your participation.

- This meeting will be recorded so that it can be shared with the people that were unable to join.
- All participants will be muted upon entry so that only the presenters can be heard.

Spanish

¡Gracias por atender esta junta! Agradecemos su participación.

- Esta junta estaría grabada para poder compartir con los que no pudieron asistir.
- Los participantes están silenciados al entrar la junta para que solo se pueda oír a los presentadores.

Chinese

感谢您参与此会议！

- 本次会议将会被录像，以便我们把它分享给没能来参加的人。
- 所有参与者在进来时都会被静音，以便于演讲者能被听到。

Interpretation

English

We offer interpretation during this meeting. In your meeting/webinar controls, click Interpretation (the small globe icon) and click the language that you would like to hear.

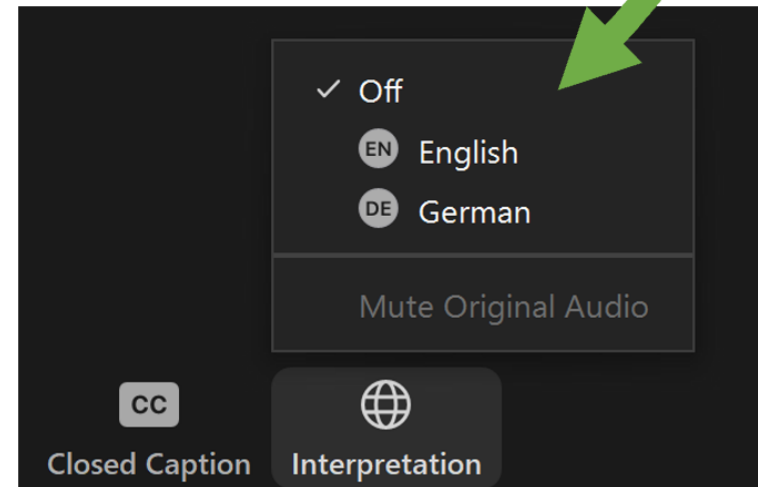
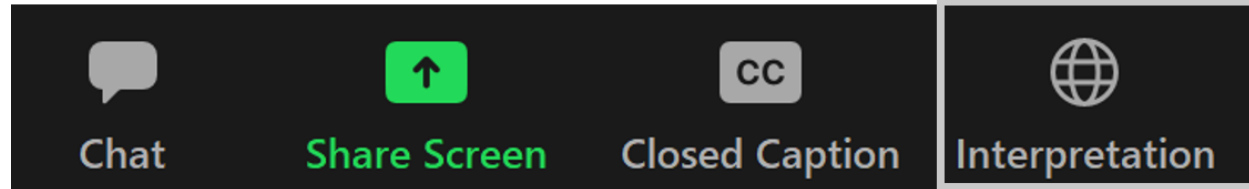
Spanish

Ofrecemos interpretación en español durante esta junta. Para escoger el audio en Inglés o en Español tendrá que picar el botón de interpretación, el cual tiene un imagen de un mundo.

Cuando le pique la interpretación por favor de escoger el idioma cual le gustaria oír.

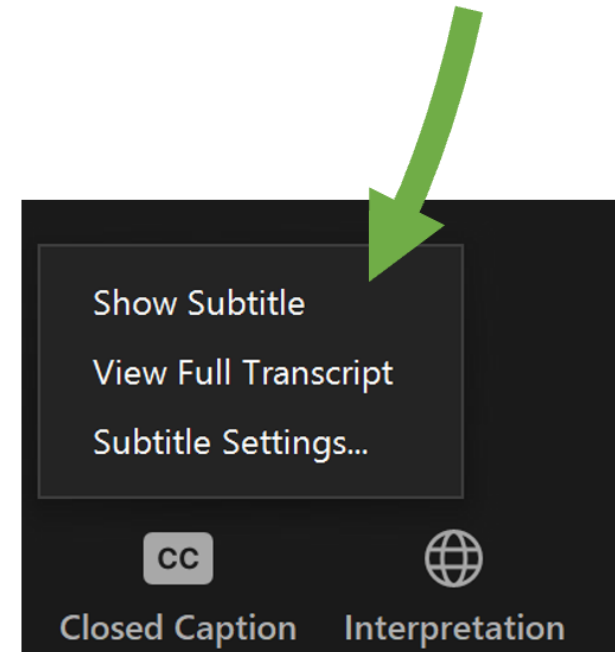
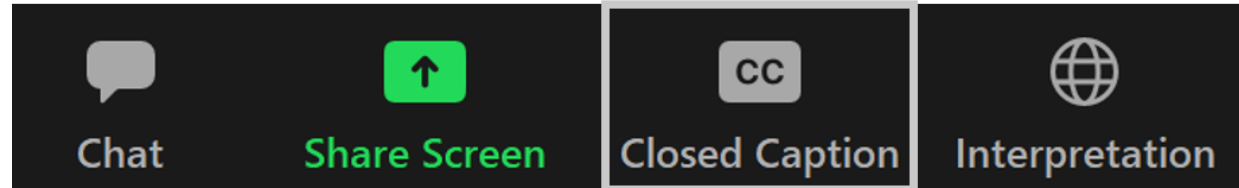
Chinese

我们本次会议期间提供口译服务。在您的会议/网络研讨会的控件中，单击口译（小地球图标），并单击您想听到的语言



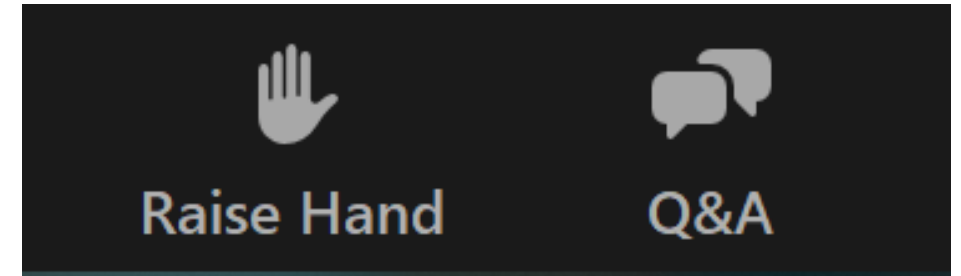
Captioning

- You can view closed captions by clicking the **Closed Captions** feature and selecting from the options shown.
- **Show Subtitle** will display a caption at the bottom of the screen.
- **View Full Transcript** will display the meeting's audio transcription in a window to the right.
- To adjust the caption size, click the upward arrow next to **Start Video / Stop Video**. Click **Video Settings** then **Accessibility**. Move the slider to adjust the caption size.



Submit a Question/Comment

- To submit a question, click the **Q&A** icon at the bottom of the window. When Q&A window pops up, type your question or comment in the comment box. To provide your comment anonymously, also click the **Send anonymously** checkbox before clicking the Send button.
- If you have a technical problem, please share your issue using the **Q&A feature** at any point during the meeting with a member of the project staff, and we will respond as quickly as possible.



What's your favorite candy?

Send anonymously

Cancel Send




Today's Meeting

Better Bus Project



Making transit
better together

Equity is one of the MBTA's Core Values. In this meeting, we will provide an overview of the equity implications of the Bus Network Redesign, both in fulfillment of our internal values and to meet federal obligations under Title VI of the Civil Rights Act of 1964.

-  BNRD Equity Overview
Justin Antos, Senior Director of Bus Transformation
-  Ongoing Monitoring of Equity in Service
Melissa Dullea, Senior Director of Service Planning
-  Title VI Equity Analysis
Steven Povich, Director of Fare Policy & Analytics

BNRD Equity Overview

We've listened to our riders

WE HAVE HEARD FROM YOU THAT GREAT BUS SERVICE:



Goes where people want to travel, when they need it



Is fast, frequent, and reliable



Is simple to use and understand



Serves the people who need it the most



Great Bus Service

GOES WHERE PEOPLE WANT TO TRAVEL

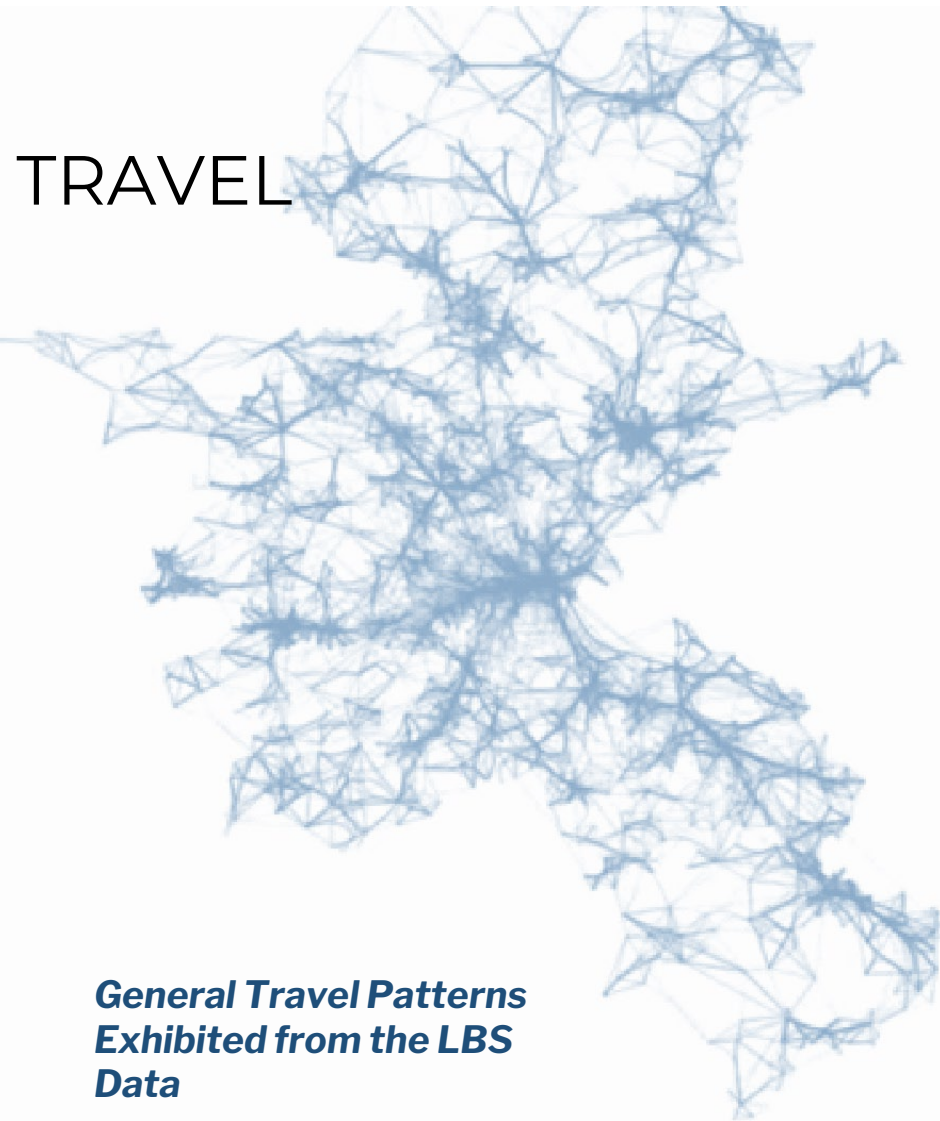
How do we know where people want to travel?

Using Location-Based Services data about where people actually travel – even if not currently served by the MBTA

- Describes trips on *all modes*
- Represent *all types of trips* (i.e. work, social, medical, etc.)
- Anonymized and unlinked from cell phone numbers to *preserve privacy*

Public survey about travel destinations

**General Travel Patterns
Exhibited from the LBS
Data**

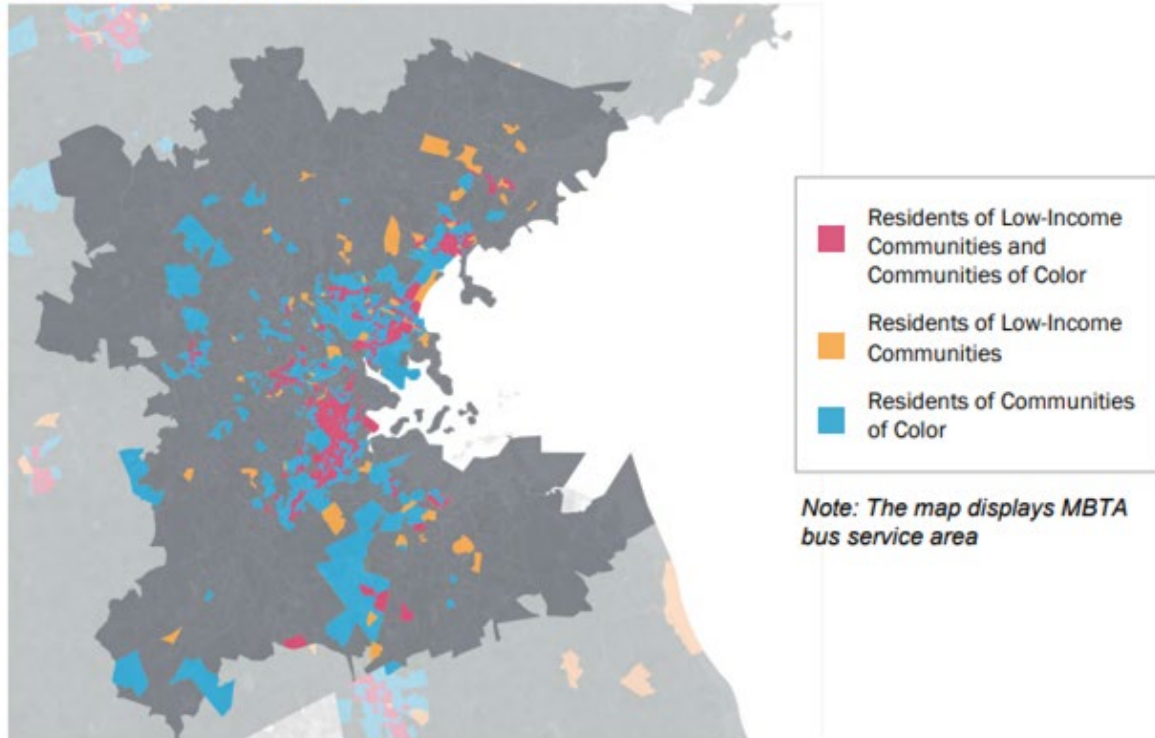




Great Bus Service

SERVES THE PEOPLE WHO NEED IT THE MOST

Low-Income Communities and Communities of Color in the MBTA Bus Service Area



Note: The map displays MBTA bus service area

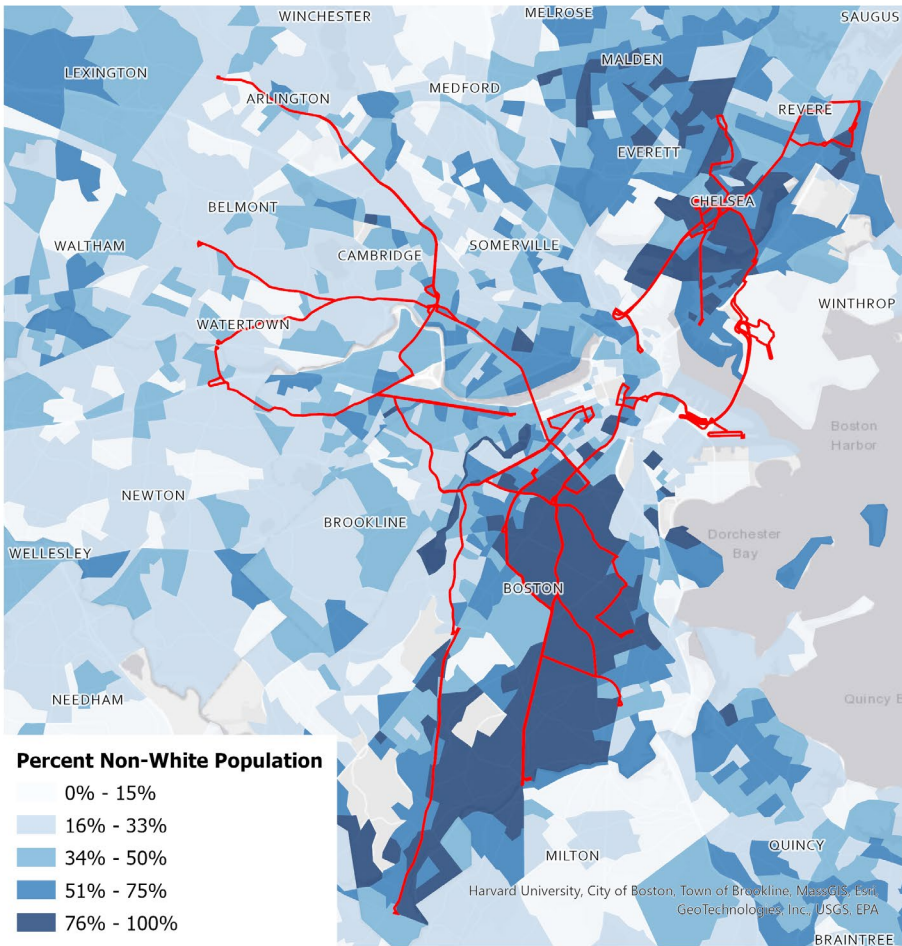


LBS data identifies trips made by our protected populations – even if they aren't traveling to/from home

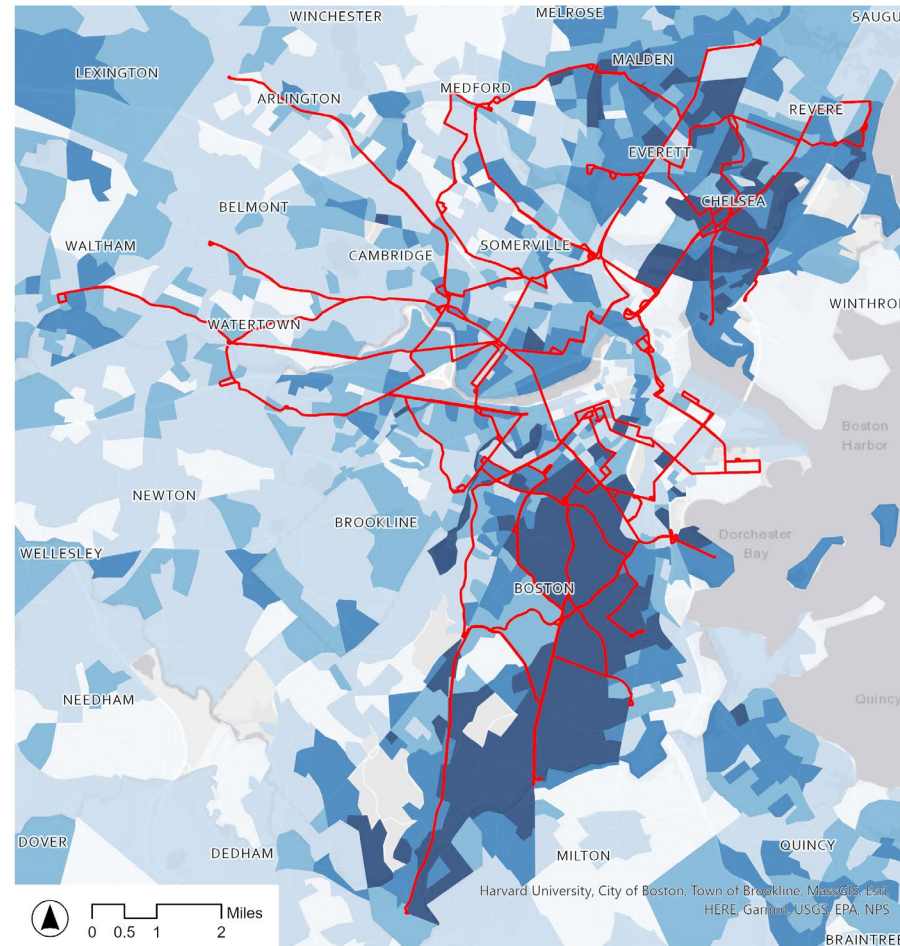
Allows us to prioritize trips made by these groups when allocating resources and designing new service

BNRD Equity Overview - Minority

Existing High Frequency Bus Network



Proposed High Frequency Bus Network

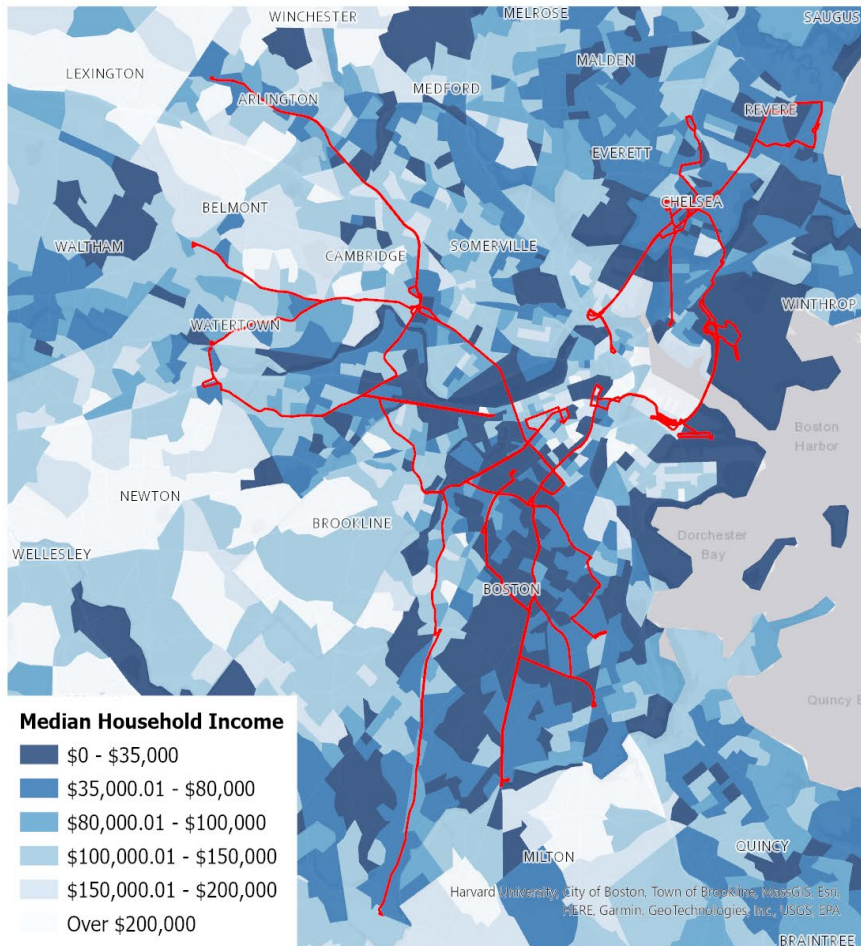


In the new network:

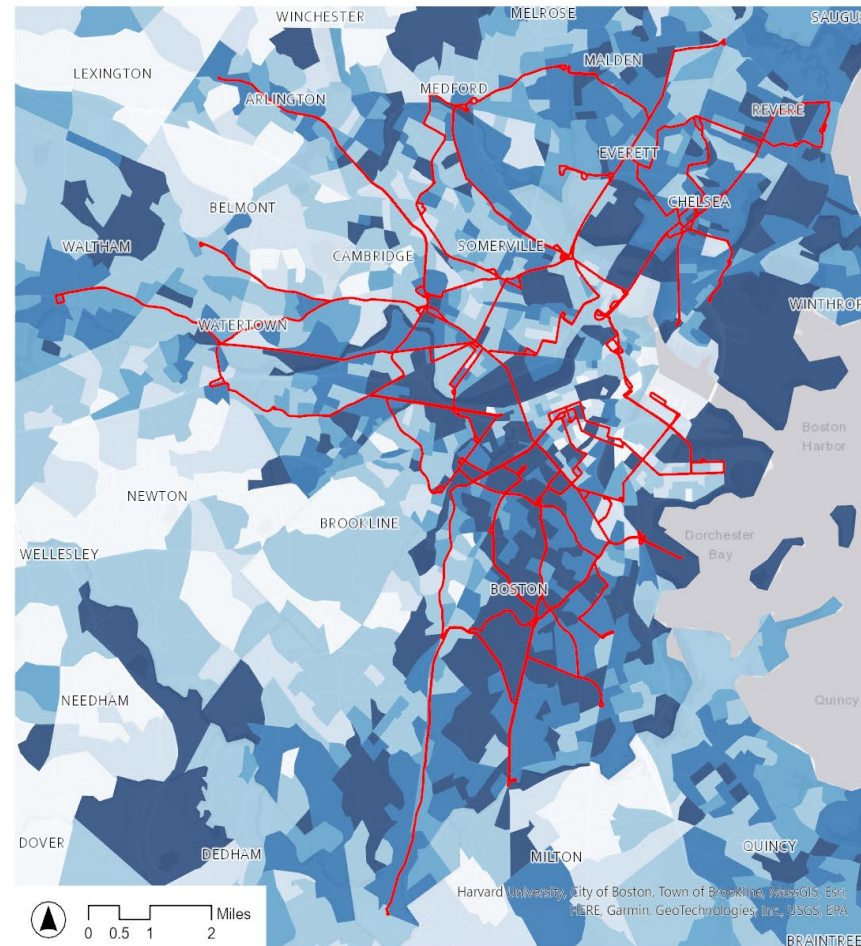
- 55% residents of color have access to high frequency service (up from 42%)
- 95,000 residents of color gain access to high frequency service.

BNRD Equity Overview – Low-Income

Existing High Frequency Bus Network



Proposed High Frequency Bus Network



In the new network:

- 49% low-income households have access to high frequency service (up from 36%)
- 29,000 low-income households gain access to high frequency service.

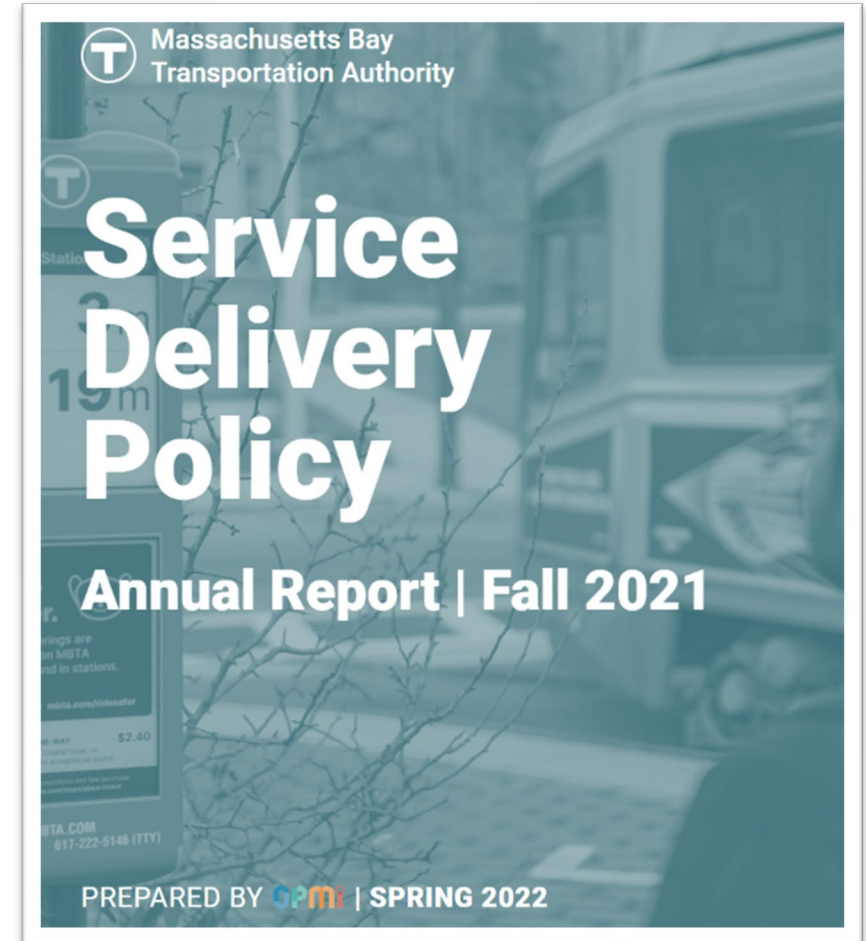
Equity in BNRD - Summary

- The Bus Network Redesign uses travel data **weighted to serve the people who need it most**
- Under the new network, more residents of color and low-income households **gain access** to high-frequency service

Ongoing Monitoring of Equity in Service

Ongoing Monitoring of Equity in Service

- [Annual Service Delivery Policy Report](#)
 - Outlines Service Availability and Quality Standards, including span, frequency, coverage, accessibility, reliability, comfort, and network quality.
 - Each standard has an **equity check**, where we check the performance of the overall network against our standard, and then the performance for low-income riders and our riders of color, to check for differences



Title VI Equity Analysis

Title VI Equity Analysis

In accordance with Title VI of the Civil Rights Act and the FTA's guidance, the MBTA evaluates major service and fare changes for Disparate Impacts on minority riders or Disproportionate Burdens on low-income riders.

- **Service Equity:** How does the change in the amount of service provided to low-income or minority riders compare to the change in the amount of service provided to all other riders?
- **Fare Equity:** How does the change in average fare paid by low-income or minority riders compare to the change in average fare paid by all riders?
- Central Transportation Planning Staff (CTPS) was contracted to complete this Title VI Equity Analysis. The complete memo can be found [here](#)

Title VI – Service Equity Overview

How does the change in the amount of service provided to low-income or minority riders compare to the change in the amount of service provided to all other riders?

- We calculate key ratios on Revenue-Vehicle Hours and Route Length to meet our federal regulation and internal policy.
 - Relative Change: Compares % change in service for low-income or minority riders to % change in service for all other riders
 - Share of Change: Compares the share of the total change for low-income or minority riders to the share of existing service for these riders
 - Absolute Change: Compares nominal change in service for low-income or minority riders to nominal change in service for all other riders

Title VI – Service Equity Results

How does the change in the amount of service provided to low-income or minority riders compare to the change in the amount of service provided to all other riders?

Ratio	Minority (Disparate Impact)	Low-Income (Disproportionate Burden)
Relative Change	<ul style="list-style-type: none"> ✓ RVH: 1.06x > 0.80x ✓ Route Length: 1.15x < 1.20x 	<ul style="list-style-type: none"> ✓ RVH: 1.06x > 0.80x ✓ Route Length: 1.07x < 1.20x
Share of Change	<ul style="list-style-type: none"> ✓ RVH: 1.06x > 0.80x ✓ Route Length: 1.07x < 1.20x 	<ul style="list-style-type: none"> ✓ RVH: 1.03x > 0.80x ✓ Route Length: 1.06x < 1.20x
Absolute Change	<ul style="list-style-type: none"> ✓ RVH: 0.99x > 0.80x ✓ Route Length: 0.86x < 1.20x 	<ul style="list-style-type: none"> ✗ RVH: 0.65x < 0.80x ✓ Route Length: 0.62x < 1.20x

There is a not a potential DI or DB finding from this analysis on 11 of 12 key ratios

Challenges with Absolute Change Ratio

The Absolute Change Ratio compares nominal change in service for low-income or minority riders to nominal change in service for all other riders. The simple example below illustrates why this metric is a weak indicator of Service Equity.

	Low-Income	Non-Low-Income
RVH Pre-Change	20	80
Change in RVH	10	20
RVH Post-Change	30	100
% Change	50%	25%

- Before the change, Low-Income riders represent 20% of RVH
- Of 30 incremental units, Low-Income riders represent 33%
- After the change, Low-Income Riders account for 23% of RVH
- Low-Income riders see a 50% increase in RVH, vs. 25% for Non-Low-Income Riders
- *Relative Change Ratio 2.00x (passing above 0.80x);*
- *Absolute Change Ratio 0.50x (passing above 0.80x)*

In Spring 2023, the MBTA is updating the DI/DB Policy. We will revise elements of the policy that have not functioned properly to ensure equity, such as the Absolute Change ratio.

Title VI – Fare Equity Overview

How does the change in average fare paid by low-income or minority riders compare to the change in average fare paid by all riders?

Note that for BNRD, our fare levels remain unchanged, however we conduct this analysis as some riders may shift between subway and local bus (which charge different fares), due to changes in the bus map.

- We calculate key ratios to meet our internal policy and federal regulation. In the case of a decrease in fares, we must ensure that these ratios are greater than 0.90x
 - Relative Change: Compare the % change in fares for low-income or minority riders to the % change in fares for all riders

Title VI – Fare Equity Results

How does the change in average fare paid by low-income or minority riders compare to the change in average fare paid by all riders?

Ratio	Minority (Disparate Impact)	Low-Income (Disproportionate Burden)
Relative Change	✓ 1.0x > 0.9x	✓ 1.8x > 0.9x

There is not a potential DI or DB finding from this analysis

Questions & Comments

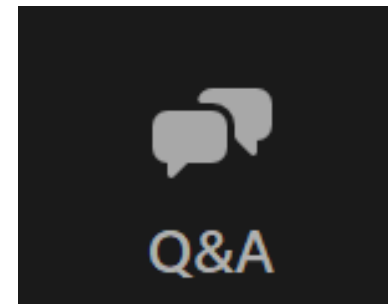
Regarding Service and Fare Equity Analysis

Questions & Answers

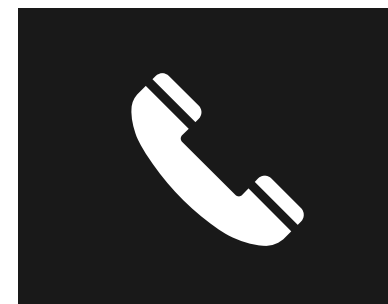
- Please share only one question or comment at a time.
- Use the “Q&A” button to submit a typed question or comment. The chat is not open, but if you direct your question to “Ask A Question” we will receive the comment/question.
- Press the “Raise Hand” button to share your question or comment verbally. Wait for the moderator to recognize and unmute you before speaking.
- If you have joined by phone only, you may “raise your hand” by pressing the star button and then nine (*9).
- *After you speak, we will lower your hand and you will be muted to allow the team to respond and provide opportunities for others to participate.*



To speak,
click “**Participants**”
then “**Raise hand**”



Click **Q&A**
to “Ask A Question”



***9**
Raise Hand

How to provide feedback

- Submit feedback online through our survey: mbta.com/bnrdfedback
- E-mail us: betterbusproject@mbta.com
- Mail written comments:

MBTA
ATTN: Angel Donahue-Rodriguez

10 Park Plaza - Suite 3830
Boston, MA 02116

- Leave a voice message:
617-222-3011

How to stay informed

- Stay updated on the project:
mbta.com/bnrd
- To learn more about other MBTA bus initiatives, visit the Better Bus Project website: mbta.com/betterbus
- For general inquiries on MBTA public outreach, contact
publicengagement@mbta.com

Better
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Thank you!

Website: [MBTA.com/BNRD](https://www.mbta.com/BNRD)

Contact: Betterbusproject@MBTA.com

