



INTERCITY BUS & RAIL TRAVEL STUDY

Preliminary Findings

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TPB Regional Public Transportation Subcommittee
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Preliminary Findings



Image credit: MWCOG

Amtrak ridership is nearing pre-pandemic levels with over 4.5 million trips in FY 2023, while intercity bus ridership is recovering more slowly at over 1 million trips.

The top origin-destination pairs are TPB - New York for both Amtrak (156 average daily vehicle trips) and intercity bus (147 average daily vehicle trips).

Union Station in Washington, DC is the busiest intercity stop with 1,734 weekly vehicle trips, followed by New Carrollton, MD with 297 weekly vehicle trips.

Amtrak averages 1,212 vehicle daily trips, followed by FlixBus with 472 vehicle daily trips. Amtrak peaks on Friday with vehicle 179 trips.

Big data sources such as Replica, NHTS NextGen OD, and Streetlight do not provide high-quality data for intercity travel studies.

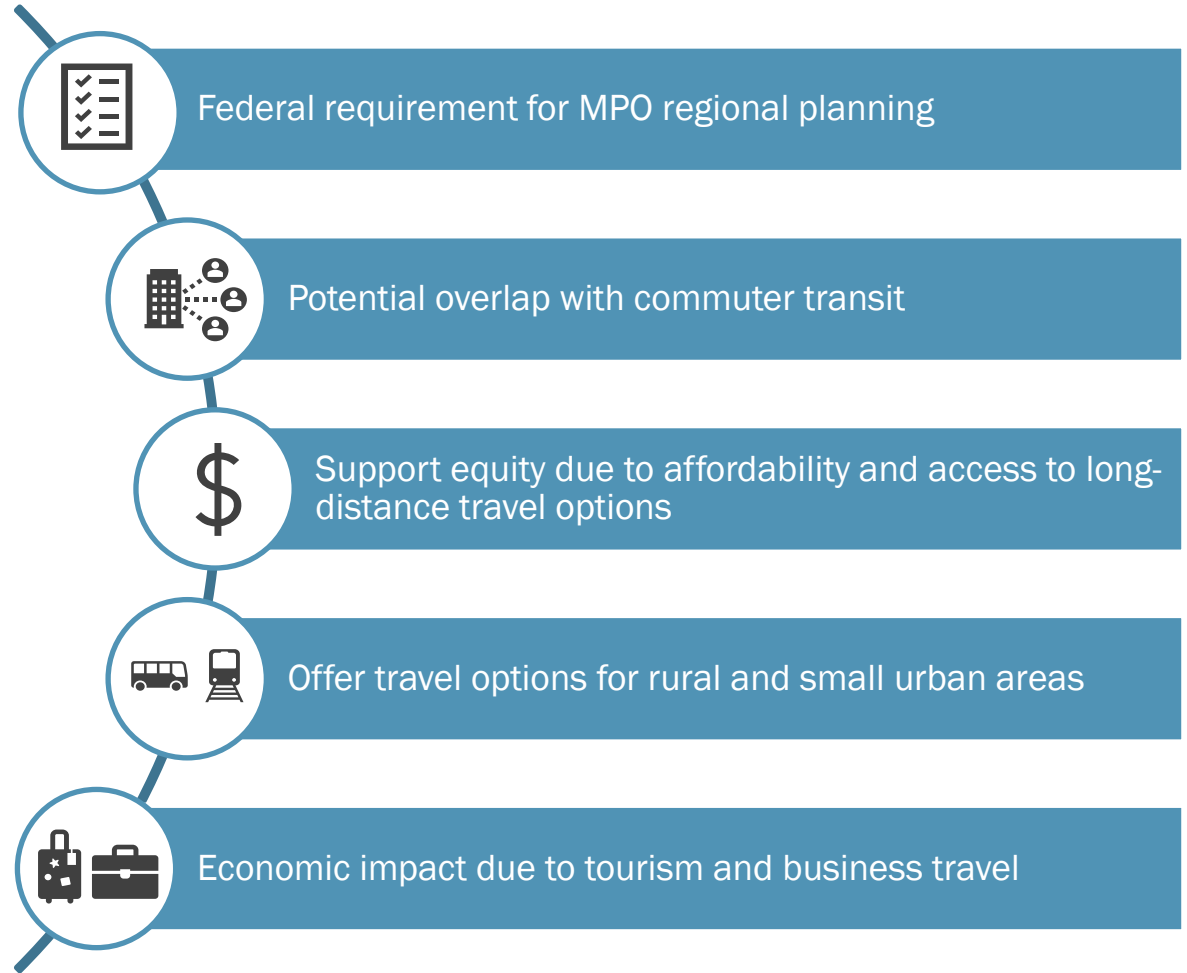
The intercept survey found that 61% of respondents traveled by bus, 28% by train. The primary reasons for travel were personal/leisure (35%) and visiting family or friends (35%).



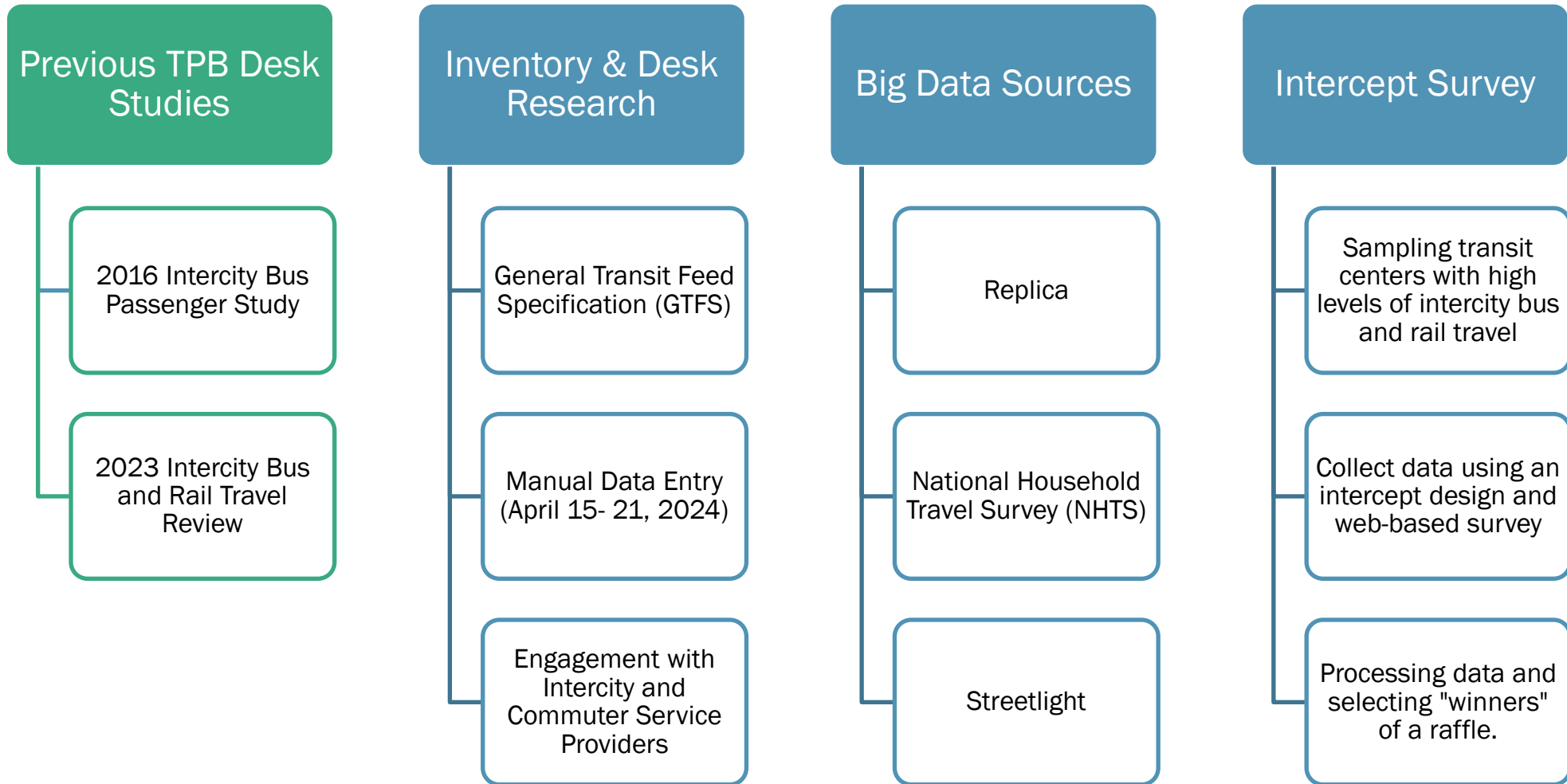
Why Study Intercity Travel?



Image credit: usatoday.com



Project Scope



Intercity Bus & Rail Network Snapshot



Intercity Transit Major Corridors and Destinations

Links Over 50 Cities Across 21 States

- Mostly Northeast Corridor

Service Providers

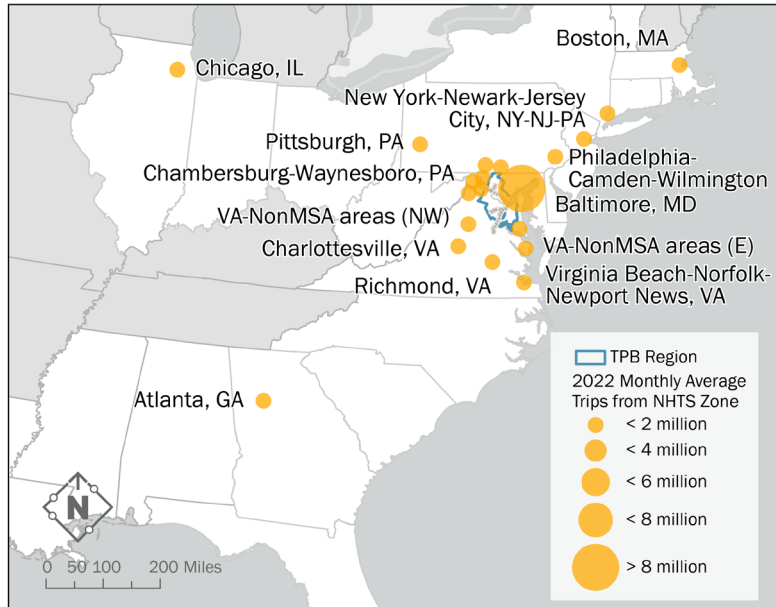
- 1 Intercity Rail
- 13 Intercity Bus
- 3 Commuter Bus
- 2 Commuter Rail

Recent or Future Service Changes

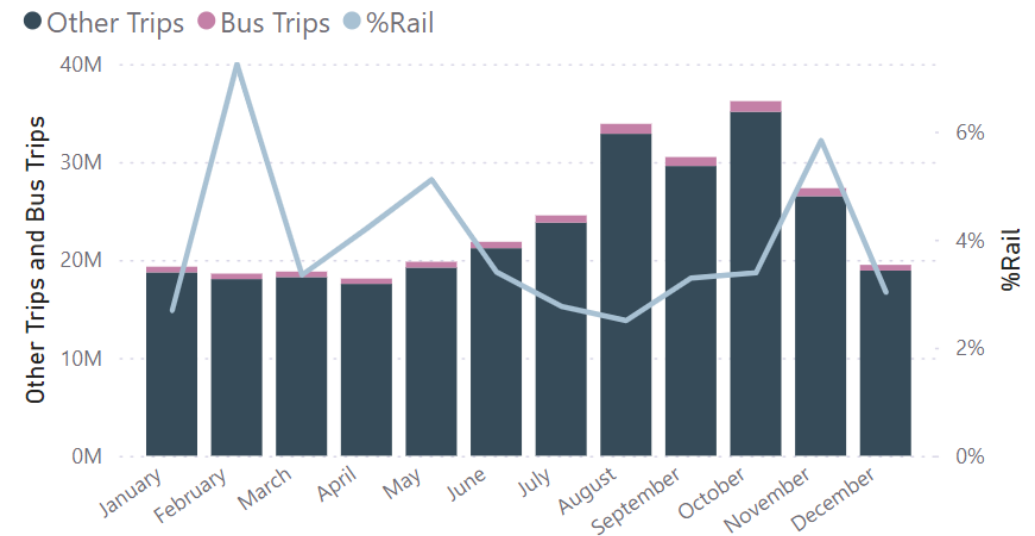
- Megabus Bankruptcy
- Virginia Breeze Expansion



Trip Volume: 2022 NHTS NextGen OD



Average Monthly Trip Volumes by Origin Zone



Monthly Travel Trends to the TPB Region

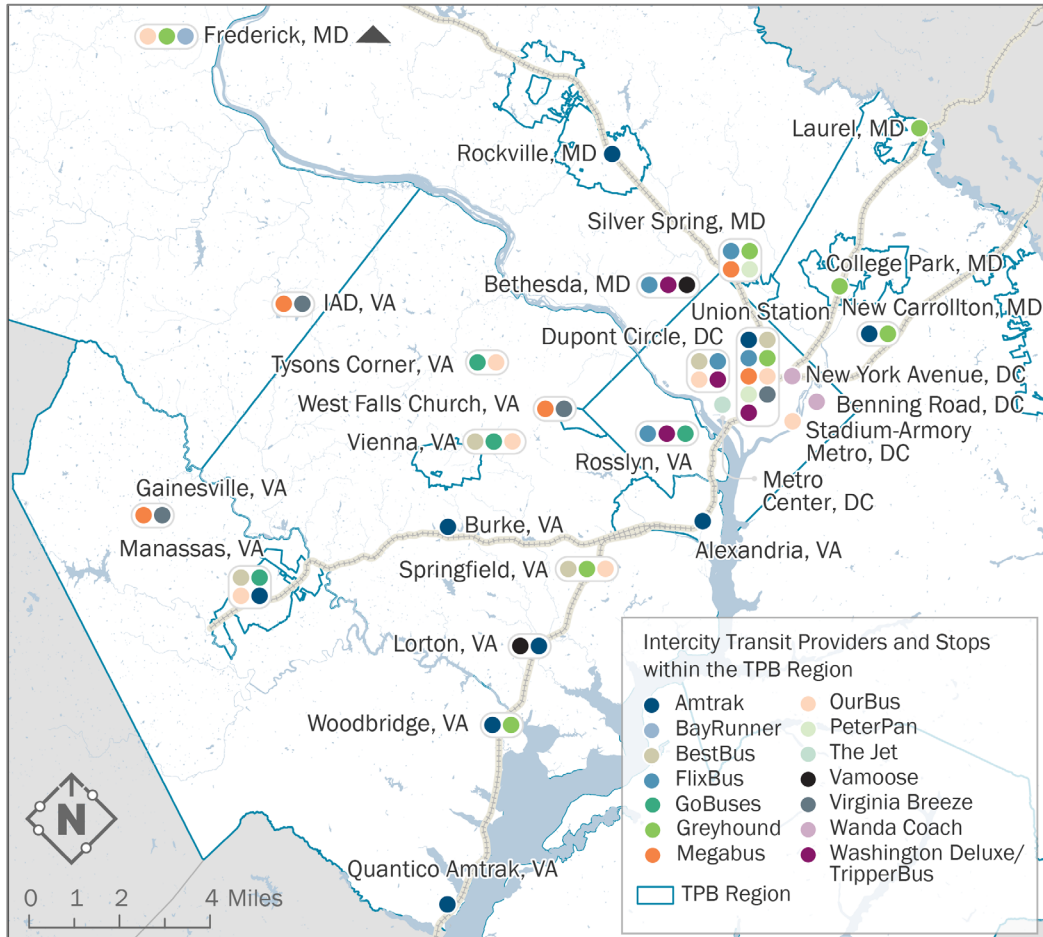
Key Findings

- The largest number of trips to the TPB region start and end in zones in the neighboring states of Virginia and Maryland.
- Many of the same zones are present in origin and destination, indicating a strong bidirectional travel flow for these regions.
- The number of trips overall increases in August and during the fall. Rail trips peak in February and are also high in May and November.

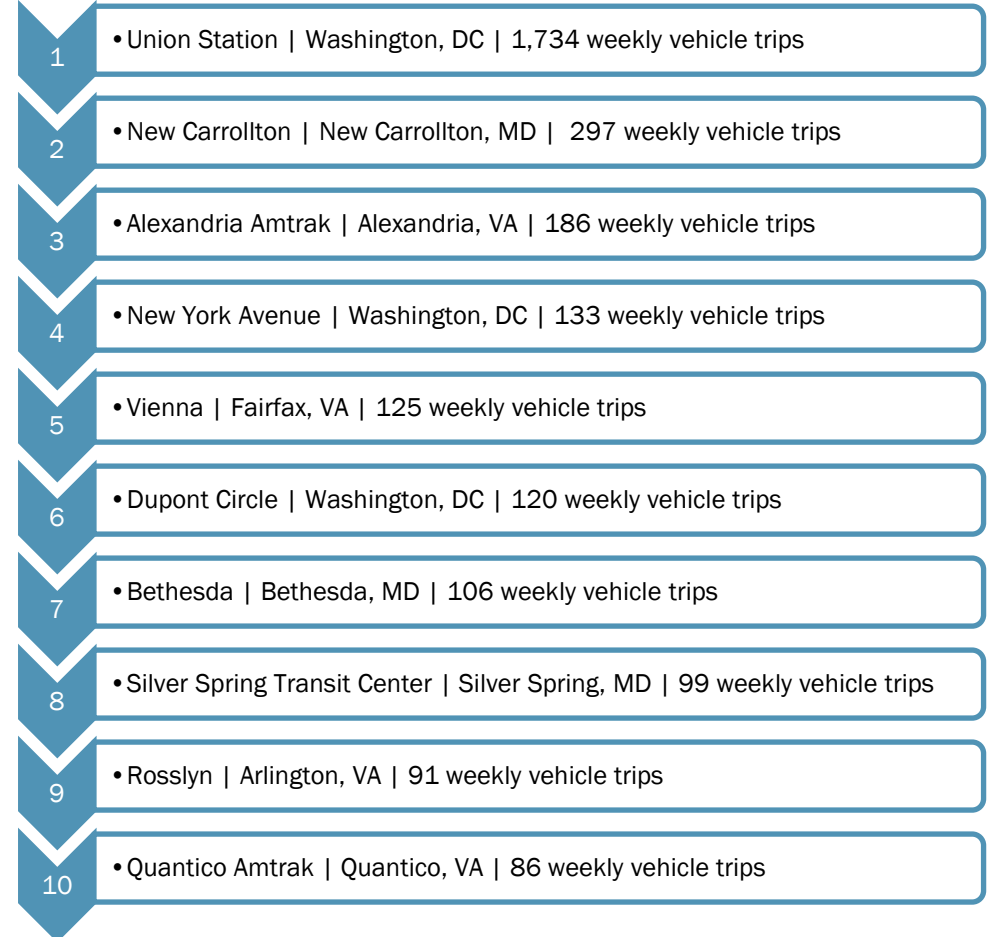


TPB's Intercity Travel Stops

31 Intercity Stops Within the TPB Region



Top Intercity Stops



Top Origins and Destinations

Amtrak

- 1 { • TPB - New York (156 average daily vehicle trips)
- 2 { • TPB - Boston (11 average daily vehicle trips)
- 3 { • TPB - Richmond (5 average daily vehicle trips)
- 4 { • TPB - Atlanta (5 average daily vehicle trips)
- 5 { • TPB - Norfolk (5 average daily vehicle trips)

Intercity Bus

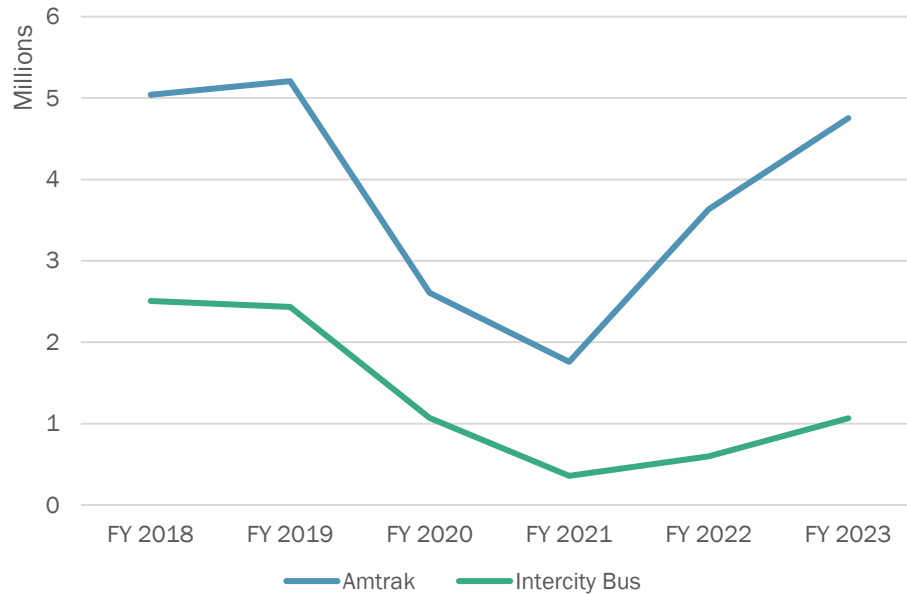
- 1 { • TPB - New York (147 average daily vehicle trips)
- 2 { • TPB - Boston (67 average daily vehicle trips)
- 3 { • TPB - Norfolk (17 average daily vehicle trips)
- 4 { • TPB - Newport News (16 average daily vehicle trips)
- 5 { • TPB - Richmond (15 average daily vehicle trips)

Commuter Bus & Rail

- 1 { • Baltimore Penn - Washington (MARC): 305 weekly vehicle trips
- 2 { • Gaithersburg - BWI Business Dist. (MTA Commuter Bus): 178 weekly vehicle trips
- 3 { • Charlotte Hall/Waldorf - DC (MTA Commuter Bus): 165 weekly vehicle trips
- 4 { • Annapolis - Washington DC (MTA Commuter Bus): 130 weekly vehicle trips
- 5 { • Charlotte Hall/Waldorf - DC (MTA Commuter Bus): 130 weekly vehicle trips



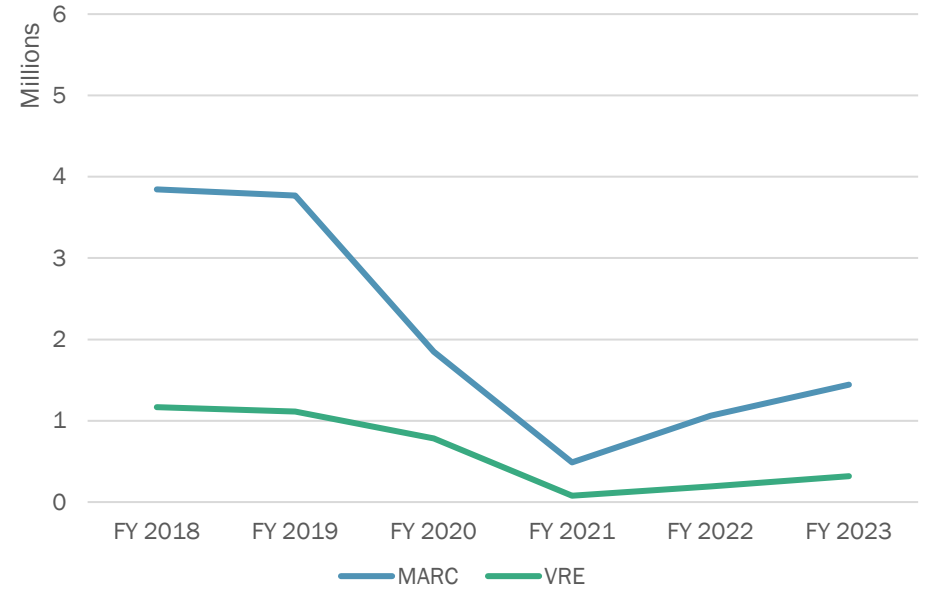
Ridership at Union Station



Intercity Service Ridership

Intercity Bus & Rail

- Amtrak is near its pre-pandemic highs
- Intercity bus ridership has been slower to recover



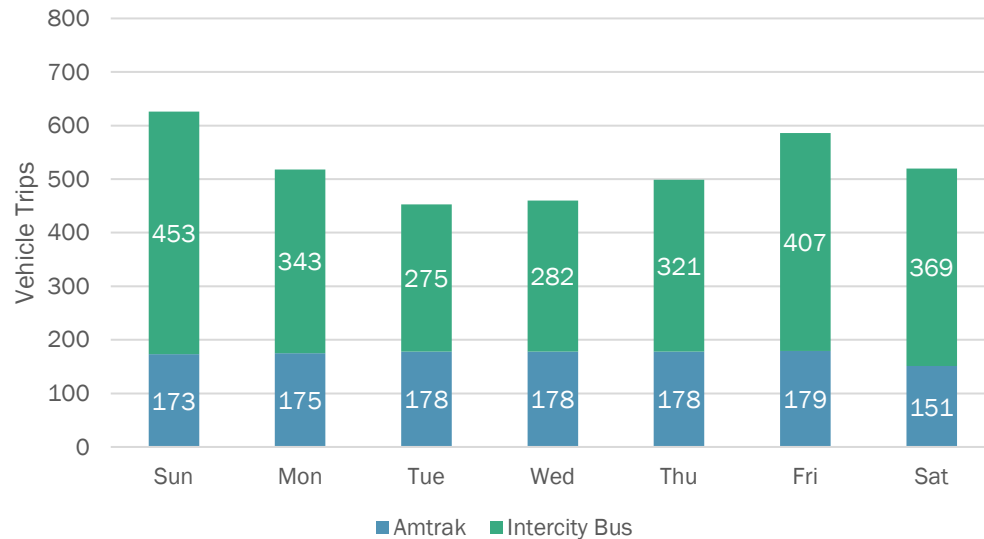
Commuter Service Ridership

Commuter Rail

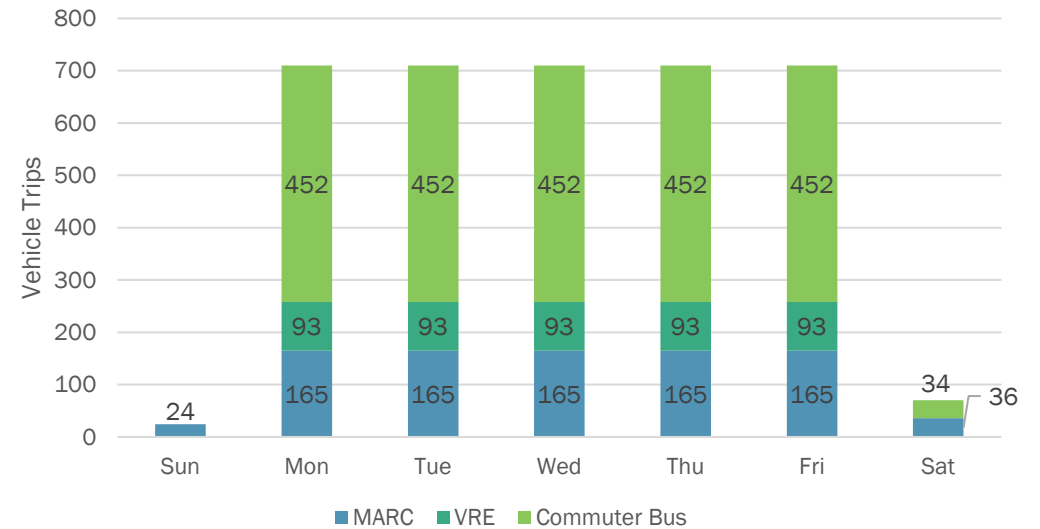
- Services have been slower to recover than Amtrak



Regional Trip Patterns



Daily Vehicle Trips – Amtrak & Intercity Bus



Daily Vehicle Trips – MARC, VRE & Commuter Bus

Holiday Week Vehicle Trips by Provider

Provider	Average Week	Memorial Day	July 4 th	Labor Day	Thanksgiving	Christmas
Amtrak	1,212	1,184	1,212	1,212	1,217	1,217
BayRunner	104	104	104	104	104	104
FlixBus	416	418	443	458	470	472
Greyhound	406	406	406	406	406	406
PeterPan	185	185	185	117	--	--

^[1] Virginia Breeze is excluded from this analysis as the GTFS feed is expired and does not line up with the holiday periods examined.



Intercept Survey - Methods



Image credit: MWCOG



Location

- In-person intercept survey conducted primarily at major transit hubs throughout the TPB. region, with a special focus on Union Station.

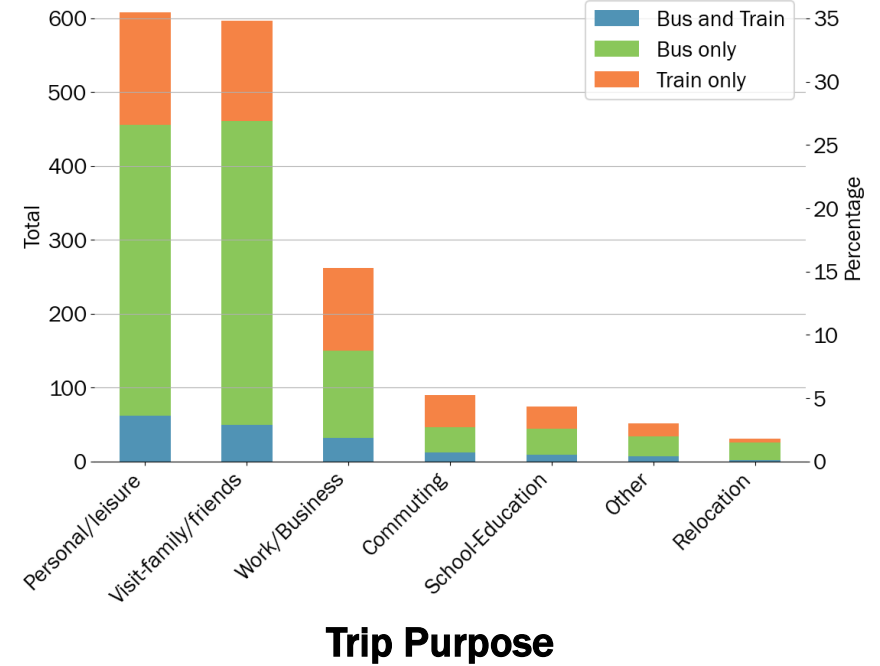
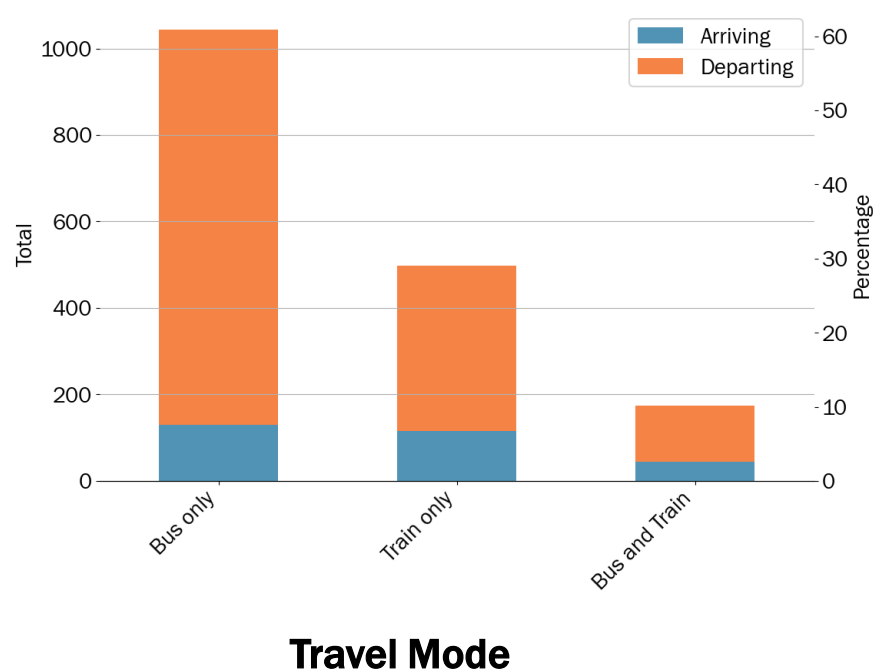
Survey Details

- 5-minute questionnaire about trip origin, destination and other details.
- Two options to take the survey:
 - Tablets handed out by interviewers
 - Postcards with QR codes
- All eligible respondents were entered into a raffle to win a \$100 Amazon gift codes.

Timeline & Responses

- Fielded over four weeks in September and October 2024.
- Achieved a total of 1,708 completes.

Intercept Survey – Preliminary Findings



Key Findings

- Most respondents traveled by bus (61%), while 28% used trains exclusively. About 10% reported a combination of bus and train travel.
- The majority of the survey participants were leaving the TPB region.
- The primary reasons for travel were personal/leisure (35%) and visiting family or friends (35%).



Next Steps



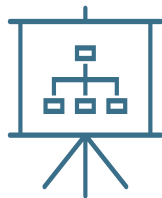
Complete Survey Data Analysis (October 2024)

- Travel Patterns
- Demographics
- Accessibility & Equity



Reporting & Web Map (December 2024)

- Inventory & Desk Research
- Big Data Sources
- Intercept Survey



Technical Committee Presentations (December 2024)



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National Capital Region
Transportation Planning Board

Appendix A: Big Data Sources

Criteria	Replica		NHTS
	<i>Places Dataset</i>	<i>County-to-County Origin-Destination</i>	<i>NextGen OD</i>
Data Source	LBS	LBS	Survey
Geographic Granularity	Customizable (down to Block Group or custom)	City/County	NHTS zones
Temporal Granularity	Hour of Day	Average Weekday/Saturday	Month Totals
Available Modes	Walking, biking, carpooling, commercial, on-demand auto, private auto, public transit, and other travel modes	Private auto, auto passenger, transit, walking, biking, and other.	Air, Rail, Vehicles
Data Span	Fall 2019 – Fall 2023	Fall 2019 – Fall 2023	1969 -2022 (every 5-8 years)
Update Frequency	Biannual	Weekly	Monthly
Most recent data	Spring 2023	12-day lag	2022
Available Trip Purposes	Home, work, work from home, school, shop, social, recreation, eating, lodging, region departure, and other.	N/A	Work / Non-work
Socio-Demographics	OD land use, age, sex, race, ethnicity, income, employment, education, household role, subfamily, commute mode, household size, language (only available within a megaregion)	N/A	N/A
Maximum Trip Length (Miles)	12,000	12,000	300+
Maximum Trip Duration (Minutes)	8,000	8,000	N/A
Data Fidelity	Average day in a season	Average day in a week	Monthly
ETL Process	Direct database access	Flat file data download	Flat file data download
Other Available Information	Activity chain	Expenditures	

