

National Capital Region Transportation Plan

Chapter 2



VISUALIZE
2050



National Capital Region
Transportation Planning Board

Approved December 17, 2025

Chapter 2: Transportation System Today

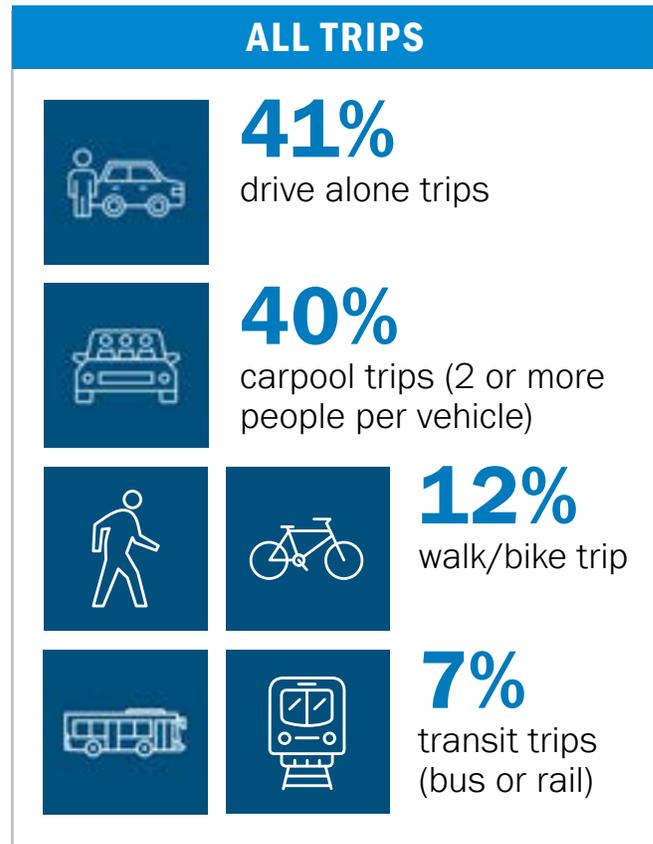
The National Capital Region has a multimodal transportation system made possible through the substantial investments of public and private agencies. The region’s well-established transportation network supports the movement

of people and employees as drivers and passengers, public transportation riders, pedestrians, bicyclists, and other travelers with an array of transportation options.¹ The system, as of 2023, may be viewed on the **National Capital Region Multimodal System (2023)** map with more details available on the **List of Stations, Systems, and Providers (2023)**.



The onset of the coronavirus (COVID-19) pandemic in 2020 brought significant changes to travel patterns, and five years later, the patterns continue to evolve from pre-pandemic norms, particularly due to rates of teleworking and economic conditions. These evolving travel habits and patterns make it challenging to track changes in travel behavior in real time and reconcile them with existing pre-pandemic surveys and models.

In 2025, it is estimated that more than 18 million trips will be made daily across different modes of transportation.² Of these trips, the travel model estimates that approximately 41 percent are people driving alone, 40 percent are in a vehicle with two or more people, 12 percent are by walking or biking, and 7 percent are riding bus or rail transit.



Travel mode shares vary by trip purpose. The percentages reported above are across all trip purposes on a typical weekday. For work purpose trips originating at home, transit mode share is typically over 20 percent.³ For commuting and other trip types, people continue to use all modes of transportation, making choices based on availability and what best suits their needs at any given time.

1 Metropolitan Washington Council of Governments. June 14, 2023. Round 10.0 Cooperative Forecasts of land activity. <https://www.mwcof.org/documents/2023/11/03/cooperative-forecasts-employment-population-and-household-forecasts-by-transportation-analysis-zone-cooperative-forecast-demographics-housing-population/>

2 System performance analysis of Visualize 2050, 2025 simulation, which made use of the Gen2/Ver. 2.4.6 Travel Model and the Round 10 Cooperative Forecasts of land activity.

3 See, for example, Jane Posey, “Air Quality Conformity Analysis of the 2022 Update to Visualize 2045, Full Report” (Washington, D.C.: National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments, June 15, 2022), 13, <https://visualize2045.org/plan-update/approved-2022-plan>

WITHIN ITS BOUNDARIES, THE NATIONAL CAPITAL REGION IS CURRENTLY SERVED BY:

- More than 17,000 lane miles of highways and major roads including:
 - ▶ 39 lane miles of High-Occupancy Vehicle (HOV) for vehicles with 2+ people
 - ▶ 255 lane miles of roadways with High-Occupancy Toll (HOT), dynamically priced express lanes to ensure a minimum travel speed with free use for carpool with 3 or more people and publicly operated transit vehicles
 - ▶ 296 lane miles of toll roads
- Three intra-regional rail systems
 - ▶ 1 urban heavy rail (Metrorail)
 - ▶ 2 commuter rails (MARC and VRE)
- 15 intercity bus providers and 34 intercity bus stations
- 318 miles of High-Capacity Transit (HCT)⁴
 - ▶ 129 miles of Metrorail
 - ▶ 173 miles of commuter rail
 - ▶ 14 miles of bus rapid transit
 - ▶ 2 miles of streetcar
- 172 HCT transit stations
 - ▶ 98 Metrorail stations
 - ▶ 38 commuter rail stations
 - ▶ 28 bus rapid transit stations
 - ▶ 8 streetcar stations
- 15 local and 3 commuter bus system providers
- 11 paratransit providers
- 100+ specialized transit service providers
- One intercity passenger rail provider, Amtrak, and 10 intercity rail stations
- Two Class I railroads—CSX Transportation and the Norfolk Southern Corporation transporting freight over 250+ miles of mainline track
- 800+ miles of off-street paved trails and paths for walking and biking
- 400+ miles of bike lanes
- Eight micromobility (bikes/scooters) providers
- 1,586 electric vehicle (EV) charging stations and 4,276 EV plugs
- One water taxi provider
- Three major airports with extensive domestic and international connections, Baltimore/Washington International Thurgood Marshall Airport (BWI), Ronald Reagan Washington National Airport (DCA), and Washington Dulles International Airport (IAD)

4 HCT, also known as fixed-guideway transit, is defined as Metrorail, commuter rail, light rail, streetcar, and bus rapid transit (BRT). Distances are centerline miles, not route miles.



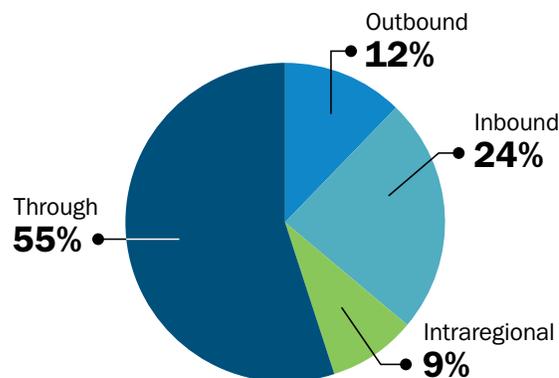
Roadways

A long history of transportation and land development policies and decisions since the region’s inception have produced an extensive regional roadway network with over 17,000 lane miles of highways and major roads, more than 550 of which are tolled lanes. This network now accommodates about 81 percent of the more than 18 million trips across the region, including single-occupant and high-occupancy vehicle trips.⁵ It also serves vital freight movement, via trucks. Many roadways include space for additional purposes including transit stops, bicycling, delivery services, and on-street parking.

Each year hundreds of millions of tons of freight valued in billions of dollars move across the region’s roadways, contributing to the economic vitality of the National Capital Region. By value, more than 50 percent of freight on the region’s roads is simply passing through, while twice as much freight travels into the region than travels out. Only 9 percent of freight moves solely within the region.⁶

Nearly every physical thing—food, clothing, medicine, furniture, and more—has been transported by truck on the region’s key corridors at some point before

Figure 2.1: Value of Freight by Direction



reaching local stores and residences. Over 160 million tons of goods each year are moved along these roadways. With the rise of e-commerce, more people are choosing home delivery, driving even greater demand for small-scale freight transportation, such as cargo vans.

Today, automobile travel is frequently selected by many people in the region for most, if not all, daily vehicle trips. On an average weekday, residents travel approximately 97 million vehicle miles, where 41 percent of trips are single occupancy and 40 percent of trips are carpool (2 or more people per vehicle).⁷

5 Air quality conformity analysis of Visualize 2050, using the Gen2/Ver. 2.4.6 Travel Model and the Round 10 Cooperative Forecasts of land activity.

6 National Capital Region Transportation Planning Board. (2023) 2023 National Capital Region Freight Plan Update. <https://www.mwcog.org/documents/2023/07/19/national-capital-region-freight-plan-freight/#:~:text=The%20draft%202023%20Update%20to,by%20the%20TPB%20in%202016>

7 Air quality conformity analysis of Visualize 2050, using the Gen2/Ver. 2.4.6 Travel Model and the Round 10 Cooperative Forecasts of land activity.



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To keep the roadways usable, routine maintenance is needed and accounts for a large share of state department of transportation (DOT) budgets. Some parts of the region continue to experience new roadway construction or extensions, typically in combination with accommodations for other modes, as local neighborhood plans are fulfilled. Other roadways undergo retrofitting to enhance safety, expand mode choices, and optimize traffic engineering functions to meet the needs of today.



Maryland Department of Transportation/Flickr

Prior to the COVID-19 pandemic, weekday vehicle miles traveled (VMT) per capita was increasing at a slower rate than the increase in the region's population; however, VMT significantly decreased at the onset of the pandemic in early 2020. Since 2021, there has been a rebound in VMT levels. With these VMT increases, planners continue to reassess how vehicle lanes can safely and efficiently accommodate travelers using various modes within limited rights-of-way.

Alongside personal automobile travel, rideshare, taxi, and ridehail services like Uber and Lyft provide an option for people to share rides or use a vehicle as needed rather than invest in a vehicle. While only one percent of all weekday trips in the National Capital Region are by taxi and ridehailing, these shared trips comprise three percent of all weekday trips in the regional core of District of Columbia, Arlington County, and the City of Alexandria.⁸

Railways

The National Capital Region is uniquely positioned along the East Coast north-south and east-west freight rail corridors. Two Class I freight railroad companies, CSX and Norfolk Southern (NS), operate within the region along 250 miles of mainline track that carry over 6.7 million tons of local freight by rail each year, leading them to be key freight transportation providers in the region.⁹

Local, commuter, and passenger rail services play a critical role in providing affordable transportation options within and through the region. Rail transportation supports economic vitality, provides high-quality alternatives to driving, builds communities, and reduces harmful environmental impacts. The region's 318-mile system of high-capacity rail transit is one of the busiest in the country, ranking third in average unlinked rail transit trips.¹⁰ Together, the Washington Metropolitan Area Transit Authority (WMATA) Metrorail, Maryland Area Regional Commuter (MARC), and Virginia Railway Express (VRE) moved 492,000 people on an average weekday in 2023 (compared to 650,000 pre-pandemic in 2019) and accounted for about 49 percent of all intra-regional transit trips.¹¹

8 National Capital Region Transportation Planning Board (April 22, 2022) *Regional Travel Survey In-Depth Analysis*. <https://www.mwcog.org/documents/2022/04/22/regional-travel-survey-in-depth-analysis-featured-publications-regional-travel-survey/>

9 Federal Highway Administration. (2020) *Freight Analysis Framework*. https://ops.fhwa.dot.gov/freight/freight_analysis/faf/

10 American Public Transportation Association (2023). *Fourth Quarter 2023 Ridership Report*. <https://www.apta.com/wp-content/uploads/2023-Q4-Ridership-APTA-Update-1.pdf>

11 National Capital Region Transportation Planning Board staff collection and analysis of weekday ridership estimates reported by the region's transit operators. Ridership from 2019 is reported due to incomplete 2020 ridership data. 2023 average weekday ridership data comes from information reported to APTA. See 2023 annual ridership data is calculated using monthly ridership information sourced from the April 2024 NTD Monthly Ridership Time Series. See <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release>



Cristina Finch/COG

Additionally, Amtrak connects people from the National Capital Region directly to places as far north as St. Albans, Vermont, and Boston, as far west as Chicago and as far south as New Orleans and Miami.

Metrorail ridership peaked in 2009 and remained stable through the early 2010s.¹² However, since 2015, ridership has declined, following national travel trends. The decline worsened due to COVID-19, with Metrorail ridership dropping from 229 million trips in 2019 to just 36.6 million in 2021. Commuter rail saw a similar decline, falling from 13.6 million in 2019 to 1.2 million in 2021.¹³ Fortunately, ridership began to recover in 2022. By 2023, Metrorail reached over 144 million trips, and the commuter rail system recorded 5.2 million trips.¹⁴

An increase in residential and commercial density around many regional railway stations is yielding higher rail ridership. Throughout the rail network,



Adam Fagen/Flickr

underutilized properties near stations present opportunities for infill development, allowing for more vibrant communities to be built and for more people to take advantage of the region's valuable rail resources.

12 Unless otherwise noted, public transit ridership data comes from the following source: National Capital Region Transportation Planning Board. (2023) 2023 State of Public Transportation Report. <https://www.mwcog.org/committees/regional-public-transportation-subcommittee/>

13 National Capital Region Transportation Planning Board. (2023) 2023 State of Public Transportation Report. <https://www.mwcog.org/committees/regional-public-transportation-subcommittee/>

14 April 2024 NTD Monthly Ridership Time Series. See <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release>

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Bus Transit

The region boasts an extensive bus transit network providing mobility and connectivity to communities operated by 15 agencies. In 2023, 12 of these agencies facilitated over 450,000 local and commuter bus trips each weekday.¹⁵ While these trips represent unlinked trips only, or vehicle boardings, many travelers combine multiple modes of transportation in a series of linked trips—often connecting to rail services—in a series of linked trips to reach their destinations.

According to 2023 data from the National Transit Database (NTD), approximately 52 percent (141 million) of unlinked passenger trips in the region were by bus, making it the primary form of public transportation.¹⁶ In 2023, of the 9.6 percent of commuters that used public transportation, approximately 35 percent rode bus transit per Census Bureau estimates.¹⁷ Metrobus, operated by WMATA, accounted for 74 percent of bus ridership in the region, followed by 10 percent of riders using Ride On in Montgomery County.¹⁸ Although the COVID-19 pandemic significantly impacted bus ridership, every agency has reported an increase in ridership since 2021.¹⁹

Community members with disabilities and other special needs are served by 11 paratransit services and over 100 other specialized transportation providers, offering on-demand and shuttle rides to complement fixed-route public transit. These



Pierre Gaunard/COG



Elvert Barnes/Flickr

paratransit services provide flexible mobility for any trip purpose. The largest of these is WMATA's MetroAccess, a shared-ride, door-to-door service designed to ensure accessibility and convenience for its passengers.

15 National Capital Region Transportation Planning Board staff analysis of average weekday unlinked passenger trips reported in the National Transit Database's Agency Profiles (2023). This does not include ridership data from DC Circulator, RTA of Central Maryland, VRT, or MTA. <https://www.transit.dot.gov/ntd/transit-agency-profiles>

16 National Capital Region Transportation Planning Board staff analysis of unlinked passenger trips reported in the National Transit Database's Agency Profiles (2023). This does not include ridership data from DC Circulator, RTA of Central Maryland, VRT, or MTA. <https://www.transit.dot.gov/ntd/transit-agency-profiles>

17 U.S. Census Bureau. (2023) *2023 American Community Survey 1-Year Estimates, Table B08301, Washington—Arlington, DC—VA—MD Urban Area* (2020). <https://data.census.gov/table/ACSDT1Y2023.B08301?g=400XX00US92242>

18 National Capital Region Transportation Planning Board staff analysis of unlinked passenger trips reported in the National Transit Database's Agency Profiles (2023). This does not include ridership data from DC Circulator, RTA of Central Maryland, VRT, or MTA. <https://www.transit.dot.gov/ntd/transit-agency-profiles>

19 National Capital Region Transportation Planning Board staff collection and analysis of weekday ridership estimates reported by the region's transit operators. Ridership from 2019 is reported due to incomplete 2020 ridership data. 2023 average weekday ridership data comes from information reported to APTA. See <https://www.apta.com/wp-content/uploads/2023-Q4-Ridership-APTA.pdf> 2023 annual ridership data is calculated using monthly ridership information sourced from the April 2024 NTD Monthly Ridership Time Series. See <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release>

The region also benefits from 64 commuter bus routes operated by MTA Commuter Buses, Ride On, Fairfax Connector, OmniRide, and Loudoun County Transit. These services provide vital connections from communities such as Frederick, Maryland; Dale City, Virginia; and Leesburg, Virginia—as well as counties beyond the National Capital Region—to major employment centers including the Pentagon, Foggy Bottom, and Capitol Hill. High Occupancy Vehicle (HOV) lanes in Maryland, such as those on I-270 and U.S. 50, enhance the reliability of Ride On and MTA commuter bus routes.

On each weekday in Virginia, the I-495/395/95 Express Lanes carry approximately 1,200 bus trips, while the I-66 express lanes outside of the Beltway handle an average of 1,400 weekday bus trips.²⁰ The express lanes provide more reliable transit travel times, giving people a reliable alternative to personal vehicle trips.

Intercity buses operated by private providers, including Greyhound, Megabus, Peter Pan, and others connect the National Capital Region as far north as Boston, as far west as Chicago, and as far south as Miami. These buses serve thousands of trips daily operating from intercity stations or stops across the region.

Pedestrians

Walking is one of the most fundamental and widely used forms of transportation. Standard practices have evolved over the last few decades, and transportation investments now routinely include pedestrian accommodations for people to reach their destinations with ease.

NOTE: The terms “pedestrian” and “walking” in Visualize 2050 refer to people traveling by foot, using a wheelchair, a stroller, or similar mobility.



M.V. Jantzen/Flickr

The region values healthy, pedestrian-oriented, Americans with Disabilities Act (ADA)-accessible community design. Most local governments have adopted Complete Streets policies and routinely build sidewalks and related pedestrian accommodations with new developments and roads. The region is growing its network of off-road ADA-accessible multimodal trails, including the National Capital Trail Network, which featured 752 miles of trails as of 2023, which is almost 50 percent of the desired 1,549-mile network.²¹

Regionally, pedestrian transportation is concentrated in or around Regional Activity Centers (RACs)—locations identified in local government plans targeted for future household and employment growth. The density of people working and living near their destinations or in mixed-use areas naturally facilitates walking due to short distances and travel times. Where trip time and distance, in addition to other factors, lends itself to walking, people throughout the region choose to walk above using other modes. While pedestrian network enhancements continue to improve travel safety and ADA-accessibility, in general, people can walk to nearby places, if desired. As of 2019, about 3.3 percent of work trips in the region were pedestrian

20 Virginia Department of Transportation. (May 07, 2024) *I-495 Southside Express Lanes Project Response Letter to TPB Chair Christina Henderson and the Transportation Planning Board.*

21 National Capital Region Transportation Planning Board. (2023) *National Capital Trail Network 2023 Update, Progress Toward Completion.* <https://national-capital-trail-network-mwcog.hub.arcgis.com/>

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trips.²² Walking is fundamental to multimodal activity, and pedestrians who utilize another mode can accomplish longer distance trips more quickly.

Bicyclists & Micromobility

The region is a national leader in bicycle-friendly community design. Many community members choose to bike or use micromobility options for their commutes and daily trips, not only for convenience, but also for health and enjoyment. Among major U.S. cities, the District of Columbia ranks third in the percentage of bicycle commuters, with 3.3 percent of residents regularly biking to work—testament to the District’s efforts to making biking a viable option for everyday travel.²³



Mike Maguire/Flickr

Much of the increase in the share of bicycle trips over the last decade can be credited to continuous investment in bicycle infrastructure, as Complete Streets policies have been implemented in various forms across the region. Today, over 800 miles of bike paths and over 400 miles of bike lanes provide community members with convenient opportunities to choose cycling and micromobility options. Projects that convert vehicle lanes into bike lanes or build segments of the envisioned National Capital Trail

Network are knitting neighborhoods across the region together with an integrated bicycle network.



Elvert Barnes/Flickr

The region’s shared micromobility bicycle and scooter programs continue to be well used. Capital Bikeshare is the largest shared micromobility provider in the region. Since its inception in 2010 as one of the nation’s first systems of its kind, Capital Bikeshare has grown from 1,100 bikes at 114 stations in the District of Columbia and Arlington County, to over 7,000 bikes at 770+ stations in eight jurisdictions today.²⁴

Capital Bikeshare ridership has recovered and grown since the pandemic. At 4.4 million trips, 2023 was Capital Bikeshare’s best year since inception.²⁵ The program introduced electronic bikes in 2018, providing travelers with a faster, less strenuous alternative to traditional bikes. Capital Bikeshare docks are conveniently located near most Metrorail stations, with nearly every station in DC, Arlington County, and the City of Alexandria having one within walking distance. In Fairfax, Montgomery, and Prince George’s counties, most Metrorail stations are located within walking distance of a Capital Bikeshare station.

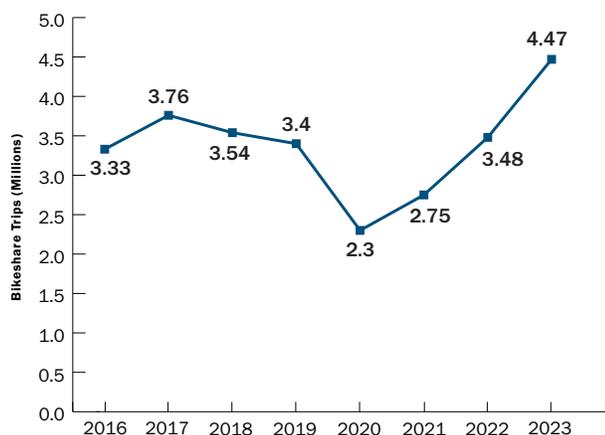
22 U.S. Census Bureau. (2020) *American Community Survey, 2015-2019 American Community Survey*. <https://www.census.gov/newsroom/press-kits/2020/acs-5-year.html>

23 Bike League. (2022) *Rates of Biking and Walking Benchmarking Report*. <https://data.bikeleague.org/data/cities-rates-of-active-commuting/>

24 Capital Bikeshare. (2024) *Capital Bikeshare DC*. <https://capitalbikeshare.com/>

25 National Capital Region Transportation Planning Board. (2024) *Dockless Bike and Scooter Share – Transportation – Events*. <https://www.mwcog.org/events/2024/06/03/dockless-bike-and-scooter-share-workshop-bicycling-bikesharing-complete-streets-walking/>

Figure 2.2:
Total Annual Capital Bikeshare Trips



Privately operated dockless e-scooter and e-bike services, offered by companies such as Lime, Lyft, Spin, and Veo, are also available in the District of Columbia, Arlington County, Alexandria, and the University of Maryland/College Park. These services see ridership levels comparable to Capital Bikeshare in these areas. DC leads with 12,000 e-scooters and 6,000 e-bikes in operation, followed by Arlington County with 1,800 e-scooters and 350 e-bikes, and Alexandria with 1,200 e-scooters and 100 e-bikes. With a larger fleet of vehicles, dockless micromobility accounts for the most shared micromobility trips in the region. The trips tend to be short—averaging 1.3 miles per trip for bikes and 0.9 miles for scooters.²⁶ These trends highlight the strength and continued growth of bicycle and micromobility transportation in the region.

Transportation Demand Management

Transportation Demand Management (TDM) promotes alternatives to solo driving to reduce traffic congestion and improve air quality. In the National Capital Region, the Commuter Connections program provides a range of commuter services, including ridesharing assistance, the Guaranteed Ride Home (GRH) program, and various commuter incentive programs that encourage carpooling, vanpooling, transit use, and active transportation. Among these services, SmarTrip transit benefits and transit/vanpool subsidies are the most widely used.²⁷ Additionally, collaboration with a regional network of 26 agencies has significantly reduced daily vehicle trips by nearly 100,000 and associated vehicle miles traveled (see Table 2.1).²⁸



Table 2.1: Commuter Connections Program Daily Impacts 2020–2023

Measure	Reduction
Vehicle Trips	99,790
Vehicle Miles of Travel	1,855,412

The HOT and HOV travel networks in the region have also been effective in providing travelers with transit and carpooling alternatives and benefits. The Northern Virginia Transportation Commission’s Commuter

26 National Capital Region Transportation Planning Board. (2023) *National Capital Trail Network 2023 Update, Progress Toward Completion*. <https://national-capital-trail-network-mwcog.hub.arcgis.com/>

27 National Capital Region Transportation Planning Board. (August 14, 2023) *2022 State of the Commute Survey Report*. <https://www.mwcog.org/documents/2023/08/14/state-of-the-commute-survey-report--carsharing-state-of-the-commute-telework-travel-surveys/>

28 Metropolitan Washington Council of Governments. FY 2021-2023 Commuter Connections Transportation Demand Management (TDM) Analysis Report. <https://www.mwcog.org/documents/2023/11/21/commuter-connections-transportation-demand-management-tdm-analysis-report-carsharing-commuter-connections-commuting/>

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Choice program has invested \$108 million from Virginia’s express toll lane revenues in public transit and other transportation projects since 2017.²⁹

Employer-provided commute services play a crucial role in encouraging employees to choose alternative transportation options over driving alone. Employees with access to free parking are more likely to drive alone, whereas those without free parking are more inclined to use various alternative modes. This is especially true for transit use. According to the 2022 State of the Commute survey, transit mode share among respondents without free parking was 18 percent when no commute benefits or services were offered—but increased to 36 percent when such benefits were available.³⁰



Joshua Roberts, International Monetary Fund/Flickr

The COVID-19 pandemic significantly impacted the use of TDM strategies in the region. By 2022, 66 percent of regional commuters were teleworking at least occasionally—nearly double the 35 percent

reported in 2019. Meanwhile, transit mode share declined across all geographic and demographic groups for commuting.³¹ As the region continues to recover from the pandemic, more employers have implemented policies for in-office work requiring employees to commute for some or all workdays resulting in a mix of benefits and burdens personally and regionwide. Throughout the transitions, TDM strategies have continued to deliver positive benefits, helping to support more transportation options and reduce congestion.

Surface Connections to Airports

Three major commercial airports—Baltimore/Washington International Thurgood Marshall (BWI), Ronald Reagan Washington National (DCA), and Washington Dulles International (IAD)—serve the region and, as shown in Figure 2.3, together handled more passengers in 2023 than pre-pandemic with over 38 million annual passenger boardings, distributed nearly evenly among them.³²



Rachel Beyerle/COG

29 Northern Virginia Transportation Commission (NVTC). (2023) *Commuter Choice 2023 Annual Report*. <https://novatransit.org/uploads/Projects/CommuterChoice/CCReport2023.pdf>

30 Footnote 28 National Capital Region Transportation Planning Board. (August 14, 2023) *2022 State of the Commute Survey Report*. <https://www.mwcog.org/documents/2023/08/14/state-of-the-commute-survey-report-carsharing-state-of-the-commute-telework-travel-surveys/>

31 Footnote 28 National Capital Region Transportation Planning Board. (August 14, 2023) *2022 State of the Commute Survey Report*. <https://www.mwcog.org/documents/2023/08/14/state-of-the-commute-survey-report-carsharing-state-of-the-commute-telework-travel-surveys/>

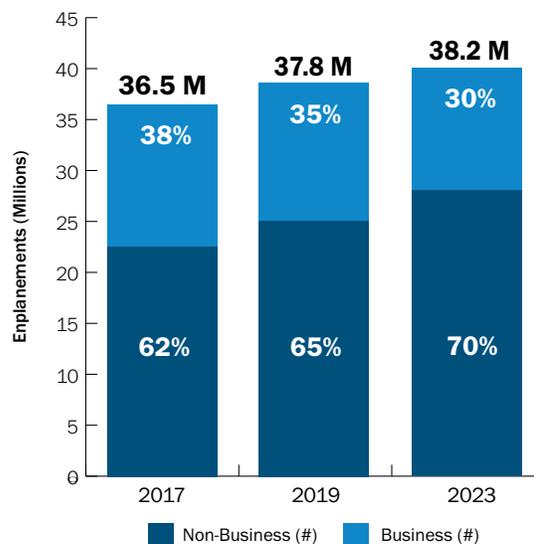
32 Total enplanement data for DCA and IAD come from the Metropolitan Washington Airports Authority (MWAA) and total enplanement data for BWI comes from the Maryland Aviation Administration.

In 2023, most air travelers began their trips from private residences (61 percent) or hotels and motels (31 percent).³³

In 2023, private cars remained the most common mode of ground access to airports in the region, accounting for 45 percent of trips. However, there was a notable difference in usage between home and non-home locations, with 55 percent of trips from home originating by private car, compared to just 11 percent from non-home locations. The use of ridehail or transportation network companies (TNCs) like Uber and Lyft to reach the airports has steadily increased, rising from 14 percent in 2017 to 26 percent in 2023 as a percentage of airport ground access trips. Among passengers traveling from non-home locations to the airport, 37 percent used TNCs, while 28 percent of home-origin trips used TNCs. TNC usage has grown at all three major airports, while taxi use has steadily declined, particularly since 2019.

Between 2017 and 2023, the share of airport ground access trips made by passengers on non-business travel rose from 62 percent to 70 percent, while the share of trips by passengers on business travel declined from 38 percent to 30 percent.³⁴ These trends, as illustrated in Figure 2.3, could be partly attributed to the impacts of COVID-19, which allowed more business activities to be conducted remotely. The increase in leisure travel may also reflect more improved financial conditions for many individuals and a heightened desire to travel in the post-pandemic era.

Figure 2.3: Air Travel Trips



The share of passengers using transit to access airports remained largely stable from 2019 to 2023, with no change at BWI (4 percent), a slight decrease at DCA (13 to 12 percent), and an increase at IAD (3 to 5 percent). DCA has long been served by Metrorail, while the 2022 opening of the Silver Line added service to IAD likely leading to the increase in transit use at that airport. BWI is directly accessible from the National Capital Region on rail via MARC and Amtrak.

Pipelines

Pipeline networks support the movement of freight travel, particularly natural resources and commodities in the energy sector, due to their efficiency and cost effectiveness. By using pipelines, the demand for space on interstate highways and rail systems is reduced, easing congestion and allowing for more efficient use of other transportation modes.

33 Unless otherwise noted, air travel data comes from the following source: National Capital Region Transportation Planning. (2023) 2023 Washington Baltimore Regional Air Passenger Survey. <https://www.mwcog.org/transportation/planning-areas/airports/casp-elements/air-passengers/>

34 National Capital Region Transportation Planning. (2023) 2023 Washington Baltimore Regional Air Passenger Survey. <https://www.mwcog.org/transportation/planning-areas/airports/casp-elements/air-passengers/>

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The Colonial and Plantation pipelines serve the National Capital Region and are part of the network of petroleum, natural gas, offshore well, and product pipelines that carry more than 48 million tons of freight annually, making pipelines the second-most used freight mode in the region by weight after truck freight.³⁵ Compared to the proportion of freight movement nationally, the region's nearly 22 percent of total freight moved by pipeline is greater.³⁶ The reliable movement of fuel through these pipelines directly impacts the ability of individuals to consistently access fuel for motor vehicles.



Cory Hancock, International Monetary Fund/Flickr

Waterways

The Potomac River is a scenic, navigable waterway in the region, though only a limited number of commodities, either by weight or value, are transported by water. Typically, goods that are less time-sensitive or difficult to move by land are transported along the Potomac River. The Port of Baltimore and the Port of Virginia, the region's closest major ports, are outside the TPB's freight analysis framework.³⁷

In addition to freight, the Potomac River is home to passenger water vessels. The Potomac Water Taxi operates from March to December, providing transportation options for travelers between The Wharf and Georgetown in the District of Columbia, Alexandria City Marina in Virginia, and National Harbor in Maryland. In 2023, more than 15,000 trips were made up and down the Potomac River between these destinations, carrying over 260,000 passengers with the most popular routes those carrying passengers to and from Alexandria to destinations in Maryland and District of Columbia.



Emma K Alexandra/Flickr

35 Federal Highway Administration. (2020) *Freight Analysis Framework*. https://ops.fhwa.dot.gov/freight/freight_analysis/faf/

36 Air quality conformity analysis of Visualize 2050, using the Gen2/Ver. 2.4.6 Travel Model and the Round 10 Cooperative Forecasts of land activity. National Capital Region Transportation Planning Board. (2023) *2023 National Capital Region Freight Plan Update*. <https://www.mwcog.org/documents/2023/07/19/national-capital-region-freight-plan-freight/#:~:text=The%20draft%202023%20Update%20to,by%20the%20TPB%20in%202016>

37 Staff analysis of 2023 City Cruise Potomac Water Taxi passenger count data.

VISUALIZE 2050

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