

VISUALIZE 2050

The logo for Visualize 2050 features the word "VISUALIZE" in a large, bold, white sans-serif font above the year "2050". The "0" in "2050" is stylized with a blue and white swoosh that loops around it, resembling a road or a path.

National Capital Region Transportation Plan

Agenda Item 4

OVERVIEW OF PUBLIC COMMENT PERIOD MATERIALS

Visualize 2050, FY 2026-2029 TIP, and
Air Quality Conformity Analysis Report

Cristina Finch
TPB Transportation Planner

TPB Community Advisory Committee
November 13, 2025



National Capital Region
Transportation Planning Board

Overview

- Providing Comments
- National Capital Region Transportation Plan – Visualize 2050
- FY 2026-2029 Transportation Improvement Program (TIP)
- Air Quality Conformity Analysis Report



SeanPavonePhoto/iStock

Providing Comments

- Comment Period: October 23–November 21, 2025
- TIP Forum: November 13, 2025
- Visualize2050.org: The hub for plan information and public comment
 - **Home, The Plan, Plan Resources & Get Involved** pages
- Four ways to submit comments:
 1. Online form at visualize2050.org
 2. Email: tpbcomment@mwcog.org
 3. Call: (202) 962-3774
 4. Mail: TPB Chair, 777 N. Capitol Street NE, Suite 300 Washington, DC 20002



#Visualize2050

Visualize 2050 Content

Visualize 2050 Executive Summary

- 12-page PDF/flipbook
- Captures plan highlights: growth, mode share and performance today/future, finance, future challenges

Visualize 2050 Full Plan

- 108-page PDF/flipbook
- Transportation vision, values, performance targets
- Summary of region's current (2025) and future (2050) multimodal transportation system planned investments and anticipated performance, remaining challenges

Supplemental Information

- 11 Maps: existing/future transportation systems, system performance, land use and activity, environmental, EV charger siting
- High-Capacity Transit - Lists of current and future stations, systems, service providers
- Project Tracker database



The screenshot shows the Visualize 2050 website interface. At the top, there is a navigation bar with links for 'ABOUT', 'PLAN DEVELOPMENT', 'THE PLAN' (which is highlighted in green), 'PLAN RESOURCES', and 'GET INVOLVED'. Below the navigation bar, there are three tabs: 'Executive Summary', 'Draft Plan', and 'Chapters'. A note says 'By clicking on the chapter accordion, ...'. The 'DRAFT PLAN - FULL DOCUMENT' section contains a thumbnail of the document and a 'DOWNLOAD PDF' button. The 'FUTURE TRANSPORTATION' section shows five maps with 'VIEW THE MAP' and 'DOWNLOAD PDF' buttons. The 'CHAPTER 6: SUPPLEMENTAL RESOURCE' section shows a thumbnail and a 'DOWNLOAD PDF' button. The 'TPPF'S PROJECT TRACKER DATABASE' section shows a thumbnail and a 'VIEW THE DATABASE' button. The 'DRAFT PLAN CHAPTERS' section lists chapters 1 through 7, each with a green checkmark and a 'VIEW' button. The chapters are: CHAPTER 1: INTRODUCTION, CHAPTER 2: TRANSPORTATION SYSTEM TODAY, CHAPTER 3: CURRENT TRANSPORTATION SYSTEM PERFORMANCE, CHAPTER 4: SOCIETAL TOPICS, CHAPTER 5: FINANCIAL PLAN FOR FUTURE INVESTMENTS, CHAPTER 6: 2050 SYSTEM AND PERFORMANCE, and CHAPTER 7: PLANNING TOGETHER FOR FURTHER PROGRESS.

Chapter 1: Introduction

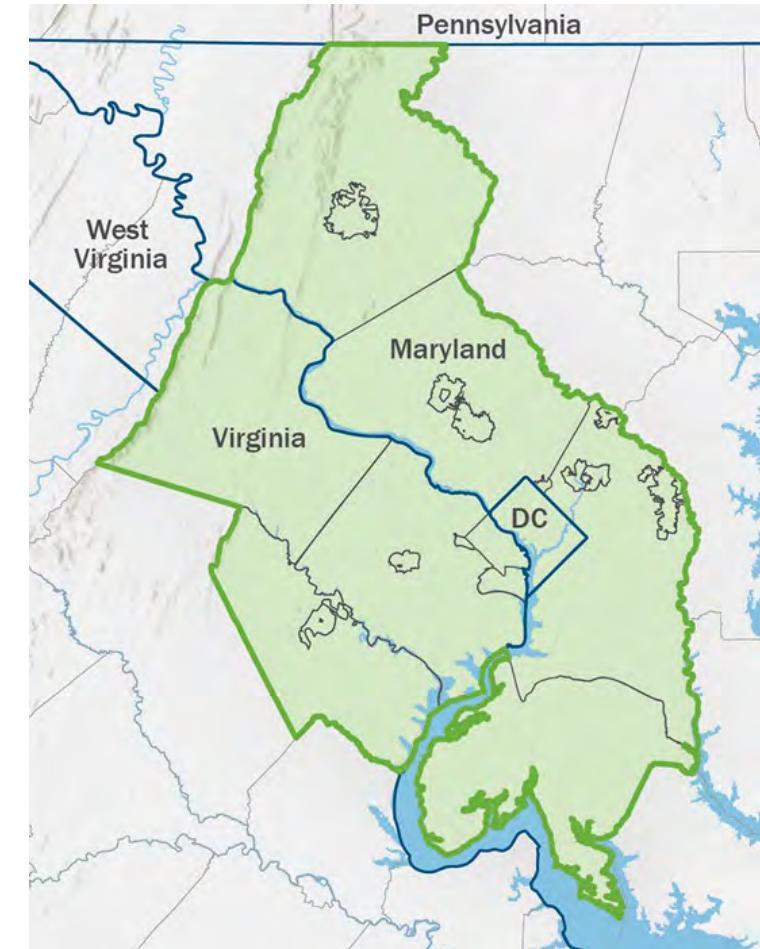
The National Capital Region today:

- 5.9 million people
- 3.3 million employees
- 3,500 sq mi. and 22 local jurisdictions

Visualize 2050's goals align with state and federal goals:

- District of Columbia's *moveDC*
- Maryland's *The Playbook*
- Virginia's *Vtrans*
- Moving Ahead for Progress in the 21st Century Act (MAP-21)

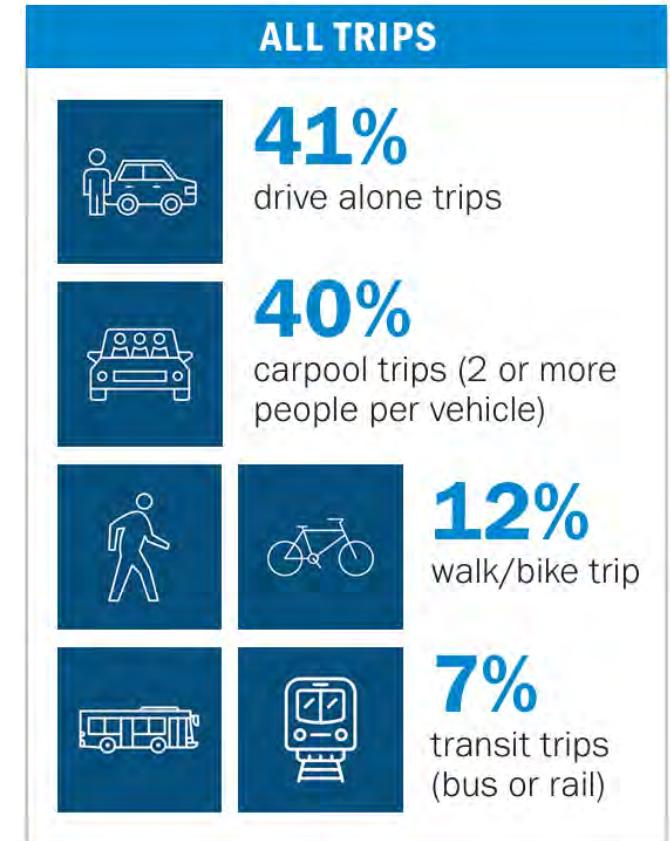
TPB's Goals



Chapter 2: Transportation System Today

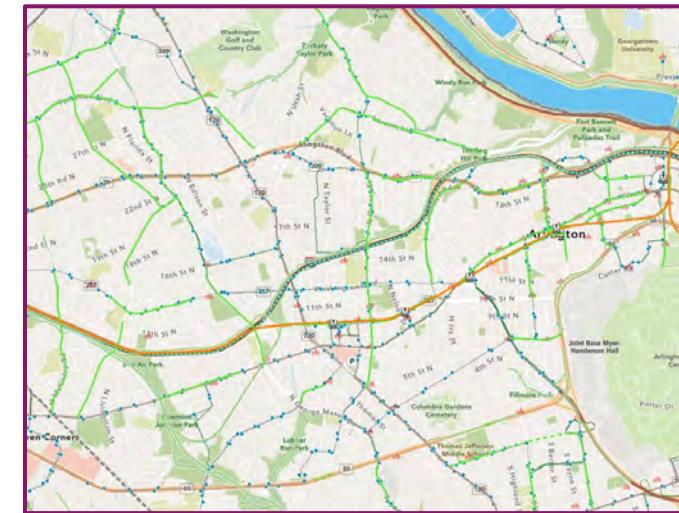
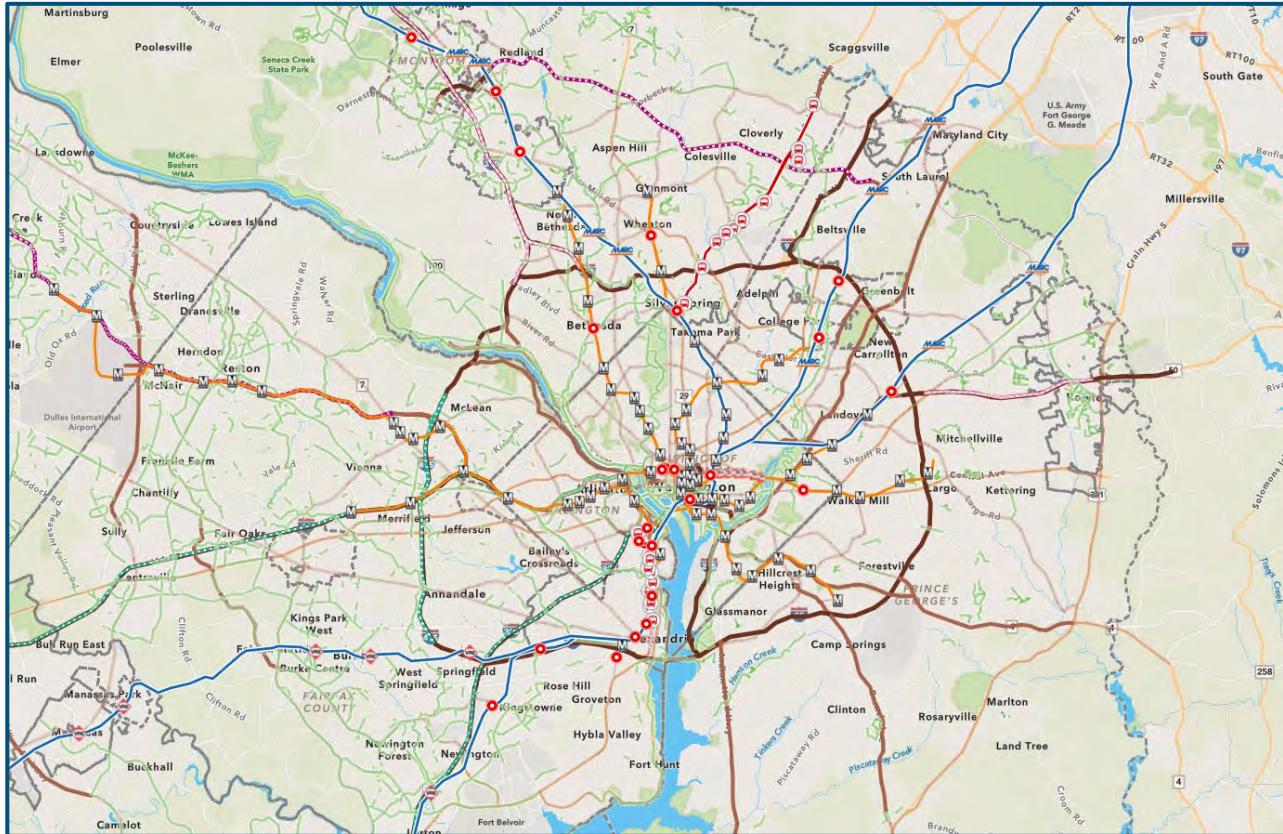
Recognizing how the region's current multimodal system lays the foundation for future improvements

- Roadways
- Railways
- Bus Transit
- Pedestrians
- Bicyclists and Micromobility
- Transportation Demand Management
- Surface Connections to Airports
- Pipelines and Waterways



Chapter 2: Transportation System Today

National Capital Region Multimodal System (2023) Map



Zoom in for more details about modes like bicycle and local transit routes.

Chapter 2: Transportation System Today

Roadways

- More than 17,000 road lane miles
- 97 million vehicle miles daily
- 15 million vehicle person trips

Railways

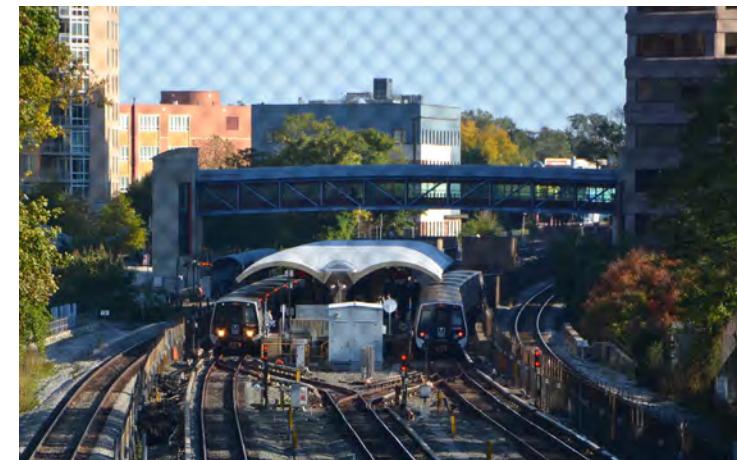
- 318-miles of high-capacity rail transit
- WMATA, MARC, VRE move over 492,000 people
- 260 miles of Class I mainline track
- Carries 6.7 million tons of freight per year

Bus Transit

- 15 local bus systems and 3 commuter bus systems
- Over 450,000 local and commuter bus trips daily



Maryland Department of Transportation/Flickr



Adam Fagen/Flickr

Chapter 2: Transportation System Today

Pedestrians

- 752 miles of National Capital Trail Network as of 2023



Mike Maguire/Flickr

Transportation Demand Management

- Commuter Connections reduced daily vehicle trips by nearly 100,000

Surface Connections to Airports

- The three commercial airports together supported 38 million boardings in 2023 and are all accessible by high-capacity transit



Rachel Beyerle/COG

Chapter 3: Current Transportation System Performance

Reflects on how the system performs in moving people and goods and the region's progress toward its performance targets

- Access
- Reliability and Congestion
- Safety and Security
- Maintenance
- System Management



MV Jantzen/Flickr

Chapter 3: Current Transportation System Performance

Access

Drivers and Passengers

- 1 million jobs accessible within a 45-minute commute

Transit

- 400,000 jobs accessible within a 45-minute commute

Pedestrians

- 63% of residents and 72% of jobs are located within $\frac{1}{2}$ mile of the existing portions of the National Capital Trail Network (NCTN)

Bicyclists and Micromobility

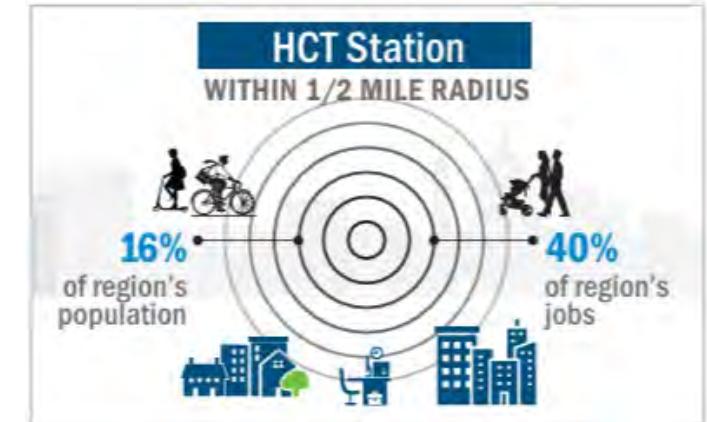
- 6.1 million Capital Bikeshare trips in 2024

Remote Access

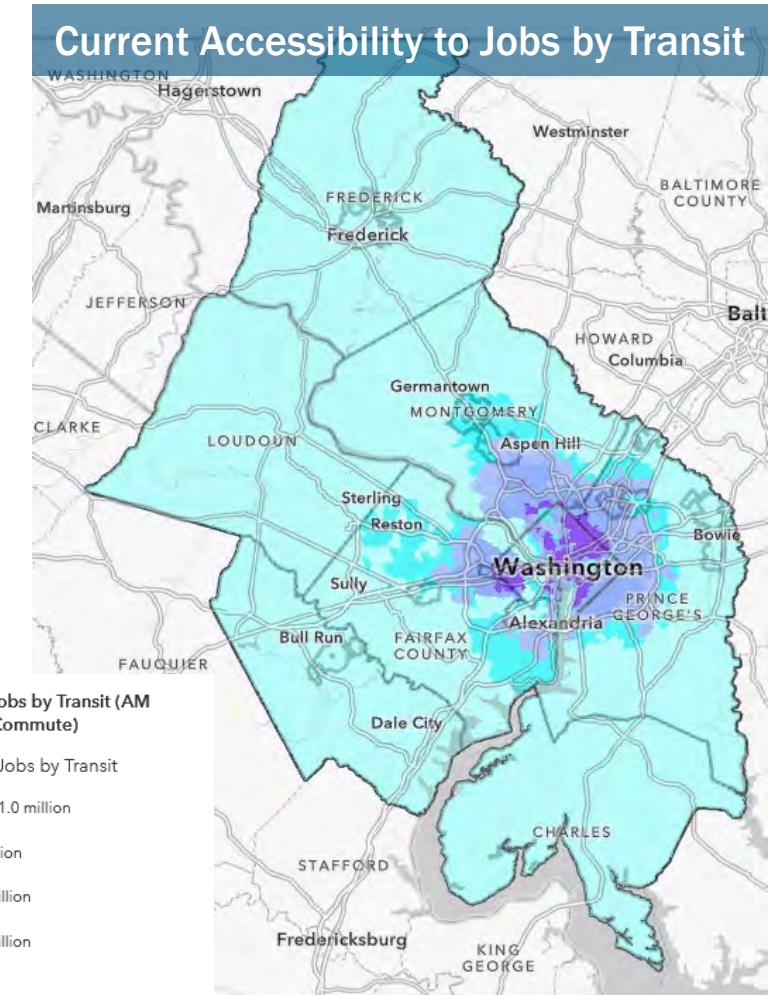
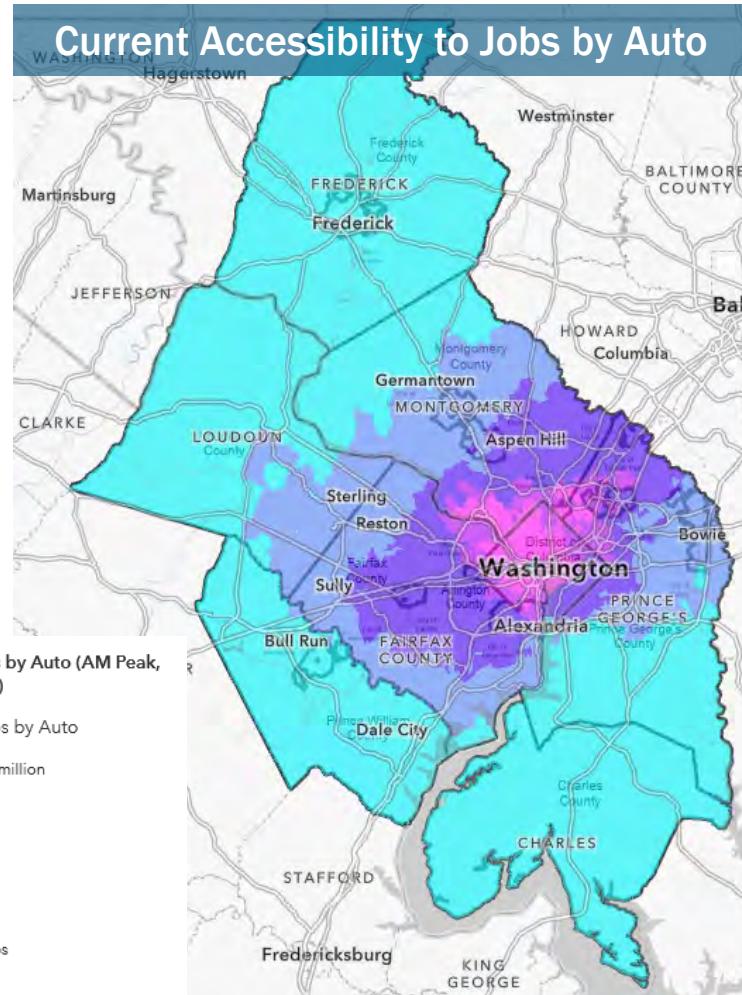
- Telework, virtual learning, online shopping



Pierre Gaunaurd/COG



Chapter 3: Current Transportation System Performance



Chapter 3: Current Transportation System Performance

Reliability and Congestion

Roadways

- All targets met
- 122 million daily vehicle miles traveled
- 10% of all roadway lane miles were congested daily at peak times in 2023
- Limited truck parking



Rachel Beyerle/COG

Bus Transit

- Reliability is dependent on overall traffic conditions



BeyondDC/Flickr

Railways

- Overcrowding at rush hours
- Sharing track space with freight and Amtrak

Air Quality measured for CMAQ projects reducing VOCs and NO_x

Reliability and Congestion Targets

 66.2% of Interstates with Reliable Travel Times 59.6% target (2022)	 13.1 Annual Hours per Capita of Peak Hour Excessive Delay met	 CMAQ projects reduce VOCs by 2.866 kg/day met the emissions reduction target of 0.610 kg/day
 89.2% of Non-Interstates with Reliable Travel Times met 77.6% target (2022)	 22.4 Annual Hours per Capita target (2022)	 CMAQ projects reduce NO _x by 3.093 kg/day met the emissions reduction target of 2.830 kg/day
 2.31 Truck Travel Time Reliability Index met 2.59 target (2022)	 44.3% Non-SOV Travel on the National Highway System met 37.3% target (2022)	

Air Quality Targets

Chapter 3: Current Transportation System Performance

Safety and Security

Drivers, Passengers, Pedestrians, and Bicyclists

- 0 of 5 targets met
- Increase in number and rate of roadway fatalities

Rail and Bus Transit Riders

- 8 of 15 targets met



BeyondDC/Flickr

Roadway Safety Targets

!	549.8 non-motorist fatalities and serious injuries did not meet the maximum 492.4 target (5-yr. rolling average, 2018-2022)
!	335 roadway fatalities did not meet the maximum 253 target
!	0.804 fatality rate did not meet the maximum 0.588 target
!	2,214.6 roadway serious injuries did not meet the maximum 1,889.7 target
!	5.305 serious injury rate did not meet the maximum 3.867 target (5-yr. rolling average, 2018-2022)

Rail and Bus Transit Safety Targets

✓	No major safety events met the target for Vanpools
✓	252 major safety events met 404 targets for Urban Bus (0.44 met 0.74 target rate)
!	3 major safety events did not meet target of 2 for Commuter Bus (0.04 did not meet 0.03 target rate)
!	7 major safety events did not meet target of 4 for Streetcar Rail (5.72 did not meet 0.27 target rate)
!	103 major safety events did not meet target of 23 for Heavy Rail (0.19 did not meet 0.04 target rate)
!	63 major safety events did not meet target of 39 for Demand Response (0.31 did not meet 0.20 target rate)
✓	No fatalities on Streetcar, Commuter Bus, Demand, Response and Vanpools
!	2 fatalities on Heavy Rail did not meet target of 0 (0.004 fatalities per revenue vehicle mile)
!	4 fatalities on Urban Bus did not meet target of 0 (0.01 fatalities per revenue vehicle mile)

Chapter 3: Current Transportation System Performance

Maintenance

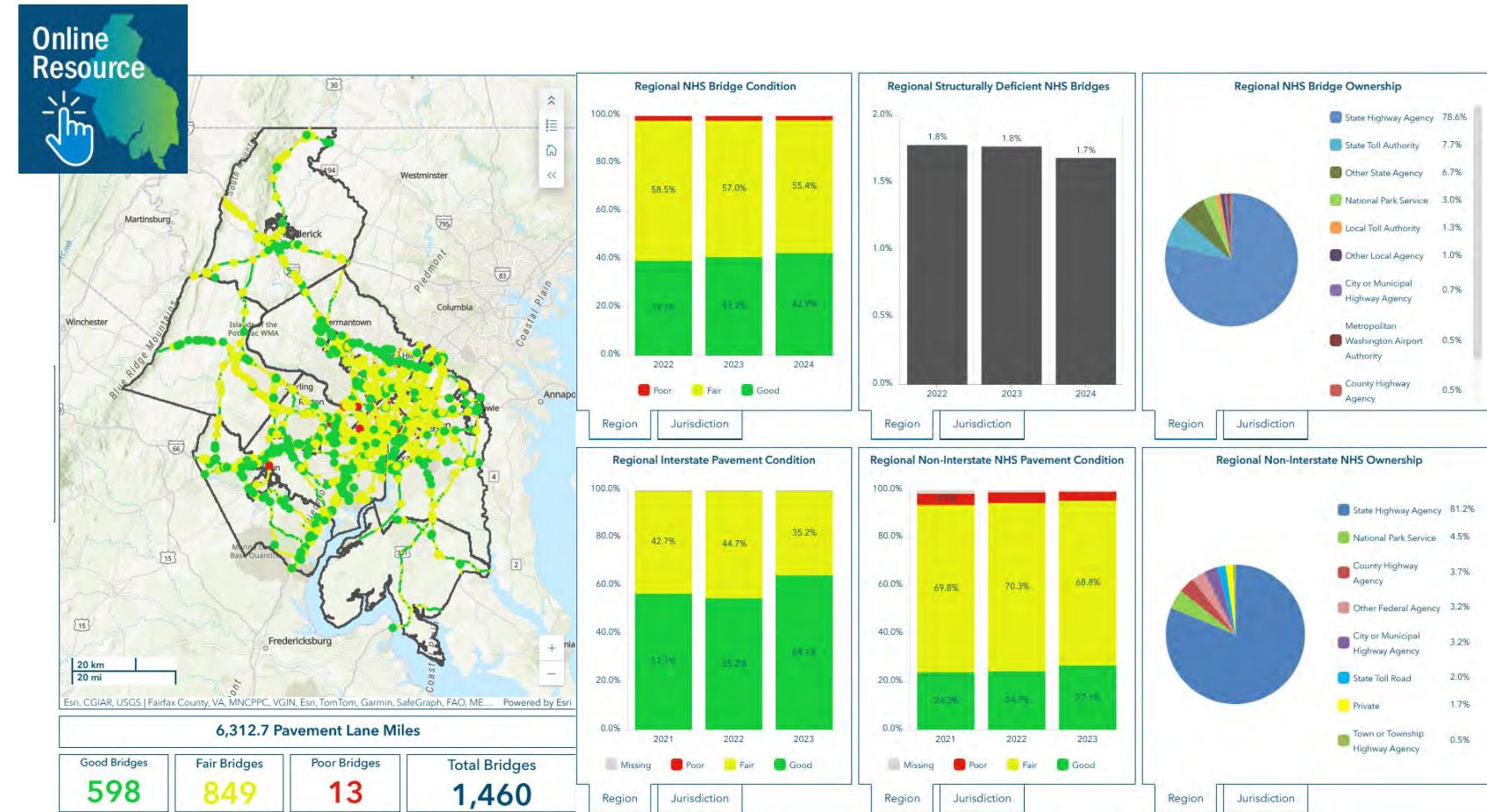
Roadways and Bridges

- 5 of 6 targets met

Highway Assets in 2021



Bridge Assets in 2023



Chapter 3: Current Transportation System Performance

Maintenance

Rail and Bus Transit

- 13 of 19 targets met



Pierre Gaunaud/COG

Transit Asset Targets

 Streetcar Rail (0% met maximum 5% target)	 Steel Wheel Vehicles (23.3% met maximum 46.7% target)
 Heavy Rail (4.3% did not meet maximum 3.5% target)	 Automobiles (44.1% did not meet maximum 41.8% target)
 Articulated Bus (2.1% met maximum 2.5% target)	 Trucks and other Rubber Tire Vehicles (34.2% did not meet maximum 25.0% target)
 Bus (6.1% met maximum 6.9% target)	 At-Grade Fixed Guideway Station (0% met maximum 4.1% target)
 Over-the-road Bus (8.1% met maximum 12.4% target)	 Bus Transfer Center (0% met maximum 4.1% target)
 Automobile, Commuter Rail Locomotive, Commuter Rail Passenger Coach, Heavy Rail Passenger Car, Light Rail Vehicle (0% met 0% target)	 Elevated Fixed Guideway Station (0% met maximum 4.1% target)
 Minivan and Sports Utility Vehicle had no 2022 targets.	 Other, Passenger or Parking (0% met maximum 4.3% target)
 Cutaway (6.6% did not meet maximum 0.7% target)	 Parking Structure (0% met maximum 4.3% target)
 Van (41.6% did not meet 0% target)	 Surface Parking Lot (0% met maximum 4.3% target)
	 Underground Fixed Guideway Station (4.3% did not meet maximum 4.1% target)

Chapter 3: Current Transportation System Performance

System Management

Roadways

- Dynamic tolls responsive to demand
- Dynamic parking pricing
- Curb space management
- Traveler information programs
- Roadway design

Rail and Bus Transit

- Network monitoring
- Route optimization
- Track agreements



Cristina Finch/COG



Emma K Alexandra/Flickr

Chapter 4: Societal Topics

Reflects on the many topics influencing and impacted by transportation:

Economy

- Population and Demographics*
- Households and Housing
- Housing Affordability
- Employment and Income*
- Tourism
- Land Use and Development Patterns
- Activity Density*
- Regional Activity Centers*

Environment

- Air Quality
- Natural Hazards Resiliency*
- Parks and Open Space
- Protected Lands
- Wetlands

Public Health

- Physical Health
- Mental Health

Emerging Technologies

- Regional Intelligent Transportation System Architecture
- Autonomous Driving, Connected and Automated Vehicles (CAVs)
- Electric Vehicles/Zero-Emission Vehicles*
- Artificial Intelligence
- Drone/Automated Vehicle Deliveries
- Automated Traffic Enforcement
- Automatic Train Operation
- On-Demand Transit/Microtransit

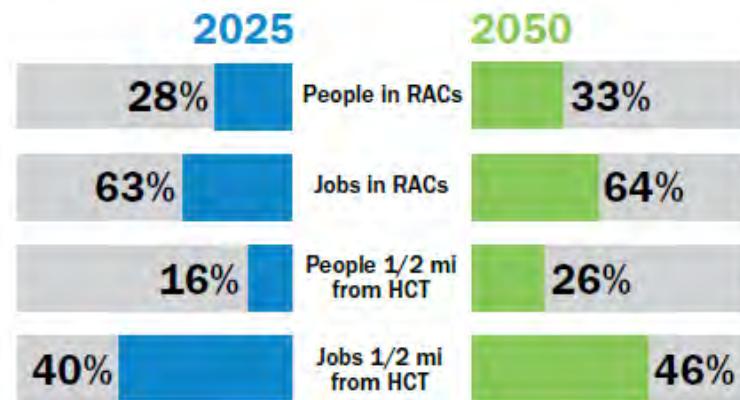


*See online maps associated with these topics.

Chapter 4: Societal Topics

- Risk to transportation assets from more severe & frequent natural hazards
- 88 of 145 (61%) of Regional Activity Centers (RACs) are within a ½ mile from a HCT station
- 110,000 registered EVs

Percent of People and Jobs in Regional Activity Centers and near High-Capacity Transit, Today and 2050



Ted Eytan/Flickr

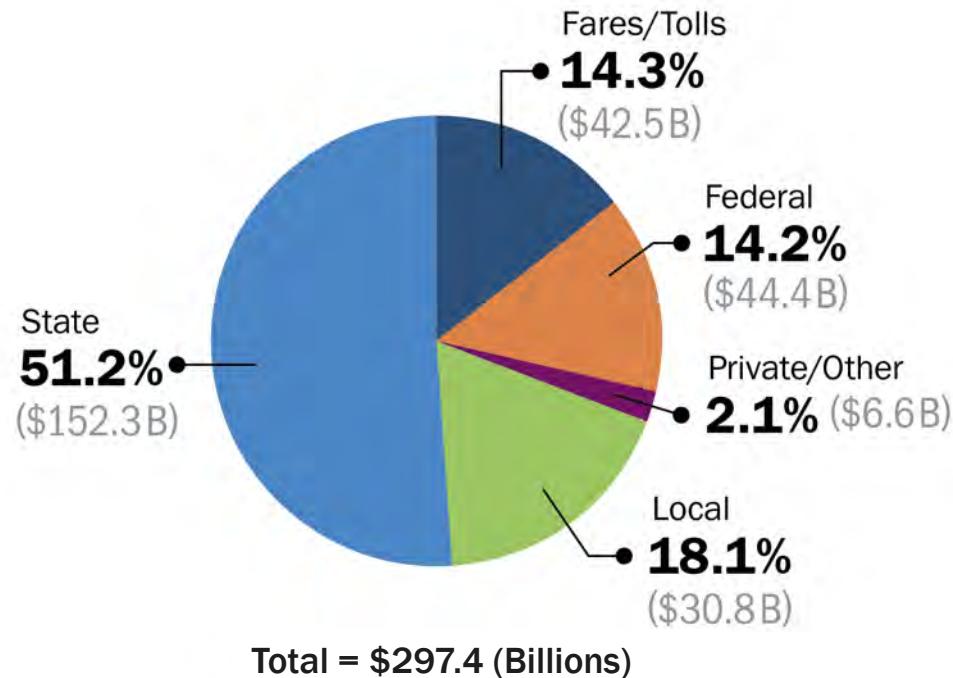


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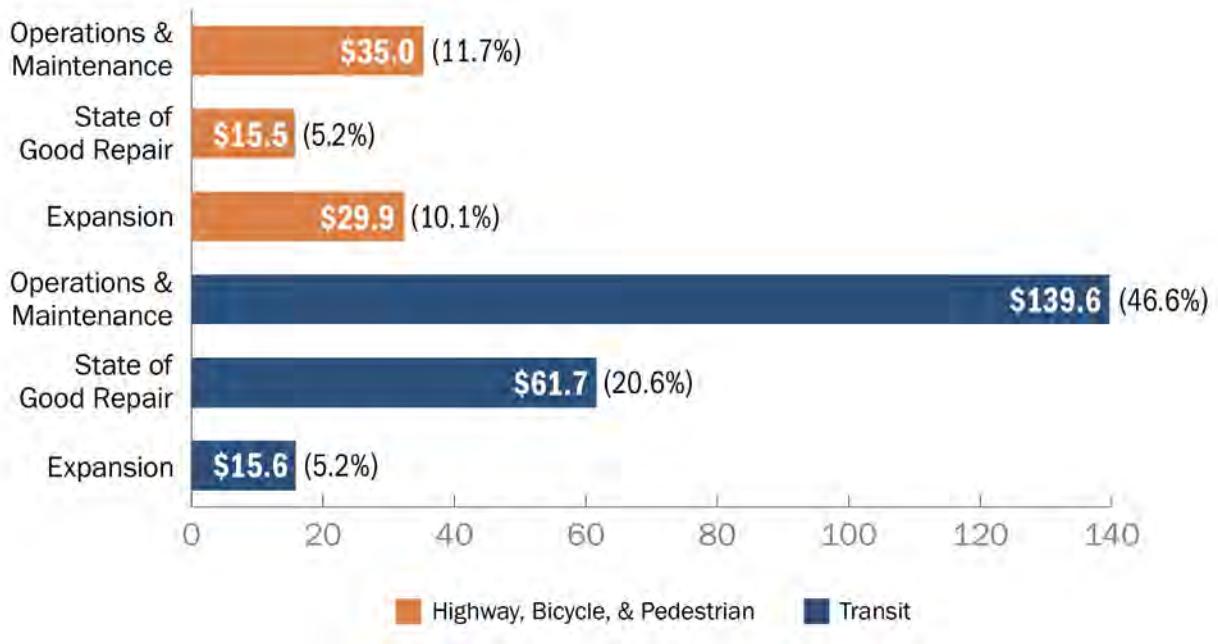
Chapter 5: Financial Plan for Future Investments

Highlights the region's investment plan given current and reasonably anticipated funding availability

Revenues by Funding Source in Year of Expenditure Dollars (Billions), 2026-2050

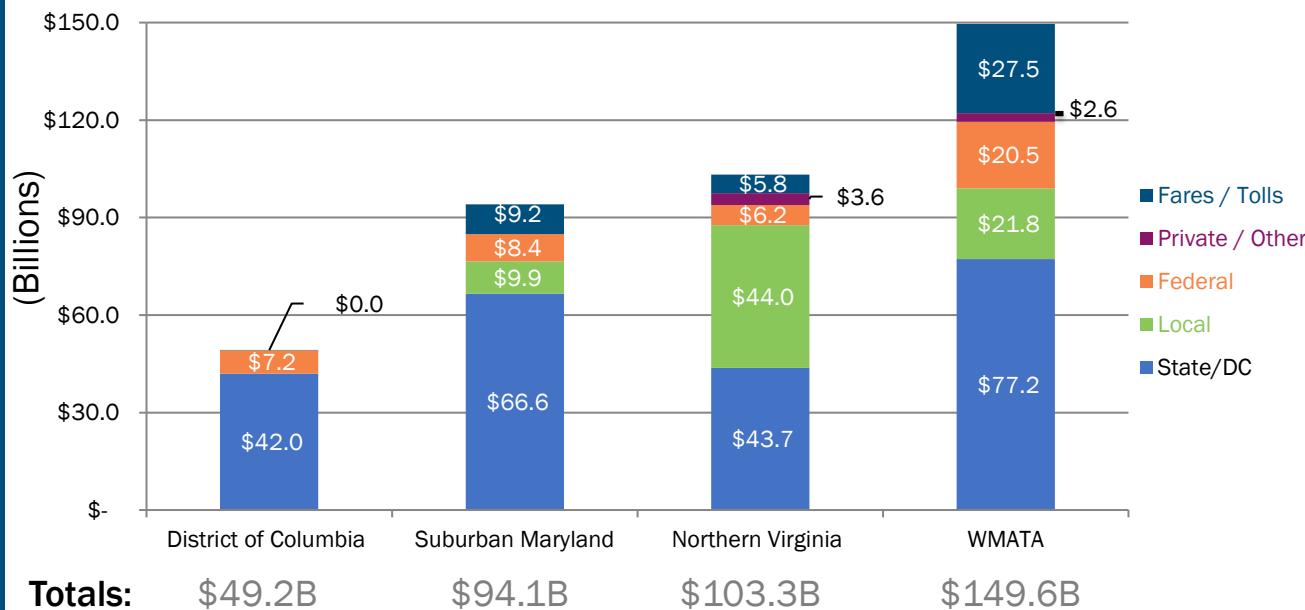


Expenditures by Type and Mode in Year of Expenditure Dollars (Billions), 2026-2050



Chapter 5: Financial Plan for Future Investments

Revenues: Funding Sources by State in Year of Expenditure Dollars (Billions), 2026-2050



The forecast revenues are reasonably expected to be available to implement Visualize 2050.



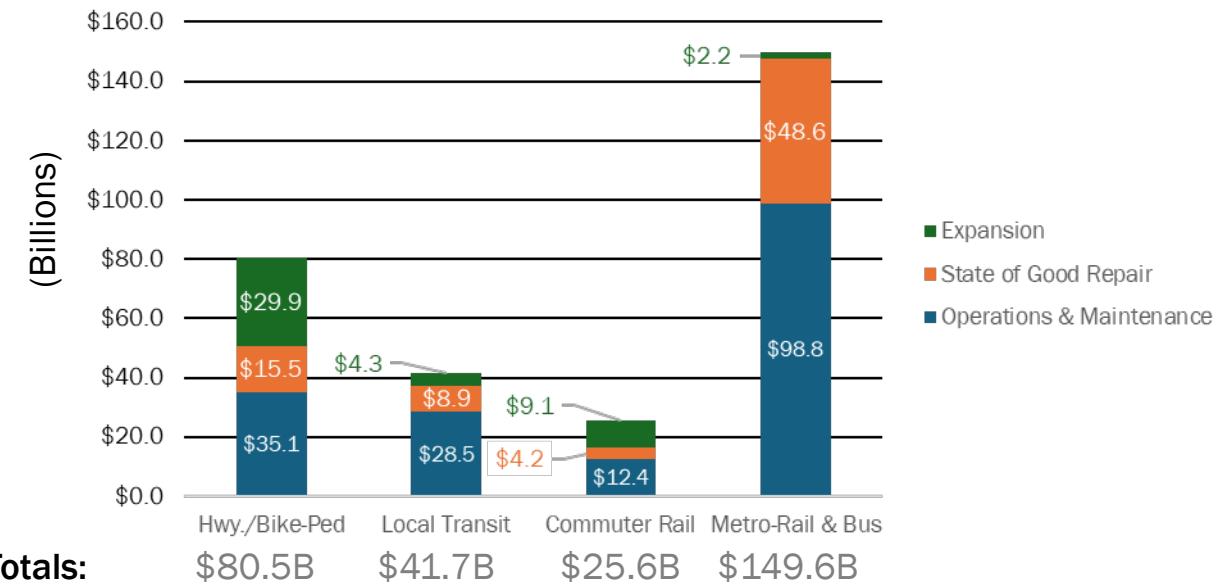
Rachel Beyerle/COG

Chapter 5: Financial Plan for Future Investments



Elvert Barnes/Flickr

Expenditures by Mode and Category (Billions), 2026-2050



Totals: \$80.5B \$41.7B \$25.6B \$149.6B

Chapter 5: Financial Plan for Future Investments

Project/Program Alignment with TPB Goals

VISUALIZE 2050
Future Transportation Investments in Projects and Programs

[DOWNLOAD PDF](#) 

	 SAFETY	 WELL-MAINTAINED INFRASTRUCTURE	 TRAVEL TIME RELIABILITY	 EFFICIENT SYSTEM OPERATIONS	 AFFORDABLE AND CONVENIENT MOBILITY OPTIONS	 ENVIRONMENTAL PROTECTION	 RESILIENT REGION	 LIVABLE AND PROSPEROUS COMMUNITIES
	Discrete Projects	187	278	168	278	132	127	209
	Project Groupings	244	27	27	17	24	12	24
	Ongoing Programs	27	56	66	56	66	24	58
	Total	339	270	371	241	371	163	291

Chapter 5: Financial Plan for Future Investments

Applying TPB's Priority Strategies via the Planned Expenditures

- Apply best practices to maintain the transportation system
- Apply the endorsed safety strategies to design and operate safer infrastructure and encourage safer behavior
- Provide more telecommuting and other options for commuting
- Implement Transportation System Management and Operations (TSMO) measures at all eligible locations
- Apply effective technologies that advance the TPB's goals



BeyondDC/Flickr



Elvert Barnes/Flickr

Chapter 6: 2050 System & Performance

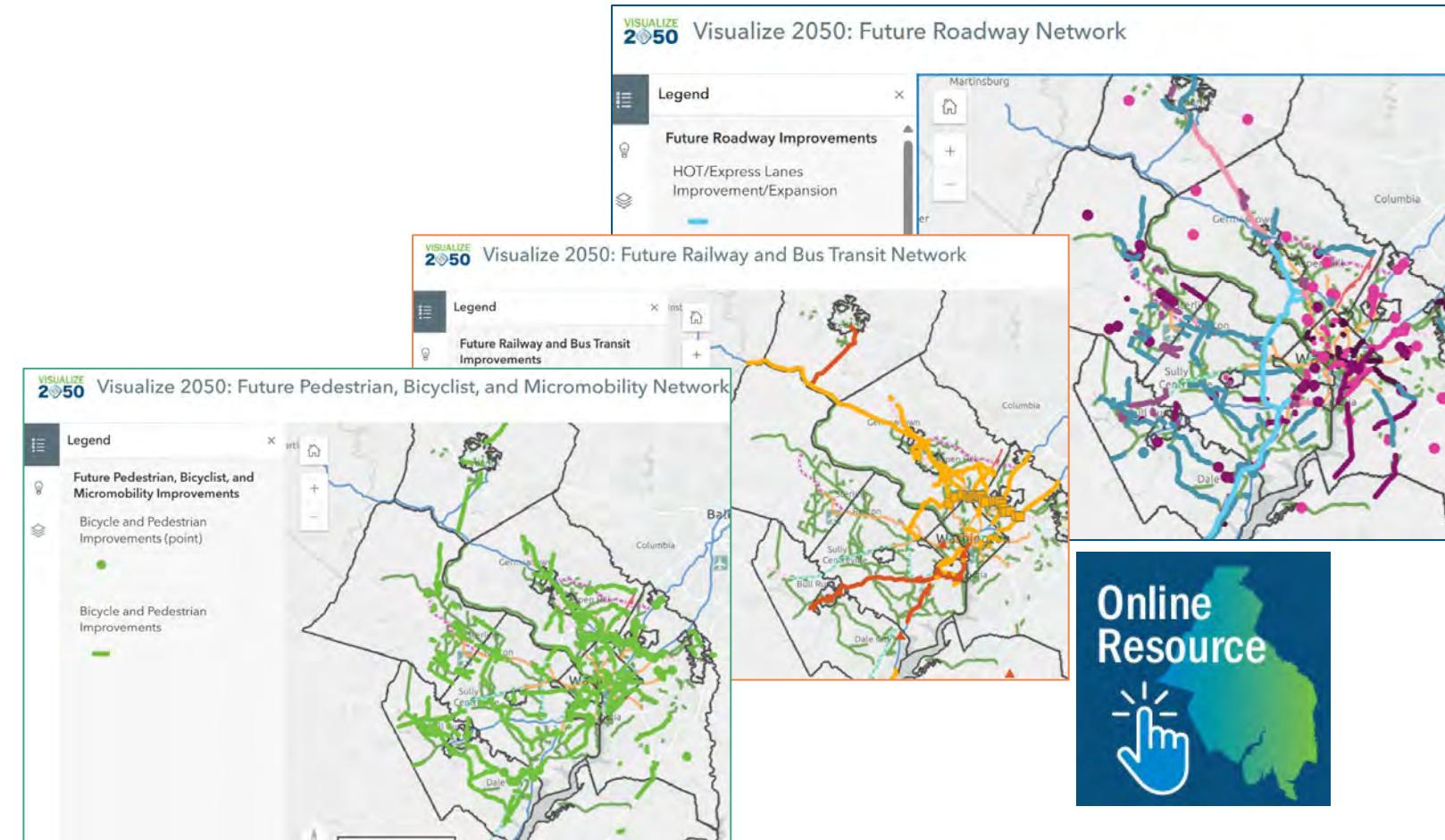
Envisioning the National Capital Region's 2050 transportation system and its future performance

Future Transportation Network

- Roadways
- Railways
- Bus Transit
- Pedestrians, Bicyclists, and Micromobility

2050 System Performance

- Access
- Congestion
- Environmental Forecasts



Chapter 6: 2050 System & Performance

Roadways

- Over 600 added lane miles
- Conversion of 10 HOV miles to HOT
- Upgraded streetlight technologies and intersections

Walking, Biking, and Micromobility

- Where applicable and possible, all future projects will include bicycle/pedestrian accommodations

Bus Transit

- +79 BRT lane miles and +90 BRT stations
- Replacement of aging fleets with clean fuel/EV buses

Railways

- +18 added rail miles and +27 rail stations
- Operational enhancements, station upgrades, accessibility improvements



BeyondDC/Flickr



BeyondDC/Flickr

Chapter 6: 2050 System & Performance

The 2050 system will further advance these TPB Priority Strategies:

- Bring jobs and housing closer together
- Expand the express highway network, with rapid transit, and allow carpool/vanpool to ride free
- Develop and implement an electric vehicle charging network
- Move more people on Metrorail
- Increase frequency and capacity of transit
- Reduce travel times on all public transportation bus services
- Convert vehicles to clean fuels
- Improve walk and bike access to transit
- Complete the National Capital Trail Network to create



BeyondDC/Flickr

Chapter 6: 2050 System & Performance

Investments, population, and land use changes will influence the transportation system:

Roadways

- More carpooling in 2050 than today
- Fewer miles driven per person
- Increased congestion and delay during typical day
 - More lane miles operate in congested conditions
 - Fewer jobs accessible by auto in 2050
 - Lower growth in people near RACs and HCTs
 - Substantially less growth in daily transit ridership

Walking, Biking, and Micromobility

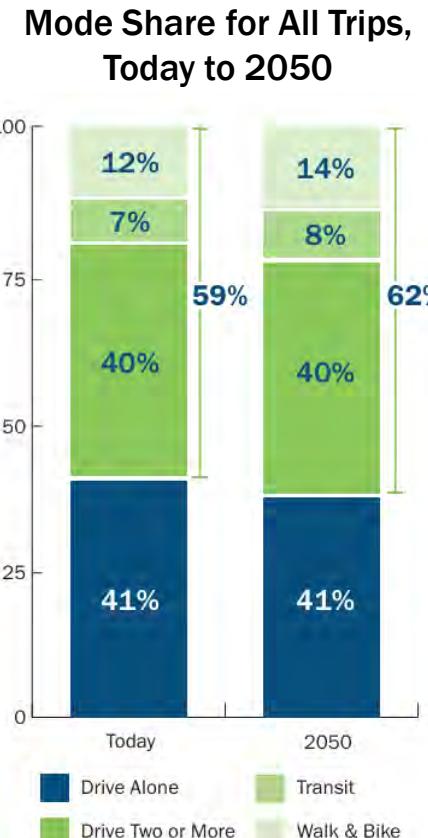
- Increase 2% for all trip types; 1% for work trips in 2050

Rail and Bus Transit

- More jobs accessible by transit in 2050
- Biggest increase in HCT stations in Inner Suburbs



Emma K Alexandra/Flickr



Chapter 6: 2050 System & Performance

Geography plays a large role in #trips by mode in 2050

Regional Core

- Highest share of transit, walking, and biking trips
- Travel evenly split between driving (50%) and alternative modes (50%)
- More than half work trips by transit

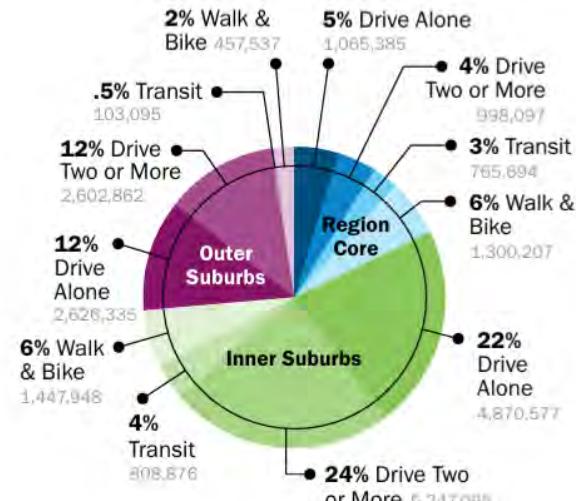
Inner Suburbs

- Most trips (56%) originate from Inner Suburbs
- Transit use: 7% all trips and 24% work trips

Outer Suburbs

- Auto-based work trips from the Outer Suburbs are greater than all work trips combined from the Regional Core
- Transit use: 0.5% all trips and 2% work trips
- Walking & biking: 2% all trips and .4% work trips

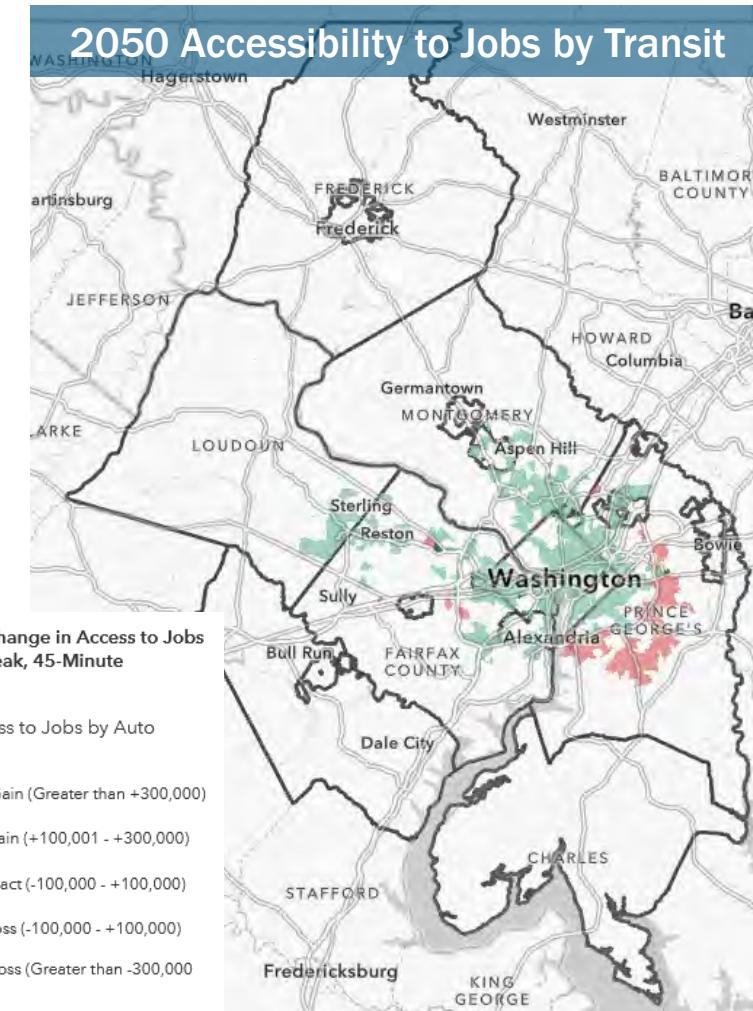
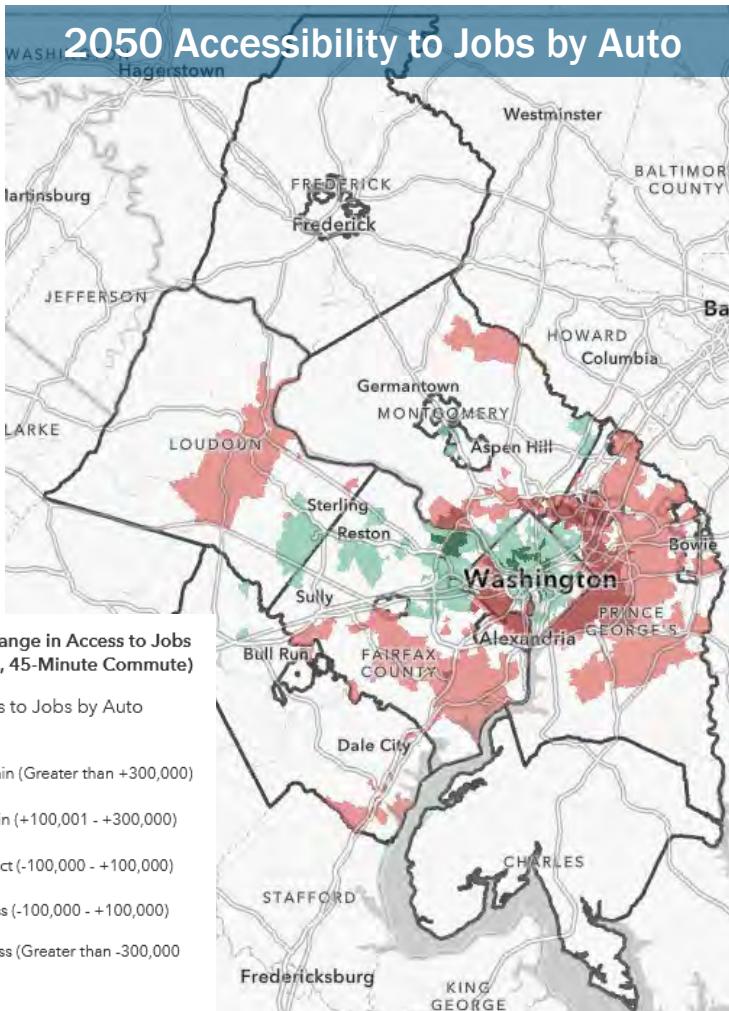
Percent of All Trips by Mode and Geography, 2050



Total Trips: 22,293,708



Chapter 6: 2050 System & Performance



Chapter 6: 2050 System & Performance

Environmental Forecasts

Vehicle Emissions & Air Quality Conformity

- Visualize 2050 meets air quality conformity requirements for Ozone (Nitrogen Oxides and Volatile Organic Compounds)
- Despite rising demand, vehicle emissions will decline

2050 System Resiliency

- Many projects & programs will include features that contribute to resilience
- Transition of buses and locomotives to zero-emission vehicles



Dan Reed/Greater Greater Washington

Chapter 7: Planning Together for Further Progress

Challenges will exist beyond the planned investments



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Emma K Alexandra/Flickr

CONTINUED TRAVELER FATALITIES & SERIOUS INJURIES

Safety challenges are unlikely to be fully resolved, as some of the underlying contributing factors—large vehicles, high-speed roadway designs, and distracted or unsafe driving—are complex and far-reaching.



SINGLE-OCCUPANT VEHICLES CONTINUE TO BE MOST PEOPLE'S CHOICE FOR COMMUTING

Many residents, particularly in the region's inner and outer suburbs, will continue to face limited access to timely multimodal options to access work due to long travel distances and impracticality of travel times.

ANTICIPATED RISKS TO INFRASTRUCTURE FROM NATURAL HAZARDS

Increased flooding and extreme heat will mount more pressure on essential, aging infrastructure.



INSUFFICIENT TRANSIT REVENUE TO SUSTAIN, LET ALONE INCREASE SERVICES

There continues to be challenges with adequately funding the Washington Metropolitan Area Transit Authority (WMATA) and local transit service needs with sustainable, predictable, long-term sources. Financial uncertainties will hinder the region's ability to elevate the transit system to a world-class modern standard.

CONTINUED INCREASE IN TRAFFIC CONGESTION & DELAYS

Congestion and delays are forecasted to persist. While delays may be expected and even yield reliable travel times, frustration will affect people's health and mental well-being as well as their daily activities.

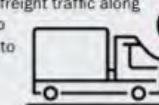


CONSTRAINED FUNDS FOR MAINTENANCE

Most funds go to operations, maintenance, and state of good repair, but limited and uncertain sources—including declining gas tax revenue and unpredictable federal support—make prioritization challenging as funding needs continue to increase.

INSUFFICIENT TRUCK PARKING ALONG MAJOR ROUTES

The surge in consumer demand for rapid package delivery has increased freight traffic along major routes, leading to difficulties for truckers to find reliable parking.



ANTIQUE INFRASTRUCTURE AT UNION STATION LIMITING SERVICE AND CAPACITY

As the region's busiest transit hub, Union Station must upgrade and expand to meet projected ridership on intercity rail and bus, Metrorail, VRE, MARC, and ground transportation driven by population/employment growth regionally and along the Northeast Corridor.

Chapter 7: Planning Together for Further Progress

- The TPB will continue its work to meet performance targets
- Targets serve as benchmarks for meeting our goals and addressing challenges
- Federal Planning Factors guide TPB's collaborative work



Montgomery County Council/Flickr

Chapter 7: Planning Together for Further Progress

Commitment to Achieving Our Goals

TPB and COG goals will guide the region to be one that is more livable, sustainable, and accessible for all.

Moving forward, the region will continue to plan together for better travel tomorrow!



Rachel Beyerle/COG

FY 2026-2029 Transportation Improvement Program

Project Records

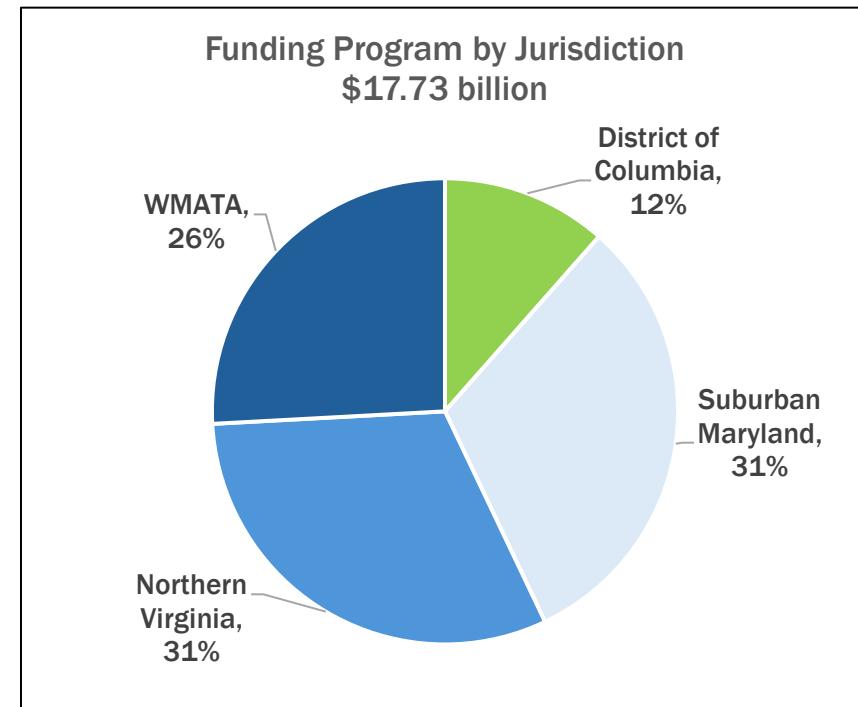
- During the zero-based budgeting (ZBB) process, TPB and member agencies reviewed 577 record for inclusion in the FY 2026-2029 Transportation Improvement Program (TIP)
- Of the 355 active TIP records, they are organized into three different types of records:

Record Status	Total Records
Active FY 2026-2029 TIP Records	355
<i>Discrete Records</i>	209
<i>Grouped Records</i>	32
<i>Ongoing Records</i>	114
Pending Financial Close Out	65
Records Completed from FY 2023-2026 TIP	93
Records Withdrawn from FY 2023-2026 TIP	64
Total	577

Funding Overview

- The FY 2026-2029 TIP features more than 350 funding records for projects, programs, and project groupings throughout the region, totaling approximately \$17.73 billion.

Record Type	Total Projects	Total TIP Funding
Discrete	209	\$8.35 billion
Grouped	32	\$6.19 billion
Ongoing	114	\$3.20 billion
Total	355	\$17.73 billion



Major Projects in the FY 2026-2029 TIP

TIP ID	Agency	Project Title	Total Project Cost	Total TIP Funding
T6727	VPRA	Long Bridge VA - DC	\$2,660 million	\$2,086 million
T2795	MDOT MTA	Purple Line	\$3,775 million	\$570 million
T6396	Montgomery Co	MD 355 Bus Rapid Transit Central	\$424 million	\$350 million
T13759	VPRA	Franconia-Springfield Bypass	\$336 million	\$294 million
T6706	VPRA	Franconia to Lorton 3rd Track Project	\$275 million	\$248 million
T6039	DDOT	H Street Bridge over Railroad	\$372 million	\$185 million
T6449	VDOT	Frontier Dr Extension	\$248 million	\$174 million
CE2671	VDOT	Edwards Ferry Road at Route 15 Bypass Interchange	\$181 million	\$171 million
T11602	VDOT	Richmond Highway Corridor Improvements, Phase 2	\$265 million	\$164 million
T3049	Montgomery Co	Goshen Road South	\$168 million	\$160 million

Bicycle and Pedestrian Projects and Accommodations

- Of 355 project records totaling \$17.73 billion, approximately 154 project records totaling \$6.81 billion (43%) reported to include bicycle and/or pedestrian accommodations
- Examples of bike and pedestrian accommodations include
 - Sidewalks
 - Protected and standard bicycle lanes
 - Shared-use use paths/trails
 - Shared-use bridges and tunnels
 - Bus/bicycle shared lanes
 - Pedestrian intersection improvements
 - Including ADA ramps, signals, bump-outs, refuge islands, etc.



BeyondDC/Flickr

Public Comment and Interagency Review Period

- During this review period, agencies are permitted to submit updates to the draft TIP* for any of the following reasons:
 - In response to comments or questions received from the public or other agencies
 - To make technical corrections
 - Update programming based on newest data available

* As long as they don't impact conformity!

- Issues found during TPB staff review:
 - Projects complete by 2029 that are not funded in the TIP
 - Records with "Future - TBD" funding in active fiscal years



Submitting Updates to the Draft FY 2026-2029 TIP

Deadline to complete updates: Fri., November 21

- Please use the form link sent via Teams and email or found at www.mwcog.org/TIP/updates
- TPB staff will review each request and accept or deny.
- All accepted updates will be compiled into an errata report that will be presented to the TPB along with the final draft of the FY 2026-2029 TIP prior to adoption on December 17.

Interagency Review Requests and Tracking

When you submit this form, it will not automatically collect your details like name and email address unless you provide it yourself.

* Required

1. Enter the TIP ID that you are requesting to update.*

Please enter at most 8 characters

2. Describe the nature of your update request.*

Enter your answer

3. Name: *

Enter your answer

4. Email: *

Enter your answer

5. Agency: *

Enter your answer

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Air Quality Conformity Analysis Report

Visualize 2050 and the FY 2026-2029 TIP

Air Quality Conformity Background

- Air quality conformity analysis is a federal requirement that ensures transportation plans and projects do not prevent a region from meeting its air quality goals under the Clean Air Act (CAA).
- This process confirms that transportation investments are consistent with the air quality standards laid out in a state's State Implementation Plan (SIP).
 - The SIP is a plan for a region to meet and/or maintain the National Ambient Air Quality Standards (NAAQS).
 - The SIP includes Motor Vehicle Emissions Budgets (MVEBs), the maximum allowable emissions from on-road vehicles.



Air Quality Conformity Background

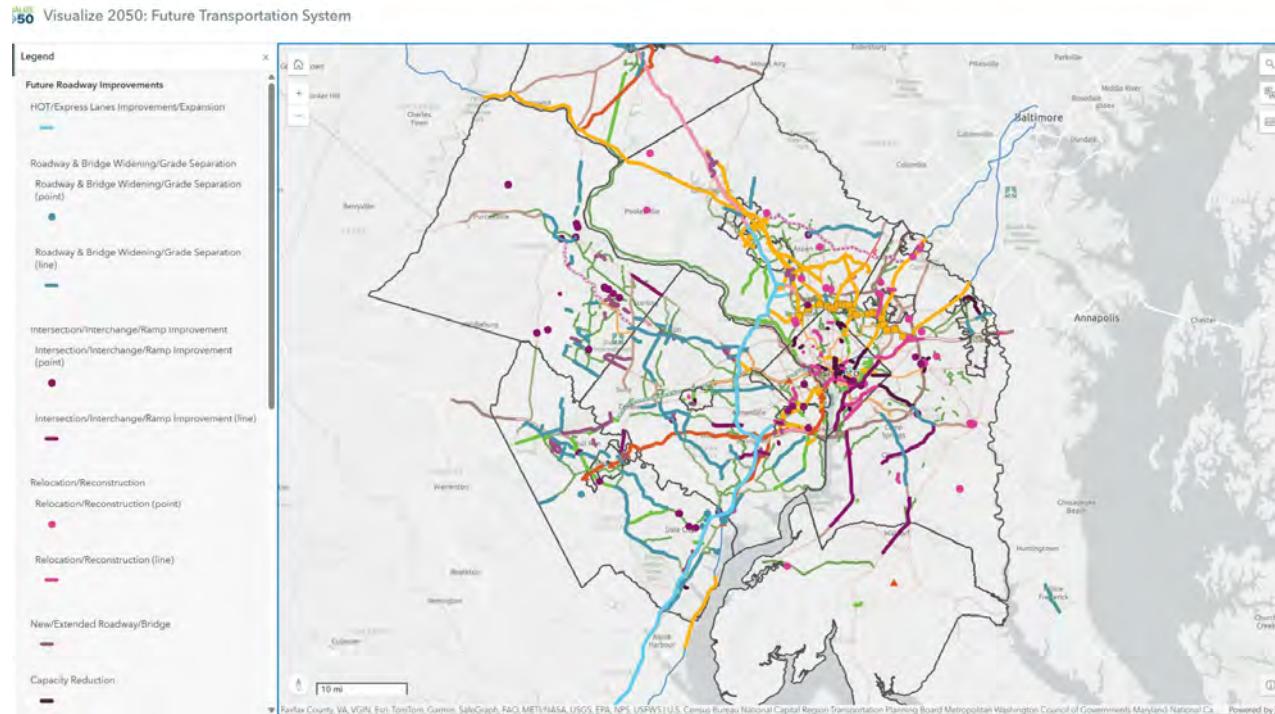


- The Washington, DC-MD-VA non-attainment area (TPB region + Calvert County) only has conformity requirements for ground-level Ozone.
- Vehicles do not emit Ozone directly – it results from two pollutants, Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NO_x), combining in sunlight to form Ozone.
- The MVEBs set limits for these two precursor pollutants.
- The TPB models total mobile source (on-road) emissions to ensure they are below the MVEBs.

Technical Tools and Assumptions

Pollutants	Ozone Season Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO _x)
Emissions Model	MOVES4.0.1
Conformity Test	<u>Budget Test</u> : Using EPA approved mobile emissions budgets from the updated 2008 Ozone NAAQS Maintenance Plan
Vehicle Fleet Data	December 2023 vehicle registration data
Geography	8-hour ozone non-attainment area
Network Inputs	Regionally significant projects
Land Activity	Cooperative Forecasts Round 10.0
HOV/HOT	<u>VA</u> : I-66, I-95, I-395, and I-495 are all HOT3+; all HOV facilities will be HOV2+ through 2050 <u>MD</u> : HOV facility on US 50 will remain HOV2+ through 2050; HOV facility on I-270 will convert from HOV2+ to HOT3+ when additional lanes are added;
Roadway Restrictions	Roadway restrictions, such as truck prohibitions, are reflected in the travel model network using information supplied by the Departments of Transportation
Analysis Years	2025, 2026, 2030, 2040, 2045, and 2050
Modeled Area	6,800 square mile area with 3,722 Transportation Analysis Zones (TAZs)*
Travel Demand Model	Gen2/Version 2.4.6

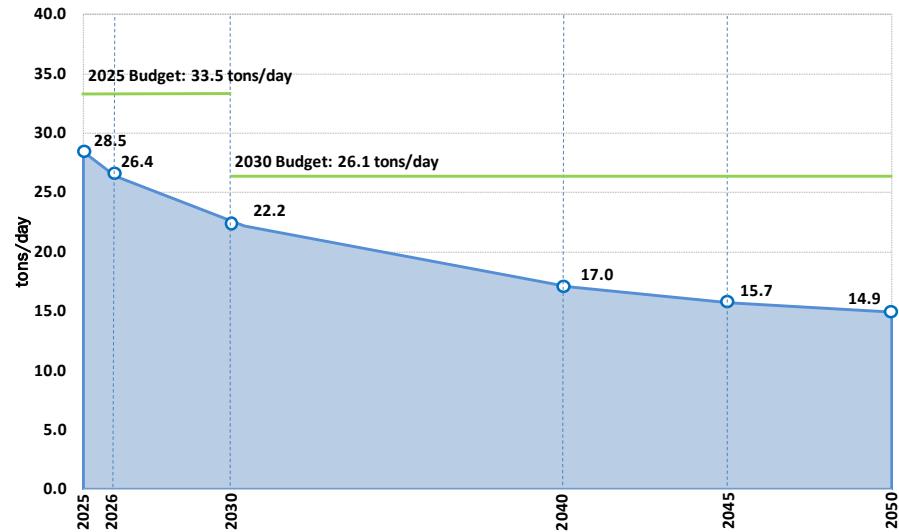
Visualize 2050 Interactive Project Map



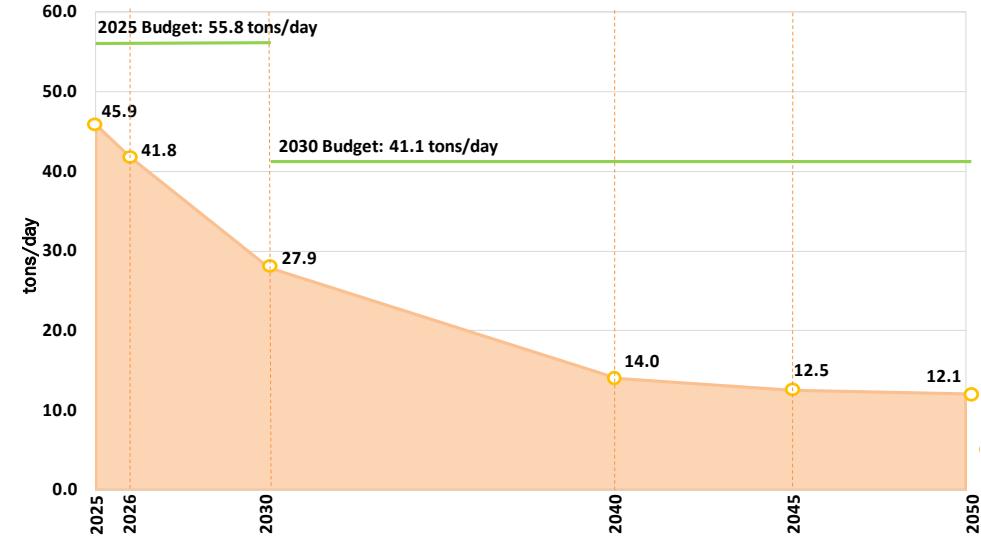
- [http://www.mwcog.org/
V50FutureTransportationM
ap](http://www.mwcog.org/V50FutureTransportationMap)
- A printed list of the regionally significant for air quality conformity projects is included in the Conformity Report (Appendix B)

Air Quality Conformity Results

Volatile Organic Compounds (VOCs)



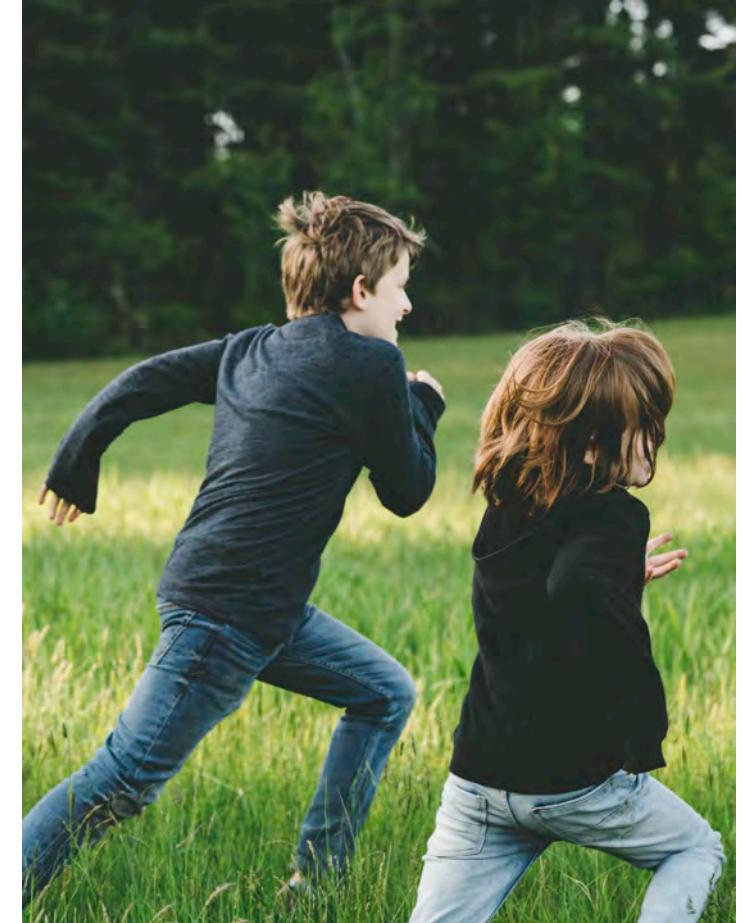
Nitrogen Oxides (NO_x)



- The conformity analysis utilizes the region's travel demand model and the EPA's Motor Vehicle Emissions Simulator (MOVES) to calculate the total emissions of VOC and NO_x .
- For both VOCs and NO_x , total emissions fall below the MVEBs.
- Visualize 2050 conforms to the SIP (passes conformity).

Air Quality Conformity Background

- On April 4, 2025, the EPA granted a Clean Data Determination (CDD) for the Washington DC-MD-VA Nonattainment Area for the 2015 Ozone standard.
- This means that data from air quality monitors has shown the region has achieved its air quality goals for ozone.
- In response, a Maintenance Plan (MP) with more stringent MVEBs will be developed, outlining how the region will maintain the ozone standard.
- A Redesignation Request (RR) will be submitted along with the MP.
- Once approved, the region will be redesignated from “Non-Attainment” to “Maintenance” of the Ozone NAAQS.



Stock Image/Microsoft

Next Steps

2025	
November	<p>11/13/2025 TIP Forum with TPB, WMATA, and District, Maryland, and Virginia DOTs.</p> <p>11/19/2025 TPB briefed on all aspects of Visualize 2050 and the FY 2026-2029 TIP and the interim report on comments.</p> <p>11/21/2025 Public comment period closes.</p>
December	<p>12/17/2025 TPB updated on additional comments and responses and acts to approve the results of the AQC analysis and adopt the Visualize 2050 plan and the FY 2026-2029 TIP.</p>

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National Capital Region
Transportation Planning Board

Agenda Item 4: Visualize 2050 Overview
November 13, 2025