



Visualize 2050
Planning and
Programming Process

Railway Planning

Part 20 of 27



National Capital Region
Transportation Planning Board

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OVERVIEW OF RAILWAY PLANNING

A broad variety of rail services operate within the National Capital Region (NCR) daily. These include freight companies and commuter, transit, and intercity passenger rail providers. Rail operators in the National Capital Region (NCR) are shown on Table 20.1.

TABLE 20.1: NATIONAL CAPITAL REGION RAIL INFRASTRUCTURE AND PROVIDERS

Rail Infrastructure	Operators	User	Service Type
Railroad	Amtrak	Passengers	Intercity Passenger Service
	MARC, VRE	Passengers	Commuter Rail Services
	CSX, Norfolk Southern	Freight	Goods Movement
Heavy Rail	WMATA – Metro	Passengers	Regional Transit Service
Light Rail (Expected 2027)	Purple Line Transit Partners	Passengers	Suburban Transit Service
Streetcar	DDOT	Passengers	Urban Transit Service

Commuter rail and heavy rail transit services extend from the region's core in Washington DC, while a streetcar service operates entirely within Washington, DC. The future Purple Line light rail service will connect communities in suburban Maryland (Montgomery and Prince George's counties). Amtrak intercity rail service operates in four different directions outward from Washington, DC, including the heavily used Northeast Corridor. Each of these passenger rail services intersects with at least one other at one or more stations, allowing public transportation users to transfer between rail services without requiring an additional mode of transport.

Commuter rail service has historically been limited due to operating on guideway owned by the CSX or Norfolk Southern freight companies or Amtrak. This is beginning to change, particularly in Virginia where the Virginia Passenger Rail Authority (VTRA) has acquired guideway from the freight companies to create a state-owned track network to support increased passenger rail service. This is expected to eventually lead to more trips being offered on the Virginia Railway Express (VRE) commuter system and on Amtrak state-supported services in Virginia.

TPB'S ROLE AND KEY STAFF

The work of various program teams at TPB either loosely involves or more regularly incorporates railway planning data into their everyday assignments. For example, travel demand information from applicable agencies, rider demographics, agency financial data, planning studies, project inputs for the Transportation Improvement Program (TIP), and more, are regularly referenced and analyzed for completion of TPB's own modeling and planning work products. The TPB includes staff whose areas of focus are financial planning, freight, performance-based planning and programming, and public transportation, all which interface with railway service providers to different extents. Table 20.2 lists several TPB staff members that engage in railway planning-related work.

TABLE 20.2: KEY STAFF

TPB Staff	Title	Role
Kanti Srikanth	Executive Director	Staff Director for the Transportation Planning Board (TPB)
Eric Randall	Principal Transportation Engineer	Contributor
Janie Nham	Planning Manager, Safety and Systems Performance	Contributor
Pierre Gaunaud	Transportation Planner	Contributor

Role of TPB Subcommittees

TPB's Regional Public Transportation Subcommittee (RPTS) is a sub-group of the TPB Technical Committee that meets monthly with membership drawn from the public transportation providers in the National Capital Region (NCR). It is also one means through which public transportation interests in the region are represented to the TPB. RPTS includes in its membership the two commuter rail operators in the NCR (VRE and MARC) and Metrorail. In addition, it leads TPB's planning work related to intercity rail and bus travel, which includes studies of intercity bus and Amtrak passenger rail services.

Every RPTS member has an assigned liaison or variety of representatives that participate in the subcommittee. These representatives serve as bridges between TPB staff working on public transportation assignments and member transit agencies. Regional transit-related data requests, general inquiries, and collaborative work typically involve RPTS liaisons at some stage. At RPTS meetings, members receive briefings on applicable TPB projects and programs, can give feedback on TPB work, share information about each other's operations and ongoing planning, and learn from regional partners and others about their transit-related projects.

The TPB's Regional Freight Subcommittee considers the role of railway operators in transportation planning as does the Regional Transportation Resiliency Subcommittee. More information can be found within the process documents: Part 10 (Freight) and Part 5 (Resiliency).

ROLE OF KEY PLANNING AGENCIES

Due to its multi-state nature, as well as the large number of freight and public transportation operators and corresponding regulatory agencies in the NCR, there are many entities in the region simultaneously involved in railway planning. Table 20.3 demonstrates which agencies in the NCR have the most significant railway planning programs and notes those agencies' key short- to- long-term planning documents. More information about how these planning documents interface with Visualize 2050 and TPB's broader planning efforts is provided in the Agency Rail Plans Relationship with the Visualize 2050 section of this document.

TABLE 20.3: NATIONAL CAPITAL REGION AGENCIES INVOLVED IN RAIL PLANNING

Agency	Role	Key Planning Documents
Metropolitan Washington Council of Governments (COG)	Along with WMATA, leading the region's DMVMoves transit vision initiative which includes rail transit for passenger movement.	Visualize 2050
Amtrak	Intercity Passenger Rail System (National)	Amtrak Connects Us
CSX	Freight Operator	N/A
Norfolk Southern	Freight Operator	N/A
Maryland Area Rail Commuter (MARC)	Commuter Rail Operator (Maryland)	Cornerstone Plan (2019) MARC Growth and Transformation Plan (expected 2025)
Virginia Railway Express (VRE)	Commuter Rail Operator (Northern Virginia)	System Plan 2050 (expected 2025)
Washington Metropolitan Area Transit Authority (WMATA)	Operate the Metrorail system. Along with COG, leading the region's DMVMoves transit vision initiative which includes rail transit for passenger movement.	Strategic Transformation Plan
Maryland Transit Administration (MTA)	Managing administration of the Purple Line's construction	Statewide Transit Plan
Department of Rail and Public Transportation (DRPT) - VA	Administers statewide transit grant funding and manages related planning, including for rail. Also administers grants for freight rail investments.	Virginia Statewide Rail Plan
Virginia Passenger Rail Authority (VPRA)	Manages Virginia's administrative and fiduciary duties for its state-supported Amtrak service, as well as provides funding for VRE.	Transforming Rail in Virginia
Local Governments	Involved with rail planning activities within their jurisdiction.	Various
District Department of Transportation	DC Streetcar Operator	moveDC Multimodal Long-Range Transportation Plan

PUBLIC ENGAGEMENT

Public outreach at TPB is handled in multiple ways, giving the public various options for providing feedback regarding railway planning and other activities. TPB, Technical Committee and subcommittee meeting materials are published online and available for public review. Anyone interested in providing comments on a particular matter may then call or write to TPB. Furthermore, members of the public may sign up to comment in-person at a TPB meeting. The public may attend open TPB meetings in-person or online via meeting livestreams on YouTube.

Members of the public may also participate in certain TPB committees that are meant to incorporate broader perspectives into the TPB's work. These include the Community Advisory Committee (CAC) and Access for All Committee (AFA). Both include appointed members from a public applicant pool. A member of the CAC was appointed to participate in the DMVMoves transit initiative (described in more detail later in this chapter). During the DMVMoves initiative, the CAC liaison shared feedback between the groups from the CAC perspective, and TPB staff provided the CAC with updates on the initiative's progress.

Some recent examples of rail planning topics that were shared at TPB which the public had the opportunity to comment on are noted below in Table 20.4.

TABLE 20.4: EXAMPLES OF OPPORTUNITIES FOR ENGAGEMENT IN RAIL PLANNING AT TPB MEETINGS

Rail Planning Topic	Date
Virginia Passenger Rail Authority (VPRA) TIP Amendment	June 2023
Intercity Bus and Rail Travel Desk Study	June 2023
National Capital Region Freight Plan	September 2023
Performance-Based Planning and Programming (PBPP) Regional Transit Safety Targets	December 2023
DMVMoves Update	October 2024

MAPPING OF EXISTING RAILWAY TRANSIT

Data used to inform TPB's mapping of the existing railway transit was collected to create a "snapshot" of railway facilities in the region in 2023. Data was collected from the sources shown below in Table 20.5.

TABLE 20.5: DATA SOURCES FOR MAPPING OF EXISTING RAILWAY TRANSIT

Layer	Source
High-Capacity Transit Stations and Lines	TPB staff compiled data from several modes of public transportation, including Metrorail, commuter rail, light rail, streetcar, and bus rapid transit (BRT) in the TPB Planning Area compiled by TPB staff from various internal sources. Accessible at https://rtdc-mwcog.opendata.arcgis.com/

KEY RAIL PLANNING ACTIVITIES AT TPB

The TPB's main rail planning activities that have supported the development of Visualize 2050 are the following studies, planning tool, and report:

- Intercity Travel Studies
- High-Capacity Transit Accessibility Study
- Transit Access Focus Areas Planning Tool
- State of Public Transportation Report

Intercity Travel Studies

The TPB, as an MPO, is required by federal regulations to apply its comprehensive, cooperative, and continuing metropolitan planning processes to “intermodal facilities that support intercity transportation, including intercity buses and intercity bus facilities.”¹ Accordingly, TPB has conducted multiple desk and field studies of the NCR’s intercity travel network, including in 2016, 2023, and 2024. These projects were presented at different stages in their development to the TPB, its Technical Committee, and subcommittees for feedback and information.

In 2023, a special work session was held before the regularly scheduled TPB meeting which featured presentations by representatives from the intercity travel industry and applicable regional agencies. The work session offered board members the opportunity to hear about intercity projects and plans impacting the NCR from those directly working on them.

For the 2024 analysis, the TPB completed a comprehensive review of intercity bus and rail services that also enhanced regional understanding of rider demographics, travel choices, origins and destinations, and more. It involved a passenger survey, desk research, and interviews with subject matter experts. The resulting report and interactive web map are available for public use but are directed at local jurisdictional staff as a resource for their intercity travel facility and service planning efforts.² TPB will continue to conduct periodic studies of and coordinate opportunities with the NCR’s intercity travel network.

Transit Access Focus Areas Planning Tool

Transit Access Focus Areas (TAFAs) are a TPB planning tool developed in 2020 and rooted in the TPB’s priority strategy: Improve walk and bike access to transit. A TFA is a geographic zone, tied to a central high-capacity transit station or high frequency bus center, and located within a half mile of a designated Activity Center. A TFA’s transit station may exist or be planned for completion by 2030, and its surrounding walkshed may have walkability challenges due to physical barriers. TAFAs exist along Metrorail lines, commuter rail routes, the future Purple Line path, and two bus-only transit centers.

Selection of final TAFAs considered a weighted calculation of a) an analysis of the transit station’s bike and pedestrian access, (b) local demand for walking and biking based on population and

¹ 23 CFR 450.300(a)

² National Capital Region Transportation Planning Board (2024). *TPB Intercity Bus and Rail Travel Study Final Report*. <https://www.mwcog.org/documents/2025/02/24/intercity-bus-and-rail-travel-study-final-report-2024-bus-rail-tpb/>; National Capital Region Transportation Planning Board (2024). *TPB Intercity Travel Survey Hub*. <https://tpb-intercity-travel-survey-mwcog.hub.arcgis.com/>

density, and (c) application of the TPB's EEAs to the area geography. Local input from jurisdictions was also requested and accounted for in the final determination of the 49 TAFAs³.

High-Capacity Transit Accessibility Study

In 2023-2024, TPB took a deeper look at the geographies around existing high-capacity transit stations in the NCR to more clearly determine station accessibility to/from various points of interest. By helping TPB and jurisdictional staff, and the public better understand the areas around High-Capacity Transit Stations (HCT), this project supported the progress of multiple TPB priority strategies including expanding bus rapid transit and transitways, moving more people on Metrorail, and improving pedestrian and bike access to transit.

Unlike the previous development of TAFAs, this analysis used a Network Analysis tool (the R5 routing engine with OpenStreetMap and GTFS data) to more accurately navigate local street grids and available infrastructure and explore practical connectivity to HCTs. EEAs were also incorporated into the analysis to gain perspective on the differing impact of connectivity issues on underserved and/or disadvantaged communities in the NCR. The resulting HCT Study website is a powerful tool with various sub-analyses and data points that can give land use and transportation planners a holistic view of what the current state and needs of HCT zones are.⁴

State of Public Transportation Report

The State of Public Transportation report is an annual product of the Regional Public Transportation Subcommittee and is meant to provide the TPB and the public a concise overview of the NCR's public transportation network and its participating operators. The report first provides a summary of annual data from across the broader transit network, followed by a summary profile of each fixed-route and commuter bus/rail service provider in the region. Information on paratransit and microtransit services is also included in these profiles, but more details about these specialized services is featured later in the report. The report continues with chapters comprehensively reviewing the various accomplishments and other activities transit providers are engaged in, as well as what work TPB did related to public transportation, in that calendar year. Publication of this annual report is a recurring activity, although formatting and related content may change over time as needed to keep the report useful and current. Summary presentations of the data in each report are given to, at the minimum, the Regional Public Transportation Committee and the TPB Technical Committee,

There are many partner agencies that conduct planning activities for the services they provide. These plans serve as valuable resources during the development of the region's transportation plan. Some elements of these plans which are financially and otherwise reasonably anticipated to move forward by 2050 have been incorporated into Visualize 2050.

Amtrak Connects US, AMTRAK

Through its long-range expansion plan *Amtrak Connects US*, the nation's principal passenger rail service aims to guide future railway planning toward greater cross-country and regional connectivity. It advocates for this expansion by noting how socioeconomic and environmental data demonstrate the benefits of passenger rail expansion for communities nationwide. The case is no different in the National Capital Region, which is at one end of the heavily traveled and economically vital Northeast Corridor on Amtrak's network.

³ National Capital Region Transportation Planning Board (July 14, 2020). TPB staff identify 49 places to improve access to transit. <https://www.mwcog.org/newsroom/2020/07/14/tpb-staff-identify-49-places-to-improve-access-to-transit-walkability-bicycling-transit-access-visualize-2045/>

⁴ National Capital Region Transportation Planning Board (2024). COG High-Capacity Transit Accessibility Analysis Hub. <https://hct-accessibility-analysis-mwcog.hub.arcgis.com/>

Cornerstone Plan, MARC

The MARC Cornerstone Plan (2019) is the long-term planning guide for Maryland's commuter rail service. It sets the vision and priorities for the train service through 2045. The projects, concepts, and investments detailed in the plan capture what service and capital investment priorities MARC intends to work on between the short to long-term. The projects meant for development within the National Capital Region are included in Visualize either as projects or programs in the short-term as part of the TIP or reasonably anticipated in later years through 2050. As of early 2025, MARC is working on a new Growth and Transformation Plan that will serve as an update to the Cornerstone Plan.

System Plan 2050, VRE

VRE's long-range service and capital investment plan is the System Plan 2050 (expected 2025). It outlines the extended vision for the northern Virginia commuter rail service and describes its current operations while detailing priorities for future growth and development. System Plan 2050 is an update to VRE's previous long-range plan from 2014. The new document considers the significant changes experienced by VRE because of the COVID-19 pandemic and its different ridership patterns and fiscal picture. VRE's updated plans impact the projects it submits to Visualize, including an expanded service schedule and an updated fleet of railcars and locomotives.

Strategic Transformation Plan, WMATA

In 2023, WMATA completed its Strategic Transformation Plan (STP), which guides the regional transit service's short-range planning and influences its long-term strategy. The STP has four principal goals: providing service excellence to customers, fostering talented and supported teams, designing a more equitable and productive regional service, and running a more sustainable system. These goals are achieved through projects like the Better Bus Network Redesign (anticipated for implementation in 2025), improved system maintenance, modernizing the various fare systems, incorporating more clean energy throughout its infrastructure, and more. WMATA's STP goals mirror many of TPB's goals with relation to transit access, safety, workforce investment, and environmental consciousness. The resulting projects are submitted for inclusion in the TIP, as well as the reasonably anticipated longer-term projects included in Visualize.

Statewide Transit Plan, MTA

In addition to mode-specific long-range plans such as MARC's Cornerstone Plan, MTA also produces a long-range Statewide Transit Plan which sets a fifty-year vision for the state's transit network. It ties together the overarching goals the state has for making public transportation more efficient and accessible across Maryland. Regarding rail, this plan highlights in its vision improvements and expansion of rail service and infrastructure across the state, including extending MARC service to Delaware, initial completion and extension of the Purple Line in suburban Maryland, and coordination with Amtrak and freight service operators. The plan highlights examples of coordination and collaboration with MTA partners to accomplish its goals. With respect to the TPB, this engagement occurs through discussion of projects at Board and committee meetings, long- and short-range inputs into Visualize and the TIP, and feedback from state agency representatives into the MPO's vision and guiding principles for the region.

Transforming Rail in Virginia, VPRA

The Virginia Passenger Rail Authority (VPRA) is responsible for managing the administration of Amtrak's state-supported routes, as well as providing funds to VRE. VPRA's guiding plan is the Transforming Rail in Virginia (TRV) initiative that is focused on improving rail capacity, passenger

rail quality, and mode choice for Virginians. TRV does not have a single long-range planning document but is represented in a collection of smaller plans and projects. These projects, which include the new Long Bridge span on the Potomac River, expansion of rail capacity along the I-95 corridor, and expanded passenger rail service across the commonwealth, will create exciting new trip opportunities for rail customers in the NCR. Besides economic growth, they may also lead to a mode shift for commuters helping the TPB meet its greenhouse gas emissions reduction goals. As applicable to the NCR, these projects are included as inputs in the TIP.

Virginia Statewide Rail Plan, DRPT

The Virginia Statewide Rail Plan (2022) was prepared by the commonwealth's Department of Rail and Public Transportation in coordination with the VPRA. It serves as Virginia's principal long-range plan for all rail activity. Besides describing the current state of passenger and freight rail across the commonwealth, it reviews the results of community outreach, offers policy guidance, and makes project recommendations. Many of the project recommendations included are part of the Transforming Rail in Virginia initiative, as well as freight projects. If a project recommendation is being studied or implemented by DRPT or VPRA, it will be included in the Visualize plan and the TIP, such as with the Long Bridge Study and planned construction, and other track capacity projects in northern Virginia. These projects also align with many of TPB's broader goals for congestion reduction and management.

DMVMoves, COG and WMATA

DMVMoves is a joint initiative of the MWCOG and WMATA boards meant to develop a long-term dedicated funding solution for WMATA and local transit services. As part of that process, it has also developed an updated vision for a world class regional transit system that makes the customer experience more seamless and efficient across the respective local transit operators and WMATA's own services. The initiative officially began on May 1, 2024, but is in large part the result of a decades-long effort to address WMATA's financial shortfalls and those of other transit agencies in the region. These funding concerns garnered greater attention during the COVID-19 pandemic and the associated loss of significant fare revenue and ridership.

The initiative's work is led by a Task Force made up of elected officials and government representatives who are tasked with providing the guiding vision and ultimately, the recommendations for participating members to vote on and implement individually. The Task Force receives advice and support from two Advisory Groups, including a Government Partners Advisory Group (GPAG) consisting of jurisdictional staff and representatives from transit, transportation, administration and other offices, and a Community Partners Advisory Group (CPAG) featuring representatives from area businesses, non-profits, associations, and other members of the public. The CPAG includes a representative from the TPB's Community Advisory Committee (CAC) who also serves as a liaison between the initiative and the CAC.

Although DMVMoves is co-led by COG, TPB staff (which come from the COG Department of Transportation Planning) help provide project management support. Staff have regularly presented updates to the TPB, its Technical Committee, and various subcommittees about DMVMoves meetings and general work. The established connections TPB staff have with transit and transportation staff at local transit agencies and existing data from previous research and analysis provide DMVMoves with a stronger foundation with which to conduct the necessary outreach and collaboration.