DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

July 2025

UPDATE: Connections 2050

DRAFT Plan for Greater Philadelphia

Appendices for Public Comment

PUBLIC COMMENT PERIOD:

July 18–August 20, 2025

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Public Comments
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The Delaware Valley Regional Planning Commission (DVRPC) is the federally designated Metropolitan Planning Organization for the Greater Philadelphia region, established by an Interstate Compact between the Commonwealth of Pennsylvania and the State of New Jersey. Members include Bucks, Chester, Delaware, Montgomery, and Philadelphia counties, plus the City of Chester, in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer counties, plus the cities of Camden and Trenton, in New Jersey.

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For Public Comment
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APPENDIX A Planning Process & Administration

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Long-Range Planning and DVRPC

The *Update: Connections 2050* Plan for Greater Philadelphia (*Update: Connections 2050*, Long-Range Plan, or Plan) outlines a long-range vision and goals and identifies strategies for the future growth of the Greater Philadelphia region. The Plan is made up of a summary document and seven appendices, all of which will be published via a website hosted at www.dvrpc.org. This Plan serves as an update to the previous Long-Range Plan, *Connections 2050: Plan for Greater Philadelphia,* which was adopted on September 14, 2021.[1]

The Delaware Valley Regional Planning Commission (DVRPC) is the federally designated Metropolitan Planning Organization (MPO) for the nine-county Greater Philadelphia region, tasked with developing a long-range transportation plan to ensure the orderly growth and development of the region in concert with multiple planning partners. DVRPC is governed by an 18-member board, composed of state, county, and city representatives from its member governments, as well as various participating, non-voting members and federal agency observers.

What's New in This Plan Update

This updated Long-Range Plan reflects significant revisions across its goals, strategies, structure, and content. Many of these changes stem directly from input received through public outreach, along with evolving regional needs and planning best practices. The Plan's visioning outreach served as a check on the vision and goals in the *Connections 2050* Plan, rather than starting this engagement with a blank slate as has been done in all recent update cycles.

The Plan updates the goals and strategies for the core elements—transportation, economy, communities, and environment—to incorporate public priorities. In addition, this update introduces a new plan element on infrastructure and utility services. Each plan element is now accompanied by a set of goals and detailed strategy recommendations. To promote transparency and accountability, the Plan identifies the party or parties responsible for implementing each recommendation.

The Plan also includes a full revision of Plan Centers—locations best suited to accommodate growth and development—shifting to a more quantitative and spatially grounded approach. The updated methodology emphasizes places with existing density and transit access and encourages future growth near existing transit infrastructure. Each Center—organized into five typologies—includes targeted strategy recommendations. Enhanced messaging spotlights selected City and Town Centers

[1] *DVRPC Publication #s 21027*, Policy Manual, and 21028, *Process and Analysis Manual.*

as model examples of context-sensitive, transit-supportive development.

The financial plan includes several notable changes. A new project category for substantive safety improvements has been created and is nearly fully funded, in alignment with the Plan's Vision Zero goal of eliminating traffic deaths and serious injuries by 2050. Additionally, the Plan introduces a new green transportation category that bundles bicycle and pedestrian projects with environmental and regional planning investments. Notably, the Regional Circuit Trail Network is now fully funded under this category.

To improve clarity and usability, transit projects have been reorganized into four distinct categories in alignment with asset management databases used by partner transit agencies:

- Preservation and Modernization
- Operational Improvements
- System Expansion
- Other

The Plan also undertook a full review of the Major Regional Project (MRP) list, ensuring consistency, feasibility, and alignment with regional goals. Sponsors were required to resubmit any candidate projects not funded for construction in the first four years of the current Transportation Improvement Program (TIP), effectively refreshing the list and reinforcing project readiness.

To enhance transparency, the financial plan now includes a full funding breakdown by project category for each MRP, providing greater clarity on how regional transportation dollars are allocated. Additionally, DVRPC has made past long-range plans, updates, and adopted amendments publicly available online at www.dvrpc.org/plan/planhistory, offering an accessible record of how long-range planning has evolved.

Together, these changes position the updated Long-Range Plan to better reflect regional priorities, align with current federal guidance, and support a more accountable, resilient, and collaborative planning process.

Process Overview

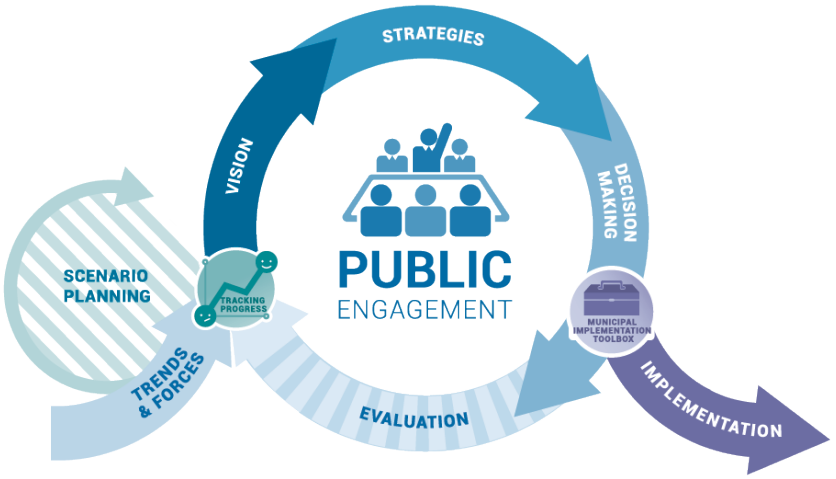
The development of *Update: Connections 2050* followed an integrated planning process based on collaborative planning theory.[2] The process includes five key steps (see Figure A-1):

- *Look at Trends*—Analyze external trends and forces shaping the region.
- *Set a Vision*—Develop a broadly shared vision and goals for regional development.
- *Choose Strategies*—Recommend strategies to achieve the vision and goals.
- *Pick Transportation Projects*—Decide how limited funds will be invested in transportation infrastructure.
- *Make it Happen*—Work with partners to put the Plan into action and check if it's working

This planning process informs a parallel effort around developing a long-range financial plan for transportation infrastructure investments over the next 25 years. This includes a Revenue Forecast, Needs Assessment, Funding Allocations, Project Evaluation, and Funding Analysis. For more details, see *Appendix F—Financial Plan*.

Public feedback is essential to shaping the vision for the Plan, ensuring it reflects the values and priorities of those who live and work in the region. Implementation strategies and funding decisions are developed by subject matter experts and planning partners, who collaborate to create a practical path toward realizing that vision.

Figure A-1: DVRPC Long-Range Planning Process



Source: DVRPC, 2021.

[2] Collaborative Planning Theory (CPT) recognizes that urban areas and regions are composed of all kinds of interconnected complex, adaptive systems. Complex adaptive systems are made up of a set of parts or things that work together as a unitary whole or interconnected network. They are constantly changing to respond to their environment or conditions, and are difficult to understand or predict as a result. Given this environment, CPT charts a path for positively transforming social conditions through ongoing dialogue with a diverse set of stakeholders and the public and using that dialogue to identify shared values and goals, while realizing that we can never fully reconcile the range of perspectives within our pluralistic society. The ultimate goal of planning, then, is to help shape decision-making guided by shared values and goals.

Stakeholder and Public Outreach

DVRPC recognizes effective public involvement as an ongoing and dynamic process, essential to addressing the future transportation, land use, and economic needs of Greater Philadelphia residents. Implementing regional plans and site-specific projects requires coordinated action among public, private, and nonprofit sectors, as well as engagement with the general public. The Commission is committed to fostering a responsive public participation program that actively seeks input, ensures timely responses, and integrates public feedback at all levels of planning. Table A-1 summarizes the outreach efforts that guided the development of the *Update: Connections 2050 Plan*.

Public Participation Plan

DVRPC's Public Participation Plan: A Strategy for Citizen Involvement,[3] outlines how the Commission meets all federal public participation mandates. It is regularly updated to reflect the Commission's current outreach activities, particularly the Public Participation Task Force. The plan conveys DVRPC's commitment to a transparent and proactive public participation process that strives to engage all residents of Greater Philadelphia. Table A-1 illustrates the long-range planning process's activities pursuant to stakeholder and public engagement.

[3] Alison Hastings and Shoshana Akins, "DVRPC Public Participation Plan: A Strategy for Citizen Involvement," *The Delaware Valley Regional Planning Commission*, January 2019, www.dvrpc.org/products/tm18012/.

Table A-1: *Update: Connections 2050* Stakeholder and Public Participation Activities

Public Participation Plan Goals	Implementation in the Long-Range Planning Process
Provide opportunities for interested parties to identify regional concerns and priorities.	• >20 meetings of the Regional Technical Committee's Financial Planning Subcommittee. • 1,336 survey responses on vision and goals from the general public. • 2 scenario planning workshops with the Futures Working Group.
Encourage public involvement among our various audiences, including traditionally underserved groups.	• Targeted engagement of 153 organizations focused on community, youth, and business development. • Four focus group discussions explored how long-range plan projects impact underserved communities.
Increase the public's awareness of opportunities and activities to actively participate in DVRPC plans and programs.	• Social media and newsletters to >13,400 recipients. • Media toolkits for planning partners to advertise survey opportunities.
Obtain meaningful public input to inform the Commission's planning and decision-making process	• Collected, analyzed, and used 500 public comments from the Connections 2050 comment period, plus thousands of data points from 1,300+ participants of the visioning survey, to inform the regional vision and financial plan. • Public comments and staff/member agency responses were presented to the DVRPC Regional Technical Committee and Board.
Inform and educate our stakeholders, share information, and increase overall awareness of regional planning, land use, economic, environmental, fairness, and transportation issues and activities in the Delaware Valley region.	• Public-facing communications tools such as DVRPC's website, newsletter, social media, and publications share accessible information and updates on planning activities and regional trends. • Outreach and engagement efforts—including public meetings, standing committees, surveys, and events—help inform and educate stakeholders while building broader awareness of planning and policy issues affecting the region.

Source: DVRPC, 2025.

General Public

DVRPC conducted various outreach activities to gather input from the general public at key stages of the planning process.

Targeted Demographic Outreach

Planning must be done with the involvement and for the benefit of all the region's residents. DVRPC is guided by federal Title VI and nondiscrimination mandates, and the Commission strives to not only meet these mandates but to create a transparent, collaborative planning process that serves everyone in the region. Community engagement is specifically promoted in Title VI as a method to ensure the full and fair participation of potentially affected and underserved communities.

Staff hosted four focus groups in July and August of 2023 to discuss the impact of transportation projects on daily life for people who live in areas that have disproportionately experienced negative impacts from transportation investments. The methodology for organizing the focus groups was informed by federal guidance and additional best practices. In addition, the project team consulted with DVRPC's Public Participation Task Force committee to prepare a script of questions to ask the focus groups. Engagement was aimed at better understanding the perceptions of regionally funded transportation investments and to solicit feedback on a sample of projects already programmed in the current Board-adopted Long-Range Plan (Plan), *Connections 2050*.

DVRPC promoted focus group recruitment through multiple channels, including its website, newsletter, and social media. Emails with a partner toolkit were sent to over 40 community groups and 150 Registered Community Organizations (RCOs) in Philadelphia. Flyers were distributed to 60 public libraries, and paid ads targeted communities in Camden, NJ, and Upper Darby, PA, including a Spanish-language ad in *Impacto*. In-person sessions were held in transit-accessible locations to ensure low-income residents did not have financial difficulty attending. Beyond meeting federal outreach requirements, these focus groups were a key component of ensuring the Plan advances the regional vision.

Visioning Outreach

In the fall of 2023, DVRPC conducted a comprehensive outreach effort to engage residents, workers, and visitors across the Greater Philadelphia region in shaping the region's future. The goal of this outreach was to gather public input on the existing regional vision and to introduce a new element related to non-transportation infrastructure to the existing four: Transportation, Environment, Communities, and Economy.

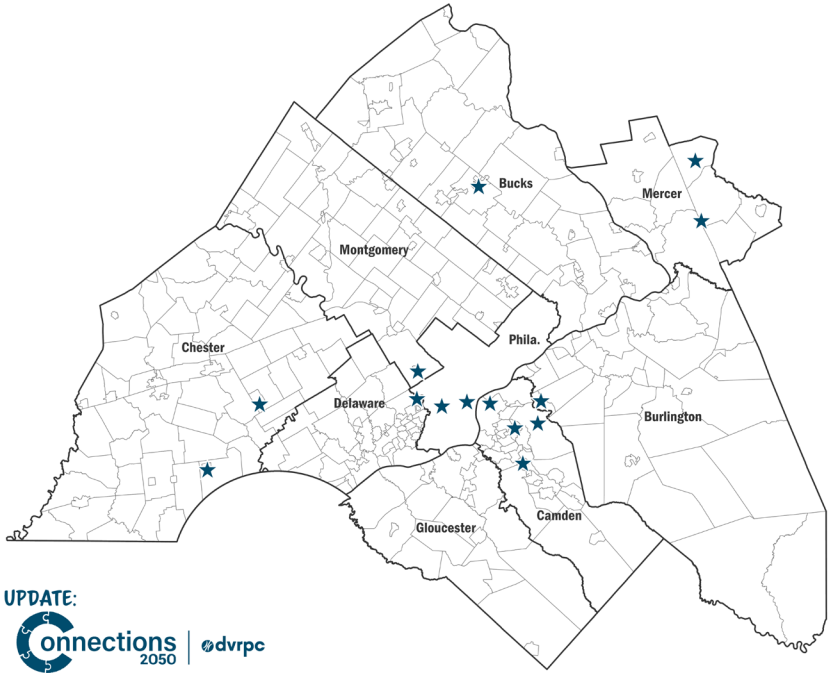
DVRPC developed a survey that could be taken in person or online and launched a web page to host online versions of the survey. Surveys were made available in both long and short formats, and in English, Spanish, and Chinese. Participants were invited to share their perspectives on what should be added, removed, or changed within the existing vision, as well as the goals under each plan element.

DVRPC employed a range of in-person and online engagement strategies to ensure broad participation.

DVRPC staff attended 15 community and professional events throughout the region to talk to individuals about the Plan and collect in-person surveys on their priorities for the region (see Figure A-2). The events took place in communities across the region:

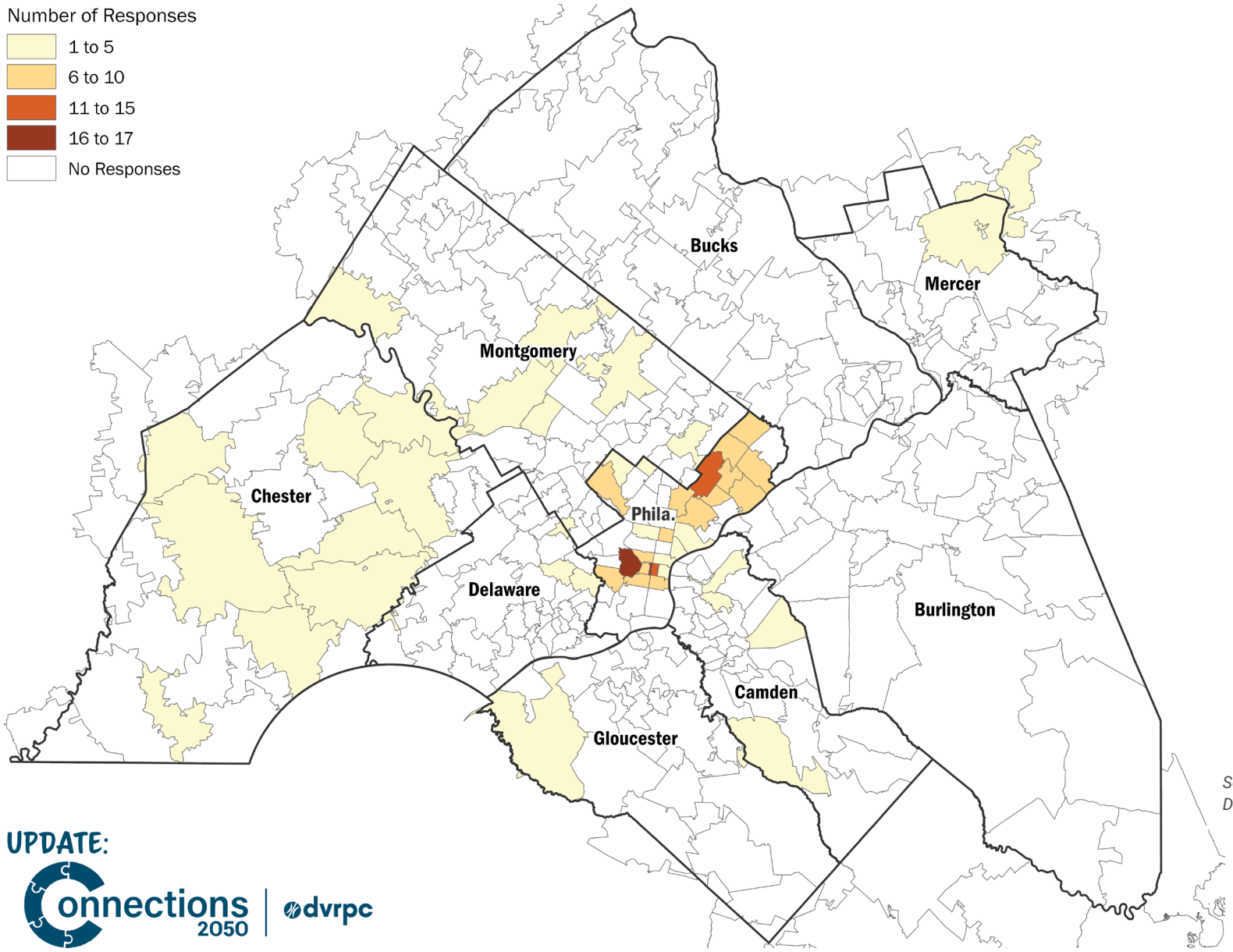
- Camden, NJ
- Cherry Hill, NJ
- Haddon Township, NJ
- Magnolia, NJ
- Maple Shade, NJ
- Princeton, NJ
- Princeton Junction, NJ
- Doylestown, PA
- Kennett Square, PA
- Narberth, PA
- Philadelphia, PA
- Upper Darby, PA
- West Chester, PA

Figure A-2: Vision Outreach Event Locations



Source: DVRPC, 2025.

Figure A-3: Geographic Distribution of Survey Respondents by Zip Code



Source: DVRPC, 2024.

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The survey was promoted online through paid social media ads and organic social media posts. The survey was also advertised through DVRPC's monthly newsletter and an email series targeting different audiences.

Staff created a partner toolkit to promote the survey and shared it with Philadelphia's Registered Community Organizations (RCOs), environmental groups throughout the region, community organizations, university contacts, communications staff for the nine counties in the DVRPC region, and the region's Transportation Management Associations (TMAs). Flyers advertising the survey were also distributed to libraries throughout the region.

DVRPC received over 1,300 validated survey responses during this visioning process. Responses came from every county within the region. Figure A-3 shows ZIP codes by range of responses submitted.

Visioning Feedback Received

Participants across the region shared a strong and unified vision for a fairer, environmentally friendly, and connected future. Feedback emphasized the importance of affordability, access to opportunity, environmental stewardship, and decision-making involving all affected members of the public. While priorities varied by focus area, respondents consistently expressed support for coordinated action that addresses long-standing disparities and improves quality of life for all residents. The following feedback is organized by Plan element.

Transportation

Survey respondents consistently prioritized improvements to public transportation, walking, and biking infrastructure. There was strong support for expanding safe, reliable, and frequent transit service, especially to better serve seniors, people with disabilities, and lower-income communities. Participants emphasized the need for better sidewalk and bike connections, traffic calming measures, and reduced dependence on cars. Safety was a major theme, with many respondents calling for protected bike lanes and safer pedestrian crossings. While some feedback focused on reducing congestion, the broader theme was a desire to shift toward a more multimodal and accessible transportation system.

Economy

Public input on the economy highlighted the importance of supporting small, local businesses. Respondents expressed strong interest in revitalizing commercial corridors through mixed-use development and walkable design. There was significant support for workforce development programs, particularly related to technology and skilled trades. Economic opportunity was closely tied to land use, with community members noting the importance of proximity to jobs, services, and transit. Many comments linked economic resilience to broader environmental goals, housing access, and economic mobility for all.

Community

Community-focused feedback centered on housing affordability, land use, and neighborhood development that does not displace residents. Participants emphasized the urgent need for more

affordable housing options and a greater variety of housing types. Many supported zoning reforms to allow for more multifamily housing and accessory dwelling units, particularly near transit. While compact, walkable development was widely supported, some respondents raised concerns about maintaining neighborhood character and preventing displacement. Respondents also called for investments in public spaces, schools, and services that contribute to a high quality of life. Across all responses emerged a strong desire for planning processes and outcomes that reflect and serve all communities.

Environment

Respondents strongly supported policies and investments that protect natural resources, enhance green space, and promote environmental resilience. Feedback emphasized the importance of preserving tree canopy, improving air and water quality, and using green infrastructure to manage stormwater and heat. Many participants expressed concern about pollution and environmental degradation, particularly in communities located near industrial areas. Environmentally responsible development, such as high-performance buildings and environmentally conscious and risk-informed land use planning, received wide support. The public voiced a clear expectation that environmental goals be integrated across transportation, housing, and economic strategies.

Infrastructure & Utility Services

The public showed a strong interest in reducing air pollution through electrification and expressed deep concern about changing weather patterns. Respondents supported strategies such as rooftop solar, building electrification, community resilience hubs, electric vehicle infrastructure, and transit investment. There was also strong support for preparing for extreme weather—especially heat and flooding—by investing in measures that reduce risk from these events, particularly for vulnerable populations. Many respondents called for more widespread access to utility programs and investments, ensuring that the benefits of emerging technologies and market transformation related to infrastructure and utilities are shared across all communities.

Plan History & Disparities

Past planning practices in the United States have contributed to deep social and economic divides through exclusionary zoning, redlining, urban renewal, and highway construction that displaced entire neighborhoods, particularly Black and Brown communities. In Greater Philadelphia, as in much of the country, early planning efforts often excluded meaningful input from those most affected, reinforcing segregation, car dependency, and the loss of neighborhood cohesion.

While the consequences of these policies continue to affect communities today, the planning field has gradually evolved to focus on broader prosperity, quality of life, and more representative public engagement. DVRPC's recent efforts reflect this shift, with an emphasis on increasing access to transportation, housing, and economic opportunities for residents who have historically been left out of planning decisions.

Initiatives such as the Chinatown Stitch,[4] Reimagining Regional Rail,[5] and Bus Revolution[6] demonstrate how DVRPC and its partners are working to improve outreach, expand travel choices, and reconsider past infrastructure decisions through a more community-responsive lens. Planners today are striving to rebuild trust and address long-standing disparities by centering community voices in decision-making, improving connections to jobs and services, and targeting investment where it is most needed.

Although certain structural challenges remain, DVRPC remains committed to advancing planning practices that support a more connected and thriving region for all who live and work here.

Standing Committees

DVRPC works closely with a diverse range of stakeholders to ensure transportation planning reflects the needs and priorities of the region. In addition to the DVRPC Board, DVRPC convenes and facilitates a number of committees to guide decision-making and project development. Committees are made up of representatives from government agencies, the private sector, academia, community organizations, and the general public. At present, DVRPC convenes 11 of these stakeholder committees:[7]

- Public Participation Task Force (PPTF)
- Regional Technical Committee (RTC)
- Delaware Valley Goods Movement Task Force (DVGMTF)
- Central Jersey Transportation Forum (CJTF)
- Regional Safety Task Force (RSTF)
- Information Resources Exchange Group (IREG)
- Greater Philadelphia Futures Group
- Healthy Communities Task Force (HCTF)
- Comprehensive Economic Development Strategy Committee (CEDS)
- Transportation Operations Task Force (TOTF)
- Regional Travel Demand Management Advisory Committee (TDM)

DVRPC collaborated with committee members in developing the Plan. The engagement with the PPTF, FWG, and DVGMTF is detailed on the following page.

[4] City of Philadelphia. "The Chinatown Stitch: Reconnecting Philadelphia to Vine Street." Complete Streets Program. www.phila.gov/programs/complete-streets/projects/the-chinatown-stitch-reconnecting-philadelphia-to-vine-street/.
[5] Southeastern Pennsylvania Transportation Authority (SEPTA). "Reimagining Regional Rail." SEPTA Initiatives. www.septa.org/initiatives/regional-rail/reimagining-regional-rail/
[6] Southeastern Pennsylvania Transportation Authority (SEPTA). "Bus Revolution." SEPTA News. www.septa.org/news/tag/bus-revolution/
[7] www.dvrpc.org/committees/

Public Participation Task Force (PPTF)

The Public Participation Task Force (PPTF) has been actively involved throughout the development of the Plan. As DVRPC's primary vehicle for ongoing public involvement, the PPTF is composed of representatives from the private sector, social service agencies, environmental organizations, and other interested stakeholders. The committee provides valuable feedback on the content, structure, and communication of the Draft Plan.

At least once annually, DVRPC hosts a dedicated PPTF meeting to present an overview of the Plan's progress and major components. Staff share public-facing presentation materials for input and facilitate trial workshops with PPTF members to refine outreach strategies and engagement tools before they are implemented with broader audiences. In addition to this advisory role, PPTF members also serve as public representatives on the Financial Planning Subcommittee of the Regional Technical Committee (RTC), helping to ensure that public perspectives are incorporated into key funding decisions and long-range investment priorities.

Futures Working Group (FWG)

The Futures Group is a collaborative, transdisciplinary group of subject matter experts and interested stakeholders that meets on a quarterly basis to discuss emerging trends and forces (social, technological, environmental, economic, or political), and how they are shaping the Greater Philadelphia region. Every four years, a subset of the larger Futures Group—The Futures Working Group—conducts an exploratory scenario planning exercise as part of the Long-Range Planning process.

As part of the Plan update, DVRPC convened a new Futures Working Group (FWG) to review the scenarios (Figure A-4) developed as part of the *Connections 2050* plan, reported in *Dispatches from Alternate Futures: Exploratory Scenarios for Greater Philadelphia* [8] and update these scenarios with recent trends and events that could significantly impact the region's future. The FWG identified new opportunities, challenges, and strategies. For example, they highlighted the ability to leverage better data for improved efficiency and transparency among communities, governments, and stakeholders. They also shared concerns around fair access to data, housing, and economic opportunities.

[8] Delaware Valley Regional Planning Commission, Dispatches from Alternate Futures: Exploratory Scenarios for Greater Philadelphia, DVRPC Publication No. 20012 (Philadelphia: DVRPC, July 2020), www.dvrpc.org/products/20012.

Figure A-4: DVRPC Four Alternate Scenarios

Source: *DVRPC, 2019.*

The FWG proposed several strategies to leverage emerging opportunities and address challenges. These strategies include fostering microdemocracy through community-led initiatives; implementing standardized design guides for municipalities to implement high-performing, clean buildings, infrastructure, and walkable communities; and enhancing tech literacy for all stakeholders. The FWG also recommended that at least five percent of total regional funding be directed toward resiliency, bike and pedestrian infrastructure, and microtransit projects.

Delaware Valley Goods Movement Task Force

DVRPC's Freight Program explored trends shaping both global and regional supply chains and projected how these might evolve by 2040. DVRPC brought this scenario planning exercise to the Delaware Valley Goods Movement Task Force (DVGMTF), DVRPC's freight advisory committee that includes representatives from trucking, railroad, port, airport, shipper, and freight forwarder industries, as well as economic development partners and member governments. Through surveys, an in-person workshop, and virtual breakout sessions, DVRPC gathered input on trends, opportunities, and challenges that impact the freight community. This input helped bring an understanding of the broader system of factors influencing infrastructure and the regional supply chain. One major insight from the group was that external disruptions and technological innovations are the primary forces shaping goods movement—and that regional coordination is essential to maintaining a stable supply chain.

The findings informed the publication *Freight Futures*, which outlines strategies across multiple areas of the supply chain, including workforce development, rail service promotion, truck parking, adaptive reuse of industrial spaces, and emerging technology to create a more balanced and resilient regional freight network. These strategies also shaped the strategy recommendations in the Plan.

Public Comments

In addition to public engagement throughout the planning process, federal regulations require that MPOs provide an opportunity for public input before adopting a long-range plan. A minimum 30-day public comment period must be conducted prior to formal adoption of long-range plans. This requirement helps ensure that they reflect regional values, priorities, and needs by incorporating feedback from a broad range of stakeholders and the general public. DVRPC meets this requirement for the Plan through a transparent process that includes public notices, distribution of draft materials, public meetings, and documented responses to all substantive comments received.

Incorporating Feedback from the Previous Plan

During the 30-day public comment period for *Connections 2050*, DVRPC received nearly 500 comments from the public[9]. This feedback provided valuable insight into regional priorities and highlighted areas where the Plan could better reflect community values. Several key themes emerged from these comments:

- A desire for more explicit and sustained support for bicycle and pedestrian infrastructure, especially the Circuit Trail Network
- Widespread opposition to new roadway widening projects
- Concerns that certain planned projects—such as I-95 and the US 30 Bypass—conflicted with the Plan's stated environmental goals
- A strong call to reprioritize funding in favor of transit, bicycle, and pedestrian investments
- Requests to pursue specific projects, such as Roosevelt Boulevard Transit, the High-Quality Bike Network, Trolley Modernization, the Spring Garden Greenway, the Chinatown Stitch (cap over I-676), I-76 Active Traffic Management, and expansions to SEPTA Regional Rail and the Broad Street and Media-Wawa lines
- Calls for increased land preservation efforts to get the region on track to meet its long-standing goal of preserving one million acres of open space

In response to this public feedback, DVRPC made several targeted changes to the *Connections 2050* Plan:

- Adding new strategies to advance the region's Vision Zero goal
- Changing the funding category for Circuit Trail projects to "Illustrative" to clarify they are eligible for funding as they are ready to advance into design or construction
- Providing more detailed information about available federal funding programs and their constraints, to help clarify what can and cannot be accomplished through the Plan

[9] Delaware Valley Regional Planning Commission, *Connections 2050 Long-Range Plan: Public Comments*, accessed June 29, 2025, www.dvrpc.org/asp/LRPComments/.

- Strengthening the Plan's call for increased investment in land preservation at the local, state, and federal levels

Following the adoption of *Connections 2050*, DVRPC undertook additional efforts to address the broader questions raised about roadway expansion. These included a Seminar on Induced Demand, a Congestion Management Process Peer Exchange hosted by FHWA's Transportation Planning Capacity Building program, and a DVRPC Board policy meeting. These dialogues helped the region build consensus around a more measured approach to roadway expansion—supporting only limited, critical investments as a last resort in order to address congestion bottlenecks and population growth.

Many of the projects specifically requested during the *Connections 2050* comment period are now being advanced through this updated Plan. The following projects, which were specifically requested during the Connections 2050 comment period, are now being advanced through this updated Plan:

- Trolley Modernization
- Connecting our Chinatown (formerly the Chinatown Stitch cap over I-676)
- The Spring Garden Connector (formerly Spring Garden Greenway)
- I-76 Active Traffic Management
- Partial funding for the High-Quality Bike Network
- Continued study and near-term safety improvements for Roosevelt Boulevard

The Plan also reaffirms support for major aspirational investments that remain dependent on future funding, such as SEPTA's Reimagining Regional Rail, Bus Revolution, the Glassboro-Camden Line, the Broad Street Line extension to the Navy Yard, and the Media-Wawa Line extension to West Chester.

Public Comment Period for *Update: Connections 2050*

Draft versions of the *Update: Connections 2050 Summary* document and appendices are available for public comment from July 18, 2025, until August 20, 2025. These documents are available online at www.dvrpc.org/2050 and at various regional libraries. The public comment period was advertised by legal notice in area newspapers, on the DVRPC website, and via email to more than 12,000 recipients on DVRPC's distribution list, as well as tribal governments in the region.

As part of the comment period, two online public information sessions are scheduled. One in-person meeting is scheduled for August 5, 2025, from 6:00 PM to 7:30 PM at Mullica Hill Library, New Jersey. Another hybrid in-person/online meeting is scheduled for August 7, 2025, from 6:00 PM to 7:30 PM at DVRPC's office in Philadelphia. Comments must be submitted in writing by:

Email: to LRP@dvrpc.org, or

Mail: Public Comments
c/o DVRPC Office of Communications and Engagement
190 N. Independence Mall West, 8th Fl.,
Philadelphia, PA 19106-1520

DVRPC hosts a database for public comments and responses from DVRPC and its planning partners. These are available for

long-range plans and amendments to plans from 2021 to the present day. Comments on plans and amendments published before 2021 can be found in DVRPC's products database at www.dvrpc.org/products/. DVRPC will consider changes to the draft Plan based on comments received. Even if DVRPC cannot incorporate a comment in this current Plan prior to adoption, the comment may be used to inform the development of the next Plan.

Plan Administration

Update: Connections 2050 was developed under the Infrastructure Investment and Jobs Act (IIJA) federal transportation legislation, which sets planning requirements that must be considered in the Plan's formation. These include consideration for a set of federal planning factors, transportation performance management (TPM) metrics and targets, and air quality conformity analysis.

Federal Planning Requirements

DVRPC is required by the U.S. Department of Transportation (USDOT), per federal planning regulations, to develop a plan for a minimum 20-year horizon.[10,11] Since the region is a nonattainment and maintenance area for air quality standards for ground-level ozone and fine particulate matter, federal planning regulations require that the Long-Range Plan be updated every four years to reflect and respond to the most recent trends and needs of the region.[12,13] *Update: Connections 2050* is also in alignment with the 2023 FHWA publication, *Model Long-Range Transportation Plans: A Guide for Performance-Based Planning.*[14]

Planning Factors

Under Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) Joint Planning Regulations, MPOs like DVRPC must incorporate performance-based planning and programming (PBPP) and address national goals, including safety, infrastructure condition, congestion reduction, and system reliability.

Long-range plans must be developed through a comprehensive, cooperative, and continuing process that ensures coordination and compatibility across agencies and jurisdictions. Federal regulations also mandate that the Plan address 10 planning factors, guiding the selection and implementation of projects, strategies, and services.[15] Table A-2 outlines these planning factors and summarizes how DVRPC has integrated them into *Update: Connections 2050*.

[10] Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 11201, 135 Stat. 429 (2021).
[11] 23 U.S.C. §§ 134-135 (2021).
[12] Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 11201, 135 Stat. 429 (2021).
[13] 23 U.S.C. §§ 134-135 (2021).
[14] Federal Highway Administration, Performance-Based Planning and Programming Guidebook, FHWA-HEP-13-041 (Washington, DC: U.S. Department of Transportation, September 2013), accessed June 11, 2024, www.fhwa.dot.gov/planning/performance_based_planning/mlrtp_guidebook/index.cfm.
[15] U.S. Department of Transportation, Federal Highway Administration, "23 C.F.R. § 450.300–.340: Metropolitan Transportation Planning and Programming", in Electronic Code of Federal Regulations, revised as of June 25, 2025, subpart C of title 23, chapter I, subchapter E, part 450, accessed June 25, 2025, www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-450/subpart-C.

Table A-2: DVRPC Consideration of FHWA Planning Factors

FHWA Planning Factor	*Update: Connections 2050* Consideration
(1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	The Plan's vision has a focus area on growing an innovative and connected economy with opportunity and shared prosperity. Goals include a well-trained and adaptable regional workforce; a variety of regional economic sectors; and reliable physical and digital access to regional, national, and global resources and markets. Each has strategies for implementation.
(2) Increase the safety of the transportation system for motorized and nonmotorized users.	The Plan maintains a strategy to take a Safe Systems approach to achieving the DVRPC regional Vision Zero goal and enhance security for all users. It identifies a range of actions to safely accommodate walking, rolling, transit, and transportation network users. Safety is the most heavily weighted criterion in the Plan-TIP Project Evaluation Criteria, scoring higher for projects if they implement FHWA-proven safety countermeasures or other safety strategies with specific crash reduction factors, addressing Department of Transportation (DOT)-identified high-crash locations, or implement safety strategies at locations with documented safety concerns in a Public Transportation Agency Safety Plan (PTASP).
(3) Increase the security of the transportation system for motorized and nonmotorized users.	The Plan sets a goal for a transportation network that is, and feels, safe and secure for all and identifies strategies to strengthen transportation security through coordination among agencies, updated cybersecurity measures, and environmental design.
(4) Increase the accessibility and mobility of people and freight.	The Plan has several strategies that address this factor including preserve and maintain infrastructure critical to freight and regional mobility, expand and improve transit access, expand active and multimodal transportation options, manage travel Demand, and ensure safe transportation operations. The Plan's economy element and goal for reliable physical and digital access to regional, national, and global resources and markets expands on this, incorporating the movement of goods, digital connections, land use, and international exchange.
(5) Protect and enhance the environment, promote conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	The Plan's vision includes a preserved and restored natural environment and healthy ecological systems, and reliable and affordable infrastructure and utility serves built with the resilience to mitigate and withstand the effects of extreme weather. The Plan includes goals and strategies for achieving these vision elements. The land use

FHWA Planning Factor	*Update: Connections 2050* Consideration
	vision included in the Plan ensures consistency with growth and development patterns.
(6) Enhance the integration and connectivity of the transportation system across and between modes throughout the state, for people and freight.	The Plan establishes a goal for connected and integrated transportation modes in a state-of-good repair and recommends a range of strategies to improve system interconnectivity, through both digital solutions such as unified fare payment systems and coordinated scheduling, and physical ones including multimodal connections of existing and emerging transportation modes and first- and last-mile solutions.
(7) Promote efficient system management and operation.	The Plan focuses on efficient mobility and encourages growth in mixed-use, walkable Plan Centers that make efficient use of infrastructure; provide access to essential services; and consume less resources. The transportation element also includes strategies for efficient operations such as Traffic Incident Management (TIM), emergency response coordination, and interoperable technologies.
(8) Emphasize the preservation of the existing transportation system.	The Plan prioritizes preservation and state-of-good-repair investments aligned with DOT and transit agency asset management plans. Projects were prioritized if they are rehabilitation or replacement projects consistent with a lowest life-cycle cost approach. The Plan recognizes that resiliency measures may be necessary for infrastructure to withstand the effects of extreme weather.
(9) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and	The Plan includes a strategy to build and maintain resilient infrastructure. This strategy requires using future weather projections when designing housing, commercial buildings, and critical infrastructure such as water, transportation, and power systems. The Plan addresses extreme weather risks by integrating nature-based solutions, enhancing disaster recovery capabilities, and improving drainage and stormwater management in transportation projects.
(10) Enhance travel and tourism.	The Plan's goal for reliable physical and digital access to regional, national, and global resources and markets includes access for visitors of the region. The Plan includes strategies to enhance access to parks, open space, and recreational areas, ensuring natural and cultural amenities are preserved and enhanced for residents and visitors alike.

Source: DVRPC, 2025.

The most recent federal transportation authorizations mandate that states and MPOs incorporate performance measures; set targets; and monitor progress of their long-range plans in the areas of safety, infrastructure preservation, congestion reduction, system reliability, freight movement and economic vitality, environmental preservation, and reduced project delivery delays. These performance measures are detailed in Appendix C. DVRPC will continue to work with federal, state, and local planning partners on implementing the performance measures planning targets within the framework of the Plan.

Air Quality Conformity Demonstration

Transportation conformity is the federally required process by which MPOs demonstrate that the transportation investments and strategies in the Plan align with air quality goals in State Implementation Plans (SIPs) for meeting National Ambient Air Quality Standards (NAAQS). This ensures that air pollution from transportation projects do not exceed the limits set in SIP budgets for particulate matter, ozone, CO, sulfur dioxide, nitrogen dioxide, and lead.

Under the Federal Clean Air Act and transportation planning provisions, areas that do not meet or have previously not met NAAQS are designated as nonattainment or maintenance areas. These areas require a conformity analysis to ensure that transportation projects included in the Plan support progress toward meeting federal air quality standards. The nine-county DVRPC planning area is part of four nonattainment or maintenance areas:

- Philadelphia-Wilmington-Atlantic City Ozone Nonattainment Area
- Philadelphia-Wilmington, PA-NJ-DE $PM_{2.5}$ Maintenance Area
- New York - Northern New Jersey - Long Island, NY-NJ-CT $PM_{2.5}$ Maintenance Area
- Delaware County $PM_{2.5}$ Maintenance Area

When projects are selected for the fiscally constrained ("Funded") Plan, those that are deemed air quality significant undergo an air quality conformity analysis. An air quality significant project has the potential to impact regional air quality by affecting transportation-related pollutants. These projects typically fall into categories that influence vehicle travel, such as:

1. Capacity-expanding roadway projects (such as adding new highway lanes, new interchanges, or major road widenings)
2. Major transit projects (such as new rail lines, major transit expansions, or changes that significantly alter ridership patterns)
3. Projects that affect travel demand (such as high-occupancy vehicle lanes, major park-and-ride facilities, or large-scale signal timing changes)

Regional conformity analysis evaluates projects funded in the TIP and Plan as a group to ensure they align with federal air quality standards set by the Clean Air Act. Specifically, they must be included in the Transportation Conformity Determination, which assesses whether planned transportation

investments will help a region meet its air quality goals for the six air pollutants. This analysis is required at least once every four years, or (1) when a new Plan or Transportation Improvement Program (TIP) is adopted, or (2) an air quality significant project is added, amended, or deleted.

DVRPC demonstrates conformity by using a travel demand model to estimate the motor vehicle air pollutants from non-exempt projects in the TIPs and long-range plans, then comparing those pollutants against budgets or limits established by the states. This process is conducted in collaboration with an interagency consultation group, including state and federal regulatory, environmental, and transportation agencies. A 30-day public comment period and two meetings on air quality conformity findings are scheduled concurrently with the DVRPC FFY2026 TIP for NJ and the *Update: Connections 2050* Plan.

DVRPC has successfully demonstrated conformity for the *Update: Connections 2050* Plan, showing that it meets state implementation plans and Clean Air Act requirements. The transportation conformity analysis meets all applicable conformity criteria, including, but not limited to the following:

- The Plan is fiscally constrained [40 CFR 93.108].
- This determination is based on the latest planning assumptions [40 CFR 93.110].
- This determination is based on the latest air pollutants estimation model available [40 CFR 93.111].
- DVRPC has made the determination according to the applicable consultation procedures [40 CFR 93.112].
- The Plan does not interfere with the timely implementation of transportation control measures (TCMs) [40 CFR 93.113].
- The Plan is consistent with the Motor Vehicle Emissions Budgets in the applicable State Implementation Plan [40 CFR 93.118].

More details are available at www.dvrpc.org/AirQuality/Conformity/.

Plan Consistency

The long-range plan is developed through a collaborative and iterative process that ensures alignment with the goals of regional planning partners. Regular meetings of the RTC Financial Planning Subcommittee and presentations to the RTC and Board provided a platform for ongoing engagement, data-driven analysis, and consensus-building. The Plan integrates input from municipalities, counties, state agencies, transit providers, and other stakeholders. This approach strengthens coordination across jurisdictions and sectors, ensuring that planning efforts remain consistent with shared regional priorities while allowing flexibility to adapt to emerging needs.

Partner Plans

DVRPC strives to ensure that its long-range planning process and Plan are consistent with, and complementary to, the goals and policies outlined in the plans and programs of member municipal and county governments, as well as the statewide transportation plans of the Pennsylvania and New Jersey departments of transportation (DOTs). Table A-3 includes a list of plans and policy documents with which *Update: Connections 2050* is consistent.

Table A-3: Partner Plans and Policy Documents for Consistency

Organization	Plan Type	Plan Title	Year Adopted
Bucks County	Comprehensive Plan	Bucks2040, Building Our Future Together	2024
Chester County	Comprehensive Plan	Landscapes3	2018
Delaware County	Comprehensive Plan	Delaware County 2035	2017
Montgomery County	Comprehensive Plan	Montco 2040: A Shared Vision	2015; 2021
City of Philadelphia	Comprehensive Plan	Phila 2035	2013
Burlington County	Highway Master Plan	Burlington County Highway Master Plan	2019
Camden County	Comprehensive Plan	Camden County Master Plan	2014
Gloucester County	Master Plan	gc2040	2015
Mercer County	Master Plan	Mercer County Master Plan	2010

Organization	Plan Type	Plan Title	Year Adopted
Pennsylvania Department of Transportation (PennDOT)	Long-Range Transportation Plan	Pennsylvania 2045 Long-Range Transportation Plan	2022
PennDOT	Transportation Asset Management Plan (TAMP)	PA State Transportation Asset Management Plan 2022	2022
PennDOT	State Transportation Improvement Program (STIP)	PA State Transportation Improvement Program	2024
New Jersey Department of Transportation (NJDOT)	Long-Range Transportation Plan	KEEP IT MOVING NJ!	2024
NJDOT	TAMP	New Jersey Transportation Asset Management Plan	2022
NJDOT	State Transportation Improvement Program (STIP)	NJ Statewide Transportation Capital Program FFY 2026	2025
DRPA-PATCO	Capital Program	FY 2024–2033 PATCO Projects	2023
New Jersey Office of Planning Advocacy	New Jersey State Plan	New Jersey State Development and Redevelopment Plan	2025
Southeastern Pennsylvania Transit Authority (SEPTA)	Strategic Plan	SEPTA Forward	2021
SEPTA	Capital Program	FY2026 Capital Budget and FY 2026–2034 Capital Program	2025
NJ TRANSIT	Strategic Plan	NJT2030	2020
NJ TRANSIT	Capital Program	NJ TRANSIT Five-Year Capital Plan	2024

Source: DVRPC, 2025.

Other Regional Plans and Programs

The long-range plan both informs and builds off several other key regional efforts. These include the Transportation Improvement Program (TIP), the Congestion Management Process (CMP), the Comprehensive Economic Development Strategy (CEDS), and the Regional Vision Zero (RVZ) program.

Transportation Improvement Program (TIP)

DVRPC's TIP is a short-term implementation program of capital improvements that are drawn from, and consistent with, the DVRPC Long-Range Plan. The TIP is multimodal in nature and includes bridge, roadway, bicycle, pedestrian, freight, operational, and public transit station, vehicle, equipment, and state-of-good-repair projects of all sizes and scopes. Required by federal law to cover four years, the TIP represents the transportation improvement funding priorities of the region and lists all projects that intend to use federal funds, along with state-funded capital projects and toll authority air quality significant projects. Anticipated costs and schedules by phase are indicated for every project in the TIP. Project phases may include preliminary engineering, final design, right-of-way acquisition, utility clearance, and construction for roadway-funded projects, and purchase, capital, operating, or debt service phases for public transit projects. The list of projects in the TIP must be financially constrained to the amount of funds that are reasonably expected to be available. More information about the TIPs for both Pennsylvania and New Jersey can be found at www.dvrpc.org/tip.

The Plan-TIP Project Evaluation Criteria is a key tool in aligning the TIP and the long-range plan into a single financial plan. See more in *Appendix F—Financial Plan*.

Congestion Management Process (CMP)

The CMP is a requirement of the federal Surface Transportation Act legislation (23 CFR Parts 450.322 and 500.109) for urbanized areas (UZAs) with populations greater than 200,000, known as Transportation Management Areas (TMAs). These federal regulations specify that the CMP be implemented as a continuous part of the metropolitan planning process. Regulations require that alternatives to new single-occupant vehicle (SOV) road capacity be explored first, and where additional capacity is found to be necessary, multimodal supplemental strategies must be developed to obtain the most long-term value from the investment. The CMP must be regularly updated.

DVRPC's CMP[16] works to improve the reliable flow of people and goods, enhance safety, minimize costs, and promote consistency with the Plan. The CMP analysis starts by identifying the most congested roadways in Greater Philadelphia and then synthesizing this information with other analyses to recommend the most appropriate travel demand, operational management, and multimodal strategies that are context sensitive to each congested facility. The CMP also evaluates the effectiveness of implemented strategies and uses the results to inform strategy recommendations.

[16] www.dvrpc.org/congestionmanagement/

The CMP provides valuable input into corridor planning, project development, project evaluation, and long-range plan policy by providing data, system-level analysis, and strategy recommendations. The CMP also supports competitive grant programs such as the Congestion Mitigation and Air Quality (CMAQ) program and the setting and achievement of federal Transportation Performance Management (TPM) targets. The federally mandated supplemental strategy requirements are a key tool to help achieve DVRPC's Long-Range Plan goals to expand travel options by building out a multimodal transportation network.

Proposed roadway network expansion projects must pass a screening for consistency with the CMP before moving on to more detailed evaluation as part of the project evaluation and selection process. The proposed projects located in a CMP-identified congested subcorridor area will only move forward if they implement a CMP strategy identified as appropriate for that subcorridor. In short, the CMP helps the region make data-driven, multimodal investments to improve mobility and reduce congestion, reserving the use of roadway expansion as a last resort. A summary of the key findings from the *2023 CMP* is in *Appendix F—Financial Plan*.

Emergency Preparedness

The transportation network is one of the most important pieces of any emergency response. In Greater Philadelphia, DVRPC is not directly responsible for emergency preparedness, security, or evacuation planning efforts; this is handled at the state, county, and municipal levels. DVRPC does, however, embrace its role in championing emergency preparedness and security by convening, collaborating, and coordinating with first responders.

Comprehensive Economic Development Strategy (CEDS)

The CEDS is the region's strategy-driven framework for diversifying the economy and increasing individual prosperity for the region's residents. Regions must update their CEDS at least every five years to qualify for U.S. Economic Development Administration (EDA) financial assistance.

DVRPC's 2024–2028 CEDS, *Growing Greater Philadelphia,* aims to help our economic development partners prioritize U.S. EDA economic development investments over the next five years.[17] DVRPC staff work closely to ensure alignment of the Plan's vision, goals, and strategies with the CEDS, which covers topics such as business growth, workforce development, and economic resilience. Transportation projects evaluated for inclusion in the long-range plan score in several ways based on their potential to increase the number of jobs that can be created, and have points deducted for adverse impacts on economic vitality, such as barriers to local businesses during construction.

Regional Vision Zero

DVRPC and its partners are creating a safety action program to advance the region's Vision Zero by 2050 goal with a process

[17] Delaware Valley Regional Planning Commission, *Comprehensive Economic Development Strategy (2024–2028): Growing Greater Philadelphia*, DVRPC (Philadelphia, adopted September 2024), www.dvrpc.org/economic/ceds/.

designed to strengthen ongoing regional collaboration toward eliminating crash fatalities and serious injuries. The *Regional Vision Zero (RVZ) Plan* will conform to USDOT criteria published in the Fiscal Year 2022 Safe Streets and Roads for All (SS4A) Notice of Funding Opportunity. In addition to required plan elements like a Regional High Injury Network, DVRPC also called on county and municipal partners to submit priority transportation plans and studies for consideration in the RVZ process to elevate local priorities and avoid duplication of effort. The RVZ process also hosted a summit of regional partners to promote collaboration in pursuit of shared safety goals and conducted a public engagement process using a crowdsourcing map tool, enabling members of the public to log safety concerns.

The City of Philadelphia's 2022 *Safety & Congestion Omnibus Action Plan* focuses on key strategies to improve road safety and reduce traffic congestion. The plan aims to:

- *Reduce speeding and reckless driving* through expanded camera-assisted traffic enforcement and policies that promote safer speeds.
- *Enhance transportation options* by strengthening alternatives to driving and expanding access to commuter benefits programs for employees of large companies.
- *Improve curb space management* by optimizing its use and encouraging sanitation and delivery activities during off-peak hours.
- *Regulate rideshare services more effectively* to ensure safe and efficient operations.

In New Jersey, 2025 legislation[18] created the Target Zero Commission with the goal of eliminating traffic deaths and serious injuries in New Jersey by 2040. The 13-member group, which includes DVRPC representation, is directed to propose an action plan within one year of the bill's signing. These initiatives work together to create a safer, more efficient transportation network for all who live, work, learn, and play in the Greater Philadelphia region.

Megaregional planning

Many planning issues extend beyond an MPO's boundary, such as transportation network expansion projects, sprawling development patterns, long commutes, congestion, extreme weather, air and water quality, electricity infrastructure, and transportation funding. DVRPC works with state DOTs and neighboring MPOs to identify cross-boundary issues. DVRPC then explores ways to address those issues, both formally and informally, through enhanced coordination and communication with the appropriate planning and operating agencies. These efforts are carried out under the auspices of the PennDOT Planning Partners meetings, NJDOT MPO Coordination

[18] Governor of New Jersey, "Governor Murphy Signs Legislation Creating Target Zero Commission," State of New Jersey, January 13, 2025, accessed July 8, 2025, www.nj.gov/governor/news/news/562025/20250113a.shtml.

meetings, the Metropolitan Area Planning Forum (New York, New Jersey, and Connecticut MPOs), Mid-Atlantic Regional Planning Roundtable (Pennsylvania, New Jersey, Delaware, Maryland, and Virginia MPOs), and many more informal channels.

Plan Amendments

Between four-year updates, DVRPC may amend the Plan to reflect changes to an MRP's scope or the FFY timing for construction, or to add a new air quality significant project to the fiscally constrained financial plan in alignment with changes to the TIP. Amendments ensure the Plan remains aligned with the regional TIPs and state programs for Pennsylvania and New Jersey, while maintaining the funding status of projects in the DVRPC Board-adopted Plan. Cost changes to roadway expansion projects may also require analysis to ensure the Plan maintains the agreed-upon investment cap for that category. All air quality significant projects that are added to the funded Plan must undergo conformity analysis.

Three types of amendments may be considered, depending on the revision(s) to the project list:

Minor Amendment: Required when there is a change in scope, timing (FFY), funding status, or cost that results in an increase greater than 20 percent or $10 million (whichever is larger) change to an existing MRP that is not air quality significant. Creation of a new MRP outside of the regular planning process would occur because of a TIP adoption or new funding to the region. New funding may include external or competitive funding programs. Minor Amendments require a redetermination of fiscal constraint, but not a redetermination of air quality conformity. Public review can occur as part of the monthly TIP amendment process, which offers a public comment period on RTC and Board actions. Minor amendments are conducted as part of the TIP amendment process during monthly RTC and DVRPC Board meetings.

Major Amendment: Required for a new or existing MRP that is air quality significant when there is a change in scope, timing (FFY), funding status, or cost, when that cost increase is greater than 20 percent or $10 million (whichever is larger). Creation of a new MRP outside of the regular planning process would occur because of TIP adoption or new funding to the region. New funding may include external or competitive funding programs. Major Amendments require a redetermination of fiscal constraint, redetermination of air quality conformity, public review, and a public comment period. Up to one major amendment will be conducted per fiscal year, as needed, in coordination with annual air quality conformity analysis.

Administrative Modification: Where projects that are not air quality significant have a scope or timing (FFY) change that results in a less than 20 percent cost difference, an administrative modification is made internally, and the project is added or updated as part of the next regular Plan adoption. No public comment or conformity analysis is required.

If a planning partner—an agency or organization that collaborates with DVRPC on regional transportation and

planning initiatives—requests an amendment between Plan cycles for a project that does not otherwise meet the cost or scope change criteria for an automatic amendment, a major amendment should be handled following the process outlined in Table A-4.

MRP to TIP Process

An MRP must be funded in the Plan before it can be programmed in the TIP. The Funded Plan includes only MRPs that can move forward with available funding, while non-MRPs (projects under $40 M that do not impact air quality) are tracked in the TIP. To determine if a TIP candidate project qualifies as an MRP, it must meet the cost threshold or impact regional travel patterns to the extent that it needs to be included in air quality conformity analysis. If it qualifies, the next step is to verify if it is funded in the current Board-adopted Long-Range Plan. If funded on the Plan, the project moves forward in the TIP based on project readiness and funding availability. If not, it must first be funded in the Plan before being added to the TIP. A project can proceed with a concurrent Plan amendment, subject to approval from the relevant state DOT, transit agency, or other implementing body. Projects on the unfunded, aspirational list can only move into the TIP if nonregional funds are provided through competitive or discretionary funding or during a Plan amendment. Projects that do not meet the MRP definition can advance without additional requirements.

Projects included in the Vision Plan may receive letters of support from DVRPC for competitive funding opportunities. If awarded funding, project sponsors must secure any additional funds necessary to ensure full project implementation within a reasonable timeframe.

Table A-4: Major Amendment Process and Timeline

Step	Action	Time Required
Request	The sponsoring agency makes a formal request for a long-range plan amendment in written format. If the amendment is to an MRP, then the request should include project name, sponsor, scope, location, extent, need, construction or implementation timing (FFY), cost, project categories, and a map showing the completed facility alignment (if available).	-
Data and Information Gathering	DVRPC staff and the sponsoring agency discuss the amendment request and address any outstanding questions or issues.	1–2 weeks
Project Evaluation	Financial plan implications are analyzed, and new project(s) are screened using the Project Evaluation Criteria.	1–2 weeks
Consultation	DVRPC staff, the sponsoring agency, and the RTC Financial Planning subcommittee meet to recommend or not recommend the proposed amendment.	2–4 weeks
Documentation	DVRPC staff will develop documentation for the amendment that will be made available for public comment. This may require meeting any new mandatory federal requirements.	2–4 weeks
Air Quality Conformity	DVRPC staff will conduct air quality conformity analysis, if required, and coordinate with the Interagency Consultation Group.	6–8 weeks
Public Comment Period	The amendment will be posted on DVRPC's website for public comment for 30 days. DVRPC will prepare a formal response to any written comment received, and comments will be considered in the final draft for Board Adoption.	6–8 weeks
Committee and Board Adoption	The amendment will be brought to the RTC and DVRPC Board for adoption.	2–4 weeks

Source: DVRPC, 2025.

Appendix B—Demographics & Land Use

APPENDIX B Demographics & Land Use

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Population & Employment Forecasts

As part of its long-range planning activities, DVRPC is required to maintain forecasts with a horizon of at least 20 years, or to the horizon year of the long-range plan. The 2050 Version 2.1 (2050 v2.1) Population and Employment Forecast updates the 2050 v1.0 forecasts adopted in 2021 with more recent data from the 2020 Decennial Census, U.S. Bureau of Economic Analysis (BEA), and National Establishment Time Series (NETS)[19]. This forecast has informed the *Update: Connections 2050 Plan* development and was necessary ahead of adopting this Long-Range Plan and for annual air quality conformity analysis. The following section provides a high-level overview of the forecasting process, methodologies, and results. Detailed results and descriptions of forecasting methodologies can be found in the DVRPC publication, "2050 v2.1 Population and Employment Forecasts, 2020–2050 Analytical Data Report."

The forecasts were developed in collaboration with county planning partners through the Socioeconomic and Land Use Analytics Committee (SLUAC): a group of agency staff from around the region tasked with demographic and economic analysis in their roles at their respective agencies. The SLUAC convenes to discuss, review, and advise on several DVRPC initiatives. Committee members provided comments on the proposed methodology and formed a consensus around the final forecasts. Planning partners were involved in every stage of forecast development through the DVRPC facilitated Socioeconomic and Land Use Analytics Committee (SLUAC). The committee is made up of county planning staff and other planning partners with expertise in demographic, economic, and/or development analysis to provide input and give feedback on forecast methodology, assumptions, and data sources; county and municipal level trends and insights; and final forecast numbers.

Population and employment changes are forecast in five-year increments at the county level for each age-cohort based on historic birth, death, and migration rates. Tables B-1 and B-2 summarize DVRPC's adopted regional and county-level population forecasts through 2050. Sub-county forecasts are available for viewing and download via:

- Web map:[20] An interactive platform with municipal/district and county-level charts.
- Table Downloads:[21] Access the DVRPC Data Catalog to preview and download tables and GIS features at county, municipal/district, and TAZ levels.

Population Forecast

The 2050 v2.1 Population Forecast provides an updated outlook on how Greater Philadelphia's population may grow and change over the next three decades. Using a new age-cohort methodology and updated base data from the 2020 Census, the

[19] V1.0 was initially updated with v2.0, but more recent data became available during this Plan update, resulting in v2.1.

[20] Population and Employment Forecast Web Map, DVRPC, accessed June 8, 2025, www.dvrpc.org/webmaps/popempforecasts/

[21] *Adopted 2050 v2.0 Population and Employment Forecasts*, DVRPC, accessed June 8, 2025, catalog.dvrpc.org/dataset/adopted-2050-v2-0-population-employment-forecasts

forecast projects population growth at both the county and municipal levels. It accounts for long-term demographic trends, including falling birth rates, an aging population, and the role of migration in sustaining growth through 2050. This version builds on earlier modeling while acknowledging current data limitations at the local level and sets the stage for future refinements in the next forecast cycle.

Population Methodology

The 2050 v2.1 population forecast incorporates updated base data and a new age-cohort model to project population at the county level. The primary methodological update was at the county and regional level.

The age-cohort model draws on historic decennial census data and birth and death records from the New Jersey and Pennsylvania state health departments. It projects future population by tracking the behavior of age-sex cohorts from a base year to a horizon year, using assumptions about birth, death, and migration rates. Starting with the 2020 Census as the base year, each county-level model generated five-year forecasts through 2050. At the end of each five-year cycle, cohorts were advanced to the next age group. New births were added as the 0–4-year-old age group, and the model was rerun for the next period, continuing until 2050.

Municipal forecasts were derived by aligning the 2050 v1.0 municipal forecasts with the updated 2050 v2.1 county forecasts. The proportion of county growth attributed to each municipality in the v1.0 forecast was applied to the total county growth in v2.1. This approach ensured that the sum of municipal forecasts matched the county-level control totals in 2050 v2.1.

The municipal forecasts in 2050 v1.0 were originally developed using UrbanSim, a land use model that incorporates demographic trends, housing costs, employment sector clustering, and location preferences of residents and businesses in response to changes in transportation access. The UrbanSim model was informed by a regional development pipeline, incorporating CoStar real estate data and refined by county reviews of building permits and active construction projects.

However, UrbanSim was not available for update in this forecast cycle, and no alternative land use models were readily accessible. As a result, municipal-level forecasts from 2050 v1.0 were used to estimate future municipal population and household growth based on the updated county-level age-cohort projections. DVRPC intends to return to a land use modeling approach in the next forecast cycle.

Population Results

The region's population is projected to grow by 7.8 percent—an increase of 458,783 people—between 2020 and 2050 (see Table B-1). This growth rate is like the 2050 v1.0 forecast, which projected a 7.6 percent increase, or 440,188 additional residents. The total forecasted population for 2050 in version 2.0 is higher (6,351,893) than in version 1.0 (6,206,332), largely due to the higher starting point established by the 2020 Census.

Regional population growth is expected to slow after 2035, declining from an average annual growth rate of 0.4 percent to

just 0.1 percent. This deceleration is primarily driven by falling birth rates and an aging population. Despite these trends, net migration is projected to remain high enough to offset population decline and sustain modest growth through 2050.

The 2020 Census led to adjustments in assumptions about net migration made in the v1.0 model. The census counted nearly 150,000 more residents than the 2019 Census Population Estimates had projected, suggesting that net migration during the 2010s was stronger than previously understood. Additionally, the SLUAC noted increased approvals of multifamily housing developments and higher international migration in the early 2020s as contributing factors to recent population growth.

The region's aging trend is expected to continue. In 2020, about one in six Greater Philadelphia residents were aged 65 or older. By 2050, that proportion is projected to increase to nearly one in four. Mortality rates for most age groups are expected to decline after returning to pre-pandemic levels by 2025. However, birth rates have steadily fallen below replacement levels. Regional births are projected to peak around 2030 and then decline throughout the remainder of the forecast period.

Figures B-1, B-2, and B-3 illustrate different aspects of the 2050 population forecast:

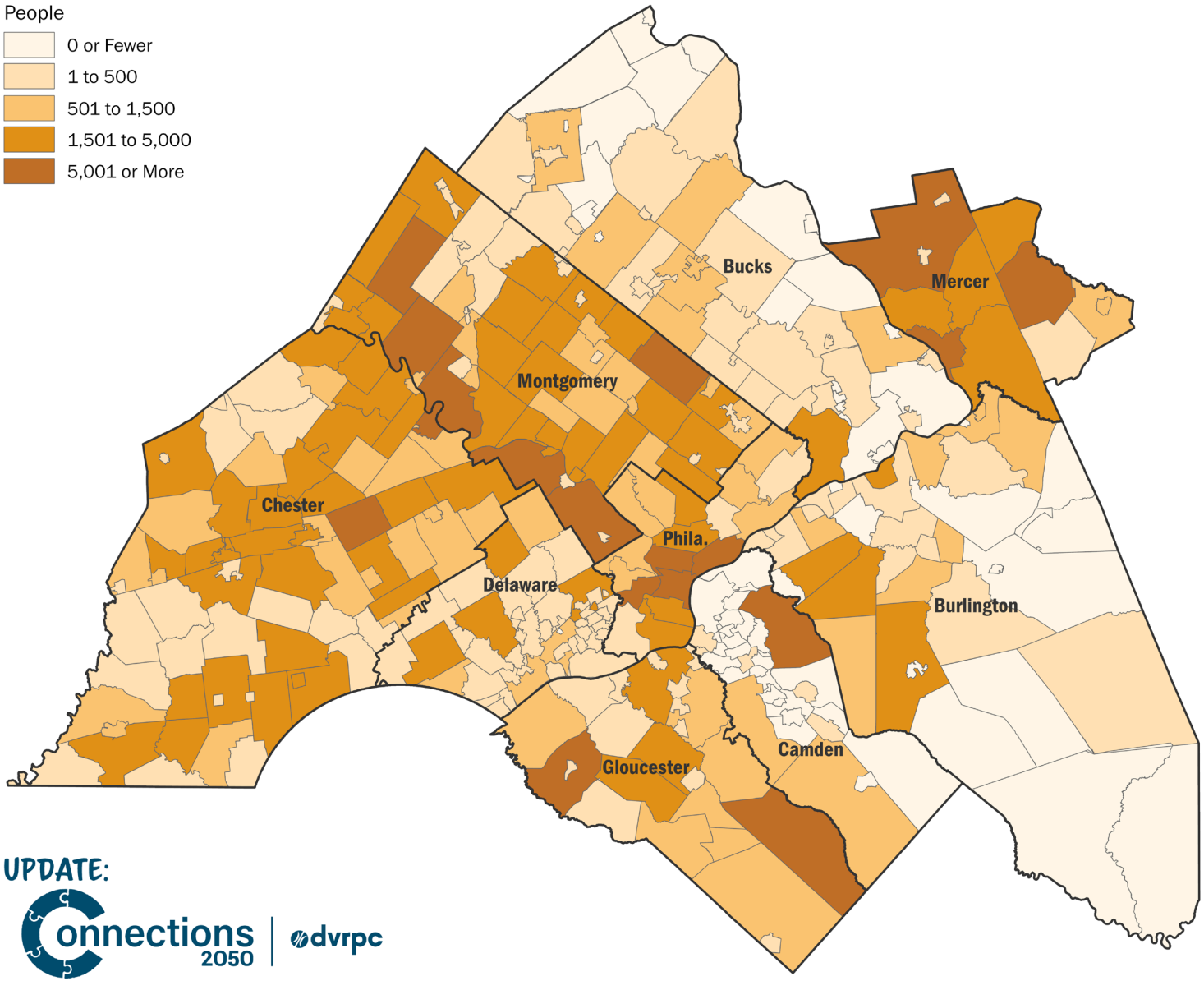
- Figure B-1: Absolute change from 2020 to 2050
- Figure B-2: Percent change from 2020 to 2050
- Figure B-3: Total forecasted population in 2050

Table B-1: Forecasted Population by County (2020–2050)

County	2020	2025	2030	2035	2040	2045	2050	Absolute Change, 2020-2050	Percent Change. 2020-2050
Burlington	461,860	474,938	481,892	485,221	486,310	484,543	481,500	19,640	4.30%
Camden	523,485	529,829	531,962	534,490	535,325	532,961	529,692	6,207	1.20%
Gloucester	302,294	306,671	310,786	317,901	322,160	327,296	330,205	27,911	9.20%
Mercer	387,340	398,254	411,630	416,247	419,761	421,736	423,029	35,689	9.20%
New Jersey	1,674,979	1,709,692	1,736,270	1,753,859	1,763,556	1,766,536	1,764,426	89,447	5.30%
Bucks	646,538	653,800	660,122	664,092	664,508	661,478	655,736	9,198	1.40%
Chester	534,413	564,292	585,266	601,696	615,751	626,434	634,012	99,599	18.60%
Delaware	576,830	584,199	591,408	596,379	598,727	598,641	597,100	20,270	3.50%
Montgomery	856,553	881,522	905,095	926,337	943,123	955,916	965,342	108,789	12.70%
Philadelphia	1,603,797	1,649,774	1,681,971	1,699,155	1,711,201	1,720,856	1,735,278	131,481	8.20%
Pennsylvania	4,218,131	4,333,587	4,423,862	4,487,659	4,533,310	4,563,325	4,587,468	369,337	8.80%
DVRPC Region	5,893,110	6,043,279	6,160,132	6,241,518	6,296,866	6,329,861	6,351,894	458,784	7.80%

Source: DVRPC 2050 v2.1 Population Forecasts, 2025.
Base populations from the U.S. Census Bureau Population Estimates Program (2023 release).

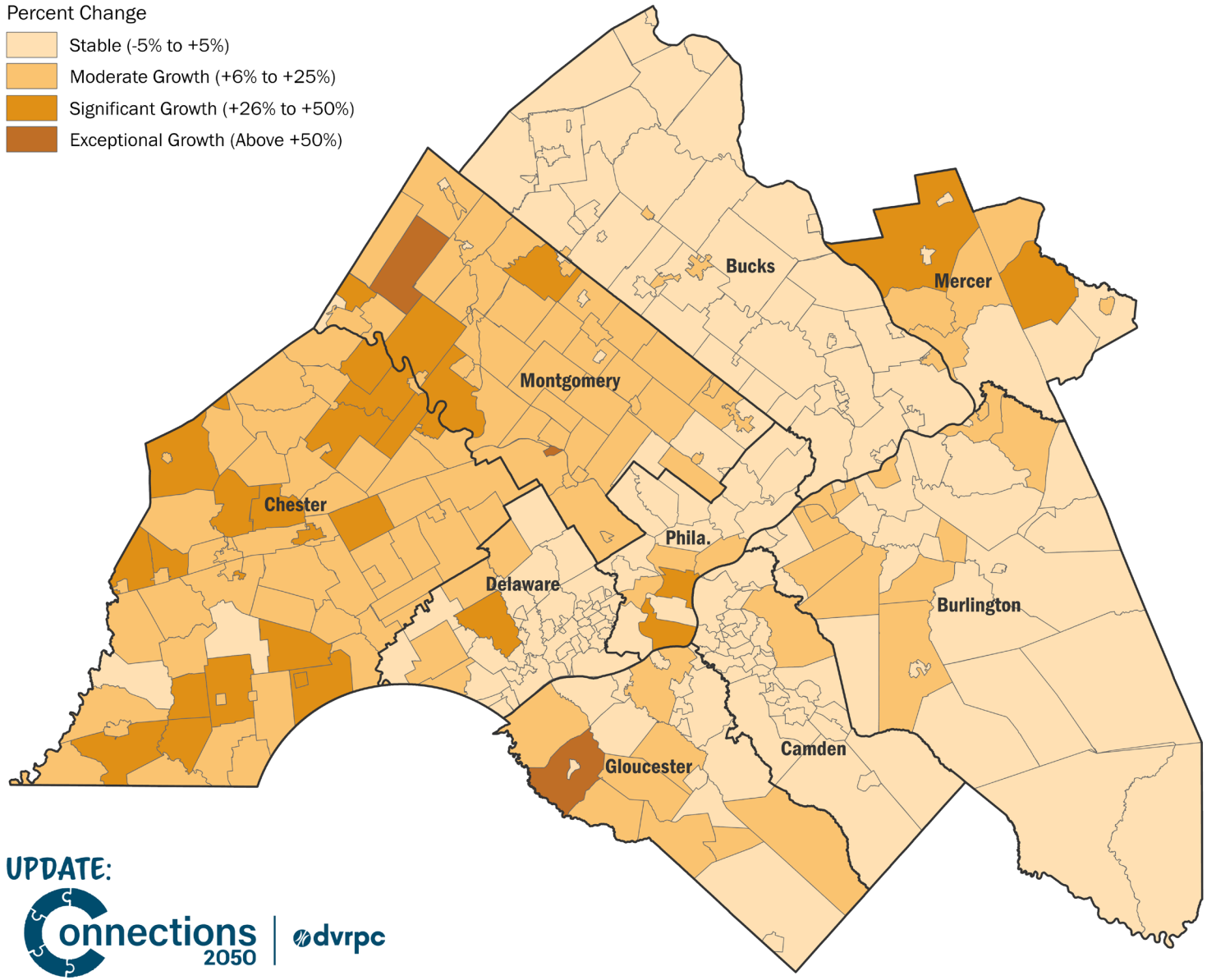
Figure B-1: Absolute Population Change (2020–2050)



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, May 2025. Base populations from U.S. Census Bureau Population Estimates Program (2023 release).

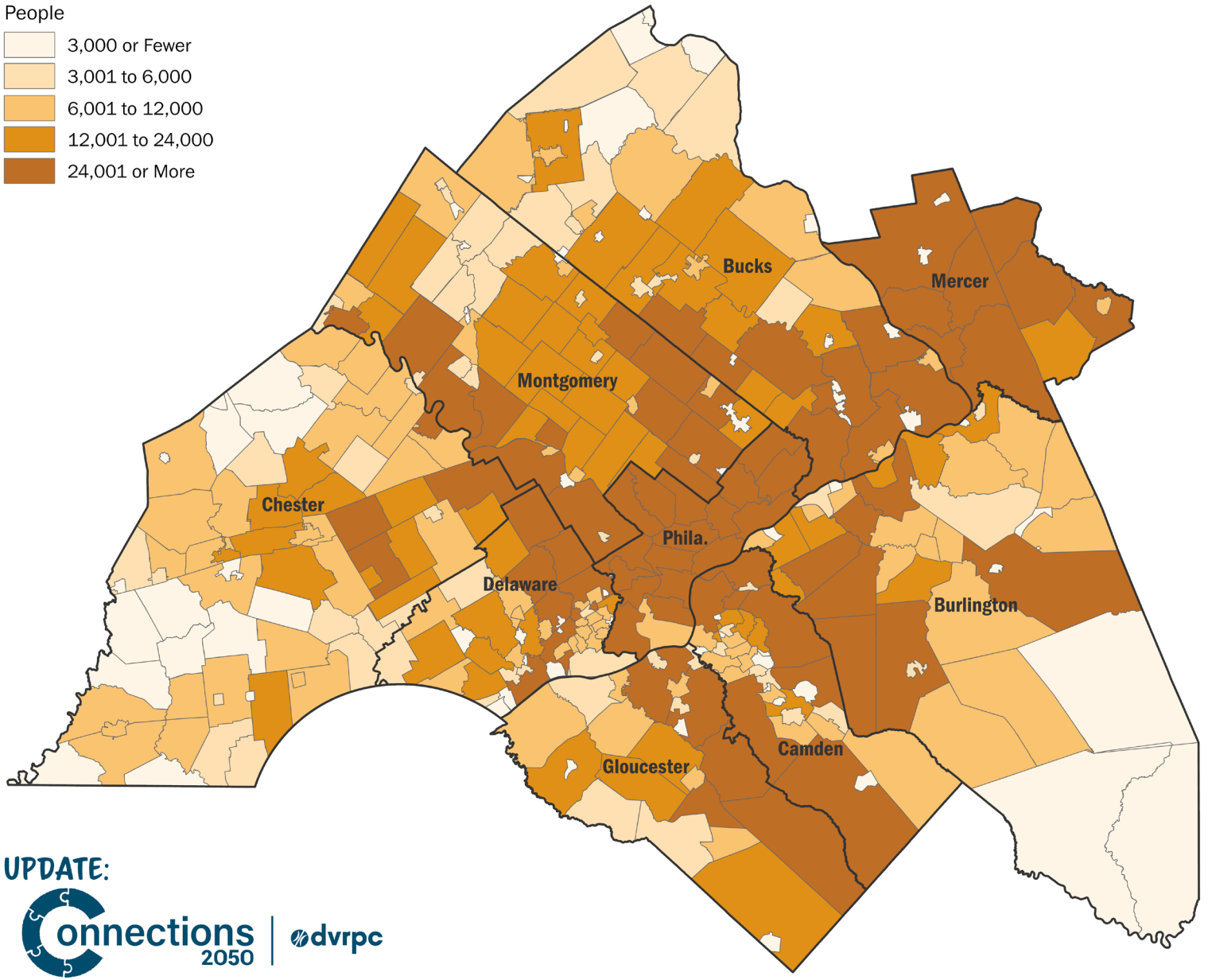
Figure B-2: Percent Population Change (2020–2050)



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, May 2025. Base populations from U.S. Census Bureau Population Estimates Program (2023 release).

Figure B-3: 2050 Municipal Population Forecast



Source: DVRPC, May 2025. Base populations from U.S. Census Bureau Population Estimates Program (2023 release).

Employment Forecast

The 2050 v2.1 Employment Forecast presents an updated outlook for job growth across Greater Philadelphia, using revised base data and an updated county-level model. Like the population forecast, it builds on prior land use modeling to estimate employment change at the municipal and regional scales. Forecasts reflect post-COVID recovery trends, shifts in sectoral demand, and long-term demographic changes that limit labor force growth. While employment is projected to increase by over 350,000 jobs by 2050, most of this growth occurs early in the forecast period, with steady but slower gains thereafter. The DVRPC Board adopted the 2050 v2.1 Employment Forecast to better reflect more recently projected job growth from emerging and existing job centers in Philadelphia's Bellwether District, Philadelphia International Airport, and the Navy Yard.

Employment Methodology

As with the population forecast, the employment forecast update involved developing a new county-level model and leveraging results from the 2050 v1.0 UrbanSim model for municipal forecasts.

The base year for the 2020 employment forecast used data from the U.S. Bureau of Economic Analysis (BEA), which includes full-time and part-time employment figures by North American Industry Classification System (NAICS) industry. To establish the municipal employment base, the NETS—a point-based database of jobs and business locations—was aggregated to the municipal level. This point-level NETS data was then uniformly scaled at the county level, by industry, to align with BEA county employment totals.

The 2050 v2.1 forecasts incorporated land use model results from the v1.0 forecast cycle to estimate municipal and traffic analysis zone (TAZ) growth. In v1.0, the land use model allocated projected growth at the census block level using both stakeholder-identified development data and an agent-based simulation model. This simulation incorporated various land use and socioeconomic inputs to distribute employment growth spatially.

For the v2.1 update, county-level employment forecasts were distributed to the municipal and TAZ levels in proportion to their respective growth shares from the v1.0 land use model. This ensured consistency with prior spatial patterns of employment growth while updating the overall county-level employment trajectory.

Employment Results

Employment in the DVRPC region is forecast to increase by 356,537 jobs between 2020 and 2050, a gain of 10.1 percent (see Table B-2). This includes both full-time and part-time wage or salary workers, as well as the self-employed.

Employment growth over the forecast period is smaller than the projected population increase of 458,784 people. This difference is largely due to the aging population. Although the region's total population is expected to grow, the working-age population remains relatively stable between 2020 and 2050, limiting the potential for employment expansion. Employment increases the

most between 2020 and 2025, reflecting a strong post-COVID recovery and low unemployment rates. After 2025, regional employment levels are projected to remain relatively steady.

By 2050, Educational Services, Health Care, and Social Assistance are expected to remain the largest employment sectors in the region (see Table B-3). This sector is well-positioned for continued growth due to increasing demand for health services associated with an aging population. Together with Professional, Scientific, and Technical Services and Finance, Insurance, and Real Estate, these top three sectors are projected to account for nearly half of all regional jobs in 2050.

The fastest-growing employment sector, by both percent and absolute change, is Arts, Entertainment, and Recreation. The Accommodation and Food Services sector was hit hard by the pandemic, and more than half (55 percent) of its projected growth represents a post-COVID rebound. Professional, Scientific, and Technical Services is projected to experience the second-largest job gain—adding nearly 90,000 employees, a 15.3 percent increase. Transportation, Warehousing, and Utilities ranks third in absolute growth and second in percentage growth, driven by the continued expansion of e-commerce and rising demand for logistics and supply chain services. Together, these four sectors account for 85 percent of total regional employment growth through 2050.

Figures B-4, B-5, and B-6 provide visual summaries of the 2050 employment forecast:

- Figure B-4: Absolute change from 2020 to 2050
- Figure B-5: Percent change from 2020 to 2050
- Figure B-6: Total forecasted employment in 2050

Table B-2: Municipal Population Forecast by County (2020–2050)

County	2020	2025	2030	2035	2040	2045	2050	Absolute Change, 2020-2050	Percent Change, 2020-2050
Burlington	272,364	301,478	297,093	293,741	293,384	303,632	304,810	32,446	11.90%
Camden	264,617	293,858	289,958	286,678	289,606	297,805	299,050	34,433	13.00%
Gloucester	148,182	171,517	169,419	167,718	167,858	171,601	173,114	24,932	16.80%
Mercer	285,580	308,959	303,685	300,383	305,709	308,075	309,670	24,090	8.40%
New Jersey	972,763	1,077,837	1,062,185	1,050,555	1,058,597	1,083,158	1,088,694	115,931	11.90%
Bucks	361,373	390,310	384,794	380,395	384,294	381,381	383,012	21,639	6.00%
Chester	342,950	394,676	389,954	386,132	390,172	385,782	390,188	47,238	13.80%
Delaware	312,220	338,314	333,421	329,732	332,611	336,167	337,581	25,361	8.10%
Montgomery	670,496	731,893	721,105	713,129	722,970	723,543	728,787	58,291	8.70%
Philadelphia	888,524	944,294	932,071	921,523	933,628	967,601	976,631	88,107	9.90%
Pennsylvania	2,575,563	2,799,487	2,761,345	2,730,911	2,763,675	2,794,474	2,816,199	240,636	9.30%
DVRPC Region	3,546,306	3,875,299	3,821,500	3,779,431	3,820,232	3,875,587	3,902,843	356,537	10.10%

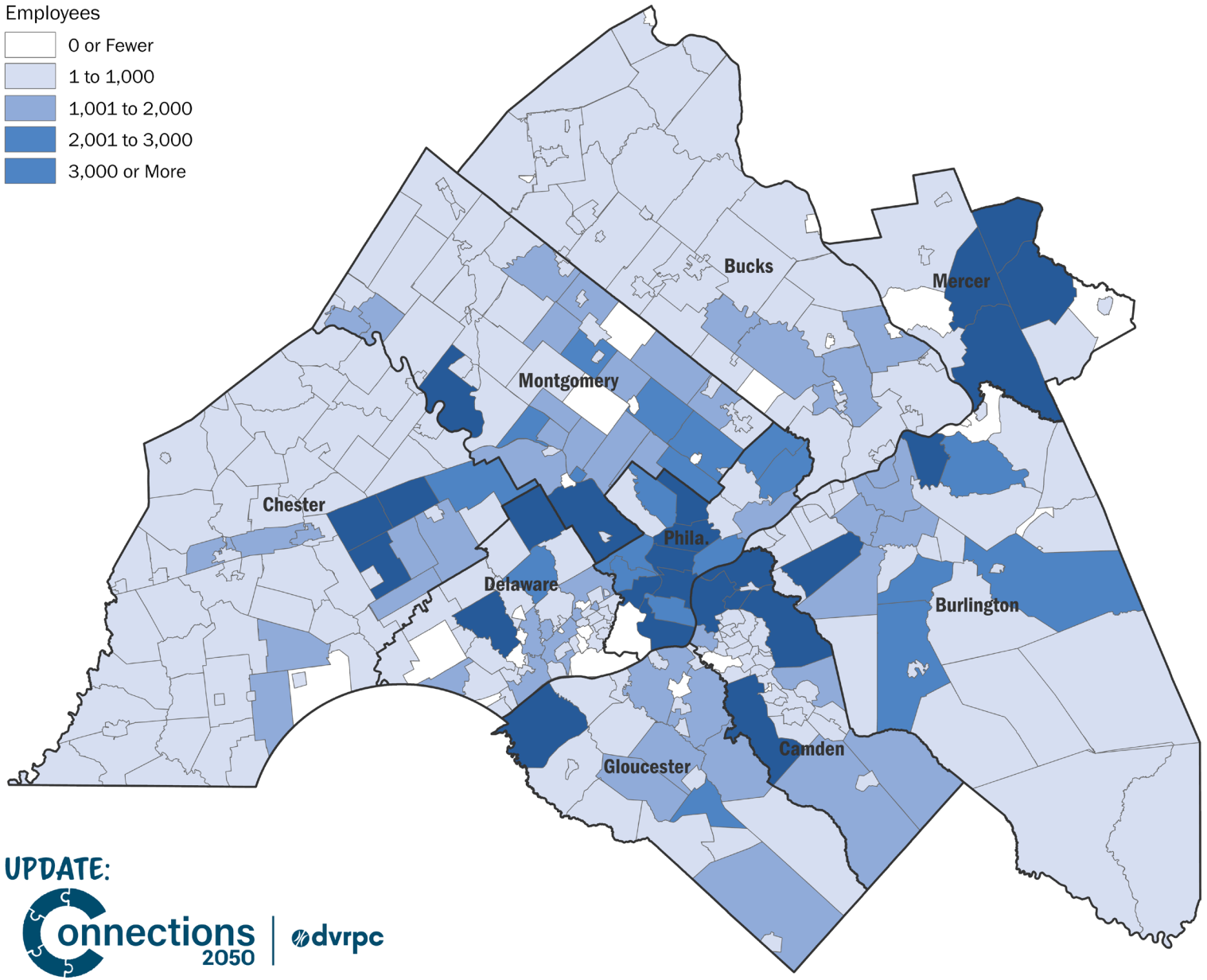
Source: DVRPC 2050 v2.1 Employment Forecasts, 2025.
Base employment data from the National Establishments Time Series (NETS) database and Bureau of Economic Analysis (BEA).

Table B-3: Employment Forecast by Sector (2020–2050)

Employment Sector	2020	2050	Absolute Change, 2020–2050	Percent Change, 2020–2050
Agriculture and Mining	16,431	15,405	-1,026	-6.2%
Construction	160,659	186,848	26,189	16.3%
Manufacturing	176,476	163,520	-12,956	-7.3%
Wholesale Trade	119,081	105,246	-13,835	-11.6%
Retail Trade	302,164	319,774	17,610	5.8%
Transportation and Warehousing, Utilities	189,367	262,938	73,571	38.9%
Information	61,987	64,749	2,762	4.5%
Finance and Insurance, Real Estate	443,505	428,049	-15,456	-3.5%
Professional, Scientific, and Technical Services	588,473	678,320	89,847	15.3%
Educational Services, Health Care and Social Assistance	722,982	776,794	53,812	7.4%
Arts, Entertainment, and Recreation; Accommodation and Food Services	239,029	380,289	141,260	59.1%
Other Services	175,844	184,458	8,614	4.9%
Public Administration	350,297	336,456	-13,841	-4.0%
Total Employment	3,546,295	3,902,846	356,551	10.1%

Source: DVRPC, 2025.

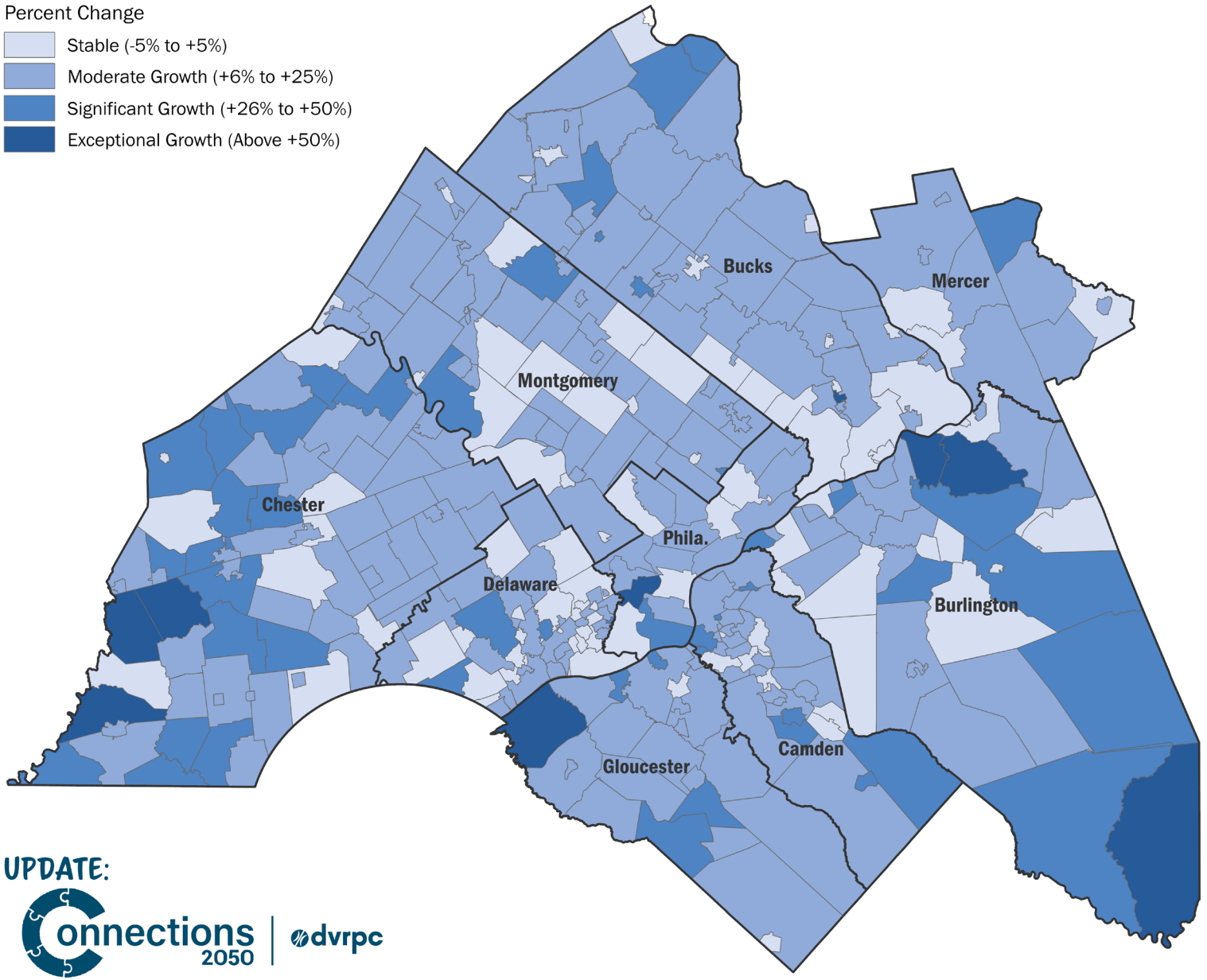
Figure B-4: Absolute Employment Change (2020–2050)



UPDATE: Connections 2050 | dvrpc

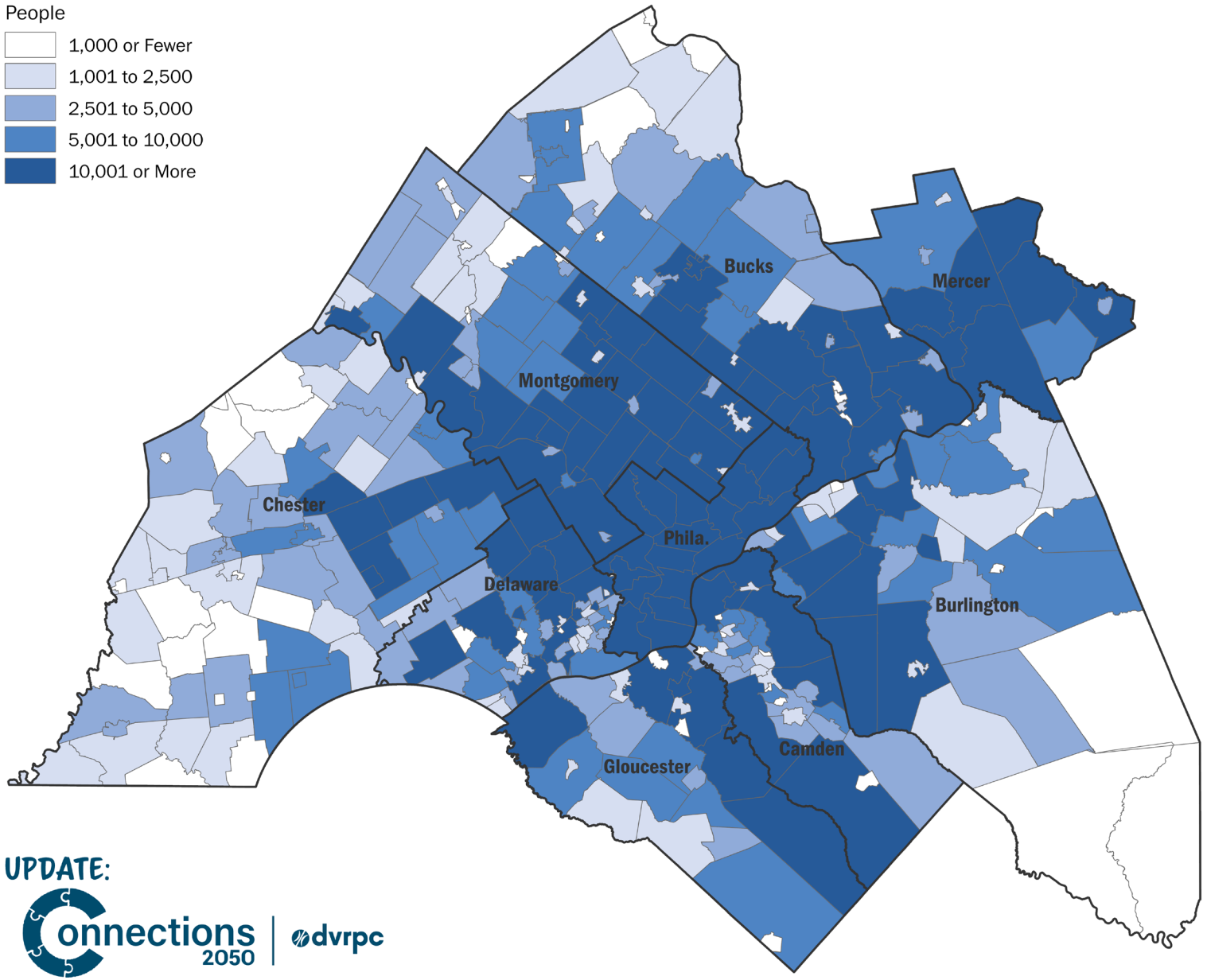
Source: DVRPC, May 2025. Base populations from U.S. Census Bureau Population Estimates Program (2023 release).

Figure B-5: Percent Employment Change (2020–2050)



Source: DVRPC, May 2025. Base populations from U.S. Census Bureau Population Estimates Program (2023 release).

Figure B-6: 2050 Municipal Employment Forecast



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, May 2025. Base populations from U.S. Census Bureau Population Estimates Program (2023 release).

IPD by Census Tract

DVRPC uses its Indicators of Potential Disadvantage (IPD) analysis across its programs to help demonstrate compliance with Title VI of the Civil Rights Act of 1964, which states:

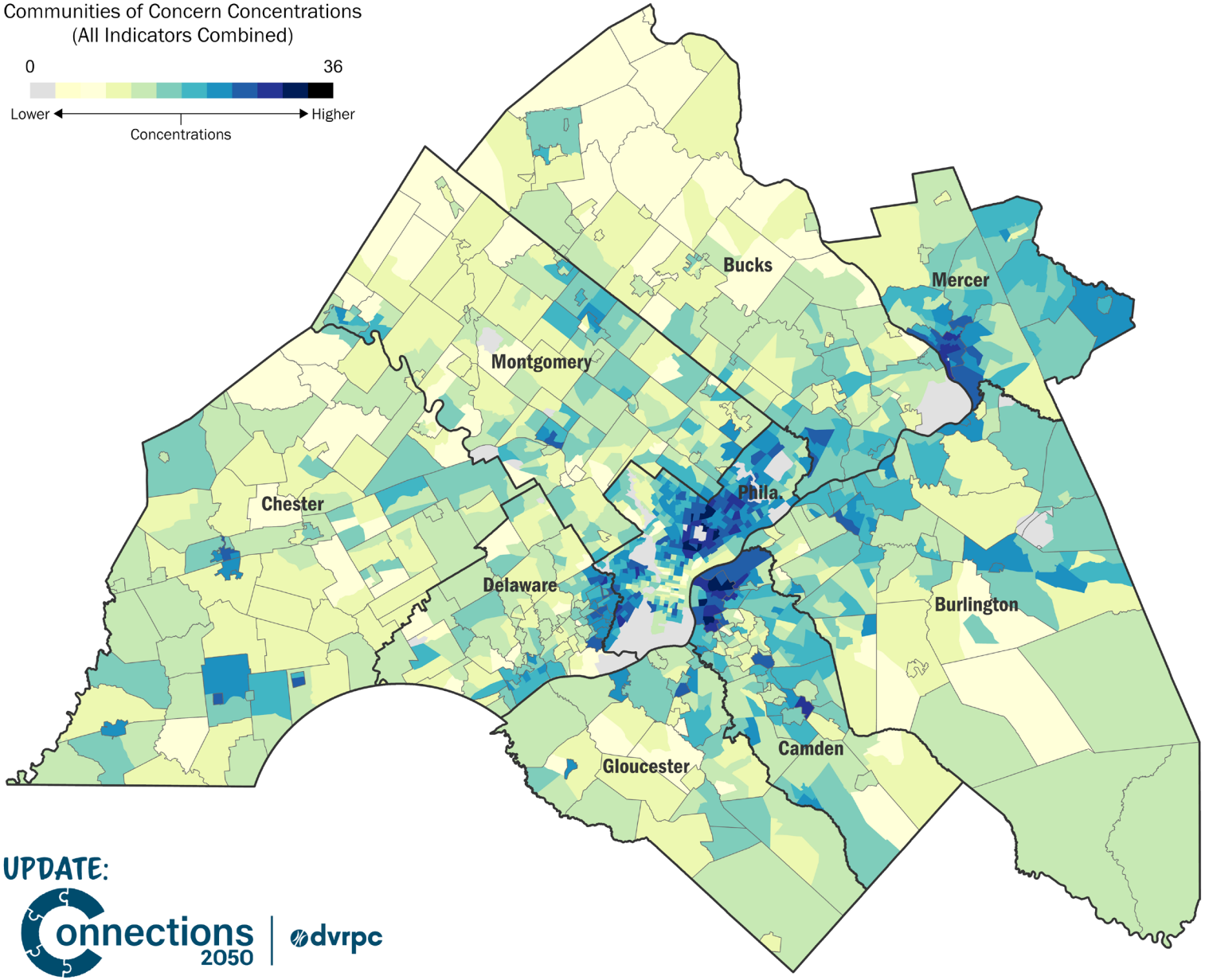
> *"No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

DVRPC follows guidance and methodologies from the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Pennsylvania Department of Transportation (PennDOT), and New Jersey Department of Transportation (NJDOT) to ensure that the needs and perspectives of diverse populations are represented in planning and decision-making processes. The IPD methodology is one component of a broader strategy that also includes public participation, stakeholder engagement, data analysis, and other research used to support collaborative planning for all residents of Greater Philadelphia.

Initially developed by DVRPC in 2001 under the name "Degrees of Disadvantage (DOD)," this analysis has since evolved and been adopted or adapted by peer agencies across the country. It is widely recognized as a best practice for demonstrating compliance with federal non-discrimination requirements.

The IPD analysis identifies populations protected under Title VI using data from the U.S. Census Bureau's American Community Survey (ACS) five-year estimates. These populations are mapped at the census tract level using Geographic Information Systems (GIS) to show spatial distribution across the region (see Figure B-7). Each identified population group functions as an "indicator" in the analysis, as listed in Table B-4.

Figure B-7: IPD by Census Tract



Source: DVRPC, May 2025. Base populations from U.S. Census Bureau Population Estimates Program (2023 release).

Table B-4: IPD Population Groups and Data Sources

Indicator	ACS Data Table	Protected Population	Authorizing Source
Ethnic Minority	B03002: Hispanic or Latino Origin by Race	Minority and National Origin	Title VI of the Civil Rights Act of 1964, FHWA Title VI, and Title VI Requirements and Guidelines
Female	S0101: Age and Sex	Sex	FHWA Title VI
Foreign Born	B05012: Nativity in the United States	National Origin	Title VI of the Civil Rights Act of 1964, FHWA Title VI, and Title VI Requirements and Guidelines
Limited English Proficiency	S1601: Language Spoken at Home	Limited English Proficiency and National Origin	Title VI of the Civil Rights Act of 1964, FHWA Title VI, and Title VI Requirements and Guidelines
Low-Income	S1701: Poverty Status in the Past 12 Months	Low-Income	FHWA Title VI
Older Adults	S0101: Age and Sex	Age	FHWA Title VI
People of Color	B02001: Race	Race and Minority	Title VI of the Civil Rights Act of 1964, FHWA Title VI, and Title VI Requirements and Guidelines
People with Disabilities	S1810: Disability Characteristics	Disability	FHWA Title VI
Youth	B09001: Population under 18 Years by Age	Age	FHWA's Title VI Program and Additional Nondiscrimination Requirements (FHWA Title VI)
Ethnic Minority	B03002: Hispanic or Latino Origin by Race	Minority and National Origin	Title VI of the Civil Rights Act of 1964, FHWA Title VI, and Title VI Requirements and Guidelines
Female	S0101: Age and Sex	Sex	FHWA Title VI

Source: DVRPC, 2025.

Development and Housing

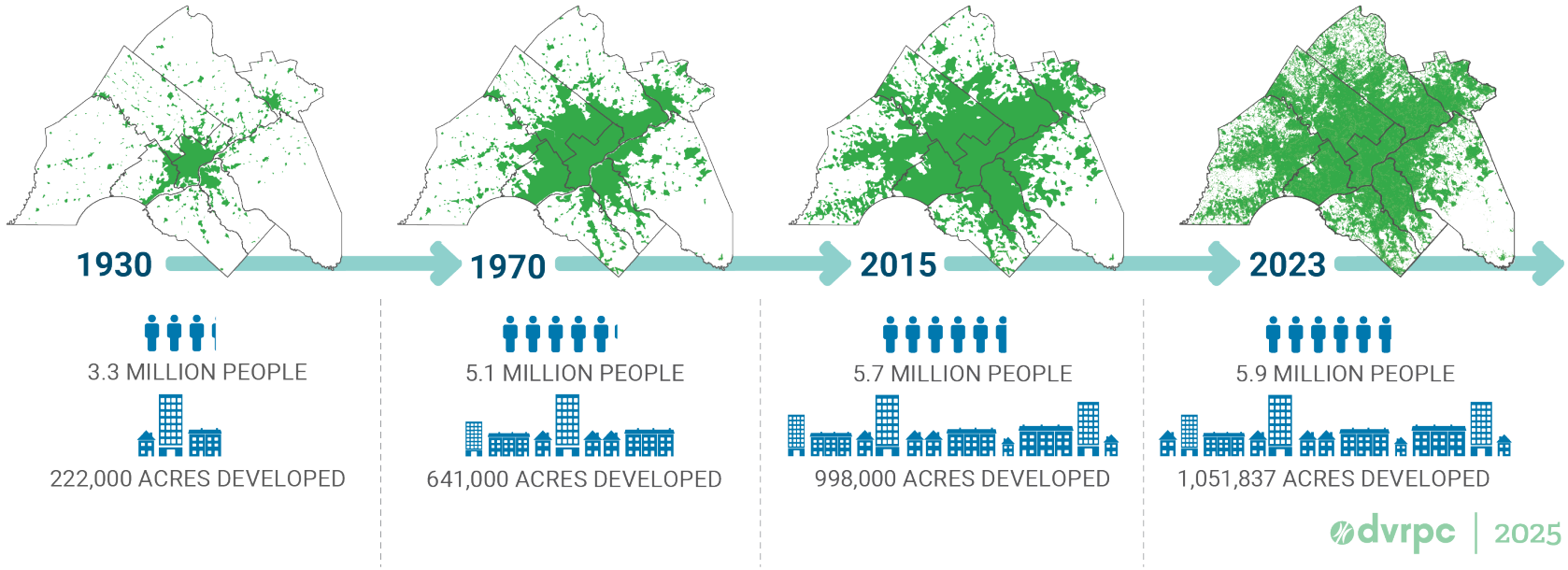
Technological advancement, economic shifts, and demographic changes have all played a significant role in shaping the character and community form of Greater Philadelphia. Over the 20th century, the region evolved from an industrial economy dominated by urban areas to one characterized by suburban expansion and increased reliance on automobiles. For example, in 1900, almost two-thirds of the region's population lived within the City of Philadelphia. By 2000, Philadelphia accounted for just 28 percent of the region's population. This decentralization of population and employment has profound implications for how DVRPC and its planning partners coordinate land use and transportation planning.

The maps in Figure B-8 help to illustrate how land use and development have evolved in the region since 1930. In 1930, development within the region was largely centered on Philadelphia's urban core. At that time, approximately 3.3 million people lived in the nine counties, and roughly 222,000 acres in the region were developed. By 1970, the region's population increased to 5.1 million people, and the amount of development land nearly tripled to 641,000 acres. Over those four decades, the rate at which land was developed grew three and a half times faster than the rate of population increase.

This trend accelerated between 1970 and 2010, when land consumption increased at roughly five and a half times the rate of population increase. These shifting development patterns have increased our resource needs, strained our transportation systems, and contributed to economic and racial segregation–challenges that our region is still grappling with.

The rate at which land development has consumed new land has slowed significantly in recent years. Between 1990 and 2010, an average of 9,050 acres of land were developed regionwide. Between 2010 and 2023, this figure dropped to roughly 3,600 acres of new development per year. There has also been a significant shift in the location of new development from the turn of the 21st century to the present day. Since 1999, the region has witnessed a 46 percent increase in the number of residential permits approved in areas characterized as Core Cities and Developed Communities. Focusing new growth in areas such as these, with existing transportation and utility infrastructure, remains a major focus of the Long-Range Plan. At the regional level, smart growth works by directing new development toward existing communities where it can help to leverage existing investments while conserving valuable open space and natural resources.

Figure B-8: Extent of Regional Development (1930–2023)



Source: Base populations from U.S. Census Bureau Population Estimates Program (2023 release).

Housing

Housing affordability has become an increasingly pressing issue for the residents of Greater Philadelphia in recent years, just as it has for Americans as a whole. Housing costs have been rising faster than incomes, and the demand for lower-cost housing has far outstripped the supply. According to the Joint Center for Housing Studies of Harvard University, the median sales price for existing single-family homes was 4.9 times the median household income in 2023. This figure represents a significant jump from the 4.1 price-to-income ratio of 2019 and the 3.2 ratio averaged during the 1990s.

What had been a long-term concern grew into a full-blown crisis during the COVID-19 pandemic as home prices surged throughout much of Greater Philadelphia. Between February 2020 and February 2025, the median sale price of homes in Burlington, Camden, Gloucester, and Mercer counties all increased by over 80 percent, according to sales data from Redfin. Median sale prices increased by over 40 percent in Bucks, Chester, Delaware, and Montgomery counties during the

same period. It is no surprise, then, that 755,000 households (one in three households/33 percent of all households) in the region spent 30 percent or more of their income on housing. This threshold officially classifies them as “cost burdened.” The problem is particularly acute for residents who rent their homes—over 52 percent of renter households are cost-burdened.

As the cost of housing squeezes household budgets, many families are being forced into precarious living situations that affect their health, the length of their commute, and their ability to save for emergencies or make long-term investments. Furthermore, rising home prices, elevated interest rates, and a limited supply of homes for sale have pushed homeownership out of reach for many, eliminating or delaying opportunities to build generational wealth and reducing access to economic opportunity.

The region’s affordability challenges are complex and multifaceted; yet, many of our problems can be traced to the long-term underproduction of housing and the resulting mounting shortage. Analysis conducted by Up for Growth (UFG), a research and advocacy organization sponsored by the American Planning Association, suggests that the 11-county Philadelphia Metropolitan Statistical Area was missing nearly 80,000 housing units in 2021, the 10th highest total of any metropolitan area in the country. Analysts cite pandemic-influenced economic conditions, labor shortages, financing availability, and regulatory barriers to new development as key contributors to the shortage. Over time, these supply constraints have contributed to increasing housing costs and reducing affordability.

Taking a regional approach to solving our housing challenges is essential because the conditions that influence the cost and supply of housing do not neatly align with municipal or county boundaries, and no one community can solve it alone. Ensuring that there is an adequate supply of quality, affordable, and accessible homes in our region will require expanding housing production, mitigating displacement, preserving existing housing, and promoting collaboration between municipalities. In 2022, DVRPC launched its Regional Housing Initiative to investigate the nature and extent of the housing challenges facing communities in our region and how we can work together to address them. As part of this initiative, DVRPC staff conducted research, gathered data, and engaged with stakeholders and subject matter experts, including county and state planners, for-profit and nonprofit developers, and housing advocates across a wide variety of topics. For more information on this effort, visit www.dvrpc.org/housing/regionalhousinginitiative.

Although many factors contributing to the housing crisis are beyond the control of local governments, municipalities do have control over where, what type, and how much housing can be built within their borders. In many places, zoning and other land use regulations have systematically prioritized low-density single-family detached homes, making it difficult or impossible to build in-demand, lower-cost housing types, such as small lot single-family homes, missing middle housing, and multifamily units. Accordingly, zoning reform aimed at expanding housing

choice and supply is one of the most critical ways that local governments can directly combat the affordability crisis.

While increasing the supply and range of housing options is crucial, where we build is just as important as what we build. Focusing new development in high-opportunity neighborhoods—places rich in jobs, infrastructure, transportation, and community assets—can help our region address other critical regional issues, including transportation, economic development, environmental protection, and resilience. Prioritizing locations near existing, high-quality transit further supports smart growth by reducing car dependence, expanding access to opportunity, and making more efficient use of public infrastructure.

Centers

Update: Connections 2050 places Centers at the heart of its vision for the region's future, using them as a foundational framework to guide regional growth, development, and transportation investment in smart, efficient way to make the most of existing assets. By linking land use and transportation planning, Plan Centers help direct resources to where they can have the greatest impact, cost-effectively. These are locations of local government, essential services, economic activity, and community life. In addition to Plan Centers, the Plan identifies Freight Centers—strategic areas that reflect and support the region's freight-based land use and economic development patterns.

Plan Centers

Centers have been a foundational element of DVRPC's long-range planning efforts since the adoption of the *Direction 2020* Plan in 1992, and the concept appeared in even earlier plans. Centers are the organizing principle of *Update: Connections 2050*—focal points in the regional landscape that shape how and where growth occurs. They provide a structure for coordinating land use with infrastructure investments, enabling the most efficient provision of transportation, water, sewer, and other critical services. Prioritizing growth in and around Centers supports the Plan's goals by preserving open space, protecting natural resources, and fostering vibrant, walkable, and connected communities. By emphasizing Centers, the Plan promotes an accessible and more efficient regional development pattern that enhances quality of life for all.

Plan Centers are places in the region that are, or do, one or more of the following:

1. Highlight and showcase what good development looks like in the regional context.
2. Support higher levels of density for future growth through mixed-use, infill development.
3. Serve as priority areas for investment, particularly by building and enhancing multimodal transportation infrastructure. This, combined with mixed-use, high-density development patterns, can shorten trip lengths and improve accessibility through transit, walking, and biking.

Centers Update

As part of the *Update: Connections 2050* Plan, DVRPC staff conducted background research to support a major revision of the region's designated Centers. This effort included a review of how Plan Centers have been incorporated in previous long-range plans, land use planning tools used by peer agencies, and recent national research on activity centers. Based on this analysis, DVRPC reaffirmed its commitment to keeping Centers as a core element of the regional plan and identified strategies to modernize and strengthen the Centers framework going forward.

The update to the Centers framework focused on three key goals:

1. Clarify the role of Centers and how they support the implementation of the regional plan.
2. Revise Center types to provide more specific recommendations tailored to each category.
3. Incorporate more quantitative data into the definition and analysis of Centers by aligning Center boundaries with U.S. Census geographies, such as clusters of block groups, municipalities, or census-designated places.

The third goal will allow DVRPC to conduct more detailed research and develop targeted policy recommendations for each Center. Over the longer term, it will also support the integration of Centers into DVRPC's Tracking Progress initiative, enabling the measurement of long-range plan goals within these areas.

Centers Identification

The core variables that define Centers are transit access and development density. Figure B-9 illustrates how each Center category is positioned on a 2x2 matrix formed by these two variables—population and employment density on the x-axis and frequency/reliability of transit service on the y-axis. Each Center type is associated with specific quantitative thresholds, as shown in the figure.

Centers located in the top-right quadrant—with both high density and strong transit access—represent the ideal development pattern for the region and are considered existing Transit-Oriented Development (TOD) showcases. High-density areas without strong transit access are opportunities for multimodal transportation investment. Transit-rich areas lacking density are ideal candidates for TOD investment, or TOD Opportunity Centers. With the right investments—outlined in the policy priorities that follow—Centers in the latter two quadrants can shift toward becoming TOD showcases.

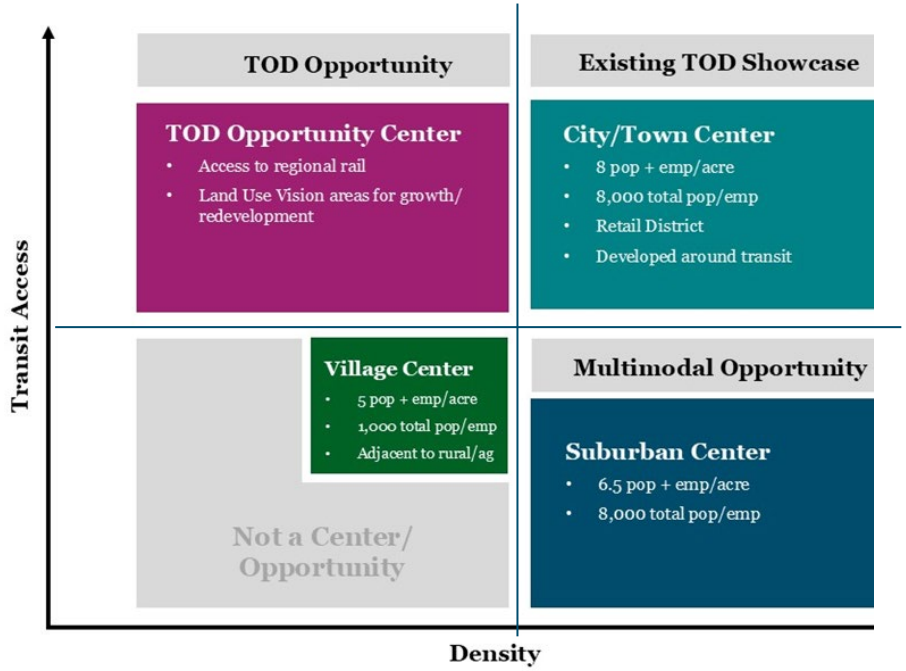
Low-density areas without transit access are typically not suited for Center designation, except for Village Centers. Village Centers serve as important and recognizable activity nodes, often within the region's rural areas. While they may not meet the density or transit thresholds found in more urbanized areas, their local significance justifies their inclusion.

Centers Categories

DVRPC collaborated with county planning partners to refine the list of Centers identified through the quantitative analysis. *Update: Connections 2050* designates 176 Centers, categorized

into one of six Center types (see Figure B-10; Tables B-5 and B-6). The update added 75 new Centers and removed 10 existing Centers that no longer met the established criteria.

Figure B-9: Centers Typology Matrix

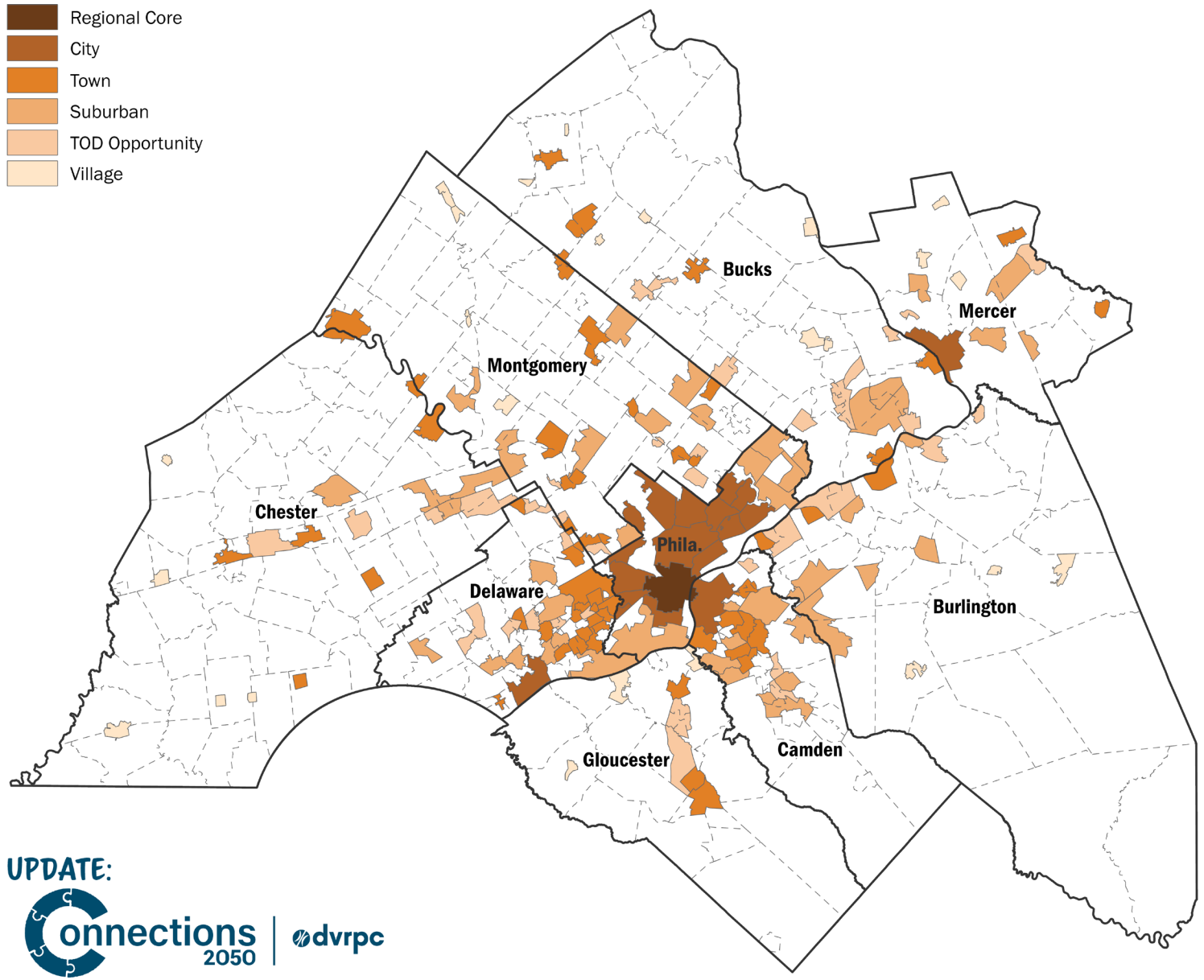


Source: DVRPC, 2025.

The six Center categories are defined as follows:

1. **Regional Core**—The central business district of the region, encompassing Greater Center City Philadelphia, University City, and downtown Camden. Geography is determined by the highest level of existing density.
2. **City Centers**—Dense, mixed-use neighborhoods or urban core cities with strong transit access and walkable main streets. These serve as models for urban development.
3. **Town Centers**—Compact, mixed-use boroughs or census-designated places with existing or historical transit service and a walkable main street. These Centers represent ideal development in a regional (non-urban) context.
4. **Suburban Centers**—Areas with higher density than their surroundings or clusters of jobs and commercial activity, but limited or no direct transit access. These Centers often face a jobs-housing imbalance and are key locations for multimodal and quality-of-life investments.
5. **TOD Opportunity Centers**—Areas with access to regional rail or strong transit service that could evolve into Town Centers through Transit-Oriented Development (TOD) strategies. These strategies may include increasing density, improving walkability, and enhancing multimodal connections.
6. **Village Centers**—Moderate-density, mixed-use clusters typically located in rural or agricultural settings. They often feature an identifiable downtown or main street and are important nodes of local cultural and economic activity.

Figure B-10: Plan Centers



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, 2025.

Table B-5: Pennsylvania Plan Centers

County	City Centers	Town Centers	Suburban Centers	TOD Opportunity Centers	Village Centers
Bucks		• Bristol Borough • Doylestown Borough • Morrisville Borough • Perkasie / Sellersville • Quakertown Borough • Telford / Souderton	• Fairless Hills • Levittown	• Chalfont Borough • Langhorne • Neshaminy / Trevose • New Britain Borough • Tullytown Borough • Warminster • Woodbourne • Yardley Borough	• Dublin Borough • New Hope Borough • Newtown • Richlandtown Borough • Silverdale Borough • Trumbauersville Borough
Chester		• Coatesville • Downingtown Borough • Kennett Square Borough • Phoenixville Borough • Pottstown • Spring City / Royersford • West Chester Borough	• Great Valley • King Of Prussia • Paoli • Uwchlan	• Berwyn-Strafford Main Line • Exton • Malvern Borough • Thorndale	• Avondale Borough • Honey Brook Borough • Oxford Borough • Parkesburg Borough • West Grove Borough
Delaware	• Chester City	• Ardmore • Bryn Mawr • Clifton Heights Borough	• Airport / Lower South • Brookhaven Borough • Broomall	• Aldan • Elwyn • Haverford • Morton • Rosemont	

County	City Centers	Town Centers	Suburban Centers	TOD Opportunity Centers	Village Centers
		• Collingdale Borough • Darby Borough • Folcroft Borough • Glenolden Borough • Havertown • Lansdowne Borough • Linwood / Marcus Hook • Media • Prospect Park / Norwood • Ridley Park Borough • Sharon Hill Borough • Swarthmore Borough • Upper Darby Township • Wayne • Yeadon Borough	• Concordville • Folsom • Springfield • Village Green-Green Ridge • Woodlyn	• Saint Davids • Villanova / Radnor • Wallingford • Wawa	
Montgomery	• Fox Chase / Burholme	• Ambler Borough • Ardmore • Bryn Mawr • Conshohocken • Glenside • Hatboro Borough	• Bala Cynwyd • Collegeville • Fort Washington • Horsham • King Of Prussia • Montgomeryville • Plymouth Meeting	• Elkins Park • Gulph Mills • Oreland • Rosemont • Rydal / Noble • Villanova / Radnor	• Eagleville • Schwenksville Borough • Tri-Borough

County	City Centers	Town Centers	Suburban Centers	TOD Opportunity Centers	Village Centers
		• Jenkintown Borough • Lansdale • Narberth Borough • Norristown / Bridgeport • Pottstown • Spring City / Royersford • Telford / Souderton	• Willow Grove	• Wynnewood	
Philadelphia	• City Avenue / Overbrook • Fox Chase / Burholme • Frankford • Germantown / Mount Airy / Chestnut Hill • Kingsessing • Lawncrest / Oxford Circle • Manayunk / Roxborough • Mayfair / Holmesburg • North Philadelphia • Rhawnhurst / Caster Gardens • River Wards • South Philadelphia		• Airport / Lower South • Bustleton • Morrell Park / Millbrook • Parkwood • Somerton • Torresdale		

County	City Centers	Town Centers	Suburban Centers	TOD Opportunity Centers	Village Centers
	• Southwest Philadelphia • Upper North Philadelphia • West Philadelphia				

Source: DVRPC, 2025.

Table B-6: New Jersey Plan Centers

County	City Centers	Town Centers	Suburban Centers	TOD Opportunity Centers	Village Centers
Burlington		• Burlington City • Palmyra • Riverside Township	• Florence • Larchmont • Moorestown • Mount Holly Township • Mount Laurel / Marlton • Willingboro	• Beverly / Delanco • Bordentown City • Cinnaminson / Riverton • Roebling	• Browns Mills • Medford Lakes Borough • Pemberton Borough
Camden	• Camden City	• Barrington Borough • Collingswood Borough • Gloucester City • Haddon Heights Borough • Haddonfield Borough • Merchantville • Westmont	• Audubon Borough • Bellmawr Borough • Cherry Hill • Echelon • Lindenwold • Mount Laurel / Marlton • Runnemede Borough	• Lindenwold Station • Pennsauken • Woodcrest / Ashland	

County	City Centers	Town Centers	Suburban Centers	TOD Opportunity Centers	Village Centers
			• Stratford Borough		
Gloucester		• Glassboro • Pitman Borough • Woodbury City		• Sewell • Woodbury Heights / Oak Valley / Wenonah	• Paulsboro Borough • Swedesboro Borough • Westville Borough
Mercer	• Trenton City	• Hightstown Borough • Princeton	• Hopewell • Mercerville • Robbinsville • Route 1 Corridor	• Ewing / West Trenton • Princeton Junction	• Hopewell Borough • Lawrenceville • Pennington Borough

Source: DVRPC, 2025.

Policy Strategies

Centers represent priority locations for infill and redevelopment, supporting a mix of uses and increased density. Higher density enables walkable communities and promotes multimodal transportation infrastructure, both of which are priorities for all Center types. Tailored policy strategies for each Center category are outlined below:

Town Centers and City Centers

These Centers serve as regional models for successful development and are positioned to advance:

- Higher-density, mixed-use, and infill development
- Pedestrian and bicycle safety through supportive infrastructure
- Historic preservation and context-sensitive development
- Strategic investment in transit and multimodal transportation integration

Suburban Centers

To evolve toward the functionality and character of Town Centers, Suburban Centers:

- Promote a better jobs-housing balance through:
  - Suburban retrofits
  - Infill ordinances
  - Neighborhood design codes or form-based zoning
  - Mixed-use development and live-work spaces
- Develop a walkable main street by:
  - Investing in Complete Streets infrastructure
  - Implementing traffic calming, road diets, and increased intersection density

- Updating zoning to allow higher-density, mixed-use, and multifamily housing

TOD Opportunity Centers

To support TOD and shift toward Town Center characteristics, strategies for these areas:

- Encourage mixed-use development and increased density through:
  - Zoning reforms to allow a mix of transit-supportive land uses and walkable design
  - Designating commercial main streets and permitting multifamily or "missing middle" housing
  - Adopting Neighborhood Design Codes, TOD zoning overlays, or form-based codes
  - Creating density bonus incentives tied to affordable housing or public realm improvements
- Develop a walkable commercial main street by:
  - Investing in Complete Streets and other pedestrian infrastructure
  - Implementing traffic calming, road diets, and increasing intersection density
- Prioritize transit and multimodal integration to maximize the benefit of existing infrastructure

Village Centers

While not intended for high-density or rail transit development, Village Centers play a critical role in rural areas by concentrating services, jobs, retail, and housing. Strategies to enhance that role include:

- Support mixed-use and higher-density development to reduce rural sprawl through:
  - Missing middle-housing
  - Neighborhood Design Codes or form-based zoning
  - Historic preservation
  - Live-work opportunities
  - Small-scale/artisanal manufacturing
  - Transfer of Development Rights (TDR) programs

Freight Centers

DVRPC also fully updated its freight centers in 2025 using newer data (see Figure B-11). Freight Centers are areas with a high concentration of freight-intensive establishments, freight-intensive employment, freight-related land uses, industrial development, and intermodal freight connectors. They are classified into five specific typologies:

1. **International Gateway**—are core nodes in the regional and national goods movement system and serve as a connection to global markets. They are focused on a single or multiple air or maritime, or port facilities.
2. **Heavy Industrial**—are nodes focused on heavy industrial land uses involved in the manufacturing of goods. They are served by freight rail access and often have additional access to a port terminal, allowing for the movement of bulk or break-bulk source materials.
3. **Distribution & Logistics**—are nodes with a high concentration of regional and national serving distribution and logistics businesses. They are often

located around key highway interchanges with access to both port gateways and consumer markets.

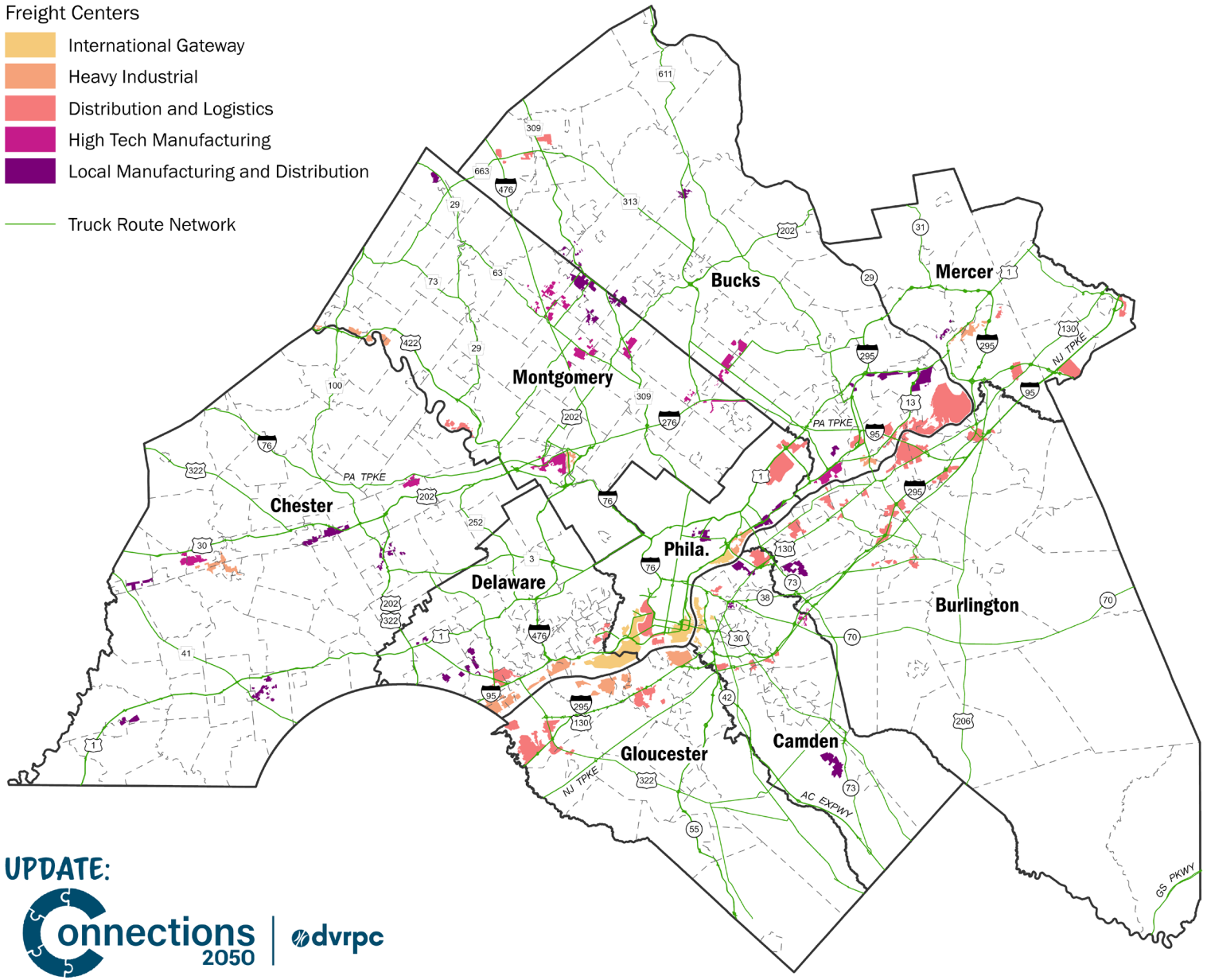
4. **High-Tech Manufacturing**—is focused on advanced manufacturing land uses and businesses such as pharmaceutical, biotechnology, or aviation businesses. They rely less on major freight rail and maritime facilities but are well located relative to highway facilities.
5. **Local Manufacturing & Distribution**—are focused on locally serving small manufacturing and distribution facilities. They are less dependent on prime location near Interstate interchanges but are well served by smaller highway facilities and proximity to consumer populations.

Freight Center typologies help planners, decision-makers, and other users to better understand transportation infrastructure requirements, land use and land development patterns, building types, employment characteristics, and potential community impacts that may exist at each freight center type.

Freight-Intensive Truck Network

Alongside the update to freight centers, DVRPC's Freight Program analyzed regional truck movements and freight centers to create a network of freight-intensive truck corridors, a key part of the upcoming Regional Freight Plan. This network will help planners address local quality-of-life concerns related to freight impacts and clearly illustrate the relationships between economic development, land use, and truck routing. Building upon an existing local framework, the analysis combined data-driven methods with essential input from county and city planners on local context and restrictions.

Figure B-11: Freight Centers



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, 2025.

Environmental Resources

Open space, farmland, soil, water, and natural resources are indispensable to our region and its residents. However, many of these resources are threatened by development. *Update: Connections 2050* recognizes that the loss of these resources does not offer a stable future for humans, and the need to accelerate and coordinate growth management and resource protection activities is urgent.

Land Use Vision

DVRPC's Land Use Vision is key to achieving the region's broad environmental and resource protection goals. The *Update: Connections 2050* Land Use Vision emphasizes Centers-based development and the preservation of agricultural and natural lands. The Land Use Vision divides the region up into four typologies: Infill and Redevelopment areas, Emerging Growth areas, Rural Resource Lands, and the Greenspace Network (see Figure B-12). The overall goal of the Land Use Vision is to concentrate new growth into Emerging Growth and Infill and Redevelopment areas, while preserving the region's Rural Resource Lands and Greenspace Network to protect sensitive natural resource areas, preserve productive agricultural lands, and create linear, connected greenspace corridors that mitigate flooding, improve water quality, and provide access to passive outdoor recreational opportunities for all.

Infill and Redevelopment Areas

These lands account for most of the region's existing development, occupying the full spectrum of land use typologies, from densely developed urban cores to first-generation suburbs to low-density residential suburban subdivisions. They do not, however, include scattered, isolated, or village-scale development in otherwise rural areas. Although these areas are already mostly developed, over the timeframe of this plan they offer a wide array of opportunities for redevelopment and infill development. Such opportunities include vacant parcels, underutilized parcels, parcels that can be repurposed for other uses, and opportunities to increase density in strategic locations.

Emerging Growth Areas

These are typically greenfield (undeveloped) areas in our region's suburban fringes that have been targeted by counties and local governments for new growth. Although they represent "new development," many of these areas are proximate to one or more of our region's designated Centers and should seek to extend the walkable and relatively more compact areas of those Centers.

Greenspace Network

The Land Use Vision aims to link and expand the region's existing protected natural areas into a Greenspace Network, joining together parks, forests, meadows, stream corridors, and floodplains in an interconnected system. The Greenspace Network is based on the twin principles of protecting core natural resource areas and linking them with greenways to create a connected system of naturally-vegetated open space spanning urban, suburban, and rural areas. The goal of the Greenspace Network is to permanently protect unprotected acres in the system through acquisitions, easements, and land use regulations. The network is broken down into just over 100

corridors. Each corridor is named to promote its identity and brand it as a unique preservation project (see Figure B-13 and corresponding list).

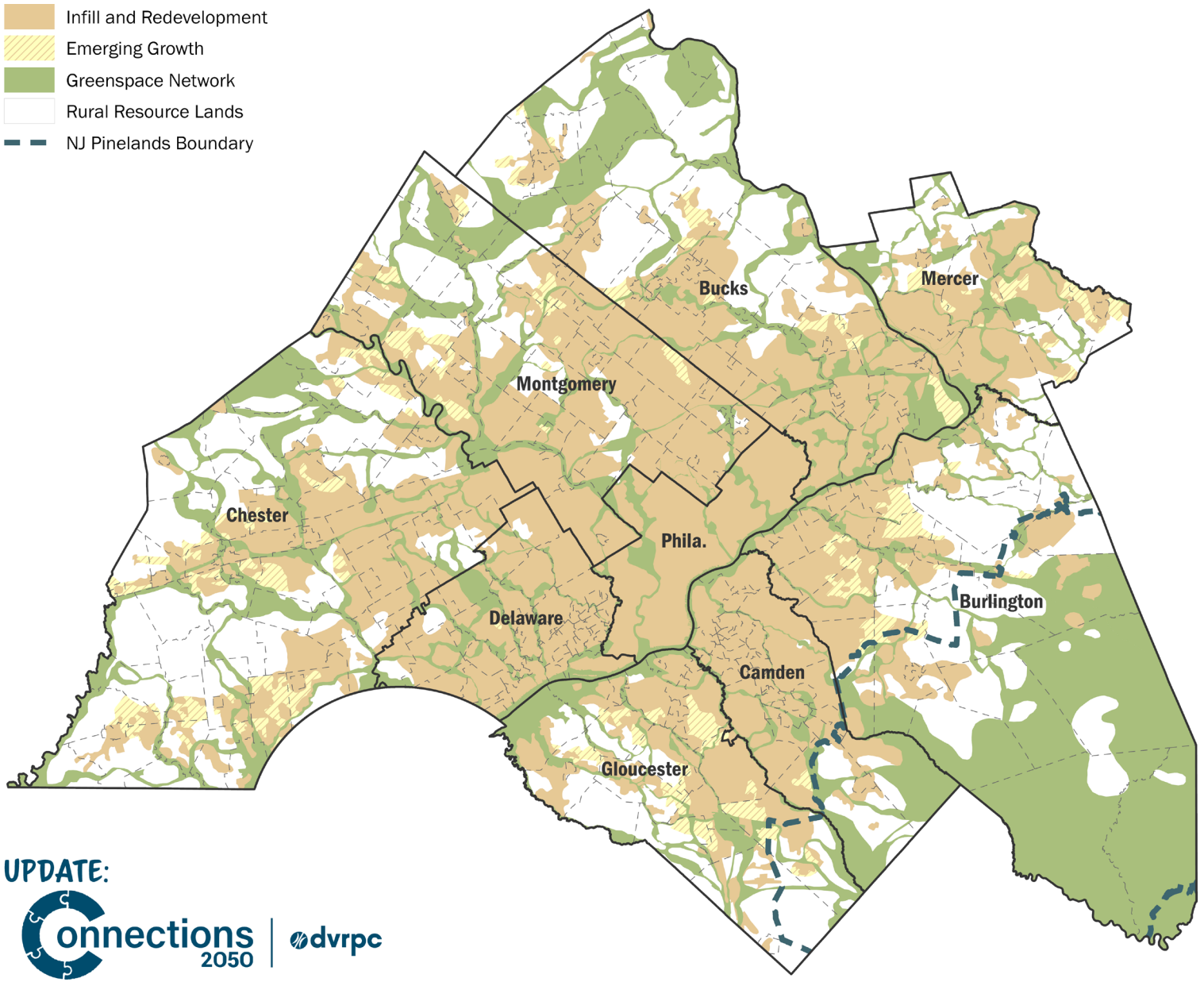
The Greenspace Network is a key for achieving regional high-priority environmental goals, including protecting and improving water quality, maintaining healthy ecosystems, providing access to natural areas and recreational opportunities, mitigating flooding, and building community resilience.

Rural Resource Lands

Rural Resource Lands are predominantly agricultural, natural, and rural areas worthy of heightened preservation efforts by governments and non-profit land trusts. Rural Resource Lands contain villages and scattered low-density development, but they remain mostly agricultural and rural in character. Their integrity should be maintained through strategic acquisitions and easements, land use regulations, good stewardship, and appropriate forms of growth. Rural Resource Lands can accommodate limited growth that is in character with the local context.

Rural Resource Lands comprise all of the region's significant remaining agricultural areas. Protecting these resources is critical to maintaining both the region's rural character and its farming economy. Although farming has always been a dominant economic sector in Greater Philadelphia, it has taken on new importance in recent years with the growing emphasis on locally produced food. The advantages of locally produced food are many, including improved health, better food quality, and lower outlays of resources and materials for processing and transportation. Our region also has highly productive, fertile soils compared to many other parts of the Northeast. These valuable soils underpin the region's agricultural economy, yet are wasted when farmland is converted to housing or other developed uses.

Figure B-12: Land Use Vision



Source: DVRPC, 2025.

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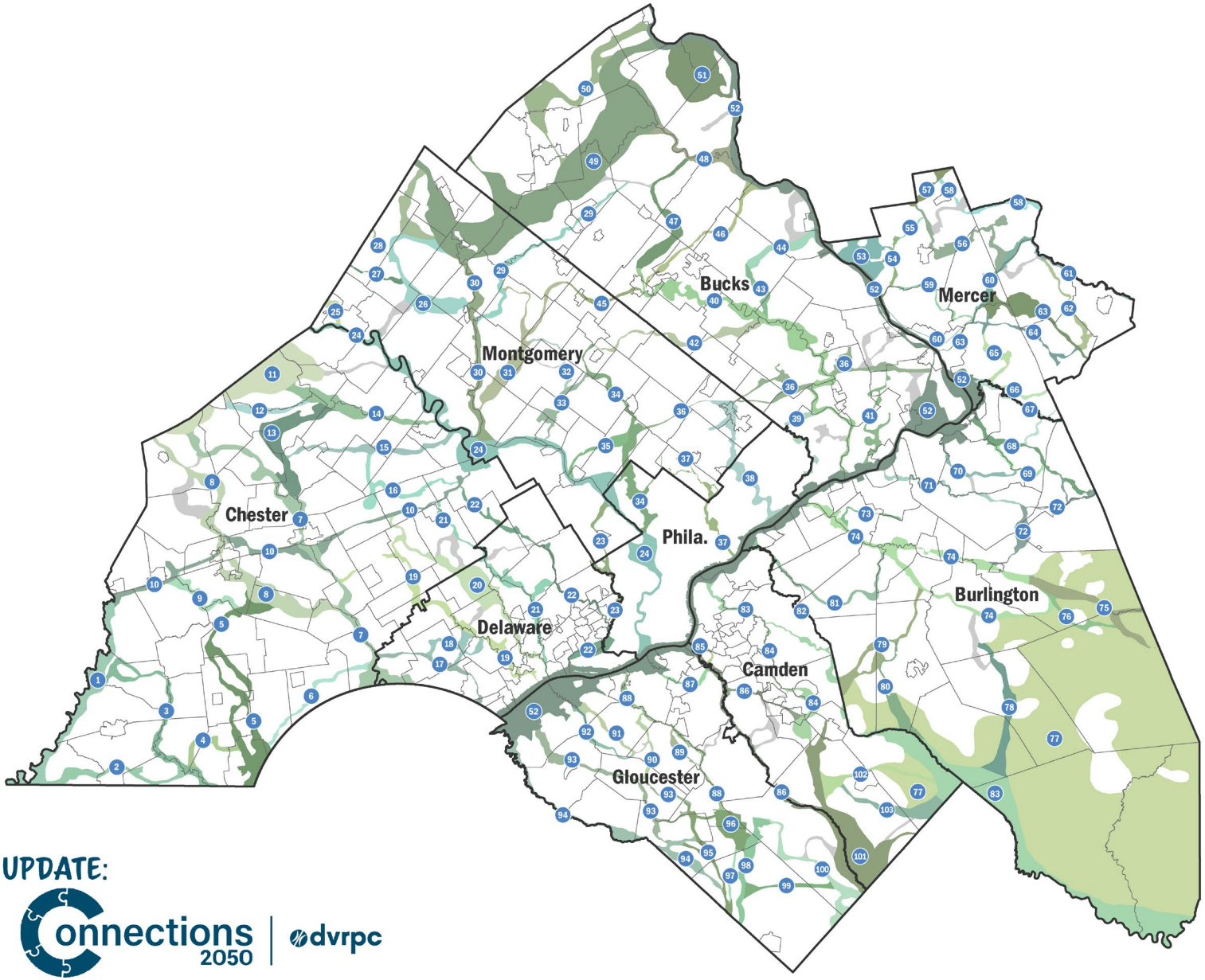
Figure B-13: Greenspace Network



Source: DVRPC, 2025.

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1. Octoraro Creek
2. Serpentine Barrens
3. Big Elk Creek
4. White Clay-Ways Run
5. White Clay Creek-Doe Run
6. Delaware Arc
7. Brandywine Creek
8. West Branch Brandywine Creek
9. Buck Run
10. Great Valley Ridgelines
11. Big Wood Corridor
12. Warwick-Elverson
13. Marsh Creek-Beaver Run
14. French Creek
15. Pickering Creek
16. Valley Creek-Pigeon Run
17. Harvey Run-Naaman's Creek
18. West Branch Chester Creek
19. Chester Creek
20. Ridley Creek
21. Crum Creek
22. Darby Creek
23. Cobbs-Mill Creek
24. Schuylkill River
25. Manatawny Creek
26. Swamp-Deep Creek
27. Minister Creek
28. Middle Creek
29. East Branch Perkiomen Creek
30. Perkiomen Creek
31. Skippack Creek
32. Towamencin Creek
33. Stony Creek
34. Wissahickon Creek
35. Plymouth Meeting
36. Cross County Corridor
37. Tacony-Cresheim Creek
38. Pennypack Creek
39. Poquessing Creek
40. Neshaminy Creek
41. Mill-Queen Anne Creek
42. Little Neshaminy Creek
43. Mill Creek
44. New Hope-Ivyland
45. West Branch Neshaminy
46. Paunnacussing-Pine Run
47. Peace Valley-Deep Run Creek
48. Tohickon Creek
49. North Woods
50. Quakertown-Cooks Creek
51. Tinicum-Nockamixon
52. Delaware River
53. Washington Crossing
54. Jacobs Creek
55. Pennington Mountain
56. Stony Brook
57. North Hopewell
58. North Mercer
59. Shabakunk-Ewing
60. Delaware and Raritan Canal
61. Millstone River
62. Big Bear Brook
63. Assunpink Creek
64. Miry Run
65. Pond Run-Back Creek
66. Doctors Creek
67. Crosswicks Creek
68. Blacks Creek
69. Bacons Run
70. Crafts Creek
71. Assicunk Creek - Annaricken Brook
72. Budd Run-North Run
73. Mill Creek
74. Rancocas Creek
75. Mount Misery
76. Bishpams Mill Creek
77. Pinelands Conservation Areas
78. Batsto-Friendship
79. Southwest Branch Rancocas Creek
80. Haynes Creek
81. Pennsauken-Masons
82. South Pennsauken Creek
83. River to Bay
84. Cooper River
85. Little Timber
86. Big Timber
87. Woodbury Creek
88. Mantua Creek
89. Chestnut Branch
90. Edwards Run
91. Repaupo Creek
92. Pargey Creek
93. Raccoon Creek
94. Oldmans-Reed
95. Still Run (Maurice River)
96. Glassboro Wildlife Management Area
97. Little Ease Run
98. Scotland Run
99. Indian-Faraway
100. Hospitality Branch
101. Great Egg Harbor River
102. Sleeper Branch

Open Space

Between 1930 and 2020, the population in Greater Philadelphia increased by 44 percent, while the amount of land consumed for development increased by 470 percent, resulting in significant losses of farms, fields, forests, and natural areas. This sprawling development pattern negatively impacts the environment, the economy, the transportation network, and our region's character and quality of life. The loss of healthy forested headwaters, riparian buffers, and naturally functioning floodplains, for example, degrades water quality, fragments natural habitats, decreases biodiversity, and makes our communities more susceptible to the impacts of extreme weather.

The consequences of excessive land consumption for local communities are costly: increased flooding; higher costs for clean drinking water; decreases in soil productivity and nutrient cycling; reduced property values; and the loss of local agricultural economies and products. Unmanaged growth and the loss of open space also strain the region's transportation infrastructure, diminish community character, and limit opportunities for personal interaction with nature and green spaces. While land consumption trends have slowed in recent decades, strengthening this trend will require both growth management and open space preservation techniques. Strategic land preservation, market-based conservation, smart growth, and enhanced community design are all needed to slow and stabilize unmanaged growth patterns at the regional scale.

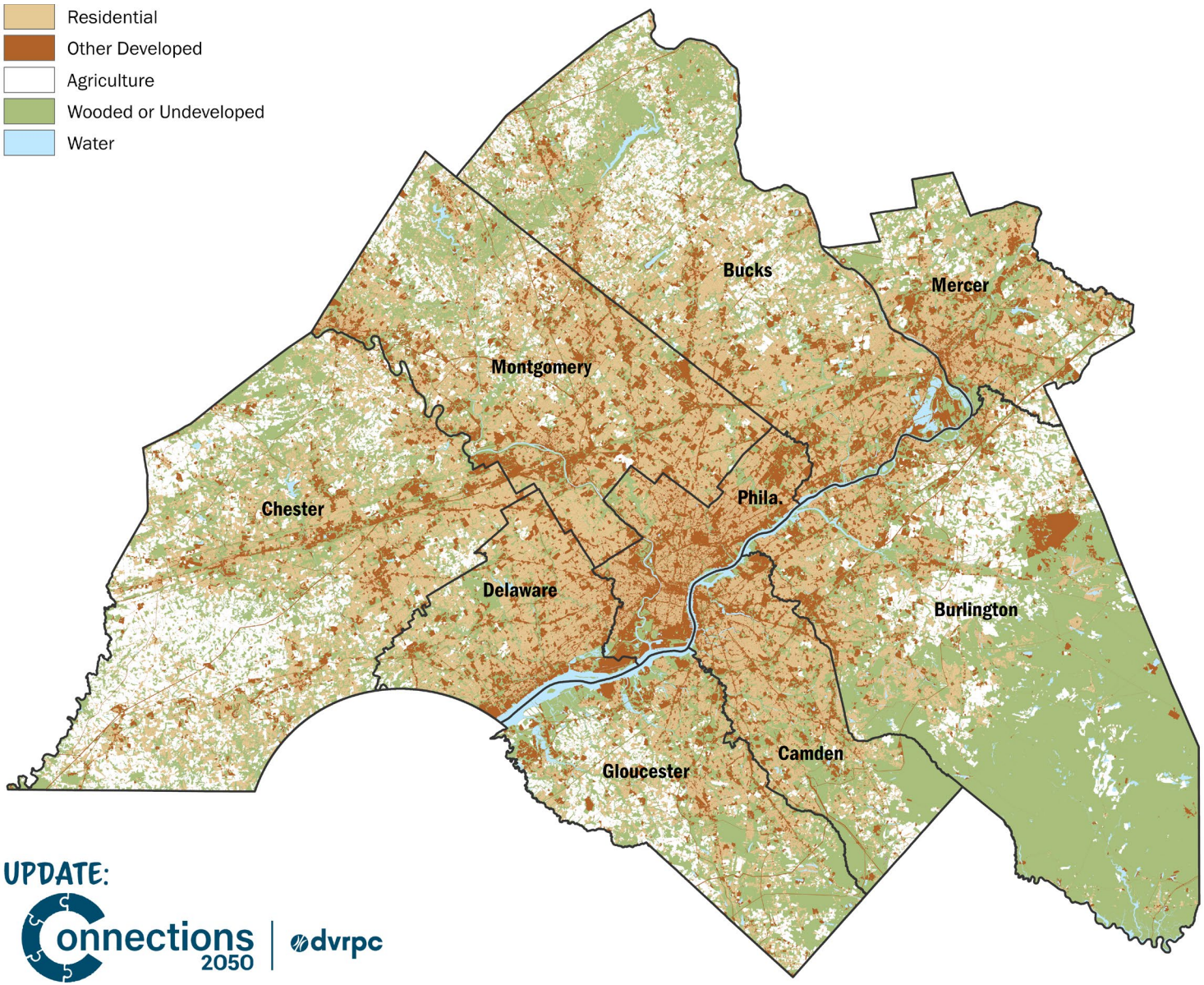
The Plan proposes that at least one million of the region's 2.4 million acres of land be permanently preserved by 2040. With over 640,000 acres of protected lands to date, the region is nearly two-thirds of the way toward meeting this goal. These lands should be strategically located in the region's Greenspace Network and Rural Resource Lands (see Land Use Vision).

Land Use Mapping

DVRPC tracks land use in the region with an inventory that has been collected every five years since 1970 (excluding 1975 and 1985). DVRPC's Land Use in the Delaware Valley, 2023: Enhanced Land Use Data (ADR026) dataset contains 73 different land use subcategories grouped under 13 primary categories, including residential, industrial, transportation, utility, commercial, institutional, military, recreational, agricultural, mining, wooded, undeveloped, and water (see Figure B-14)

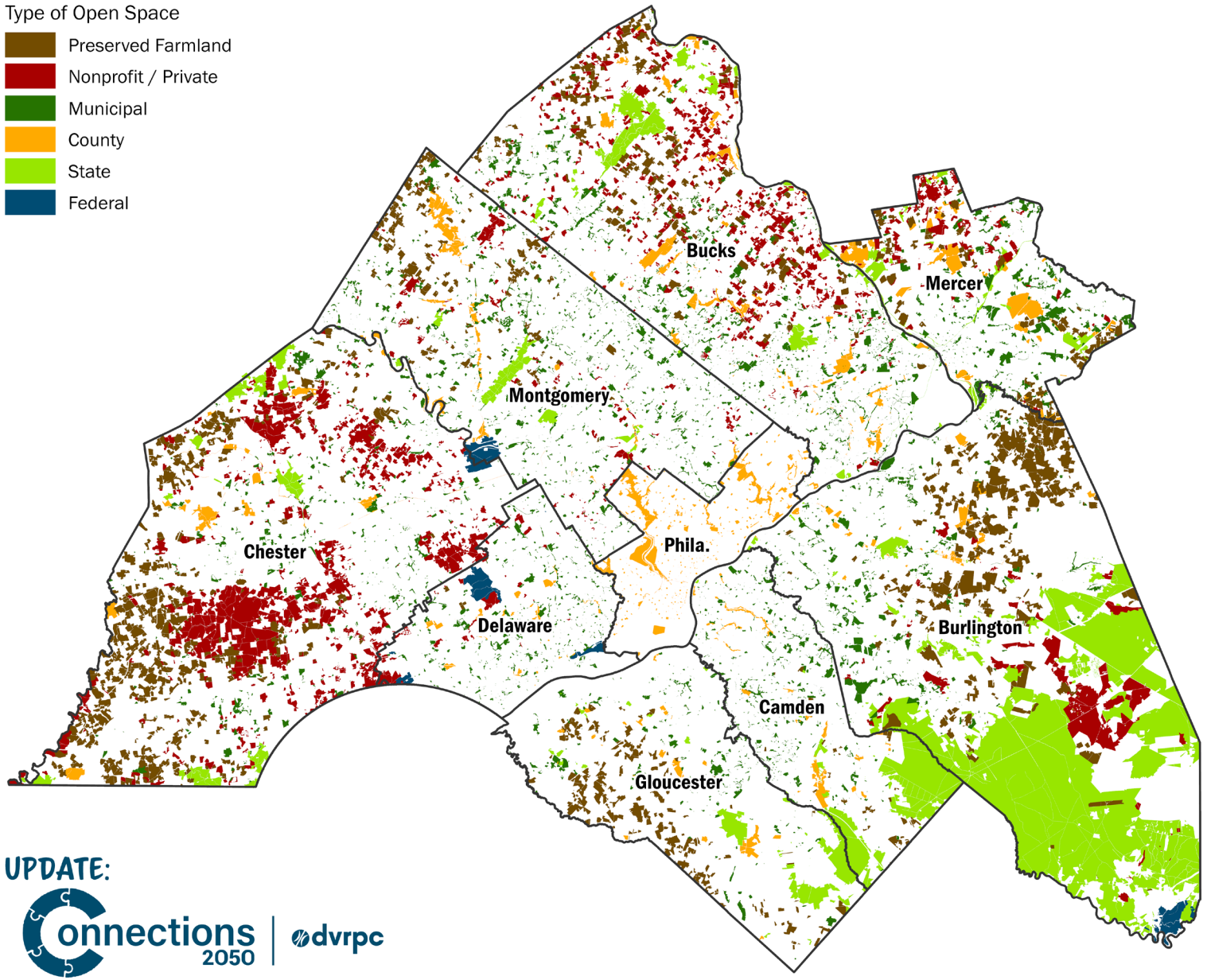
DVRPC maintains an inventory of protected public and private open space to track the region's progress toward meeting its land preservation goals. The inventory tracks all publicly owned open space, preserved farmland, and privately-owned, protected open space. Between 2002 and 2024, the region has steadily increased its inventory of protected public and private open space. Currently, 26 percent of Greater Philadelphia's total land area is protected open space (see Figure B-15 and Table B-7).

Figure B-14: 2023 Land Use



Source: DVRPC, 2023.

Figure B-15: Protected Open Space



Source: DVRPC, 2025.

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Table B-7: Protected Open Space Inventory, 2025

County	*Public Protected Open Space*					*Private Protected Open Space*		*Total Protected*	*County Total Land Area*		*Percent of Land Area*
	Federal	State	County	Municipal	Total Public	Non-Profit/ Private	Preserved Farmland	Total Private			
Burlington	2,651.90	151,803.64	2,678.58	12,314.21	169,448.33	14,497.52	36,674.42	51,171.94	220,620.27	523,911.00	42.11%
Camden	0.00	20,666.24	3,044.26	5,701.24	29,411.74	6.84	2,837.74	2,844.58	32,256.32	145,673.00	22.14%
Gloucester	0.00	10,081.50	2,451.17	5,745.74	18,278.41	788.86	15,143.00	15,931.86	34,210.27	215,417.00	15.88%
Mercer	0.00	4,598.16	8,806.42	11,591.56	24,996.14	7,644.84	9,410.20	17,055.04	42,051.18	146,340.00	28.74%
NJ Subregion	**2,651.90**	**187,149.54**	**16,980.43**	**35,352.75**	**242,134.62**	**22,938.06**	**64,065.36**	**87,003.42**	**329,138.04**	**1,031,341.00**	**31.91%**
Bucks	0.00	12,865.05	9,370.56	17,860.38	40,095.99	27,719.81	19,707.80	47,427.61	87,523.60	397,831.00	22.00%
Chester	1,290.22	9,579.68	5,461.27	14,169.82	30,500.99	59,001.47	48,732.80	107,734.27	138,235.26	485,732.00	28.46%
Delaware	3,794.80	2,600.52	1,745.94	5,520.26	13,661.52	3,139.98	203.99	3,343.97	17,005.49	122,001.00	13.94%
Montgomery	2,155.55	4,979.56	5,272.37	15,937.83	28,345.31	6,381.65	10,759.49	17,141.14	45,486.45	311,737.00	14.59%
Philadelphia	372.44	300.82	9,852.11	0.00	10,525.37	673.55	0.00	673.55	11,198.92	91,178.00	12.28%
PA Subregion	**7,613.01**	**30,325.63**	**31,702.25**	**53,488.29**	**123,129.18**	**96,916.46**	**79,404.08**	**176,320.54**	**299,449.72**	**1,010,648.00**	**21.26%**
Regional Total	**10,264.91**	**217,475.17**	**48,682.68**	**88,841.04**	**365,263.80**	**119,854.52**	**143,469.44**	**263,323.96**	**628,587.76**	**2,041,989.00**	**25.76%**

All figures in acres. Source: DVRPC, 2025.

Water Quality and Stormwater Runoff

In natural areas, such as forests, most rainfall soaks into the ground, where it is used by trees and other vegetation or is filtered through the soil to become groundwater. Only a small amount actually runs off land surfaces into waterways. In urban and built-up suburban areas, rooftops, streets, sidewalks, parking lots, and even compacted soils associated with lawns prevent rainwater from soaking into the ground. Instead, water drains off these impervious surfaces and is carried quickly by drains and pipes to rivers and streams. This stormwater runoff leads to non-point source pollution and increases the volume and velocity of stormwater, thereby eroding and enlarging stream channels and increasing sediment loads. The end result is impaired water quality and degraded stream health.

It is also important to effectively manage stormwater and improve water quality in urban and suburban settings. Techniques to manage stormwater in developed landscapes include conservation landscaping; naturalized retention basins; turf reduction; vegetated riparian buffers; and engineered soil-vegetation systems commonly referred to as Green Stormwater Infrastructure (GSI), which soak up and slowly infiltrate stormwater by mimicking natural processes. GSI includes techniques such as rain gardens, green roofs, tree trenches, stormwater planters, and vegetated bioswales. GSI also provides other benefits like improving air quality, greening the community, ameliorating the urban heat island effect, and fostering a sense of place.

Whether part of a sophisticated, engineered GSI approach or simply planted along a public right-of-way, street trees are one of the most effective forms of stormwater management and "greening" in an urban environment. One hundred mature tree crowns intercept approximately 100,000 gallons of rainfall per year. Translated into dollars, a single street tree produces $90,000 of direct benefits, such as stormwater retention and air quality improvements, over its lifetime

Historic Resources and Landscapes

Greater Philadelphia's rich past is reflected in the variety and number of historic and cultural resources throughout the region. From indigenous archaeological sites to early Swedish settlements, and from the colonial-era row houses of Society Hill to the hundreds of pre-20th century towns and villages that dot our landscape, Greater Philadelphia's history is incorporated into, and enriches the fabric of, present-day life. The wealth of resources is underscored by the number of historic landmarks, sites, buildings, and districts on the National Register of Historic Places, state- and nationally recognized historic landscapes and heritage areas, sites protected through local historic designations, and countless other historic buildings and resources that lack any formal designation. These resources often form the bedrock of a community's character and identity, and are crucial in establishing the "sense of place" that is simultaneously a key ingredient and outcome of Centers-based development.

Despite sustained efforts by non-profit organizations, government agencies, and local governments to identify, protect, preserve, rehabilitate, and restore the region's historic and cultural resources, these resources continue to be threatened by demolition, neglect, encroaching sprawl, incompatible land uses,

poor planning, and insensitive design. These negative forces are often even more dangerous and destructive in communities of color where histories of marginalized communities have no existing system of preservation and support, and fewer capital resources prohibit preservation and restoration efforts. The loss of these resources undermines key aspects of the Centers-based development philosophy, such as utilizing existing infrastructure, creating and celebrating a community's unique character, protecting rural and agricultural landscapes, and enhancing human-scaled development patterns that promote walking and biking as viable transportation alternatives.

Transportation projects, in particular, can impair or destroy historic resources through road widenings, bridge replacements, realignments, and capacity enhancements, as has been experienced in communities across the region. In some instances, transportation assets, like bridges, are also historic. In these cases, targeted maintenance and care are needed to ensure their preservation. To ameliorate impacts on historic resources, federally funded transportation agencies must follow federal historic preservation laws and plan their projects accordingly. As part of this process, state historic preservation offices work with federal agencies to identify historic resources and avoid or minimize any potential adverse effects during the planning, permitting, design, and construction of federally funded and licensed projects. Since 2005, federal transportation regulations have established formal consultation requirements for MPOs and state DOTs to work with environmental, regulatory, and historic resource agencies in the development of long-range transportation plans. Additionally, DVRPC continually works with resource agencies and local governments to explore how transportation projects and local plans can better support, rather than impair, historic preservation and revitalization efforts.

Appendix C—Federal Performance Measures

APPENDIX C Federal Performance Measures

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Background

Federal legislation, starting with MAP-21 and continuing in the subsequent FAST Act and IIJA, requires state departments of transportation (DOTs) and metropolitan planning organizations (MPOs) to establish and use a performance-based approach in transportation decision-making to achieve national goals. Performance-Based Planning and Programming (PBPP) is a systematic, data-driven approach to transportation decision-making, ensuring that resources are allocated efficiently to achieve the identified performance outcomes.

The goal of PBPP is to ensure targeted investment of federal transportation funds by increasing accountability and transparency and providing better investment decisions that focus on key outcomes related to the national performance goals:

1. Safety
2. Infrastructure preservation
3. Congestion reduction
4. System reliability
5. Freight movement and economic vitality
6. Environmental sustainability
7. Reduced project delivery delays

State DOTs, MPOs, and transit providers identify and track the desired performance outcomes through Transportation Performance Management (TPM). TPM includes tracking performance measures, setting data-driven targets for each measure, and selecting projects to help meet those targets. The FAST Act and IIJA also require that the TIP include a description of its anticipated effect toward achieving the established performance targets, linking investment priorities to those performance targets.

The FHWA has established three performance measures for roadway performance. The three performance measures are:

1. Roadway Safety (Performance Measure Rule 1 [PM1]);
2. Bridge and Pavement Condition (Performance Measure Rule 2 [PM2]); and
3. System Performance (Performance Measure Rule 3 [PM3]), which evaluates system reliability, freight reliability, and the federal Congestion Mitigation and Air Quality (CMAQ) program.

State DOTs are required to establish targets for each performance measure and report progress toward these targets, except for the CMAQ program Urban Area (UA) measures, where DOTs and MPOs collaborate to develop the unified target. MPOs, such as DVRPC, must either support the respective state DOT and transit operator targets or create their own regional targets. As a bi-state MPO, DVRPC must plan and program projects to contribute toward separate sets of targets: one set for each state in which the Planning Area boundary extends. DVRPC has agreed to support the PM2 and PM3 targets set by the Pennsylvania Department of Transportation (PennDOT) and the New Jersey Department of Transportation (NJDOT), respectively. Written procedures were developed between the state DOTs and MPOs regarding the coordination of TPM activities.

For PM1, Roadway Safety, DVRPC has established its own target in alignment with DVRPC's Regional Vision Zero 2050 goal. If an MPO adopts regional targets, it must adopt targets that cover the entire MPO region.

There are multiple performance measures established within the three performance measure groupings. Each performance measure grouping has different requirements for reporting and updating performance targets. Table C-1 summarizes these measures, the area for which they are being reported, the facilities included, and the update frequency.

On the transit side, the FTA has established performance measures for Transit Asset Management (TAM) and Transit Safety. Table C-2 has a summary of these measures. FTA regulations establish a strategic and systematic process of operating, maintaining, and improving public capital assets effectively through their life cycle. The performance management requirements are a minimum standard for transit operators.

DVRPC has agreed to support the targets for transit assets and transit safety set by the region's transit operators: the Southeastern Pennsylvania Transportation Authority (SEPTA), NJ TRANSIT, and DRPA/PATCO. Additionally, DVRPC has a memorandum of agreement with the respective transit agencies that outlines the requirements and responsibilities under the TPM process. Transit agencies are required to submit their performance targets to the National Transit Database (NTD) annually, as well as a supporting narrative that reports progress towards these targets

Table C-1: FHWA Performance Measures Summary

Goal Area	Performance Measure	Geography	Network	Reporting Frequency
PM1 Roadway Safety	Number of Fatalities	Statewide or Regional	All Roads	Annual
	Fatality Rate (per 100 million VMT)			
	Number of Suspected Serious Injuries			
	Suspected Serious Injury Rate (per 100 million VMT)			
	Number of Non-Motorized Fatalities and Suspected Serious Injuries			
PM2 Bridge and Pavement Condition	Good Pavement Lane Miles	Statewide or Regional	Interstates and National Highway System (NHS)	Two-Year Interim Target, Four-Year Target
	Poor Pavement Lane Miles			
	Good Bridge Deck Area		NHS	
	Poor Bridge Deck Area			
PM3 System Performance	Person Miles Traveled with Reliable Travel Times (%)	Statewide or Regional	Interstates and NHS	Two-Year Interim Target, Four-Year Target
	Truck Travel Time Reliability Index		Interstates	
	Percentage Non-SOV Travel	Urban Area (UA) with a population over 200,000	All UAs	
	Annual Hours of Peak Hour Excessive Delay (PHED) per Capita		All NHS roads within UAs, AM and PM Peak Periods	
	CMAQ pollution reduction outcomes	Statewide and Regional	CMAQ Projects	

Source: DVRPC, 2025.

Table C-2: FTA Performance Measures Summary

Goal Area	Performance Measure	Assets/Geography	Reporting Frequency
Transit Assets	Percentage of Rolling Stock Meeting or Exceeding the Useful Life Benchmark	Revenue Vehicles	Annual
	Percentage of Support Equipment Meeting or Exceeding the Useful Life Benchmark	Non-Revenue Vehicles	
	Percent of Facilities Rated Below 3 on the TERM Scale	Passenger, Administrative, and Maintenance Facilities	
	Percent of Track Segments with Performance Restrictions	Rail Track	
Transit Safety	Fatalities (Total and Number per Vehicle Revenue Mile)	Entire Transit Agency Service Area	Annual
	Injuries (Total and Number per Vehicle Revenue Mile)		
	Safety Events (Total and Number per Vehicle Revenue Mile)		
	System Reliability (Mean Distance in Miles between Major Service Failures)		
	Assaults on Transit Workers (Total and Number per Vehicle Revenue Mile)		

Source: DVRPC, 2025.

Historical data for the metrics tracked through TPM are available on DVRPC's Tracking Progress website. [22] *Tracking Progress* is an interactive dashboard for exploring regularly updated data to gauge our progress toward achieving the vision established in DVRPC's long-range plan. Each indicator includes a time series analysis to track data trends at different scales, including the regional level, county level, and by UA or transit agency, depending on the metric. The dashboard tracks actual performance for each of the performance measures via the following metrics:

- Safety
- Bridge Conditions
- Pavement Conditions
- System Reliability
- Transit Conditions
- Transportation Safety

The following sections of this Appendix provide more information on each performance measure and its associated targets, as they pertain to the region. For more information about the development and implementation of TPM policy and rulemaking, see www.fhwa.dot.gov/tpm. To view the latest TPM targets and performance for DVRPC, visit www.dvrpc.org/tpm.

[22] *Tracking Progress*, Delaware Valley Regional Planning Commission, accessed June 8, 2025, www.dvrpc.org/trackingprogress/

Roadway Performance Measures

PM1: Roadway Safety

Targets and Reporting Requirements

PM1 Roadway Safety includes five performance measures:

- Number of Fatalities
- Annual Fatality Rate, per 100 million Vehicle Miles Traveled (VMT)
- Number of Suspected Serious Injuries
- Suspected Serious Injury Rate, per 100 million VMT
- Number of Non-Motorized Fatalities and Suspected Serious Injuries

Targets are updated annually and measure performance for all roads in a region or state. Targets are reported using five-year rolling averages, with baseline data projected to a two-year target. Current targets and performance data can be found on DVRPC's TPM website under the Roadway Safety tab.[23]

If an MPO adopts regional targets, it must submit a progress report to the respective state DOT. FHWA will determine whether a state has met or made significant progress toward its safety performance targets. A state is considered to have met or made significant progress when at least four out of the five safety performance targets are met or the actual outcome for the

[23] Delaware Valley Regional Planning Commission. *Transportation Performance Management: Highway*. www.dvrpc.org/tpm/?indicator=highway.

safety performance target is better than baseline performance. New Jersey and Pennsylvania have not met or made significant progress towards their previous roadway safety targets. The penalty for not meeting targets or making significant progress is that the state DOT must:

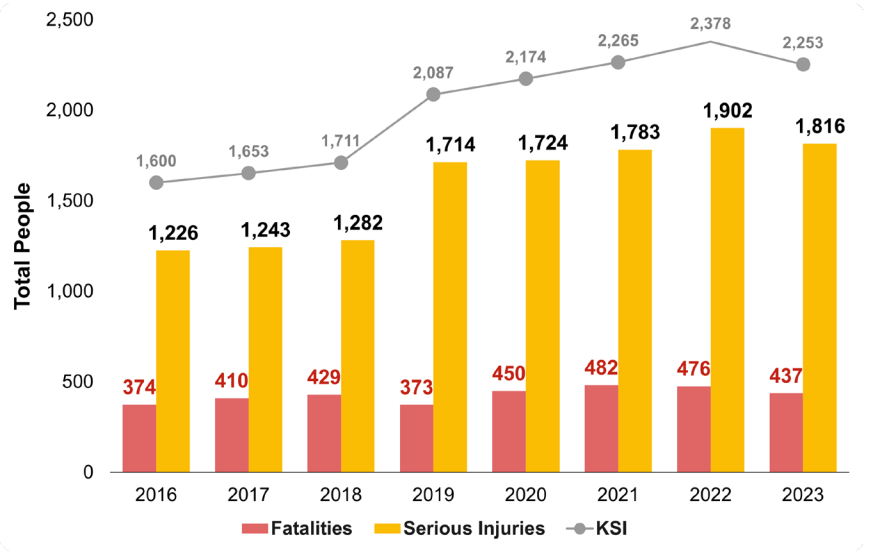
- Submit a Highway Safety Improvement Program (HSIP) Implementation Plan.
- Use obligation authority equal to the HSIP apportionment for the prior year, only for highway safety projects.

Trends

The metric most commonly used to measure roadway safety is "people killed or suspected of being seriously injured" (KSI), which refers to the total number of individuals who either died or sustained severe injuries in a traffic collision. KSI is promoted by FHWA and utilized by both NJDOT and PennDOT.

Regionally, the total KSI on roadways has been increasing overall in the past decade. In 2023, KSI totaled 2,253 people in the region. This was lower than the region's peak of 2,378 in 2022, but notably higher than the 2010s, when this number was consistently below 2,000. The region has experienced a similar upward trend in both KSI per 100,000 people and KSI per 100 million VMT, with a significant portion of this increase attributable to the 2019 change in the definition for suspected serious injuries.

Figure C-2: KSI On Roadways in the DVRPC Region



Source: DVRPC, 2025.

DVRPC and State DOT Efforts Towards PM1 Targets

Update: Connections 2050 aims to direct 5.9 percent of total roadway revenues in Pennsylvania and 2.0 percent in New Jersey toward substantive safety improvements—projects that go beyond existing design standards to address locations with a high number of crashes and advance Vision Zero goals. While these targeted investments are a smaller share of total roadway funding, they are designed to deliver outsized safety benefits. Most reasonably anticipated roadway funds will be directed toward system preservation projects (70.1 percent in Pennsylvania and 54 percent in New Jersey), which will also enhance safety by modernizing infrastructure to meet current design standards and improve overall roadway condition. For a

list of TIP-funded projects related to Roadway Safety, see chapter four of the New Jersey and Pennsylvania TIPs.

DVRPC has incorporated the Regional Vision Zero policy into the work of the Regional Safety Task Force (RSTF), reframed to embrace FHWA's safe system approach. These holistic changes help to advance our safety culture and increase the priority of safety initiatives. In 2023, DVRPC launched the *Regional Vision Zero 2050* program initiative, funded by a Safe Streets and Roads for All (SS4A) grant. This effort involves close coordination with county-partner sub-awardees to develop a plan that facilitates collaborative engagement with municipal partners. DVRPC continues to include crash analyses in our work program projects to advance substantive infrastructure safety improvements. The DVRPC region has received numerous SS4A grants over the short life of this program. This includes two grants for DVRPC, as well as grants for several counties and many municipalities.[24]

DVRPC has developed a Regional High Injury Network (RHIN), the result of a data-driven process designed to show where KSI crashes occurred, and where bicyclists and pedestrian crashes occurred, both using reportable crash data. DVRPC published the RHIN in advance of the Regional Vision Zero Safety Action Plan release to support local safety planning.

The *Transportation Safety Analysis and Plan* (TSAP) is the regional safety planning document informing safety work across the Greater Philadelphia area. Close collaboration with partners helps to raise the profile of regional safety needs and connects them to funding opportunities.

In Pennsylvania, a road diet network screening analysis for PennDOT District 6-0 has been completed, and staff continue to screen roadway maintenance plans for Complete Streets facility opportunities as part of the PennDOT Complete Streets Resurfacing program (formerly the Bicycle Friendly Resurfacing program). In the City of Philadelphia, two High Injury Network (HIN) safety corridor studies have been completed and have received federal implementation funding, while one additional corridor safety study is ongoing. Additionally, in partnership with the City of Philadelphia, DVRPC explored the possibility of a context-based speed limit setting to address speeding-related crashes on urban arterials.

The City of Philadelphia regularly releases a five-year *Vision Zero Action Plan*. The Action Plan guides Philadelphia's traffic safety initiatives and is accompanied by a Capital Plan, which focuses on potential safety solutions for priority corridors and intersections on the City's HIN.

In New Jersey, DVRPC-led safety planning efforts include Road Safety Audits (RSAs) covering all four counties, funded by NJDOT. The completed RSAs are now advancing into the HSIP Local Safety Program application process. In Trenton, this has included a *Complete Streets Design Handbook*, as well as various published and upcoming plans relating to the bike network, trails planning, and Vision Zero. Other studies include *the Brown Mills*

[24] For a list of competitive grant awards in the DVRPC region, see www.dvrpc.org/pdf/summaryofiijaawardstothedvrpc%20region.pdf.

Bicycle and Pedestrian Action Plan and the *Harrison Avenue Pedestrian Road Safety Audit*.

PM2: Roadway Infrastructure Condition

Targets and Reporting Requirements

PM2 Bridge and Pavement Condition measures the performance of:

- Interstate Pavement Infrastructure
- Non-Interstate National Highway System (NHS) Pavement Infrastructure
- NHS Bridge Infrastructure

Performance is measured in terms of the percentage of pavement lane miles or bridge deck area in "good" condition and "poor" condition.

FHWA has set standards that categorize pavement and bridge conditions as good, fair, or poor. Pavement condition is determined by specific measures, which include the International Roughness Index (IRI), cracking, rutting, and faulting. Bridge condition is based on ratings given to the bridge deck, superstructure, and substructure components during regular inspections using National Bridge Inventory (NBI) standards. If any of the components of a structure qualify as poor, the entire bridge structure is deemed poor. All components of the bridge structure must have a good rating for the structure to be deemed in good repair. Bridge condition performance measures are calculated by summing the deck area of bridges in "good" and "poor" condition and dividing by the total deck area of all NHS bridges. Poor condition does not mean the bridge is unsafe to use. Both PennDOT and NJDOT will take necessary action to restrict heavy-weight vehicles or close a bridge to ensure safety.

State DOTs must establish pavement targets, regardless of ownership, for the full extent of the Interstate and non-Interstate NHS.[25] State DOTs must establish targets for all bridges carrying the NHS, which includes on- and off-ramps connected to the NHS within a state, and bridges carrying the NHS that cross a state border, regardless of ownership.

DOTs and MPOs must then report on performance and set two- and four-year expected performance targets. Current targets and performance data can be found on DVRPC's TPM website under the Bridge and Pavement Condition tab.[26]

Federal regulations require DOTs to (1) submit a Transportation Asset Management Plan (TAMP) that, at a minimum, forecasts asset deterioration, determines costs and benefits over an asset's life cycle, and identifies short- and long-term budget

[25] The NHS was designated in 1995 and expanded in 2012. It contains nearly 221,000 miles of roadway across the U.S., including all interstates and principal arterials, the Strategic Highway Network for defense purposes, and intermodal connectors, which are roads connecting the NHS to ports, airports, rail terminals, and pipeline terminals. The NHS covers just 5.3 percent of the nation's roads, but it carries about 55 percent of all traffic.

[26] Delaware Valley Regional Planning Commission. Transportation Performance Management: Bridge & Pavement Condition. www.dvrpc.org/tpm/?indicator=bridgepavement.

needs; and (2) produce a recommended program that is financially constrained.

The federal Infrastructure PM Rule requires that less than five percent of Interstate lane miles be in poor condition to meet the federal threshold for pavement condition. If pavement conditions on the Interstate system fail to meet the federal minimum condition thresholds in the most recent year of the State biennial report, the state DOT must comply with the provisions outlined in 23 USC 119(f) for the subsequent fiscal year. The State must:

- Use obligation authority to transfer a portion of State Transportation Planning (STP) funds to the National Highway Performance Program (NHPP) for maintenance projects to address Interstate pavement conditions.
- Submit a TAMP that describes actions the state will take to meet or make significant progress toward meeting its targets. The TAMP should guide the state's project decisions to meet or make substantial progress toward meeting its infrastructure performance targets in subsequent years.

If a state has not met or made significant progress toward meeting its targets on the non-Interstate NHS system, the state DOT must submit a TAMP that describes actions the state will take to meet or make significant progress toward meeting its targets. The TAMP should guide the state's project decisions to meet or make significant progress toward achieving its infrastructure performance targets in subsequent years.

The federal Infrastructure PM Rule requires that no more than 10 percent of the total deck area of bridges on the NHS be considered structurally deficient to meet the federal threshold for bridge condition. If a state has not met the federal threshold for bridge conditions for three consecutive years, the state DOT must obligate and set aside NHPP funds for eligible NHS bridge projects. The set-aside will remain in effect until the State meets the threshold of less than 10 percent of bridge deck area classified as structurally deficient.

Trends

In 2023, 4.2 percent of the region's NHS pavement lane miles were in poor condition, according to the PM2 metric, which is one percentage point lower than in 2020. Just 0.5 percent of the region's Interstates were in poor condition in 2023, down slightly from one percent in 2020. Five percent of non-Interstate NHS pavement was in poor condition in 2023, down slightly from six percent in 2020.

Over the last two decades, the region has made significant progress in improving bridge conditions. Since peaking at nearly 18 percent in 2003, deficient deck area has decreased to just below 6 percent in 2023—a 62 percent drop in the total deficient deck area. The total number and deck area of deficient bridges has decreased steadily.

DVRPC and State DOT Efforts Towards PM2 Targets

The Greater Philadelphia region remains committed to preserving and maintaining pavement and bridge infrastructure. The current TIP and DVRPC Long-Range Plan continue to emphasize analysis related to transportation system

preservation needs and funding, aligning with the support of pavement and bridge condition performance targets. This, in turn, informs the fiscally constrained list of projects included in the Long-Range Plan and TIP. For a list of TIP-funded projects related to Bridge and Pavement Condition, see chapter four of the New Jersey and Pennsylvania TIPs.

NJDOT's TAMP reviews the current state of physical assets; identifies objectives for asset condition and performance; analyzes future conditions under different investment levels; determines the best investment strategies for assets across their life cycle, given the investment level; and considers risks to accomplishing the objectives and implementing planned investment strategies.

PennDOT's pavement condition targets are consistent with its asset management objectives to maintain the system at the desired state-of-good-repair (SGR), manage for the Lowest Life-Cycle Cost (LLCC), and achieve national and state transportation goals. LLCC is a tool to determine the best option by considering all transportation agency expenditures and user costs throughout the life of an alternative, not just the initial investment. PennDOT's RoadCare pavement program can project how pavement conditions will decline over time, identify when preservation projects are needed, and estimate their associated costs. As a result, it can project future pavement conditions given different investment levels. Likewise, PennDOT's BridgeCare software can project future bridge projects and conditions at various investment levels. Both programs utilize an LLCC approach. PennDOT is working on a companion program, Project Builder, which will identify corridors in need of preservation, rather than focusing on individual facilities, pavement, and bridges in silos.

PM3: System Performance

Targets and Reporting Requirements

PM3 measures roadway system reliability, freight reliability, and performance of the Congestion Mitigation and Air Quality (CMAQ) program. Current targets and performance data can be found on DVRPC's TPM website under the System Performance tab.[27] The measures and metrics include:

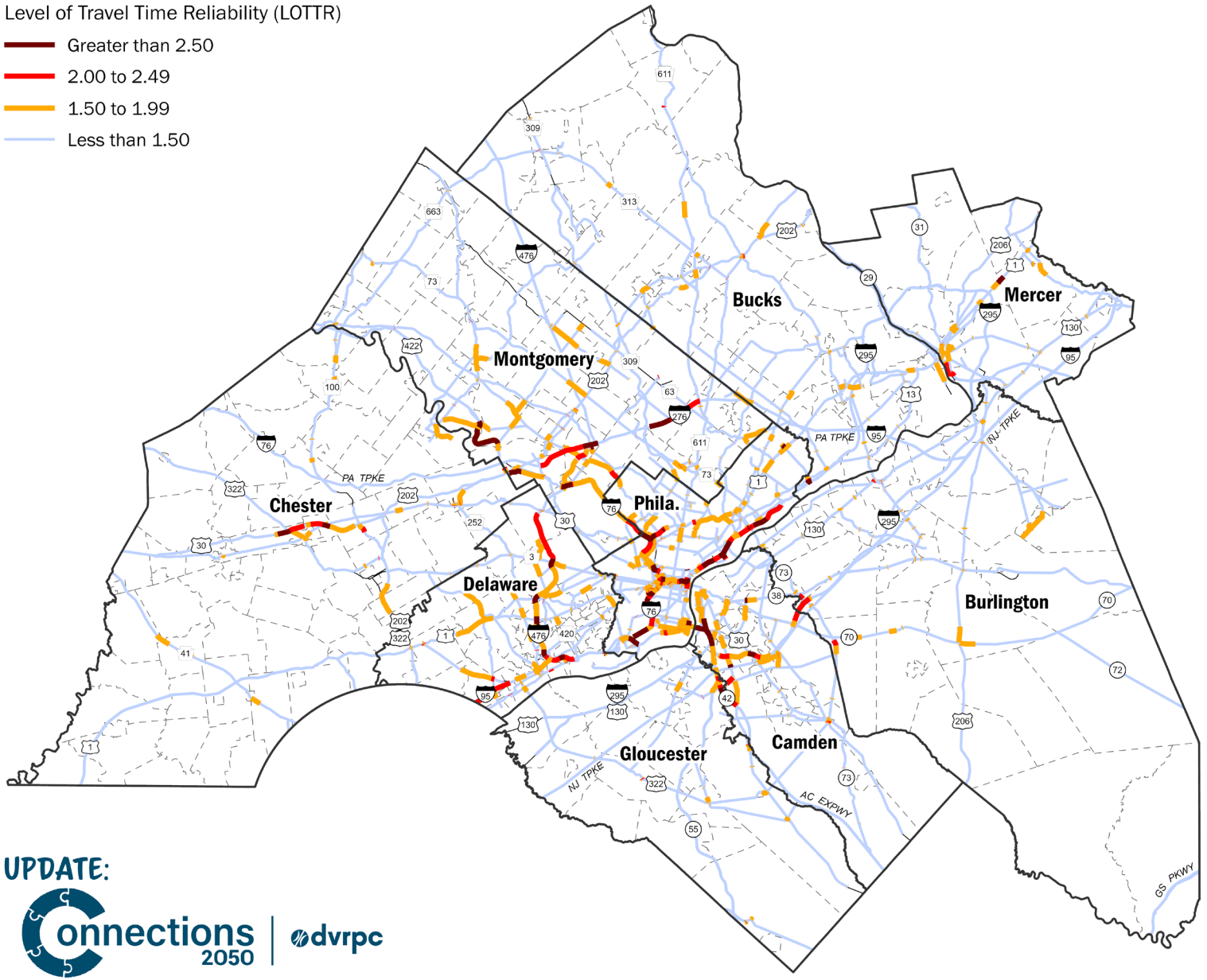
- **Roadway System Reliability**: Includes two reliability measures, one each covering the Interstate System and the non-Interstate National Highway System (NHS). Reliability is measured as Level of Travel Time Reliability (LOTTR), which indicates the percent of person miles traveled that are reliable on the Interstate and non-Interstate systems within a region. Travel times, VMT, and average vehicle occupancy are factored into this reliability measure to calculate the percentage. LOTTR is measured during four peak travel periods, which include peak daytime periods and weekend periods. LOTTR indicates roadway travel time reliability measured by the ratio of the 80th percentile travel time to a "normal" travel time (50th percentile). Any roadway segment with

[27] Delaware Valley Regional Planning Commission. *Transportation Performance Management: System Performance*.

an LOTTR value of 1.50 or more is considered unreliable (see Figure C-2).

- **Freight Reliability:** Freight reliability is measured for the Interstate system only, using a Truck Travel Time Reliability (TTTR) metric. State DOTs must establish a single index for the Interstate system in the state for five peak hour travel periods, which include peak daytime periods, an overnight period, and weekend periods. The TTTR indicates the reliability of the Interstates for freight movement, measured by the ratio of the 95th percentile travel time to a "normal" travel time (50th percentile). Unlike LOTTR, there is no threshold established for unreliability; the higher the index, the more unreliable (see Figure C-3).
- **Congestion Mitigation and Air Quality (CMAQ) Performance**: There are three performance measures established to measure the performance of the federal CMAQ program. Two of the measures assess the program's influence on traffic congestion, and the third measures the program's performance in reducing on-road mobile source air pollution.
    - **Congestion Measures**: As part of the CMAQ Program, congestion measures only apply on the NHS in UAs that are in all or part of a designated "non-attainment" or "maintenance area" under the Clean Air Act (see Figure C-4). Roadways outside the UAs are excluded from the measures. The measures also only apply to UAs that contain populations over 200,000. Most of the DVRPC region is in the Philadelphia UA, but a portion of the DVRPC region also encompasses parts of New York City, Allentown-Bethlehem-Easton, and Trenton UAs. There are two performance measures under this category:
        - Annual Peak Hour Excessive Delay (PHED) per Capita helps to identify areas with excessive traffic congestion and assess their pollutants in a region.
        - Percent Non-Single Occupant Vehicle (non-SOV) Travel. Reducing this percentage may have beneficial effects for reduced congestion, improved air quality, and improved health.
    - **Air Pollution Reduction Measures:** The federal rules requiring the assessment of the CMAQ program's effectiveness in reducing on-road mobile air pollution require that state DOTs and MPOs serving UAs with over 200,000 people establish two- and four-year targets for the amount of applicable air pollutants that are reduced through CMAQ funded projects for both the MPO region and statewide. Applicable air pollution is determined by the attainment status of the criteria pollutants. If the states and MPOs do not meet these targets, they are able to adjust the targets and evaluate future CMAQ investments that may improve progress towards meeting the targets.

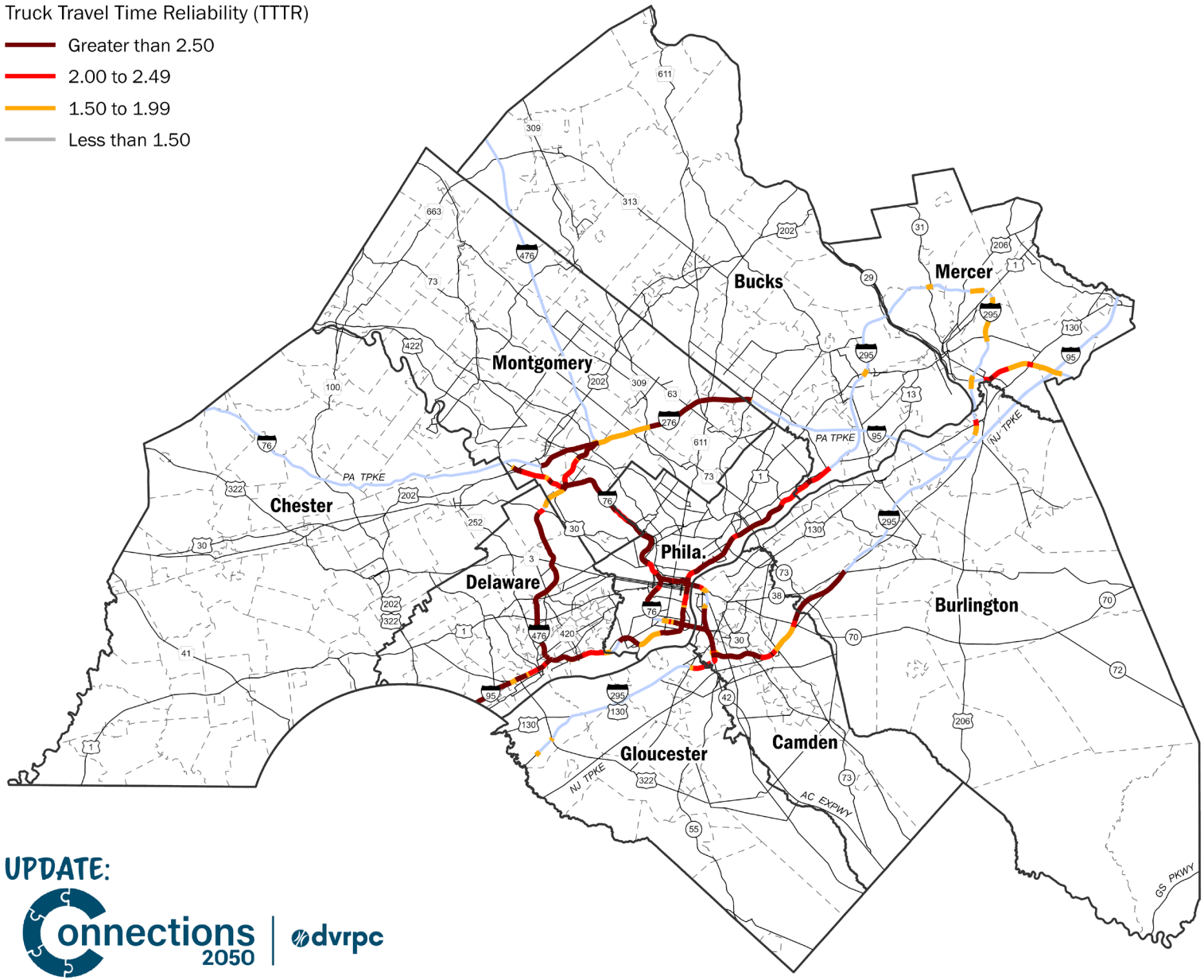
Figure C-3: LOTTR Interstate and Non-Interstate Roadways



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, 2024.

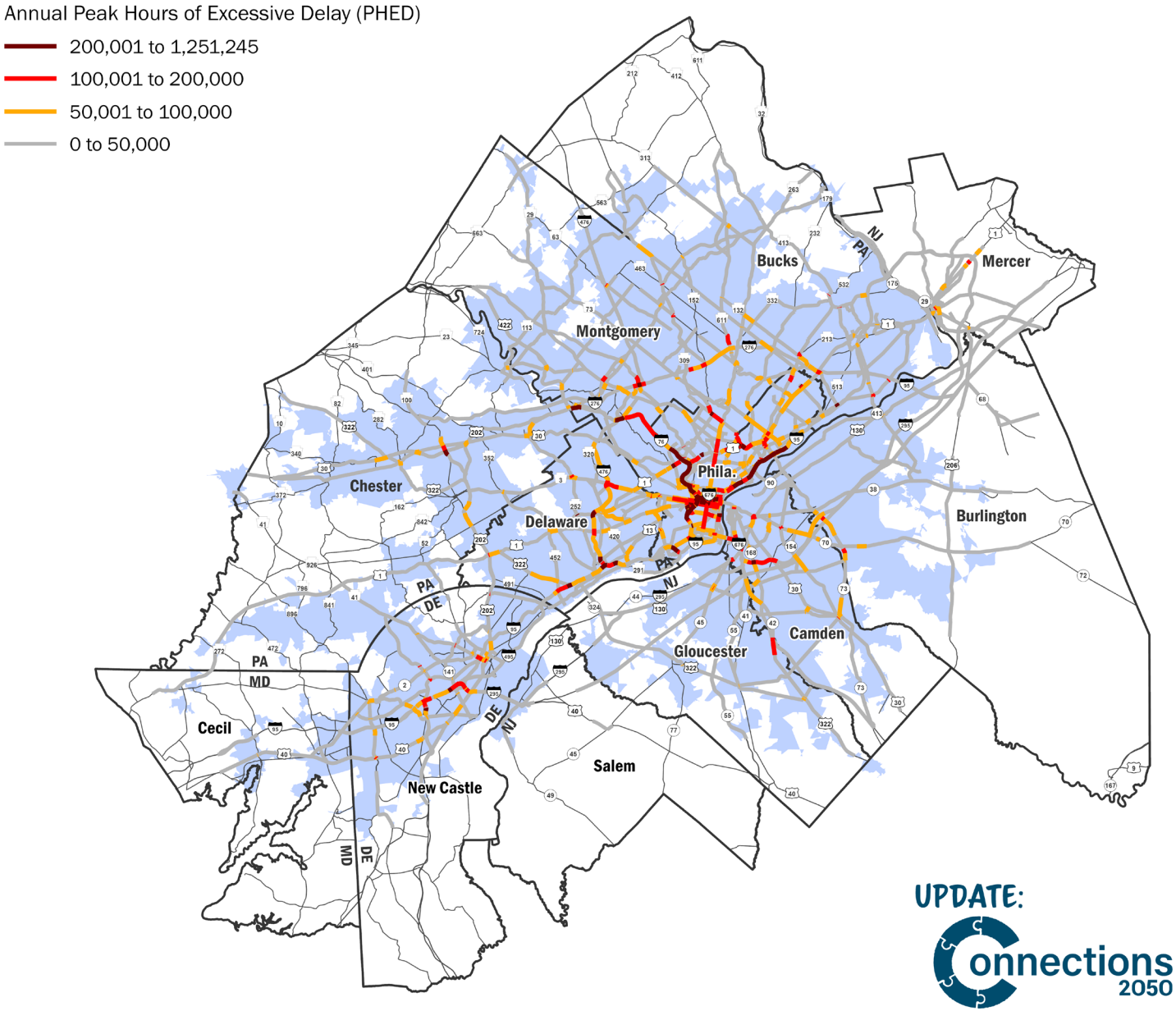
Figure C-4: TTTR Interstate Roadways



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, 2024.

Figure C-5: PHED in the Philadelphia PA-NJ-DE-MD UA



Source: DVRPC, 2024.

Trends

Regionally, roads have become more reliable since 2017 on both the Interstate and Non-Interstate NHS. As of 2023, 90.7 percent of Non-Interstate NHS and 81.0 percent of Interstate roadways scored as reliable using the LOTTR metric. This is compared to 84 percent and 74 percent, respectively, in 2017. TTTR has also decreased since 2017. As of 2023, the average Interstate TTTR score was 1.67, down from 1.83 in 2017. PHED has also decreased overall since 2017 for the DVRPC region. In the Philadelphia UA, there were 78.6 million annual hours of PHED in 2023, or 13.9 hours of PHED per capita, compared to 88.1 million hours in 2017. In the Trenton UA, PHED increased from 1.0 million in 2021 to 1.4 million in 2023, or 4.4 hours of PHED per capita. Each of these measures of travel congestion experienced a decrease in delay and an increase in system reliability in 2020, due to the reduction in traffic during the COVID-19 pandemic. Total congestion has returned to mainly pre-COVID levels but is now generally more evenly spread throughout the day than it was before the pandemic.

DVRPC and State DOT Efforts Towards PM3 Targets

DVRPC is committed to enhancing road reliability within the region. Staff collaborate with PennDOT and NJDOT, as well as county, city, and transit partners, to develop projects that enhance travel time reliability and contribute to meeting state targets.

DVRPC proactively seeks to include freight as a primary planning factor in its Long-Range Plan and Transportation Improvement Program (TIP) development, as well as through the conduct of technical studies. At the forefront of DVRPC's Freight Planning Program is the Delaware Valley Goods Movement Task Force, a broad-based freight advisory committee that provides a forum for the private and public sector freight communities to share their unique perspectives on regional plans and specific projects. The FAST Act established, and the IIJA continued, the National Highway Freight Program (NHFP) to improve the efficient movement of freight on the National Highway Freight Network (NHFN). The NHFP's eligibility criteria require that a project contribute to the efficient movement of freight and be identified in the state's freight investment plan. States may use up to 10 percent of NHFP funding each year for public or private freight rail, water facilities (including ports), and/or intermodal facilities. For a list of projects funded with federal NHFP and NHPP funds in the DVRPC region, see chapter four of the New Jersey and Pennsylvania TIPs for more information.

DVRPC's *Congestion Mitigation and Air Quality Interim Performance Plan (2022–23)*[28] identifies all TIP projects that will help the MPO and states meet the four-year targets for traffic congestion. DVRPC's CMP facilitates a CMP Planning Advisory Committee and generates a list of the top-most congested roadway facilities and bottleneck locations for state, county, and local roadways.

[28] *Congestion Mitigation and Air Quality Program Interim Performance Plan (2022–2023)*, Delaware Valley Regional Planning Commission, July 2022, www.dvrpc.org/products/25117.

Transit Performance Measures

For transit, the FTA has established performance measures for Transit Asset Management and Transit Safety (see Table C-2). FTA regulations establish a strategic and systematic process of operating, maintaining, and improving public capital assets effectively through their life cycle. The performance management requirements are a minimum standard for transit operators and involve measuring and monitoring the following:

1. Transit rolling stock
2. Transit support equipment
3. Transit infrastructure
4. Transit facilities
5. Transit safety, which includes fatalities, injuries, safety events, vehicle revenue miles between system failures, and assaults of transit workers

Transit Assets

Targets and Reporting Requirements

Transit providers are required to coordinate with MPOs to set performance targets for assessing the state-of-good-repair (SGR) of four capital-asset categories: Rolling Stock, Equipment, Facilities, and Infrastructure. Current targets and performance data can be found on DVRPC's TPM website under the Transit Asset Management tab.[29]

A transit asset is in a State-of-Good Repair (SGR) if:

1. It can perform its designed function;
2. It does not pose a known unacceptable safety risk; and
3. Its life-cycle investments have been met or recovered.

Rolling Stock: Percent of the transit provider's rolling stock that has met or exceeded their Useful Life Benchmark (ULB).

The performance-based planning regulation requires that transit providers set annual targets for the average age of their revenue-generating vehicles (rolling stock) for each of 23 vehicle types. The targets specify the percent of the transit provider's rolling stock that exceeds (is older than) the Useful Life Benchmark (ULB) measured in years. The ULB is established by the transit provider with Federal Transit Administration (FTA) guidance.

Equipment: Percent of the transit provider's support (non-revenue) equipment that has met or exceeded its ULB.

Transit providers are required to set annual targets for the average age of their non-revenue generating vehicles (equipment) for three vehicle types: automobiles, rubber-tired vehicles, and steel-wheeled vehicles. Targets are only set for vehicles that are road-worthy, self-propelled, maintenance, or construction vehicles. The targets are set for the percent of equipment, by vehicle category type, that exceeds the non-revenue generating fleet's ULB.

[29] Delaware Valley Regional Planning Commission. *Transportation Performance Management: Transit Asset Condition*. www.dvrpc.org/tpm/?indicator=transitasset.

Facilities: Percent of assets with condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale for Passenger Facilities and Administration Facilities.

Transit providers are required to set annual targets for the percent of facilities (by group) that are rated less than 3.0 on the TERM Scale. The two groups of facility types are Passenger and Administration Facilities. FTA requires that facility condition data be fully updated every four years, at a minimum. Agencies may choose to assess a quarter of their facilities every year, or more frequently. Each annual report must include updated facility condition data based on any assessments completed since the last report. Only facilities with direct capital responsibility require condition assessments. For example, a facility such as Philadelphia's 30th Street Station, which is owned and maintained by Amtrak, is not subject to a local transit agency's capital responsibility and therefore is not included in that agency's performance reporting.

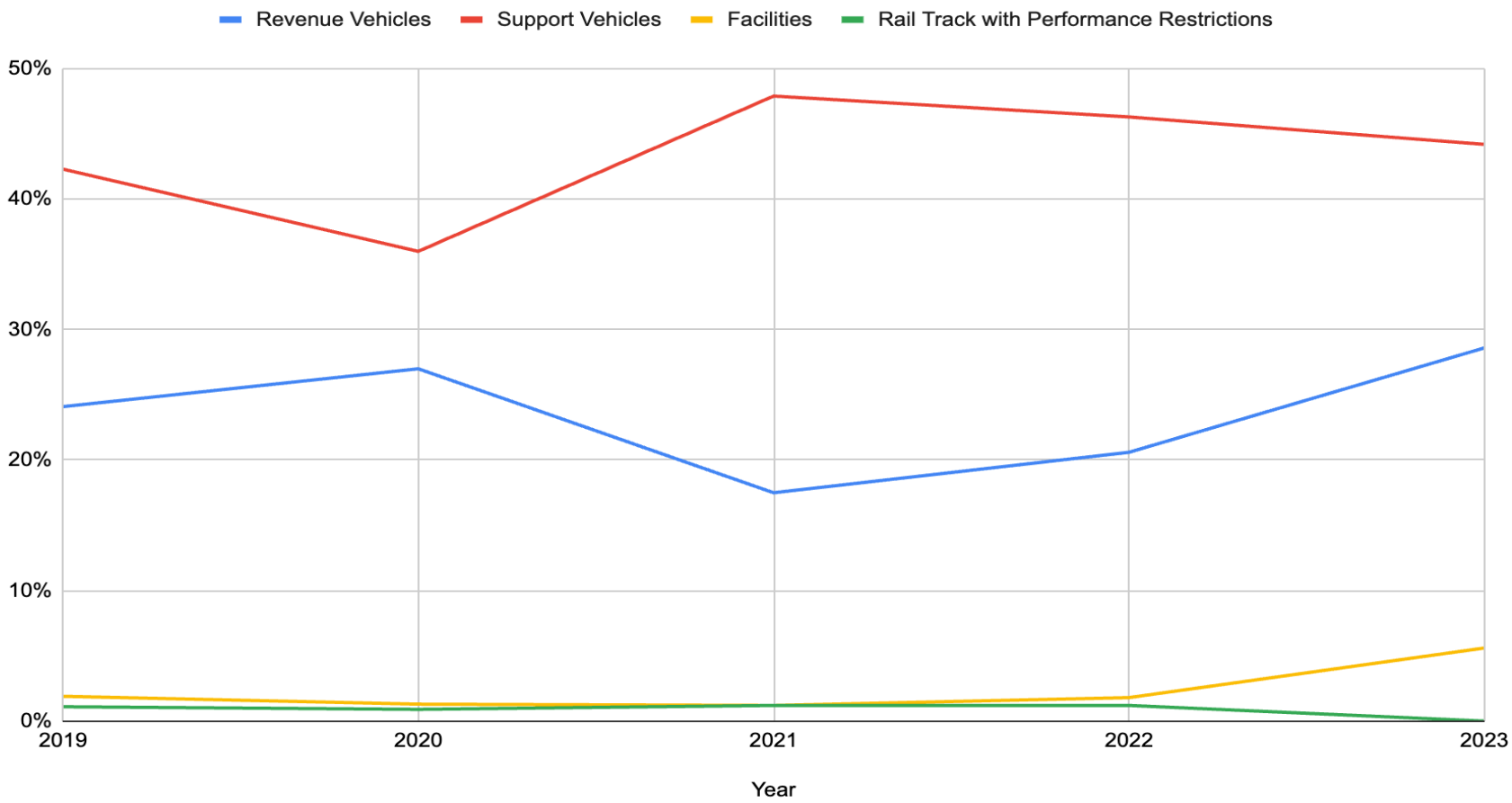
Infrastructure: Percent of the transit provider's fixed guideway track miles that have performance restrictions. The annual performance measure for infrastructure is an average of each month's performance restriction measure.

Transit providers are required to set annual targets for the percent of fixed guideway track segments that have performance restrictions. A performance restriction is defined as a segment of guideway track miles where the maximum permissible speed of transit vehicles is below the guideway's full-service speed. Restrictions can be caused by issues with rail fixed guideway, track, power, or signal systems. Performance restrictions should be measured at 9:00 AM local time on the first Wednesday of each month. Regional and commuter rail services report to the Federal Railroad Administration (FRA), rather than the Federal Transit Administration (FTA); therefore, data for these routes is not included in this report.

Trends

Table C-6 shows the trends in transit asset conditions between 2019 to 2023. During this time, the percentage of the region's Support Vehicles in deficient condition has varied between 36.0 and 47.9 percent, and the percentage of the region's Revenue Vehicles in deficient condition has varied between 17.5 and 28.6 percent. Only marginal percentages of the region's passenger and administrative transit facilities and rail tracks were in deficient condition during that period. The condition of the region's transit facilities, vehicles, rail tracks, and other transit assets is critical to service reliability and appealing to potential riders. Worsening conditions can lead to a loss of ridership and decrease the operating budgets of the region's transit agencies. This, in turn, limits the ability to improve service.

Figure C-6: Percent of Transit Assets in Deficient Condition, by Asset Category (All Providers)



Source: Federal Transit Administration's National Transit Database, 2019–2023.

DVRPC and Transit Agency Efforts Towards Transit Assets Targets

Transit providers are required to develop a TAMP to identify local funding prioritization. TAMP places value and understanding on the negative impacts of deferring maintenance and the positive outcomes of optimizing investment decisions that improve SGR. Successfully implementing TAMP requires using resources more efficiently to reduce an agency's environmental footprint, managing waste responsibly, building and supporting healthy places, and becoming more resilient to prepare for extreme weather.

MPOs are required to demonstrate how funding will be allocated to assist the transit agencies in meeting the TAMP targets. For a list of TIP-funded projects related to TAMP, see chapter four of the New Jersey and Pennsylvania TIPs.

Transit Safety

Targets and Reporting Requirements

Transit agencies are required to develop transit agency safety plans (TASP) that establish performance targets based on the five Safety Performance Targets (SPT) included in FTA's *National Transit Public Safety Plan* (NTPSP). Transit agencies are required to report their targets and performance to their respective state DOTs and MPOs to prioritize funding to improve transit safety performance. FTA does not impose penalties for failing to meet SPTs set by transit providers.

Current targets and performance data can be found on DVRPC's TPM website under the Transit Safety tab.[30] Transit agencies and states must identify SPTs by mode for each of the following categories:

Fatalities: Total number of fatalities reported to the NTD and rate per total vehicle revenue miles (VRM) by mode.

The transit safety performance measure requires that transit providers set annual targets for the number of fatalities that occur on each mode of transit that the agency operates, excluding deaths that result from trespassing, suicide, or natural causes. The National Public Transportation Safety Plan defines the modes as rail, fixed guideway bus service, and non-fixed route bus service. Fatalities are required to be calculated for both the total number of fatalities and the fatality rate per VRM. Transit worker fatalities are also reported, using the same metrics as total fatalities.

Injuries: Total number of injuries reported to NTD and rate per total VRM by mode.

The Public Transportation Agency Safety Plan (PTASP) requires that transit agencies set annual targets for the number of injuries that occur on each mode of transit that the agency operates. Injuries are defined as "harm to a person that requires immediate medical attention away from the scene." Injuries are required to be calculated for both the total number of injuries and the injury rate per VRM for each of the modes that the agency operates. Transit worker injuries are also reported, using the same metrics as total injuries.

Safety Events: Total number of safety events reported to NTD and rate per total VRM by mode.

Transit providers are required to set annual targets for the number and rate of safety events by mode that occur across the transit agency's system. A safety event is defined by FTA as a "collision, derailment, fire, hazardous material spill, or evacuation." Safety events are required to be calculated for both the total number of events and the event rate per VRM for each

[30] Delaware Valley Regional Planning Commission. *Transportation Performance Management: Transit Safety*. www.dvrpc.org/tpm/?indicator=ptasp.

of the modes that the agency operates. Pedestrian, vehicular, and total collisions are also reported, using the same metrics as total safety events.

System Reliability: Mean distance between major mechanical failures by mode.

Transit providers are required to set annual targets for the agency's system reliability for each mode of transit that the agency operates. The system reliability performance measure accounts for major mechanical failures of a vehicle that prevent the vehicle from starting or completing a scheduled trip. Mechanical failures and interrupted trips can create hazardous conditions for the transit operators and passengers, depending on the location of the service interruption and if passengers are required to alight in unsafe locations.

Assaults on Transit Workers: Total number of assaults on transit workers reported to the NTD and assault rate per VRM by mode.

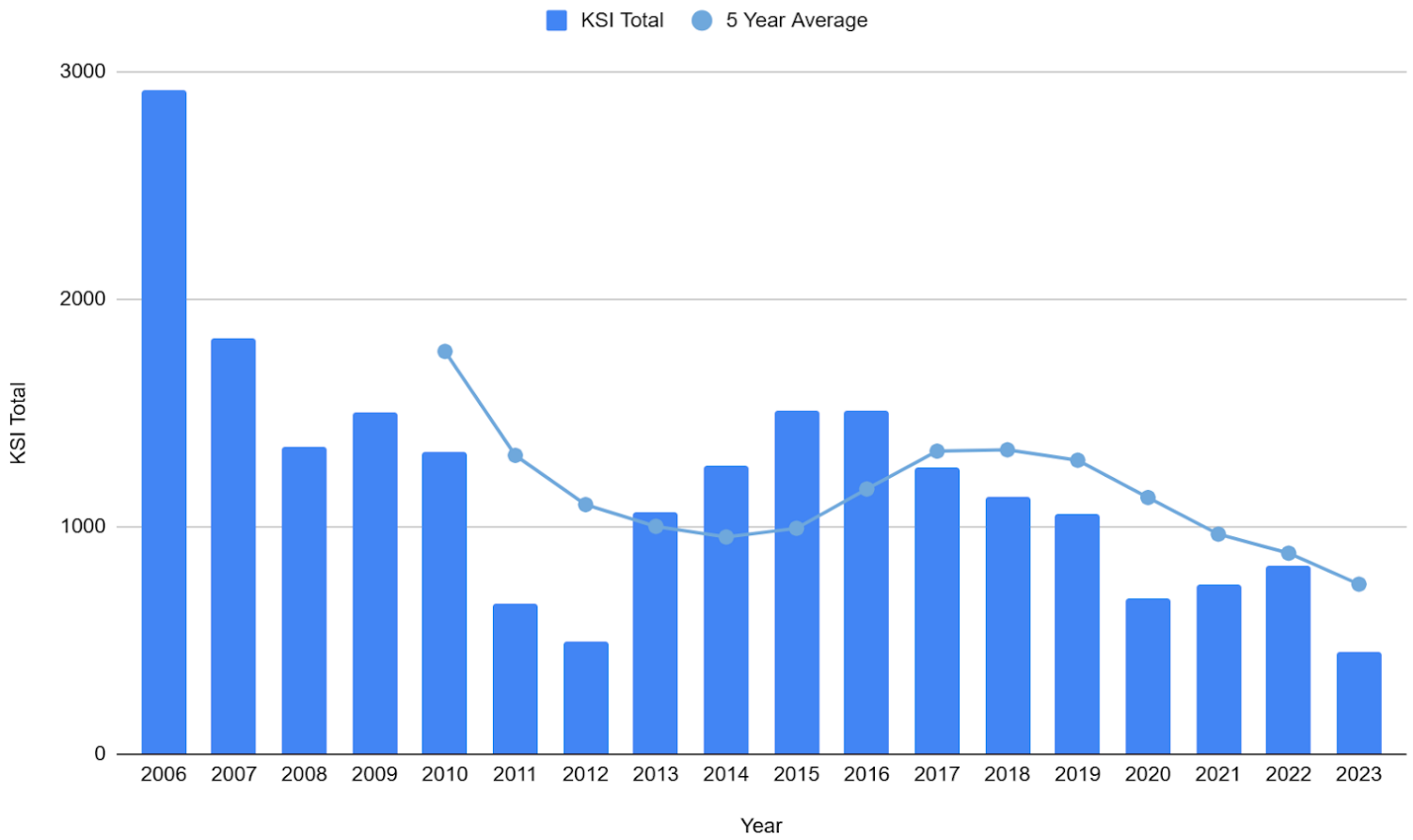
In April 2024, updates were made to the PTASP regulation, creating new safety performance target requirements focusing on transit worker safety. Transit providers are required to set annual targets for the total number of assaults on transit workers and the assault rate per vehicle revenue mile. Reporting requirements account for physical and non-physical assaults on any transit worker, including operators, police, or station agents, in any work setting.

Trends

Transit safety has improved significantly over the last two decades, with 447 KSI in 2023 across all transit modes and agencies in the region. This sets a new low for this indicator for the years in this dataset. Passenger injuries have consistently accounted for the majority of transit KSI. For example, passenger injuries made up 85.8 percent of transit KSI in the region in 2023.

Injuries to transit agency employees across all modes and agencies in the region totaled 4.3 per 200,000 employee-work hours in 2022. This measure peaked in 2018, then decreased to its lowest level in this dataset in 2020, during pandemic shutdowns. Regionwide, there has been a 15.7 percent decrease since 2009, a 35.8 percent decrease since 2018, but a 79.2 percent increase since 2020.

Figure C-7: KSI on Transit in the DVRPC Region



Source: New Jersey Department of Transportation, Pennsylvania Department of Transportation, U.S. Census Bureau's Population Estimates Program, 2006–2023.

Similar trends were also seen with the number of people killed and injured per 100,000 transit vehicle-revenue-miles. There was a notable peak of 20.5 KSI per 100,000 vehicle-revenue miles across all transit modes and agencies in the region in 2009, which then fell by roughly 80 percent to 4.2 in 2012. It then more than doubled to 9.6 in 2016 before nearly halving again to 4.5 in 2020 during the pandemic. Finally, the measure increased to 5.2 in 2023.

Transit safety events peaked at 9,452 across all transit modes and agencies in the region in 2006, in the years included in this dataset. Since then, counts have been much lower, with an all-

time low of 545 in 2011, a slight resurgence of 1,560 in 2016, and a return to 568 in 2023. This final count is a 95.9 percent decrease from the 2006 peak, and roughly a third of the 2016 count.

DVRPC and Transit Agency Efforts Towards Transit Safety Targets

DVRPC's goal to achieve Vision Zero—no transportation-related deaths or serious injuries—by 2050, encompasses transit incidents.

SEPTA has developed and implemented various safety programs, rules, and standard operating procedures. In addition to these administrative controls, SEPTA invests capital funds in various projects to maintain SEPTA's state-of-good-repair and reduce risks, improve safety, and help achieve safety performance target goals.

On the New Jersey side, NJ TRANSIT and DRPA/PATCO are implementing projects that will help reduce rail vehicle collisions and improve passenger safety for all transit users in and around NJ TRANSIT and DRPA/PATCO's operating environments. NJ TRANSIT takes every precaution to ensure both passenger and public safety on its bus, rail, and light rail systems. NJ TRANSIT operates a risk-based safety management system (SMS), a data-driven process that proactively manages risks in the public transportation system. The SMS aims to transform the safety culture by making safety everyone's responsibility, empowering employees to take an active role in safety, and encouraging employees and contractors to report safety concerns to senior management.

For a list of TIP-funded projects related to Transit Safety, see chapter four of the New Jersey and Pennsylvania TIPs.

Appendix D—Community Analytics

APPENDIX D Community Analytics

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Title VI Mandates and Guidance

As the region's MPO, DVRPC is mandated by federal law to ensure nondiscrimination in all its programs and projects, including the long-range plan. DVRPC reviewed regional population data, transportation asset conditions, and planned investments to ensure compliance of the financial plan with federal law.

The primary federal guidelines DVRPC follows in its planning efforts are dictated by Title VI of the Civil Rights Act of 1964, a federal nondiscrimination statute that states "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." Additional guidance from FTA[31] and the FHWA[32] encourages transportation agencies to follow nondiscrimination guidelines based on sex, age, and disability, according to Section 162 (a) of the Federal-Aid Highway Act of 1973 (23 USC 324) (sex), Age Discrimination Act of 1975 (age), and Section 504 of the Rehabilitation Act of 1973/Americans with Disabilities Act of 1990 (disability).

The programming process that DVRPC facilitates during Plan updates seeks to meaningfully address regional needs and legal requirements, ensuring all communities benefit from transportation projects and that adverse impacts are avoided or mitigated as feasible. In addition to Title VI, some other considerations in fiscal constraint include:

- ensuring consistency with DVRPC's Long-Range Plan vision and goals;
- distributing investments across the region;
- supporting federal performance-based planning and programming measures;
- balancing different transportation modes and project types; and
- staying within the constraints of the level of transportation funding that the region expects to receive.

Methodology

Assessing potential impacts of transportation projects at the long-range planning stage presents inherent challenges, particularly when many projects have not yet entered the design phase. Nevertheless, early-stage Title VI analysis supports informed decision-making and identifies considerations for subsequent phases, including project development, design, and environmental review.

This analysis builds on DVRPC's Indicators of Potential Disadvantage (IPD) methodology, originally developed in 2001 and recognized nationally as a best practice for meeting federal

[31] Federal Transit Administration. *Title VI Requirements and Guidelines for Federal Transit Administration Recipients (FTA Circular 4702.1B).* U.S. Department of Transportation. Last updated March 1, 2016. Accessed April 16, 2025.

[32] Federal Highway Administration. "Title VI of the Civil Rights Act of 1964 and Additional Nondiscrimination Requirements." U.S. Department of Transportation. Last modified March 4, 2025. Accessed March 16, 2025. highways.dot.gov/civil-rights/title-vi-civil-rights-act-1964-and-additional-nondiscrimination-requirements.

non-discrimination requirements. The methodology uses American Community Survey (ACS) five-year estimates to identify the geographic distribution of Title VI-protected populations. Data are analyzed and mapped at the census tract level using Geographic Information Systems (GIS). Each population is evaluated using a standardized method based on regional averages and standard deviations, resulting in five possible classifications: well below average, below average, average, above average, and well above average. While this full range is used in the analysis, only the "above average" and "well above average" classifications are mapped and reported for this Plan. These two classifications indicate a higher concentration of Title VI or low-income populations are located within the census tract at a statistically significant level.

To assess existing conditions and regional transportation needs, DVRPC compiled and analyzed a range of infrastructure, safety, demographic, and accessibility data. Pavement and bridge condition ratings are mapped to identify areas with aging or deficient infrastructure. Demographic mapping focuses on concentrations of low-income and Title VI populations, using standardized intervals based on regional averages. These intervals—well below average, below average, average, above average, and well above average—help to identify geographic patterns in population distribution. Additionally, crash data are analyzed to understand the spatial distribution of overall crashes and those involving bicyclists and pedestrians, disaggregated by low-income and Title VI intervals. Transit accessibility is also evaluated and mapped to highlight how well the region's population is connected to public transportation services. This multimodal, data-driven approach informs the identification of priority areas for investment and further analysis.

To evaluate system-level outcomes, DVRPC analyzes the geographic distribution of funded Major Regional Projects (MRPs) in relation to identified low-income[33] and Title VI populations. This analysis assesses how investments are allocated across project categories and the potential for both beneficial and adverse impacts on communities of concern. The methodology includes mapping candidate projects alongside concentrations of low-income and Title VI populations to visualize spatial alignment. DVRPC compiled tables listing the dollar amount and percentage of funded MRP investments by project category for both Pennsylvania and New Jersey, segmented by whether projects are located in areas with above-average or well above-average concentrations of these populations. Additionally, MRP expenditures are categorized by the type of potential impact—positive, neutral, or potentially adverse—on communities of concern, providing a system-level view of how investments align with regional needs and demographic characteristics.

Communities of Concern

Table D-1 provides an overview of demographic data from the U.S. Census for the five-county southeast Pennsylvania

[33] DVRPC's IPD analysis defines Low-Income Populations as 200% of the poverty level or below.

subregion and the four-county southern New Jersey subregion. Figures D-1 and D-2 map concentrations of low-income and Title VI populations, using standard above-average and well-above-average intervals to identify geographic patterns in population distribution.

Table D-1: Population Estimates in the DVRPC Region (2050)

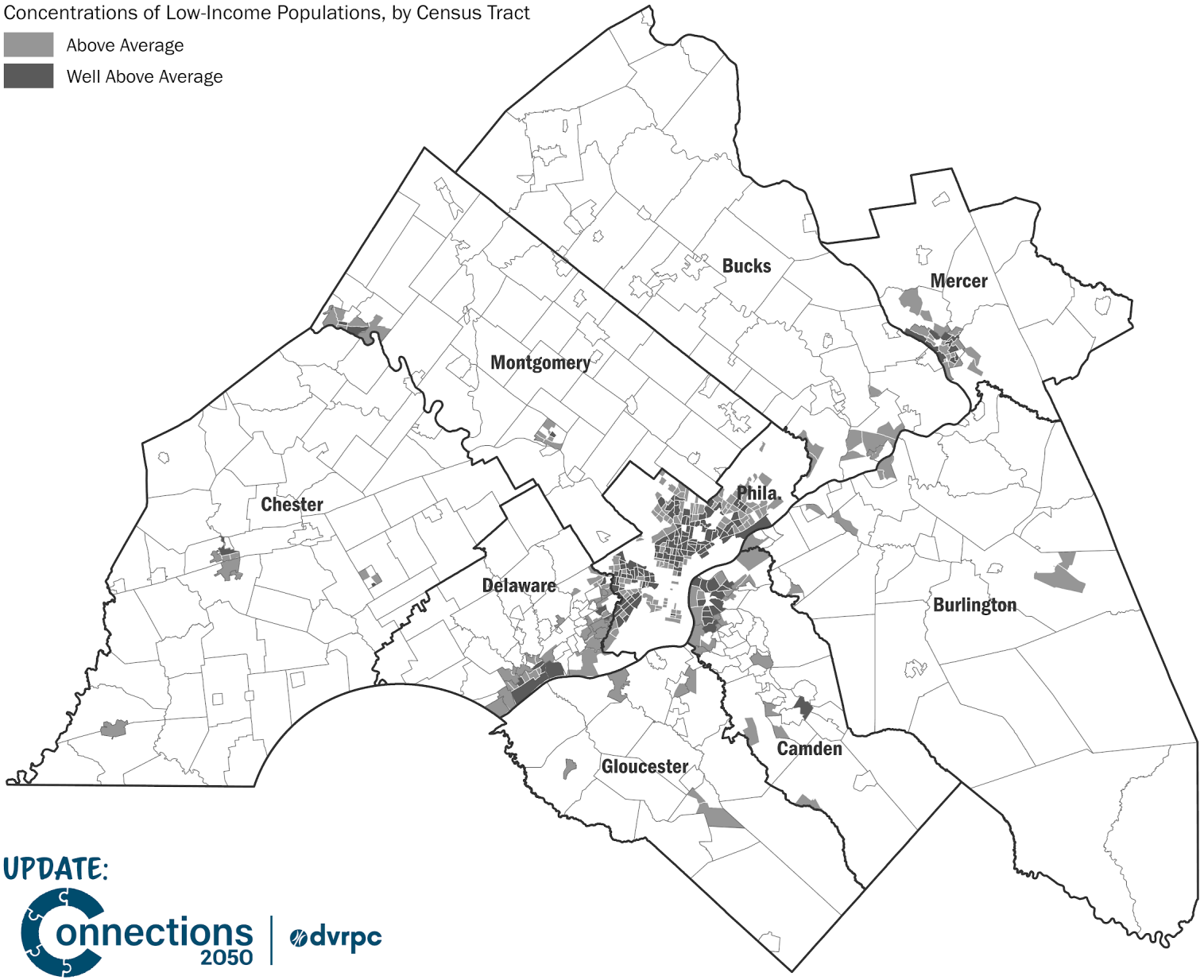
Population for DVRPC Counties	Population Estimate	Regional Percentage
Total	5,882,799	100%
Title VI Protected Classes		
Low-Income Population*	1,409,394	24%
People of Color	2,314,990	39%
Ethnic Minority	659,279	11%
Foreign Born	740,519	13%
Limited English Proficiency (LEP)	412,596	7%
Persons with a Disability	756,681	13%
Female	3,023,211	51%
Youth	1,266,408	22%
Older Adults (65 years or older)	984,302	17%

Source: U.S. Census Bureau, ACS 5-Year Estimates, 2019–2023

**DVRPC's Title VI analysis defines Low-Income Populations as 200 percent of the poverty level or below.*

Population data reflect census tract-level figures used in DVRPC's Indicators of Potential Disadvantage and may differ from regional estimates and forecasts, which use different sources and methods.

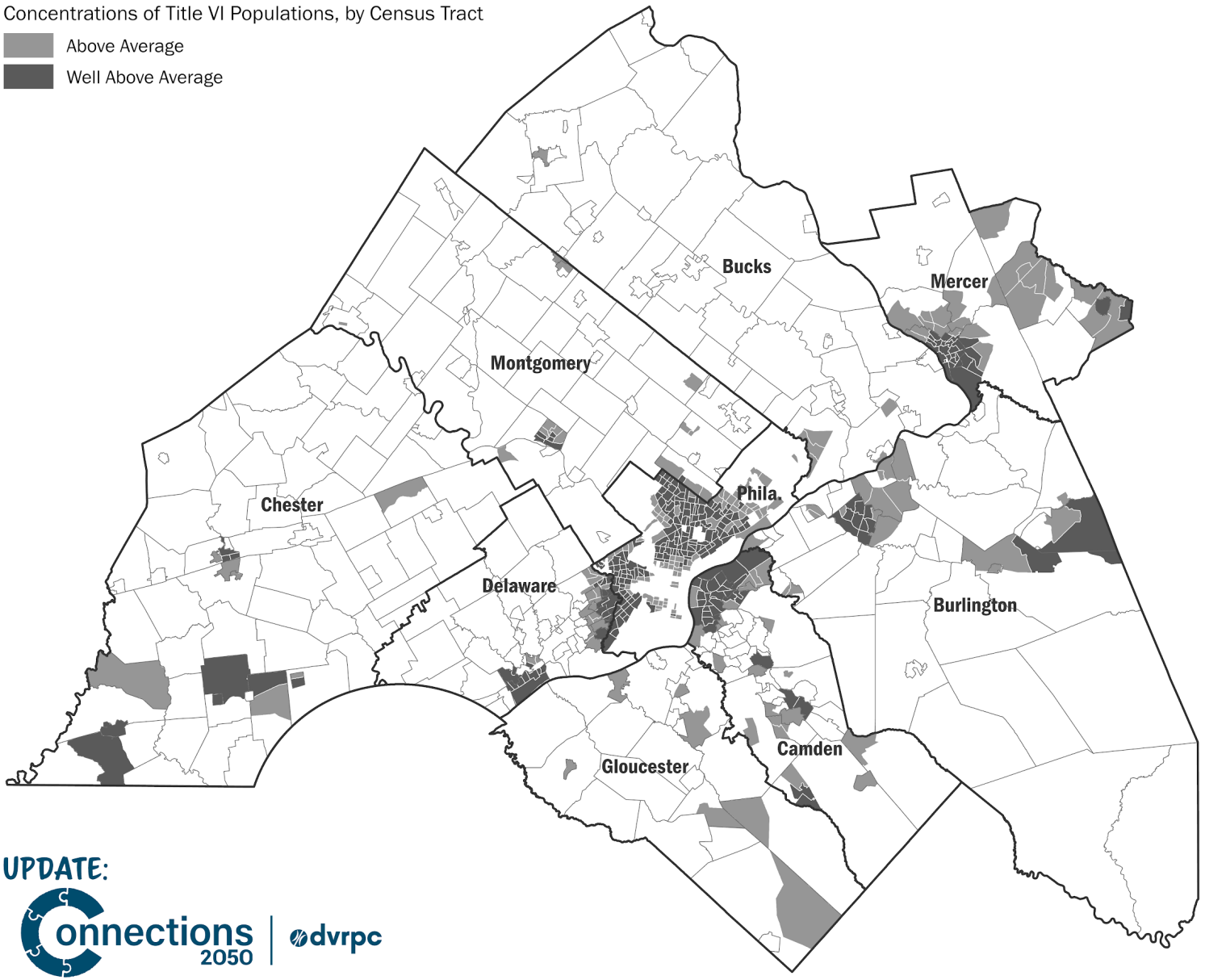
Figure D-1: Concentrations of Low-Income Population



Data Sources: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2019–2023.

UPDATE: Connections 2050 | dvrpc

Figure D-2: Concentrations of Title VI Populations



Data Sources: U.S. Census Bureau, American Community Survey 5-Year Estimates. 2019–2023.

Assessing Conditions and Needs

Pavement Conditions

Figures D-3 and D-4 map concentrations of low-income and Title VI populations using standardized intervals based on regional averages, along with Pavement condition in International Roughness Index (IRI). The IRI is a standardized measurement used to evaluate pavement smoothness and ride quality. It quantifies how much a road surface deviates from a perfectly smooth surface by measuring the vertical movement of a vehicle's suspension system as it travels over the pavement. IRI is expressed in inches per mile (or meters per kilometer), with lower values indicating smoother pavement and higher values indicating rougher conditions. IRI is widely used by transportation agencies, including the Federal Highway Administration (FHWA), as a reliable, objective metric to assess pavement condition.

For a complete analysis of pavement conditions in low-income and Title VI communities, see Chapter 3 the FY2025 TIP for Pennsylvania[34] and the FY2024 TIP for New Jersey[35].

Bridges Conditions

Figures D-5 and D-6 map concentrations of low-income and Title VI populations using standardized intervals based on regional averages, along with bridge condition using categories of good, fair, and poor.

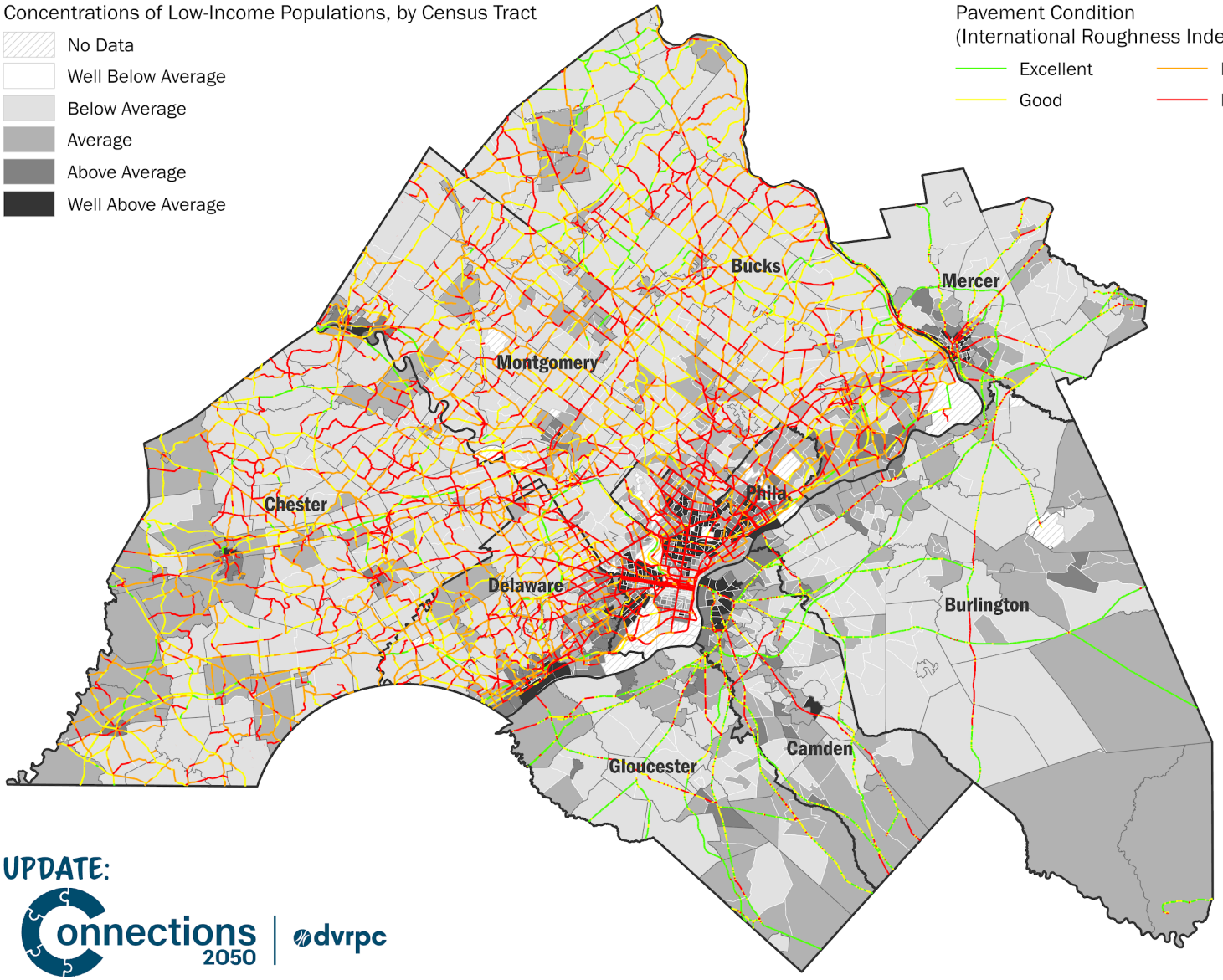
For a complete analysis of bridge conditions in low-income and Title VI communities, see the FY2025 TIP for Pennsylvania and the FY2024 TIP for New Jersey.

Bridge conditions are not being maintained uniformly across all areas in the region. SGR is particularly further behind in areas with higher concentrations of low-income populations. This analysis helps assess compliance with Title VI. Similarly, pavement conditions vary across communities and are not uniformly addressed. In this region, pavement maintenance is managed through a combination of approaches; some projects are included in the TIP, while others are funded through separate state programs that are not reflected in the TIP document.

[34] Delaware Valley Regional Planning Commission (DVRPC), FY 2025 Transportation Improvement Program for Pennsylvania (FY 25–28), adopted by DVRPC Board July 25, 2024; effective October 1, 2024, DVRPC, accessed June 25, 2025, www.dvrpc.org/tip/pa/.

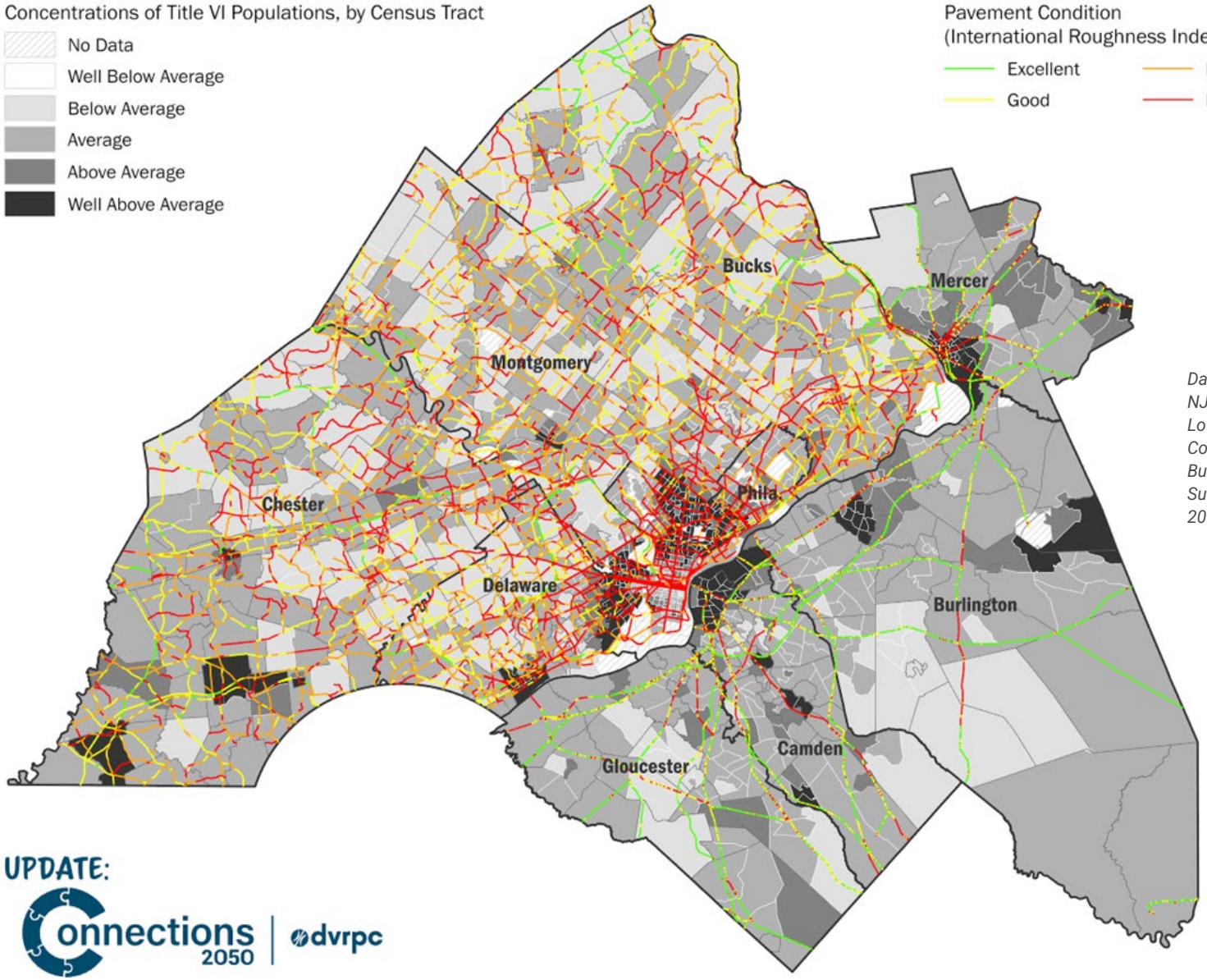
[35] Delaware Valley Regional Planning Commission (DVRPC), FY 2024 Transportation Improvement Program for New Jersey (FY 24–27), adopted September 28, 2023; effective December 18, 2023, DVRPC, accessed June 25, 2025, www.dvrpc.org/tip/nj/.

Figure D-3: Pavement Condition and Concentrations of Low-Income Populations



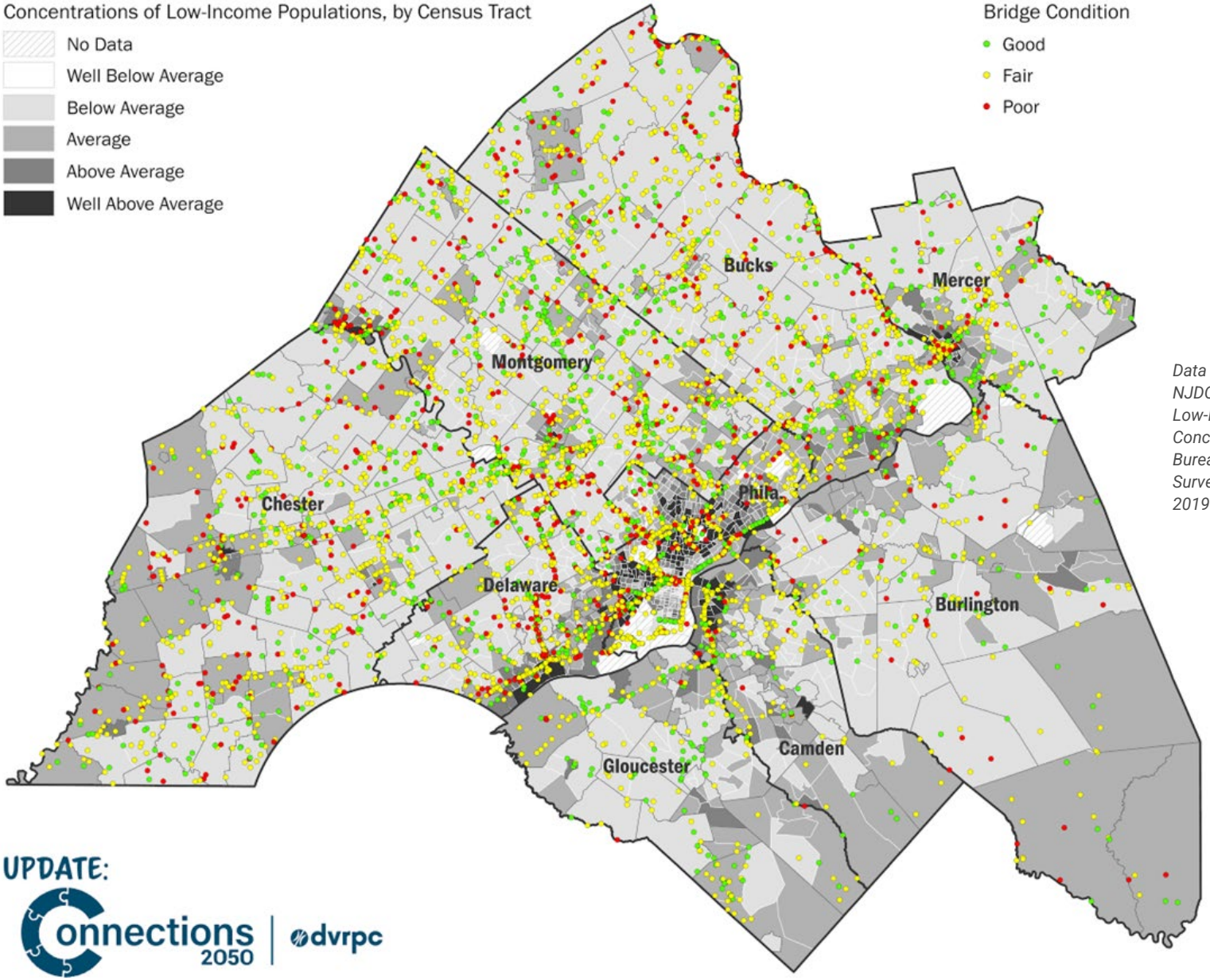
Data Sources: Pavement - NJDOT, 2021; PennDOT, 2025; Low-Income Population Concentrations - U.S. Census Bureau, American Community Survey 5-Year Estimates, 2019–2023.

Figure D-4: Pavement Condition and Concentrations of Title VI Populations



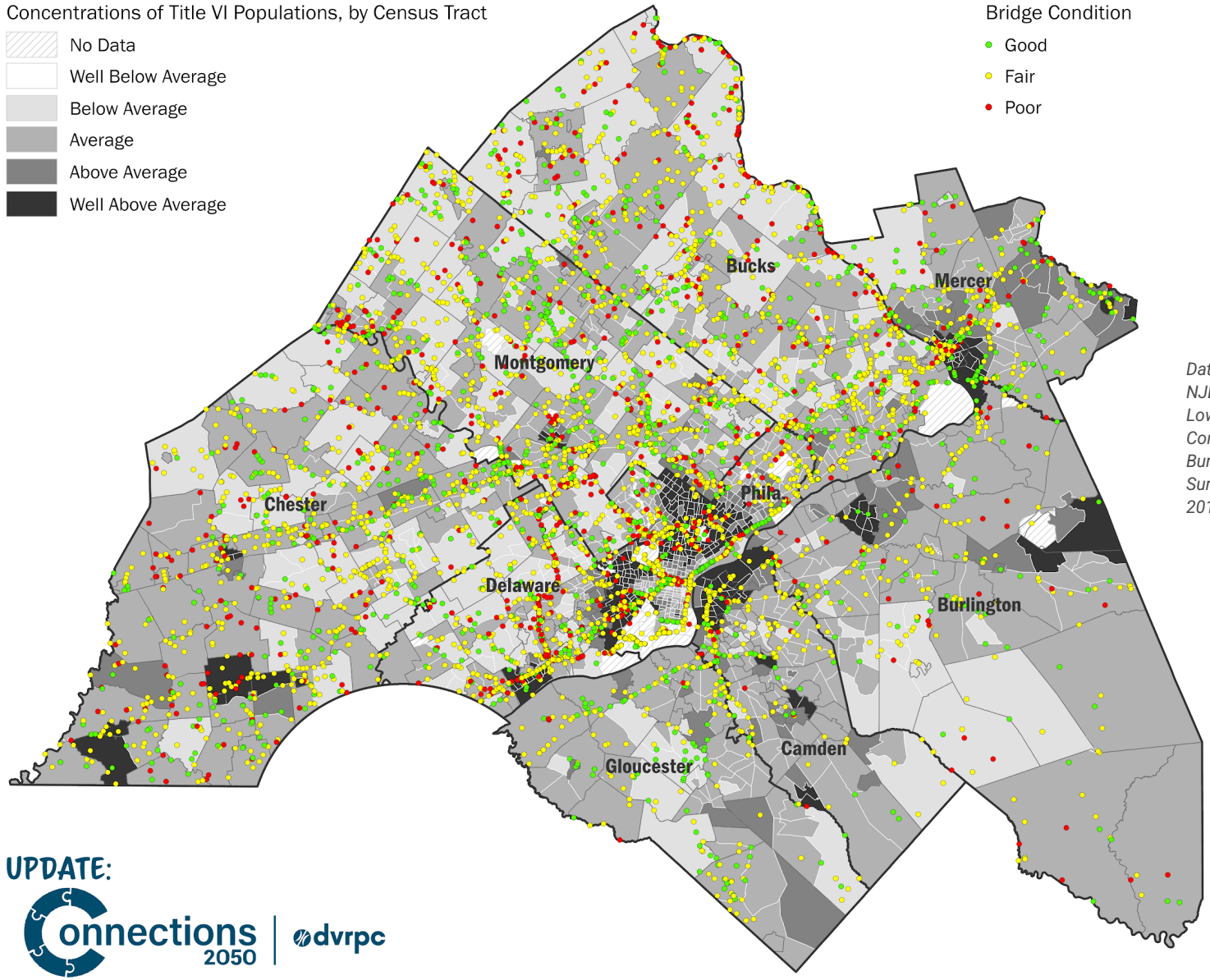
Data Sources: Pavement - NJDOT, 2021; PennDOT, 2025; Low-Income Population Concentrations - U.S. Census Bureau, American Community Survey 5-Year Estimates, 2019–2023.

Figure D-5: Bridge Condition and Concentrations of Low-Income Populations



Data Sources: Pavement - NJDOT, 2021; PennDOT, 2025; Low-Income Population Concentrations - U.S. Census Bureau, American Community Survey 5-Year Estimates, 2019–2023.

Figure D-6: Bridge Condition and Concentrations of Title VI Population



Data Sources: Pavement - NJDOT, 2021; PennDOT, 2025; Low-Income Population Concentrations - U.S. Census Bureau, American Community Survey 5-Year Estimates, 2019–2023.

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Roadway Safety

Tables D-2 through D-5 present the relationship between population group concentrations and crash outcomes in the DVRPC region, focusing on low-income and Title VI populations. Specifically:

- Table D-2 shows the distribution of all crashes by low-income population intervals.
- Table D-3 shows the distribution of all crashes by Title VI population intervals.
- Table D-4 presents the distribution of bicyclist and pedestrian-related crashes by low-income intervals.
- Table D-5 presents the distribution of bicyclist and pedestrian-related crashes by Title VI intervals.

These interval classifications—ranging from well below average to well above average—are based on regional averages and allow for comparison of crash outcomes across population concentrations. Currently, there are no well below average census tracts for either low-income or Title VI populations in the region.

Table D-2: Regionwide Distribution Of Crashes By Low-Income Intervals

Low-Income Intervals	Population	Population as a Percent of the Region	Total Crashes	Crashes per 10K People	Fatalities per 10K People	Serious Injuries per 10K People
Well Above Average	631,773	11%	33,530	531	6.3	16.6
Above Average	858,871	15%	61,012	710	4.6	15.5
Average	1,885,421	32%	148,549	788	4.8	15.4
Below Average	2,493,721	43%	165,012	662	3.4	13.5
DVRPC Region	**5,869,786**	**100%**	**364,522**	**621**	**3.8**	**13**

Data Sources: U.S. Census Bureau, ACS 5-Year Estimates, 2019–2023; Pennsylvania Department of Transportation (PennDOT) Crash Information Tool, 2018–2022; New Jersey DOT Crash Records, 2018–2022.

Table D-3: Regionwide Distribution Of Crashes by Title VI Intervals

Title VI Intervals	Population	Population as a Percent of the Region	Total Crashes	Crashes per 10K People	Fatalities per 10K People	Serious Injuries per 10K People
Well Above Average	1,116,634	19%	60,105	538.3	5.1	14
Above Average	780,042	13%	67,469	864.9	4.8	15.8
Average	2,878,721	49%	202,325	702.8	3.9	13.9
Below Average	1,094,389	19%	63,476	580	3.6	14.6
DVRPC Region*	**5,869,786**	**100%**	**364,522**	**621**	**3.8**	**13**

Data Sources: U.S. Census Bureau, ACS 5-Year Estimates, 2019–2023; PennDOT Crash Information Tool, 2018–2022; New Jersey DOT Crash Records, 2018–2022. DVRPC Regional total includes geographies that contain no data.

In tables D-4 and D-5, Vulnerable Road Users (VRU) refers to people who are at higher risk of injury in traffic crashes due to their lack of physical protection. This group typically includes pedestrians, bicyclists, motorcyclists, and users of micromobility devices (e.g., scooters, e-bikes). KSI is a safety performance metric that tracks the number of people who are killed or suspected of being seriously injured in traffic crashes. "Seriously injured" generally refers to injuries that require hospitalization or result in long-term impairment.

Table D-4: Regionwide Distribution of Bicyclist and Pedestrian-Related Crashes by Low-Income Population Intervals

Low-Income Intervals	Population	Population as a Percent of the Region	Total VRU* KSI** Crashes	VRU KSI Crashes per 10K People	VRU Fatalities per 10K People	VRU Serious Injuries per 10K People
Well Above Average	631,773	11%	623	9.9	3.1	6.9
Above Average	858,871	15%	608	7.1	2	5.2
Average	1,885,421	32%	878	4.7	1.5	3.2
Below Average	2,493,721	43%	621	2.5	0.7	1.9
DVRPC Regional	**5,869,786**	**100%**	**2,308**	**3.9**	**1.2**	**2.8**

Data Sources: U.S. Census Bureau, ACS 5-Year Estimates, 2019–2023; PennDOT Crash Information Tool, 2018–2022; New Jersey DOT Crash Records, 2018–2022.
** Vulnerable Road Users (VRU)*
*** Killed or Suspected of Being Seriously Injured (KSI)*

Table D-5: Regionwide Distribution Of Bicyclist and Pedestrian-Related Crashes by Title VI Population Intervals

Title VI Intervals	Population	Population as a Percent of the Region	Total VRU* KSI** Crashes	VRU KSI Crashes per 10K People	VRU Fatalities per 10K People	VRU Serious Injuries per 10K People
Well Above Average	1,116,634	19%	829	7.4	2.4	5.2
Above Average	780,042	13%	471	6	1.8	4.3
Average	2,878,721	49%	987	3.4	1	2.5
Below Average	1,094,389	19%	275	2.5	0.7	1.9
DVRPC Regional	**5,869,786**	**100%**	**2,308**	**3.9**	**1.2**	**2.8**

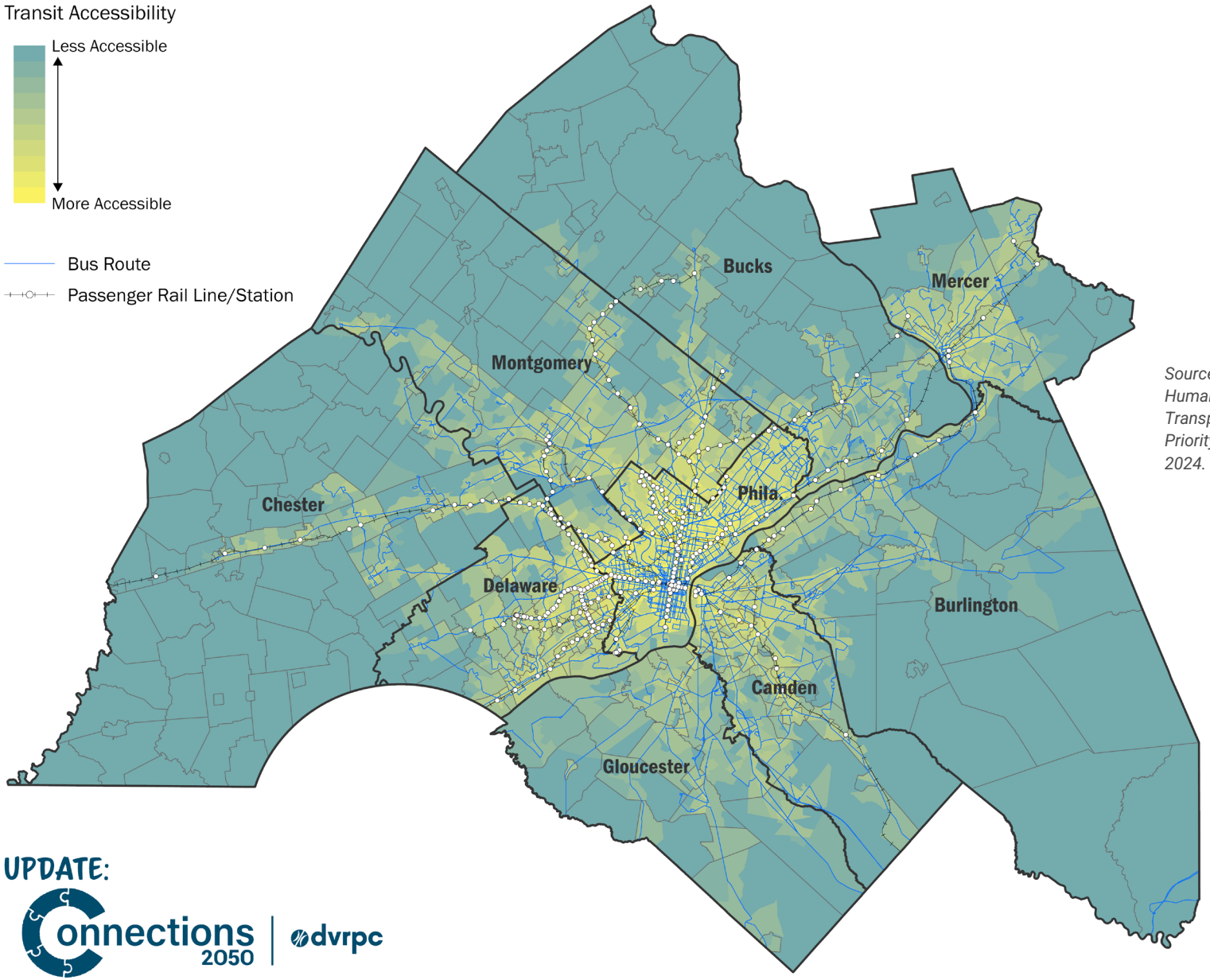
Data Sources: U.S. Census Bureau, ACS 5-Year Estimates, 2019–2023; PennDOT Crash Information Tool, 2018–2022; New Jersey DOT Crash Records, 2018–2022.
** Vulnerable Road Users (VRU)*
*** Killed or Suspected of Being Seriously Injured (KSI)*

Transit Accessibility

To understand access to transit, DVRPC leverages mapping developed in the *Coordinated Human Services Transportation Plan* (CHSTP).[36] The CHSTP Priority Score Map Toolkit helps users visualize where there is a potentially high need to improve transit service for vulnerable populations to reach essential services in the Greater Philadelphia region. Figure D-7 shows this transit accessibility in the DVRPC region along with existing bus routes and passenger rail and stations. More blue values are assigned to areas that are less accessible by transit, and more yellow values are assigned to areas that are more accessible by transit.

[36] Delaware Valley Regional Planning Commission, Coordinated Human Services Transportation Plan, accessed July 5, 2025, www.dvrpc.org/coordinatedhumanservices/.

Figure D-7: Transit Accessibility in the DVRPC Region



Source: DVRPC Coordinated Human Services Transportation Plan (CHSTP) Priority Score Map Toolkit, 2024.

Project Evaluation

Table D-6 presents a matrix that categorizes each MRP by project type and assesses the potential for adverse or beneficial impacts to communities, including those identified as low-income or Title VI populations. The table organizes project categories into five qualitative classifications:

- "Little to No Adverse Impacts/Unknown, Some Potential to be Beneficial"
- "Little to No Adverse Impacts/Unknown, Inherently Beneficial"
- "Some Potential for Adverse Impacts, Inherently Beneficial"
- "Some Potential for Adverse Impacts, Some Potential to be Beneficial"
- "High Potential for Adverse Impacts, Some Potential to be Beneficial"

These classifications are based on the general characteristics and typical outcomes associated with each type of investment. For example, substantive safety or improvements to bicycle and pedestrian infrastructure are typically considered to have "Little to No Adverse Impacts/Unknown, Inherently Beneficial," while large roadway capacity projects may be categorized as having a "High Potential for Adverse Impacts, Some Potential to be Beneficial" due to possible disruptions in the short-term and/or increased traffic and environmental impacts in the longer-term, while also providing the potential for an in increase in access to jobs, services, education, and other opportunities. The matrix provides a system-level overview of how different types of investments may affect communities.

Table D-6: Project Categories for Title VI Analysis

	Little to No Adverse Impacts/Unknown	Some Potential for Adverse Impacts	High Potential for Adverse Impacts
Some Potential to be Beneficial	• Pavement Preservation and Modernization • Bridge Preservation • Transit Preservation and Modernization • Transit Other • Travel Demand Management	• Roadway Operational Improvements	• Bridge Removal • Major Road Network Expansion • Minor Network Expansion
Inherently Beneficial	• Community Connections, such as highway caps and noise walls • Substantive Safety Infrastructure (Including Vision Zero) • Environmental Mitigation & Resiliency • Bicycle and Pedestrian Network Expansion	• Intersection Improvements • Transit System Expansion (T3) • Transit Operational Improvements	NA

Source: DVRPC, 2025.

Tables D-7 through D-10 present the geographic distribution of funded MRP investments in Pennsylvania and New Jersey relative to low-income and Title VI populations. Each table breaks down the total dollar amount and percent of investment by project category and lists these against standardized population intervals. These intervals are based on regional averages and are used to classify census tracts according to the concentration of low-income or Title VI populations.

- Table D-7 summarizes MRP investments in Pennsylvania by project category and low-income population intervals.
- Table D-8 mirrors this approach for Title VI population intervals in Pennsylvania.
- Table D-9 provides the same analysis for low-income communities in New Jersey.
- Table D-10 completes the set with data on MRP investments in New Jersey by Title VI population intervals.

Together, these tables allow for a system-level assessment of Title VI compliance.

Table D-7: Pennsylvania Funded MRP Investments by Project Category and Low-Income Communities

Project Cat.	Category Name	Well Above Average	Above Average	Average	Below Average	No Data	Total
R1	Pavement Preservation & Modernization Investments	$101.90	$231.10	$1,097.00	$843.00	$196.50	$2,469.50
R1	Percent Pavement Preservation & Modernization	4%	9%	44%	34%	8%	99%
R2	Bridge Preservation Investments	$1,028.00	$756.60	$1,892.30	$2,139.80	$1,509.90	$7,326.00
R2	Percent Bridge Preservation	14%	10%	26%	29%	21%	100%
R3	Substantive Safety Investments	$9.80	$0.02	$21.80	$16.70	$2.60	$50.90
R3	Percent Substantive Safety	19%	0%	43%	33%	5%	100%
R4	Mobility Operational Improvements Investments	$266.60	$73.50	$500.06	$660.20	$78.10	$1,578.40
R4	Percent Mobility Operational Improvements	17%	5%	32%	41%	5%	100%
R5	Roadway Expansion Investments	$4.40	$36.70	$297.60	$634.30	$0.20	$973.30
R5	Percent Roadway Expansion	0%	4%	31%	65%	0%	100%
R6	Green Transportation Investments	$9.80	$0.02	$233.30	$427.30	$0.00	$670.50
R6	Percent Green Transportation (includes Community Connections)	1%	0%	35%	64%	0%	100%

Project Cat.	Category Name	Well Above Average	Above Average	Average	Below Average	No Data	Total
T1	Transit Preservation & Modernization Investments	$462.30	$113.70	$714.80	$431.70	$58.90	$1,781.50
T1	Percent Transit Preservation & Modernization	26%	6%	4%	24%	3%	99%
T2	Transit Operational Improvements Investments	$0.00	$208.70	$58.40	$107.00	$1.10	$375.10
T2	Percent Transit Operational Improvements	0%	56%	16%	29%	0%	100%
T3	Transit System Expansion Investments	$0.00	$68.10	$51.20	$0.00	$0.00	$119.30
T3	Percent System Expansion	0%	57%	43%	0%	0%`	100%
T4	Transit Other Investments	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	Percent Total Mappable MRP Investments	12%	10%	32%	34%	12%	100%
	Total Mappable MRP Investments	$1,882.80	$1,488.40	$4,866.50	$5,260.00	$1,847.30	$15,344.50

*All figures in millions of Year-of-expenditure (YOE) dollars. Figures may not add up due to rounding. *T4 MRPs were not listed in Plan and are not mappable for this analysis.*
Source: DVRPC, 2025.

Table D-8: Pennsylvania Funded MRP Investments by Project Category and Title VI Communities

Project Cat.	Category Name	Well Above Average	Above Average	Average	Below Average	No Data	Total
R1	Pavement Preservation & Modernization Investments	$86.20	$131.30	$1,850.20	$205.40	$196.50	$2,469.60
R1	Percent Pavement Preservation & Modernization	3%	5%	75%	8%	8%	99%
R2	Bridge Preservation Investments	$153.60	$1,064.60	$3,928.10	$670.40	$1,509.30	$7,326.00
R2	Percent Bridge Preservation	2%	15%	54%	9%	21%	101%
R3	Substantive Safety Investments	$6.90	$17.80	$23.00	$0.60	$2.60	$50.90
R3	Percent Substantive Safety	14%	35%	45%	1%	5%	100%
R4	Mobility Operational Improvements Investments	$94.20	$247.00	$856.00	$303.10	$78.10	$1,578.40
R4	Percent Mobility Operational Improvements	6%	16%	54%	19%	5%	100%
R5	Roadway Expansion Investments	$24.30	$6.20	$619.80	$322.90	$0.20	$973.30
R5	Percent Roadway Expansion	2%	1%	64%	33%	0%	100%
R6	Green Transportation Investments (includes Community Connections)	$6.90	$0.10	$639.60	$23.90	$0.00	$670.50
R6	Percent Green Transportation	1%	0%	95%	4%	0%	100%

Project Cat.	Category Name	Well Above Average	Above Average	Average	Below Average	No Data	Total
T1	Transit Preservation & Modernization Investments	$474.30	$315.10	$871.90	$61.30	$58.90	$1,781.50
T1	Percent Transit Preservation & Modernization	27%	18%	49%	3%	3%	100%
T2	Transit Operational Improvements Investments	$140.00	$0.00	$220.20	$13.80	$1.10	$375.10
T2	Percent Transit Operational Improvements	37%	0%	59%	4%	0%	100%
T3	Transit System Expansion Investments	$68.10	$0.00	$51.20	$0.00	$0.00	$119.30
T3	Percent Transit System Expansion	57%	0%	43%	0%	0%	100%
T4	Transit Other Investments*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	Percent Mappable MRP Investments	7%	12%	59%	10%	12%	100%
	Total Mappable MRP Investments	$1,054.50	$1,782.10	$9,060.00	$1,601.40	$1,846.70	$15,344.60

*All figures in millions of YOE dollars. Figures may not add up due to rounding. *T4 MRPs were not listed in Plan and are not mappable for this analysis*
Source: DVRPC, 2025.

Table D-9: New Jersey Funded MRP Investments by Project Category and Low-Income Communities

Project Cat.	Category Name	Well Above Average	Above Average	Average	Below Average	No Data	Total
R1	Pavement Preservation & Modernization Investments	$98.80	$53.50	$489.40	$42.80	$0.00	$684.40
R1	Percent Pavement Preservation & Modernization	14%	8%	72%	6%	0%	100%
R2	Bridge Preservation Investments	$192.30	$69.40	$101.90	$65.40	$0.00	$429.00
R2	Percent Bridge Preservation	45%	16%	24%	15%	0%	100%
R3	Substantive Safety Investments	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
R3	Percent Substantive Safety	0%	0%	0%	0%	0%	0%
R4	Mobility Operational Improvements Investments	$0.00	$58.50	$346.70	$342.20	$1.70	$749.20
R4	Percent Mobility Operational Improvements	0%	8%	46%	46%	0%	100%
R5	Roadway Expansion Investments	$0.00	$58.80	$178.90	$142.40	$3.20	$383.20
R5	Percent Roadway Expansion	0%	15%	47%	37%	1%	100%
R6	Green Transportation Investments	$0.00	$3.60	$0.10	$0.00	$0.00	$3.80
R6	Percent Green Transportation	0%	96%	4%	0%	0%	100%
T1	Transit Preservation & Modernization Investments	$0.00	$0.00	$89.80	$0.00	$0.00	$89.80

Project Cat.	Category Name	Well Above Average	Above Average	Average	Below Average	No Data	Total
T1	Percent Transit Preservation & Modernization	0%	0%	100%	0%	0%	100%
T2	Transit Operational Improvements Investments	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
T2	Percent Transit Operational Improvements	0%	0%	0%	0%	0%	0%
T3	Transit System Expansion Investments	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
T3	Percent Transit System Expansion	$0.00	$0.00	$0.00	$0.00	$0.00	100%
T4	Transit Other Investments*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	Percent Total Mappable MRP Investments	12%	10%	52%	25%	0%	100%
	Total Mappable MRP Investments	$291.10	$243.80	$1,206.80	$592.80	$4.90	$2,339.40

*All figures in millions of YOE dollars. Figures may not add up due to rounding. *T4 MRPs were not listed in Plan and are not mappable for this analysis*
Source: DVRPC, 2025.

Table D-10: New Jersey Funded MRP Investments by Project Category and Title VI Communities

Project Cat.	Category Name	Well Above Average	Above Average	Average	Below Average	No Data	Total
R1	Pavement Preservation & Modernization Investments	$144.70	$93.90	$435.10	$10.70	$0.00	$684.40
R1	Percent Pavement Preservation & Modernization	21%	14%	64%	2%	0%	100%
R2	Bridge Preservation Investments	$261.70	$91.20	$76.10	$0.00	$0.00	$429.00
R2	Percent Bridge Preservation	61%	21%	18%	0%	0%	100%
R3	Substantive Safety Investments	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
R3	Percent Substantive Safety	0%	0%	0%	0%	0%	0%
R4	Mobility Operational Improvements Investments	$41.90	$73.70	$631.70	$0.10	$1.70	$749.20
R4	Percent Mobility Operational Improvements	6%	10%	84%	0%	0%	100%
R5	Roadway Expansion Investments	$0.00	$124.20	$255.80	$0.10	$3.20	$383.20
R5	Percent Roadway Expansion	0%	32%	67%	0%	1%	100%
R6	Green Transportation Investments	$0	$1.50	$2.30	$0	$0	$3.80
R6	Percent Green Transportation	0%	40%	60%	0%	0%	100%
T1	Transit Preservation & Modernization Investments	$46.90	$18.70	$24.20	$0.00	$0.00	$89.80

Project Cat.	Category Name	Well Above Average	Above Average	Average	Below Average	No Data	Total
T1	Percent Transit Preservation & Modernization	52%	21%	27%	0%	0%	100%
T2	Transit Operational Improvements Investments	$0	$0	$0	$0	$0	$0
T2	Percent Transit Operational Improvements	0%	0%	0%	0%	0%	0%
T3	Transit System Expansion Investments	$0	$0	$0	$0	$0	$0
T3	Percent Transit System Expansion	0%	0%	0%	0%	0%	0%
T4	Transit Other Investments	$0	$0	$0	$0	$0	$0
T4	Percent Transit Other	0%	0%	0%	0%	0%	0%
	Percent Total Mappable MRP Investments	21%	17%	61%	0%	0%	100%
	Total Mappable MRP Investments	$495.20	$403.20	$1,425.20	$10.90	$4.90	$2,339.40

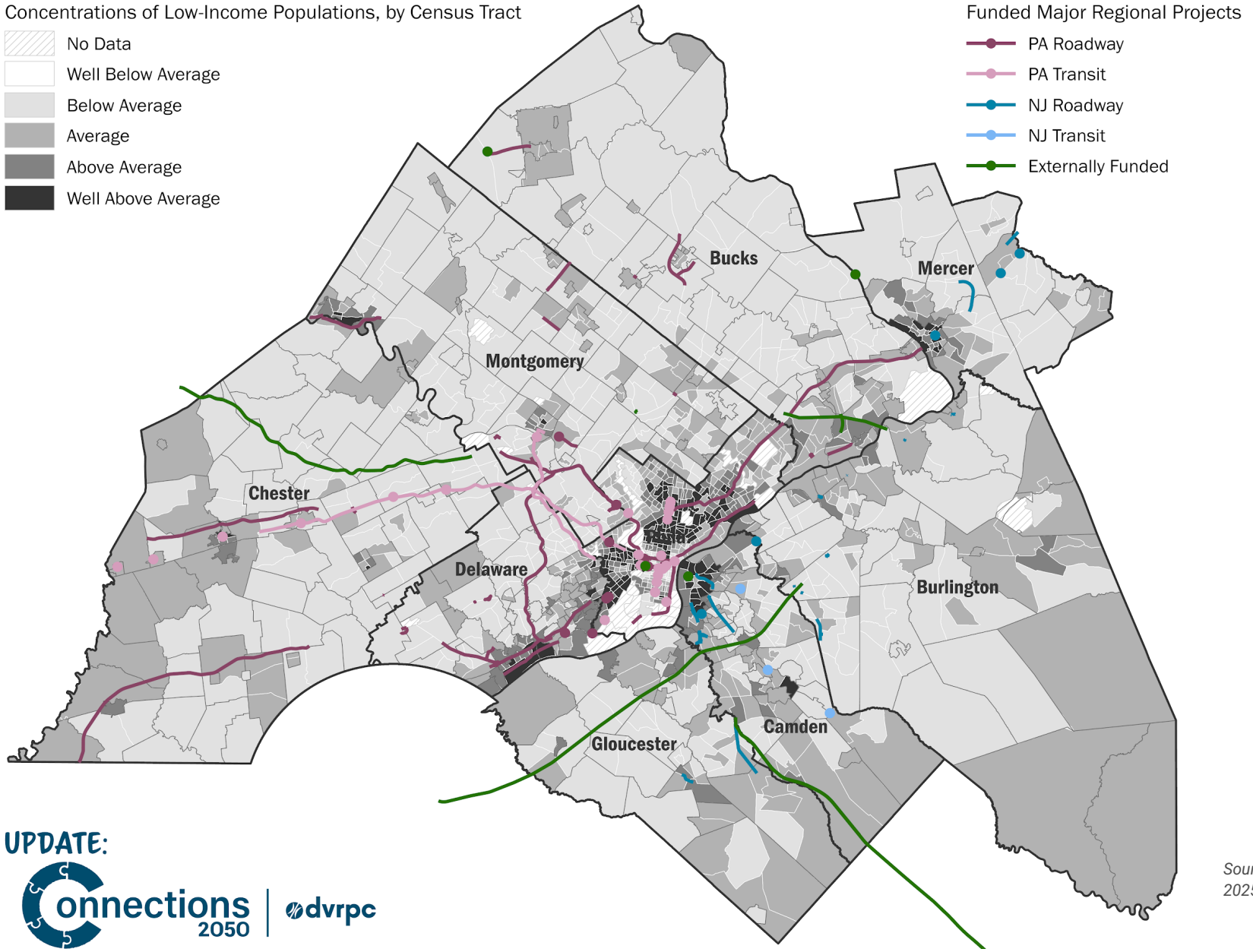
All figures in millions of YOE dollars. Figures may not add up due to rounding.
Source: DVRPC, 2025.

Figures D-8 and D-9 illustrate the spatial relationship between candidate MRPs and communities of concern within the DVRPC region. Both figures map the locations of candidate MRPs, overlaid with census tracts classified by the concentration of low-income and Title VI populations, respectively.

- Figure D-8 displays candidate project locations in relation to areas with varying concentrations of low-income populations, using standardized intervals from "Well Below Average" to "Well Above Average."
- Figure D-9 uses the same approach but focuses on Title VI populations.

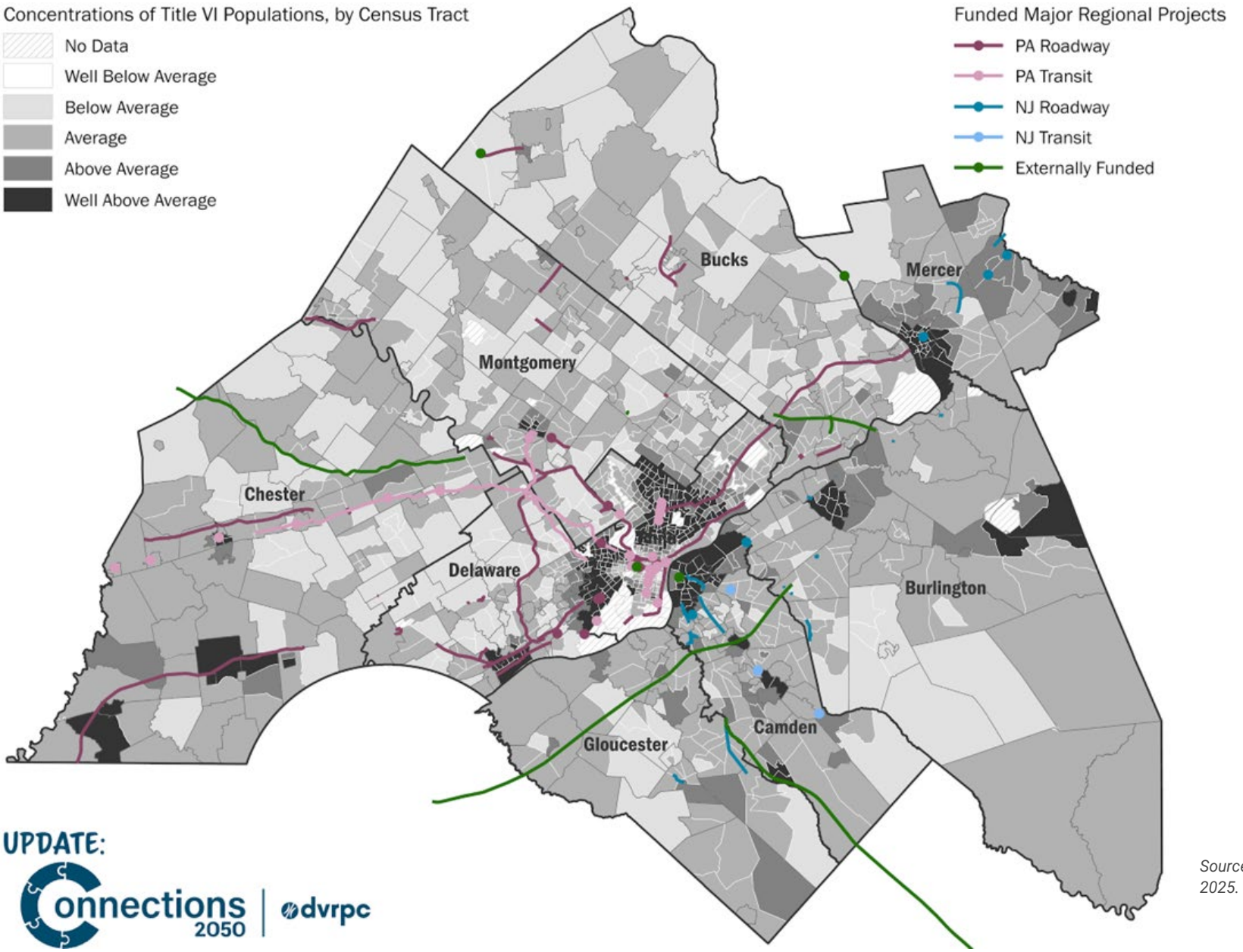
These maps provide a visual tool to assess whether MRPs are fairly distributed in accordance with Title VI. Note that this analysis and mapping only include those projects that are mappable. See the project list in the *Update: Connections 2050 Summary Document* for an indication of which projects either lacked sufficient detail to assign a specific location on a map or had too many discrete components to be represented cleanly.

Figure D-8: Funded MRPs and Concentrations of Low-Income Populations



Source: DVRPC, 2025.

Figure D-9: Funded MRPs and Concentrations of Title VI Populations



Source: DVRPC, 2025.

Table D-11 summarizes the total dollar amount and share of funded MRPs in Pennsylvania and New Jersey by project category. Each project category is assessed for its potential impact on communities of concern, using the following three classifications:

- Projects of Concern: High potential for adverse impacts and potentially beneficial
- Some Potential for Adverse Impacts & Potentially Beneficial
- Little to No Potential for Adverse Impacts or Unknown, & Some Potential to Be Beneficial

This table helps illustrate the scale and nature of investment in each category relative to its possible effects on Title VI and low-income populations, providing a regional view of how transportation investments align with compliance objectives.

Table D-11: Mapped and Unmapped Funded MRPs by Potential Impact

Potential Impact	Project Categories	Pennsylvania MRP Expenditures ($M)	Pennsylvania Percent of MRP Expenditures	New Jersey MRP Expenditures ($M)	New Jersey Percent of MRP Expenditures
Projects of Concern: High potential for adverse impacts & potentially beneficial	Bridge Removal	$0.00	0%	$0.00	0%
	Major/Minor Road Network Expansion	$1,183.81	4.2	$465.91	5.70%
Some potential for adverse impacts & potentially beneficial	Roadway Operational Improvements	$1,652.55	5.9	$1,936.57	23.80%
	Transit Operational Improvements	$1,401.67	5.00%	$0.00	0%
	Transit System Expansion	$438.04	1.60%	$0.00	0%
Little to no potential for adverse impacts/unknown & some potential to be beneficial	Pavement Preservation and Modernization	$2,897.24	10.30%	$1,371.57	16.80%
	Bridge Preservation	$8,572.48	30.4	$896.67	11%
	Transit Preservation and Modernization	$9,664.50	34.3	$2,498.32	30.70%
	Substantive Safety	$1,139.91	4.00%	$0.00	0%

Potential Impact	Project Categories	Pennsylvania MRP Expenditures ($M)	Pennsylvania Percent of MRP Expenditures	New Jersey MRP Expenditures ($M)	New Jersey Percent of MRP Expenditures
	Transit Other*	$0.00	0%	$0.00	0%
	Green Transportation	$1,231.22	4.40%	$975.22	12.00%
Total MRP Expenditures*		$28,181.42	100.00%	$8,144.27	100.00%

Source: DVRPC, 2025.

**The Plan allocates 34.05% of transit revenue to T4- Transit Other Costs, but there are no Major Regional Projects.*

Conclusions

This system-level analysis provides a high-level assessment of how transportation investments are geographically distributed across the region and how they align with low-income and Title VI communities. The findings indicate that a notable portion of funded MRPs are located in or pass through census tracts with above-average or well-above-average concentrations of low-income or Title VI populations. However, the extent of investment varies across states and demographic categories.

In Pennsylvania, approximately 20.2% of mapped, funded MRP dollars ($2.5 billion out of $12.4 billion) are directed to tracts with higher-than-average concentrations of Title VI populations, while 18.5% ($2.8 billion out of $15.3 billion) are directed to low-income census tracts. In New Jersey, 38% of mapped, funded MRP dollars ($900 million out of $2.3 billion) go to above-average and well-above-average low-income tracts, and 12% support tracts with elevated Title VI populations.

While this geographic analysis provides valuable insights, DVRPC recognizes the limitations of place-based methodologies alone. As part of a commitment to continuous improvement, DVRPC facilitated a series of supplemental focus group discussions with residents of communities with high concentrations of low-income and Title VI populations. These conversations aimed to deepen understanding of how people in these communities perceive transportation investments and what types of improvements are most meaningful to them.

Focus group participants consistently emphasized the need to prioritize basic infrastructure improvements—particularly roadway preservation, sidewalks, ADA-compliant transit facilities, and safer pedestrian and bicyclist environments—over large-scale transformative projects. Many participants expressed skepticism about whether regional transportation investments were designed with their communities in mind, despite recognizing the theoretical benefits of certain projects. Feedback also highlighted a strong preference for investments that improve local access, safety, and day-to-day reliability, which tend to be lower-cost (i.e., non-MRP) projects.

Six central themes emerged from these discussions: the need for greater investment in communities that have not received fair levels of investment in the past and therefore have above average infrastructure in poor condition; mitigation of negative impacts; the importance of state of repair; safety and security; expanded mobility options; and improved communication. These insights reinforce the importance of community engagement and transparency throughout the planning and project development process.

Together, the quantitative system-level analysis and qualitative focus group findings point to a clear priority: ensure that transportation investments are responsive to the everyday needs of all communities. DVRPC will continue to refine its methodologies—including exploring more people-based analytical approaches—and integrate community perspectives to continue to guide effective investment decisions in future planning cycles.

Appendix E—Future Funding Outlook

APPENDIX E Funding Sources and Future Funding Outlook

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Funding Sources and Future Funding Outlook

The region's future transportation funding outlook is marked by considerable uncertainty. In particular, the Pennsylvania subregion in particular faces significant challenges with transit service at risk due to operating budget shortfalls. This section provides an overview of current federal, state, local, and other sources of funding for transportation infrastructure. It also presents a forward-looking assessment of potential changes, opportunities, and challenges to the funding landscape.

Federal Funding

Federal transportation funding is authorized through multi-year legislation. The current legislation is the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL). Signed into law on November 15, 2021, the IIJA is a five-year, $1.2 trillion bill reauthorizing federal surface transportation, drinking water, and wastewater programs. It includes $550 billion in new infrastructure investments across transportation, broadband, wastewater, and other sectors (See Table E-1).

The U.S. Department of Transportation (USDOT) administers IIJA funds through various agencies, including the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Most roadway and bridge funds are distributed via the Highway Trust Fund (HTF), which is supported by the federal fuel tax—18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel—and supplemented by general funds. Twenty percent of fuel tax revenues are allocated to a Mass Transit Account that funds transit projects directly through the FTA.

The IIJA departs from previous surface transportation acts in both scope and structure. It includes investments in water, electricity, and broadband infrastructure, and it expands competitive grant programs. Compared to the prior FAST Act, annualized funding increases 55% for highways and 49% for transit. Roughly two-thirds of IIJA funds are distributed via formula programs, while the rest are allocated through competitive grants.

The legislation is set to expire in September 2026. Congressional committees began to formally compile input into the reauthorization of the federal surface transportation legislation in April 2025.

Table E-1: Federal IIJA Program Funding Breakdown

Category	Total Contract Authority	Annual Average	Additional Appropriations
FHWA Highway Programs	$351.3 B	~$70.3 B	+ $2.8 B/year (up to $14.6B total)
FTA Transit Programs	$91.2 B	~$18.2 B	+ $3.2 B/year (up to $15.8B total)
Federal Railroad Administration FRA	$66 B	N/A	+ $36.2 B
Federal Aviation Administration FAA	$25 B	N/A	N/A
USDOT Other Programs	$34.1 B	N/A	+ $5.3 B

Source: Infrastructure Investment and Jobs Act, Public Law 117–58 (2021), www.congress.gov/bill/117th-congress/house-bill/3684.

Federal Highway Formula Programs

States and metropolitan areas receive the following FHWA-administered funds through formulas based on population, vehicle miles traveled (VMT), and other criteria (see Table E-2).

Table E-2: Federal Highway Formula Programs

Program Name	Acronym	Description
Bridge Off-System	BOF	For replacing or rehabilitating non-federal-aid highway system bridges that are structurally deficient or functionally obsolete.
Carbon Reduction Program	CARBON	Supports projects that reduce transportation mobile source air pollution, including electrification, electric vehicle (EV) charging, bicycle/pedestrian corridors, congestion pricing infrastructure, and diesel retrofits.
Congestion Mitigation and Air Quality	CMAQ	Funds projects in non-attainment or maintenance areas for ozone, CO, or PM that improve air quality and/or reduce congestion without expanding highway capacity.
Flexible Funds	FLEX	FHWA funds are transferred to FTA for eligible transit or highway projects.
Highway Safety Improvement Program	HSIP	Supports data-driven projects to improve safety. Requires an up-to-date State Strategic Highway Safety Plan (SHSP).
Highway Safety Improvement Program—Vulnerable Road Users	HVRU	Targets safety improvements for non-motorized users. Projects must be included in the SHSP.
National Highway Freight Program	NHFP	Enhances freight movement on the National Highway Freight Network (NHFN), including PHFS, Critical Rural and Urban Freight Corridors, and interstates.
National Highway Performance Program	NHPP	Maintains and improves National Highway System infrastructure, including bridges, tunnels, ITS, and bicycle/pedestrian facilities.
Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation	PROTECT	Offers both formula and discretionary funds to improve transportation system resilience to extreme weather.
Railroad-Highway Grade Crossing	RRX	Funds safety improvements at public highway-rail grade crossings.

Program Name	Acronym	Description
Safe Routes to School Federal-Aid	SRTSF	Encourages safe walking/biking to school through infrastructure and education projects.
Surface Transportation Block Grant Program	STBGP	Highly flexible funding for federal-aid highways, public roads, transit capital, and intermodal facilities.
Surface Transportation Block Grant Program—Urban Allocation	STBGP-U	Allocated to urban areas (population >200,000) for locally prioritized projects.
Statewide Planning and Research	SPR	Supports long-range planning and State Transportation Improvement Programs (STIPs).
Transportation Alternatives Set-Aside	TASA	A subset of STBGP for smaller-scale projects, including bike/pedestrian improvements, trail conversions, scenic enhancements, and historic preservation.

Source: Infrastructure Investment and Jobs Act, Public Law 117–58 (2021).

Federal Transit Formula Programs

Table E-3 lists the various formula-based federal transit programs.

Table E-3: Federal Transit Formula Programs

Program Name	Acronym	Description
Congestion Mitigation and Air Quality	CMAQ	Funds transit capital projects with documented air quality benefits. FHWA-origin funds may be flexed to FTA.
Demonstration Funds	DEMO	Earmarks from ISTEA, TEA-21, and SAFETEA-LU are used for transit projects.
Federal Other	FED OTHER	Represents unanticipated federal funds not part of standard apportionments.
Planning	Section 5303/5304/5305	Supports cooperative, comprehensive, and continuing multimodal transportation planning in metropolitan and statewide contexts.
Urbanized Area Formula Grants	Section 5307	Provides capital and planning funds to public transit systems in urban areas. Limited use for operating expenses under certain criteria.
Enhanced Mobility of Seniors and Individuals with Disabilities	Section 5310	Assists private nonprofits in meeting specialized transportation needs.
Technical Assistance and Standards	Section 5314a	Supports technical assistance and workforce development programs.
Human Resources and Training	Section 5314b	Funds public transit workforce development programs.
Emergency Relief	Section 5324	Supports equipment replacement, infrastructure repair, and resilience planning following natural disasters.
State-of-Good Repair	Section 5337 (SGR)	Provides capital assistance to maintain high-intensity fixed guideway and motorbus systems, including asset management planning.
Bus and Bus Facilities Formula Program	Section 5339a	Allocated by formula to replace, rehabilitate, and purchase buses and related infrastructure. Includes discretionary subprograms for major capital needs and low/no-polluting fleets.

Source: Infrastructure Investment and Jobs Act, Public Law 117–58 (2021), www.congress.gov/bill/117th-congress/house-bill/3684.

Federal Competitive Funds

The IIJA introduces a wide array of non-formula, competitive grant programs . These programs are open to states, metropolitan regions, tribal governments, and other eligible entities, depending on the administering agency. Many are subject to annual Congressional appropriations (see Table E-4).

Fixed Guideway Capital Investment Grants (CIG)
FTA's Capital Investment Grants (CIG) program is the federal government's traditional competitive grant source. The CIG program is the main funding mechanism for new and expanded fixed guideway transit infrastructure. Under the IIJA, $4.6 billion is authorized annually from the General Fund for CIGs, subject to Congressional appropriations. CIG Program Categories include:

- **New Starts**—For new fixed guideway projects or extensions costing $400 million or more, or seeking $150 million or more in CIG funding.
- **Small Starts**—For similar projects under $400 million total cost and requesting less than $150 million in federal CIG funds.
- **Core Capacity**—For substantial capital investments in existing fixed guideway corridors that are at or near capacity and will increase capacity by 10 percent or more. Core Capacity projects may not include routine state-of-good-repair elements.

DVRPC includes CIG allocations in the long-range plan when specific projects are identified. Historically, the region has assumed a capacity to secure two New Starts and two Small Starts grants (one per state subregion) over the life of the Plan. Projects must demonstrate strong local financial commitments for both capital and operating costs to be eligible.

As of this update, no major transit expansion project in the region is positioned to enter the CIG pipeline. The King of Prussia Spur has been indefinitely paused. However, Southeastern Pennsylvania Transit Authority (SEPTA)'s Trolley Modernization Project includes a request for a $200 million Core Capacity CIG grant for station upgrades and transit signal priority enhancements.

Table E-4: Selected Competitive Grant Programs

Program Name	Acronym	Description
Advanced Digital Construction Management Systems	ADCMS	Supports the implementation of digital technologies in construction management to improve project delivery and documentation.
Advanced Transportation Technologies and Innovative Mobility Deployment	ATTAIN	Provides grants for deploying advanced transportation technologies to enhance mobility, safety, efficiency, system performance, and return on investment.
Accelerated Innovation Deployment Demonstration Program	AID	Offers grants to pilot innovations in areas such as planning, materials, construction, operations, and finance.
Active Transportation Infrastructure Investment Program	ATIIP	Funds construction of connected biking and walking networks and the planning of active transportation infrastructure. Subject to annual appropriations.
Bridge Investment Program	BRIP	Offers grants for the replacement, rehabilitation, preservation, and construction of bridges over 20 feet long.
Better Utilizing Investments to Leverage Development	BUILD (formerly RAISE/TIGER)	Supports surface transportation projects with significant regional or local impacts.
Community Charging and Fueling Infrastructure	CFI	Funds development of EV charging and alternative fuel infrastructure in underserved communities, rural areas, and high-density housing zones.
Corridor Charging and Fueling Infrastructure	CFI	Focuses on EV and alternative fuel infrastructure deployment along federally designated Alternative Fuel Corridors.
Congestion Relief Program	CRP	Supports integrated multimodal solutions in large urban areas (1M+ population) to reduce congestion and its environmental/economic impacts.
FTA All Stations Accessibility Program	ASAP	Provides funding to retrofit or improve existing transit stations to comply with the Americans with Disabilities Act (ADA).

FTA Discretionary Bus and Bus Facilities	Section 5339b	Offers competitive funding for large-scale capital projects to replace, rehabilitate, or purchase buses and bus-related infrastructure.
FTA Capital Investment Grants	Section 5309	FTA's primary discretionary grant program for new fixed guideway transit investments, including heavy rail, commuter rail, light rail, streetcar, and BRT.
FTA Pilot Program for Transit-Oriented Development Planning	Section 5309	Funds local integration of land use and transit planning for capital investments.
FTA Expedited Project Delivery for CIG Pilot	EPD	Allows up to eight projects to receive accelerated grant approval, subject to public-private partnership participation and state-of-good-repair certification.
FTA Low or No Emission Vehicle Program	Section 5339c	Supports deployment of advanced propulsion transit buses and infrastructure.
FTA Public Transportation Innovation	Section 5312	Funds development and demonstration of innovative transit products and services.
FTA Transit Cooperative Research Program	Section 5312i	Supports applied research, best practices, and prototype development to address near-term transit agency needs.
FTA Passenger Ferry Grant Program	Section 5307h	Competitive funding for capital improvements to public ferry systems in urbanized areas.
Infrastructure for Rebuilding America	INFRA	Supports multimodal freight and highway projects of national or regional importance.
National Infrastructure Project Assistance	MEGA	Targets large and complex surface transportation projects beyond the scope of traditional programs.
National Culvert Removal, Replacement, and Restoration Grants	Culvert AOP Program	Supports ecological restoration by improving fish passage at culvert locations.
NEVI Discretionary Set-Aside	NEVI Set-Aside	Allocates 10 percent of NEVI formula funds for additional deployment of reliable EV infrastructure.

Roadside Pollinator Program	–	Provides grants for vegetation and habitat improvements along roadsides to benefit pollinators. Subject to annual appropriations.
Prioritization Process Pilot Program	PPPP	Assists agencies in developing data-driven planning processes with measurable public benefits.
PROTECT Discretionary Grants	PROTECT Grant	Funds transportation resilience projects that address extreme weather vulnerability.
Rail Vehicle Replacement Program	RVR	Supports capital replacement of passenger rail vehicles in revenue service.
Reduction of Truck Emissions at Port Facilities	RTEPF	Funds electrification and other air pollution-reducing technologies at port facilities.
Rural Surface Transportation Grant Program	–	Improves transportation connectivity, reliability, and safety in rural regions.
Safe Streets and Roads for All	SS4A	Funds local safety planning and implementation efforts aligned with "Vision Zero" or "Toward Zero Deaths" strategies.
Strategic Innovation for Revenue Collection	SIRC	Tests road usage charges and other alternative funding models to support the long-term solvency of the HTF.
Transportation Access Pilot Program	APP	Provides technical assistance (not direct funding) to develop accessibility data and performance metrics for transportation planning.
Wildlife Crossings Pilot Program	WCPP	Supports infrastructure projects to reduce vehicle-wildlife collisions and improve ecological connectivity.

Source: Infrastructure Investment and Jobs Act, Public Law 117–58 (2021), www.congress.gov/bill/117th-congress/house-bill/3684.

Federal Funding Outlook

The IIJA is set to expire on September 30, 2026, and the reauthorization process is underway. Historically, federal surface transportation bills have often required a series of continuing resolutions before reauthorization. Since the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA), reauthorization has taken an average of 18 months. While the current schedule for reauthorization is ambitious, there is a strong commitment among federal policymakers to complete the process on time and avoid the need for continuing resolutions.

Highway Trust Fund (HTF) Solvency

The federal motor fuel tax has not increased since 1993. Over time, rising vehicle fuel efficiency, the adoption of electric vehicles, and a modest decline in VMT since the COVID pandemic have suppressed fuel tax revenues. Inflation has further reduced the value of the gas tax—eroding 64 percent of its purchasing power. To keep the HTF solvent, Congress has transferred $271.5 billion from the general fund and $3.7 billion from the Leaking Underground Storage Tank Fund since 2008, including:

- $215 billion to the Highway Account
- $60.1 billion to the Transit Account

Looking ahead, the Congressional Budget Office (CBO) projects both the Highway and Transit Accounts of the HTF will be exhausted by 2028 if no new funding is authorized. Under current law, the HTF cannot run negative balances, but CBO estimates a combined $284 billion shortfall in both accounts from 2028–2034 if current spending and tax structures continue. Table E-5 includes projected start-of-year balances, revenues, outlays, and resulting balances for both the Highway Account and Transit Account.

Table E-5: CBO Baseline Projections for HTF Accounts (2023–2034)

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Highway Account Start-of-Year Balance	$98.9	$89.6	$79.4	$64.1	$44.1	$20.6	a	a	a	a	a	a
Revenues and Interest and Intergovernmental Transfers	$42.0	$43.9	$42.8	$41.4	$40.3	$39.3	$38.6	$37.9	$37.0	$36.2	$35.5	$35.0
Outlays and Flexed Balances[b]	–$51.2	–$54.1	–$58.0	–$61.4	–$63.8	–$66.0	–$67.6	–$68.8	–$70.1	–$71.4	–$72.8	–$74.2
Highway Account End-of-Year Balance	$89.6	$79.4	$64.1	$44.1	$20.6	–$6.2[a]	–$35.1[a]	–$66.0[a]	–$99.1[a]	–$134.3[a]	–$171.6[a]	–$210.8[a]
Transit Account Start-of-Year Balance	$34.6	$31.9	$28.0	$22.1	$14.5	$5.5	a	a	a	a	a	a
Revenues and Interest,[c] Flexed Balances,[b] and Intergovernmental Transfers	$7.3	$7.9	$7.5	$6.9	$6.5	$6.2	$6.0	$5.8	$5.6	$5.4	$5.2	$5.0
Outlays	–$10.0	–$11.8	–$13.4	–$14.5	–$15.5	–$16.3	–$16.7	–$17.0	–$16.9	–$17.1	–$17.0	–$16.8
Transit Account End-of-Year Balance	$31.9	$28.0	$22.1	$14.5	$5.5	–$4.7[a]	–$15.4[a]	–$26.7[a]	–$38.0[a]	–$49.7[a]	–$61.5[a]	–$73.3[a]

All figures in billions of Year-of-expenditure (YOE) dollars.
Source: Adapted from CBO, June 2024.

[a] Under current law, the HTF cannot incur negative balances. However, following the rules governing baseline projections in the *Balanced Budget and Emergency Deficit Control Act* of 1985, CBO's baseline for surface transportation spending reflects the assumption that obligations presented to the HTF will be paid in full. The addendum to this table shows the cumulative shortfall of fund balances, assuming spending amounts consistent with CBO's June 2024 baseline. In keeping with the rules for baseline construction, those amounts are estimated by adjusting the obligation limitations enacted under the *Further Continuing Appropriations and Other Extensions Act*, 2024, to account for projected inflation.

[b] Flexed balances are transfers from the highway account to the transit account.

[c] Some of the taxes that are credited to the HTF are scheduled to expire on September 30, 2028, including the taxes on tires and all but 4.3 cents of the federal tax on motor fuels. However, under the rules governing baseline projections, these estimates reflect the assumption that all the expiring taxes credited to the fund will continue to be collected after fiscal year 2028.

The Senate's Environment and Public Works Committee began meeting in February 2025 about new federal transportation legislation for when the IIJA expires. The committee has identified safety as its top priority, along with a higher focus on technology and the supply chain.[37]

In addition to potential federal legislation impacts on funding levels, future transit funding levels in Pennsylvania are at risk should SEPTA's operating service cuts take effect. Many funding categories are allocated to transit agencies based on service level provision. Reduced operating service levels will lead to decreased capital budget resources. For example, the proposed 45 percent service cuts would reduce 5307/5337 funds by approximately $30 million per year.

State Funding

State funding is the second largest contributor to the region's transportation revenues. DVRPC estimates annual allocations for both roadway and transit investments based on financial guidance from Pennsylvania Department of Transportation (PennDOT) and regional partners. In line with current assumptions, state funding levels in both Pennsylvania and New Jersey are expected to remain flat through the end of the current 12-year program and increase by 3 percent annually thereafter.

In the *Update: Connections* 2050 financial plan, state sources are projected to comprise 29.4 percent of total regional revenues. Of this, Pennsylvania contributes approximately 17.1 percent, while New Jersey contributes 12.2 percent.

Pennsylvania

Pennsylvania's transportation revenue was significantly expanded through Act 89 of 2013, which increased the state's oil company franchise tax, resulting in the third-highest state gasoline tax in the country—currently 57.6 cents per gallon. The Pennsylvania Constitution (Article 8, Section 11) limits the use of fuel tax revenues strictly to roadway and bridge purposes, excluding their use for transit operations or other purposes. In addition to federal funds passed through the state, Pennsylvania provides a variety of state-specific funding streams (see Table E-6).

[37] Eugene Mulero, "Senate Transportation Committee Eyes Next Highway Bill", Transport Topics, February 26, 2025 (accessed February 27, 2025) www.ttnews.com/articles/senate-transportation-highway.

Table E-6: Pennsylvania State Funding Sources

Program Name	Acronym	Description
Act 13 of 2012	ACT13	Funds from the Marcellus Shale Impact Fee to support the repair or replacement of at-risk, locally owned bridges.
Appropriation 073—Green Light-Go	A-073	Competitive grant program supporting congestion reduction and signal efficiency on state highways; requires a 50 percent municipal or private match.
Appropriation 179/179A	–	Targeted funding for local bridge projects in economically distressed areas.
Appropriation 183	–	General support for local bridge projects.
Appropriation 185 / 185-IM	–	Funding for state-owned bridge projects, including a subset for the Interstate Management Program (IMP).
Appropriation 581 / 581-IM	–	Funding for highway or bridge projects on the state highway system, including those within the IMP.
Appropriation 582	–	Funds used for highway maintenance operations such as resurfacing and maintenance staffing.
Automated Red-Light Enforcement	ARLE / ASE	Revenues from red-light and speed enforcement cameras used for safety improvement grants.
Multimodal Transportation Fund	411	Competitive statewide program supporting transportation projects that enhance communities, safety, and multimodal access.
Transportation Infrastructure Investment Fund	TIIF or e581	Funds economic development-related highway improvements on the state system.
State Spike Funds	SPIKE or SPK	Discretionary state funding allocated by the Secretary of Transportation to priority projects.

Source: Pennsylvania Department of Transportation, 2025 Statewide Transportation Improvement Program (FY 2025–2028), approved September 27, 2024.

Together, these programs provide critical support for maintaining and improving Pennsylvania's roadway and bridge infrastructure. The IMP plays a significant role in addressing the state's aging Interstate system. Managed under the Statewide Transportation Improvement Program (STIP), the IMP allocates both state and federal funds for non-expansion maintenance projects, with approval from PennDOT's Project Management Committee.

For transit, Pennsylvania provides several capital funding programs, most of which are distributed by formula or through defined allocation methods. These include:

- Asset Improvement Program (Section 1514)—Distributed to transit agencies based on demonstrated need, and can support asset purchases, replacements, or debt service.
- Programs of Statewide Significance (Sections 1516 / 341)—Funds transit services such as Persons with Disabilities, Welfare-to-Work, intercity bus and rail, technical assistance, and demonstrations.
- Public Transportation Assistance Fund (PTAF44)—Allocates funding to transit operators from dedicated sources.

In 2022, the level of Act 44 funding from the Pennsylvania Turnpike was reduced from $450 million to $50 million per year. The resulting $400 million shortfall was replaced with general fund revenues. These funds continue to support Section 1514 alongside lottery and tax revenues. Pennsylvania also offers discretionary or competitive programs to support specific modal investments. These include, but are not limited to:

- Rail Freight Assistance Program—Provides support for infrastructure preservation and expansion to promote rail freight service and economic development.
- Rail Transportation Assistance Program (Capital Budget)—Requires a specific line item in the Capital Budget Act to access funding.

New Jersey

New Jersey's primary source of transportation revenue is the Transportation Trust Fund (TTF), which supports both highway and transit investments through separate allocations. The TTF is funded through a combination of the motor fuels tax and the Petroleum Products Gross Receipts Tax, which is adjusted annually to meet state revenue targets. As of 2025, the total state gas tax is 44.9 cents per gallon for gasoline and 51.9 cents for diesel.

State transit funding in New Jersey is supplemented by an annual appropriation of 8.5 percent of the Casino Tax Fund, which is earmarked to support transportation services for seniors and persons with disabilities.

New Jersey also administers a Local Freight Impact Fund, which is a competitive grant program targeting improvements to local freight infrastructure. New Jersey Department of Transportation (NJDOT) uses toll credits to fulfill local matching fund requirements for federal projects, reducing the need for direct cash contributions from local governments.

Discretionary State Funds

In addition to formula-based funding, the region receives supplemental support from discretionary and competitive grant programs administered by state agencies. These programs offer opportunities for targeted investments in freight, safety, multimodal, and environmental initiatives. Only funding that can be reasonably anticipated—based on prior awards or strong prospects—is included in the financial forecast for the long-range plan.

In Pennsylvania, Act 89 of 2013 established two Multimodal Transportation Funds, one administered by PennDOT and the other by the Department of Community and Economic Development (DCED). These programs have become an important resource for local governments, transit agencies, and private entities pursuing integrated transportation improvements.

Other discretionary and competitive state funding sources in Pennsylvania include, but not limited to:

- Rail Freight Assistance Program—Supports the preservation and enhancement of essential rail freight service where economically feasible, helping to stimulate economic development through new or expanded rail access. Local match requirements vary.
- Rail Transportation Assistance Program (Capital Budget)—Available to applicants with a dedicated line item in the Pennsylvania Capital Budget Act.
- Automated Red-Light Enforcement (ARLE)—Revenues from red-light violations are distributed via a PennDOT-administered grant program for roadway safety, congestion, and enhancement projects. Eligible applicants include municipalities with documented traffic safety issues.
- Green Light-Go (Appropriation 073)—Provides competitive funding to improve traffic signal efficiency on state highways in designated corridors.

In New Jersey, discretionary transit and roadway grants are less common. However, the Local Freight Impact Fund provides a competitive opportunity to fund projects that improve the mobility, safety, and condition of local freight corridors. New Jersey's strong reliance on state-level formula programs and centralized capital planning results in fewer discretionary programs compared to Pennsylvania.

State Funding Proposals

In both Pennsylvania and New Jersey, efforts are underway to address the long-term structural challenges facing transit operating budgets, especially as fare revenue continues to lag in the post-COVID era.

In New Jersey, P.L. 2024, c.20 established a 2.5 percent Corporate Transit Fee on Corporation Business Tax returns for companies with net income over $10 million. This additional tax supplements the existing Corporation Business Tax and is intended to provide a dedicated revenue stream for NJ TRANSIT's operations.

In Pennsylvania, Governor Shapiro's FY25 and FY26 proposed budgets call for dedicating an additional 1.75 percent of state

sales tax revenues to support transit operations. While this proposal has not been enacted, the General Assembly has expressed interest in exploring other funding strategies to stabilize public transportation throughout the Commonwealth.

One such strategy was implemented in 2025: a new road user charge for electric and plug-in hybrid vehicles. Owners of electric vehicles (EVs) now pay an additional $200 annual registration fee, while owners of plug-in hybrid vehicles pay an additional $50. These fees can be paid biennially. Beginning in 2026, the rates increase to $250 for EVs and $63 for plug-in hybrids. These fees are intended to ensure all vehicles contribute to roadway maintenance, regardless of fuel source.

Local Funding

Local funding plays a limited but vital role in supporting the region's transportation system. Across the country, local sources provide substantial flexibility for multimodal investments and help communities meet federal and state match requirements. However, in both Pennsylvania and New Jersey, state laws significantly constrain the ability of local governments to raise dedicated transportation revenues through taxation. This has created a major challenge for the Greater Philadelphia region in both maintaining existing infrastructure and advancing capital expansion projects.

A key consequence of these constraints is the region's lack of a stable and predictable local funding strategy—particularly when pursuing competitive federal programs like the FTA's CIGs. Without a reliable source of local match funding, the region is at a disadvantage in securing discretionary federal dollars for transformative projects.

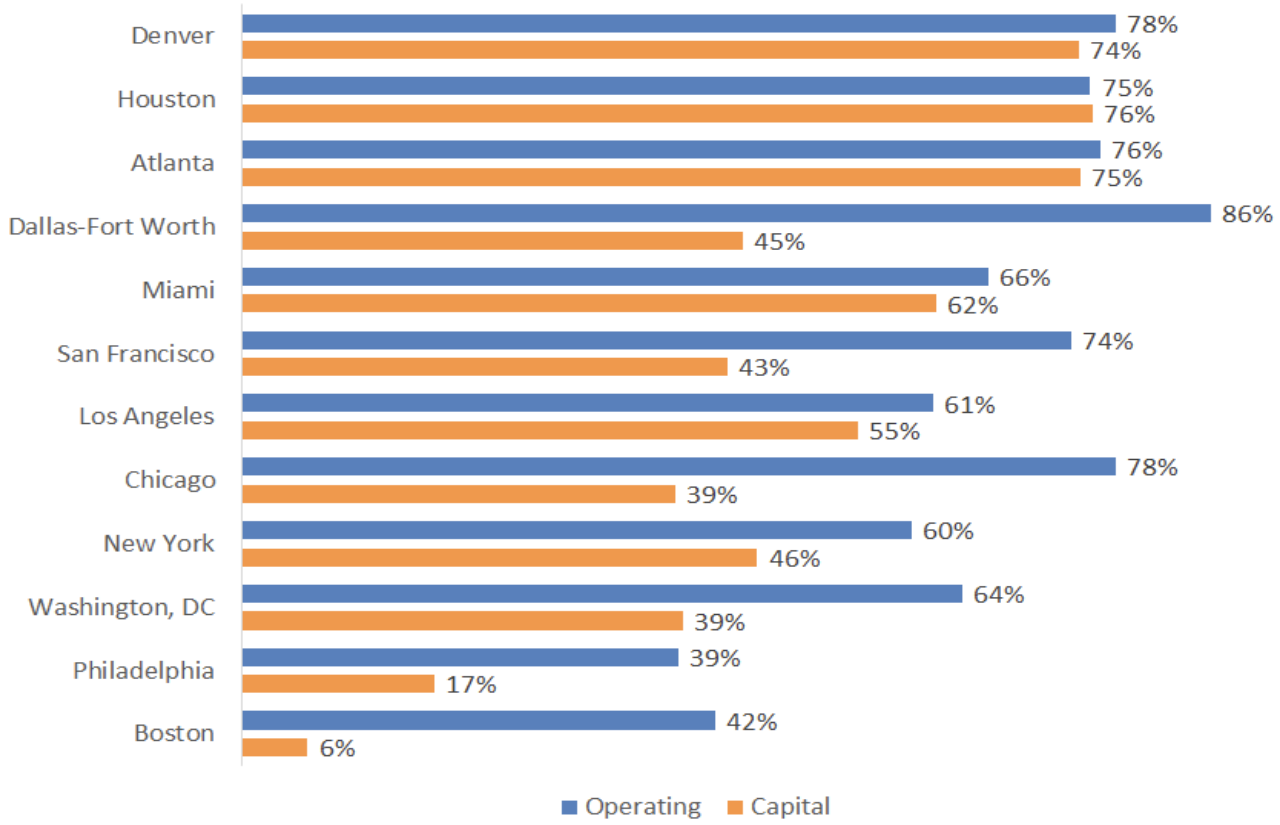
Local contributions account for just 2 percent of reasonably anticipated revenues in the *Update: Connections 2050* financial plan. In most cases, these funds are used solely to meet the required match ratios for federal or state funding programs. The long-range financial forecast assumes that local match contributions will grow in proportion to state and federal allocations to preserve the required match ratios.

Local roadway funds in Pennsylvania include funding from counties, municipalities, or other non-federal sources used to match state or federal roadway investments. Local transit funds in Pennsylvania are contributed by counties or municipalities, also used to match federal and state transit allocations. In New Jersey, NJDOT typically uses toll credits to meet federal local match requirements, which reduces the need for direct financial contributions from municipalities or counties.

According to the National Transit Database (NTD), the Philadelphia region has among the lowest levels of local financial support for both capital and operating transit budgets compared to peer regions (see Figure E-1). Among 12 large peer metropolitan areas, Philadelphia ranks second lowest in local capital contributions (17 percent of the total capital budget) and lowest in operating support (39 percent). These figures reflect a broader structural gap in local fiscal authority, rather than a lack of need or demand for local investment.

It is worth noting that some revenues categorized as "local" in the NTD—such as Pennsylvania Turnpike lease funds—are treated as state funding in the Plan. Similarly, some agencies included in the NTD (for example many private paratransit services in the region, such as Senior Citizens United Community Services) fall outside the financial scope of *Update: Connections 2050* but contribute to the region's overall NTD metrics.

Figure E-1: Percent of Transit Capital and Operating Funding from Local Sources (2015–2024)



Source: Federal Transit Administration, National Transit Database, 2015–2024.

The region currently lacks a detailed plan for generating local funding for major capital initiatives. For example, most projects receiving CIG New Starts funding in recent years have had local and state contributions covering more than 60 percent of total project costs. In Pennsylvania, the Transit Revitalization Investment District (TRID) mechanism offers a way to generate

incremental revenue through value capture. However, TRIDs alone are unlikely to provide sufficient funds to support large-scale system expansion.

Current federal funding levels are insufficient to meet existing and projected capital needs, and this situation would worsen if federal transportation funding declines or becomes more competitive. Regions with robust local funding sources are better positioned to maintain their infrastructure and sustain economic growth. To improve financial readiness, there is a need for DVRPC and its partners to explore alternative financing mechanisms, such as the Transportation Infrastructure Finance and Innovation Act (TIFIA) loan program and other value capture strategies.

Additional Local Funding Options

Expanding local revenue authority is critical to delivering the region's long-term transportation vision. In addition to supporting multimodal investments and emerging technologies, flexible local funding would enable communities to meet their match obligations and build out strategic networks. However, concerns about long-term maintenance costs have also deterred communities from pursuing projects like sidewalks and bike facilities, creating barriers to achieving a truly multimodal system. To address these challenges, DVRPC and its planning partners have analyzed a broad range of potential local funding tools. These include:

- Personal income tax—Levied on individual wages and salaries.
- Realty transfer tax—Assessed as a percentage of the sale price when property is transferred.
- Vehicle property tax—Applied as a percent of a vehicle's fair market value.
- Property tax surcharge—An additional tax on real property based on assessed value.
- Sales tax—A general consumption tax on goods and services.
- Sales tax on vehicles—A specific sales tax applied to motor vehicle purchases.
- Transportation Network Company (TNC) fee—A per-trip fee on app-based ride-hailing services.
- Local gasoline sales tax—A tax on fuel purchases based on a percentage of total cost.
- Local services tax—A flat-rate tax on individuals employed within a municipality or school district; limited to $52 annually and exempt for incomes under $12,000.
- Cigarette tax—An excise tax embedded in the retail price of tobacco products.
- Vehicle registration fee—Charged when registering a vehicle, typically biennially.
- Malt beverage tax—Levied on beer and similar alcohol products.
- Liquor tax—Applied to the sale of wine and spirits.
- Hotel occupancy tax—Charged as a percentage of the cost of short-term lodging.

These funding tools offer varying degrees of political viability, revenue potential, and administrative complexity. Ultimately, implementing one or more of these mechanisms will likely

require state legislative authorization, particularly in Pennsylvania.

Over the past several legislative sessions, various bills enabling certain counties—including Bucks, Chester, Delaware, Montgomery, and Philadelphia—to generate local transportation revenues through a set of new taxation options. If enacted, the bill would allow these counties to implement one or more of the following:

- A surcharge on liquor and malt beverage taxes
- An excise tax on rental vehicles
- A surtax on the state earned income tax
- A vehicle property tax
- A sales and use tax surtax
- A real estate transfer tax
- A local services tax for employees earning more than $12,000 annually
- Increase the annual vehicle registration fee by $5

Revenues generated through these measures could be used to:

- Match federal and state transportation funds
- Support local transit agency operations, maintenance, or debt service
- Fund specific public transportation projects
- Enter into long-term agreements to support local transportation services

These legislative efforts reflect a growing recognition that regional mobility depends on flexible, reliable, and diverse funding strategies, especially to maintain existing services and advance capital projects.

Other Funding

In addition to federal, state, and local sources, several partner transportation authorities in the Greater Philadelphia region generate their own revenues, most notably through toll collections. These self-sustaining authorities typically cover both capital and operating expenses using toll proceeds and are not included in DVRPC's long-range financial forecasts. However, when these authorities use federal funds in conjunction with their own revenue on specific capital projects, DVRPC tracks both federal and non-federal expenditures. The federal portion is then included in regional revenue and expenditure totals.

Other roadway funding designations in Pennsylvania that fall outside standard categories include:

- OTHER—Miscellaneous or non-traditional sources not otherwise categorized.
- Other State (OTH-S)—State funds that are not derived from highway user fees or dedicated transportation revenues.
- Toll Credit Match (TOLL)—Toll revenue credits that may be used to satisfy federal matching requirements, allowing states to leverage federal funds without contributing cash.
- Turnpike Funds (TPK)—Revenues provided by the Pennsylvania Turnpike Commission, typically used for capital projects on or near the toll network.

Additional transit funding sources in Pennsylvania include:

- OTH—Other non-federal, non-state sources, such as institutional partnerships or special allocations.
- TOLL—Toll credit match used in place of local cash for federal match requirements.

  TPK—Turnpike Commission contributions used to support transit access or improvements in coordination with highway investments.

Beyond toll authorities, there are several alternative financing mechanisms available to public agencies seeking to manage large or variable capital costs. While not always included in long-range forecasts due to uncertainty or project-specific applicability, these tools can play a key role in funding major infrastructure initiatives. They include:

- Municipal bonds—Issued by local or regional transportation agencies to finance capital improvements, often backed by dedicated revenue streams or general obligation pledges.
- Public-private partnerships (P3s)—Contractual arrangements in which private sector partners help finance, design, construct, operate, or maintain infrastructure in exchange for future revenue or availability payments.
- TIFIA (Transportation Infrastructure Finance and Innovation Act)—A federal credit program that provides low-interest loans, loan guarantees, and lines of credit to transportation projects with dedicated revenue sources.
- EB-5 immigrant investor visa program—Allows foreign nationals to invest in U.S. infrastructure and economic development projects in exchange for eligibility to apply for a green card.
- State infrastructure banks—Revolving funds operated by state DOTs that offer loans or credit assistance for eligible surface transportation projects.
- Congestion pricing—A system that charges drivers a fee to enter or drive within high-traffic areas during peak times to reduce congestion and fund transportation improvements. Most recently, New York City's congestion pricing plan would charge most drivers a toll to enter Manhattan below 60th Street in its Central Business District. Despite early success, the program faces ongoing legal and political challenges.
- Parking pricing—The practice of charging fees for parking spaces to manage demand, reduce congestion, and encourage alternative transportation.
- Tolling of existing highways—Involves charging drivers a fee to use roadways that were previously free, to manage traffic, and generate funding for transportation infrastructure.

These tools are typically considered when a specific project has a unique financing need, rather than being assumed as general-purpose funding across the plan. When incorporated, they are usually tied to toll-backed revenue streams, lease agreements, or local value-capture strategies.

These funding strategies supplement—but do not replace—core sources of federal and state aid. As the region's infrastructure needs evolve, particularly with respect to resilience, access, and technology integration, creative financing approaches may become increasingly important to advancing major transportation initiatives.

Appendix F—Financial Plan

APPENDIX F Financial Plan

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Financial Plan Overview

The regional funding priorities and capital investments outlined in the *Update: Connections 2050* Financial Plan were made through extensive collaboration with DVRPC's Regional Technical Committee (RTC) Financial Planning Subcommittee. DVRPC facilitated 31 meetings with the Subcommittee, along with many more targeted conversations, between May 2022 and May 2025. Long-range planning staff worked closely with key partners—including county and municipal governments, PennDOT, NJDOT, SEPTA, NJ TRANSIT, and DRPA/PATCO—to identify transportation infrastructure investments necessary to be made over the life of the Plan to achieve the regional vision by 2050.

The financial plan consists of five steps:

1. Needs Assessment—Establish infrastructure and service requirements needed to achieve the region's transportation vision and goals.
2. Revenue Forecast—Project future funding levels to determine how much revenue will be available for transportation projects.
3. Funding Allocation—Distribute funds across project types in alignment with regional priorities and needs.
4. Project Evaluation and Selection—Compare the benefits and costs of candidate projects and select those that will have the most impact.
5. Fiscal Constraint and Funding Options—Demonstrate that the Plan does not call for expenditures beyond reasonably anticipated revenues and identify ways to fill any gaps in funding (see *Appendix E—Funding Sources and Future Outlook* for content on this topic).

There are four separate financial plans: one for multimodal roadway projects and one for transit projects in each of the Pennsylvania and New Jersey subregions. Funding for each of these financial plans comes from different federal, state, and local sources. Each contains four funding periods that align with both the 2025 Pennsylvania and 2026 New Jersey TIPs, respectively (see Table F-1). In Pennsylvania, the first funding period comprises years two to four of the four-year FFY2025 TIP and years five to six of the Twelve-Year Program (TYP). The second period corresponds with the last six years of the statewide TYP. In New Jersey, the first funding period aligns with the first four years of the FFY2026 TIP. The second funding period corresponds with the remainder of the statewide 10-year plan. Per federal conformity requirements, 10 years is the maximum length allowable for any single Plan funding period.

Table F-1: *Update: Connections 2050* Funding Periods

Funding Period	Pennsylvania	New Jersey
1	2026–2030 (5)	2026–2029 (4)
2	2031–2036 (6)	2030–2036 (6)
3	2037–2045 (9)	2036–2045 (10)
4	2046–2050 (5)	2046–2050 (5)

Source: DVRPC, 2025.

The financial plan closely aligns with two other federally mandated programs:

1. Transportation Improvement Program (TIP)[38] is a regionally agreed upon list of priority multimodal transportation projects planned for the next four years that intend to use federal funding, along with all non-federally funded projects that are regionally significant for air quality conformity, with estimated costs and scopes.
2. Congestion Management Process (CMP)[39] provides information about the performance of the regional transportation network, identifies and prioritizes congested locations in the region, and recommends operational, travel demand, and multimodal alternatives to widening or new capacity roadways to enhance reliability and mobility for people and goods. Regulations require any project that adds single-occupancy vehicle (SOV) capacity to be consistent with the CMP to be eligible for federal funding. SOV capacity-adding projects must include supplemental strategy commitments to get the most long-term value from investment.

Following a performance-based approach, these programs help improve transportation, reduce congestion and related wasted travel time, enhance safety, and ensure efficient use of public resources.

Needs Assessment

The first step in the financial plan development is to conduct a needs assessment to estimate the level of investment necessary to achieve the regional vision and goals outlined in *Update: Connections 2050*. Regionally, the assessment identified approximately $162.9 billion in transportation improvements needed over the life of the Plan (see Table F-2).

The majority of these investments would preserve and maintain the existing transportation system, while also advancing regional goals for safety, mobility, and multimodal accessibility. This estimate does not yet fully account for the costs of achieving Vision Zero, reducing the transportation sector's air quality impacts, or preparing infrastructure for the effects of extreme weather. The scale of investment needed varies across the region. In the Pennsylvania subregion, where infrastructure tends to be older and more extensive, the estimated need is $54.7 billion for roadways and $68.0 billion for transit. In the New Jersey subregion, the estimated need is $25.7 billion for roadways and $14.4 billion for transit.

[38] Delaware Valley Regional Planning Commission, Transportation Improvement Program (TIP), DVRPC, www.dvrpc.org/tip/.

[39] Delaware Valley Regional Planning Commission, Congestion Management DVRPC, www.dvrpc.org/congestionmanagement/.

Table F-2: Total DVRPC Transportation Needs (2026–2050)

Mode	LRP Category / Subcategory	Pennsylvania	New Jersey
Roadway	Pavement Preservation & Modernization	$ 14.3 B	$ 8.4 B
	Bridge Preservation	$ 17.1 B	$ 4.7 B
	Substantive Safety	$ 2.0 B	$0.0 B
	Mobility Operational Improvements	$ 7.5 B	$ 4.8 B
	Roadway System Expansion	$ 2.0 B	$ 1.1 B
	Green Transportation	$ 11.8 B	$ 6.3 B
Roadway Subtotal		$ 54.7 B	$ 25.7 B
Transit	Transit Preservation & Modernization	$ 37.7 B	$ 5.1 B
	Transit Operational Improvements	$ 7.4 B	$ 426.0 B
	Transit System Expansion	$ 15.0 B	$ 8.6 B
	Transit Other	$ 7.8 B	$ 293.0 B
Transit Subtotal		$ 68.0 B	$ 14.4 B
Subregional Total		$ 122.7 B	$ 40.1 B
Regional Total			$ 162.9 B

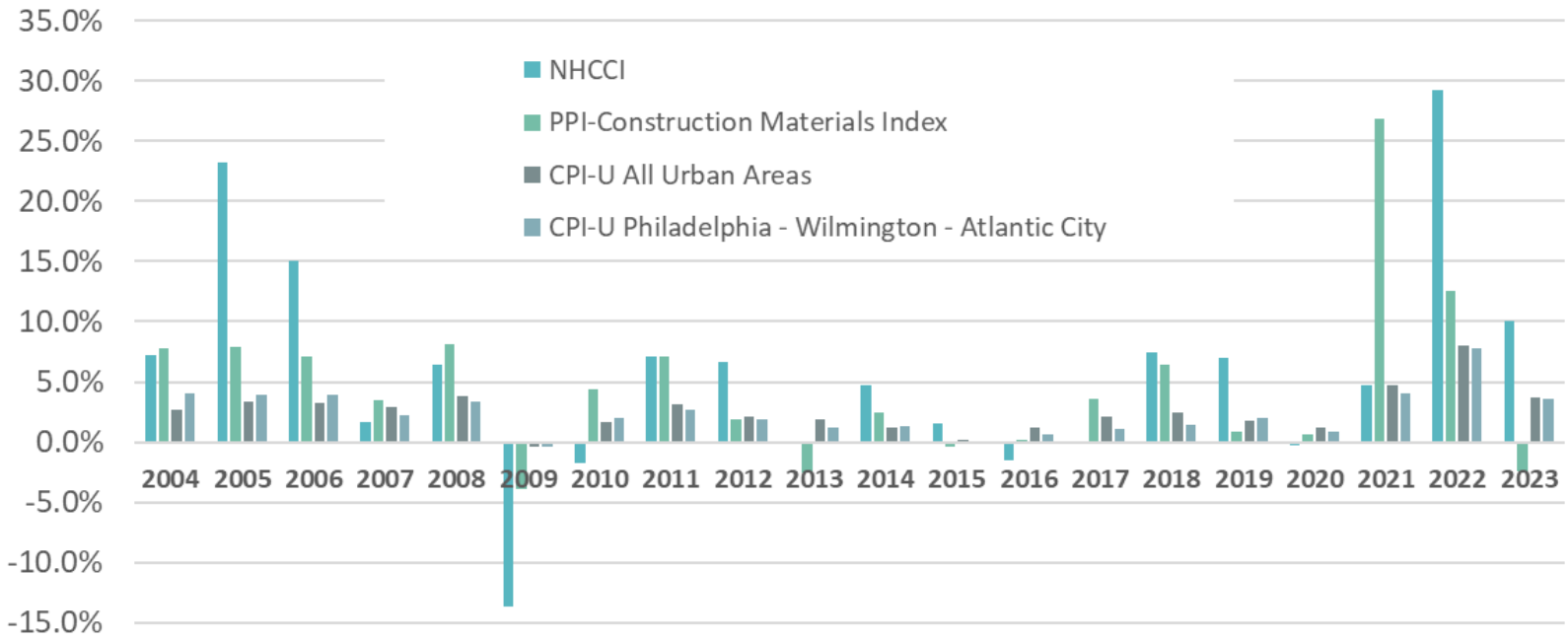
All figures are in millions of Year-of-expenditure (YOE) dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

Federal regulations require that cost estimates for future transportation projects be expressed in year-of-expenditure (YOE) dollars, which account for inflation expected between the present day and the year a project is scheduled for construction. Because inflation in the construction industry tends to be more volatile than in the broader economy, DVRPC monitors several inflation indices to inform its estimates. These include:

- The National Highway Construction Cost Index
- The Producer Price Index for Construction Materials
- The Consumer Price Index for All Urban Areas (CPI-U)
- The Consumer Price Index for the Philadelphia-Camden-Wilmington Region

Since the 2021 adoption of *Connections 2050*, these indices have increased by an average of 25 percent (see Figure F-1). To reflect this change, DVRPC applied an inflation rate of 5.5 percent per year from 2021 to 2025 to update earlier cost estimates to 2025 dollars. For future projections beyond 2026, *Update: Connections 2050* applies a 3 percent annual inflation rate to bring project costs into year-of-expenditure (YOE) dollars. This figure is consistent with assumptions used by both Pennsylvania and New Jersey Departments of Transportation.

Figure F-1: Annual Inflation Comparison



Sources: U.S. Federal Highway Adminstration; U.S. Bureau of Labor Statistics; Federal Reserve Bank of Saint Louis (FRED) 2024.

Roadway Need

Separate needs assessments are conducted for roadway and transit infrastructure for Pennsylvania and New Jersey. Roadway infrastructure includes all auto-accessible roads and bridges controlled or managed by state, county, local, and private entities. Greater Philadelphia's road network includes more than 20,000 miles of public roads—connecting communities across nine counties and supporting one of the nation's busiest freight corridors. Table F-3 outlines the existing road assets in the region, which informs additional needs, especially for preservation. The comprehensive needs assessment draws on asset management systems to identify the investments necessary to:

- Achieve and maintain a state-of-good repair for existing infrastructure
- Enhance bicycle and pedestrian facilities
- Implement safety and operational improvements through physical and technological upgrades
- Make limited investments in new infrastructure

The roadway need groups road, bicycle, and pedestrian infrastructure investments into six primary categories.

- R1. Pavement Preservation and Modernization
- R2. Bridge Preservation
- R3. Substantive Safety
- R4. Mobility Operational Improvements
- R5. Roadway System Expansion
- R6. Green Transportation

Since many projects in the Plan involve multiple types of improvements, they often span more than one category. This section describes each category of roadway spending, subcategories that provide more detail and help with project evaluation, the types of projects it includes, and provides example projects that fall under each category.

Table F-3: Existing Road Assets in Greater Philadelphia

Infrastructure	Owner	Pennsylvania Subregion	New Jersey Subregion
Roads (linear miles)	State DOT	3,553	524
	Other State/Federal Agency	169	159
	Turnpike/Toll Authority	94	100
	County/Local/Municipal	11,616	7,300
Bridges	State-Maintained Bridges, >8 feet	1,942	594
	State-Maintained Deck Area (millions of square feet)	26.0	6.7
	Locally Maintained Bridges, >20 feet	983	427
	Locally Maintained Deck Area (millions of square feet)	3.1	1.1
Bike and Pedestrian (miles)	Sidewalks (various owners)	12,279	7,409
	Bike Route (signed, without pavement markings)	184	0
	Sharrows	30	0
	Bike Lane	433	246
	Buffered/Protected Bike Lane	17	0
	Circuit Trails	268	87
CCTV Cameras	State DOT	454	110

	Turnpike/Toll Authority	22	260
	County/Local/Municipal	1,000	270
Dynamic Message Sign DMS	State DOT	197	64
	Turnpike/Toll Authority	43	63
	County/Local/Municipal	-	17
Traffic Signals	State DOT	3	635
	County/Local/Municipal	5,769	866
Safety Service Patrols	State DOT	15	11
	Turnpike/Toll Authority	4	10

Sources: DVRPC, PennDOT, NJDOT, Pennsylvania Turnpike Commission (PTC), New Jersey Turnpike Authority (NJTA), South Jersey Transportation Authority (SJTA), DRPA, Burlington County Bridge Commission, Mercer Co., Burlington Co., Camden Co., Gloucester Co., 2025.

R1. Pavement Preservation and Modernization

R1 Pavement Preservation and Modernization expenditures maintain existing roadway pavement infrastructure in a state-of-good-repair (SGR). This category includes projects that maintain, resurface, or reconstruct Interstate, state, and federal-aid eligible local roadways. It also covers safety upgrades and essential infrastructure elements such as signs, lighting, drainage, and pedestrian facilities, ensuring roads across all levels meet current standards. Pavement preservation needs are represented in three subcategories (R1.01 to R1.03) for each state subregion.

Interstate Roadway Preservation & Modernization [R1.01] Projects that improve or reconstruct regional Interstate facilities, including preventive maintenance, resurfacing, and reconstruction. Funding for these projects in Pennsylvania comes from the Interstate Management Program (IMP).

Non-Interstate Roadway Preservation & Modernization [R1.02] Projects that improve or reconstruct all non-Interstate, state-maintained facilities in the region, including preventative maintenance, resurfacing, and reconstruction. This category includes but is not limited to modernization of existing roadways to bring them to current safety standards, as well as preservation of existing bike and pedestrian facilities.

Local Federal Aid Roadways [R1.03] Preventative maintenance, resurfacing, and reconstruction for local federal aid roads. This category includes but is not limited to modernization of existing roadways to bring them to current safety standards, as well as preservation of existing bike and pedestrian facilities.

In the Pennsylvania subregion, the R1 need originates from PennDOT's Deighton Pavement Model based on data collected in the Pavement Asset Management System (PAMS). The model forecasts future pavement project needs using current condition data. PAMS contains data on over 4,270 segment miles of roadway in the Pennsylvania subregion. Using PennDOT's Overall Pavement Index (OPI) metric, approximately 12.8 percent of all segment miles of Interstate pavement are in deficient condition. A total of 17.6 percent of non-Interstate NHS and and 25.8 percent non-NHS roads are in deficient condition.[40] DVRPC estimates the cost to achieve and maintain an SGR for pavement in the Pennsylvania subregion is approximately $14.3 billion (YOE) over the life of the Plan (see Table F-4).

[40] Pennsylvania Department of Transportation (PennDOT), 2023 Performance Measures Annual Report – Pavements, 2023. Available at: www.penndot.pa.gov/ProjectAndPrograms/Planning/Pages/PennDOT-Performance-Measures.aspx.

Table F-4: Pennsylvania Subregion Pavement Preservation & Modernization Needs (R1)

R1	Pavement Preservation & Modernization Subcategory	2026–2030	2031–2036	2037–2045	2046–2050	Total
R1.01	Interstate Roadway Preservation & Modernization	$106.1	$401.4	$304.6	$449.7	$1,261.9
R1.02	Non-Interstate Roadway Preservation & Modernization	$1,993.3	$2,239.2	$5,238.2	$3,268.5	$12,739.1
R1.03	Local Federal Aid Roadways	$47.3	$67.0	$125.4	$85.5	$325.2
R1	**Total**	**$2,146.6**	**$2,707.6**	**$5,668.2**	**$3,803.7**	**$14,326.1**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

In the New Jersey subregion, the R1 need originates from NJDOT through its Pavement Management System (PMS). NJ DOT uses data from the PMS to forecast future pavement project needs using the Deighton pavement model, which tracks the condition of each roadway lane mile to identify maintenance and replacement needs to bring the existing network to an SGR. NJDOT has set a goal of 80 percent of lane miles in good or fair condition for maintaining an SGR for the state highway system (what NJDOT maintains, which is a larger network than the NHS). NJDOT maintains approximately 1,751 segment miles of roadway within the DVRPC region. Of these, approximately eight percent are currently in poor condition.[41] DVRPC estimates the cost to achieve and maintain an SGR for pavement in the New Jersey subregion is approximately $8.4 billion (YOE) over the life of the Plan (see Table F-5).

[41] Delaware Valley Regional Planning Commission (DVRPC), *Tracking Progress 2023*, accessed January 24, 2025,

Table F-5: New Jersey Subregion Pavement Preservation & Modernization Needs (R1)

R1	Pavement Preservation & Modernization	2026–2029	2030–2036	2037–2045	2046–2050	Total
R1.01	Interstate Roadway Preservation & Modernization	$277.4	$482.3	$1,018.3	$635.5	$2,413.4
R1.02	Non-Interstate Roadway Preservation & Modernization	$655.2	$1,139.3	$2,405.4	$1,501.3	$5,701.3
R1.03	Local Federal Aid Roadways	$36.6	$63.5	$134.2	$83.7	$318.1
R1	**Total**	**$969.2**	**$1,684.8**	**$3,557.9**	**$1,585.0**	**$8,432.7**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

R2. Bridge Preservation

Bridge preservation expenditures maintain existing regional bridge infrastructure in a state-of-good-repair (SGR). This category includes maintenance, rehabilitation, replacement, or removal of Interstate, state, and federal-aid eligible local bridges, as well as dams. Projects may address structural components, safety features, or pedestrian access, and can also involve full bridge removal where replacement is not planned. Bridge preservation needs are represented in four subcategories (R2.01 to R2.04) for each state subregion.

Interstate Bridge Preservation [R2.01] Projects that improve or reconstruct regional Interstate bridge facilities, including maintenance, rehabilitation, and replacement of Interstate bridge facilities. Maintenance can include scouring, washing, or replacement of expansion joints, rocker bearings, or underpinnings. Rehabilitation includes but is not limited to fixing or replacing one or more of the three main bridge components (the deck, the superstructure, or the substructure), and can include painting metal bridges and deck overlays. Funding for these projects in Pennsylvania comes from the IMP and regional and statewide funding in New Jersey.

Non-Interstate Bridge Preservation [R2.02] Projects that improve or reconstruct non-Interstate state-maintained regional bridge facilities, including maintenance, rehabilitation, and replacement. This category includes, but is not limited to, preservation of existing bike and pedestrian facilities on non-Interstate bridges. Widening as part of reconstruction that is required by law remains in this category.

Bridge Removal [R2.03] Projects that will remove bridges that will not be replaced. These are air-quality significant projects that also carry long-term funding implications, as federal funds can never be used to build a bridge at that location again if it has been used to fund the bridge in the past.

Local Bridges [R2.04] Projects that improve or reconstruct county and local bridge facilities, including maintenance, rehabilitation, and replacement, as well as dam rehabilitation and reconstruction. Includes but is not limited to preservation of existing bike and pedestrian facilities on local federal aid bridges.

In Pennsylvania, PennDOT developed a model called BridgeCare that applies Lowest Life-Cycle Cost (LLCC) logic, incorporating deterioration rates, treatment options, and related costs and outcomes. DVRPC used this model to identify bridge investments needed to maintain acceptable SGR in the Pennsylvania subregion through the Plan's horizon. Following PennDOT's guidance, DVRPC applied a 30% construction cost escalation factor to reflect higher regional project costs. Even so, LLCC-based estimates were significantly lower than in the last Plan update ($25.7 billion). DVRPC now estimates $14.3 billion (YOE) is needed to achieve and maintain SGR for bridges in the Pennsylvania subregion (see Table F-6).

Table F-6: Pennsylvania Subregion Bridge Preservation Needs (R2)

R2	Bridge Preservation	2026–2030	2031–2036	2037–2045	2046–2050	Total
R2.01	Interstate Bridge Preservation	$1,333.1	$585.0	$1,291.8	$246.7	$3,456.6
R2.02	Non-Interstate Bridge Preservation	$1,076.3	$2,159.9	$2,607.6	$1,499.9	$7,343.8
R2.03	Bridge Removal	$3.6	$0.0	$0.0	$0.0	$3.6
R2.04	Federal-Aid Eligible Local Bridges	$38.2	$45.0	$40.1	$98.7	$222.0
R2	**Total**	**$2,040.6**	**$2,306.1**	**$5,363.5**	**$3,354.0**	**$7,569.4**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

For New Jersey, DVRPC developed a methodology using NJDOT Bridge Management System data to analyze future bridge conditions by accounting for normal deterioration, as well as determining when and what kind of bridge project interventions will be needed to maintain bridges in an SGR following an LLCC approach. The analysis included projected needs for county and local bridges that are eligible for federal aid. DVRPC identified approximately $4.7 billion (YOE) in bridge investment that is needed to maintain an acceptable SGR in the New Jersey subregion over the life of the Plan (see Table F-7).

Table F-7: New Jersey Subregion Bridge Preservation Needs (R2)

R2	Bridge Preservation	2026–2029	2030–2036	2037–2045	2046–2050	Total
R2.01	Interstate Bridge Preservation	$64.6	$112.3	$237.2	$148.0	$562.1
R2.02	Non-Interstate Bridge Preservation	$366.1	$636.6	$1,344.0	$838.8	$3,185.4
R2.03	Bridge Removal	$0.0	$0.0	$0.0	$0.0	$0.0
R2.04	Federal-aid Eligible Local Bridges	$107.7	$187.2	$395.3	$246.7	$936.9
R2	**Total**	**$473.8**	**$823.8**	**$1,739.3**	**$1,085.5**	**$4,684.4**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

R3. Substantive Safety

A key transportation goal in the vision for Greater Philadelphia is a transportation system that is and feels safe and secure for all. Strategies such as implementing Vision Zero and enhancing security for all users are furthered through expenditures in the R3 Substantive Safety project category. This category includes projects and programs that reduce serious crashes through targeted safety improvements, such as road diets, roundabouts, signal upgrades, rail crossing separations, and emergency response tools. Focus areas include safer infrastructure, speed management, crash reduction, and enhanced support for traffic incident management (TIM) and responder safety. Substantive safety needs are represented in two subcategories (R3.01 to R3.02) for each state subregion:

Substantive Safety Infrastructure [R3.01] Projects that go beyond adherence to design criteria and nominal safety standards in a way that will improve the safety performance of a roadway and reduce roadway fatalities and serious injuries. Includes but is not limited to Highway Safety Improvement Program (HSIP) projects; FHWA Proven Safety Countermeasures improving speed management, roadway departures, intersections, crosscutting, and safety enhancements to existing bicycle and pedestrian facilities; grade-separated rail crossings; and portions of Complete Streets projects that include road diets and other safety countermeasures.

Incident Management [R3.02] Includes capital and operating funds for safety service patrols, local TIM task forces, emergency communication networks, security, and other tools related to responder safety.

The substantive safety need is based on investment estimates for infrastructure improvements using FHWA Proven Safety Countermeasures, DVRPC's Draft Regional High Injury Network, and NJDOT rural roadway data. DVRPC estimated the costs to build select countermeasures at 40 percent of intersections on the RHIN, focusing on locations with two or more people killed or suspected of being seriously injured (KSI) and those with crashes involving a bicyclist or pedestrian. In Pennsylvania, it accounts for the cost of implementing Philadelphia's *Vision Zero Plan*. The incident management need was derived from DVRPC's Office of Transportation Operations Management and its regular updates to the *Transportation System Management and Operations Plan*. In total, DVRPC established a desired R3 investment level of $2 billion (YOE) in Pennsylvania and $437 million (YOE) in New Jersey (see Tables F-8 and F-9).

Table F-8: Pennsylvania Subregion Substantive Safety Needs (R3)

R3	Substantive Safety Subcategory	2026–2030	2031–2036	2037–2045	2046–2050	Total
R3.01	Substantive Safety Infrastructure	$453.0	$440.1	$399.8	$325.6	$1,618.6
R3.02	Incident Management	$38.0	$63.1	$158.4	$122.0	$381.4
R3	**Total**	**$491.0**	**$503.1**	**$558.3**	**$447.6**	**$2,000.0**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

Table F-9: New Jersey Subregion Substantive Safety Needs (R3)

R3	Substantive Safety Subcategory	2026–2029	2030–2036	2037–2045	2046–2050	Total
R3.01	Substantive Safety Infrastructure	$51.8	$80.0	$50.7	$31.6	$214.2
R3.02	Incident Management	$31.4	$44.8	$90.0	$57.6	$223.8
R3	**Total**	**$83.2**	**$124.8**	**$140.7**	**$89.2**	**$437.9**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

R4. Mobility Operational Improvements

The Financial Plan outlines expenditures for operational improvements to enhance the efficiency of the existing transportation network. This category includes physical and technological projects that improve traffic flow, access, and system efficiency without adding major roadway capacity through signal upgrades, intersection redesigns, gridded local roads, real-time traffic management systems, and new technologies like connected vehicles and electric vehicle (EV) charging equipment to enhance mobility and network performance. Mobility Operational Improvements are represented in four subcategories (R4.01 to R4.04) for each state subregion.

Accessibility Improvements [R4.01] Projects that provide new gridded road segments with three lanes across or fewer and intersections spaced no more than every 600 feet. Each project is reviewed for inclusion in the air quality conformity determination.

Intersection Improvements [R4.02] Projects that include intersection improvements; new turning lanes; interchange improvements, including the addition of new lanes to existing movements, or ramps with a maximum length of ½ mile; roadway realignments; channelization; access management; and diverging diamond and single-point urban intersection treatments. Each project is reviewed for inclusion in the air quality conformity determination.

Transportation Systems Management and Operations (TSMO) [R4.03] Capital and operating costs for maintaining and restoring the performance of an existing transportation system before extra capacity is needed. Strategies and investments include but are not limited to traffic signal management and coordination, Intelligent Transportation Systems infrastructure (ITS), active traffic management systems (ATM); as well as Integrated Corridor Management (ICM). Funds will support DOT, county, and local operations. Each project is reviewedor inclusion in the air quality conformity determination.

Vehicle Technology [R4.04] Deployment of infrastructure for connected and automated vehicles and EV-charging equipment, existing fleet diesel conversions or replacements with electric vehicles (EVs), establishment of an interconnected network to facilitate data collection, access, and reliability, and building out mobility hubs for intermodal transfers. EV investments include funding from the National Electric Vehicle Infrastructure (NEVI) Formula Program.

Regional needs and associated cost estimates are derived from DVRPC's Office of Transportation Operations Management and its regular updates to the *Transportation Operations Master Plan*.[42] DVRPC estimates the cost to build operational improvement infrastructure over the next 25 years is $7.5 billion (YOE) in Pennsylvania and $4.8 billion (YOE) in New Jersey (see Tables F-10 and F-11).

[42] Transportation Operations Master Plan, Delaware Valley Regional Planning Commission, August 2009, www.dvrpc.org/products/09049/

Table F-10: Pennsylvania Subregion Mobility Operational Improvement Needs (R4)

R4	Mobility Operational Improvements	2026–2030	2031–2036	2037–2045	2046–2050	Total
R4.01	Accessibility Improvements	$0.0	$0.0	$0.0	$0.0	$0.0
R4.02	Intersection Improvements	$369.3	$490.6	$1,929.3	$1,472.1	$4,261.3
R4.03	TSMO	$290.7	$568.2	$386.3	$458.8	$1,704.0
R4.04	Vehicle Technology	$342.8	$409.5	$535.9	$230.4	$1,518.6
R4	**Total**	**$1,002.7**	**$1,468.3**	**$2,851.6**	**$2,161.3**	**$7,483.8**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

Table F-11: New Jersey Subregion Mobility Operational Improvement Needs (R4)

R4	Mobility Operational Improvements	2026–2029	2030–2036	2037–2045	2046–2050	Total
R4.01	Accessibility Improvements	$0.0	$0.0	$68.6	$0.0	$68.6
R4.02	Intersection Improvements	$282.8	$450.7	$1,068.0	$1,333.0	$3,134.5
R4.03	TSMO	$119.2	$180.4	$371.6	$241.9	$913.1
R4.04	Vehicle Technology	$125.7	$168.1	$260.4	$94.8	$649.0
R4	**Total**	**$527.6**	**$799.1**	**$1,768.6**	**$1,669.8**	**$4,765.2**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

R5. Roadway System Expansion

Roadway system expansion projects are those that add capacity by widening or extending existing facilities or building new facilities to accommodate higher traffic volumes. This includes major and minor expansions, new interchanges, and capacity enhancements funded through competitive or discretionary programs, including some with freight or multimodal emphasis. Roadway expansion projects in the Plan are focused on bottleneck removal, correcting design flaws, filling in missing movements, or supporting economic development so the region can continue to grow and prosper in the future. All projects in this category, regardless of cost, are listed in the Plan to maintain a regionally agreed-upon 4 percent cap on expenditures for these types of projects.

Roadway system expansion needs are represented in three subcategories (R5.01 to R5.03) for each state subregion.

Major Road Network Expansion [R5.01] Capacity-adding projects at or over the $40 million MRP threshold that make changes to the road network, which makes them significant for air quality conformity analysis. These include but are not limited to widening, extending, or building new roadway facilities; arterial-to-expressway and other conversions that increase effective carrying capacity of existing facilities; or creation of new interchanges or movements between facilities to handle higher traffic volumes, reduce congestion, and/or to improve traffic flow between highways and arterial roads. Projects that are considered half expansion, half operational improvement for funding purposes include flex lanes; part-time shoulder use; and completing missing movements at existing, partial interchanges.

Minor Road Network Expansion [R5.02] Capacity-adding projects that do not rise to the level of MRP but that make changes to the road network, making them significant for air quality conformity analysis. They are subject to project evaluation criteria screening and analysis and are counted in the cap on system expansion investments. These include but are not limited to widening, extending, or building new roadway facilities; arterial-to-expressway and other conversions that increase effective carrying capacity of existing facilities; or creation of new interchanges or movements between facilities to handle higher traffic volumes, reduce congestion, and/or to improve traffic flow between highways and arterial roads. Projects that are considered half expansion, half operational improvement for funding purposes include flex lanes; part-time shoulder use; and completing missing movements for existing, partial interchanges.

Additionally-Funded Road Network Expansion [R5.03] Capacity-adding projects awarded to the region through competitive or other non-formula funding sources, such as PennDOT's Multimodal Fund, NJDOT's Local Freight Impact Fund, or turnpike authority toll-funded projects. They often—but not exclusively—focus on goods movement or multimodal improvements. Sincee these investment decisions are made outside of regional control and do not use regional funds, these projects are not analyzed with the

region's evaluation criteria, subject tofiscal constraint„or counted against the cap on system expansion investments. While they must be included in the Air Quality Conformity analysis, they are not included in the Needs Assessment nor are the funds used to pay for them counted in the Plan's reasonably anticipated revenue forecast. See the www.dvrpc.org/AirQuality/Conformity/ for a complete list of projects captured in conformity analysis.

The Roadway System Expansion Need was established using *Connections 2050* MRPs and TIP projects and converted into YOE dollars based on the years in the current Plan update. DVRPC established a need of $2.0 billion in Pennsylvania and $1.1 billion in New Jersey (YOE), see Tables F-12 and F-13.

Table F-12: Pennsylvania Subregion Roadway System Expansion Needs (R5)

R5	Roadway System Expansion	2026–2030	2031–2036	2037–2045	2046–2050	Total
R5.01	Major Road Network Expansion	$372.7	$538.1	$600.5	$72.9	$1,584.3
R5.02	Minor Road Network Expansion	$86.7	$32.9	$316.5	$22.3	$458.3
R5.03	Additionally- Funded Road Network Expansion	NA	NA	NA	NA	NA
R5	**Total**	**$459.4**	**$571.0**	**$917.0**	**$95.2**	**$2,042.6**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

Table F-13: New Jersey Subregion Roadway System Expansion Needs (R5)

R5	Roadway System Expansion	2026–2029	2030–2036	2037–2045	2046–2050	Total
R5.01	Major Road Network Expansion	$241.4	$543.5	$84.0	$98.3	$967.3
R5.02	Minor Road Network Expansion	$20.2	$35.0	$21.5	$12.1	$88.8
R5.03	Additionally- Funded Road Network Expansion	NA	NA	NA	NA	NA
R5	**Total**	**$261.6**	**$578.6**	**$105.5**	**$110.4**	**$1,056.1**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

R6. Green Transportation

The Financial Plan identifies critical investments in multimodal, community-centered, and environmental mitigation enhancements that support a more resilient and connected transportation system that serves everyone. Green Transportation covers projects that support environmentally friendly, low-polluting, and multimodal transportation options. These improvements include the expansion and modernization of bicycle and pedestrian networks, resurfacing of off-road trail infrastructure, and strategies to reconnect communities divided by legacy transportation facilities by capping over highways to create new community open space. Also included are obligations and requirements that must be fully funded, such as environmental mitigation and resiliency projects, travel demand management, rail and transit-supportive roadway improvements, and regional planning efforts to reduce reliance on single-occupancy vehicles. These initiatives enhance mobility options, reduce environmental impact, and promote mobility access across the region. Desired investments for Green Transportation projects are represented in seven subcategories (R6.01 to R6.07) for each state subregion:

Bicycle and Pedestrian Network Expansion [R6.01]
Includes bicycle lanes, protected bicycle lanes, sidepaths, trails, sidewalks, bicycle and pedestrian bridges, overpasses or tunnels, project engineering, curb ramps, and other ADA improvements. This category also accounts for new bike/ped facilities built as part of Complete Streets projects. Bike and pedestrian facilities are FHWA Proven Safety Countermeasures, but are listed here to highlight expansion investment needs. Preservation, modernization, and safety

improvements for existing on-road bike and pedestrian facilities are captured in categories R1, R2, and R3.

Off-Road Trail Resurfacing & Reconstruction [R6.02] Resurfacing and reconstruction of existing trails.

Community Connections [R6.03] Expressway-to-boulevard conversions and highway capping that convert airspace into green space or parcels, and other smaller scale approaches to reconnect communities. These projects aim to reconnect communities to neighboring areas, cultural landmarks, or environmental resources that were previously disrupted or made inaccessible by transportation infrastructure.

Environmental Mitigation & Resiliency [R6.04] Streetscaping improvements that include enhancing tree canopy, installing green stormwater infrastructure (GSI), landscaping, cooling features, and air pollution-mitigation strategies; non-project-specific needs like wetland mitigation and cultural resource preservation; and environmental remediation and testing associated with underground storage tanks, lead-based paint, asbestos, soil and groundwater, and air quality (these are sometimes included as part of project costs in other funding categories). Specific funding programs include but are not limited to CMAQ project engineering, Air Quality Action Program, CARBON, and PROTECT.

Travel Demand Management [R6.05] Carpool and vanpool programs, telecommuting, variable work hours, and other policies that provide alternatives to SOVs. Funding for transportation management associations (TMAs), marketing for the Mobility Alternatives Program (MAP), Assisting Commuters After COVID, and Share-A-Ride. Some of these programs require a local match, which is not reflected in the Needs Assessment.

Rail Improvements [R6.06] Roadway funds dedicated for rail improvements to both the freight and passenger rail network, including new park-and-ride facilities at existing stations, as well as rubber-tire transit investments, including shelters, wayfinding, real-time information, passenger amenities, and street repaving and marking to support bus operations.

Regional Programs [R6.07] Local and regional planning and studies, regional GIS support, the regional travel demand model, and other miscellaneous items, such as equipment purchases and maintenance and storage facilities. This project category is for DVRPC work program items or pass-through funds for county work programs.

To inform the "Green Transportation" needs, several separate analyses were conducted for the various subcategories. The Bicycle Network Expansion portion of R6.01, estimates costs based on constructing the top 50 percent of regional priority corridors identified through the Bicycle Level of Traffic Stress (LTS) Connectivity Analysis.[43] Staff estimated project costs using recent funding benchmarks and determined the annual investment needed to complete the remaining 385 miles of

[43] Delaware Valley Regional Planning Commission, *Bicycle Level of Traffic Stress (LTS) and Connectivity Analysis* (web map), DVRPC, October 2021, www.dvrpc.org/webmaps/bike-lts/.

Circuit Trails that are currently in progress, pipeline, or planned for completion by 2040. Pedestrian Network Expansion needs were estimated by proposing sidewalk construction on one side of 25 percent of currently unserved street segments in the region's most densely developed communities and local centers, where future growth is expected. Additional priority was given to filling all sidewalk gaps within a half-mile radius of Regional Rail stations and high-frequency bus stops to support reliable transportation choices for all travelers, and improve first- and last-mile connections.

The needs assessment for R6.02 (Off-Road Trail Resurfacing & Reconstruction) is based on an estimated typical cost of $500,000 per mile (in current dollars) for mill and overlay of a standard 10-foot-wide asphalt trail, informed by data from county partners. Assuming a 20-year useful life for trail surfaces, as advised by DVRPC's Office of Project Implementation, costs were allocated evenly across the plan period to maintain a consistent investment rate of approximately $10 million per year, ensuring full system renewal every 20 years.

Needs for R6.03 (Community Connections) were estimated by using existing proposed MRPs, such as highway caps and road diets, as a proxy for other investments. DVRPC's analysis identified candidate roadway corridors that have at least two lanes in each direction, lower peak-hour traffic volumes, are at least a quarter mile long, and are located in areas with compact development and local activity centers. Staff assumed 20 percent of those corridors could be implemented cost-effectively as part of routine resurfacing projects, while the remaining 80 percent would require stand-alone investments.

DVRPC used the previous Plan's funded and unfunded MRP list as well as current and historical TIP spending levels to determine investment needs for subcategories R6.04–R6.07 over the life of the Plan. In total, DVRPC established a desired investment of $11.8 billion in Pennsylvania and $6.3 billion in New Jersey (YOE) (see Tables F-14 and F-15).

Table F-14: Pennsylvania Subregion Green Transportation Needs (R6)

R6	Green Transportation	2026–2030	2031–2036	2037–2045	2046–2050	Total
R6.01	Bicycle and Pedestrian Network Expansion	$1,487.6	$2,100.3	$3,595.2	$2,272.2	$9,455.3
R6.02	Off-Road Trail Resurfacing & Reconstruction	$41.3	$58.2	$109.0	$74.5	$283.0
R6.03	Community Connections	$64.7	$353.7	$10.5	$7.2	$436.0
R6.04	Environmental Mitigation & Resiliency	$42.7	$60.3	$112.9	$77.1	$293.0
R6.05	Travel Demand Management	$7.1	$10.0	$18.7	$12.8	$48.5
R6.06	Rail Improvements	$6.1	$8.6	$16.2	$11.1	$42.0
R6.07	Regional Programs	$184.8	$260.9	$488.5	$333.8	$1,267.9
R6	**Total**	**$1,834.2**	**$2,852.0**	**$4,350.9**	**$2,788.5**	**$11,825.7**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

Table F-15: New Jersey Subregion Green Transportation Needs (R6)

R6	Green Transportation	2026–2029	2030–2036	2037–2045	2046–2050	Total
R6.01	Bicycle and Pedestrian Network Expansion	$399.6	$555.9	$850.6	$475.7	$2,281.8
R6.02	Off-Road Trail Resurfacing & Reconstruction	$12.7	$17.6	$33.4	$23.2	$86.9
R6.03	Community Connections	$1.7	$2.4	$4.5	$3.1	$11.7
R6.04	Environmental Mitigation & Resiliency	$79.2	$137.7	$290.6	$181.4	$688.8
R6.05	Travel Demand Management	$15.8	$40.2	$84.8	$52.9	$193.6
R6.06	Rail Improvements	$23.1	$40.2	$84.8	$52.9	$200.9
R6.07	Regional Programs	$328.7	$571.5	$1,206.6	$753.1	$2,859.9
R6	**Total**	**$860.6**	**$1,365.3**	**$2,555.3**	**$1,542.3**	**$6,323.5**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

Transit Need

Transit infrastructure consists of facilities that are maintained and operated by the region's local transit service providers. A number of facilities are used by the region's transit service providers but are not listed here because the asset is leased without maintenance responsibilities. Both Southeastern Pennsylvania Transit Authority (SEPTA) and NJ TRANSIT lease rail track from Amtrak and various regional freight rail operators.

Philadelphia's 30th Street Station is another example of a facility maintained by Amtrak that is used by both SEPTA and NJ TRANSIT. There is also rail infrastructure for which the region's transit operators have maintenance responsibility, but the line is not in active service. Examples include SEPTA's Chester Trunk Line from Chester City to West Chester, Pennsylvania; and NJ TRANSIT's Vineland Secondary Route. Table F-16 outlines the existing transit infrastructure in Greater Philadelphia, which informs additional needs, especially for preservation.

Table F-16: Existing Transit Assets In Greater Philadelphia

Infrastructure	SEPTA	NJ TRANSIT	PATCO	PART
Rail Track Miles	397.4	117.4	35.3	-
• Elevated Track Miles	30.8	-	-	-
• Tunnel Track Miles	58.4	-	2.4	-
Interlockings	90	33	14	-
Bridges	341	58	26	-
At-Grade Crossings	182	99	-	-
Power Substations and Switching Stations	77	-	11	-
Rail Stations and Bus Terminals	342	28	13	1
• Regional/Commuter Rail Stations	154*	7	-	-
• Heavy Rail Stations	52	-	13	-
• Trolley/Light Rail Stations	75	20	-	-

Infrastructure	SEPTA	NJ TRANSIT	PATCO	PART
• Bus Terminals or Loops	62	1	-	-
Buses	1,390	275	-	8
Paratransit Vehicles	459	N/A	0	2
Heavy Rail Vehicles	343	-	120	-
Light Rail Vehicles	182	20	-	-
Regional/Commuter Rail Multiple Unit Vehicles	347	42	-	-
Trackless Trolleys	38	-	-	-
Locomotives	8	12	-	-
Push Pull Cars	53	20	-	-
Maintenance Vehicles	936		63	2
Regional/Commuter Rail Vehicle Storage Yards		3		
Bus Storage and Maintenance Shops	23	3	3	1

Includes four stations in Delaware and two stations in New Jersey, and 42 stations that are leased from Amtrak.
Sources: SEPTA, NJ TRANSIT, PATCO, and Pottstown Area Rapid Transit (PART), 2025.

The transit Needs Assessment presents infrastructure and service investments into four major categories. This section outlines each transit expenditure category and details the types of projects included within them.

T1. Transit Preservation and Modernization

The Transit Preservation and Modernization category identifies expenditures improve or repair to existing transit assets; replace or rehabilitate transit vehicles, guideway systems, storage, or maintenance facilities or equipment; or renovate transit stations, including to meet ADA requirements. This category involves the replacement of transit bridges, as well as set-aside program funding to address future infrastructure and vehicle needs as they arise. Transit preservation needs are represented in three subcategories (T1.01 to T1.03) for each state subregion:

Transit Infrastructure [T1.01] Greater Philadelphia's existing transit network is among the oldest in the nation and includes over 550 miles of existing track, accounting for segments with two or more tracks running in parallel. Transit infrastructure needs include major regional rail infrastructure preservation; rrack rehabilitation, resurfacing. Or replacement; catenary and substation rehabilitation or replacement; signal and communications rehabilitation or replacement; and rail bridge and elevated structure improvements.

Transit Vehicles [T1.02] Over 2,850 transit passenger vehicles currently operate in Greater Philadelphia to bring passengers from place to place. Transit vehicle needs include major regional revenue vehicle replacements; minor vehicle purchases; routine vehicle overhaul; vehicle storage and maintenance facilities and equipment; and utility vehicles.

Transit Facilities [T1.03] This subcategory covers Greater Philadelphia's existing inventory of more than 380 rail stations and bus terminals, including regional rail stations, heavy rail stations, trolley or light rail stations, and bus terminals or loops. Transit facility needs include major regional station renovation; minor station rehabilitation; parking and passenger amenities; and maintenance facilities.

T1 needs were developed in close coordination with SEPTA, using its asset management system to determine regular maintenance cycles, such as how often infrastructure needs to be rehabilitated, restored, or replaced. SEPTA has one of the oldest rail fleets in the country, and most of SEPTA's rail fleet will require replacement over the horizon of the Plan. Much of SEPTA's guideway infrastructure is approaching the end of its 50-year life expectancy, fueling replacement needs. Vehicles comprise nearly 40 percent of SEPTA's SGR backlog. Vehicle replacement and overhauls are the highest priority for SEPTA's Capital Program, and these needs represent a programmatic approach to infrastructure renewal. Stations are the second leading cost in SEPTA's backlog of SGR projects.

With the *NJT2030 Strategic Plan*, NJ TRANSIT initiated its first-ever systemwide assessment of facilities to build a comprehensive maintenance, repair, and modernization plan. T1 needs were developed in coordination with NJ TRANSIT and

DRPA/PATCO, relying on their most recent capital budgets as well as the FY2026 TIP for New Jersey. DVRPC estimates the cost to preserve and modernize transit infrastructure in the region is $37.7 billion (YOE) in Pennsylvania and $5.1 billion (YOE) in New Jersey (see Tables F-17 and F-18).

T2. Transit Operational Improvements

Transit Operational improvements reflect the need to improve the functionality of the existing system. This category covers projects that advance transit capacity or operations, such as adding guideways or sidings to existing passenger rail lines or upgrading a traditional bus route with bus rapid transit service. It also includes traffic signal prioritization for transit at roadway intersections, as well as improvements to transit operations centers, facilities, and other assets. Technology enables transportation operations centers to relay accurate, up-to-date travel information to the public, and is a main focus for transit agencies in both state subregions. Deploying technology can also save agencies money by automating functions like transit fare collection.

T2 needs were identified through coordination with the capital budgets and planning documents of regional transit agencies, including SEPTA, DRPA/PATCO, PART, and NJ TRANSIT. Projects currently programmed in the existing Transportation Improvement Programs (TIPs), the *Connections 2050* Long-Range Plan, and each agency's long-term planning efforts—such as Transit Asset Management Plans (TAMPs)—were consolidated to estimate the operational improvements required to support and advance the region's transportation vision. DVRPC estimates the cost of transit operational improvements to be $7.4 billion (YOE) in Pennsylvania and $0.4 billion (YOE) in New Jersey (see Tables F-17 and F-18).

T3. Transit System Expansion

This category includes new stations, parking, or other facilities on existing lines (including station parking needs), extension of existing lines, new rail and Bus Rapid Transit (BRT) routes, or new ferry service that the region would like to pursue. T3 needs were based on Pennsylvania and New Jersey transit agency capital programs, plus funded and unfunded, aspirational MRPs from the region's previous long-range plan. DVRPC estimates the cost of transit system expansion to be $15.0 billion (YOE) in Pennsylvania and $8.6 billion (YOE) in New Jersey (see Tables F-17 and F-18).

T4. Transit Other

This category includes lease agreements, environmental remediation, debt service, and other mandatory expenditures. Needs in this category must be fully funded within the Plan. T4 needs were developed by analyzing expenditures from existing TIPs for relevant projects. An annual cost was established based on current spending levels and then adjusted for inflation over each Plan period. DVRPC estimates the YOE cost of transit system expansion to be approximately $7.8 billion in Pennsylvania and $0.3 billion in New Jersey, see Tables F-17 and F-18.

Table F-17: Pennsylvania Subregion Transit Investment Needs (T1–T4)

Cat ID	Transit Category	2026–2030	2031–2036	2037–2045	2046–2050	Total
T1	Transit Preservation & Modernization	$25,019.9	$4,269.2	$6,896.2	$1,557.6	$37,742.9
T2	Transit Operational Improvements	$643.1	$569.6	$4,268.8	$1,920.7	$7,402.2
T3	Transit System Expansion	$311.0	$284.4	$8,917.1	$5,511.6	$15,024.1
T4	Transit Other	$753.7	$1,504.9	$3,457.8	$2,122.7	$7,839.1
Transit Total		**$26,727.7**	**$6,628.1**	**$23,540.0**	**$11,112.6**	**$68,008.3**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

Table F-18: New Jersey Subregion Transit Investment Needs (T1–T4)

Cat ID	Transit Category	2026–2029	2030–2036	2037–2045	2046–2050	Total
T1	Transit Preservation & Modernization	$879.6	$1,145.5	$1,291.7	$1,811.3	$5,128.1
T2	Transit Operational Improvements	$47.5	$119.5	$69.7	$188.9	$425.7
T3	Transit System Expansion	$24.0	$51.7	$5,184.9	$3,295.6	$8,556.2
T4	Transit Other	$53.6	$62.1	$78.8	$98.2	$292.7
Transit Total		**$1,004.7**	**$1,378.8**	**$6,625.1**	**$5,394.0**	**$14,402.6**

All figures are in millions of YOE dollars. Discrepancies in totals may occur due to rounding.
Source: DVRPC, 2024.

Barriers to Transit Expansion

Accessible, frequent, and reliable transit service is essential to achieving the Plan's goals of reducing car dependence and providing safe, multimodal transportation options for all. While there is a clear need for expanded transit infrastructure both nationally and within the region, securing adequate funding remains a major obstacle. The region faces several challenges that hinder transit system expansion.

1. Maintenance and State-of-good-repair Needs

The foremost challenge is the overwhelming need to preserve and maintain existing transit infrastructure. Many metropolitan areas, including the DVRPC region, rely on aging systems that require extensive maintenance and modernization. These costs must often be addressed before expansion can even be considered. The high cost of bringing legacy infrastructure into a state-of-good-repair can divert funding away from system growth, creating a cycle of underinvestment.

2. Insufficient State and Local Capital and Operating Funding

Even when expansion projects are planned, securing funding for both construction and ongoing operations is difficult. The Federal Transit Administration's New Starts program is highly competitive and typically covers only about 40 percent of a project's cost. The remaining 60 percent must come from state and local sources, yet neither Pennsylvania nor New Jersey has a dedicated funding source to support such investments. Meeting the Plan's transit goals will require a transformational shift in how transit is funded at all levels of government.

3. Regulatory and Procedural Hurdles

Over the past several decades, changes in federal authorization processes have made transit project development more complex, time-consuming, and expensive. Requirements under the National Environmental Policy Act (NEPA), for example, often necessitate extensive environmental reviews that can delay projects for years.

4. Land Acquisition and Construction Challenges

Acquiring land for new transit infrastructure can be particularly difficult in dense urban areas. Negotiations with property owners, legal disputes, and the relocation of businesses or residents can add significant time and cost to projects. In addition, national trends such as supply chain disruptions, inflation in material and labor costs, and a shortage of skilled construction workers further complicate and delay project delivery.

Addressing these challenges will require not only increased funding but also policy reforms to streamline processes and remove barriers to efficient transit expansion.

Revenue Forecast

The second step in the financial plan is estimating reasonably anticipated revenue to the region over the last year of the Plan. DVRPC identified all federal, state, and local revenue sources for capital project expenditures that the region can reasonably expect to receive through the year 2050.

Preparation of this financial plan's revenue estimate included a review of historical data and trends, which serve as general guidance on how much funding the region can expect to receive in the future. Sources of this information include:

- the current and previous STIPs;
- state DOTs and transit agencies; and
- FHWA planning guidance and federal authorization levels from IIJA.

DVRPC develops the Plan's revenue forecast at the federal, state, and local levels, and considers other potential sources of funding like bonds and the Transportation Infrastructure Finance and Innovation Act (TIFIA).

Funding Sources

As required by federal regulation, DVRPC estimates future transportation funding levels to ensure that the region's long-range plan is fiscally constrained. To do this, DVRPC projects the growth of federal funding through each successive six-year federal transportation authorization, extending to the year 2050.

For roadway funding, DVRPC first estimates future national funding levels, then projects allocations to Pennsylvania and New Jersey, and finally estimates how much of each state's share will be directed to the Greater Philadelphia region.

For transit funding, DVRPC estimates a portion of total federal funds will continue to be allocated directly to the region's urban areas, based on historical trends and program formulas.

Pennsylvania: Roadway Funding Sources

In Pennsylvania, road funding comes from four main sources:

1. **Formula Funds** (the largest share)
   These are allocated to each Metropolitan Planning Organization (MPO) and rural planning organization, including DVRPC. Beginning with the FFY2023 Transportation Improvement Program (TIP), National Highway Performance Program (NHPP), and Surface Transportation Program (STP) funds are distributed based on a formula that accounts for:
   - 40 percent bridge deck area in poor condition (bridges over 20 feet), and
   - 60 percent pavement condition data. This formula reflects the principles of Pennsylvania's Transportation Asset Management Plan (TAMP) and accounts for cost variations between different maintenance treatments—for example, surface milling versus full-depth reconstruction, or repairing low-volume roads versus limited-access highways.
2. **Interstate Management Program (IMP)**
   IMP funding supports preservation projects on the Interstate system across the Commonwealth. Although managed at the state level, projects located within

Greater Philadelphia make this a second key funding source for the region.

3. **Discretionary State Line Items**
   These funds are allocated through state-level decisions based on need and are often used to advance large projects that cannot be fully funded through formula distributions. They also include revenues from ongoing competitive state programs, where the region can expect to continue receiving a significant share.

4. **Other Competitive and One-Time Sources**
   These include funds from competitive federal grants, local governments, or toll authorities. While important for specific projects, they are considered one-time or limited awards and are not expected to provide consistent, long-term funding. These sources are not primarily federal and are treated as additional revenue for the region.

New Jersey: Programmatic and Formula Funding

In New Jersey, NJDOT manages state-owned facilities through its Statewide Capital Program. Federal formula funds are distributed to each of the state's three MPOs, including DVRPC, to maintain county and local roads.

DVRPC estimates the region's long-term share of state and federal funding based on historic distribution patterns. Federal transit funds are allocated directly to the state's urbanized areas. In the short term, DVRPC relies on actual funding levels in the State Transportation Improvement Program (STIP). For longer-term projections, estimates are informed by trends in:

- Population, employment, and vehicle miles traveled (VMT)
- Transit ridership
- Condition of infrastructure
- Relative growth in rail and bus service compared to other regions

These criteria differ across federal funding programs, so the future funding levels for the region depend in part on how Greater Philadelphia performs relative to national trends.

Funding Assumptions in *Update: Connections 2050*

Based on guidance from PennDOT and discussions with NJDOT and regional planning partners, *Update: Connections 2050* assumes that federal funding will remain flat through 2032, aligning with the current Pennsylvania Twelve-Year Program (TYP). Starting in 2037, DVRPC anticipates a transition away from the existing gas tax to a new federal transportation funding mechanism.

At that time, the forecast assumes:

- A one-time 10 percent increase in federal funding, followed by
- Annual growth of 3 percent, compounded with each subsequent six-year authorization through 2050.

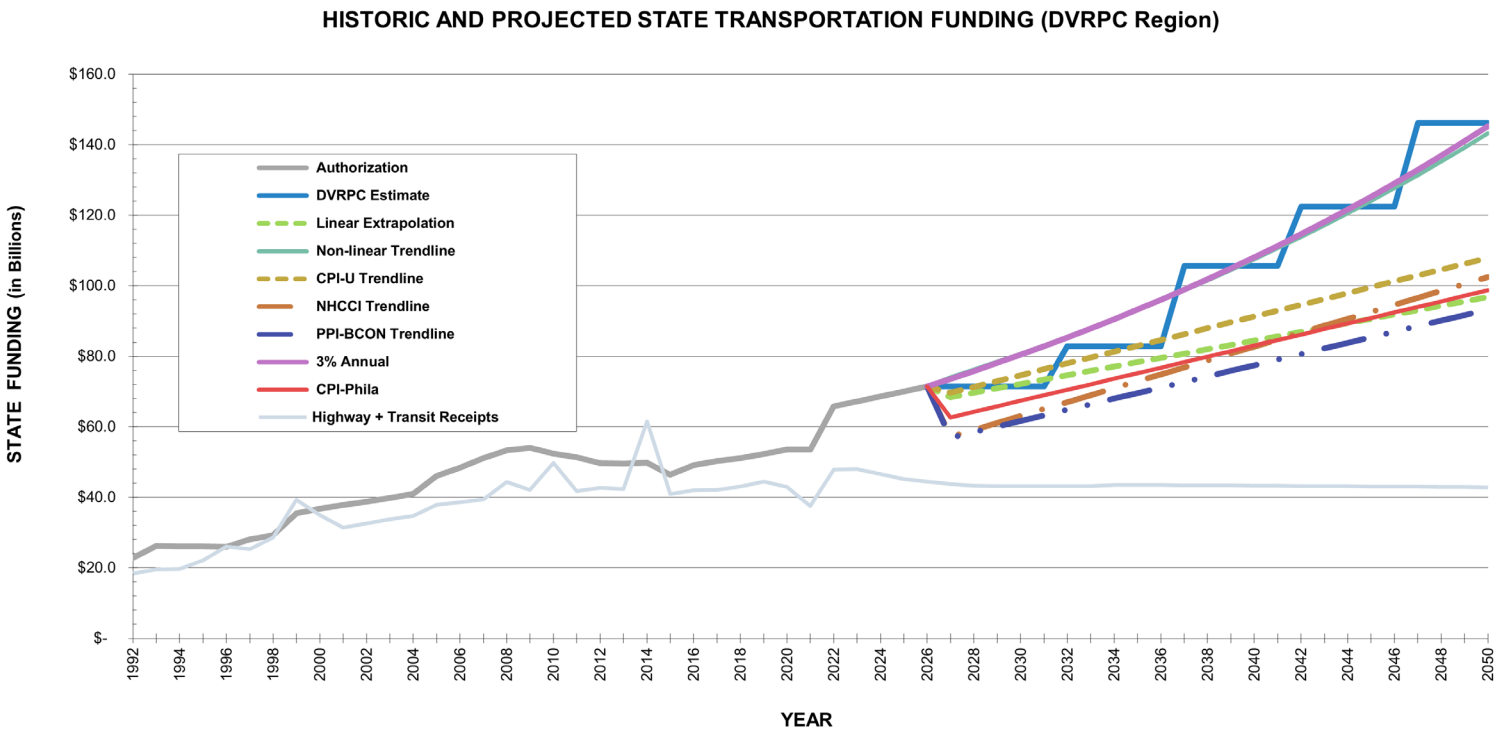
This projection reflects the expected need to modernize transportation funding mechanisms at the federal level. Figure F-2 illustrates actual and projected funding levels from 1992 through 2050, using a variety of analytical methods. The stepped blue line represents DVRPC's forecast, showing flat

funding through 2033, followed by steady 3 percent annual growth thereafter.

DVRPC estimates annual state contributions for both roadway and transit investments, then projects the portion likely to be allocated to Greater Philadelphia. Based on guidance from PennDOT and planning partners, *Update: Connections 2050* assumes that state funding levels in both Pennsylvania and New Jersey will remain flat through 2050.

For more details on revenue sources and funding gaps, see *Appendix E–Funding Sources and Future Outlook*.

Figure F-2: Historic and Projected Federal Transportation Funding (Nationwide)



Sources: U.S. Bureau of Labor Statistics; Federal Reserve Bank; Federal Highway Administration; DVRPC, 2024.

Table F-19: Anticipated Funding by Source and Mode (2026–2050)

	Funding Source	PA Subregion	NJ Subregion	Total
Roadway	Federal	$ 25.3 B	$ 9.6 B	$ 35. B
	State	$ 5.3 B	$ 6.9 B	$ 12.2 B
	Local	$ 1.4 B	$ 0.0 B	$ 1.4 B
	Subtotal	$ 32.1 B	$ 16.5 B	$ 48.6 B
Transit	Federal	$ 11. B	$ 3.6 B	$ 14.6 B
	New-Start / Small-Start	$ .2 B	$ 0.0 B	$ .2 B
	State	$ 11.3 B	$ 3. B	$ 14.3 B
	Local	$ .5 B	$ .3 B	$ .8 B
	Subtotal	$ 23. B	$ 6.8 B	$ 29.8 B
DVRPC Total		**$ 55.1 B**	**$ 23.3 B**	**$ 78.4 B**

All figures in billions of YOE dollars. Figures may not add up due to rounding.
Source: DVRPC, 2024.

Table F-20: Anticipated Funding By Mode And Plan Period (2026–2050)

Subregion	Mode	2026–2030	2031–2036	2037–2045	2046–2050	Total
Pennsylvania	Roadway	$ 5.1 B	$ 6.8 B	$ 12.0 B	$ 8.2 B	$ 32.1 B
	Transit	$ 3.2 B	$ 3.8 B	$ 9.4 B	$ 6.4 B	$ 22.8 B
	New-Start/Core Capacity	$ 0.2 B	$ 0.0 B	$ 0.0 B	$ 0.0 B	$ 0.2 B
	Subregion Total	$ 8.5 B	$ 10.6 B	$ 21.4 B	$ 14.6 B	$ 55.1 B
		2026–2029	2030–2035	2036–2045	2046–2050	Total
New Jersey	Roadway	$ 2.4 B	$ 3.5 B	$ 6.3 B	$ 4.3 B	$ 16.5 B
	Transit	$ 0.9 B	$ 1.7 B	$ 2.6 B	$ 1.8 B	$ 6.8 B
	New-Start/Core Capacity	$ 0.0 B	$ 0.0 B	$ 0.0 B	$ 0.0 B	$ 0.0 B
	Subregion Total	$ 3.3 B	$ 5.1 B	$ 8.8 B	$ 6.1 B	$ 23.3 B
Regional Total		**$ 11.8 B**	**$ 15.7 B**	**$ 30.2 B**	**$ 20.8 B**	**$ 78.4 B**

Source: DVRPC, 2024 *$200 million in New Starts funds are Core Capacity funds to be allocated to Operational Improvements for Trolley Modernization in Pennsylvania.
All figures in billions of YOE dollars. Figures may not add up due to rounding.

Funding Allocation

After forecasting revenue, the next step is to allocate the anticipated funding to broad project categories before assigning it to specific transportation projects. Funding is allocated across roadway and transit categories based on a combination of comparative need and alignment with the Plan's vision, goals, and policy direction. In addition, current programmed expenditures from the region's four-year Transportation Improvement Programs (TIPs) and the Ten-Year Statewide Transportation Improvement Program (STIP) in New Jersey and TYP in Pennsylvania are considered. These near- and mid-term documents are fully aligned with the Long-Range Plan and contain detailed information about the hundreds of smaller-scale projects that are incorporated into the Plan but are not individually listed here for brevity.

The Plan prioritizes investment in the following order:

1. Preservation and maintenance needs
2. Operational improvements
3. Bicycle, pedestrian, and network expansion projects

This prioritization follows national policy guidance and reflects the LLCC approach promoted by the U.S. Department of Transportation, PennDOT, and NJDOT. The overarching goal is to achieve and maintain a state-of-good repair (SGR) for the region's existing roadway and transit systems.

The Plan must also fully fund the "Other" category for both roadway and transit systems. This category primarily includes bond repayments, environmental mitigation and remediation, and other required financial commitments.

Despite prioritizing preservation, the region's anticipated revenues fall short. Even if all projected funding through 2050 were allocated solely to maintaining the existing transportation system, it would still not be enough to meet identified needs. As a result, there would be insufficient resources to address critical improvements related to safety, congestion relief, multimodal mobility, or bicycle and pedestrian network expansion.

Table F-21 identifies the target allocations and resulting revenue for each funding category. Funding within each category is allocated to MRPs, which are listed in the Plan, with a portion set aside for smaller-scale projects that will be identified in the current and future TIPs.

Table F-21: Funding Allocation To Project Categories

Mode	Category	Pennsylvania		New Jersey	
		Target Allocation	Allocated Revenue	Target Allocation	Allocated Revenue
Roadway	R1. Pavement Preservation & Modernization	25.6%	$8.2 B	35.0%	$5.8 B
	R2. Bridge Preservation	44.5%	$14.3 B	19.0%	$3.1 B
	R3. Substantive Safety	5.9%	$1.9 B	2.0%	$0.3 B
	R4. Mobility Operational Improvements	10.0%	$3.2 B	14.0%	$2.3 B
	R5. Roadway System Expansion	4.0%	$1.3 B	4.0%	$0.7 B
	R6. Green Transportation	10.0%	$3.2 B	26.0%	$4.3 B
Roadway Subtotal		**100%**	**$32.1 B**	**100%**	**$16.5 B**
Transit	T1. Transit Preservation & Modernization	56.0%	$12.9 B	81.0%	$5.5 B
	T2. Transit Operational Improvements	3.0%	$0.7 B	5.0%	$0.3 B
	T3. Transit System Expansion	4.0%	$0.9 B	9.3%	$0.6 B
	T4. Transit Other	37.0%	$8.5 B	4.8%	$0.3 B
Transit Subtotal		**100.0%**	**$22.8 B**	**100.0%**	**$6.8 B**
Subregional Totals			**$55.1 B**		**$23.3 B**
Regional Totals					**$78.4 B**

All figures in billions of YOE dollars. Figures may not add up due to rounding.
Source: DVRPC, 2025.

Project Evaluation & Selection

The Federal Highway Administration (FHWA) requires a formal project evaluation process to guide the selection of projects included in both the Transportation Improvement Program (TIP) and the Long-Range Plan. Given the constraints on available funding, it is essential to select projects judiciously—grounded in quantitative assessment—to ensure that investments support the vision, principles, and goals identified in the region's Long-Range Plan.

DVRPC's *Plan-TIP Project Evaluation Criteria* serves as a key tool for making data-informed investment decisions. It is applied to evaluate candidate transportation projects for the TIP, as well as most Major Regional Projects (MRPs) in the Plan that do not yet have construction funding in the 10-year Statewide Transportation Improvement Program (STIP) (New Jersey) or TYP (Pennsylvania) or design funding in the first four years of either state's TIP.

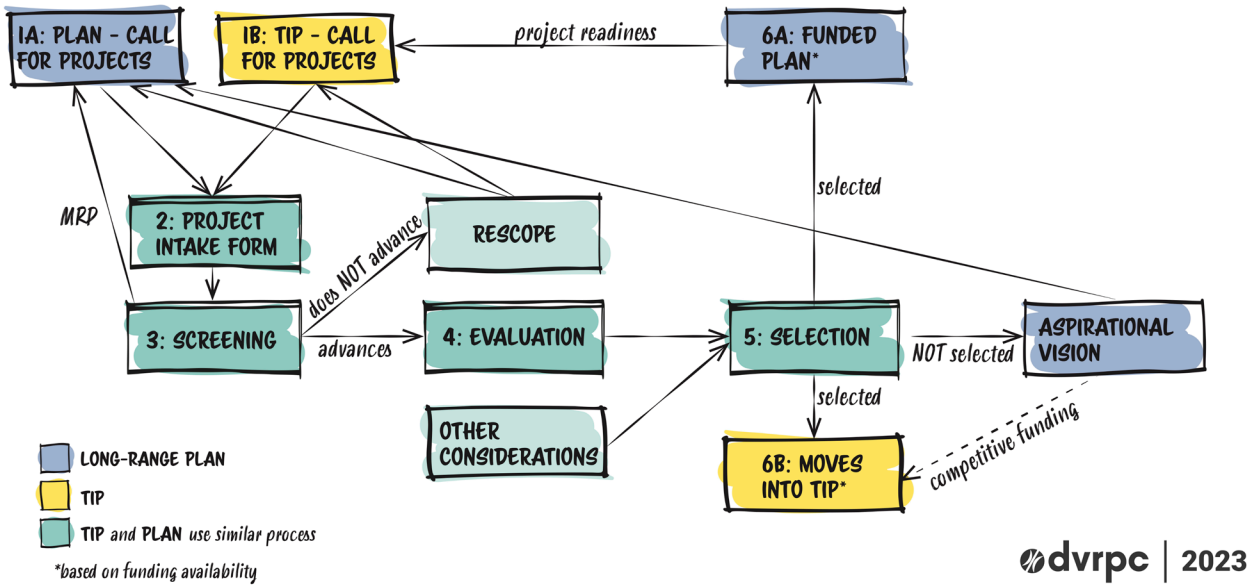
At a minimum, this process satisfies FHWA's requirement to use a structured evaluation methodology when selecting projects for programming. Beyond compliance, the criteria support regional decision-making by helping to ensure that transportation investments:

- Align with the vision and goals of the Long-Range Plan for Greater Philadelphia
- Support federal Transportation Performance Management (TPM) targets, including:
    - PM-1: Roadway safety
    - PM-2: Bridge and pavement condition
    - PM-3: System performance
    - FTA: Transit safety and asset management

The evaluation criteria are one component of DVRPC's broader project identification and selection process for both the TIP and the Long-Range Plan (see Figure F-3).

The project evaluation process begins with a call for projects, issued to DVRPC's planning partners. Project sponsors are asked to complete a project intake form that collects the data necessary for evaluation.

Figure F-3: DVRPC Project Identification, Evaluation, and Selection Process



Source: DVRPC, 2023.

The project evaluation process begins with a call for projects, issued to DVRPC's planning partners. Project sponsors are asked to complete a project intake form that collects the data necessary for evaluation.

The initial step involves screening each submission for consistency with the Long-Range Plan's vision and goals. This step also ensures that any MRPs are included and funded in the Plan before they can be considered for inclusion in the TIP.

Projects that do not meet the screening criteria may be excluded from further evaluation and will not appear in the Plan or TIP.

MRPs that pass the screening are then evaluated using the Plan-TIP Project Evaluation Criteria. The evaluation results are considered alongside a range of additional factors, including:

- Geographic balance
- Regional and local priorities
- Stakeholder support

- Funding eligibility
- Performance-based planning and asset management
- Project readiness
- Ability to leverage other public or private investments

Project selection is further constrained by the federal requirement for fiscal constraint, which mandates that neither the long-range plan nor the TIP can program more spending than is reasonably expected in available revenue.

Project selection is facilitated by DVRPC staff, with final decisions made by planning partners representing DVRPC's governing Board. Projects recommended by the Financial Planning Subcommittee and approved by the Board are included in the funded project list. Projects that cannot be accommodated within fiscal constraint are typically shown in the Plan as aspirational, unfunded projects. These may advance to the funded portion of the Plan or TIP if additional or competitive funding becomes available.

Congestion Management Process (CMP)

The project evaluation process, which informs both the TIP and the Long-Range Plan, ensures that regional transportation investments align with shared goals, available resources, and performance outcomes. One essential input to this evaluation framework is the CMP—a federally required, performance-based process that guides how MPOs like DVRPC address roadway congestion.

The CMP provides critical data and analysis to inform investment decisions and ensures consistency with federal planning requirements, including the mandate that alternatives to expanding single-occupancy vehicle (SOV) capacity be considered first. In doing so, the CMP directly supports the region's long-range planning priorities, particularly those related to safety, reliability, multimodal access, and smart growth. CMP findings help identify where congestion exists, what's causing it, and which multimodal or operational strategies may offer the most cost-effective and responsible solutions. These findings are used to prioritize projects and strategies in the Plan.

Aligning CMP with Plan Goals

The CMP is structured to reinforce the goals of the Long-Range Plan through a series of performance-based and policy-driven measures known as CMP Objective Measures. These include:

- Increasing mobility and reliability
- Enhancing integration across modes and expanding transit access in areas of greatest need
- Modernizing and maintaining the existing transportation network
- Advancing Vision Zero and improving safety
- Supporting efficient freight and goods movement
- Strengthening transportation security and emergency preparedness
- Aligning with other regional planning goals such as:
    - Investing in centers and areas of growth,
    - Prioritizing infrastructure in less environmentally sensitive areas, and

- Directing resources to Title VI communities

CMP Key Findings

The CMP is a systematic approach used by MPOs to monitor, assess, and manage traffic congestion while promoting multimodal solutions. Rather than relying solely on expanding road capacity, the CMP prioritizes strategies that improve efficiency, enhance mobility, and reduce dependence on single-occupancy vehicles.

Federal regulations guide how MPOs implement the CMP, requiring that non-capacity-adding strategies—such as operational improvements, travel demand management, and multimodal enhancements—be evaluated and implemented before any new SOV capacity is added. Where capacity expansion is deemed necessary, supplemental strategies must be included to maximize long-term value from the investment. See *Appendix A — Planning Process & Administration*, for additional information on federal CMP requirements.

The 2023 CMP for Greater Philadelphia incorporates performance data and other CMP Objective Measures to:

- Identify and prioritize congested locations,
- Analyze contributing factors to congestion,
- Recommend targeted strategies to address it, and
- Evaluate the effectiveness of implemented strategies over time.

The CMP is developed in coordination with the CMP Advisory Committee, ensuring broad input and alignment with regional needs. It is updated and adopted prior to the development of the Financial Plan and directly informs project identification and prioritization within the Plan.

A primary output of the CMP is the identification of congested locations that require strategic attention. The 2023 CMP identifies four key types of congestion-related challenges:

1. **Congested Corridors and Subcorridor Areas —** Areas with recurring congestion that impact regional mobility.
2. **Focus Roadway Corridor Facilities —** Strategic corridors that require a mix of operational, multimodal, and demand-management strategies.
3. **Focus Intersection and Limited Access Roadway Bottlenecks —** High-impact bottlenecks where targeted interventions can yield significant system performance improvements.
4. **Bus Route Reliability Locations —** Segments where transit vehicles experience significant delays or variability in travel time.

These locations are prioritized for further study and consideration for future investment, whether through the TIP, competitive grant opportunities, or inclusion in the fiscally constrained Long-Range Plan.

Congested Corridor and Subcorridor Areas

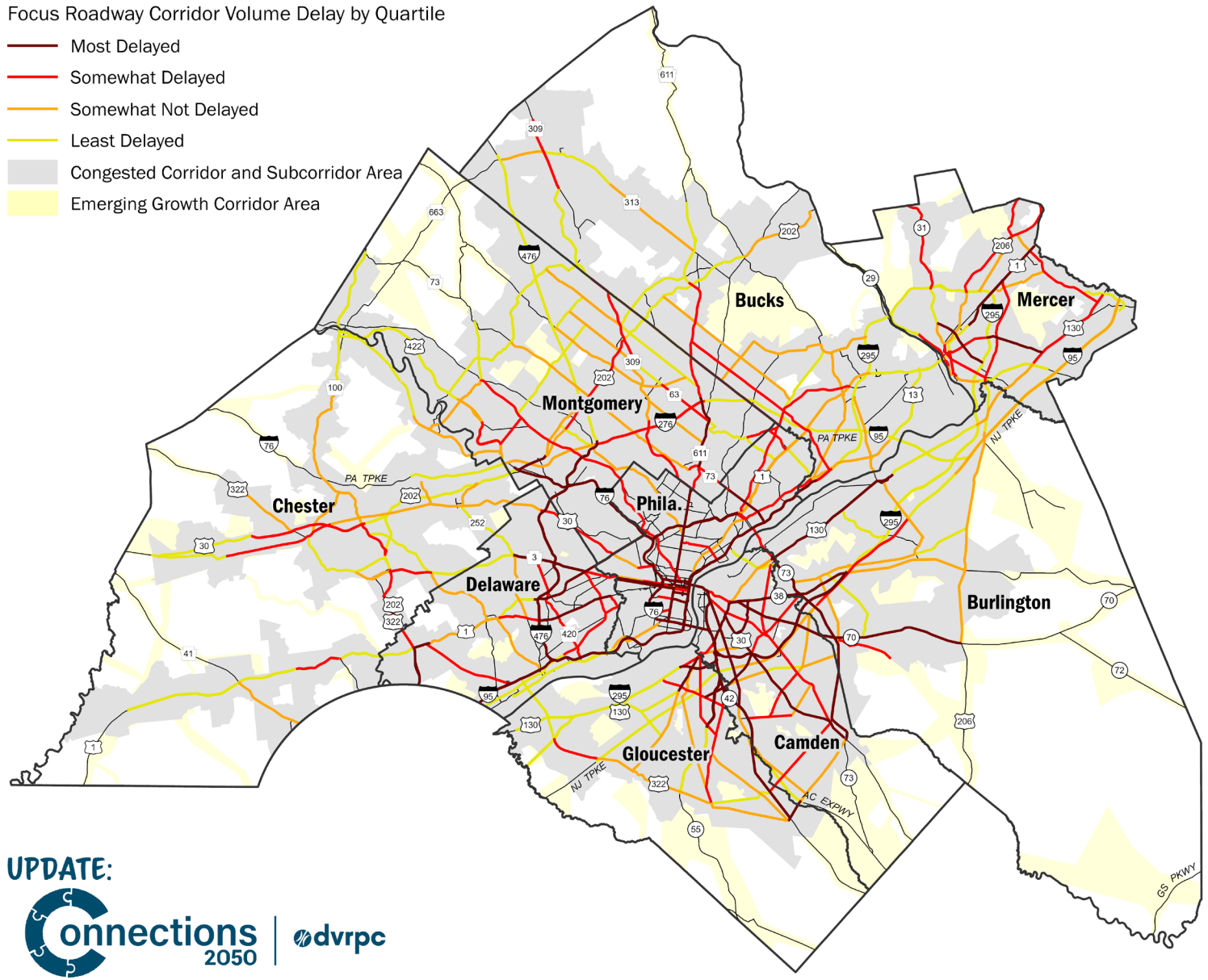
The DVRPC region is segmented into CMP Congested Corridor and Subcorridor Areas to help prioritize locations for investment and support the development of targeted strategies to mitigate congestion. Because the region is too large to assess every

roadway and intersection individually, this framework allows for analysis at a more manageable regional scale. Using Focus Roadway Corridor Facilities, Bottlenecks, and CMP Objective Measures, the CMP identifies 37 broader corridor areas experiencing higher levels of congestion and unreliability—20 in the Pennsylvania subregion (further divided into 68 subcorridors) and 17 in the New Jersey subregion (further divided into 63 subcorridors). For example, corridor area 5 (U.S. 1) in Pennsylvania consists of nine subcorridor areas beginning in western Chester County and ending at the Pennsylvania–New Jersey border. Similarly, corridor area 6 (U.S. 130) in New Jersey includes 12 subcorridor areas stretching from Gloucester County to the Mercer–Middlesex County boundary. In addition to current congestion areas, the CMP also identifies emerging regionally significant growth corridors where congestion is not yet severe but may become a concern due to existing land use and travel trends. These corridors and subcorridors are depicted in the Focus Roadway Corridor Facilities, Bottlenecks, and Transit Reliability Mapping (see Figures F-4 through F-6). CMP Objective Measures are used to identify Priority Congested Corridor and Subcorridor Areas to guide investment decisions, with these priority areas feeding into the Plan-TIP Project Evaluation Criteria. This approach helps direct resources to projects that support the goals of the Long-Range Plan, including increasing mobility and reliability, integrating modes and improving accessibility, modernizing infrastructure, advancing Vision Zero to eliminate fatalities and serious injuries by 2050, enhancing freight connections, strengthening cybersecurity, and ensuring investments align with other key regional planning priorities.

Focus Roadway Corridor Facilities

Analyzing congestion at the roadway corridor facility level, rather than by individual roadway segments, provides a clearer understanding of why some corridors perform better than others and allows for more consistent tracking of congestion over time. Focus Roadway Corridor Facilities are identified in areas with high congestion based on metrics such as the Travel Time Index (TTI), Planning Time Index (PTI), and other performance measures. These facilities are located within CMP-designated congested corridors, subcorridors, and emerging growth corridor areas. In total, there are 336 Focus Roadway Corridor Facilities in the DVRPC region—205 in Pennsylvania and 131 in New Jersey (see Figure F-4). These facilities help prioritize congested locations and support the development of targeted congestion management strategies. Facility limits are defined based on transitions between corridor and subcorridor areas, major interchanges, and key arterial roadways. While ramps are generally excluded due to limited traffic volume data, some mainline merge roadways with available volume data—such as connections from I-476 to I-95 in Delaware County or NJ 42 to I-295 in Camden County—are included to capture significant congestion impacts.

Figure F-4: Focus Roadway Corridor Facilities



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, 2024.

The Most Congested Focus Roadway Facilities are identified by selecting the top two corridors in each county with the highest peak-hour vehicle and volume delays, using both travel time and planning time metrics. In some cases, a single facility ranked in the top two for both delay measures, which reduced the total number of facilities identified for that county. The 2023 CMP analysis identifies 41 such facilities—23 in the Pennsylvania subregion and 18 in the New Jersey subregion (see Table F-22).

These facilities are listed in ascending order by county and roadway name. The number of identified facilities is intentionally limited to ensure resources are directed toward locations experiencing the most severe congestion, and to reflect realistic funding constraints. Several of these corridors are already included in programmed projects in the Pennsylvania and New Jersey TIPs and the Long-Range Plan.

Table F-22: Most Congested Focus Roadway Corridor Facilities

MAP ID	Roadway	Limits	Municipality	County
Pennsylvania				
24	I-95	PA 132 (Street Road) to PA 63	Bensalem	Bucks
89	PA 132 (Street Road)	I-95 to U.S. 1	Bensalem, Bristol	Bucks
145	PA 413	U.S. 1 Bus (Lincoln Highway) to PA 332	Langhorne, Langhorne Manor, Middletown	Bucks
173	PA 532/PA 213	PA 132 (Street Road) to U.S. 1	Lower Southampton, Langhorne, Middletown	Bucks
25	I-95	PA 63 (Woodhaven Road) to Academy Road	Bensalem, North Delaware	Bucks, Philadelphia
116	PA 100	U.S. 30 Bypass to U.S. 202	West Goshen, West Whiteland	Chester
138	PA 23	PA 724 to U.S. 422	East Pikeland, Phoenixville, Schuylkill	Chester, Montgomery
54	U.S. 30 Business	U.S. 30 Bypass to PA 82 (Coatesville)	Caln, Coatesville, Downingtown, East Caln	Chester
56	U.S. 30 Bypass	PA 100 to U.S. 30 Business	East Caln, West Whiteland	Chester

MAP ID	Roadway	Limits	Municipality	County
57	U.S. 30 Bypass	U.S. 30 Business to Reeceville Road	Caln, East Caln	Chester
64	U.S. 32/U.S. 202	U.S. 1 to PA 3	Various	Chester
118	Baltimore Ave	U.S. 13 to Bishop Ave	Clifton Heights, Lansdowne, Upper Darby, Yeadon	Delaware
119	Baltimore Pike	Bishop Avenue to I-476	Nether Providence, Springfield	Delaware
31	I-95	I-476 to U.S. 322	Chester City, Chester, Ridley	Delaware
32	I-95	U.S. 322 to PA-DE State Line	Lower Chichester, Upper Chichester	Delaware
157	Lansdowne Ave	U.S. 13 to PA 3	Darby, Lansdowne, Upper Darby, Yeadon	Delaware
19	I-76	U.S. 1 (City Avenue to I-476	Lower Merion, West Conshohocken	Montgomery
20	I-76	I-476 to I-76	Upper Merion, West Conshohocken	Montgomery
40	U.S. 1 (City Avenue	U.S. 30 (Girard Avenue to I-76	Lower Merion, West Park	Montgomery, Philadelphia
117	I-676 (Vine Street Expressway)	I-76 to I-95	Central Philadelphia	Philadelphia
19	I-76	I-676 (Vine Street Expressway) to U.S. 30 (Girard Avenue	University-Southwest, West Park	Philadelphia
18	I-76	U.S. 30 (Girard Avenue to U.S. 1 (City Avenue	West Park	Philadelphia
78	Market St	I-95 (Penn's Landing) to PA 611 (Broad Street)	Central Philadelphia	Philadelphia
New Jersey				
300	I-295	NJ 70 (Exit 34) to NJ 38 (Exit 40)	Cherry Hill, Mount Laurel	Burlington

MAP ID	Roadway	Limits	Municipality	County
369	NJ 70	NJ 73 to U.S. 206	Evesham, Medford, Southampton	Burlington
372	NJ 73	NJTPK (Exit 4) to NJ 70	Evesham, Mount Laurel	Burlington
371	NJ 73	U.S. 130 to NJTPK (Exit 4)	Various	Burlington
341	I-295	NJ 42 (Exit 26) to NJ 70 (Exit 34)	Various	Camden
328	I-76	NJ-PA State Line to I-295	Bellmawr, Gloucester, Mount Ephraim	Camden
312	NJ 168 (Black Horse Pike)	I-295 to NJ 42	Bellmawr, Gloucester, Runnemede	Camden
426	CR 544	NJ 41 to CR 534	Deptford	Gloucester
307	I-295	U.S. 130 to NJ 42 (Exit 26)	Various	Gloucester
311	NJ 42	AC Expressway to I-295	Various	Gloucester
360	NJ 45	U.S. 130 to King SHWV	Various	Gloucester
358	NJ 55	NJ 42 to NJ 47	Deptford	Gloucester
428	U.S. 322/CR 536	CR 536/CR 654 (Main Street) to AC Expressway	Winslow, Monroe	Gloucester
407	CR 622 (Olden Avenue)	I-295 to NJ31	Trenton, Hamilton, Ewing	Mercer
351	NJ 33	I-295 to U.S. 130	Hamilton, Robbinsville	Mercer
349	NJ 35	U.S. 1 to CR 622 (Olden Avenue	Trenton	Mercer
318	U.S. 1	Alexander Road to CR 629	West Windsor	Mercer
317	U.S. 1	I-295 to Alexander Road	Lawrence, West Windsor	Mercer

Source: DVRPC, 2024.

Focus Intersection and Limited Access Roadway Bottlenecks

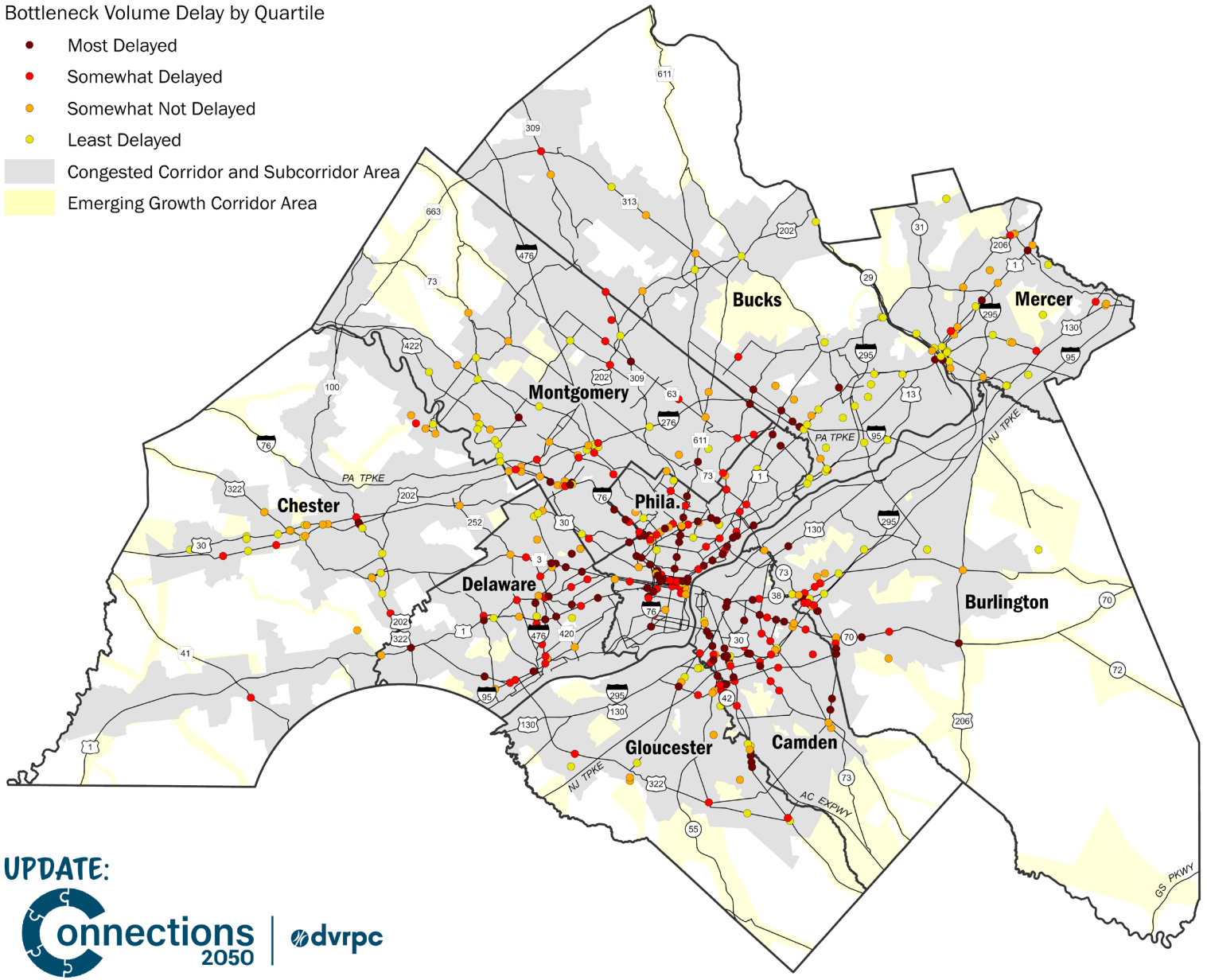
Some Focus Roadway Corridor Facilities may not show significant overall congestion, but individual intersections or interchanges along these corridors may experience reduced mobility, resulting in localized bottlenecks. The intersection bottleneck analysis focuses on arterials and other non-limited-access roadways, typically at signalized intersections, as well as limited-access roadway bottlenecks at critical on- and off-ramps or locations with lane reductions, such as drops from three to two lanes.

Focus Intersection Bottlenecks are identified where at least one approach segment to an intersection has a peak-hour Travel Time Index (TTI) greater than 1.50 or a Planning Time Index (PTI) greater than 3.00, along with high peak-hour vehicle and volume delays. Intersections with multiple delayed approaches received additional weight in the analysis. For each bottleneck, peak-hour vehicle and volume delays are summarized across all approaching segments that intersect with the bottleneck, as well as any trailing segments with a TTI of 1.40 or higher, continuing until another bottleneck is encountered. In total, 299 Focus Intersection Bottlenecks were identified: 181 in Pennsylvania and 118 in New Jersey.

Focus Limited Access Roadway Bottlenecks occur in areas such as on-ramps where merging vehicles slow mainline traffic, or near off-ramps where queues back up to the mainline due to signal delays at the ramp terminus. For these bottlenecks, peak travel time vehicle and volume delays are summarized for the bottleneck segment and adjacent upstream segments with a TTI of 1.40 or greater, extending until another bottleneck is encountered. A total of 145 Focus Limited Access Bottlenecks were identified: 102 in the Pennsylvania subregion and 43 in the New Jersey subregion.

Figure F-5 maps both Focus Intersection and Limited Access Roadway Bottlenecks, symbolized by volume delay quartiles for each subregion. Brown represents the most severe delays and yellow the least. Each mapped bottleneck is labeled and can be cross-referenced with the corresponding table to view detailed delay and ranking information.

Figure F-5: Focus Intersection and Limited Access Roadway Bottlenecks



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, 2024.

The Most Congested Focus Intersection Bottlenecks are identified using the highest peak hour vehicle and volume delays, performed separately for each county in the region. Some county bottlenecks were in the top two for both delay measures, which reduced the total number of bottlenecks in a county. The *2023 CMP* analysis identified 33 Most Congested Focus Roadway Facilities, with 23 in the Pennsylvania subregion and 18 in the New Jersey subregion (see Table F-23).

Table F-23: Focus Intersection Bottlenecks

MAP ID	Limits	Municipality	County
Pennsylvania			
20	PA 132 (Street Road) at Old Lincoln Highway	Bensalem Township	Bucks
8	PA 132 (Street Road) at PA 532 (Bustleton Pike)	Lower Southampton Township	Bucks
10	PA 232 (Huntingdon Pike) at County Line Road	Upper Southampton Township	Bucks
15	PA 413 (Pine Street) at PA 213 (Maple Avenue	Langhorne Borough	Bucks
39	PA 100 at Howard Road	West Whiteland Township	Chester
37	PA 100 at U.S. 30 Bypass WB Off Ramp	West Whiteland Township	Chester
59	PA 41 at Baltimore Pike	Avondale Borough	Chester
36	US 30 Bus (Lincoln Highway) at PA 82 (1st Avenue	Coatesville City	Chester
77	Springfield Road at Bishop Ave	Springfield Township	Delaware
80	U.S. 1 (State Road) at Springfield Road	Springfield Township	Delaware
89	U.S. 322 (Conchester Highway) at Bethel Ave/Cherry Tree Road	Upper Chichester Township	Delaware
12	PA 23 (Front Street) at Matsonford Road/Fayette St	West Conshohocken Borough	Montgomery
13	PA 363 (Trooper Road) at Ridge Pike	Lower Providence Township	Montgomery
10	PA 611 (Old York Road) at Washington Lane	Abington Township	Montgomery
12	Philmont Avenue at Pine Road	Lower Moreland Township	Montgomery

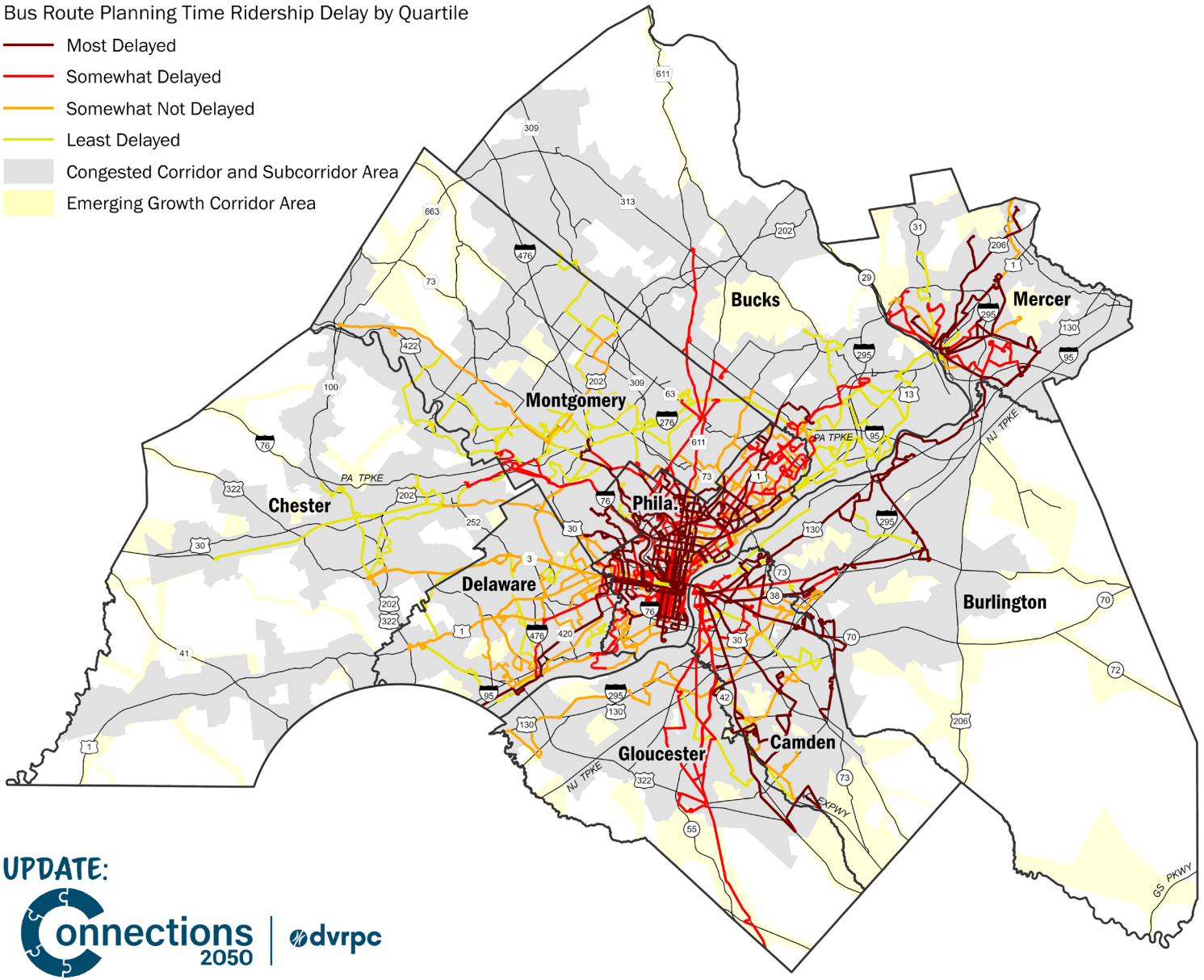
15	U.S. 1 (City Avenue) at PA 23 (Conshohocken State Road)	Lower Merion Township, West Park	Montgomery, Philadelphia
15	U.S. 1 (City Avenue) at Presidential Boulevard	Lower Merion Township, West Park	Montgomery, Philadelphia
15	Allegheny Avenue) at Kensington Ave	North Philadelphia	Philadelphia
13	PA 532 (Bustleton Avenue) at Byberry Road	Upper Far Northeast Philadelphia	Philadelphia
New Jersey			
375	U.S. 206 at NJ 70	Southampton Township	Burlington
310	NJ 70 at Elmwood Road	Evesham Township	Burlington
388	NJ 73 at Church Road/Ramblewood Parkway	Mount Laurel Township	Burlington
308	NJ 73 at Waverly Avenue/Willow Road	Maple Shade Township	Burlington
402	NJ 168 (Black Horse Pike) at NJ 41 (Clements Bridge Road)	Runnemede Borough	Camden
369	NJ 73 at CR 675 (Cooper Road)	Voorhees Township	Camden
340	NJ 70 at Chelton Parkway/West Gate Drive	Cherry Hill Township	Camden
396	NJ 45 (Broad Street) at CR 534 (Cooper Street)	Woodbury City	Gloucester
411	NJ 42 (Black Horse Pike) at CR 651 (Greentree Road)	Washington Township	Gloucester
408	NJ 42 (Black Horse Pike) at CR 639 (Ganttown Road)	Washington Township	Gloucester
361	U.S. 1 Bus (Brunswick Pike) at Allen Lane	Lawrence Township	Mercer
318	NJ 33 at CR 526 (Robbinsville Edinburg Road)	Robbinsville Township	Mercer
360	U.S. 1 (Brunswick Pike) at CR 546 (Franklins Corner Road)	Lawrence Township	Mercer
364	U.S. 1 (Brunswick Pike) at CR 571 (Washington Road)	West Windsor Township	Mercer

Source: DVRPC, 2024.

Transit Bus Reliability

The CMP SEPTA NJ TRANSIT Bus Reliability analysis evaluates transit reliability using peak planning time vehicle delay and ridership delay measures for SEPTA and NJ TRANSIT bus routes. Planning time delay measures the 95th percentile delay for one vehicle. High planning time delays may be due to unforeseen circumstances such as crashes, disabled vehicles, or parked cars in bus lanes. Delays were divided by the facility length, and ranked separately for SEPTA and NJ TRANSIT from most to least in delay, for both measures. Delays were normalized by route length and ranked separately for each system, with mapping and color-coded tables showing quartile-based severity (see Figure F-6). The study included 158 major transit routes (125 for SEPTA and 33 for NJ Transit), with exclusions for lower-ridership or out-of-region services. Routes with the worst delays were mostly in dense urban areas like Philadelphia and Camden County. The analysis also integrates CMP Objective Measures to guide investment decisions and prioritize congested corridors, ensuring the most unreliable routes are considered in future planning and mitigation strategies. Unreliable transit routes that are within the CMP Congested Corridor, Subcorridor, and Emerging Growth Corridor Areas are given more weight for managing reliability and congestion than routes not in these areas.

Figure F-6: SEPTA And NJ Transit Bus Reliability



UPDATE: Connections 2050 | dvrpc

Source: DVRPC, 2024.

CMP Strategies

In addition to identifying congested locations that require strategic attention, the CMP provides a toolbox of 125 congestion management strategies. These strategies are organized into five key areas: TSMO and Intelligent Transportation Systems (ITS); Travel Demand Management (TDM); Public Transportation Improvements; Land Use and Transportation Integration; and Roadway Capacity Enhancement. Drawing on the congested locations analysis and CMP Objective Measures, the CMP tailors multimodal strategy recommendations to each identified location. These recommendations aim to improve mobility and reliability, enhance safety, and support a context-sensitive approach that integrates land use and transportation planning.

Specific strategy recommendations for each congested location are available through the CMP Corridor and Subcorridor Area Viewer. For each location, a small number of “very appropriate” strategies are prioritized based on contextual suitability. “Secondary” strategies may also be relevant and should be considered once priority actions are addressed. “Appropriate everywhere” strategies are generally lower in priority but can be applied across the system, regardless of whether a location is identified as congested. The CMP also evaluates the effectiveness of implemented strategies and uses those findings to refine and inform future recommendations.

Major Regional Projects (MRPs)

The project evaluation process plays a critical role in determining which initiatives advance within the region's constrained financial resources. Among the many projects that are implemented in the region, certain high-impact, high-cost efforts stand out due to their scale and significance. These are classified as MRPs—a set of evaluated projects that are candidates for dedicated funding in the Plan. The following section describes MRPs in more detail and lists those included in the Plan.

MRPs are large-scale initiatives that have significant regional travel impacts or costs exceeding $40 million. Most network expansion projects qualify as MRPs, as do major reconstruction efforts on the region's freeways and bridges. MRPs are discrete projects with defined start and end dates. They are not part of ongoing programs, such as the Transit Vehicle Overhaul Program. An MRP should be included in the Plan before it can be programmed in the TIP.

In addition to expansion and reconstruction efforts, the Plan also includes major transit operational improvements like SEPTA's Trolley Modernization project, and large-scale bicycle and pedestrian projects such as the Circuit Trails network. For brevity, smaller-scale projects identified during the Needs Assessment are not listed individually in the Plan. Instead, funding categories within the Plan act as placeholders for these investments, which may be included explicitly in future Transportation Improvement Programs (TIPs).

Projects in the Plan are designated as one of the following:

- **Funded:** Prioritized by the Financial Planning Subcommittee and programmed within anticipated revenues (see Tables F-24—F-28).
- **Unfunded:** Aspirational MRPs aligned with the Plan's goals that could move forward if new funding becomes available (see Tables F-29 and F-30). Within the fiscally constrained portion of the Plan, $35.9 billion worth of MRPs remain unfunded.
- **Illustrative:** Infrastructure preservation and modernization projects on existing roadways and bridges that may advance through state-administered TIPs, depending on funding and scheduling (see Table F-32).

Funded MRPs

Several new investments were able to be fiscally constrained within the Plan's funded list as part of *Update: Connections 2050*. Various trail and greenway segments of the Circuit Trail network (MRP IDs PAR078 and NJR005) are fully funded for completion in all counties.

In Pennsylvania, Vision Zero Safety Improvements (PAR076) cover almost all the need identified for all five counties, and the Philadelphia High-Quality Bike Network (PAR066) has over $220 million in dedicated funding. Chester Pike Safety Improvements (PAR079) is a new project involving traffic calming, improved pedestrian facilities, and intersection improvements. On the transit side, Keystone Corridor Improvements (PAT019) makes track and signal upgrades through three counties, and Trolley

Modernization (PA024–028) is broken into five separate projects for increased transparency as it moves into construction.

In New Jersey, funding is largely consistent with the previous Plan. NJ 73 and Ramp G Bridge over U.S. 130 (NJR011) replaces a structurally deficient and functionally obsolete bridge in Camden County, and NJ 42 Reconstruction (NJR012) funds resurfacing, rehabilitation, and reconstruction, including ADA compliance in Gloucester County. On the transit side, River Line Light Rail Vehicles (NJT004) offer twenty new vehicles to serve Burlington, Camden & Mercer counties.

The following tables list funded MRPs, including details on scope, timing, cost, and breakdown of allocated funding by project category:

- Pennsylvania Roadway—F-24
- Pennsylvania Transit—F-25
- New Jersey Roadway—F-26
- New Jersey Transit—F-27
- Completed MRPs—F-28

Table F-24: Pennsylvania Roadway MRPs—Funded

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAR001	U.S. 422 Reconstruction	Reconstruct and realign U.S. 422 from the Sanatoga Interchange to east of Stowe, including bridge and ramp improvements and Schuylkill River bridge reconstruction.	Chester, Montgomery	1–2	$314.50	R1: 80%, R2: 20%
PAR002	U.S. 1 from Schoolhouse Road Reconstruction	Reconstruct from Schoolhouse Road to Maryland State Line.	Chester	1–2	$437.50	R1: 80%, R2: 20%
PAR003	U.S. 1 at PA 352 and 452 Interchange	Reconstruction of PA 352 cloverleaf interchange, Media Bypass/Baltimore Pike interchange, and PA 452 intersection, and eliminate lane drops.	Delaware	1–3	$257.80	R2: 100%
PAR004	U.S. 1 from PA Turnpike Reconstruction	Reconstruct from I-276 / PA Turnpike to NJ state line, including widening from PA Turnpike to PA 413; Interchange improvements.	Bucks	1–2	$229.30	R1: 75%, R4: 2%, R5: 23%
PAR006	U.S. 30 / Coatesville-Downingtown Bypass (Western)	Reconstruct from PA 10 to just west of Reeceville Road; complete missing movements at PA 82, Airport Road, and Bus. 30 / PA 10 interchanges.	Chester	1–3	$622.10	R1: 85%, R4: 8%, R5: 8%
PAR007	U.S. 322 Reconstruction and Widening	Reconstruct and widen from Clayton Park Drive to I-95.	Delaware	1–2	$288.90	R1: 35%, R2: 15%, R4: 20%, R5: 30%
PAR008	Henderson Road and South Gulph Road Widening	Widen Henderson Road from South Gulph Road to Shoemaker; Widen South Gulph Road	Montgomery	1–2	$21.70	R1: 50%, R5: 50%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
		from Crooked Lane to I-76 Gulph Mills intersection.				
PAR009	PA 309 Connector Road	Construct new Road from Allentown Road to County Line Road; Improve PA 309 Interchange.	Bucks, Montgomery	1	$75.20	R4: 20%, R5: 80%
PAR010	Ridge Pike Reconstruction and Widening	Reconstruct 4-lane road from Crescent Avenue to I-276 PA Turnpike; widen to add center turn lane; reconstruct 2 bridges over Norfolk-Southern rail tracks.	Montgomery	1–2	$33.30	R1: 55%, R2: 15%, R4: 30%
PAR011	I-95 North Philadelphia (Sector A) Reconstruction	Reconstruct from Race Street to State Road; Interchange improvements at Vine, Girard, Allegheny, Betsy Ross Bridge, and Cottman interchanges.	Philadelphia	1–2	$1,852.10	R1: 7%, R2: 75%, R4: 18%
PAR013	I-95 South Philadelphia Reconstruction	Reconstruct and rehabilitate from I-676 to Broad Street.	Philadelphia	3–4	$5,377.90	R1: 10%, R2: 90%
PAR016	I-95 / U.S. 322 / Highland Avenue Interchange	Realign I-95 and add new movements at interchange to 322, Bethel Road, and Highland Avenue.	Delaware	1–2	$123.00	R1: 25%, R2: 25%, R4: 35%, R5: 15%
PAR018	Concord Road Intersections	Intersection reconfigurations along Concord Road at Valleybrooke Road/ Foulk Road, Bethel Road/Engle Street, Bridgewater Road, and McDonald Boulevard/Sunfield Drive.	Delaware	1–3	$52.80	R4: 100%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAR019	Bristol Road Extension	Extend from U.S. 202 to Park Avenue.	Bucks	1	$39.80	R4: 50%, R5: 50%
PAR020	Belmont Avenue at I-76 Interchange	Widen Belmont Avenue to provide additional lanes, intersection improvements, and streetscape improvements; modify I-76 and railroad overpasses.	Montgomery	2–3	$73.70	R4: 50%, R5: 50%
PAR021	U.S. 202 at US 1 Loop Road Completion	Complete southwestern Loop Road and PA 926.	Chester, Delaware	1	$15.00	R3: 50%, R4: 50%
PAR024	I-476 Active Traffic Management	Part-time shoulder use and other operational strategies from PA 3 to I-95.	Delaware	1–2	$48.50	R4: 50%, R5: 50%
PAR025	I-76 Integrated Corridor Management	Implement smart traffic technologies, safety improvements, and multimodal enhancements, including adaptive signals, ramp metering, and coordination with SEPTA.	Montgomery	1–3	$688.40	R2: 8%, R4: 46%, R5: 46%
PAR027	U.S. 30 / Coatesville-Downingtown Bypass (Eastern)	Reconstruct and implement part-time shoulder use or flex lanes from just west of Reeceville Road to Quarry Road, including six interchange projects.	Chester	1–4	$1,047.30	R1: 44%, R2: 20%, R4: 11%, R5: 25%
PAR028	I-95 Active Traffic Management	Part-time shoulder use and other operational strategies southbound from Stewart Avenue to I-476 and northbound from U.S. 322 East to Stewart Avenue.	Delaware,	2–4	$52.90	R4: 50%, R5: 50%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAR029	North Valley Road Bridge over Amtrak	Replace North Valley Road Bridge over Amtrak; realign to connect new bridge with Darby Boulevard.	Chester	1–2	$32.80	R2: 100%
PAR031	PA 23 Trout Creek Bridge Replacement	Replace weight-restricted bridge on a new alignment; realign roadway between Moore Road and Vandenberg Road, providing two westbound lanes and one eastbound lane.	Montgomery	1–2	$21.70	R2: 50%, R4: 25%, R5: 25%
PAR032	Penn's Landing Highway Cap	Access and community improvement via cap over I-95 and Columbus Boulevard from Chestnut Street to Walnut Street in Center City, and extension of South Street pedestrian bridge.	Philadelphia	1	$66.80	R6: 100%
PAR033	I-95 Girard Point River Crossing (Phases 1 and 2)	Repair Girard Point Bridge and approaches; assess for potential tolling.	Philadelphia	1	$150.80	R2: 100%
PAR034	I-95 over Bartram Avenue / Conrail	Rehabilitate pavement and bridge over Bartram Avenue / Conrail.	Delaware	2–3	$395.20	R2: 100%
PAR035	I-95 at Street Road Bridge	Replace bridge over I-95 and Northeast Corridor with a wider structure. Provide turning lanes on the bridge, widen I-95, and improve connection to U.S. 13.	Bucks	1–3	$349.30	R2: 70%, R5: 30%
PAR036	PA 663 / John Fries Highway Reconstruction & Widening	Reconstruct and widen from PA 309 to PA Turnpike.	Bucks	2031––2036	$6.00	R1: 75%, R5: 25%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAR038	Sumneytown Pike Corridor and Intersection	Corridor and intersection improvement from PA 63 to PA 363.	Montgomery	2–3	$38.30	R1: 25%, R4: 38%, R5: 38%
PAR040	Belmont Avenue over Schuylkill	Rehabilitate bridge over the Schuylkill River.	Montgomery, Philadelphia	1	$53.30	R2: 100%
PAR041	Keystone Boulevard Extension	Extend Keystone Boulevard from its current terminus to Grosstown Road.	Montgomery	3–4	$48.10	R5: 100%
PAR044	PA 63 / Welsh Road Bridges	Bridge replacements and minor widening between Blair Mill Road and Twining Road.	Montgomery	2–3	$130.20	R2: 90%, R5: 10%
PAR047	Eakins Oval Reconfiguration	Reconfigure circulation paths and patterns around Eakins Oval and Benjamin Franklin Parkway.	Philadelphia	1	$43.80	R3: 25%, R4: 75%
PAR048	Chinatown Stitch Cap (Phase 1)	New Cap over I-676 in Chinatown area of Philadelphia.	Philadelphia	3–4	$202.40	R6: 100%
PAR049	30th Street Station Vehicle Circulation	Vehicle Circulation Improvements per the 30th Street District Plan, including street upgrades, JFK Boulevard realignment, and I-76 ramp reconfigurations.	Philadelphia	3–4	$93.10	R4: 100%
PAR051	I-76 Pavement Preservation	Pavement preservation and guiderail upgrades on I-76 (Schuylkill Expressway) from U.S. 1 to I-676 (Vine Street Expressway) in Philadelphia.	Philadelphia	1–2	$87.30	R1: 100%
PAR052	59th Street Bridge over Amtrak	Replacement of 59th Street bridge over AMTRAK in Philadelphia. Includes street	Philadelphia	1–2	$47.60	R2: 100%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
		lighting improvements, ADA compliance, railroad electric traction (ET) system modification, utility relocations, and related work.				
PAR053	I-476 (Blue Route) Pavement Preservation	Pavement preservation and guiderail upgrades on I-476 from the I-76 interchange to MacDade Boulevard interchange.	Delaware, Montgomery	1–2	$86.20	R1: 100%
PAR054	Ridge Pike over Norfolk Southern and PA Turnpike	Combined replacement of Ridge Pike over Norfolk Southern, and over I-276/PA Turnpike.	Montgomery	1	$5.90	R2: 100%
PAR056	Wanamaker Avenue Bridge over Darby Creek	Replacement of both the southbound and northbound bridge, which carries SR 420 over Darby Creek between Tinicum Township and Prospect Park Borough.	Delaware	1–2	$34.50	R2: 100%
PAR060	PA 100 Northbound at Exton Station	Additional northbound lane between Pottstown Pike on-ramp and the U.S. 30 Exton Bypass; intersection improvements.	Chester	2–4	$6.30	R4: 7%, R5: 93%
PAR063	PA 663 from Portzer to Hickory Multimodal Expansion	Widen to 4 lanes between Portzer Road and Hickory Drive, including turn lanes; construct an 8' wide bike/pedestrian pathway.	Bucks	1–2	$6.30	R5: 90%, R6: 10%
PAR064	Market Street over Schuylkill and CSX	Rehabilitate bridges with bike and pedestrian improvements over Schuylkill River and CSX rail tracks	Philadelphia	1–2	$196.20	R2: 100%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAR065	State Road Reconstruction	Full-depth pavement reconstruction for ~2.2 miles of SR 2002 (State Road) from the bridge crossing the Neshaminy Creek to SR 0413 (New Rodgers Road).	Bucks	1–2	$36.30	R1: 75%, R2: 25%
PAR066	Philadelphia High-Quality Bike Network: Programmed	Construct a network of high-quality protected bike lanes, off-street facilities, and neighborhood bikeways.	Philadelphia	2–4	$386.50	R6: 100%
PAR070	Spring Garden Connector	Realignment, signal improvements, ECG and Circuit train construction, safety improvements.	Philadelphia	1–2	$52.10	R1: 45%, R3: 10%, R4: 45%
PAR071	PA 291 / Second Street / Industrial Highway Bike / Ped Complete Streets	PA 291 through Chester. Traffic calming, enhanced crosswalks, landscaping, new and altered traffic signals, and a separate facility for the East Coast Greenway.	Delaware	2–3	$34.60	R1: 25%, R3: 25%, R4: 25%, R6: 25%
PAR072	Spring Garden Bridges Over Amtrak	Rehabilitate bridges over the Schuylkill River and CSX rail tracks.	Philadelphia	1–2	$57.20	R2: 100%
PAR073	70th, 71st, and 72nd Street Bridges over Amtrak	Rehabilitate 70th, 71st, and 72nd Street bridges over Amtrak rail facilities, and upgrades of adjacent intersections.	Philadelphia	1–3	$76.40	R2: 100%
PAR074	U.S. 202 / PA 611 (Doylestown Bypass) Preventive Maintenance	Rehabilitate the Doylestown Bypass mainline and ramps, and repair 22 bridges, including several overhead crossings such as Swamp Road, Easton Road, and Butler Pike.	Bucks	1–2	$77.00	R1: 20%, R2: 80%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAR075	Roosevelt Boulevard Operational Improvements (Phase 1)	Intersection and roadway improvements along U.S. 1 (Roosevelt Boulevard) from Broad Street to Adams Avenue, and from Adams Avenue to Old Lincoln Highway.	Philadelphia	1–2	$134.60	R4: 100%
PAR076	Vision Zero Safety Improvements	Improve road safety with engineering enhancements.	All PA Counties	1–4	$1,072.00	R3: 100%
PAR078	The Circuit (PA)	Remaining trail and greenway segments of the Circuit Trail network in the PA state subregion.	All PA Counties	2–4	$588.40	R6: 100%
PAR079	Chester Pike Safety Improvements	Safety improvements along the U.S. 13 corridor, including calming, pedestrian facilities, intersection improvements, streetscaping, and potential lane reallocation.	Delaware	2–3	$71.50	R1: 20%, R2: 50%, R4: 30%
PAR080	Market East Complete Streets	Complete Streets improvements on Market East (bike/pedestrian/transit).	Philadelphia	3	$71.20	R1: 50%, R3: 50%
PAR083	JFK Boulevard and Market Street Bikeway	Permanent improvements to Market Street and JFK Boulevard for separated bikeway and transit lanes.	Philadelphia	2	$87.70	R6: 100%

Source: DVRPC, 2025.
**See Table F-1 for Plan Period years.*

Table F-25: Pennsylvania Transit MRPs—Funded

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAT001	City Hall and 15th Street Stations	Rehabilitate City Hall Station on the Broad Street Line and 15th Street Station on the Market-Frankford Line (MFL) for full ADA compliance, improved safety and security, state-of-good-repair, and reduced maintenance costs. The 15th Street Station rehab was completed in 2020.	Philadelphia	1	$ 96.50	T1: 100%
PAT002	Amtrak Keystone Corridor Stations	Station enhancements, relocation and construction at Coatesville, Parkesburg and Downingtown.	Chester	1–2	$ 130.00	T1: 100%
PAT006	SEPTA Key Program	Updated Fare Collection System, systemwide,	All PA Counties	1–2	$ 211.80	T1: 100%
PAT007	Regional Rail Catenaries 30th Street Station Westbound	Catenary replacement from 30th Street Station westbound to K and Zoo interlocking and Powelton Yard.	Philadelphia	1	$ 112.60	T1: 100%
PAT008	Regional Rail Vehicles	Replace aging Silverliner IV railcars to improve infrastructure, update vehicle specifications, and support the Reimagining Regional Rail initiative.	All PA Counties	1-3	$ 626.60	T1: 100%
PAT009	Center City Concourse Improvements	Upgrade underground pedestrian tunnel network that connects major transit stations beneath Center City, Philadelphia.	Philadelphia	1	$ 59.7	T1: 100%
PAT013	Frazer Shop and Yard Upgrades	Expand train storage and improve access to the Paoli/Thorndale Line, reducing costs from non-revenue train movements.	Chester	1	$ 11.70	T1: 100%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAT014	Market Frankford Line (MFL) Vehicles	Replace Market-Frankford Line M-4 railcars, including vehicle design, production, signal upgrades, and facility improvements at 69th Street and Bridge Street Yards.	Philadelphia, Delaware	1–2	$1,419.80	T1: 100%
PAT015	SEPTA Transit Substation	Program for overhauls, plus replacements at Ellen, Market, Park, Broad, Louden, Caster, and Ranstead.	Delaware, Philadelphia	1–2	$ 344.90	T1: 100%
PAT016	Paoli Intermodal Transportation Center	Upgrade Paoli Station with a new center high-level platform, elevators, ramps, ADA improvements, and supporting infrastructure changes to ensure multimodal access.	Chester	3–4	$ 88.90	T3: 100%
PAT017	Zoo Interlocking Preservation	State-of-good-repair improvements, including retaining wall construction and first and second phase of track work.	Philadelphia	1	$ 68.4	T1: 100%
PAT019	Harrisburg Line Improvements	Track 2 Upgrades and Bidirectional Signaling from Paoli to Overbrook.	Chester, Montgomery, Philadelphia	1	$ 83.00	T2: 100%
PAT020	Eastwick Intermodal Station (Phase 2)	Construct new intermodal station and extend Route 36 Trolley.	Philadelphia	2–3	$ 236.60	T1: 50%, T3: 50%
PAT023	Bus Revolution	Bus stop and transit priority enhancements.	All PA Counties	3	$ 61.30	T2: 100%
PAT024	Trolley Modernization: Infrastructure	New tracks, bridges, power systems, signal and communication upgrades, tunnel overhauls, and coordination with city and utility agencies.	Delaware, Philadelphia	1–2	$1,040.30	T1: 100%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAT025	Trolley Modernization: Vehicles	Acquire 130 new ADA-accessible trolleys and support their design, testing, operator training, and system integration.	Delaware, Philadelphia	1–2	$ 945.70	T1: 100%
PAT026	Trolley Modernization: Facilities	Design and construction of a new Trolley Heavy Maintenance Facility and upgrade of existing facilities to support the new trolley fleet, improve reliability, and ensure ADA compliance.	Delaware, Philadelphia	1–2	$1,700.00	T1: 100%
PAT027	Trolley Modernization: Operations	Redesign trolley routes, implement new schedules and operations, and train staff to support the modernized fleet and improve system efficiency.	Delaware, Philadelphia	1–2	$1,000.00	T2: 100%
PAT028	Trolley Modernization: Expansion	Improve trolley access for Title VI communities through extensions to Overbrook, Eastwick, and Upper Darby, supporting regional job growth and economic development.	Delaware, Philadelphia	3	$ 300.00	T3: 100%
PAT034	Intercity Bus Station	New Intercity Bus Station to replace Filbert Street Bus Terminal.	Philadelphia	2	$ 89.40	T3: 100%
PAT040	Mainline-Schuylkill Bridges, Interlockings, and Duct Bank	Rehabilitate seven bridges and interlockings between Suburban Station and 30th Street Station.	All PA Counties	1–2	$ 433.50	T1: 100%
PAT041	Regional Rail Station Improvements (Near Term)	Reconfigure and upgrade Regional Rail stations at Marcus Hook, Willow Grove, Cornwells Heights, Jenkintown-Wyncote, and Villanova (Phase 2) to improve accessibility and service.	All PA Counties	1–2	$ 309.90	T1: 100%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAT042	Escalator / Elevator Improvement Program	ADA compliance of SEPTA stations by installing elevators and modernizing escalators.	All PA Counties	1–3	$ 66.6	T1: 100%
PAT043	1234 Market Street Headquarters Improvements	Rehabilitate SEPTA's headquarters with upgrades to electrical, HVAC, elevators, and life safety systems, along with space optimization to enhance efficiency and leasing potential.	Philadelphia	1–2	$ 21.00	T1: 100%
PAT044	Zero Emission Bus (ZEB) Fleet Transition Facility Upgrades	Full transition to zero-emission buses, including battery electric and fuel cell models, contingent on securing necessary infrastructure funding.	All PA Counties	1–3	$ 176.50	T1: 100%
PAT045	Railroad Interlocking Improvement Program (Phase 3–12)	Rebuild and reconfiguration of key Regional Rail interlockings to enhance operational efficiency, including locations such as 16th Street, Broad, Wayne, and Schuylkill.	All PA Counties	1–3	$ 136.90	T1: 100%
PAT046	Regional Rail VHF Radio Upgrade	Replace and upgrade SEPTA's aging Regional Rail radio system to improve portable coverage, close safety-critical gaps, and meet current AREMA and AAR standards.	All PA Counties	1	$ 51.90	T1: 100%
PAT047	Regional Railroad Signal Improvement Program	Modernize the signal system on the Regional Rail Network, including upgrades to improve operational reliability for the train control systems.	All PA Counties	1–2	$ 60.8	T1: 100%
PAT048	NHSL Signal System Renewal	Modernize the Norristown High Speed Line (NHSL) signal system to improve reliability, address state-of-good-repair needs, and incorporate advanced train control technology.	Delaware, Montgomery	1–2	$ 108.30	T1: 100%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAT049	Video Systems Refreshment Program	Replace and install upgraded mobile video systems across SEPTA's fleet, including inward-facing cameras on Regional Rail cars and crash-hardened recorders on buses.	All PA Counties	1–2	$ 68.00	T1: 100%
PAT050	Critical Bridge Program	Rehabilitate or replace aging bridges across the system to maintain a state-of-good-repair, including structures on the Fox Chase, Lansdale/Doylestown, Media/Elwyn, Manayunk/Norristown, and West Trenton Lines.	All PA Counties	3	$ 166.10	T1: 100%
PAT051	NHSL Vehicle Replacement and Infrastructure	Replace vehicles and necessary infrastructure for the Norristown High Speed Line (NHSL)	Delaware, Montgomery	2–3	$ 225.70	T1: 100%
PAT052	NHSL Station Accessibility Projects	Reconstruction of a key intersection and addition of a new connector road with a signal to improve traffic flow and reduce congestion near I-295 and NJ Turnpike Exit 6A.	Delaware, Montgomery	1–2	$ 150.00	T1: 100%
PAT058	Norristown Station Freight Bypass	Separate freight and passenger service through Norristown by constructing a dedicated freight track and rebuilding the Norristown Transportation Center with high platforms and full accessibility to enable reliable S Line operations.	Montgomery	2–3	$ 170.50	T2: 100%
PAT068	Coatesville Turnback: Interlocking and Pocket Track	Construction of a turnback pocket track in Atglen to allow SEPTA trains to reverse off the main line west of Thorndale, improving operational flexibility on the Keystone Line.	Chester	3	$ 86.80	T2: 100%

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
PAT071	Paoli / Thorndale Line Station Upgrades (Phase 1 to Villanova)	Upgrade of track, signals, overhead wire, and stations along the Amtrak-owned Paoli/Thorndale Line to improve reliability and accessibility, including construction of high platforms and full ADA access at 17 stations.	Delaware, Montgomery, Philadelphia	1	$ 141.00	T1: 100%
PAT085	Broad Street Line (BSL) Vehicle Replacement and Infrastructure	Replace aging Broad Street Line (BSL) railcars with modern trainsets and complete related signal and infrastructure upgrades to improve operational efficiency.	Philadelphia	2	$ 173.60	T1: 100%
PAT086	Metro Station Enhancements	ADA compliance for BSL and MFL stations, including 11th Street, 34th Street, Bridgeport, Chinatown, Ellsworth-Federal, Erie, Fairmount, Hunting Park, Logan, Lombard-South, Snyder, Spring Garden, and Wyoming.	Philadelphia, Montgomery	1–3	$ 753.80	T1: 100%
PAT087	Bus Purchase Program	Evaluation of Fuel Cell Electric Buses (FCEBs) and the necessary fueling infrastructure to support them as part of SEPTA's transition to Zero-Emission Buses (ZEBs) by the year 2040.	All PA Counties	1–3	$2,200.40	T1: 100%

Source: DVRPC, 2025.
**See Table F-1 for Plan Period years.*

Table F-26: New Jersey Roadway MRPs—Funded

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $YOE)	Project Categories
NJR002	I-295 at NJ 38 Missing Moves	Add Missing Movements to the I-295 Interchange at NJ 38.	Burlington	1–2	$ 235.00	R4: 75%, R5: 25%
NJR003	I-295 Direct Connect through I-76 / NJ 42	Direct Connect I-295 through Interchange at I-76/NJ 42.	Camden	1–2	$ 371.20	R1: 31%, R4: 22%, R5: 47%
NJR004	U.S. 1 Alexander Road to Mapleton Road Widening	Widen from 6 to 8 lanes from Dinky Bridge to Scudders Mill Road; intersection improvements at Washington Road and Harrison Street.	Mercer	1	$ 15.40	R4: 35%, R5: 65%
NJR005	The Circuit (NJ)	Complete 179 miles of the Circuit regional trail network in New Jersey.	All NJ Counties	1–3	$ 508.20	R6: 100%
NJR006	U.S. 130 Realignment	Realign sections of U.S. 130 corridor from Campus Drive and Rising Sun Road, and redesign multiple intersections with new signals.	Burlington	1	$1,031.40	R1: 50%, R4: 50%
NJR007	NJ 73 Intersection Improvements	Intersection and roadway improvements at Evesham Road (CR 544) and along NJ 73 from Dutch Road to Route 70.	Burlington	1–2	$ 38.70	R4: 100%
NJR008	NJ 73 and Church Road Interchanges	Grade-separated interchanges at Church Road (CR 616) and Fellowship Road (CR 673).	Burlington	1–2	$ 140.00	R4: 50%, R5: 50%
NJR009	322 Bypass near Rowan University	Bypass of U.S. 322/NJ 55 intersection; improvements at U.S. 322/Joseph Bowe Boulevard, and corridor upgrades between Lehigh and Yale.	Gloucester	2–3	$ 104.50	R4: 20%, R5: 75%, R6: 5%
NJR010	I- 76 / 676 Bridges and Pavement	Replace bridge decks and superstructures along I-76/676 over Newton Creek, Nicholson	Camden	1	$ 317.60	R1: 50%, R2: 50%

		Road, Conrail, Klemm Avenue, and related crossings.				
NJR011	NJ 73 and Ramp G Bridge over U.S. 130	Replace the structurally deficient and functionally obsolete bridge.	Camden	1–2	$ 61.40	R2: 100%
NJR012	NJ 42 Reconstruction	Replace the structurally deficient and functionally obsolete bridge.	Gloucester	1	$ 25.00	R1: 100%
NJR013	Lincoln Avenue / Chambers Street (CR 626) Bridge	Resurface, rehabilitate, and reconstruct from Kennedy Avenue to Atlantic City Expressway, including ADA compliance.	Mercer	1	$ 71.00	R2: 100%
NJR014	NJ 64 Bridge over Amtrak	Replace the Lincoln Avenue Bridge over Amtrak Northeast Corridor (NEC) rail line, an inactive rail yard, and Assunpink Creek.	Mercer	1	$ 48.10	R2: 100%
NJR019	I-295 Capacity and Operations	Dynamic speed limit, dynamic lane assignment, and queue warning between New Jersey Turnpike and I-295.	Mercer	1–2	$ 68.00	R4: 80%, R5: 20%
NJR020	NJ 30 Resurfacing	Capacity and operational improvements from Sloan Avenue (CR 649) to Princeton Pike (CR 583).	Camden	1	$ 57.60	R1: 100%
NJR021	Trenton Amtrak Bridge Replacements	Resurface the pavement from Cooper Street to Grove Street.	Mercer	1	$ 13.00	R2: 100%
NJR022	U.S. 130 Bridge Replacement	Replace East State Street and Monmouth Street Bridges with single-span, ABC (Accelerated Bridge Construction) systems. Remove Chestnut Avenue Bridge.	Burlington	1	$ 66.30	R2: 100%
NJR025	Clarksville Road (CR 638) Bridge over Amtrak	Replace bridge on Clarksville Road (CR 638) over Amtrak.	Mercer	1–2	$ 52.60	R2: 100%

Source: DVRPC, 2025.
**See Table F-1 for Plan Period years.*

Table F-27: New Jersey Transit MRPs—Funded

MRP ID	Facility	Project Scope	Location	Timing	Cost (Millions of $YOE)	Project Categories
NJT002	Atlantic City Line Stations	Station enhancements at Atco, Cherry Hill, and Lindenwold stations	Camden	3	$ 154.60	T1: 100%
NJT003	PATCO Heavy Rail Vehicles	Procure (120) heavy rail vehicles.	Camden	3	$ 236.70	T1: 100%
NJT004	River Line Light Rail Vehicles	Procure (20) Light-Rail Vehicles.	Burlington, Camden, Mercer	3	$ 309.30	T1: 100%
NJT005	Northeast Corridor Rail Vehicles	Replace (42) commuter rail vehicles.	Mercer	2–3	$ 956.90	T1: 100%
NJT007	PATCO Interlocking and Track Rehabilitation (Phase II)	Rehabilitate Locust, Hall, Way, East/West Ferry, and East Crest Interlockings.	Camden	1	$ 136.20	T1: 100%
NJT008	PATCO Station Platform Rehabilitation	Plan, design, and reconstruct PATCO Station Platforms, including concrete and steel repairs and replacement of platform structures.	Camden	1	$ 32.50	T1: 100%

Source: DVRPC, 2025.
**See Table F-1 for Plan Period years.*

Several projects have been completed since the September 2021 adoption of the previous *Connection 2050* Plan, or are expected to be completed by the beginning of FFY 2026 (see table F-28).

Table F-28: MRPs Completed Since Adoption of the *Connections 2050* Plan (2021)

MRP ID	Facility	Project Scope	Location	Cost
Completed Pennsylvania Roadway				
229	PA 309 Sellersville Bypass Resurfacing	Resurface from Church Road to Tollgate Road.	Bucks	$75.90
255	Route 332 bypass	Increase the capacity of the Route 332 bypass between Stony Hill Road and the I-295 Interchange in Lower Makefield Township, Bucks County.	Bucks	$3.70
36	I-295 Scudder Falls Bridge Replacement	Complete replacement of the existing Scudder Falls Bridge over the Delaware River from the Route 332 interchange in Bucks County, PA, to the Bear Tavern Road interchange in Mercer County, NJ. Includes six lanes of through traffic (three in each direction), two auxiliary northbound lanes for entry/exit travel, and one auxiliary southbound lane for entry/exit travel, and a separate, parallel bicycle and pedestrian facility. 4.4 miles total.	Bucks, Mercer	$570.00
401	Delaware River Joint Toll Bridge Commission All Electronic Tolling - Multiple Bridges	Design and construction of all-electronic tolling at Trenton-Morrisville (U.S. 1), Milford-Montague, I-80 Delaware Water Gap, Portland-Columbia, Easton-Phillipsburg (Route 22), and I-78 toll bridges.	Bucks, Mercer	$43.00
32	PA Turnpike Northeast Extension Reconstruction and Widening, MP A43–A44	Reconstruct and widen the PA Turnpike's Northeastern Extension (I-476) from north of Clump Road to just south of the Quakertown Interchange.	Bucks, Montgomery	$45.00
34	County Line Road	Reconstruct and widen between U.S. 202 and Stump Road, and between Kulp Road and PA 611.	Bucks, Montgomery	$24.20
168	AC Expressway Electronic Tolling and ITS Upgrades	Upgrade of toll collection through electronic tolling. Atlantic City Expressway MP 0.0–44, ACE Connector. (SJTA)	Camden, Gloucester	$55.00

226	Ship Road and U.S. 30 BUS Couplet	Convert present location of Ship Road to northbound-only; construct a southbound leg, as well as a 10-foot-wide multimodal trail.	Chester	$1.10
402	PA Turnpike Reconstruction and Widening, MP 324–326	Reconstruct and widen between the Valley Forge Road overpass and the Valley Forge Interchange.	Chester, Montgomery	$125.00
236	District 6 Traffic Management Center	New Regional Traffic Management Center at PennDOT District 6 Headquarters.	Montgomery	$53.60
240	Spring House	Widen for an additional through-lane from Norristown Road to Sumneytown Pike.	Montgomery	$1.20
244	Horsham Road Widening	Widen to two through-lanes in each direction from Limekiln Pike to Davis Grove. Widen Limekiln Pike to two through-lanes at the intersection with Horsham Road.	Montgomery	$5.20
102	U.S. 1 / Roosevelt Boulevard over Wayne Junction	Rehabilitate the bridge carrying Roosevelt Boulevard / U.S. 1 over Roberts Road, Wayne Avenue Station, Clarissa Street, Germantown Avenue, and North Gratz Street.	Philadelphia	$119.10
Completed Pennsylvania Transit				
BE	Media / Sharon Hill Lines	Route 101 and 102 Positive Train Control and Right-of-Way (ROW) Improvements.	Delaware	$94.70
P	Media-Elwyn Line Extension	Extend from Elwyn to Wawa, PA.	Delaware	$239.10
AI	Fern Rock Station Modifications	Safety improvements and station modifications.	Philadelphia	$25.40
BY	Buses and Trolleys	Computer-Aided Radio Dispatch signal and communication system upgrades and replacements.	Philadelphia	$114.60
DB	Southwest Connection Regional Rail from 30th Street Station to Phil Interlocking	Signals, catenary, and ROW improvements from 30th Street Station to Phil Interlocking.	Philadelphia	$88.00

Completed New Jersey Roadway				
208	U.S. 206 and CR 537 / Monmouth Road	Redesign intersection to add left and through-lanes for both approaches of CR 537 to U.S. 206.	Burlington	$17.90
312	Rising Sun Road to Dunns Mill Road Connector	Construct a two-lane bypass road from Rising Sun Road to Dunns Mill Road, near the Route 130/Dunns Mill Road intersection.	Burlington	$3.30
93	NJ 70 Corridor / Intersection Improvements	Operational and Safety Improvements from NJ 38 to NJ 73; Intersection Improvements at Kingston Road and Covered Bridge Road.	Burlington, Camden	$745.40
75	I-295 at NJ 42 Missing Moves, Bellmawr	Add Missing Movements to Interchange at I-76/NJ 42 in Bellmawr.	Camden, Gloucester	$180.00
246	U.S. 130	Reconstruct Route 130 bridge over Big Timber Creek.	Camden, Gloucester	$47.30
263	U.S. 47	Reconstruct Route 47 bridge over Big Timber Creek.	Camden, Gloucester	$41.00
305	Route 47, Grove Street to Route 130, Pavement	Resurface, rehabilitate, and reconstruct within the project limits. ADA compliance and correction of a culvert that causes a flooding condition.	Gloucester	$89.00
310	CR 676 / Mantua Boulevard / Rowan Fossil Park Access Road Extension	New roadway as an extension of CR 676 in Mantua Township; through-lane to connect CR 553 to Rowan Fossil Park Access Road.	Gloucester	$14.90
83	West Trenton Bypass	New service road connector from Bear Tavern Road to Decou Avenue/Parkway Avenue.	Mercer	$11.90
138	Vaughn Drive Connector	Extend to CR 571 (Princeton Hightstown Road).	Mercer	$34.10
311	Route 133 / Cranbury Station Road Interchange	Construct new interchange to facilitate access to distribution centers.	Mercer	$7.40

Completed New Jersey Transit				
CF	Franklin Square Station	Scoping, preliminary design work, ADA compliance, structural, electrical, plumbing, communication, signal, and security elements needed to enhance the currently closed station to full operation.	Philadelphia	N/A
N	NJ TRANSIT Buses	Procure (560) 45' Buses.	Burlington, Camden, Gloucester, Mercer	$1,316.80

Source: DVRPC, 2025.

Unfunded MRPs

Due to the limited funding available for achieving the region's vision, some MRPs are categorized as Unfunded, though they remain aspirations to complete as more funding becomes available. Anticipated timing for these projects is listed, but cost remains in current-year dollars until the project is programmed. Table F-29 lists Pennsylvania MRPs that are unfunded, including both roadway and transit. Table F-30 lists New Jersey MRPs that are unfunded.

Table F-29: Pennsylvania MRPS—Unfunded

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
Unfunded Pennsylvania Roadway					
PAR005	U.S. 202 (Section 100) Active Traffic Management	Implementation of appropriate operational strategies, active traffic management, and/or select widening for congestion mitigation between West Chester and the Delaware state line.	Chester	$186.10	R1: 70%, R5: 10%, R6: 20%
PAR012	U.S. 422 Mainline Widening	Reconstruct and widen from 4 to 6 Lanes from U.S. 202 to PA 363.	Montgomery	$258.00	R1: 20%, R4: 30%, R5: 50%
PAR014	I-476 and I-76 Ramp Modifications	Ramp modifications.	Montgomery	$14.50	R1: 45%, R2: 5%, R4: 50%
PAR015	I-76 at PA 23 Matsonford Road	Realign I-76 West offramps into Conshohocken, closing Matsonford Road ramp, and creating new link at Woodmont Road.	Montgomery	$14.50	R4: 50%, R5: 50%
PAR017	PA 113 Widening	Widen from U.S. 30 to Peck Road to remove bottleneck.	Chester	$20.70	R5: 100%
PAR022	Guthriesville Loop Road	Extend new road from Reeceville Road to Horseshoe Pike.	Chester	$7.70	R5: 100%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
PAR023	US 202 Dannehower Bridge	Construct a new half-diamond interchange at Lafayette Street and U.S. 202/Dannehower Bridge in Norristown.	Montgomery	$235.40	R2: 50%, R4: 25%, R5: 25%
PAR026	U.S. 422 Active Traffic Management	Part-time shoulder use and other operational strategies from U.S. 202 to PA 29.	Chester, Montgomery	$344.00	R4: 50%, R5: 50%
PAR030	Perkiomen Crossing	Provide additional bridge over Perkiomen Creek between Ridge Pike and Germantown Pike to connect with PA 29. Construct new connections and relocate intersections on both ends of the bridge.	Montgomery	$77.30	R2: 75%, R4: 20%, R5: 5%
PAR037	U.S. 202 Operational Improvements	Improve operational efficiency of U.S. 202 Section 200 through West Goshen Township.	Chester	$201.20	R1: 80%, R5: 20%
PAR039	Germantown Pike Reconstruction and Widening	Widen and make intersection improvements along the corridor, including updated signals and enhanced sidewalk and trail connections at Potshop Road, Sunset Avenue, Sandra Lane, and Whitehall Road.	Montgomery	$21.00	R1: 30%, R2: 10%, R4: 10%, R5: 45%, R6: 5%
PAR042	Second Conshohocken Bridge	Bridge over Schuylkill River.	Montgomery	$67.00	R5: 100%
PAR043	PA 100 at PA 73	Modify interchange into a single-point, urban-style interchange	Montgomery	$93.90	R4: 100%
PAR045	PA 611 / Easton Road Widening	Provide an additional travel lane in each direction north of Blair Mill Road to County Line; modify the existing cross-section from 5 to 7 lanes.	Montgomery	$56.10	R1: 20%, R2: 20%, R4: 30%, R5: 30%
PAR046	Roosevelt Boulevard Reconstruction	Operational improvements from Broad Street to Bensalem Township.	Philadelphia	$5,000.00	R3: 25%, R4: 75%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
PAR050	U.S. 422 Corridor ITS	Implement ITS improvements along U.S. 422, Ridge Pike, PA 23, and PA 724.	Chester, Montgomery	$126.20	R4: 100%
PAR055	I-76 Active Traffic Management	Part-time shoulder use and other operational strategies from U.S. 1 to I-676.	Philadelphia	$63.70	R4: 50%, R5: 50%
PAR057	Township Line Road Widening	Widen between U.S. 422 and Cemetery Road, install shoulders and turn lanes (~4.3 miles).	Montgomery	$49.60	R2: 30%, R4: 30%, R5: 40%
PAR058	Stanbridge Street Extension	Extend Stanbridge Street a 1/2 mile from State Hospital to Johnson Highway.	Montgomery	$24.80	R2: 20%, R5: 80%
PAR059	Oak Drive Extension	Construct a new roadway from 113/Oak Drive to 63/Credit Union driveway (~0.7 miles).	Montgomery	$14.90	R5: 100%
PAR061	PA 100 at King Street, High Street	Eliminate NB cloverleaf to High Street; College Drive extension to King Street.	Montgomery	$18.60	R1: 15%, R2: 30%, R4: 30%, R5: 25%
PAR062	Market Street (Douglass Twp)	Construct a new connector road between Grosser Road and PA 73.	Montgomery	$20.10	R1: 80%, R2: 10%, R5: 10%
PAR067	PA 113 Relocation (Lederach)	Relocate the roadway ~0.9 miles around Lederach Village (Whitaker Way to Landis Road).	Montgomery	$12.40	R1: 40%, R2: 20%, R5: 40%
PAR068	PHL Cargo City Enhanced Connection to I-95	New slip ramp at Exit Ramp 10 and improved internal circulation, incorporating the East Coast Greenway.	Delaware	$111.50	R4: 50%, R5: 50%
PAR069	Trooper Road Widening	Widen to five lanes from U.S. 422 to Egypt Road (~1.5 miles).	Montgomery	$43.40	R1: 30%, R4: 30%, R5: 40%
PAR077	Philadelphia High-Quality Bike Network: Need	Construct a network of high-quality protected bike lanes, off-street facilities, and neighborhood bikeways	Philadelphia	$767.40	R6: 100%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
PAR081	Nicetown Cap	Cap Over Roosevelt Boulevard highway cut from 16th Street to Old York Road.	Philadelphia	$206.00	R6: 100%
PAR082	Avenue of the Arts Streetscape Improvements	Enhance corridor connectivity, safety, and wayfinding through intersection improvements and expanded pedestrian and bicycle infrastructure.	Philadelphia	$106.00	R1: 50%, R3: 25%, R4: 25%
Unfunded Pennsylvania Transit					
PAT003	Exton Station Parking	Construct a multilevel parking garage.	Chester	$40.40	T3: 100%
PAT004	Chestnut Hill East Line Bridges	Rehabilitate the Chestnut Hill East Line from Wayne Junction to Chestnut Hill East, including track, bridge, signal, and power upgrades, along with station ADA improvements.	Philadelphia	$251.00	T1: 100%
PAT005	Chestnut Hill West Line Bridges	Rehabilitate the Chestnut Hill West Line from Lehigh Interlocking to Chestnut Hill West, including track, bridge, signal, and power upgrades, along with station ADA improvements.	Philadelphia	$263.00	T1: 75%, T2: 25%
PAT010	Highland Avenue Station Relocation	Station will soon be closing; possible relocation to Engle/Townsend Street.	Delaware	$36.20	T1: 100%
PAT011	West Chester Rail Service	Restore service by extending Media/Elwyn/Wawa Line to West Chester Borough.	Chester, Delaware	$509.50	T3: 1%
PAT012	30th Street-Mantua-Philadelphia Zoo Connector	New fixed-guideway shuttle service connecting 30th Street Station, the new 30th Street District development, Mantua neighborhood, and Philadelphia Zoo.	Philadelphia	$266.00	T3: 100%
PAT018	Frazer Station	New SEPTA station on the Keystone Corridor between Malvern and Exton.	Chester	$153.50	T3: 100%
PAT021	West Market Station	New Station on the Market-Frankford Line.	Philadelphia	$462.60	T3: 100%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
PAT022	Pennridge Line Extension	Restore service from Lansdale to Perkasie.	Bucks, Montgomery,	$300.00	T3: 100%
PAT035	Lower Schuylkill Transit Connections	Transit connections to Bellwether District. Alignment undetermined at this time.	Philadelphia	$500.00	T3: 100%
PAT037	King of Prussia Rail	Rail Line Extension from Hughes Park to King of Prussia Mall.	Montgomery	$2,188.50	T3: 100%
PAT038	Broad Street Line (BSL) Extension	Transit Extension to the Navy Yard.	Philadelphia	$1,180.70	T3: 100%
PAT039	Regional Rail Station Parking	Parking Improvements at various Regional Rail Stations.	All PA Counties	$244.90	T3: 100%
PAT053	Trunk Line Infrastructure, Fern Rock Layover, and Stations (Melrose and Elkins Park)	Rehabilitate the Reading Main Line from 16th Street Junction to Carmel Interlocking, including track, bridge, signal, and power upgrades, station ADA improvements, and operational enhancements at Fern Rock.	All PA Counties	$306.00	T1: 100%
PAT054	North Philadelphia Station	Reconstruct and consolidate North Philadelphia and North Broad stations into a new regional intermodal hub to improve connectivity across SEPTA, Amtrak, and NJ TRANSIT services.	All PA Counties	$1,000.00	T1: 100%
PAT055	Airport Freight Separation and Eastwick Intermodal Station Phase 1	Construct a separate freight track through Eastwick Station to eliminate conflicts with SEPTA's Airport Line and enable more reliable service and high-level platform construction.	All PA Counties	$200.00	T2: 100%
PAT056	Airport Double Track and Airport Tail Track	Double-track a key two-mile segment of the Airport Line and construct a tail track near the terminals to improve capacity, reliability, and service frequency to Philadelphia International Airport.	All PA Counties	$50.00	T2: 100%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
PAT057	PHIL Flyover	Construct a SEPTA flyover near 54th Street in West Philadelphia to eliminate conflicts with Amtrak and increase capacity and reliability on the Wilmington/Newark and Airport Lines.	All PA Counties	$300.00	T2: 100%
PAT059	Norristown Line Stations and ROW Rehabilitation	Upgrade all Norristown Line stations with high platforms and accessible routes to improve speed and reliability; three are already in the CIP. Rehabilitate the full 14.6-mile line—track, bridges, signals, and power—for long-term performance.	Delaware, Montgomery	$376.00	T1: 100%
PAT060	North Philadelphia Flyover	Construct a flyover south of 16th Street Junction to fully separate S Line trains from SEPTA's Regional Rail trunk, reducing conflicts and improving reliability.	Philadelphia	$320.00	T2: 100%
PAT061	Media/Wawa Line Station and Right-of Way Rehabilitation	Rehabilitate the full 15.7-mile Media/Wawa Line with new track, signals, power, bridges, and drainage; construct high-level platforms at 12 stations and a grade-separated junction at Arsenal to improve reliability, ADA , and service frequency.	Delaware	$484.00	T1: 100%
PAT062	Wawa Double Track	Extend double track from Elwyn to Lenni Yard to support frequent service on the Media/Wawa Line, requiring grading, bridge modifications, and crossover installation within available ROW.	Delaware	$75.00	T2: 100%
PAT063	Major Grade Crossings Along the Media Wawa Line	Grade-separate rail crossings and reconfigure nearby intersections at Morton and Secane Stations to reduce traffic conflicts and improve safety on the Media/Wawa Line.	Delaware	$100.00	T1: 100%
PAT064	Lansdale Doylestown Line Station and ROW Rehabilitation	Upgrade all stations on the Lansdale/Doylestown Line with full-length high platforms and accessible routes, and rehabilitate track, power, and signal	Montgomery	$599.00	T1: 100%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
		infrastructure to improve reliability and reduce delays.			
PAT065	Lansdale Station	Reconfigure tracks and platforms at Lansdale Station to improve speeds, provide accessible platforms, and reduce freight conflicts, supporting more efficient and reliable service within the existing ROW.	Bucks, Montgomery	$60.00	T1: 100%
PAT066	Doylestown Line Double	Construct a flyover south of 16th Street Junction to fully separate S Line trains from SEPTA Regional trunk traffic—eliminating conflicts, simplifying operations, and supporting reliable service. Alternative configurations will also be studied.	Bucks	$145.00	T2: 100%
PAT067	Glenside/Lansdale Yard	Develop a new yard and maintenance facility with crew reporting capabilities between Glenside and Lansdale to support expanded service. Location and scope to be determined through further analysis.	Montgomery	$150.00	T1: 100%
PAT069	Villanova Turnback and Church Interlocking	Support implementation of the Amtrak Keystone Master Plan in coordination with PennDOT and Amtrak. Includes new interlocking and pocket track west of Villanova to enable 15-minute service and ADA improvements, and new crossovers east of Ardmore to reduce conflicts between Amtrak and SEPTA trains.	Montgomery	$80.00	T2: 100%
PAT070	Overbrook Yard Flyover	Construct or rehabilitate the Stiles flyover to reduce train conflicts between SEPTA and Amtrak and improve access to Overbrook Yard. Includes a new Cynwyd Line connection to the shop. Requires coordination with Amtrak and PennDOT, and construction over active tracks.	Philadelphia	$300.00	T2: 100%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
PAT072	Trenton Line Stations and ROW Rehabilitation	Upgrade Trenton Line stations with full-length high platforms and accessible routes for faster, more reliable service. Rehabilitate track, bridges, and signals in coordination with Amtrak and the NEC Commission. Requires overnight work or temporary closures and joint planning on Amtrak ROW.	Bucks, Mercer	$126.00	T1: 100%
PAT073	Grundy Interlocking Upgrades	Upgrade Grundy Interlocking in coordination with Amtrak to improve operations and convert an existing unused siding into an electrified turnback pocket for SEPTA trains. Part of NEC Connect 2037; requires further alternatives analysis and inter-agency coordination.	All PA Counties	$50.00	T2: 100%
PAT074	Mantua Quadruple Track	Add a new southbound track connecting to Mantua Interlocking, eliminating a key bottleneck where SEPTA and Amtrak services currently merge, to improve reliability and capacity through this segment.	Philadelphia	$50.00	T2: 100%
PAT075	Trenton Yard	New yard and maintenance facility in Trenton—potentially in partnership with Amtrak or NJ TRANSIT—would reduce long deadhead trips, improve operations on the Trenton Line, and support a new fleet; site location to be determined through further study.	Mercer	$50.00	T1: 100%
PAT076	Warminster Line Stations and ROW Rehabilitation	Fully rehabilitate the Warminster Line—upgrading track, power, signals, drainage, bridges, and crossings—and build high platforms with accessible routes at all stations to improve reliability, speed, and accessibility.	All PA Counties	$312.00	T1: 100%
PAT077	Warminster Line Double Track	Extend double track from Ardsley through Roslyn and expand the siding through Willow Grove, rebuild	Montgomery	$50.00	T2: 100%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
		affected stations with high platforms, and add a second platform at Warminster Station to eliminate operational constraints.			
PAT078	West Trenton Line Stations and ROW Rehabilitation	Fully rebuild the West Trenton Line—modernizing track, power, signals, bridges, drainage, and crossings—and construct high platforms with accessible routes at all stations to improve reliability, speed, and accessibility.	Bucks, Mercer, Montgomery, Philadelphia	$664.00	T2: 100%
PAT079	Wilmington/Newark Line Stations and ROW Rehabilitation	Rehabilitate track, signals, bridges, and overhead wire on the Wilmington/Newark Line and rebuild 14 stations with high-level platforms and accessible routes to improve reliability, passenger experience, and service frequency.	All PA Counties	$252.00	T1: 100%
PAT080	Wilmington Third Track	Add a third track through the single-track segments south of Claymont and Wilmington to separate SEPTA service from Amtrak, enabling more frequent trains and reducing conflicts, with further study and coordination needed.	Delaware, Philadelphia	$720.00	T2: 100%
PAT081	Hook Interlocking Improvements	Build a turnback pocket off the Northeast Corridor near Marcus Hook station, with upgraded signals at Hook Interlocking to improve capacity by allowing trains to lay over off the mainline, while studying other alternatives.	Delaware	$46.00	T2: 100%
PAT082	Wilmington/Newark Yard	Build a new yard and shop in Delaware with maintenance and crew facilities to reduce deadhead moves and support new fleet operations, with the location to be determined through further study and requiring acquisition of a suitable parcel.	Delaware, Philadelphia	$50.00	T2: 100%
PAT083	Cynwyd Line Stations and ROW Rehabilitation	Rehabilitate the Cynwyd Line's aging track, bridges, power, and signals, and add a second track plus two	Montgomery, Philadelphia	$79.00	T1: 100%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
		high-level platforms at Cynwyd station to improve reliability, accessibility, and capacity, with other alternatives to be studied.			
PAT084	Roberts Yard and Powelton Yard Reconstruction	Rebuild Roberts and Powelton Yards with modern maintenance and crew facilities to accommodate future fleet needs.	Philadelphia	$200.00	T1: 100%
PAT088	Delaware Avenue Line	New transit service within Philadelphia.	Philadelphia	$1,139.80	T3: 100%
PAT089	Atglen Line Extension	Rail Line Extension from Thorndale to Atglen.	Chester	$21.20	T3: 100%
PAT090	Roosevelt Boulevard Line	New surface transit line along Roosevelt Boulevard.	Bucks, Philadelphia	$5,000.00	T3: 100%

Source: DVRPC, 2025.

Table F-30: New Jersey MRPs—Unfunded

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
Unfunded New Jersey Roadway					
NJR001	NJ 29 from U.S. 1 to Sullivan Way	Convert NJ 29 to an Urban Boulevard from U.S. 1 to Sullivan Way.	Mercer	$ 545.30	R3: 50%, R6: 50%
NJR015	Trenton City Traffic Signal Upgrades	Comprehensive upgrades and interconnect 127 urban traffic signals, remove not-warranted.	Mercer	$ 98.00	R4: 100%
NJR016	U.S. 1 and NJ 129 Direct Connection	Add missing move that currently directs heavy trucks through residential neighborhoods.	Mercer	$ 178.90	R3: 50%, R4: 50%
NJR017	I-195 Active Traffic Management	Dynamic speed limit, dynamic lane assignment, and queue warning between New Jersey Turnpike and I-295.	Mercer	$ 31.30	R4: 100%
NJR018	I-295 and Route 168 Interchange	Dynamic speed limit, dynamic lane assignment, and queue warning between New Jersey Turnpike and I-295.	Camden	$ 235.00	R4: 75%, R5: 25%
NJR023	Route 130 Delaware Avenue/Florence-Columbus Road (CR-655)	Reconstruct the intersection, add a new connector roadway, and install a traffic signal to improve traffic flow and reduce congestion at a key truck route near Interstate 295 and NJ Turnpike Exit 6A, addressing growing traffic demands.	Burlington	$ 47.00	R2: 100%
NJR024	Route 322 Widening	Widen U.S. route 322 to four lanes from the Woolwich border in Harrison township to county route 609 Barnsboro road.	Gloucester	$ 103.00	R2: 100%
Unfunded New Jersey Transit					
NJT001	Atlantic City Line Investments for Added Frequency	Infrastructure improvements for increased service frequency.	Camden	$ 214.80	T1: 50%, T2: 50%

MRP ID	Facility	Project Scope	Location	Cost (Millions of $2025)	Project Categories
NJT006	PATCO extension to University City	Transit Extension to University City.	Philadelphia,	$ 3,409.50	T3: 100%
NJT009	Hydrogen Fuel Vehicle Procurement	Procure ~400 hydrogen fuel vehicles to serve lower New Jersey.	All NJ Counties	$ 40.00	T1: 100%
NJT010	U.S. 1 BRT	Express bus network serving the U.S. 1 corridor and providing access from Somerset County on U.S. 206, Monmouth County on CR 571, Burlington Count on I-295, and Bucks County on I-95.	Mercer	$ 366.80	T3: 100%
NJT011	Glassboro-Camden Line	Construct New Transit Line from Camden to Gloucester County with 14 stations from Walter Rand Transportation Center to Glassboro.	Camden, Gloucester	$ 1,800.00	T3: 100%
NJT012	Extend River LINE to NJ State House	On-street service from Trenton Transit Center to West State Street.	Mercer	$ 38.40	T3: 100%
NJT013	South Jersey BRT	New BRT from Avondale Park and Ride and Delsea Drive to Center City, Philadelphia.	Camden	$ 121.80	T3: 100%
NJT014	West Trenton Line and Station Restoration	Re-establish passenger service on the West Trenton Line (CSX) to Newark and Secaucus (From West Trenton Station to Bridgewater, NJ). Service three stations in the region, including Hopewell Borough, Hopewell Township, and West Trenton Ewing Township).	Mercer	$ 796.00	T3: 100%

Source: DVRPC, 2025.

Illustrative MRPs Table F-31 contains illustrative projects as a sample of major regional reconstruction projects that need to be advanced over the life of *Update: Connections 2050*. Illustrative projects are not considered unfunded; rather, they will advance into the Plan and TIP depending on the timing of their repair needs and project readiness. Illustrative projects can be completed by drawing from the balance of unallocated system preservation funds, but not all of them will be able to advance due to limited revenues. These projects use regional funds but are not selected or programmed by DVRPC. Illustrative projects listed here are derived from DVRPC analysis of PennDOT and NJDOT asset management modeling.

Table F-31: Illustrative Pavement and Bridge MRPs

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $2025)
Illustrative Pennsylvania Pavement					
PAI001	I-95 Reconstruction	Reconstruct I-95 from Tulip Street to Broadway Avenue.	Bucks	4	$ 39.71
PAI002	U.S. 1 Reconstruction	Reconstruct from Rolling Hill Road to Springfield and from Cheyney Road to PA-352.	Delaware	2–3	$ 113.70
PAI003	PA-152 Reconstruction	Reconstruct PA-152 from Easton Road to Susquehanna Road.	Montgomery	3	$ 44.55
PAI005	Ridge Avenue Reconstruction	Reconstruct Allegheny Avenue to Northwestern Avenue.	Philadelphia	1–4	$ 69.16
PAI006	Academy Road Reconstruction	Reconstruct from Torresdale Avenue to Knights Road.	Philadelphia	2–3	$ 56.73
Illustrative Pennsylvania Bridges					
PAI007	I-95 Ramps E and F to Barry Bridge	Superstructure Repair/Rehabilitation, Barry Bridge Ramps.	Philadelphia	1	$ 38.10
PAI009	SR 0100 over Schuylkill River and River Road	Superstructure Repair/Rehabilitation, 0.5 miles north of U.S. 422.	Montgomery	3	$ 53.80

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $2025)
PAI010	I-76 (Schuylkill Expressway) over South Gulph Road, SEPTA, Creek and Lane	Bridge Replacement at Gulph Mills.	Montgomery	1	$ 44.30
PAI011	I-76 (Schuylkill Expressway) over Schuylkill River Bank	Deck Replacement from Arch Street to University Avenue.	Philadelphia	3	$ 185.10
PAI012	Broad Street over Conrail, B&O Railroad and Belt Line	Superstructure Repair/Rehabilitation, Broad Street over Conrail and B&O.	Philadelphia	4	$ 44.20
PAI013	I-95 over Tacony Street and Bridge Street	Bridge Replacement near Wakelin Street.	Philadelphia	1	$ 45.00
PAI014	Ramp H NB onto Juniata Street, Almond Street and Thomson Street	Superstructure Repair/Rehabilitation at Betsy Ross Bridge.	Philadelphia	3	$ 49.70
PAI015	Roosevelt Boulevard Extension over Roberts Avenue, SEPTA and CSX	Superstructure Repair/Rehabilitation at Wayne Junction Viaduct.	Philadelphia	3	$ 171.10
PAI016	Strawberry Mansion Bridge over Schuylkill River, Kelly Drive, West River Drive and Standard Drive	Bridge Replacement, Strawberry Mansion Bridge.	Philadelphia	3	$ 75.00
PAI017	Roosevelt Boulevard NB and SB over Schuylkill River, Roads and Railroad	Superstructure Repair/Rehabilitations, one mile south of City Line Avenue.	Philadelphia	2	$ 121.70
Illustrative New Jersey Pavement					
NJI001	I-676 Reconstruction	Reconstruct from County Route 537 to U.S. 30.	Camden	3	$ 63.50
NJI002	I-76 Reconstruction	Reconstruct from I-676 to I-295.	Camden	3	$ 114.90
NJI003	I-676 Viaduct over Streets Rehabilitation	Reconstruct I-676 City Streets Ramp to Kaighns.	Camden	1–4	$ 99.20
New Jersey Bridges					

MRP ID	Facility	Project Scope	Location	Plan Period*	Cost (Millions of $2025)
NJI004	East State Street (CR 601) over Bordentown SEC	Reconstruct Bridge over Bordentown Secondary.	Camden	4	$ 54.40
NJI005	U.S. 322 over Main Street	Reconstruct Bridge over Main Street.	Gloucester	2	$ 42.80
NJI006	I-295 over Big River Creek	Reconstruct Bridges over Big River Creek.	Gloucester	2–4	$ 77.70
NJI007	NJ 133 over NJ Turnpike	Reconstruct Bridges over NJ Turnpike.	Mercer	2	$ 80.90
NJI008	NJ Route 38 over NJ Turnpike Tollway Reconstruction	Reconstruct Bridge over NJ Turnpike Tollway at NJ 38.	Burlington	4	$ 65.40
NJI009	NJ Route 38 over I-295	Reconstruct Bridge over I-95 at NJ 38.	Burlington	4	$ 60.60
NJI010	I-295 SB over NJ Route 45 and Conrail	Reconstruct Bridge at I-195 over NJ 45.	Burlington	1	$ 41.20

Source: DVRPC, 2025.
**See Table F-1 for Plan Period years. Timing for illustrative projects based on asset management systems and subject to change.*

Air Quality Conformity and System Expansion

When projects are selected for funding in the fiscally constrained Plan or TIP, some are deemed air quality significant. These are projects that could affect regional transportation air pollution and thereby impact air quality. Typical examples include:

- Capacity-expanding roadway projects (e.g., new highway lanes, interchanges, or major widenings)
- Major transit projects (e.g., new rail lines or system expansions that significantly change ridership patterns)
- Projects affecting travel demand (e.g., high-occupancy vehicle lanes, large park-and-ride facilities, or systemwide signal timing improvements)

Air quality significant projects must undergo an air quality conformity analysis. Conformity is a federally required process that ensures transportation investments are consistent with air quality goals in State Implementation Plans (SIPs) to meet National Ambient Air Quality Standards (NAAQS). MPOs must demonstrate conformity at least once every four years, or whenever they adopt or amend a Plan or TIP to include, modify, or remove a regionally significant, non-exempt project.

Under the federal Clean Air Act, geographic areas are designated based on their compliance with NAAQS. The nine-county DVRPC region falls within the following nonattainment areas (which do not meet NAAQS) and maintenance areas (which previously did not):

- Philadelphia-Wilmington-Atlantic City Ozone Nonattainment Area
- Philadelphia-Wilmington, PA-NJ-DE $PM_{2.5}$ Maintenance Area
- New York - Northern New Jersey - Long Island, NY-NJ-CT $PM_{2.5}$ Maintenance Area
- Delaware County $PM_{2.5}$ Maintenance Area

These areas are subject to the conformity process. This process ensures that long-range transportation plans support continued progress toward meeting federal air quality standards.

Air quality significant projects are included in the Transportation Conformity Determination, which assesses whether planned investments will help the region meet targets for six EPA-regulated pollutants: ozone, $PM_{2.5}$, CO, sulfur dioxide, nitrogen dioxide, and lead.

DVRPC conducts conformity analysis using a regional travel demand model to estimate air pollutants from non-exempt projects in the Plan and TIP. These air pollutants are then compared to allowable limits, or "budgets," established by state air quality agencies. The process involves coordination with an interagency consultation group—comprising state and federal environmental and transportation agencies—and includes a 30-day public comment period. DVRPC holds two public meetings on conformity findings, scheduled alongside the release of the FY2026 TIP for New Jersey and the Update to the *Connections 2050 Plan*.

DVRPC has successfully demonstrated conformity of the *Update: Connections 2050* Plan, meeting state implementation plans and Clean Air Act requirements. The transportation

conformity analysis meets all applicable conformity criteria, including, but not limited to:

- The Plan is fiscally constrained [40 CFR 93.108];
- this determination is based on the latest planning assumptions [40 CFR 93.110];
- This determination is based on the latest air pollutants estimation model available [40 CFR 93.111];
- DVRPC has made the determination according to the applicable consultation procedures [40 CFR 93.112];
- the Plan does not interfere with the timely implementation of transportation control measures (TCMs)1 [40 CFR 93.113]; and
- the Plan is consistent with the MVEBs in the applicable SIPs [40 CFR 93.118].

More details, including a list non-exempt MRPs are available at www.dvrpc.org/AirQuality/Conformity/.

Externally-Funded MRPs

In addition to those projects receiving federal and state transportation dollars, *Update: Connections 2050* includes a list of externally funded projects due to their impacts on the regional network and air quality conformity. These projects are generally funded through toll revenues, but some will be funded from other non-federal sources. They are largely developed outside the regional planning process, and roadway system expansion projects in this category are excluded from the Needs Assessment and the four percent cap on roadway system expansion investments.

Several externally funded projects are funded for the first time in the *Update: Connections 2050* Plan. The Philadelphia 30th Street District Plan (PAX023) is a collaborative effort led by Amtrak in partnership with Brandywine Realty Trust, Drexel University, PennDOT, and SEPTA, and will help Amtrak reach its goals of doubling ridership by 2040 and achieving net-zero by 2045. In New Jersey, the Walter Rand Transportation Center (NJX002)—first added through Amendment 2 to the *Connections 2050* Plan— is funded through the New Jersey State Debt Defeasance and Prevention Bill[44] and will transform the current facility in Camden into a modern, ADA-compliant, and customer-focused transit hub for the entire region. On the roadway side, the Washington Crossing Bridge Replacement (PAX007) will complete replacement of the bridge and reconstruction of the approach roadways in both Bucks and Mercer counties.

Table F-32 identifies MRPs that are externally funded by a sponsoring authority. Since these projects are not funded with regional dollars, they are listed in 2025 dollars rather than YOE. Table F-33 lists MRPs identified for future implementation by a sponsoring authority, but not yet funded. Note: the costs in Table F-32 are for the entire project, rather than just the cost for the project within the region; some of the all-electronic tolling projects extend beyond the region.

[44] An Act concerning the "New Jersey Debt Defeasance and Prevention Fund," P.L. 2023, c. 68 (S. 3980), approved June 30, 2023.

Table F-32: Externally Funded MRPs

MRP ID	Facility	Sponsor	Scope	Location	Plan Period*	Cost (Millions of $2025)
PAX001	Quakertown Interchange Reconfiguration	Pennsylvania Turnpike Commission (PTC)	Reconfiguration of the I-276 and PA 663 (A-43) interchange in Milford Township, including full-depth roadway and infrastructure reconstruction.	Bucks	1–2	$ 115.00
PAX002	I-95 at PA Turnpike (Stage 2 Reconstruction and Widening)	PTC	Connection of I-95, I-295, and I-276 (PA Turnpike) and complete remaining planned sections of Turnpike widening and reconstruction.	Bucks, Burlington	1–2	$ 550.00
PAX003	I-95 at PA Turnpike (Stage 3 Bridge Replacement)	PTC / New Jersey Turnpike Authority (NJTA)	Replacement of Delaware River Bridge, including an assessment of the existing bridge, widening from 4 to 6 lanes, and reconstruction of approach roadways.	Bucks, Burlington	1–4	$1,477.00
PAX004	PA Turnpike (I-276) Reconstruction and Widening (Section A)	PTC	Reconstruction and widening of the PA Turnpike mainline from approximately one mile west of the Bensalem Interchange (#351) to Richlieu Road.	Bucks, Burlington	2–3	$ 359.90
PAX005	PA Turnpike (I-276) Reconstruction and Widening (Section C)	PTC	Reconstruction and widening of the PA Turnpike mainline from 4 to 6 lanes from Galloway Road to Bensalem Boulevard.	Bucks, Burlington	1–3	$ 359.90
PAX007	Washington Crossing Bridge Replacement	Delaware River Joint Toll Bridge Commission (DRJTBC)	Complete replacement of the bridge and reconstruction of the approach roadways.	Bucks, Mercer	1–2	$ 157.30

MRP ID	Facility	Sponsor	Scope	Location	Plan Period*	Cost (Millions of $2025)
PAX009	PA Turnpike (I-76) Reconstruction and Widening , MP 320-324	PTC	From four to six lanes for four plus miles from the Route 29 Interchange to the Valley Forge Service Plaza in Tredyffrin Township.	Chester	1–2	$ 650.00
PAX010	PA Turnpike (I-76) Reconstruction and Widening, MP 298-302	PTC	From four to six lanes, from the Morgantown Interchange to just east of Yoder Road.	Chester	1–3	$ 356.30
PAX011	PA Turnpike (I-76) Reconstruction and Widening, MP 302-308	PTC	From four to six lanes, including replacement of 10 overhead bridges, between Yoder Road and Styler Road.	Chester	1–3	$ 346.70
PAX012	PA Turnpike (I-76) Reconstruction and Widening, MP 308-312	PTC	From four to six lanes, including replacement of 10 overhead bridges, between Styler Road and SR 100.	Chester	1–3	$ 343.10
PAX013	PA Turnpike (I-76) Reconstruction and Widening, MP 312-316	PTC	From four to six lanes over four miles between the Downingtown Interchange and Valley Hill Road bridge.	Chester	1	$ 450.00
PAX014	PA Turnpike (I-76) Reconstruction and Widening, MP 316-319	PTC	From four to six lanes for four miles from Valley Hill Road bridge to the Route 29 Interchange in Charlestown Township.	Chester	1–2	$ 304.20
PAX020	I-276 / Lafayette Street Interchange Tolling	PTC / Montgomery County	Phases 4 and 5 of a new cashless tolling interchange at the intersection of I-276 / Lafayette	Montgomery	1–2	$ 95.70

MRP ID	Facility	Sponsor	Scope	Location	Plan Period*	Cost (Millions of $2025)
			Street / Ridge Pike in Plymouth Township (MP 331.6).			
PAX022	I-276 at PA 309 Fort Washington Interchange	Upper Dublin Township	Interchange improvements.	Montgomery	1	$ 6.70
PAX023	Philadelphia 30th Street District Plan	Federal Railroad Administration (FRA); Northeast Corridor Commission (NECC)	Short-term improvements to the intermodal transportation hub at 30th Street Station, including realignment and Schuylkill Yards development.	Philadelphia	1	$ 800.00
NJX001	NJ Turnpike Interchanges 1–4 Capacity Enhancements	NJTA	Widening of one additional lane in each direction from the base of the Delaware Memorial Bridge at MP 0.0 to just north of the existing Interchange 4 at MP 36.5.	Burlington, Camden, Gloucester	1–3	$ 3,472.00
NJX002	Walter Rand Transportation Center	NJ TRANSIT	Replacement of the existing facility with an expanded, multipurpose transit center with intermodal connectivity.	Camden	1	$ 250.00
NJX003	Atlantic City Expressway Third Lane Widening	South Jersey Transportation Authority (SJTA)	Construction of a third lane in the westbound direction from milepost 30.6 to milepost 44.	Camden, Gloucester	1–2	$ 205.00
NJX004	Atlantic City Expressway Bridges	SJTA	General rehabilitation of including deck and superstructure repairs and parapet replacements.	Camden, Gloucester	1–3	$ 41.00

MRP ID	Facility	Sponsor	Scope	Location	Plan Period*	Cost (Millions of $2025)
NJX005	Atlantic City Expressway Resurfacing	SJTA	Annual Atlantic City Expressway resurfacing program.	Camden, Gloucester	1–4	$ 55.00
NJX006	South Jersey Transit Authority (SJTA) Facilities	SJTA	Rehabilitation and improvement of SJTA facilities, including service areas, maintenance yards, parking facilities, and utility systems.	Camden, Gloucester	1–4	$ 20.00

Source: DVRPC, 2025.
**See Table F-1 for Plan Period years.*

Table F-33: External, Unfunded MRPs

MRP ID	Facility	Scope	Location	Sponsor	Cost (Millions of $2025)
PAX006	Northeast Corridor Future	Improved facilities and operations in the Mid-Atlantic North region of the Northeast Corridor will support higher speeds and more service, including track upgrades at Trenton, Paoli, and Ardmore.	Bucks, Delaware, Philadelphia, Mercer	FRA; NECC	TBD
PAX008	Trenton - Morrisville (Route 1) Toll Bridge and PA Avenue Interchange Improvements	Removal of Toll Plaza in support of all electronic tolling and reconfiguration of the Pennsylvania Avenue Interchange.	Bucks, Mercer	DRJTBC	$ 25.10
PAX015	Norristown Line Extension to Reading	Restore Amtrak passenger train service from Reading to Philadelphia.	Chester, Montgomery, Philadelphia	FRA; NECC; Chester	$ 250.00
PAX016	I-276 / I-76 Valley Forge Interchange	Reinstitute inter-city services to Chester, PA.	Delaware	FRA; NECC	TBD
PAX017	I-276 / I-76 Valley Forge Interchange	Modifications.	Montgomery	PTC	$ 41.60
PAX018	I-276 and Virginia Drive Full Movements	New interchange with full movements.	Montgomery	PTC	$ 27.40
PAX019	I-276 and Henderson Road Interchange	New interchange.	Montgomery	PTC	$ 32.50
PAX021	I-276 and PA 63 Welsh Road	New interchange.	Montgomery	PTC	$ 54.60

Source: DVRPC, 2025.

Port and Rail Freight Improvements

In the last five years, several major port facilities and rail operators in the DVRPC region have undertaken infrastructure improvements to enhance cargo capacity, intermodal connectivity, and regional competitiveness. PhilaPort has undergone significant modernization efforts, including the deepening of the Delaware River channel to 45 feet, expansion of the Packer Avenue Marine Terminal, and acquisition of new EVs for land operations. The planned SouthPort Marine Terminal Complex continues to move forward with the first new berth expected to be delivered by 2027. At the Tioga Marine Terminal, preliminary plans are proposed to bring additional rail capacity and enhance efficiency of the existing rail system at the site.

Across the river in New Jersey, the Gloucester Marine Terminal, operated by Holt Logistics, has invested in cold storage and temperature-controlled handling infrastructure to strengthen its role as a leading East Coast importer of perishable goods. The Paulsboro Marine Terminal, developed and operated by the South Jersey Port Corporation (SJPC), has completed bulk-handling upgrades and continues to position itself as a hub for steel and energy-related cargo. The Camden terminals, also managed by SJPC, have focused on pier reinforcement and landside access improvements, including expanded gate capacity and resurfacing of intermodal staging areas.

The privately operated Keystone Trade Center in Bucks County is undergoing redevelopment to support expanded maritime and rail freight activity, with planned upgrades to berth facilities, rail sidings, and utility infrastructure. In addition, Class III operators such as SMS Rail Lines have been investing in their networks and upgrading them to handle heavier loads and enhance safety. These projects collectively reflect a coordinated regional approach to port and rail investment, emphasizing multimodal access, environmental resilience, and support for high-value commodity flows.

PHL Airport

Philadelphia International Airport (PHL) functions as a cornerstone of the Greater Philadelphia region's multimodal freight network. The airport's siting, along I-95 and at the center of the northeast corridor, makes it an attractive location to base cargo operations out of in the mid-Atlantic region.

Philadelphia International Airport (PHL) plays a critical role in Greater Philadelphia's freight network. As a global gateway located within the Northeast Corridor, PHL connects the region's industries to international markets and facilitates the movement of time-sensitive and high-value goods, such as pharmaceuticals produced by the region's growing life sciences sector.

To meet rising demand and improve freight capacity, PHL is undertaking the West Cargo Development project, which will add 136 acres of cargo handling space, nearly one million square feet of new terminal facilities, and up to 20 additional freighter parking positions. These investments aim to expand PHL's share of the region's cargo market. Complementary upgrades include a $40 million cargo aircraft parking apron, new taxiways, runway improvements, and utility and roadway realignments.

In addition, the planned Cool Port facility, a state-of-the-art warehouse originally slated to open in 2025, will enhance the airport's ability to handle perishable and temperature-sensitive goods and further position PHL as a competitive hub for specialized air cargo. Together, these improvements enhance multimodal freight mobility, strengthen supply chain resilience, and support long-term regional economic growth.multimodal freight mobility, strengthen supply chain resilience, and support long-term regional economic growth.

Interregional Transport

The DVRPC region is well-connected with peer cities and regions along the Northeast Corridor and beyond. These connections support residents' access to jobs, education, services, and recreation. Interregional public transportation is critical to a thriving region. Philadelphia's location along Amtrak's Northeast Corridor makes travel up and down the East Coast a viable option. The Federal Railroad Administration's (FRA) NEC Future 2035 Plan includes improvements to station accessibility, increased service frequency, faster travel times, and better integration with local commuter rail operations. Plans for the William H. Gray III 30th Street Station in Philadelphia are essential to enhancing connections from outside the region to destinations throughout the region, and vice versa. In addition to improving multimodal connectivity at William H. Gray Station, NJ Transit has capital improvement projects at the Walter Rand Transportation Center in Camden and the Trenton Transportation Center, which will similarly facilitate connections across the region.

SEPTA and the City of Philadelphia share an interest in improving public transportation access to Philadelphia International Airport (PHL). Major capital investments to SEPTA's Airport Line—including additional track to separate it from freight rail in some sections—coupled with a proposed trolley extension to Eastwick Station, would enable more frequent service between PHL and Center City Philadelphia, strengthening regional connections.

Intercity bus service continues to require more consistent service and improved passenger facilities; a need made more pressing during a period of industry consolidation and transition among primarily private carriers. The City of Philadelphia is working to identify a permanent solution for an intercity bus terminal. Bus service between Reading, Pottstown, and Philadelphia, once provided by Amtrak, is now operated by private carriers. The Schuylkill River Passenger Rail Authority (SRPRA)—a joint effort among Berks, Chester, and Montgomery counties—is working to advance intercity rail service in this corridor. Expanding rail service frequencies west of Harrisburg to Pittsburgh would foster stronger economic connections across Pennsylvania, linking Philadelphia, Harrisburg, and Pittsburgh.

Demonstration of Fiscal Constraint

DVRPC maintains fiscal constraint of its financial plan. Fiscal constraint requires that total transportation expenditures outlined in the Long-Range Plan do not exceed the reasonably expected funding for the region over the life of the Plan and within each individual funding period.

Tables F-34 and F-35 show how much funding has been allocated to MRPs in the Plan and other TIP projects, as well as a balance to be programmed for future projects as they are identified in successive TIPs for each state subregion. DVRPC aims to have a substantial balance of available funds in each project category after programmed TIP and fiscally constrained projects in the Plan are accounted for. The proposed funding allocation leaves a balance of 35 and 25 percent of funds over the life of the Plan for Pennsylvania roadway and transit projects, respectively. It leaves a balance of 45.8 and 32.9 percent of funds over the life of the Plan for smaller-scale New Jersey roadway and transit projects that will be identified in the current and future TIPs between 2026 and 2050. Balances to be programmed can also be used to advance system preservation and bike and pedestrian projects listed as Illustrative in this document.

Table F-34: Pennsylvania Funding Allocation Over The Life of the Plan

Mode	Funding Category	Allocated Revenue	MRP Expenditure	Non-MRP TIP Expenditure	Balance
Roadway	R1. PAVEMENT	$8.22 B	($2.9 B)	($2.55 B)	$2.77 B
	R2. BRIDGE	$14.28 B	($8.57 B)	($.78 B)	$4.93 B
	R3. SUBSTANTIVE SAFETY	$1.89 B	($1.14 B)	($.01 B)	$0.75 B
	R4. OPERATIONAL IMPROVEMENTS	$3.21 B	($1.65 B)	($1.07 B)	$0.48 B
	R5. SYSTEM EXPANSION	$1.28 B	($1.18 B)	($0.0 B)	$0.10 B
	R6. GREEN TRANSPORTATION	$3.21 B	($1.23 B)	($.59 B)	$1.39 B
	Highway Subtotal	$32.1 B	($16.68 B)	($5.01 B)	$10.41 B
Transit	T1. Transit Preservation & Modernization	$12.77 B	($9.66 B)	($2.45 B)	$0.65 B
	T2. Transit Operational Improvements	$1.53 B	($1.40 B)	($0.01 B)	$0.12 B
	T3. Transit System Expansion	$0.74 B	($0.44 B)	($0.01 B)	$0.29 B
	T4. TRANSIT OTHER	$7.76 B	($0.0 B)	($1.82 B)	$5.94 B
	Transit Subtotal	$23. B	($11.50 B)	($.67 B)	$10.83 B
PA Sub-region Total		**$51.1 B**	**($28.18 B)**	**($5.68 B)**	**$17.24 B**

All figures in billions of YOE dollars. Figures may not add up due to rounding.
Source: DVRPC, 2025.

Table F-35: New Jersey Funding Allocation Over The Life of the Plan

Mode	Funding Category	Allocated Revenue	MRP Expenditure	Non-MRP TIP Expenditure	Balance
Roadway	R1. PAVEMENT	$5.78 B	($1.37 B)	($.02 B)	$4.38 B
	R2. BRIDGE	$3.14 B	($0.90 B)	($0.28 B)	$1.96 B
	R3. SUBSTANTIVE SAFETY	$0.33 B	($0.0 B)	($.06 B)	$.27 B
	R4. OPERATIONAL IMPROVEMENTS	$2.31 B	($1.94 B)	($0.05 B)	$0.32 B
	R5. SYSTEM EXPANSION	$0.66 B	($0.47 B)	($0.0 B)	$0.19 B
	R6. GREEN TRANSPORTATION	$4.29 B	($0.98 B)	($0.73 B)	$2.59 B
	Highway Subtotal	$16.5 B	($5.65 B)	($3.4 B)	$7.45 B
Transit	T1. Transit Preservation & Modernization	$5.16 B	($2.50 B)	($1.63 B)	$1.04 B
	T2. Transit Operational Improvements	$0.56 B	($0.0 B)	($0.21 B)	$0.34 B
	T3. Transit System Expansion	$0.77 B	($0.0 B)	($0.06 B)	$0.70 B
	T4. TRANSIT OTHER	$0.32 B	($0.0 B)	($0.16 B)	$0.15 B
	Transit Subtotal	$6.8 B	($2.5 B)	($2.06 B)	$2.24 B
NJ Sub-region Total		**$23.3 B**	**($8.14 B)**	**($3.21 B)**	**$11.95 B**

All figures in billions of YOE dollars. Figures may not add up due to rounding.
Source: DVRPC, 2025.

Appendix G—Definitions & Acronyms

APPENDIX G Definitions & Acronyms

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Definitions

Air Quality Significant — projects that have the potential to impact air quality by affecting transportation-related air pollution through changes in traffic patterns or volumes. These are typically projects that include a component of project categories R4, R5, or T3, but a thorough evaluation is conducted as part of the annual air quality conformity determination. See *Air Quality Conformity Determination* (www.dvrpc.org/airquality/conformity/). Not all projects included in conformity make major changes to regional travel patterns.

Congestion Management Process (CMP) — a systematic and regionally coordinated approach used to monitor, evaluate, and manage traffic congestion. The CMP identifies strategies to improve transportation system performance and safety by reducing congestion and enhancing mobility, especially through non-capacity-increasing alternatives such as operational improvements, demand management, and multimodal solutions. It is required in metropolitan areas to ensure that investment decisions consider congestion impacts and appropriate mitigation strategies.

Federalized (TIP) — any project that has obligated federal funds via the current or a previous Transportation Improvement Program

Federal Fiscal Year (FFY) —a 12-month period used by the federal government for budgeting and financial reporting purposes, beginning on October 1 and ending on September 30 of the following calendar year. For example, FFY 2026 runs from October 1, 2025, through September 30, 2026. This timeframe is used to track federal funding, including transportation investments, and aligns with federal appropriations and grant cycles. DVRPC's Fiscal Year (FY) begins on July 1 and ends on June 30 of the following calendar year. For example, DVRPC FY 2026 denotes the 12-month period from July 1, 2025, to June 30, 2026.

Fiscal Constraint — the requirement that revenues in the transportation plan and TIP must be reasonably expected to be available and sufficient to cover the costs of the projects and programs included.

Life-Cycle Planning — a process to estimate the cost of managing an asset class, or asset sub-group over its whole life with consideration for minimizing cost while preserving or improving the condition (FHWA Asset Management Rule (23 CFR 515.5).

Long-Range Plan (LRP) — a comprehensive, fiscally constrained strategy that guides investments in the region's multimodal transportation system over at least a 20-year horizon. The Plan is updated every four years.

Lowest Life-Cycle Cost (LLCC) — asset management strategy designed to maximize the life of an asset at the lowest cost through a risk-based prioritization of preservation, rehabilitation, and reconstruction.

Major Regional Project (MRP) — large-scale projects (over $40M) that are discrete projects with defined start and end dates, and not part of an ongoing program.

Metropolitan Planning Organization (MPO) — a federally mandated and federally funded transportation policy-making organization that is made up of representatives from local government and governmental transportation authorities.

Minor Regional Roadway Network Expansion Project — Roadway Network Expansion projects below the $40M threshold that are funded via the TIP. These projects don't rise to the level of MRP, but are still tracked in the Plan to account for all roadway system expansion projects region-wide in the 4 percent cap on regional spending.

Plan Elements — the key focus areas that structure the Long-Range Plan's Vision. *Update: Connections 2050* is organized around five core elements: (1) Transportation, (2) Economy, (3) Communities, (4) Environment, and (5) Infrastructure and Utility Services. Each element includes three specific goals that support the overall vision. The Plan also outlines targeted strategies for achieving these goals, along with implementation steps and responsible parties.

Regional Technical Committee (RTC) — serves as an advisory unit, reporting directly to the DVRPC Board, about: (1) transportation planning initiatives, (2) the development and maintenance of the Transportation Improvement Program, (3) the development of the long-range plan, (4) the development of the Unified Planning Work Program, and (5) all other transportation planning as directed by the Board.

Roadway System Expansion Projects — projects that involve adding new capacity to the existing roadway network, such as new roads, new lanes, or major realignments that increase overall system capacity.

State-of-Good-repair (SGR) — infrastructure elements (roads, bridge, rail tracks, stations, transit revenue vehicles) are maintained in a reliable, functional, and safe state.

- **NJDOT Definition** — life cycle planning approach and investment strategies expressed in terms of the percentage of the assets in Good or Fair condition.
    - 80 percent of pavements on SHS roadways (by lane miles) in a state-of-good-repair.
    - 94 percent of NBIS bridges on SHS roadways (by deck area) in a state-of-good-repair.
    - 95 percent of NBIS bridges on NHS roadways (by deck area) in a state-of-good-repair.
- **PennDOT Definition** — no more than 5 percent of NHS Interstate and non-Interstate pavement lane miles shall be rated in poor condition (FHWA minimum); no more than 10 percent of total NHS bridge deck area poor (FHWA minimum). The current practice of prioritizing NHS assets over other networks.

Transportation Improvement Program (TIP) — a federally mandated, short-range program that lists all regionally significant and federally funded transportation projects to be implemented in a metropolitan planning organization's (MPO) region. The TIP includes detailed information on project scopes, schedules, and funding sources, and must demonstrate fiscal constraint. It is developed through a cooperative process

involving state DOTs, transit operators, local governments, and the public, and must align with the region's Long-Range Plan.

TIP Action — a formal amendment or administrative modification to the Transportation Improvement Program.

Urbanized Area (UA) — An area defined by the U.S. Census Bureau with a population of 50,000 or more, characterized by densely developed residential, commercial, and other urban land uses. In the context of FHWA and FTA funding, urbanized areas are used to determine how federal transportation funds are allocated. Different funding programs and planning requirements may apply based on the size and characteristics of the urbanized area.

Unfunded, Aspirational Projects — projects that are not currently funded or programmed but are included in the Long-Range Plan as priorities, should additional resources become available.

YOE (Year-of-expenditure) — a method of expressing estimated project costs in the actual dollars expected to be spent in the year the expenditure will occur, accounting for inflation and cost escalation over time (FHWA Financial Plans Guidance). Funded MRPs are expressed in YOE dollars, whereas 2025 base cost dollars are used to represent unfunded projects.

Acronyms

ACS	American Community Survey
ADA	Americans with Disabilities Act
BIL	Bipartisan Infrastructure Law
BRT	Bus Rapid Transit
CBO	Congressional Budget Office
CIG	Capital Investment Grant
CJTF	Central Jersey Transportation Forum (of DVRPC)
CMAQ	Congestion Mitigation and Air Quality
CMP	Congestion Management Process
COVID-19	Coronavirus Disease 2019
CPT	Collaborative Planning Theory
DOT	Department of Transportation
DRJTBC	Delaware River Joint Toll Bridge Commission
DVRPC	Delaware Valley Regional Planning Commission
EV	Electric Vehicle
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FY	Fiscal Year
FFY	Federal Fiscal Year
GIS	Geographic Information System
GSI	Green Stormwater Infrastructure
HCTF	Healthy Communities Task Force
HSIP	Highway Safety Improvement Program
HTF	Highway Trust Fund
HVAC	Heating, Ventilation, and Air Conditioning
ICM	Integrated Corridor Management
IIJA	Infrastructure Investment and Jobs Act
IMP	Interstate Management Program
IPD	Indicators of Potential Disadvantage
ISTEA	Intermodal Surface Transportation Efficiency Act
KSI	Killed or Suspected of being Seriously Injured
LEP	Limited English Proficiency
LLCC	Lowest Life-Cycle Cost
LOTTR	Level of Travel Time Reliability

LTS	Level of Traffic Stress
MPO	Metropolitan Planning Organization
MRP	Major Regional Project
NAICS	North American Industry Classification System
NECC	Northeast Corridor Commission
NETS	National Establishment Time Series
NHFP	National Highway Freight Program
NHFN	National Highway Freight Network
NJ	New Jersey
NJDOT	New Jersey Department of Transportation
NJTA	New Jersey Turnpike Authority
NTD	National Transit Database
NTPSP	National Transit Public Safety Plan
PA	Pennsylvania
PAMS	Pavement Asset Management System
PennDOT	Pennsylvania Department of Transportation
PHED	Peak Hours of Excessive Delay
PHL	Philadelphia International Airport
PTC	Pennsylvania Turnpike Commission
PTI	Planning Time Index
ROW	Right-of-Way
SEPTA	Southeastern Pennsylvania Transit Authority
SJPC	South Jersey Port Corporation
SJTA	South Jersey Transportation Authority
SOV	Single Occupancy Vehicle
SPT	Safety Performance Target
STIP	Statewide Transportation Improvement Program
TAMP	Transit Asset Management Plan
TASP	Transit Agency Safety Plan
TCM	Transportation Control Measure
TERM	FTA Transit Economic Requirements Model
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIM	Traffic Incident Management
TIP	Transportation Improvement Program
TMA	Transportation Management Association
TPK	Turnpike
TOD	Transit-Oriented Development
TPM	Transportation Performance Management
TRID	Transit Revitalization Investment District

TSMO	Transportation Systems Management and Operations
TTF	Transportation Trust Fund
TTI	Travel Time Index
TTTR	Truck Travel Time Reliability
TYP	Twelve-Year Program
ULB	Useful Life Benchmark
UZA	Urbanized Area
USDOT	United States Department of Transportation
VMT	Vehicle Miles Traveled
VRM	Vehicle Revenue Miles
RVZ	Regional Vision Zero
YOE	Year-of-Expenditure

DRAFT Update: Connections 2050

Plan for Greater Philadelphia

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Abstract: *The Update: Connections 2050 Plan for Greater Philadelphia* documents the vision, principles, goals, policies, and strategies, and contains a summary of the financial plan. This set of appendices supplements the *Update: Connections 2050* Summary Document, which documents the regional vision for 2050, goals, policies, and strategies, and contains a summary of the financial plan.

Key Words: 2050, Air Quality Conformity, Appendices, Appendix, Centers, CMP, Demographics, Employment, Federal Performance Measures, Fiscal Constraint, Forecasts, Freight, Funding, Funding Allocation, Funding Outlook, Funding Sources, Greenspace Network, Housing, Housing, Investments, IPD, Land Use, Land Use Vision, Long-Range Plan, Major Regional Project, Needs Assessment, Open Space, Outreach, Plan, Plan Administration, Planning Factors, Planning Process, Population, Preservation, Project Evaluation, Public Outreach, Region, Revenue Forecast, Roadway Infrastructure Condition, Roadway Safety, Safety, Stakeholders, System Performance, Title VI, Transit, Transit Assets, Transit Safety, Transportation, Vision Survey

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