

2023-2026 TRANSPORTATION IMPROVEMENT PROGRAM



October 2022

Southwestern Pennsylvania Commission

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Southwestern Pennsylvania Commission

2022

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1. Introduction

The Southwestern Pennsylvania Commission (SPC) is the federally-designated metropolitan planning organization (MPO) responsible for the region's transportation planning process that supports the effective operations, maintenance and improvement of the regional transportation system, including the movement of people and goods, protection and enhancement of communities and the environment, and continuing development of the regional economy.

SPC's transportation planning area encompasses the ten counties of Southwestern Pennsylvania and their connections to points beyond the region. The planning process addresses transportation needs for roadways, bridges and public transportation; travel by automobile, truck, bus, train, bicycle or walking; issues with traffic congestion and safety; and, access to work, school, shopping, recreation and our homes.

The Transportation Improvement Program (TIP) is one of the core products of SPC's cooperative, coordinated and comprehensive (3c) metropolitan transportation planning process. The 2023-2026 TIP for Southwestern Pennsylvania specifically identifies the region's highest priority transportation projects programmed for advancement over the next four years. The TIP includes a variety of transportation investments, including improvements made to the roadway system, public transportation, rail and other intermodal projects, as well as bicycle and pedestrian facilities. The TIP document is amended regularly to reflect the most current funding and project information and is updated comprehensively every two years.

The TIP represents a significant investment of public funding and is developed in accordance with federal and state legislation and guidance, which are discussed in Section 2, and with extensive input from the public and our planning partners. Projects identified in the TIP are funded in three basic ways: TIP Formula Funds, State Managed Programs, and Discretionary or Other Programs. The TIP is fiscally-constrained, indicating that anticipated revenues for the four-year TIP period are sufficient to fund the identified projects. When projects are funded through State Managed Programs or Discretionary or Other Programs, external program revenues are added to the TIP along with the project. Where noted, many discretionary projects are included in the TIP for planning purposes only (public review or air quality testing), but the original funding agency retains project management responsibility. The TIP Financial Summary table can be found in Appendix 4.

The region's transit agencies provide financial analyses that demonstrate their capacity to implement the budgeted programs. The included Transit Financial Capacity documentation certifies that the agencies have the financial capacity to deliver the projects identified in their programs without affecting current operations/service levels (Appendix 5).

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2. Transportation Program Planning Framework

Federal and state legislation provides much of the planning framework for the region's TIP development process, including statutory regulations and requirements, as well as funding levels and distribution formulas. Based on federal and state regulations, the statewide planning partners have jointly developed financial and procedural guidance to support TIP development across the state's planning regions.

For the SPC region, *SmartMoves for a Changing Region* – the region's adopted long range transportation plan - provides additional policy and program guidance consistent with federal and state legislation. *SmartMoves* defines the policies, strategies, and overall vision for the region. The TIP is the primary implementation vehicle for *SmartMoves*.

Federal and State Planning Framework

Federal and state legislation provides much of the planning framework and funding for the region's transportation program development process and the 2023-2026 TIP. The Fixing America's Surface Transportation (FAST) Act of 2015, the Bipartisan Infrastructure Law (2021) the Clean Air Act of 1970, and the Civil Rights Act of 1964 provide substantial federal context for the region's transportation program. PA Act 120 (1970), PA Act 44 (2007) and PA Act 89 (2013) provide the legislative context for the state transportation program.

Federal Transportation Legislation

Federal metropolitan planning regulations ([23 CFR §450.326](#)) guide the development of the TIP as well as the documents that are required to demonstrate that the TIP is meeting the requirements of the Clean Air Act (Air Quality Conformity Determination), Title VI of the Civil Rights Act and other nondiscrimination statutes (Benefits and Burdens Analysis/Environmental Justice Report). With the adoption of the TIP, metropolitan planning organizations are required to self-certify that the metropolitan transportation planning process is being carried out in accordance with all of the applicable federal requirements ([23 CFR §450.336](#)). These requirements and how SPC is meeting them can be found in SPC's Self-Certification Resolution and Programmatic Checklist (Appendix 1).

Bipartisan Infrastructure Law (BIL)

The 2023-2026 TIP was developed in accordance with the FAST Act (December 4, 2015) and the Bipartisan Infrastructure Law (BIL), which was signed into law on November 15, 2021. The BIL is a five-year bill (2022-2026).

The BIL authorized \$567.5 billion nationally in spending over the five-year period. \$383.4 billion from the Highway Trust Fund and \$184.2 billion in guaranteed appropriations. There is also \$93.5 billion from the General Fund, which is subject to appropriations. The BIL also continues to emphasize performance-based planning and programming that was introduced in MAP-21 and subsequently the FAST Act. Approximately 64% of the BIL's funding authorizations to the Federal Highway Administration (including FMCSA and NHTSA) (\$363.1 billion), 16% to FTA (\$91.2 billion), 20% for other agencies and programs (\$113.2 billion). These authorizations represent a 51.7% increase nationwide over funding levels in the FAST Act.

The BIL retains the majority of the highway program structure from the FAST Act, but adds flexibility to a number of the core federal funding programs and contains several new programs. Notable changes to existing programs and new programs include:

Changes to Existing Programs:

- Expanded eligibility to the STBGP program to include EV charging infrastructure, wildlife crossings, ITS deployment, intermodal connections between emerging transportation technologies (i.e. hyperloop).
- Increases overall funding of the Transportation Alternatives program by 10% and increases sub allocation from 50% to 59%.
- Congestion Mitigation and Air Quality (CMAQ) program increases eligibility to include shared micromobility, and lock and dam modernization and marine highway corridor projects.

New Programs:

- New \$27.5 billion formula based FHWA bridge program via General Fund appropriations to replace, rehabilitate, preserve, protect and construct projects on public roads.
- New \$5 billion electric vehicle (EV) charging infrastructure formula program. State DOT plans required for use of funding for each fiscal year 2022 to 2026. If a state takes no action, funds could be reallocated to localities and other states.
- New Carbon Reduction Program aimed at reducing transportation emissions.
- New Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program provides funding for resiliency. PROTECT contains both formula and discretionary distributions.

Clean Air Act

The Clean Air Act establishes National Ambient Air Quality Standards (NAAQS) and assigns certain responsibilities to state and local governments to meet these standards. The U.S. Environmental Protection Agency has promulgated transportation conformity regulations to address Clean Air Act requirements. SPC is responsible under these regulations for testing its long range plan and

TIP to ensure that these programs will not deteriorate regional air quality. A summary of SPC's conformity process and findings are presented in a later section of this report, and are explained in detail in the Air Quality Conformity Determination for the 2023-2026 TIP.

Civil Rights Act and Environmental Justice

The 2023-2026 Transportation Improvement Program Environmental Justice Report documents that no identifiable population segment or geographic areas are disproportionately benefitted (served) or burdened (disrupted and/or inconvenienced) as a result of the proposed transportation investments in the 2023-2026 TIP.

State Transportation Legislation

PA Act 120 of 1970 established the State Transportation Commission and requirements for a PA Twelve Year Transportation Program. PA Act 44 of 2007 established a number of state programs, including several of the current public transit programs. PA Act 89 was enacted in November 2013 as a state multimodal funding measure.

Act 89 allocated additional revenues to metropolitan and rural planning regions in the state highway and bridge programs. The significant highway and bridge increases also enabled a transfer to the transit programs of Act 44 (former) highway/bridge monies. Act 89 also had a substantial impact on program design for State Managed Programs such as the Interstate Program and the Secretary's Discretionary Highway (Spike) Program.

Generally, Act 44 (as amended by Act 89) transportation revenues are generated by Pennsylvania Turnpike Commission (PTC) tolls and are used to support state public transit programs. Act 89's other state revenue increases support the expanded state highway and bridge programs. The provision of PTC tolls being used to support state public transit sunsets in 2022, thereby shifting \$400 million in yearly payments from the PTC to the motor vehicle sales tax. The sunset of this provision has the potential to jeopardize the stability of transit funding across the commonwealth; most notably the Port Authority of Allegheny County doing business as "Pittsburgh Regional Transit" (PRT) in the SPC region.

Over the years, separate federal- and state-legislated program requirements have been aligned such that a single planning process meets the requirements of both federal and state transportation programs.

Federal and State Transportation Funding Programs

Federal and state transportation programs can be separated into three basic categories, depending on the project selection processes used to identify projects for inclusion into the TIP: TIP Formula Funds, State Managed Programs and Other Discretionary Programs.

TIP Formula Funds (Highway and Bridge Program)

Multiple federal and state programs provide funding to statewide planning regions (large urban, small urban, rural). This formula funding is distributed to metropolitan and rural regions based on defined needs-based formulas and criteria. Regional planning agencies manage these funds through their regional TIPs using established planning processes. Funding sources can be either federal or state, highway or public transit programs. Pennsylvania's 2023 Transportation Program Financial Guidance further describes these programs and funding formulas (see Appendix 10 for more information).

SPC manages the TIP development process for the ten-county Pittsburgh Transportation Management Area, including performance-based project evaluation and selection decisions for these TIP Formula Funds. State formula funding includes the State Highway and State Bridge categories, and federal funding programs that are distributed through regional TIPs include:

- National Highway Performance Program (NHPP)
- Surface Transportation Block Group Program (STP)
- Surface Transportation Block Group Program-Urban (STU)
- Bridge Formula Investment Program (BRIP)
- Surface Transportation Block Group Program Set-Aside (TA)
- Congestion Mitigation and Air Quality Program (CMAQ)
- Carbon Reduction Program (CRP, CRPU)
- Highway Safety Improvement Program (HSIP)
- Off System Bridges (BOF)
- Promoting Resilient Operations for Transformative, Efficient Cost-saving Transportation (PROTECT)

TIP Formula Funds (Public Transportation Program)

There are several categories of federal formula funding for public transit, the largest of which is the Section 5307 urban area program. Many of the region's public transit operators qualify for this funding and use it for capital improvements such as buses, stations and maintenance facilities. Some small urban public transit operators are authorized to use a portion of this funding for public transit operating assistance. Section 5307 funding is allocated to the urban area. The public transit agencies that serve the Pittsburgh and Monessen urbanized areas agree to share this funding through a formula administered by SPC that closely parallels the federal formula, but also accounts for maintenance of the busway network. Federal formula funding requires a 20% non-federal match, most of which is provided by the Commonwealth, along with a local

contribution. Federal rural area funding—Section 5311—is administered directly by PennDOT on a statewide basis.

As part of an agreement between the Commonwealth and the transit community during the enactment of Act 3 of 1997, a total of \$25 million per year in federal highway funding is flexed to transit agencies for their projects. This funding is reserved in the highway financial guidance discussed previously. Federal and state funding, which is available for public transit programming, is included in Appendices 3 through 5. Federal funding is based on most recent FAST Act authorizations only and is held flat through the period. Federal funding includes a mix of urban formula, fixed guideway, seniors and persons with disabilities, rural formula, and bus project funding. Additional federal fund authorizations are not included in the tables.

State funding for transit programs is provided for in Act 44 of 2007 as amended by Act 89 of 2013. Act 44 of 2007 established the Public Transportation Trust Fund (PTTF) to fund public transportation programs and projects. Public transportation funds are derived from the following sources: Turnpike, Sales and Use Tax, Public Transportation Assistance Fund (PTAF), Capital Bond Funds, Lottery, transfers from the Motor License Fund that are not restricted to highway purposes and various fines. These funds are deposited into the PTTF.

Note:

In FY 2022/2023, the Public Transportation law shifts funding sources as follows:

- The PTC contribution is reduced to \$50 million.
- \$450 million in motor vehicle sales tax is deposited into the PTTF.
- Because this shift would divert funding from the PA General Fund, there remains some uncertainty as to whether this will be the ultimate funding solution.

Act 44, as amended, authorizes six major public transportation programs:

- Operating Program (Section 1513)
- Asset Improvement Program for Capital projects (Section 1514)
- Capital Improvement Program (Section 1517)
- Alternative Energy Capital Investment Program (Section 1517.1)
- New Initiatives Program (Section 1515)
- Programs of Statewide Significance (Section 1516)

In addition to the programs authorized by Act 44, as amended, the State Lottery Law authorizes the Reduced Fare Shared-Ride Program for Senior Citizens (**Shared-Ride Program**). Lottery

Funds are used to replace 85% of the fare for senior citizens 65 and older on shared ride, advanced reservation, and curb to curb transportation services.

The funding in the transit tables is for planning purposes only. The actual federal and state funding that is ultimately available each year will be determined during the annual appropriations and budgeting processes. For the purposes of this document, we have assumed that funding shifts from the General Fund via the Vehicle Sales Tax will occur in FY 2022/23.

The information in these documents is based on the availability of these funds and is subject to change based on changes in available funding amounts and/or legislative updates.

State Managed Programs

There are several programs that utilize state and federal funds that are managed by PennDOT's Central Office in Harrisburg. PennDOT shares project information with the regional planning partners for public information purposes, but makes project selection and management decisions. Projects are then included in the SPC TIP. These include the Interstate Maintenance (IM) Program, which identifies and prioritizes improvements to the Interstate Highway system. These projects are often significant investments and are of statewide or national significance. Other programs managed from PennDOT Central Office include the Railway-Highway Safety Crossing Program (RRX), statewide Highway Safety Improvement Program (HSIP) and the statewide Transportation Alternatives Set-Aside (TA). Both the HSIP and TA have state components that parallel formula-funded programs managed at the regional level. The National Highway Freight Program, established by the FAST Act, is also managed at the state level.

The [Pennsylvania Rapid Bridge Replacement Program](#) (RBR), a Public Private Partnership (P3) approved in PA Act 89, is a statewide initiative intended to address Pennsylvania's 4,000 structurally deficient bridges. The RBR program will cover 50% of the costs of the RBR Program with the remaining 50% coming from each region's formula funding based on the percent share of RBR associated bridge deck in their area. The source of the regional share is split evenly between state bridge funding and state highway (capital) funding. These funds are deducted from each region's formula distribution and are reserved in a separate item for the statewide program. The SPC region's funding deduction for the RBR is approximately \$9.8 million per year for a total regional reservation of \$39.2 million. The RBR program has replaced a total of 193 structurally deficient bridges in the SPC region.

PennDOT maintains a discretionary program: the Secretary's Discretionary Highway Program, commonly known as the "Spike Program" that is funded through a combination of set-asides from the NHPP, STP and State Highway/Bridge funding categories. The Pennsylvania Secretary of Transportation makes project selection decisions, but projects are managed through the regional transportation programs. The Spike Program increases PennDOT's capacity to address projects

that can be difficult to fund within a region's allocation of TIP Formula Funds. Project selection is based on asset management principles with a priority on pavement and bridge preservation, and fixing poor pavements and structurally deficient (SD) bridges.

The Interstate Maintenance (IM) Program project lists are found in Appendix 9. The statewide funding levels for these programs are outlined in Pennsylvania's 2023 Transportation Program Financial Guidance. The IM Program will continue to be managed on a statewide basis with the programming of funds occurring centrally by the Department of Transportation in accordance with the Transportation Asset Management Plan (TAMP) and Transportation Performance Management (TPM) requirements. An amount equal to 26/55ths of available NHPP funds (\$150 million) is set aside for the Interstate Management Program in the first year of the 2021 Program. An additional \$50 million is set aside for Interstates in each subsequent year until a total of \$1 billion is realized by 2028.

Twenty percent of the balance of NHPP funds remaining after these additional funds for the Interstate system are set-aside will be held in a statewide reserve to advance projects on the National Highway System (NHS) in accordance with the TAMP and performance management principles. The remaining funds will be distributed among MPOs and RPOs for bridges and highways on the NHS.

Other Discretionary Programs and Private Funding

There are multiple discretionary funding programs contained in the BIL. In total, over the next five years these programs account for about \$48.4 billion between FHWA, FTA and the Office of the Secretary of Transportation (OST). These discretionary programs include:

Office of the Secretary of Transportation

- Megaprojects (\$5 billion)
- RAISE Grants (\$47.5 billion)
- Safe Streets (\$5 billion)
- Culverts (\$1 billion)
- SMART Program (\$500 million)

Federal Highway Administration

- Bridge Investment Program (\$9.24 billion)
- INFRA Grants (\$3.2 billion)
- Reduction of Truck Emissions in Ports (\$150 million)
- Reconnecting Communities (\$500 million)

Federal Transit Administration

- Low-No Emission Bus Grants (\$5.25 billion)
- Capital Investment Grants ((\$8 billion)
- ADA Upgrades to Rail Transit (\$1.75 billion)
- Electric or Low Emission Ferries (\$250 million)
- Rural Passenger Ferry Service (\$1 billion)

The program funding sources for these projects are typically distinct from regular TIP or State Discretionary funding sources. Program cycles may be separated from the TIP cycle or may be irregular, active only on the occasion that funding becomes available. As with other discretionary funding, the projects generally appear in the TIP as planning information, except when noted. The SPC TIP does not manage the funding program. SPC updates project information as new status reports are received from the project managers.

Also listed for illustrative purposes in Appendix 4, is the funding for the Pennsylvania Turnpike Commission (PTC), and local or privately-funded projects. Appendix 9 includes a listing of the all of the PTC capital maintenance projects and descriptions of PTC expansion projects, as well as projects funded through other discretionary programs and local or private funds.

Pennsylvania's 2023 Transportation Program Financial Guidance/General and Procedural Guidance

Pennsylvania's Planning Partners – MPOs, RPOs, FHWA, FTA, the State Transportation Commission and PennDOT—collaborate in the development of the Financial Guidance and the General and Procedural Guidance, establishing a framework for the statewide TIP development process. This guidance includes useful background information, policies established for use by the partners in the development of regional transportation programs, and program assumptions.

The General and Procedural Guidance identifies the purpose of the planning program and the roles and responsibilities of various intergovernmental planning partners. It also identifies the procedures necessary for developing a TIP that is consistent statewide for the formation of the Statewide Transportation Improvement Program, commonly known as the STIP.

Pennsylvania's 2023 Transportation Program Financial Guidance describes the procedures and formulas for distributing financial allocations of available federal and state transportation funding. It identifies set-asides for State Managed and State Discretionary Programs, as well as develops funding formulas and distribution tables allocating funding to metropolitan and rural planning organizations. Where program funding is allocated by formula, the guidance identifies the weighted criteria and their use. Several federal and state discretionary programs are also identified along with general provisions for their use. Projects introduced by the Pennsylvania Turnpike Commission are separate from TIP Formula Funds, State Managed Programs or Discretionary Programs (see Appendix 9 for more information).

SPC's Long Range Transportation Plan

Federal law requires that each MPO develop a regional long range transportation plan with at least a 20-year horizon. *SmartMoves for a Changing Region* was developed and adopted on June 24, 2019 as the region's official long range transportation plan for Southwestern Pennsylvania. *SmartMoves* sets the overall vision for the region:

"A world-class, safe and well maintained, integrated transportation system that provides mobility for all, enables resilient communities, and supports a globally competitive economy."

SmartMoves includes 3 regional goals that are supported by 8 strategies each designed to emphasize mutually supportive regional activities, places and connections. The long range transportation plan forms the foundation of all of the plans and programs undertaken at SPC. The TIP is the main implementation vehicle for the long range transportation plan.

SmartMoves continued to prioritize investments in the maintenance and preservation of existing transportation system assets; a theme that is clearly articulated as the top priority in the 2023-2026 TIP. Other significant investments are made in safety and operations, as well as improvements that foster economic growth, enhance livability and connectivity in communities and corridors throughout the region, and provide sustainable, multimodal transportation choices.

SmartMoves contains goals and strategies for a wide breadth of community and economic development topics that are interrelated with the transportation system, as it directly supports and enables our communities and our economy to prosper. This plan continues to focus on core transportation investments such as maintaining our current system; optimizing our system through operational improvements; working toward Vision Zero by investing in safety for all system users; and providing equitable mobility options for all users through improvements in public transit and pedestrian and bicycle infrastructure.

The plan describes the overall strategic Vision for the region's transportation system and also, as required by federal regulations, describes the specific projects and investments that can be advanced with revenues that are reasonably expected to be available during the life of the plan. This plan also includes a set of multimodal projects and initiatives to modernize and expand our transportation system that are in various stages of the planning process, and at this time, do not have funding identified for implementation.

All of these projects and initiatives contribute to the Regional Vision. The strategies and actions contained in the plan, coupled with the ongoing planning efforts already underway in the region,

will not only help to guide the development of these projects, but also help to identify partnerships and opportunities for collaboration to assist in implementing the Vision and the plan.

3. Regulatory Compliance

As part of the TIP development process, MPOs are responsible for reviewing their transportation planning processes to ensure they are being carried out in accordance with all applicable federal requirements, and that local processes to enhance the participation of the general public, including the transportation disadvantaged, have been followed in the development of the TIP and long range transportation plan update. SPC has conducted this process review and included a Self-Certification Resolution and a Programmatic Checklist to certify the transportation planning process (Appendix 1).

Transportation Performance Management

The Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act included performance management requirements. Performance-based planning ensures that the Pennsylvania Department of Transportation (PennDOT) and the Metropolitan Planning Organizations (MPOs) collectively invest federal transportation funds efficiently towards achieving national goals. In Pennsylvania, the Rural Planning Organizations (RPOs) follow the same requirements as MPOs.

Transportation Performance Management (TPM) is a strategic approach that uses system data and information to make investment and policy decisions to achieve national performance goals¹. TPM is an ongoing, systematic approach that provides key information to help decision-makers understand how investments decisions made across transportation assets and/or modes affect system performance. The process improves communications between decision-makers, stakeholders and the public. A key component of TPM is the establishment of performance measures and targets, which are developed via cooperative partnerships based on data and objective information.



¹ [23 USC §150\(b\)](#)

Pennsylvania has long utilized a comprehensive planning and programming process, with a focus on collaboration between the Pennsylvania Department of Transportation (PennDOT), FHWA, and planning partners at the county and regional levels. This approach will be applied as we begin to implement TPM and Performance-Based Planning and Programming (PBPP).

PennDOT and its Planning Partners (MPOs/RPOs) will coordinate when setting targets to ensure consistency to the maximum extent possible. Each MPO/RPO will need to establish targets. They may adopt the state's performance targets and support the state's efforts in achieving those targets or establish their own quantifiable performance targets.

Performance measures and goals ([23 CFR 490](#)) have been established for the federal-aid program to assess the following: the condition of pavements and bridges on the National Highway System (NHS); safety in terms of serious injuries and fatalities on public roads; performance of the Interstate and non-Interstate NHS; freight movement on the Interstate system; traffic congestion and on-road mobile source emissions as related to the CMAQ Program; NHS asset management; and, public transit asset management through state of good repair (SGR) measures. Data is being gathered and shared among planning partners to develop baseline measurements and prepare for the ongoing assessment of progress toward performance targets. Processes are being developed for publishing standardized reports to disseminate this information to planning partners and the public.

A detailed summary of the TPM and PBPP collaboration, roles and responsibilities, target setting processes, and progress made on achieving targets since the last TIP can be found in Appendix 3.

Federal Clean Air Act Requirements

The U.S. Environmental Protection Agency (EPA) has designated several areas within Southwestern Pennsylvania that are not in attainment of one or more National Ambient Air Quality Standards (NAAQS). The designated nonattainment and maintenance areas in the region include:

- PM₁₀ (1987 NAAQS – one designated area – five municipalities within Allegheny County)
- Carbon monoxide (1971 NAAQS – one designated area – City of Pittsburgh's Central Business District and certain other high traffic density areas in and near the City's Oakland neighborhood)
- Ozone (1997 8-hour NAAQS – two designated areas – one covering all of Greene County; one covering all of Indiana County)
- Ozone (2008 8-hour NAAQS – one designated area covering seven of the ten counties within SPC's planning area)
- PM_{2.5} (1997 Annual NAAQS – three separate areas that, combined, cover five entire counties and parts of four other counties within SPC's planning area)

- PM_{2.5} (2006 Daily NAAQS – the same three areas designated nonattainment for the PM_{2.5} 1997 Annual NAAQS)
- PM_{2.5} (2012 Annual NAAQS – one designated area covering all of Allegheny County)

A companion document to this report, the Air Quality Conformity Determination for the Pittsburgh Transportation Management Area, documents the process used by SPC for making the transportation-related conformity determination for the TIP and long range transportation plan. It also demonstrates that SPC's adopted transportation plans, programs, and projects within each nonattainment and maintenance area conform to the provisions of the federal Clean Air Act and the applicable criteria and procedures of the Transportation Conformity Rule.

Environmental Justice

Executive Order 12898 mandates federal agencies to incorporate environmental justice (EJ) analysis in their policies, programs and activities. Building from the framework of Title VI of the Civil Rights Act of 1964, which ensures nondiscrimination in federal programs, EJ directives address how low-income and minority populations are affected by the actions of the federal government. In their publication, *An Overview of Transportation and Environmental Justice*, the U.S. Department of Transportation (U.S. DOT) outlines their three main objectives stemming from this mandate:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
- Prevent the denial of, reduction in or significant delay in the receipt of benefits by minority and low-income populations.

SPC prepares a Report on Environmental Justice as a companion document to the TIP, which summarizes multiple analyses, outcomes and activities that are part of the region's planning process, including both a participatory component and a technical component. A summary of SPC's public outreach and opportunities for the residents of the Southwestern Pennsylvania region to participate in transportation planning is included in this report, with further information detailed in SPC's Public Participation Report. The report also evaluates the distributive effects of the 2023-2026 TIP by assessing the geographic distribution of the benefits and burdens of the regional transportation system to low-income and minority populations. An analysis of roadway and bridge asset condition, location of transit stops, and financial investments relative to EJ populations is also used to mitigate any potentially disproportionately negative effects of the long range plan on minority populations.

TIP Fiscal Constraint/Transit Financial Capacity

Federal regulations require a fiscally-constrained transportation program (23 CFR Part 450.326 and FTA Circular 7008.1A). There must be a reasonable expectation that sufficient revenue (federal, state and local matching funds) will be available to cover the total cost of projects identified in the TIP. Pennsylvania's 2019 Transportation Program Financial Guidance identifies the amounts expected to be available for multiple federal and state funding sources in the 2023-2026 TIP. Regarding local funding, project sponsors must document funding sources for projects and phases proposed for TIP years 1 and 2 before they can be considered as TIP candidates.

Fiscal constraint for the Highway Component of the TIP is reviewable at the state level in the State Transportation Improvement Program (STIP). A financial summary of the fiscally-constrained SPC Highway Program is presented in Appendix 4.

Public transit guidance requires sponsors of local transit projects to determine their financial capacity to undertake projects involving the acquisition, operation and maintenance of facilities and equipment partially funded by the federal government, and that such improvements can be managed in addition to operating and maintaining the existing transit system. Public transit service providers in the SPC region document this financial capacity in Appendix 5. Public transit project sponsors use SPC's public participation process as the required public comment period for their financial capacity documents.

Public Participation

The SPC public participation process is detailed in its Public Participation Plan. Documentation of public outreach activities associated with development of the 2023-2026 TIP is included in the TIP Public Participation Report, which is produced upon conclusion of the public comment period. For the 2023-2026 TIP, this public comment period was held May 9 to June 7, 2022. The Public Participation Report (Appendix 12) includes documentation of the virtual public engagement undertaken in support of the 2023-2026 TIP. The report includes presentations, virtual meeting times and presentation materials, and copies of public advertisements identifying provisions for persons with disabilities and/or needs related to sight, hearing or language. The report also includes a summary of the public comments submitted, SPC's response to these comments and the full text of all written and electronic comments received through the public participation process.

The materials presented for public review included the Draft 2023-2026 Transportation Improvement Program and two companion documents: the draft Air Quality Conformity Determination for the Pittsburgh Transportation Management Area, and the draft Benefits and Burdens Assessment (Report on Environmental Justice). Also included was an Amendment to the

region's transportation plan, *SmartMoves for a Changing Region*, to reflect project phasing and cost information included in Draft 2023-2026 TIP. This complete set of TIP resources was available for review on the SPC website (www.spcregion.org) and through member websites.

On an ongoing basis, SPC also conducts targeted outreach to groups serving persons with disabilities, public transportation-dependent populations, and other groups with particular transportation needs (elderly, low-income groups, etc.). Public Participation Panels and member planning departments are instrumental in providing referrals for the additional outreach.

TIP Modification Procedures

The transportation program must be responsive to necessary programming changes after TIP adoption in order to ensure that scarce public resources are being utilized to their fullest extent. Changes to the TIP are enacted through the STIP MOU (State TIP Memorandum of Understanding), and SPC's TIP Modification Procedures, adopted at both the regional and state levels. The SPC TIP Modification Procedures and the STIP MOU are included in Appendix 2. A process flow diagram is also provided to help project sponsors determine how specific modification requests will be administered. These modification requests are processed through SPC's Transportation Technical Committee (TTC) and the Transit Operators Committee (TOC).

4. Transportation Improvement Program Development Process

The 2023-2026 TIP is the culmination of a continuing, comprehensive and cooperative planning process involving the public, SPC member governments and planning partners, PennDOT, transit providers and other interested parties. This process has produced a fiscally-constrained, prioritized list of transportation improvement projects and strategies that advances the Regional Vision, Goals and Strategies of *SmartMoves for a Changing Region* as well as the PennDOT Twelve Year Program (TYP). The TIP is the first four-year period for both the TYP and long range plan. Projects are funded by phase, often over multiple years, in order maximize limited financial resources.

PennDOT Connects

Working with Planning Partners, PennDOT is placing a renewed focus on the collaborative planning process. The PennDOT Connects/Local Government Collaboration policy requires collaboration among stakeholders to clarify specific details unique to candidate project locations. The focus of this collaboration involves leveraging the expertise of various disciplines with varying roles and responsibilities within local government, the planning regions, and Districts.

Specific areas for collaboration should include, but are not necessarily limited to:

- Safety issues/concerns
- Bicycle/pedestrian accommodations
- Transit/multimodal considerations
- Presence of/impacts from (current/future) freight-generating land uses
- Planned development
- Consistency with current and/or proposed zoning
- Existence of regional planning studies
- Other proposed transportation improvements
- Green infrastructure/stormwater management
- Impacts on the natural, cultural, or social environment
- Right-of-way considerations
- Anticipated public opinion
- Community or cultural events in the candidate project area

The PennDOT Connects/Local Government Collaboration Policy is to document local government collaboration including the transportation problem, environmental resources, land use and other contextual issues early in the planning process to support future project phases. The intended outcomes include clearer scopes of work and more accurate schedules and budgets when projects are programmed. The information documented in the collaborative planning process is

carried forward into the scoping and environmental review processes. This process ensures that PennDOT and planning partners achieve a better understanding of the project location, the context of the community, and the community's vision to better shape projects moving forward. This better understanding will lead to projects that enhance the community and maximize public investments.

As in the past, any new projects proposed to be added to the 2023-2026 TIP must follow the collaborative planning process approach, and must be documented through the PennDOT Connects Screening Form process.

Carryover Projects

The preliminary TIP is developed using a process where projects that were initiated but not fully completed in the preceding TIP have first priority for funding in the draft TIP. The cost of advancing each of these continuing projects is updated and, if funding is available, the full costs for completing the subsequent project phase(s) are provided for in the TIP. A review is performed to ensure project sponsors do not carry over to the next TIP any project that is no longer a priority and that the cost and schedule for the carryover project is realistic. Projects are reviewed to ensure that the local match is available. Project sponsors may voluntarily drop lower-priority projects from the program to create capacity to cover cost increases for other existing projects or to add a new higher-priority project.

New Candidate Roadway and Bridge Projects

In each TIP update, a large number of candidate transportation projects are proposed to SPC for inclusion in the program. These candidate projects come from public input, our members, the region's long range transportation plan, other SPC planning efforts such as Road Safety Audits and corridor studies, as well as other sources such as the PennDOT Twelve Year Program, PennDOT District plans, local capital improvement plans, county comprehensive plans and related studies, etc. The region's planning partners, through regional TIP Workgroup meetings (4 held in each PennDOT District and one regional meeting), screen the new proposals to assure consistency with the long range transportation plan, determine if they advance the long range transportation plan's Regional Vision, Goals, Strategies and performance measures, and whether they satisfy relevant funding program requirements.

The 2023-2026 TIP was developed in conjunction with the PennDOT Twelve Year Program. Early in the development process, the Pennsylvania State Transportation Commission (STC) developed a web-based public survey mapping tool that allowed the public to place comments and project ideas (grouped by type of project) at specific locations on a map, as well as to rank their top 5 priorities in terms of investment categories. The priorities found in *SmartMoves* and the identified priorities found in the STC survey are consistent with one another (pavement and bridge condition, traffic flow, Interstates and walking). *SmartMoves* also identifies public transportation and bicycling as top regional priorities. This survey yielded 686 transportation

related issues mapped, with 77 of those issues being already addressed by existing projects for the Southwestern Pennsylvania region. This input identified areas that are in need of routine maintenance; suggestions to remedy operational issues such as traffic signal timing; changes to address larger, non site specific policy issues; and, location specific capital improvements. In locations where the transportation issues could be addressed through PennDOT, county or municipal maintenance activities, comments were forwarded to the respective owner of the infrastructure. For input related to capital improvement needs, SPC staff evaluated each of the comments, with support from each of the respective PennDOT District TIP Workgroups, for possible projects to include in the TIP.

This program has also utilized the vast amount of input (over 22,600 points of engagement) that was collected during the development of *SmartMoves*. This input ranged from project specific needs to overall transportation system investment priorities to input at the policy and strategy level. Three new projects were added to the 2023-2026 TIP that came from public input. An additional 13 projects that came from previous public input were carried over from the (2021-2024) TIP. Roadway and bridge projects are prioritized and recommended for inclusion into the fiscally-constrained program based on a number of factors such as bridge and pavement condition, safety factors and data from the SPC Congestion Management Process, as well as considerations on how well each project advances the long range transportation plan and addresses established performance metrics. For a detailed illustration of the TIP development process, refer to Figure 1, the TIP Process Flow Diagram.

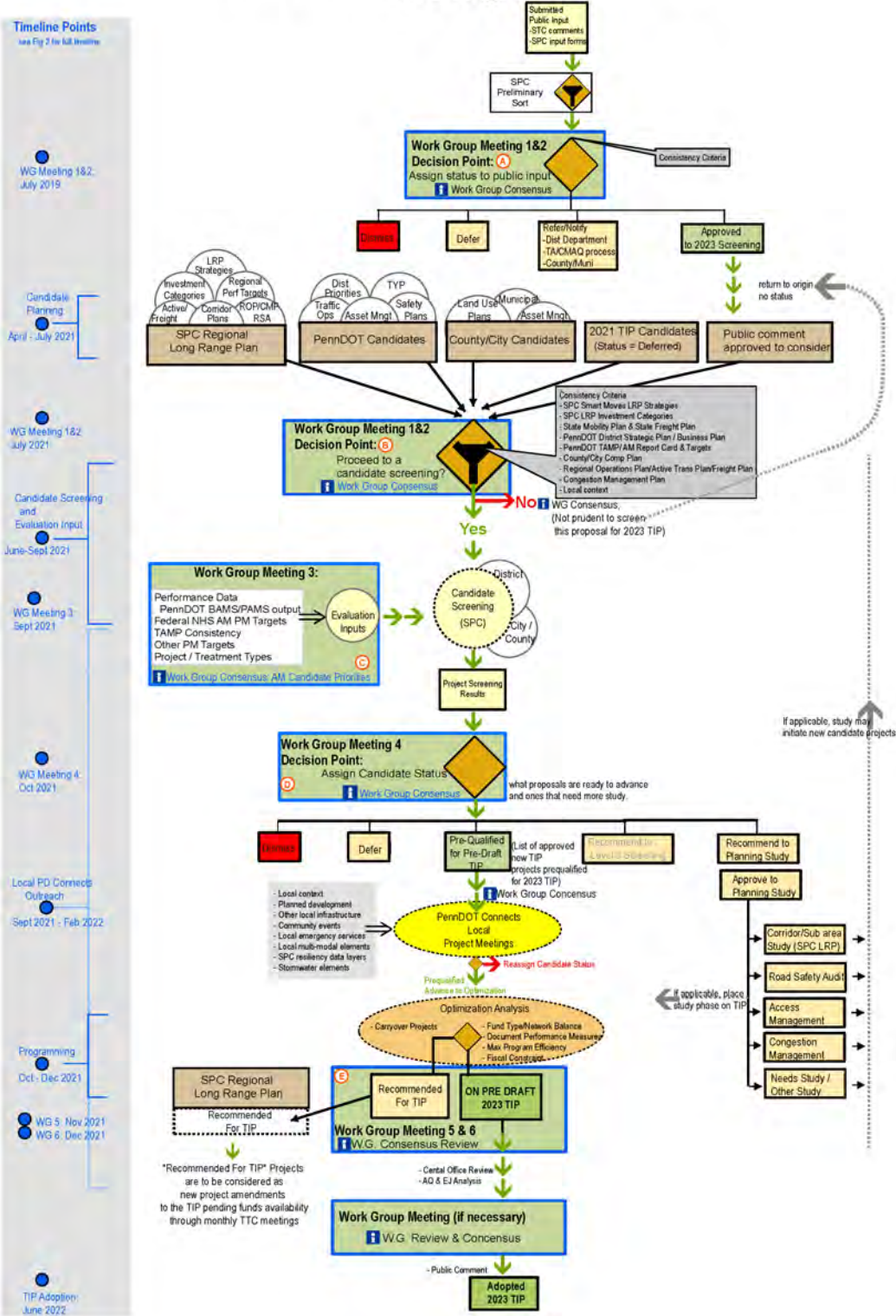
SPC's Transportation Technical Committee (TTC) reviews the project lists and recommends them for inclusion into the TIP for approval by the Commission. Frequently, large or complex projects or specific project phases are deferred to subsequent TIPs or cash-flowed over several years due to limited fiscal capacity. As previously noted, any new projects are also subject to the PennDOT Connects process prior to being added to the TIP.

Public Transit Projects

SPC's Transit Operators Committee (TOC) member public transit service providers generate project requests within the fiscal limits of separate urban and rural financial program guidance for each respective agency. The TOC compiles and reviews project submissions that are included in the TIP for approval by the Commission. Urban program guidance is provided through a special work group that reports to the TOC. The work group translates Pennsylvania's 2023 Transportation Program Financial Guidance for urban program formula funding (Section 5307) into agency-specific estimates that are useful in preparing urban operating budgets and capital project lists. Rural Section 5311 budgets for individual rural transit service providers are determined by the PennDOT Bureau of Public Transportation (BPT) and transmitted directly to the rural providers. Each project also includes a proposed amount of state matching funds and local agency share. The BPT manages the final project selection by deciding the level of state funding to commit to each identified project. The Public Transportation Program projects are listed in Appendix 8.

Figure 1

2023 TIP Update: Process Flow Diagram
SPC Region



SPC Competitive Funding Programs

In addition to the project prioritization and selection process for roadway and bridge projects, SPC conducts its own competitive funding processes for its regional allocations of federal Congestion Mitigation and Air Quality (CMAQ) and Transportation Alternatives Set-Aside Program (TA Program) funding. Similarly, SPC reserves a portion of its STP-U funding to support the Livability through Smart Transportation (SMART) Program. The programmatic requirements as well as project evaluation and selection procedures are detailed in each respective program's guidelines. Once program recommendations are made, the SPC Transportation Technical Committee endorses project lists for each program to be included in the TIP.

For the 2023-2026 TIP, each project was evaluated for technical aspects and deliverability through a process that includes the respective program committee (CMAQ/TA Program/SMART). Decision Lens™ (decision support software, licensed through PennDOT) was used in order to dynamically evaluate the projects to determine which projects provide the best return on investment and advance the Regional Vision, Goals and Strategies of *SmartMoves*.

All of the projects selected in SPC's competitive funding programs are included in the SPC Competitive Funding Programs project lists (Appendix 7).

Congestion Mitigation and Air Quality (CMAQ) Program

Projects programmed for Congestion Mitigation and Air Quality (CMAQ) funding were evaluated and recommended through the CMAQ Evaluation Committee (CEC). An open call for projects was held in the late summer of 2021. The process (as described in the CMAQ Program Guidance) used a number of air quality related performance-based metrics to analyze project benefits and other factors to gauge a project's consistency with adopted SPC plans and policies as well as the ability of the project to be delivered on-time and within its stated budget. The CEC includes representatives from SPC's standing committees (Transit Operators Committee and Transportation Technical Committee) as well as representatives from the Active Transportation Forum, the Port of Pittsburgh Commission, the Allegheny County Health Department and the Pennsylvania Department of Environmental Protection. The CEC solicited, reviewed and prioritized candidate projects proposed for CMAQ funding, which were then recommended to the SPC Transportation Technical Committee for approval.

Transportation Alternatives Set-Aside Program (TA Program)

An open call for projects was held in the fall of 2021 for the 2023-2024 SPC Transportation Alternatives Set-Aside Program (TA Program) similar in structure to the CMAQ program, the process (as described in the TA Program Guidance) used a number of performance-based metrics to analyze multimodal benefits to communities and the region as a whole, by connecting community activity centers, public transportation and recreational facilities to the communities they serve. As in the CMAQ process, other factors were considered in order to evaluate each

potential project's consistency with adopted SPC plans and policies as well as the ability of the project to be delivered on-time and within its stated budget. SPC's Transportation Technical Committee participated in the evaluation of these projects.

Livability through Smart Transportation (SMART) Program

The SMART Program also used a similar methodology and structure as the CMAQ and TA Program processes. A call for projects for this program was held through the city and county planning departments in the spring of 2022. The process (as described in the SMART Program Guidance) utilized a number of metrics designed to select projects that increase the livability and sustainability of the region through encouraging partnering with both public and private stakeholders and coordinating land use and transportation planning. As in the CMAQ and TA Program processes, other factors considered each potential project's consistency with adopted SPC plans and policies as well as the ability of the project to be delivered on-time and within its stated budget. Projects selected for 2023-2024 SMART funding will be amended into the TIP after projects are selected, once the 2023-2026 TIP becomes active.

TIP Approval

At the conclusion of a required 30-day public comment period, all comments were documented, reviewed and responded to. SPC adopted the 2023-2026 TIP and its companion documents at its meeting on June 27, 2022. Once the TIP is approved at the regional level, it is submitted to PennDOT for approval by the Governor, as well as to the U.S. DOT. Federal regulations also require that the regional TIP be incorporated into a state TIP (STIP), which is a compilation of projects from throughout the Commonwealth. As discussed in the previous section, as project schedules and cost estimates change, SPC makes adjustments to the TIP periodically through the Transportation Technical Committee and Transit Operators Committee. This ensures that the region's limited federal and state funding is being used to the fullest extent.

5. Implementing the Vision

Since the enactment of MAP-21 in 2012, SPC and its planning partners have been on the forefront of developing robust, data-driven, performance-based planning programs that are used to inform and monitor investment strategies and priorities. Examples of these types of programs can be found across the state, including the Congestion Management Process; operations and safety planning; asset management planning; and, multimodal project selection/prioritization methodologies.

SmartMoves for a Changing Region defines the Regional Vision, Goals and Strategies developed through a collaborative regional planning process that identifies transportation, community, and economic development needs and priorities. Transportation focused strategies, resulting in infrastructure improvement projects and related programs are implemented in a number of ways, primarily through the TIP, which provides the bulk of the region's transportation investment funds.

SmartMoves also identifies the tasks to be undertaken and the partners needed to advance the implementation of the 24 Strategies and their related actions. Example tasks to implement the Strategies could include initiatives such as creating holistic visions for corridors of regional significance; the development of a best practices resource center; development of a regional plan to tackle climate change; planning to revitalize communities throughout the region; conducting public outreach to raise awareness of the need for increased transportation funding and the public benefits therein; and the examination of how to increase coordination and linkages between regional transit providers.

Enhancing and revitalizing communities is a major focus of *SmartMoves*. Through coordination with municipalities, SPC, PennDOT and planning partners are actively working to enhance existing communities in terms of safety, mobility and livability. Early coordination with local governments during the project development process ensures that the transportation investments we are making fit the needs of community and can be viewed as assets that foster growth and economic development.

As discussed above and in Section 2: Transportation Planning Framework, *SmartMoves* developed the framework for performance-based planning and programming in the SPC region. This framework, based on the seven national performance goals and input from a broad public involvement process, established the basis for gauging performance of the 2023-2026 TIP. Additional performance guidance from PennDOT set targets for the amount of investment to be dedicated to state-owned structurally deficient bridges (both by deck area and count) as well as pavement condition on the National Highway System.

National Performance Goals:

- 1. Safety** - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- 2. Infrastructure Condition** - To maintain the highway infrastructure asset system in a state of good repair.
- 3. Congestion Reduction** - To achieve a significant reduction in congestion on the National Highway System.
- 4. System Reliability** - To improve the efficiency of the surface transportation system.
- 5. Freight Movement and Economic Vitality** - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- 6. Environmental Sustainability** - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- 7. Reducing Delays in Project Delivery** - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

In order to ensure the TIP, the primary mechanism that advances the Regional Vision and Goals of *SmartMoves*, is working to advance the aspirations of the region, all new candidate projects (434) that were considered for inclusion into the 2023-2026 TIP were screened against the *SmartMoves* Strategies and regional performance measures relating to transportation investments. It is evident that the 2023-2026 TIP makes significant investments in the same functional areas that *SmartMoves* identified as top priorities for the region, thereby establishing a direct link between long range planning and short term programming for Southwestern Pennsylvania.

This section will demonstrate how investments made in the 2023-2026 TIP directly work to implement *SmartMoves* by correlating investments with strategies and federal performance metrics to the *SmartMoves* Goals.



SmartMoves is built upon the three fundamental goals of Connected Mobility, Resilient Communities, and a Globally Competitive Economy. These goals comprise a shared, holistic Vision for the future of Southwestern Pennsylvania: ***“A world-class, safe and well maintained, integrated transportation system that provides mobility for all, enables resilient communities, and supports a globally competitive economy.”***

Safety

A significant investment (41 projects - \$199.5 million) will be made to make the region’s roadway system safer for all users over the life of the 2023-2026 TIP. These improvements include upgrades such as ADA curb ramps (\$4.2 million); at-grade railway crossing upgrades (\$7.8 million); and intersection improvements (\$178.6 million). Specific examples of safety improvements in the region include:

- US 422 at Margaret Road Intersection Improvements (Armstrong County)
- Freedom Crider Road at Lovi Road Intersection Improvements (Beaver County)
- Indian springs Road at Rustic Lodge Intersection Improvements (Indiana County)
- Bates Street Improvements (City of Pittsburgh)
- US 119 McClure Road Intersection Improvements (Fayette County)
- US 30 Corridor Improvements – Allegheny and Westmoreland Counties)
- Bebout Road and East McMurray Road Intersection Improvements (Washington County)

The illustration below depicts a critical piece of the Laurel Valley Transportation Improvement Project in Norvelt, Westmoreland County that is currently under construction. This is the intersection of SR 981, SR 2021 and Hecla Road. The improvement removes a 5-leg intersection and implements a roundabout. It enhances safety and operations as well as accessibility and mobility for all system users. Note: this graphic is for illustration purposes only. The final configuration to be constructed may vary from the illustration.



The aforementioned safety projects are in addition to the region’s dedicated allocation of Highway Safety Improvement Program (HSIP) funding. The region averages approximately \$14.2 million per year (\$57.1 million total) in regional HSIP funds. Projects are selected yearly via a cooperative process between PennDOT, SPC and its planning partners. The region is also receiving \$15.6 million in statewide HSIP funds.

In order to receive HSIP funding, projects are rigorously evaluated based on expected safety benefit and historic crash data. Each project is evaluated based on its Benefit/Cost Analysis; Highway Safety Manual Analysis; number of fatal and injury crashes; the application of systematic improvements; improvements to local roads; and, deliverability. Based on the evaluation criteria, the projects selected demonstrate a significant potential safety return for the cost, within the current available funding.

Examples of projects funded with state and regional HSIP funds include:

- SR 2040/Seco Drive to Brownsville Road (Allegheny County)
- PA 38 Crash Avoidance Upgrades (Butler County)
- PA 65 East Washington Street Safety (Lawrence County)
- Liberty Avenue Improvements (City of Pittsburgh)
- SR18/SR21 Safety Improvements (Greene County)

Infrastructure Condition

SmartMoves Strategies:

1. Employ holistic planning for mobility and accessibility when developing and prioritizing projects. Make transportation improvements fit community context and enhance local quality of life.
2. Promote strategic infrastructure investment in communities that reduces physical exposure and vulnerability from natural hazards, including flooding and landslides.
3. Embrace emerging infrastructure innovations and technologies including planning, design, materials and construction processes for an adaptable and resilient built environment.

Investment in maintaining the region's existing infrastructure is the top priority in the region's long range transportation plan, as well as the PennDOT 2023-2026 TIP Investment Plan. Maintaining the existing system is the top priority in the 2023-2026 TIP for Southwestern Pennsylvania. Investing in existing infrastructure promotes sustainability in terms of long term system preservation and also reinforces SPC's commitment to revitalizing the region's existing communities to promote growth and economic development. These asset management projects often also provide accommodations for bicyclists and pedestrians, thereby helping to increase mobility and support modal choices in the region.

Over 41% (\$659 million) of the region's \$1.58 billion in programmed TIP funds are invested in reducing the number of poor bridges and the square footage of SD deck area in Southwestern Pennsylvania. This investment in the region's bridges will reduce the number of poor bridges by 266 bridges (12.9%); reduce the square footage of poor bridge deck area by 294,127 square feet and, reduce the number of weight posted bridges by 30 (8.3%).

The state-managed Pennsylvania Rapid Bridge Replacement (RBR) Program has replaced an additional 193 SD bridges in the region, reducing the poor deck area by an additional 276,243 square feet.



Investing in poor condition bridges has been a top priority for a number of years for the Commonwealth and the region. Some notable examples of major bridge rehabilitation to begin work over the next four years include:

- Karns Crossing Bridge (Butler County)
- Highland Park Bridge (City of Pittsburgh)
- McKeesport Duquesne Bridge (Allegheny County)
- US 422 Graff Bridge (Armstrong County)
- Rochester-Monaca Bridge (Beaver County)
- Layton Bridge (Fayette County)
- East Washington Street Bridge (Lawrence County)
- SR 18 over Chartiers Creek (Washington County)
- West Newton Bridge (Westmoreland County)

Due to nearly a 100% increase in funding from the BIL, locally owned bridges are also receiving a significant amount of investment in this TIP. While the number of poor state owned bridges has been steadily decreasing, locally owned poor condition bridges have remained fairly constant due to a lack of adequate federal funding for local bridges.

Some notable local bridges being rehabilitated or replaced on this TIP include:

- Fern Hollow Bridge (City of Pittsburgh)
- Swinburne Bridge (City of Pittsburgh)
- Patton Street Bridge (Allegheny County)
- Loughheads Bridge CB #9 (Beaver County)
- Kelly Bridge CO #24 (Butler County)
- North Gallatin Avenue Bridge (Fayette County)
- Wallace Road Bridge (Lawrence County)
- Pike Run Bridge #1 (Washington County)
- Fairwood Manor Bridge (Westmoreland County)

Investments in roadway condition will rebuild and rehabilitate approximately 385 miles of the region's highway system, including 134 Interstate miles. This investment will ensure the longevity of the region's highway system and foster economic growth through the safe and efficient movement of people and goods throughout the region. Major roadway rehabilitation projects in the region include:

- Campbell's Run Road Reconstruction (Allegheny County)
- SR 28 – Allegheny Valley Expressway Preventative Maintenance (Armstrong County)
- Smithfield Street Reconstruction (City of Pittsburgh)
- SR 65 Highway Restoration (Beaver County)
- SR 8 Resurfacing (Butler County)
- Indiana Bypass Highway Restoration (Indiana County)
- East Washington Street (SR 65) Restoration (Lawrence County)
- SR 66 Pavement Preservation (Allegheny and Westmoreland Counties)
- SR 88 Pavement Preservation (Washington County)

Similarly, the public transit system also needs to be maintained to ensure the safety of its users and the longevity of the system. Over \$476 million (shown by investment type below) of state and federal public transit funding is dedicated maintaining the public transportation system.

- Fixed Guideway Capital Maintenance and Rail Vehicles - \$290.5 million
- Capital Bus Facilities and Equipment - \$181 million
- Bus Signal and Communications Equipment - \$279,000
- Bus Stop and Terminal Maintenance - \$4.6 million

Congestion Reduction and Reliability

SmartMoves Strategies:

1. Integrate multiple forms of public/private transportation to provide increased mobility equitably for all users including those in underserved rural areas and disadvantaged populations.
2. Employ holistic planning for mobility and accessibility when developing and prioritizing projects. Make transportation improvements fit community context and enhance local quality of life.
3. Support and encourage transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), and particulate matter (PM).

Closely associated with condition of the infrastructure and safety of the transportation system is ensuring that the system is efficient and reliable for all users. A region's transportation system, like any complex system, cannot operate safely, efficiently, and reliably unless it is well maintained; but often, maintaining the system is simply not enough. This is particularly true as the environment in which that system resides continues to change and evolve. Older designs need to be upgraded or enhanced to keep up with changes in travel patterns, modal preferences, and advances in transportation technology and innovative design in order to keep the system



safe, efficient and reliable.

Planning and programming transportation investments at the corridor level enables SPC, PennDOT and our planning partners to take a coordinated approach to identifying system deficiencies. For example, the TIP invests over \$162.6 million (24 projects) in identified regional Congestion Management Corridors. Similarly, the Interstate Maintenance and Spike Programs (Appendix 9) invest \$953.7 million in funding on the SPC Interstate Highway System from 2023-2026; a portion of which is dedicated for the continued implementation of a plan to completely modernize Interstate 70 in Washington and Westmoreland Counties. Improvements to Interstates 376 and 79 are also included in the program. Examples of projects that alleviate congestion and improve reliability include:

- I-79/SR 910 Interchange Improvements (Allegheny County)
- Frankstown Avenue Traffic Signal Upgrades (City of Pittsburgh)
- SR 356 Park-n-Ride Expansion (Butler County)
- SR 356 Corridor Improvements (Butler County)
- US 119 Traffic Signal Upgrades (Fayette County)
- SR 88 Traffic Signal Upgrades (Washington County)
- US 30/Georges Station Road Intersection Improvements (Westmoreland County)

Investments in public transit and ridesharing also assist in relieving congestion of the region's roadway system. As illustrated in Appendix 8, the Public Transportation Program, regionwide, will purchase 373 buses and shared ride vehicles (\$137.1 million) for public transit service. To further support the reliability and efficiency of these public transit investments, there are 141 roadway and bridge projects (\$868.3 million) located on current public transit routes.

Reducing congestion, along with improving air quality, are the main goals of the federal CMAQ program. The 12 new CMAQ funded projects (\$35.3 million) in the TIP are estimated to reduce vehicle trips by 1,186 trips per day and vehicle miles traveled (VMT) by 10,305 miles per day, primarily through expansion of the region's active transportation network, enhancements to public transit service and traffic signal system upgrades.

Community Development and Economic Vitality

SmartMoves Strategies:

1. Integrate multiple forms of public/private transportation to provide increased mobility equitably for all users including those in underserved rural areas and disadvantaged populations.

2. Provide municipal education on land use best practices, Smart Growth principles, community development, transportation planning, and on existing mechanisms to leverage private sector development.
3. Promote strategic infrastructure investment in communities that reduces physical exposure and vulnerability from natural hazards, including flooding and landslides.
4. Embrace emerging infrastructure innovations and technologies including planning, design, materials and construction processes for an adaptable and resilient built environment.
5. Employ holistic planning for mobility and accessibility when developing and prioritizing projects. Make transportation improvements fit community context and enhance local quality of life.

SmartMoves places significant emphasis on enhancing our communities throughout the region. Through extensive public engagement during the planning process, it was quickly realized that the expansion of our regional trail network along with providing neighborhood connections to these regional trail facilities was important not only to the region’s urban areas, but to suburban, small towns, and rural areas alike. These connections increase the livability and vitality of the communities throughout the region by helping to create unique, livable areas with a sense of place that are accessible for all residents. This TIP, guided by the *SmartMoves* Strategies provides funding to numerous projects and programs that work to make these connections.

The safe and efficient movement of freight throughout Southwestern Pennsylvania and beyond is a top priority for the long term economic vitality of the region. Investment in the regional freight network increases access to many of the region’s communities and enhances opportunities for job creation and reinvestment in Southwestern Pennsylvania. The 2023-2026 TIP invests nearly \$644 million (109 projects) in projects that are within 1 mile of regional freight facilities (industrial, manufacturing, distribution, intermodal facilities, etc.). These investments will allow for more efficient movement of freight throughout the region, which will enhance the economy and create opportunities for additional community investment.

Notable examples of projects that will enhance our communities, promote economic vitality and facilitate freight movement in the region include:

- I-376 Corridor and Interchange Improvements (Allegheny and Lawrence Counties)
- Wilkesburg Transit Center Upgrades (Allegheny County)
- SR 28, Goheenville Dip Safety Improvements (Armstrong County)
- Monaca Gateway Corridor Improvements (Beaver County)
- SR 228/Freedom Road Corridor Improvements (Butler County)

- Penn Avenue and Smithfield Street Reconstruction Projects (City of Pittsburgh)
- Cast Iron Bridge Restoration (Fayette County)
- SR 19 - Waynesburg Betterment (Greene County)
- Saltsburg Avenue Hoodlebug Trail Connection (Indiana County)
- Union Township Sidewalk Extensions (Lawrence County)
- SR 88 - Charleroi Betterment (Washington County)
- Laurel Valley Transportation Improvement Project Sections I and II (Westmoreland County)

The implementation of adaptive traffic signal networks on critical corridors throughout the region assists in the movement of freight as well as moving people. Adaptive signal control systems coordinate control of traffic signals along arterial corridors. Advanced signal systems allow proactive traffic management by allowing traffic conditions to be actively monitored and adapted based on prevailing traffic conditions across all modes. Adaptive traffic signals also assist in fulfilling regional policy goals related to congestion reduction and reliability as well as environmental sustainability. Segments of US Routes 19 and 30, as well as State Routes 8, 50, 60 and 286 are scheduled to be upgraded to adaptive systems over the next four years. Over \$54 million in traffic signal improvements, many of which are along critical corridors in the region, are included in the 2023-2026 TIP.

The provision of bicycle and pedestrian facilities and improvements plays an important role in the economic vitality of communities, both large and small, across the region. Improving bicycle and pedestrian facilities in the region's communities can support local business and bolster tourism via intraregional connections such as the Three Rivers Heritage Trail and the Great Allegheny Passage. The 2023-2026 TIP will dedicate \$18.2 million in Transportation Alternatives Set-Aside Program (TA Program) funding to expand the bicycle and pedestrian network facilities such as sidewalks, bike lanes and shared use paths to connect or further expand existing facilities. Additionally, the SPC SMART Program will allocate an additional \$12 million in funds to increase the sustainability and livability of communities in the region. These are competitive funding programs and projects will be added to the TIP as they are selected.



The PennDOT Connects process also plays an important role in supporting economic vitality and community development. As discussed in Section 4, through the Connects process, local governments have the opportunity to inform PennDOT and planning partners of current and future plans for the community, contextual elements surrounding the project area and any other factors that may influence the planning and implementation of a particular transportation infrastructure improvement. This approach ensures the improvement being implemented will serve the community’s current and future needs.

Environmental Sustainability

SmartMoves Strategies:

- 1.** Invest in strategies that adapt to and decelerate the impacts of climate change. This includes investment in disaster preparedness, response, and recovery, as well as, creating awareness about climate change, its projected impacts, and regional strategies.
- 2.** Promote strategic infrastructure investment in communities that reduces physical exposure and vulnerability from natural hazards, including flooding and landslides.
- 3.** Conservation of the region’s natural resource assets and key tracts of land that enhance environmental quality, natural land connectivity, habitat corridors,

agricultural lands preservation and provides recreational opportunities for residents and tourists.

4. Promote and support sustainable regional water resource management and planning for water topics, such as stormwater, flooding, water quantity, water quality, and infrastructure systems.
5. Support and encourage transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), and particulate matter (PM).

Implementation

The protection and preservation of the natural environment are considerations that are taken into account early in the project development process. PennDOT's Linking Planning and NEPA (LPN) initiative focuses on identifying the most critical transportation infrastructure needs in planning and providing a consistent method of collecting information relating to purpose and need, project limits and characteristics, public participation, and potential environmental resource impacts that will provide a better understanding of the issues that may affect the project delivery schedule and budget. Through the state's established LPN process, SPC screens each candidate project during the TIP development process. SPC's practices in this field have been recognized as a best practice in the Commonwealth for the LPN process.

Landslides resulting from extreme weather are an ever increasing concern for Southwestern Pennsylvania, which is the most landslide susceptible area in Pennsylvania². There are currently 350+ active landslides in the region with an estimated repair cost of \$235 million. The 2023-2026 TIP dedicates \$65.4 million in funding to remediate 13 of the most critical landslides in the region. The \$65.4 million in TIP funds are in addition to and do not include the millions in A-409 District Maintenance funding that will be used to remediate landslides. Dedicating TIP funds to remediate landslides takes scarce funds away from other high priority TIP projects.

Along with congestion reduction, the other main component of SPC's Congestion Mitigation and Air Quality (CMAQ) program is the selection of projects that contribute to attainment or maintenance of the national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), and particulate matter (PM). The CMAQ program in the 2023-2026 TIP funds projects including development of a Wilkesburg Transit Center; development of mobility hubs and other active transportation facilities; traffic signal upgrades; TDM programs; and, corridor improvements.

² Delano, H. L., and Wilshusen, J. P., 2001, Landslides in Pennsylvania: Pennsylvania Geological Survey, 4th ser., Educational Series 9, 34 p.

In addition to the congestion reduction benefits discussed previously in the Congestion Reduction and Reliability Section, the newly approved CMAQ projects provide benefits to the air quality in the region by reducing:

- Ozone
 - Volatile Organic Compounds (VOC) by 19kg/day
 - Nitrogen Oxides (NO_x) by 566kg/day
- Carbon Monoxide (CO) by 125kg/day
- Fine Particulate Matter (PM_{2.5}) by 12kg/day

Reducing Delays in Project Delivery

SmartMoves Strategies:

1. Streamline federal, state and local project development and delivery across all phases.
2. Improve infrastructure efficiency through technology implementation in the development, design, construction, operation and maintenance.

Implementation

Ensuring that projects are delivered in a timely manner helps to reduce costs associated with the project development and delivery process and allows for the maximum utilization of scarce state and federal resources. SPC actively tracks the progress of projects and meets with local project sponsors to ensure they are fully aware of their roles and responsibilities in the project development process in order to meet their project development and obligation deadlines. During the summers of 2017, 2019 and 2021 SPC held a series of Project Delivery Workshops throughout the region. These workshops outlined the requirements and of administering a state or federal-aid transportation project. Additionally, SPC also provides assistance to local project sponsors by procuring consultant assistance in order to expedite the project delivery process for its TA and SMART programs.