2020-2022
UNIFIED PLANNING WORK PROGRAM
FOR SOUTHWESTERN
PENNSYLVANIA

July 2020

Southwestern Pennsylvania Commission
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Southwestern Pennsylvania Commission

2020

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SECTION I
SPC PLANNING OVERVIEW
INTRODUCTION TO SPC

Southwestern Pennsylvania is a ten-county region comprised of Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington and Westmoreland Counties and the City of Pittsburgh.

The region is physically and economically diverse, with urban, suburban and rural development patterns supporting an economic base ranging from world class, high-tech medical and biomedical research facilities to mineral extraction and agriculture.

Effective planning for a region of this size and diversity requires the cooperation and coordination of many planning partners working together toward a regional vision. SPC serves as the forum for regional planning efforts in the areas of transportation and economic development, working closely with the public, local municipal officials, county planning and development offices, ten transit operators, three Transportation Management Associations (TMAs), the Pennsylvania Department of Transportation (PennDOT) and dozens of other entities on the identification and implementation of a regional vision.

As the Metropolitan Planning Organization (MPO) for the region, SPC is required by federal law to develop and regularly update several transportation planning and programming documents, including a Long Range Plan (LRP), which establishes the long term vision, goals and strategies for the region; the Unified Planning Work Program (UPWP), which identifies the transportation planning activities to be conducted within each state fiscal year; and, the Transportation Improvement Program (TIP), which details the highest transportation project and program priorities of the region over a four-year period.

SPC uses a continuing, cooperative and comprehensive planning process to fulfill its transportation planning role for the region. Local transportation service providers, transit agencies, airport authorities, maritime operators, rail-freight operators, pedestrian and bicycle advocates, port operators, municipal officials, the business community and the public are all partners in the development and implementation of the regional transportation plan. In addition, PennDOT, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) are important partners in the design, funding and implementation of the TIP for the region.

Recognizing that the transportation system not only provides for the mobility of people and goods, but also affects patterns of growth and economic activity through accessibility to land, the SPC transportation planning process works to identify strategies that advance the long term transportation, community development and economic goals of the region. The integration of transportation and economic development planning requires cooperation with local municipalities, member counties, and other MPOs and planning entities in adjoining regions.

SPC is uniquely positioned to advance this coordinated, comprehensive regional vision. In addition to being the MPO for the region, SPC is also designated by the Economic Development Administration of the U.S. Department of Commerce as the Economic Development District (EDD) for the ten-county region. As the EDD, SPC develops a regional Comprehensive Economic Development Strategy (CEDS) for Southwestern Pennsylvania, assists in implementation strategies, and provides technical assistance to local governments in their economic development activities and programs.
The counties of Southwestern Pennsylvania are also within the region served by the Appalachian Regional Commission (ARC), a federal-state partnership designed to address the unique economic development and infrastructure development needs of the 200,000 square-mile Appalachian Region. To meet these goals, ARC helps to fund projects such as education and workforce training programs, highway construction, water and sewer system construction, small business start-ups and expansions, and development of healthcare resources. To strengthen local participation and ensure that funds are allocated in accordance with local needs and are used effectively and efficiently, ARC relies on a network of multi-county planning and development organizations, or Local Development Districts (LDDs). SPC is the designated LDD for Southwestern Pennsylvania.

SPC’s multiple federal designations (as MPO, EDD and LDD for the region) represent an unparalleled opportunity to create a comprehensive program linking transportation, community development and economic vitality initiatives for Southwestern Pennsylvania.

This comprehensive program is reflected in SmartMoves for a Changing Region, which ties the regional economic development strategy of the CEDS to the regional long range transportation plan through strategies, actions and projects that focus on the region taking advantage of our considerable existing assets and developing, supporting, and implementing projects and programs that advance our progress. It means investing in regionally-connected, seamless transit and new transit investments in key corridors and networks. It means developing modern support infrastructure that prepares the region not only for current technological advances, but also for the new technology being advanced in this region.

The plan is about creating and connecting people to opportunity. The opportunity can be physical tangible connections like improved regional transit or enhanced broadband connectivity. The opportunity can create connections to training for the jobs of the future that afford the region’s workforce family-sustaining job opportunities in new and emerging industries. The opportunity is about the region connecting with opportunities to invest in and take stewardship of our older communities, as well as investing in strategies that protect our environment and address climate change and resiliency.

Where SmartMoves sets the Vision for the region, the UPWP, the TIP, and the CEDS are the mechanisms through which the Commission develops short range programs to implement this Vision.

This document, the 2020-2022 Unified Planning Work Program, identifies transportation planning activities to be conducted within the 2020-2021 and the 2021-2022 fiscal years (July 1, 2020 through June 30, 2022) and establishes the priorities of the SPC transportation planning program for fiscal years 2020-2022.

As the region’s comprehensive transportation planning program, the UPWP provides a central source of information about all major transportation planning priorities so that decision-makers can base their public investment decisions on the most complete information affecting growth and development within the Southwestern Pennsylvania region.

The 2020-2022 Work Program identifies the individual programs and initiatives to be undertaken within five broad program areas: Transportation Program Development; Multimodal Transportation Planning; Transportation Operations & Safety; Data Systems & Modeling; and, Outreach & Coordination.
TRANSPORTATION PLANNING PROGRAM OVERVIEW

The UPWP planning activities cover a full range of transportation modes and planning functions. Many of these planning efforts rely on the availability of reliable, accurate and current data, including traffic forecasts, roadway condition evaluations, congestion assessments or air quality conformity assessments. As such, the acquisition and maintenance of data is a vital element of the SPC work program, and supports many of the UPWP projects identified in this two-year Work Program.

In addition to the federally-required plans and programs (the LRP and TIP) and their companion Air Quality Conformity findings and Environmental Justice analyses, the range of continuing UPWP activities includes active transportation planning, freight planning, transit planning, monitoring and tracking federal performance metrics, regional operations and safety planning, operation of a ridesharing program, and planning for Intelligent Transportation Systems (ITS), public outreach and engagement, and other planning activities. SPC also partners with PennDOT in conducting PennDOT Connects municipal outreach and training, collecting traffic and roadway information, participating in PennDOT planning studies, and providing other technical assistance to both PennDOT and county and municipal partners as needed.

The 2020-2022 Work Program document is divided into three sections. This introductory section provides a general description of the UPWP and the regional transportation planning process. Section II, Job Descriptions for Planning Projects, identifies the objectives, activities and products for each planning job. Section III, UPWP Funding Summaries, presents summaries of the sources that provide funding for the planning program as well as the budgets for individual planning projects.

SPC TRANSPORTATION PLANNING RESPONSIBILITIES

SPC has been charged with transportation planning responsibilities for Southwestern Pennsylvania since 1962, when it was created under the Regional Planning Law of May 29, 1956, P.L. 1845, as amended, and Section 3 of the Intergovernmental Cooperation Act, Number 180, July 12, 1972. In 1999, the Southwestern Pennsylvania Regional Planning Commission was renamed the Southwestern Pennsylvania Commission, or SPC.

SPC’s role in transportation planning as the Metropolitan Planning Organization (MPO) for Southwestern Pennsylvania was strengthened in 1991 with the passage of landmark transportation legislation, called ISTEA, which reinforced the regional LRP, TIP and UPWP as the planning foundations upon which federal transportation funding decisions were to be made. Subsequent transportation reauthorization legislation, TEA-21 (1998) and SAFETEA-LU (2005), and MAP-21 (2012) reaffirmed the key decision-making role of the MPO. Additional responsibilities are directed by the Federal Clean Air Act, which requires SPC to demonstrate that the emissions resulting from its transportation plans and programs will not exceed certain minimum standards.

In 2015, Congress enacted the Fixing America’s Surface Transportation (FAST) legislation. The FAST Act expands upon the eight planning factors from MAP-21, adding two additional factors that must be considered in the metropolitan planning program.
PLANNING EMPHASIS AREAS

The ten federal planning factors that must be considered in the metropolitan planning process are:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase the accessibility and mobility options available to people and for freight.
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
7. Promote efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhance travel and tourism.

In developing the 2020-2022 Work Program, SPC has identified projects and strategies that address these federal emphasis areas.

STATEWIDE PLANNING INITIATIVES

The Commonwealth of Pennsylvania also provides annual guidance for a number of primary planning activities and special initiatives that SPC incorporates into the annual UPWP. For Fiscal Years 2020-2022, these priority areas include: (1) Plans and Programs; (2) Supporting Planning/Programming Activities; (3) Project Delivery; (4) Land Use/Transportation Linkages/Economic Development/Modernization; (4) Highway Performance Monitoring and Traffic Data Collection; (5) Public Involvement and Outreach; (6) Local Technical Assistance Program (LTAP); and, (7) Program Administration.

These priority areas are included in the planning activities within the appropriate functional area of SPC’s transportation department. In some cases such as performance-based planning and programming, the tasks are disbursed through several of the department’s functional areas. The planning priority areas being addressed are noted at the beginning of each functional area section.

REGIONAL PRIORITIES IN TRANSPORTATION PLANNING

In fulfilling its commitment to meet the federal and state transportation planning mandates, SPC works with its members and partners to advance the Vision, Goals and Strategies of SmartMoves for a Changing Region and the strategies of the regional Comprehensive Economic Development Strategy into a single, multi-year work program that ties local transportation plans to other related plans and policies for the benefit of the region (See Exhibit One). SmartMoves sets the overall context for all of SPC’s planning efforts over the next two years.
During this UPWP, as depicted in Planning Milestones Table below, SPC will maintain and update the regional TIP, update the regional Safety Action Plan, and the Public Participation Plan (and companion documents). SPC will also participate in Federal Certification and FTA Triennial Reviews, which will call upon the expertise of each of SPC’s Functional Areas. SPC’s work program will also focus on advancing initiatives tied to the Strategies identified in SmartMoves, including:

- Regional collaboration and education of local governments in best practices for integrating transportation, environmental and land use planning.
- Adapting planning and programming to help address the impacts of extreme weather through resiliency and sustainability and greenhouse gas emission deceleration strategies.
- Improve infrastructure efficiency through technology implementation in project development, design, construction, operation and maintenance.
- Utilize the PennDOT Connects process to ensure holistic planning and context-based street design for each project so that community needs are discussed before projects are programmed on the TIP.
- The reinvestment in our older communities through various projects, programs and educational initiatives.
- Better coordination and collaboration among public and private transportation providers in order to provide more equitable transportation services in the region.

SPC continues to focus on project delivery tracking efforts to ensure the region’s scarce funding resources are maximized. SPC will continue to proactively engage local project sponsors to ensure their projects are being advanced in a timely manner. Benefits to enhanced project tracking include improved ability to monitor project programming and delivery; the ability to more quickly identify project delays; and, enhanced information for local decision-makers and the general public. The project selection process continues to be refined and enhanced to reflect current policies and priorities.

Federal requirements in performance-based planning and programming will continue to be a priority during this work program period. During the previous UPWP, SPC worked collaboratively with its planning partners to establish performance baselines, update planning agreements and adopt performance targets. Work during this program will focus on updating targets as necessary, developing reporting mechanisms to inform partners and the public of the progress being made toward the targets, as well as ensuring the programming of projects works to achieve the region and Commonwealth’s adopted performance targets.
## Unified Planning Work Program

**Fiscal Years 2020-2022**

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### Table 1: Planning Milestones

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<td><strong>Required Adoption</strong></td>
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<td><strong>Target</strong></td>
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<td>Air Quality Conformity</td>
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<td>Jun-23</td>
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<td>EJ Benefits and Burdens Analysis</td>
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<td>Air Quality Conformity</td>
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<td>Annual List of Federal Obligations</td>
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<td>PM2 - Asset Condition (biennial)</td>
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<td>Public Participation Plan</td>
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<td>Coordinated Transportation Plan (CTP)</td>
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<td>Congestion Management Process</td>
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<td>Active Transportation Plan</td>
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<td>Functional Classification/NHS Review</td>
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*Source: Southwestern Pennsylvania Commission*
Exhibit 1: The Regional Vision, Goals and Strategies

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

**Connected Mobility**
A world-class, safe and well maintained, integrated transportation system that provides mobility for all.

**Mobility for All – Equity Keeps Us Whole**
- Integrate multiple forms of public/private transportation to provide increased mobility equitably for all users including those in underserved rural areas and disadvantaged populations.

**High Tech Mobility – Connected Systems & Autonomous Vehicles**
- Modernize Supporting Infrastructure: Develop and deploy appropriate infrastructure to facilitate safe and efficient use of Connected Infrastructure as well as Connected and Autonomous Vehicles.
- Offset impacts associated with Connected and Autonomous Vehicles on safety, public sector revenue, congestion and local quality of life.

**Funding and Financing – Sustainable Funding**
- Fund additional transportation infrastructure through private sector partnerships, with user fees, value capture, and other appropriate mechanisms; broaden revenue tools available to local governments to fund infrastructure projects.
- Conduct education on the need for revenue increases as a continuing process, not a “one and done” endeavor; garner overall understanding of public infrastructure benefits, needs and subsequent support for needed infrastructure revenues.
- Develop a comprehensive regional plan for public transit connections, including the identification of a possible regional source for dedicated public transit funding to facilitate seamless linkages and cooperation across the region.

**Prioritize and Streamline – Faster Project Development & Delivery**
- Employ holistic planning for mobility and accessibility when developing and prioritizing projects. Make transportation improvements fit community context and enhance local quality of life.
- Streamline federal, state and local project development and delivery across all phases.

**Resilient Communities**
The revitalization of our communities will make us a magnet for new investment. Intensive investments in connectivity, walkable neighborhoods, and green infrastructure will attract business and residents to newer and older communities alike.
Resilient Communities – Elevate Community
- Promote institutional investment in older communities, repurposing versus demolition, and ensure that affordable housing is retained utilizing best practice models in the region for land use, vacant properties, and environmental strategies.
- Provide municipal education on land use best practices, “Smart Growth” principles, community development, transportation planning, and on existing mechanisms to leverage private sector development.
- Promote strategic infrastructure investment in communities that reduces physical exposure and vulnerability from natural hazards, including flooding and landslides.
- Embrace emerging infrastructure innovations & technologies including planning, design, materials and construction processes for an adaptable and resilient built environment.

Tackle Climate Change, Air & Water – The Earth Sustains Us
- 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.
- Conservation of the region’s natural resource assets & key tracts of land that enhance environmental quality, natural land connectivity, habitat corridors, agricultural lands preservation & provides recreational opportunities for residents and tourists.
- Promote and support sustainable regional water resource management and planning for water topics, such as, stormwater, flooding, water quantity, water quality, and infrastructure systems.
- 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).

Globally Competitive Economy
Strategic infrastructure investments and workforce training will make the region recognized as a global leader in technology and innovation.

Grow, Train and Retrain – Workforce for Change
- Grow job candidate market through initiatives such promoting the benefits of skilled labor positions, workforce reintegration of individuals with minor criminal records or previous drug use, recruitment & retention, and immigration.
- Train and/or retrain employees and new college graduates for the jobs in the region, as well as training for emerging technology opportunities, like Additive Manufacturing and Artificial Intelligence.
- Prioritize soft skills in training curriculums and provide flexible and easy to use funding for an “on the job training” approach geared to emerging and new technologies.

Prioritize, Improve, Support – Infrastructure Supports Us
- Prioritize infrastructure projects based upon their regional economic benefits, with emphasis on projects that promote the local utilization of energy and industry output.
- Improve infrastructure efficiency through technology implementation in the development, design, construction, operation and maintenance.
- Support the identification and development of an “Appalachian Storage Hub” to promote the local use of locally derived ethane feedstock.

Partner and Deploy – Technology Advances Us
- Utilize public-private partnerships to leverage private sector participation to identify, track, develop and deploy new technology advancements across the region. This includes communications, manufacturing and mobility.
- Provide High speed internet connectivity and availability everywhere through public policy, either funding or incentives. Use existing transportation corridors to facilitate delivery of broadband through the region.
SPC COMPOSITION

SPC membership consists of Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington and Westmoreland Counties and the City of Pittsburgh. The ten member counties and the City of Pittsburgh each appoint five voting members to the Commission. In addition to the local government members, four state agencies, the Port Authority of Allegheny County, and a representative from the SPC Transit Operators Committee are voting members of the Commission. Five other federal government agency representatives are active, non-voting participants.

The SPC Commissioners are responsible for the adoption of the three federally mandated transportation planning documents: the region’s long range plan, the Unified Planning Work Program and the Transportation Improvement Program.

To stay abreast of issues in the more than 7,100 square-mile region, SPC engages several key committees and forums, as well as an active public engagement program.

SPC COMMITTEES & FORUMS

EXECUTIVE COMMITTEE - The committee has a representative from each member jurisdiction, and is chaired by the SPC Chairman. There are three at-large representatives from the Commission membership, and a representative from each of the following state offices: Pennsylvania Department of Transportation, the office of the Governor and the Department of Community and Economic Development.

REGIONAL POLICY ADVISORY COMMITTEE – The Regional Policy Advisory Committee has an advisory role to the Commission, and is charged with making recommendations on policy issues and projects as requested by the Executive Committee. Membership mirrors the voting membership of the Commission, as appointed by the members, including other participants as requested by the Executive Committee to discuss special topics.

TRANSPORTATION TECHNICAL COMMITTEE (TTC) - The TTC deals exclusively with technical issues relating to transportation, and makes recommendations to SPC on a range of matters including the Transportation Improvement Program (TIP); transportation-related air quality plans; and, transportation issues. The TTC meets each month in advance of Commission meetings, and, as needed, creates sub-committees tasked with specific assignments. The TTC includes the planning directors of the ten SPC member counties and the City of Pittsburgh, and representatives of PennDOT Central Office, Pennsylvania DEP, and the Port Authority of Allegheny County. Non-voting members of the Committee include PennDOT District Offices, FHWA, FTA, EPA, TMAs, and the Allegheny County Bureau of Air Pollution Control.

TRANSIT OPERATORS COMMITTEE (TOC) - The TOC develops transit components and performance measures for the region’s long range transportation plan; develops and maintains the transit component of the Transportation Improvement Program; tracks the use of funds programmed on the TIP; and, addresses other common transit issues of regional interest. The TOC meets as needed. The TOC is chaired by a member of the Commission as elected by the TOC. The members include designated Transportation Management Associations and all recipients of federal and state transit assistance in the
region. Current members are the Port Authority of Allegheny County, Beaver County Transit Authority, Westmoreland County Transit Authority, Mid Mon Valley Transit Authority, Freedom Transit, Fayette Area Coordinated Transportation, Green County Human Services, Indiana County Transit Authority, Butler City-Township Joint Municipal Transit Authority, Town & Country Transit Authority, SPC’s CommutInfo Program, New Castle Area Transit Authority, Oakland Transportation Management Association, Airport Corridor Transportation Management Association and the Pittsburgh Downtown Partnership.

**ACTIVE TRANSPORTATION FORUM** - This advisory group meets on topics related to active transportation needs and issues in the region. The group facilitates SPC’s efforts to maintain intermodal accessibility throughout the region by providing localized information on pedestrian and bicycle needs and accommodations within the regional transportation system.

**TRANSPORTATION OPERATIONS & SAFETY FORUM** – SPC provides a central forum to coordinate transportation operations and safety planning in the region, including planning for Intelligent Transportation Systems (ITS) and efforts to reduce transportation-related deaths Toward Zero. The availability of a broad regional Transportation Operations & Safety Forum has helped to integrate these topics; improve communication between regional stakeholder groups in different specialty areas; and reinforce SPC’s role as the regional champion for transportation operations and ITS.

**TRAFFIC INCIDENT MANAGEMENT (TIM) LEADERSHIP COUNCIL** – To help regional organizations enhance the delivery of services and products for the purpose of improving responder safety, clearing incidents from the roadway as quickly and safely as possible, and improving the availability and reliability of interoperable incident communications, SPC facilitates a dialogue between leadership and practitioners including crash and homicide investigators, emergency medical services, fire and rescue, hazardous material handlers, law enforcement, media, medical examiners, road maintenance, service patrols, towing and recovery, traffic management centers, transportation, utilities, and others.

**FREIGHT FORUM** – The SPC Freight Forum provides a venue for air cargo, railroad, trucking and waterway freight service companies to discuss issues that impact the movement and handling of goods within the region. SPC staff uses information obtained at these meetings to better integrate freight and goods movement into regional transportation plans and programs, including the Transportation Improvement Program, Long Range Transportation Plan, Congestion Management Process, Congestion Mitigation and Air Quality Program and other regional initiatives.

The members’ planning and development directors, other advisory groups, and ad hoc committees are established to guide special initiatives or planning studies as needed.

**UPWP DEVELOPMENT PROCESS**

SPC’s 2020-2022 UPWP began to take shape during the development for the region’s long range transportation and development plan – *SmartMoves for a Changing Region*. *SmartMoves* contains 24 Strategies and associated action items intended on advancing the Regional Vision and Goals of the plan. This framework provides the overall guidance for tasks to be completed over the next two years by SPC and its planning partners.


SmartMoves employed a broad and robust public engagement campaign to help set the direction of the plan, the region, and activities to be undertaken by SPC and its planning partners across the region.

The campaign resulted in over 22,000 points of engagement from the public, the business community and partners. This engagement was instrumental in developing the plan and subsequently the tasks described in this Unified Planning Work Program that will ultimately work to advance and implement SmartMoves.

An integral part of this public and stakeholder engagement was a MetroQuest survey that was conducted to gauge the public’s priority in addressing the plan’s 24 Strategies (Exhibit 2). This survey was used as one point of input to inform the tasks included in this Work Program.

**Exhibit 2: SmartMoves MetroQuest Survey**

Considering input from SmartMoves as well as input and feedback from planning partners and SPC Leadership, SPC staff has developed a robust work program for the next two years that address our state and federal requirements while also integrating and advancing local priorities.

Table 2 depicts the collaborative process used to develop the UPWP that advances the regional transportation planning and programming process for the 10-county Southwestern Pennsylvania region.
### Table 2: UPWP Development Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2020-2022 UPWP Development Schedule</strong></td>
<td></td>
</tr>
<tr>
<td>By August 23</td>
<td>Memo to project managers requesting UPWP design input: identify PennDOT and SPC guidance, resource materials, and design schedule. Assign job write-ups for ongoing projects.</td>
</tr>
<tr>
<td><strong>Aug. 27 – Sept. 13</strong></td>
<td><em>Project Manager strategy / direction setting sessions</em></td>
</tr>
</tbody>
</table>
| Sept-Oct (ongoing) | Coordinate input from SPC committees and external sources as appropriate  
  - September TTC – Requested initial input from partners  
  - September – Meeting with Port Authority of Allegheny County  
  - October TTC – Present draft UPWP to solicit feedback  
  - October – Meetings with District Planners  
  - October SPC Executive Committee - Present draft UPWP to solicit feedback |
| By October 4      | Project managers submit draft job descriptions and budgets for ongoing projects for the two year program.  
  Begin Executive Director review of the completed preliminary report before FHWA/FTA submission.                                                                               |
| By October 30     | Submit the preliminary 2020-2022 UPWP to FHWA and FTA in accordance with the PennDOT Guidance.                                                                                                            |
| **End of November** | FHWA/FTA will respond with written comments by the end of November, expecting that their comments will be integrated into the planning partner UPWP before MPO/RPO Board approval.  
  Identify Candidates for Supplemental Funding. Assign to project managers for further development.                                                                                     |
| By December 3     | Memo to project managers from the Admin Director, requesting updates to UPWP project budgets for the current 2019-2020 fiscal year (anticipated).  
  Review 2019-2020 project budgets and revise as necessary.                                                                                                                           |
| By December 13    | Submit Revised Budget Worksheets for current 2019-2020 UPWP projects.                                                                                                                                     |
| December 20       | New candidate projects, job descriptions and budgets are due as assigned.  
  Project managers may submit revised project budgets for the two year program (changes from the October submission) for ongoing projects.                                                 |
| By January 3      | Submit (preliminary) Draft UPWP for review by Executive Director, including a fiscally-balanced draft budget table.  
  UPWP narrative updated to respond to FHWA/FTA comments. Budget tables fiscally balanced to available revenues, responding to project manager budget revisions |
| January 27        | Request Commission approval of Draft UPWP for submission to funding agencies (PennDOT, FHWA, and FTA).                                                                                                            |
UPWP ADMINISTRATION

UPWP design and administration requires a high degree of federal, state and local intergovernmental cooperation. SPC and its members identify regional needs and implement the planning activities. The SPC UPWP identifies these activities for review and approval by the funding agencies.

The federal government, through the U.S.DOT, provides regulatory guidance and approximately 80% of the UPWP funds. State and local governments provide the remaining funds as a required local match of the federal funds. PennDOT, SPC member governments, the Port Authority of Allegheny County, and other local transit operators provide the majority of the remaining local matching funds. In-kind and private foundation contributions provide the remaining match where possible.
SECTION II

JOB DESCRIPTIONS FOR PLANNING PROJECTS
TRANSPORTATION PROGRAM DEVELOPMENT
Unified Planning Work Program
Fiscal Years 2020-2022

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TRANSPORTATION PROGRAM DEVELOPMENT – OVERVIEW

The Program Development Group of SPC’s Transportation Department focuses on the processes that shape and implement the region’s long range plan (LRP), as well as the development and maintenance of the region’s Transportation Improvement Program (TIP).

The long range plan is a performance-based, 25-year transportation and development plan that sets the policy and investment foundation for all of SPC’s initiatives. The plan is required to be updated every four years, in air quality nonattainment and maintenance areas, in order to confirm the transportation plan’s validity and consistency with current and forecasted transportation land use conditions and trends.

The TIP is a short-range program, listing highest priority surface transportation projects and programs that will be undertaken over the next four years in the 10-county SPC region. The TIP is developed by a continuing, comprehensive and cooperative transportation programming process that involves various planning partners, local project sponsors, stakeholders and the public, and is the main implementation vehicle to advance the policies, goals and strategies found in the LRP. In addition to the LRP implementation efforts undertaken by the Program Development Group, initiatives undertaken by the Operations and Safety Group, Multimodal Planning Group, and the Data and Modeling Group, as outlined and described in other sections of the 2020-2022 Work Program, all play vital roles in the advancement of the LRP.

SmartMoves for a Changing Region’s Goals and Strategies are implemented through SPC’s programs such as the Regional Traffic Signal Program, Congestion Mitigation and Air Quality (CMAQ) Program, the Transportation Alternatives Set-Aside (TA Set-Aside) and Livability through Smart Transportation Program (SMART), the CommutInfo Program and the SPC Water Resource Center as well as roadway, bridge, transit and other multimodal investments. Included throughout the plan is the consideration of sustainability and resiliency in the system.

The PennDOT Connects process continues to play an important role in implementing the vision and policies set forth in the LRP. PennDOT Connects is intended to consider community priorities, as defined by adopted community plans, as well as contextual elements of the project area early in the project development process, before funds are programmed onto the TIP. PennDOT Connects will help to shape future LRP updates by providing a sustained, collaborative effort which will result in better defined local priorities, projects and ultimately better communities.

The Program Development Group develops and provides oversight to a number of planning programs and initiatives, all of which are directly related to the advancement and implementation of the LRP and TIP. These programs and initiatives, their objectives, planning activities, work products, and yearly budgets are further described in detail in this section of the 2020-2022 Work Program.
STATEWIDE PLANNING PRIORITY AREAS

The tasks found in this section of the UPWP address the following priority areas:

- **I-Plans and Programs:** Long Range Plan (LRP) and Transportation Improvement Program (TIP) administration and development, PennDOT Connects, non-traditional funding, and Performance-Based Planning and Programming.
- **II-Supporting Planning/Programming Activities:** Functional Classification and NHS designations, technical assistance, TA Set-Aside program administration, process reviews, sustainability and resiliency planning, P3 promotion, asset management, and participation in the 2021 TMA Federal Certification Review.
- **III-Project Delivery:** TIP/LRP fiscal constraint, PennDOT Connects/scoping field views, MTF project review and application assistance, and innovative finance.
- **IV-Land Use/Transportation Linkages/Economic Development/Modernization:** integrating freight considerations into LRP and TIP development, identifying livability and sustainability strategies via the SMART program and regional collaboration, local comprehensive planning assistance, training and best practices for local governments, resiliency planning, integrated/strategic corridor planning, and PennDOT Connects participation, training and support.
- **VI-Public Involvement and Outreach:** Continue to implement the new Environmental Justice Core Elements analysis and share results with PennDOT, PennDOT Connects integration, STC collaboration for Twelve Year Program updates, assist PennDOT and planning partners with outreach activities.

ROLES

- **Federal Highway Administration (FHWA)/Federal Transit Administration (FTA):** Provide technical assistance as well as general oversight, review and approval of the Metropolitan Planning Process for Southwestern Pennsylvania.
- **SPC:** In the LRP and TIP development processes, the role of SPC is to establish and facilitate a cooperative process for program development; the SPC adopts the documents for the region. Through the regional Transportation Technical Committee (TTC) monthly meetings, administers current TIP modifications. LRP amendments undergo a public review process and the TTC also reviews and recommends amendments to SPC. SPC takes a lead role in implementing the LRP with broad collaboration among the region’s planning partners, stakeholders and the public.
- **PennDOT Center for Program Development:** In TIP Development, the role of the PennDOT CPDM is to ensure that statewide procedural and fiscal guidance for TIP development is adhered to. PennDOT CPDM makes all Spike/Discretionary decisions and reviews the Draft TIP. PennDOT CPDM develops and updates the Statewide Interstate Maintenance Program. The PennDOT CPDM reviews and transmits the region’s LRP to federal partners for review and approval. SPC looks to the CPDM for supplemental funding, project delivery guidance and technical assistance in implementing the region’s LRP.
- **PennDOT Districts:** In TIP and LRP development, the Districts’ role is to share information regarding asset conditions, safety conditions, and traffic operations presenting an advanced list
of priority needs for the operation, preservation, and reconstruction of the state highway and bridge system within the District. The District Programming Units conduct and present carryover analysis and best fit optimization of new project candidates that have been prequalified for the TIP. Districts take the lead in coordinating and conducting PennDOT Connects activities.

- **Member Planning Departments:** In LRP and TIP development, the county/city planning departments’ role is to communicate the priority needs regarding maintenance and upgrade of the transportation network in the county/city, including on state, county and municipal infrastructure assets. Member planning departments are to provide input on changes and status of county/city and municipal comprehensive plans, zoning ordinances, and planned development to determine their effects on early transportation planning decision-making and subsequent TIP programming.

**TRANSPORTATION PROGRAM DEVELOPMENT – RESULTS FROM CURRENT PROGRAM**

The current long range transportation and development plan, *SmartMoves for a Changing Region*, was adopted on June 24, 2019. The plan, which was developed through a robust public involvement process, developed a series of regional strategies.

*SmartMoves* continues to emphasize investment in the maintenance and preservation of the existing transportation system, a theme that is also the top priority in the current 2019-2022 TIP and the draft 2021-2024 TIP. Other significant investments are made in safety and operations, as well as improvements that foster economic growth, enhance livability, mobility and connectivity in communities throughout the region, and provide residents with sustainable, multimodal transportation choices.

The following is a sample of plan implementation activities that were advanced in the 2018-2020 Work Program:

- Through a robust and inclusive public process, SPC developed and adopted a new Regional Vision, Goals and Strategies as part of the development of the *SmartMoves* long range plan.
- Worked with the communications staff to facilitate a robust public process that included SPC member Public Participation Panels, member counties, municipalities, the public, business community and stakeholders, neighboring regions and adjoining states to gather input and feedback throughout the LRP process.
- Utilized Expert Resource Panels to assist in identifying Forces of Change that have the ability to affect the region now and into the future. These Panels formed the early basis for the Vision, Goals and Strategies that drive *SmartMoves*.
- Continued use, enhancement, and development of Planning and Environmental Linkage tools including SPC’s Regional Ecological Framework and a GIS-based Wetland Mitigation Tool developed by SPC. SPC successfully used these tools in the development of the Planning and Environmental Linkage aspects of the LRP.
- Continued LRP implementation through use of SPC’s committee structure, including Freight Forum, Active Transportation Forum, Regional Operations & Safety Forum, Transit Operators Committee and Transportation Technical Committee.
• Completed work on the Northern Washington County Corridor-Based, Small Area Transportation Plan.

During fiscal years 2018-2020, SPC maintained the 2019-2022 TIP and also developed the draft 2021-2024 TIP. These documents depict a clear linkage between the investment policies and regional goals set forth in the LRP. For example, the priority of properly maintaining the existing transportation system was maintained as a top priority in the 2019-2022 TIP.

In 2018, the target setting process for the federally-mandated transportation performance measures, instituted in MAP-21, has begun to be set in place by state DOTs and MPOs throughout the United States. SPC is closely collaborating with PennDOT and our planning partners to comply with the target setting and performance measure implementation requirements. This effort will continue into the 2020-2022 Work Program and beyond. The practice of performance-based planning and programming will continue to play a vital role in how state and federal transportation funds are allocated in the Commonwealth and in the region.

The following is a sample of the TIP implementation activities that were advanced in the 2018-2020 Work Program to maintain the 2019-2022 TIP and to develop the 2021-2024 TIP:

• Monitored and maintained fiscal constraint of the 2019-2022 TIP, provided review of modification requests, documented amendments and administrative changes to the TIP, and provided materials for regular TOC and TTC meetings.
• Participated in multiple PennDOT-led, local and statewide planning efforts, including numerous PennDOT Connects meetings and project scoping field views.
• Coordinated and synthesized early public input for the draft 2019-2022 TIP with the Twelve Year Program (TYP) update conducted by the State Transportation Commission.
• SPC conducted and facilitated 12 Project Development Work Group meetings as part of development of the 2021-2024 TIP, completed Linking Planning and NEPA (LPN) forms for candidate projects, developed an interactive mapping program and mapped all TIP candidate projects, and screened all new candidate TIP projects against the adopted performance measures in the LRP.
• Coordinated public input for the Draft 2019-2022 TIP with the Twelve Year Program (TYP) update conducted by the State Transportation Commission.
• Held three rounds of Public Involvement Panel (PPP) Meetings to gather input into the TIP development process.
• Completed the solicitation, evaluation and selection of projects for the SPC Congestion Mitigation and Air Quality Program, the SPC Transportation Alternatives Set-Aside program, and the Livability through Smart Transportation (SMART) program.
• Used Decision Lens® in the technical evaluation of projects to assist in the decision-making process for the CMAQ, TA Set-Aside and SMART Programs.
• Conducted four regional workshops to educate and aid local project sponsors in potential state and federal funding programs open to local sponsors and in delivering federal and state funded transportation improvement projects.
• Participated in both the statewide Financial Guidance and General and Procedural Guidance Work Groups.
- Conducted a Benefits and Burdens Analysis on the 2021-2024 TIP in accordance with federal Environmental Justice and Title VI requirements.
- Completed an Air Quality Conformity Analysis of the 2021-2024 TIP as required by U.S. Department of Transportation and the U.S. Environmental Protection Agency.
- Completed a 30-day public comment of the 2021 draft TIP and processed all related comments.
- Adopted a fiscally constrained 2021-2024 Transportation Improvement Program for the Southwestern Pennsylvania region.
LONG RANGE PLAN IMPLEMENTATION

ESTIMATED COST:

<table>
<thead>
<tr>
<th></th>
<th>2020-2021</th>
<th>2021-2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Highway Administration</td>
<td>$446,080</td>
<td>$445,440</td>
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<tr>
<td>Federal Transit Administration</td>
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<td>PennDOT</td>
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<tr>
<td>SPC</td>
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<td>$29,680</td>
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<tr>
<td>Other</td>
<td>$65,000</td>
<td>$65,000</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>$697,000</strong></td>
<td><strong>$696,000</strong></td>
</tr>
</tbody>
</table>

TASK DESCRIPTIONS

*SmartMoves for a Changing Region* 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, the specific projects and investments that can be advanced with revenues that are reasonably expected to be available during the life of the plan.

*SmartMoves* also established a performance-based foundation for regional transportation investment decisions consistent with current federal guidance. The Moving Ahead for Progress in the 21st Century Act (MAP-21) introduced requirements for performance-based planning and integrated performance management into many federal-aid transportation programs. Under MAP-21, states and regions were required to establish measurable performance targets in support of national goals for Safety, Infrastructure Condition, Congestion Reduction, System Reliability, Freight Movement and Economic Vitality, Environmental Sustainability, and Reducing Delays in Project Delivery. These requirements continue with the FAST Act.

National performance measures associated with these federal goals are under development via a multi-year intergovernmental process. As federal performance measures become effective, states and MPOs will define and adopt performance targets for each performance category (Safety, Asset Management and System Performance). Progress on achieving these targets will be reported every two years by the states (yearly for safety). MPOs are to report on the performance measures, the targets and progress toward target achievement every four years in each LRP update.

The Program Development Group, along with the Safety and Operations Group and the Data and Models Group will all continue to play important roles in the performance-based planning and programming (PBPP) process for SPC and the region at-large.

The implementation of the LRP is a multifaceted endeavor for translating the plan’s policy goals, Strategies, and Regional Vision into measurable, achievable actions that are implemented through close
collaboration and coordination among SPC’s federal, state and local planning partners as well as the public.

The next LRP is slated to be adopted in 2022. When needed, amendments and updates to SmartMoves will be considered and updated as necessary between regular plan update cycles.

1. Long Range Plan

Objective:

SmartMoves (June 2019) initiated multiple new or modified processes - transportation system needs assessment, federal performance management requirements, financial planning, resource allocation, and improved project evaluation/project prioritization practices - and incorporated required performance target setting and reporting advances cooperatively with PennDOT within SPC’s growing Transportation Performance Management (TPM) planning framework. The plan includes a needs-based overview of the region’s transportation system based on improved asset management processes.

SPC will begin to develop the region’s next LRP, which is slated for adoption in June 2023. This plan will build on the strong foundation for performance based planning and programming and broad regional collaboration that was developed by SmartMoves. Plan implementation efforts will continue to advance the development of planning tools, data systems, and analytical and public processes that focus on transportation system performance, accessibility and mobility, equity, economic growth, community investment and sustainability for Southwestern Pennsylvania.

Planning Activities:

Research and Peer Review – The development of the update to SmartMoves for a Changing Region will begin by conducting a peer review of other MPO long range plans and other current best practices in transportation planning. The region’s planning directors could be used as a sounding board to review the current long range plan development process, as well as to review research and recommend a preferred approach to the next long range plan.

- Outreach and Engagement – SPC will utilize a multifaceted outreach and engagement approach that generates interest, informs, and educates stakeholders and the public using a mix of traditional and modern communication tools that reach diverse audiences and help the public understand and connect with the elements of the LRP. This includes taking advantage of engagement opportunities at existing public events across diverse geographies and demographic groups and providing greater issue and topic education throughout the planning process.

- Performance Measurement, Target Setting and Reporting – The LRP will build on the foundation of performance-based planning and programming established in SmartMoves and will focus on continuing the implementation of PM1, PM2, PM3, and
Transit federal performance metrics as well as exploring how these methodologies may be useful beyond the original Interstate and NHS applications. Over time and with the consistent application of planning resources these improved processes might be expected to facilitate better management practices and system performance results covering all segments of the region’s intermodal transportation system.

- **Investment Analysis and Financial Strategies** - A primary goal for the SmartMoves Investment Plan – matching available transportation revenues to transportation system needs – has been met in the near-term in the constrained project list. The project list reflects an investment mix that is carefully balanced; it reasonably supported performance targets across the complete range of plan investment categories. In the longer-term, and in future LRP updates however, the goal of matching revenues with needs has potentially far-reaching effects because the Investment Plan also identified an enormous revenue gap where available revenues cover only about 30%-40% of total transportation needs.

In the next LRP update, a comparison of alternative means to maximize mobility, livability, quality of life, and the movement of people and goods throughout the region will be used to maximize the region’s effectiveness in adapting to change. Through Strategies identified in SmartMoves, and work undertaken during this Work Program, staff will research and explore best practices that examine sustainable funding strategies - including an assessment of transportation needs, ongoing performance results, and a financial planning framework that provides a multifaceted and increasingly detailed view of the overall needs of the transportation system.

**Work Products:**

- A state of the practice, federally-compliant long range transportation and development plan for the Southwestern Pennsylvania region.

2. **Transportation Performance Management**

SPC is implementing a comprehensive evaluation system to inform the regional transportation planning process as a response to federal and state guidance and requirements for performance-based planning systems. This integrated Transportation Performance Management (TPM) planning process will be used to better identify and address critical needs in the system and strategically recommend the most appropriate investments to maximize our federal, state and local transportation funds. Primary tasks include an ongoing evaluation of transportation system needs; implementation of a comprehensive regional asset management process (NHS, federal aid, other state networks); collaboration with PennDOT on federal performance management requirements (PM1, PM2, PM3 and transit); and, an evaluation of significant performance risks to the regional transportation system (physical deterioration, transit services, safety, travel demand) at the current level of investment. The following sections identify the planning activities associated with these primary tasks. Additional support activities are included in other UPWP jobs – Safety and Operations, Multimodal Planning, Freight Planning, Data Systems and Modeling. Identified planning tasks and activities will in many cases build upon practices already in place that were used during the development of SmartMoves.
2.A. Transportation System Needs Assessment

Objective:

This task will advance a multifaceted planning process: evaluate overall transportation system needs; establish a planning framework for comparing cross-asset transportation system performance for each investment category; evaluate current performance levels (each investment category); evaluate performance for additional networks (other federal aid/other state networks); identify useful investment strategies (each category, including associated measures of effectiveness); identify total investment need at selected thresholds (minimum acceptable, maintain current performance, good performance); and, incorporate measures supporting life-cycle cost (LCC) and preservation-priority maintenance practices into SPC planning processes. The improved evaluation tools and processes will better predict the types of future investments that will be needed while providing improved support materials to guide future transportation decision-making. Some of these tools and processes might be useful to SPC’s planning partners or participating local governments.

Planning activities necessarily include technical support to review and adjust roadway functional class designation as well as roadway segments defining the NHS network.

Planning Activities:

- Coordinate LRP input from SPC Planning Groups - Data and Models, Safety and Operations, Multimodal Planning and Transportation Program Development. Enhance planning processes and activities to better evaluate and document transportation system needs and anticipated performance levels for the region’s transportation system.
- Evaluate the total system needs for each LRP investment category.
- Identify “good” performance levels for asset condition / state of good repair / network performance for each investment category. Identify minimum acceptable performance levels as well. Normalizing performance thresholds across disparate investment types is necessary as a first step in directly comparing performance results.
- Identify total investment need (at selected policy thresholds): to maintain current performance levels; to remain above minimum acceptable performance; and, to reach the good-level performance threshold.
- Monitor current condition (current performance level) for each LRP Investment Plan investment category – multiple performance measures may be appropriate depending on the case: highway safety, transit safety, infrastructure condition, transit state of good repair, mobility and accessibility, reliability, modal choice, freight movement, congestion and air quality.
- Identify priority implementation strategies and/or activities associated with each investment category; include relative “measures of effectiveness” for each strategy or activity to evaluate potential improvements or negative changes associated with various investment levels.
Monitor the performance of the federal aid highway network and other state highway networks in addition to the current federal requirements for the interstate system and NHS (non-interstate).

Continue development of Asset Management (AM) processes and tools: Baseline, Current and Forecast Physical Conditions for Pavements and Bridges; Network based Needs Summaries (all networks).

Ensure that SPC evaluation processes are based on life-cycle costs and are consistent with PennDOT LCC practices. Incorporate pavement age/life expectancy factors identified in PennDOT’s performance report.

Determine the most-effective investment level for a preservation-priority strategy recognizing the still-considerable backlog in the SPC region of “fix-it-first” pavement and bridge projects.

Refine, in cooperation with PennDOT, SPC’s tools and processes for forecasting bridge and pavement conditions. Consider District-based standard cost data for preservation, rehabilitation, replacement, and improvement costs. Determine the timing and cost for the next recommended preservation treatment and the best alternate treatment timing and cost, as well, if the recommended treatment is not funded or cannot be completed in a timely manner. Integrate these factors into SPC’s AM planning and analysis routines.

Document estimated needs in a Region Needs Assessment Report; also document improved evaluation processes in an MPO planning guide.

Identify opportunities to work with PennDOT and local government partners, developing and providing planning guidance, technical assistance and tools as appropriate to facilitate the use by planning partners of needs-based and performance-based planning techniques. Tailor support materials for contextual use: county, municipal or corridor.

Identify and integrate into the LRP as appropriate quality of life performance measures and non-transportation measures.

Work with FHWA, PennDOT and planning partners to update the NHS (non-Interstate) highway network in the region.

Work with PennDOT and SPC planning partners to update the Functional Classification system as requested or when necessary due to a new roadway being constructed or when a major development alters regional traffic patterns.

**Work Products:**

- SWPA Region Needs Assessment Report, including baseline condition, current condition, identified performance thresholds for minimum and good condition, and investment level required to reach a desired performance level (in progress this UPWP, targeted completion in early 2023).

- Summary of useful strategies to meet identified transportation needs, measures of effectiveness for each strategy, including testing for performance impacts at selected investment levels (January 2021).
• An enhanced process with supportive data systems and analysis tools for assessing, reporting and tracking the condition and performance of the transportation system and forecasting / testing selected improvement strategies in response to LRP policy goals, anticipated TIP investments, and required federal performance measures (ongoing).

• AM Program Needs Estimates, subset of the Region Needs Assessment Report. Identifies cost estimates for multiple network-based Pavement and Bridge investment categories (annual updates for selected investment categories completed over a three year cycle).

• Briefing materials for the Commission, planning partners and the public.

2.B. Federal Performance Management

**Objective:** MAP-21 and the FAST Act introduced federal performance requirements and established Transportation Performance Management (TPM) rules for both highway programs and public transportation. The TPM process uses system data to support investment and policy decisions to meet national transportation performance goals. A more complete description of SPC’s performance-based planning (PBPP) framework is provided in the SPC TIP (Appendix 3) and SmartMoves (Appendix 2). PennDOT, SPC, regional transit agencies and other planning partners work together in implementing mutually-determined performance targets in identified areas (PM1, PM2, PM3 and Transit, as identified below). The PBPP process includes Data Collection and Analysis, Coordinated Target Setting, and Reporting on Progress. Adopted targets must be consistent with other federal, state and regional planning efforts.

**Planning Activities:**

**General**

• Develop an SPC System Performance Report documenting regional transportation system performance in accordance with federal performance measure requirements. The report must include baseline conditions, targets, and progress toward achieving the performance targets (compare current conditions to baseline) within identified timeframes.

• Include similar information in MPO-adopted LRPs and TIPs. SPC recently adopted SmartMoves in June 2019; its next LRP is scheduled for July 2023 (beyond this UPWP period). The 2023-2026 TIP is scheduled for adoption in June 2022.

**PM1 (Highway Safety Performance Measures)**

• Ensure adequate SPC representation on the PennDOT Safety Planning Work Group, Planning Partners meetings and conference calls to provide input into PM1 target setting.

• Review statewide and planning region safety data provided by PennDOT and review their performance findings; determine whether to adopt state targets or use SPC-developed regional targets.
• Provide assistance to PennDOT and respond as appropriate to re-assess and modify safety improvement strategies and revenue/investment strategies if an FHWA determination of significant progress is not established during their review of PA safety performance targets.

**PM2 (Pavement/Bridge Performance Measures)**

• Ensure the conduct of SPC’s AM planning activities is consistent with the PennDOT Transportation Asset Management Plan and is coordinated as appropriate with the PennDOT District Planners.

• Review the updated PA Twelve Year Program and regular AM performance reports to determine their impact on the region’s AM performance targets and TIP development project selection priorities.

• Participate in PennDOT’s AM Work Group activities, planning partner meetings and conference calls to provide input as appropriate into PM2 target setting.

• Determine whether to adopt PennDOT AM performance targets as the region’s PM2 pavement and bridge condition targets. Develop regional targets as appropriate.

• Develop an MPO PM2 report by October 2020. The report must include baseline conditions, targets, and progress (current conditions) toward achieving the performance targets.

• Respond to, re-assess and modify AM investment priorities and/or revenue strategies if an FHWA determination of significant progress cannot be made during their federal review of state PM2 performance.

**PM3 (Transportation System Performance Measures)**

• Coordinate with PennDOT as they track the PM3 measures over the next two years. States are permitted to adjust their 4-year targets at the midterm of the performance period, representing data through 2019 in a report due to FHWA by October 1, 2020.

• Assist as requested as PennDOT coordinates any updates to the performance measures with the Planning Partners.

• SPC will also track the annual PHED and Non-SOV travel measures and revisit the estimated established 4-year targets at the mid-term period (October 2020).

• Evaluate and explore accuracy and utilization of alternate data sources for the Non-SOV Travel measure such as the Make My Trip Count Survey.

**Transit Performance Measures**

• Monitor and share public transportation performance management information (baseline conditions, targets, progress) within SPC’s broader role of tracking performance of the region’s overall transportation system. Port Authority shared TPM information is generated through internal Port Authority management systems. Fifteen small Tier II agencies shared TPM information is provided through small public transportation agency participation in the PennDOT-managed TAM Group Plan and PennDOT’s Bureau of Public Transportation (BPT) Capital Planning Tool (CPT).
Work Products:

- SPC System Performance Report, including required PM1, PM2, PM3 and Transit measures, baseline condition, targets and an assessment of progress.
- Inclusion of required TPM information in the 2023-2026 TIP.
- Adopted PM1, PM2, and PM3 performance targets developed cooperative processes with identified statewide planning partners/agencies.
- Briefing materials for the Commission, planning partners and the public.

3. LRP Investment Plan

The LRP Investment Plan is supported by two multifaceted processes - a financial planning process and a program development process. The financial planning framework includes multiple steps: identify available revenues, compare revenues with total needs, identify an approach to balance resource allocation, and identify optimal investment ranges for 14 investment categories to help inform initial project selection. SmartMoves Plan (Appendix IV) includes a description of the program development process and a fiscally-constrained project list as developed by SPC Work Group meetings at each PennDOT District. The financial planning and program development processes are integrated through the District Work Groups, where prioritization decisions sometimes lead to project-based adjustments that affect the proposed investment balance across categories.

Planning support for the LRP Investment Plan during the 2020-2022 planning period focuses on maintaining the LRP project lists while improving the planning processes themselves in preparation for the next plan update. Project list maintenance is complicated by potential risks to existing federal and state funding sources (Risks to Transportation Funding in Pennsylvania, February 2019) including the scheduled expiration of the FAST Act, which controls federal transportation funding authorizations. Reductions in available revenues that may occur if these risks are realized would then be reflected in a future TIP development process that also requires an amended LRP Investment Plan. FAST Act reauthorization or extensions might result in either increases or reductions in revenues, both of which would require an updated Investment Plan. There is also a significant prospective enhancement to the program development process, where testing of potential scenario planning techniques and tradeoff analysis should be helpful in comparing costs and benefits of selected investment mixes. Process results could be useful by quantifying the benefits of proposed investment options in TIP planning, potential work with legislators on the benefits of selected revenue increases and advances in communications support for public education and awareness.

SmartMoves sets forth a sustainable funding strategy that requires additional SPC planning attention to related processes. The sustainable funding strategy identifies related actions for SPC to integrate into its planning framework: matching revenues to needs, identifying new funding sources, and promoting public private partnerships. Additional actions identify raising public awareness as well as legislative outreach. Planning system improvements are expected to support development of reliable and persuasive communications materials, demonstrate that existing revenues are properly and effectively spent, additional revenue sources are being accessed as successfully as possible, and costs are being appropriately managed. With a solid demonstration
that the entire transportation funding gap cannot be addressed through existing means, the planning processes identified in section one (TPM) and this Investment Plan section are integral to development and support for a Commission theme to become more proactive on revenue.

3.A. LRP Financial Planning Framework

**Objective:** As noted earlier the primary emphasis of the financial planning framework within this section of the LRP Investment Plan includes multiple steps supporting the development of the fiscally constrained LRP project list: identify available revenues, compare revenues with total needs, identify an approach to balance resource allocation, and identify optimal investment ranges for 14 investment categories to guide initial project selection.

**Planning Activities:**
- Identify Available Revenues for the TIP, LRP Stage 2 and LRP Stage 3 periods. Update revenue estimates as appropriate. Identify and monitor potential risks to these revenue sources. Further develop (and document) the processes and tools for assigning revenues to investment categories.
- Update Investment Gap Tables periodically as ongoing PennDOT-SPC collaboration on asset management (AM) costs improves SPC AM needs estimates.
- Improve the investment strategy/approach to balance resource allocation across 14 investment categories. Test scenario planning techniques and tradeoff analysis, and integrate them into the LRP Financial Planning Framework to optimize the Investment Plan’s investment mix.
- Develop communications materials to share appropriate information with the Commission, planning partners, and the public as part of a public awareness priority.
- Review Major Project Financial Plans as requested.

**Work Products:**
- Revenue estimates for TIP and LRP, identified by funding source and for the region and for each PennDOT District. As needed with amended TIP/LRP.
- Improved resource allocation process; tools for scenario planning and tradeoff analysis.
- Updated Investment gap tables for region, each PennDOT District, periodic update, based on anticipated improvements to needs estimates.
- Updated Investment Plan Summary, w/ LRP amendment.
- Review of Major Project Financial Plans as requested.
- Briefing materials for the Commission, planning partners and the public.

3.B. Long Range Plan Project Lists

**Objective:**
Planning support for the LRP Investment Plan during the 2020-2022 planning period focuses on maintaining the LRP project lists while improving the program development process in anticipation of the 2023 LRP update. Project list maintenance will be impacted by identified funding risks including the scheduled expiration of the FAST Act. Any changes in revenues would
then be reflected in a future TIP development process that also requires an amended LRP Investment Plan. Maintain SPC LRP consistency with the 2023 TIP financial guidance. Begin preparations for the 2023 LRP project list development.

Planning Activities:
- Maintain the fiscally-constrained project lists.
- Determine if adjustments in the 2019 LRP project list and line item amounts are necessary to maintain fiscal constraint.
- Develop approach for 2023 LRP project list development.

Work Products:
- Updated fiscally-constrained LRP project list.

4. Infrastructure Resiliency

Objective:

Consistent with resiliency related strategies detailed in SmartMoves for a Changing Region, improve the resiliency and reliability of the region’s transportation infrastructure with respect to vulnerabilities posed by extreme weather related events that are projected to show long term increases in magnitude and frequency. Planning activities in this area will focus on adopting or developing tools, strategies and processes that can assess the vulnerabilities and impacts associated with extreme weather events on the transportation system and integrate those tools/strategies into the transportation planning process. In the SPC region, the extreme weather vulnerabilities concerned are predominately those associated with increased frequency and magnitude of precipitation events and their resulting impacts.

Planning Activities:
- Actively participate in the next phase of PennDOT’s extreme weather resilience efforts including consultation and coordination with members of the PennDOT Central Office extreme weather resilience initiative, focusing on assisting in the implementation of the planning related recommendations of the study.
  - Use tools developed by PennDOT that identify historic vulnerabilities and integrate their use in the SPC transportation planning process for the LRP and TIP - PennDOT Road Closure Reporting System (RCRS), PennDOT One-Map, PennShare layers, SPC layers, etc.).
  - Assist, where requested, in the development of planning tools that evaluate the historic vulnerability of existing infrastructure using the RCRS data and other sources.
  - Investigate methods to integrate resiliency considerations into asset management. Encourage the use/adaptation of these methods for asset management within the SPC PennDOT Districts and work to extend methods to local asset management in the region.
• Utilize SPC’s landslide susceptibility model to conduct vulnerability analysis on the transportation network and transportation assets within the region.

• Continue to track federal and state agency climate change scenario projections and disseminate the information to planning partners in the region.

• Enhance cross-departmental activities with SPC’s Water Resources Department in addressing localized stormwater management activities and best practices by providing municipal training and technical assistance through the LTAP Program.

• Identify methods to better monitor and document the TIP costs associated with extreme weather related events (flooding and slides).

• Support resiliency planning in the SPC region including involvement in county hazard mitigation plans and county comprehensive plans.

• Examine and implement methods to adapt planning and programming to help address the impacts of extreme weather through resiliency and sustainability and greenhouse gas emission deceleration strategies.

• Formalize methods to include resiliency and vulnerability information about planned TIP projects as part of PennDOT Connects municipal outreach.

• Collect data from county hazard vulnerability assessments that are related to information on roadways, bridges and other transportation infrastructure such as railways and public transportation assets that are vulnerable to weather-related hazards such as flooding, high rainfall volumes, landslides, and mine subsidence.

• Continue to research resiliency planning activities and vulnerability assessment methodologies as well as adaptation and mitigation approaches pertaining to impacts on the transportation system by flooding, landslides, and mine subsidence.

Work Products:

• Mapping to depict the areas and the major transportation infrastructure in the region that have historically been most vulnerable to extreme weather (flooding and landslides).

• Data/statistics conveying the impact and cost of extreme weather on the SPC TIP.

• A landslide vulnerability report and GIS layers summarizing the potential impact of highly susceptible landslide areas on the transportation network and transportation assets in the SPC region.

• Methods to incorporate resiliency concepts into asset management and pre-TIP planning, including consideration of local assets.

• Communication materials summarizing and sharing current climate assessments, adaptation strategies, stormwater management approaches, landslide susceptibility, impact on the SPC TIP, and vulnerability assessment methods.

• Briefing materials for the Commission, planning partners and the public.
5. Planning and Environmental Linkage

Objectives:

Develop processes and tools that can be applied to programs and projects in order to develop transportation infrastructure in a way that maintains and enhances the cultural and ecological value of the region. Patterned after federal Planning and Environmental Linkage (PEL) initiatives, these efforts will be consistent with an ecological approach to transportation infrastructure development. These efforts will be focused both at system level regional planning, such as the development of the Regional Ecosystem Framework (REF), and at the project level, such as using SPC’s wetland mitigation suitability tool. Encouraging the adoption of a regional approach to mitigation planning is an emerging goal of this project. It is the intent of the project to maintain and develop tools that can be used by SPC and also by its partners to plan mitigation for transportation projects/programs in a more efficient and beneficial way.

Planning Activities:

- Maintain and update of the Regional Ecological Framework (REF).
- Apply the REF mapping to other planning processes such as to county comprehensive plan updates or corridor project planning.
- Utilize the recently updated Regional Natural Heritage Inventory (NHI) data. This dataset is a key component of the REF model and individual project screenings.
- Conduct PEL/LPN corridor or subarea studies in conjunction with other SPC planning studies.
- Maintain and enhance the SPC wetland mitigation planning tool. Investigate ways to better share and utilize the mitigation planning tool with PennDOT District Environmental Units.
- Continue to participate as a member of the Statewide Transportation Innovation Council (Environmental Technical Advisory Group).
- Advance development of a mitigation planning tool for stream mitigation (build/adapt the wetland mitigation tool).
- Explore development of a Regional Programmatic Mitigation Plan (RPMP):
  - Distribute the RPMP research white paper that was developed during the 2018 - 2020 UPWP to key agency and non-governmental organization (NGO) personnel.
  - Conduct a survey of key agency and NGO stakeholders to gauge feasibility and agency support.
  - Seek FHWA technical assistance to obtain guidance on feasibility.
  - Involve Central Office Environmental Policy and Development Section where applicable.
  - Where appropriate, work to enhance relations with nonprofit, federal, and state government conservation organizations.
- Participate in the identification of opportunities to improve, maintain, and restore the function of natural environmental systems in the region in conjunction with planned transportation projects.
6. Non-Traditional Funding Capacity Building

**Objective:** Building the region’s funding capacity supports policy goals of maximizing the effectiveness of existing resources, leveraging other sources of funding, and finding innovative ways to advance the Regional Vision, Goals and Strategies as set forth in the LRP. Given the significant needs associated with the regional transportation system and the demands on traditional state and federal funding streams, it is important to help project sponsors look for additional sources of funding. SPC works to promote local project development through the identification and utilization of non-traditional and discretionary funding programs, as well as to build and enhance relationships with federal, state and local officials, the business community, and other interested agencies and foundations. *SmartMoves* identifies “Promotion of Public Private Partnerships” as a priority strategy for sustainable funding. The region should be prepared to capitalize on this tool, and plan for and develop infrastructure projects that will be attractive to private parties and beneficial to the residents of the region. The *SmartMoves* Plan also identifies a sustainable funding goal with multiple related actions: matching revenues to needs, identifying new funding sources, and raising public awareness of transportation funding issues. Multiple revenue options are suggested as appropriate for general needs and for targeted purposes. Identifying a possible regional source of dedicated transit funding is also highlighted as an immediate critical need.

**Planning Activities:**

- Work to raise awareness in the business community, nonprofit sector, and other areas to broaden support for increases in infrastructure revenues.
- Enhance understanding by the private sector, nonprofits, and the general public of public infrastructure needs; garner support for increased infrastructure revenues by highlighting past successes and accomplishments.
- Support partners in potentially undertaking a robust public education campaign to make the general public aware of the benefits of increased transportation funding and how it has been used in local communities.
- Work with PennDOT and other partners to identify and support sustainable sources of revenue. *SmartMoves* suggests multiple new funding sources as possible revenue options for general or specific purposes. Investigate revenue options, identify strengths and weaknesses, and recommend the most promising options.
- Document project and program benefits for the SPC Congestion Mitigation and Air Quality (CMAQ), Transportation Alternatives Set-Aside (TA Set-Aside) and Livability through Smart
Transportation (SMART) programs to demonstrate the effectiveness of existing resources, especially by highlighting project best practices. Apply effectiveness lessons in further non-traditional outreach.

- Assist member planning partners with the application, project development, and submission process associated with pursuing non-TIP related funding.
- Continue to build relationships with the private sector and federal, state and local elected officials to foster productive working relationships in order to advance the Regional Vision, Goals and Strategies of SmartMoves.
- Utilize the PennDOT Connects process to help to ensure that connections are made among stakeholders while projects are in the planning and design phases.
- Continue to produce the Community and Transportation Funding Programs Brochure that lists federal, state, local and private non-traditional funding opportunities for use by potential project sponsors, planning partners and stakeholders to identify funding for a wide variety of public improvement, infrastructure, and community-based initiatives.
- Further define, develop, and pursue funding for projects found on the Regional Vision Projects Lists (Appendix IV-2: Projects Currently Beyond Fiscal Capacity) in SmartMoves. This includes meeting with planning partners and stakeholders to develop responsibilities, project descriptions, cost estimates and potential non-traditional funding mechanisms (non Title 23 or Title 49 funding).
- Identify and implement innovative financing mechanisms for major capital projects, such as Transportation Districts, the Pennsylvania Infrastructure Bank (PIB) and public private partnerships (P3s). Promote the PIB and P3s as tools for financing transportation projects, including community reinvestment and economic development projects. In coordination with the PennDOT P3 Office, investigate the most applicable and best-use scenarios of employing P3s in the Southwestern Pennsylvania region.

**Work Products:**

- A well-defined set of projects that can be poised to begin the project development process should additional funds, beyond what is reasonably expected to be available via traditional federal and state funds identified in the LRP, become available to the region.
- A non-traditional funding clearinghouse webpage on the SPC website.
- As requested, technical assistance to planning partners in pursuing non-traditional funding opportunities.
- Briefing materials for the Commission, planning partners and the public.

7. **Transportation Planning Guidance and Assistance**

**Objective:** As the demand to maintain transportation infrastructure at a sufficient level increases, the need for local entities to identify, plan, and prioritize transportation projects is crucial in their ability to maintain and update their local transportation network as well as increase livability, accessibility, and mobility in their communities. Local entities may lack the capacity and resources to conduct planning activities which can hinder their ability to develop the necessary transportation projects in their respective locality. Local entities access to transportation resources and data is vital in their abilities in developing competitive TIP and LRP projects. SPC can provide the expertise and support to local entities to assist in data connection, mobility planning and development, and other necessary tasks to enhance local entities transportation plans and projects. Planning activities in this
area will focus on providing guidance and support to local entities, to enhance local entities’ ability to develop a well maintained, integrated transportation system and create vibrant accessible communities.

Planning Activities:

- Provide guidance and support to SPC member counties and their municipalities in preparing transportation elements of their comprehensive plans and other local planning efforts, on an as-needed basis. Work with local entities to assist in local planning efforts.
- Assist in the development of Westmoreland County planning district mobility plans as identified in Reimagining Our Westmoreland.
- When requested, assist in the development of county-wide planning toolkits that provide SPC member counties and municipalities the ability to understand transportation needs.
- Provide GIS and other data software applications to publish maps and data for inclusion in local entities transportation plans, as requested.
- Connect member entities with information and analysis of local transportation network conditions, to assist local entities with the opportunity to enhance and develop competitive transportation projects.
- Explore Integrated Corridor Planning and other innovative planning approaches in applicable, high priority areas in the region.
- Identify appropriate network and corridor-related treatments in the region’s significant freight activity centers and on significant transit corridors.
- Best Practices Resource Center – Work to develop a center for planning best practices information and examples that can be shared with member planning departments, municipalities and others as a way to provide planning support to local planning efforts in the region.

Work Products:

- Develop county-wide planning toolkits for member counties that contain data and processes for transportation plans.
- Assist member counties with development of mobility plans including Westmoreland County’s planning district mobility studies as part of the implementation of their Comprehensive Plan, Reimagining Our Westmoreland.
- Provide planning resources and activities to member entities on an as-needed/requested basis.
- An online Best Practices Resource Center to act as a repository for state of the practice transportation and community planning tools and resources.

8. Corridors of Regional Significance Master Planning Program

Objective: Corridors of Regional Significance connect activity centers across multiple counties within and through Southwestern Pennsylvania. The corridors should employ context based street design and the multimodal movement of people and goods, critical to the economic vitality and quality of life in Southwestern Pennsylvania.
Many of these corridors traverse multiple place type zones ranging from sparsely populated rural areas, to small town and suburbs, to the densely populated urban areas and urban core of the City of Pittsburgh. Each zone is accompanied by its own unique context as well as its own mobility, connectivity and accessibility needs.

Historically, improvements made to these corridors are aimed at solving specific issues at specific locations such as safety or operational deficiencies, reoccurring congestion or capital maintenance asset management needs. In order for the region to maximize the use of these facilities and to strengthen communities and the economy, they must be examined holistically, rather than location by location. *SmartMoves for a Changing Region*, Southwestern Pennsylvania’s long range plan, sets the Regional Vision, Goals and Strategies for this type of holistic corridor planning.

Working with a broad range of state, federal and local partners and stakeholders this new initiative will include the following activities.

**Activities:**

- Define Corridors of Regional Significance, subdivided by place type, and identify specific modes of transportation that currently and could potentially utilize the corridor as well as adjacent, interrelated facilities.
- Perform assessments in identified corridors over a multi-year period that examine user perspectives; travel patterns; multimodal connectivity and accessibility; as well as current and planned land use/economic activity.
- Develop a strategic framework for multimodal goals and investment in each corridor to guide and inform future LRP and TIP programming decisions.
- Provide an overall corridor based context into the PennDOT Connects process when projects are programmed and also for other state and local planning processes.

**Work Products:**

- A set of well defined Corridors of Regional Significance including context based goals and strategies to assist in the planning and programming of future investments in each corridor.
TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DEVELOPMENT AND MANAGEMENT

ESTIMATED COST:

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TASK DESCRIPTIONS

The planning, development, documentation, administration and technical assistance associated with the region’s TIP is a substantial portion of the responsibilities contained within the Program Development Group. The following section describes the activities that will be undertaken by SPC, in collaboration with its partners, to develop and maintain a federally-compliant and dynamic TIP for the region.

1. Pre-TIP Planning

Objectives:

Develop tools, incorporate new processes, and foster coordination/collaboration efforts that will assist SPC, PennDOT and the region’s transit providers in considering network/project needs, various planning level studies, project screening information, and other project proposal information early in transportation planning (pre-TIP) within the SPC region.

This project will incorporate elements of federal initiatives such as Every Day Counts and Performance-Based Planning and Programming (PBPP), state initiatives on Linking Planning and NEPA, and PennDOT Connects into the current TIP administration and future TIP updates. These tools, processes, and coordination will provide project needs and fiscal constraint information as input to pre-TIP planning and programming decisions, leading into the subsequent, post-TIP, transportation project development process. Work products will lead to better decision-making, which, when informed by pre-TIP planning products and systematic planning processes, will add more value to transportation programs and can ultimately lead to more livable, sustainable communities.
Planning Activities:

**Project Development Work Groups** – These Work Groups typically consist of District, SPC, county planning departments, transit operators, and Transportation Management Association representatives. The Work Groups meet periodically to review the status of candidate projects and generate consensus on advancing/deferring/dismissing project proposals at various decision points in the pre-TIP planning process.

- Maintain three Project Development Work Groups as a key collaboration element in pre-TIP and performance-based planning and programming.
- Maintain and enhance the Work Groups’ SharePoint sites in conjunction with TIP updates.
- Provide staff support, administrative and technical assistance, planning process facilitation, organizational support, and decision support information to the Project Development Work Groups.
- Establish agendas for ongoing Work Group meetings including candidate status management, asset management monitoring/reporting, public input form assessment, and overall LPN process support.
- Use Work Groups as a key collaboration element of the Pre-TIP planning process for the 2023-2026 TIP development.
- Continue maintenance and enhancement of the data and analytical systems used for pre-TIP planning.
- Continue development of an enhanced Off-System Bridge (BOF) program to analyze and prioritize BOF eligible projects. Coordinate with District Bridge Unit to discuss program details and deliverables.
- Establish and administer BOF Work Group to review and recommend BOF eligible bridges as part of the BOF program.

**Linking Planning and NEPA (LPN)/PennDOT Connects Integration Activities** – The LPN initiatives originate from a desire to extract benefits for overall transportation project development by considering environmental resources early in the transportation planning process. Similarly, PennDOT Connects aims to consider community priorities, as defined by adopted community plans, as well as contextual elements of the project area early in the project development process, before funds are programmed onto the TIP. Working in conjunction, these activities improve project selection, increase program predictability, and increase the efficiency of the overall project development process, resulting in a transportation system that has less of an impact on the region’s natural, cultural and community resources. This integrated process will enable the project to better serve the communities in which it is located and will help to ensure it meets the community’s needs for years to come.

- Utilize the required PennDOT Screening Forms in early pre-TIP planning and project development, including those associated with: the current TIP and the 2023-2026 TIP update.
• Incorporate public input originating from the State Transportation Commission public involvement activities into the TIP update process.
• Level 2 Screening Form Activities – adapting processes and maintaining activities associated with the administration of the required Level 2 screening forms for new candidate projects being considered for the TIP and associated early LRP update work.
• Conduct environmental screenings and the development of preliminary constraint mapping for selected 2023-2026 TIP projects and for PennDOT District Environmental Units, as requested.
• Fully integrate the PennDOT Connects process into the overall TIP process and schedule.
• Participate in relevant trainings and webinars, hosting/attending where applicable.
• Maintain PennDOT District Environmental Manager Communication.
• Attend PennDOT Connects meetings with local municipalities on TIP candidates, as warranted and as new projects are added to the 2021 TIP.
• Review and comment on PennDOT Connects Project Initiation Forms where applicable on TIP candidates, as warranted and as new projects are added to the current TIP.
• Participate as a member of the Statewide Transportation Innovation Council, Environmental Technical Advisory Group.
• Continued maintenance and upgrade of the data systems used for pre-TIP planning and performance-based programming.
• Work with PennDOT to integrate other performance measure data and expand scorecard tools to evaluate the optimal investment levels with respect to performance measures/targets and apply them to the TIP update.
• Ensure the TIP update process develops in accordance with federal transportation performance measures and derives input from the LRP investment plan.
• Provide education, support, and technical assistance to the Project Development Work Groups in the area of performance measures and their influence on the TIP development process.
• Maintain, update, and improve existing GIS-based planning tools for conducting project environmental screenings, supplementing the environmental screening tool on the PennDOT Connects website.

**Work Products:**

• Project Development Work Groups meeting administrative support and materials including: agendas, project lists, summaries of performance and other transportation data, financial data and projections, public input summaries, and other items as necessary.
• Implementation of the PennDOT Connects initiative, incorporating the screening forms into the project development process within the SPC region.
• A procedural framework document for the 2023 TIP update.
• Consensus on the advancement of project proposals at several decision points through the forms process prequalifying projects to the LRP/TIP.
• Improved communication and input at municipal and county level on TIP projects via PennDOT Connects activities.
• Populate candidate project screening forms and project initiation forms for projects within counties/PennDOT Districts/region.
• Improved planning tools and communication networks (with PennDOT Districts and resource agencies) in order to conduct planning and environmental linkage activities.
• Improved data systems for conducting pre-TIP planning activities including increased integration of performance measure data.
• Briefing materials for the Commission, planning partners and the public.

2. Current TIP Administration, Draft TIP Documentation and Environmental Justice Documentation

Objectives: Delivering projects through the TIP is a primary mechanism for advancing the Regional Vision, Goals and Strategies of SmartMoves for a Changing Region. The following planning activities are designed to maintain, document, and deliver the 2021-2024 Transportation Improvement Program, as well as the development of the next TIP, adhering to federal regulations including Title VI, Environmental Justice and Air Quality Conformity requirements.

Planning Activities:
• Provide staff and logistical support to SPC’s Transportation Technical Committee (TTC) in the maintenance and administration of the TIP.
• Ensure the TIP is consistent with and works to advance the LRP.
• Make certain that Environmental Justice (EJ) areas are correctly identified and mapped, and that all core guidance criteria is met within the benefits and burdens analysis.
• Research areas in which EJ analysis can be augmented via the use of primary and/or secondary guidance criteria.
• Collaborate with other planning partners to gather EJ data in order to ensure that TIP program is effectively benefiting EJ communities.
• Participate in EJ analysis training and integration provided by FHWA and/or PennDOT to improve SPC’s Environmental Justice process.
• Work jointly with PennDOT and regional planning partners to modify the TIP as required.
• Monitor the status of the TIP surface transportation program during the fiscal year and share appropriate program information with TIP stakeholders.
• Recommend TIP amendments based on coordination with project sponsors to ensure SPC’s limited federal and state funding is used to its greatest potential.
• Provide technical assistance to current and potential project sponsors in accordance with federal, state and regional planning and programming requirements and to ensure technical consistency and completeness of project information.
• Maintain and further develop a data management system that enhances SPC data processing and analysis capabilities.
• Maintain and enhance the TIP webpage within SPC’s website.
• Publish annual listings of projects for which federal funds have been obligated in the preceding year.
• Review and refine, as necessary, performance measures for the TIP.
• Detail the anticipated effect of the TIP toward achieving the performance targets established in the LRP.
• Review and update, where warranted, the TIP modification procedures MOU with PennDOT Program Center as part of the 2023 TIP update.
• Assist in conducting public outreach and participate in Public Participation Panels and other public meetings.
• Work to achieve greater EJ representation within Public Participation Panels and in public engagement in general.

Work Products:
• Maintenance of the 2021 – 2024 TIP
  - TTC meeting materials and other reports/technical documentation.
  - Monthly documentation and processing of amendments and administrative changes to the TIP.
  - Fiscal year end Federal Obligations Report.
• 2023-2026 TIP document, supporting materials and presentations to the public and other planning partners and stakeholders.
  - 2023-2026 TIP project list and draft TIP materials.
  - Benefits and Burdens (EJ) Analysis and report for the 2023-2026 TIP.
  - Self Certification Resolution and Checklist.
  - Transportation Performance Management chapter.
  - TIP Modification Procedures MOU Update.
  - Other TIP Checklist items.
• Briefing materials for the Commission, planning partners and the public.

3. SPC Funding Program Administration

Objectives: The Congestion Mitigation and Air Quality (CMAQ), Transportation Alternatives Set-Aside (TA Set-Aside) and Livability through Smart Transportation (SMART) programs are important mechanisms for improving the mobility and accessibility of the regional transportation system as well as enhancing the livability and sustainability of communities in the region. The programs and projects selected for funding from these programs help advance the Regional Vision, Goals and Strategies of the LRP and are important in achieving progress on regional performance measures. Development, monitoring and overall administration of these three SPC-directed funding programs (CMAQ, TA Set-Aside and SMART) helps to ensure that funds are used in accordance with program guidelines and to ensure that funding is maximized to the greatest extent possible. CMAQ Program evaluation and performance measure effectiveness are discussed in other planning sections.
Planning Activities:

- Administer the CMAQ, TA Set-Aside, and SMART funding programs including: coordination with planning partners and project sponsors, meeting materials and agendas, program schedules, policy/program guidance documents, candidate project applications, project evaluation and selection facilitation, and project monitoring.
- Update, expand, and document technical project evaluation procedures and methodologies for use in prioritizing multimodal projects in the LRP and the TIP, focusing on incorporating performance measures into the evaluation methodology.
- Continue to use Decision Lens® software to aid in the decision-making process.
- Continue to actively coordinate with project sponsors to ensure timely delivery of projects and execute any necessary programming adjustments on the current TIP.
- Review and refine, as necessary, the program policies, procedures, and structure for each funding program in anticipation of the 2023-2026 TIP development cycle.

Work Products:

- Priority projects to be programmed and delivered for the 2021-2024 CMAQ Program and the 2021-2022 TA Set-Aside and SMART programs.
- Summary and administrative reports for each program (CMAQ, TA Set-Aside and SMART) to document procedures, meeting minutes, processes undertaken, projects selected, funds allocated, how each of the programs advance the LRP, and further implement sustainability, resiliency, and performance-based planning and programming.
- TIP modifications and amendments, as necessary, to ensure projects are funded in the correct year according to current schedules and budgets.
- Briefing materials for the Commission, planning partners and the public.

4. Local Project Delivery Assistance

Objectives: Maximizing the effectiveness of public investments is a key factor in the long term sustainability of the regional transportation system. As such, ensuring that projects are delivered on time and within budget is critical. Through these planning activities, SPC strives to assist local project sponsors in the planning, programming and delivery of state and federally funded projects on the region’s TIP. SPC will continue to proactively engage and coordinate with local project sponsors and, on an as needed basis, serve as adjunct project managers to ensure that funds awarded through SPC’s competitive funding programs are being used in a timely manner. This assistance will generally involve facilitation and coordination among project sponsors, local governments, PennDOT Districts, PennDOT central office, and the FHWA in order to develop a project to the point of construction. Through proactive delivery assistance, projects can move more efficiently and create capacity for new candidates to be programmed, thus maximizing regional benefit.

With the approach of PennDOT Connects to enhance local government engagement and improve transportation project planning, design, and delivery, it is important that local
governments recognize transportation’s role in connecting and enhancing communities while supporting economic development.

Planning Activities:

- Actively participate in PennDOT Connects meetings that occur in the region between PennDOT Districts, local and county governments, and other stakeholders.
- Coordination with project sponsors to provide guidance in administering state and federal aid projects in order to:
  - Identify appropriate funding mechanisms and their programmatic requirements.
  - Assist in developing viable, deliverable project scopes, schedules and budgets.
- Assist project sponsors in identifying and mitigating potential hurdles that may arise during the project development process.
- Assist in completing reimbursement agreements and other required administrative actions between local project sponsors and PennDOT, where applicable.
- Contract and oversee project management consultant support for local projects funded by SPC discretionary programs.
- Maintain and track the status of all CMAQ, HSIP, TA Set-Aside and SMART funded projects and make recommendations on needed funding changes as necessary.

Work Products:

- Conduct transportation planning and delivery workshops throughout the region, giving increased attention and outreach to the various government associations and organizations that promote local government programs, services, and training sessions.
- Meetings with potential project sponsors, as needed, to assist them in applying for state or federal funds.
- Individual meetings with project sponsors who are awarded funding to ensure they are aware of their roles and responsibilities in implementing local projects.
- Individual meetings with project sponsors during the project development process in order to overcome impediments to project delivery.
- Project agreements and other administrative documentation required in order to advance transportation infrastructure projects and programs.
- Briefing materials for the Commission, planning partners and the public.
TRANSPORTATION PROGRAM DEVELOPMENT – MULTI-YEAR IMPLICATIONS

*SmartMoves for a Changing Region* continues advancement of the consensus Vision for our region and the strategic investment direction for realizing that Vision. It continues to build on the broad consensus through the *SmartMoves* Strategies. The region’s long term investment strategy continues SPC’s priority on the preservation and operation of the existing roadway, bridge, and transit infrastructure.

The next LRP for Southwestern Pennsylvania is scheduled for adoption in June 2023. Specific activities to be completed in the 2020-2022 Work Program and beyond include:

- Plan Maintenance and Monitoring – Maintain and monitor the current plan through SPC standing and special committees, member planning and development staff, SPC’s Public Participation Panels, PennDOT’s Multimodal Project Management Systems, and other appropriate mechanisms.
- Continue development of the 2019 long range planning processes and development of the LRP, as well as the statewide transportation planning and programming process that PennDOT and its MPO/RPO partners continue to improve through joint implementation of the statewide Linking Planning and NEPA/PennDOT Connects initiative by all planning partners.
- Continue to monitor and adjust, as necessary, the fiscal constraint of the LRP in accordance with revenue projections associated with all future federal and state transportation funding legislation.
- Continue *SmartMoves for a Changing Region* implementation on multiple fronts with broad collaboration between local, state and regional partners.
- Continue to use the TIP as the main implementation vehicle to advance the Goals, Strategies and Regional Vision of the LRP and to track the performance of the LRP through TIP project evaluation and selection.
- Continue to seek additional, traditional and non-traditional, discretionary funding to assist in delivering high priority projects in the region.

The 2021-2024 TIP goes into effect on October 1, 2020. The 2023-2026 TIP and 2025-2028 TIP will be the next program updates, with SPC adoption scheduled for June 2022 and June 2024 respectively. As the mechanism for implementing the LRP, there is an ever-increasing emphasis on measuring TIP impact and performance on various transportation planning and programming areas and the Goals and Strategies set forth in the LRP. Several needs related to TIP management will take multiple years to accomplish and will require planning work across several UPWP periods:

- Continue to evolve the TIP Work Group process to build and integrate planning capacity in order to increase value in TIP development and other areas of transportation planning.
- Capitalize on available technology in TIP development through the use of GIS, visualization, monitoring, and other techniques.
- Fully integrate performance-based planning and programming requirements into the TIP development and maintenance processes.
- Continue to track progress of the LRP performance-based planning and programming targets through the TIP.
• Continue integration of Linking Planning and NEPA and PennDOT Connects initiatives into the TIP and LRP development processes.

• Integrate local road and bridge needs into the TIP and LRP transportation planning and asset management framework.

• As SPC adds asset management and TIP program management tools, extend this planning capability to the member counties and City of Pittsburgh to assist them in the management of local government programs.

• Continue to advance emerging emphasis areas such as transportation resiliency and greenhouse gas monitoring and reduction in the planning process.

• Continue to monitor and adjust, as necessary, the fiscal constraint of the TIP in accordance with revenue projections from the FAST Act and all future federal and state transportation funding legislation.
MULTIMODAL TRANSPORTATION PLANNING
MULTIMODAL TRANSPORTATION PLANNING – OVERVIEW

The Multimodal Transportation Planning Group of SPC’s Transportation Department works to advance the Regional Vision of the long range transportation plan SmartMoves for a Changing Region by focusing on planning projects and products that serve to help sustain a world-class, safe and well maintained, integrated transportation system that provides mobility for all, enables resilient communities and supports a globally competitive economy. By fostering the robust planning necessary to deliver safe, secure and integrated motorized and non-motorized transportation networks that enhance access and mobility and increase economic opportunity for people throughout the region, SPC staff work with our regional partners to develop integrated multimodal solutions that account for the needs of all transportation system users.

STATEWIDE PLANNING PRIORITY AREAS

The tasks in this section of the UPWP address the following priority areas:

- **I-Plans and Programs**: Long Range Plan (LRP) and Transportation Improvement Program (TIP) administration and development (Title III), PennDOT Connects, and Performance-Based Planning and Programming.
- **II-Supporting Planning/Programming Activities**: Freight planning, technical assistance and process review, sustainability planning, Administration of Planning Agreements with transit operators, FTA Triennial Review Support, and participation in the 2021 TMA Federal Certification Review.
- **III-Project Delivery**: Transit TIP/LRP fiscal constraint, PennDOT Connects/scoping field views, and MTF project review and application assistance.
- **IV-Land Use/Transportation Linkages/Economic Development/Modernization**: integrating freight considerations into LRP and TIP development, identifying livability and sustainability strategies via TDM and transit, equity and mobility planning for transportation disadvantaged populations, integrated/strategic corridor planning, PennDOT Connects participation, training and support.

ROLES

- **Federal Highway Administration (FHWA)/Federal Transit Administration (FTA)**: Provide technical assistance as well as general oversight, review and approval of the Metropolitan Planning Process for Southwestern Pennsylvania.

- **SPC**: For program and planning product development, SPC staff will establish and facilitate cooperative processes with federal oversight agencies, the Pennsylvania Department of Transportation (PennDOT) and local planning partners. The Southwestern Pennsylvania Commission adopts the regional long range transportation plan, the Transportation Improvement Program and other planning products required by federal planning law. These programs and products are monitored and administered through the standing Transportation Technical and Transit Operators Committees.
• **Pennsylvania Department of Transportation (PennDOT):** For LRP and TIP development, the PennDOT Center for Planning and Program Development along with the PennDOT Multimodal Deputate ensure that statewide procedural and fiscal guidance for program development is adhered to and provides technical assistance for the preparation of locally initiated and federally required planning products.

• **PennDOT Districts:** In LRP and TIP development, the Districts’ role is to share information regarding asset conditions, safety conditions, and traffic operations presenting an advanced list of priority needs for the operation, preservation, and reconstruction of the state highway and bridge system within the District. The District Programming Units conduct and present carryover analysis and best fit optimization of new project candidates that have been prequalified for the TIP. Districts take the lead in coordinating and conducting PennDOT Connects activities.

• **Member Planning Departments:** In the program and project development processes, the county/city planning departments’ role is to communicate the priority needs regarding maintenance and upgrade of the transportation networks in the county/city, including state, county, and municipal infrastructure assets. Member planning departments are to provide input on changes and status of county/city and municipal comprehensive plans, zoning ordinances, and planned development to determine their effects on early transportation planning decision-making and subsequent programming.

• **Transit Agencies:** Staff works closely with the region's transit operators, providing technical assistance, data, maps, and other analysis as needed. Transit service, operations, and management information is available from the transit operators. Coordinate TIP and LRP Amendments, as well as overall short and long-range planning for public transit in the SPC region.

**MULTIMODAL TRANSPORTATION PLANNING – RESULTS FROM CURRENT PROGRAM**

The Multimodal Transportation Planning Group of SPC's Transportation Department focuses on planning processes and products designed to facilitate implementation of the region’s long range plan, *SmartMoves for a Changing Region*. *SmartMoves* continues to place an emphasis on investing in multimodal projects to foster economic growth, enhance livability and connectivity in communities throughout the region, and provide residents with sustainable and resilient transportation choices.

The following is a sample of planning activities that were advanced in the 2018-2020 Work Program:

• Provided technical support for Multimodal Transportation projects:
  - Bus Purchase – Washington County Transportation Authority - $500,000
  - Port Authority of Allegheny County – Battery Operated Buses – first regional FTA Low/No Emissions grant - $2.2 million
- Completed/adopted 2018 Southwestern Pennsylvania Active Transportation Plan.
- Created and maintained the web-based toolkit: Active Transportation Resource Center.
- Facilitated Active Transportation Forum meetings and programmed capacity-building presentations to help county and local governments and community stakeholders stay abreast of current issues and topics related to active transportation and healthy communities.
- Continued bicycle data collection program. Conducted bicycle counts on:
  - Butler-Freeport Trail, Butler County
  - Panhandle Trail, Allegheny County
  - Blairsville Waterfront Trail, Indiana County
  - Gap-to-Point, City of Pittsburgh
- Participated in the Safe Streets, Smart Cities Academy of the National Complete Streets Coalition.
- Participated on the City of Pittsburgh’s Complete Streets Advisory Group to help guide the city through the development of designs, standards, code changes and process changes necessary for successful implementation of their Complete Streets policy.
- Completed bicycle suitability mapping – Ohio River Trail Council – Allegheny and Beaver Counties.
- Completed the Regional Sidewalk Inventory.
- Completed the Guide to Understanding Bike Symbols, Signs and Pavement Markings in Southwestern Pennsylvania.
- Coordinated and facilitated eight meetings of the Alliance for Transportation Working in Communities focusing on the development of 2019 Southwestern Pennsylvania Public Transit – Human Services Coordinated Transportation Plan.
- Completed the 2019 update of the Southwestern Pennsylvania Public Transit – Human Services Coordinated Transportation Plan, a supplemental document for SmartMoves.
- Completed a Transit Development Plan for the Westmoreland County Transit Authority. The plan focused on service delivery options.
- Completed a Transit Strategic Plan for the Mid-Mon Valley Transit Authority. The plan focused on Board development.
- Completed a Transit Development Plan for the Washington County Transportation Authority. The plan focused on recommended activities to identify new transit markets and strategic opportunities.
- Provided technical assistance to the City of Pittsburgh, Allegheny County, the City of Pittsburgh Urban Redevelopment Authority and the Port Authority of Allegheny County for the planning of the Downtown-Oakland-East End Bus Rapid Transit project.
- Completed SmartMoves Connections: A Regional Vision for Public Transit as an implementation of SmartMoves focusing on regional transit connectivity and cooperative planning.
- Facilitated 12 meetings of SPC’s Transit Operators Committee.
- Provided technical assistance to the region’s operators of public transit for the following activities:
  - Management of Title III (Transit) TIP and the 2021-2024 TIP update.
  - Transit –related narratives for SmartMoves for a Changing Region.

- Completed the Regional Transportation Demand Management Strategic Action Plan for Southwestern Pennsylvania. The plan serves to integrate TDM planning into the regional transportation planning process.
- Completed FFY 2018 FTA Triennial Review for the CommuteInfo vanpool program resulting in no findings.
- Continued management of the region’s Vanpool Services contract for the provision of vanpool vehicles and subsidized transportation for over 500 volunteer participants.
- Provided commuter options support for over 400 worksites in the SPC region.
- Completed update of the CommuteInfo website.
- Developed and implemented regional strategies to strengthen the region’s ability to serve the transportation needs of area businesses and industries in keeping with recommendations of the Regional Freight Plan for Southwestern Pennsylvania.
- Facilitated 8 meetings of the regional Freight Forum to share information between a variety of public and private stakeholders in the freight sector interested in coordination of operations, investment decision-making, and staying abreast of current issues and topics impacting freight transportation in the region.
- Hosted the FHWA Truck Parking Workshop 2019.
- Participated in the Ohio Conference on Freight as conference committee member and moderator of the panel on Regional Freight Planning.
- Participated in the Pennsylvania Freight Working Group; and reviewed candidate applications for freight rail preservation projects under the Pennsylvania Rail Freight Assistance Program and the Rail Technical Assistance Program.
- Made recommendations to PennDOT on the statewide designation of 12 Critical Urban and Critical Rural Freight Corridors in the SPC region based on current freight volumes, regional freight connectivity benefits.
MULTIMODAL TRANSPORTATION PLANNING

ESTIMATED COST:

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**TASK DESCRIPTIONS**

Implementation of SmartMoves is a multifaceted endeavor for translating the Regional Vision, Goals and Strategies into measurable, achievable actions that are implemented through close collaboration and coordination with SPC’s federal, state and local planning partners. Integrating the needs of a wide range of transportation system users and the operations of a variety of transportation modes is the focus of SPC’s Multimodal Planning efforts.

The following activities will be undertaken by SPC staff, in collaboration with its partners, to advance multimodal transportation planning in the region.

**Active Transportation Planning**

Staff contributes to planning products designed to support a regional active transportation network placing an emphasis on sustainable transportation projects that support human-powered transportation engaging people in healthy physical activity while they travel from place to place and helping to reduce emissions and fuel consumption associated with motorized vehicle travel.

**Activities:**

- Facilitate implementation of the *Southwestern Pennsylvania Active Transportation Plan* by fostering and supporting local planning efforts to identify opportunities to establish a regional active transportation network.

- Provide technical assistance to county and local governments and community stakeholders interested in developing active transportation plans, projects and programs, including bicycle/pedestrian plans, Complete Streets policies, Safe Routes to School programs, healthy community programs and obtaining bicycle and walk-friendly community designations.

- Continue to maintain and update the region’s Active Transportation Resource Center to provide plan and project implementation tools, including information on how to ensure compliance with the Americans with Disabilities Act (ADA), for county and municipal governments and community stakeholders.

- Advance development of the regional bicycle and pedestrian data collection program by working with state and local agencies to develop minimum data collection requirements for inventories, participating in local and state-sponsored work groups to ensure
consistency of data collection and obtaining crowd-sourced datasets to enhance monitoring and planning activities.

- Support and facilitate the regional Active Transportation Forum on a quarterly basis in order to provide a venue for local governments and community stakeholders to identify local and regional bicycle and pedestrian issues and share information.
- Provide support for PennDOT’s continuing multimodal initiatives including advancing PennDOT Connect initiatives.
- Develop regional measures for the emissions and health benefits of active transportation activities.

**Access and Mobility Planning**

Through the Alliance for Transportation Working in Communities (ATWIC), staff cultivates regional collaboration of efforts among human service agencies, transportation providers, healthcare facilities, governmental entities and others to identify strategies and support projects aimed at enhancing equity and overall access for transportation-disadvantaged populations in Southwestern Pennsylvania.

**Activities:**

- Implementation activities associated with the 2019 *Southwestern Pennsylvania Public Transit-Human Services Coordinated Transportation Plan* focusing on strategies to advance equity and changing transportation service options and technology.
- Provide planning assistance to Southwestern Pennsylvania’s public, for-profit, non-profit, and human service transportation providers on the coordination of service delivery efforts; creating trip-making options; and, maximizing service delivery efficiency and effectiveness.
- Plan and facilitate activities that result in programs and projects offering reliable and affordable transportation options for the region’s residents, including its most vulnerable populations, and providing access to jobs, services, and other destinations.
- Facilitate regional collaboration and provide technical support to address transportation accessibility concerns in our urban, suburban, and rural communities and identify proven best practices that can be implemented to resolve transportation barriers.
- Participate, as needed, in additional planning, programming and project implementation activities at the request of the SPC Transit Operators Committee, Federal Transit Administration, PennDOT, counties, municipalities, community-based organizations, and/or other stakeholders.
- Facilitate planning and project implementation that makes measurable progress toward an equitable, integrated regional transportation system that provides for multiple traveling options.
- Documentation of the actions and outcomes of the ATWIC Program, including the ongoing efforts and facilitation of quarterly meetings of the Alliance stakeholder group.
Regional Transit Planning

Staff contributes to planning efforts that maintain and enhance a safe, efficient and sustainable system of public transportation that connects people with jobs and the essential resources they need to access by advancing programs and projects providing public transportation options, regional transit coordination, alternatives to fixed route transit service, and economic opportunities linked to land use and transit-oriented development.

Activities:

- Provide technical assistance to public transportation providers, PennDOT, FTA and other stakeholders as they develop the regional transit programs of projects in adherence to federal and state regulations and guidance relating to the region’s LRP, TIP, and UPWP.
- In collaboration with FTA, PennDOT and regional transit providers, monitor and evaluate the LRP, TIP and UPWP for compliance with federal and state laws and regulations and for progress toward the regional goals and policies adopted by SPC. Track the delivery of all federally-funded transit projects in the region through the annual list of transit obligations and other reporting opportunities.
- In collaboration with FTA, PennDOT and regional transit providers, establish and monitor performance targets for the transit operators in the SPC region.
- Coordinate the annual sub-allocation process for distribution of FTA Federal Urbanized Area Formula Program (Section 5307) funds to eligible sponsors of urban transit projects. Coordinate the effective use of federal funding to reach the region’s goals and policies as adopted by SPC in the LRP.
- Provide technical assistance to SPC’s members and the region’s transit providers, as requested and as provided for in the TIP update procedures and other documents, through forums such as the Transit Operators Committee (TOC) and the Transportation Technical Committee (TTC).
- Assist with continuing efforts to integrate the Title I (highway) and Title III (transit) TIP management databases and to operationalize use of the PennDOT Bureau of Public Transportation Capital Planning Tool.
- Collaborate with transit providers, PennDOT, FTA, municipalities, community-based organizations and other stakeholders to plan and implement transit oriented development (TOD), Transit Revitalization Investment Districts (TRID) and other strategies to revitalize, redevelop and create transit-supportive communities.
- Coordinate with the region’s transit providers, PennDOT, FTA and municipalities to identify potential corridors for future regional transit expansion, through Transit Signal Priority, Bus Rapid Transit and other innovative approaches.
- Assist municipalities in planning for enhancements to first and last mile connections to public transit facilities.
- Collaborate regionally on the location of park-n-ride facilities across all counties to support their varying needs and provide bus access in areas with a greater need but less demand.
- Work toward greater efficiency in public transit systems through regional cooperation while also ensuring equitable public transit access.
• Provide technical assistance to public transportation providers, the PennDOT Multimodal Deputate, FTA and other stakeholders to ensure that intercity passenger rail and bus services are considered in the transportation planning process at both the state and local levels and to improve and promote interconnectivity between public transit services, intercity passenger rail, and intercity bus services.

• Conduct additional studies, research and planning as requested by transit providers, SPC members, municipalities, PennDOT and other stakeholders that advance the goals of the region’s LRP.

Regional Travel Demand Management and Commuter Options

Staff activities focus on Travel Demand Management planning and programming that supports a the vision that all travelers in the region have access to and are motivated to choose healthy, sustainable and effective travel options that reduce stress on the transportation network. Through the CommuteInfo Program staff supports a customer-focused commuting options resource center that administers regional vanpool and carpool matching programs and facilitates a regional forum for Travel Demand Management efforts designed to increase the number of people who travel to work or school by transit, vanpool, carpool, or bicycle.

Activities:

• Provide administrative, technical and planning support for management and operation of CommuteInfo - the regional ridesharing program.

• Promote and expand commuter ridesharing through the production and distribution of marketing/information/training materials and events.

• Coordinate regional Travel Demand Management efforts and outreach in cooperation with partner agencies by providing a forum for collaboration.

• Maintain and enhance the regional ridesharing database to be used in responding to requests for ridesharing assistance, creating program marketing materials, and measuring program effectiveness.

• Monitor changes in regional commuting patterns as well as changes in regional employment and business trends in order to inform decision-making on program design.

• Engage in corridor-based forums for local partners and stakeholders to discuss and plan local ridesharing activities.

• Collaborate with SPC’s Operations & Safety Group as well as PennDOT, counties, TMAs, transit providers, and other partners on implementation and promotion of ridesharing and commuter options as important travel demand management strategies employed as part of the SPC’s Congestion Management Program.

• Documentation of the management of the CommuteInfo Program of Projects for maintenance of the region’s TIP.

• Documentation of the status of all active federal and state grants that provide funding assistance for the provision of ridesharing services.
Integrated Holistic Planning Support

Through close contacts with and connections to the planning activities and priorities of its members, SPC staff actively engages in geographically-focused multimodal transportation and land use special studies in order to provide technical assistance for the advancement of community-based project planning.

Activities:

- Provide multimodal technical and planning support for the region’s Congestion Management Process.
- Provide multimodal technical and planning support for the Regional Operations Plan including technical support to SPC staff and staff from the PennDOT Program Center for implementation activities of the Southwestern Pennsylvania Transportation Demand Management Action Plan.
- Provide multimodal technical and planning support for the Regional Transportation Safety Action Plan.
- Provide support and technical assistance to SPC staff and PennDOT Program Center staff and staffs of the three regional PennDOT Districts for the implementation of PennDOT Connects.
- Provide technical and planning support for the development of multi-municipal, corridor and sub-area focused land use/transportation assessments for targeted geographic areas.
- Identify livability, sustainability, and resiliency planning strategies for the location of transportation facilities and services for broader access to employment opportunities, affordable housing, schools and safe streets.
- Provide input to PennDOT in efforts to identify planning activities targeted to county and local governments, conservation districts and community stakeholders; examples include Smart Growth, Complete Streets, access management, transit oriented development, healthy communities, Americans with Disabilities Act (ADA) compliance, connectivity, transportation impact fees, and energy savings.
- Provide technical and planning assistance to member counties and the City of Pittsburgh for development of multimodal planning products associated with transit/land use/economic development studies designed to provide various types of innovative value capture mechanisms.

Work Products:

- Technical assistance for the development of regional trails and bicycle networks.
- Assistance and documentation of the development and promulgation of enhanced active transportation performance measures and tracking systems.
- Facilitation of the regional process for implementation of the 2019 Southwestern Pennsylvania Public Transit–Human Services Coordinated Transportation Plan.
• Documentation of planning tasks undertaken by the region’s transit providers including the Port Authority of Allegheny County in accordance with adopted cooperative Metropolitan Planning Agreements.

• Documentation to PennDOT, the Federal Transit Administration and regional stakeholders of the Annual List of Obligations of federal transit funding.

• Documentation to PennDOT, the Federal Transit Administration and regional stakeholders for the annual sub-allocation process for the region’s federal Urbanized Area Formula Program funds.

• Technical assistance and documentation for the region’s public transit project sponsors in the creation of Transit Development Plans.

• Technical support for and required documentation of any and all studies, reports and other planning documents resulting from requests for technical assistance from regional transit agencies.

• Documentation to PennDOT, the Federal Transit Administration and regional stakeholders of federally-required transit asset maintenance and safety-related performance measures and tracking systems.

• Management and administrative support for the regional vanpool program and the vanpool service contract.

• Maintenance and administration of the regional ridesharing database.

• Preparation and dissemination of marketing, promotional, and educational materials to enhance public informational campaigns promoting travel demand management and commuter options.

• Preparation of briefing materials for the Commission, planning partners and the public as required.

• Facilitate quarterly meetings of the SPC Transit Operators Committee: the region’s Active Transportation Forum; the Alliance for Transportation Working in Communities; and, the region’s Travel Demand Management Advisory group.

• Maintenance of the regional Active Transportation Resource Center; the ATWIC website; the CommuteInfo website; and the TOC website.
REGIONAL FREIGHT PLANNING

ESTIMATED COST:

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TASK DESCRIPTIONS

The economic vitality of Southwestern Pennsylvania depends on the ability to safely and efficiently move people, goods and materials into, through and out of the region. The regional freight transportation network consists of a robust network of highways, rail lines, inland waterways, airports, and intermodal hubs. Along with stakeholder organizations, SPC staff assists in the development of planning products and programs designed to strengthen and grow the region’s economic base through the implementation of a strong and interconnected freight transportation network, in the context of advancing the Regional Vision established in SmartMoves for a Changing Region, the region’s long range transportation and economic development plan; the Regional Freight Plan for Southwestern Pennsylvania; and, the Pennsylvania Comprehensive Freight Movement Plan.

Regional Freight Plan Implementation

SPC completed development of the first Regional Freight Plan for Southwestern Pennsylvania in the FY2016-2018 UPWP. Moving forward, SPC will use this plan as the foundation for regional freight planning work, including work to address needs of the freight transportation system and work to improve the reliability and resiliency of freight networks.

Activities:

- Develop and maintain a regional freight inventory that includes detailed information and maps of freight intermodal facilities, priority freight corridors, freight flows and related GIS mapping applications of the regional freight network.
- Identify and assess opportunities for multimodal or cross-modal transportation options in the movement of goods and materials, including transload, Intermodal Connectors, and first and last mile opportunities.
- Collaborate with SPC’s Transportation Program Development and Data and Models Groups as well as PennDOT, counties, and other partners to monitor and enhance freight performance measures.
- Document additional sites eligible for federal designation as Intermodal Connectors (IMC) and submit requests for formal IMC designation to FHWA for consideration.
- Collaborate with planning partners and Freight Forum stakeholders to develop candidate projects for consideration in the LRP and TIP to address freight needs identified in the Regional Freight Plan.
- Collaborate with planning partners, private industry and other interested parties in monitoring and responding to new patterns in industrial and warehouse/delivery and similar
economic activities to facilitate adequate public consideration of the transportation needs of these new freight handlers.

Work Products:
- Implementation activities associated with the Regional Freight Plan.
- Regional Freight Opportunities Assessment.
- Southwestern Pennsylvania Freight Transportation Database.
- Freight-related transportation projects.
- Annual Regional Freight-Related Performance Measure report.
- Briefing materials for the Commission, planning partners and the public.

Regional Freight Program

The regional freight planning program responds to federal and state freight planning priorities, as identified in the National Freight Strategic Plan, the FAST Act, the Pennsylvania Long Range Transportation Plan and the Pennsylvania Comprehensive Freight Movement Plan, and provides opportunities for regional freight interests to have input into the transportation planning process.

Activities:
- Use the regional Freight Forum and other outreach efforts to facilitate the exchange of information among various freight mode stakeholders; provide avenues of input from the regional freight community on transportation planning issues; and, provide for the consideration and enhancement of inter-regional freight movement.
- Provide technical assistance to the PennDOT Multimodal Deputate, including participation in the Pennsylvania Freight Working Group, Pennsylvania Freight Summit, state Rail Freight Advisory Committee, Rail Freight Assistance Program, Statewide Comprehensive Goods Movement Study, and various other state studies and initiatives. Coordinate the region’s response to continuing and emerging federal and state freight initiatives.
- Provide technical assistance to PennDOT District partners on freight planning and programming initiatives through the PennDOT Connects initiative, as well as through regular updates to Transportation Technical Committee members.
- Participate in multi-state planning efforts through participation in regional freight events such as the West Virginia Planning Conference and the Ohio Conference on Freight. Continue to collaborate with multijurisdictional partners, including adjoining MPOs in Pennsylvania, West Virginia, Ohio and Maryland, and the Departments of Transportation in those four states to cooperatively identify and address freight transportation issues and opportunities in inter-regional and multi-jurisdictional freight movement.
- Support intermodal initiatives of the Appalachian Regional Commission, the I-95 Corridor Coalition, the I-81 Corridor Coalition and other similar programs.
- Advance priority freight initiatives identified by SPC members, partners and the regional Freight Forum, as appropriate.
- Collaborate with partners in adjoining states, PennDOT, Pennsylvania Turnpike Commission, local planning partners and other stakeholders in the exploration of the feasibility and benefits of Hyperloop technologies.
• Work with representatives of Pittsburgh International Airport and other airports in the region in the identification and assessment of air cargo opportunities.
• Continue to monitor freight utilization of the inland river system through established relationships with the Port of Pittsburgh Commission and the U.S. Army Corps of Engineers (USACE).
• Assess the potential surface transportation impacts of scheduled lock closures on the Ohio River system as well as unscheduled lock closures (episodic) to determine probable impacts on the local surface transportation network. Identify opportunities to address vulnerability concerns and resiliency needs of the regional Inland Navigation System.
• Develop technical reports identifying safety issues associated with at-grade railroad crossings, GPS truck routing, commercial vehicle safety and specific locations as required.
• Collaborate with SPC’s Transportation Operations and Safety Group as well as PennDOT, counties, and other partners on integration of freight considerations into the regional Congestion Management Process, Regional Operations Plan, Regional Transportation Safety Action Plan, PennDOT Connects initiatives and other planning efforts.
• Cooperate with local partners in the identification and advancement of transportation investments that enhance the economic competitiveness of a location or community in a corridor-based modal integration strategy or in direct support of efforts to enhance air, rail or water access.

**Work Products:**

• Regular meetings of the regional Freight Forum and associated meeting materials.
• Regional multimodal, multi-state freight summit to educate local leaders on freight issues and opportunities in the SPC region, foster cross-regional cooperation and develop partnerships in the design and implementation of solutions to intermodal freight needs (as appropriate).
• Identification and implementation of mode specific responses to demonstrated needs, such as Truck Parking Strategy implementation and identification of a Regional Freight Network.
• Intermodal Management System and NHS Intermodal Connector mapping.
• Freight-related education and communications materials, other technical reports and special studies as requested.
• Briefing materials for the Commission, planning partners and the public.
PORT AUTHORITY PLANNING PROGRAM

ESTIMATED COST:

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TASK DESCRIPTIONS

Port Authority of Allegheny County provides public transportation throughout Pittsburgh and Allegheny County. The Authority's 2,600 employees operate, maintain and support bus, light rail, incline and paratransit services for approximately 209,000 daily riders. Port Authority owns and maintains an extensive network of transit properties and facilities including 3 busways, 54 park and ride lots and garages, a 26.2-mile light rail system, an HOV Tunnel, and an incline. Port Authority is currently focused on planning and implementing a number of improvements to make service more efficient and easier to use, including implementation of mobile payment and real-time screens, real-time vehicle tracking and on-street bus rapid transit.

1. Port Authority Transit Service, System Planning and Planning for Persons with higher mobility needs

Objectives: Monitor system performance and evaluate performance of routes and make adjustments to ensure productivity and effective services. Respond, when possible, to customer requests for service changes. Perform transportation system planning to develop park-and-ride facilities and transit centers. Coordinate transit service and operations with business and joint development initiatives, transportation related air quality planning, congestion management, and smart growth activities at the municipal, county and regional levels. Coordinate with the region’s three Transportation Management Associations (TMAs), Allegheny County Transit Council (ACTC) and the Committee for Accessible Transportation (CAT). Conduct other planning activities which seek to improve transit operations and facilitate integration within the overall transportation system. Conduct planning specifically focused on groups with higher and more sensitive transportation needs, including, but not limited to: Persons with disabilities, low income persons, persons of a minority race or ethnicity, persons without access to a vehicle, persons under age 18 or over age 65, persons with limited English proficiency, or single mothers.

Planning Activities:

- Conduct transit service planning including, but not limited to:
  - Adjusting bus route alignments and garage assignments.
  - Revising bus and rail schedules, hours of service, vehicle blocks and operator runs.
  - Adjusting Downtown bus route patterns.
  - Per the service standards guidance, reviewing stop locations for each bus route and recommend and implement stop consolidation.
- Per the service standards guidelines, monitoring performance of existing transit services and evaluating proposals for new service utilizing productivity and other measures.
- Monitoring performance of changed services and making adjustments where needed.
- Revising the National Transit Database sampling plan.
- Producing service memos.
- Developing and implementing the quarterly system picks.
- Developing new public information materials including schedules and maps and updating Port Authority’s website schedule information to reflect service changes and provide other information to increase public awareness of new travel opportunities.
- Engaging in joint planning activities with the staffs from the other transit providers as well as Southwestern Pennsylvania Commission (SPC) staff to identify efficient service configurations designed to provide riders with improved connections between services in order to enhance regional transit travel.

- Refine and maintain the system-related database as input to planning services.
- Perform additional short-range route planning and evaluation in response to customer, business or other stakeholder requests for changes.
- Continue service planning activities for new developments in Port Authority’s service area.
- Develop service plans as necessary to reflect updated funding scenarios and other agencies’ key initiatives.
- Work with ACCESS, and other agencies on options to reduce service gaps resulting from service reductions and/or changes.
- Pursue short-range operational improvements to facilitate future implementation of Bus Rapid Transit corridors and refine long-term operating plan.
- Examine the public information network and implement improvements, including Geographic Information Systems (GIS) and providing support for electronic media.
- Continue Implementation of upgrades such as the Automated Fare Collection system (including Smart Card) and Automated Travel Information System.
- Provide data for continuous updates to Port Authority’s Real-Time Information.
- Coordinate service, fare systems and customer information with Southwestern Pennsylvania’s other transit providers.
- Manage Port Authority’s existing network of park-and-ride facilities and pursue continued expansion of Port Authority’s park-and-ride network.
- Participate in SPC’s transportation related air quality planning including the Congestion Mitigation & Air Quality (CMAQ) program.
- Continue to encourage a multi-faceted approach to provision of transportation services involving the private sector as appropriate, including involvement in TMAs.
• Increase opportunities for business and joint development initiatives in conjunction with Port Authority transit operations, facilities and park-and-ride program.
• Provide staff support to ACTC.
• Coordinate with the CAT and ACCESS and provide PAAC support for other initiatives facilitating access for persons with disabilities and senior citizens.

**Work Products:**

• Continued review of bus and rail transit services and adjustments to improve productivity as warranted per the service guidelines.
• Quarterly service revision summaries.
• Bus stop consolidation.
• A regional transit database.
• An improved public information network, including easier access to schedules and information.
• Revised, easy to read, and informative system map, timetables and other public information.
• Managing the existing park-and-ride program and expanding the network of park-and-ride facilities.
• Coordination with the three TMAs.
• Efforts to ensure consideration of transit by municipalities and private developers in future development projects.
• Improved transit services coordinated with other municipal, Allegheny County, PennDOT Connects and other PennDOT plans and projects.
• Provide input into local roadway construction and other development projects.
• Records meetings with external advisory committees.
• Provide informational materials in accessible formats.
• Plan for service increases/reductions as warranted within available financial resources.

2. **Port Authority TIP, State Twelve Year Program, County Capital Program and UPWP Administration and Operating, Strategic and Financial Planning**

**Objectives:** Develop a program of transit projects for inclusion in the region’s Transportation Improvement Program (TIP), State Twelve-Year Program and Allegheny County’s Capital Program. To administer 2020 - 2022 UPWP and the administration of the 2019 - 2022 TIP, and initiate planning for the 2021 - 2024 TIP. Monitor potential new legislative initiatives coming out of PA legislature. Develop modeling based upon any new federal reauthorization bill that is presented to congress for ratification. Develop and implement a new fare policy. Monitor and update Port Authority’s strategic operating plans and capital needs assessment to reflect
funding associated with Act 89, and to assess other important issues which pertain to Port Authority financial and business planning.

Planning Activities:

- Develop transit projects for inclusion in the region’s TIP, the State Twelve-Year Program, and the County Capital Program.
- Administer the Authority’s portion of the UPWP.
- Continue development of Port Authority’s portion of the 2021-2024 TIP.
- Ongoing quarterly capital budget progress meetings with Authority staff.
- Implement and monitor the progress of the strategic operating plan.
- Refine and maintain key performance indicators as a system evaluation tool and record.
- Monitor and update capital project status reports on a quarterly basis.
- Update 20-year capital and operating projections as necessary.
- Update fare modeling projections used in the preparation of the Authority's operating and capital budgets.
- Examine operating and capital impacts of FY 2020 and FY 2021 budgets.
- Assess other important issues which pertain to the Authority's financial and business planning.
- Coordinate with the PennDOT Connects Program to support TIP projects’ multimodal consideration.

Work Products:

- Programming of transit projects for the Capital Improvement Program.
- Administer the transit component of the FY 2019-2022 TIP.
- Updated long range operating and capital plans.
- Regular reports on capital performance.
- Regular reports on operating performance.
- Updated capital needs assessment.
- Updated long-term financial projections based upon Pennsylvania Act 89 and the federal FAST Act and any other state or federal transportation funding legislation enacted in 2020 - 2021.
- Annual operating and capital budget based on planning forecasts.
- Financial indicators and operating statistics.
- Assessment of other important issues pertaining to financial and business plans.
- Continued refinement of process to monitor the capital improvement program.

3. Port Authority Long-Range Transit Planning

Objectives: To advance corridor and area-wide mid-range and long-term planning for small- and large-scale transit improvements. Participate in long-range transit corridor and
community planning studies being led by the City of Pittsburgh, Allegheny County, SPC and other entities. Advance Port Authority’s Transit Oriented Communities program. Conduct preliminary planning for extensions in fixed-guideway corridors.

Planning Activities:

- Conduct National Environmental Policy Act (NEPA) review for prioritized corridors and provide environmental support to engineering staff for projects in design.
- Identify and prioritize corridors for major improvements and develop alternatives for service improvements and capital investments.
- Conduct Transit-Oriented Communities (TOC) program by leading planning, design and development activities that support station access and design as well as joint development. Coordinate TOC efforts with municipal, community, and other stakeholders to ensure feasibility and support. Coordinate with the Federal Transit Administration, Pennsylvania Department of Transportation, SPC and Allegheny County as necessary.
- Advance the Station Improvement Program to modernize existing busway and light rail stations to better meet current rider needs, support TOC initiatives and enhance transit operations.
- Coordinate with municipal, county, regional and state planning and development initiatives to maximize opportunities for implementation of TOC.
- Work with municipalities and private developers to ensure there are provisions for transit in new construction and development projects in order to support TOD initiatives proposed in local, county and regional plans.
- Implement Port Authority’s First and Last Mile Program Plan. Conduct outreach to advance partnerships necessary for project development and implementation, and share the plan and methodology, and generate broad interest in improving access to transit.
- Identify opportunities for business and joint development on Port Authority’s facilities.
- Represent Port Authority on community and area-wide planning studies to ensure that on-street and fixed-guideway transit is considered in future development proposals.
- Provide planning and environmental review support for near-term transit projects such as the new transit centers and park and ride facilities.
- As needed, provide information to SPC to be incorporated into the regional long range plan.
- Evaluate the feasibility of a new garage which would service alternative fuel buses (electric and/or compressed natural gas).
• Provide planning support, including site-specific environmental review to advance the Downtown – Uptown – Oakland – East End Bus Rapid Transit project through implementation.

Work Products:
• A Long-Range Plan of transit improvements prioritizing corridors for further development.
• Documentation of efforts conducted to advance projects and strategies included in the adopted regional long range plan.
• Representation of Port Authority in planning efforts undertaken by other organizations.
• Per Port Authority’s guidelines, advancement of a TOC program at busway and light rail transit stations.
• Per Port Authority’s guidelines, advancement of a First and Last Mile Program to enhance access to busway and light rail transit stations.
• Implementation of a Station Improvement Program.
• Continuation of a Sustainability Plan.
• Evaluation of the feasibility of a new bus garage.
MULTIMODAL TRANSPORTATION PLANNING – MULTI-YEAR IMPLICATIONS

Active transportation has emerged as a high priority area at the national, state, regional and local levels. SPC will continue to work with regional partners to implement strategies from the Regional Active Transportation Plan as well as the SmartMoves for a Changing Region to guide future program and project development activities in this area.

SPC staff will continue to lead regional efforts to improve access, mobility and equity for the elderly, disabled and other traditionally underserved populations through its ATWIC program and implementation of the Southwestern Pennsylvania Public Transit-Human Services Coordinated Transportation Plan.

SPC staff will also continue to provide technical assistance to regional transit providers for enhanced service coordination through implementation and project development activities associated with SmartMoves Connections: A Regional Vision for Public Transit as well as the development of strategic planning documents for rural and small urban providers.

SPC looks to expand the reach of its CommuteInfo vanpool and carpool program in order to increase its impact. Staff will be identifying ways to better integrate the CommuteInfo program with transportation demand management (TDM) planning and strategy development as part of the Congestion Management Process (CMP) and the Regional Operations Plan (ROP) – using the CMP as a tool to target TDM outreach in areas and corridors with identified congestion problems. SPC will also be looking at ways to increase collaboration between the PennDOT Program Center, the three Transportation Management Associations (TMAs) in the region and a broad range of stakeholders in order to implement the region-wide TDM Action Plan.

In recent years, there has been a growing awareness at the federal level that there are clear national interests in addressing bottlenecks in the national freight network and in enhancing the intermodal movements of goods. This is evidenced in the FAST Act through the creation of a new National Highway Freight Program (NHFP) and a new discretionary Nationally Significant Freight and Highway Projects program. SPC has maintained a long-standing dialogue with members of the freight community to identify freight needs and to incorporate freight concerns into the transportation planning process.
TRANSPORTATION OPERATIONS & SAFETY
TRANSPORTATION OPERATIONS & SAFETY – OVERVIEW

*SmartMoves for a Changing Region* was developed with the following Regional Vision: A world-class, safe and well maintained, integrated transportation system that provides connected mobility for all, enables resilient communities, and supports a globally competitive economy. To achieve the vision, the following investments that are relative to the Transportation Operations and Safety were identified:

- Investment for Maintaining Infrastructure Condition
- Investment for System Safety, Efficiency and Reliability
- Multimodal Investment for Community and Economic Development

The *SmartMoves* Regional Vision includes well maintained roadways and bridges that are safe for all users. *SmartMoves* makes significant investments in improving mobility conditions, safety, and operations across all modes of transportation. The use of new and emerging technologies in operations, design, construction methodologies, and materials will be critical moving into the future, allowing us to maximize use of our limited state and federal funds.

Transportation safety can be heavily influenced by recurring operational conditions such as traffic congestion, weather, work zones, traffic signal timings, and other factors. Conversely, crashes and other random incidents can have a large impact on operations and congestion. For this reason, transportation operations and user safety planning are often done in tandem to ensure a coordinated approach.

Transportation systems management and operations (TSM&O) programs work to optimize the performance of the existing infrastructure though implementation of multimodal, cross-jurisdictional systems, services, and projects. These systems, services, and projects are designed to preserve capacity and improve the security, safety, and reliability of transportation systems.

Planning for operations involves developing objectives to direct the consideration of operational performance during the planning process, and incorporating operations solutions into investment decisions that support those objectives. This approach helps to ensure that operations needs are addressed in regional planning and investment decisions. By linking planning and operations, planners have a greater understanding of the role of operations projects and programs in the context of meeting regional goals, objectives and performance metrics, as well as a greater understanding of how they can help advance these activities. This linkage also allows operators to have a greater understanding of how the long range planning process can support management and operations activities, and how their activities fit into the context of regional goals.

STATEWIDE PLANNING PRIORITY AREAS

The tasks in this section of the UPWP address the following priority areas:

- **I-Plans and Programs**: Long Range Plan (LRP) and Transportation Improvement Program (TIP) development support; PennDOT Connects; and Performance-Based Planning and Programming.
- **II-Supporting Planning/Programming Activities**: Maintain and update the region’s Congestion Management Process (CMP); technical assistance to planning partners; ITS and TSMO strategy and project development; implementation of the Regional Operations Plan (ROP); ITS
Architecture maintenance and update; and conduct Road Safety Audits (RSA) and Corridor Operations Planning Studies (COPS).

- **III-Project Delivery:** Participate in PennDOT Connects and design/scoping field views; development and implementation of the Regional Traffic Signal Program.
- **IV-Land Use/Transportation Linkages/Economic Development/Modernization:** Identifying multimodal livability and sustainability strategies via integrated/strategic corridor planning; PennDOT Connects participation; training and support.

**ROLES**

- **Federal Highway Administration (FHWA)/Federal Transit Administration (FTA):** Provide technical assistance as well as general oversight, review and approval of the metropolitan planning process for Southwestern Pennsylvania.

- **SPC:** In Transportation Operations and Safety, the role of SPC is to establish and facilitate a cooperative process for operations and safety planning. SPC staff leads the planning process and implementation strategies for the Regional Operations Plan (ROP), the Regional Safety Action Plan (SAP), the Regional ITS Architecture and Plan, the Congestion Management Process, and the Regional Traffic Signal Program. SPC staff also provides technical assistance to all regional stakeholders and leads special studies with consensus from or at the request of regional planning partners. SPC staff also leads the Regional Operations and Safety Forum, which meets quarterly to discuss the above plans as well as upcoming operations and safety projects, studies, and initiatives. The Forum includes staff from FHWA, PennDOT Central Office (BOMO), PennDOT Districts, County Planners, the City of Pittsburgh, Transportation Management Associations, other municipalities, bicycle and pedestrian advocates, and consultants.

- **PennDOT Central Office (BOMO):** In Transportation Operations and Safety, the role of the PennDOT Bureau of Maintenance and Operations (BOMO), Highway Safety and Traffic Operations Division is to participate and engage in the development of SPC’s ROP and SAP and ensure that statewide guidance is being adhered to. BOMO staff and SPC staff also cooperate and coordinate on the exchange of operations and safety data. PennDOT Central Office legal staff is also involved in the review and approval of the reimbursement agreements for the Regional Traffic Signal Program.

- **PennDOT Districts:** In Transportation Operations and Safety, the Districts’ role is to participate and engage in the development of all aspects of SPC’s Operations and Safety program. The Districts participate on Steering Committees and consultant selection advisory committees for plan development and special studies. In the development of the ROP and SAP, the Districts’ role is to communicate the priority needs regarding operations and safety of the state owned transportation network. SPC staff and District staff also regularly cooperate and coordinate on the exchange of operations and safety data. The Districts, as roadway owners, are engaged in our Road Safety Audit program and are also involved in the review and approval of activities associated with the Regional Traffic Signal Program.
• **Member Planning Departments**: In Transportation Operations and Safety, the county/city planning departments’ role is to participate and engage in the development of all aspects of SPC’s Operations and Safety program. The planning departments’ participate on Steering Committees and consultant selection advisory committees for plan development and special studies. In the development of the ROP and SAP, the county/city planning departments’ role is to communicate the priority needs regarding operations and safety of the transportation network in the county/city. SPC staff and planning departments’ staff also cooperate and coordinate regularly on the exchange of operations and safety data. The counties and city, as roadway owners, are also engaged in our Road Safety Audit program.

**TRANSPORTATION OPERATIONS & SAFETY – RESULTS FROM CURRENT PROGRAM**

*SmartMoves for a Changing Region* continues to place an emphasis on investing in the maintenance and preservation of the existing transportation system; a theme that is also the top priority in the 2021-2024 TIP currently under development. SPC’s operations and safety programs address goals such as ensuring that we include major projects that maintain our existing system while also enhancing safety, accessibility, mobility, and connectivity across the region.

The following is a sample of transportation operations and safety planning activities that were advanced in the 2018-2020 Work Program:

- Held regular meetings of the regional Transportation Operations & Safety Forum.
- Utilized the Regional Integrated Transportation Information System (RITIS) platform suite of tools from the University of Maryland Center for Advanced Transportation Technology (CATT) laboratory to establish and confirm federal performance targets for system performance (PM3). In 2018, SPC Operations and Safety staff confirmed and adopted the statewide targets for metrics such as:
  - Percent of Person-miles Traveled on the Interstate System that are Reliable
  - Percent of Person-miles Traveled on the Non-Interstate NHS that are Reliable
  - Interstate System Truck Travel Time Reliability Index
  - Annual Hours of Peak-Hour Excessive Delay (PHED) per Capita
- Continued to participate in statewide and national discussions concerning advancements in Intelligent Transportation Systems (ITS), including a statewide connected and autonomous vehicle work group (led by PennDOT) on planning and policy related to these emerging technologies. Also participated in the past two State of Pennsylvania annual Connected/Autonomous Vehicle summits.
- Participated in stakeholder workshops to develop the concept of operations for the Pennsylvania Safety Transportation and Research Track (PennSTART).
- Completed the 2019 Regional Operations Plan (ROP) update. The 2019 ROP update includes over 60 proposed projects, studies, and initiatives that were developed over a seven-month process that included significant feedback from a regional steering committee and stakeholder group.
- Successfully coordinated and submitted five applications for statewide Transportation Systems Management and Operations (TSMO) funding on behalf of PennDOT Districts 11 and 12. These applications were awarded $4.3 million for implementation of additional
CCTVs, dynamic message signs, and other ITS-related infrastructure on the region’s Interstates and state routes.

- Completed the next phase of development for the Regional Traffic Signal Program including preliminary engineering, final design, and construction on the third cycle of projects. With the pending completion of the third funding cycle of this program, over $12 million has been invested to improve 577 signalized intersections across 70 municipalities in our region since 2008. The results of the first two cycles of this program include **$64 of public benefit for every $1 spent** in terms of reduced travel delay, reduced vehicular stops, reduced fuel consumption and emissions, and improved safety.

- Completed a comprehensive review of the Congestion Management Process corridors to determine any necessary modifications. SPC engaged with staff from each county, the City of Pittsburgh, the Transportation Operations and Safety Forum and other regional stakeholders to gather feedback on CMP modifications. The corridor set has been updated.

- Analyzed historical crash data in order to facilitate establishment of the federally mandated, regional safety performance targets for the first two reporting periods (2014-2018 and 2015-2019). The latest regional safety targets were adopted by SPC in January, 2019. These metrics include:
  - Number of fatalities
  - Rate of fatalities (per 100M Vehicle miles traveled)
  - Number of serious injuries
  - Rate of serious injuries (per 100M vehicle miles traveled)
  - Number of non-motorized fatalities and serious injuries

- Conducted six additional Road Safety Audits. By end of FY 2020, SPC will have completed 39 Road Safety Audits since 2009. Many of the suggestions made in these audits have been incorporated by safety projects.

- Completed a third Corridor Operations Planning Study along State Route 30 in Westmoreland County. This was completed at the request of the PennDOT District 12-0.

- Completed a State Route 885 (Second Avenue) Multimodal Corridor Planning Study at the request of the City of Pittsburgh and PennDOT District 11-0. This study analyzed an arterial corridor with limited and finite capacity that is projected to experience very high development growth in the next 20 years. Recommendations included a new bus rapid transit route, new multimodal transit, bike and pedestrian facilities, and links and intersection improvements.

- Continued to lead **Traffic Incident Management (TIM) initiatives** within and outside of the region. Staff continues to coordinate local TIM teams, training sessions, webinars, and after action reviews. Staff continues to lead and report on FHWA TIM self assessments and provide a quarterly TIM Program newsletter. The newsletter identifies funding opportunities for first responders. SPC also assisted with coordinating and providing National SHARP II TIM Responder Training to over 650 City of Pittsburgh Fire Fighters. Outside the region, SPC staff met with staff of Tri-County Regional Planning Commission (TCRPC) and South Central Taskforce to discuss how to start a TIM initiative in their region. The meeting consisted of presenting TIM Team fundamentals/program guide and assisting the Harrisburg area in their kickoff meeting efforts.
TRANSPORTATION OPERATIONS, CONGESTION MANAGEMENT, AND CONNECTED
MOBILITY/ITS

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TASK DESCRIPTIONS

Monitoring and evaluating transportation system performance in order to identify sources and causes of recurring and non-recurring congestion is critical for developing and implementing strategies that enhance the mobility of people and goods in Southwestern Pennsylvania. Given that transportation system users typically don’t recognize jurisdictional boundaries as they travel, and desire a seamless trip between origin and destination, it is essential to do this work in a collaborative environment with a wide variety of stakeholders.

Similarly, seamless technology and transportation are both about connecting people with the resources they need to live their lives, as well as connecting people in cities, towns and regions around the world. Technology in transportation has evolved and has changed rapidly in recent years. Activities in ITS planning are designed to maximize the power of technology to improve safety, mobility, and accessibility for transportation system users.

The following activities will be undertaken by SPC to facilitate the regional collaboration and cooperation that is needed to achieve an efficient and connected operating transportation system.

1. Regional Transportation Systems Management & Operations Program

   **Objective:** Transportation Systems Management and Operations (TSM&O) is a set of strategies to anticipate and manage traffic congestion, and minimize causes of service disruption, delay and crashes. TSM&O is an integrated program to optimize the performance of the existing infrastructure though implementation of multimodal, cross-jurisdictional systems, services and projects. These elements are designed to preserve capacity and improve the security, safety and reliability of transportation systems. SPC encourages and participates in the incorporation of TSM&O within the ongoing cooperative regional planning and programming process and helps to identify regional and statewide process changes needed to incorporate TSM&O.

   **Planning Activities:**
   - Provide leadership and administrative support to the regional Transportation Operations and Safety Forum as it assists with the development of regional programs such as the ROP, CMP, ITS and safety planning.
Unified Planning Work Program
Fiscal Years 2020-2022

- Participate in PennDOT and local transportation operations planning activities including identification and prioritization of operations projects and transportation management plans to mitigate work zone impacts.
- Review and provide feedback, as requested, on development access plans and traffic impact studies.
- Coordinate and conduct workshops and studies on congestion reduction strategies.
- Participate in integrated corridor and planning studies associated with implementation of the LRP.
- Support PennDOT and other planning partners in efforts to research and implement innovative solutions such as roundabouts and diverging diamond interchanges to address locations with congestion and safety problems.
- Work with other SPC departments, as well as planning partner agencies, to implement policies, strategies and technologies to reduce energy and fossil fuel consumption.
- Continue outreach materials, such as the regional Journal of Transportation Operations & Safety (JOTS), to disseminate information about regional congestion management and transportation operations initiatives.
- Develop and maintain collaboration tools such as SPC’s website, social media outlets and SharePoint site in order to share operations planning and programming information.
- Conduct outreach activities including surveys, educational materials, training and other initiatives designed to increase the awareness of transportation operations and the benefits of traffic signal improvements and other implementation initiatives.

Work Products:
- Regular meetings of the Transportation Operations and Safety Forum including meeting materials.
- Technical assistance, workshops and outreach materials.
- Studies and other technical reports.
- Briefing materials for the Commission, planning partners and the public.

2. Regional Operations Plan Implementation

Objective: The long range plan was developed with the following Regional Vision: A world-class, safe and well maintained, integrated transportation system that provides mobility for all, enables resilient communities, and supports a globally competitive economy. To achieve the Vision, the following investments, that are relative to the Regional Operations Plan (ROP), were identified:
- Investment for Maintaining Infrastructure Condition
- Investment for System Safety, Efficiency and Reliability; and
- Multimodal Investment for Community and Economic Development

SPC’s Regional Operations Plan (ROP) has established operations objectives to mitigate recurring congestion, maintain mobility during planned events, minimize the impact of
unplanned events, and provide an efficient multimodal transportation system. These objectives have been developed in collaboration with a broad range of regional partners and require continuing collaboration and cooperation among these partners to undertake implementation activities to achieve them.

Planning Activities:

- Continue to identify regional focus areas for transportation operations to prepare for the next Regional Operations Plan update. The recently completed 2019 Regional Operations Plan identified over 60 proposed projects, studies, and initiatives. Many of these proposed projects include intelligent systems to advance connected mobility. Continue to encourage the incorporation of ROP projects in the TIP workgroup discussions. Continue to coordinate with planning partners on acquiring any available discretionary funding for ROP projects when it becomes available.
- Conduct multimodal and other Corridor Planning Studies in corridors and regional subareas identified in the ROP in order to target congestion reduction strategies and implementation initiatives.
- Provide technical assistance for transportation operations project implementation.
- Monitor the effectiveness of transportation operations projects and strategies by conducting before and after analyses.

Work Products:

- Data assembly for next Regional Operations Plan update.
- Before and after studies.
- Briefing materials for the Commission, planning partners and the public.

3. Congestion Management Process (CMP)

Objective: The CMP is a regional planning tool designed to help manage congestion by identifying congested corridors and recommending multimodal strategies for congestion mitigation. The CMP provides information that helps transportation planners, operations professionals and others to understand the causes and sources of congestion in individual corridors and the region. Data on these congestion elements helps SPC, in partnership with other agencies, to formulate congestion management strategies. Data and information from the CMP benefits the transportation planning process by helping the region focus limited federal transportation dollars where they can have the greatest impact. The CMP process will also engage planning partners on FHWA operations performance metrics and target setting. As required, regional operations performance targets will be established within 180 days of established statewide operations targets.

Planning Activities:

- Collect, compile, analyze and display traffic data as part of the CMP in order to identify sources and causes of congestion.
• Review and report on the state of recurring and non-recurring congestion in the region via tracking of various performance measures. Address federal performance metric requirements by collecting and analyzing data that will allow target setting and performance measure tracking of the following:
  - Percent of person-miles traveled on the Interstate system that are reliable
  - Percent of person-miles traveled on the non-Interstate national highway system that are reliable
  - Truck travel time reliability

• Complete a comprehensive review of the current network of 104 CMP corridors to determine necessary modifications. In the previous Work Program, staff engaged with regional stakeholders and planning partners and obtained the necessary feedback to update the CMP corridor set. In this Work Program, staff will analyze available data and re-engage stakeholders to obtain feedback on congestion mitigation strategies for each corridor.

• Use the CMP process to determine the positive travel time and reliability impacts that newly completed projects have made on Tier 1 (freeway) corridors.

• Continue to incorporate new sources of data (such as private-source probe data) and new analysis platforms such as Streetlight and RITIS in order to enhance the amount and quality of traffic data available for transportation planning purposes.

• Continue to enhance multimodal data integration into the CMP including transit ridership data, park-n-ride data, and freight data.

• Provide information and analyses required to incorporate traffic operations data into the technical project evaluation processes for the TIP and LRP, and to assess project selection criteria for other funding programs.

Work Products:
• Comprehensive CMP website updates.
• Special studies and data sets, as needed.
• Data and analyses for incorporation into project selection and project development activities for the TIP and LRP.
• Briefing materials for the Commission, planning partners and the public.

4. Regional ITS Architecture

Objective: ITS projects funded by USDOT must conform to a Regional ITS Architecture (Federal Regulation 23 CFR 940.11). SPC maintains this Architecture and updates it as needed in order to keep up with planned and potential future capabilities and needs throughout the region. SPC collaborates with agencies and stakeholders throughout the region to accomplish this.

Planning Activities:
• Maintain the Regional ITS Architecture.
  - Since the last comprehensive update to the ITS Architecture in 2015, USDOT has released a new software update (ARC-IT). In this Work Program, staff will
incorporate this latest software update into our ITS Architecture. SPC will obtain access to and training on the latest updates for regional use.

- Add current ITS services within the region through coordination with and outreach to current architecture stakeholders. Use USDOT’s Regional Architecture Guidance as appropriate.
- Extend the current architecture to additional agencies and service areas through stakeholder education, outreach and technical assistance. Priority service areas include information services, transit management, incident management, emergency management, traffic control, freight, and research.
- Customize architecture flows and identify standards as appropriate to facilitate the interchange of ITS information between agencies.
- Work with funders and project sponsors to ensure that they incorporate and enforce a systems engineering analysis as a defined process for their ITS projects.
- Identify project architectures as appropriate within the Regional ITS Architecture.
- Maintain a user-friendly Regional ITS Architecture webpage so planning partners and stakeholders have access to the information within the architecture. Create links between this website and PennDOT’s Operations webpages and pages hosted by other planning partners and stakeholders.

Work Products:
- Updated and accessible Regional ITS Architecture.
- Briefing materials for the Commission, planning partners and the public.

5. Regional ITS Program/Connected Mobility

Objective: The information contained in the Regional ITS Architecture and the relationships established to build and maintain the architecture are important elements for engaging stakeholders in planning for the future of ITS in the region. SPC will continue to use these tools to establish a strategic regional vision for ITS and to assist in the implementation of ITS projects.

Planning Activities:
- Provide leadership and administrative support to the ITS stakeholder group as it guides and implements the region’s ITS planning program. Per the updated ROP, update the ITS device inventory and develop a Regional ITS Strategic Plan.
  - Foster discussion on a regional vision for ITS including the potential for agencies to collaborate on projects and funding. Discussion would also include how the region can be positioned to prepare itself for more connected and autonomous vehicle deployment.
  - Host a regional forum, in conjunction with the 2020 Pennsylvania Automated Vehicle Summit, regarding regional readiness for CAVs
  - Support subcommittees as needed to advance priority initiatives of the region’s ITS community.
  - Sponsor quarterly meetings, special meetings, and special events as appropriate.
• Per the ROP, conduct outreach and encourage implementation of Transit Signal Priority. Provide technical assistance as requested for project implementation.
  - Assist planning partners with project planning activities and identification of funding strategies as appropriate.
  - Assist planning partners with competitive ITS/Connected Mobility grant applications as needed.
  - Track the status of ITS projects in the region and facilitate the exchange of project information. Encourage before/after evaluation of those projects and contribution of the results to the USDOT’s Research and Innovative Technology Administration (RITA) databases.
  - Conduct ITS-related feasibility studies that assess the feasibility and cost effectiveness of an ITS deployment strategy at specific locations (for example, the Regional Cashless Tolling Study was completed as part a prior program).

• Identify educational, training, and professional capacity building opportunities and facilitate access as appropriate.

• Disseminate ITS-related information to regional ITS stakeholders, decision-makers and the general public.
  - Determine effective uses for SPC’s webpage for ITS communications.
  - Publish ITS articles or project features in newsletters, via social media or other communications methods as appropriate.
  - Support ITS presentations as needed at professional associations and special events.
  - Sponsor ITS workshops as appropriate.

Work Products:
• Regular meetings with regional ITS stakeholders.
• Updated ITS Architecture.
• Regional ITS Strategic Plan.
• Study documents that assess the feasibility and cost effectiveness of ITS deployment strategies at specific locations.
• Educational materials, newsletters, training courses, seminars and/or conferences as needed.
• Presentation teams and promotional/support materials for conducting public outreach as needed.
• Briefing materials for the Commission, planning partners and the public.
TRANSPORTATION SAFETY PLANNING

ESTIMATED COST:

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TASK DESCRIPTIONS

Having a safe and secure transportation network is important to transportation operations, public health, the regional economy, and overall quality of life in the region. Transportation safety planning activities undertaken by SPC strive to reduce the number and rate of crashes, fatalities, and injuries on the region’s transportation network. These efforts “Toward Zero Deaths” focus on the “4 E’s” of safety: Education, Engineering, Enforcement and Emergency Response. The safety planning process will also engage planning partners on FHWA safety performance metrics and target setting.

1. Regional Transportation Safety Action Plan Implementation

Objective: State DOTs and MPOs are responsible for establishing targets and achieving significant reductions in each of the five federal safety performance measures:

- Number of fatalities (all public roads)
- Rate of fatalities (all public roads-per 100M vehicle miles traveled)
- Number of serious injuries (all public roads)
- Rate of Serious Injuries (all public roads-per 100M vehicle miles traveled)
- Number of non-motorized fatalities and non-motorized serious injuries (all public roads)

SPC’s 2015 Regional Transportation Safety Action Plan was the first step in establishing safety targets and tracking safety performance for the SPC region. Eight regional safety focus areas were identified based on a review of regional crash data and feedback from SPC safety stakeholders. This project will update the Regional Transportation Safety Action Plan, monitor these safety performance measures, and encourage safety projects and initiatives that address the safety focus areas. This began in the previous (2018-2020) Work Program and will be completed in the 2020-2022 Work Program. In the previous program, SPC adopted regional safety performance targets for the 2014-2018 and 2015-2019 reporting periods.

Planning Activities:

- Continue to compile and analyze traffic crash data on a regular basis in order to monitor trends and identify problem locations and priority issues.
- Update and maintain the Regional Transportation Safety Action Plan, which is integrated into the LRP, in order to identify regional focus areas for safety.
- Conduct an in-depth analysis or study of 1-2 safety focus areas per year in order to develop detailed action plans and implementation strategies for the region.
- Continue to provide information and analyses required to incorporate safety data into the technical project evaluation processes for the TIP, LRP, and other funding programs such as CMAQ, SMART and TA Set-Aside.
- Continue to coordinate with and encourage PennDOT Central Office and the Districts on an MPO-led process for distribution of the regional Highway Safety Improvement Program (HSIP) funding allocation. This proposed process would place a significant emphasis on a systemic safety approach that is data driven, but flexible. FHWA's Systematic Safety Project Evaluation Tool, as well as the focus areas identified in the Regional Transportation Safety Action Plan, would be used as guidance within this process.
- Participate in PennDOT, transit agency and local safety planning activities including identification and prioritization of HSIP projects.
- Monitor and report the regional safety performance measures as federally required.
- Monitor the effectiveness of safety projects and strategies by conducting before and after analyses.
- Provide technical assistance for safety project implementation.
- Create outreach materials, such as the regional Journal of Transportation Operations & Safety (JOTS), to disseminate information about regional safety initiatives.
- Develop and maintain collaboration tools such as SPC's website, social media outlets and SharePoint site in order to share safety planning and programming information.

**Work Products:**

- Update of the Regional Transportation Safety Action Plan.
- Transportation Safety Focus Area studies.
- Before and After Studies.
- Project evaluation processes that integrate safety factors.
- Outreach materials and newsletters.
- Briefing materials for the Commission, planning partners and the public.

2. **Road Safety Audits**

**Objective:** A Road Safety Audit (RSA) is a formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users. This program assists planning partners with integrating RSAs into the project development process, identifying potential road safety issues, and establishing programming mechanisms to fund the suggested improvements.
Planning Activities:

- Provide technical assistance to planning partners interested in conducting RSAs.
- Conduct before and after studies of previously completed RSAs in order to gauge effectiveness and to identify suggestions that have not yet been implemented. These findings could then be used to help develop additional candidate projects for funding consideration.
- Provide technical assistance for cost estimating and project funding applications to address safety issues.
- Share RSA Summary Reports and RSA procedures with other MPOs and RPOs.

Work Products:

- Road Safety Audit reports with suggested safety improvements.
- Cost estimates and project funding proposals.

3. Corridor Operations Planning Studies

Objective: In order to improve mobility, accessibility, and safety in a comprehensive manner, SPC has developed a corridor study approach, which focuses on operations and safety collectively. Corridor Operations Planning Studies are a hybrid between traditional studies and the charrette-style RSA process and take a more holistic look at both operations and safety together and how they impact one another along a corridor. SPC has completed at least one of these studies per fiscal year for the last few years.

Planning Activities:

- Provide technical assistance to partners interested in conducting Corridor Planning Studies.
- Provide technical assistance for cost estimating and project funding applications to address operations and safety issues.

Work Products:

- Corridor Planning Study reports with suggested operations and safety improvements.
- Cost estimates and project funding proposals.

4. Traffic Incident Management (TIM) Program

Objective: TIM programs address the National Unified Goal for Traffic Incident Management (NUG) by enhancing the delivery of incident management services and products through increased cooperation and collaboration. By bringing first responders together on a regular basis, improvements in interagency traffic incident management will help to ensure the safety of first responders and reduce incident clearance time on the regional transportation network.
Planning Activities:

- Maintain the regional TIM program including leadership and administrative support for the Regional TIM Steering Committee.
- Provide support and training for the region’s Local TIM Teams. Work with partners to encourage formation of additional TIM teams as needed.
- Provide leadership and support for the statewide TIM program (PENNTIME).
- Establish and maintain TIM guidelines that can be adopted as standard practice by regional agencies.

Work Products:

- TIM educational materials.
- TIM funding newsletter and outreach materials.
- Leadership of the PENNTIME TIM Task Force Development Committee and support PENNTIME meetings and initiatives.
- Regional TIM SharePoint collaboration portal.
- Support and host Regional TIM Steering Committee meetings.
- First responder training sessions, workshops, and local TIM team meetings.
- FHWA TIM Self-Assessment (annual).
- Briefing materials for the Commission, planning partners and the public.
- TIM Performance Measures tool (Incident Clearance Time and Secondary Crashes).
REGIONAL TRAFFIC SIGNAL PROGRAM

ESTIMATED COST:

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TASK DESCRIPTIONS

Maintenance and operation of traffic signals is a key component of an efficient regional transportation system. In Southwestern Pennsylvania there are currently over 2,800 traffic signals that are owned, operated and maintained by approximately 255 municipalities. Many of the municipalities do not have the resources, staff, or technical expertise to be able to ensure that these signals are operating as efficiently as possible and in coordination with signals in surrounding communities. SPC’s innovative work in this area assists municipal governments and PennDOT in the delivery of traffic signal improvements to existing signal infrastructure in order to increase operational efficiency, reduce congestion, and improve safety and air quality along the region’s arterial roadway network. This mature program’s successful track record has led to increased statewide funding and implementation of traffic signal improvements and has been modeled as a national best practice.

1. Regional Signal Program

   **Objective:** SPC has identified traffic signal management and infrastructure as a major need in the region. SPC has developed and established a regional traffic signal program that includes asset management, technical and project assistance to municipalities, as well as potential funding to assist in upgrading signal systems in the region. This effort is a high priority project type in both *SmartMoves for a Changing Region* and in the Regional Operations Plan (ROP). The planning and implementation activities that are part of this program are undertaken to increase the operational efficiency and safety of signalized corridors and to highlight the benefits of doing so.

   **Planning Activities:**
   - Manage efforts to update and maintain the current GIS-based regional traffic signal asset management database that can be used to assess and prioritize traffic signal needs. This information was previously provided to PennDOT Central Office to facilitate establishment of their TSAMS database.
   - Work with our planning partners to establish criteria for prioritizing local and regional signal needs.
- Continue coordination efforts with PennDOT Central Office on their funding programs and initiatives with regard to traffic signals and arterial corridors (e.g., Green Light Go and ARLE programs).
- Support a traffic signal technical committee to advance priority initiatives and support special events as requested.
- Manage the project selection, reimbursement agreements, preliminary engineering, final design, and construction phases for the 4th cycle of the Regional Traffic Signal Program, including:
  - Perform traffic engineering analyses and review analyses conducted by outside engineering consultants. Produce a preliminary engineering technical report with recommendations that are finalized by SPC, PennDOT, and municipalities.
  - Manage and review final design of the approved recommendations. Coordinate final design and final bid packaging with involved municipalities and PennDOT Districts.
  - Coordinate and manage construction/field implementation of technical recommendations, including any updated timings and coordination plans, equipment upgrades, signal decommissioning, etc., with PennDOT and the involved municipalities.
- Manage before and after studies to document the benefits of traffic signal investments, including operational improvements, estimated fuel savings, reduced emissions and financial savings. Include an analysis of accident records to document safety impacts of these investments.
- Research emerging technologies with regard to signal timing and coordination, including adaptive traffic signals and connected and autonomous vehicle technologies.
- Identify opportunities for Integrated Corridor Management pilot projects that would include controlling traffic signals in key corridors from the Regional Traffic Management Center (RTMC) during incidents and other necessary times. Assist local municipalities and others with identifying possible opportunities for other smart transportation projects along arterial corridors, such as adaptive traffic signals, access management, modern roundabouts, and traffic calming and multimodal accommodations.
- Encourage and provide technical assistance and available funding to municipalities interested in converting to LED traffic signals.

**Work Products:**
- Traffic signal asset management database.
- Technical reports with analyses and recommendations for signal improvements.
- Final design and bid packaging of traffic signal improvement/retiming projects.
- Before and after studies.
- Meetings with traffic signal stakeholders including meeting materials.
- Outreach and education materials.
- Briefing materials for the Commission, planning partners and the public.
REGIONAL ROUNDBOUD SCREENING STUDY

ESTIMATED COST

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TASK OVERVIEW AND DESCRIPTION

With traffic moving inside a roundabout between 15-25 mph, and with significantly less number of conflict points than a conventional traffic signal, roundabouts have been found to increase safety by reducing potential fatal crashes at an intersection by 90%, injuries by 76%, and all crashes by 39%. Research in the US and elsewhere in the world has also indicated that roundabouts provide annual savings of $5,000 in electrical and maintenance costs versus a traffic signal, and that they provide a service life of 100 years or more versus 10 to 20 years for a traffic signal. Unlike signalized intersections they are also not impacted by power outages. They also reduce vehicle delays by around as much as 50% as traffic flows continuously through an intersection. Due to their demonstrated ability in making intersections safer and their substantial operational and capacity characteristics, PennDOT and others have completed construction of 15 roundabouts within the region. Ten additional locations are in design development. Some local governments have also included roundabouts in their comprehensive planning. PennDOT has an Intersection Control Evaluation (ICE) policy which requires that alternative intersection designs be considered when undertaking a project; however, PennDOT currently has no methodology or planning function in place to determine the locations where roundabouts should be a higher priority. SPC is trying to position itself to: a) be informed when roundabout funding applications are received as well as; b) be prepared for any discretionary and other statewide or federal funding that becomes available for roundabout projects.

With this study, SPC proposes to work with its planning partners to identify, map, analyze, and prioritize a comprehensive list of intersections for roundabout feasibility.

STUDY TASK OUTLINE

The following general task outline will be utilized to develop a scope of work for this study:

- Kick off meeting(s) with county and state planning partners and stakeholders.
- Develop initial list of intersections to evaluate based on planning partner and stakeholder feedback, crash data and the potential to improve safety.
- Develop methodology for screening initial list of intersections for roundabout feasibility analysis. This could include:
  - Significant right of way impacts that could make a roundabout uneconomical.
  - Significant drainage or utility impacts that could make a roundabout uneconomical.
  - Environmental impacts that cannot be mitigated.
  - Proximity to historical sites that may rule out a roundabout.
  - Proximity of bottlenecks that would routinely back up traffic into the roundabout such as overcapacity signals and freeway entrance ramps.
Proximity of grades or unfavorable topography that may limit visibility or complicate construction.

- Routes where large combination vehicles or over dimensional vehicles frequently use an intersection and insufficient space is available.
- Locations where vehicles exiting the roundabout would be interrupted by downstream traffic control that could create queues backing up into the roundabout.
- Proximity of other traffic control devices that would require signal preemption such as railroad tracks.
- Isolated intersections located within a coordinated signal network where it is felt that LOS might be better with a signalized intersection incorporated into the system.

- Traffic data collection at locations passing the screening test.
- Roundabout operations analysis at locations passing the screening test.
- Evaluation and ranking of potential roundabout project locations.
- Concept development and budgetary cost estimates of top ranked roundabout project locations.
- Before and after video of model simulation of select roundabout locations.

**WORK PRODUCTS**

- Kick off meeting(s) with county and state planning partners and stakeholders.
- Task reports and a final report that documents and prioritizes locations to consider roundabouts.
- A methodology to conduct a regional screening of roundabout locations that could be shared with other planning partners and MPOs statewide.
TRANSPORTATION OPERATIONS & SAFETY – MULTI-YEAR IMPLICATIONS

The region’s operations and safety planning programs will continue to advance SPC’s priorities on the maintenance and operation of the existing system, coordinated investment at the corridor level, and provision of safe and secure multimodal and intermodal options for moving both people and goods. Within the operations and safety program, measurable performance targets have been established in support of national performance measures for safety, congestion reduction, and system reliability. Future performance measurement reporting will be integral to this program and will enable, encourage, and highlight the continued need for operations and safety planning and programming.

Congestion reduction and system reliability were two of seven national goals that have continued focus in the federal FAST Act legislation. Establishment of performance standards and an outcome-based program is continued with the provisions of this latest authorization bill. In working toward the federal goals “to achieve a significant reduction in congestion on the National Highway System” and “to improve the efficiency of the surface transportation system”, SPC will continue to be a leader in planning for operations and on mainstreaming transportation operations into the planning process. SPC staff members have been recognized as statewide leaders in Planning for Operations initiatives and could be called upon to assist in expanding operations programs to other parts of the Commonwealth, particularly to rural areas where RPO planning staffs may not be able to support such activities.

Safety was another of the seven national goals that were reiterated in the FAST Act. In working toward the federal goal “to achieve a significant reduction in traffic fatalities and serious injuries on public roads”, SPC will continue, through its transportation safety planning initiatives, to focus on increasing its role in transportation safety planning and on continuing to integrate safety into the overall transportation planning process. SPC staff members are being recognized as statewide leaders in Traffic Incident Management initiatives and have been called upon to assist in expanding TIM programs to other parts of the Commonwealth. A systematic regional HSIP funded program will ensure that effective improvement projects are provided on state, county, and local roadways.

The continued updating of the regional ITS Architecture to meet the latest standards enables SPC and its planning partners to fully use resources and emerging technologies that are available at the national level. Development of an ITS Strategic Planning document and future updates will result in the development of regional strategies and priority setting. It will also assist in preparing the region and its stakeholders for new technologies and systems, such as connected and autonomous vehicles, as they are developed, tested, and deployed. These on-going activities within SPC’s ITS planning and implementation initiatives promote collaborative and effective ITS planning.

SPC's Regional Traffic Signal Program will continue to focus on efforts to address the traffic signal priority areas defined in the Southwestern Pennsylvania Regional Operations Plan. These ongoing efforts include providing technical, project management, and funding assistance to municipalities in order to implement signal improvement projects; gathering updated information on regional traffic signal needs; and, conducting before and after studies to determine and promote the measures of effectiveness related to the program. SPC’s first three cycles of the program involved work on 649 traffic signals. The 4th cycle of the program is projected to affect an additional 80 traffic signals.
DATA SYSTEMS & MODELING
DATA SYSTEMS & MODELING – OVERVIEW

SPCcompiles large amounts of data, maps and other information for use as resource material by staff on a daily basis and to support both in-house and outside agency planning activities. Key data items are available for download from SPC’s website through SPC’s Regional Data Center. In addition, many of these data resources are linked to the region’s comprehensive Geographic Information System (GIS). SPC also functions as a Pennsylvania State Data Center Regional Affiliate and Census processing center and repository. This data underpins all of the planning activities at SPC.

One of the fundamental uses for this data is in SPC’s regional models including the REMI (Regional Economic Models, Inc.) forecasting model, Mature Economic Region Land Use Allocation Model (MERLAM), the regional travel demand model, and SPC’s air quality models. These models are essential to providing planning support to PennDOT, SPC’s members, and other regional partners, as well as for developing the LRP and TIP and in processing air quality conformity determinations.

Significant ongoing data collection, data management and coordination is needed with federal, state and local agencies to maintain these data systems and models. The software and hardware used for SPC’s data management and dissemination is maintained, updated, and enhanced periodically in order to keep up with technological advancements and opportunities. Staff training is also provided regularly.

STATEWIDE PLANNING PRIORITY AREAS

The tasks in this section of the UPWP address the following priority areas:

- **II-Supporting Planning/Programming Activities:** update and maintain the regional travel demand and air quality models, assist in implementing the state Climate Change Action Plan through air quality conformity analysis, FTA Triennial Review Support, and participation in the 2021 Federal Certification Review.

- **V-Highway Performance Monitoring System and Traffic Data Collection:** Verify and update roadway inventory and performance measures on Highway Performance Monitoring System (HPMS) sample sections including any additional segments that may be required based upon revised urban boundary revisions in accordance with HPMS manual specifications.

Submit HPMS data to PennDOT by the first Friday in December of each calendar year.

ROLES

**Federal Highway Administration (FHWA)/Federal Transit Administration (FTA):** Provide technical assistance as well as general oversight, review and approval of the Metropolitan Planning Process for Southwestern Pennsylvania.

**SPC:** In Data and Modeling, SPC’s role is to acquire, maintain, summarize, and disseminate data and associated analysis in support of SPC’s mission and implementation of SmartMoves for a Changing Region. This includes coordination with a number of organizations and agencies (DEP, PaSDC, Census Bureau, SPC members, the region’s transit operators, local universities, etc.).

Southwestern Pennsylvania Commission
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coordination with the PennDOT Program Center and FHWA, staff manages and tracks progress toward the local Transportation Performance Management targets. SPC staff manages the HPMS data collection activity in the region. Staff routinely updates and maintains the regional population, household, and employment forecasting models and the regional travel demand model. As needed, staff will work with other partners (PennDOT, DEP, EPA, etc.) to monitor and evaluate greenhouse gas emissions and assist in implementing Pennsylvania’s Climate Action Plan. Perform traffic data collection for PennDOT.

**PennDOT Central Office:** Provide resources, and oversight to traffic data collection efforts.

**PennDOT Center for Program Development:** The Program Center convenes and chairs the statewide Air Quality Transportation Conformity Work Group, and serves as liaison to FHWA and EPA for review and approval of air quality conformity assessments. The Program Center has a lead role in coordinating with SPC and other planning partners on managing the Transportation Performance Management process, and as needed, in monitoring and evaluating greenhouse gas emissions and implementation of the state’s Climate Action Plan.

**PennDOT Districts:** The Districts are both a source of data for SPC’s Data Systems and Modeling function, but also a customer for SPC’s data and data services. Custom analysis, modeling, and other technical assistance are routinely provided for the Districts on request. Advise SPC on locations to collect traffic data.

**Member Planning Departments:** Similar to the Districts, SPC’s members are also both a source of data as well as a customer for SPC's data services. Staff works closely with the members and their local municipalities on development and sharing of data and GIS resources. Local municipal plans are available from the members. Staff assists with the development of municipal plans with data and analysis on request. Communicate local traffic data collection needs.

**Transit Agencies:** Staff works closely with the region's transit operators, providing technical assistance, data, maps, and other analysis as needed. Transit service, operations, and management information is available from the transit operators.

**DATA SYSTEMS & MODELING - RESULTS FROM CURRENT PROGRAM**

*SmartMoves for a Changing Region* was adopted on June 24, 2019 as the regional long range transportation and development plan. This plan represents significant progress in implementing performance-based planning and programming. Extensive data analysis is important to *SmartMoves*. SPC’s data systems and modeling programs provide data and analysis that support planning activities throughout the Work Program to advance the Regional Vision, Goals and Strategies of *SmartMoves*.

SPC’s GIS-based information helps make the region's transportation system—including roadways, railways, bridges, waterways, tunnels, airports, etc. - more efficient and effective by analyzing multiple scenarios in the planning process. Private and public economic development groups have used GIS to aid
site selection activities for key projects within counties and along key investment corridors. SPC’s forecasting and travel models provide data and analysis to help the region prepare effective transportation plans, manage congestion and meet air quality standards. SPC routinely provides technical assistance to its members and partner agencies to develop traffic forecasts for key transportation improvements throughout the region. These activities help to advance the Regional Vision, Goals and Strategies of SmartMoves. The following is a sample of data systems and modeling activities that were advanced in the 2018-2020 Work Program:

- Maintained data sharing agreements with Carnegie Mellon University and the University of Pittsburgh.
- Assisted the U.S. Census Bureau with preparatory activities related to the 2020 Census, including the Local Update of Census Addresses (LUCA) Program, Participant Statistical Areas Program (PSAP), Complete Count Committee (CCC) Program, and other 2020 Census initiatives.
- Enhanced GIS data for the 10-county region representing new and updated multimodal transportation, land use, land cover, environmental, social and demographic features.
- Refined metadata, attribute descriptions, spatial data dictionaries and additional documentation of the regional GIS for use in-house and for outside data recipients.
- Revised data representing the region’s demographics at all geographic levels for historic and current counts, estimates, and projections. Incorporated data from the U.S. Census Bureau at all levels of geography for a 41-county region. Additional enhancements were made using data from the American Community Survey and other recent Census estimates.
- Updated land use data and statistics regionwide from detailed aerial photography, distilled at the municipal level and by traffic analysis zone for the region’s demographic forecast and regional travel demand model.
- Updated, edited and rectified GIS data representing infrastructure, land use/land cover, topography, hydrology, environmental features, and trip generators to correct ground locations through use of recent aerial imagery to aid transportation and economic development projects and plans.
- Distributed recent aerial imagery to PennDOT, member counties, municipalities, and planning partners for their use and to promote the sharing of end products between agencies with similar jurisdictions.
- Updated data representing past landslides and historic flood events to aid in determining possible negative impacts, and to improve the resiliency and reliability of the region’s transportation systems.
- Robust regional GIS applications and tools provided information on environmental features, demographics, and traffic patterns and conditions to assist the evaluation of projects for the TIP, the LRP, and Congestion Mitigation and Air Quality (CMAQ) projects.
- Updated GIS databases and mapping for all of SPC’s Congestion Management Process travel corridors, park-n-ride lots, LRP projects, and TIP projects for use by staff, publication and for posting on the SPC website.
- A Traffic Signal Asset Management System database and online application that joins data from GIS with signal permits and attributes for over 3,400 traffic signal, beacon and flasher locations across the 10-county region.
- Maintained the inventory of locally-owned bridges across the region and a geospatial database of locations, a complete slate of attributes and a collection of photographs to support
PennDOT’s Local Transportation Asset Management strategy.

- Developed GIS data and products to assist compliance with Environmental Justice mandates, for Title VI activities at partner agencies, and the Americans with Disabilities Act.
- Hosted meetings on geospatial data and standards between member governments and planning partners to initiate practices to aid the exchange of GIS products and data. Represented MPO GIS interests for the PA Mapping and Geographic Information Consortium, and as part of PennDOT’s Planning Partners.
- Produced various data layers, databases, maps, and graphics to assist planning partners, associated agencies and local governments.
- Upgraded GIS software and added hardware components to improve data processing capabilities, ensure data quality and accuracy, and improve the use of GIS data, applications and subsequent products.
- Staff provided technical support and detailed traffic forecasts to individual consultant teams that were under contract to PennDOT or member agencies, in preparation of needs analysis reports and traffic studies. A sample of recent projects includes:
  - Stevenson Mill Road and Port Vue Drive extension projects (Moon Township, Allegheny County)
  - I-376/Banksville Road Interchange Reconstruction project (City of Pittsburgh)
  - Origin - Destination analysis of travel patterns in the City of Pittsburgh's Cultural District
  - Analysis of travel patterns for the City of Pittsburgh's Strip District Study
  - Route 885/Second Avenue Corridor Study (City of Pittsburgh – Hazelwood)
  - Oakland 2030 District – Development of Transportation Baseline travel characteristics and greenhouse gas emissions
  - I-79 at Route 51 Interchange (Coraopolis Borough, Allegheny County)
  - Mon-Oakland Mobility Study (City of Pittsburgh)
  - East Busway Extension Feasibility Study – Swissvale to Monroeville (Allegheny County)
  - Downtown-Oakland-East End Bus Rapid Transit Project (City of Pittsburgh)
- Online Data Library on the SPC website where numerous data summaries are available to the public. Several “Spotlight” projects have been developed to showcase available data. SPC continued using Tableau software in the 2018-2020 Work Program to develop interactive dashboards, enhancing the display of data on SPC’s Data Library.
- Inventory of the region’s park-n-ride facilities that contains detailed information for each of the more than 100 park-n-ride facilities located in the SPC region.
- Conformity assessments were conducted for adoption of the regional TIP in 2018 and adoption of the LRP in 2019.
- SPC continued to maintain an up-to-date, calibrated version of the REMI TranSight model. The REMI TranSight model provides the capability to integrate output from SPC’s regional travel demand model into the broader economic model to better evaluate the total economic effects of changes to the transportation network. The configuration of the REMI model regions allows for detailed and flexible scenario building for each of SPC’s individual
member counties and the City of Pittsburgh. The REMI TranSight model assists with assessing the performance of the region's LRP.

- SPC’s Cycle 11 forecast of population, employment and households, the updated 2045 Long Range Forecast, was developed in the 2018-2019 Program Year and adopted with SmartMoves for a Changing Region in June 2019.

- Developed metrics, targets, and tracking process for ongoing monitoring and reporting of progress on transportation performance measures to address U.S.DOT’s Transportation Performance Management planning process.

- In 2017, developed a strategic plan to systematically update the region’s travel demand models and modeling process, and to acquire data and tools to enhance modeling capability. In 2018, staff began implementing the plan. The modeling software platform was replaced to provide greater flexibility and integration with GIS tools. SPC’s modeling process was migrated to the new software.

- In 2018 and 2019, SPC purchased a subscription to StreetLight Data which provides access to an analytics platform to evaluate transportation projects and development of data for the model update process.

- Enhanced GIS data for the 10-county region representing new and updated transportation, transit, land use / land cover, environmental, social and demographic features.

- Refined metadata, attribute descriptions, spatial data dictionaries and additional documentation of the regional GIS for use in house and for outside data recipients.

- Revised data representing the region’s demographics at all geographic levels for historic and current counts, estimates, and projections. Incorporated data from the Census estimates and the American Community Survey at all levels of geography for a 37-county region.

- Updated land use data and statistics region-wide from detailed aerial photography, distilled at the municipal level and by traffic analysis zone for the region’s demographic forecast and traffic demand models at SPC. Updated, edited and rectified GIS data representing infrastructure, land use / land cover, topography, hydrology, environmental features, and trip generators to correct ground locations through use of recent aerial imagery and county provided parcels to aid transportation and economic development projects and plans.

- Distributed recent aerial imagery to PennDOT, member counties, municipalities, and planning partners for their use and to promote data sharing across the region.

- Updated data representing past landslides and historic flood events to aid in determining possible negative impacts and to improve the resiliency and reliability of the region’s transportation systems.

- A comprehensive collection of GIS data representing sidewalks, public stairs, trails and pedestrian / bicycle infrastructure to support the regional Active Transportation Plan.

- Robust regional GIS applications and tools that provide information on environmental features, demographics, and traffic patterns and conditions to assist the evaluation of projects for the TIP, the LRP, Congestion Mitigation/Air Quality projects and Transportation Alternatives Program.
• Updated GIS data and mapping for all of SPC's Congestion Management Process travel corridors, park and ride lots, LRP projects, and TIP projects for use by staff, publication and for posting on the SPC website.

• An updated and current Traffic Signal Asset Management System database and application that joins data from GIS with signal permits and attributes for over 3,400 traffic signal, beacon and flasher locations across the 10-county region.

• An inventory of locally-owned bridges and roads across the region with a geospatial database of locations, a complete slate of attributes and a collection of photographs to support asset management strategies.

• Developed GIS data and products to assist compliance with Environmental Justice mandates, for Title VI activities at partner agencies, and the Americans with Disabilities Act.

• Hosted meetings on geospatial data and standards between member governments and planning partners to initiate practices to aid the exchange of GIS products and data. Represented MPO GIS interests for the PA Mapping and Geographic Information Consortium, PennDOT’s Planning Partners and AASHTO GIS transportation symposium.

• Produced various geospatial data layers, aerial mosaics, maps, and graphics to assist planning partners, associated agencies and local governments.

• Upgraded GIS software and added hardware components to improve data processing capabilities, ensure data quality and accuracy, and improve the use of GIS data, applications and subsequent products.
GEOGRAPHIC INFORMATION SYSTEMS

ESTIMATED COST:

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<td>SPC</td>
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<td><strong>$424,000</strong></td>
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OBJECTIVES:
Tasks undertaken within GIS Operations provide accurate geospatial data representing land use, transportation infrastructure, environmental conditions, demographics, housing and employment categories that enhance existing GIS applications; introduce additional applications; and, provide support to SPC departments, member governments, associated agencies, and planning partners, resulting in improved quality and quantity of work at SPC.

PLANNING ACTIVITIES:

- Maintain and enhance a wide collection of GIS data and imagery representing built infrastructure, land cover / land use, topography, hydrology, environmental features, and trip generators to aid in sound and sustainable planning for transportation and economic development projects.

- Provide the necessary GIS data, applications, and products required by the various departments of SPC to assist with UPWP activities, to advance projects and support planning partners.

- Enhance and maintain multiple levels of geography to accurately depict the demographics of the region in terms of population, households, housing units, and workplace employment for further analysis and for incorporation with SPC’s modeling and forecasting programs.

- Maintain an accurate base map to highlight the relationship of various transportation features such as railroad crossings, traffic signals, active transportation facilities, transit facilities, intermodal facilities, and ITS infrastructure to identify and minimize potential conflicts of safety.

- Develop and maintain accurate databases of environmental features and conditions as required for environmental impact studies for transportation and economic development projects across the region and to aid in linking transportation planning and the National Environmental Policy Act.
• Maintain accurate data for the region’s transportation networks and incorporate HPMS traffic counts and traffic signal data to aid in the analysis of system performance within SPC’s Congestion Management Process, Regional Operations Plan, and Traffic Signal Asset Management System.

• Maintain data and information related to transit routes, stops, and transit stations for fixed route transit service by all transit providers in the region and provide technical assistance for transit oriented development strategies.

• Incorporate completed economic development projects and maintain databases of places of employment and zip codes to aid in determining the region’s employment for SPC’s modeling efforts, and to identify trip generators and attractions that affect traffic patterns.

• Maintain data and information representing river terminals, trucking, freight facilities, and railroad corridors to support SPC’s Freight Forum, keep current SPC’s Regional Freight Network, and assist in the development of regional and localized freight plans.

• Expand existing spatial data for transit service, pedestrian and bicycle trails and facilities, and parking facilities to provide analysis for improved active transportation, intermodal and multimodal opportunities across the region.

• Aid the region’s local governments with their comprehensive and multi-jurisdictional plans through the use of accurate GIS data and imagery. Incorporate data and land use classifications from county and municipal comprehensive plans into SPC’s GIS to reflect changes across the region.

• Assist SPC and PennDOT district staff by maintaining databases of functionally classified highways, adjusted urbanized areas, fixed transit routes and stops, traffic signals, and park-n-ride lot locations.

• Maintain and update demographic data on race, age, income, education, mobility and Limited English Proficiency for benefits and burdens analysis as part of Environmental Justice activities at SPC, and to expand public outreach and public participation with minority and disadvantaged populations.

• Compile GIS data representing land cover / land use to identify areas within existing communities for infill development and the re-use of brownfield sites for transportation, employment, and housing. Carry out revisions to land cover data as recent aerial imagery becomes available to keep data current for project evaluation, transit development plans, modeling and forecasting activities.

• Incorporate data from PennDOT’s Roadway Management System, Bridge Management System, Multi-Modal Project Management System, and Crash Data Analysis Retrieval Tool in the regional GIS to evaluate current conditions, traffic volumes, and sufficiency and deficiency of the region’s highways and bridges to
assist the Commission in prioritizing TIP and LRP projects, to assist staff in conducting Road Safety Audits and to support regional Traffic Incident Management.

- Provide orthophotographs and digital elevation data from recent aerial photography programs to member governments, associated agencies and planning partners.

- Implement a flexible training schedule for GIS and other applications to increase analytical ability of staff, maximize data analysis, and improve the distribution of data and information to planning partners and the public.

- Apply and adopt spatial and data standards to promote and enhance the sharing of GIS data between SPC's member governments, associated agencies, planning partners and consultants.

- Create maps, graphics and visualization tools to assist SPC departments with public engagement and outreach related to UPWP programs, to satisfy outside requests, and for distribution through the SPC website.

- Maintain an adequate collection of hardware and software for GIS and other SPC programs to provide necessary services for member governments, associated agencies, and planning partners.

WORK PRODUCTS:

- A current collection of GIS data for the SPC region depicting transportation, environmental, social, and demographic features added or revised from outside data and various sources of aerial imagery.

- Maps, graphics, data, reports, and visualization tools for use by SPC departments, at various public meetings, and for member governments, associated agencies, planning partners and the general public.

- Improved GIS applications to aid in the evaluation of transportation projects, and to increase the efficiency of SPC transportation plans and programs.

- Updated metadata and documentation to reflect the addition of new GIS data, enhanced GIS data attributes, new applications, and to improve the transmittal of GIS products.

- Presentations, seminars and participation at local and state GIS functions.

- Enhanced GIS content and applications on SPC's website.
• Promotional and support materials for SPC’s public participation processes.

MULTI-YEAR PLANNING ISSUES:

• A complete, current and comprehensive collection of GIS data and aerial imagery for the 10-county region that complements data and GIS programs at state agencies, member governments and planning partners within and adjacent to the SPC region.

• A spatial collection of data showing land cover data change in the region as a revised base map to aid in transportation and economic development planning decisions for both short and long-term plans. Data will be updated from future collections of imagery to show change and identify development patterns.

• Updated land use totals and workplace employment data by municipality and traffic analysis zone that are tracked in SPC’s modeling and forecasting programs to identify growth or loss in residential and employment sectors over time.

• In-depth analysis of the region’s demographic data to identify disadvantaged populations and trends relating to transportation and economic development opportunities.

• Historic and current statistics regarding the region’s highway and bridge inventory to aid in project evaluation and prioritization for both state and locally maintained transportation infrastructure.

• As transportation and economic development projects are completed, they are added to the regional GIS and incorporated into the monitoring of the flow of traffic, people, and goods and services.

• Track, inventory, and digitize land use categories from county and municipal comprehensive plans as they are completed. Incorporate results into modeling and forecasting activities.

• Increasingly accurate GIS data at the regional level through the incorporation of periodic updates to digital parcels, street centerlines, and site addresses provided by local governments.

• Expand existing databases and geospatial layers for traffic counts, traffic signals, and transit facilities to reflect changing conditions and for benchmarking in
project evaluation programs.

- Broader representation of environmental features and conditions to assist in linking transportation planning and the National Environmental Policy Act.
REGIONAL DATA AND GRAPHICS CLEARINGHOUSE

ESTIMATED COST:

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<th>2020-2021</th>
<th>2021-2022</th>
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</thead>
<tbody>
<tr>
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<td>PennDOT</td>
<td>$32,300</td>
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<td>SPC</td>
<td>$32,300</td>
<td>$33,700</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$323,000</td>
<td>$337,000</td>
</tr>
</tbody>
</table>

TASK DESCRIPTIONS

The collection and analysis of a wide range of data supports SPC’s transportation and economic development planning programs. The maintenance and application of data resources such as the regional park-n-ride inventory, freight flows, traffic volume trends, and datasets like NPMRDS, INRIX, and StreetLight are vital across all of SPC’s planning functions. Key program elements include the processing and dissemination of Census and other data releases and developing and maintaining a current catalog of SPC data products available to staff, member agencies, planning partners and others. SPC functions as a Regional Affiliate of the Pennsylvania State Data Center (PaSDC). In this role, SPC operates as an extension of the PaSDC by responding directly to the information needs of requestors in the SPC region. Data analysis, technical assistance, and consultation services are also provided.

1. Data and Graphics Maintenance & Analysis

Objective: SPC serves as a regional resource for data to support planning by SPC’s internal departments, member governments, associated agencies, and planning partners. SPC continuously enhances this data and looks for new ways to analyze and apply data visualization techniques to produce clear, concise information for planning activities.

Planning Activities:

- Maintain SPC’s data files to reflect changes that occur over time.
- Research, develop and/or acquire new data resources, as needed.
- Coordinate with the data collection, data management and data dissemination efforts undertaken by SPC through funding from other agencies such as the Appalachian Regional Commission and the PA Department of Community and Economic Development.
- Support implementation of SmartMoves for a Changing Region by providing data and analysis, as needed.
- Increase awareness among in-house staff, outside agencies and other stakeholders regarding data resources available through SPC.
- Continue to expand and enhance the presentation of data resources on SPC’s regional data center and data library housed on the SPC website. Develop and implement tools to allow interactive choice by users for selecting the type and geography of tables/graphs/maps to display during their website visit.
• Respond to data requests from in-house staff and from outside agencies and individuals.
• Continue to function as a PaSDC Regional Affiliate agency and Census processing center and repository.
• Work with the U.S. Census Bureau to acquire, process and disseminate the various Census products as they are released, including 2020 Census data releases, annual American Community Survey (ACS) data, annual Census population estimates, and several other Census data files.
• Review hardware and software needs for SPC’s data maintenance and dissemination activities. Obtain, install and operationalize needed equipment. Provide for staff training, as needed.
• Continue to work with partners to obtain demographic and origin-destination data for users of regional park-n-ride facilities and report on findings.
• Continue research and testing of options for enhancing park-n-ride facility utilization statistics via alternative data collection methods. Select and deploy new methodologies for obtaining baseline utilization statistics for regional park-n-ride facilities.
• Provide analysis of regional freight flow/goods movement data (FAF5) that is expected to be released in late 2020.
• Continue to acquire, review, and expand capacity for analysis of “big data” for travel monitoring such as NPMRDS, INRIX, StreetLight, etc.
• Provide demographic analysis for SPC’s Linking Planning and NEPA activities, as needed.
• Identify specific data needs to advance regional resiliency and sustainability efforts.
• Assist with data collection, data management and data analysis tasks required for SPC’s Local Asset Management activities, as needed.

Work Products:
• Updated data files and related documentation from the U.S. Census Bureau and other sources, as needed.
• New data files and related documentation, as needed.
• Standard and custom data products for use by staff and other organizations and individuals.
• Enhanced SPC regional data center with online data library and updated catalog of data resources.
• Various interactive dashboards and other Infographics to highlight SPC’s data resources.
• Documentation of data collection, management and dissemination activities and procedures.
• Updated data request file that records and documents incoming data requests.
• Operational software and hardware for data collection, management and dissemination, and a staff trained in its use.
• Current data on characteristics and use of the region’s park-n-ride facilities.
• Documentation of the analysis of Freight Analysis Framework (FAF5) freight flows to/from the region.
• Documentation of the analysis of “big data” for the region, such as NPMRDS, INRIX, and StreetLight data.
• Briefing materials for the Commission, planning partners and the public.

2. Transportation Performance Management

Objective: SPC continues to be in close collaboration with PennDOT and other planning partners to implement performance targets and measures related to FHWA and FTA rulemakings intended to use system information to make investment and policy decisions to achieve national performance goals as required by MAP-21 and the FAST Act. Performance measures have been established 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, transit asset management through state of good repair (SGR) measures. Data has been gathered and shared among planning partners to develop baseline measurements and continue the ongoing assessment of progress toward performance targets. Processes continue to be developed for publishing standardized reports to disseminate this information to planning partners and the public.

Planning Activities:

• Acquire, process, and analyze datasets for monitoring progress toward performance targets, such as the National Bridge Inventory (NBI), the Fatality Analysis Reporting System (FARS), the National Performance Management Research Data Set (NPMRDS), the Highway Performance Monitoring System (HPMS), etc. Develop and document tools to efficiently process and analyze these datasets.
• Coordinate the development and implementation of Memorandums of Understanding (MOUs) with planning partners and others.
• Collaborate with PennDOT, SPC members, Public Participation Panels, transit operators, and other planning partners to implement local targets, develop appropriate metrics, and to track and disseminate progress toward targets.
• Prepare required reports for PennDOT, FHWA, and FTA.
• Develop regular reports and visualization tools that will communicate progress toward performance targets to staff, planning partners, the public, and others. Develop performance measures section for the SPC website. Post reports and other relevant information to the SPC website and through other media.
• Manage SPC’s overall efforts to address federal performance measure requirements. Additional work to respond to the performance measures requirements will also be initiated under other UPWP tasks and undertaken by other SPC Transportation Department Groups.
**Work Products:**

- Documentation of data collection, analysis, management and dissemination activities and procedures related to the ongoing monitoring of progress toward performance targets.
- Performance monitoring reports and interactive dashboards to be disseminated to interested parties via SPC’s online regional data center and data library and through other means.
- Briefing materials for the Commission, planning partners and the public.
AIR QUALITY MODELING

ESTIMATED COST:

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<td>Federal Highway Administration</td>
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<td><strong>TOTAL:</strong></td>
<td><strong>$328,000</strong></td>
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TASK DESCRIPTIONS

The Clean Air Act (CAA) requires that transportation planning must be consistent with air quality goals in areas experiencing air quality problems. This is determined through the transportation conformity process. Transportation conformity applies to transportation plans, programs, and projects receiving federal funding or requiring federal approvals in areas that do not meet, or previously have not met, air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide. These areas, designated by the federal Environmental Protection Agency (EPA), are known as nonattainment areas or maintenance areas, respectively. The region’s overall sustainability, livability and resiliency are affected by our ability to forecast air quality. Federal highway funding is available through the Congestion Mitigation and Air Quality (CMAQ) program for eligible transportation projects in nonattainment or maintenance areas. SPC conducts a competitive solicitation for candidate CMAQ projects every two years as part of the TIP update process.

1. Air Quality Models

   **Objective:** To conduct the required assessment of the region’s LRP and TIP to ensure that they conform to the Clean Air Act. To conduct air quality modeling in support of various other tasks in the UPWP, such as project evaluation for the CMAQ program, addressing the federal Transportation Performance Management (TPM) traffic congestion measures related to the CMAQ program, and assisting SPC members and planning partners in developing current estimates and projections of greenhouse gas emissions from transportation-related sources.

   **Planning Activities:**
   - As part of the regional transportation air quality conformity process, review scope and design concepts of projects proposed for inclusion in the TIP and LRP and identify regionally significant, non-exempt, transportation projects.
   - Conduct analyses necessary for SPC to make its required finding of conformity for any newly adopted or amended LRP or TIP as needed. Solicit public comment. Prepare appropriate documentation.
   - Ensure that SPC satisfies federal requirements for interagency coordination and consultation on transportation air quality conformity assessments and related tasks.
Unified Planning Work Program
Fiscal Years 2020-2022

- Continually monitor SPC’s emissions modeling process. Upgrade modeling techniques, procedures, and software as needed.
- Monitor state and federal actions that could affect SPC’s conformity process. Adjust the process to respond to those actions.
- Monitor state and federal actions on proposed climate change legislation and related regulations and policy directives, greenhouse gas emissions analysis, implementation of Pennsylvania’s Climate Action Plan, and other similar initiatives. Integrate into SPC’s air quality planning process as appropriate.
- Provide technical support to SPC’s members, the region’s municipalities, and planning partners on development, maintenance, and enhancement of Climate Action Plans.
- Develop and maintain analysis and modeling processes, tied to EPA’s MOVES model, to estimate current and future levels of greenhouse gas emissions from mobile sources in the SPC region. Integrate those new processes into the travel demand and conformity modeling process.
- Develop estimates of the potential air quality and congestion impacts of projects proposed for CMAQ funding in the TIP.
- Address the federal TPM traffic congestion and air quality measures in coordination with PennDOT and through the interagency process. Set regional targets, calculate metrics, monitor progress, and prepare required reports and documentation.
- Provide support to other UPWP tasks, as needed, and to SPC member agencies and planning partners, by developing emissions estimates and other air quality impacts attributable to programs and/or projects developed by them.
- Continue SPC’s participation in the Pennsylvania Transportation Air Quality Work Group. The Work Group meets quarterly to discuss and share information about the air quality conformity process and related topics. It also serves as the statewide forum for interagency consultation on conformity process issues.
- Provide training opportunities for staff in transportation conformity, CMAQ, Greenhouse gas emissions, and other air quality planning and modeling topics.

Work Products:
- Conformity reports for new and/or amended TIPs and LRPs for the region’s air quality nonattainment and maintenance areas for ozone, particulate matter, and carbon monoxide.
- Documentation of technical procedures, public review, and interagency coordination in the conformity process.
- Documentation of emissions modeling procedures.

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• Documentation of changes to SPC’s Air Quality Planning process to address new federal and state directives from climate change legislation and related regulatory and policy directives.

• Documentation of activity and analysis conducted in support of other UPWP tasks, and/or in support of initiatives undertaken by SPC member agencies and planning partners.

• CMAQ candidate project air quality and congestion impact analyses.

• Regional targets and metrics addressing the TPM congestion measures, and related process documentation and progress reporting.

• Briefing materials for the Commission, planning partners and the public.

2. CMAQ Project Before and After Assessments

Objective: With consultant assistance, develop a framework and procedures for conducting before and after studies of completed CMAQ funded projects. Using the framework, conduct a pilot study with a sampling of completed CMAQ funded projects to assess whether expected emissions benefits were realized.

Planning Activities:

• Conduct literature review and interviews with key practitioners to identify current practice for before and after studies. Review process used by SPC to assess before and after performance of completed regional traffic signal corridor projects. Compile national examples of before and after studies and document their data needs, analysis methods, and cost.

• Select a sample of recently completed CMAQ projects in the region to test and assess the before and after analysis methods. Determine which methods are best suited to each eligible CMAQ project type.

• Prepare a toolkit of available analysis methods, and prepare detailed instructions for their use. Prepare templates for data collection. Develop guidance for project sponsors to prepare quality data for use in the before and after studies.

• Update SPC's CMAQ Program Guidance to integrate recommended before and after study processes into the candidate CMAQ project application package.

Work Products:

• Documentation of literature search and practitioner interviews.

• Templates and guidance for collecting quality before and after data for CMAQ funded projects.
• Toolkits and procedures for conducting before and after studies.
• Final study report, documenting the pilot study's methodology, findings, and recommendations.
• Draft modifications to SPC’s CMAQ Program Guidance and Procedures to integrate the study recommendations into the candidate CMAQ project application package and project evaluation process for use during development of the 2023-2026 TIP.
• Briefing materials for the Commission, planning partners and the public.
LAND USE MODELS AND REGIONAL FORECASTS

ESTIMATED COST:

<table>
<thead>
<tr>
<th></th>
<th>2020-2021</th>
<th>2021-2022</th>
</tr>
</thead>
<tbody>
<tr>
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<td>PennDOT</td>
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<tr>
<td>SPC</td>
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<td>$22,240</td>
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<td><strong>TOTAL:</strong></td>
<td><strong>$279,500</strong></td>
<td><strong>$278,000</strong></td>
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</tbody>
</table>

TASK DESCRIPTIONS

Understanding population and employment trends and land use patterns is important for understanding current and future demands on the transportation network. It is also important to be able to assess potential changes that could occur as a result of policy changes at the federal, state, regional and local level. SPC uses an integrated economic-demographic forecasting model known as REMI (Regional Economic Models, Inc.) for this purpose. SPC uses another model known as MERLAM (Mature Economic Region Land Use Allocation Model) to allocate regional forecasts of population, households and employment from REMI to the municipalities and traffic analysis zones in the SPC region.

1. Economic-Demographic Models & Forecasts

   **Objective:** SPC provides policy-sensitive forecasts of population, employment and households for the ten-county SPC region. To do so, SPC maintains land use modeling procedures and the process for regional allocation of forecasted population, employment and households. These models permit SPC to monitor demographic trends and current and proposed economic development activity in the ten-county SPC region and to build scenarios demonstrating the likely outcomes of major transportation and economic development investments.

   **Planning Activities:**
   - Acquire, install, review, calibrate and, as appropriate, modify the annually updated version of the REMI model for the ten-county SPC region.
   - Maintain REMI population and employment forecasts that serve as the control total for the municipal and traffic zone forecasts and as the baseline for testing policy alternatives.
   - Use the REMI model in conjunction with SPC’s regional travel demand model to perform corridor and subarea analyses to better understand the relationship between major regional-scale construction and industry employment trends, to monitor LRP performance, and to demonstrate the likely outcomes of major transportation infrastructure and/or economic development investments in the region.
- Develop a series of standardized REMI products in response to requests from other agencies and partners.
- Maintain and expand SPC’s development monitoring and major trip generators databases.
- Maintain and expand SPC’s employment databases.
- Acquire, maintain and update the various datasets required for the MERLAM model.
- Update, maintain and support the MERLAM model, including calibration of the MERLAM model for each of the eleven REMI regions.
- Use the MERLAM model for analysis of regional and local demographic and economic trends for evaluation and development of plans and programs.
- Use the REMI and MERLAM models for land use planning and analysis, as needed.
- Provide for staff training on the REMI and MERLAM models, as needed.
- Develop and maintain documentation of the REMI and MERLAM models.
- Convene a Forecast Advisory Committee, as needed, with representation from each of SPC’s member governments, economists, major developers and other key stakeholders.

**Work Products:**
- Current, operational version of the REMI model for the ten-county SPC region and a staff trained in its use.
- Documentation of scenarios built and demonstrated utilizing the REMI model, as needed.
- Current, up-to-date development monitoring and major trip generators databases.
- Current, up-to-date employment databases.
- Current, operational version of the MERLAM model for the ten-county SPC region and a staff trained in its use.
- Documentation of land use planning and analysis utilizing the REMI and MERLAM models, as needed.
- Documentation of the REMI and MERLAM models.
- Forecast Advisory Committee meeting materials and minutes, as needed.
- Briefing materials for the Commission, planning partners and the public.
TRANSPORTATION MODELS

ESTIMATED COST:

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<tr>
<th></th>
<th>2020-2021</th>
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<tbody>
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<td>TOTAL:</td>
<td>$394,000</td>
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</table>

TASK DESCRIPTIONS

SPC’s travel demand models are indispensable in the region’s transportation planning and programming processes. Model results are the basis of SPC’s transportation air quality conformity assessments and the models are routinely used to develop transit ridership and traffic projections for PennDOT, the Turnpike Commission, transit operators, SPC’s members, and others. The volume of this kind of work continues to grow and to increase in complexity.

SPC continually improves its transportation modeling capabilities. SPC’s current transportation models were designed to use the Citilabs Cube Voyager software package. The modeling process is structured as a standard four-step chain of transportation models including trip generation, trip distribution, modal split, and travel assignment models. Regional forecasts of population and employment developed by SPC with the REMI model are allocated to traffic analysis zones through the SPC-developed MERLAM process. These results are then used as inputs to the trip generation model.

1. Travel Demand Model

Objective: To provide estimates of current and future travel demand in the region. To maintain, enhance, and use the tools needed to simulate travel patterns stratified by mode, purpose, and time of day for individual transportation facilities or corridors, as well as regionwide.

Planning Activities:

- Maintain and enhance regional travel demand modeling capability.
- Purchase annual subscription to Streetlight Insight data and INRIX Trips data for access to comprehensive, detailed data on trip and traveler characteristics in the region. This will provide current, accurate data for transportation studies, travel model calibration, and transportation operations analysis.
- Maintain regional Economic Impact Assessment modeling tools and ensure their compatibility with the regional travel demand model and demographic forecasting tools.
• Train staff in SPC’s established modeling procedures, in the use of SPC modeling software, and in travel demand modeling theory and practice.
• Provide ongoing modeling support to other UPWP tasks, and provide assistance to SPC’s members and planning partners.
• Develop extensions and enhancements to current modeling process as required for ongoing modeling workload (travel projections, park-n-ride demand, transit ridership estimates, air quality analysis, etc.).
• Use microsimulation/visualization software (ex. Vissim/Visum) to enhance SPC’s travel modeling capabilities.
• Modify and update modeling steps, as needed.
• Upgrade or replace hardware and software, as needed.
• Assess data needs for ongoing maintenance and enhancement of SPC’s travel model.
• Continue to monitor national developments concerning longer-range advances in modeling theory and practices.
• Begin implementing major data collection efforts to support travel demand model re-validation and re-calibration efforts.
• Continue using NPMRDS data files and other data resources to compute travel time reliability metrics for SPC’s response to the new federal Transportation Performance Management process, and for improving model calibration and validation efforts.
• Participate, as needed, in efforts to develop and maintain a Pennsylvania statewide travel demand model. Work to ensure compatibility with regional models.

Work Products:
• Continued, and improved, in-house travel modeling capability and data resources to support other SPC work tasks.
• Documentation of activity to maintain and extend current modeling capability.
• Documentation of efforts to develop a statewide travel demand model.
• Documentation of efforts conducted to support assessment of economic impacts of major transportation and development projects.
• Documentation of travel time reliability metrics and model calibration and validation efforts.
• Operational hardware and software for travel demand modeling and a staff trained in its use.
• Current, up-to-date technical documentation of travel demand model.
• Individual reports on data collection efforts/surveys conducted to provide needed data for the model update process.
• Briefing materials for the Commission, planning partners and the public.
TRANSPORTATION MODEL UPDATES/ENHANCEMENTS

ESTIMATED COST:

<table>
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TASK DESCRIPTIONS

The travel survey data underlying SPC’s travel demand model is over 15 years old. Significant changes in regional demographics and travel patterns have occurred since the last data collection effort. Incorporating recent advances in travel demand modeling theory and practice into SPC’s model will require development of an updated model structure and acquisition of new base year data. In 2018, SPC prepared a strategic plan for a multi-year process to update its regional travel demand model. In 2019, as a first step in carrying out the strategic plan SPC purchased upgraded modeling software, and migrated the existing modeling process to operate on the new platform.

For the 2020-2022 Program, SPC is requesting supplemental funding to continue the model development process detailed in the Strategic Plan that is intended to produce a new, calibrated suite of travel models for the SPC region, incorporating current data and latest modeling “best practices”.

1. **Travel Model Updates**

   **Objectives:** In the 2020-2021 Program Year, to complete initial steps in updating SPC’s regional travel demand model, including revisiting the system of Traffic Analysis Zones, recoding of the transportation networks, procure data to develop, test, and integrate into the modeling process updates to the trip generation models.

   In the 2021-2022 Program Year, to continue the model improvement effort by developing, testing, and integrating into the modeling process updated trip distribution, mode choice, and travel assignment models.

   **Planning Activities:**

   - Use SPC’s subscription to StreetLight InSights data, supplemented with limited and targeted data collection to compile and analyze data to support the update of the regional travel model.
   - Data analysis tasks are expected to include updates to regional and sub-regional Origin-Destination travel patterns; travel time, speed, and delay metrics; tripmaker demographics; medium and heavy truck travel patterns; and geographic distribution of travel by trip purpose, mode, time of day, and day of week.
• Procure consultant services to assist staff in designing updates to the existing trip generation models and in considering new trip generation models for special generators (universities, medical centers, major regional attractions, etc.), develop data to build and test the new models and to provide technical documentation and user guides.

• Use the consultant to advise staff in recoding the modal networks, recommend level of detail, Traffic Analysis Zone structure, GIS interface, and strategies for representing active transportation modes (bicycles, pedestrians) in the regional models.

• Develop datasets to build and test the new models.

• Develop a scope of work for future model development activities which, with consultant assistance, could include implementation of the updated trip generation model, and design and implementation of updates to the mode choice and travel assignment models.

Work Products 2020-2021:

• A final design and implementation strategy for updating the region’s trip generation models, and adding a “special generators” modeling component.

• Restructured highway and transit networks incorporating robust GIS interface for ease of network editing and displaying of model results.

• Revised TAZ structure to support more detail in the networks and the ability to include non-motorized modes in the modeling (pedestrians, bicycles).

• A staff trained and experienced in the use of the model.

• Technical documentation of the model structure.

• Summary reports documenting the development, calibration, and validation of each component of the updated model.

• Briefing materials for the Commission, planning partners and the public.
TRAFFIC FORECASTS AND NEEDS REPORTS

ESTIMATED COST:

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</table>

TASK DESCRIPTIONS

Through the use of its regional models, SPC provides support to PennDOT and other planning partners in the development of traffic forecasts for traffic impact studies, engineering reports, and the design phases of various transportation projects. These forecasts are used to project future year traffic volumes and traffic flow patterns in order to identify appropriate mitigation measures and design criteria.

2. Traffic Forecasts

Objective: A needs analysis is one of the critical first steps in the development of any transportation project. As needed, SPC will provide the accurate travel forecasts essential for developing appropriately scoped projects to improve accessibility, mobility, safety and long term sustainability of the transportation system as well as enhancing the communities where the projects are implemented.

Planning Activities:

- Assist in developing detailed travel forecasts for project design.
- Provide technical support on an individual project basis for major investment analyses. SPC support is expected to focus on transportation demand, economic impact assessment, and “build/no build” impact analysis, while responding to federal mandates regarding major investment analysis.
- Prepare/Participate in Project Needs Studies for transportation projects, as identified by PennDOT and SPC.
- Provide information and analysis about projected travel demand and trip characteristics, as requested by PennDOT, consultants, and planning partners.
- Adjust technical approaches, as appropriate, to ensure integration and consistency with federal planning regulations.

Work Products:

- Data and analysis to support PennDOT Districts, SPC members, other planning partners and individual consultant teams in their preparation of reports and design documents.
- Detailed travel forecasts.
• Briefing materials for the Commission, planning partners and the public.
HIGHWAY PERFORMANCE MONITORING SYSTEM (HPMS)

ESTIMATED COST:

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TASK DESCRIPTIONS:

The major purpose of the HPMS is to support a data driven process within FHWA, PennDOT, and Congress. The HPMS data are used extensively in the analysis of highway system condition, performance, and investment needs that make up the biennial Condition and Performance Reports to Congress.

HPMS Inventory

Objective: To verify and update roadway inventory and performance measures on 548 sample sections throughout the region, in accordance with the HPMS Field Manual specifications. The inventory includes the measurement and/or classification of shoulders, lanes, and medians as well as noting the number of traffic signals, stop signs, and/or potential widening obstacles within each sample section.

Planning Activities:
- Maintain an in-house database of all Inventory sample sections to facilitate accountability and work schedule. Coordinate with PennDOT central office the delivery of sample sections to be inventoried for the given year.
- Compare new sample locations to in-house database to highlight any issues regarding the data or sample locations, report to PennDOT any conflicts.
• Group and map sample sites in order to efficiently be able to visit all the given locations within the allotted timeframe.
• Oversee HPMS Inventory effort in Lawrence County; integrate their data into SPC database.
• Participate in PennDOT’s data collection quality review process.
• Maintain and replace, when needed, the HPMS data collection vehicle, safety equipment and measuring devices.
• Attend and participate in HPMS Inventory workshops and conferences sponsored by PennDOT.
• Submit sample section updates by first week of December of given year.
• Coordinate with PennDOT districts the verification of submitted data.

HPMS Traffic Monitoring

Objective: To attempt to collect at least 450 total traffic counts throughout the region. Both volume and classification counts will be collected via machine tube counters with around 375 assigned locations. Also, classification counts will be collected via manual field views conducted over the course of 6 total hours starting either from 6am-Noon or Noon-6pm. Approximately 75 manual counts will be collected.

Planning Activities:
• Maintain an in-house database of HPMS traffic count sites and traffic count data to facilitate accountability and to provide data to assist other SPC departments.
• Develop and Maintain an ArcGIS Online mapping interface of all collected traffic counts.
• Coordinate with PennDOT central office the delivery of sites to be counted for the given year.
• Review sites to identify any issues that will affect the ability to complete the counts safely, accurately, and to PennDOT’s specifications. Such issues can include construction, safety of staff, and/or the characteristics of the roadway (parking, medians).
• Review the number of assigned manual counts to be taken to determine the appropriate number of interns to be hired, if needed.
• Submit completed counts by the end of the month in which they were completed.
• Maintain and replace, when needed, the traffic counting vehicle, traffic counters, traffic counting supplies, and safety equipment.
  ○ SPC has an inventory of 72 counters.
  ○ Traffic counting supplies includes road tube, tape, nails, etc.
Safety equipment such as high visibility clothing, gloves, glasses, hard hats, etc.
- Attend and participate in HPMS Traffic Counting workshops.
- Participate in PennDOT’s annual traffic counter personnel safety review process.
- Complete all possible traffic counts by the week before Thanksgiving and have data submitted by the first week of December.

**Local Transportation Data Technical Assistance**

**Objective:** HPMS Program Staff will continue to assist PennDOT, and maintain identified datasets on a local level - data collection, maintenance and update of transportation system datasets for locally-owned roads and bridges/culverts (less than 20’), traffic devices, and bicycle / pedestrian assets. Additional data can be collected as requested subject to available resources.

**Planning Activities:**

- Continue working with PennDOT and other MPOs/RPOs to establish common data standards and collection methods.
- Work with PennDOT and local governments as requested to: enhance and update local roadway centerline files; verify bridge lengths / identify replacement structures, update hydrology centerline file (for predictive locations); identify traffic device locations, current status, and additional traffic signal data to maintain signal database and GIS layer; planning for future pedestrian network inventories; and identify trail networks and improvements, maintaining an inventory of trailheads, parking lots, bike racks, etc.
- Continue working with local governments to identify additional information sources, inventory needs and opportunities.
- Continue the development of these datasets; extend online viewer applications to support participation by municipalities, planning partners and other SPC departments in the use and upkeep of the datasets.
DATA SYSTEMS & MODELING – MULTI-YEAR IMPLICATIONS
Accurate and up-to-date data resources and modeling tools underpin all of the planning activities at SPC. Moreover, SPC’s members and partner agencies rely on these resources and the technical expertise of SPC’s staff for their planning work. SPC’s data and modeling programs will continue to support the planning functions of the agency and the activities of its planning partners by maintaining these important data resources and by staying abreast of the latest innovations and techniques in GIS, data collection, and modeling. Examples include:

- A complete, current and comprehensive collection of GIS data and aerial imagery for the 10-county region that complements data and GIS programs at state agencies, member governments and planning partners within and adjacent to the region.
- A spatial collection of data showing land cover data change in the region as a revised base map to aid in transportation and economic development planning decisions for both short and long term plans. Data will be updated from future collections of imagery to show change and identify development patterns.
- Updated land use totals and workplace employment data by municipality and traffic analysis zone that are tracked in SPC’s modeling and forecasting programs to identify growth or loss in residential and employment sectors over time.
- In-depth analysis of the region’s demographic data to identify the spatial distribution of disadvantaged populations and trends relating to transportation and economic development opportunities.
- Historic and current statistics regarding the region’s highway and bridge inventory to aid in project evaluation and prioritization for both state and locally-maintained transportation infrastructure.
- Monitor and as needed, participate in federal activity to update Urbanized Area boundaries and MSA boundaries following the 2020 Census.
- As transportation and economic development projects are completed, add them to SPC’s GIS and incorporate into the monitoring of the flow of traffic, people, and goods and services.
- Track, inventory, and digitize land use categories from county and municipal comprehensive plans as they are completed. Incorporate results into modeling and forecasting activities.
- Develop increasingly accurate GIS data at the regional level through the incorporation of periodic updates to digital parcels, street centerlines, and site addresses provided by local governments.
- Expand existing databases and geospatial layers for traffic counts, traffic signals, and transit facilities to reflect changing conditions and for benchmarking in project evaluation programs.
- Broader representation of environmental features and conditions to assist in linking transportation planning and the National Environmental Policy Act.
• Implementation of a multi-year strategic plan to enhance SPC’s land use, economic and travel demand models.
• Enhancement of the regional park-n-ride database including implementation of new techniques for collecting utilization statistics and origin-destination data.
• Continued expansion of SPC’s Data Library with enhanced data presentation capabilities including the SPC website.
• Integration of new datasets that have been emerging along with the increase and diffusion of mobile technologies.
• Enhancement of freight data and analysis capabilities.
• Improved use of data visualization tools and techniques to compile, analyze and present information to the public and to decision-makers, including transportation performance measure tracking.
• Ongoing monitoring of transportation performance targets and measures to address U.S.DOT Transportation Performance Management planning process.

While SPC continuously works to enhance its transportation models as part of day-to-day work activities, more extensive updates are needed periodically in order to gather updated information on some of the foundational data elements that the models rely on. These periodic updates require resources beyond what is available through core planning funds. Should additional funding become available, SPC intends to undertake a major data collection and travel survey effort to provide updated data for its travel models.
OUTREACH & COORDINATION
OUTREACH & COORDINATION – OVERVIEW

As the designated MPO for a 7,100+ mi² ten-county area, SPC is responsible for regional transportation planning activities that necessitate outreach to and coordination with a wide range of stakeholders. SPC works with its member governments, planning partners, the public, and interested parties to ensure effective and innovative transportation planning that is representative of and responsive to the needs of a very diverse region. Public engagement, communications and outreach throughout the transportation planning process provides important opportunities for the public, planning partners and interested parties to share information, ideas, needs and priorities as we work together to build our region’s future.

Effective planning for a region of this size and diversity requires the cooperation and coordination of many planning partners working together to advance SmartMoves for a Changing Region’s Regional Vision, Goals and Strategies. SPC serves as the forum for regional planning efforts in the areas of transportation and economic development, working closely with the public, local municipal officials, county planning and development offices, ten transit operators, three Transportation Management Agencies (TMAs), the Pennsylvania Department of Transportation (PennDOT) and dozens of other entities.

SPC supports a regional planning process that is coordinated, comprehensive and continuing. The implementation of this planning process requires substantial outreach and coordination with our regional planning partners. Through the projects included in the Coordination and Outreach program, SPC solicits the participation and involvement of the regional planning partners in technical committees, project level studies and other transportation planning initiatives. Public outreach and involvement is conducted through the Public Participation and Communications Program, which also includes SPC website maintenance. The Local Technical Assistance Program (LTAP) permits SPC to serve as a regional point of contact and facilitator for technology transfer.

Program Administration activities support the design, management and evaluation of the Work Program, provide secretarial support for the planning and technical staff, and ensure proactive public involvement in the transportation planning process. Program administration functions include activities that benefit all jobs in the Work Program.

SPC’s Public Participation Program offers a variety of opportunities for people to participate in the regional transportation planning process, with the goal of fostering significant and ongoing two-way communication with our member governments, planning partners, the public and interested parties. SPC provides resources and support in coordinating the planning process through a variety of mechanisms. One of the chief mechanisms is through the use of our Public Participation Panels (Panels). SPC brings planning directly to our member counties through these Panels. Panels are comprised of more than 300 individuals reflecting the demographic diversity, needs, and concerns of communities throughout our 10-county region. The Panels help to conduct outreach, identify needs and resources, suggest alternatives, and assist in the evaluation of implementation strategies in the planning process.

SPC works diligently to make information accessible to the public and to provide timely public notice. We provide information to the public that is accurate, understandable and pertinent to regional transportation planning and engagement activities, and do so through the use of varied communication tools. In addition to informing the public, SPC makes every effort to educate the public about the planning process and provide supportive policy, program and technical information. Educating the
public supports informed public contribution and continued engagement. Education is enhanced through the use of visualization tools that help people understand and relate to SPC’s various planning activities.

SPC continues to develop methods and opportunities for traditionally underserved portions of the population to participate in the transportation planning process, including minority, non-English speaking, and low-income groups. It is a continual priority to increase the diversity and number of participants in previous engagement activities through building new relationships with organizations and communities that serve these populations.

**STATEWIDE PLANNING PRIORITY AREAS**

The Tasks found in this section of the UPWP address the following priority areas:

- **VI-Public Involvement and Outreach:** Monitoring, evaluating and updating the Public Participation Plan; expanding EJ activities to ensure all stakeholders have the opportunity to participate in the planning and programming process; maintaining, monitoring and enhancing the Title VI and LEP programs; maintaining and enhancing the SPC website and all social media platforms; collaborate with PennDOT to promote and publicize the TYP Public Outreach Campaign; disseminating information related to SPC meetings in a timely manner, in accordance with the PPP; assist county and local governments with outreach activities as requested and as necessary.

- **VII Local Technical Assistance Program:** Work with PennDOT to customize training for the SPC region and schedule priority training; advertise training to municipalities in the region; submit quarterly reports to PennDOT project managers.

- **VIII Administrative:** Manage the 2018-2020 UPWP (two year) for the SPC region and design the 2020-2022 UPWP. Provide administrative, secretarial and graphics support across all UPWP tasks. Provide planning funds to SPC member planning departments to facilitate their participation in regional forums and various UPWP tasks.

**ROLES**

- **Federal Highway Administration (FHWA)/Federal Transit Administration (FTA):** Provide technical assistance as well as general oversight, review and approval of the Metropolitan Planning Process for Southwestern Pennsylvania.

- **SPC:** Provide public engagement support to SPC, organization wide; promote PennDOT initiatives, including PennDOT Connects; work with SPC members and planning partners to promote SPC activities as well as other county and local initiatives regionwide. Work with PennDOT to administer, develop, prioritize, schedule, and market LTAP training. Provide administrative oversight of the SPC UPWP
Unified Planning Work Program  
Fiscal Years 2020-2022

- **PennDOT Center for Program Development**: Provide resources, including messaging, data and outreach materials for SPC use into the Twelve Year Program update. Process invoices and provide review and feedback over SPC work program tasks.

- **PennDOT Bureau of Planning and Research**: Provide resources, and oversight of the LTAP program.

- **PennDOT Districts**: Provide SPC materials including construction updates and other promotional items for dissemination. Review program activities and reports as well as process invoices. Coordinate current and future UPWP Tasks with SPC.

- **Member Planning Departments**: The county/city planning department’s role is to assist in communicating and promoting the transportation planning process and its outcomes to its municipalities and residents and also to relay county and community needs o SPC and planning partners. The county/city members are also responsible in appointing Public Participation Panel members. Assist in identifying and promoting LTAP training opportunities. Provide participation and input into the metropolitan planning process for Southwestern Pennsylvania.

**OUTREACH & COORDINATION – RESULTS FROM CURRENT PROGRAM**

The 2021-2024 Transportation Improvement Program (TIP) development occurred during the 2018-2020 UPWP. During the TIP update, SPC offered an online form for the public to give input on a variety of transportation topics, from roads and bridges, public transportation, bicycle and pedestrian, etc. SPC worked with its standing committees, which include representatives from county and city planning agencies, PennDOT, transit operators, bicycle and pedestrian organizations, freight interests and others, to review this input for common linkages to current and future TIP projects to carry forward as input into the long range plan. For the TIP update, the Public Participation Panels met twice each year, in all ten counties. SPC shared information and input opportunities through our email, website and social media networks.

The following is a sample of the range of public outreach, administrative support, and coordination that was provided across all UPWP tasks in the 2018-2020 UPWP:

- Advance mail outs, agenda packets and follow-up to various committee meetings and Commission events.
- Monthly progress reports, invoices and accounting documentation.
- Maintenance of contact databases and other resources.
- Correspondence with various partners and the public.
- Submission of the draft 2020-2022 UPWP.
• Active engagement and support for ten Public Participation Panels (PPPs), including meetings and official public comment periods associated with SmartMoves for a Changing Region and the 2021-2024 TIP update.

• Cooperative outreach with legislators, local elected officials, and Councils of Government at a variety of local meetings.

• Development and implementation of new educational materials for PPP members and the general public.

• Initiation of comprehensive website redevelopment for www.spcregion.org and multiple ancillary websites focused on specific programs and initiatives to make all SPC websites mobile-friendly.

• Expanded video production capabilities and use of videos to support outreach and engagement.

• Enhanced use of online surveys to gather input for various planning projects and studies.

• Ongoing improvements and enhancements of the interactive web-based form for use by the public in providing public input to the transportation planning process.

• Annual Report, e-newsletters, website updates and enhancements, presentations and other materials and products.
**UPWP ADMINISTRATION**

**Responsible Agency:**
Southwestern Pennsylvania Commission

**ESTIMATED COST:**

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**Results from Current Program:**

- Work Program outlined in FY 2016-2018 currently being implemented.
- The draft 2018-2020 UPWP was submitted for PennDOT approval end of February 2018.
- Maintenance and monitoring of overall 2016-2018 planning program, and individual projects, to ensure delivery on time and within budget.

**Objectives:**

Manage the 2018-2020 UPWP (two year) for the SPC region and design the 2020-2022 UPWP. Particular design focus in FY 2018-2019 is on implementing and administering performance management requirements set forth in guidance from MAP-21 and the FAST Act. Also, work cooperatively to advance specific recommendations from the 2017 Certification Review of the Pittsburgh Metropolitan Area and service to the SPC members, partners, customers and region.

**TASK DESCRIPTIONS:**

- During the Program Year, meet with Commission members, PennDOT and U.S. DOT representatives of FHWA and FTA to review current UPWP progress and to discuss tasks to be undertaken in the upcoming UPWP.
- Perform maintenance activities, as needed, including processing UPWP amendments, budget revisions and staffing plan reassignments.
- Coordinate transportation planning activities that respond to federal and state requirements and local objectives. Specific activities are identified in the TIP, the long range plan and in other UPWP jobs that analyze the benefits and burdens of projects, programs and services to various socioeconomic groups to demonstrate that there are not disparate impacts on protected populations.
- Design the 2020-2022 UPWP consistent with PennDOT Central Office Annual Planning Priorities letter that also reflects FHWA Pennsylvania Division Guidance and Priorities and FTA Planning Emphasis Areas.
Unified Planning Work Program
Fiscal Years 2020-2022

- With input from PennDOT, U.S. DOT and SPC’s planning partners, advance recommendations from the 2017 Certification Review of the Pittsburgh Metropolitan Area.

- Approve the FY 2020-2022 UPWP (two year) by end of February 2020. Submit all documents required for contract execution by mid-March 2020, including Exhibits 2 and 3 and authorizing signature resolutions. Also, identify and include transportation projects associated with land use initiatives, and be prepared to support carryover/ongoing supplemental planning tasks as candidates for supplemental planning funds.

- Submit progress reports and invoices to PennDOT no later than 15 days following the reporting period.

- Provide meeting notices and materials not less than five working days prior to meetings and distribute the meeting minutes within 15 working days after the meetings.

- Continue Environmental Justice and public participation activities. Implement Title VI Nondiscrimination/EJ Compliance Plan.

- Ensure SPC region is addressing DBE requirements as part of SPC contracting practices.

- Participate in equal opportunity non-discrimination and DBE trainings offered by PennDOT, FHWA and FTA.

- Include funding requests for any special supplemental Work Program tasks in 2020-2022 UPWP.


- Advance development of a UPWP strategic planning process that would extend forward for 3 to 5 years with an expected focus on delivery of the Long Range Plan’s Policy Goals, consistent with the MAP-21 rule-making process and additional FAST Act direction.
  - Involve multiple UPWP planning tasks as needed to develop performance targets necessary for accomplishing the region’s LRP goals, and appropriate performance measures for monitoring progress towards the goals.
  - Update the TIP programming process as necessary to ensure effective delivery of the LRP goals and performance targets.
  - Provide a feedback process for evaluation and reconsideration of LRP policy goals and performance targets.

- Develop planning tools, data systems and reports necessary to support evolving long range plan analytical processes: land use planning, transportation model improvements, community and economic development, investment target cost-benefits (life-cycle), and investment tradeoffs.

Work Products:

- Final document, 2020-2022 UPWP.
- Completion of the 2018-2020 UPWP.
- Continued advancement of Environmental Justice/Title VI processes and activities.
GENERAL SUPPORT SERVICES

RESPONSIBLE AGENCY:

Southwestern Pennsylvania Commission

ESTIMATED COST:

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Results from Current Program:

Administrative, secretarial and graphics support were provided across all UPWP tasks. Examples of the range of support include advance mail outs, agenda packets and follow-up to various Committee meetings and events; extensive support to the ten Public Participation Panels; monthly progress reports; various Work Program documents by UPWP job; maintenance of contact databases and various files; and, correspondence with various partners and the public.

Objectives: Provide administrative/secretarial support for tasks across all projects in the UPWP in advancement of federal, state, and regional (Commission) planning provisions.

TASK DESCRIPTIONS:

- Draft and final copy/files for all administrative materials, such as:
  - Correspondence.
  - Meeting notices, agendas, attendance lists, minutes.
  - Presentation materials and handouts.
  - Interim and final study reports.
  - Program progress reports and budget material.
- Associated support activities, such as:
  - Service to office visitors, directing them to appropriate staff, response to various requests.
  - Telephone contacts, assistance to callers.
  - Various committee/meeting support activities (e.g., nametags, registration, etc.).
  - Copies and report production support.
  - Sending faxes, routing incoming faxes.
  - Mailing list database maintenance.
  - Preparation of mass mailings and other mailings.
  - Handling incoming and outgoing correspondence, logging and filing.
  - Staff travel arrangements (air travel, hotel and conference registration).
- Administrative/secretarial support for tasks across all projects in the UPWP; production/distribution of individual UPWP job products.
• Graphic design/support for newsletters, promotional materials, and reports.
• Extensive support to county Public Participation Panels.
• Submission of progress reports and invoices to PennDOT no later than 15 days following the reporting period.
• Provision of meeting notices and materials not less than five working days prior to meetings and distribute the meeting minutes within 15 working days after the meeting.

Work Products:

Administrative, secretarial and graphics support for all tasks in the UPWP to meet a range of varied planning needs including support for numerous committees/meetings, events or conferences; visitor services; processing incoming/outgoing correspondence; document processing; preparation of progress reports; and maintenance of contact databases and various files.

• Commission action on the FY 2020-2022 Unified Planning Work Program (UPWP)(two-year) by end of February 2020. Submit all documents required for contract execution by mid-March 2020, including Exhibits 2 and 3 and authorizing signature resolutions. Also, identify and include transportation projects associated with land use, and be prepared to support carryover/ongoing supplemental planning tasks as candidates for any supplemental planning funds.
• Submission of progress reports and invoices to PennDOT no later than 15 days following the reporting period.
• As part of public involvement and outreach activities, provide meeting notices and materials not less than five working days prior to meetings and distribute the meeting minutes within 15 working days after the meetings.
MEMBER PLANNING AGENCY PARTICIPATION

ESTIMATED COST:

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TASK DESCRIPTIONS

SPC’s eleven member agencies are represented at all levels of Commission interaction, from general policy forums to technical work groups for single UPWP activities, including the Transportation Technical Committee, Transit Operators Committee, Regional Policy Advisory Committee, Active Transportation Forum, Freight Forum, CMAQ Evaluation Committee, Transportation Operations and Safety Forum, Local Traffic Incident Management Teams, the Livability Through Smart Transportation Work Group, and SPC Public Participation Panels. Member agency representatives assist in reviewing packages of meeting materials as well as working with staff in preparing and discussing key agenda issues.

Planning agencies also provide technical support to various UPWP tasks on an as-needed basis. Participation in various technical committees and project work groups, data collection and analysis, study committees, and other technical review efforts require a significant commitment of time and labor.

1. SPC Member Planning Participation

Objective: SPC supports and encourages coordinated transportation planning processes within the region by providing planning funds to SPC member planning departments to facilitate their participation in regional forums and various UPWP tasks.

Planning Activities:

- Support and participate in SPC standing committees and task-related work groups, including:
  - Public Participation – assist in outreach/education through each member’s Public Participation Panel.
  - Transportation Alternatives Set-Aside Program (TA Set-Aside) – assist in the evaluation of candidate projects.
  - Congestion Mitigation & Air Quality (CMAQ) Program - assist in program development and preparation in advance of the next funding cycle; assist in the evaluation of candidate projects for the next update.
  - Livability Through Smart Transportation (SMART) Program – assist in the development, evaluation, and delivery of candidate projects.
  - Participate in SPC’s various committees and forums (Regional Policy Advisory Committee, Freight Forum, Transit Operators Committee, Active Transportation Forum, Transportation Operations and Safety Forum, Local Traffic Incident Management Teams, etc.).
• Provide input and technical support for the maintenance and development of major products such as the LRP, TIP and UPWP.
  - TIP – assist in maintenance and monitoring of the current TIP, and in development of the fiscally-constrained TIP update.
  - SmartMoves – assist with LRP implementation on multiple fronts including review of any plan amendment requests, and ensure that the plan remains consistent with all federal and state planning provisions; assist with activities to advance the next plan update cycle.
  - UPWP – participate in advancement of individual 2018-2020 UPWP projects as needed, and assist in design of 2020-2022 UPWP, including generating candidate projects and study for supplemental funding consideration.
  - Continue to assist in application of project evaluation procedures to analyze, evaluate, and prioritize candidate LRP and TIP projects.
  - Continue to assist with completion of various Linking Planning and NEPA (LPN) Screening Forms for new candidate LRP/TIP projects.

• Provide support to PennDOT as key partners in advancing the region’s response to the Department’s priority activities: Land Use/Transportation Linkages/Economic Development/Modernization, Plans and Programs, Planning Tools and Techniques, HPMS and Traffic Data Collection, Local Technical Assistance Program, and Public Involvement and Outreach.

• Work cooperatively to comply with requirements of the FAST Act, while also assisting in advancing specific recommendations from the Certification Review of the Pittsburgh Metropolitan Area as documented in the final report.

• Work with PennDOT to promote public/private partnerships (P3s) and innovative financing opportunities in support of economic development.

• Continue to identify and implement innovative financing mechanisms for major capital projects. Promote the Pennsylvania Infrastructure Bank (PIB) as a tool for financing transportation projects, including community reinvestment projects. Work with PennDOT to identify and support sustainable sources of revenue.

• Continue to assist in assessing and advancing Intelligent Transportation Systems (ITS) elements through the LRP and TIP.

• Continue to expand and improve Environmental Justice activities to ensure that all stakeholders have the opportunity to become involved in the region’s planning and programming process.

• Identify livability, sustainability, and resiliency planning strategies for the location of transportation facilities and services for broader access to employment opportunities, affordable housing, schools and safe streets.

• Continue to work with SPC and PennDOT to incorporate land use planning into the planning process. Help to initiate changes in the process that may be necessary to accomplish this effort.

• Coordinate all land use planning with the respective county comprehensive plans. Look for opportunities to integrate land use and transportation in blighted communities or brownfields/grayfields.
• Assist SPC and PennDOT in efforts to identify training and planning activities targeted to local governments dealing with access management, transit oriented design, healthy communities, street connectivity, interchange area development, transportation impact fees, energy savings, etc.

• Support and participate in Road Safety Audits conducted within the member jurisdiction.

• Assist SPC’s continuing response to the inventory of local transportation assets.

• Participate in equal opportunity, non-discrimination and DBE Training offered by PennDOT and FHWA that SPC may host. PennDOT DBE training includes all aspects of 49 CFR Part 26 and is also fully consistent with DBE procedures for FTA grantees.

Work Products:

• Active participation and input to various SPC committees.

• Support and input to special studies.

• Assistance in public outreach/education through member Public Participation Panels.

• County comprehensive plans with robust land use and transportation components.

• Linking Planning and NEPA screening forms.

• Assistance with LRP and TIP maintenance activities including review of amendment requests.

• Assistance in advancing other UPWP projects.
PUBLIC PARTICIPATION / COMMUNICATIONS PROGRAM

ESTIMATED COST:

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TASK DESCRIPTIONS

Communication with the public contributes to more effective and innovative transportation planning that is representative of and responsive to the needs of the entire region. To maintain and enhance communication among SPC members and the public in accordance with the FAST Act; Title VI of the Civil Rights Act of 1964; Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994; the Americans with Disabilities Act of 1990; and the Limited English Proficiency Executive Order, SPC has an adopted Public Participation Plan. As part of this Public Participation Plan, SPC has implemented Public Participation Panels in each of the region’s 10 counties. These panels have proven to be one effective way to provide education designed to enhance understanding of regional planning and transportation programs; opportunities for public participation and input during development of plans, programs and projects; and opportunities to review draft documents and comment on major decisions prior to Commission action.

1. Public Participation Plan

**Objective:** The Public Participation Plan provides a framework to ensure that SPC’s transportation planning processes include a proactive participation process and comply with federal participation plan requirements. The Public Participation Plan identifies strategies and tools to help ensure effective participation in SPC’s transportation planning activities. Activities in this Public Participation Plan are also coordinated with the statewide transportation planning public involvement and consultation processes.

**Planning Activities:**

- Update the Public Participation Plan and its companion Documents (Title VI Plan and Limited English Proficiency (LEP) Plan
  - Review current federal transportation regulations
  - Research public participation plans and programs from peer MPOs
  - Research ways to use social media to increase participation
  - Revise and update SPC participation plan
  - Conduct 45-day public review and comment period
  - Develop summary/educational materials for public dissemination

- Support and promote effective public involvement in SPC’s transportation planning process by utilizing strategies and techniques to:
- Provide opportunities for public involvement and input during development of planning programs, policies and projects.
- Provide opportunities to review draft documents and comment on major decisions prior to Commission action.
- Attend regional forums to engage and inform different populations of our region.
- Continually develop effective public meeting materials utilizing visualization techniques to inform and engage the public about transportation planning and funding issues.
- Continually expand engagement reach using social media, videos, surveys, story maps and other online mechanisms.

- Administer all required public comment periods in accordance with federal regulations and the Public Participation Plan (provide timely notice, make draft documents widely available including via the Internet, hold public meetings, gather comments and feedback, respond to comments as appropriate, and document the process).
- Continue to develop innovative techniques for engaging the public, and reaching affected populations and the public at large as appropriate. Disseminate information and receive public feedback.
- In accordance with federal regulations on the accessibility of transportation planning and programming processes and outcomes, continue its Environmental Justice program of innovative outreach in the region.
  - Actively engage minority and low-income populations, non-English speakers and those with Limited English Proficiency (LEP), older persons and persons with disabilities, and other populations traditionally underserved by the existing transportation system, by developing communications materials to be translated and distributed as appropriate to enhance the participation of these groups.
  - Maintain existing public outreach tools and develop new and innovative techniques to reach extended audiences.
  - Monitor regional population and demographic trends and enhance specialized outreach as outlined in the Public Participation Plan, including Limited English Proficiency assessments.
  - Participate in outreach opportunities presented by regional task forces on disabilities, and other special needs groups.
  - Using demographic data, identify and map locations of demographic clusters, including protected populations, concentrations of low-income, minority, elderly, non-auto households, or other groups having special transportation needs.
  - Make web-based mapping of low-income and minority clusters available on the SPC website.

- Support communications efforts associated with projects and initiatives developed from the Work Program.
  - Use uniform protocols and coordinated communications vehicles including materials developed for print and electronic distribution, public meetings and online communications products. Ensure cost-effective production and dissemination of SPC information and materials to the public, members, regional planning partners, and other organizations using a variety of methods to reach target audiences.
- Conduct educational presentations about SPC programs and projects through meetings, workshops, conferences and other means of communication. Use regional community and media organizations to disseminate information about transportation planning and public participation opportunities, emphasizing outreach to minority and low-income populations, non-English speakers and LEP persons, older persons and persons with disabilities, and other populations traditionally underserved by the existing transportation system.
- Maintain and enhance accessibility to information in a variety of formats.
- Use the agency website (www.spcregion.org) and social media platforms (Facebook, twitter, YouTube, etc.) to disseminate information on various projects, programs and initiatives.
- Create videos as a means of educating and informing the public in a new and innovative format to reach different audiences.
- Utilize an email marketing tool to get information to the public and our regional stakeholders. This email marketing tool can be a way to share information regarding public input, an upcoming meeting, new data, etc.

**Work Products:**
- An updated Public Participation Plan.
- Advertisements promoting public comment periods and public meetings.
- Public meetings and associated materials.
- Press releases, annual report, e-newsletters, educational packets and other written products communicating SPC’s programs, planning processes and activities.
- Limited English Proficiency Plan and staff training activities.
- Continued expansion of SPC’s main website and related project websites.
- Briefing materials for the Commission, planning partners and the public.
- Various social media platform posts and engagements, including educational videos for the SPC YouTube channel.

2. **Public Participation Panels**

**Objective:** SPC maintains Public Participation Panels (Panels) for each county in its transportation planning region. Residents do not need to travel outside their own county to address SPC, because through the Panels, SPC comes to them. Panel members are appointed to reflect the demographics of the population of their respective counties in regards to age, income, ethnicity, special needs, and special interests. Members serve as a conduit to the local communities where they live and work. They are asked to provide input, but are also expected to "get the word out" about what they learn at meetings. Panel meetings are open to the public and are scheduled on an as-needed basis.

**Planning Activities:**
- Review effectiveness of Panels and make adjustments based on updated overall Public Participation Plan.
• Provide administrative support for Public Participation Panels.
• Organize and promote public meetings hosted by Panels to enhance understanding of the transportation planning and programming process and to obtain feedback on plans, programs and projects.
• Maintain and continue to develop SPC’s online resources so that the Panels and the public can be involved and have a place to go to get more information regarding our meetings and programs.
• Create outreach “toolkits” that will help the Panel participants spread the word easier regarding SPC activities (public input, upcoming meetings, submission deadlines, etc).
• Use an email marketing tools (Constant Contact, etc.) to communicate with the Panels. The email marketing tool makes it easy and more efficient to share information with the Panels.

Work Products:
• Recommendations to enhance panels and public engagement overall.
• Panel member orientation materials.
• Panel membership and attendance records.
• Panel meetings and associated materials.
• Briefing materials for the Commission, planning partners and the public.
• Public Participation/Get Involved webpage.
• Email marketing engagement.
• Outreach “toolkits.”

3. Transportation Improvement Program (TIP) / Long Range Plan (LRP) Outreach and Engagement

Objective: Develop a Public Outreach and Engagement Plan that generates interest, informs, and educates the public using a mix of traditional and modern communication tools that reach diverse audiences and help the public understand and connect with the elements of the TIP/LRP.

Planning Tasks:
• Participate in local events and provide convenient meeting opportunities to share information with diverse groups of stakeholders and the general public.
• Provide educational information in advance to empower stakeholders to provide informed feedback.
• Utilize graphics, imagery and videos to make technical information relatable and easy to understand.
• Focus advertising and branding on public interests/hooks, and less on the technical information.
• Utilize social media and online advertising to gather feedback on plan topics, support other outreach methods, and expand the audience reach.

• Incorporate communication tools that are convenient and diverse to capture input from a variety of audiences.

• Use quantitative tools and techniques to measure outreach effectiveness.

Work Products:

• TIP/Long Range Plan public meetings
• Surveys
• Plan outreach and engagement materials and events
• Plan materials and documents
• Social media posts and advertisements
• Educational videos

4. Complete Website Redevelopment

Objective: In the 2017 Federal Certification Review, FHWA and FTA recommended that SPC take steps to make its websites more mobile-friendly. This task to redesign and update all SPC websites and develop new website tools by moving from Dreamweaver to the WordPress platform began in the 2018-2020 UPWP period, during which time Phase I to design the new SPC web brand/template was completed. Phase II, Content Development, is underway as well as Phase III, Data Navigator Tools, which will include a custom navigation interface for users to access SPC’s Data Resource Library and will enable users to create custom tables that are exportable. An additional custom interface for the Congestion Management Process (CMP) is also planned and would be integrated with SPC’s ArcGIS content. The WordPress platform also allows for additional staff members to be granted varied levels of administration access to facilitate a more streamlined content updating process.

Planning Tasks

• Update all SPC websites using WordPress.
• Ensure that all content available on SPC’s website is available to all end users;
• Achieve a far more contemporary look and feel for SPC website.
• Production of story maps, photo galleries, and other very visual modes of branding and storytelling with minimum need for hard coding.
• Identify and train additional staff for managing website content via WordPress.

Work Products:

• Completion of new SPC websites.
• Custom Data Navigator Tool for SPC’s Data Resource Library.
• Custom interface for the Congestion Management Process (CMP).
• Additional staff trained to manage website content via WordPress.
LOCAL TECHNICAL ASSISTANCE PROGRAM (LTAP)
PROMOTION AND EVALUATION

ESTIMATED COST:

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OBJECTIVES:

The PennDOT Local Technical Assistance Program is part of a national initiative to transfer transportation technology through training, technical assistance, and other customer services to municipal elected officials and their staff. LTAP provides technical information and proven technologies to meet the growing demands on municipal governments. In an effort to expand and promote LTAP services to the 548 municipalities within its ten-county region, SPC proposes to assist PennDOT with facilitating LTAP training during the 2020-2022 fiscal years.

The program markets and promotes the training opportunities provided by LTAP through the establishment of a partnership wherein SPC would serve as Regional Technology Transfer Representative for LTAP in the ten-county SPC region.

Through this program, the technical training needs of local municipalities are met by identifying their needs and coordinating with LTAP on scheduling relevant training programs in the region.

TASK DESCRIPTIONS:

1. Identify Regional Training Needs

   - Develop a priority training list that identifies training needs within the region based on historical data, knowledge of region, and district municipal services representative input; incorporate into an annual training calendar.

   - Using the priority training list/annual calendar, work with PennDOT to schedule training dates.

   - In coordination with PennDOT Project Manager, identify training course locations. Responsibilities include, but are not limited to logistics, class locations, registration, room set-up, food, etc.

   - Identify regional municipal issues and provide to PennDOT Project Manager for consideration.

   - Identify additional training available on safety and operations topics for possible additional training opportunities.
2. Program Marketing and Outreach

- In conjunction with PennDOT Project Manager, develop a plan to expand LTAP training and technical assistance in the region. Examples of marketing activities may include but not be limited to integration of LTAP into MPO/RPO outreach programs, promotion of technical assistance through the distribution of brochures, targeting municipalities who have not taken advantage of LTAP services, etc.

- Work with PennDOT Project Manager to promote upcoming LTAP activities at least six (6) weeks prior to the scheduled LTAP class sessions. Promotional activities may include but are not limited to brochures, LTAP fax alerts, website updates, newsletters, postcards, etc.

- In coordination with PennDOT Project Manager, develop a plan for LTAP outreach in the region, such as equipment shows, county conventions, etc., for approval by PennDOT Project Manager. Outreach activities should be coordinated with PennDOT Project Manager and Municipal Services Representatives to avoid duplication in outreach efforts.

3. Administration and Reporting

- Participate in scheduled conference calls with PennDOT Project Manager.

- Determine a regular communication method that will work best for all parties.

- Submit quarterly reports detailing all LTAP project activities and expenditures to PennDOT Project Manager.

- Develop and submit annual reports that detail the process used to market LTAP in the region no later than July 31, 2021, 2022. The annual report should include an evaluation of training, marketing, and outreach activities, and recommendations for future activities with LTAP in the region.
OUTREACH & COORDINATION – MULTI-YEAR IMPLICATIONS

The UPWP is a core element of the MPO planning function. As such, the development and administration of the UPWP is an ongoing work task. UPWP development continues to evolve to take a longer-term, multi-year view of each of the region’s planning activities.

- Completion of the FY 2018-2019 planning program, which ends on June 30, 2019.
- Completion of the FY 2019-2020 planning program, which ends on June 30, 2020.
- Continue to advance Environmental Justice/Title VI processes and activities.
- Continue to work cooperatively with regional/state/federal planning partners to advance specific recommendations from the 2017 Certification Review of the Pittsburgh Metropolitan Area by FHWA and FTA.

Staff support is required for virtually all elements of the UPWP. As such, it is envisioned that every Work Program will include this work element in advancing all the planning provisions of the FAST Act and subsequent federal legislation.

- Continue to provide secretarial, clerical and administrative support across individual UPWP jobs in advancing all the planning provisions of MAP-21, the FAST Act, and any emerging federal guidance.
- Continue graphics/design support for newsletters, printed materials and reports.
- Continue to take advantage of advancements in technology and graphic and support software to improve efficiency, quality control, and turn-around, enhancing SPC’s commitment to service to SPC members, partners and customers throughout Southwestern Pennsylvania and to the Commonwealth.

Engaging the public and facilitating collaboration amongst a wide range of stakeholders in an area as large and diverse as Southwestern Pennsylvania is always challenging. Advances in technology and communications, particularly smart phones and social media, have created more opportunities to engage the public in the planning process. SPC plans to expand its use of social media and video capabilities to enhance the communication of program and project information across different media. SPC is constantly looking for the best ways to provide clear, concise, and meaningful information to its planning partners, interested stakeholders, and members of the public.

SPC will continue to use its Public Participation Panels, Internet website, newsletters, and other tools to educate and engage citizens on regional transportation issues. It will also use workshops, on-line forums, meetings and other mechanisms to facilitate communication and collaboration with its members and other transportation stakeholders. In the coming years, SPC will continue to investigate new technologies, including emerging visualization tools, to help people understand and relate to SPC’s various planning activities. SPC will also continue to develop methods and opportunities for traditionally underserved portions of the population to participate in the transportation planning process, including minority, non-English speaking, and low-income groups.

Technical support is an evolving need for municipalities as technology and conditions on the ground change. Thus, it is expected that LTAP will include in its course and on-site tech assist offerings, ever evolving materials and expertise in subject matter that is vital to local governance. LTAP will continue to provide on-site tech assists as specific needs arise in individual municipalities, provide a voice for local governments when deciding on new or updated course offerings, and finally serve as ongoing support for PennDOT and PSATS in the PennDOT Connects initiative.
SECTION III

UPWP FUNDING SUMMARIES
## Unified Planning Work Program
### Fiscal Years 2020-2022

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### SOUTHWESTERN PENNSYLVANIA COMMISSION
#### 2020-2021 UNIFIED PLANNING WORK PROGRAM

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#### Year One

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#### Exhibit Three

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#### July 2020

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#### CONTRACT SUMMARY

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### SOUTHWESTERN PENNSYLVANIA COMMISSION

#### 2021-2022 UNIFIED PLANNING WORK PROGRAM

### CONTRACT SUMMARY

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## Unified Planning Work Program
Fiscal Years 2020-2022

### Exhibit Three

#### Southwestern Pennsylvania Commission 2020-2022 Unified Planning Work Program

## Contract Summary

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## PROJECT FUNDING TABLE

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| II. MULTIMODAL TRANSPORTATION PLANNING | SPC | Other | UP WP Project Funding | AGENCY PARTICIPATION | Other
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| III. TRANSPORTATION OPERATIONS and SAFETY | SPC | Other | UP WP Project Funding | AGENCY PARTICIPATION | Other
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| IV. DATA SYSTEMS and MODELING | SPC | Other | UP WP Project Funding | AGENCY PARTICIPATION | Other
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| V. OUTREACH AND COORDINATION | SPC | Other | UP WP Project Funding | AGENCY PARTICIPATION | Other
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| TOTAL FOR 2020-2021 UPWP YEAR ONE | SPC | Other | UP WP Project Funding | AGENCY PARTICIPATION | Other
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**FOOTNOTES:**

1) The local match includes $65,000 in-kind support provided by SPC.
2) The local match includes $65,000 in-kind support provided by SPC.
3) The local match includes $75,000 in-kind support provided by SPC.
4) The local match includes $5,000 in-kind support provided by SPC.
5) The 20% local match is provided by the Port Authority of Allegheny County.
6) The local match includes $40,000 in-kind support provided by SPC.
7) The local match includes $2,000 in-kind support provided by SPC.
8) The local match includes $2,000 in-kind support provided by SPC.
9) PENNDOT PE Funds (100% $90,000 total).
10) The 20% local match is provided by Lawrence County.
11) The 20% local match provided by the SPC Member Counties and the City of Pittsburgh.
12) The local match includes $20,000 in-kind support provided by SPC.
13) FHWA LTAP Program supplement provided by PennDOT.
14) Supplemental PL Funds, completion date June 30, 2021. The $50,000 local match is provided by PennDOT as PA MLF.
15) Supplemental PL Funds, completion date June 30, 2021. 100% FHWA PL Supplemental.

**NOTE:** Project detail may not sum to totals because of rounding.
### Unified Planning Work Program
Fiscal Years 2020-2022

**Southwestern Pennsylvania Commission**

#### Year Two
October 2019

**Exhibit Four**

**2021-2022 Unified Planning Work Program**

#### Project Funding Table

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<td>Other</td>
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#### I. Transportation Program Development

1a) Long Range Plan Implementation

- SPC: $1,238,000

1b) TIP Development & Management

- SPC: $542,000

#### II. Multimodal Transportation Planning

2a) Multimodal Transportation Planning

- SPC: $1,030,000

2b) Regional Freight Planning

- SPC: $192,000

2c) Port Authority Planning Program

- SPC: $230,000

#### III. Transportation Operations and Safety

3a) Transportation Operations & Congestion Management

- SPC: $353,000

3b) Transportation Safety Planning

- SPC: $323,000

3c) Regional Traffic Signal Program

- SPC: $24,000

#### IV. Data Systems and Modeling

4a) Geographic Information Systems

- SPC: $424,000

4b) Regional Data & Graphics Clearinghouse

- SPC: $337,000

4c) Air Quality Modeling

- SPC: $292,000

4d) Land Use Models & Reg. Forecasts

- SPC: $278,000

4e) Transportation Models

- SPC: $294,000

4f) Traffic Forecasts and Needs Reports

- SPC: $90,000

4g) HPM S - Traffic Count Program

- SPC: $265,000

4h) HPM S - Inventory

- SPC: $57,000

4i) HPM S - Lawrence County

- SPC: $18,750

#### V. Outreach and Coordination

5a) UPWP Administration

- SPC: $117,517

5b) General Support Services

- SPC: $332,000

5c) Member Planning Agency Part.

- SPC: $226,000

5d) Public Participation / Commun. Program

- SPC: $45,000

#### TOTAL FOR 2021-2022 UPWP YEAR TWO

- SPC: $6,133,517

**FOOTNOTES:**

1) The local match includes $65,000 in-kind support provided by SPC.

2) The local match includes $65,000 in-kind support provided by SPC.

3) The local match includes $75,000 in-kind support provided by SPC.

4) The local match includes $10,000 in-kind support provided by SPC.

5) The 20% local match is provided by the Port Authority of Allegheny County.

6) The local match includes $40,000 in-kind support provided by SPC.

7) The local match includes $20,000 in-kind support provided by SPC.

8) The local match includes $2,000 in-kind support provided by SPC.

9) PENNDOT PE Funds (100%), $90,000 total.

10) The 20% local match is provided by Lawrence County.

11) The 20% local match provided by the SPC Member Counties and the City of Pittsburgh.

12) The local match includes $20,000 in-kind support provided by SPC.

13) FHWA LTAP Program supplement provided by PennDOT.

NOTE: Project detail may not sum to totals because of rounding.

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_Southwestern Pennsylvania Commission_  
_Page 159_
**Unified Planning Work Program**
**Fiscal Years 2020-2022**

**Exhibit Four**

**2020-2022 UNITED PLANNING WORK PROGRAM**

**July 2020**

**PROJECT FUNDING TABLE**

<table>
<thead>
<tr>
<th>PROJECT BUDGETS</th>
<th>UPWP</th>
<th>AGENCY PARTICIPATION</th>
<th>Other</th>
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<tr>
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<td>SPC</td>
<td>Other</td>
<td>FHWA</td>
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<tr>
<td>I. TRANSPORTATION PROGRAM DEVELOPMENT</td>
<td>2,474,500</td>
<td>2,474,500</td>
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<tr>
<td>a) Long Range Plan Implementation</td>
<td>1,393,000</td>
<td>1,393,000</td>
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<td>b) TIP Development &amp; M anagement</td>
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<td>II. MULTIMODAL TRANSPORTATION PLANNING</td>
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<tr>
<td>a) Multimodal Transportation Planning</td>
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<td>2,056,500</td>
<td>505,440</td>
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<tr>
<td>b) Regional Freight Planning</td>
<td>382,750</td>
<td>382,750</td>
<td>242,800</td>
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<tr>
<td>c) Port Authority Planning Program</td>
<td>Port Authority (5)</td>
<td>460,000</td>
<td>368,000</td>
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<tr>
<td>III. TRANSPORTATION OPERATIONS and SAFETY</td>
<td>2,000,500</td>
<td>2,000,500</td>
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<tr>
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<tr>
<td>a) Transp. Ops &amp; Congestion Mgmt.</td>
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<td>803,000</td>
<td>642,400</td>
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<tr>
<td>b) Transportation Safety Planning</td>
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<td>c) Regional Traffic Signal Program</td>
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<td>303,500</td>
<td>242,800</td>
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<tr>
<td>d) Regional Roundabout Screening Study</td>
<td>250,000 (14)</td>
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<td>200,000</td>
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<td>IV. DATA SYSTEM S and M ODELING</td>
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<td>4,684,500</td>
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<tr>
<td>a) Geographic Information Systems</td>
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<td>b) Regional Data &amp; Graphics Clearinghouse</td>
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<td>c) Air Quality Modeling</td>
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<td>d) Land Use Models &amp; Reg. Forecasts</td>
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<td>e) Transportation Models</td>
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<td>f) Traffic Forecasts and Needs Reports</td>
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<td>h) HPMS - Inventory</td>
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<td>i) HPMS - Lawrence County</td>
<td>Lawrence County (10)</td>
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<td>j) Transportation Model Updates/Enhancements</td>
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<tr>
<td>V. OUTREACH AND COORDINATION</td>
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<td>533,446</td>
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<td>a) UPWP Administration</td>
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<td>132,291</td>
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<td>b) General Support Services</td>
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<td>c) Member Planning Agency Participation</td>
<td>Member Agencies (11)</td>
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<td>d) Public Participation / Commun. Program</td>
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<td>e) Local Technical Assistance Program</td>
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<td>90,000</td>
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<tr>
<td>TOTAL FOR 2020-2022 UPWP TWO YEAR</td>
<td>13,006,114</td>
<td>1030,946</td>
<td>14,037,060</td>
</tr>
</tbody>
</table>

**FOOTNOTES:**

1) The local match includes $130,000 in-kind support provided by SPC.
2) The local match includes $130,000 in-kind support provided by SPC.
3) The local match includes $130,000 in-kind support provided by SPC.
4) The local match includes $20,000 in-kind support provided by SPC.
5) The 20% local match is provided by the Port Authority of Allegheny County.
6) The local match includes $80,000 in-kind support provided by SPC.
7) The local match includes $45,000 in-kind support provided by SPC.
8) The local match includes $4,000 in-kind support provided by SPC.
9) PENNDOT PE Funds (100%), $900,000 total.
10) The 20% local match is provided by Lawrence County.
11) The 20% local match provided by the SPC Member Counties and the City of Pittsburgh.
12) The local match includes $40,000 in-kind support provided by SPC.
13) FHWA LTAP Program supplement provided by PennDOT.
14) Supplemental PL Funds, completion date June 30, 2021. The $50,000 local match is provided by PennDOT as PA MLF.
15) Supplemental PL Funds, completion date June 30, 2021. 100% FHWA PL Supplemental.

**NOTE:** Project detail may not sum to totals because of rounding.

*SOUTHWESTERN PENNSYLVANIA COMMISSION*

**Two Year 2020-2022 Unified Planning Work Program**

*July 2020*

*Southwestern Pennsylvania Commission*

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