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Renee Sigel

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2016-2018
UNIFIED PLANNING WORK PROGRAM
FOR SOUTHWESTERN PENNSYLVANIA

March 2016
The Southwestern Pennsylvania Commission (SPC) hereby gives public notice that it is the policy of the Commission to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI and other related statutes require that no person in the United States of America shall, on the grounds of race, color, sex, national origin, age, or disability, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which SPC receives federal financial assistance. Any person who believes they have been aggrieved by an unlawful discriminatory practice by SPC under Title VI has a right to file a formal complaint with the Commission. Any such complaint must be in writing and filed with SPC’s Title VI Coordinator within one hundred eighty (180) days following the date of the alleged discriminatory occurrence. For more information, or to obtain a Title VI Discrimination Complaint Form, please see our website at: www.spcregion.org or call 412-391-5590.
# TABLE OF CONTENTS

## SECTION I: SPC PLANNING OVERVIEW ................................................................. 1

- Introduction to SPC ........................................................................................................ 3
- Transportation Planning Program Overview .......................................................... 5
- SPC Transportation Planning Responsibilities .................................................... 5
- Planning Emphasis Areas ....................................................................................... 6
- Statewide Planning Initiatives .............................................................................. 6
- Regional Priorities in Transportation Planning .................................................. 8
  - Exhibit One: The Regional Vision and Key Policies ....................................... 10
- SPC Composition ..................................................................................................... 11
- SPC Committees & Forums .................................................................................. 11
- UPWP Administration ............................................................................................ 12

## SECTION II: JOB DESCRIPTIONS FOR PLANNING PROJECTS ......................... 15

- Transportation Program Development .................................................................. 17
  - Transportation Program Development - Overview ........................................ 19
  - Transportation Program Development - Results from Current Program .......... 20
  - Long Range Plan Implementation ..................................................................... 22
  - Transportation Improvement Program (TIP) Development and Management .... 29
  - Transportation Program Development - Multi-Year Implications .................. 34

- Multimodal Transportation Planning ................................................................. 37
  - Multimodal Transportation Planning - Overview ............................................. 39
  - Multimodal Transportation Planning - Results from Current Program ............. 40
  - Multimodal Transportation Planning .................................................................. 43
  - Regional Freight Planning .................................................................................. 50
  - Port Authority Planning Program ........................................................................ 54
  - Multimodal Transportation Planning - Multi-Year Implications ......................... 59

- Transportation Operations & Safety ................................................................. 61
  - Transportation Operations & Safety - Overview .............................................. 63
  - Transportation Operations & Safety - Results from Current Program .......... 64
  - Transportation Operations & Congestion Management ..................................... 66
  - Transportation Safety Planning ........................................................................ 70
  - Intelligent Transportation Systems (ITS) Planning & Implementation ............ 73
  - Regional Traffic Signal Program ....................................................................... 76
  - Transportation Operations & Safety - Multi-Year Implications ......................... 78

- Data Systems & Modeling ..................................................................................... 81
  - Data Systems & Modeling - Overview ............................................................. 83
  - Data Systems & Modeling - Results from Current Program ......................... 84
  - Geographic Information Systems ....................................................................... 87
  - Regional Aerial Photography ............................................................................. 90
Regional Data and Graphics Clearinghouse ................................................................. 91
Air Quality Modeling .................................................................................................. 93
Land Use Models and Regional Forecasts................................................................. 95
Transportation Models ............................................................................................. 97
Traffic Forecasts and Needs Reports .......................................................................... 99
Highway Performance Monitoring System (HPMS) .................................................. 100
Local Asset Management (LAM) ............................................................................. 103
Data Systems & Modeling - Multi-Year Implications ............................................... 107

**Outreach & Coordination** .................................................................................... 109

Outreach & Coordination - Overview ....................................................................... 111
Outreach & Coordination - Results from Current Program ..................................... 113
UPWP Administration .............................................................................................. 115
General Support Services ......................................................................................... 117
Member Planning Agency Participation .................................................................. 119
Public Participation / Communications Program ...................................................... 122
Local Technical Assistance Program (LTAP) ............................................................ 125
Outreach & Coordination - Multi-Year Implications ................................................ 127

**SECTION III: UPWP FUNDING SUMMARIES** .................................................. 129

Exhibit Two: UPWP Contract Summary .................................................................. 131
Exhibit Three: Project Funding Table ........................................................................ 132

The Southwestern Pennsylvania Commission (SPC) hereby gives public notice that it is the policy of the Commission to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI and other related statutes require that no person in the United States of America shall, on the grounds of race, color, sex, national origin, age, or disability, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which SPC receives federal financial assistance. Any person who believes they have been aggrieved by an unlawful discriminatory practice by SPC under Title VI has a right to file a formal complaint with the Commission. Any such complaint must be in writing and filed with SPC’s Title VI Coordinator within one hundred eighty (180) days following the date of the alleged discriminatory occurrence. For more information, or to obtain a Title VI Discrimination Complaint Form, please see our website at: www.spcregion.org or call 412-391-5590.
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. Over the past decades, the region has experienced a shift away from its traditional manufacturing base and the emergence of a vital service sector economy.

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 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 transportation project 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 and the public are all partners in the development and implementation of the regional transportation plan. 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, constituent 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 Mapping the Future: The Southwestern PA Plan, which ties the regional economic development strategy of the CEDS to the regional long range transportation plan through projects that focus on achieving balanced, cost-effective growth and development by:

- Taking advantage of the significant infrastructure investment in the region’s established communities and transportation network by emphasizing capital maintenance in the existing system; and
- Enhancing the region’s economic competitiveness by relieving congestion and mobility disconnections, and focusing new investment in locations that respond to industry demands and market realities.

*Mapping the Future*’s investment strategy is well balanced with a very significant commitment to maintaining quality multimodal transportation options in existing communities throughout the region and to providing quality connections between those existing communities to support job creation and regional economic competitiveness.

Where *Mapping the Future* 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 2016-2018 Unified Planning Work Program, identifies transportation planning activities to be conducted within the 2016-2017 and the 2017-2018 fiscal years (July 1, 2016 through June 30, 2018) and establishes the priorities of the SPC transportation planning program for fiscal years 2016-2018.

The 2016-2018 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.

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 metropolitan area.
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, the range of continuing UPWP activities include freight planning, transit planning, monitoring traffic congestion, planning for non-motorized transportation, regional operations and safety planning, operation of a ridesharing program, and planning for Intelligent Transportation Systems (ITS) among other things. SPC also partners with PennDOT in collecting traffic and roadway information, participates in PennDOT planning studies, and provides other technical assistance to both PennDOT and county and municipal partners as needed.

The 2016-2018 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 American’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 planning factors that must be considered in the metropolitan planning process are:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.
- Increase the safety of the transportation system for motorized and non-motorized users.
- Increase the security of the transportation system for motorized and non-motorized users.
- Increase the accessibility and mobility options available to people and for freight.
- 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.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.
- Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- Enhance travel and tourism.

In developing the 2016-2018 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 2016-2018, these priority areas include: Land Use/Transportation Linkages/Economic Development/Modernization; Plans and Programs; Planning Tools and Techniques; Highway Performance Monitoring and Traffic Data Collection; Public Involvement and Outreach; Local Technical Assistance Program (LTAP); and, Program Administration.

I. Land Use/Transportation Linkages/Economic Development/Modernization

The 2016-2018 Work Program includes several projects and programs that link planning for transportation, land use, economic development, safety and mobility. The Long Range Plan Implementation project clearly integrates the regional planning process with local and countywide land use and economic development planning efforts. SPC advisory groups such as the Transportation Operations and Safety Forum, Active Transportation Forum and Freight Forum provide opportunities for members of the community to identify local and regional needs, as well as share information on training needs and opportunities. SPC partners with the state on efforts to comprehensively assess travel behavior in order to identify operational improvements, as well as assess a broad range of commuting alternatives. Special consideration of the freight needs of the region is included in implementation of the Regional Freight Plan and through development of a regional freight conference. The identification of sustainable and
resilient strategies to link transportation, economic development and land use are integrated into multiple projects.

II. Plans and Programs

In the 2016-2018 Work Program, SPC will be advancing implementation of Mapping the Future: The Southwestern PA Plan, which is the long range transportation and development plan adopted in June 2015. This will include maintenance of the 2015-2018 TIP through September 2016, and the 2017-2020 TIP beginning in October 2016. It will also include the development of the 2019-2022 TIP. Each of these documents will meet FAST Act expectations regarding performance measurement, visualization, transportation facility inventories and smart transportation practices. The combined SPC/PennDOT linking planning and NEPA project identification and prioritization process has been fully integrated into TIP maintenance and LRP update efforts and will continue. The development of performance measures is an ongoing task, and will be further advanced in the 2016-2018 Work Program.

Also falling under the plans and programs framework are technical services provided to PennDOT. Such efforts include local input into the Highway Occupancy Permit process, Transportation Impact Assessment and regional efforts to create an inventory of local assets such as bridges, culverts, traffic signals, sidewalks and other critical infrastructure, which continue in the 2016-2018 Work Program.

III. Planning Tools and Techniques

SPC maintains technical data resources and capabilities that are unparalleled in the region, including aerial photography, GIS mapping and data, and travel demand models. The maintenance of these technical resources is fundamental to planning efforts in the region.

In recent years, SPC has implemented programs to use these technical resources to monitor, evaluate and enhance the regional transportation system in new and creative ways. One such example is the analysis of data from Pittsburgh’s new Healthy Ride bike share program. Coupling new sources of data with powerful GIS mapping and analysis capabilities provides new insights into the functioning of the regional transportation network, and provides valuable information for planning. SPC continues to develop new methods for assessing transportation needs and identifying cost-effective transportation solutions.

SPC has expanded its educational efforts to include training on issues of transportation operations, safety, congestion management, intermodal connectivity, transit planning and smart transportation, and continues to work with PennDOT in the advancement of new programs and planning objectives by serving as a local training resource within the region.

The SPC region has been the beneficiary of discretionary funding programs such as Pennsylvania Community Transportation Initiative (PCTI), Transportation Investment Generating Economic Recovery (TIGER) and other non-traditional funding programs for the advancement of regional transportation priorities. The identification, assessment and promotion of the wide variety of discretionary funding opportunities within the region may enable local municipalities, counties and agencies to become successful applicants under such programs.
IV. Highway Performance Monitoring System and Traffic Data Collection

The collection of highway performance and condition data under the Highway Performance Monitoring System (HPMS) and the traffic monitoring system for highway projects continue to be significant tasks in the 2016-2018 Work Program. This data provides roadway performance information, and is used as a primary input in many SPC programs. The effective use of these tools requires that data be collected in a timely manner, and that quality data is generated.

V. Public Involvement and Outreach

The 2016-2018 Work Program will see a continued and comprehensive focus on public involvement and outreach, as SPC works to implement Mapping the Future. Recent enhancements to the public involvement process have included expanded use of SPC’s websites, establishment of an SPC YouTube page, creation of videos to highlight specific projects and to provide an overview of the long range plan, and implementation of a regional project input form that facilitates the gathering of information on new candidate projects into the PennDOT Linking Planning and NEPA Process. Outreach to traditionally underserved elements of the regional populace will continue to be advanced through the 2016-2018 Work Program.

VI. Local Technical Assistance Program (LTAP)

SPC has partnered with PennDOT in the delivery of the Local Technical Assistance Program for the past several years. The 2016-2018 Work Program includes a four-pronged approach to LTAP promotion and delivery, including: 1) identification of regional training meetings; 2) marketing and promotion of available programs; 3) administration and reporting; and, 4) identification of program (training) needs in the region not currently being addressed through the LTAP program. In doing so, SPC seeks to identify opportunities to move LTAP beyond its current training focus, and further into technical assistance and other planning customer assistance to municipal elected officials and their staffs.

VII. Administrative

SPC approved submission of the draft 2016-2018 UPWP to the funding agencies on January 25, 2016. All documents required for contract execution shall be submitted to PennDOT by March 14, 2016, including Exhibits Two and Three and authorizing signature resolutions. SPC will also continue to submit progress reports, invoices and other materials required to carry out the work program.

REGIONAL PRIORITIES IN TRANSPORTATION PLANNING

In fulfilling its commitment to meet the varied federal and state transportation planning mandates, SPC works with its members and partners to do regional planning that advances projects that incorporate both the vision of Mapping the Future 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).

SPC has implemented several project tracking/performance monitoring efforts to permit more detailed assessment of regional performance in transportation planning and programming. SPC has also begun 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 has undergone significant refinement in recent years with the evolution of project evaluation and selection criteria for regional funding programs. SPC is continuously exploring additional enhancements to project evaluation and selection methodologies and procedures, which are being pursued in virtually all functional areas of the UPWP.
Exhibit One: The Regional Vision and Policy Goals

The Regional Vision:
*Transportation and land use that supports and enhances the regional economy and the communities within it.*

### Policy Goals

#### Regional Places
- Revitalization and redevelopment of the region’s existing communities is a priority.
- Investment in infrastructure improvements will be coordinated and targeted at the corridor level to optimize the impact of the investment.
- The region will focus on the identification and development of industrial sites with special attention given to well situated brownfield locations.

#### Regional Connections
- Maintenance of the existing transportation system will be a regional priority.
- Transportation and development choices will reflect a priority on safe and secure multimodal and intermodal networks for both people and goods.
- The region’s transportation system will be actively managed and operated to allow the system to function at its full potential.
- The region’s transit system will connect people with resources throughout the entire region.
- The entire region will have access to broadband communications infrastructure.
- The region’s infrastructure system will be designed to protect and enhance public health and the environment.

#### Regional Activities
- The region will place a priority on business development with a focus on existing business retention and expansion.
- The region will support initiatives designed to improve both the quality and quantity of the region’s workforce to meet emerging industry demands.
- The region will support identified strategic industry clusters.
- The region will place a priority on programs and services to attract and retain a diverse population with a particular focus on young adults and immigrants.
- The region will proactively support the emerging role of colleges and universities in economic development.
- The region will preserve, promote and develop the tourism and hospitality industries by capitalizing on historic, cultural, recreational and ecological assets.
- The region will preserve and develop its agricultural industry.
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 participation 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 and the Policy Committee 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, the Washington County Transportation Authority, Fayette Area Coordinated Transportation, Green County Human Services, Indiana County Transit Authority, Butler City-Township Joint Municipal Transit Authority, Mid-County Transit Authority, SPC’s CommuteInfo 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 serves as SPC’s eyes and ears on 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 & 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 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 FHWA and the Federal FTA, 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, other local transit operators, and the Port of Pittsburgh Commission provide the majority of the remaining local matching funds. In-kind and private foundation contributions provide the remaining match where possible.
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SECTION II

JOB DESCRIPTIONS FOR PLANNING PROJECTS
TRANSPORTATION PROGRAM DEVELOPMENT
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, stakeholders and the public, and is the main implementation vehicle to advance the policies, goals and strategies found in the long range plan. 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 2016-2018 Work Program, all play vital roles in the advancement of the LRP.

Mapping the Future’s policy goals are implemented through SPC’s programs such as the Regional Traffic Signal Program, Congestion Mitigation and Air Quality (CMAQ) and Transportation Alternatives Program (TAP) investments, the CommutelInfo Program, the SPC Water Resource Center and the Energy Savings Program, as well as roadway, bridge, transit and other multimodal investments. Included throughout the program is the emerging consideration of sustainability and resiliency in the system.

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 2016-2018 Work Program.
TRANSPORTATION PROGRAM DEVELOPMENT – RESULTS FROM CURRENT PROGRAM

*Mapping the Future: The Southwestern PA Plan* was adopted on June 29, 2015, as the regional long range transportation and development plan. This plan represents significant progress in implementing performance-based planning and programming. The plan, through a robust public involvement process, developed 40 performance measures that track a wide range of indicators across three categories: Communities; People, Jobs & Economy; and, Mobility & Infrastructure. These measures will be tracked through the TIP development process and performance reports will be included in future SPC long range plans.

*Mapping the Future* continued 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 2017-2020 TIP. Other significant investments are made in safety and operations, as well as improvements that foster economic growth, enhance livability and connectivity in communities throughout the region, and provide residents with sustainable, multimodal transportation choices. *Mapping the Future* also included updates to the Regional Operations Plan (ROP), the Public Transit-Human Services Coordinated Transportation Plan, and the Regional Transportation Safety Action Plan.

The following is a sample of plan implementation activities that were advanced in the 2014-2016 UPWP:

- Continued to apply *Mapping the Future’s* 16 policy goals, which are stratified into Regional Places (3), Regional Connections (6), and Regional Activities (7), to guide TIP decision-making throughout the region, to serve as benchmarks for plan progress, and to integrate the plan’s Regional Vision into all UPWP activities.
- Maintained long range plan engagement/outreach through SPC member Public Participation Panels, continued coordination with other regional initiatives, and communication with neighboring regions and adjoining states.
- Coordinated public input for the long range plan with the Twelve Year Program (TYP) update conducted by the State Transportation Commission.
- Amended *Mapping the Future* to include the City of Pittsburgh and Allegheny County Sports & Exhibition Authority’s I-579 CAP proposed (Tiger VII candidate) project.
- 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. Other environmental screening tools are also being piloted with new TIP projects as part of the region’s Linking Planning & NEPA response and technical analysis. Outreach and consultation continues, as needed, with both PennDOT District Environmental Managers and regional representatives from the environmental and cultural resource agencies.
- Participated in multiple PennDOT-led, statewide planning efforts.
- Continued plan implementation through use of SPC’s committee structure, including Freight Forum, Pedestrian/Bike Committee, Regional Operations & Safety Committee, Transit Operators Committee and Transportation Technical Committee.
- Conducted a Benefits and Burdens Analysis on *Mapping the Future: The Southwestern PA Plan* in accordance with federal Environmental Justice and Title VI requirements.
• Completed an Air Quality Conformity Analysis on *Mapping the Future: The Southwestern PA Plan*, as required by U.S. Department of Transportation and the U.S. Environmental Protection Agency.

During fiscal years 2014-2016, SPC also developed and adopted the 2017-2020 TIP. The 2017-2020 TIP begins to implement and track the performance measures developed in *Mapping the Future*. The 2017-2020 TIP depicts a clear linkage between the investment policies and regional goals set forth in the plan. For example, the 2017-2020 TIP invests nearly half of its available federal and state funding toward addressing structurally deficient bridges in the Southwestern Pennsylvania region. When surveyed during the development of *Mapping the Future*, respondents identified investing in structurally deficient bridges as the number one priority for the region.

The following is a sample of the TIP implementation activities that were advanced in the 2014-2016 UPWP to maintain the 2015-2018 TIP and to develop the 2017-2020 TIP, which is scheduled for adoption in June 2016:

• SPC conducted and facilitated 11 TIP work group meetings as part of development of the 2017-2020 TIP, completed 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.
• Developed and implemented a stand-alone process for the solicitation, evaluation and selection of projects for the SPC Transportation Alternatives Program (TAP).
• Reviewed and instituted changes to the project evaluation and selection criteria for the SPC Congestion Mitigation and Air Quality (CMAQ) Program.
• Used Decision Lens® in the technical evaluation of projects to assist in the decision making process for both the CMAQ and TA Programs.
• Developed and delivered the Livability through Smart Transportation (SMART) Program.
• Conducted four regional workshops to educate and aid local project sponsors in delivering federal and state funded projects.
• Provided 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.
• Monitored and maintained fiscal constraint of the 2015-2018 TIP, provided documentation of amendments and administrative changes to the TIP, and provided materials for regular TOC and TTC meetings.
• Participated in both the statewide Financial Guidance and General and Procedural Guidance Work Groups.
• Conducted a Benefits and Burdens Analysis on the 2017-2020 TIP in accordance with federal Environmental Justice and Title VI requirements.
• Completed an Air Quality Conformity Analysis of the 2017-2020 TIP as required by U.S. Department of Transportation and the U.S. Environmental Protection Agency.
LONG RANGE PLAN IMPLEMENTATION

ESTIMATED COST:

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TASK DESCRIPTIONS

Mapping the Future establishes 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 integrating 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 recently passed FAST Act. Refining, documenting and implementing the performance measures established in Mapping the Future will be a priority during the 2016-2018 Work Program.

National performance measures associated with these federal goals are under development via a multi-year intergovernmental process. When federal targets and performance measures are adopted, states will report every two years on progress towards meeting their targets. Metropolitan planning organizations are to report progress every four or five years in their updated long range plans.

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 the close collaboration and coordination with SPC’s federal, state and local planning partners. The following section will outline not only the LRP implementation actions that will be undertaken, but will also discuss the evaluation and processes that will be examined in preparation of the next long range plan update.

The next long range plan is will be adopted in 2019. When needed, amendments and updates to Mapping the Future will be considered and updated as necessary between regular plan update cycles.

1. Long Range Plan

Objective: SPC will continue to enhance and update its long range plan development, continuing to focus on enhancing the delivery of the plan’s policy goals, strategies and Regional Vision. These efforts will continue to advance the development of planning tools, data systems, and analytical processes that focus on transportation system performance, land use, economic investment scenarios and public involvement.
Planning Activities:

- **Community, Livability, and Economy** – SPC will continue to incorporate national best practices in its planning program, PennDOT’s Enhanced Corridor Planning Pilot, and full integration of the region’s Comprehensive Economic Development Strategy in order to enhance the sustainability, livability, and economy of the region and its many unique communities.

- **Performance Management and Target Setting** - As discussed in the introduction, a foundation for performance-based planning and programming was established *Mapping the Future*. SPC will focus on honing those performance measures through system evaluation tools and analysis in order for targets to be established and the Policy Goals, Strategies and the Regional Vision to be advanced with measurable actions. This task will also tie together all of SPC’s functional areas of transportation planning.

- **Investment Analysis and Financial Strategies** - Comparison of alternative investment scenarios 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 position in securing non-traditional revenues and discretionary funding.

Work Products:

- A federally-compliant recommended strategy, process, and tool set for use in developing SPC’s next long range plan.

2. **Transportation System Evaluation**

**Objective:** A comprehensive evaluation system informs the regional transportation planning process to better identify and address critical needs in the system and strategically recommend the most appropriate investments to maximize our federal, state and local funds. The following planning activities will be undertaken to enhance practices already in place in order to evaluate and document the current conditions and performance of the transportation network in Southwestern Pennsylvania and to better predict the types of future investments that will be needed. In addition to the system evaluation activities that are undertaken by SPC’s Operations and Safety, Data and Modeling, and Multimodal Planning Groups, the Program Development Group will undertake the following system evaluation activities over the next two years.

Planning Activities:

- Coordinate with the SPC Data and Models, Safety and Operations, and Multimodal Planning Groups to enhance processes and procedures in order to better evaluate and document the current state (baseline) and performance of the transportation system with regard to infrastructure condition, mobility, accessibility, modal options, freight movement, safety, and operations.

- Maintain and improve SPC bridge and pavement condition forecasting tools in support of estimating future transportation system highway and bridge needs.

- Develop an Asset Management framework including analytic and reporting systems for use by SPC and its planning partners and municipalities in both short and long range
planning and programming for the STP and locally-owned federal-aid systems to complement current PennDOT Asset Management efforts on the National Highway System (NHS).

- Analyze trends and future projections and establish objective statements that measure the policies and goals of the LRP in order to discuss and set performance targets for inclusion into the next LRP.
- 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.
- Explore Integrated Corridor Planning in applicable high priority areas in the region.
- Work with Allegheny County, the City of Pittsburgh, and PennDOT District 11, to analyze and update, as necessary, the Federal-Aid Functional Classification system in Allegheny County.
- 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.
- Produce a performance measure tracking report in accordance with federal and state standards.
- Provide technical assistance and guidance to SPC member counties and their municipalities in preparing transportation elements of their comprehensive plans and other municipal planning efforts.
- Evaluate the transportation system needs in the area of Northern Washington County in the corridor including: I-79, US-19, Washington Pike/Morganza Road and the collectors that link them.

**Work Products:**

- Washington County Transportation Study – A corridor based, small area transportation plan to evaluate current and future needs of a rapidly growing area. The study would include an analysis of existing conditions, future traffic projections and a list of prioritized short, medium, and long-term improvements and strategies with recommended traditional and non-traditional funding mechanisms to finance the improvements.
- An enhanced process for assessing, reporting and tracking the condition and performance of the transportation system and the improvements/enhancements made to the system as a result of the policy goals in the LRP and the investments made by the TIP.
- I-79 Needs Analysis Study - A comprehensive study to better understand current and future needs in the I-79 Corridor from Washington, PA to I-279 in Allegheny County and to ensure that this corridor will meet the future mobility needs required to efficiently move people and goods through this part of the region.
- An updated roadway functional classification system in Allegheny County and the City of Pittsburgh to submit to PennDOT and FHWA for approval.
• Develop a best management practices (BMP) document for use by counties and municipalities to inventory, track and prioritize asset management needs.
• Briefing materials for the Commission, planning partners and the public.

3. Infrastructure Resiliency

Objectives: A solid understanding of the risks and critical elements in the regional transportation system that have the potential to be impacted by extreme weather and other natural and man-made disasters helps government and agency officials to be prepared for these events. The following planning activities will result in a set of strategies and practices that can be implemented in order to mitigate adversities that have potential short and long term impacts on the effectiveness of the regional transportation system.

Planning Activities:
• Actively participate in PennDOT’s Extreme Weather Resilience Study and use the study as a basis for a Southwestern Pennsylvania-specific Extreme Weather Resilience Study. Consultation and coordination with members of the PennDOT Central Office Extreme Weather Resilience Study will be conducted to assist in the development of the infrastructure vulnerability assessment.
• 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. Under this task, this information will be compiled into a Transportation Infrastructure Vulnerability Assessment, using new research and planning techniques being employed by states, regions and MPOs around the country. Coordination with the SPC Water Resource Center will be invaluable in the assessment of stormwater-related issues on transportation infrastructure as this program moves forward.
• Continue to develop and promote sustainability, system redundancy, and continued development of alternative modes for adaptability in the face of potential infrastructure degradation such as: ridesharing; increased transit ridership; encouragement of biking and walking to reduce Greenhouse Gas Emissions; freight traffic contingency planning; and, emissions reductions resulting from congestion management and regional traffic signal programs.
• Analyze potentially high impact regional vulnerabilities, and research best management planning, programming, and incident management practices to mitigate these vulnerabilities.
• Provide assistance for regional cooperation and coordination of regional infrastructure resiliency initiatives.
• Research, catalogue and/or develop Best Management Practices (BMPs) to promote resiliency and mitigate impacts on the transportation system by flooding, high rain volumes, landslides, mine subsidence, etc.
Work Products:

- Mapping to depict the areas and the major transportation infrastructure in the region that are most vulnerable to extreme weather and other risks like mine subsidence.
- A Regional Transportation Infrastructure Vulnerability Assessment Report and Extreme Weather Resilience Study that includes a set of recommendations on how best to minimize impacts to the transportation system and how to preserve, integrate, and maximize resources (both natural and financial) to become more resourceful and flexible in the face of adversity.
- BMP Fact Sheets around topic areas such as stormwater, landslides, resiliency assessments, salt reduction, etc.
- Briefing materials for the Commission, planning partners and the public.

4. Planning and Environmental Linkage

Objectives: Patterned after federal Planning and Environmental Linkage (PEL) initiatives, SPC has been developing processes and tools that can help develop transportation infrastructure in a way that maintains and enhances the cultural and ecological value of the region. These efforts are consistent with an ecological approach to transportation infrastructure development and are focused both on system-level regional planning, such as development of the regional ecosystem framework, and at the project level, such as using the wetland mitigation suitability tool. Encouraging the adoption of a regional approach to mitigation planning is an emerging resiliency goal. SPC’s intent is to maintain and develop tools that can be used internally and by our planning partners to plan mitigation for transportation projects/programs in a more efficient and regionally beneficial way.

Planning Activities:

- Maintain and update the Regional Ecological Framework (REF) and apply REF mapping to other planning processes such as county comprehensive plan updates and integrated corridor planning.
- Coordinate a regional update of Natural Heritage Inventory (NHI) data (pending DCNR grant). This project will involve the collaborative update of the region’s NHI spatial data working with the Western PA Conservancy, member planning departments, and resource agencies. This dataset is a key component of the REF model and individual project screenings.
- Conduct PEL/LPN (Linking Planning and NEPA) corridor or subarea studies in conjunction with other SPC planning studies.
- Maintain and enhance the wetland mitigation planning tool that was developed by SPC in 2015. Explore the feasibility of extending this tool to include stream mitigation.
- Use the wetland mitigation planning tool in a joint initiative with PennDOT District 12-0’s environmental unit to validate the suitability model and assess potential wetland mitigation on I-70 interchange projects. Apply to other projects as warranted.
• Continue to participate as a member of the Statewide Transportation Innovation Council (STIC) Environmental Technical Advisory Group (TAG) including related subcommittee work, white paper development, and peer reviews.

• Explore development of a Regional Programmatic Mitigation Plan:
  - Build on coordination with PennDOT Districts and Resource Agencies developed during the implementation of LPN activities and agency consultation conducted during the LRP.
  - Seek FHWA technical assistance to obtain guidance on development, with the potential to hold a collaboration session to build momentum/consensus for the programmatic mitigation plan.
  - Involve Central Office Environmental Policy and Development Section where applicable.
  - Identify most applicable resources for inclusion.
  - Where appropriate, work to enhance relations with non-profit, 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.

**Work Products:**

- Regional Ecosystem Framework GIS model
- Regional Natural Heritage Inventory database
- Mitigation planning tools
- PEL studies for applicable corridors
- Briefing materials for the Commission, planning partners and the public.

5. **Non-Traditional Funding Capacity Building**

**Objective:** Given the overwhelming needs associated with the regional transportation system and the demands put on traditional state and federal funding streams, it is critical to continually look for other 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 relevant agencies and foundations with the goal of maximizing the effectiveness of existing resources, leveraging other sources of funding, and finding innovative ways to advance the vision and policies set forth in the long range plan.

**Planning Activities:**

• 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 and policy goals of *Mapping the Future*. 
- Further define, develop, and pursue funding for projects found on the “Potential Projects” list in *Mapping the Future* including 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).

- Establish a user-friendly online database of 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.

- 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. Work with PennDOT and other partners to identify and support sustainable sources of revenue.

- Provide technical assistance and guidance to SPC member counties and their municipalities in pursuing various sources of funding for projects.

**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.

- Briefing materials for the Commission, planning partners and the public.
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 text 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:** SPC has been actively involved in recent years in incorporating elements of federal “Every Day Counts” initiatives as well as state initiatives such as “Linking Planning and NEPA” and “Results Oriented Planning”. SPC will continue to develop tools, incorporate new processes, and foster coordination/collaboration efforts with PennDOT and our planning partners in administering the TIP, streamlining project delivery, and advancing the next (2019) TIP update. These efforts consider network-level and project-level needs, various planning studies, project screening information, performance data, and other project proposal information early in the transportation planning (pre-TIP) process. These tools, processes, and coordination efforts lead to better decision-making and improved project delivery.

   **Planning Activities:**

   - **Project Development Work Groups** – These work groups typically consist of District, SPC, county planning departments, transit operators, and Transportation Management Association representatives and 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.
     - Maintain and enhance the Project Development 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 agenda for ongoing Project Development Work Group Meetings including candidate status management, asset management monitoring/reporting, public input form assessment, and overall LPN process support.
Unified Planning Work Program  
Fiscal Years 2016-2018

- Use Project Development Work Groups as a key collaboration element of the Pre-TIP planning process for the 2019 TIP development.
- Continue maintenance and upgrade of the data systems used for pre-TIP planning.

• **Linking Planning and NEPA (LPN) 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. FHWA, PennDOT and SPC have embraced these LPN initiatives with the goal of improving project selection, increasing program predictability, and increasing 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.

  - Use the required PennDOT LPN Screening Forms in early pre-TIP planning and project development, including those associated with the current 2017 TIP and the 2019 TIP update. Continue to adapt and enhance screening forms and processes to maximize their effectiveness.
  - Participate in the LPN statewide advisory committee providing assistance to the DM1 update in the area of pre-TIP planning.
  - Maintain communication and collaboration with PennDOT’s District Environmental Managers related to project development.
  - Conduct environmental screenings and the development of preliminary constraint mapping for PennDOT District Environmental Units, as requested.
  - Participate in relevant trainings and webinars, hosting/attending where applicable.
  - Maintain, update, and improve existing GIS-based planning tools for conducting project environmental screenings, supplementing the environmental screening tool on the PennDOT LPN website.
  - Incorporate public comments originating from both the State Transportation Commission and SPC public input forms into public involvement activities associated with the 2019 TIP update process.

**Work Products:**

• **TIP Workgroup 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 Linking Planning and NEPA process incorporating the screening forms into the project development process within the SPC region.

• Consensus on the advancement of project proposals at several decision points through the forms process prequalifying projects to the LRP/TIP.

• Populationed Forms (Project Needs) database containing Level 1 and 2 proposal data 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.
2. SPC Funding Program Administration

**Objectives:** The Congestion Mitigation and Air Quality (CMAQ), Transportation Alternatives (TA) and Livability Through Smart Transportation (SMART) programs are important mechanisms for improving the regional transportation system and 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 and policy goals 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, TAP 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.

**Planning Activities:**
- Administer the CMAQ, TAP 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.
- 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.
- Review and refine, as necessary, the program policies, procedures, and structure for each funding program in anticipation of the 2019-2022 TIP development cycle.

**Work Products:**
- Lists of priority projects to be programmed and delivered for the 2019-2022 CMAQ Program and the 2019-2020 TAP and SMART Programs.
- Summary and administrative reports for each program (CMAQ, TAP 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.

3. Current TIP Administration, Draft TIP Development and Environmental Justice Documentation

**Objectives:** Delivering projects through the TIP is a primary mechanism for advancing the Regional Vision, policy goals and strategies of Mapping the Future. The following planning activities are designed to maintain, document, and deliver the 2017-2020 Transportation Improvement Program, adhering to federal regulations including Title VI and Environmental...
Justice and Air Quality Conformity requirements, and to begin the development of the 2019-2022 TIP.

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.
- 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 measures established in the LRP.
- Maintain and update, where warranted, TIP amendment procedures.
- Assist in conducting public outreach and participate in Public Participation Panel meetings.

Work Products:
- 2017 TIP document, supporting materials and presentations to the public and other planning partners and stakeholders.
- 2019 TIP project list and draft TIP document.
- TTC meeting materials and other reports/technical documentation.
- Monthly documentation and processing of amendments and administrative changes to the TIP.
- Monthly project database reports.
- Benefits and Burdens Analysis and report for the 2019-2022 TIP.
- 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 to ensure that funds awarded through SPC’s competitive funding programs are being used in a timely manner. Through proactive delivery assistance, projects can move more efficiently and create capacity for new candidates to be programmed, thus maximizing regional benefit.

**Planning Activities:**
- 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 requirements between local project sponsors and PennDOT.
- Maintain and track the status of all CMAQ, TAP and SMART funded projects and make recommendations on needed funding changes as necessary.

**Work Products:**
- Local Project Delivery workshops to inform and assist potential project sponsors.
- Meetings with potential project sponsors, as requested/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.
- Briefing materials for the Commission, planning partners and the public.
TRANSPORTATION PROGRAM DEVELOPMENT – MULTI-YEAR IMPLICATIONS

Mapping the Future: The Southwestern PA Plan 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 plan’s sixteen policy goals with regard to development strategies that are directed at preserving, enhancing and building on existing communities and infrastructure. The region’s long term investment strategy continues SPC’s priority on the maintenance and operation of the existing roadway, bridge, and transit infrastructure.

The next regional transportation and development plan for Southwestern Pennsylvania is scheduled for adoption in June 2019. Specific activities to be completed in the 2016-2018 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 to evaluation and enhance the long range planning process. Build on new long range planning concepts in 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 initiative by all planning partners.
- Continue to monitor and adjust, as necessary, the fiscal constraint of the LRP in accordance with revenue projections from the FAST Act and all future federal and state transportation funding legislation.
- Continue Mapping the Future implementation on multiple fronts with local, state and regional partners.
- Continue to use the TIP as the main implementation vehicle to advance the policy goals, strategies and Regional Vision of the LRP and to track the performance of the LRP through TIP project evaluation and selection.

The 2017-2020 TIP goes into effect on October 1, 2016. The 2019-2022 TIP and 2021-2024 TIPs will be the next program updates, with SPC adoption scheduled for June 2018 and June 2020 respectfully. As the mechanism for implementing the LRP, there is an ever-increasing emphasis on measuring TIP impact on various transportation planning and programming areas and the policy 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 workgroup 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 utilization of GIS, visualization, monitoring, and other techniques.
- Continue to integrate performance-based planning and programming elements into the TIP development process.
- Continue integration of Linking Planning and NEPA initiatives into the TIP and LRP development processes.
Unified Planning Work Program
Fiscal Years 2016-2018

- 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 their programs.
- Continue to advance emerging emphasis areas such as transportation resiliency and greenhouse gas monitoring and reduction into 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.

SPC also seeks to enhance its overall multidisciplinary resiliency and sustainability efforts consistent with regulatory and program guidance and direction. Our state and federal funding agency partners (including but not limited to: USDOT, PennDOT, ARC, EDA), as well as many of our planning partners, have placed increased emphasis on addressing resiliency and sustainability themes in our work. These issues transcend the boundaries of specific planning disciplines like transportation and require a level of integration and collaboration that goes beyond what is possible with current planning funds. Should additional funding become available, SPC is poised to increase the level of policy-level and technical-level collaboration and coordination on these topics.

SPC continues to seek funding for a multimodal transportation study in northern Washington County to assess long-term needs in that area. SPC staff would accomplish as much of this work in-house as possible, but additional funding would support a more comprehensive study.
MULTIMODAL TRANSPORTATION PLANNING
MULTIMODAL TRANSPORTATION PLANNING – OVERVIEW

The Multimodal Planning Group of SPC’s Transportation Department focuses on planning projects and products that advance the Regional Vision, policy goals and strategies of Mapping the Future to support the economic vitality of the region by creating 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 focuses on the plan’s policy goals, providing a framework for SPC to work with its partners toward the development of integrated multimodal solutions that account for the needs of all transportation system users. Good multimodal transportation plans and programs serve to implement these policy goals.
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, Mapping the Future. Mapping the Future continues to place an emphasis on investing in multimodal projects that serve 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 2014-2016 UPWP:

- Provided technical support for PA Act 89 Multimodal Transportation projects:
  - Indiana County, Burrell Township – $1.7 million to construct a multi-purpose pedestrian bridge over Route 22 to connect Hoodlebug and Blairsville Riverfront Trails that will expand the multi-state trail network; provide a safe route for pedestrians, including students at a nearby trade school; and, reduce short-distance vehicular use across SR 22.
  - Beaver County, Borough of Monaca – $261,000 to make Complete Streets improvements to accommodate vehicles, pedestrians and bicycles on a 10-block segment of Monaca’s main downtown corridor, Pennsylvania Avenue, and to construct a 2.4-mile segment of the Ohio River Greenway Trail along Pennsylvania Avenue.

- Purchased 8 automated bicycle counters and began work with the University of Pittsburgh and the PennDOT-supported WalkWorks program to develop a pilot bicycle data collection project. The pilot project will provide the foundation for later development and implementation of an ongoing regional bicycle and pedestrian data collection program.

- Established a strategic framework for development of the Southwestern Pennsylvania Active Transportation Plan. This plan, which is an implementation action of Mapping the Future, that will tie together local planning efforts to identify opportunities designed to establish a regional active transportation network.

- Provided technical assistance for the launch of the City of Pittsburgh “Healthy Ride” Bike Share Program.

- Updated and adopted the Southwestern Pennsylvania Coordinated Public Transit - Human Services Plan (CTP). The CTP is a federally-mandated planning product and an integral part of the region’s long range transportation plan that focuses on planning activities designed to promote cooperation and coordination among the hundreds of human service and support agencies across the region that are engaged in providing access to services and jobs for the region’s mobility- and accessibility-disadvantaged populations. Outreach for the CTP included face-to-face focus group sessions in all ten counties of the SPC region and participation from over 220 human service professionals.

- Initiated implementation of the CTP upon adoption. Staff continued extensive outreach efforts to advance implementation initiatives such as addressing human service transportation policies and regulations that have created undue barriers to efficient and consistent transportation options.

- SPC staff provided technical assistance to the region’s sponsors of federal and state-funded transit projects for the preparation of the FY2017-2020 programs of projects.
listings, including almost $190 million in bus replacements, directly impacting regional transportation asset maintenance performance measures.

- Provided technical and planning support for the consolidation of Washington County’s shared ride transit service and the City of Washington’s fixed-route transit service.
- Provided technical and financial support for development of a five-year service and capital investment plan designed to provide enhanced transit access for 20 communities in the Mid-Mon Valley.
- Provided technical and financial assistance to the Port Authority of Allegheny County for the initiation of planning activities designed to evaluate the potential to extend the Martin Luther King Jr. East Busway into eastern Allegheny County.
- Administered FTA urban area funding in order to establish a three-year, $3 million contract for the provision of van leasing and support for over 40 regional volunteer vanpool groups through the CommutelInfo program.
- Conducted extensive employer and community outreach, participating in over 100 events and individual meetings, to educate the people of the Southwestern Pennsylvania region about travel alternatives to the single occupancy vehicle. In 2015, over 1,200 participants in CommutelInfo’s regional vanpool and registered carpool programs resulted in nearly 245,000 fewer single-occupant vehicle round trips made by participants.
- Coordinated travel demand management activities in partnership with the three transportation management associations in the region – the Pittsburgh Downtown Partnership, Oakland Transportation Management Association and Airport Corridor Transportation Association.
- Completed the “Mon Valley Places” study, which examined the potential economic and land use benefits of improved transit service in the Lower Mon Valley area of Allegheny County.
- Completed the Route 51 Transit Signal Priority Simulation Modeling and Transit Stop Improvements study using 3D computer modeling to simulate advanced transit technology and demonstrate the potential for advanced traffic signals to provide faster trips for transit commuters in communities in the southern portion of Allegheny County.
- Provided technical assistance to the PennDOT Results Oriented Planning Catalyst Team for the development of the Route 65 Corridor Transportation/Land Use Planning Pilot project. The planning initiative coordinated transportation and land use planning efforts among 23 communities in the Ohio River Valley in Allegheny and Beaver Counties with transportation improvement project planning of PennDOT District 11-0.
- Participated on the technical committee for the City of Pittsburgh’s Envision Downtown initiative as well as the steering committee for the establishment of the City’s Eco-Innovation District, a transit/land use/economic development planning effort designed to provide value capture mechanisms for the Uptown neighborhood.
- Completed development of a Regional Freight Plan for Southwestern Pennsylvania. This year-long planning study inventoried and assessed the multimodal transportation network, identifying bottlenecks and operational limitations in the freight network, and developing strategies to strengthen the region’s ability to serve the transportation needs of area businesses and industries.
• Identified and mapped “intermodal connectors”, a federal designation for local routes providing access to locations where high volumes of freight are transferred from one mode to another.

• Facilitated 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.

• Participated in the Ohio Conference on Freight, which was held jointly with the Kentucky Transportation Commission’s bi-annual meeting and the annual meeting of the Mid-America Freight Coalition, to enhance multistate collaboration on freight transportation.

• Provided input to and technical support for PennDOT’s development of the Pennsylvania State Rail Plan, which identified a range of improvements for enhanced passenger and freight rail service, and reviewed several dozen applications for freight rail preservation projects under the Rail Freight Assistance Program and the Rail Technical Assistance Program.
MULTIMODAL TRANSPORTATION PLANNING

ESTIMATED COST:

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TASK DESCRIPTIONS

Implementation of the region’s long range plan is a multifaceted endeavor for translating the Plan’s vision, policy 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, in collaboration with its partners, to advance multimodal transportation planning in the region.

1. Active Transportation Planning

**Objective:** Communities in the region are placing an emphasis on sustainable transportation projects that support human-powered transportation, which engages people in healthy physical activity while they travel from place to place and also reduces emissions and fuel consumption associated with motorized vehicle travel. Through these planning activities, SPC staff develops planning products designed to support a regional active transportation network by providing technical assistance to counties and communities for active transportation programs and projects.

**Planning Activities:**

- Develop the *Southwestern Pennsylvania Active Transportation Plan*. This plan will tie together local planning efforts to identify opportunities designed to establish a regional active transportation network.
- Continue development of mapping for the regional trail network.
- Continue development of mapping for a regional bicycle network.
- Develop and implement an ongoing bicycle and pedestrian data collection program for the region.
- Support and facilitate the regional Active Transportation Forum.
- Develop and disseminate bicycle and pedestrian best practices and tools that can be used by municipalities and other agencies implementing active transportation projects.
and programs, including information on how to ensure compliance with the Americans with Disabilities Act (ADA).

- Provide technical assistance to municipalities in the region to become designated as pedestrian-friendly and bicycle-friendly communities.
- Provide technical assistance to communities and potential project sponsors on funding opportunities and project development strategies for non-motorized transportation facilities and accessibility enhancements.
- Provide support for PennDOT’s continuing multimodal initiatives.
- Develop regional measures for the emissions and health benefits of active transportation activities.
- Explore opportunities to integrate health initiatives like the PA Department of Health’s *WalkWorks* program, safety initiatives like Safe Routes to School, and transportation planning initiatives to increase the impact on creating healthy, livable communities.
- Conduct before and after studies to assess the benefits of various projects.

**Work Products:**

- Southwestern Pennsylvania Active Transportation Plan.
- Quarterly meetings of the region’s Active Transportation Forum.
- Regional trail network mapping.
- Regional bike network mapping.
- Community bike/pedestrian facilities inventory.
- Enhanced active transportation performance measures and tracking systems.
- Regional active transportation best practices clearinghouse.
- Briefing materials for the Commission, planning partners and the public.

### 2. Access and Mobility Planning

**Objective:** The Alliance for Transportation Working in Communities (ATWIC) is a program of SPC that cultivates regional collaboration of efforts to improve transportation access in communities throughout the region and facilitate planning for transportation projects targeted toward low-income jobseekers, individuals with disabilities, older adults, and others for whom the lack of transportation options is a key issue. These planning activities are meant to provide technical assistance to communities and agencies involved in implementing accessibility and enhanced mobility projects.

**Planning Activities:**

- Facilitate planning and project implementation that makes measurable progress toward an integrated regional transportation system that provides for multiple traveling options.
3. Transit Technical Assistance and Regional Planning

Objective: Maintaining and enhancing a safe, efficient and sustainable system of public transportation that connects people with the essential resources they need to access is a key component of the Regional Vision established in Mapping the Future. SPC’s planning activities advance programs and projects providing public transportation options, regional transit coordination, alternatives to fixed-route transit delivery systems, and economic opportunities linked to land use and transit-oriented development.

Planning 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.

• 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.

• 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, municipalities, PennDOT and other stakeholders that advance the goals of the region’s LRP.

• Develop a regional implementation strategy for transit signal priority and bus rapid transit applications.

Work Products:

• TOC meeting materials and other documentation of support to standing and special committee activities of SPC relating to transit.

• Documentation of planning tasks undertaken by the region’s transit providers including the Port Authority of Allegheny County.

• Annual list of obligations of federal transit funding.

• Documentation of the annual sub-allocation process for the region’s federal Urbanized Area Formula Program funds.

• Transit Development Plans.
Unified Planning Work Program  
Fiscal Years 2016-2018

- Studies, reports and other planning documents resulting from requests for technical assistance and support from regional transit agencies.
- Enhanced transit accessibility performance measures and tracking systems.
- Regional implementation strategy for transit signal priority and bus rapid transit applications.
- Updated TOC website and member relations strategy.
- Briefing materials for the Commission, planning partners and the public.

4. Commuter Options Planning

Objective: Travel Demand Management (TDM) is an important element in maintaining and operating an efficient and sustainable multimodal transportation system. SPC provides staff support for a customer-focused commuting options resource center that administers regional vanpool and carpool matching programs and facilitates a regional forum for coordinating ridesharing efforts. The CommuteInfo Program (www.CommuteInfo.org) services are designed to increase the number of people who travel to work or school by transit, vanpool, carpool, or bicycle.

Planning Activities:
- Provide administrative, technical and planning support for management and operation of the regional ridesharing program.
- Promote and expand commuter ridesharing through the production and distribution of marketing/information/training materials and events.
- Coordinate regional ridesharing 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.
- Maintain and enhance a toll-free phone number and website providing access to program information and materials.
- 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 travel demand management strategies.

Work Products:
- CommuteInfo vanpools.
- Regional ridesharing database.
5. Integrated Corridor and Sub-Area Planning

**Objective:** 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.

**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.
- Provide multimodal technical and planning support for Regional Transportation Safety Action Plan.
- 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, Linking Planning and NEPA, access management, transit oriented development, healthy communities, compliance with the Americans with Disabilities Act (ADA), connectivity, interchange area development, 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.
• Provide multimodal planning assistance to the Northern Washington County Transportation Study.
• Additional special studies as requested.
• Briefing materials for the Commission, planning partners and the public.
• (See Also, Transportation Operations & Safety Work Products)
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. SPC develops planning products and programs to strengthen and grow the region’s economic base through the implementation of a strong and interconnected freight transportation network and coordinate regional goods movement and freight planning in cooperation with stakeholder organizations, in the context of advancing the Regional Vision, policy goals and strategies established in Mapping the Future: The Southwestern PA Plan.

1. Regional Freight Plan Implementation

   **Objective:** SPC embarked on 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.

   **Planning Activities:**
   - Develop planning activities and products that support implementation of the Regional Freight Plan including:
     - 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 Group 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.
• Identify potential future enhancements to the Regional Freight Plan.

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.

2. Regional Freight Program

Objective: 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 Comprehensive Freight Movement Plan, and provides opportunities for regional freight interests to have input into the transportation planning process.

Planning Activities:
• Use the regional Freight Forum 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 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.
• 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 multijurisdictional freight movement.
• Support intermodal initiatives of the Appalachian Regional Commission and other similar programs.
• Advance priority freight initiatives identified by the regional Freight Forum, as appropriate.
• 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).
- Monitor efforts by the USACE, Port of Pittsburgh Commission, Waterways Council International and others to ensure the implementation of the recommendations of the Upper Ohio River Navigation Study for the replacement of the existing 600 ft by 1100 ft main lock chambers on the Emsworth and Montgomery facilities to ensure continued viability of these lock facilities, the oldest and smallest on the Ohio River System.
- 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.
- Monitor freight system vulnerability to weather-related disruptions through discussions with regional partners (USACE and others). Promote the implementation of green infrastructure solutions to address seasonal flooding of small creeks that have the ability to erode rail beds, create scour concern on small structures and may result in landslide or slump related traffic disruptions. Monitor land use changes that result in an increase in freight-related transportation demand (new industrial parks, major industrial uses, rail intermodal facilities, etc.) or that result in additional limitations on the freight transportation network (removal of rail spurs, rezoning and repurposing of former industrial/warehouse sites, closure or relocation of major freight consumers such as coal generated power plants, etc.).
- Develop technical reports identifying safety issues associated with at-grade railroad crossings, GPS truck routing, commercial vehicle safety and specific locations as required.
- Participate in FHWA sponsored educational programs as appropriate.
- Collaborate with SPC’s Transportation Operations & 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, and other planning efforts.
- Implement innovative practices in the identification and designation of freight activity centers, including Bluetooth monitoring of traffic in the vicinity of freight nodes, heightened use of traffic classification counts on key freight corridors, and use of new data resources such as the PennDOT Sign Inventory Database to identify freight limitations in the region.
- 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:

- Quarterly 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.
- 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.
- (See Also, Transportation Operations & Safety Work Products)
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 smart card technology, real-time vehicle tracking and on-street bus rapid transit.

1. Port Authority Transit Service, System Planning and Planning for Elderly and Persons with Disabilities

   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) and the Allegheny County Transit Council. Conduct other planning activities which seek to improve transit operations and facilitate integration within the overall transportation system.

   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 performances of existing transit services and evaluating proposals for new service utilizing productivity and other measures.
     - Monitoring performance of changed services and make 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 plan 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 in the Downtown – Uptown – Oakland – East End Corridor.
- 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.
- Continue Implementation of 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 implement 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.
- Participate in SPC’s Congestion Management Process (CMP).
- 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.

**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.
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 2016 - 2018 UPWP and the administration of the 2017 - 2020 TIP, and initiate planning for the 2019-2022 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 2019-22 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.
Unified Planning Work Program
Fiscal Years 2016-2018

- Examine operating and capital impacts of FY 2017 and FY 2018 budgets.
- Assess other important issues which pertain to the Authority's financial and business planning.

Work Products:
- Programming of transit projects for the Capital Improvement Program.
- Administer the transit component of the FY 2017-2020 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.
- 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.
- Implement TransStats to monitor operating key performance indicators.

3. Port Authority Long-Range Transit Planning

Objectives: To advance planning efforts for mid-range projects including improvements such as Bus Rapid Transit (BRT) in the Downtown – Uptown – Oakland – East End Corridor. Participate in long-range transit corridor and community planning studies being led by the City of Pittsburgh, Allegheny County, SPC and other entities. Advance a program for Transit-Oriented Development (TOD). Conduct preliminary assessment of alternatives for extending the Martin Luther King, Jr. East Busway. Promote and develop sustainability initiatives.

Planning Activities:
- Conduct National Environmental Policy Act (NEPA) review and coordinate Preliminary Engineering (PE) activities as elements of the Project Development phase for the Downtown-Uptown-Oakland-East End Corridor BRT project.
- Evaluate the feasibility of alternatives for extending the Martin Luther King, Jr. East Busway from its existing Swissvale terminus to East Pittsburgh, Monroeville and/or other communities to the east or southeast of Swissvale.
- Participate in Transit-Oriented Development planning efforts as appropriate. Using the recently completed Transit-Oriented Development Guidelines document, conduct a program of education and outreach to local, county and regional governments, developers, business groups, advocacy organizations and interested citizens to advance a program for TOD along Port Authority’s existing busway and light rail transit systems as well as for future fixed guideways such as the BRT project. Coordinate with the
Federal Transit Administration and Pennsylvania Department of Transportation, as necessary.

- Coordinate with municipal, county, regional and state planning and development initiatives to maximize opportunities for implementation of TOD.
- 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.
- Identify opportunities for business and joint development on Port Authority’s facilities.
- Advance the Station Improvement Program to modernize existing busway and light rail stations to better meet current rider needs, support TOD initiatives and enhance transit operations.
- 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 McKeesport Transportation Center.
- Develop a sustainability program to promote environmental responsibility and reduction of resource consumption for the entire Port Authority organization.
- As needed, provide information to SPC information 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).

**Work Products:**

- Completed NEPA and PE with a recommendation for a Locally Preferred Alternative for a Bus Rapid Transit Improvement in the Downtown-Oakland-East End Corridor.
- 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.
- Further planning for an extension of the Martin Luther King, Jr. East Busway east of Swissvale.
- Per Port Authority’s guidelines, advancement of a TOD program at busway and light rail transit stations.
- Development of a Station Improvement Program.
- Establishment of a Sustainability Program.
- Evaluation of the feasibility of a new bus garage.
MULTIMODAL TRANSPORTATION PLANNING – MULTI-YEAR IMPLICATIONS

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. SPC’s recent development of a Regional Freight Plan helps to establish a more solid foundation for ongoing and future efforts to fully integrate freight into the transportation planning and investment decision-making process. The Freight Plan will guide program development and implementation initiatives in the coming years.

Similar to freight, active transportation has been emerging as a high priority area at the national, state, regional and local levels. SPC will be embarking on the development of a Regional Active Transportation Plan to guide future program development and implementation activities in this area. The challenge for SPC will be to identify an appropriate role for the MPO in order to add value to ongoing efforts, many of which are appropriately taking place at the county and municipal level.

Development of the Regional Active Transportation Plan is likely to be undertaken in large part by in-house SPC staff; however, if additional funds can be secured, SPC would like to supplement in-house efforts with additional technical expertise from outside sources.

SPC will continue to lead regional efforts to improve access and mobility 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 will also continue to provide technical assistance to regional transit providers for enhanced service coordination and the development of strategic planning documents for each of the 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 travel demand management (TDM) planning and strategy development as part of the Congestion Management Process (CMP) – 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 with the three Transportation Management Associations (TMAs) in the region in order to maximize the impacts of regional TDM efforts.

SPC also seeks to increase the level of technical support it provides to transit operators across the region, particularly in developing Transit Development Plans for each agency. SPC works to do this in its core program, but there is additional need beyond what can be accomplished with current planning funds. Should additional funding become available, SPC will be able to assist additional transit operators in the region with establishing these Transit Development Plans.
Supplemental Work: **Active Transportation Plan**

**ESTIMATED COST:**

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Supplemental Work: **Transit Development Plans**

**ESTIMATED COST:**

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TRANSPORTATION OPERATIONS & SAFETY
TRANSPORTATION OPERATIONS & SAFETY – OVERVIEW

Having a safe and reliable transportation system is an important component of *Mapping the Future*’s regional vision of “Transportation and land use that supports and enhances the regional economy and the communities within it.” Transportation Operations & Safety programs directly address the plan’s goals of having transportation and development choices that reflect a priority on safe and secure multimodal and intermodal networks for both people and goods; a regional infrastructure system that is designed to protect and enhance public health and the environment; and, a transportation system that is actively managed and operated to allow the system to function at its full potential.

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

Transportation systems management and operations (TSM&O) programs attempt 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 and objectives, and 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 and objectives in the planning process.
TRANSPORTATION OPERATIONS & SAFETY – RESULTS FROM CURRENT PROGRAM

Mapping the Future continued 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 2017-2020 TIP currently under development. SPC’s operations and safety programs address policy goals including a) Maintenance of the existing transportation system will be a regional priority; b) The region’s transportation system will be actively managed and operated to allow the system to function at its full potential; and c) Transportation and development choices will reflect a priority on safe and secure multimodal and intermodal networks for both people and goods.

The following is a sample of transportation operations and safety planning activities that were advanced in the 2014-2016 UPWP:

- Held regular meetings of the regional Transportation Operations & Safety Committee.
- Led local coordination efforts to host ITS America’s 2015 Annual Meeting in Pittsburgh. This successful convention, themed "Bridges to Innovation", drew over 2000 of the nation’s top transportation and technology policymakers, innovators and engineers, investors, researchers and business leaders to Pittsburgh to address the role of technology in the nation’s and region’s transportation future.
- Coordinated a joint exhibit booth space at the 2015 ITS America conference with PennDOT, the Pennsylvania Turnpike Commission, and the Delaware Valley Regional Planning Commission. As part of this effort, SPC collaborated with those agencies to produce a video discussing innovation in Pennsylvania's transportation system.
- Participated 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.
- Worked with the City of Pittsburgh and a host of regional stakeholders to pursue grant funding through FHWA’s Beyond Traffic: Smart City Challenge.
- Conducted work sessions with 25 regional ITS stakeholders including state and local transportation agencies, transit agencies, transportation management associations, and local governments to discuss their current ITS architecture and to gain input on future needs in order to complete a comprehensive update to the Regional ITS Architecture.
- Completed a comprehensive update of the Regional Operations Plan (ROP).
- Completed a Regional Transportation Safety Action Plan (the first of its kind) for Southwestern Pennsylvania.
- Analyzed INRIX vehicle probe data for regional Interstate corridors as part of the Congestion Management Process.
- Participated in statewide work groups to address TSM&O capabilities within state and regional agencies and to develop consistent congestion-related performance metrics that can be applied throughout Pennsylvania.
- Assisted PennDOT District 12-0 by collecting and providing Bluetooth data for the New Stanton Interchange Project's design phase to assist in determining adequate work zone configurations.
- Conducted 6 Road Safety Audits.
• Completed a transportation Operations and Safety Assessment (OSA) study (the first of its kind) along S.R. 68 in Butler County.

• Developed a Traffic Incident Management (TIM) Program Guidebook to establish a framework for the regional TIM program.

• Held regular meetings of the Regional TIM Steering Committee and Local TIM Teams, as well as TIM training sessions, webinars, and After Action Reviews.

• Collaborated with transportation and public safety officials in Pennsylvania, Ohio and West Virginia to hold a one-day tri-state TIM conference to share best practices and increase multi-state collaboration on incident management.

• Assisted with coordinating and organizing Emergency Response (ER) Day at the ITS America 2015 Annual Meeting. ER Day is intended to engage emergency responders as an integral part of ITS America's vision to save lives through the deployment of Intelligent Transportation Systems. Many members of the region’s Local TIM teams participated.

• Coordinated and cosponsored a FHWA Ramp Management Workshop.

• Collaborated with PennDOT, the City of Pittsburgh, Carnegie Mellon University, and the University of Pittsburgh Medical Center for a pilot project that implements Adaptive Traffic Signal Technology and Dedicated Short Range Communication (DSRC) Antennas for a connected vehicle testbed on Baum Boulevard and Centre Avenue in the City of Pittsburgh.

• Completed the next phase of development for the Regional Traffic Signal Program including preliminary engineering, final design, and construction on the second cycle of projects. SPC has now completed two cycles of this important regional program, which to date has invested over $8 million to improve 501 signalized intersections across 63 municipalities in our region. Through the first two cycles of this program, results have yielded $64 of public benefit for every $1 spent in terms of reduced delay, reduced vehicular stops, and reduced fuel consumption and emissions.

• Completed final design of a light emitting diode (LED) traffic signal conversion project that is assisting economically and fiscally distressed municipalities with outstanding LED conversion in order to improve safety and reduce energy consumption.

• Executed Reimbursement Agreements with PennDOT Districts 10-0, 11-0, and 12-0 for the 3rd cycle of the Regional Traffic Signal Program. This cycle will use an additional $5 million of funding to address continuing signal needs throughout the region.

• The first cycle of the Regional Traffic Signal Program was awarded the Governor’s Award for Environmental Excellence by the Department of Environmental Protection as well as the ITS Project of the Year by the PA Chapter of the Intelligent Transportation Society of America.
TRANSPORTATION OPERATIONS & CONGESTION MANAGEMENT

ESTIMATED COST:

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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 in order to overcome the institutional and jurisdictional hurdles that sometimes exist. The following activities will be undertaken by SPC to facilitate the regional collaboration and cooperation that is needed to achieve an efficiently 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 through 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 Committee as it guides the development of regional programs such as the ROP, CMP, ITS, and safety planning.
- Participate in PennDOT and local transportation operations planning activities including identification and prioritization of operations projects, Corridor Modernization, and transportation management plans to mitigate work zone impacts.
- Review and provide feedback, as requested, on Highway Occupancy Permit (HOP) applications and other development access plans and traffic impact studies.
- Coordinate and conduct workshops and studies on congestion reduction strategies. SPC has recently discussed the possibility of hosting a Congestion Pricing workshop in 2016 with FHWA and PennDOT.
- Participate in integrated corridor and subarea planning studies associated with implementation of the long range transportation and development plan.
- Support PennDOT and other planning partners in efforts to 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.
- Create 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 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: 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:
- Develop and maintain the Regional Operations Plan (ROP), which is integrated into the LRP, in order to identify regional focus areas for transportation operations.
- Conduct multimodal Operations and Safety Assessments (OSAs) 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:
- Regional Operations Plan.
- Operations & Safety Assessment studies.
- 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, 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.

Planning Activities:
- Collect, compile and analyze 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.
- Conduct a comprehensive review of the current network of 116 CMP corridors to determine necessary modifications.
- Participate in needs studies for Single Occupancy Vehicle CapacityAdding Projects (SOVCAP) in order to ensure that the projects are consistent with the regional CMP and that consistency is adequately documented in environmental clearance documents.
- Continue to incorporate new technologies (such as Bluetooth detection devices) and new sources of data (such as private-source probe data) in order to enhance the amount and quality of traffic data available for transportation planning purposes.
- Assist PennDOT and other planning partners by providing Bluetooth data collection to support project development and engineering design activities as needed.
- 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.
- 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.
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.

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 four USDOT safety performance measures: reduced fatalities, reduced fatality rate, reduced crashes, and reduced crash rate. SPC’s Regional Transportation Safety Action Plan is the first step in establishing safety targets and tracking safety performance for the SPC region. Eight regional safety focus areas have been identified based on a review of regional crash data and feedback from SPC safety stakeholders. This project will monitor these safety performance measures and encourage safety projects and initiatives that address the safety focus areas.

**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.
- Develop 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 of 1-2 safety focus areas per year in order to develop detailed action plans and implementation strategies for the region.
- 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 and TAP.
- Coordinate with 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 2015 Regional Transportation Safety Action Plan, would be used as guidance within this process.
• Participate in PennDOT and transit agency safety planning activities including identification and prioritization of HSIP projects.
• Monitor and report the regional safety performance measures as outlined in SPC's LRP and Regional Transportation Safety Action Plan.
• 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 and SharePoint site in order to share safety planning and programming information.

Work Products:
• Transportation Safety Focus Area Reports.
• 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 Road Safety Audits (RSA).
• 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.

Work Products:
• Road Safety Audit reports with suggested safety improvements.
• Cost estimates and project funding proposals.
3. 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:
- Develop and 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.
- Establish and maintain TIM guidelines that can be adopted as standard practice by regional agencies.

Work Products:
- TIM Program Guide.
- TIM newsletter and outreach materials.
- Regional TIM SharePoint collaboration portal.
- First responder training sessions and workshops.
- FHWA TIM Self-Assessment (annual).
- Briefing materials for the Commission, planning partners and the public.
INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PLANNING & IMPLEMENTATION

ESTIMATED COST:

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TASK DESCRIPTIONS

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 since the invention of the wheel, but 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.

1. Regional ITS Architecture

**Objective:** ITS projects funded by USDOT must conform to a Regional ITS Architecture. 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.
  - 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.
  - Obtain access to and training on the latest Turbo Architecture program for consultant and staff use.
  - Customize architecture flows and identify standards as appropriate to facilitate the interchange of ITS information between agencies.
  - Identify project architectures as appropriate within the Regional Architecture.
  - Create 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.

2. Regional ITS Program

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.
  - 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 for connected vehicle deployment.
  - Support subcommittees as needed to advance priority initiatives of the region’s ITS community.
  - Sponsor quarterly meetings, special meetings, and special events as appropriate.
- Develop a Regional ITS Strategic Plan.
- Coordinate as needed with other planning efforts such as SPC’s Regional Traffic Signal Program, Regional Traffic Incident Management Program, Active Transportation Program, and safety planning initiatives to ensure these efforts are incorporated into the ITS Architecture.
- 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 grant applications as needed (such as the City of Pittsburgh’s Smart City Challenge bid).
  - 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 (strategies such as Integrated Corridor Management, Transit Signal Priority, etc.).
- 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.
- 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.
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 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 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 identified as a high priority in both *Mapping the Future* 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.
  - Coordinate efforts with PennDOT BHSTE to ensure that SPC’s tools and techniques are adaptable to the upcoming statewide Traffic Signal Asset Management Systems (TSAMS).
  - Periodically collect and distribute asset management data and updates to partners via secured access through SPC’s website.
- Work with our planning partners to establish criteria for prioritizing local and regional signal needs.
• Continue coordination efforts with PennDOT Central Office on their new 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 3rd and 4th cycles of the Regional Traffic Signal Program, including:
  - Perform traffic engineering analyses and review analyses performed 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 pedestrian facilities.

• 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.
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 goals 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 in the federal MAP-21 legislation, which focused on establishing performance standards and an outcome-based program. This focus is continued with the provisions of the latest funding bill – the Fixing America’s Surface Transportation (FAST) Act. 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 established in MAP-21. In working toward the federal goal “to achieve a significant reduction in traffic fatalities and serious injuries on public roads”, SPC will continue, thorough 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 could be 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 update 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. This will include continuing efforts on the next phases of the Regional Traffic Signal Program and making its delivery more effective. SPC will continue to have discussions with its planning partners on changes that would provide a more seamless and systematic
program with faster delivery. SPC’s first two cycles of the program involved work on 501 traffic signals. The 3rd and 4th cycles of the program are projected to affect an additional 450-500 traffic signals.
DATA SYSTEMS & MODELING
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DATA SYSTEMS & MODELING – OVERVIEW

SPC compiles 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. 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 and other regional partners, as well as for developing the LRP and TIP and in processing air quality conformity determinations.

Significant ongoing 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.
DATA SYSTEMS & MODELING – RESULTS FROM CURRENT PROGRAM

*Mapping the Future: The Southwestern PA Plan* was developed and adopted on June 29, 2015, as the regional Long-Range Transportation and Development Plan. This plan represents significant progress in implementing performance based planning and programming. The plan, through a robust public involvement process, developed 40 performance measures that track a wide range of indicators across four categories: Safety and Reliability, Maintenance, Economy, and Community. These measures will be tracked through the TIP development process and performance reports will be included in future SPC Long-Range Transportation Plans. *Mapping the Future* continued 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 2017-2020 TIP currently under development. Extensive data analysis is important to *Mapping the Future*. Various datasets were compiled related to long range plan performance measures to track progress in achieving the Regional Vision. SPC’s data systems and modeling programs provide data and analysis to support planning activities throughout the work program that advance the policy goals and regional strategies of *Mapping the Future*.

SPC’s GIS-based information helps make the region’s transportation—including highways, railways, bridges, waterways, tunnels, airports and others—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. These activities help to advance the following policy goals: Investment in infrastructure improvements will be coordinated and targeted at the corridor level to optimize the impact of the investment; and, The region will focus on the identification and development of industrial sites with special attention given to well-situated brownfield locations.

SPC’s 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 following policy goals: The region’s transportation system will be actively managed and operated to allow the system to function at its full potential; and, The region’s infrastructure system will be designed to protect and enhance public health and the environment.

The following is a sample of data systems and modeling activities that were advanced in the 2014-2016 UPWP:

- Established data sharing agreements with Carnegie Mellon University and the University of Pittsburgh.
- 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, traffic safety and traffic signal projects.
- Enhanced GIS data for the 10-county region representing new and updated transportation, transit, land use, land cover, environmental, social and demographic features.
- Revised data representing the region’s demographics at all geographic levels for historic and current counts, estimates, and projections. Incorporated data from the 2010 Census.
at all levels of geography for a 37-county region. Additional enhancements were made using data from the American Community Survey and recent Census estimates.

- 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 GIS databases 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.
- 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.
- A finalized inventory of locally-owned bridges across the region and developed a geospatial database of locations, a complete slate of attributes and a collection of photographs to support PennDOT’s Local Transportation Asset Management strategy.
- Completed an inventory of locally-owned roads in seven of the region’s counties as part of 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.
- 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:
  - Freedom Road Upgrade Project (Beaver County)
  - Laurel Valley Transportation Improvements Project (Westmoreland County)
  - I-79 Feasibility Study (Allegheny County)
  - Route 30 Improvements - Route 48 to Irwin (Allegheny and Westmoreland counties)
  - Salina Bridge Replacement Study (Westmoreland and Armstrong counties)
- 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. In the 2015-2016 Program Year, SPC obtained Tableau software to provide a means for staff to develop interactive dashboards to enhance 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 for the TIP and long-range plan were conducted for adoption of the regional long-range transportation plan.
- In 2016 SPC acquired the REMI TranSight model as an upgrade to the PI+ model that had been used for the regional population and employment forecasts. The TranSight model accepts input of travel model outputs to facilitate the assessment of the economic impacts of major regional transportation and development projects. This newly acquired capability will be used in assessing the performance of the region's long-range transportation plan.
• SPC’s Cycle 10 forecast of population, employment and households, the updated 2040 Long Range Forecast, was developed in the 2014-2015 Program Year and adopted with SPC’s Mapping the Future: The Southwestern PA Plan in June 2015.

• In the 2015-2016 Program Year, SPC upgraded its license for the REMI PI+ model to 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 was adjusted so that each of SPC’s individual member counties and the City of Pittsburgh would be separate REMI regions to allow for more detailed and flexible scenario building.
GEOGRAPHIC INFORMATION SYSTEMS (GIS)

ESTIMATED COST:

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TASK DESCRIPTIONS

Geographic Information Systems provide the backbone for geospatial data and analysis that is essential for regional planning. Through both formal and informal data sharing and collaboration with regional planning partners and other stakeholders, SPC continuously enhances its GIS data sets and capabilities.

1. Regional GIS Maintenance & Enhancement

   **Objective:** SPC provides a regional clearinghouse of accurate geospatial data representing land use, transportation infrastructure, environmental conditions, demographics, housing, and employment categories that provide support to SPC’s departments, member governments, associated agencies, and planning partners. Using technology to enhance existing GIS applications and introduce new applications results in improved quality and quantity of work across all of SPC’s work programs.

   **Planning Activities:**
   - Maintain and enhance a wide collection of GIS data and imagery representing built infrastructure, land cover/land use, topography, hydrology, geology, 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 various departments within SPC to assist with UPWP activities, 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, bicycle/pedestrian 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 accurate 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.

• Expand current GIS databases for river terminals, trucking, freight facilities, and railroad corridors to support SPC’s Freight Forum, keep SPC’s Regional Freight Map current, and assist in the development of regional and localized freight plans.

• Expand existing GIS databases for transit service, bicycle and pedestrian trails, and parking facilities to provide analysis for intermodal and multimodal relationships in 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 staffs by maintaining databases of functionally classified highways, adjusted urbanized areas, fixed transit routes and stops, traffic signals, and park-and-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 coverages of land cover/land use data 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 modeling and forecasting activities.

• Incorporate data from PennDOT’s Roadway Management System, Bridge Management System, Multimodal 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, assist staff in conducting Road Safety Audits, and support regional Traffic Incident Management.

• Provide prints, 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 and to maximize data analysis.
• 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 outreach related to UPWP programs, satisfy outside requests, and distribute 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.
• Maps, graphics, data, reports, and visualization tools for use by SPC, as well as member governments, associated agencies, and other planning partners.
• Improved GIS applications to aid in the evaluation of transportation projects to increase the efficiency of SPC transportation 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 on SPC’s website.
• Promotional and support materials for SPC’s outreach and public participation processes.
• Briefing materials for the Commission, planning partners and the public.
REGIONAL AERIAL PHOTOGRAPHY

ESTIMATED COST:

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TASK DESCRIPTIONS

SPC is in the third year of a job to update aerial photography coverage of the region as an element of the regional Geographic Information System. The only remaining work is a quality control/acceptance review of work products produced by the contractor in earlier program years.

Work Products Being Reviewed:

- High quality digital aerial imagery and elevation data for the SPC region.
- Highly accurate GIS data through the integration of imagery to rectify, update, and publish GIS data to support plans, programs and projects.
- Accurate data representing transportation infrastructure, hydrology, land use / land cover, environmental features and trip generators in GIS.
- Updated land cover inventory by municipality and traffic analysis zone to support the region’s transportation and economic modeling and forecasting programs.
- Accurate and current base maps for in-house and field use that support SPC’s UPWP programs for traffic operations, road safety audits, traffic signal projects, congestion management, bicycle and pedestrian, transit oriented development, and HPMS.
**REGIONAL DATA AND GRAPHICS CLEARINGHOUSE**

**ESTIMATED COST:**

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**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 volumes, and datasets like NPMRDS, INRIX, and AirSage 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 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 PennDOT’s long range plan and comprehensive freight movement plan by providing data and analysis, as needed.
   - Support implementation of *Mapping the Future* by providing data and analysis, as needed, especially with regard to plan performance measures and targets.
   - Increase awareness among in-house staff and outside agencies regarding data resources available through SPC.
   - Respond to data requests from in-house staff and from outside agencies and individuals.
   - Continue to enhance data presentation capabilities on SPC’s website to allow interactive choice by users for selecting the type and geography of tables/graphs/maps to display.
during their website visit. Develop and maintain data analysis capability for SPC’s website.

- 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, such as annual American Community Survey (ACS) data releases and 2010 Decennial 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, as needed.
- Continue to expand capacity for analysis of datasets such as NPMRDS, INRIX, and AirSage.
- 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:**

- SPC regional data library and updated catalog of data resources.
- Enhanced SPC website.
- Standard and custom data products for use by staff and other organizations and individuals.
- Documentation of data collection, management and dissemination activities and procedures.
- Various Census data products.
- 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.
- Analysis of datasets such as NPMRDS, INRIX, and AirSage.
- Documentation of the analysis of freight flows in the region.
- Briefing materials for the Commission, planning partners and the public.
AIR QUALITY MODELING

ESTIMATED COST:

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TASK DESCRIPTIONS

The Clean Air Act (CAA) requires that, in areas experiencing air quality problems, transportation planning must be consistent with air quality goals. This is determined through the transportation “conformity” process. Conformity applies to federally-funded transportation plans and programs 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 are known as "nonattainment areas" or "maintenance areas," respectively. The region’s overall sustainability, livability and resiliency is affected by our ability to forecast air quality.

1. Air Quality Models

Objective: SPC is required to assess the region’s LRP and TIP to ensure that they conform to the Clean Air Act. SPC also uses air quality modeling to support various tasks in the UPWP, such as project evaluation for the Congestion Mitigation & Air Quality (CMAQ) funding program.

Planning Activities:
- As part of the regional transportation air quality conformity process, review scope and design concept 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/consultation on transportation air quality conformity assessments and related tasks.
- 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 the City of Pittsburgh on the maintenance and enhancement of their Climate Action Plan.
- Develop and maintain analysis and modeling processes, tied to EPA’s MOVES model, to estimate current and future level 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.
- 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 modeling, and other air quality planning topics.

**Work Products:**

- Conformity reports for new and/or amended TIP and LRP for both the 8-hour ozone standard and the PM2.5 air quality standards.
- Documentation of technical procedures, public review, and interagency coordination in the conformity process.
- Emissions modeling procedures.
- Documentation of changes to SPC’s Air Quality Planning process to address new federal and state directives from climate change legislation and related regulations and policy directives.
- Documentation of activity and analysis conducted in support of other UPWP tasks, or in support of initiatives undertaken by SPC member agencies and planning partners.
- CMAQ candidate project air quality impact analyses.
- Briefing materials for the Commission, planning partners and the public.
LAND USE MODELS AND REGIONAL FORECASTS

ESTIMATED COST:

<table>
<thead>
<tr>
<th></th>
<th>2016-2017</th>
<th>2017-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Highway Administration</td>
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<td>Federal Transit Administration</td>
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<td>PennDOT</td>
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<td>SPC</td>
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<td><strong>TOTAL:</strong></td>
<td><strong>$239,500</strong></td>
<td><strong>$244,500</strong></td>
</tr>
</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 traffic analysis zones in the 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 long range plan 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, as needed, 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.
• 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.
• 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.
• 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, as needed.
• Briefing materials for the Commission, planning partners and the public.
TRANSPORTATION MODELS

ESTIMATED COST:

<table>
<thead>
<tr>
<th></th>
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<th>2017-2018</th>
</tr>
</thead>
<tbody>
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<td>Federal Transit Admin.</td>
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<td>SPC</td>
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<td><strong>$286,200</strong></td>
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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, 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 TP+ 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:** SPC’s travel demand models provide estimates of current and future travel demand in the region. Travel on individual transportation facilities can be simulated and stratified by mode, by purpose, and by time of day.

**Planning Activities:**

- Maintain and enhance regional travel demand modeling capability.
- 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.
- Develop extensions/enhancements to current modeling process as required for ongoing modeling workload (traffic 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/re-calibration efforts.

Work Products:
• Continued, and improved, in-house travel modeling capability to support other SPC work tasks.
• Documentation of activity to maintain and extend current modeling capability.
• Documentation of efforts conducted to support assessment of economic impacts of major transportation and development projects.
• Operational hardware and software for travel demand modeling and a staff trained in its use.
• Current, up to date 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.
TRAFFIC FORECASTS AND NEEDS REPORTS

ESTIMATED COST:

<table>
<thead>
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<tbody>
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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 in order to identify appropriate mitigation measures and design criteria.

1. Traffic Forecasts

**Objective:** A needs analysis is one of the critical first steps in the development of any transportation project. Providing accurate traffic forecasts is essential for developing appropriately scoped projects that will 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 traffic 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 traffic growth, 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 and individual consultant teams in their preparation of reports and design documents.
- Detailed traffic forecasts.
- Briefing materials for the Commission, planning partners and the public.
HIGHWAY PERFORMANCE MONITORING SYSTEM (HPMS)

ESTIMATED COST (Traffic Count Program):

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ESTIMATED COST (Inventory):

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<tr>
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</thead>
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<tr>
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ESTIMATED COST (Lawrence County):

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</table>

TASK DESCRIPTIONS

The Highway Performance Monitoring System (HPMS) is a national-level highway information system that includes data on the extent, condition, performance, use and operating characteristics of the nation's highways. HPMS was developed as a continuing database to provide Congress with regularly updated information on the state of the highway system. 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. The HPMS also supports data-driven processes within FHWA, PennDOT, MPOs, and other transportation agencies.

1. HPMS Inventory

   **Objective:** In collaboration with PennDOT and in accordance with the HPMS Field Manual specifications, SPC verifies and updates roadway inventory and performance measures on approximately 560 sample sections throughout the region. 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 on the sample sections to be inventoried each year.
   - Compare new sample locations to SPC’s in-house database to highlight any issues regarding the data or sample locations. Report any conflicts to PennDOT.
• Group and map sample sites in order to efficiently visit all the given locations within the allotted timeframe.
• Oversee separate HPMS Inventory effort in Lawrence County and integrate their data into SPC’s database.
• Participate in PennDOT’s data collection quality review process.
• Maintain and replace, when needed, 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 each given year.
• Coordinate with PennDOT Districts the verification of submitted data.

Work Products:
• Regional HPMS Database.
• HPMS data transfers to PennDOT Central Office.
• Briefing materials for the Commission, planning partners and the public.

2. HPMS Traffic Monitoring

Objective: In collaboration with PennDOT, SPC will collect up to 380 traffic counts for the Highway Performance Monitoring System. This data is essential for updating regional transportation models, conducting planning and engineering studies, and making investment decisions.

Planning Activities:
• Maintain an in-house database of HPMS traffic count sites and traffic count data.
• Coordinate with PennDOT Central Office on the sites to be counted each year.
• Review sites to identify issues that could affect the ability to complete the count 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 level of temporary staffing (i.e., interns).
• Submit completed counts by the end of the month in which they are completed.
• Maintain and replace, when needed, the traffic counting vehicle, traffic counters, traffic counting supplies, and safety equipment. (SPC currently has an inventory of 72 counters. Traffic counting supplies includes road tube, tape, nails, etc. Safety equipment includes high visibility clothing, gloves, glasses, hard hats, etc. The field vehicle used by HPMS staff is due for replacement in August 2017.)
• Attend and participate in HPMS traffic counting workshops.
• Participate in PennDOT’s annual traffic counter personnel safety review process.
• Complete all traffic counts by mid-November and have data submitted by the first week of December each year.

Work Products:
• Regional Traffic Count Database.
• Traffic count data transfers to PennDOT Central Office.
• Briefing materials for the Commission, planning partners and the public.
LOCAL ASSET MANAGEMENT (LAM)

ESTIMATED COST:

<table>
<thead>
<tr>
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<th>2016-2017</th>
<th>2017-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Highway Administration</td>
<td>$110,400</td>
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<tr>
<td>PennDOT</td>
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<td>SPC</td>
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<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>$138,000</strong></td>
<td><strong>$165,000</strong></td>
</tr>
</tbody>
</table>

TASK DESCRIPTIONS

Systems and procedures have been in place for a long time to monitor the condition and performance of transportation assets on the federal-aid and state highway systems. But in Southwestern Pennsylvania, those networks only make up about 1/3 of the highway system. County and locally-owned roads make up the other 2/3 of the system. There is not nearly as much information on the location, condition, and performance of roads, bridges, traffic signals, and other transportation assets on these local roads. In 2011, SPC and PennDOT embarked on a multiyear Local Asset Management program to gather and map data on this part of the transportation network. This task advances several regional priorities in *Mapping the Future*, including revitalization and redevelopment of the region’s existing communities, maintenance of the existing transportation system, transportation safety and security, multimodal and intermodal networks for people and goods, and sustainable and resilient infrastructure that protects and enhances public health and the environment.

1. Local Roads Data Collection

**Objective:** In collaboration with PennDOT, SPC collects data on non-liquid fuels eligible local roads to assist in program planning and needs analyses.

**Planning Activities:**

- Continue working with PennDOT and other MPOs/RPOs to establish data standards and consistent data collection procedures.
- Work with PennDOT to enhance the local roadway centerline file.
- Execute the regional data collection plan through the use of staff resources as well as SPC’S established summer intern program.
- Provide training to interns and SPC staff as needed.
- Complete weekly Quality Assurance/Quality Control checks on collected data.

**Work Products:**

- Local roads data and GIS mapping.
- Data collection standards and procedures.
- Training materials.
- Briefing materials for the Commission, planning partners and the public.
2. Local Bridge Data Collection

Objective: In collaboration with PennDOT and local municipalities, SPC collects data on locally-owned bridges and culverts less than 20’ in length to assist in program planning and needs analyses.

Planning Activities:
- Continue working with PennDOT and other MPOs/RPOs to establish data standards and consistent data collection procedures.
- Work with PennDOT Districts to identify structures that need lengths to be verified.
- Assist PennDOT in enhancing their Bridge Management System (BMS) files.
- Work with municipalities to identify structures not contained in current regional data sets, as well as identifying any structures that have been replaced since completion of the original inventory.
- Continue updating the region’s hydrology centerline file in order to better identify where structures may exist.
- Manage and maintain an in-house database of the collected structures for use by SPC departments, municipalities and other planning partners.
- Provide training to interns and SPC staff as needed.
- Attend GIS-T conference to stay up-to-date on emerging technologies in order to identify opportunities to further enhance data collection procedures and products.

Work Products:
- Bridge data and GIS mapping.
- Data collection standards and procedures.
- Training materials.
- Briefing materials for the Commission, planning partners and the public.

3. Traffic Signal Asset Management

Objective: In collaboration with PennDOT and local municipalities, SPC collects data on traffic signals in the region. This data helps support regional Transportation Operations & Safety efforts, including the Regional Traffic Signal Program.

Planning Activities:
- Continue implementation of the regional traffic signal asset management database and associated planning tools.
- Collect additional traffic signal data to fully populate the established database and GIS layer.
- Maintain an in-house database of collected signals with an online viewer to assist municipalities, PennDOT, and SPC departments.
- Provide training to interns and SPC staff as needed.

**Work Products:**
- Regional Traffic Signal Asset Management Database.
- Training materials.
- Briefing materials for the Commission, planning partners and the public.

### 4. Local Pedestrian & Bicycle Infrastructure

**Objective:** SPC collects data on the regional pedestrian and bicycle network including sidewalks, trails, public stairs, and biking infrastructure to support local and regional efforts in active transportation planning and to support safety programs.

**Planning Activities:**
- Establish and maintain data standards and data collection procedures for pedestrian and bicycle infrastructure.
- Continue to work with the City of Pittsburgh and Allegheny County on creating a complete data set for the existing pedestrian network.
- Coordinate with trail groups and other local organizations to identify current and future non-motorized transportation corridors.
- Identify methods for continuing the development of these datasets and expanding them to other parts of the region.
- Provide training to interns and SPC staff as needed.

**Work Products:**
- Bicycle and pedestrian data and GIS mapping.
- Data collection standards and procedures.
- Training materials.
- Briefing materials for the Commission, planning partners and the public.

### 5. Asset Management Tools & Technology Transfer

**Objective:** Since embarking on this LAM effort in 2011, the focus has been on data collection. As data collection efforts, particularly on local roads and bridges, are substantially completed, the focus will need to shift. SPC and PennDOT need to develop tools and processes that can be used to turn this data into information that can inform decision-making and prioritization.

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*Southwestern Pennsylvania Commission*

Page 105
at municipal, county, regional and state levels. In addition, processes and tools need to be developed to ensure the long term maintenance and sustainability of these data sets.

Planning Activities:
- Develop asset management tools for analyzing and presenting local data.
- Establish a framework for disseminating asset management data, information, and analysis tools to municipalities so it can inform their planning and investment decision-making.
- Establish a standardized process to provide local municipalities with a mechanism to help keep local asset data current.

Work Products:
- Local asset management data analysis tools.
- Outreach and education materials.
- Strategic program framework.
- Briefing materials for the Commission, planning partners and the public.
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 the planning work they do. 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 Geographic Information Systems, data collection, and modeling. Examples include:

- Implementation of a multiyear strategic plan to enhance SPC’s land use, economic and travel demand models.
- Completion of updated aerial imagery and spatial data showing the change in land cover across 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 to show land use changes and to 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.
- A complete and comprehensive collection of GIS data 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.
- 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.
- Expansion of existing databases and geospatial layers for traffic counts, traffic signals, and transit facilities to reflect changing conditions and for benchmarking in project evaluation programs.
- Enhancement of the regional park-n-ride database including implementation of new techniques for collecting utilization statistics and origin-destination data.
- Broader representation of environmental features and conditions to assist in linking transportation planning and the National Environmental Policy Act.
- 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 performance measure tracking.

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 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 Mapping the Future’s Regional Vision, policy goals and regional 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 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.
OUTREACH & COORDINATION – RESULTS FROM CURRENT PROGRAM

Mapping the Future: The Southwestern PA Plan was developed and adopted on June 29, 2015, as the region’s long-range transportation and development plan. In developing the long range plan, SPC offered numerous opportunities for public participation, beginning with early input as part of the 2015-2018 Transportation Improvement Program (TIP) update from Spring 2013 to Summer 2014. As the TIP represents the first stage of the long range plan, public input into the TIP is relevant to the long range plan as well. 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.

After the TIP was adopted in the Summer of 2014, SPC launched the next phase of public participation as part of Mapping the Future. For initial input, SPC hosted four regional forums to review available data and discuss potential performance measures related to transportation and economic development. The forums were attended by SPC’s Public Participation Panel members and their invitees in order to gain input on the initial draft performance measures.

Those in attendance were asked to assist SPC in the selection and focus of draft performance measures for possible inclusion in the plan. From a selection group of 90 measures in transportation and economic development categories, SPC used an electronic voting system in which participants could prioritize their individual selections, and also ask questions of SPC staff and planning partners who attended the events. Nearly 100 citizens turned out for these events, and their questions and feedback were vital to the next step in the process.

Based on feedback from these regional meetings, SPC then developed an online Performance Measures Survey to obtain broader input from the region to develop a draft set of performance measures for inclusion in Mapping the Future: The Southwestern PA Plan. The survey was organized into three sections: Communities; People, Jobs & Economy; and, Mobility & Infrastructure.

SPC released a follow-up community survey in February 2015 on Investment Priorities. The survey asked respondents for their priorities on strategies and how they would spend money on transportation in the region. More than 1,000 surveys were completed throughout the SPC region. More details about public input and the online surveys are presented in later sections.

Review and comment on the draft plan was solicited in a 30-day public review process, in accordance with federal requirements. During this review process from May 13, 2015 through June 12, 2015, public comment was accepted at ten Public Participation Panel meetings and via mail, email or fax at any time during the public comment period.

The following is a sample of the range of public outreach, administrative support, and coordination that was provided across all UPWP tasks in the 2014-2016 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 2016-2018 UPWP.
• Development of a variety of draft and final documents including Mapping the Future: The Southwestern PA Plan; Environmental Justice Benefits and Burdens Assessment for Mapping the Future; Air Quality Conformity Determination for the Pittsburgh Transportation Management Area; and, Southwestern Pennsylvania Public Transit-Human Services Coordinated Transportation Plan Update.
• Active engagement and support for ten Public Participation Panels (PPPs), including meetings and official public comment periods associated with Mapping the Future and the 2017-2020 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.
• A comprehensive website (www.spcregion.org) and multiple ancillary websites focused on specific programs and initiatives.
• Development of a new instructional video and webinar on PPP participation opportunities, the Public Participation Plan, the TIP and Mapping the Future.
• Implementation of a new 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.
• Participation in a statewide Peer Exchange on Public Involvement.
• In 2014, SPC focused on expanding training opportunities in the more rural communities in our region, holding 7 courses in 4 counties. A total of 150 participants took advantage of the LTAP program, including several first-time attendees. Course offerings covered a variety of topics that helped municipal employees do their jobs more safely and efficiently.
• In 2015, SPC held 9 courses in 6 counties. A total of 145 participants took advantage of the LTAP program. Course offerings covered a variety of practical topics such as roadway drainage and work zone traffic control. SPC continues to focus on enhancing coordination between our local governments and PSATS in an effort to grow the number and scope of course offerings.
UPWP ADMINISTRATION

ESTIMATED COST:

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TASK DESCRIPTIONS

Effective management of projects included in the UPWP is necessary for ensuring that planning funds are used efficiently and for their intended purpose. The following activities will be undertaken by SPC to ensure that UPWP projects remain on schedule, within budget, and that they meet the rules and regulations established by USDOT, PennDOT, and other funding and regulatory agencies.

1. 2016-2018 UPWP Management

Objective: SPC continues to monitor the results of on-going MAP-21 rule-making and emerging guidance from the 2015 FAST Act in advancing regional transportation planning. SPC will work cooperatively with its partners to adapt to changes that result from these efforts, as well as advance specific recommendations from the 2013 Federal Certification Review for the Pittsburgh Metropolitan Area, during delivery of this Work Program.

Planning Activities:

- Meet with Commission members, PennDOT and USDOT representatives to review current UPWP progress and to discuss tasks to be undertaken in the future work programs.
- Perform maintenance activities including processing UPWP amendments, budget revisions and staffing adjustments as needed.
- Coordinate transportation planning activities that respond to current and emerging federal and state requirements and local objectives.
- Submit progress reports and invoices to PennDOT no later than 15 days following the reporting period.
- Continue Environmental Justice and public participation activities, including implementation of the Title VI/EJ Compliance Plan.
- Conduct Requests for Proposals (RFPs) and other procurements to obtain outside consultant support, as needed, to deliver UPWP projects. SPC anticipates issuing an RFP to rebid its open end contracts during this UPWP period.
- Ensure that the 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.
• Prepare for the next Certification Review of the Pittsburgh Metropolitan Area by FHWA and FTA (due Summer 2017) including materials for the associated Desk Review of Planning Products and Processes.

Work Products:
• Completion and final closeout documents associated with the 2014-2016 UPWP.
• Modifications and adjustments to the 2016-2018 UPWP document, as needed.
• Progress reports.
• Documentation of Environmental Justice/Title VI, public participation, DBE and other required processes and activities.
• Outside consultant contracts.

2. 2018-2020 UPWP Development

Objective: As indicated above, SPC will continue to monitor the results of on-going MAP-21 rule-making and emerging guidance from the 2015 FAST Act in advancing regional transportation planning. SPC will work cooperatively with its partners to adapt to changes that result from these efforts, as well as recommendations from Federal Certification Reviews for the Pittsburgh Metropolitan Area, during the development of future Work Programs.

Planning Activities:
• Design the 2018-2020 UPWP consistent with the PennDOT Central Office Annual Planning Priorities letter that also reflects FHWA Pennsylvania Division Guidance and Priorities and FTA Planning Emphasis Areas.
• With input from PennDOT, USDOT and SPC’s planning partners, continue to advance specific recommendations from previous Certification Reviews of the Pittsburgh Metropolitan Area.
• Include funding requests for any special supplemental Work Program tasks in 2018-2020 UPWP.
• Anticipate continued participation in statewide work groups such as the UPWP Funding Formula/Distribution Work Group.
• Continue to integrate performance based planning principles and best practices into the development of the MPO Work Program.
• 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 planning, and other planning functions.

Work Products:
• Final 2018-2020 UPWP.
GENERAL SUPPORT SERVICES

ESTIMATED COST:

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TASK DESCRIPTIONS

Administrative/secretarial support is essential in delivering all projects in the UPWP and in advancing federal, state, and regional (Commission) planning priorities.

1. Administrative Support

Objective: The following activities are designed to support and sustain planning functions throughout the agency in its role as the Metropolitan Planning Organization for Southwestern Pennsylvania.

Planning Activities:

- Produce draft and final copies 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
- Provide basic office operations services, such as:
  - Telephone contacts, assistance to callers
  - Various committee/meeting support activities (e.g., nametags, registration, lunches)
  - Copies and report production support
  - Sending faxes and routing incoming faxes
  - Mailing list database maintenance
  - Preparation of mass mailings and other mailings
  - Conference room reservations and preparation
  - Conference calls setup
  - Handling incoming and outgoing correspondence, logging and filing
  - Service to office visitors, directing them to appropriate staff, response to various requests
  - Staff travel arrangements and meeting/conference registrations
- Graphic design/support for newsletters, promotional materials, and reports.
- Support to individual county Public Participation Panels.
- 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 meeting.
Work Products:
- Meeting notices and meeting minutes.
- Presentations, reports, graphics materials and other documents.
- Contacts databases.
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 (TAP) Program – 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 2019-2022 TIP 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 2017-2020 TIP, and in development of the fiscally-constrained 2019-2022 TIP.
  - Mapping the Future – 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 2016-2018 UPWP projects as needed, and assist in design of 2018-2020 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 2013 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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<th>2017-2018</th>
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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 Implementation**

   **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:**
   - 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.
     - Continually develop effective public meeting materials utilizing visualization techniques to inform and engage the public about transportation planning and funding issues.
   - 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 MPO 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 citizens, 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) to disseminate information on various
projects, programs and initiatives.
• Update the Public Participation Plan as needed.
Work Products:
- 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.

2. Public Participation Panels

Objective: SPC maintains Public Participation Panels (PPPs) for each county in its transportation planning region. Citizens do not need to travel outside their own county to address SPC, because through the PPPs, SPC comes to them. PPP 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. PPP meetings are open to the public and are scheduled on an as-needed basis.

Planning Activities:
- Provide administrative support for Public Participation Panels.
- Organize and promote public meetings hosted by PPPs to enhance understanding of the transportation planning and programming process and to obtain feedback on plans, programs and projects.

Work Products:
- PPP member orientation materials.
- PPP membership and attendance records.
- PPP meetings and associated materials.
- Briefing materials for the Commission, planning partners and the public.
LOCAL TECHNICAL ASSISTANCE PROGRAM (LTAP)

ESTIMATED COST:

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TASK DESCRIPTIONS

The PennDOT Local Technical Assistance Program (LTAP) is part of a national initiative to transfer transportation technology through training, technical assistance, and other customer services to municipal elected officials and their staffs. LTAP provides 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 will assist PennDOT with facilitating LTAP training during the 2016-2018 fiscal years.

1. LTAP Services

   Objective: The program markets and promotes training opportunities through a partnership wherein SPC serves 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.

   Planning Activities:

   - Identify Regional Training Needs
     - Develop a priority training list that identifies training needs within the region based on historical data, knowledge of the region, input from PennDOT municipal services representatives, and outreach to municipalities.
     - Use the priority training list to develop an annual training calendar and work with PennDOT to schedule training dates.
     - Establish training course locations and coordinate logistical needs with the PennDOT LTAP Project Manager. Responsibilities include, but are not limited to, classroom facilities, course registration, room set-up, food, etc.
     - Identify regional municipal issues and provide feedback to PennDOT’s LTAP Project Manager for consideration.
     - Develop ideas for potential new training courses.
   - Program Marketing and Outreach
     - In conjunction with PennDOT’s LTAP Project Manager, develop a plan to expand the reach of LTAP training and technical assistance offerings in the region. Examples of marketing activities may include, but are not 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’s 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’s Project Manager, develop a plan for targeted LTAP outreach in the region, such as equipment shows, Advisory Committee, County Conventions, etc. Outreach activities should be coordinated with PennDOT’s LTAP Project Manager and Municipal Services Representatives to avoid duplication in outreach efforts.

- **Administration and Reporting**
  - Participate in scheduled conference calls with PennDOT’s LTAP 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’s Project Manager.
  - Develop and submit annual reports that detail the process used to market LTAP in the region no later than July 31, 2017, and July 31, 2018. The annual report should include an evaluation of training, marketing, and outreach activities, and recommendations for future activities with LTAP in the region.

- Explore opportunities to use the LTAP program as an outreach mechanism to municipalities on local asset management and other regional initiatives.

**Work Products:**
- Training priorities list and annual training calendar.
- LTAP training courses and associated materials.
- Outreach and marketing materials.
- Quarterly progress reports.
- Annual reports.
- Conference calls and other regular communications.
- Briefing materials for the Commission, planning partners and the public.
OUTREACH & COORDINATION – MULTI-YEAR IMPLICATIONS

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.

One collaboration opportunity that SPC is interested in exploring is the potential to use the Local Technical Assistance Program (LTAP) as an outreach means for engaging municipalities in the Local Asset Management (LAM) program. Since its inception, then LAM program has been focused on compiling inventories of locally-owned roads, bridges, culverts, traffic signals, and other physical assets. This effort could provide ways for local, county and regional planning agencies to use this information for improved planning and project implementation. Also, tying local municipalities into the LAM program could provide opportunities to establish processes and tools for keeping the asset data updated over time. LTAP may be a mechanism for connecting local municipalities to the LAM program.
SECTION III

UPWP FUNDING SUMMARIES
## CONTRACT SUMMARY

### FEDERAL HIGHWAY ADMINISTRATION
- FHWA PL - MPO Base Program: 7,900,000
- FHWA PL - Supplemental Planning Program: 72,000 (Local Technical Assistance Program, Year One and Year Two)
- FHWA Total: $7,972,000

### FEDERAL TRANSIT ADMINISTRATION
- FTA PL - MPO Base Program: 1,900,000
- FTA PL - Other Supplemental Funding: 175,000 (Active Transportation Plan, Transit Development Plans (Year One only))
- FTA Total: $2,075,000

### PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
- PENNDOT MLF - Match to MPO Base Planning Program: 1,140,000
- PENNDOT FE - Traffic Forecasts and Needs Reports: 234,000
- PennDOT Total: $1,374,000

### SOUTHWESTERN PENNSYLVANIA COMMISSION
- Match to FHWA Base Planning Program: 440,734
- Match to FTA Base Planning Program: 279,690
- Match to Supplemental Planning Program: 9,000 (Local Technical Assistance Program)
- SPC Total: $729,424

### OTHER LOCAL MATCH
- SPC Match to FHWA PL: 418,000
- SPC Match to FTA PL: 150,750
- Other SPC Match: 35,000
- Member Planning Agency Participation: 106,690
- HPMS - Lawrence County: 10,000
- Port Authority Planning Program: 92,000
- Transit Development Plans: 25,000
- LTAP Promotion and Evaluation: 9,000
- Other Local Match Total: 846,440

### SPC 2016-2018 UPWP TOTAL (TWO YEARS)
- SPC in-kind: Lawrence County (FHWA), SPC Members (FHWA), Port Authority (FTA), Transit Partners, Toll Credits
- SPC 2016-2018 UPWP Total: $12,996,864

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_Southwestern Pennsylvania Commission_  
Page 131
## Unified Planning Work Program
### Fiscal Years 2016-2018

**Exhibit Three**

### PROJECT FUNDING TABLE

<table>
<thead>
<tr>
<th>Project Category</th>
<th>SPC Budget</th>
<th>Other</th>
<th>UPWP Project Funding</th>
<th>AGENCY PARTICIPATION</th>
<th>Other Project Funding</th>
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<td>261,300</td>
<td>209,040</td>
<td>15,195</td>
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<tr>
<td>3b) Transportation Safety Planning</td>
<td>256,600</td>
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<td>208,880</td>
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<td>3c) Intelligent Transportation Systems Planning and Implementat</td>
<td>129,200</td>
<td>129,200</td>
<td>103,360</td>
<td>15,639</td>
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<tr>
<td>3d) Regional Traffic Signal Program</td>
<td>143,500</td>
<td>143,500</td>
<td>114,800</td>
<td>14,035</td>
<td>4,767</td>
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<td>IV. DATA SYSTEMS and MODELING</td>
<td>2,082,200</td>
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<td>4a) Geographic Information Systems</td>
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<td>343,700</td>
<td>219,969</td>
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<td>4b) Regional Data and Graphics Clearinghouse</td>
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<td>208,800</td>
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<tr>
<td>4c) Air Quality Modeling</td>
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<td>265,000</td>
<td>212,000</td>
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<td>4d) Land Use Models and Regional Forecasts</td>
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<td>4e) Transportation Models</td>
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<td>193,169</td>
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<td>4f) Traffic Forecasts and Needs Reports</td>
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<td>4g) HPMS - Traffic Count Program</td>
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<td>294,400</td>
<td>165,754</td>
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<td>4h) HPMS - Inventory</td>
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<td>97,400</td>
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<td>4i) HPMS - Lawrence County</td>
<td>Lawrence County</td>
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<td>4j) Local Asset Management</td>
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<td>V. OUTREACH AND COORDINATION</td>
<td>675,835</td>
<td>246,723</td>
<td>942,958</td>
<td>794,946</td>
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<td>5a) UPWP Administration</td>
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<tr>
<td>5b) General Support Services</td>
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<td>328,835</td>
<td>263,067</td>
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<td>5c) Member Planning Agency Participation</td>
<td>Member Agencies</td>
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<td>9,000</td>
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</table>

### TOTAL FOR 2016-2018 UPWP YEAR TWO | 5,851,235 | 521,723 | 6,372,958 | 3,986,000 | 950,000 | 687,000 | 361,613 | 386,345 |

**FOOTNOTES:**

1. The local match includes $55,000 in-kind support provided by SPC.
2. The local match includes $55,000 in-kind support provided by SPC.
3. The local match includes $55,000 in-kind support provided by SPC.
4. The local match includes $10,000 in-kind support provided by SPC.
5. The Port Authority Planning Program is provided by the Port Authority of Allegheny County.
6. The local match includes $12,000 in-kind support provided by SPC.
7. The local match includes $18,000 in-kind support provided by SPC.
8. The local match includes $5,000 in-kind support provided by SPC.
9. The local match includes $10,000 in-kind support provided by SPC.
10. The local match includes $15,000 in-kind support provided by SPC.
11. PENNDOT PE Funds (100%) $117,000 total.
12. The 10% local match is provided by Lawrence County.
13. The 20% local match provided by the SPC Member Counties and the City of Pittsburgh.
14. The local match includes $20,000 in-kind support provided by SPC.
15. 2017-2018 Supplemental Planning Funds (LTAP). SPC 20% local match in Year One. Toll Credit Match in Year Two.

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