UNIFIED PLANNING WORK PROGRAM
FY 2019
January 1, 2019 – December 31, 2019

The preparation of this report was financed in part through a technical studies grant from the Federal Transit Administration and metropolitan planning funds from the Federal Highway Administration, administered by the Kansas Department of Transportation and the Missouri Department of Transportation. The opinions, findings and conclusions expressed in this publication are those of the authors and not necessarily those of the Missouri Highways and Transportation Commission, the Kansas Secretary of Transportation, the Federal Highway Administration or the Federal Transit Administration.

Approved
November 27, 2018
Amended
July 23, 2019
# FY 2019 Unified Planning Work Program
## Mid-America Regional Council

**Table of Contents**

**Introduction** ..................................................................................................................................................... 1

**Transportation Planning Process** ................................................................................................................ 2

**Major Transportation Planning Initiatives** ..................................................................................................... 11

1.0 Program Support and Administration ........................................................................................................... 12

1.1 Transportation Administration – Lead Agency: MARC ............................................................................ 12

1.2 Public Participation – Lead Agency: MARC ............................................................................................. 13

2.0 Long Range Planning ................................................................................................................................. 14

2.1 Land Use, Demographic and Comprehensive Planning – Lead Agency: MARC ......................................... 14

2.2 Metropolitan Transportation Plan – Lead Agency: MARC ...................................................................... 17

2.3 Measuring Multimodal Connectivity Pilot Project – Lead Agency: MARC ............................................... 18

3.0 System Management ..................................................................................................................................... 19

3.1 Modeling/Forecasting Activities – Lead Agency: MARC .......................................................................... 19

3.2 Air Quality Planning – Lead Agency: MARC ............................................................................................ 21

3.3 Active Transportation Planning – Lead Agency: MARC ............................................................................ 23

3.4 Transportation Technology Planning and Integration – Lead Agency: MARC ........................................ 25

3.5 Transportation Safety Planning – Lead Agency: MARC ........................................................................... 25

3.6 Congestion Management Process – Lead Agency: MARC ....................................................................... 26

3.7 Transportation System Operations and Management Planning – Lead Agency: MARC ....................... 27

3.8 Regional Household Travel Survey – Lead Agency: MARC ...................................................................... 28

3.9 Transportation Performance Measurement and Target Setting – Lead Agencies: KDOT, MoDOT, KCATA, JCT, UGT, IndeBus, KCMA, MARC ............................................................................................................. 28

4.0 Programming ..................................................................................................................................... 29

4.1 Transportation Improvement Program – Lead Agency: MARC ............................................................... 29

5.0 Plans and Studies ................................................................................................................................. 30

5.1 Transit/Paratransit Planning and Coordination – Lead Agency: MARC ...................................................... 30

5.2 KCATA Short–Range Transportation Planning – Lead Agency: KCATA .................................................. 31

5.3 KCATA Long–Range Transit and Capital Planning – Lead Agency: KCATA ........................................ 32

5.4 Goods Movement/Freight Planning – Lead Agency: MARC .................................................................... 33

5.5 Corridor Studies – Lead Agency: MARC .................................................................................................. 34

5.6 Environmental Assessment (EA) for U.S. 169 Corridor from I-70 and I-35 to MO 9, Including the Buck O’Neil Bridge over the Missouri River – Lead Agency: MoDOT ............................................................... 35

5.7 Aviation Planning and Coordination – Lead Agency: MARC .................................................................... 36

5.8 MoDOT Traffic Studies – Lead Agency: MoDOT ...................................................................................... 36

5.9 Kansas City Outer Loop Toll Feasibility Study – Lead Agency: KDOT ........................................................... 37
INTRODUCTION

As the designated Metropolitan Planning Organization (MPO) for the Kansas City region, the Mid-America Regional Council (MARC) is responsible under Section 134 of Title 23, United States Code, for carrying out a continuing and comprehensive transportation planning process in cooperation with the States of Kansas and Missouri and the region’s public transportation operators. The Fixing America’s Surface Transportation Act (FAST Act) is the most recent law establishing federal transportation policy and funding authorizations. Federal regulations implementing transportation policy (23 CFR §450.308) require that:

“(b) Metropolitan transportation planning activities performed with funds provided under title 23 U.S.C. and title 49 U.S.C. Chapter 53 shall be documented in a unified planning work program (UPWP)...

(c) ...each MPO, in cooperation with the State(s) and public transportation operator(s) shall develop a UPWP that includes a discussion of the planning priorities facing the MPA [metropolitan planning area]. The UPWP shall identify work proposed for the next one- or two-year period by major activity and task (including activities that address the planning factors in §450.306(a)), in sufficient detail to indicate who (e.g., MPO, State, public transportation operator, local government, or consultant) will perform the work, the schedule for completing the work, the resulting products, the proposed funding by activity/task, and a summary of the total amounts and sources of Federal and matching funds.”

As its name suggests, the UPWP promotes a unified regional approach to transportation planning in order to achieve regional goals and objectives. The UPWP performs three distinct functions: (1) it describes the transportation planning activities MARC and other agencies propose to undertake during 2019 to address regional issues and priorities; (2) it serves to document the proposed expenditures of federal, state and local funds in support of applications for various planning grants; and (3) it provides a management tool for MARC and the funding agencies in scheduling major transportation planning activities, milestones and products. As an example, under the Kansas City region’s current air quality status, MARC updates the Metropolitan Transportation Plan on a five-year cycle. The first two years of the cycle focus on follow-up activities identified in the previous plan, updating databases on travel behavior and enhancing technical tools to set the stage for the next update. The third year of the cycle focuses on the development of a policy framework and policy direction for the plan and preparation of demographic and revenue forecasts for the plan period. The fourth and fifth years focus on development of the plan components, including modal elements, project listings, financial capacity analyses, environmental justice analyses, and air quality analyses, and concludes with final public review and agency adoption of the updated plan (these items were the focus for 2019 and 2020). Some elements of public outreach and engagement and performance monitoring will be part of each year’s activities.

The FY 2019 UPWP has been developed by MARC, with input from local governments, area transit agencies, the Missouri Department of Transportation (MoDOT), the Kansas Department of Transportation (KDOT), the Federal Transit Administration (FTA), and the Federal Highway Administration (FHWA). The document is organized into specific work elements, for which objectives, work activities, products, completion dates and funding sources are identified as appropriate. The 2019 UPWP has been developed in accordance with the Memorandum of Understanding adopted in 2013 and
updated in 2018 to identify roles and responsibilities of MARC as the MPO, the Kansas and Missouri Departments of Transportation, the Kansas City Area Transportation Authority, the City of Independence, Johnson County Transit, Unified Government Transit and the Kansas City Streetcar Authority in the metropolitan planning process for the Kansas City region.

TRANSPORTATION PLANNING PROCESS

The Mid-America Regional Council (MARC) began operations as a metropolitan council of governments on January 1, 1972 as a result of a merger between the Mid-America Council of Governments and the Metropolitan Planning Commission. In 1974, the governors of Kansas and Missouri officially designated MARC as the Metropolitan Planning Organization for the Kansas City metropolitan area. MARC is also designated as the regional agency responsible for air quality planning under Section 174 of the Federal Clean Air Act.

The function of MARC is to provide a forum for the presentation and resolution of metropolitan problems and issues by the duly elected officials of general-purpose local governments. The types of problems and issues that are addressed by MARC typically are those that transcend established local government boundaries. Transportation systems, air quality, water and sewer systems, work force, cultural, public safety, homeland security, human service, health care, and housing needs are illustrative examples of regional questions and issues with which MARC is involved.

The MARC region consists of the entirety of nine counties: Johnson, Leavenworth, Miami and Wyandotte Counties in Kansas, and Cass, Clay, Jackson, Platte and Ray Counties in Missouri, and a small portion of Lafayette County in Missouri, encompassing a population of over 2.0 million persons. For purposes of transportation planning, MARC serves as the MPO for eight of the nine counties and a portion of Lafayette County as shown in Figure 1; MARC serves as a Regional Planning Commission under MoDOT’s Planning Framework for Ray County.

The MARC Board of Directors consists of thirty-three elected officials. The nine counties and the six largest cities within the region (Kansas City, Independence and Lee’s Summit, Missouri and Kansas City, Overland Park, and Olathe, Kansas) have direct board representation. The smaller cities are represented on the Board by their counties or by local elected officials selected at the county level.

The Kansas City region’s transportation planning process is shown conceptually in Figure 2. The process is an ongoing, evolving process involving many iterations and refinements over time. The first major step in the process is the development and adoption of the Metropolitan Transportation Plan (MTP). Contributing to the MTP are the outputs of the congestion management process, as well as other management systems and performance monitoring activities. Projections of regional land use, population and employment provide another key input to the MTP, since they determine to a large extent the future transportation needs of the region. The process also involves an extensive public engagement effort to identify community issues, concerns and priorities. MARC’s MTP is project specific (for regionally significant projects) and financially constrained.

The MTP provides the basis for development of the Transportation Improvement Program (TIP), which is a financially-constrained list of projects to be funded and implemented over the next five years. The TIP must be consistent with the MTP. After approval by MARC, the TIP is approved by the Governors, or their designees, of both Kansas and Missouri and incorporated into the statewide transportation improvement program (STIP) for each state.
The most recent update to the Metropolitan Planning Boundary was approved by the Governor of Missouri on May 14, 2015.
Figure 2 – Transportation Planning Process

TRANSPORTATION SYSTEM PERFORMANCE

MANAGEMENT SYSTEMS

STRATEGIES

REGIONAL LONG RANGE TRANSPORTATION PLAN

STATEWIDE LONG RANGE TRANSPORTATION PLAN

PUBLIC INPUT

REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM

STATE TRANSPORTATION IMPROVEMENT PROGRAM

PROJECT IMPLEMENTATION

POPULATION EMPLOYMENT FORECAST

TRAVEL DEMAND FORECAST
The region’s current air quality status does not require the MTP and TIP to conform to a state implementation plan (SIP) for Air Quality. However, as standards become more stringent, it is possible that Kansas City will be designated as nonattainment and significant work is needed to prepare for such a designation. In order to perform required conformity analysis on the MTP and TIP, the newest emissions model (currently MOVES2015) requires ongoing maintenance and data collection to keep all inputs current and relevant. All criteria pollutant ambient air quality standards are required to be reviewed every five years, and although a revised ozone standard was issued in 2015, no determination on MARC’s air quality status has been made.

Once projects are included in the current year of the TIP, they may proceed to implementation, which in turn results in changes in system condition, and performance that may be reflected in the management systems and performance monitoring activities. These changes, as well as new land use, population and employment forecasts, require periodic updates to the MTP. Because of the region’s current status as an air quality attainment area, MARC updates the MTP on a 5-year cycle. If the region is redesignated to non-attainment for ozone, the MTP will be updated every four years.

The transportation planning process must consider projects and strategies that address ten factors identified in the FAST Act:

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

Products

The major products of the transportation planning process, in addition to the UPWP, are the Metropolitan Transportation Plan (MTP) and the Transportation Improvement Program (TIP). Numerous special reports, corridor/subarea studies and analyses on a wide variety of transportation issues are also produced on a regular basis.

Metropolitan Transportation Plan (MTP). The MTP is the centerpiece of the metropolitan transportation planning process. MARC has developed a number of Metropolitan Transportation Plans since its inception. In the summer of 2015, MARC approved *Transportation Outlook 2040 Update*, the region’s current MTP. *Transportation Outlook 2040 Update* is built around the vision of a sustainable metropolitan area, and promotes the identification of and investment in nodes and corridors of activity. *Transportation Outlook 2040 Update* articulates a broad set of region-wide transportation goals, policies
and strategies that address transportation's role in areas such as place-making, public health, and energy use. The plan is financially constrained, reflecting only funding that is currently available or can reasonably be expected to be available during the plan's time frame, and it identifies major transportation investments through the year 2040. The plan also was assessed for and meets environmental justice requirements to ensure equitable investments are planned for the region. In addition, MARC determined that the plan conformed to the applicable state implementation plan (SIP) for air quality through a voluntary conformity process. The MTP must be completely updated at least every five years, but may be revised more frequently if necessary. MARC anticipates the next major update of the MTP will be completed in 2020.

**Transportation Improvement Program (TIP).** The TIP is a prioritized list of transportation projects proposed for implementation during the next five years. Projects included in the TIP must be consistent with the MTP, and are submitted for consideration by local government agencies, state transportation agencies, local transit operators or by MARC. The TIP must cover at least four years, although MARC produces a five-year TIP and processes amendments on a quarterly cycle. The TIP is financially constrained in each year of the program, meaning that the funding identified for transportation projects in a given year cannot exceed the amount reasonably expected to be available to the region under existing federal, state and local programs. MARC also assesses the TIP for environmental justice considerations. Prior to adoption of the TIP, MARC provides an opportunity for public review and comment. No regionally significant project, regardless of funding source, or any project utilizing federal transportation funds may proceed to implementation unless it is included in the TIP. The TIP must be completely updated every four years, based on the last date of approval by the Federal Highway Administration and the Federal Transit Administration. MARC currently updates the TIP under a two-year cycle, and the 2018-2022 TIP was completed in 2017.

**Advisory Committees**

MARC maintains several advisory committees to provide input on a wide variety of issues, including transportation. The major committees involved in the transportation planning process are described below (see Figure 3):

**Total Transportation Policy Committee (TTPC).** TTPC provides policy-level input to the Board of Directors on significant transportation issues, programs and projects, and serves as the primary focal point for MARC's overall transportation planning program. Membership on the TTPC includes elected officials and staff representatives from local counties and municipalities, as well as representatives from the Kansas City Area Transportation Authority, the Kansas Department of Transportation (KDOT), the Missouri Department of Transportation (MoDOT), and non-voting representatives from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

**Air Quality Forum (AQF).** AQF provides policy input on MARC's air quality programs, including transportation-related issues such as conformity procedures, mobile source inventories, and transportation control measures. The AQF plays a lead role in the development of the region’s air quality strategy, including the Kansas City portion of the state implementation plan (SIP) for air quality. Membership includes representatives from local governments, the Missouri Department of Natural Resources, the Kansas Department of Health and Environment, the Missouri Department of Transportation, the Kansas Department of Transportation, and other related stakeholders.
Sustainable Places Policy Committee (SPPC). The SPPC provides leadership and policy advice to the MARC Board of Directors in regional sustainable development. Under the guidance of the SPPC, MARC works with local communities to update and implement land-use strategies that support transportation, equity, environment, and conservation principles.

Transportation Legislative Advisory Committee (TLAC). TLAC provides a forum for MARC committee leadership to discuss and develop legislative positions related to transportation. TLAC’s efforts have focused primarily on monitoring and developing positions related to federal transportation authorizations.

Modal Committees. A series of modal committees report to the TTPC, each one corresponding with a particular mode or type of transportation. The modal committees include the Aviation Committee, Bicycle/Pedestrian Advisory Committee, Destination: Safe Coalition, Goods Movement Committee, Highway Committee, and the Regional Transit Coordinating Council. Membership on the modal committees is a mixture of elected officials, local government staff members, state and federal officials, and representatives from various community groups.

Programming Committees. Several committees provide guidance in the programming of federal transportation funds. The structure and roles of some of these committees changed in 2013 in response to changes in funding programs in MAP-21.

- Two STP Priorities Committees, one each for Kansas and Missouri, are composed of local government staff members and state DOT representatives. The committees play a major role in prioritizing Metropolitan Surface Transportation Program (MSTP) and Congestion Mitigation/Air Quality (CMAQ) traffic flow projects for inclusion in the MTP and the TIP. Separate committees are maintained for each state since the federal funds are apportioned at the state level and must be spent within that state.
- The Active Transportation Programming Committee provides project funding and program management recommendations for the Transportation Alternatives Program and CMAQ bicycle and pedestrian projects. The committee includes local and state representatives familiar with best practices for the planning and design of facilities for biking and walking; safety for non-drivers; environmental mitigation; vegetation management; historic preservation and transportation aesthetics.
- The Regional Transit Coordinating Council addresses regional transit planning, coordination, and implementation of transit priorities. The council is responsible for the prioritization of CMAQ transit funding and FTA Section 5310 funding.
- The Destination Safe Coalition is a collaborative effort involving representatives from law enforcement, public works, safety education, academia, and public health that determine regional transportation safety priority areas. The Coalition recommends regional projects through Missouri’s Blueprint for Safer Roadways and the Kansas Section 402 Program.
- The Air Quality Forum (see above) is also responsible for prioritizing the CMAQ alternative fuels, diesel retrofit and outreach/other projects.

Technical Forecast Committee. The Technical Forecast Committee is a standing committee composed of local government representatives in the fields of planning, public works and community development, as well as community/private sector representatives. The committee provides technical support in developing regional demographic forecasts, strategies and policy evaluation.
Ad Hoc Committees. A number of ad hoc committees have been created from time to time by MARC or other organizations within the metropolitan area to provide input on various transportation issues or help develop components of the Metropolitan Transportation Plan. An example of an ad hoc committee would be the Linking Environmental and Transportation Planning Advisory Group.
MARC Transportation/Air Quality Committee Structure

LEADERSHIP
MARC Board of Directors

POLICY MAKING
Total Transportation Policy Committee
Air Quality Forum
Sustainable Places Policy Committee
Transportation Legislative Advisory Committee

Planning
- Aviation
- Bicycle/Pedestrian
- Destination: Safe Coalition
- Goods Movement
- Highway
- Regional Transit Coordinating Council

Programming
- Active Transportation Programming
- Air Quality Forum
- Destination: Safe Coalition
- Kansas Surface Transportation Priorities
- Missouri Surface Transportation Priorities
- Regional Transit Coordinating Council
Public Involvement

MARC’s Public Participation Plan was updated in 2017. The Public Participation Plan describes MARC’s objectives in conducting public engagement activities, explains how public participation processes will be conducted in conjunction with major products, and identifies a set of techniques and strategies that MARC will draw from in developing specific public engagement activities/processes, including visualization techniques. The Plan also specifically addresses considerations for traditionally underserved populations to ensure that minority and low-income persons are included in MARC’s planning and public engagement activities.

Agency Roles and Responsibilities

As the Metropolitan Planning Organization (MPO) and the designated air quality planning agency for the region, MARC has lead responsibility to ensure that the transportation planning process is being carried out in accordance with federal and state regulations. Several other partner agencies play key roles in the transportation planning process, as discussed below.

State DOTS. MARC works cooperatively with the Missouri Department of Transportation (MoDOT) and the Kansas Department of Transportation (KDOT) in carrying out all of its transportation planning activities. State representatives serve on the Total Transportation Policy Committee, as well as the various modal and programming committees. Both state DOTS have planning offices with personnel designated as liaisons for metropolitan planning and programming.

The state DOTS are responsible for a number of activities that affect the metropolitan planning process. They are charged with the development of Statewide Long-Range Transportation Plans, which are to reflect the Metropolitan Transportation Plan developed by MARC. Each state DOT also develops a statewide transportation improvement program (STIP), which must embody the TIP developed by MARC for the Kansas City metropolitan area. Accordingly, both state DOTS participate actively in the process by which projects are prioritized and included in the region’s TIP.

The state DOTS also serve as additional linkages between MARC and federal transportation agencies (i.e. the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA) and the Federal Aviation Administration (FAA)). While MARC has direct contact with these agencies, some communications with federal agencies, particularly those involving formal federal actions, are channeled through the state DOTS. The state DOTS also provide grant oversight of MARC’s federal planning funds.

State Air Quality Agencies. The Missouri Department of Natural Resources (MDNR) and the Kansas Department of Health and Environment (KDHE) have overall responsibility for compliance with the Clean Air Act, including development and adoption of state implementation plans (SIPs). Both agencies have formally designated MARC as the lead planning agency for air quality in the Kansas City metropolitan area. As a result, MARC plays a lead role in developing mobile and stationary source emissions inventories, identifying and analyzing potential air quality strategies, and drafting SIP revisions for the region. These products are then submitted to MDNR and KDHE for review and approval. Both state air quality agencies serve on MARC’s Air Quality Forum.

Public Transit Agencies. The bistate Kansas City Area Transportation Authority (KCATA) is the largest provider of public transportation in the Kansas City metropolitan area. In addition, three local governments provide substantial public transportation services: Johnson County, Kan., operates Johnson
County Transit; the city of Independence, Mo., operates IndeBus; and the Unified Government of Kansas City, Kan., and Wyandotte County operates Unified Government Transit/UGT. The KCATA provides contract management and planning services for the City of Independence and Johnson County and operates several of the Unified Government Transit routes directly. A fifth transit operator, the Kansas City Streetcar Authority, began streetcar service in downtown Kansas City, Mo. in 2016. These five transit agencies submit projects to MARC for inclusion in the TIP and carry out many of the transit-related planning activities contained in the Unified Planning Work Program.

MAJOR TRANSPORTATION PLANNING INITIATIVES

The work elements identified in the UPWP are intended to assist the region in informing, refining, enhancing, or implementing elements of the MTP. Appendix A reflects how work elements relate to the MTP’s goals and objectives. The following is a brief discussion of the major transportation planning initiatives that are reflected in the 2019 UPWP.

- Respond to the FAST Act – Tasks 1.1, 2.2, 3.9, 4.1, and 5.5
- DBE and Title VI program triennial updates – Task 1.1
- Creating/Planning Sustainable Places – Task 2.1
- Update of the Metropolitan Transportation Plan – Task 2.2
- Performance Measures and Targets – Tasks 2.2, 3.9, 4.1
- Regional Household Travel Survey Completion – Task 3.10
- Development of the 2020-24 Transportation Improvement Program – Task 4.1
- Smart Moves Implementation – Task 5.1, 5.2
- Prospect Bus Rapid Transit (BRT) Implementation – Task 5.2
- Independence Avenue Bus Rapid Transit (BRT) Project Development – Task 5.3
- Environmental Assessment for U.S. 169 Corridor from I-70 and I-35 to MO 9, Including the Buck O’Neil Bridge over the Missouri River – Task 5.7
1.0 Program Support & Administration

1.1 Transportation Administration – Lead Agency: MARC

Objectives

- To provide overall management of MARC’s transportation planning program, and ensure compliance with applicable federal and state requirements.
- To administer all applicable federal funding and activities in a prudent and lawful manner.
- To ensure that all grants and contracts are administered to allow timely completion of scheduled activities and products.
- To support the various transportation and related committees as noted on page 7 and ensure communications among and between the committees.
- To manage and develop staff contributing to transportation planning activities.

Background/Previous Work

MARC has managed the metropolitan transportation planning process in compliance with applicable federal and state requirements since being designated as the MPO in 1974. The region’s transportation planning process was reviewed in 2017 and certified as to its compliance with all applicable laws and regulations, in accordance with federal transportation planning requirements. In 2018, MARC and the region’s planning partners completed an update to the Memorandum of Understanding that outlines the respective roles and responsibilities of each party to the metropolitan planning process.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Committee Support.** Support MARC’s transportation policy, planning, programming and special committees with agendas, meeting logistics, maintenance of membership and miscellaneous communications (monthly).
2. **ACTIVITY: Legislative Tracking.** Monitor state/federal legislative activities related to transportation programs and modify/update MARC policy positions; respond to new regulations issued to implement new legislation (as needed).
3. **ACTIVITY: Personnel.** Complete annual staff evaluations (Dec); Conduct staff recruitments (as needed); Staff development and training (monthly), which could include training on the MPO process and products, modal planning, performance measurement, operations and management, connected and autonomous vehicles, linkages between transportation and related planning topics, and functional skills related to data, software, management, fiscal processes, facilitation, communication and customer service.
4. **ACTIVITY: Procurement.** Conduct third party contract procurement and provide pre- and post-award contract administration (as needed).
5. **ACTIVITY: Operations.** Support operating expenses (training, meeting expenses, advertising, travel, supplies, etc.) to conduct the metropolitan planning process (monthly).
6. **ACTIVITY: DBE.** Implement all aspects of the DBE program ensuring MARC is compliant with 49 CFR part 26 (ongoing)
7. **ACTIVITY: UPWP Invoicing.** Prepare and submit invoices to state departments of transportation (monthly).
8. **PRODUCT: UPWP and Progress Reports.** Prepare annual Unified Planning Work Program and Budget (Oct); Prepare Quarterly UPWP progress reports (April, July, Oct); Prepare prior year Annual Progress Report per 23 CFR 420.117(b) (Mar).

9. **PRODUCT: Transportation Program Local Match Policy and Strategy.** Review/update the MARC Local Match Policy to ensure MARC’s continued ability to implement regional planning resources (Oct).

10. **PRODUCT: DBE and Title VI Reports.** Participate in, monitor and prepare reports, including the DBE and Title VI triennial program updates, that document DBE and Title VI activities. DBE biannual report (ongoing).

11. **PRODUCT: Title VI Program.** Implement all aspects in updating the Title VI and LEP Plan to ensure concurrence with 49 CFR 21 and FTA Circular 4207.1B (Sept)

1.2 **Public Participation – Lead Agency: MARC**

**Objectives**

- To gain meaningful input into the transportation and related planning processes from persons with diverse knowledge and ideas, including those traditionally underserved by transportation and those who have not traditionally participated in the planning process.
- To provide opportunities for convenient public access, review and comment on regional planning and programming documents, as well as the data and forecasts on which they are based.
- To incorporate public input into plans, programs and other products of the metropolitan planning process.
- To document official actions (review, approval, adoption and amendments) of transportation and air quality planning processes and related public review, as well as special studies and other projects that could result in significant changes to these processes.
- To comply with federal public participation requirements.

**Background/Previous Work**

MARC’s public participation procedures call for early and continuous consultation with community stakeholders and the general public. MARC uses tools such as the Transportation Matters and ReMARC newsletters, and the agency Web site (www.marc.org), to provide information and announce opportunities for input to MARC’s planning efforts. Public meetings are also integral to this process.

MARC’s public participation activities are carried out through a Public Participation Plan that outlines strategies to increase the effectiveness of MARC’s current public involvement activities, particularly with reaching traditionally underserved populations, and notes that ongoing investigation of best practices will be used to make sure the full range of public engagement activities is considered for each project. MARC developed a new Public Participation Plan in 2007 and updated this plan in 2010, 2013, and 2017.

**Activities and Products (Estimated Completion Dates)**

1. **ACTIVITY: Engagement.** Actively engage public and private community stakeholders, the general public and the media, especially related to the development of a new metropolitan transportation plan, as outlined in the Public Participation Plan (monthly); evaluate effectiveness (Dec).

2. **ACTIVITY: Formal Public Review and Comment.** Provide information for public review and comment, document public input and agency response, and provide to decision makers (TIP: Jan, April, July, Oct; UPWP: Oct; other: as needed).
3. **ACTIVITY: Publications/Documents.** Develop issue-specific fact sheets and presentations (as needed); design written reports for publication (as needed); distribute “Guide to the Transportation Planning Process” (ongoing).

4. **ACTIVITY: Speakers Bureau.** Maintain speaker’s bureau and presentation materials for outreach efforts related to MARC’s transportation plans and programs (as needed).

5. **ACTIVITY: RTP 2050 Engagement.** With potential consultant support, conduct public engagement in association with the development of RTP 2050 around topics including, but not limited to scenario planning, resilience, equity and environmental justice (ongoing).

6. **PRODUCT: Calendar and Announcements.** Maintain transportation-related meetings and events on public online calendars (monthly). Create HTML invitations to advertise transportation events (as needed).

7. **PRODUCT: Newsletters.** Post to the Transportation Matters Blog (as needed); and transportation stories for ReMARC (quarterly).

8. **PRODUCT: Digital Media and Communication.** Develop and maintain digital media content and web-based communication tools, such as websites, webpages, social media accounts, email blasts etc., for public engagement, general communications, plans and programs, and their related products (ongoing).

### 2019 Budget for Program Support and Administration

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Transportation Administration</td>
<td>$426,215</td>
</tr>
<tr>
<td>1.2 Public Participation</td>
<td>$246,544</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$672,759</strong></td>
</tr>
</tbody>
</table>

For additional budget information please reference Appendix C – Schedules 1 & 2

---

### 2.0 LONG-RANGE PLANNING

#### 2.1 Land Use, Demographic and Comprehensive Planning – Lead Agency: MARC

**Objectives**

- To support a planning process that engages community stakeholders and the public in dialogue about regional goals and objectives, and how best to achieve them through the integration of the region’s transportation investments, land use decisions and environmental conservation efforts.
- To promote local and regional land use, community development and economic development policies consistent with the goals and objectives adopted by the MARC Board and included in the Metropolitan Transportation Plan.
- To maintain and improve the social, economic, demographic, geographic, and land use data systems that facilitates the above and that is necessary to conduct metropolitan transportation planning.
- To communicate development changes and their implications to elected officials, business leaders, civic groups, community organizations, and city, county, and staff agency personnel.
- To promote Sustainable Places and Transit-Supportive Development principles through dialogue, presentations, analysis of data and practices, maintenance of the MARC website and development of tools to assist local communities.
- To encourage sustainable development and greater housing choices in the metropolitan area, reducing travel demand.
- To support community design and transportation and mobility options that support improved public health.
- To support local officials and others working together to address climate change and broader goals of sustainability to advance the vision of the Kansas City area becoming America’s Green Region.
Background/Previous Work

The MARC Board and MARC committees adopted the updated Transportation Outlook 2040 in June 2015. The update included current population growth projections, current budget projections and refined regional transportation projects through 2040. The update supports specific policy direction related to regional growth and development and outlines a clear direction towards developing integrated land use, transportation and environmental strategies as a mechanism to pursue a more sustainable future. The Sustainable Places Policy Committee, a MARC Board created policy level committee, will continue the work started under Creating Sustainable Places. Its role is to advise the MARC Board regarding regional development and changing demographics.

The development of detailed strategies and forecasts rest upon a host of data sets, analytical capabilities and public engagement capacities that must be continually maintained, often as a joint effort between MARC and its member local governments or partner organizations. These include (list is not exhaustive):

Data

- Aerial orthoimagery, flown metro-wide every 2 years by MARC on behalf of the region’s cities and counties to provide the basis for geographically accurate local land use data.
- Parcel-level land use file, maintained by counties and integrated by MARC, to provide current land use, and additional attributes such as square feet, year built and value.
- Planned land use, maintained by cities and counties and integrated by MARC to represent the collective future imagined by area local governments.
- Street centerlines, names and addresses, as well as address points, maintained by cities and counties and integrated by MARC to accurately geocode buildings and employers to Transportation Analysis Zones (TAZ) and other geographic areas.
- Social, economic and demographic data, maintained by a wide variety of federal, state and local agencies, as licensed from private sources, and aggregated by MARC to monitor changing trends by location or characteristic.
- Natural Resources Inventory, NRI land cover data at a 2.5 meter pixel scale that classifies land cover into four classifications: impervious, barren, vegetated, and water. A variety of sub-classifications exist for the impervious and vegetated cover which offer enhanced ecosystem understanding.¹
- MetroGreen®, the regional trails and greenway plan.

Analytical Capabilities

- Geographic Information Systems (currently ESRI’s ArcGIS) to maintain, integrate, and analyze the geographically-based data sets above
- Statistical analysis software (currently SAS) to analyze the above data sets and to estimate the parameters on various models.
- Modeling and visualization software (currently Envision Tomorrow, Tableau and UrbanSim) to help translate technical data inputs into meaningful measures (greenhouse gas emissions, energy consumption, etc.), and to visually display data for improved understanding and public awareness.

Public Engagement Capacities

- Data web sites, including Metro Dataline (www.metrodataline.org), KC Rising (kcrisingmetrics.org), KC Quality of Life (www.kcqualityoflife.org) and KC Economy (www.kceconomy.com).¹

¹ Funded through sources other than CPG
Facilitating community participation and exploration of policy through tools and websites such as [www.marc.org](http://www.marc.org) and Creating Sustainable Places.

MARC hosts a regional planners’ roundtable, which meets quarterly as a forum for local planners to discuss common issues of concern and to learn about best practices.¹

MARC convenes a quarterly “Planning Director’s Luncheon”, as a forum for sharing of expertise, best practices, and provide updates on important planning, development, and other local activities.¹

MARC’s KC Communities for All Ages works to facilitate aging in place and aging in community for the region’s senior community. This regional initiative furthers conversation about land use and transportation that creates communities that welcome all ages.¹

MARC continues the First Suburbs Coalition which addresses neighborhoods, commercial areas, and infrastructure issues and policies to promote sustainable communities and healthy environments.¹

MARC facilitates a gathering of local GIS professionals (KC Metro GIS) including representatives from state and local government to share expertise and collaborate on data development and sharing opportunities.¹

MARC coordinates periodic meetings of data professionals working in cities, non-profits and public health agencies to discuss the development of data and tools that help keep policy makers abreast of key trends and performance metrics.¹

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Technical Analysis.** Maintain, update and improve data sets, analytical capabilities and public engagement capacities as described above, as well as active committees overseeing them (ongoing).

2. **ACTIVITY: 2020 Census Preparation:** Working with local government planners and others, lead the region’s participation in the Census Bureau’s Participant Statistical Areas Program (PSAP) that defines the census tracts and block groups used to tabulate the results of the 2020 Census. Because the Census Bureau will no longer publish data by TAZ, special effort will be made to engage and incorporate suggestions from transportation planners concerning the aggregates of blocks that would best meet the needs of transportation as well as demographic analysis (July).

3. **ACTIVITY: 2020 Aerial Project.** In partnership with area local governments, debrief over the 2018 aerial project and, based on findings, plan the 2020 aerial flight that will generate digital orthophotography for the participating communities. Optional products may include color infrared photography and Lidar. (Vendor selection by December)

4. **ACTIVITY: Planning Tools.** Continue to help local governments incorporate into their own planning and development processes the tools developed in the CSP program, such as Envision Tomorrow Plus and the Natural Resources Inventory (ongoing).

5. **ACTIVITY: Economic and Workforce Indicators.** As part of the KC Rising initiative to enhance the region’s economic competitiveness in the wake of the Great Recession, develop, maintain economic and workforce indicators that augment and reinforce transportation performance indicators in support of improved integrated planning. Publish indicators annually via a website that offers both data downloads and data visualization, as well as in periodic reports. (ongoing)

6. **ACTIVITY: Sustainable Places Policy Committee:** The committee meets approximately six times a year to review and recommend policies and actions to the MARC Board regarding the environment, land use and changing demographics. Additionally, the committee provides oversight to the Planning Sustainable Places program (ongoing).

7. **ACTIVITY: RideKC Regional Plan:** Integrate RideKC Regional Plan analysis findings into land use, demographic and comprehensive planning to inform and refine transit-supportive development principles and practices (ongoing).

¹ Funded through sources other than CPG
8. **ACTIVITY Data – Linear Referencing System:** Work in coordination with State DOT partners to create a regional linear referencing system (LRS) for all public roadways in the 9-county MARC region (Dec).

9. **ACTIVITY: Public Engagement – Data Access:** Implement an open data strategy and/or platform that allows greater searchability, ease of access, and use of data maintained to support regional planning efforts (ongoing).

10. **ACTIVITY: Data – Employment:** Investigate whether MARC can obtain state Labor Market Information data on the location, classification and employment levels of individual business establishments in the Kansas City region. If possible, compare and contrast this data with data from InfoGroup on area business establishments. (Dec)

### 2.2 Metropolitan Transportation Plan – Lead Agency: MARC

**Objectives**

- To maintain a Metropolitan Transportation Plan (MTP) for the Kansas City Metropolitan Area.
- To integrate the MTP with the statewide long-range plans, funding priorities, and transportation programs developed by KDOT and MoDOT.
- To facilitate continued community dialogue concerning regional development and mobility and transportation goals, policies, strategies, and priorities reflected in the MTP.
- To measure progress related to the goals and performance measurements outlined in the MTP.
- To continue development of work plan towards adoption of next MTP, branded as our Regional Transportation Plan 2050 (RTP 2050), due in 2020.

**Background/Previous Work**

In June 2015, MARC adopted its updated *Transportation Outlook 2040*, the Metropolitan Transportation Plan (MTP). The adopted MTP includes a detailed policy framework, an identified regional land use direction supporting regional activity centers (nodes) and corridors, detailed listings transportation needs, and an underlying population and employment forecast.

MARC has launched a process towards ultimate adoption of an updated MTP in June of 2020. The new plan is currently branded our Regional Transportation Plan 2050 (RTP 2050). Development of this plan to date has included a deliberate “Needs Assessment” process, development of an online “story maps” tool, use of social media platforms to engage with the public (Facebook live), and an initial scenario analysis of transportation networks and land use growth scenarios to test sensitivity of our transportation models.

**Activities and Products (Estimated Completion Dates)**

1. **ACTIVITY: Plan Implementation.** Continue the implementation of strategies and policy priorities outlined in the TO2040 (ongoing).
2. **ACTIVITY: Plan Development.** Implement identified activities towards development of future MTP, including public engagement around policy framework and plan strategies, MTP project selection, scenario analysis, autonomous and connected vehicles and programming policy statement revision, etc. The MTP is scheduled for adoption in June of 2020.
3. **ACTIVITY: Training.** Conduct targeted training programs through the Academy for Sustainable Communities supporting *Transportation Outlook 2040* implementation activities and strategies. Topics to be covered may include, but are not limited to, transportation safety, pedestrian and bicycle counting, and mobility planning (ongoing).
4. **ACTIVITY: Review and evaluate the structure of the MTP database; make enhancements that improve ability to report, summarize and visualize both spatial and non-spatial data.** (Dec)
5. **PRODUCT: Manage Transportation Outlook 2040.** Process plan amendments (as needed).

### 2.3 Measuring Multimodal Network Connectivity Pilot Project – Lead Agency: MARC

#### Objectives

- Apply modeling techniques to evaluate, refine and demonstrate multimodal network connectivity consistent approaches described in the [FHWA Guidebook for Measuring Multimodal Network Connectivity](https://www.fhwa.dot.gov/) (pdf).
- Enhance and expand modeling to measure and evaluate bicycle and pedestrian connectivity to jobs, educational institutions and opportunities. Connectivity modeling will assess completeness, density, route directness access to destinations and network quality.
- Measures will be used to assess future investment scenarios to identify preferred investment scenarios the best support the goals and objectives of the Regional Transportation Plan 2050 (RTP 2050)
- Combine non-motorized connectivity measures with Pedestrian Level of Service (PLOS) and Bicycle Level of Service (BLOS) network analysis near twenty, phase one mobility hubs locations identified by Smart Moves 3.0
- Develop a regional modified Bicycle Level of Traffic Stress with the Bicycle Demand Model developed by MARC for the Greater Kansas City Regional Bikeway Plan to further prioritized infrastructure investments based on demand and gap analysis.

#### Background/Previous Work

The FHWA Office of Human Environment released a call for proposals on July 5, 2018 with the intent of providing assistance to State (DOTs) and MPOs in operationalizing multimodal network connectivity measures into a performance-based planning and a project development approach. The national call for proposals required all applications submitted by August 2, 2018. On August 15, 2018, we received notice from the Office of Human Environment that MARC’s proposed Scope of Work was approved. MARC will receive $55,814.40 that will be matched with $13,953.60 (in-kind).

MARC’s Multimodal Network Connectivity Measures Project will evaluate the performance of bicycle and pedestrian networks near mobility hubs. Measures will be used assess future investment scenarios and transportation packages, including a no build scenario and various levels of multimodal investment scenarios. MARC will use the results of this work during the development of the Regional Transportation Plan (RTP 2050), while supporting further work to implement SmartMoves 3.0 and the Regional Transportation Bikeway Plan.

This effort will enhance and expand our capacity as the MPO to address cross-cutting regional goals related to pedestrian and bicycle travel mobility options. Previous analyses of non-motorized connectivity will position MARC to successfully develop improved connectivity measures for the greater Kansas City region. Existing network assessments regarding network completeness, density, route directness, access to destinations and quality can be incorporated into this project:

#### Activities and Products

1. **ACTIVITY: Step 1** Identify the planning context
2. **ACTIVITY: Step 2** Define the analysis method
3. **ACTIVITY: Step 3** Assemble the data
4. **ACTIVITY: Step 4 Compute metrics**

5. **ACTIVITY: Step 5 Package results**

6. **ACTIVITY: Project Administration**

7. **PRODUCT: Final Report**

### 2019 Budget for Long Range Planning

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use, Demographic &amp; Comprehensive Planning</td>
<td>$469,332</td>
</tr>
<tr>
<td>Metropolitan Transportation Plan</td>
<td>$338,167</td>
</tr>
<tr>
<td>Measuring Multimodal Connectivity Pilot Project</td>
<td>$69,768</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$877,267</strong></td>
</tr>
</tbody>
</table>

*For additional budget information please reference Appendix C – Schedules 1 & 2*

### 3.0 SYSTEM MANAGEMENT

#### 3.1 Modeling/Forecasting Activities – Lead Agency: MARC

**Objectives**

- To maintain and improve economic, demographic and travel models needed to prepare long-range forecasts of metropolitan growth and development and resulting travel.
- To utilize these models to analyze impacts of specific policies and investments that might be undertaken in support of the regional goals and objectives adopted by the MARC Board of Directors and stated in the Metropolitan Transportation Plan.

**Background/Previous Work**

An accurate, state-of-the-practice suite of economic, demographic and transportation forecasting models must be maintained in order to identify needed infrastructure improvements and to gauge impacts of regional policies and investments. Over the last several years, MARC has improved its in-house modeling capacities. These include:

- A continually enhanced and updated regional economic and demographic model (REMI) to provide long-range forecasts of metropolitan Kansas City’s total population by age, income and employment by industry.
- A land use forecasting model (transitioning from Paint the Town to cloud-based UrbanSim) that utilizes detailed parcel-level current land use, an aggregation of local land use plans, and calibrated location choice models to provide forecasts of households, population and employment at the level of census blocks, which are then aggregated to traffic analysis zones (TAZs).
- A GIS-based land use scenario model (Envision Tomorrow+) that also uses current and future land use plans along with financial information on building costs and rents to create and evaluate economically feasible development alternatives in activity centers and corridors.
- An improved and augmented set of four-step travel demand models that explicitly models the availability of autos in the home and is based on a set of recent travel surveys.

In June 2010, MARC had adopted new set of population, household and employment forecasts by small-area using Paint the Town. As part of the adoption process, needed improvements to the identification of activity centers and corridors were identified, as was the need to develop a method of annually tracking the percentage of population growth occurring in existing areas. Both these improvements were developed during 2011. In 2012, the entire land use database was updated, including allocating 2010 block-level population,
households and employment data to the 800,000 polygons. In 2013, Paint the Town was further enhanced to include a model to forecast rural development and to separate the forecast for non-residential land development from residential land development. An updated land use forecast was completed at the TAZ level in 2014 and was disaggregated to 2010 census tracts in 2015. The 2015 forecast was updated in 2017 based on the most recent trend information from the Census Bureau’s population estimates, American Community Survey (ACS) and Longitudinal Employer Household Dynamics (LEHD) data, as well as local residential building permits.

Paint the Town, though, doesn’t model land markets and prices, making it insensitive to the impact of local infrastructure investment and economic incentive policies. As a result, in 2018 MARC began transitioning from Paint the Town to a cloud-based version of UrbanSim (called Urban Canvas) that runs at the block level. The required data was collected and the block model has now has been estimated for the Kansas City region. It is now is delivering preliminary forecasts. Work is beginning on incorporating a pro forma based developer model into the block model.

In 2012 and 2013, MARC conducted a regional truck survey and initial works to add a truck modeling component to the regional travel demand model. In 2016 and 2017, work was completed to validate/calibrate the travel model and several enhancements were made to improve the performance and reliability of forecasts. 2016 Model updating was considered the major model updates, which includes updated model TAZ system from 900 zones to 2400 zones, updated the land use data from 2010 Census and 2015 ACS and LEHD, as well as updated the transit routes with the new RideKC system.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Land Use Model Development.** Working with the developer, complete an initial version of the pro forma land development model for Urban Canvas that more realistically adds to the supply of developable land through development and redevelopment. (September)

2. **ACTIVITY: Land Use Forecasts.** Refine initial forecasts using model adjustments as necessary to improve reasonableness. Review forecasts with the Technical Forecast Committee for adoption (Dec).

3. **ACTIVITY: Evaluate Land Use Forecast.** Evaluate land use forecast to be consistent with current city and county population and employment estimates (ongoing).

4. **ACTIVITY: Land Use Model Development.** Prepare all the data necessary to run UrbanSim/UrbanCanvas and generate initial forecasts. Develop and utilize model adjustments as necessary to improve reasonableness of the forecast. Begin implementing work program for any necessary model improvements (ongoing).

5. **ACTIVITY: Land Use-Travel Model Integration.** Continue development of a methodology for integrating the land use and travel models. The outcome of this effort will produce a system of feedback loops between the models, where the results of one are used as inputs for the other (Dec).

6. **ACTIVITY: Travel Demand Model.** Maintain, update and operate MARC Travel Demand Model and its applications. On-call consultant services may be accessed in support of this task. (ongoing)

7. **ACTIVITY: RTP 2050 Scenario Analysis.** Support the development of the 2050 Regional Transportation Plan (RTP 2050) by running scenarios to provide travel demand forecasts for MARC Long Range Transportation Plan, as well as Transportation Improvement Program (TIP). (ongoing)

8. **ACTIVITY: Air Quality Modeling.** Develop the mock input files for use in the latest EPA approved air quality emissions model MOVES2014b. (Dec.)

9. **ACTIVITY: Provide modeling support and data requests.** This activity provides transportation model runs, network assignments, analyses and reports, and impact assessments for local and regional planning efforts (as needed).

10. **ACTIVITY: Enhancement of Technical Capacities.** Research, develop, and test model-based transportation performance evaluation tools and improve the capacity to produce multi-modal forecasts and analysis. (Dec.)
11. **ACTIVITY: Model Users Group.** Convene the region’s travel model users to share information, promote best practice, and encourage consistent modeling approaches (Dec).

12. **ACTIVITY: 2020 Census PSAP.** Participate in the Census Participant Statistical Areas Program to review, analyze, and recommend appropriate changes to statistical areas for the 2020 Census. This includes a special review of Block Groups for compatibility with transportation modeling, as the Census Bureau will no longer be delineating travel analysis zones (TAZs) as statistical areas. (July)

13. **ACTIVITY: Synthetic Data Pilot.** Work with Sidewalk Labs and local planning partners to complete a new planning tool using data collected through the Android mobile phone operating system, Google Maps, Google internet searches and other sources. The tool will provide a database with synthesized analogues of travel information based on actual data that has been anonymized to protect the privacy of individuals using these services for use in travel model development, analysis of regional transportation trends and other applications (Dec).

### 3.2 Transportation Research and Database Management – Lead Agency: MARC

#### Objectives

- To collect, maintain and analyze data on transportation and travel behavior within the region to facilitate transportation planning and decision-making.
- To support data management and governance functions including internal processes, hardware and software systems, and technical capacities of MARC staff.
- To promote better understanding of transportation patterns and trends among member jurisdictions and the general public.
- To conduct analysis and research in support of goals, objectives and strategies identified in Transportation Outlook 2040. To respond to requests for information from local, state and private agencies and members of the public.

#### Background/Previous Work

To better understand transportation and travel behavior within the region, MARC regularly collects and analyzes data through special surveys initiated locally or available through federal, state or private sources. Examples of prior data collection efforts include the 1996, 2000, 2007, and 2012 Travel Time Studies, the 1998 and 2002 Vehicle Occupancy Studies, the 2004 Household Travel Survey, the 2005 On-Board Transit Survey, and the 2007 External Survey.

Data pertaining to transportation that is routinely tracked and reported such as traffic counts, transit ridership, accidents, aircraft activity and expenditure of funds for maintenance and expansion of transportation facilities are kept on file in computer databases at MARC.

#### Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Transportation Planning Research.** Research and explore emerging issues, best practices, analytical tools and general information related to transportation planning (ongoing).
2. **ACTIVITY: Data Collection.** Research, access and obtain data sets needed to achieve program objectives; maintain access to KDOT and MoDOT databases (ongoing).
3. **ACTIVITY: Database Management.** Maintain databases and documentation for both spatial and non-spatial data; refine and improve data management processes; coordinate with internal and external partners on data governance issues (ongoing);
4. **ACTIVITY: Data Analysis.** Process data collected through surveys and special studies for use in planning, programming, management, and marketing of transportation services and projects (ongoing).
5. **ACTIVITY: Data Distribution.** Disseminate data to MARC member jurisdictions, other interested agencies and the general public; develop tools and services to publish data and information online (ongoing).

6. **PRODUCT: Research Reports.** Prepare miscellaneous, periodic research reports and analyses on transportation trends and related information as prompted by emerging issues (as needed).

### 3.3 Air Quality Planning – Lead Agency: MARC

**Objectives**

- To ensure that transportation plans and programs support regional air quality objectives and do not result in increased air pollution.
- To remain prepared for the possibility that the region may become subject to air quality/transportation conformity requirements under the eight-hour ozone standard if the region is redesignated a nonattainment area.
- To support the mobile source emission reduction goals of the Kansas and Missouri State Implementation plans and the regional Clean Air Action Plan.
- To promote compliance with the eight-hour National Ambient Air Quality Standard for ozone.
- To build stakeholder support for initiatives that mitigate air pollution caused by cars and trucks.
- To provide input on regional air quality plans and programs as they relate to transportation.

**Background/Previous Work**

MARC serves as the designated Section 174 agency for the bi-state Kansas City area, coordinating the development of state air quality plans and providing opportunities for local governments to participate in the development of these plans. MARC's air quality responsibilities include coordination, planning, technical analysis, and public information and education. This work element encompasses the transportation component of MARC's air quality planning program. Previous work included an update of the mobile source emissions inventory and budgets for inclusion in the Kansas City SIPs for ground-level ozone.

As an one-hour nonattainment and maintenance area, the Kansas City region was required to conform its MTP and TIP to mobile source emissions budgets in the Kansas and Missouri State Implementation Plans (SIPs). MARC, as the metropolitan planning organization for the Kansas City region, was responsible for developing the conformity analyses, for getting approval from federal, state and local agencies on the methodologies and assumptions used to demonstrate conformity, and for seeking public comment on the analyses. The work was carried out to ensure that projected future year mobile source emissions would not exceed limits prescribed in the SIPs.

In May 2005, the Kansas City region was designated attainment for the eight-hour ozone standard. When the one-hour ozone standard was revoked on June 15, 2005, the region ceased to be subject to federal transportation/air quality conformity requirements. In 2007 the region experienced violations of the eight hour 85ppb ozone standard, and in response, the states of Kansas and Missouri began to implement contingency measures in their ozone SIPs.

In March 2005, the MARC Board of Directors approved a regional Clean Air Action Plan (available on the MARC website at http://www.marc.org/Environment/Air-Quality/Reports/Clean-Air-Action-Plan). The plan includes voluntary strategies for reducing emissions from a variety of sources, including cars and trucks. Some of the mobile source measures in the plan include gas cap testing; retrofitting diesel engines on buses, heavy duty trucks and locomotives; electrifying truck stops to enable drivers to idle their rigs less; and promoting the use of idling reduction policies for public and private fleets. While some of these elements can be implemented at
little or no cost, a majority of them are capital intensive and will require public or private funds in order to be realized.

In 2011, a comprehensive update was made to include promotion of complete streets planning and transit access. A 2018 update is anticipated to include additional mobile source elements. Since 2008, MARC has worked with MDNR and KDHE to administer Clean Diesel grants from EPA to local projects to reduce on- and off-road heavy duty diesel emissions, including projects involving rail and freight transport. MARC has also applied on behalf of large fleets for this funding, and will continue to work with Kansas City area fleets on reducing diesel emissions. The current (2015) ozone standard is 70ppb and the Kansas City region has been recommended as attainment for this standard.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Technical Analysis.** Maintain the MOVES model for counties in the current air quality maintenance area, including determining local data needs and working with appropriate entities to collect data regularly (ongoing).
2. **ACTIVITY: Committee Support.** Convene the Conformity Consulting Agencies, Air Quality Forum and other necessary subcommittees to review and discuss air quality conformity analyses/determinations and related planning assumptions and methodologies (as needed).
3. **ACTIVITY: Engagement.** Engage area chambers of commerce, economic development councils, and industry and trade associations in efforts to implement other CAAP mobile source elements (ongoing).
4. **ACTIVITY: Fleet Engagement.** Provide technical, planning and analytical support to local government efforts to reduce mobile source emissions of ozone precursor emissions, particularly from fleets (ongoing).
5. **ACTIVITY: Technical Analysis.** Analyze air quality benefits resulting from regional mobile source emissions reduction initiatives (ongoing).
6. **ACTIVITY: Public Engagement.** Engage cities and counties outside the Air Quality Boundary to help them understand mobile source elements of the CAAP and future SIP (ongoing).
7. **ACTIVITY: VW Settlement.** Provide technical, planning and analytical support for local efforts to access VW settlement resources (ongoing).
8. **PRODUCT: Email Updates.** Send email updates to Conformity Consulting Agencies, Air Quality Forum and other relevant committees on region’s status in regard to the eight-hour ozone standard (as needed).
9. **PRODUCT: Committee Support.** Prepare meeting summaries and documentation for Consulting Agencies Group (as needed).

### 3.4 Active Transportation Planning– Lead Agency: MARC

**Objectives**

- To develop, maintain and implement regional planning strategies which advance active transportation mobility through the Regional Transportation Plan 2050 to foster increased regional bicycle and pedestrian travel as a share of all trips.
- To facilitate transportation policies which integrate active transportation solutions with community development needs in the region.
- To foster efforts through engineering best practices, public education, and traffic enforcement to improve safety of pedestrians and bicyclists.
- To support efforts that address and advance active transportation data collection.
- To support advancement of technical analysis tools that address active transportation planning and programming needs. To provide active transportation planning support across related MARC’s initiatives and programs.
• To provide appropriate planning and technical assistance to local governments working to address pedestrian and bicycling needs.

Background/Previous Work

MARC’s Active Transportation Planning program has a long history of developing innovative solutions to address regional transportation challenges.

The history of this program stretches back over two decades. MPO program initiatives have included:
• Development of a MetroGreen Action Plan which included regional greenway trail system of over 1,100 miles consisting of three distinct corridors types streams, utility/rail-to-trail and roadway leading the formation of ad-hoc and formal coalitions around corridor planning
• Launched “Explore KC” campaign to promote walking and cycling with annual events and public education (May 2002);
• Adoption of the MARC Policy on Bicycle and Pedestrian Accommodations on Missouri and Kansas River Bridges (April 2006);
• Development and adoption of “Best Practices: 2012 Local Planning and Design Guide” in conjunction with the local chapter of the American Public Works Association;
• Launched Active Transportation Regional Counting Program (2012);
• Adoption of the MARC Complete Streets Policy (March 2012), updated December 2015);
• Created a Complete Streets Policy Handbook (updated in 2017) as a resource for local jurisdictions on how to adopt and implement complete streets policies in communities
• Adoption of the Greater Kansas Regional Bikeway Plan (January 2015) expanding regional roadway corridors to a system over 2,000 miles while adding 128 miles of MetroGreen streams corridors in Miami County.
• Adoption of the Regional Pedestrian Policy Plan to synthesize a regional vision of walkability through best practices for policies, plans, and programs related to enhanced coordination of regional and local efforts (May 2018)

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Bicycle and Pedestrian Advisory Committee.** Provide staff support to BPAC to both develop and implement the annual committee work plan (ongoing).
2. **ACTIVITY: Active Transportation Programming Committee.** Provide staff support to the Active Transportation Programming Committee to monitor reasonable progress of projects, develop/refine application review criteria and review funding applications (ongoing).
3. **ACTIVITY: WFC/BFC Local Efforts** Provide planning assistance to local jurisdictions that are working to achieve either Walk Friendly Communities (WFC) or Bicycle Friendly Community (BFC), to expand designations across the region. (as needed).
4. **ACTIVITY: Provide continuing education opportunities through professional trade associations to address emerging issues related to active transportation modes including but not limited to cross cutting sectors such as transportation access, mobility, and transit oriented land use planning (ongoing).**
5. **ACTIVITY: Bikeway & Trails Inventory.** Conduct a biennial data request. Work across MARC departments to maintain inventory of local bikeway plans and built facilities to support regional active transportation planning and programming efforts (ongoing).
6. **ACTIVITY: Regional Priority Sidewalk Data Inventory.** Work across MARC departments and MPO planning and programming efforts to develop and maintain a GIS pedestrian inventory (ongoing).
7. **ACTIVITY: Regional Counting Program.** Assist local governments with setting up local programs to conduct bicycle and pedestrian automatic counts through the loan of counting equipment and training. Research
potential opportunities for program expansion through cooperative service and data sharing agreements (ongoing).

8. **ACTIVITY: Complete Streets Implementation.** Continue implementation of the MARC Complete Streets Policy. Provide training and assistance to local governments developing Complete Streets policies if needed (ongoing).

### 3.5 Transportation Technology Planning and Integration – Lead Agency: MARC

**Objectives**

- To anticipate and address changes in transportation technology that may impact future transportation, land use, economic and other systems.
- To manage, maintain and refine the Regional Intelligent Transportation Systems (ITS) Architecture that outlines the functional relationships between current and planned ITS deployments in the Kansas City metropolitan area.
- To integrate the Regional ITS Architecture and ITS planning activities with the Metropolitan Transportation Plan and the Transportation Improvement Program.

**Background/Previous Work**

MARC adopted the first version of the Regional Intelligent Transportation Systems (ITS) Architecture for the Kansas City metropolitan area in compliance with federal transportation planning requirements in 2004 and completed updates to the architecture in 2012 and 2018. The Regional ITS Architecture provides a specific, tailored structure for facilitating institutional agreement and technical integration for the implementation of ITS projects in the region by defining how systems functionally operate and the interconnection of information exchanges that must take place between these systems to accomplish transportation services.

**Activities and Products (Estimated Completion Dates)**

1. **ACTIVITY: ITS Architecture Maintenance.** Process periodic updates to the Regional ITS architecture and public interface (as needed).
2. **ACTIVITY: Assistance.** Provide assistance to ITS stakeholders to refine the regional architecture or ensure that project-level ITS planning conforms to the regional architecture (as needed).
3. **ACTIVITY: Coordination with development of MARC’s planning products (MTP, TIP, etc.).** Identify ITS initiatives and their integration as appropriate (as needed).
4. **PRODUCT: Regional Automated Vehicle Strategic Framework.** Continue to refine and expand regional goals, strategies, research and engagement for successful deployment of automated and connected vehicle technologies (Dec.).
5. **PRODUCT: Amendments.** Process amendments to the regional ITS architecture (as needed).

### 3.6 Transportation Safety Planning – Lead Agency: MARC

**Objectives**

- To promote a data-driven process which elevates safety across all modes and prioritizes transportation network investments in the Kansas City region.
- To develop, maintain, and implement the Safety Chapter of the Regional Transportation Plan 2050 and the *Kansas City Regional Transportation Safety Blueprint 2018-22*.
- To foster communication and regional collaboration among local, state and national safety stakeholders on transportation safety issues in the Kansas City region.
• Foster a culture of safety by working with safety partners to share and reinforce messages with the public, which both encourage and enforce safe travel behavior.

Background/Previous Work

Transportation Outlook 2040 identifies that one of the region’s transportation goals is to “improve safety and security for all transportation users.” MARC initiated efforts in transportation safety planning in 2003 by sponsoring the “Planning it Safe” forum, and has continued development of a safety program by creation of the Destination Safe Coalition in 2004, creation of the Kansas City Regional Transportation Safety Blueprint, Toward Zero Deaths – 2018-2022, and specific projects and programs to focus on the 3 priority emphasis areas (i.e., infrastructure-related crashes, behavior-related crashes, and crashes involving special users) and 15 focus areas of lane departure, fixed object, unrestrained occupants, aggressive driving involved, young motorists (ages 15-24 involved), impaired driving involved, horizontal curves, intersections, unlicensed, revoked or suspended drivers, distracted driving involved, motorcycle/moped riders, older motorists (age 65 and over) involved, head-on, pedestrians, and large trucks involved. In 2017, work was completed to update and adopt the Kansas City Regional Transportation Safety Blueprint. In January of 2018, the MARC Board of Directors adopted safety performance measures in accordance with MAP-21 and the FAST Act.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Coalition Support.** Collaborate with safety partners on transportation safety issues in the Kansas City region, including, but not limited to, engaging additional stakeholders, attending Coalition meetings, holding task team meetings, promoting events that incorporate transportation safety, and conducting meetings of the Destination Safe Coalition (Jan, March, May, July, Sept, Nov, or as needed).
2. **ACTIVITY: Technical Support.** Provide support and general direction for the Destination Safe Task Teams (as needed).
3. **ACTIVITY: Special Safety Studies.** Conduct safety data analyses as part of project area studies, corridor studies, and other program activities including Road Safety Assessments (RSA) (as needed).
4. **ACTIVITY: Public Education.** Implement the annual Public Information & Education program through paid and owned media (ongoing).
5. **PRODUCT: Safety Calendar.** Update information about state, regional and local safety events (as needed).
7. **PRODUCT: Develop data-driven process to evaluate safety benefits of investment scenarios for the Regional Transportation Plan 2050.**
8. **PRODUCT: Annual Safety Report.** Provide staff support to the Destination Safe Coalition in the development and completion of an annual safety report (Apr).

3.7 **Congestion Management Process – Lead Agency: MARC**

Objectives

• Carry out the Congestion Management Process in accordance with relevant federal requirements and guidance.
• Continue to implement and refine regional policies and standards regarding system performance on the congestion management network.
• Continue to implement and refine a process for monitoring regional congestion and identifying needed capital improvements, as well as demand management and system management strategies.
Background/Previous Work

As the MPO for a Transportation Management Area (TMA), MARC, in cooperation with the two state DOTs, is responsible for developing a Congestion Management Process (CMP) for the metropolitan area and integrating it with the metropolitan transportation planning process.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: System Performance Monitoring.** Continue data collection, analysis and reporting in support of the CMP (ongoing).

2. **ACTIVITY: Identification and Evaluation of Strategies.** Coordinate with regional planning partners to identify strategies that respond to needs identified through performance monitoring. (ongoing)

3. **ACTIVITY: CMP Implementation.** Coordinate the CMP with the development of planning products and activities, including the MTP, TIP, Regional ITS Architecture, planning studies, etc. (ongoing).

4. **PRODUCT: CMP Documentation:** Maintain CMP products and documentation as needed (ongoing).

3.8 Transportation Systems Management & Operations Planning – Lead Agency: MARC

Objectives

- To provide a strategic planning framework for regional traffic operations and management programs while ensuring compliance with applicable federal and state requirements.
- To improve integration of regional traffic operations and management initiatives with the metropolitan transportation planning process.

Background/Previous Work

MARC’s prior planning efforts have supported efforts to improve the efficiency and effectiveness of the region’s transportation system through the implementation of operations and management strategies. MARC operates the region’s RideShare program. MARC has lead the development and implementation of the Operation Green Light regional traffic signal coordination system since its original feasibility study was completed in 2000. Since that time, MARC has also developed and updated the Regional ITS Architecture and Congestion Management Process. MARC’s partners have developed and deployed the Kansas City Scout freeway management system and the Operation Green Light traffic signal operations system on over 700 traffic signals serving 24 agencies in the region. In 2011 and 2012, FHWA provided technical support to MARC to administer a “self-assessment” for regional traffic signal operations. In 2017, MARC completed a new strategic plan for Operation Green Light. MARC led a Transportation System Management and Operation Summit and TSM&O Capability Maturity Model Assessment in 2017. In 2018, MARC hosted an FHWA workshop on Integrated Corridor Management.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Regional TSM&O Workgroup.** Provide staff support to the Regional TSM&O Workgroup to both develop and implement the annual committee work plan for traffic operations and management (ongoing).

2. **ACTIVITY: Regional TSM&O Plan Development.** Coordinate with regional stakeholders and partners to support planning for transportation system management and operations, including integration of TSM&O into the RTP 2050 (Dec).
### 3.9 Transportation Performance Management (TPM) – Lead Agencies: KDOT, MoDOT, KCATA, JCT, UGT, IndeBus, KC Streetcar, MARC

**Objectives**

- To establish performance measurement targets in response to the FAST Act’s performance-based approach to statewide and metropolitan planning.
- To coordinate the selection of performance targets by the state DOTs, MARC and the region’s transit agencies to ensure consistency, as appropriate.
- To integrate performance management into planning and programming processes.

**Background/Previous Work**

Under the FAST Act, states, transit agencies and metropolitan planning organizations are to establish and follow a performance-based approach to transportation decision-making that supports the national goals of safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays. USDOT developed a process for establishing performance targets and reporting on progress towards achieving targets through the federal rulemaking process. State DOTs, transit agencies and MPOs shall coordinate to the maximum extent practicable on the establishment and reporting of performance targets.

**Activities and Products (Estimated Completion Dates)**

1. **ACTIVITY: Coordinate to Develop Performance Targets for FAST Act TPM Measures.** Coordinate with planning partners, including the Performance Management Workgroup, to support development of performance targets for the measures defined in the FAST Act and related federal rulemaking. (ongoing)
2. **ACTIVITY: Incorporate Performance Targets into Planning Products.** Integrate performance targets and reporting into MTP, and TIP, and other planning products as appropriate. (ongoing)
3. **PRODUCT: Annual Performance Measurement Report.** Produce the annual report that measures progress related to the goals and performance measurements outlined in *Transportation Outlook 2040*, including progress towards achievement of FAST Act targets (Oct)

### 3.10 Regional Household Travel Survey – Lead Agency: MARC

**Objectives**

- To collect and analyze data on transportation and travel behavior within the region to facilitate travel demand modeling, transportation planning and decision-making.
- To understand travel behavior differences between low-income and minority populations and the community at large, and to understand travel behavior differences between traditional mixed-used developments, and single-use land development patterns.
- To promote better understanding of transportation patterns and trends among member jurisdictions and the general public.

**Background/Previous Work**

To better understand transportation and travel behavior within the region, and to ensure accuracy of the regional travel model, MARC periodically conducts household travel surveys. The last such survey conducted in the region was the 2003 Regional Household Travel Survey.
Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Household Travel Survey.** Complete remaining tasks in the household travel survey scope of work including survey pre-test, regional survey, data analysis, and Synthetic data comparison. (Aug).

2. **PRODUCT: Regional Household Travel Survey Report.** Full documentation for Regional Household Travel Study (June).


2019 Budget for System Management

| 3.1  | Transportation Modeling/Forecasting       | $603,162 |
| 3.2  | Transportation Research & Database Management | $508,489 |
| 3.3  | Air Quality Planning                      | $94,263  |
| 3.4  | Active Transportation                      | $117,552 |
| 3.5  | Transportation Technology                  | $35,685  |
| 3.6  | Transportation Safety Planning             | $92,649  |
| 3.7  | Congestion Management System               | $55,528  |
| 3.8  | Management & Operations Planning           | $38,978  |
| 3.9  | Performance Measurement & Target Setting   | $74,650  |
| 3.10 | Regional Household Travel Survey           | $700,000 |
| **Total** |                                             | **$2,320,958** |

For additional budget information please reference Appendix C – Schedules 1 & 2

4.0 PROGRAMMING

4.1 Transportation Improvement Program – Lead Agency: MARC

Objectives

- To develop a detailed and financially realistic program of transportation projects, drawn from all elements of the community, which is consistent with the Metropolitan Transportation Plan, financially realistic, in conformity with air quality plans and addresses social equity/environmental justice regulations.
- To evaluate and prioritize projects according to procedures approved by various MARC programming committees.
- To ensure opportunities for public input, review and comment related to the TIP.
- To foster an understanding of the TIP process among member jurisdictions, and to effectively communicate the approved TIP to the general public.
- To effectively process TIP modifications actions (Amendments/Administrative Modifications).

Background/Previous Work

MARC produces the regional *Transportation Improvement Program (TIP)* in cooperation with the Kansas and Missouri Departments of Transportation, local governments and public transportation agencies. The TIP is a staged, five-year list of surface transportation projects proposed for federal, state and local funding that documents how the Kansas City region prioritizes the limited transportation resources available for the various needs of the region consistent with the adopted Metropolitan Transportation Plan and federal transportation planning requirements. In 2017, MARC approved the 2018-2022 TIP in compliance with federal transportation law.
Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: TIP Maintenance.** Maintain the current 2018-2022 TIP through communications with project sponsors, timely processing of requested administrative modifications, and any other necessary changes; process quarterly TIP amendments (Jan, Apr, Jul, Oct) and special TIP amendments (as needed).
2. **ACTIVITY: Programming.** Provide staff support to MARC’s programming committees. Review evaluation procedures and processes approved by various MARC committees (as needed).
3. **ACTIVITY: FAST Act Performance Measurement.** Work with MARC’s planning partners to address the FAST Act requirements that the TIP make progress toward achieving established performance targets as required per 23 CFR 450.326(c) and 23 CFR 450.326 (d). (ongoing).
4. **PRODUCT: TIP Modification Policy.** Review the policies associated with TIP amendments and administrative modifications to produce an updated TIP Modification Policy (Dec).
5. **PRODUCT: Develop the 2020-2024 Transportation Improvement Program** (Oct)

### 2019 Budget for Programming

<table>
<thead>
<tr>
<th>4.1 Transportation Improvement Program</th>
<th>$138,910</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>$138,910</strong></td>
</tr>
</tbody>
</table>

*For additional budget information please reference Appendix C – Schedules 1 & 2*

### 5.0 PLANS AND STUDIES

#### 5.1 Transit/Paratransit/Mobility Planning and Coordination – Lead Agency: MARC

**Objectives**

- To provide planning and coordination needed to support the implementation of the Smart Moves Regional Transit and Mobility Plan.
- To improve local and regional mobility and expand modal choice through increased transit and special transportation availability, enhanced communication and public education, and improved coordination.
- To integrate Public Transit and Human Services Transportation into a mobility management system.
- To reduce traffic congestion and improve air quality.
- To enhance Creating Sustainable Places principles by coordinating transit planning with the Sustainable Code Framework, sidewalk planning, bikeways, and sustainable land use.

**Background/Previous Work**

MARC, in cooperation with the Kansas City Area Transportation Authority, Johnson County Transit, Unified Government Transit, the City of Independence, the Kansas City Streetcar Authority and other transit interests in the region, continue to refine and update SmartMoves, a plan for regional, coordinated and expanded mobility and transit services throughout the region.

Efforts since 2011 have focused on:

- Updating the *Transportation Outlook 2040* and the Smart Moves Regional Transit Vision to incorporate recent planning activities underway at the local level;
- Developing strategies focused on successful implementation of the Smart Moves plan;
Refining the Smart Moves plan, including efforts to identify major corridor investments and to integrate public transit and human services transportation as envisioned in SAFETEA-LU and MAP-21;

Providing ongoing public information and education regarding the benefits of investing in public transit;

Selecting specific projects and services in the region to receive federal transit and related funds;

Jointly advancing transit studies related to high-priority Smart Moves corridors and mobility hubs;

Creation of the RTCC and Mobility Advisory Committee;

Completion of an update to the SmartMoves plan and development of short term “investment strategies, and;

Convening of a Mobility Hib Workgroup to develop mobility hub implementation strategies.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY. Smart Moves implementation support.** Provide technical assistance to governmental, non-profit and for-profit grantees and operators of transportation/mobility services (ongoing and as needed).

2. **ACTIVITY. Transit Study Development.** Participate in, or assist with, transit/mobility services studies in the region as needed (ongoing and as needed).

3. **ACTIVITY. Engagement, Outreach and Education.** Conduct transit/mobility services related public involvement and education programs such as workshops and trainings related to the Smart Moves plan, with focus on areas such as land use considerations, urban design, and economic development benefits of transit (ongoing and as needed).

4. **ACTIVITY. Conduct programming processes** for transit related funding programs; administer funds as necessary (ongoing).

5. **ACTIVITY. Regional Transit Coordinating Council Support.** Convene and support the Regional Transit Coordinating Council and all sub-groups of the council, including the Mobility Advisory Committee, in partnership with KCATA. (ongoing)

6. **ACTIVITY: Continue to consider and integrate a range of mobility and land use strategies into planning efforts and committee work plans in accordance with the Smart Moves 3.0 plan (ongoing).**

7. **ACTIVITY: Transportation Management Associations (TMAs).** Research best practices related to TMAs, including set-up and administration. Identify employment centers and employers where TMAs could address known employment transportation challenges (ongoing).

8. **Activity: Funding.** Work with transit and other community leadership to develop a process focused on a sustainable funding structure for the development of the regional transit and mobility system (ongoing).

9. **ACTIVITY: Smart Moves Refine Local Investment Priorities.** Convene local leadership through workshops or similar forums to advance the implementation of Smart Moves. This activity includes the refinement of priority projects and identification of funding (ongoing).

10. **PRODUCT. Transit Data and Products.** Develop enhanced transit planning resources including travel demand modeling data, GIS data, route maps, and communication products (ongoing).

5.2 **RideKC Short-Range and Ongoing Transportation Planning – Lead Agency: KCATA**

Objectives:

- Develop technical route service plans and short-term service recommendations to appropriately adjust and improve KCATA route services in the community.

- Provide planning and administrative support for regional transit services to ensure a comprehensive, cooperative and continuing transportation planning process, as well as pursuing local and regional planning projects that integrate land use and transportation and advance transit infrastructure planning. Coordinate with regional partners to provide convenient, reliable, and safe transportation that exceeds customer expectations, and to monitor, measure, and improve transit service on an ongoing basis.
Background/Continuous Work:

This ongoing program will support KCATA staff and consultant work related to planning studies and initiatives anticipated in 2019, including implementation of service improvements recommended by the SmartMoves plan update as well as service planning tasks related to Prospect MAX final design and implementation.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: RideKC Freedom and Freedom On-Demand.** Evaluate pilot program and opportunities to expand throughout the region and other process and service improvements.
2. **ACTIVITY: Community Planning Activities.** Coordinate with local communities on development review and transportation projects impacting access to transit services; provide data and planning expertise as needed to improve the connection between land use and transportation planning.
3. **ACTIVITY: Regional Marketing.** Continue implementation and marketing of the RideKC brand and services to passengers and the general public, including the creation and distribution of materials, signage, attending community events, and providing high-quality passenger information in multiple formats.
4. **ACTIVITY: SmartMoves Implementation.** Continue implementation of the SmartMoves investible strategies as identified in the plan, including service improvements and coordinating with local jurisdictions to plan and implement mobility hubs throughout the region.
5. **ACTIVITY: Prospect MAX:** Implement new service and amenities on the Prospect MAX corridor, including service changes to new downtown stations and new mobility hubs to be constructed as part of the project, anticipated for completion in 4Q 2019.
6. **ACTIVITY: Johnson County Comprehensive Operational Analysis:** Implement service changes recommended by the planning and public outreach process completed in the fall of 2018.
7. **ACTIVITY: Jobs Access Service:** Continue to monitor and improve new jobs access services such as expanded routes to Platte County, Gardner/Edgerton, and new night service on key local route corridors in Johnson County. Add and new jobs access services, in coordination with employers, as funding becomes available.
8. **ACTIVITY: Transit Service Monitoring and Improvements.** Based on ongoing monitoring and performance assessments, continue service and infrastructure planning efforts to improve the efficiency of transit service and to accommodate changing needs and demands in the region.

5.3 RideKC Long-Range Transit and Capital Planning – Lead Agency: KCATA

Objectives

- Develop service and capital improvement plans and related cost estimates to address critical and unmet needs. This includes planning for bus rapid transit corridor investments, improved pedestrian access to transit services, fare collection systems, asset management systems, and other needs and initiatives.

Background/Previous Work

KCATA is implementing bus rapid transit service on Prospect Avenue and is continuing studies and activities to assess two other corridors, Independence Avenue and North Oak. In addition, several Planning Sustainable Places projects are underway to plan for service and infrastructure improvements at key locations in the region. In addition, work continues on improving passenger amenities, pedestrian accessibility, and fare payment technology.
Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Regional Fare Collection and Technology:** Continue the development and procurement of advanced systems for fare payment and collection to improve passenger ease of travel and seamless transit. This includes an evaluation of the capital infrastructure and IT components required for the replacement of farebox, mobile payment, and fare validation systems.

2. **ACTIVITY: Streetcar Expansion:** Continue to assist the Kansas City Streetcar Authority and the City of Kansas City with continued planning and engineering of the planned north and south expansions of the RideKC Streetcar route.

3. **ACTIVITY: Independence MAX Project Development:** Advance the planning study completed in the fall of 2018 into the FTA Project Development process. Begin advanced planning, conceptual engineering, and assessment of funding opportunities in support of the region’s fourth MAX bus rapid transit route.

4. **ACTIVITY: North Oak Transit Improvement Plan:** Continue the planning study to evaluate BRT feasibility on the North Oak corridor as well as other Northland needs and opportunities.

5. **ACTIVITY: Rock Island Corridor:** Continue planning for a multimodal transportation corridor in the Rock Island Right-of-Way, including active transportation uses, future transit service, and development opportunities.

6. **ACTIVITY: Downtown Transit Emphasis Corridor:** Continue design and implementation of new transit stations along Grand Boulevard, the designated north/south transit emphasis corridor in downtown.

7. **ACTIVITY: Blue Ridge Crossing Transit Study:** Begin a transportation study of the Blue Ridge Crossing transit center, a major connecting point for transit service in east Kansas City and Independence.

8. **ACTIVITY: Transit Oriented Development Planning:** In coordination with municipalities, develop plans and implementation of TOD policies and specific plans to build and encourage appropriate development on key high-capacity transit corridors and activity centers.

9. **PRODUCT: Regional Wayfinding Plan.** Through the Planning Sustainable Places program, complete a study of regional transportation wayfinding for the SmartMoves and MetroGreen multimodal transportation investments.

10. **PRODUCT: Woodland Plaza Neighborhood/Transportation Plan.** Through the Planning Sustainable Places program, complete a study of the Woodland Plaza and surrounding neighborhoods to improve

5.4 **Goods Movement/Freight Planning – Lead Agency: MARC**

**Objectives**

To integrate freight transportation issues and concerns within the overall metropolitan transportation planning process.

**Background/Previous Work**

Because of its central location and historical importance as a gateway to the western United States, the Kansas City metropolitan area is one of the nation’s major centers for the movement of freight. The city ranks as the second largest rail hub in the country, served by eight major railroads and six intermodal facilities. The region is home to numerous trucking companies, including the country’s largest less-than-truckload (LTL) carrier. Additionally the reactivation of the Kansas City Port Authority (Port KC) and construction of a new Kansas City International Airport (KCI) barge and air freight will have increased importance. MARC has been actively involved in freight planning since the 1995 Intermodal Freight Strategies Study, which provided the basis for the Goods Movement Element of the MTP.
In 1996, as part of the restructuring of MARC’s transportation committees, a new Goods Movement Committee was established to bring together representatives of the private sector freight industry with elected and staff officials from state and local governments. This committee plays an active role in identifying and prioritizing projects that will result in more efficient goods movement within and through the region.

In 1998, MARC, in cooperation with the Greater Kansas City Chamber of Commerce and the US Department of Treasury initiated the Mid-Continent TradeWay Study to evaluate the potential for establishing an international trade processing capability in the Kansas City region. In 2000, MARC, in cooperation with the Greater Kansas City Chamber of Commerce and the Kansas City Area Development Council, established Kansas City SmartPort to implement the recommendations of the Mid-Continent TradeWay Study. In 2006, MARC, in cooperation with Kansas City SmartPort, Inc., KDOT and MoDOT, completed an updated ITS implementation plan for Kansas City SmartPort. In 2007, MARC worked with Kansas City SmartPort to conduct pilot tests of some of the operational concepts developed in the 2006 ITS planning work. In 2009 MARC completed the Kansas City Regional Freight Outlook Study (KCRFO) that provided a regional freight strategic plan to assist the region to remain a vital national freight transportation hub and support the region’s freight transportation planning. In 2012 MARC in cooperation with KC SmartPort completed Phase III operational testing of the 2006 ITS planning work.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Committee Support.** Provide staff support to the Goods Movement Committee to both develop and implement the annual committee work plan (ongoing).
2. **ACTIVITY: Collaboration and Engagement.** Maintain liaison and support to Kansas City SmartPort and other freight interests in the region; participate in state and national freight planning; provide public engagement between the freight community and the public sector regarding freight transportation issues (ongoing).
3. **ACTIVITY: Regional Freight Planning.** Identify regional freight-related needs and priorities for regional planning; update elements of the MTP and TIP as necessary (ongoing).
4. **ACTIVITY: FAST Act Compliance.** Conduct Freight Corridor Planning, freight performance measure development and participate in state freight planning activities as prescribed by FAST Act (as needed).
5. **ACTIVITY: Planning Products.** Coordination with development of MARC’s planning products (MTP, TIP, ITS Architecture etc.). Identify freight initiatives and their integration as appropriate (as needed).
6. **ACTIVITY: Freight Planning Coordination.** Coordinate regional freight plan to ensure compliance with the FAST Act and the freight plans of Kansas and Missouri and provide input into the proposed MTP planning process (as needed).

5.5 **Corridor Studies – General – Lead Agency: MARC**

Objectives

- To coordinate the initiation and conduct of major corridor studies within the MARC region and provide for the incorporation of study findings and recommendations in MARC’s Metropolitan Transportation Plan and Transportation Improvement Program.
- To actively participate in corridor studies and provide input reflecting regional goals, policies and priorities.

Background/Previous Work

MARC’s policy is to conduct major investment studies (MIS) whenever major transportation improvements are proposed in the region. These studies are viewed as an integral part of the metropolitan transportation
planning process, and as a precedent or companion to NEPA environmental and alignment or operational studies. In some instances, other (non-MIS) studies are undertaken to develop, evaluate and select strategies for improving the performance of the region’s transportation network.

Transportation Outlook 2040 identifies locations for major studies in the region. MARC will play an active role in coordinating and facilitating corridor studies in the region, although other agencies may have lead responsibility. This work element encompasses MARC staff's participation in the various major corridor studies during the year, many of which are also included as specific work elements in the UPWP.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Study Coordination.** Ensure compliance with MARC policy regarding the initiation, conduct and review of major corridor studies in cooperation with federal, state and local agencies; ensure findings from studies are reviewed by key MARC committees and incorporated into the region’s plans and programs as appropriate (as needed).

2. **ACTIVITY: Study Support.** Support studies by providing information/technical assistance to local agencies and by participating in steering and technical committees (as needed).

3. **ACTIVITY: Approval Process.** Process study conclusions through appropriate MARC committees for incorporation into the LRTP or other plans/documents (as needed).

5.6 **Environmental Assessment (EA) for U.S. 169 Corridor from I-70 and I-35 to MO 9, Including the Buck O’Neil Bridge over the Missouri River – Lead Agency: MoDOT**

Objectives

To undertake a study of the Buck O’Neil Bridge, in order to determine the future improvements and assess the environmental impacts and overall feasibility. This study will also include an evaluation of bicycle and pedestrian accommodations.

This study will be developed in accordance with all applicable federal regulations and guidelines.

Background/Previous Work

MoDOT has proposed a study to evaluate the improvements to the existing US-169 bridge structure over the Missouri River (Buck O’Neil Bridge) in Clay/Jackson County.

The EA will use the Purpose and Need, Reasonable Alternatives and additional data from the PEL, as a starting point for selecting the preferred alternatives for the Buck O’Neil Bridge and nearby US 169 corridors.

The Transportation Outlook 2040, the region’s long-range transportation plan, has identified improvements to the Broadway Bridge as an illustrative project.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Identify the Purpose and Need (2018).**
2. **ACTIVITY: Develop alternatives and conduct alternatives analysis (2018).**
3. **ACTIVITY: Conduct public meetings (2018-19).**
4. **ACTIVITY: Prepare applicable environmental documentation (2018-19).**
5. **ACTIVITY: Prepare final report documenting results of corridor study analysis (2019).**
6. **PRODUCT:** Complete the Draft Environmental Assessment (EA) and hold the Location Public Hearing (2019).

7. **PRODUCT:** Complete the Final EA and receive the Finding of No Significant Impact (2019).

### 5.7 Aviation Planning and Coordination – Lead Agency: MARC

**Objectives**

- To maintain a current Aviation System Plan, consistent with the needs of the Kansas City metropolitan area, and to integrate aviation with other transportation modes.
- To facilitate an open, ongoing discussion of regional aviation issues among aviation professionals, regional elected leadership, and local, state, and federal officials.
- To effectively integrate aviation planning considerations into the overall MARC metropolitan transportation planning process.
- Support implementation of UAS technologies in a manner that safely integrates them with the aviation system.

**Background/Previous Work**

MARC has historically maintained a regional airports system plan with resources provided by the Federal Aviation Administration. The latest update to the MARC Airports System Plan was completed and adopted in 2016. MARC holds regular meetings of the Aviation Committee to coordinate and consult with regional aviation stakeholders on a range of transportation issues.

**Activities and Products (Estimated Completion Dates)**

1. **ACTIVITY:** Regional Aviation System Plan Implementation. Support implementation of the Regional Aviation System Plan goals and recommendations (ongoing).
2. **ACTIVITY:** Aviation Research and Coordination. Consult with regional officials responsible for aviation planning and operations, including coordination of in-house planning work with other agencies, review of technical journals and papers, and attendance at meetings, conferences and seminars (ongoing).
4. **ACTIVITY:** Coordinate with Federal Aviation Administration (FAA) officials, regional stakeholders, and MARC staff to integrate obstruction evaluation and airport airspace analysis (OE/AAA) into the MARC surface transportation planning/programming process (ongoing).
5. **ACTIVITY:** Support the UAS Leadership Group and implementation of actions from the Regional UAS Strategic Framework (ongoing).

### 5.8 MoDOT Traffic Studies – Lead Agency: MoDOT

**Objectives**

- To analyze traffic characteristics to support management of the transportation system.
- To produce and maintain various traffic databases and reports in order to recommend solutions to improve and enhance the safety of the regional transportation system.

**Background/Previous Work**

MoDOT traffic personnel perform various technical duties associated with updating and maintaining the traffic volume, speed and accident data; analyze data for causes and recommend remedial action on the
transportation system within the MARC boundary. Personnel also assist in developing long-range and short-range projects to relieve congestion by addressing roadway management, congestion management, incident management, roadway access management and traffic signal network management.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Data Collection and Analysis.** Support, review and analyze traffic and safety data to identify concerns and recommend solutions (as needed). Research and review requests for improvements to the state highway system.

2. **ACTIVITY: Safety Program:** Perform Road Safety Audits, Identify High Hazard segments, intersections and corridors. Identify strategies and make recommendations for improvements.

3. **PRODUCT: Traffic Studies and Reports.** Regularly research improvements or impacts of improvements to the safety and operations of MoDOT’s system. Develop traffic study reports outlining findings and/or recommending approvals. Review and analyze recommendations of the Regional Arterial Management System – Operation Green Light (OGL) and study potential solutions at various intersections (as needed).

### 5.9 Kansas City Outer Loop Toll Feasibility Study – Lead Agency: KDOT/Kansas Turnpike Authority

**Objectives**

- Revisit the Toll Feasibility Analysis (TFA) for the proposed outer loop corridor, which was completed as part of the Five County Regional Transportation Study (5CRTS).
- Update land-use and development assumptions in the 5CRTS model, as appropriate.
- Determine at planning-level whether recent development trends would generate sufficient traffic volumes to necessitate a tolled outer loop corridor, or independent segment(s) thereof.
- Evaluate future development and corridor-access scenarios that could predicate need for a tolled outer loop corridor, should recent development trends fail to generate sufficient traffic volumes.

**Background/Previous Work**

Recent growth and development in the Kansas counties around Kansas City has led to renewed interest from elected officials and key stakeholders regarding the need for an outer loop corridor. KDOT and the Kansas Turnpike Authority have therefore been asked to review the need for a potential outer loop toll facility. The agencies have commissioned a Level 1 “Sketch” Planning Toll Feasibility Evaluation. Potential toll scenarios will be analyzed through generalized assessment methods to determine the potential toll financial feasibility of each scenario as a standalone toll project using readily-available data, travel demand models and past studies as a baseline.

The 5CRTS assumed the proposed corridor would connect Leavenworth with I-49 in Cass County, Missouri and generally follows a route south through western Leavenworth and western Johnson Counties and easterly through northern Miami and central Cass Counties. The actual alignment has not yet been determined. The outer loop corridor was also previously examined in the 21st Century Parkway study, Perimeter Transportation Needs Assessment and South Metro Connections study.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Baseline Conditions/Data Collection (Sept 2018)**
2. **ACTIVITY: Corridor Alternatives/Cost Estimates (Feb)**
3. **ACTIVITY: Level I Traffic and Revenue Estimates (Feb)**
4. **ACTIVITY: Level I Toll Feasibility Evaluation and Screening (Mar)**
5. **ACTIVITY: Stakeholder Meetings (Dec 2018, Mar, as needed)**
5.10 Metcalf Improvements Study – City of Overland Park, Kansas

Objectives

- To develop a purpose and goal for the Metcalf Avenue corridor from 75th St. to 83rd St.
- To develop conceptual section configuration alternatives and identify the potential impacts to adjacent land development/redevelopment potential.
- To conceptually identify how different modes of transportation may be accounted for within the existing right-of-way and other corridor constraints.
- To evaluate traffic flow and multimodal impacts.

Background/Previous Work

The Metcalf Avenue corridor is a principal arterial and National Highway System (NHS) route that provides north-south travel movement through the City of Overland Park and direct connections to I-35 and I-435. Significant transit service exists on the corridor and the intersection at 75th St. has been identified as a potential site for a mobility hub where an array of transportation services and amenities come together.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY:** Data collection (Dec).
2. **ACTIVITY:** Review and assimilate existing plans and needs (Dec).
3. **ACTIVITY:** Traffic and usage analysis (Dec).
4. **PRODUCT:** Final report (Dec).

5.11 Central Plains Heartland Freight Technology Plan – Lead Agency: MARC

Program Objectives

Development of a multi-jurisdictional, implementable plan to address freight, safety and economic development for the states and major metropolitan areas of the Central Plains/Heartland region. This plan will be developed through a unique public-private partnership of metropolitan planning organizations and state departments of transportation along with academic, business and industry leaders in the five Central Plains/Heartland states of Illinois, Iowa, Kansas, Missouri and Nebraska.

Background/Previous Work

The Central Plains/Heartland region is a national center for agriculture, life sciences, advanced manufacturing, and freight transportation and logistics. The Central Plains/Heartland region accounts for 8 percent of the national population, and makes up roughly 12 percent of the interstate system. The region’s location in the center of the country provides residents and businesses short travel distances to major population centers.

Program Activities and Products

1. **ACTIVITY:** Engage key regional public and private stakeholders.
2. **ACTIVITY:** Define the critical transportation facilities, high-level supply chains and market linkages among the large metropolitan areas and states in the Central Plains/Heartland.
3. **ACTIVITY:** Develop recommendations for harmonized regional regulatory objectives and strategies

4. **ACTIVITY:** Develop recommendations for regional data sharing and management

5. **PRODUCT:** Final report

**Funding**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>$250,000</td>
<td>FHWA- National Economic Partnerships for Innovative Approaches to</td>
</tr>
<tr>
<td>Non-Federal</td>
<td>$ 62,500</td>
<td>Multi-Jurisdictional Coordination” program</td>
</tr>
<tr>
<td>Task Total</td>
<td>$312,500</td>
<td></td>
</tr>
</tbody>
</table>

**2019 Budget for Plans and Studies**

| 5.1 Transit Planning & Coordination | $287,393 |
| 5.2 RideKC Short-Range and Ongoing Transportation Planning | $500,000 |
| 5.3 RideKC Long-Range Transit and Capital Planning | $1,050,000 |
| 5.4 Goods Movement/Freight Planning | $77,362  |
| 5.5 Corridor Studies | $10,563  |
| 5.6 Environmental Assessment (EA) for U.S. 169 Corridor | $1,500,000 |
| 5.7 Aviation Planning | $2,306   |
| 5.8 MoDOT Traffic Studies | $273,266 |
| 5.9 Kansas City Outer Loop Toll Feasibility Study | $300,000 |
| 5.10 Metcalf Improvements Study | $250,000 |
| 5.11 Central Plains Heartland Freight Technology Plan | $312,500 |
| **Total** | **$4,563,390** |

*For additional budget information please reference Appendix C – Schedules 1 & 2*
Appendix A

RELATIONSHIP BETWEEN UPWP PROJECTS AND MTP POLICY DIRECTION

2019 UPWP Projects and MTP Policy Framework

MARC’s current Metropolitan Transportation Plan (MTP), Transportation Outlook 2040, creates a policy framework for transportation investments in the Kansas City region. The plan recognizes the vision of a sustainable region that increases the vitality of our society, economy and environment for current residents and future generations, with a more specific transportation vision of a safe, balanced, regional, multi-modal transportation system that is coordinated with land-use planning, supports equitable access to opportunities, and protects the environment. The MTP identifies ten transportation goals to help make progress towards this vision. The 2019 Unified Planning Work Program (UPWP) is designed to ensure the region focuses time and resources on this policy framework. Each transportation goal is shown below along with the specific actions included in the 2019 UPWP that address that part of the region’s policy framework.

Climate Change and Energy Use – Decrease the use of fossil fuels through reduced travel demand, technology advancements, and a transition to renewable energy sources
- Transit Planning Activities (Tasks 5.1, 5.2, 5.3, 5.4)
- Active Transportation planning and Bike/Ped Planning and Promotion Activities (Tasks 2.3, 3.4)
- Land-Use and Comprehensive Planning Activities (Task 2.1)
- Environmental/Air Quality Planning Activities (Tasks 2.2, 3.3)
- Operations and Management Planning Activities (Tasks 3.5, 3.7, 3.8)

Economic Vitality – Support an innovative, competitive 21st century economy
- Operations and Management Planning Activities (Task 3.5, 3.7, 3.8)
- Major Corridor Planning (Tasks 5.1, 5.2, 5.3, 5.4, 5.6, 5.7)
- Goods Movement/Freight Planning (Tasks 5.5)

Environment – Protect and restore the region’s natural resources (land, water and air) through proactive environmental stewardship
- Environmental/Air Quality Planning Activities (Tasks 2.2, 3.3)
- Active Transportation Planning and Bike/Ped Planning and Promotion Activities (Tasks 2.3, 3.4)

Equity -- Ensure all people have the opportunity to thrive.
- Land-Use and Comprehensive Planning Activities (Tasks 2.1)
- Public Participation Activities (Task 1.2)
- Transit Planning Activities (Tasks 5.1, 5.2, 5.3, 5.4)

Place Making – Coordinate transportation and land-use planning as a means to create quality places in existing and developing areas and to strengthen the quality of the region
- Land-Use and Comprehensive Planning Activities (Tasks 2.1)

Public Health – Facilitate healthy, active living
- Transit Planning Activities (Tasks 5.1, 5.2, 5.3, 5.4)
- Active Transportation planning and Bike/Ped Planning and Promotion Activities (Tasks 2.3, 3.4)
- Land-Use and Comprehensive Planning Activities (Tasks 2.1)
Safety and Security – Improve safety and security for all transportation users
• Safety and Security Planning Activities (Task 3.6)

System Condition – Ensure the transportation system is maintained in good condition
• System Condition Performance Monitoring and Planning (Tasks 2.2, 3.9, 5.2, 5.3, 5.4)

System Performance – Manage the system to achieve reliable and efficient performance
• Operations and Management Planning Activities (Tasks 3.5, 3.7, 3.8)
• Major Corridor Planning (Tasks 5.1, 5.2, 5.3, 5.4, 5.6, 5.7)

Transportation Choices -- Expand affordable, accessible, multimodal transportation options in order to better connect residents and visitors to jobs and services.
• Transit Planning Activities (Tasks 5.1, 5.2, 5.3, 5.4)
• Active Transportation Planning and Bike/Ped Planning and Promotion Activities (Tasks 2.3, 3.4)
• Land-Use and Comprehensive Planning Activities (Task 2.1)
Appendix B

MAJOR WORK ACCOMPLISHMENTS IN 2018

Planning and Project Development

- Processed amendments to the region’s metropolitan transportation plan, Transportation Outlook 2040.
- Continued work to develop regional sustainability indicators and sustainability tools for Creating Sustainable Places.
- Engaged the Sustainable Places Policy Committee (SPPC), a follow-up committee to the previous Creating Sustainable Places committee, on Planning Sustainable Places work, discussion on a number of sustainable initiatives, programming support, etc.
- Supported efforts towards and update of MARC Vision, which will influence policy framework, goals and strategies in development of upcoming Metropolitan Transportation Plan.
- Continued MARC’s Regional Counting Program for collecting bicycle/pedestrian counts. Loaned counting equipment to local governments assisted them with installation, data retrieval and analysis. Researched potential opportunities for program expansion.
- Adopted the Regional Pedestrian Policy Plan, a regional and local assessment of existing plans, policies and programs with a pedestrian lens, accompanied by recommendations to enhance MARC’s regional efforts and recommendations to enhance local efforts.
- Regional Planning Roundtable – Convened quarterly roundtable meetings of city/county planners in the region to discuss best practices and share events/announcements.
- Convened Regional Planning Director’s Luncheons on a quarterly basis, as forum for informal networking and idea exchange.
- Produced quarterly fatality reports with updated format to incorporate historical data on the Safety Blueprint priority areas.
- Developed the annual Destination Safe Public Information & Education Plan.
- Monitored USDOT rulemaking related to MAP-21/FAST Act.
- Implemented recommendations from the FHWA Data Business Planning pilot to improve data management practices in support of regional mobility performance measures.
- Performed several upgrades and enhancements to the regional travel demand model, including model calibration and validation.
- Completed an update to the Kansas City Regional Intelligent Transportation Systems Architecture that will bring the architecture into consistency with the latest version of the National ITS architecture, incorporate new initiatives in the region, and update the architecture user interface.
- Completed development of a policy and planning framework for autonomous and connected vehicles in greater Kansas City.
- Completed identification of CUFC and formula to address mileage allocation
- Completed phase two of the Green Infrastructure Plan development
- Completed Regional Climate Resilience Strategy
- Convened a Transportation Performance Management work group to guide development of performance targets for NHS system condition, NHS system performance, and freight.
- Coordinated with planning partners to establish and adopt performance targets for Safety, NHS system condition, and NHS/Freight system performance.
- Incorporated performance targets and performance management activities into the MTP, performance measures report, and TIP.
- Assembled and convened a Regional Transportation System Management & Operations (TMS&O) Work Group to oversee and guide regional TSM&O planning and implementation efforts.
- Completed second update to the Complete Streets Handbook.
- Complete third update to the Peer Cities Transit Report.
• Convened a “Mobility Hub” taskforce to advance implementation efforts around mobility hubs, including sample code/plan language, metrics to be developed around hubs, future areas of work, etc.
• Completed an update to the Coordinated Public Transit-Human Services Transportation Plan.
• Initiated an update to the Regional Household Travel Survey, which will be used to update regional travel models.
• Obtained a license for Dynameq (dynamic traffic assignment) software tool that will support more detailed traffic analysis and forecasting.
• Developed framework and collected data on pedestrian infrastructure along existing fixed transit routes to assess accessibility of stops and routes.
• Continues to implement a work plan towards an update of Metropolitan Transportation Plan (RTP 2050), due to be completed in 2020.
• Completed and finalized work on the US-69/I-70 Planning and Environmental Linkages (PEL) “Beyond the Loop” Study.
• Completed Transit Oriented Development Economic Impact Study.
• Began regional analysis of retail sector to determine potential opportunities and challenges in conjunction with transportation and land use changes in the sector.
• Submitted an application for funding under FHWA’s National Economic Partnerships for Innovative Approaches to Multi-Jurisdictional Coordination

Programming

• Approved MARC committee recommendations for federal Congestion Mitigation Air Quality (CMAQ), Surface Transportation Block Grant Program (STP), Surface Transportation Block Grant Program – Set Aside (TAP) and 5310 funding programs estimated to total $80 million through FFY 2022.
• Completed and approved 6 amendments to the 2018-2022 Transportation Improvement Program (TIP)
• Prepared the 2018 Annual Listing of Obligated Projects
• Supported regional applications through letters of support for, state economic development and cost share programs.
• Released call for projects under the FY 2019 Destination Safe, Missouri Coalition for Roadway Safety and Kansas 402 safety projected and made funding recommendations to respective states.
• Conducted project selection process for the 2019 Planning Sustainable Places projects. Projects have been selected to receive funds and have begun procurement work.

Public Engagement

• Maintained the Transportation Matters blog; published quarterly editions of ReMARC.
• Hosted webinars and training programs related to transportation, the built and natural environment, and other planning issues for regional professional development.
• MARC conducted a number of “pop” up meetings and other engagement efforts such as an online “story map” and a number of Facebook live events in association with the development of the metropolitan transportation plan (RTP 2050).
• MARC conducted a stakeholder engagement and public open house in association with the development of the first Regional Pedestrian Policy Plan.
• MARC engaged the Destination Safe Coalition of partners in an open public review of the Kansas City Regional Safety Blueprint 2018-2022 update.
Management and Administration

- Completed/approved three amendments to the 2018 Unified Planning Work Program (UPWP); prepared the 2017 Year-end report; prepared 208 Quarterly Reports; prepared the 2019 Unified Planning Work Program.
- Completed MARC’s 2019 – 2021 DBE goal

Other

- Sponsored the Green Commute Challenge, an employer-based alternative transportation contest from June through August. Upon completion, 631 participants had reduced their driving by 508,336 miles, and prevented 397,356 pounds of emissions from entering the atmosphere. They also saved $102,469 in driving costs and vehicle expenses.
- Continued to implement traffic signal timing updates and manage the Operation Green Light Program; began project development for the video monitoring and communications enhancement project.
- Continued work with BikeWalkKC to offer Missouri local government “Safe Streets for Bicycles Workshops” and “Safe Streets for Bicycles Lunch and Learns”.
- Promoted Bike to Work Week (during May Bike Month) and International Walk to School Day (under the Walktober banner) through MARC’s Explore KC campaign and in cooperation with BikeWalkKC and their Why I walk/Why I bike campaign.
- Participated on MoDOT’s Local Public Agency Advisory Committee.
## APPENDIX C - SCHEDULE 1
### FY 2019 FUNDING SUMMARY TABLE

<table>
<thead>
<tr>
<th>Work Element</th>
<th>MARC</th>
<th>KDOT</th>
<th>MoDOT</th>
<th>Other</th>
<th>CPG Funds</th>
<th>Federal</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KDOT(1)</td>
<td>MoDOT(2)</td>
<td>Amount</td>
<td>Agency</td>
</tr>
<tr>
<td>1.1 Transportation Administration</td>
<td>$85,243</td>
<td>$124,174</td>
<td>$216,798</td>
<td>$426,215</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Public Participation</td>
<td>$49,308</td>
<td>$71,830</td>
<td>$125,406</td>
<td>$246,544</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Land Use, Demographic &amp; Comprehensive Planning</td>
<td>$93,866</td>
<td>$136,737</td>
<td>$238,728</td>
<td>$469,331</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2 Metropolitan Transportation Plan</td>
<td>$67,634</td>
<td>$98,524</td>
<td>$172,010</td>
<td>$338,168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3 Measuring Multimodal Connectivity Pilot Project</td>
<td>$0</td>
<td>$13,954</td>
<td>$0</td>
<td>$55,814</td>
<td>FHWA</td>
<td>$69,758</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4 Transportation Modeling/Forecasting</td>
<td>$101,698</td>
<td>$148,146</td>
<td>$258,646</td>
<td>$508,490</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Transportation Research &amp; Database Management</td>
<td>$18,853</td>
<td>$27,463</td>
<td>$47,947</td>
<td>$94,263</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3 Air Quality Planning</td>
<td>$23,634</td>
<td>$34,248</td>
<td>$59,794</td>
<td>$117,552</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4 Transportation Technology</td>
<td>$5,137</td>
<td>$10,397</td>
<td>$18,151</td>
<td>$35,685</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5 Transportation Safety Planning</td>
<td>$18,530</td>
<td>$26,993</td>
<td>$47,126</td>
<td>$92,469</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.7 Congestion Management System</td>
<td>$11,106</td>
<td>$16,178</td>
<td>$28,245</td>
<td>$55,529</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8 Management &amp; Operations Planning</td>
<td>$7,796</td>
<td>$11,356</td>
<td>$19,826</td>
<td>$38,978</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.10 Regional Household Travel Survey</td>
<td>$110,000</td>
<td>$440,000</td>
<td>$150,000</td>
<td>FHWA SPR</td>
<td>$700,000</td>
<td>$138,910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Transportation Improvement Program</td>
<td>$27,782</td>
<td>$40,470</td>
<td>$70,658</td>
<td>$138,910</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 Transit Planning &amp; Coordination</td>
<td>$57,479</td>
<td>$100,000</td>
<td>$0</td>
<td>$400,000</td>
<td>FTA 5307</td>
<td>$500,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2 RideKC Short-Range and Ongoing Transportation Planning</td>
<td>$210,000</td>
<td>$0</td>
<td>$840,000</td>
<td>FTA 5307, 5309, Section 2005(b)</td>
<td>$1,050,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.3 RideKC Long-Range Transit and Capital Planning</td>
<td>$15,473</td>
<td>$22,539</td>
<td>$39,350</td>
<td>$77,362</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.5 Corridor Studies</td>
<td>$2,112</td>
<td>$3,077</td>
<td>$5,373</td>
<td>$10,562</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.6 Environmental Assessment (EA) for U.S. 169 Corridor</td>
<td>$0</td>
<td>$750,000</td>
<td>$750,000</td>
<td>FHWA STP</td>
<td>$1,500,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.7 Aviation Planning</td>
<td>$461</td>
<td>$672</td>
<td>$1,174</td>
<td>$2,307</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.8 MoDOT Traffic Studies</td>
<td>$0</td>
<td>$250,000</td>
<td>$0</td>
<td>$250,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.9 Kansas City Outer Loop Toll Feasibility Study</td>
<td>$0</td>
<td>$300,000</td>
<td>$0</td>
<td>$300,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.10 Metcalf Improvements Study</td>
<td>$0</td>
<td>$250,000</td>
<td>$0</td>
<td>$250,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.11 Central Plains Heartland Freight Technology Plan</td>
<td>$6,250</td>
<td>$56,250</td>
<td>$250,000</td>
<td>FHWA</td>
<td>$312,500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.1 Operation Green Light</td>
<td>$0</td>
<td>$700,000</td>
<td>$700,000</td>
<td>FHWA STP</td>
<td>$1,400,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.2 RideShare Program</td>
<td>$0</td>
<td>$18,000</td>
<td>$18,000</td>
<td>FHWA CMAQ</td>
<td>$250,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.3 Active Transportation Programs</td>
<td>$0</td>
<td>$238,750</td>
<td>$955,000</td>
<td>FHWA STP</td>
<td>$1,193,750</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.5 Blue River Watershed Vulnerability Assessment</td>
<td>$0</td>
<td>$37,500</td>
<td>$150,000</td>
<td>FHWA</td>
<td>$187,500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.6 Grandview Intersection Analysis</td>
<td>$0</td>
<td>$2,000</td>
<td>$8,000</td>
<td>FHWA TEAP</td>
<td>$10,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.7 Crooked Road Traffic Study</td>
<td>$0</td>
<td>$2,000</td>
<td>$8,000</td>
<td>FHWA TEAP</td>
<td>$10,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$809,766</td>
<td>$2,828,622</td>
<td>$2,203,805</td>
<td>$4,588,814</td>
<td>$11,691,268</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Kansas CPG funds assume $1,010,262 in 2019 allocated funding. MARC will provide $252,565 to match CPG.

(2) Missouri CPG funds assume $1,841,341 in new funds and $362,464 in carryover funds. MARC anticipates using direct cost value of $550,951 to match Missouri CPG funds and increase Missouri CPG to $2,754,756 as detailed in Appendix C - Schedule 2. Additional carryover funds will be used to support this.
## APPENDIX C - SCHEDULE 2
### DETAIL OF PLANNING PROGRAM BY STATE (FHWA PL AND FTA SEC 5305(d))

<table>
<thead>
<tr>
<th>Work Element</th>
<th>Kansas Cost Share</th>
<th>Missouri Cost Share</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Transportation Administration</td>
<td>$155,218</td>
<td>$270,997</td>
<td>$426,215</td>
</tr>
<tr>
<td>1.2 Public Participation</td>
<td>$89,787</td>
<td>$156,757</td>
<td>$246,544</td>
</tr>
<tr>
<td>1.3 Land Use, Demographic &amp; Comprehensive Planning</td>
<td>$170,921</td>
<td>$298,410</td>
<td>$469,331</td>
</tr>
<tr>
<td>2.1 Metropolitan Transportation Plan</td>
<td>$123,155</td>
<td>$215,013</td>
<td>$338,168</td>
</tr>
<tr>
<td>2.2 Transportation Modeling/Forecasting</td>
<td>$164,972</td>
<td>$288,022</td>
<td>$452,994</td>
</tr>
<tr>
<td>3.1 Transportation Research &amp; Database Management</td>
<td>$185,182</td>
<td>$323,308</td>
<td>$508,490</td>
</tr>
<tr>
<td>3.2 Air Quality Planning</td>
<td>$34,329</td>
<td>$59,934</td>
<td>$94,263</td>
</tr>
<tr>
<td>3.3 Active Transportation</td>
<td>$42,810</td>
<td>$74,742</td>
<td>$117,552</td>
</tr>
<tr>
<td>3.4 Transportation Technology</td>
<td>$12,996</td>
<td>$22,689</td>
<td>$35,685</td>
</tr>
<tr>
<td>3.5 Transportation Safety Planning</td>
<td>$33,741</td>
<td>$58,908</td>
<td>$92,649</td>
</tr>
<tr>
<td>3.6 Congestion Management System</td>
<td>$20,223</td>
<td>$35,306</td>
<td>$55,529</td>
</tr>
<tr>
<td>3.7 Management &amp; Operations Planning</td>
<td>$14,195</td>
<td>$24,783</td>
<td>$38,978</td>
</tr>
<tr>
<td>3.8 Performance Measurement &amp; Target Setting</td>
<td>$27,186</td>
<td>$47,464</td>
<td>$74,650</td>
</tr>
<tr>
<td>3.9 Regional Household Travel Survey</td>
<td>$0</td>
<td>$550,000</td>
<td>$550,000</td>
</tr>
<tr>
<td>4.1 Transportation Improvement Program</td>
<td>$50,588</td>
<td>$88,322</td>
<td>$138,910</td>
</tr>
<tr>
<td>5.1 Transit Planning &amp; Coordination</td>
<td>$104,663</td>
<td>$182,730</td>
<td>$287,393</td>
</tr>
<tr>
<td>5.2 Goods Movement/Freight Planning</td>
<td>$28,174</td>
<td>$49,188</td>
<td>$77,362</td>
</tr>
<tr>
<td>5.3 Corridor Studies</td>
<td>$3,846</td>
<td>$6,716</td>
<td>$10,562</td>
</tr>
<tr>
<td>5.4 Aviation Planning</td>
<td>$840</td>
<td>$1,467</td>
<td>$2,307</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1,262,826</td>
<td>$2,754,756</td>
<td>$4,017,582</td>
</tr>
</tbody>
</table>

#### 1 Federal Funding as a percentage of total MARC (Missouri portion) actual transportation planning costs is 93.7% ($3,765,017/$4,017,582 = 93.7%).

#### 2 The value of MoDOT Traffic Studies, KDOT Outer Belt Study Direct Costs and Overland Park Metcalf Study Direct Cost makes an additional $658,613 ($823,266 x .80) of Federal CPG (MO) funding available for budgeted actual cost. Federal funding as a percentage of total MARC (Missouri portion) actual transportation planning costs is in excess of 100% ($2,862,418/$2,754,756 = 104%). Additional unused federal CPG amount of $107,662 ($2,862,418-$2,754,756) is available for use on Missouri scope of work share added during the FY 2019 program year. Additional unused direct cost credit value is $134,577 ($107,662 is 80% of $134,577).

#### 3 Federal Funding as a percentage of total MARC (Kansas/Missouri shares) actual transportation planning costs is 93.7% ($3,765,017/$4,017,582 = 93.7%).
### APPENDIX C - SCHEDULE 3

**AVAILABLE FEDERAL PLANNING FUNDS BY STATE**

<table>
<thead>
<tr>
<th></th>
<th>Kansas</th>
<th>Missouri</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARC CPG balance as of 7/18 with FY2018 allocation</td>
<td>$1,044,486</td>
<td>$4,051,970</td>
<td>$5,096,456</td>
</tr>
<tr>
<td>FY 2019 CPG Allocation</td>
<td>$1,010,261</td>
<td>$1,841,341</td>
<td>$2,851,602</td>
</tr>
<tr>
<td>FY 2018 CPG funds expended</td>
<td>$(1,044,486)</td>
<td>$(2,015,671)</td>
<td>$(3,060,157)</td>
</tr>
<tr>
<td>Total estimated CPG funds available for FY 2019 UPWP*</td>
<td>$1,010,261</td>
<td>$3,877,640</td>
<td>$4,887,901</td>
</tr>
<tr>
<td>CPG funds programmed for FY 2019</td>
<td>$(1,010,261)</td>
<td>$(2,754,756)</td>
<td>$(3,765,017)</td>
</tr>
<tr>
<td>Remaining Unprogrammed CPG funds balance</td>
<td>$-</td>
<td>$1,122,884</td>
<td>$1,122,884</td>
</tr>
</tbody>
</table>

In Kansas, MPO’s are allowed to carry over their planning funds for three years. The three year cycle follows the grant cycle KDOT follows with the Federal Transit Administration with the most recent ending in 2017. After the third year, the MPO is allowed to keep 20% of the remaining balance as carryover and the remaining 80% will be placed in a KDOT Metro Planning Project and made available to MPO’s through a competitive application process.

In Missouri, MARC’s ability to maintain a balance of planning funds provides stability if current funding is delayed or reduced. In addition, the funds can be drawn upon to supplement normal activities with exceptional work that MARC needs to periodically conduct to meet federal requirements. For example, conducting an extensive household travel survey in 2019 would not be possible without a substantial balance of funds from prior years. Based on the assumption that 100% of the funds programmed in this document will be spent, MARC estimates that $1,122,884 will be available for carryover to the next UPWP.
### 2019 MoDOT Traffic Studies Projected Salaries

<table>
<thead>
<tr>
<th>Title</th>
<th>Yearly Salary Base</th>
<th>Yearly Fringe 86.45%</th>
<th>Yearly Total</th>
<th>% Eligible</th>
<th>Yearly Eligible</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traffic Studies Staff</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sr Traffic Studies Specialist - Cedrick Owens</td>
<td>57,436</td>
<td>49,653</td>
<td>107,089</td>
<td>50%</td>
<td>53,545</td>
</tr>
<tr>
<td>Sr Traffic Studies Specialist - Alex Martinez</td>
<td>54,352</td>
<td>46,987</td>
<td>101,339</td>
<td>50%</td>
<td>50,670</td>
</tr>
<tr>
<td>Sr Traffic Studies Specialist - Krystal Jolly</td>
<td>53,356</td>
<td>46,126</td>
<td>99,482</td>
<td>50%</td>
<td>49,741</td>
</tr>
<tr>
<td>Sr Traffic Studies Specialist - Tamara Pitts</td>
<td>53,356</td>
<td>46,126</td>
<td>99,482</td>
<td>50%</td>
<td>49,741</td>
</tr>
<tr>
<td><strong>Total Traffic Eligible Costs</strong></td>
<td>218,500</td>
<td>188,893</td>
<td>407,393</td>
<td></td>
<td>203,697</td>
</tr>
<tr>
<td><strong>Blueprint for Safety Staff</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sr Traffic Studies Specialist - Tamara Pitts</td>
<td>53,356</td>
<td>46,126</td>
<td>99,482</td>
<td>35%</td>
<td>34,819</td>
</tr>
<tr>
<td>Sr Traffic Technician - David Olson</td>
<td>37,276</td>
<td>32,225</td>
<td>69,501</td>
<td>50%</td>
<td>34,751</td>
</tr>
<tr>
<td><strong>Total Blueprint Eligible Costs</strong></td>
<td>90,632</td>
<td>78,351</td>
<td>168,983</td>
<td></td>
<td>69,569</td>
</tr>
</tbody>
</table>

**Total UPWP Eligible Costs** 273,266

Projected 2019 Salary/Fringes based on FY19 base salary + $700 annual pay increase beginning Jan2019 and FY19 fringe benefits percentage.
## MARC CPG Subcontracts

<table>
<thead>
<tr>
<th>UPWP Task</th>
<th>Project</th>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td>Public Engagement for RTP 2050</td>
<td>CPG</td>
<td>$25,000</td>
</tr>
<tr>
<td>3.1</td>
<td>On-Call Consultant Support for Travel Demand Modeling</td>
<td>CPG</td>
<td>$50,000</td>
</tr>
<tr>
<td>3.1</td>
<td>Synthetic Data Pilot Completion</td>
<td>CPG</td>
<td>$22,435</td>
</tr>
<tr>
<td>3.10</td>
<td>Regional Household Travel Survey</td>
<td>CPG/SPR</td>
<td>$700,000</td>
</tr>
</tbody>
</table>

**Total Contractual**

| CPG – Consolidated Planning Grant | SPR – State Planning and Research Program | $797,435 |

## MARC CPG Operating Expenses

<table>
<thead>
<tr>
<th>UPWP Task</th>
<th>Project</th>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Legal Fees</td>
<td>CPG</td>
<td>$500</td>
</tr>
<tr>
<td>1.1</td>
<td>Contracted Service (Document Translation, etc.)</td>
<td>CPG</td>
<td>$1,500</td>
</tr>
<tr>
<td>1.1</td>
<td>Service Agreements (emme/2, REMI, ESRI, etc.)</td>
<td>CPG</td>
<td>$63,405</td>
</tr>
<tr>
<td>1.1</td>
<td>Data</td>
<td>CPG</td>
<td>$19,000</td>
</tr>
<tr>
<td>1.1</td>
<td>In Region Travel</td>
<td>CPG</td>
<td>$500</td>
</tr>
<tr>
<td>1.1</td>
<td>Out of Region Travel</td>
<td>CPG</td>
<td>$22,000</td>
</tr>
<tr>
<td>1.1</td>
<td>Registration Fees (Conference, Training, etc.)</td>
<td>CPG</td>
<td>$10,500</td>
</tr>
<tr>
<td>1.1</td>
<td>Meeting</td>
<td>CPG</td>
<td>$2,000</td>
</tr>
<tr>
<td>1.1</td>
<td>Periodicals &amp; Subscriptions</td>
<td>CPG</td>
<td>$2,000</td>
</tr>
<tr>
<td>1.1</td>
<td>Agency Professional Memberships (1)</td>
<td>CPG</td>
<td>$13,750</td>
</tr>
<tr>
<td>1.1</td>
<td>Classified Advertising</td>
<td>CPG</td>
<td>$20,000</td>
</tr>
<tr>
<td>1.1</td>
<td>Drafting</td>
<td>CPG</td>
<td>$200</td>
</tr>
<tr>
<td>1.1</td>
<td>Courier/Overnight Delivery</td>
<td>CPG</td>
<td>$200</td>
</tr>
<tr>
<td>1.1</td>
<td>Printing</td>
<td>CPG</td>
<td>$500</td>
</tr>
<tr>
<td>1.1</td>
<td>Supplies and General Expense</td>
<td>CPG</td>
<td>$500</td>
</tr>
<tr>
<td>1.1</td>
<td>Computer Supplies</td>
<td>CPG</td>
<td>$20,550</td>
</tr>
<tr>
<td>1.1</td>
<td>Equipment &lt;$2,000</td>
<td>CPG</td>
<td>$5,000</td>
</tr>
<tr>
<td>1.1</td>
<td>Training (includes webinars)</td>
<td>CPG</td>
<td>$5,000</td>
</tr>
</tbody>
</table>

**Total Operating Expenses**

(1) For 2019 MARC professional memberships could include NARC (transportation program only), AMPO, Kansas City SmartPort, KPTA, MPTA, CTAA and Community Indicators Consortium, and the Association of Public Data Users among others. $187,105
### MARC Personnel Costs

<table>
<thead>
<tr>
<th>Item</th>
<th>CPG</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary</td>
<td>CPG</td>
<td>$1,588,417</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>CPG</td>
<td>$789,223</td>
</tr>
<tr>
<td><strong>Total Personnel Costs</strong></td>
<td></td>
<td><strong>$2,377,640</strong></td>
</tr>
</tbody>
</table>

### MARC Other Costs

<table>
<thead>
<tr>
<th>Item</th>
<th>CPG</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect</td>
<td>CPG</td>
<td>$722,204</td>
</tr>
<tr>
<td>Rent</td>
<td>CPG</td>
<td>$105,630</td>
</tr>
<tr>
<td><strong>Total Other Costs</strong></td>
<td></td>
<td><strong>$827,834</strong></td>
</tr>
</tbody>
</table>
STATE AND LOCAL GOVERNMENTS RATE AGREEMENT

EIN: 430976432
ORGANIZATION:
Mid-America Regional Council
600 Broadway, Suite 200
Kansas City, MO 64105-1659

DATE: 10/01/2018
FILING REF.: The preceding agreement was dated 07/25/2017

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES

<table>
<thead>
<tr>
<th>RATE TYPES:</th>
<th>FIXED</th>
<th>FINAL</th>
<th>PROV. (PROVISIONAL)</th>
<th>PRED. (PREDETERMINED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFFECTIVE PERIOD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TYPE</td>
<td>FROM</td>
<td>TO</td>
<td>RATE (%) LOCATION</td>
<td>APPLICABLE TO</td>
</tr>
<tr>
<td>FIXED</td>
<td>01/01/2018</td>
<td>12/31/2018</td>
<td>28.40 On Site</td>
<td>Head Start</td>
</tr>
<tr>
<td>FIXED</td>
<td>01/01/2018</td>
<td>12/31/2018</td>
<td>30.20 On Site</td>
<td>All Programs except Head Start</td>
</tr>
<tr>
<td>FIXED</td>
<td>01/01/2019</td>
<td>12/31/2019</td>
<td>28.60 On Site</td>
<td>Head Start</td>
</tr>
<tr>
<td>FIXED</td>
<td>01/01/2019</td>
<td>12/31/2019</td>
<td>30.40 On Site</td>
<td>All Programs except Head Start</td>
</tr>
<tr>
<td>PROV.</td>
<td>01/01/2020</td>
<td>12/31/2021</td>
<td>Use same rates and conditions as those cited for fiscal year ending December 31, 2019.</td>
<td></td>
</tr>
</tbody>
</table>

*BASE

Direct salaries and wages including all fringe benefits.
**SECTION I: FRINGE BENEFIT RATES**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE (%)</th>
<th>LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED</td>
<td>1/1/2018</td>
<td>12/31/2018</td>
<td>48.90</td>
<td>On Site</td>
<td>Regular Staff</td>
</tr>
<tr>
<td>FIXED</td>
<td>1/1/2018</td>
<td>12/31/2018</td>
<td>7.65</td>
<td>On Site</td>
<td>Intern</td>
</tr>
<tr>
<td>FIXED</td>
<td>1/1/2019</td>
<td>12/31/2019</td>
<td>49.80</td>
<td>On Site</td>
<td>Regular Staff</td>
</tr>
<tr>
<td>FIXED</td>
<td>1/1/2019</td>
<td>12/31/2019</td>
<td>7.65</td>
<td>On Site</td>
<td>Intern</td>
</tr>
</tbody>
</table>

**DESCRIPTION OF FRINGE BENEFITS RATE BASE:**
Salaries and wages.
SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. The fringe benefits included in the rate(s) are listed below.

TREATMENT OF PAID ABSENCES

The costs of vacation, holiday, sick leave pay and other paid absences are included in the organization's fringe benefit rate and are not included in the direct cost of salaries and wages. Claims for direct salaries and wages must exclude those amounts paid or accrued to employees for periods when they are on vacation, holiday, sick leave or are otherwise absent from work.
Equipment Definition:
Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost of $2,000 or more per unit.

FRINGE BENEFITS:

FICA
Pension
401k Employer Match
Unemployment Compensation
Cafeteria Allowance
Health Insurance Subsidy
Educational Assistance
Disability Insurance
Vacation
Sick Leave
Holidays
Jury Duty
Funeral Leave
Emergency Leave
Transit Passes
Moving Expenses for New Hires

There is no In-Kind salaries and wages included in the base.

The indirect cost rate(s) has/have been negotiated in compliance with the applicable Administration for Children and Families Program Instructions for the Head Start program (ACYF-PI-HS-05-01 and ACYF-PI-HS-08-03). ACYF-PI-HS-08-03, dated 5/12/2008, specifically defines "compensation" and limited the cost of "compensation charged to any federally funded program to zero for any staff whose "compensation exceeded the rate payable for level II of the Executive Schedule. As of January, 2018 the Executive Schedule Level II rate is $189,600.

Your next indirect cost rate proposal based on actual costs for the fiscal year ending 12/31/18 is due in our office by 06/30/2019.
SECTION III: GENERAL

A. LIMITATIONS:
The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its indirect cost pool as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as indirect costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:
This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from indirect to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:
If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:
The rates in this Agreement were approved in accordance with the authority in Title 2 of the Code of Federal Regulations, Part 200 (2 CFR 200), and should be applied to grants, contracts and other agreements covered by 2 CFR 200, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:
If any Federal contract, grant or other agreement is reimbursing indirect costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of indirect costs allocable to these programs.

BY THE INSTITUTION:
Mid-America Regional Council

(SIGNATURE)
CAROL GONZALES

(NAME)
DIR. FINANCE & ADMINISTRATION

(TITLE)
10-10-18

(DATE)

ON BEHALF OF THE FEDERAL GOVERNMENT:

AGENCY
DEPARTMENT OF HEALTH AND HUMAN SERVICES

(SIGNATURE)
Darryl W. Mayes

(NAME)
Arif Karim

(TITLE)
Director, Cost Allocation Services

(DATE) 10/1/2018

4456

RHS REPRESENTATIVE:
Wanda Rayfield

TelephoneNumber:
(214) 767-3261
Appendix E
RELATED ACTIVITIES

E.1 Operation Green Light – Lead Agency: MARC

Objectives

- Manage traffic signal operations on the arterial corridors included in Operation Green Light in cooperation with partner agencies.
- Support regional traffic incident management initiatives by managing traffic signal timing plans on the arterial corridors included in Operation Green Light.
- Maintain the regional shared wireless communication network.
- Maintain the regional Advanced Transportation Management System (ATMS) Software

Background/Previous Work

Operation Green Light is a regional effort to improve traffic flow and reduce vehicle emissions. Operation Green Light works with federal, state and local agencies to operate and coordinate traffic signal timing plans and communication between traffic signal equipment across jurisdictional boundaries on nearly 700 traffic signals. Coordinating traffic signal systems can significantly reduce travel delay, reduce ozone precursor emissions and provide a powerful tool to help manage incident-related congestion.

Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Program management.** Activities included in this work include project management, stakeholder engagement, training, and all other work necessary to ensure the active prioritization of objectives to efficiently manage traffic signal infrastructure and control devices (ongoing)
2. **ACTIVITY: Signal Timing and Synchronization.** Activities include traffic data collection and analysis, field observation, controller programming and deployment, signal timing troubleshooting and traffic modeling and deployment (ongoing.)
3. **ACTIVITY: Regional network communications.** Activities include, database management, repair tracking, field investigation, equipment procurement, server administration, contractor oversight and other activities associated with the system network (ongoing.)
4. **ACTIVITY: Regional ATMS system software.** Lead regular software development meetings to maintain and enhance the shared software system including servers and supporting systems
5. **ACTIVITY: Engage regional traffic operations stakeholders in an assessment of strengths, weaknesses, opportunities and threats to regional traffic operations initiatives.** (ongoing)

E.2 RideShare Program – Lead Agency: MARC

Objectives

- Identify and implement ways to provide effective commuter resources that inform citizens of their transportation options and encourage alternatives to driving alone, including carpooling, vanpooling, transit, bicycling, walking and telecommuting.
- Create opportunities for RideShare to help build social capital throughout the community.
- Increase the number of new RideShare registrants and implement strategies that encourage residents to reduce their single-occupant driving
• Increase RideShare’s visibility and influence among area employers that are implementing or developing alternative transportation programs for their employees
• Develop opportunities for collaborative outreach activities with other programs at MARC and outside agencies to maximize resources and avoid duplication of services

Background/Previous Work

MARC administers the RideShare Commuter Resource Center as an on-going program. RideShare services include an 816-842-RIDE commuter hotline, free online carpool matching, vanpool and transit referral, Guaranteed Ride Home service to registered participants and online bulletins to alert commuters to roadway construction projects and potential travel delays. Services for employers include on-site RideShare promotions, in-house carpool matching and tracking of alternative transportation usage, as well as regional promotions like the Green Commute Challenge. RideShare is included in the region’s metropolitan transportation plan as a transportation demand management program.

Program Activities

1. Conduct a targeted business outreach campaign to inform employers of RideShare’s services and coordinate efforts with other transportation programs.
2. Coordinate a regional carpool promotion to generate media coverage and greater awareness of carpooling.
3. Coordinate and market the Green Commute Challenge employer contest to employers throughout the Kansas City region during the 2018 ozone season.
4. Identify opportunities to offer incentives to commuters who use alternative forms of transportation.
5. Continue refining a marketing strategy to promote online ridematching and other commuter resources to businesses, communities and individual commuters.
6. Continue offering individual ridematching and Guaranteed Ride Home services.

Program Activities and Products (Estimated Completion Dates)

1. 
   ACTIVITY: Inform and engage the public about carpooling through a region-wide carpool promotion (ongoing).
2. 
   ACTIVITY: Host region-wide Green Commute Challenge to engage employers and employees in using transportation alternatives (July, August, September).
3. 
   PRODUCT: Public Information. Publish updates and information on social media including Facebook and blog posts (ongoing).

E.3 Active Transportation Programs – Lead Agency: MARC

Objectives

• To increase the mode share of pedestrians and bicyclists through education and encouragement.

Background/Previous Work

Explore KC is MARC’s campaign to promote the exploration of the Kansas City region by foot or bicycle while trying to increase the number of citizens that bike or walk to work, school and other destinations, and for exercise. The campaign aims to improve air quality and lessen traffic congestion. Through this program, we seek to increase public awareness of bicycle and pedestrian facilities in the Kansas City region and the health benefits associated with safe walking and bicycling practices. The campaign provides resources for
communities that promote Bike to Work Week and international Walk to School Week. Instructional materials are provided to targeted groups such as transit riders and bike commuters.

Program Activities and Products (Estimated Completion Dates)

1. **ACTIVITY**: Develop *Explore KC* campaigns for the spring and fall including media outreach, printed materials, and promotional giveaways (Apr and Sept).
2. **ACTIVITY**: Provide support for Regional Bike/Ped Count program through automated counter equipment and subscription service credits (ongoing).

**E.4 Planning Sustainable Places Program – Lead Agency: MARC**

Program Objectives

- To support and facilitate local government planning activities that supports the Metropolitan Transportation Plan (MTP) for the Kansas City Metropolitan Area.
- To integrate local and regional land use, transportation, and environmental planning.
- To facilitate continued public participation concerning regional development and mobility and transportation goals, policies, strategies, and priorities reflected in the MTP.
- To facilitate the implementation of local and regional plans.

Background/Previous Work

The Kansas City region’s vibrant, green and connected centers and corridors is central to both the Creating Sustainable Places initiative and Transportation Outlook 2040 (TO2040), the region’s long range transportation plan.

In 2012, MARC’s Total Transportation Policy Committee (TTPC) and the Creating Sustainable Places (CSP) Coordinating Committee launched Planning Sustainable Places (PSP), a combined initiative to provide communities with pre-development resources to advance sustainable projects in their corridors and centers. The fourth round of Planning Sustainable Places projects will be conducted in 2019.

More information about the Planning Sustainable Places program and the related projects can be found at the program webpage: [http://www.marc.org/Regional-Planning/Creating-Sustainable-Places/Planning-sustainable-Places/Background.aspx](http://www.marc.org/Regional-Planning/Creating-Sustainable-Places/Planning-sustainable-Places/Background.aspx)

Program Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Program Support.** Continue the support of the overall Planning Sustainable Places Program including providing related local government planning and tools application support as necessary. (ongoing during 2019)
2. **ACTIVITY: Project Work Commences.** The 2019 projects will complete procurement and commence work during 2019. MARC will retain 7.5% of STP funding to support project development and administration activities (ongoing during 2019).
3. **ACTIVITY: The process to review and refine the Planning Sustainable Places program’s format and processes to better target funding to projects that further sustainable land use, transportation and environmental actions will begin during the fall of 2019.
<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Project Title</th>
<th>Federal Funding</th>
<th>Local Match</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gardner, Kan.</td>
<td>Gardner Destination Downtown: A Placemaking &amp; Mobility Enhancement Project</td>
<td>$72,000</td>
<td>$ 18,000</td>
<td>The project would develop a plan for the Downtown Core area that would include a parking analysis, streetscape improvements, public space, transit amenities and trail connections.</td>
</tr>
<tr>
<td>Shawnee, Kan.</td>
<td>RE-Imagine 75th: A Pedestrian, Streetscape and Amenity Corridor Design Guide</td>
<td>$ 48,000</td>
<td>$ 12,000</td>
<td>The project would develop guidelines for transit stops, complete street design elements, stormwater quality BMPs, and design guidelines.</td>
</tr>
<tr>
<td>Olathe, Kan.</td>
<td>Downtown Olathe Active Transportation Connectivity Plan</td>
<td>$ 60,000</td>
<td>$ 15,000</td>
<td>The project will develop complete streets and bike boulevard conceptual design for Downtown Olathe.</td>
</tr>
<tr>
<td>Roeland Park, Kan.</td>
<td>Roe Boulevard and Johnson Drive Corridor Plan</td>
<td>$80,000</td>
<td>$ 37,505</td>
<td>The project will enhance multimodal connectivity and parking along Johnson Drive and at 47th Street.</td>
</tr>
<tr>
<td>Kansas City Area Transportation Authority</td>
<td>Multimodal Branding and Wayfinding System Plan</td>
<td>$68,375</td>
<td>$ 29,000</td>
<td>The project will develop unified regional navigational information for bicyclists, pedestrians and transit users.</td>
</tr>
<tr>
<td>Kansas City Area Transportation Authority</td>
<td>Woodland Plaza: Planning Equitable Transportation Investments in a Redeveloping Community</td>
<td>$</td>
<td>$ 7,600</td>
<td>The project will develop multimodal linkages and infrastructure to connect neighborhood institutions with residents, employees and the greater community.</td>
</tr>
<tr>
<td>Kansas City, Mo./Hispanic Economic Development Council</td>
<td>West 31st Street Corridor – SW Blvd to SW Trafficway</td>
<td>$ 100,000</td>
<td>$ 37,500</td>
<td>The project will develop a complete street plan that includes multimodal planning, safety improvements, wayfinding, and improved streetscape through a Qualified Opportunity Zone.</td>
</tr>
<tr>
<td>Kansas City, Mo.</td>
<td>63rd Street Corridor Project Development</td>
<td>$ 50,575</td>
<td>$ 65,000</td>
<td>The project will develop mobility and connectivity solutions for three activity centers along 63rd Street between Troost and Brookside.</td>
</tr>
<tr>
<td>Kansas City, Mo.</td>
<td>Linwood Corridor Complete Street &amp; Bikeway Connections</td>
<td>$ 90,000</td>
<td>$ 32,500</td>
<td>The project will develop a complete street linking the Rock Island Trail with Downtown Kansas City.</td>
</tr>
</tbody>
</table>
### North Kansas City, Mo.

**Project Title:** North Kansas City Bike Master Plan  
**Federal Funding:** $58,000  
**Local Match:** $25,000  
**Description:** The project will develop an overall plan for bicycle facilities including associated supportive infrastructure and policy framework.

### Independence, Mo.

**Project Title:** Truman Connect  
**Federal Funding:** $96,000  
**Local Match:** $25,000  
**Description:** The project will develop a complete street concept that connects multiple activity centers in the city and improves safety, connectivity and congestion.

### Gladstone, Mo.

**Project Title:** North Oak Complete Streets  
**Federal Funding:** $102,200  
**Local Match:** $57,500  
**Description:** The project will develop a complete street including bike facilities, pedestrian facilities and integration of high-capacity transit on a commercial corridor which has safety and high motor vehicle volumes.

---

**E.5 Blue River Watershed Vulnerability Assessment – Lead Agency: MARC**

**Objectives**

- Apply the FHWA Vulnerability Assessment Framework to the Blue River watershed, using modeling techniques to evaluate risks, vulnerabilities and potential mitigation strategies associated with flooding and stream stability and their effects on transportation infrastructure.
- Incorporate a resilience lens into the emerging “one water” Blue River watershed plan and the Metropolitan Transportation Plan (MTP), and inform the intersection of regional transportation and water resource management plans and policies through integrated, cross-sector, multi-benefit approaches to mitigation.
- Create a replicable pilot project that will support resilience planning throughout the Kansas City region, and in other inland riverine environments across the country.

**Background/Previous Work**

The proposed effort fits squarely within a raft of regional and local initiatives. At the regional scale, MARC was designated as a Climate Action Champion by the White House and Department of Energy in 2015. After two years of significant community engagement, education and planning, the MARC Board of Directors adopted a Regional Climate Resilience Strategy in June 2017. The strategy provides a high-level, integrated framework to advance climate resilience in multiple sectors, from transportation, water and energy to ecosystem and public health. One key strategy recommendation includes conducting detailed, quantifiable risk and vulnerability assessments for transportation and other sectors.

The region’s current MTP includes policy goals related to climate change, natural resource protection, air and water quality, public health, walkability, place-making and public safety, among others. The 2020 MTP, currently under development, will highlight climate resilience as a key focus area. Increased incidences of extreme weather – whether related to temperature or precipitation – markedly affect each of those goals.
MARC has long supported regional green infrastructure conservation and restoration. An FHWA-sponsored Eco-Logical Action Plan developed in 2008 was followed in 2013 by detailed Natural Resource Inventory (using GIS and remote sensing to produce 2.5-meter resolution land cover maps) and the designation of natural resource conservation/restoration priorities based upon ecosystem service valuation. MARC developed a Green Infrastructure (GI) Framework in late 2016 as a basis for formulating multi-benefit, watershed-based mitigation strategies. The 2020 MTP offers another regional opportunity to advance recommended GI strategies.

At the local level, KCMO and JOCO launched an integrated watershed planning feasibility study for the Blue River in mid-2017. The “one water” plan prioritizes water quality protection investments across the stormwater and wastewater sectors, leading to the creation new community assets that enhance quality of life. Engagement of key water resource managers along with transportation professionals will expand the cross-sector impact of the study, with a critical assessment of risks and vulnerabilities associated with water quantity and quality, along with potential multi-benefit mitigation strategies to address identified concerns.

Initially, the project has focused on assembling a comprehensive database of water quality in the Blue River watershed. Subsequent tasks will include developing one or more feasible alternative integrated management scenarios. A sustainable return-on-investment tool will be used to assess options using a mix of economic, environmental and community parameters. Inclusion of resilience factors will make the preferred scenarios more robust.

Program Activities and Products (Estimated Completion Dates)

1. **ACTIVITY**: Articulate objectives and define study scope
2. **ACTIVITY**: Obtain asset data
3. **ACTIVITY**: Obtain and refine climate data
4. **ACTIVITY**: Assess vulnerability
5. **ACTIVITY**: Identify, analyze, and prioritize adaption options
6. **ACTIVITY**: Incorporate assessment results in decision-making
7. **ACTIVITY**: Monitor and revisit
8. **ACTIVITY**: Project Administration
9. **PRODUCT**: Final Report

**E.6 Grandview Intersection Analysis – Lead Agency: City of Grandview, Missouri**

Objectives

To review existing conditions and identify improvements that address safety and operational efficiencies at each intersection.

Background/Previous Work

The city has previously conducted TEAP studies which have led to several operational enhancement projects. These projects include corridor improvements along Main St., interconnecting traffic signals and integrating communications with the KC Scout System, and constructing shared-use paths with ADA-compliant sidewalk improvements. Presently, the city has identified three intersections with safety and/or operational deficiencies that could benefit as a result of a traffic study.

Program Activities and Products (Estimated Completion Dates)
E.7 Crooked Road Traffic Study—Lead Agency: City of Parkville, Missouri

Objectives

To review existing conditions and identify improvements that address safety and operational efficiencies at each intersection.

Background/Previous Work

The city previously conducted a TEAP study in 2016. Based on the results of that study, city staff installed temporary measures to block a median break. This is a short term measure to allow the city time to program money into the budget to construct long-term safety improvements at the examined site. Presently, the city has identified two intersections with safety and/or operational deficiencies that could benefit as a result of a traffic study.

Program Activities and Products (Estimated Completion Dates)

1. **ACTIVITY**: Data Collection (March 2019)
2. **ACTIVITY**: Public Involvement Process (March 2019)
3. **PRODUCT**: Conduct safety and operational studies for three identified intersections (April 2019)

2019 Budget for Related Activities

| E.1 Operation Green Light       | $1,400,000 |
| E.2 Rideshare                  | $250,000  |
| E.3 Active Transportation Programs | $90,000  |
| E.4 Planning Sustainable Places | $1,193,750 |
| E.5 Blue River Watershed Vulnerability Assessment | $187,500 |
| E.6 Grandview Intersection Analysis | $10,000  |
| E.7 Crooked Road Traffic Study  | $10,000   |
| **Total**                      | **$3,141,250** |

For additional budget information please reference Appendix C – Schedules 1 & 2