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April 24, 2018
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# FY 2018 Unified Planning Work Program
## Mid-America Regional Council
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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 2018 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 2014 and 2015). Some elements of public outreach and engagement and performance monitoring will be part of each year’s activities.

The FY 2018 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 2018 UPWP has been developed in accordance with the Memorandum of Understanding adopted in 2013 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 and Unified Government Transit 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 1.9 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.
Figure 2 – Transportation Planning Process

1. 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

2. Population Employment Forecast
3. 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 setup and data collection, as well as ongoing updates 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.
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
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.
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 of for the City of Independence and Johnson County and operates several of the Unified Government Transit routes directly. These four 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. A fifth transit operator, the Kansas City Streetcar Authority, began streetcar service in downtown Kansas City, Mo. in 2016.

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 2018 UPWP.

- Respond to the FAST Act – Tasks 1.1, 2.2, 2.6, 3.1, and 7.1
- DBE and Title VI program triennial updates – Task 1.1
- Creating/Planning Sustainable Places – Task 2.1
- Performance Measures and Targets – Tasks 2.2, 2.6, 3.1
- Transportation Programming – Task 3.1
- Synthetic Data Pilot – Task 2.3
- Regional Priority Sidewalk Data Inventory – Task 5.1
- Completion of the Regional ITS Architecture Update – Task 5.2
- Prospect Bus Rapid Transit (BRT) Development – Task 6.3
- Independence Avenue Bus Rapid Transit (BRT) Assessment – Task 6.3
- Regional Transit Fare Collection and Monitoring – Task 6.3
- KC Streetcar Southern Extension Study – Task 6.4
- Planning and Environmental Linkages (PEL) Study: Broadway Extension (US-169), including bridge over Missouri River, and I-70 North Loop – Task 8.2
1.0 Program Administration

1.1 Program Administration – Lead Agency: MARC

Program 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. Also in 2017, MARC and the region’s planning partners reviewed the Memorandum of Understanding outlining the respective roles and responsibilities of each party to the metropolitan planning process.

Program Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Committee Support.** Support MARC’s transportation policy, planning, programming and special committees (see page 7) 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. **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).
7. **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).

8. **ACTIVITY: DBE.** Implement all aspects of the DBE program ensuring MARC is compliant with 49 CFR part 26 (ongoing)

**Funding**

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<td><strong>Task Total</strong> $406,466</td>
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**1.2 Public Participation – Lead Agency: MARC**

**Program 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.

**Program 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. **PRODUCT: Newsletters.** Post to the Transportation Matters Blog (as needed); and transportation stories for ReMARC (quarterly).
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 speakers bureau and presentation materials for outreach efforts related to MARC’s transportation plans and programs (Dec).

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

6. **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).

7. **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).

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### 2.0 METROPOLITAN TRANSPORTATION PLANNING

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

**Program 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 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.
- 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\(^\text{®}\), 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) 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](http://www.metrodataline.org)), KC Rising ([kcrisingmetrics.org](http://kcrisingmetrics.org)) and KC Economy ([www.kceconomy.com](http://www.kceconomy.com)).

\(^1\) Supported through funding 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.\footnote{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.

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.\footnote{3}

MARC continues the First Suburbs Coalition which addresses neighborhoods, commercial areas, and infrastructure issues and policies to promote sustainable communities and healthy environments.\footnote{3}

### Program 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: 2018 Aerial Project.** In partnership with area local governments, conduct a 2018 aerial flight that generates digital orthophotography for the participating communities. Optional products may include color infrared photography and Lidar. (December)
3. **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).
4. **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)
5. **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.
6. **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).
7. **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).
8. **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.
9. **ACTIVITY: Data – Redevelopment Rate:** Using parcel and other available data, track and monitor redevelopment activity for use in assessing progress toward a region where at least 5 percent of its residential growth is accommodated by redevelopment.
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(The local funds of $380,502 will provide cash value match for federal funds used elsewhere in the UPWP. $80,000 of this cash value will match a portion of Kansas CPG funds with the remainder used to match Missouri CPG funds)

2.2 Metropolitan Transportation Plan – Lead Agency: MARC

Program 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 initiate work on the next MTP 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.

Program Activities and Products (Estimated Completion Dates)

1. **PRODUCT: Manage Transportation Outlook 2040.** Process plan amendments (as needed).
2. **ACTIVITY: Plan Implementation.** Continue the implementation of strategies and policy priorities outlined in the TO2040 (ongoing).
4. **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).
5. **ACTIVITY: Continue inter-disciplinary efforts to update MARC’s Creating Sustainable Places plan (Regional Plan for Sustainable Development) in order to refresh/reaffirm regional vision (ongoing).
6. **ACTIVITY: Host FHWA Megaregions workshop (July)**
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2.3 Modeling/Forecasting Activities – Lead Agency: MARC

Program 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). Cloud-based UrbanSim is being renamed to UrbanCanvas and is expected to support parcel-level forecasting at some point in 2018.
- 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. 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 2015 and 2016, work was completed to validate/calibrate the travel model and several enhancements were made to improve the performance and reliability of forecasts.

Program Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Regional Control Totals.** Update regional control totals of population, households and employment using the REMI model, extending them to 2050 in preparation for the new metropolitan transportation planning horizon. (Mar)

2. **ACTIVITY: Maintain Land Use Forecast.** Maintain land use forecast to be consistent with current city and county population and employment estimates. (Ongoing)

3. **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. With consultant support, develop and begin implementing work program for any necessary model improvements.

4. **ACTIVITY: Land Use-Travel Model Integration.** Research successful practices, hold staff trainings and convene an internal technical team to develop a plan and 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).

5. **ACTIVITY: Travel Model Outputs.** Transportation model runs, network assignments, analyses and reports, including impact assessments (as needed).

6. **ACTIVITY: Truck Model Development.** Incorporate new, expanded zone structure into existing truck model and convert macros to Python scripts; fully integrate truck model into EMME as a multi-class assignment (Dec).

7. **ACTIVITY: Model Users Group.** Convene the region’s travel model users to share information, promote best practice, and encourage consistent modeling approaches (Dec).

8. **ACTIVITY: Synthetic Data Pilot.** Work with Sidewalk Labs and local planning partners to develop 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).

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2.4 Congestion Management Process – Lead Agency: MARC

Program Objectives

- To continue to implement and refine regional policies and standards regarding system performance on the congestion management network.
- To 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.

Program 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.** Integrate 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).

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2.5 Transportation Research and Database Management – Lead Agency: MARC

Program 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.

Program 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; implement processes to improve data accuracy and enhance processes (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 and/or analyses to MARC member jurisdictions, other interested agencies and the general public; develop tools and services to publish data and information online; Maintain current data on the MARC Data Portal (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).

7. **PRODUCT: Annual Performance Measurement Report.** Produce the annual report that measures progress related to the goals and performance measurements outlined in Transportation Outlook 2040 (Oct)

8. **ACTIVITY: Data Coordination Committee.** Hold regular meetings of the MARC Data Coordination Committee to advance data management and governance practices within MARC (ongoing).

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2.6 Transportation Performance Measurement and Target Setting – Lead Agencies: KDOT, MoDOT, KCATA, JCT, UGT, IndeBus, KC Streetcar, MARC

**Program 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

One of the significant changes MAP-21 made to the statewide and metropolitan planning processes was to introduce a performance-based approach to planning. Under MAP-21Continued 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 articulated in MAP-21of (safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays).  MAP-21 lays out a timetable to develop the performance measures and targets with states, transit agencies and MPOs having different deadlines to set their respective targets. USDOT developed a process for establishing performance targets and reporting on progress towards achieving targets through the federal rulemaking process. Despite that, MAP-21 encourages coordination between states, transit agencies and MPOs to ensure some degree of consistency, as much as is practical, among the agency targets. State DOTs, transit agencies and MPOs shall coordinate to the maximum extent practicable on the establishment and reporting of performance targets.

Program Activities and Products (Estimated Completion Dates)

1. **ACTIVITY: Establish Safety Performance Targets.** Work collaboratively with MARC’s planning partners to establish targets for the 5 safety performance measures defined in the final Safety Performance Measures Rule. (Feb)

2. **ACTIVITY: Coordinate to Develop Performance Targets for PM2 and PM3.** Coordinate with planning partners, including the Performance Management Workgroup, to support development of draft performance targets for the measures defined in the final rules for NHS Pavement and Bridge Condition (PM2) and System Performance, Freight and CMAQ (PM3), as appropriate. (Ongoing)

3. **ACTIVITY: Incorporate Performance Targets into Planning Products.** Integrate performance targets and reporting into MTP, System Performance Report and TIP, as appropriate. (Ongoing)

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2.7 Regional Household Travel Survey – Lead Agency: MARC

Program 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.

Program Activities

1. **ACTIVITY: Methodology.** Identify sampling methodology and sample size (Mar).
2. **ACTIVITY: Survey Instruments.** Develop and pre-test survey instruments (May).
3. **ACTIVITY: Survey Review.** Review recent on-board surveys and address data needs that might be included in this survey (May)
4. **ACTIVITY: Survey.** Conduct the 2018 Regional Household Travel Survey (Dec).
5. **ACTIVITY: Project Website.** Development and maintenance of the project website (ongoing).
6. **ACTIVITY: Processing.** Process and geocode survey results (Dec).
7. **ACTIVITY: Validation.** Validate the results of the Synthetic Data Pilot (see Task 2.3) (Feb 2019)
8. **ACTIVITY: Travel Model Incorporation:** Incorporate updated travel behavior statistics into the regional travel model (Feb 2019).
9. **PRODUCT: 2018 Regional Household Travel Study.** Completed 2018 Regional Household Travel Study (Mar 2019)

Project Funding

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$171,421 of Missouri CPG will be programmed for this project in 2019.

(Match for Missouri CPG funds provided by direct cost match from task 6.4)

3.0 **SHORT-RANGE TRANSPORTATION PLANNING**

3.1 **Transportation Improvement Program – Lead Agency: MARC**

Program 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 establish and maintain an efficient TIP amendment process.

Background/Previous Work

22
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.

Program 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. Evaluate and prioritize projects according to procedures 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).


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3.2 MoDOT Traffic Studies – Lead Agency: MoDOT

Program 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.

Program 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. **ACTIVITY: 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).

**Funding**

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*(Up to $317,748 of this project is providing direct cost match for federal funds used elsewhere in the UPWP)*

### 4.0 AIR QUALITY PLANNING

#### 4.1 Conformity of the Metropolitan Transportation Plan and Transportation Improvement Program and Mobile Source Elements of the Clean Air Action Plan—Lead Agency: MARC

**Program 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.

Program 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.
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. **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).
4. **PRODUCT: Committee Support.** Prepare meeting summaries and documentation for Consulting Agencies Group (as needed).
5. **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).
6. **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).
7. **ACTIVITY: Technical Analysis.** Analyze air quality benefits resulting from regional mobile source emissions reduction initiatives (ongoing).
8. **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).
9. **PRODUCT: Clean Air Action Plan: Complete an update to the Clean Air Action Plan (Dec)
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5.0 TRANSPORTATION SYSTEM MANAGEMENT/TRAVEL DEMAND MANAGEMENT

5.1 Active Transportation Planning– Lead Agency: MARC

- To develop, maintain and implement regional planning strategies of the Active Transportation Chapter of Transportation Outlook 2040.
- 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
- 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;
- 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

In 2014, local and regional stakeholders worked with MARC to create the Greater Kansas City Regional Bikeway Plan (RBP). This plan, adopted January of 2015, sets forth a regional bikeway network comprised of over 2,000 miles of roadway corridors, and recommends adding 128 miles of stream corridors to the MetroGreen System. The RBP expands the MetroGreen concept of bike and pedestrian facilities in rights-of-way using a Complete Streets approach and provides a set of recommended design guides. It will serve as the guiding document for
MARC to help local governments implement their individual bikeway plans in a manner that emphasizes regional connectivity.

The RBP has been incorporated by reference into the Active Transportation Chapter of Transportation Outlook 2040, adopted June of 2015. The RBP will advance many of the goals of the Transportation Outlook 2040 policy framework.

In June 2015, MARC was the first organization in the nation to host the Walk Friendly Communities (WFC) workshop offered by the Pedestrian Bicycle Information Center. MARC is taking an innovative approach to promote WFC through MPO transportation planning services, recognizing the regional impact of communities pursuing this program. The WFC has been incorporated by reference into Transportation Outlook 2040 and will be an integral program embedded in a future regional pedestrian policy plan.

Through 2016, MARC engaged local governments with a Local Government Pedestrian Inventory made of four surveys designed to capture information about plans, policies and programs embedded within administration, planning, public works, law enforcement. This information has been used to inform the development of the regional pedestrian policy plan. Throughout 2017, MARC’s efforts continued to evaluate regional plans, policies and programs. This work will culminate in a regional pedestrian policy plan that will address ways to enhance MARC efforts and will provided guidance to local governments to develop a more walkable region.

**Program 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. **PRODUCT: Completion of a Regional Pedestrian Policy Plan.**
5. **PRODUCT: Development of the Metrogreen Bikeway and Trail Wayfinding Plan**
6. **ACTIVITY: Best Practices.** Promote best practices for local planning and design guidelines for pedestrian and bicycle facilities in cooperation with recognized professional trade organizations. (ongoing).
7. **ACTIVITY: Bikeway & Trails Inventory.** Work across MARC departments to maintain inventory of local bikeway plans and built facilities to support regional active transportation planning and programming efforts (ongoing).
8. **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).
9. **ACTIVITY: Regional Counting Program.** Assist local governments with setting up local programs to conduct bicycle and pedestrian manual and automatic counts through the loan of counting equipment and training. Research potential opportunities for program expansion (ongoing).
10. **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).
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5.2 Transportation Technology Planning and Integration – Lead Agency: MARC

Program 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 an update to the architecture in 2012. 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.

Program 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. **Product: Amendments.** Process amendments to the regional ITS architecture (as needed).
4. **Product: Regional ITS Architecture Update.** Complete an update 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.
5. **Product: Regional Automated Vehicle Strategic Framework.** Conduct research, stakeholder engagement and develop regional goals and strategies for successful deployment of automated vehicle technologies and organize leadership to begin implementation of priority objectives, culminating in formal updates or amendments to the metropolitan transportation plan (Dec.).
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5.3 Transportation Safety Planning – Lead Agency: MARC

Program Objectives

- To document and understand transportation safety issues across all travel modes in the Kansas City region.
- To develop, maintain, and implement the Safety Chapter of the MTP and the *Kansas City Regional Transportation Safety Blueprint*.
- To foster communication and regional collaboration among local, state and national safety stakeholders on transportation safety issues in the Kansas City region.
- To share and reinforce messages to the public, which encourage 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 – 2013-2017*, 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 began to update and adopt the Kansas City Regional Transportation Safety Blueprint. During the development of this plan MARC worked towards MPO established safety performance measure target setting in accordance with MAP-21 and the FAST Act.

Program 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).
3. **PRODUCT: Update the Kansas City Regional Transportation Safety Blueprint.** Provide staff support to the Destination Safe Coalition in completing the development of the plan for the 2018-2022 horizon (Dec).
4. **PRODUCT: Annual Safety Report.** Provide staff support to the Destination Safe Coalition in the development and completion of an annual safety report (Apr).
5. **ACTIVITY: Technical Support.** Provide support and general direction for the Destination Safe Task Teams and related Communities for All Ages initiative (as needed).
6. **ACTIVITY: Support Studies.** Conduct safety data analyses as part of project area studies, corridor studies, and other program activities (as needed).

7. **ACTIVITY: Public Education.** Implement the annual Public Information & Education program through paid and owned media (ongoing).

8. **PRODUCT: Safety Calendar.** Update information about state, regional and local safety events (as needed).

9. **PRODUCT: Road Safety Assessment (RSA).** Support Destination Safe Coalition efforts to build capacity to assist local transportation agencies with RSAs (as needed).

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### 5.4 Transportation Systems Management & Operations Planning – Lead Agency: MARC

#### Program 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.
Program 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 planning partners to build on 2017 regional coordination activities and champion implementation of TSM&O strategies.

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6.0  MOBILITY & PUBLIC TRANSPORTATION PLANNING

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

Program Objectives

- To provide planning and coordination needed to support the implementation of the Smart Moves (RideKC) regional transit vision.
- 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.


- 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 Vision, 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;
- Creation of the RTCC and new special transportation sub-committee, and;
• Completion of an update to the SmartMoves plan and development of short term “investment strategies.

Program 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).
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 (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:** Develop “Mobility Work Plan/Strategy” to expand consideration and range of mobility strategies in accordance with the Smart Moves 3.0 plan. These include consideration of fixed route transit/paratransit/special transportation, as well as ridesharing, bicycle/pedestrian mobility, bike and car sharing, ride-hailing services, micro-transit, demand response, on demand services, outreach strategies, and physical infrastructure accessibility strategies
7. **PRODUCT. Transit Data and Products.** Develop enhanced transit planning resources including travel demand modeling data, GIS data, route maps, and communication products (ongoing).
8. **ACTIVITY: Monitor selected performance measures and consider development of additional metrics to further populate RideKC Data Insight dashboard. (ongoing)**
9. **ACTIVITY: Mobility Hub Development.** Create a mobility hub workgroup to begin developing a model for mobility hub development. This workgroup will further prioritize mobility hubs and advise on the development of mobility hub profiles for these prioritized hubs and resources related to zoning, development, and urban design for local governments in 2018.
10. **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.
11. **Activity: Funding.** Create a transit and mobility funding task force to develop a sustainable funding structure for the development of the regional transit and mobility system.
12. **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.
13. **ACTIVITY: Smart Moves –Support Local Government Efforts in the Implementation of Smart Moves.** Participate in local government efforts to implement Smart Moves and provide educational opportunities, such as workshops and trainings related to land use considerations, urban design, and economic development benefits of transit.

**Funding**

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

Program 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 2018, 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.

Program Activities and Products (12 Months)

1. **ACTIVITY: Transit Service Improvements.** Continued service and infrastructure planning to improve the efficiency of transit service and to accommodate changing needs and demands as well as continued implementation of the KCATA Comprehensive Service Analysis.

2. **ACTIVITY: RideKC Freedom and Freedom On-Demand.** Evaluate pilot program and opportunities to expand throughout the region and other process and service improvements.

3. **ACTIVITY: Community Planning Activities.** Coordinate with local communities on a variety of comprehensive land use and transportation plans for areas and corridors; promote transportation networks and development planning that supports existing and future transit service. This includes staff participation in Planning Sustainable Places projects throughout the region.

4. **ACTIVITY: Regional Branding Activities.** In coordination with regional partners and the Regional Transit Coordinating Council, continue implementation of the new regional RideKC brand, including planning activities related to marketing, infrastructure, signage, and fleet changes to reflect the new brand.

5. **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.

6. **ACTIVITY: SmartMoves Implementation.** Begin implementation of the SmartMoves investible strategies as identified in the plan, including service improvements and planning for mobility hubs throughout the region.

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

Program 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 begging studies to assess the feasibility on 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.

Program Activities and Products (12 Months)

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 systems.

2. **ACTIVITY: Prospect MAX:** Complete final design and begin construction of bus rapid transit infrastructure on Prospect Avenue, with MAX service beginning in 2019.

3. **ACTIVITY: Independence Avenue BRT Planning Assessment:** Complete a study for bus rapid transit service on the Independence Avenue corridor in Kansas City and Independence, to include service and infrastructure planning and extensive public outreach.

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

5. **ACTIVITY: Passenger Amenities.** Continued planning and implementation of transit centers, passenger amenities, facility and bus stop upgrades to improve access to transit and the experience of passengers.

6. **ACTIVITY: Planning Sustainable Places Projects.** Complete transit and pedestrian access studies for the Prospect/U.S. 71 corridor, Southwest Johnson County, Leavenworth, and 75th & Metcalf.

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

8. **ACTIVITY: Downtown Transit Emphasis Corridor Stations:** Continue design and implementation of new transit stations along designated emphasis corridors in downtown: Grand Boulevard, 11th Street, and 12th Street.

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6.4  KC Streetcar Southern Extension Study – Lead Agency: Kansas City Streetcar Authority

Program Objectives

The KC Streetcar Authority (KCSA) and the Kansas City Area Transportation Authority (KCATA) are conducting a KC Streetcar Southern Extension study to assess multi-modal transportation needs. The KC Streetcar Southern Extension Technical Services will build upon the downtown streetcar service and will support work required to further develop and advance the southern extension towards the University of Missouri, Kansas City (UMKC). The KC Streetcar Southern Extension study will focus on following:

- Data collection (utilities, current conditions, etc.)
- Refining alignment details (curb-running / center-running)
- Station stop locations and terminus configuration
- Plan for coordinated regional transit service integration and improvement
- Updated cost estimates
- Initiation of federal funding process

The KCSA and KCATA have developed a coordinated project development process with key project partners such as the City of Kansas City, and the Mid-America Regional Council (MARC). This approach is inclusive of key project stakeholders in Kansas City and on the proposed route such as property owners, residents, neighborhood groups, community organizations, etc.

Background/Previous Work

The Main Street extension proposal advances implementation of the strongest streetcar expansion corridor & long-standing regional transit vision as indicated in Kansas City Region’s Long-Range Transit Vision, “Smart Moves.” This extension proposal also builds on the success of the downtown streetcar starter-line, while further strengthening that route and extending benefits to a larger population and job centers.

Program Activities and Products (Estimated Completion Dates)

1. PRODUCT: In partnership with the Kansas City Streetcar Authority and the Kansas City Area Transportation Authority (KCATA), finalize feasibility study (May)

Funding

Non-Federal $1,000,000  KCSA and KCATA (50/50)
Task Total $1,000,000

7.0  GOODS MOVEMENT/ FREIGHT PLANNING

7.1  Goods Movement/Freight Planning – Lead Agency: MARC

Program 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. Barge and air freight are also important to the region’s economy.

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.

Program 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 (Dec).
2. **ACTIVITY: Collaboration and Engagement.** Maintain liaison and support to Kansas City SmartPort and other freight interests in the region; provide public engagement between the freight community and the public sector regarding freight transportation issues (Dec).
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 (Dec).
5. **ACTIVITY: Coordination with ITS Architecture.** Identify ITS-related elements of freight initiatives; integrate with the regional ITS Architecture, 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 (Dec).
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8.0 MAJOR CORRIDOR STUDIES

8.1 Major Corridor Studies – General – Lead Agency: MARC

Program 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.

Potential Program 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).
8.2 Planning and Environmental Linkages (PEL) Study: Broadway Extension (US-169), including bridge over Missouri River, and I-70 North Loop – Lead Agency: MARC

Program Objectives

- To undertake a study of US-169 and I-70 in order to determine the future improvements and assess the environmental impacts and overall feasibility
- To perform the study in concurrence with the recommendations from previous, relevant corridor studies
- To insure that the study is developed in accordance with all applicable federal regulations and guidelines
- To obtain public and agency consensus and understanding about a range of feasible alternatives

Background/Previous Work

The purpose of this project is to conduct a pre-NEPA environmental study in accordance with applicable federal regulations and guidance for the Broadway Extension and I-70 North Loop in Clay and Jackson Counties, Missouri and Wyandotte County, Kansas. The project limits are: Broadway Extension (US-169) from I-70 to Missouri Highway 9, I-70 between the I-670 interchanges in Kansas and Missouri, and I-670 between the I-70 interchanges in Kansas and Missouri.

Previous studies in this corridor include the Northland-Downtown Major Investment Study, the Interstate 29/35 Paseo Bridge Corridor EIS, the Lewis and Clark Viaduct Study, and the I-70 1st Tier EIS.

This pre-NEPA study will develop a purpose and need statement, identify and narrow feasible transportation alternatives, and focus on issues such as general location, mode choice, known environmental and cultural resource constraints, air quality, and land use implications of the major alternatives.

Program Activities and Products (Estimated Completion Dates)

1. **ACTIVITY:** Public involvement campaign including opportunities to participate and comment at project’s milestones using various public involvement tools such as traditional public meetings/hearing, mobile meetings, online and social media, Community Connections Team, community advisory group, and elected official briefings. (Beginning 1/2016 - ongoing)
2. **ACTIVITY:** Prepare an agency coordination plan (Completed in 2017).
3. **ACTIVITY:** Meet with cooperating and participating agencies to identify their information and concerns as the project purpose and need and alternatives are developed (Completed in 2017).
4. **ACTIVITY:** Traffic analysis, including travel demand modeling and operational modeling (ongoing).
5. **ACTIVITY:** Develop the purpose and need (Completed in 2017).
6. **ACTIVITY:** Analysis of a range of initial alternatives and reasonable alternatives (Completed in 2017).
7. **ACTIVITY:** Assessment of the social, economic, environmental impacts of a proposed action or project (ongoing).
8. **PRODUCT:** Prepare a final report (2018).
Funding for Entire Project

Federal $3,000,000 FHWA-STP-MO
Non-Federal $850,000 Kansas City, MO
Task Total $3,850,000

(This project will begin in 2016 and be completed in 2018.)

8.3 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

Program 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.

Program Activities and Products (Estimated Completion Dates)

1. ACTIVITY: Identify the Purpose and Need (2018).
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).

Funding

Federal $750,000 FHWA-STP-MO
Local $750,000
Task Total $1,500,000
9.0 AVIATION PLANNING

9.1 Aviation Planning and Coordination – Lead Agency: MARC

Program 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.

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.

Program 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).**

Funding

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Appendix A

RELATIONSHIP BETWEEN UPWP PROJECTS AND MTP POLICY DIRECTION

2018 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 2018 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 2018 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 6.1, 6.2, 6.3, 6.4)
- Active Transportation planning and Bike/Ped Planning and Promotion Activities (Task 5.1)
- Land-Use and Comprehensive Planning Activities (Tasks 2.1)
- Environmental/Air Quality Planning Activities (Tasks 2.2, 4.1, 4.2)
- Operations and Management Planning Activities (Tasks 2.4, 5.2, 5.4, 5.5)

Economic Vitality – Support an innovative, competitive 21st century economy

- Operations and Management Planning Activities (Task 2.4, 5.2, 5.4, 5.5)
- Major Corridor Planning (Tasks 6.1, 6.2, 6.3, 6.4, 8.1, 8.2, 8.3)
- Goods Movement/Freight Planning (Tasks 7.1)

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, 4.1, 4.2)
- Active Transportation Planning and Bike/Ped Planning and Promotion Activities (Task 5.1)

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 6.1, 6.2, 6.3, 6.4)

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 6.1, 6.2, 6.3, 6.4)
- Active Transportation planning and Bike/Ped Planning and Promotion Activities (Task 5.1)
- 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 5.3)

System Condition – Ensure the transportation system is maintained in good condition
• System Condition Performance Monitoring and Planning (Tasks 2.2, 3.2, 6.2, 6.3, 6.4)

System Performance – Manage the system to achieve reliable and efficient performance
• Operations and Management Planning Activities (Task 2.4, 5.2, 5.4, 5.5)
• Major Corridor Planning (Task 6.1, 6.2, 6.3, 6.4, 8.1, 8.2, 8.3)

Transportation Choices -- Expand affordable, accessible, multimodal transportation options in order to better connect residents and visitors to jobs and services.
• Transit Planning Activities (Tasks 6.1, 6.2, 6.3, 6.4)
• Active Transportation Planning and Bike/Ped Planning and Promotion Activities (Task 5.1)
• Land-Use and Comprehensive Planning Activities (Tasks 2.1)
MAJOR WORK ACCOMPLISHMENTS IN 2017

Planning and Project Development

- Processed amendments to the region’s metropolitan transportation plan, *Transportation Outlook 2040*.
- Adopted Smart Moves 3.0 Regional Transit and Mobility Plan that incorporates extensive work to develop a 10-year implementation plan to double the number of jobs accessible by transit in the region and to update the region’s long-range transit vision. This initiative was funded with a $1.2 million 2014 TIGER (Transportation Investment Generating Economic Recovery) planning grant from USDOT.
- Completed the development of the RideKC Data Insight transit performance metric dashboard.
- 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 scenario planning and integrated cross-disciplinary planning efforts, including multiple public scenario planning workshops, towards update of Regional Plan for Sustainable Development, including an update of the 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.
- Conducted a sidewalk inventory of local governments to maintain data and support regional active transportation and pedestrian policy planning.
- Developed first 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.
- MARC facilitated the update and approval of the Kansas City Regional Safety Blueprint, a five year plan from 2018-2022, through the Destination Safe Leadership Team, the decision making body of the Destination Safe Coalition. The plan will guide safety work to reduce fatalities and serious injuries related to crashes in the 13 county Destination Safe service area.
- Coordinated efforts with partners and the public towards development of a Regional Pedestrian Policy Plan.
- 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.
- Processed the new provisions outlined in the FAST Act and presented key planning and programming changes to transportation stakeholders.
- Completed FHWA pilot project to implement concept of a Virtual Data Sharing Framework to assist with planning for operations in the MARC region.
- Completed FHWA Data Business Planning pilot to improve data management practices in support of regional mobility performance measures.
• Participated in USDOT’s Bike/Ped/Transit Safety Assessment along Prospect Ave. in Kansas City, Mo.
• Performed several upgrades and enhancements to the regional travel demand model, including model calibration and validation.
• Initiated 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 an interactive freight map
• Completed identification of CUFC and formula to address mileage allocation
• Completed phase two of the Green Infrastructure Plan development
• Completed Regional Climate Resilience Strategy
• Coordinated with planning partners to establish and adopt performance targets for Transit State of Good Repair.
• Coordinated with planning partners to develop draft safety performance targets for the Destination Safe Region, which will guide the development of MPO safety targets.
• Convened a Transportation Performance Management work group to guide development of performance targets for NHS system condition, NHS system performance, and freight.
• Assembled and convened a Regional Transportation System Management & Operations (TMS&O) Work Group to oversee and guide regional TSM&O planning and implementation efforts.
• Convened a Regional TSM&O Summit to lay foundation for the eventual development of Regional TSM&O Plan.
• 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.
• Developed a work plan and publicly launched process towards update of Metropolitan Transportation Plan, due to be completed in 2020.

Programming
• Completed a review of the methodology and process used to develop program priorities for Surface Transportation Program (STP) and Transportation Alternatives Program (TAP) funds.
• Completed and approved 3 quarterly amendments to the 2016-2020 Transportation Improvement Program (TIP)
• Completed and approved the 2018-2022 Transportation Improvement Program
• Prepared the 2017 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 2016 Destination Safe, Missouri Coalition for Roadway Safety and Kansas 402 safety projected and made funding recommendations to respective states.
• Offered four Planners’ Roundtable forums to examine relevant planning topics for the region.
• Conducted a “Technical Assistance Symposium” in the fall of 2017 to strengthen ties between policy guidance in MTP and various MARC regional plans/strategies and efforts and the upcoming programming activities scheduled for 2018.
• Conducted consultant procurement process for the 2017 Planning Sustainable Places projects. All projects but one commenced 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 5 public open houses in association with the development of the Smart Moves 3.0 Plan.
• 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 one amendment to the 2017 Unified Planning Work Program (UPWP); prepared the 2016 Year-end report; prepared 2017 Quarterly Reports; prepared the 2018 Unified Planning Work Program.

Other

• Sponsored the Green Commute Challenge, an employer-based alternative transportation contest from June through August. Upon completion, 681 participants had reduced their driving by 480,873 miles, and prevented 380,482 pounds of emissions from entering the atmosphere. They also saved $97,974 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.
## MID-AMERICA REGIONAL COUNCIL
### FY2018 UNIFIED PLANNING WORK PROGRAM
### Appendix C - SCHEDULE 1

### WORK ELEMENT

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(1) Tasks and amounts are serving as Match for CPG funded planning activities in the UPWP.
(2) Please see Appendix C - Schedule 2 for breakdown of direct costs.
(3) Kansas CPG funds assume $1,010,259 in new funds and $34,227 in carryover funds. MARC will provide $197,122 in cash and $80,000 cash value from the regional aerial orthoimagery project detailed in task 2.1 to match the Kansas CPG funds.
(4) Missouri CPG funds assume $1,816,609 in new funds and $840,080 in carryover funds. MARC will use $300,852 cash value from the regional aerial orthoimagery project detailed in task 2.1 and $917,748 in direct cost match from MoDOT and the Kansas City Streetcar Authority to match the Missouri CPG funds.
## MID-AMERICA REGIONAL COUNCIL
### FY2018 UNIFIED PLANNING WORK PROGRAM
#### Appendix C - SCHEDULE 1

<table>
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<tr>
<th>WORK ELEMENT</th>
<th>Kansas City, Missouri</th>
<th>KCATA</th>
<th>Kansas City Streetcar Authority (KCSA)</th>
<th>Other Local</th>
<th>TOTAL</th>
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<td>6.1 Transit/Paratransit Planning and Coordination (1)(5)</td>
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<td>6.2 KC Streetcar Southern Extension Study</td>
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<td>7.0 GOODS MOVEMENT/FREIGHT PLANNING</td>
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<td>7.1 Goods Movement/Freight Planning</td>
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<td>8.0 MAJOR CORRIDOR STUDIES</td>
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<td>8.1 Major Corridor Studies - General</td>
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<td>8.3 Environmental Assessment (EA) for U.S. 169 Corridor</td>
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<td>9.0 AVIATION PLANNING</td>
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<td>9.1 Aviation Planning and Coordination</td>
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</table>

**TOTALS**

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(5) Missouri CPG funds assume $1,810,609 in new funds and $800,000 in carryover funds. MARC will use $300,852 cash value from the regional aerial orthoimagery project detailed in task 2.1 and $317,748 in direct cost match from MoDOT and the Kansas City Streetcar Authority to match the Missouri CPG funds.
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<th>Title</th>
<th>Yearly Salary Base</th>
<th>Yearly Fringe 83.83%</th>
<th>Yearly Total</th>
<th>% Eligible</th>
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<td>47,562</td>
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<td>Sr Traffic Studies Specialist</td>
<td>Alex Martinez</td>
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Projected 2018 Salary/Fringes based on FY18 base salary and FY18 fringe benefits.
# MARC CPG Subcontracts

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<th>Project</th>
<th>Source</th>
<th>Amount</th>
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<td>Synthetic Data Pilot</td>
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<td>Regional ITS Architecture Update (cont. from 2017)</td>
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## Total Contractual

$848,357

CPG – Consolidated Planning Grant  
SPR – State Planning and Research Program

# MARC CPG Operating Expenses

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<td>In Region Travel</td>
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<td>Out of Region Travel</td>
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<td>CPG</td>
<td>$500</td>
</tr>
<tr>
<td>1.1</td>
<td>Document Translation Services</td>
<td>CPG</td>
<td>$1,500</td>
</tr>
<tr>
<td>1.1</td>
<td>Data</td>
<td>CPG</td>
<td>$19,000</td>
</tr>
</tbody>
</table>

## Total Operating Expenses

$172,105

(1) For 2018 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.
### MARC Personnel Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary</td>
<td>CPG</td>
<td>$1,572,400</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>CPG</td>
<td>$677,091</td>
</tr>
<tr>
<td><strong>Total Personnel Costs</strong></td>
<td></td>
<td><strong>$2,249,491</strong></td>
</tr>
</tbody>
</table>

### MARC Other Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect</td>
<td>CPG</td>
<td>$644,049</td>
</tr>
<tr>
<td>Rent</td>
<td>CPG</td>
<td>$96,792</td>
</tr>
<tr>
<td><strong>Total Other Costs</strong></td>
<td></td>
<td><strong>$740,841</strong></td>
</tr>
</tbody>
</table>
STATE AND LOCAL GOVERNMENTS RATE AGREEMENT

EIN: 430976432
DATE: 07/25/2017
ORGANIZATION:
FILING REF.: The preceding Mid-America Regional Council
agreement was dated 600 Broadway, Suite 200
07/20/2016
Kansas City, MO 64105-1659

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
RATE TYPES: FIXED FINAL PROV. (PROVISIONAL) PRED. (PREDETERMINED)

<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>01/01/2017</td>
<td>12/31/2017</td>
<td>34.90</td>
<td>On Site</td>
<td>Head Start</td>
</tr>
<tr>
<td>FIXED</td>
<td>01/01/2017</td>
<td>12/31/2017</td>
<td>36.80</td>
<td>On Site</td>
<td>All Programs Except Headstart</td>
</tr>
<tr>
<td>FIXED</td>
<td>01/01/2018</td>
<td>12/31/2018</td>
<td>28.40</td>
<td>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</td>
<td>On Site</td>
<td>All Programs Except Headstart</td>
</tr>
<tr>
<td>PROV.</td>
<td>01/01/2019</td>
<td>12/31/2020</td>
<td></td>
<td></td>
<td>Use same rates and conditions as those cited for fiscal year ending December 31, 2018.</td>
</tr>
</tbody>
</table>

*BASE

Direct salaries and wages including all fringe benefits.
ORGANIZATION: Mid-America Regional Council  
AGREEMENT DATE: 7/25/2017  

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>1/1/2017</td>
<td>12/31/2017</td>
<td>51.70</td>
<td>On Site</td>
<td>Regular Staff</td>
</tr>
<tr>
<td>FIXED</td>
<td>1/1/2017</td>
<td>12/31/2017</td>
<td>7.65</td>
<td>On Site</td>
<td>Intern</td>
</tr>
<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>PROV.</td>
<td>1/1/2019</td>
<td>12/31/2020</td>
<td></td>
<td></td>
<td></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, 2017 the Executive Schedule Level II rate
is $187,000.

Your next indirect cost rate proposal based on actual costs for the fiscal
year ending 12/31/17 is due in our office by 06/30/2018.
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 the rate(s) 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 shall: (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]

Dorothy Pope

[Title]

Director of Financial Affairs

[Date]

7/25/2017

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Darryl W. Mayes

[Signature]

Arif Karim

[Title]

Director, Cost Allocation Services

[Date]

7/25/2017

HHS REPRESENTATIVE:

Wanda Rayfield

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

E.1 Operation Green Light – Lead Agency: MARC

Program 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.

Program 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)

Funding

<table>
<thead>
<tr>
<th>Operations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>$ 610,000</td>
</tr>
<tr>
<td>Non-Federal</td>
<td>$ 610,000</td>
</tr>
<tr>
<td>Task Total</td>
<td>$1,220,000</td>
</tr>
</tbody>
</table>
E.2 RideShare Program – Lead Agency: MARC

Program 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

Program 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

1. ACTIVITY: Develop Explore KC campaigns for the spring and fall including media outreach, printed materials, and promotional giveaways.

2. ACTIVITY: Provide support for Regional Bike/Ped Count program through automated counter equipment and subscription service credits

Funding

<table>
<thead>
<tr>
<th>Funding</th>
<th>Amount</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>$36,000</td>
<td>FHWA-CMAQ-MO</td>
</tr>
<tr>
<td>Federal</td>
<td>$36,000</td>
<td>FHWA-CMAQ-KS</td>
</tr>
<tr>
<td>Non-Federal</td>
<td>$18,000</td>
<td></td>
</tr>
<tr>
<td>Task Total</td>
<td>$90,000</td>
<td></td>
</tr>
</tbody>
</table>

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

In June 2015, MARC adopted the Transportation Outlook 2040 update, the Metropolitan Transportation Plan (MTP). The updated MTP includes current population growth projections, current budget projections, and
refined regional transportation projects through 2040. The update was incorporated into the existing detailed policy framework, and identified regional land use direction supporting regional activity centers (nodes) and corridors. The update of *Transportation Outlook 2040* continues to call for the support of the Planning Sustainable Places Program to help provide local governments with planning assistance in support of these local and regional goals. Through multiple funding sources MARC has developed and deployed the program as outlined. In 2017 the third round of Planning Sustainable Places projects will be conducted.

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 2018)
2. **ACTIVITY: Project Work Finishes.** The remainder of the 2017 projects will complete during 2018. MARC will retain 7.5% of STP funding to support project development and administration activities (ongoing during 2018).
3. **ACTIVITY: Review and refinement of the Planning Sustainable Places program’s format and processes to better target funding to projects that further sustainable land use, transportation and environmental actions.
4. **ACTIVITY: Conduct call for projects for 2019 funding.

<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 Main Street Corridor Plan</td>
<td>$112,500</td>
<td>$ 37,500</td>
<td>The project will develop a transportation corridor plan with supporting land use and environmental planning.</td>
</tr>
<tr>
<td>Lenexa, Kan.</td>
<td>Quivira Road Corridor Study</td>
<td>$ 122,950</td>
<td>$ 32,000</td>
<td>The project will analyze the relationship between transportation and land use and recommend appropriate multi-modal options and uses.</td>
</tr>
<tr>
<td>Olathe, Kan.</td>
<td>The Olathe Get Active Bike Share Implementation Strategy</td>
<td>$ 56,000</td>
<td>$ 14,000</td>
<td>The project will evaluate the feasibility of a bike share program that builds upon previous active transportation planning.</td>
</tr>
<tr>
<td>Unified Government</td>
<td>Rosedale University Town District: Fisher Park Activity Center &amp; TOD Hub Plan</td>
<td>$117,600</td>
<td>$ 50,400</td>
<td>The project will develop an area plan for a multi-modal center.</td>
</tr>
<tr>
<td>Sponsor</td>
<td>Project Title</td>
<td>Federal Funding</td>
<td>Local Match</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>---------------</td>
<td>-----------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Unified Government</td>
<td>Kaw River Bike/Ped Connector Bridge</td>
<td>$120,000</td>
<td>$30,000</td>
<td>Assessment of an abandoned railroad bridge and development of a plan with conceptual design for the bridge’s use as a trail connection and possibly other uses.</td>
</tr>
<tr>
<td>Edgerton, Kan.</td>
<td>Downtown Edgerton Plan</td>
<td>$60,000</td>
<td>$20,000</td>
<td>The project will develop a transportation plan that includes supporting streetscape concepts and land use policy.</td>
</tr>
<tr>
<td>Prairie Village, Kan.</td>
<td>City Wide Bike/Ped Plan</td>
<td>$56,000</td>
<td>$14,000</td>
<td>The project will develop a comprehensive bike/ped plan.</td>
</tr>
<tr>
<td>Overland Park, Kan.</td>
<td>An Event and Transportation Hub for Overland Park</td>
<td>$60,000</td>
<td>$60,000</td>
<td>The project will develop a plan and implementation strategy for a transportation hub.</td>
</tr>
<tr>
<td>Overland Park, Kan.</td>
<td>College &amp; Metcalf Mobility Hub</td>
<td>$83,900</td>
<td>$93,750</td>
<td>A land use planning effort that identifies redevelopment and transportation opportunities in the area surrounding the OP Convention Center.</td>
</tr>
<tr>
<td>Westwood, Kan.</td>
<td>47th Street Complete Street Evaluation</td>
<td>$48,000</td>
<td>$12,000</td>
<td>The project will comprehensively guide a new green complete street design between Rainbow Blvd and Mission Road.</td>
</tr>
<tr>
<td>Edwardsville, Kan.</td>
<td>Connecting Edwardsville</td>
<td>$60,000</td>
<td>$20,000</td>
<td>The project will develop a pedestrian connectivity plan.</td>
</tr>
<tr>
<td>Kansas City Area Transportation Authority</td>
<td>Leavenworth Transit Plan</td>
<td>$35,800</td>
<td>$10,000</td>
<td>Develop model transit plans that include new approaches to connecting people to jobs and activity centers in areas with lower densities than traditional urban service areas that can be replicated in other parts of the region.</td>
</tr>
<tr>
<td>Kansas City Area Transportation Authority</td>
<td>75th &amp; Metcalf Transit and Pedestrian Access Improvement Plan</td>
<td>$35,800</td>
<td>$10,000</td>
<td>Develop conceptual plans and cost estimates for transit and pedestrian improvements at 75th &amp; Metcalf.</td>
</tr>
<tr>
<td>Kansas City Area Transportation Authority</td>
<td>Southwest Johnson County (Edgerton and Gardner Area)</td>
<td>$21,450</td>
<td>$6,000</td>
<td>Develop model transit plans that include new approaches to connecting people to jobs and activity centers in areas with lower densities than traditional urban service areas that can be replicated in other parts of the region.</td>
</tr>
<tr>
<td>Sponsor</td>
<td>Project Title</td>
<td>Federal Funding</td>
<td>Local Match</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------</td>
<td>-----------------</td>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Louisburg, Kan.</td>
<td>Louisburg Master Trail Plan</td>
<td>$20,000</td>
<td>$10,000</td>
<td>Update the City of Louisburg Master Trail Plan in a way to fill in trail gaps.</td>
</tr>
<tr>
<td>Unified Government</td>
<td>Cambridge Connector Feasibility Analysis</td>
<td>$100,000</td>
<td>$37,500</td>
<td>Assess alternatives that balance multimodal transportation needs, land use redevelopment, and environmental constraints and opportunities.</td>
</tr>
<tr>
<td>Kansas City, Mo.</td>
<td>Truman Road Complete Street Redevelopment Plan</td>
<td>$20,000</td>
<td>$10,000</td>
<td>The project will develop a complete street concept plan.</td>
</tr>
<tr>
<td>Kansas City, Mo.</td>
<td>Midtown Complete Streets Corridor Plan</td>
<td>$36,000</td>
<td>$10,000</td>
<td>The project will develop and evaluate the feasibility of complete streets in the Midtown/Plaza area.</td>
</tr>
<tr>
<td>Kansas City, Mo.</td>
<td>Gillham Road Corridor Bike Connections Plan</td>
<td>$72,000</td>
<td>$20,000</td>
<td>The project will evaluate on-street bicycle facilities along Gillham Road between Crossroads/Downtown and Brush Creek/Plaza.</td>
</tr>
<tr>
<td>North Kansas City, Mo.</td>
<td>Armour Road Complete Street Plan</td>
<td>$100,000</td>
<td>$25,000</td>
<td>The project is a plan for transitioning Armour Road from Burlington to Ozark to a complete street.</td>
</tr>
<tr>
<td>Independence, Mo.</td>
<td>24 Highway Fairmount Business District Plan</td>
<td>$72,000</td>
<td>$18,000</td>
<td>The project will address creating a balanced transportation system within the Fairmount Business District to aid in the development of a sustainable transit oriented commercial district.</td>
</tr>
<tr>
<td>Kansas City, Mo.</td>
<td>Independence Pedestrian Safety Improvements Study</td>
<td>$36,000</td>
<td>$10,000</td>
<td>The project will develop conceptual plans, identify priorities and funding strategies for pedestrian safety improvements along Independence Ave between Forest Ave and Ewing Ave.</td>
</tr>
<tr>
<td>Kansas City, Mo.</td>
<td>Troost Ave &amp; Prospect Ave ROW Enhancement Plans</td>
<td>$48,000</td>
<td>$24,000</td>
<td>The project will develop policy recommendations for right-of-way enhancements with phased implementation plans.</td>
</tr>
<tr>
<td>Sponsor</td>
<td>Project Title</td>
<td>Federal Funding</td>
<td>Local Match</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------------------------------------------------</td>
<td>-----------------</td>
<td>-------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Kansas City Area Transportation Authority</td>
<td>Swope Area – Prospect Connectivity Study</td>
<td>$135,000</td>
<td>$174,000</td>
<td>The project is to identify pedestrian and bicycle focused solutions concerning the issues of connectivity, safety, convenience and comfort for potential transit users east of U.S. 71 between Swope Parkway and 85th Street who would access transit on Prospect.</td>
</tr>
<tr>
<td>Kansas City, Mo.</td>
<td>Trails Nexus Study &amp; Ordinance</td>
<td>$36,000</td>
<td>$10,000</td>
<td>The project will update a previous trail study and develop an ordinance that will establish new development’s responsibility to provide adequate trail facilities.</td>
</tr>
</tbody>
</table>

Funding

Federal $ 600,000 FHWA-STP-MO  
Federal $ 355,000 FHWA-STP-KS  
Non-Federal $ 238,750  
Task Total $ 1,193,750

E.5  Lightweight and Mill Street Intersection Study – Lead Agency: City of Liberty, MO

Program Objectives

- To review existing conditions and identify improvements that address safety and operational efficiencies at the intersection of Lightburne and Mill streets.

Background/Previous Work

The city has overseen a number of roadway improvement projects in recent years. Recent Capital Improvement Projects include the reconstruction of Liberty Drive, intersection improvements at Withers Road and Liberty Drive, and several geometric improvements along Conistor Drive.

Program Activities and Products

1. ACTIVITY: Data Collection (March 2018)  
2. ACTIVITY: Public Involvement Process (March 2018)  
3. PRODUCT: Conduct safety and operational studies for three identified intersections (April 2018)

Funding

Federal $ 8,000 FHWA-TEAP-MO  
Non-Federal $ 2,000  
Task Total $10,000
Program 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

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

Funding
Federal $150,000 FHWA
Non-Federal $ 37,500
Task Total $187,500

E.7  Grandview Intersection Analysis – Lead Agency: City of Grandview, Missouri

Program 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

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)

Funding
Federal $ 8,000 FHWA-TEAP-MO
Non-Federal $ 2,000
Task Total $10,000
E.8  Crooked Road Traffic Study– Lead Agency: City of Parkville, Missouri

**Program 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**

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)

**Funding**

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