

Nashville Area Metropolitan Area Planning Organization

FY 2019 UPWP
Unified Planning Work Program

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Respectfully prepared for the Nashville Area MPO Transportation Policy Board by the:

Greater Nashville Regional Council

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Table of Contents

1.0 Introduction	1
1.1 About the MPO	1
1.2 Planning Partnerships	4
1.3 Sources of Funding	5
1.4 Public Participation	6
1.5 UPWP Highlights	7
2.0 Issues and Requirements	9
2.1 Federal Planning Factors & Emphasis Areas	9
2.2 Regional Goals & Objectives	11
3.0 Work Tasks	13
Task 1. Program Administration	14
Task 2. Regional Planning	16
Task 3. Transportation Programming	18
Task 4. Data Analysis and Modeling	19
Task 5. Communications & Outreach	20
4.0 Budget Tables	21
Table 1. FY 2019 Annual Program Budget	22
Table 2. FY 2019 UPWP Funding and Matching Sources by Task	23
Table 3. FY 2019 Federal and State Revenue Sources	23
Table 4. FY 2019 MPO Operating Budget by Task	24
Table 5. FY 2019 Other Direct Costs Detail	24
Table 6. Estimated MPO Dues Revenue	25
Table 7. FY 2020 Budget Estimates	26
Appendix A. Map of the MPO Planning Area	A1
Appendix B. Project Planning Studies	B1
TDOT Planning Report Requests	B1
Planning Activities funded with Grants Programmed in the TIP	B1
Appendix C. Acronyms and Definitions	C1

1.0 Introduction

1.1 About the MPO

Established through federal legislation, Metropolitan Planning Organizations (MPOs) exist throughout the United States in all urbanized areas of more than 50,000 people and have the authority to prioritize, plan, and program transportation projects in urban / metropolitan areas for federal funding. In Tennessee, eleven MPOs work in partnership with the Tennessee Department of Transportation (TDOT) to carry out the following activities in their respective planning areas:

- Monitor the conditions of the existing transportation network;
- Identify existing capacity or safety problems through detailed planning studies to develop candidate transportation improvements;
- Forecast future population and employment growth for the region;
- Evaluate the effects that future land use plans will have on transportation infrastructure within major growth corridors throughout the region;
- Develop alternative growth scenarios to evaluate the affects that land use and transportation choices made today will have on the region's future;
- Estimate the impact that an expanding transportation system will have on air quality;
- Develop a financial plan that identifies the costs and revenues associated with the continued operation and maintenance, and future expansion of the region's transportation system;
- Work with the public and stakeholders to determine the region's priorities for improving the transportation system with the anticipated revenue; and
- Track progress through performance-based planning.

The Nashville Area MPO is the federally-designated transportation planning and programming agency for Davidson, Maury, Robertson, Rutherford, Sumner, Williamson, and Wilson counties (see map in Appendix A). The MPO's planning program is administered by the Greater Nashville Regional Council (GNRC) and is funded in large part by grants made available through TDOT from the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) of the U.S. Department of Transportation (U.S. DOT). Local governments across the area contribute funding through regional annual dues which assess every county and each community of 5,000 or more in population a per capita rate of 26 cents. Anticipated planning activities and funding sources are published in advance each fiscal year of work as part of the MPO's Unified Planning Work Program (UPWP).

The UPWP is a federally required document that communicates with the public and stakeholders how their federal transportation dollars are being used on regional planning activities. The plans that the MPO develops provide the public with advanced knowledge of projects to be implemented with federal funding. The UPWP provides the public with information about activities that support the development of all MPO products and outline opportunity for early engagement.

About the Greater Nashville Regional Council and MPO Integration

Effective October 1, 2017, the Greater Nashville Regional Council (GNRC) is responsible for carrying out the staffing and administrative functions of the Nashville Area MPO in accordance with the Transportation Planning and Policy Agreement adopted on September 20, 2017. The agreement designates the GNRC as the MPO's sponsor agency, a responsibility previously held by the Metropolitan Planning Commission (MPC) of Nashville-Davidson County.

The GNRC is one of nine regional development districts established by the Tennessee General Assembly under the Tennessee Development District Act of 1965. GNRC, which operates as a council of governments (COG), represents 13 counties and 52 cities in Middle Tennessee. County members include Cheatham, Davidson, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson and Wilson counties.

GNRC's mission is to assist local communities and state agencies in the development of plans and programs that guide growth and development in the most desirable, efficient, and cost-effective manner, while ensuring the continued long-term livability of the region. GNRC is governed by a regional council comprised of city mayors, county mayors/ executives, state legislators, appointments representing business/industry, and appointments representing minority populations. The GNRC employs more than 70 fulltime professional staff including planners, policy analysts, research analysts, economic and community development specialists, and social workers.

MPO Products & Publications

As part of its responsibility to staff the MPO program, GNRC staff produces three major work products: a Regional Transportation Plan (also known as the RTP or long-range transportation plan), a Transportation Improvement Program (TIP), and a Unified Planning Work Program (UPWP). The MPO's Transportation Planning Prospectus provides further detail on the program's organizational structure and planning process, and a Public Participation Plan (PPP) helps communicate to partners and the general public opportunities for involvement in the development of MPO products. The PPP also specifies the process and timelines for adopting and amending MPO plans and programs. All plans and programs are available on the MPO's website at NashvilleMPO.org and at the GRNC's Downtown Office, 138 2nd Ave N, Nashville, TN 37201.

Regional Transportation Plan

The Regional Transportation Plan (RTP) is a long-range, twenty-five year multimodal strategy and capital improvement program developed to guide the effective investment of public funds in transportation facilities. The plan identifies specific roadway and transit projects that will help manage congestion, increase regional mobility options, and address other community-driven quality of life outcomes. The RTP is updated every four or five years and may be amended as a result of changes in federal planning requirements, anticipated federal, state, and local funding; major investment studies; congestion management systems plans; interstate interchange justification studies; and environmental impact studies. The Regional Transportation Plan is available at http://nashvillempo.org/plans_programs/RTP/.

Transportation Improvement Program

The Transportation Improvement Program (TIP) is a short-range work program that lists all regionally-significant and federally funded transportation projects and services in the MPO planning area. This includes highway and street projects, public transit projects, as well as bicycle and pedestrian projects that are implemented by TDOT or local governments, or transit agencies. The TIP is required to cover at least a four-year span and is updated at least every three years. All projects included in the TIP must be consistent with, or selected from the adopted regional transportation plan. Additionally, the TIP must be fiscally constrained by federal appropriations or estimated revenues.

The TIP identifies the location and scope of work for transportation improvements and authorizes federal grant amounts and phases of work (e.g., engineering, construction, etc.) by program year. Federal transportation funds may not be used by TDOT or local agencies in the region until they are programmed in the TIP. The current TIP accounts for approximately \$1.5 billion dollars through the year 2020.

More information about the TIP is available online at http://nashvillempo.org/plans_programs/tip/. An interactive map of projects in the TIP is available at <http://TIP.NashvilleMPO.org>.

Transportation Planning Prospectus and Organizational Bylaws

The Transportation Planning Prospectus provides an overview of federal metropolitan planning requirements, the MPO's organizational structure and decision-making process, and other regional partners who share a role in carrying out those requirements. The organizational bylaws specify the governance structure and responsibilities of the MPO Transportation Policy Board and the sponsor agency.

The Prospectus and Organizational Bylaws is available online at http://nashvillempo.org/publications_docs/.

Public Participation Plan

The Public Participation Plan (PPP) provides the general public and interested parties with an overview of the MPO's public involvement process. This includes information about the strategies deployed to engage the public and stakeholders, and the specific timelines and requirements for public comment during the development and adoption of the MPO's plans and programs.

The Public Participation Plan is available online at http://nashvillempo.org/publications_docs/.

Nashville Region's Vital Signs

Each October, the Nashville Area Chamber of Commerce and MPO publish a major report to the region that tracks data points related to key issues affecting Middle Tennessee's economic well-being and quality of life in order to facilitate conversation about community-driven solutions to reinforce our strengths and address our weaknesses.

The report is available online at <http://www.nashvillechamber.com/vitalsigns>.

Annual Listing of Federally-Obligated Projects

Each December, the MPO publishes a complete list of all transportation projects that have had federal funds obligated during the preceding federal fiscal year. The obligation of funds is the federal government’s promise to pay for all eligible expenses incurred by TDOT or the local implementing agency. Grant funds must be approved by the MPO and included in the RTP and TIP prior to their obligation by the federal government.

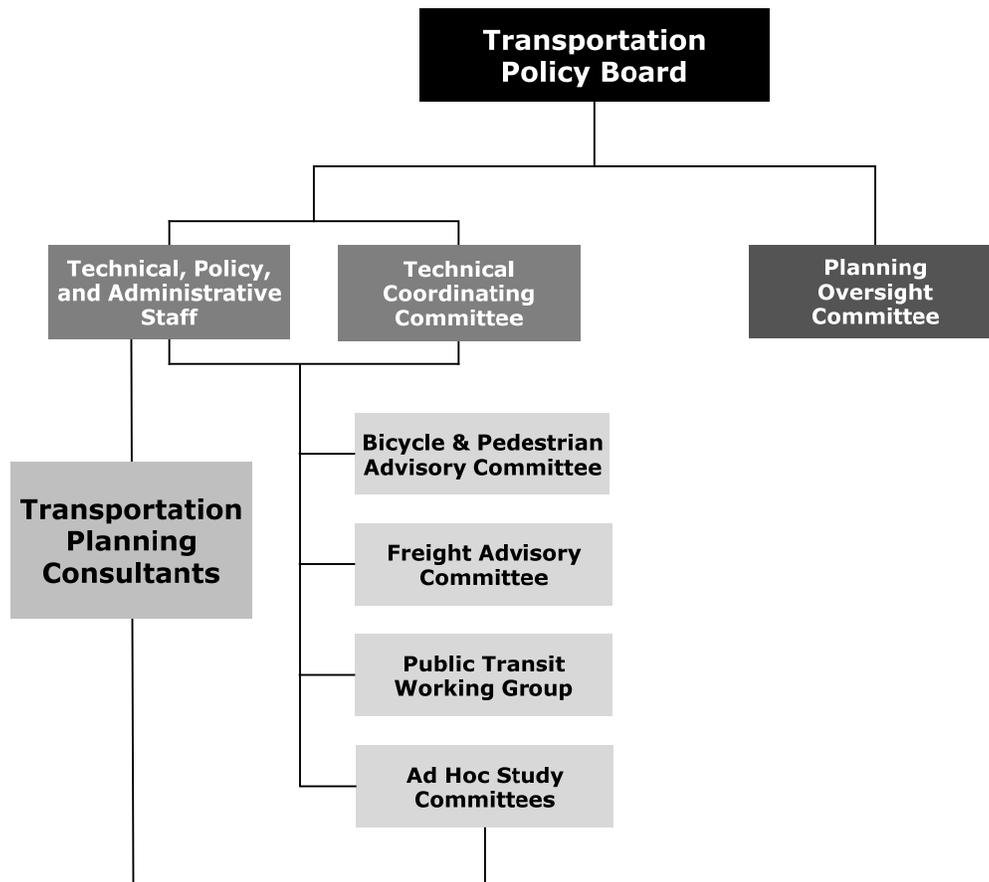
The annual list is available online at http://nashvillempo.org/transportation_projects/.

Other Reports, Publications, Digital Media

The MPO publishes several reports and presentations each year to the website at http://nashvillempo.org/publications_docs/. The MPO also produces or shares videos, photos, and presentations in the Multi-Media Center section of the website at http://nashvillempo.org/media_center/.

Organizational Structure

The MPO’s program is comprised of a Transportation Policy Board, advisory committees, and professional planning staff as depicted in the figure below and described in the following sections.



Transportation Policy Board

The Transportation Policy Board governs the policy-making and programming decisions for the MPO program, and serves as the primary forum for collaboration among local communities, state officials, and interested parties related to regional transportation policies, plans, programs, and funding. The Policy Board consists of the principal elected official (e.g., mayor or county executive) from each of the counties within the approved metropolitan planning area, as well as cities in those counties with a population of 5,000 or more people. Additional board members include the Tennessee Governor, a representative from the Greater Nashville Regional Council, a representative of area public transit operators, a representative of area county highway departments, and staff from the Federal Highway Administration and Federal Transit Administration. A complete roster and contact information is available online at http://nashvillempo.org/about_mpo/exec_board.aspx.

Planning Oversight Committee

The Planning Oversight Committee (POC) monitors the progress of activities identified in the Unified Planning Work Program, and review and approve requests for reimbursement of expenses incurred by consultants contracted by the GNRC on behalf of the MPO. The committee also serves to develop any terms of agreement with GNRC for the administration of the MPO planning grants and the provision of staffing support. The committee's recommendations must be adopted by the Transportation Policy Board in order to be enacted. The committee consists of the chairperson and vice-chairperson of the Transportation Policy Board, the chairperson of the Technical Coordinating Committee, Policy Board members that represent the largest city within each Census-defined Urbanized Area located within the metropolitan planning area, and a member of the Policy Board representing a municipality located outside of an Urbanized Area, a member of the Policy Board representing a county government, and a representative of TDOT.

Technical Coordinating Committee

The Technical Coordinating Committee (TCC) is the lead advisory committee to the Policy Board. The TCC is responsible for assisting transportation planning staff with preparing and reviewing data, analyzing trends, and developing recommendations for the Transportation Policy Board. In addition, the TCC takes a lead role in coordinating local implementation of MPO-endorsed projects and policies. The committee consists of the administrative and technical leadership of member jurisdictions and agencies including local planning and public works departments, public transit agencies, public health departments, the Tennessee Department of Transportation, the Tennessee Department of Environment and Conservation, the Federal Highway Administration, and the Federal Transit Administration. A complete roster and contact information is available online at

http://nashvillempo.org/about_mpo/committees/tech_committee.aspx.

Administration and Staffing Support

The MPO program is staffed by the GNRC which provides professional planners, engineers, communications specialists and policy analysts in support of the Transportation Policy Board. An MPO Coordinator oversees the day to day management of activities identified in the adopted UPWP. The GNRC also is responsible for the execution of legal agreements and contracts on behalf of the MPO, and provides administration and management of its fiscal needs. More information about GNRC is available at <http://www.gnrc.org>.

1.2 Planning Partnerships

The MPO serves as a regional partnership among the U.S. DOT, TDOT, local elected leadership, local planning and public works departments, transit agencies, and other public-sector agencies and non-profit organizations related to transportation, public health, the environment, and economic and community development. The following partners assist in carrying out tasks identified in the UPWP in order to meet federal planning requirements.

Federal Agencies

The MPO collaborates with a host of federal agencies including the Environmental Protection Agency, Department of Health and Human Services, and Department of Housing and Urban Development, and the Army Corps of Engineers. The Federal Highway Administration and Federal Transit Administration of the U.S. Department of Transportation both serve as non-voting members of the MPO Transportation Policy Board and Technical Coordinating Committee.

State Agencies

The MPO coordinates with various functions of state government including the Governor's Office, the Department of Safety and Homeland Security, the Department of Health, and the Department of Economic and Community Development, and works regularly with the Tennessee Department of Transportation and Tennessee Department of Environment and Conservation (TDEC). TDOT typically represents the Governor's Office on the MPO Transportation Policy Board. Both TDOT and TDEC serve on the MPO's Technical Coordinating Committee.

Public Transit Agencies

The MPO has an ongoing partnership with each of the following public transit agencies. While each transit agency is responsible for short-range planning for their respective service areas, those agencies collaborate with the MPO in developing mid- and long-term transit plans for the region.

- **Regional Transportation Authority (RTA):** Provides regional express bus, commuter rail, and vanpool service to areas within the MPO planning area.
- **Nashville Metropolitan Transit Authority (MTA):** Provides local bus, bus rapid transit (BRT)-lite, and ADA paratransit service to residents and visitors in Nashville-Davidson County.

- **Franklin Transit Authority:** Provides local bus/trolley and ADA paratransit service to residents in Franklin including the Cool Springs area. The Franklin Transit Authority is operated by The Transportation Management Association (TMA) Group, a 501(c)(3) non-profit organization which also operates vanpool programs for RTA and Williamson County Government.
- **City of Murfreesboro Public Transportation Department “Rover” (MPT):** Provides local bus and ADA paratransit services to residents in Murfreesboro.
- **Mid-Cumberland Human Resource Agency (MCHRA):** The MCHRA is a private non-profit organization that provides rural paratransit services across 13-counties in Middle Tennessee, including six of the seven MPO counties (excluding Maury County). The MCHRA participates in the development of the region’s Coordinated Human Services Transportation Plan.

Private Non-Profit Organizations

The MPO has an ongoing partnership with each of the following non-profit organizations who help connect additional private-sector partners to the planning process.

- **Clean Air Partnership of Middle Tennessee:** Administers a public outreach campaign to educate residents and businesses on the importance of good air quality, and encourages alternatives to driving in order to minimize pollution generated by cars and trucks in the region.
- **Nashville Civic Design Center:** Works with the MPO to integrate good urban design considerations into the transportation planning process. In partnership with the Nashville Civic Design Center and the University of Tennessee at Knoxville School of Architecture and Design, the MPO publishes two booklets per year that illustrate best practices and concepts to provide guidance to the region.
- **Nashville Area Chamber of Commerce:** The MPO is the lead partner for “Nashville Region’s Vital Signs” initiative that helps draw attention to the area’s strengths and weakness through ongoing tracking of various performance measures that relate to quality of life. The MPO also participates in the Chamber’s “Moving Forward” initiative, which was established to help ensure the timely implementation of regional transit plans.

1.3 Sources of Funding

The planning activities of the Nashville Area MPO, like others across the nation, are primarily funded through grants from the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) with non-federal matching funds provided by the State or local government members.

Federal Transportation Planning Grants

Federal transportation planning grants are provided on an annual basis to cover the costs of MPO staffing and consultant studies and must be applied to activities listed in the MPO’s Unified Planning Work Program.

- **Consolidated Planning Grant Program:** The Tennessee Department of Transportation (TDOT) participates in the Consolidated Planning Grant (CPG) Program whereby FHWA and FTA metropolitan planning funds are combined into a single grant fund administered by FHWA. The funding from this program are distributed to the MPOs through TDOT in accordance with 23 CFR 420.109.
 - **FHWA Section 112 Metropolitan Planning (PL) Grant Program:** Federal PL funds are distributed by the FHWA to states according to a formula adopted by the U.S. Congress and are intended to assist MPOs in carrying out federal planning requirements. In Tennessee, PL funds are divided into eleven separate MPOs based on a formula agreed to by TDOT and MPOs. The PL distribution formula gives each MPO a base amount plus an amount based on 2010 Census Urbanized Area population figures. The Formula also retains a small portion for TDOT to use for the benefit of all the MPO. The MPO is responsible for providing a required non-federal match of 20 percent.
 - **FTA Section 5303 Metropolitan Planning Grant Program:** Federal 5303 funds originate out of the FTA. The distribution formula is based on each MPOs 2010 Census Urbanized Area population. The MPO is responsible for covering half of the required non-federal match of 20 percent as the state covers the remaining half. The end result is an 80/10/10 ratio of federal, MPO, and state funding.
- **FHWA State Planning and Research (SPR) Grant Program:** SPR funds are distributed out of the Federal Highway Administration for the purposes of assisting State departments of transportation with meeting their federal planning requirements. In Tennessee, TDOT shares SPR funds with MPOs whose boundaries extend beyond the Census-defined urbanized areas. A 20 percent match is required and may be provided by either TDOT or MPO local government members, depending on the nature of the project.

- **Other Federal Funding Federal:** Regulations allow MPOs and their member jurisdictions to use federal transportation grants targeted for programs to pay for planning activities. Typically, those “program” funds come from the FHWA Surface Transportation Program or the FTA Urban Transit Program and are intended to cover the costs of corridor or project-level planning activities. In addition, the U.S. Department of Transportation and other federal agencies periodically make available other grant programs that can be used for the purposes of carrying out regional planning activities. Those programs are typically administered on a competitive basis and require a formal application and proposal. In the event that program funds (STP, FTA 5307, etc.) are used for regional planning activities those funds are programmed in the MPO’s TIP and referenced in Appendix B of this document.

Non-Federal Matching Funds

In most cases, federal grant funds require at least a 20 percent non-federal match. The MPO receives funding from its member jurisdictions to cover that match based on a per capita rate. Additional contributions may be provided by MPO members, TDOT, or regional partners in order to cover special efforts or those that affect only a subset of the membership.

1.4 Public Participation

Each February or March, the MPO announces a call-for-studies or planning activities to be considered for the upcoming year’s UPWP. While the call is primarily targeted at those serving on the MPO Technical Coordinating Committee and Policy Board, the public is encouraged to offer suggestions for topics or issues to be studied. In addition, the MPO’s Public Participation Plan (PPP) requires that members of the public are given at least seven (7) days to review and comment on the draft work program prior to adoption. Following that review period, two public hearings are held prior to the adoption of the work program. The MPO uses local and regional newspapers to notify the public of the seven-day review period and date, times, and locations of the two public hearings. A copy of the draft UPWP will be posted on the MPO’s website at NashvilleMPO.org and made available in electronic format at public libraries across the region. Special assistance will be provided for those contacting MPO staff at (615) 862-7204 or Contact@NashvilleMPO.org.

Changes to the Work Program

The addition or deletion of work tasks, the addition of major studies not described in the UPWP, the addition of new federal funding, or shifts in funding between tasks of more than 20 percent will require a formal amendment and follow the same public participation rules that apply to initial adoption. All other changes may be performed administratively by the MPO Coordinator and provided to TDOT for submission to FHWA and FTA.

Other Public Involvement Opportunities

Public involvement is a critical element of all planning that is conducted by the MPO. Such involvement ensures that the planning process conforms to the goals, and objectives of the region. The MPO’s PPP provides guidelines for how the public and interested stakeholders will be involved in the development of the regional transportation plan. Specifically, the MPO reaches out to the community through a variety of forums with the strategic objective to engage a broad and diverse audience with efforts to target the following:

- General public;
- Traditionally-underserved populations including the low-income, minority groups, and the disabled;
- Governmental partners including local, state, and federal agencies;
- Key transportation stakeholders including departments of transportation and public works, users and employees of public transportation, users of pedestrian walkways and bicycle facilities, and freight shippers and carriers.
- Business community including area chambers of commerce and economic developers; and
- Non-profit community including quality growth advocacy groups.

In order to engage those audiences in the most effective way, the MPO has invested in a variety of tools and techniques to augment the standard public workshops that are often used in public planning.

- **MPO Website:** The MPO website make regional plans and programs more accessible to the general public. The website provides an overview of the MPO and its responsibilities and information about staff, Policy Board leadership, regional planning efforts, regional data and forecasts, meeting information, and items for public review and comment. The website also contains a multi-media section, which houses relevant videos, PowerPoint presentations, and photo slideshows, and a public involvement section containing access to social media outlets.

- **Traditional Media:** The MPO continues to use the traditional media to communicate its proposed plans and programs and to encourage public participation at regional events and local workshops. The MPO's Public Participation Plan outlines the meeting notice and advertising requirement carried out annual.
- **Social Media:** The MPO uses social media platforms to diversify its communication methods and broaden its reach beyond traditional media.
- **Regional Symposiums/ Summits:** The MPO continues to host or co-host large regional summits or symposiums to educate the public and stakeholders about important regional issues including context sensitive solutions, complete streets, school-siting, regional transit development, and regional growth and development.
- **Speaker's Bureau:** MPO staff members have been active over the last several years visiting a variety of organizations throughout the region to provide presentations aimed at communicating proposed plans and programs as well as soliciting input through facilitated conversations.
- **Survey Research:** In recent years, the MPO has conducted various telephone and web-based surveys to measure attitudes and perceptions towards transportation policy. The largest of the efforts included statistically valid telephone surveys of 1,100 residents from across the region conducted in 2010, and again in 2014.
- **Videos and other Visualizations:** The MPO has invested significantly in recent years to produce visualization tools in order to increase the public's understanding of proposed plans and programs.

In addition to the regular meetings and outreach efforts of the MPO, the public is encouraged to participate in the various regional planning activities identified in the UPWP or in their local community planning process that aligns with regional and statewide planning efforts.

1.5 UPWP Highlights

This document outlines metropolitan planning requirements (Section 2.0) and presents a work program of planning activities (Section 3.0) to address them during federal fiscal year (FY) 2019, beginning October 1, 2018 and ending September 30, 2019. In some cases, activities may span multiple fiscal years. The MPO has indicated the multi-year schedule for those efforts within the UPWP.

Highlights of Prior Year (FY 2018) Accomplishments

Following is a list of the major planning activities that occurred in FY 2018, some of which are continuing into FY 2019:

- **Implementation of the MPO's Integration into GNRC:** On October 1, 2017, the MPO Program was integrated into the Greater Nashville Regional Council (GNRC). This new model for administering the MPO planning activities brings the Nashville area in line with best practices and ensures that transportation planning is coordinated with planning activities related to economic and community development and the other infrastructure needs of the region.
- **Major Update to the Public Participation Plan:** In August 2018, the MPO adopted a major update to the federally-required PPP to account for changes in federal law and to incorporate state of the practice methodologies for community outreach methods.
- **Adoption of the FY 2019 Unified Planning Work Program:** In August 2018, the MPO adopted this FY 2019 UPWP to communicate anticipated regional planning activities to be funded with federal transportation planning grants.
- **Quadrennial Federal Certification Review:** In the Spring/Summer of 2018, the MPO participated in a federal certification review process comprised of a desk review, an on-site visit, and a public involvement opportunity hosted by FHWA and FTA. Each MPO for Urbanized Areas of 200,000 or more in population are required to be certified no less than every four years by FHWA and FTA.
- **Call-for-Projects for the MPO's Active Transportation Program:** The MPO administered a call-for-projects and awarded grants through its Active Transportation Program (ATP). Created in 2010, the MPO's ATP is funded by a portion of the MPO's direct suballocation of Surface Transportation Block Grant (STBG) funding and the full amount of suballocated Transportation Alternatives Program funding to advance projects that improve walking, bicycling, and transit facilities. The program is coordinated with the MPO's Bicycle and Pedestrian Advisory Committee whose members help evaluate projects for funding.
- **Regional Smart Mobility Assessment and ITS Architecture Update:** The MPO began work on a study to identify emerging technologies that could be used to assist with meeting area travel and mobility needs. The Regional ITS Architecture is being updated as result of the assessment's recommendations.
- **South Corridor Transit Study** – The MPO kicked off a major transit alternatives analysis in May 2018 to evaluate the feasibility of rapid transit options between downtown Nashville and communities in Williamson and Maury

counties located along the I-65/ US 31/ SR 6 corridors. The study will conclude in FY 2019 and include recommendations for station area development and design and local transit improvements.

Highlights of FY 2019 Activities

The activities outlined in the MPO's FY 2019 UPWP addresses several local and regional planning issues including the expansion of public transit options, the development of walkable communities, and the integration of transportation, land use, urban design, and economic development decision-making. The FY 2019 UPWP highlights include:

- **Continuation of South Corridor Transit Study** – The MPO will continue its work with TDOT, the RTA, and local partners to evaluate the feasibility of major transit investments in the region's south corridor between Nashville and Spring Hill.
- **Continuation of the Smart Mobility Assessment and Intelligent Transportation Systems Architecture Update** – The MPO will continue its work to identify and prioritize the deployment of technologies to improve mobility and the availability of real-time traveler information across the region.
- **Ongoing Congestion Management Analysis** – The MPO will continue data analysis to monitor regional congestion in accordance with federal planning requirements for a congestion management process.
- **General Planning and Special Demonstration Projects** – The MPO has budgeted funds to conduct various planning studies to further refine recommendations contained in the Regional Transportation Plan including but not limited to freight and goods movement, parking and transportation demand management strategies, transportation revenue/ funding options, creative placemaking, and public/stakeholder outreach.
- **Refinement to Regional Modeling Tools** – The MPO will continue updating and improving the regional land use and travel demand models in preparation for corridor studies and the update to the RTP scheduled for 2020. The MPO is continuing to improve its activity-based modeling platform, and evaluating options to upgrade its land use model to optimize its use in local and regional scenario planning activities. These models assist in the prediction of future land development patterns and travel behaviors to help guide policy discussions and investment decisions.
- **Transportation, Urban Design, and Land Use Integration** – The MPO will continue its support for the integration of transportation planning, urban design, and land use planning through additional work with regional partners to explore transit-oriented development (TOD) and other quality growth toolbox concepts. The MPO is prepared to compete for additional grant funding made available at the federal and state levels to advance livable community initiatives.
- **Regional Indicators Report** – The MPO will continue its "Nashville Region's Vital Signs" partnership with the Nashville Area Chamber of Commerce. This initiative tracks key performance measures related to Middle Tennessee's economic well-being and quality of life and used to facilitate conversation about community-driven solutions to emerging challenges. Vital Signs outreach provides an opportunity for the MPO and the chamber to educate community and business leaders on the value of this data to drive planning and investments decision-making.
- **Performance Management Measures** – The MPO will continue to work with TDOT to fulfill federal requirements for performance based planning including the setting and tracking of targets.

2.0 Issues and Requirements

2.1 Federal Planning Factors & Emphasis Areas

In 2015, the U.S. Congress passed and the President signed into law the transportation act entitled, *Fixing America's Surface Transportation Act* (FAST Act). This federal legislation defines ten specific planning factors to consider when developing transportation plans and programs in a metropolitan area to ensure consistency with national goals and objectives:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users
4. Increase the accessibility and mobility options available to people and for freight.
5. Protect and enhance the environment, promote energy conservation, improve 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 storm water impacts of surface transportation.
10. Enhance travel and tourism.

The UPWP organizes work into five separate tasks assigned to address federal planning. The tasks include - 1.0 Program Administration, 2.0 Regional Planning, 3.0 Transportation Programming, 4.0 Data Analysis and Modeling, and 5.0 Communications and Outreach. Each task is designed to contribute to the 10 planning factors according to the proposed activities identified in Section 3.0 of the UPWP.

Planning Factor/Task	Program Administration	Regional Planning	Transportation Programming	Data Analysis & Modeling	Communications & Outreach
Economic Vitality	X	X	X	X	X
System Safety	X	X	X	X	X
System Security	X	X	X	X	X
Accessibility	X	X	X	X	X
Protect Environment	X	X	X	X	X
Integration of System	X	X	X	X	X
Efficiency	X	X	X	X	X
System Preservation	X	X	X	X	X
Resiliency	X	X	X	X	X
Travel and Tourism	X	X	X	X	X

In addition to the planning factors required by MAP-21 and the FAST Act, the MPO considered other federal emphasis areas relevant to the metropolitan planning process in the development of this UPWP.

Models of Regional Planning Cooperation

The FHWA and FTA encourage ongoing collaboration among TDOT and MPOs and between MPOs in order to ensure the proper coordination of transportation plans and programs. The Nashville Area MPO is an active participant in TDOT's statewide long-range transportation plan update and as a member of the MPO; TDOT is actively engaged in the regional transportation plan developed for the Nashville metropolitan area. In addition, the Nashville Area MPO works closely with the Clarksville Urbanized Area MPO to carryout transit studies on behalf of or in partnership with the Regional Transportation Authority of Middle Tennessee.

As of October 1, 2017, the GNRC became the sponsor agency for the MPO program. This followed a 14 month process which began in August 2016, when the MPO and GNRC entered into a Memorandum of Agreement (MOA) that

established a framework for the two organizations to explore ways to enhance coordination among local communities and between regional organizations in Middle Tennessee. As part of that agreement, a joint committee conducted research to develop recommendations for improving the efficiency and effectiveness of regional decision-making and to better align transportation planning programs with other regional activities related to economic development, infrastructure investment, and quality of life. More information can be found at COG.NashvilleMPO.org to serve as a resource to members of the Joint Committee, stakeholders, and members of the public who have an interest in the process.

Access to Essential Services

The MPO is committed to ensuring that the region's transportation system can be relied upon to connect vulnerable populations to life sustaining services including housing, employment, health care, schools, and recreation. The recommendations of the 2040 Regional Transportation Plan incorporated findings into the development of an "equity atlas" which was initially drafted in 2015. This report identifies the location of traditionally underserved populations along with those essential services. The MPO will continue to develop the equity atlas throughout FY 19.

MAP-21 and FAST Act Implementation

Since the passage of MAP-21 in 2012 and the FAST Act in 2015, the MPO has been working to expand its approach to performance-based planning. Specifically, the MPO is preparing to develop new performance measures for safety, state of good repair, and mobility for use in evaluating land use scenarios and transportation projects that were considered for the 2045 Regional Transportation Plan. Staff will continue to work with area stakeholders to establish performance targets to help monitor progress towards federal, state, and regional transportation goals.

Safety and Public Health

The MPO has maintained its reputation as a national leader in the integration of public health considerations into the transportation planning process. The MPO will continue its efforts to evaluate health impacts of proposed transportation policies, plans, and programs through traditional roadway safety/ crash data analyses, emerging Health Impact Assessment practices and the further integrate its Integrated Transport Health Impact Model (ITHIM) with its Activity Based Model to forecast health savings due to changes in travel behaviors.

Planning for Operations

The MPO will continue to work with TDOT and other stakeholders to ensure that improvements to traffic operations and incident management are a top strategy for achieving congestion management and roadway safety goals of the MPO. In FY 18 the MPO launched a major study to evaluate improvements to the regional Intelligent Transportation Systems (ITS) infrastructure to include potential upgrades to area traffic signal technology, and to prepare for emerging technologies in transportation and communications. The MPO will continue this work in FY 19.

Linking Planning and Environment

In recent years, federal and state agencies have sought to streamline the transportation project delivery process by linking the planning process with the environmental review required by the National Environmental Policy Act (NEPA). To assist in this effort, the MPO has placed an emphasis on integrating analyses of environmental, community, and economic goals into long-range planning.

Freight & Goods Movement

The MPO continues to build its capacity for regional freight planning through the UPWP. The MPO has budgeted funds in FY 19 to facilitate implementation of recommendations from the most recent phase of the Regional Freight and Goods Movement Study. Strategies will be developed through coordination with the regional Freight Advisory Committee and Technical Coordinating Committee.

2.2 Regional Goals & Objectives

While the MPO is committed to advancing the national goals of the federal transportation program, its work program also aligns with its guiding principles and is driven by a set of regional goals and objectives identified through public and stakeholder involvement in the development of the regional transportation plan. This section presents the MPO's mission, guiding principles and regional goals and objectives. In general, regional goals closely mirror those set at the national level, as many metropolitan areas face similar growth challenges and demands for infrastructure.

Mission and Guiding Principles

The MPO facilitates strategic planning for the region's multimodal transportation system by serving as a forum for collaboration among local communities and State leaders. The vision of the MPO is to develop policies and programs that direct public funds to transportation projects that increase access to opportunity and prosperity, while promoting the health and wellness of Middle Tennesseans and their environment.

The MPO's four guiding principles provide the necessary direction and a framework within which the agency will work collaboratively with State and local government agencies, non-profit organizations, the business community, and citizens to contribute to overall quality of life for the region.

- **Livability:** Enhance quality of life by prioritizing initiatives that increase opportunities for housing, learning, employment, recreation, and civic involvement while maintaining affordability.
- **Sustainability:** Encourage growth and prosperity without sacrificing the health, natural environment, historical and cultural assets, or financial stability of this or future generations.
- **Prosperity:** Contribute to the region's economic well-being by targeting solutions that attract talent, connect workforce with jobs, reduce the cost of doing business, and leverage additional investment.
- **Diversity:** Respect the multitude of backgrounds and the variety of perspectives of Middle Tennesseans by pursuing an array of strategies customized to local community needs and character.

Regional Goals & Objectives

The regional goals and objectives embody the desired outcomes of the Nashville Area MPO and provide targets by which its plans and programs are developed and measured. Planning activities outlined in the UPWP provide data, research, and analysis used to develop and evaluate policies, projects, or programs for their consistency with the goals and objectives outlined below.

- **Maintain a Safe and Reliable Transportation System for People and Goods**
 - Integrate a "fix-it-first" mentality to keep existing infrastructure in a State of good repair.
 - Reduce the number and severity of crashes by designing roadways to accommodate all users.
 - Incorporate information technologies to improve traffic operations and help optimize traveler decisions.
 - Manage the negative impact of traffic congestion by providing alternatives to driving.
 - Designate and implement a regional freight network to efficiently move goods and minimize negative impacts to local communities.
- **Help Local Communities Grow in a Healthy and Sustainable Way**
 - Align transportation decisions with economic development initiatives, land use planning, and open space conservation efforts.
 - Integrate healthy community design strategies and promote active transportation to improve the public health outcomes of the built environment.
 - Encourage the deployment of context-sensitive solutions to ensure that community values are not sacrificed for a mobility improvement.
 - Incorporate the arts and creative placemaking into planning and public works projects to foster innovative solutions and to enhance the sense of place and belonging.
 - Pursue solutions that promote social equity and contain costs for transportation and housing.
 - Minimize the vulnerability of transportation assets to extreme weather events.
- **Enhance Economic Competitiveness to Attract Private Investment**
 - Recognize major shifts in demographics and market preferences for transportation and housing and respond with solutions that keep Middle Tennessee an attractive place to live and do business.
 - Improve the connectivity between workforce and jobs by offering a range of options to manage commuting distances and travel times.

- Improve mobility within and between centers of commerce across the region by providing a diversified transportation system, rather than relying solely on roadway capacity.
- Keep the region connected to national and global markets by improving travel times on US Interstates, upgrading intermodal connections to water, air, and rail freight systems, and by ensuring Middle Tennessee is included in plans for national high-speed passenger rail.
- **Spend Public Funds Wisely by Ensuring a Return on Investment**
 - Increase public ownership in the planning process to help identify the most significant problems.
 - Foster regional interdisciplinary collaboration to prioritize the most effective solutions.
 - Evaluate the full costs and benefits of public investment in infrastructure.
 - Strive for quality over quantity by implementing all elements of priority projects to maximize value.
 - Consider public-private partnerships to encourage innovative approaches to project design and delivery.
 - Accelerate project delivery schedules by involving the public early and often, minimizing bureaucratic delay, and ensuring that funding is available to implement projects once designed.
 - Monitor and track the performance of public investments to demonstrate accountability.
 - Find ways to bridge the gap between revenue shortfalls and the growing cost of transportation needs.

3.0 Work Tasks

MPO planning activities ensure the region maintains a certified transportation planning process. This section provides detailed information for the tasks that the MPO will undertake in FY 2019 including:

- **Tasks 1.0 Program Administration:** Administer a continuous, cooperative, and comprehensive metropolitan planning program to ensure that state and local partners maintain eligibility for the use of federal transportation funds to improve area roadways and transit systems.
- **Task 2.0 Regional Planning:** Maintain a long-range plan for the region's transportation needs that is: 1) technically based on the latest available data on land use, demographics, and travel patterns; 2) philosophically based on regional goals and values, and 3) financially based on predictable, reliable funding sources; integrate transportation planning with land use, economic development, environmental, and public health considerations. Contribute to other local and state planning efforts across the area to ensure the incorporation of a regional perspective, and to help increase the effectiveness of regional governance and coordination.
- **Task 3.0 Transportation Programming:** Maintain a regional program that prioritizes and schedules transportation projects consistent with adopted short- and long-range plans of the state and region; administer competitive grant programs as scheduled.
- **Task 4.0 Data Analysis and Modeling:** Maintain and analyze data to support transportation planning and facility/system design; develop planning models to forecast future population and employment growth, land development, traffic volumes, transit ridership, and to identify potential impacts of growth and/or policy proposals on public health and the environment.
- **Task 5.0 Communications and Outreach:** Keep MPO members, planning partners, and the public informed on regional trends and issues and the transportation planning process; engage stakeholders and the public in the development of regional policies; provide opportunities for meaningful input on proposed plans and programs; comply with the guidelines of the adopted Public Participation Plan; continue to seek new methods of outreach.

How to Read the Budget Summary Table

Each task includes a table, which shows the type, and amount of funding anticipated to be used during the fiscal year by the implementing agency. More information about MPO partnerships and funding sources is provided in Sections 1.2 and 1.3 respectively.

- Funding Source
 - FTA 5303 – Metropolitan Planning grant funds provided by FTA.
 - PL – Metropolitan Planning grant funds provided by the FHWA, or FTA 5303 funds flexed to FTA as part of the Consolidated Planning Grant (CPG) Program.
 - FHWA SPR (MPO) – State Planning and Research grant funds provided by the FHWA sub-granted to the MPO by TDOT to account for the rural portions of the MPO planning area.
 - FHWA SPR (TDOT) - State Planning and Research grant funds provided by the FHWA to TDOT.
 - Local Match – Local funding provided to match federal grants. Local funding includes revenue generated through regional membership dues, in-kind contributions from MPO member agency or partner, and other cash contributions from MPO members or partners.
 - State Match – State funding provided to match federal grants. In general, TDOT provides the full match for SPR (TDOT) funding, and 50 percent of the required match for FTA 5303 funds.
- Implementing Agency
 - GRNC – Funds expected to be used by GNRC to carry out MPO activities.
 - TDOT – Funds expected to be used by TDOT.
 - Partnership – Funds expected to be used by MPO partners including the Clean Air Partnership of Middle Tennessee, the Nashville Area Chamber of Commerce, and the Nashville Civic Design Center.
 - Consultants – Funds expected to be used to hire consultants to augment MPO staff efforts.

Task 1. Program Administration

Purpose

Administer a continuous, cooperative, and comprehensive metropolitan planning program to ensure that state and local partners maintain eligibility for the use of federal transportation funds to improve area roadways and transit systems.

Recent Accomplishments

- Administered the planning activities identified in the adopted FY 2018 UPWP.
- Developed the FY 2019 UPWP.
- Completed the selection and contracting process to begin the South Corridor Transit Feasibility Study.
- Continued professional development activities for MPO staff.
- Revised the MPO Prospectus and Organizational Bylaws and Public Participation Plan to reflect the change in sponsor agency from Metro Nashville to GNRC.
- Implemented the recommendations from the Joint Committee to integrate the MPO program and administration into GNRC.
- Coordinated with TDOT, FHWA, and FTA on the implementation of recommendations to integrate the MPO into GNRC and process to transfer grants to new sponsor agency.
- Participated in the federal certification review process jointly conducted by FHWA and FTA. The certification review ensures that the planning requirements of 23 U.S.C. 134 and 49 U.S.C. 5303 are being satisfactorily implemented.

Fiscal Year 2019 Activities

- Manage the implementation of work tasks and budgets within the FY 2019 UPWP.
- Complete tasks necessary to the integration of the MPO program and administration into the GNRC to include continued updates to MPO program management protocols, planning agreements, and communications and outreach strategies.
- Continue to coordinate with TDOT, adjacent MPOs and RPOs, transit agencies, and other transportation stakeholders across the Middle Tennessee region.
- Maintain MPO planning agreements, and update as needed.
- Continue the practice of training new members on MPO programs and services.
- Monitor best practices for transportation/ metropolitan area planning by attending workshops and by participating in associations such as the National Academies Transportation Research Board, American Planning Association, Association of MPOs, the American Public Transportation Association, Transportation for America, the American Association of State Highway and Transportation Officials, among others.
- Host or participate in various regional, statewide, and national conferences to advance best practices in transportation planning and coordination.
- Prepare the FY 2020 Unified Planning Work Program.

TDOT Activities

- TDOT will work with the MPO to establish the administrative and technical procedures required to meet federal planning requirements; prepare and review contractual agreements as necessary; participate in MPO meetings; distribute special and annual reports and study documents; review and analyze individual transportation planning projects and studies; coordinate FTA programs across Tennessee; assist MPOs with matters pertaining to statewide freight and public transportation systems; and undertake general administrative activities in support of the metropolitan planning program.

Final Products

- Invoices and progress reports to TDOT (quarterly).
- Printed/ published MPO reports and documents (ongoing).
- Travel and training (ongoing).
- Annual memberships in planning and transportation engineering organizations (ongoing).
- Software and devices for MPO activities (ongoing).
- FY 2020 UPWP (Draft – April/ Adoption – August).

Anticipated Purchases

- Local travel and other direct costs for meetings across the MPO area –\$10,000

- Travel and registration for conferences, cost of production for MPO hosted conferences including facility rental, food, speakers, brochure/programs –\$40,000
- Printing and publications for MPO products developed as part of any UPWP Task - \$30,000
- Consumable Supplies - \$5,000
- Membership fees and organizational dues - \$10,000
- Public noticing and advertisements - \$20,000
- Software and devices to including subscriptions for ESRI ArcGIS, Caliper TransCAD, and other software necessary to perform the tasks outlined in this Unified Planning Work Program - \$20,000
- Telecommunications - \$3,000

Budget Summary

Agency	CPG PL (80/10/10)		CPG PL (80/20)		Local Match	State Match	Total
	FTA 5303	FHWA PL	FHWA SPR (MPO)	FHWA SPR (TDOT)			
MPO	\$ 24,524	\$ 167,622	\$ -	\$ -	\$ 44,971	\$ 3,065	\$ 240,182
TDOT	\$ -	\$ -	\$ -	\$ 20,097	\$ -	\$ 5,024	\$ 25,121
Partnerships	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Totals	\$ 24,524	\$ 167,622	\$ -	\$ 20,097	\$ 44,971	\$ 8,089	\$ 265,303

Task 2. Regional Planning

Purpose

Maintain a long-range plan for the region's transportation needs that is: 1) technically based on the latest available data on land use, demographics, and travel patterns; 2) philosophically based on regional goals and values, and 3) financially based on predictable, reliable funding sources; integrate transportation planning with land use, economic development, environmental, and public health considerations.

Recent Accomplishments

- Continued implementation and maintenance of the 2040 Regional Transportation Plan (RTP).
- Completed updates to the federal functional classification system in coordination with TDOT.
- Participated in the MTA/RTA nMotion strategic planning process.
- Participated in Wilson County's Transit Orientated Development planning processes along the Music City Star.
- Participated in Envision Nolensville Pike planning efforts to develop context sensitive public works projects to support community desires along the BRT route.
- Participated in the Berry Hill multimodal study along Franklin Pike.
- Continued work with Nashville Civic Design Center to publish booklets that feature MPO plans and programs beyond those contained in "Moving Tennessee Forward" in partnership with the University of Tennessee at Knoxville College of Architecture and Design.
- Began work on the South Corridor Transit Feasibility Study in partnership with TDOT's I-65 Corridor Study.
- Began work on the Regional Intelligent Transportation Systems/ Smart Cities Assessment in partnership with area Chambers of Commerce and local entrepreneurial centers.
- Supported TDOT's targets for safety performance management measures.

Fiscal Year 2019 Activities

- Continue development of a major update to the Regional Transportation Plan (RTP) to extend the planning horizon to 2045 with updated analysis of existing conditions and trends, financial constraints, and project prioritization and selection.
- Continue to monitor and implement federal planning requirements for the integration of transportation performance measures for safety, congestion, and other measures identified by federal regulations and guidance. Performance measures and targets will be developed in coordination with TDOT as part of the development of the 2045 RTP.
- Continue to maintain the federal functional classification system for the MPO planning area.
- Participate in local and statewide planning efforts to ensure consistency with regional plans.
- Coordinate with the RTA, area transit agencies, and the Mid-Cumberland Human Resource Agency in the maintenance and administration of the Coordinated Human Services Transportation Plan.
- Continue efforts to integrate public health considerations into the transportation planning process.
- Continue to evaluate strategies to manage congestion in the region through the development of alternatives to driving alone, and through alignment with local land use decisions.
- Continue participation in Roadway Safety Audit Reviews to identify safety improvements to area roadways.
- Continue to explore opportunities to integrate innovative design activities into the planning and project development process through practices such as creative-placemaking.
- Complete work on the Regional ITS/ Smart Cities study to evaluate intelligent transportation systems (ITS) across the region and to develop recommendations for how to upgrade traffic signals and prepare for emerging technologies such as connected vehicles and integrated communications systems. The effort will include an update to the ITS Architecture.
- Complete work on the South Corridor Transit Feasibility Study to evaluate transit investment opportunities between Nashville and Williamson and Maury counties, and produce recommendations to align economic and community development practices with those investments.
- Conduct study of potential transit circulators in emerging transit markets across the region including along existing regional transit corridors and the Music City Star commuter rail line.
- Coordinate with TDOT on the development of targets for pavement and bridge conditions, and performance, freight and CMAQ performance management measures.
- Conduct additional planning activities to further evaluate recommendations from the recently completed Freight and Goods Movement Study.

TDOT Activities

- TDOT will work with the MPO to integrate recommendations of the 2040 RTP and the statewide long-range transportation plan; review MPO planning models; attend meetings for planning studies; and provide support to the Tennessee Model Users Group.

Partner Activities

- The MPO will provide up to \$40,000 in federal funds to the Nashville Civic Design Center for a partnership with the University of Tennessee at Knoxville School of Architecture and Design, the production of two publications that help communicate best practices for the integration of urban design and transportation planning and public engagement coordination for local planning efforts.

Final Products

- South Corridor Transit Recommendations (September).
- ITS/ Smart Cities Evaluation/ ITS Architecture Final Report (October).
- Technical reports from related to general planning and modeling activities to span issues related to contents of the upcoming regional transportation plan including land use/ economic growth and development, roadway safety, system security, system preservation, congestion management, freight and goods movement, and financial planning (On-going).
- Technical reports from transit planning activities (ongoing).
- Updated regional planning models (ongoing).
- Transportation and urban design publications (September).

Anticipated Purchases

- Consultants for general planning and regional modeling support - \$1,125,000 (less funds spent in FY 2018)
- Consultant for Study of Potential Transit Circulators - \$125,000 (less funds spent in FY 2018)
- Consultant for South Corridor Transit Study¹ - \$1,000,000 (less funds spent in FY 2018)
- Consultant for Regional ITS/ Smart Cities Study - \$300,000 (less funds spent in FY 2018)

Budget Summary

	CPG PL (80/10/10)	CPG PL (80/20)						
Agency	FTA 5303	PL	FTA 5307	SPR (MPO)	SPR (TDOT)	Local Match	State Match	Total
MPO	\$ 202,336	\$ 472,118	\$ -	\$ -	\$ -	\$ 143,322	\$ 25,292	\$ 843,069
TDOT	\$ -	\$ -	\$ -	\$ -	\$ 54,477	\$ -	\$ 13,618	\$ 68,095
Partnerships	\$ -	\$ -	\$ -	\$ 40,000	\$ -	\$ 10,000	\$ -	\$ 50,000
Consultants	\$ 490,000	\$ 872,000	\$ 400,000	\$ 278,000	\$ -	\$ 398,750	\$ 111,250	\$ 2,550,000
Totals	\$ 692,336	\$ 1,344,118	\$ 400,000	\$ 318,000	\$ 54,477	\$ 552,072	\$ 150,160	\$ 3,511,164

¹ The total budget for the South Corridor Transit Study is \$1,000,000, with \$500,000 in funding being provided through the Transportation Improvement Program project #2017-89-033 from a FTA 5307 grant and associated non-federal match. These amounts are shown in the Task Budget Summary table and detailed in Appendix B to this document.

Task 3. Transportation Programming

Purpose

Maintain a regional program that prioritizes and schedules transportation projects consistent with adopted short- and long-range plans of the state and region; administer competitive grant programs as scheduled.

Recent Accomplishments

- Administered and maintained the FYs 2017-2020 Transportation Improvement Program by processing formal amendments and administrative adjustments, the TIP is available at TIP.NashvilleMPO.org.
- Published the list of federally-obligated projects for FY 2017.
- Assisted TDOT in a call-for-projects for the Congestion Mitigation Air Quality (CMAQ) program and the state Transportation Alternatives Program.
- Upgraded the MPO's web-based TIP software and database at TIP.NashvilleMPO.org.
- Held call-for-applications related to the MPO's Active Transportation Program. Awarded funds to projects across the MPO planning area to improve access and safety to active transportation facilities.

Fiscal Year 2019 Activities

- Maintain the TIP to ensure its compliance with federal regulations and to program additional federal funds as they become available.
- Monitor the progress of project fund obligations and MPO member compliance with TIP programming policies.
- Assist TDOT in the call-for-projects for the state Transportation Alternatives Program.
- Publish a list of federally obligated projects within 90 days of the FY 2018 closeout.
- Develop a new FY 2020-2023 TIP to include a 1) call-for-projects, 2) project cost estimation, evaluation, and prioritization, 3) financial planning to fiscal constraints, and 4) coordination with TDOT as the state prepares the new State Transportation Improvement Program (STIP).

TDOT Activities

- TDOT will report the obligation status of TIP projects on a regular basis; provide information and assistance to MPO membership regarding project schedules and funding expenditures; and issue various call-for-projects for state-managed grant funds.

Final Products

- Maintenance of the FYs 17-20 Transportation Improvement Program (On-going).
- Annual Listing of Federally Obligated Projects (December).

Budget Summary

	CPG PL (80/10/10)	CPG PL (80/20)						
Agency	FTA 5303	PL	SPR (MPO)	SPR (TDOT)	Local Match	State Match	Total	
MPO	\$ 39,351	\$ 91,819	\$ -	\$ -	\$ 27,874	\$ 4,919	\$ 163,962	
TDOT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Partnerships	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Totals	\$ 39,351	\$ 91,819	\$ -	\$ -	\$ 27,874	\$ 4,919	\$ 163,962	

Task 4. Data Analysis and Modeling

Purpose

Maintain and analyze data to support transportation planning and facility/system design; develop planning models to forecast future population and employment growth, land development, traffic volumes, transit ridership, and to identify potential impacts of growth and/or policy proposals on public health and the environment.

Recent Accomplishments

- Implemented the MPO’s first regional activity-based travel demand model along with custom software to facilitate data visualization and analysis. The software supports user accounts, custom mapping and reporting, and is intended to increase accessibility to robust datasets and travel forecasts often only used by travel demand modelers.
- Began data collection to update the regional land use model for use in the 2045 RTP.

Fiscal Year 2019 Activities

- Maintain the MPO’s Integrated Transportation Health Impact Model (ITHIM) to predict health outcomes of changes in regional travel behaviors.
- Continue to improve the regional land use and travel demand models in preparation for corridor studies and the next major update to the RTP scheduled for 2020 including migration to an activity-based modeling platform.
- Continue to compile and analyze data to monitor regional congestion in accordance with federal planning requirements for a congestion management process.
- Continue to compile and analyze data related to highway, bridge, and transit system conditions using information from Highway Performance Monitoring System, National Bridge Inventory, and the Federal Transit Database.
- Continue to collect and analyze roadway safety (traffic incident) data made available from the Tennessee Department of Safety and Homeland Security.
- Continue to collect base year data for regional planning models to be used in the development of the 2045 Regional Transportation Plan including land use data, transportation system data, socioeconomic data, environmental quality data, sociocultural data. Datasets are accessible from a variety of sources including state agencies and local governments.
- Partner with the Nashville Area Chamber of Commerce to produce the Nashville Region’s Vital Signs data indicators report.

TDOT Activities

- TDOT will continue to collect traffic count data for planning and project design, and provide support for maintaining traffic accident data for use in safety analysis.

Partnership Activities

- The MPO will provide up to \$75,000 in federal funds to the Nashville Area Chamber of Commerce to cover its share of the production of the “Nashville Region’s Vital Signs” report.

Final Products

- Nashville Region’s VitaSigns Report (October).
- Updated planning models to forecast future land use, traffic, transit, and public health conditions (ongoing).
- Technical reports documenting model parameters and assumptions (ongoing).

Budget Summary

Agency	CPG PL (80/10/10)		CPG PL (80/20)		Local Match	State Match	Total
	FTA 5303	PL	SPR (MPO)	SPR (TDOT)			
MPO	\$ 110,056	\$ 256,798	\$ -	\$ -	\$ 77,956	\$ 13,757	\$ 458,568
TDOT	\$ -	\$ -	\$ -	\$ 16,761	\$ -	\$ 4,190	\$ 20,951
Partnerships	\$ -	\$ 75,000	\$ -	\$ -	\$ 18,750	\$ -	\$ 93,750
Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Totals	\$ 110,056	\$ 331,798	\$ -	\$ 16,761	\$ 96,706	\$ 17,947	\$ 573,269

Task 5. Communications & Outreach

Purpose

Keep MPO members and partners informed on regional trends and issues and the transportation planning process; engage stakeholders and the public in the development of regional policies; provide opportunities for meaningful input on proposed plans and programs; comply with the guidelines of the adopted Public Participation Plan; continue to seek new methods of outreach.

Recent Accomplishments

- Completed updates to all MPO documents to communicate the change in sponsor agency to the public.
- Participated in presentations and events as part of the continuing outreach efforts of the RTP.
- Enhanced custom web-based application for inventorying and archiving information about plans and studies conducted across the region including local comprehensive plans, corridor studies, etc. The online database is searchable by keyword and provides a summary of the key recommendations or findings for each plan or study.
- Participated in “creative labs” as part of Envision Nolensville Pike to increase community engagement along the corridor to inform the planned transit and roadway improvements.
- Completed an update to the MPO’s PPP.

Fiscal Year 2019 Activities

- Maintain compliance with the MPO’s Public Participation Plan.
- Maintain MPO member and stakeholder contact lists and databases.
- Maintain a list of traditionally under-served or under-represented populations (e.g., minorities, low-income, seniors, young adults, among others).
- Maintain contacts with local media for the dissemination of transportation planning related news and events.
- Continue the integration of social media platforms to reach highly mobile residents.
- Continue implementation of communications plans to ensure that the public and stakeholders are made aware of any branding or programmatic changes as the MPO program is integrated into the GNRC.
- Continue to place public notices and advertisements seeking public comments on MPO plans and programs.
- Conduct MPO meetings including the annual membership luncheon that will pull together the Policy Board and Technical Coordinating Committee.
- Incorporate highlights of MPO accomplishments and planning activities into GNRC annual report.
- Continue to find ways to expand public engagement by incorporating existing GNRC programs, the arts and creative placemaking into transportation planning efforts.

Partnership Activities

- The MPO will provide up to \$40,000 in federal funds to the Clean Air Partnership of Middle Tennessee for the administration of an air quality education and outreach program.

Final Products

- Public Participation Plan (ongoing).
- Air Quality outreach (ongoing).
- General public meetings and workshops related to MPO products (ongoing).

Budget Summary

Agency	CPG PL (80/10/10)	CPG PL (80/20)	SPR (MPO)	SPR (TDOT)	Local Match	State Match	Total
	FTA 5303	PL					
MPO	\$ 70,488	\$ 164,472	\$ -	\$ -	\$ 49,929	\$ 8,811	\$ 293,699
TDOT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Partnerships	\$ -	\$ -	\$ 40,000	\$ -	\$ 10,000	\$ -	\$ 50,000
Consultants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Totals	\$ 70,488	\$ 164,472	\$ 40,000	\$ -	\$ 59,929	\$ 8,811	\$ 343,699

4.0 Budget Tables

Table 1. FY 2019 Annual Program Budget

	FHWA PL	FTA***	FHWA SPR	STATE MATCH	MEMBER DUES	OTHER LOCAL ****	TOTAL
TOTAL MPO PROGRAM EXPENSES	\$ 2,099,828	\$ 1,336,755	\$ 358,000	\$ 167,094	\$ 637,801	\$ 163,750	\$ 4,763,229
NEW PROGRAMS	\$ 1,227,828	\$ 536,755	\$ 190,000	\$ 67,094	\$ 402,801	\$ 38,750	\$ 2,463,229
FY 2019 MPO OPERATING	\$ 1,152,828	\$ 446,755	\$ -	\$ 55,844	\$ 364,051	\$ -	\$ 2,019,479
MPO Staff Salaries & Benefits	\$ 718,916	\$ 308,107	\$ -	\$ 38,513	\$ 218,242	\$ -	\$ 1,283,779
MPO Other Direct Costs	\$ 110,400		\$ -	\$ -	\$ 27,600	\$ -	\$ 138,000
MPO Indirect Costs*	\$ 323,512	\$ 138,648	\$ -	\$ 17,331	\$ 98,209	\$ -	\$ 577,700
MPO Contingency/ Federal Non-Reimbursables	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ -	\$ 20,000
FY 2019 REGIONAL PARTNERS	\$ 75,000	\$ -	\$ 80,000	\$ -	\$ -	\$ 38,750	\$ 193,750
Clean Air Partnership of Middle Tennessee	\$ -	\$ -	\$ 40,000	\$ -	\$ -	\$ 10,000	\$ 50,000
Nashville Area Chamber of Commerce Vital Signs	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ 18,750	\$ 93,750
Nashville Civic Design Center	\$ -	\$ -	\$ 40,000	\$ -	\$ -	\$ 10,000	\$ 50,000
FY 2019 REGIONAL ACTIVITIES	\$ -	\$ 90,000	\$ 110,000	\$ 11,250	\$ 38,750	\$ -	\$ 250,000
General Planning & Regional Modeling		\$ 90,000	\$ 110,000	\$ 11,250	\$ 38,750	\$ -	\$ 250,000
CONTINUING PROGRAMS**	\$ 872,000	\$ 800,000	\$ 168,000	\$ 100,000	\$ 235,000	\$ 125,000	\$ 2,300,000
REGIONAL STUDIES	\$ 772,000	\$ -	\$ 168,000	\$ -	\$ 235,000	\$ -	\$ 1,175,000
General Planning & Regional Modeling	\$ 700,000	\$ -	\$ -	\$ -	\$ 175,000	\$ -	\$ 875,000
Smart Cities/ ITS Assessment	\$ 72,000	\$ -	\$ 168,000	\$ -	\$ 60,000	\$ -	\$ 300,000
SUBREGIONAL STUDIES	\$ 100,000	\$ 800,000	\$ -	\$ 100,000	\$ -	\$ 125,000	\$ 1,125,000
South Corridor Transit Feasibility Study	\$ -	\$ 800,000	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ 1,000,000
Transit Circulation Studies	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 25,000	\$ 125,000
TOTAL TDOT PARTICIPATION EXPENSES	\$ -	\$ -	\$ 91,335	\$ 22,832	\$ -	\$ -	\$ 114,167
TOTAL FY 2019 UPWP BUDGET	\$ 2,099,828	\$ 1,336,755	\$ 449,335	\$ 189,926	\$ 637,801	\$ 163,750	\$ 4,877,396

*Based on anticipated indirect cost rate approval of 45%

**May be spent down before the start of FY 2019

***Includes FTA 5303 funds flexed to FHWA for the Consolidated Planning Grant Program and FTA 5307 funds programmed in the TIP for regional planning activities

****Other Local includes cash and in-kind contributions from MPO members or regional partners

Table 2. FY 2019 UPWP Funding and Matching Sources by Task

UPWP Task	CPG PL (80/10/10)	CPG PL (80/20)						
	FTA 5303	PL	FTA 5307	SPR (MPO)	SPR (TDOT)	Local Match	State Match	Total
1.0 Program Administration	\$ 24,524	\$ 167,622	\$ -	\$ -	\$ 20,097	\$ 44,971	\$ 8,089	\$ 265,303
2.0 Regional Planning	\$ 692,336	\$ 1,344,118	\$ 400,000	\$ 318,000	\$ 54,477	\$ 552,072	\$ 150,160	\$ 3,511,164
3.0 Transportation Programming	\$ 39,351	\$ 91,819	\$ -	\$ -	\$ -	\$ 27,874	\$ 4,919	\$ 163,962
4.0 Data Analysis & Modeling	\$ 110,056	\$ 331,798	\$ -	\$ -	\$ 16,761	\$ 96,706	\$ 17,947	\$ 573,269
5.0 Communications & Outreach	\$ 70,488	\$ 164,472	\$ -	\$ 40,000	\$ -	\$ 59,929	\$ 8,811	\$ 343,699
Totals	\$ 936,755	\$ 2,099,828	\$ 400,000	\$ 358,000	\$ 91,335	\$ 781,551	\$ 189,926	\$ 4,857,396

Table excludes \$20,000 in local cash generated from Membership Dues for the MPO Contingency Fund not allocated to a specific task.

Table 3. FY 2019 Federal and State Revenue Sources

Federal Grant Source	FY 18 Carryover*	FY 19 Allocation	Total Available FY 19	Programmed in FY 19	Est. Carryover FY 20
FHWA PL Funds	\$ 1,200,000	\$ 1,191,719	\$ 2,391,719	\$ 1,476,316	\$ 915,403
FHWA SPR Funds	\$ 350,000	\$ 294,884	\$ 644,884	\$ 437,750	\$ 207,134
FTA 5303 Funds	\$ 1,000,000	\$ 520,000	\$ 1,520,000	\$ 863,357	\$ 656,643
Total	\$ 2,550,000	\$ 2,006,603	\$ 4,556,603	\$ 2,777,423	\$ 1,779,180

*Includes any reserves. Amount is estimated and subject to changed based expenditures through September 30, 2017. Federal and state funds only.

Table 4. FY 2019 MPO Operating Budget by Task

Task	Salaries & Benefits	Other Direct Costs	Non-Reimbursables	Total Direct Costs	Indirect Costs	Total Costs
1.0 Program Administration	\$ 70,470	\$ 138,000	\$ 20,000	\$ 228,470	\$ 31,711.50	\$ 260,181.50
2.0 Regional Planning	\$ 581,427	\$ -	\$ -	\$ 581,427	\$ 261,641.95	\$ 843,068.51
3.0 Transportation Programming	\$ 113,077	\$ -	\$ -	\$ 113,077	\$ 50,884.71	\$ 163,961.84
4.0 Data Analysis & Modeling	\$ 316,253	\$ -	\$ -	\$ 316,253	\$ 142,314.07	\$ 458,567.57
5.0 Communications & Outreach	\$ 202,551	\$ -	\$ -	\$ 202,551	\$ 91,148.10	\$ 293,699.44
TOTAL	\$ 1,283,779	\$ 138,000	\$ 20,000	\$ 1,441,779	\$ 577,700	\$ 2,019,479

**Non-reimbursable expenses are paid for by cash from the MPO's contingency fund. **Table excludes expenses for partners, consultants, and TDOT.*

Table 5. FY 2019 Other Direct Costs Detail

Other Direct Costs	Amount
Local Travel	\$ 10,000
Workshops and Conferences	\$ 40,000
Printing and Publications	\$ 30,000
Consumable Supplies	\$ 5,000
Membership Fees and Organizational Dues	\$ 10,000
Public Noticing/ Marketing	\$ 20,000
Software and Devices	\$ 20,000
Telecommunications	\$ 3,000
TOTAL	\$ 138,000

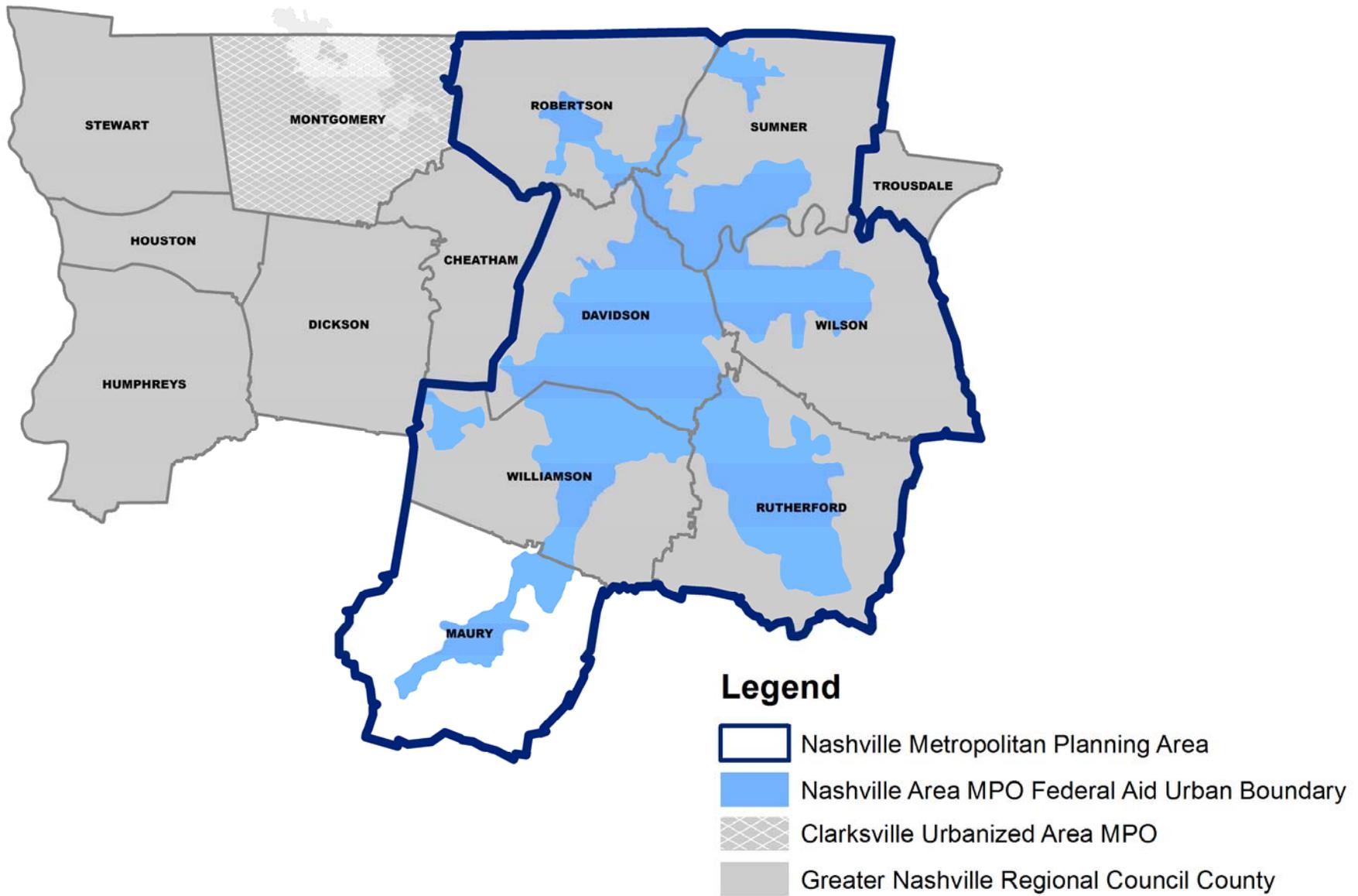
Table 6. Estimated MPO Dues Revenue

	U.S. Census Population Estimate for 2016	FY 2019 Member Dues at 26 Cents per Capita
City of Brentwood	43,549	\$11,322.74
City of Columbia	37,905	\$9,855.30
City of Fairview	8,812	\$2,291.12
City of Franklin	75,248	\$19,564.48
City of Gallatin	34,834	\$9,056.84
City of Goodlettsville	17,368	\$4,515.68
City of Greenbrier	6,808	\$1,770.08
City of Hendersonville	57,392	\$14,921.92
City of Lavergne	36,583	\$9,511.58
City of Lebanon	31,118	\$8,090.68
City of Millersville	6,845	\$1,779.70
City of Mt. Juliet	31,556	\$8,204.56
City of Murfreesboro	129,556	\$33,684.56
City of Nolensville	7,164	\$1,862.64
City of Portland	12,634	\$3,284.84
City of Spring Hill	36,478	\$9,484.28
City of Springfield	16,959	\$4,409.34
City of White House	11,280	\$2,932.80
Metropolitan Government of Nashville-Davidson County	673,221	\$175,037.46
Maury County	43,356	\$11,272.56
Robertson County	38,434	\$9,992.84
Rutherford County	93,936	\$24,423.36
Sumner County	57,863	\$15,044.38
Town of Smyrna	48,176	\$12,525.76
Williamson County	56,576	\$14,709.76
Wilson County	70,108	\$18,228.08
TOTAL	1,683,759	\$437,777.34

Table 7. FY 2020 Budget Estimates

	FHWA PL	FTA 5303	FHWA SPR	STATE MATCH	REGIONAL DUES	OTHER LOCAL	TOTAL
TOTAL MPO PROGRAM EXPENSES	\$ 1,354,195	\$ 667,350	\$ 295,000	\$ 83,419	\$ 476,968	\$ 28,750	\$ 2,905,682
FY 2020 MPO OPERATING	\$ 854,195	\$ 317,350	\$ -	\$ 39,669	\$ 273,218	\$ -	\$ 1,484,432
MPO Staff Salaries & Benefits	\$ 740,483	\$ 317,350	\$ -	\$ 39,669	\$ 224,790	\$ -	\$ 1,322,292
MPO Other Expenses	\$ 113,712	\$ -	\$ -	\$ -	\$ 28,428	\$ -	\$ 142,140
MPO Contingency/ Federal Non-Reimbursables	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ -	\$ 20,000
FY 2020 REGIONAL PARTNERS	\$ -	\$ -	\$ 155,000	\$ -	\$ -	\$ 28,750	\$ 183,750
Clean Air Partnership of Middle Tennessee	\$ -	\$ -	\$ 40,000	\$ -	\$ -	\$ 5,000	\$ 45,000
Nashville Area Chamber of Commerce	\$ -	\$ -	\$ 75,000	\$ -	\$ -	\$ 18,750	\$ 93,750
Nashville Civic Design Center	\$ -	\$ -	\$ 40,000	\$ -	\$ -	\$ 5,000	\$ 45,000
FY 2020 STUDIES	\$ 500,000	\$ 350,000	\$ 140,000	\$ 43,750	\$ 203,750	\$ -	\$ 1,237,500
General Planning & Regional Modeling	\$ 500,000	\$ 350,000	\$ 140,000	\$ 43,750	\$ 203,750	\$ -	\$ 1,237,500
<i>Includes use of anticipated carryover amounts from FY 2019</i>							

Appendix A. Map of the MPO Planning Area



Appendix B. Project Planning Studies

TDOT Planning Report Requests

None received to date for the coming fiscal year.

Planning Activities funded with Grants Programmed in the TIP

South Corridor Transit Study

The South Corridor Transit Feasibility Study is intended to provide the transit agencies, community leadership, and stakeholders within the MPO area a series of short-, mid-, and long-term recommendations to implement the vision for rapid transit between Nashville and communities along the south corridor into Maury County, as defined by the MPO's 2040 Regional Transportation Plan and the nMotion Strategic Plan developed by the Regional Transportation Authority of Middle Tennessee (RTA) and the Nashville Metropolitan Transit Authority (MTA).

- TIP#: 2017-89-033
- Total Budget: \$1,000,000
- FTA 5303: \$400,000
- **FTA 5307: \$400,000**
- State Match: \$100,000
- Local Match: \$100,000

Appendix C. Acronyms and Definitions

Active Transportation: Transportation which requires physical activity as part of the mode. Typically, active transportation refers to walking, bicycling and to transit, as transit trips begin and end with a walking or bicycling trip.

ADA - Americans with Disabilities Act of 1990: Federal law that requires public facilities (including transportation services) to be accessible to persons with disabilities including those with mental disabilities, temporary disabilities, and the conditions related to substance abuse.

ADAAG – ADA Standards for Accessible Design Guidelines: Enforceable accessibility standards adopted by federal regulations.

ADT - Average Daily Traffic: The number of vehicles passing a fixed point in a day, averaged over a number of days. The number of count days included in the average varies with the intended use of data.

ATRI – American Transportation Research Institute: A well-known leader in transportation-related research, is an organization whose hallmark is innovative thinking, critical analysis and uncompromised excellence. As part of the American Trucking Associations (ATA) Federation, ATRI benefits from the broad support of the ATA and its members.

AVL – Automated Vehicle Locator: A device that makes use of the Global Positioning System (GPS) to enable a business or agency to remotely track the location of its vehicle fleet by using the Internet.

AVO - Average Vehicle Occupancy: The ratio of person trips to vehicle trips; often used as a criteria in judging the success of trip reduction programs.

BLOS – Bicycle Level of Service: A measure, expressed on a scale of A to F, of the general conditions of roadways for supporting bicycle travel. LOS indicates the level of comfort or perceived safety based on a combination of factors including the roadway's vehicular speed limit, traffic volumes, shoulder widths, travel lane widths, and bicycle facilities.

BRT – Bus Rapid Transit (BRT-Lite): A high speed bus system operated within an exclusive right-of-way. BRT incorporates exclusive transit ways, modern stations, on-board fare collection, high-tech vehicles and frequent service. BRT systems can be built incrementally and designed for vehicles - rather than people - transfer from local bus routes to the high speed lines. BRT-Lite typically refers to a bus service that includes some components of BRT, but not operating within a dedicated guideway.

CAA - Clean Air Act Amendments: 1990 amendments to the federal Clean Air Act which classify non-attainment areas and provide for rules dealing with air pollution in such areas; specifically brought transportation decisions into the context of air quality control.

CBIS – Computer Based Information System

CCTV – Closed Circuit Television: The use of video cameras to transmit a signal to a specific place or limited set of monitor/displays. CCTV is used for video surveillance of traffic conditions.

CFR – Code of Federal Regulations: The codification of the general and permanent rules published in the Federal Register by the departments and agencies of the Federal Government. It is divided into 50 titles that represent broad areas subject to Federal regulation. Federal transportation planning requirements pertaining to MPOs are generally provided in Titles 23 and 49.

CMAQ - Congestion Mitigation and Air Quality Improvement Program: Provides a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas).

CMP - Congestion Management Process (previously known as Congestion Management System): A systematic process required under SAFETEA-LU for all TMAAs that shall address congestion management through the metropolitan planning process that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy of new and existing transportation facilities eligible for funding under title 23 and chapter 53 of title 49 through the use of travel demand reduction and operational management strategies. The CMP is required under 23 CFR 500.109 and shall include methods to monitor and evaluate the performance of the multi-modal transportation system, identify causes of congestion, identify and evaluate alternative actions, provide information supporting the implementation of actions, and evaluate the efficiency and effectiveness of implementation actions. The CMP is periodically reviewed for efficiency and effectiveness of the implemented strategies, the results of this evaluation shall be provided to decision-makers to provide guidance on selection of effective strategies for future implementation purposes.

Complete Streets – Streets that offer transportation choices that are safe and convenient for all ages and ability levels. These choices may include transit, walking, bicycling and automobile travel.

CO2 – Carbon Dioxide – A naturally occurring and important greenhouse gas. Burning of carbon-based fuels since the industrial revolution has rapidly increased its concentration in the atmosphere, leading to global warming. Emissions from transportation vehicles is a contributor to this increase in concentration.

CONST – Construction (phase of a project): The phase of a project after the preliminary environmental and engineering work is completed, where the project is being built and the improvements are prepared for implementation.

CRT – Cumberland Region Tomorrow: A nonprofit organization comprised of private-sector community leaders founded in 2000 to support quality growth planning across Middle Tennessee.

DMS – Dynamic Message Signs: An electronic roadway sign that allows for messages to be customized to travelers based on current conditions.

DMU – Diesel Multiple Unit: A type of propulsion technology for passenger trains requiring no separate locomotive. Instead, the engine is incorporated into one or more of the cars/carriages of a light rail, commuter rail, or street car system.

DOT - Department of Transportation: Agency responsible for transportation at the local, state, or federal level. For title 23 U.S.C. federal-aid highway actions, this would mean the Federal Highway Administration and for federal-aid transit actions under title 49 U.S.C, this would mean the Federal Transit Administration.

E+C – Existing plus Committed Transportation Network: Also called a No-Build network, this is a test of how a roadway network, consisting of an existing network plus currently funded future roadway projects, could withstand the demand of projected population and employment growth.

EA – Environmental Assessment: The process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made. The purpose of the assessment is to ensure that decision-makers consider environmental impacts before deciding whether to proceed with new projects.

EIS - Environmental Impact Statement: A National Environmental Policy Act (NEPA) document that explains the purpose and need for a project, presents project alternatives, analyzes the likely impact of each, explains the choice of a preferred alternative, and finally details measures to be taken in order to mitigate the impacts of the preferred alternative.

EJ - Environmental Justice: Derived from Title VI of the Civil Rights Act of 1964, and established by Executive Order 12898, EJ requires federally funded plans and programs to assess their impact, either positive or negative, on traditionally underserved (e.g., low-income, minority, etc.) communities or segments of the population. The goal of EJ is to ensure public involvement of low income and minority groups in decision making to prevent disproportionately high and adverse impacts on low income and minority groups, and to ensure that these groups receive equal benefits from transportation improvements.

EPA – U.S. Environmental Protection Agency: is an agency of the federal government of the United States charged with protecting human health and with safeguarding the natural environment: air, water, and land.

E-TRIMS – Enhanced Tennessee Roadway Information Management System: A database managed by the Tennessee Department of Transportation that includes attribute information for various transportation assets.

Executive Board (renamed to Transportation Policy Board): A standing committee created for the purpose of serving as spokespersons for the citizens of the metropolitan area and is the designated MPO to prioritize and direct federal transportation funds to local projects. The Board is comprised of elected officials from the cities over 5,000 population and the counties of Davidson, Maury, Robertson, Rutherford, Sumner, Williamson and Wilson. Additional board members include the Tennessee Governor, a representative from the Greater Nashville Regional Council, a representative of area public transit operators, a representative of area county highway departments, and staff from the Federal Highway Administration and Federal Transit Administration. Board meetings are open to the public and where any member of the public can address the MPO on any transportation issue.

FHPP - Federal High Priority Projects: Discretionary projects earmarked by the U.S. Congress as high priorities at the federal level during the Congressional appropriations and re-authorization process.

FHWA - Federal Highway Administration: Division of the U.S. Department of Transportation responsible for administering federal highway transportation programs under title 23 U.S.C.

Fiscal Constraint: A requirement that the MPO regional transportation plan and TIP include sufficient financial information for demonstrating that projects in the metropolitan transportation plan, TIP, and STIP can be implemented using committed, available, or reasonably available revenue sources, with reasonable assurance that the federally supported transportation system is being adequately operated and maintained. For the TIP and the STIP, financial constraint/fiscal constraint applies to each program year.

FRA – Federal Railroad Administration: The modal administration of the United States Department of Transportation responsible for the safety and effectiveness of the nation’s railroad infrastructure.

FTA - Federal Transit Administration: The modal administration of the United States Department of Transportation responsible for federal transit planning and programs under title 49 U.S.C.

FTA - Franklin Transit Authority: The local transit agency for Franklin, Tennessee, currently operated on behalf of the city by The TMA Group.

Functional Classification: Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network.

FY - Fiscal Year: A federal fiscal or budget year; runs from October 1 through September 30 for the MPO and the federal government. State and local governments operate on a fiscal year beginning July 1 and ending June 30.

HIA – Health Impact Assessment: An assessment conducted ideally in the planning phases of a built environment project which estimates any positive or negative impacts that a project may have on environmental or personal health. The assessment makes recommendations for improvements to the project to mitigate negative impacts such as reducing emissions or improving positive impacts such as increasing physical activity.

GIS – Geographic Information System: a system for capturing, storing, analyzing and managing data which is spatially referenced to the earth. GIS is a tool that allows users to create interactive queries (user created searches), analyze the spatial information, edit data, maps, and present the results of all these operations.

GNRC – Greater Nashville Regional Council: a regional organization created by State law to serve as the development district for 13 counties in northern Middle Tennessee. GNRC serves as the Area Agency on Aging and Disability, the Middle Tennessee Tourism Council, and provides community planning and economic development assistance to its local government members. In 2017, the GNRC was designated to serve as the MPO sponsor agency, and as such provides staffing and administrative services to the MPO Transportation Policy Board.

GPS – Global Positioning System: a space-based navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites.

HERS-ST – Highway Economic Requirements System-State Version: an engineering/economic analysis (EEA) tool that uses engineering standards to identify highway deficiencies, and then applies economic criteria to select the most cost-effective mix of improvements for system-wide implementation.

HOV - High Occupancy Vehicle: In Tennessee, vehicles carrying two (2) or more people receive this designation and may travel on freeways, expressways and other large volume roads in lanes designated for high occupancy vehicles. Motorcycles are also authorized to use these lanes.

HPMS – Highway Performance Monitoring System: a national level highway information system that includes data on the extent, condition, performance, use and operating characteristics of the nation's highways.

HUD – United States Department of Housing and Urban Development: Federal agency charged with helping to create strong, sustainable, inclusive communities and quality, affordable homes.

HTS (or HHTS) – Household Travel Survey: A major survey effort conducted periodically to collect socio-economic and travel behavior information from a random selection of households across the planning area. Data from the survey are used in travel demand modeling to predict future transportation trends.

IM – Interstate Maintenance: A funding category created by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the IM authorizes funding for activities that include the reconstruction of bridges, interchanges, and over crossings along existing Interstate routes, including the acquisition of right-of-way where necessary, but shall not include the construction of new travel lanes other than high occupancy vehicle lanes or auxiliary lanes.

IMS - Incident Management System: A systematic process required under SAFETEA-LU to provide information on accidents and identify causes and improvements to the Transportation system to increase safety of all users.

ISTEA - Intermodal Surface Transportation Efficiency Act of 1991: Federal law which restructured transportation planning and funding by requiring consideration of multimodal solutions, emphasis on the movement of people and goods as opposed to traditional highway investments, flexibility in the use of transportation funds, a greater role of MPOs, and a greater emphasis on public participation. ISTEA preceded TEA-21 and SAFETEA-LU.

ITE - Institute of Transportation Engineers: An international society of professionals in transportation and traffic engineering; publishes Trip Generation (a manual of trip generation rates by land use type).

ITS - Intelligent Transportation System: Use of computer and communications technology to facilitate the flow of information between travelers and system operators to improve mobility and transportation productivity, enhance safety, maximize the use of existing

transportation facilities, conserve energy resources and reduce adverse environmental effects; includes concepts such as “freeway management systems,” “automated fare collection” and “transit information kiosks.”

Intergovernmental Agreement: Legal instrument describing tasks to be accomplished and/or funds to be paid between government agencies.

LMT – Leadership Middle Tennessee: A leadership institute founded in 1999 to broaden the perspective of community leaders to include a greater understanding of regional issues and challenges.

LOS - Level of Service: A qualitative assessment of a road’s operating condition, generally described using a scale of A (little congestion) to E/F (severe congestion).

LRT – Light Rail Transit: a particular class of urban and suburban passenger railway that utilizes equipment and infrastructure that is typically less massive than that used for rapid transit systems, with modern light rail vehicles usually running along the system.

LRTP – Long-Range Transportation Plan: A document resulting from regional or statewide collaboration and consensus on a region or state's transportation system, and serving as the defining vision for the region's or state's transportation systems and services. In metropolitan areas, the plan indicates all of the transportation improvements scheduled for funding over the next 20 years. It is fiscally constrained, i.e., a given program or project can reasonably expect to receive funding within the time allotted for its implementation.

MAP-21 – Moving Ahead for Progress in the 21st Century Act: The federal transportation act passed by Congress and signed into law in 2012 that authorized federal surface transportation programs for FYs 2013 and 2014.

MG - Minimum Guarantee: A funding category created in TEA-21 that guarantees a 90 percent return of contributions on formula funds to every state.

MPO Activities: Are plans, programs and projects related to the MPO process.

MPW – Metro Public Works: The Metropolitan Government of Nashville–Davidson County Department of Public Works.

MPO - Metropolitan Planning Organization: The forum for cooperative transportation decision-making; required for urbanized areas with populations over 50,000.

MTA – Metropolitan Transit Authority: The public transit agency serving Nashville/Davidson County.

NBI – National Bridge Inventory: A compilation of bridge data supplied by the States to the FHWA for bridges located on public roads.

NBIAS – National Bridge Investment Analysis System: A tool developed by the FHWA to help analyse the financial needs to keep bridges in a state of good repair.

NEPA – National Environmental Policy Act: Passed in 1970, NEPA requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions.

NHPP – National Highway Performance Program: A federal transportation grant program administered through the FHWA to support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS

NHS - National Highway System: Consists of roadways important to the nation’s economy, defense, and mobility. The NHS includes the Interstate System, principal arterial highways in rural and urban areas, the Strategic Highway Networks and connectors for national defense purposes, and intermodal connectors that tie together the surface, air, water, and rail transportation systems.

NOx – Nitrogen Oxides or oxides of nitrogen: The third largest greenhouse gas. It attacks ozone in the stratosphere, aggravating the excess amount of UV light striking the earth's surface.

Obligated Funds: Funds that have been authorized by and committed to legally by a federal agency to pay for the federal share of the project cost.

Officials: Are people who have governmental decision-making, planning or administrative responsibilities that relate to MPO activities.

PE – Preliminary Engineering (phase of project): a process to begin developing the design of the facilities and system, to analyze the function and operation of the system, evaluation cost efficiencies and prepare for the final design of the project.

PLOS – Pedestrian Level of Service: A measure, expressed on a scale of A to F, of the general conditions of roadways for supporting pedestrian travel. LOS indicates the level of comfort or perceived safety based on a combination of factors including the roadway’s vehicular speed limit, traffic volumes, travel lane widths, and pedestrian facilities.

PMS - Pavement Management System: A systematic process utilized by State agencies and MPOs to analyze and summarize pavement information for use in selecting and implementing cost-effective pavement construction, rehabilitation, and maintenance programs;

required for roads in the National Highway System as a part of ISTEA; the extent to which the remaining public roads are included in the process is left to the discretion of State and local officials.

PPP – Public Participation Plan: a federally-required document that describes the MPO's process for involving the public and interested stakeholders in the development and adoption of required plans and programs, and the formal procedures used to adopt or amend the Long-Range Transportation Plan, the Transportation Improvement Program, and Unified Planning Work Program.

Public: Includes citizens, public agencies, advocacy groups and the private sectors that have an interest in or may be affected by MPO activities.

Public Participation: Is an integral part of a planning or major decision-making process. It provides opportunities for the public to be involved with the MPO in an exchange of data and ideas. Public participation offers an open process in which the rights of the community, to be informed to provide comments to the Government and to receive a response from the Government, are met through a full opportunity to be involved and to express needs and goals.

ROW - Right-of-Way: Real property that is used for transportation purposes; defines the extent of the corridor that can be used for the road and associated drainage.

RTA – Regional Transportation Authority: Nine-county regional agency that plans and develops regional transit in the Nashville area.

RTDM - Regional Travel Demand Model: This is a tool for simulating and forecasting regional travel patterns as well as testing various growth patterns or transportation investment scenarios to measure the impact to area traffic. The base year travel patterns are determined from periodic survey research of travel behaviors among Nashville area households and data provided by the US Census.

SAFETEA-LU - Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users - legislation enacted August 10, 2005, as Public Law 109-59. SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009. SAFETEA-LU was preceded by ISTEA and TEA-21.

School Siting: the process by which a community decides where to locate a new public school. The placement of schools and the zones of populations assigned to attend a school affect transportation patterns in the community as well as the modal types used to make a home to school trip.

SIP – State Implementation Plan (for air quality): the regulations and other materials for meeting clean air standards and associated Clean Air Act requirements.

SR – State Route: a roadway owned, financed and maintained by a state.

SRTS – Safe Routes to School: the name of a national movement and a component of SAFETEA-LU by which communities provide infrastructure and education to enable and encourage children to walk and bicycle to school.

STA – State gas tax fund: Also called motor fuel excise tax, this is a tax charged by the gallon and collected as consumers pay at the pump. The tax goes primarily towards basic operating costs, highway maintenance contracts, resurfacing, bridges, major reconstruction, new construction, consultant contracts, right-of-way purchases, and to match federal funds.

STIP - State Transportation Improvement Program: A priority list of transportation projects developed by the Tennessee Department of Transportation that is to be carried out within the four (4) year period following its adoption; must include documentation of federal, State, and local funding sources for each project. Transportation projects in the state's 11 metropolitan areas are determined through Metropolitan Planning Organization process.

STP – Surface Transportation Program (S-STP, L-STP, M-STP, U-STP, O-STP): A federal grant program administered by the Federal Highway Administration that provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. **S-STP** refers to STP funding provided to TDOT for statewide use. **L-STP** refers to STP funding distributed to areas of 5,000 to 50,000 in population. **M-STP** refers to STP funding distributed to the Murfreesboro Urbanized Area. **U-STP** refers to STP funding distributed to the Nashville-Davidson Urbanized Area. **O-STP** refers to the sum of L-STP, M-STP, U-STP funding allocated in the regional transportation plan between the years 2021 and 2040.

STRACNET – Strategic Rail Corridor Network: A network consisting of 38,800 miles of rail lines important to national defense and which provides service to 193 defense installations whose mission requires rail service.

STRAHNET – Strategic Highway Network: A network of highways that provides defense access, continuity, and emergency capabilities for movements of personnel and equipment in both peace and war.

TAZ – Traffic Analysis Zone: A unit of geography - usually based on U.S. Census tracts, blockgroups, or blocks - used in travel demand models which predict the number of trips expected to occur between zones.

TCA – Tennessee Code Annotated: The codification of Tennessee state laws.

TCC - Technical Coordinating Committee: A standing committee of MPO area planners, engineers, and other transportation related agencies which provide advice on plans or actions of the MPO. TCC meetings are open to the public.

TDM – Transportation Demand Management: a method of planning for and implementing transportation improvement in a manner that reduces traffic congestion and pollution by influencing changes in travel behavior.

TDEC – Tennessee Department of Environment and Conservation: State agency responsible for protecting the quality of the natural environment, conserving natural and historic resources, and providing quality outdoor recreational activities through the state park system.

TDOS – Tennessee Department of Safety and Homeland Security: State agency responsible for driver's licenses, vehicle titles, highway patrol, handgun permits, public safety, and homeland security

TDOT – Tennessee Department of Transportation: State agency responsible for the planning and implementation of Tennessee's multimodal transportation system including roads and bridges, aviation, public transit, waterways, and railroads.

TEA-21 - Transportation Equity Act for the 21st Century: Federal Legislation that authorized funds for all modes of transportation and guidelines on the use of those funds. Successor to ISTEA, the landmark legislation clarified the role of the MPOs in the local priority setting process. TEA-21 emphasized increased public involvement, simplicity, flexibility, fairness, and higher funding levels for transportation. TEA-21 preceded SAFETEA-LU.

TITAN – Tennessee Integrated Traffic Analysis Network: A database of traffic incidents report to TDOS by local and state law enforcement agencies.

TIP - Transportation Improvement Program: A priority list of transportation projects developed by a metropolitan planning organization that is to be carried out within the four (4) year period following its adoption; must include documentation of federal, state, and local funding sources for each project and be consistent with adopted MPO long range transportation plans and local government comprehensive plans.

TMA - Transportation Management Area: An area designation by the U.S. Department of Transportation given to all urbanized areas with a population of 200,000 or more (or other area when requested by the Governor and MPO); these areas must comply with special transportation planning requirements regarding congestion management systems, project selection and certification; requirements identified in 23 CFR - 450.300-338.

Transportation Policy Board (formerly the Executive Board): A standing committee created for the purpose of serving as spokespersons for the citizens of the metropolitan area and is the designated MPO to prioritize and direct federal transportation funds to local projects. The Board is comprised of elected officials from the cities over 5,000 population and the counties of Davidson, Maury, Robertson, Rutherford, Sumner, Williamson and Wilson. Additional board members include the Tennessee Governor, a representative from the Greater Nashville Regional Council, a representative of area public transit operators, a representative of area county highway departments, and staff from the Federal Highway Administration and Federal Transit Administration. Board meetings are open to the public and where any member of the public can address the MPO on any transportation issue.

The TMA Group: A local non-profit organization headquartered in Williamson County responsible for carrying out certain transit services on behalf of the Regional Transportation Authority and the Franklin Transit Authority, and for the administration of the regional Clean Air Partnership of Middle Tennessee, under contract to Williamson County and the Nashville Area MPO.

TOD - Transit Oriented Development: a mixed-use development that is anchored by a transit station. The transit mode may include bus or rail, and the development may include uses such as housing, office and retail.

TODD - Transit on Demand: a type of flexible transit service offered by the Franklin Transit Authority that is available upon request from customers.

Transportation Disadvantaged: People who are unable to transport themselves or to purchase transportation due to disability, income status or age.

Transportation Enhancements: Specific activities which can be funded with Surface Transportation Program (STP) funds; activities include pedestrian/bicycle facilities, acquisition of scenic easements and scenic historic sites, scenic or historic highway programs, scenic beautification, historic preservation, rehabilitation/operation of historic transportation structures, railway corridor preservation, control/removal of outdoor advertising, archeological planning/research and mitigation of highway runoff water pollution.

TRIMS – Tennessee Roadway Information Management System: An Oracle database application which enables TDOT to capture, maintain, and view critical roadway data. The TRIMS application provides users with a view of roadway data, traffic, bridges, crashes, railroad grade crossings, pavement conditions and photolog digital images.

TSM - Transportation Systems Management: Strategies to improve the efficiency of the transportation system through operational improvements such as the use of bus priority or reserved lanes, signalization, access management, turn restrictions, etc.

UGB – Urban Growth Boundary: A regional boundary, set in an attempt to control urban sprawl by mandating that the area inside the boundary be used for higher density urban development and the area outside be used for lower density development. In Tennessee, UGBs are defined through a public planning process involving a county and its municipalities.

UPWP - Unified Planning Work Program: Developed by Metropolitan Planning Organization (MPOs); identifies all transportation and planning activities anticipated within the next one to two years, including a schedule for the completion of the identified tasks and activities.

U.S.C – United States Code: A consolidation and codification by subject matter of the general and permanent laws of the United States. Titles 23 and 49 of the USC pertain to highways and transportation.

V/C Ratio Volume over Capacity Ratio: A roadway performance measure to show how a highway volume compares with a highway's capacity.

VMT - Vehicle Miles Traveled: A measure calculated from observed traffic counts or from a travel demand model to convey the total distanced traveled by automobiles. May also be expressed on per capita basis.

VOC – Volatile Organic Compounds: Organic chemical compounds that have high enough vapor pressures under normal conditions to significantly vaporize and enter the atmosphere. Included among these compounds are dry-cleaning solvents and some constituents of petroleum fuels.



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