AIR QUALITY CONFORMITY DETERMINATION REPORT

for the:

MOBILITYPLAN 2050

And Amendments to the:

Fiscal Year 2023-2026

TRANSPORTATION IMPROVEMENT PROGRAM

And the:

LAMTPO 2050 MTP

Adopted by the Knoxville Regional TPO Executive Board

April 30, 2025

Air Quality Conformity Determination Report for the Knoxville Regional TPO 2025 Update of the Metropolitan Transportation Plan, known as the "Mobility Plan 2050"

and

the accompanying Knoxville Regional TPO FY 2023-2026 Transportation Improvement Program

Prepared by:

Knoxville Regional TPO Staff

For additional information contact:

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Phone: 865-215-3813

The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation

Contents

List of Tables and Figures

Adopting Resolution by Knoxville Regional TPO Executive Board for Mobility Plan 2050 and Air Quality Conformity Determination

A RESOLUTION BY THE EXECUTIVE BOARD OF THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION (TPO) ADOPTING THE MOBILITY PLAN 2050 & AIR QUALITY CONFORMITY DETERMINATION REPORT

WHEREAS, the Infrastructure Investment and Jobs Act (IIJA) requires that each MPO have a current metropolitan transportation plan; and

WHEREAS, the guidance for the development of the metropolitan transportation plan, as found in the Final Rule for Metropolitan Transportation Planning and Programming in the Federal Register under section 23 CFR 450.322, was followed and

WHEREAS, the metropolitan transportation plan must address all modes of transportation in an urban area, have a planning horizon of at least 20 years, and be financially constrained; and

WHEREAS, the Clean Air Act Amendments of 1990 (CAAA) and IIJA require that transportation plans and programs conform to air quality goals established by the State Implementation Plan (SIP) for regions in nonattainment or maintenance of an air pollution standard; and

WHEREAS, the Knoxville Region is subject to air quality conformity requirements under the 1997 and 2008 8-Hour Ozone Standards and the 2006 Daily PM2.5 Standard; and

WHEREAS, an Air Quality Conformity Determination Report was prepared to demonstrate conformity of the Mobility Plan 2050 and FY 2023-2026 Transportation Improvement Program based on the required emissions tests and using the latest emissions model from the Environmental Protection Agency; and

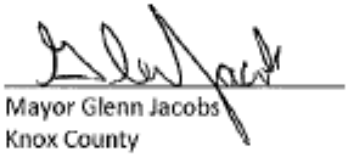
WHEREAS, the TPO's public outreach and Interagency Consultation procedures were adhered to with Mobility Plan 2050 and the Air Quality Determination being circulated for public review, presented at more than two open public meetings and coordinated with stakeholder and regulatory agencies through the Interagency Consultation process; and

WHEREAS, the TPO Technical Committee has recommended the adoption of the Mobility Plan 2050; and,

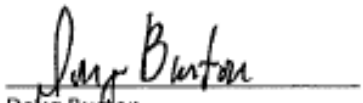
NOW, THEREFORE, BE IT RESOLVED BY THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION EXECUTIVE BOARD:

That Mobility Plan 2050 and the Air Quality Conformity Determination Report be adopted as the basis for transportation planning decisions in the areas subject to air quality conformity in the Knoxville Region including the TPO Planning area.

April 30, 2025
Date



Mayor Glenn Jacobs
Knox County
TPO Executive Board Vice Chair



Doug Burton
Coordinator
Knoxville Regional TPO

Adopting Resolution by Knoxville Regional TPO Executive Board for FY 2023-2026 TIP Amendments

A RESOLUTION BY THE EXECUTIVE BOARD
OF THE KNOXVILLE REGIONAL
TRANSPORTATION PLANNING ORGANIZATION (TPO)
AMENDING THE FY 2023-2026 TRANSPORTATION IMPROVEMENT PROGRAM

WHEREAS, the FY 2023-2026 Knoxville Regional Transportation Improvement Program was adopted on October 26, 2022; and

WHEREAS, in accordance with requirements of the U.S. Department of Transportation, the elements of the transportation planning process are to receive final approval from the Executive Board of the local Metropolitan Planning Organization; and

WHEREAS, the Transportation Improvement Program must be updated as needed; and

WHEREAS, the proposed project amendments were reviewed with the Knoxville-Area Air Quality Interagency Consultation Group with respect to air quality conformity requirements and are either exempt from, or were demonstrated to conform with the federal transportation air quality conformity regulations from the Clean Air Act; and

WHEREAS, the Knoxville Regional Transportation Planning Organization Technical Committee recommends approval of the Resolution, and

NOW, THEREFORE, BE IT RESOLVED BY THE KNOXVILLE REGIONAL TRANSPORTATION PLANNING ORGANIZATION EXECUTIVE BOARD;

That the FY 2023-2026 Transportation Improvement Program be amended to include the following changes and that the Tennessee Department of Transportation include these amendments into the State Transportation Improvement Program:

Attachment #3A: Amendment 23-2014-042 City of Knoxville Traffic Control Equipment Upgrade - Amend project to update the project termini, revise the project schedule, increase PE-N, PE-D and ROW costs, remove the construction phase and decrease the total project cost. The Kingston Pike corridor termini are revised to "from Metron Center Way/University Commons to Huxley Road" The Broadway corridor termini are revised to "from World's Fair Park Drive/Oak Ave./Jackson Avenue to Colonial Circle". PE-N is programmed in FY 2025 at an additional cost of $44,200 ($44,200 federal CMAQ). PE-D is programmed in FY 2025 at an additional cost of $437,225 ($437,225 federal CMAQ). ROW is programmed in FY 2025 at an additional cost of $440,000 ($440,000 federal CMAQ). The additional CMAQ is new CMAQ PM2.5 funding and in addition to the original CMAQ award. This amendment removes $9,119,575 (-$8,966,000 federal CMAQ/+$921,425 federal CMAQ PM2.5/-$812,000 federal CRP/-$263,000 local) from the project and the TIP. The total project cost is reduced to $3,046,425. Note: The added CMAQ PM2.5 funds were approved as a cost overrun by the TPO Technical Committee on 2/11/25.

Attachment #3B: Amendment 23-2011-082 Montvale Road (SR-336) - Amend the TIP to remove this project, as it is not included in TDOT's 10-Year Plan. This amendment removes $9,300,000 STBG ($7,440,000 federal/$1,860,000 state) from the TIP.

Attachment #3C: Amendment 23-2017-005 SR-115 (US-129) Widening - Amend the TIP to remove this project, as it is not included in TDOT's 10-Year Plan. Remove PE-D and ROW phases. This amendment removes $1,000,000 NHPP ($800,000 federal/$200,000 state) from the TIP.

Attachment #3D: Amendment 23-2017-036 Emory Road (SR-131) - Amend the TIP to remove this project, as it is not included in TDOT's 10-Year Plan. Remove PE-D phase. This amendment removes $4,200,000 STBG ($3,360,000 federal/$840,000 state) from the TIP.

Attachment #3E: Amendment 23-2017-038 I-640/I-275/I-75 Interchange) - Amend the TIP to align the schedule with TDOT's 10-Year Plan. Remove PE-N and PE-D phases. This amendment removes $8,0000,000 NHPP ($6,400,000 federal/$1,600,000 state) from the TIP.

Attachment #3F: Amendment 23-2017-040 Chapman Hwy (SR-71/US441) Operational and Safety Improvements - Amend the TIP to remove this project, as it is not included in TDOT's 10-Year Plan. Remove PE-D phase. This amendment removes $3,000,000 NHPP ($2,400,000 federal/$600,000 state) from the TIP.

Attachment #3G: Amendment 23-2017-056 I-75 - Amend the TIP to remove this project, as it is not included in TDOT's 10-Year Plan. Remove PE-D phase. This amendment removes $6,658,222 NHPP ($5,326,578 federal/$1,331,644 state) from the TIP.

Attachment #3H: Amendment 23-2017-057 Pellissippi Pkwy (SR-162) Interchange at Oak Ridge Hwy (SR-62) in Solway (IA) - Amend the TIP to remove this project, as it is not included in TDOT's 10-Year Plan. Remove PE-D and ROW phases. This amendment removes $6,973,000 ($3,200,000 federal NHPP/$800,000 state/$2,973,000 local) from the TIP.

Attachment #3I: Amendment 23-2023-005 I-75 Widening - Amend the TIP to add this non-exempt project for PE-N/PE-D in FY 2025 at a cost of $14,770,000 state ($0 federal/$14,770,000 state). This amendment adds $14,770,000 state ($0 federal/$14,770,000 state) to the TIP. The total project cost is $96,304,090.

Attachment #3J: Amendment 23-2014-059 Sevierville Road - Amend the TIP to remove this project. This project is not included in TPO's Mobility Plan 2050. Remove ROW and CN phases. This amendment removes $12,409,750 L-STBG ($9,927,800 federal/$2,481,950 local) from the TIP.

Attachment #3K: Amendment 23-2014-060 Morganton Road Roadway Improvement - Amend the TIP to remove this project. This project is not included in TPO's Mobility Plan 2050. Remove PE-D, ROW and CN phases. This amendment removes $11,972,276 ($9,333,400 federal L-STBG/$305,526 federal HPP/$2,333,350 local) from the TIP.

April 30, 2025
Date

Mayor Glenn Jacobs
Knox County
TPO Executive Board Chair

Doug Burton
Coordinator
Knoxville Regional TPO

Adopting Resolution by Lakeway Area Metropolitan Transportation Planning Organization Executive Board for Air Quality Conformity Determination

Lakeway Area Metropolitan Transportation Planning Organization (LAMTPO)
Morristown, TN – Jefferson City, TN – White Pine, TN – Hamblen County, TN – Jefferson County, TN
Bean Station, TN-Grainger County, TN-Hancock County, TN

Resolution #____25-006____
A RESOLUTION APPROVING THE AIR QUALITY CONFORMITY DETERMINATION REPORT AS PREPARED BY THE KNOXVILLE TPO

WHEREAS, a comprehensive, cooperative, and continuing transportation planning process is to be carried out in the Lakeway Area Metropolitan Transportation Planning Organization (LAMTPO) study area; and

WHEREAS, The Executive Board of the Lakeway Area Metropolitan Transportation Planning Organization (LAMTPO) serves as a forum for cooperative decision making on transportation issues in the Urbanized Area; and

WHEREAS, the Lakeway Area Metropolitan Transportation Planning Organization promotes the safety, protection, and enhancement of transportation corridors within its jurisdictional boundaries, and

WHEREAS, the Lakeway Area Metropolitan Transportation Planning Organization and the Knoxville TPO are within the same area previously designated nonattainment for the 1997 8-Hour Ozone Standard and have a Memorandum of Agreement to cooperatively address transportation conformity requirements that continue to be required as an anti-backsliding measure for this revoked standard, and

WHEREAS, the Knoxville TPO has prepared Air Quality Conformity Determination that cover the entire Ozone Maintenance Area, including the LAMTPO planning area within Jefferson County, which has determined that all current plans and programs within LAMTPO meet the air quality conformity requirements.

NOW, THEREFORE, BE IT RESOLVED, that the Lakeway Area Metropolitan Transportation Planning Organization (LAMTPO) Executive Board approves the air quality conformity determination as prepared by the Knoxville TPO.

This Resolution shall be effective upon its passage and approval.

ATTEST:

Mark Potts
Executive Board Chair

April 9, 2025
Date

Approval Letter by U.S. DOT for Air Quality Conformity Determination

U.S. Department of Transportation
Federal Highway Administration

Tennessee Division

404 BNA Drive, Suite 508
Nashville, Tennessee 37217
Phone (615) 781-5770

May 30, 2025

In Reply Refer To:
HPD-TN

Mr. Matt Meservy
Director, Long Range Planning Division
Tennessee Department of Transportation
James K. Polk Building, Suite 900
Nashville, TN 37243

Subject: Air Quality Conformity Determination for Knoxville, TN

Dear Mr. Meservy:

The Federal Highway Administration (FHWA) Tennessee Division and Federal Transit Administration (FTA) Region IV Office, in coordination with the Environmental Protection Agency (EPA) Region IV Office, have reviewed the Air Quality Conformity Determination adopted by the Knoxville Regional Transportation Planning Organization (KRTPO) Executive Board on April 30, 2025.

The Air Quality Conformity Determination covers the Knoxville, TN maintenance area for the 2008 8-hour ozone and the 2006 Daily $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) and addresses 2025 Update of Metropolitan Transportation Plan, known as the Mobility Plan 2050 and FY 2023-2026 Transportation Improvement Program (TIP).

Based on our review, we find the documents conform to the ozone and $PM_{2.5}$ NAAQS for Knoxville, Tennessee.

If you have any questions regarding this determination, please contact me at (615) 781-5788.

Sincerely,

SONYA RICE BAKER
Digitally signed by SONYA RICE BAKER
Date: 2025.05.30 07:58:43 -05'00'

Sonya Baker
Safety Engineer

cc: Mr. Gilberto De León, Acting Division Administrator, FHWA TN Division
Ms. Jacinda Russell, Field Operations Team Leader, FHWA TN Division
Mr. Andres Ramirez, Community Planner, FTA Region IV
Ms. Dianna Myers, Environmental Scientist, EPA Region IV
Ms. Simone Jarvis, Life Scientist, EPA Region IV
Ms. Ann Marie Anway, OCT MPO Team Lead, TDOT
Mr. Stacy Morrison, OCT Planning Manager, TDOT

Executive Summary

OVERVIEW AND PURPOSE

The Knoxville Regional Transportation Planning Organization (KRTPO) has conducted a regional emissions analysis to support an air quality conformity demonstration for the regular 4-year update to its Metropolitan (Long-Range) Transportation Plan (MTP) known as the Mobility Plan 2050 and for resulting amendments to its FY 2023-2026 Transportation Improvement Program (TIP) to ensure that the TIP is a direct subset of the MTP. The purpose of this report is to document that the updated MTP and TIP conform to federal regulations from the latest surface transportation act known as "Infrastructure Investment and Jobs Act" (IIJA), also known as the "Bipartisan Infrastructure Law" (BIL) and the Clean Air Act Amendments of 1990.

An Air Quality Conformity Determination for transportation plans and programs within the Knoxville Region is required since it is currently designated as a "Maintenance Area" for the 8-Hour Ozone Standard as well as the Particulate Matter 2.5 (PM2.5) Daily Standard. The United States Environmental Protection Agency (EPA) sets air quality standards through the Clean Air Act to protect human health and the environment from unsafe levels of pollution. The transportation conformity process is used to ensure that federal funds will not be spent on projects that cause or contribute to any new violations of the National Ambient Air Quality Standards (NAAQS); increase the frequency or severity of NAAQS violations; or delay timely attainment of the NAAQS or any required interim milestone.

The Knoxville Region is currently subject to transportation conformity requirements based on the designations under three separate NAAQS in the following specific geographic locations:

- Maintenance for **2008 8-hour Ozone Standard** – Blount, Knox, and part of Anderson counties
- Maintenance for **2006 Daily PM2.5 Standard** – Anderson, Blount, Knox, Loudon and part of Roane counties
- **1997 8-hour Ozone Standard** – Anderson, Blount, Jefferson, Knox, Loudon, Sevier and part of Cocke counties. This standard was revoked by EPA, but transportation conformity remains as an anti-backsliding measure and with fewer requirements that need to be met compared with the above two NAAQS.

Note, the above geographies extend beyond the base planning area boundary of the KRTPO and the intent of this conformity determination is to cover the entirety of the area subject to conformity in coordination with TDOT and the Lakeway Area MTPO.

EMISSIONS ANALYSIS SUMMARY

In order to be able to demonstrate conformity of the TPO's transportation plans with the applicable NAAQS, a regional emissions analysis is performed using outputs from a regional transportation model and a mobile source emissions model from EPA known as "MOVES" (Motor Vehicle Emission Simulator). An estimate of emissions is generated for various required analysis years between the present year and the final year of the LRTP and compared against allowable amounts that have been formally set as part of a State Implementation Plan known as "Motor Vehicle Emissions Budgets" (MVEB).

2006 Daily PM2.5 Standard

The PM2.5 air quality standard consists of two different measurement timeframes – an annual level and a daily level – based on the health effects that can occur for short-term versus long-term exposures. The designation as a nonattainment area under the Annual PM2.5 Standard became effective on April 5, 2005 and the designation as a nonattainment area for the Daily PM2.5 Standard became effective on December 14, 2009. The EPA approved a redesignation of the area to Attainment with a Maintenance Plan effective on August 28 and 29, 2017 for the daily and annual standards respectively. The Region met the 2012 Annual PM2.5 Standard of 12 $\mu g/m^3$ at its enactment and the 1997 Standard was revoked by EPA, thereby removing the requirement to demonstrate conformity for the Annual Standard. It should also be noted that the EPA recently established an updated Annual PM2.5 Standard that was promulgated on February 7, 2024 at a level of 9 $\mu g/m^3$ for which the official designation process is ongoing at the time of this report adoption.

The EPA published a notice announcing a finding that the 2014 and 2028 Motor Vehicle Emissions Budgets (MVEB) for Direct PM2.5 and Oxides of Nitrogen (a PM2.5 precursor pollutant) included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 82, No. 46, page 13347 on March 10, 2017. A regional emissions analysis was conducted using inputs consistent with both the SIP and other latest planning assumptions. The computed emissions from on-road mobile sources compared against the MVEB in the 2006 Daily PM2.5 Maintenance Area for the analysis years of 2026, 2028 (interpolated), 2035, 2040 and 2050 are shown in Table 1.

Table 1: MVEB Test for 2006 Daily PM2.5 Standard

	Analysis Year				
Direct Particulate Matter 2.5:	**2026**	**2028**	**2035**	**2040**	**2050**
Motor Vehicle Emissions Budget (MVEB)	1.22	0.67	0.67	0.67	0.67
Projected Emissions	0.42 ✓	0.39 ✓	0.30 ✓	0.28 ✓	0.29 ✓
Oxides of Nitrogen (NOx):	**2026**	**2028**	**2035**	**2040**	**2050**
Motor Vehicle Emissions Budget (MVEB)	42.73	19.65	19.65	19.65	19.65
Projected Emissions	12.35 ✓	10.70 ✓	4.92 ✓	3.99 ✓	3.67 ✓

Emissions in tons per day

2008 Ozone Standard

The nonattainment designation for the 2008 8-hour Ozone Standard became effective on July 20, 2012. A redesignation request to Attainment with a Maintenance Plan was submitted to EPA by the Tennessee Department of Environment and Conservation (TDEC) in November 2014 and approved by EPA on July 13, 2015 with an effective date of August 12, 2015. Therefore, as of August 12, 2015 the Knoxville Region is considered a "Maintenance Area" for the 2008 Ozone Standard.

The EPA published a notice announcing a finding that the 2011 and 2026 Motor Vehicle Emissions Budgets (MVEB) for NOx and VOC included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 80, No. 133, page 39970 on July 13, 2015.

A regional emissions analysis was conducted using inputs consistent with both the SIP and other latest planning assumptions, which are documented in Chapter 3 of this report. The computed emissions from on-road mobile sources compared against the MVEB in the 2008 Ozone Maintenance Area for the analysis years of 2026, 2035, 2040 and 2050 are shown in Table 2.

Table 2: MVEB Test for 2008 Ozone Standard

	Analysis Year			
Volatile Organic Compounds (VOC):	**2026**	**2035**	**2040**	**2050**
Motor Vehicle Emissions Budget (MVEB)	10.49	10.49	10.49	10.49
Projected Emissions	5.31 ✓	3.78 ✓	3.30 ✓	2.84 ✓
Oxides of Nitrogen (NOx):	**2026**	**2035**	**2040**	**2050**
Motor Vehicle Emissions Budget (MVEB)	17.69	17.69	17.69	17.69
Projected Emissions	9.85 ✓	3.89 ✓	3.05 ✓	2.80 ✓

Emissions in tons per day

1997 Ozone Standard

The 1997 8-Hour Ozone conformity analysis consists of an abbreviated process since a regional emissions analysis is not required per EPA guidance for this revoked NAAQS. A full description of the requirements to demonstrate conformity for this standard is provided in the main report which essentially boil down to meeting interagency consultation requirements and fiscal constraint of the applicable Plans.

Summary Conformity Statement

In summary, the emissions analysis performed by the KRTPO demonstrates that the projected emissions from the proposed transportation system are less than the allowable amount for each of the required analysis years and thus conformity for the 2008 8-Hour Ozone, 1997 8-hour Ozone, and Daily PM2.5 standards has been demonstrated for the affected current transportation plans and the project amendments thereto.

The conformity determination was coordinated with stakeholder and regulatory agencies through an Interagency Consultation process and a 30-day public review and comment period was held. A summary of comments that were received and responses is included in the report.

Chapter 1 - Introduction and Background Information

1.0 INTRODUCTION

The primary purpose of this document is to demonstrate that update to the Knoxville TPO Metropolitan (Long-Range) Transportation Plan (MTP), known as "Mobility Plan 2050" and the Knoxville Regional Transportation Planning Organization (KRTPO) FY 2023-2026 Transportation Improvement Program (TIP) to ensure that the TIP is a direct subset of the MTP. The purpose of this report is to document that the updated MTP and TIP conform to federal regulations from the latest surface transportation act known as "Infrastructure Investment and Jobs Act" (IIJA), also known as the "Bipartisan Infrastructure Law" (BIL) and the Clean Air Act Amendments of 1990.

Federal Transportation Planning Regulations (23 CFR 450) require Metropolitan Planning Organizations to prepare a comprehensive Metropolitan Transportation Plan (MTP) that covers a minimum 20-year horizon. The MTP is required to be updated every four years in air quality nonattainment/maintenance areas in order to ensure that the underlying planning assumptions are still valid. The TPO is also required to prepare a four-year program of projects known as a Transportation Improvement Program (TIP) that must be consistent with the approved MTP.

1.1 BACKGROUND ON TRANSPORTATION CONFORMITY

Transportation Conformity is required in nonattainment and maintenance areas by federal regulations (40 CFR Parts 51 and 93) and is the mechanism through which on-road mobile source emissions are addressed in the area's goals for cleaner air. The air quality conformity process is used to ensure that federal funds will not be spent on projects that cause or contribute to any new violations of the National Ambient Air Quality Standards (NAAQS); increase the frequency or severity of NAAQS violations; or delay timely attainment of the NAAQS or any required interim milestone. The CAA requires that metropolitan transportation plans, metropolitan transportation improvement programs (TIPs) and Federal projects conform to the purpose of the State Implementation Plan (SIP), which details the emissions levels from each sector including mobile sources needed to regain compliance with the air quality standard. If conformity is not demonstrated then the area may enter what is known as a conformity "lapse" period, which can trigger highway sanctions by the EPA under the authority of the Clean Air Act (CAA) meaning only very specific projects may move forward, while funding is essentially frozen for most new roadway construction or widening projects. Under section 179(b)(1) of the CAA, once EPA imposes highway sanctions the FHWA may not approve or award

any grants in the sanctioned area except those that are specifically exempted such as safety and air quality improvement projects that do not encourage single occupancy vehicle capacity. The conformity regulations in 40 CFR 93.104(f) allow for a 12-month lapse grace period during which projects that were in the most recent conforming plan and TIP can continue to move forward, but new non-exempt projects cannot be added.

The general criteria and procedures for determining conformity of transportation plans are described in 40 CFR 93.109 as:

- Latest Planning Assumptions (40 CFR 93.110)
- Latest Emissions Model (40 CFR 93.111)
- Consultation (40 CFR 93.112)
- TCMs (40 CFR 93.113)
- Emissions Budget (40 CFR 93.118)

Subsequent sections of this report document the assumptions, model inputs and procedures used to satisfy the above requirements in conducting the regional emissions analysis to demonstrate transportation conformity for the amendments to the Mobility Plan 2050 and the FY 2023-2026 TIP.

1.2 BACKGROUND ON THE KNOXVILLE REGION OZONE AND PM2.5 MAINTENANCE AREAS

The Clean Air Act requires the United States Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six “Criteria Pollutants” – Particulate Matter, Ozone, Nitrogen Dioxide, Carbon Monoxide, Sulfur Dioxide, and Lead in order to protect human health and the environment from unsafe levels of these pollutants. These pollutants are regulated through the EPA setting maximum limits on exposure levels that must be reviewed periodically. Regions, which are found to be out of compliance with those limits, may be designated as a “Nonattainment Area”.

The Knoxville Region has previously been in non-attainment for two criteria pollutants (ground-level ozone and fine particulate matter) under federal NAAQS with detailed history of EPA designations for Ozone and PM2.5 following sections:

1.2.1 OZONE

The region's first nonattainment designation for ground-level ozone became effective in January 1992 under the "1-Hour Ozone Standard" and included only Knox County. The area was able to demonstrate attainment with that standard effective in October 1993 and was then considered a "Maintenance Area".

EPA promulgated a more stringent ozone standard in 1997 known as the "1997 8-Hour Ozone Standard" which was set at 80 parts per billion (ppb). The EPA designated the counties of Anderson, Blount, Jefferson, Knox, Loudon, Sevier, and a portion of Cocke within the Great Smoky Mountains National Park in non-attainment of the 1997 8-hour standard for ground level ozone. This nonattainment designation became effective on June 15, 2004. The area demonstrated attainment with this standard effective in March 2011 and was considered a Maintenance Area. This standard was subsequently revoked with the effective date of the more stringent 2008 8-hour Ozone Standard thereby eliminating the maintenance designation and conformity requirements however a court ruling made in 2018 reinstated the conformity requirement as an anti-backsliding measure. EPA has released specific guidance as to how to address conformity for this revoked standard which is explained in a subsequent section of this report. An important aspect of this geographical area is that it overlaps with a separate adjacent MPO area known as the Lakeway Area Metropolitan Transportation Planning Organization (LAMTPO) specifically in the Jefferson County area. Conformity findings for plans and projects in this overlapping area must be coordinated as with this particular conformity determination report which covers the entire area.

EPA again strengthened the ozone standard in 2008 based on an updated review of scientific and medical data. This standard is known as the "2008 8-hour Ozone Standard" and it was set at 75 ppb. A formal designation of nonattainment areas for this standard became effective on July 20, 2012 and included the counties of Blount and Knox plus a portion of Anderson County surrounding the TVA Bull Run Fossil Plant. The EPA approved a re-designation of the area to Attainment with a Maintenance Plan effective on August 12, 2015.

Figures 1 & 2 on the following page show the affected geographies for the 1997 and 2008 Ozone Standards:

Figure 1: Knoxville 1997 8-Hour Ozone "Conformity" Area

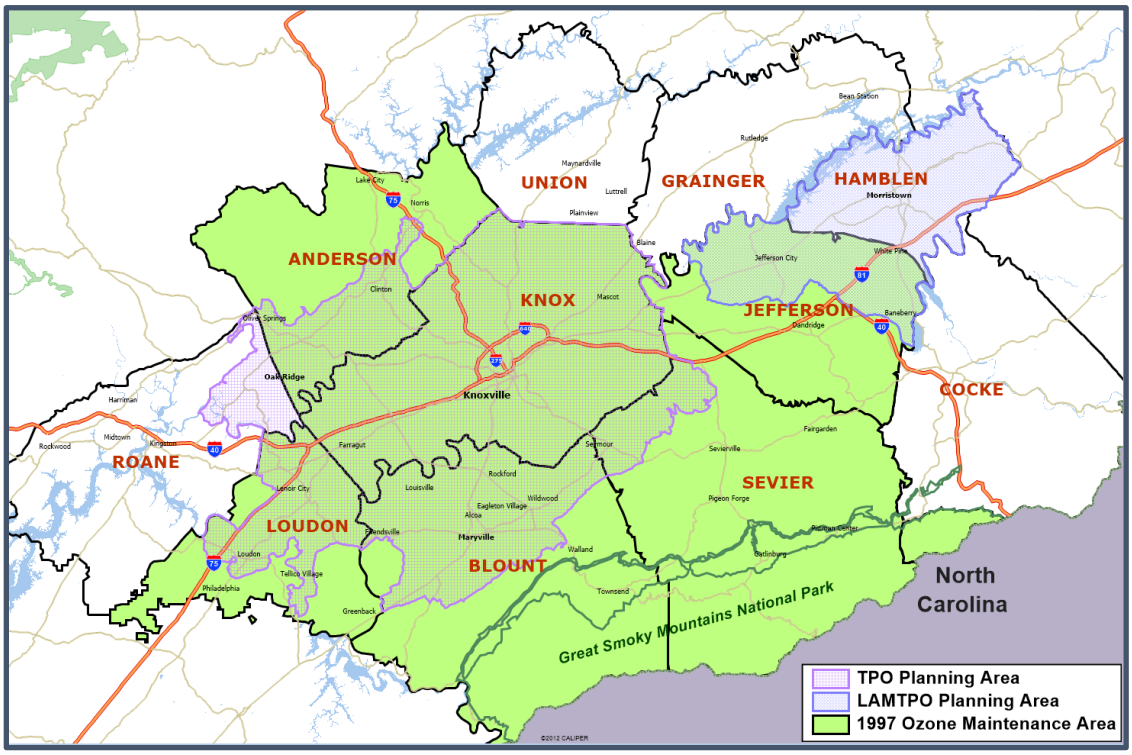
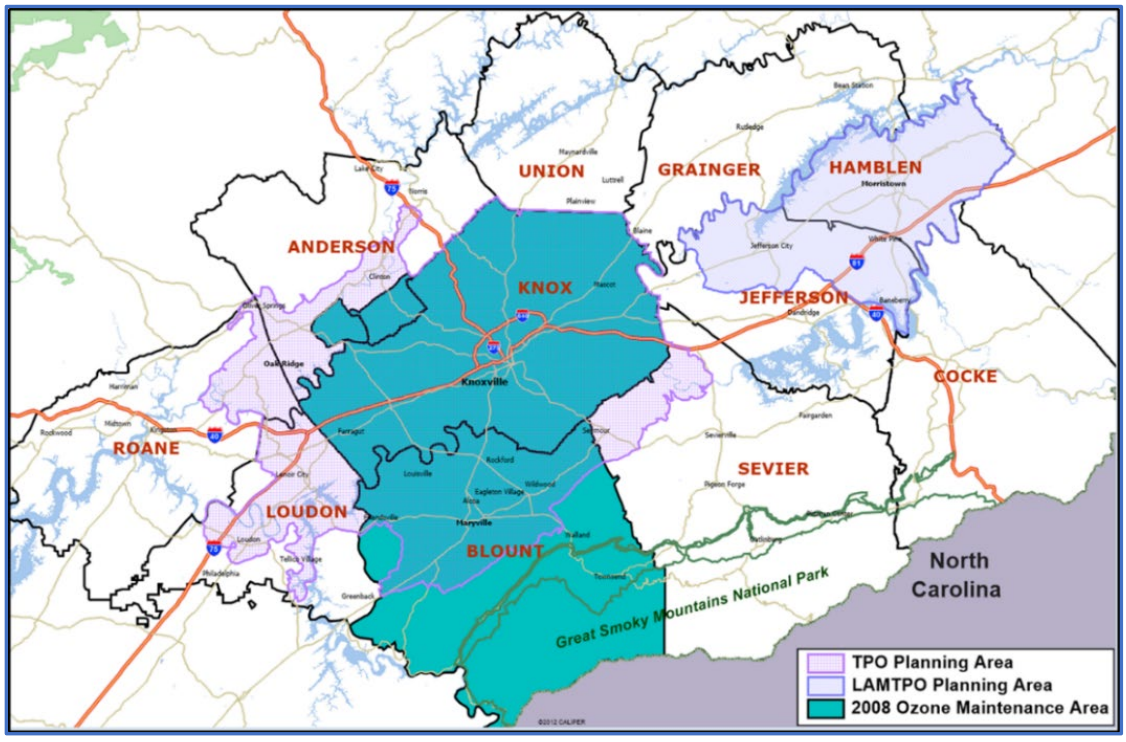


Figure 2: Knoxville 8-Hour Ozone Maintenance Area



1.2.2 PM2.5

The EPA first promulgated air quality standards for fine particulate matter less than 2.5 microns in diameter (PM2.5) in 1997 due to evidence that these fine particles pose a significant health risk because of their ability to bypass the nose and throat defenses and lodge deeply within the lungs. The PM2.5 air quality standard consists of two different measurement timeframes – an annual level and a daily level – based on the health effects that can occur for short-term versus long-term exposures. The EPA set these initial standards on a daily – 65 micrograms/cubic meter (μg/m^3) and an annual – 15 μg/m^3 basis for levels of PM2.5.

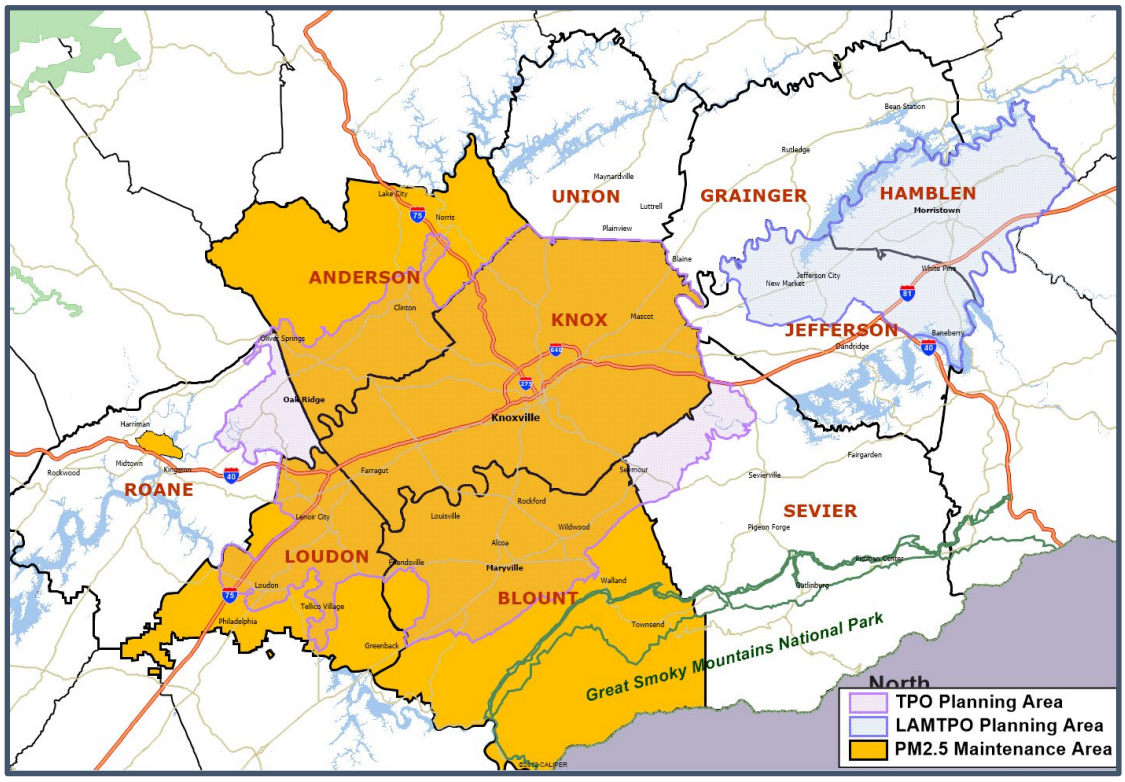
On April 5, 2005, the EPA formally designated the counties of Anderson, Blount, Knox, Loudon, and a portion of Roane in non-attainment for the 1997 Annual PM2.5 Standard. As a result of the PM2.5 designation, the TPO updated the Mobility Plan in 2006, expanding the Knoxville Region to include that portion of Roane County not included in the original Plan and prepared an updated conformity determination.

EPA strengthened the PM2.5 standard in 2006 by reducing the permissible daily levels of PM2.5 from 65 to 35 μg/m^3. The same counties that were designated under the 1997 Annual PM2.5 Standard were formally designated nonattainment for the 2006 Daily PM2.5 Standard effective December 2009.

The EPA approved a redesignation of the area to Attainment with a Maintenance Plan effective on August 28 and 29, 2017 for the daily and annual standards respectively. The Region is meeting the 2012 Annual PM2.5 Standard of 12 μg/m^3 and the 1997 Standard has been revoked by EPA, thereby removing the requirement to demonstrate conformity for the Annual Standard. It should also be noted that the EPA recently established an updated Annual PM2.5 Standard that was promulgated on February 7, 2024 at a level of 9 μg/m3 for which the official designation process is ongoing at the time of this report adoption.

The current Knoxville Region Maintenance Areas for the 2006 Daily PM2.5 Standard is shown in Figure 3 on the next page:

Figure 3: Knoxville PM2.5 Daily Standard Maintenance Area



1.3 EMISSIONS ANALYSIS BACKGROUND

Transportation Conformity is demonstrated through a technical process known as an "emissions analysis", in which future estimates of emissions from the transportation system are compared against what has been determined to be sufficient to allow the area to re-attain the air quality standard. Different types of emissions are involved in the production of Ozone and PM2.5 pollution as described below:

- **Ozone:** Ozone is not directly emitted into the atmosphere; rather it is formed through a chemical reaction between "Volatile Organic Compounds" (VOC) and "Oxides of Nitrogen" (NOx) in the presence of sunlight. Mobile-sources contribute both sources of emissions – VOC are primarily formed from the evaporation of motor fuel, while NOx is formed from the internal combustion process and emitted in vehicle exhaust.

- **PM 2.5:** There are some PM2.5 emissions, known as "Direct PM2.5", that are directly emitted from motor vehicles. Direct PM2.5 emissions consist of elements contained in vehicle exhaust as well as particles resulting from brake and tire wear. In addition, it is believed that NOx emissions can contribute to secondary formation of PM2.5 so it is also included in the emissions analysis.

1.4 EMISSIONS ANALYSIS PROCEDURE

The emissions analysis is performed primarily using two different models – a Travel Demand Forecasting Model (TDFM), developed by the KRTPO and the MOVES4 mobile source emissions model, which was developed by the EPA and allows the user to input localized parameters. The TDFM provides outputs of the estimated Vehicle Miles of Travel (VMT) on the transportation system and associated average speeds by functional classification. The MOVES4 model uses the activity data from the TDFM and combines it with other inputs describing the analysis area to derive an overall emissions amount. This procedure is known as the "Inventory Mode" of MOVES4, which was chosen for this analysis as opposed to the "Emission Rate Mode", which produces emissions rates that must be subsequently post processed with the TDFM activity data. Appendix B of this document describes the MOVES4 inputs that were used in the emissions analysis.

Finally, the emissions analysis must also be performed for different years throughout the life of the LRTP. Since the timeframe covered by the LRTP is from 2025-2050, and MVEBs are available for both Ozone and PM2.5, 40 CFR part 93.118 establishes the required analysis years and emissions tests. In general, the required analysis years include:

- Attainment Year for applicable pollutants
- Last Year of the maintenance plan for applicable pollutants
- Any other years for which the maintenance plan establishes budgets
- Last year of the timeframe of the conformity determination
- Years such that there are no more than 10 years between analysis years

Following are the analysis years that were selected to meet the above requirements:

- 2026 – First Analysis Year and also Last Year of 2008 Ozone Standard Maintenance Plan
- 2028 – Applies only to PM2.5 as the Last Year of the 2006 Daily PM2.5 Standards Maintenance Plan (interpolated)
- 2035 – Year no greater than 10 years apart
- 2040 – Year no greater than 10 years apart
- 2050 – Last Year of Transportation Plan

Note, 2028 is designated as being interpolated per the conformity regulations in 40 CFR 93.118(d) which states "the emissions for years for which consistency with motor vehicle emission budgets must be demonstrated may be determined by interpolating between the years for which the regional emissions analysis is performed". The interpolation is performed as a linear regression between the two emissions outputs for years 2026 and 2035 and is a much simpler analysis than setting up a travel demand model and MOVES model run to specifically quantify emissions for those years.

Chapter 2 – Planning Assumptions for Regional Emissions Analysis

2.0 INTRODUCTION

An important component of the conformity determination is to ensure that the latest planning assumptions are used in developing the inputs to both the regional travel demand model, which provides the majority of the activity data (vehicle speeds and miles driven) for the various analysis years and the emissions rate model, which requires other locality-specific characteristics. The latest planning assumptions requirements are contained in 40 CFR 93.110 and were discussed through the Interagency Consultation (IAC) process as required by 40 CFR 93.105. The draft planning assumptions document provided to the IAC is included in Appendix C. The following sections of this chapter summarize the primary planning assumptions used to support the regional emissions analysis that was conducted as part of this conformity determination.

2.1 PLANNING ASSUMPTIONS FOR DEVELOPING TRAVEL DEMAND FORECASTS:

The TPO uses a TDFM that was originally finalized in 2012 based on regional travel surveys conducted in 2008 and validated to a 2010 base year. The model has been maintained since that time and other minor updates conducted for previous Mobility Plans. The model has been re-validated to a base year of 2022 to coincide with the latest available traffic and land use data at the time of the model update development. It was also recalibrated for some of the major trip purposes, primarily “home-based work” which has been impacted significantly by the increased trend towards working from home coming out of the Covid pandemic. Following these updates the model was checked against and found to meet all standard FHWA validation targets. Following is a summary of the travel model development and additional information regarding model validation is included in Appendix K of the main 2050 Mobility Plan document.

The model outputs for total vehicle miles of travel (VMT) by roadway functional classification have been compared against the estimated actual amount of VMT as reported to FHWA for the Highway Performance Monitoring System (HPMS) and appropriate HPMS adjustment factors have been developed to ensure accurate replication of the amount of travel in the region. The travel demand model encompasses a total of

10 counties in the Knoxville Region and includes the entirety of the previously noted maintenance/nonattainment areas as shown on figures 1, 2 and 3.

The county-level data for base year 2022 population and household characteristics is primarily derived from the U.S. Census Bureau's inter-censal Population Estimates data and American Community Survey (ACS) whereas employment data was obtained through various sources such as the Bureau of Economic Analysis (BEA) and Bureau of Labor Statistics (BLS). The future year 2050 county-level population and employment control totals were developed through a review of available sources of projection data including proprietary data from Woods & Poole Economics, the University of Tennessee Center for Business & Economic Research and previous custom projections developed by a consultant for the TPO. It was determined that the most appropriate source of future year projections was the Woods & Poole Economics, inc data source and these projections were endorsed by the TPO Executive Board at its April 24, 2024 meeting.

The travel demand model summarizes socioeconomic characteristics (population, employment, household income, etc) into sub-county geographic units of somewhat homogenous land use known as Traffic Analysis Zones (TAZ). The county-level estimates for the base and future analysis years must be allocated to the TAZs. In the case of the base year, population data from the 2020 decennial census is available at very small geographic units known as Census Blocks which are aggregated to the TAZ-level. The net change in population for each county between 2020 and 2022 was then allocated based on recent trends in residential building permit activity and using a proprietary data source from a company known as Applied Geographic Solutions which specializes in compiling demographic data. Employment data was allocated based on a proprietary data set known as InfoGroup obtained through TDOT, which provides detailed establishment level information of employment counts by industry type geocoded to its actual location.

In order to allocate the future growth of population and employment from the county control totals to the smaller TAZs, the TPO staff consulted with planning staffs and stakeholders from each jurisdiction within the TPO and LAMTPO area. TPO staff obtained information on proposed developments and other likely development areas in the various jurisdictions to inform the allocation. This exercise is inherently challenging due to the unforeseen things that can influence development patterns, but provides a "best guess," and can be updated as needed to account for major changes with each subsequent Mobility Plan update.

2.2 LATEST EMISSIONS MODEL:

The EPA officially released an emissions factor model known as “MOVES4” through a Federal Register Notice of Availability on September 12, 2023, which set a 2-year grace period for its use instead of the prior version known as “MOVES3”. A subsequent release known as MOVES5 occurred subsequent to the development of planning assumptions for the emissions model inputs which were started based on MOVES4 being the latest available model. It was decided to stay with using MOVES4 for this conformity analysis since technically it is still within the grace period established by EPA’s MOVES4 Notice of Availability in the Federal Register (88 FR 62567) which continues to be in effect until September 12, 2025. The input default database for the latest version of MOVES4 (MOVES4.0.2) used to determine the total on-road emissions of the pollutants of concern for this conformity analysis is known as “movesdb20250107”.

2.3 EMISSIONS TESTS:

The emissions tests used for this conformity analysis follow the requirements listed in 40 CFR 93.118 based on the fact that a Motor Vehicle Emissions Budget (MVEB) is available for all pollutants. The following sub-sections of this chapter document the specific MVEBs for each pollutant and note their applicability in terms of the analysis years that were selected as documented in Section 1.4.

2.3.1 FOR 2008 8-HOUR OZONE STANDARD

The emissions test for the 2008 8-Hour Ozone Standard is based on an MVEB set for both an interim year (2011) and the last year of the Maintenance Plan (2026). The EPA published a notice announcing a finding that the 2011 and 2026 Motor Vehicle Emissions Budgets (MVEB) for NOx and VOC included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 80, No. 133, page 39970 on July 13, 2015. Table 3 shows the MVEB for the 2008 Ozone Standard:

Table 3: MVEB for 2008 Ozone Standard

Pollutant	2011 (tons/day)	2026 (tons/day)
VOC	19.71	10.49
NOx	41.62	17.69

The emissions tests are performed for the analysis years previously identified in Section 1.5 of this report of 2026, 2035, 2040 and 2050. Since all of these analysis years are from 2026 and later the emissions for those years are compared against the MVEB for 2026.

2.3.2 FOR 2006 "DAILY" PM2.5 STANDARD

The EPA published a notice announcing a finding that the 2014 and 2028 Motor Vehicle Emissions Budgets (MVEB) for Direct PM2.5 (including direct exhaust PM2.5 emissions and from brake and tire wear) and Oxides of Nitrogen (a PM2.5 precursor pollutant) included in the Maintenance SIP are adequate for the purposes of transportation conformity in the Federal Register / Vol. 82, No. 46, page 13347 on March 10, 2017. These emissions are actually calculated for an annual situation and converted to daily amounts by dividing by 365. Table 4 shows the MVEB for the 2006 Daily PM2.5 Standard:

Table 4: MVEB for 2006 Daily PM2.5 Standard

Pollutant	2014 (tons/day)	2028 (tons/day)
PM2.5	1.22	0.67
NOx	42.73	19.65

The emissions tests are performed for the analysis years previously identified in Section 1.4 of this report of 2026, 2028, 2035, 2040 and 2050. Analysis years prior to 2028 (the 2026 analysis year) use the MVEB for 2014 while all other analysis years are compared against the MVEB for 2028. The year 2028 emissions are interpolated between the 2026 and 2035 analysis year outputs from the emissions modeling process.

2.4 MOVES4 INPUTS AND RUNSPEC DEVELOPMENT:

In order to set up a MOVES4 model run the user must first define the "run specification" or "Runspec" for short, which establishes the specific model domain such as the county, time period, road types, vehicle types and pollutants being modeled for. Following the Runspec, the user enters specific input data for the county being modeled through an interface known as a "County Data Manager". The County Data Manager allows inputs for a variety of characteristics affecting emissions generation including the number of vehicles, vehicle miles of travel, average speeds, meteorological information, fuel types and average vehicle fleet age by vehicle type among others. The following sub-sections detail the Runspec and County Data Manager parameters used for this conformity analysis.

2.4.1 MOVES4 RUNSPEC PARAMETERS

The MOVES model run is first set up based on a number of parameters to define the appropriate geographic scale and other aspects of the modeling domain to be utilized in the analysis, which is referred to as a "run specification" or runspec for short. Following is a list of the MOVES runspec panels and how they were set up for the KRMP conformity analysis and based on appropriate technical guidance documentation from EPA:

1.) Scale:

- Both Pollutants – County level scale – Inventory mode

2.) Time Spans:

- Both Pollutants – Year (based on analysis years as ultimately selected, 2026, 2035, 2040 and 2050), by Hour, all hours
- Ozone – July weekday
- PM2.5 – All months, all days

3.) Geographic Bounds:

- 2008 Ozone – Anderson (partial), Blount and Knox counties
- PM2.5 – Anderson, Blount, Knox, Loudon and Roane (partial) counties

4.) Onroad Vehicles:

- Both Pollutants – Gasoline, CNG, Ethanol (E85), Electricity and Diesel fuels, all valid vehicle combinations

5.) Road Type:

- Both Pollutants – All road types

6.) Pollutants and Processes:

- Ozone – NOx and VOC and all other required supporting prerequisite pollutants
- PM2.5 – Primary PM2.5 (exhaust, brake and tire wear), NOx and all supporting prerequisite pollutants
- Note – unchecked the "Refueling Displacement Vapor Loss" and "Refueling Spillage Loss" to exclude refueling emissions that are instead included in the Area source emissions inventory.

7.) Output options:

Both Pollutants –

- General Output tab: Units = grams, joules, miles; Activity: checked "Distance Traveled" and "Population"
- Output Emissions Detail tab: checked "Road Type" and "Source Use Type"

2.4.2 MOVES3 COUNTY DATA MANAGER INPUT DEVELOPMENT

For the locality-specific inputs required in the "County Data Manager" section of MOVES, the following general information is being provided for how they were developed, additional technical details and example input files are provided in Appendix B.

CDM 1.) Meteorology – this input consists of locality specific values of temperature and humidity covering the required analysis time frame, i.e. summer months for Ozone and all months for annual PM2.5. It is generally required that the conformity analysis must use consistent inputs for meteorology that were developed for an applicable SIP and its MVEBs. Since MVEBs are available in all cases the direct MOVES inputs used in their development will be utilized for this analysis.

- Analysis Year Variation – This input is held constant for all analysis years.

CDM2.) Source Type Population – this input defines the vehicle population within the study area by type of vehicle and must be generated using local-specific data. This input is derived from various sources, the primary of which is vehicle registration data that is maintained by the Tennessee Department of Revenue in terms of the "light duty" categories of vehicles and other national sources and default data for the "heavy duty" categories. The base year information for this analysis was collected and provided by TDOT staff to

support the National Emissions Inventory (NEI) development for year 2023. Future-year projections are also necessary to account for growth in population and corresponding vehicle ownership and these are described in more detail in the Appendix.

- Analysis Year Variation – This input is varied for each analysis year based on the projected growth in total vehicles.

CDM3.) Age Distribution – vehicle age distribution datasets are tied somewhat with the source type population input since the same data sources that track vehicle ownership also contain information about vehicle age. Locality specific data is critical for this input as there can be wide variation in vehicle fleet age depending on the specific geographic area being analyzed. This information was likewise compiled by TDOT staff as part of the 2023 NEI effort.

- Analysis Year Variation – This input is held constant for all analysis years.

CDM4.) Vehicle Type VMT – this MOVES input actually consists of four separate input files related to the estimated vehicle miles of travel in the area being analyzed including:

HPMSVTypeYear – this is the total amount of VMT estimated for each of the analysis years by Source Type. TDOT annually reports total VMT by roadway functional classification to the FHWA's Highway Performance Monitoring System (HPMS) and the most recent available year of data when the conformity analysis was started was for 2022 and used to validate the travel demand model as noted previously. Statewide vehicle classification data was used to derive urban/rural factors by road type and vehicle (source) types and compiled for a 2023 base year by TDOT, again for the NEI development. Future year projections of VMT are derived from the TPO's travel demand forecasting model.

- Analysis Year Variation – This input is varied for each analysis year based on the projected growth in VMT.

Month VMT Fraction – this input accounts for the variability in travel throughout the months of the year. These inputs were by TDOT from its traffic count data.

- Analysis Year Variation – This input is held constant for all analysis years.

Day VMT Fraction – this input accounts for the differences in weekday travel versus weekend travel and are also available from TDOT.

- Analysis Year Variation – This input is held constant for all analysis years.

Hour VMT Fraction – this input accounts for the hourly variation in travel and is provided by the regional travel demand forecasting model.

- Analysis Year Variation – This input is varied for each analysis year based on the results of the travel demand model run.

CDM5.) Average Speed Distribution – this input was developed using the travel demand model and additional built-in post processing steps to derive the needed format for MOVES.

- Analysis Year Variation – This input is varied for each analysis year based on the results of the travel demand model run.

CDM6.) Road Type Distribution – this input provides the distribution of VMT on each road type by source type. This input is also derived from post processing the travel demand model outputs.

- Analysis Year Variation – This input is varied for each analysis year based on the results of the travel demand model run.

CDM7.) Fuels – Consists of four separate inputs (Fuel Supply, Fuel Formulation, Fuel Usage Fraction and AVFT). These inputs are provided by TDEC based on EPA guidance to reflect fuels used in the Knoxville Region. Transit fleet data from Knoxville Area Transit (KAT) was used to develop fuel type profiles for transit buses (sourceType 42), which consist only of gasoline, electric and diesel fuel vehicles (no CNG).

- Analysis Year Variation – This input is held constant for the most part with the exception of phase-in of various fuel formulation regulatory information in the appropriate timeframes.

CDM8.) Starts – local information for this input is not currently available and therefore MOVES defaults are utilized for all analysis years.

CDM9.) Hotelling – local information for this input is not currently available and therefore MOVES defaults are utilized for all analysis years.

CDM10.) I/M Programs – this is not applicable to the Knoxville Region as it does not currently have any inspection and maintenance programs.

Chapter 3 – Mobile Source Emissions Analysis and Applicable Governing Regulations

3.0 INTRODUCTION

The Metropolitan Planning Regulations of the IIJA/BIL (23 CFR Parts 450 and 771, May 27, 2016) and the USEPA Transportation Conformity Rule (40 CFR Parts 51 and 93, August 15, 1997 and amended most recently on March 14, 2012) specify certain minimum requirements that must be addressed in performing a mobile source emissions analysis in order to determine conformity of a Metropolitan Transportation Plan (MTP). The following sections in this chapter discuss these requirements and how they were addressed by the KRTPO in making the determination of conformity on the updated Mobility Plan 2050 and amended FY2023-2026 Transportation Improvement Program.

3.1 REGULATIONS RELATED TO DEVELOPMENT OF LRTP AND TRANSPORTATION CONFORMITY

The Metropolitan Planning Regulations found in 23 CFR Part 450 specify the content of Metropolitan Transportation Plans and relevant aspects related to Transportation Conformity.

- **23 CFR 450.322(a)** – The MTP must have a minimum 20-year planning horizon. The MTP covers the period of 2025-2050, which meets the requirement for a minimum 20-year planning horizon. The MTP is known as the Mobility Plan 2050.
- **23 CFR 450.322(b)(6)** – The MTP must "include design concept and scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of the source of funding, in nonattainment and maintenance areas to permit conformity determinations under the U.S. EPA conformity regulations at 40 CFR part 51. In all areas, all proposed improvements shall be described in sufficient detail to develop cost estimates". The project list included in the Mobility Plan document and in Appendix D covers the necessary detail and project scopes to develop cost estimates as accurately as possible.
- **23 CFR 450.322(b)(11)** – The MTP must "include a financial plan that demonstrates the consistency of proposed transportation investments with already available and projected sources of revenue…" The Mobility Plan 2050 main document contains a financial analysis that demonstrates financial constraint.

3.2 REGULATIONS GOVERNING MOBILE SOURCE EMISSIONS ANALYSES

The Transportation Conformity Rule was first promulgated by EPA on November 24, 1993 (58 FR 62188). It has subsequently been amended several times to cover changes such as the implementation of the 1997 8-Hour Ozone and PM2.5 National Ambient Air Quality Standards on July 1, 2004. The most recent amendment to the Transportation Conformity Rule was published in the Federal Register on March 14, 2012 (75 FR 14979), which was a restructuring of several sections such that the Conformity Rule would not need to be revised each time a new or revised NAAQS is issued by EPA. Applicable guidelines from the Transportation Conformity Rule and how they have been addressed in this conformity determination are as follows:

- **40 CFR 93.106(a)** – The transportation plan must specifically describe the transportation system envisioned for certain future years, which are called horizon years and are subject to the following restrictions:
    - The horizon years may be no more than 10 years apart;
    - The first horizon year may not be more than 10 years from the base year used to validate the transportation demand planning model;
    - If the attainment year is in the time span of the transportation plan, the attainment year must be a horizon year, and;
    - The last horizon year must be the last year of the transportation plan's forecast period.

The base year for validation of the KRTPO's transportation demand planning model is 2022 and the KRMP's forecast period is from 2025 to 2050. Therefore, the analysis years used in developing the conformity analysis are:

Analysis Years for 2008 8-hour Ozone Standard:

- 2026 – First horizon year within 10 years from base year used to validate the transportation demand planning model, also is the Final year of the Ozone Maintenance Plan
- 2035 – Year such that there are no more than 10 years between analysis years
- 2040 – Year such that there are no more than 10 years between analysis years
- 2050 – Final year of Mobility Plan 2050

Analysis Years for 2006 Daily PM2.5 Standard:

- 2026 – First horizon year within 10 years from base year used to validate the transportation demand planning model
- 2028 – Final year of the Maintenance Plan (interpolated)
- 2035 – Year such that there are no more than 10 years between analysis years
- 2040 – Year such that there are no more than 10 years between analysis years
- 2050 – Final year of Mobility Plan 2050

- **40 CFR 93.106(a)(2)(i)** – The transportation plan shall quantify and document the demographic and employment factors influencing the expected transportation demand.

The summary of county-level estimates of socioeconomic data and growth projections for all study years is available upon request. The travel demand model used the following socioeconomic characteristics in order to determine estimates of travel for each analysis year:

- Total Population
- Household Population
- Group Quarters Population
- Number of Households
- Average Persons per Household
- Average Median Household Income
- Workers per Household
- Vehicles per Household
- Students per Household
- School Enrollment (K-12)
- University Student Enrollment
- Total Employment
- Basic Employment
- Industrial Employment
- Retail Trade Employment
- Services Employment

Further information regarding the development of the transportation model socioeconomic data is presented in Appendix K of the Mobility Plan document.

- **40 CFR 93.106(a)(2)(i)** – The highway and transit system shall be described in terms of the regionally significant additions or modifications to the existing transportation network which the transportation plan envisions to be operational in the horizon years.

The transportation system is described in the travel demand model through a GIS-based network of links and nodes with attributes describing the character of roadways. Some of the key attributes that were used to account for the improvement projects that are being proposed include:

- FHWA Functional Classification
- Divided or Un-divided Roadway
- Level of Access Control
- Number of Lanes in each direction
- Lane Width
- Posted Speed Limit
- Area Type (Rural, Suburban, Urban or Major Employment District)

Transit mode usage is also estimated as part of the travel demand model as it relates to the fixed route transit service that is provided by Knoxville Area Transit (KAT).

- **40 CFR 93.110** – The conformity determination must be based upon the most recent planning assumptions in force at the time of the conformity determination. The KRTPO documented its assumptions and planning data with the Interagency Consultation Group, which is summarized in the meeting information included in the Appendix C. The demographic and transportation modeling assumptions are documented in Chapter 3.

- **40 CFR 93.111** – The conformity determination must be based on the latest emission estimation model available. This conformity determination utilized the most recent available version of MOVES –MOVES4, with default database "movesdb20250107".

- **40 CFR 93.112** – The conformity determination must satisfy consultation requirements in the applicable implementation plan. Chapter 6 and documentation in the appendix relate to the interagency consultation process.

- **40 CFR 93.118 and 93.119** – Motor vehicle emissions budget and other applicable conformity tests that must be used. Chapter 5 of this report documents the emissions tests that were used to demonstrate conformity. The emissions tests were discussed in the Interagency Consultation process to determine their appropriateness.

- **40 CFR 93.122** – Procedures for determining transportation-related emissions. The TPO documented its assumptions and methodology for determining future growth in vehicle miles of travel on the regionally significant transportation system with the Interagency Consultation Group. The primary source for projecting future vehicle activity is the travel demand forecasting model, which includes all regionally significant roadways and represents all regionally significant highway projects being proposed for implementation in the Mobility Plan 2050 and FY 2023-2026 TIP by

analysis year. All counties in the affected air quality maintenance areas are represented in the travel demand model.

- **40 CFR 93.126 and 93.127** – Projects exempt from regional emissions analysis. The highway project list included in the Appendix D of this document describes which projects were determined to be exempt from air quality analysis. These projects were deliberated through the Interagency Consultation process to ensure that there was full agreement on the exempt status for projects.

Examples of exempt projects include:

  - Bridge Replacement Project – A project that only entails rehabilitating or replacing the existing bridge in-kind without any additional laneage being constructed.
  - Pedestrian Improvement Project
  - Interchange Reconfiguration Project
  - Intersection Project – This could include any type of project that involves only a single intersection such as adding turn lanes (channelization) or a traffic signal.
  - Street Lighting
  - Pavement Resurfacing
  - Reconstruction of a 2-lane roadway, which is only improving the width and geometrics of the roadway and perhaps some additional turn lanes.

3.3 AVAILABILITY OF TECHNICAL INFORMATION RELATED TO EMISSIONS ANALYSES

Additional information regarding specific MOVES4 emissions model inputs and outputs and travel demand model assumptions is available upon request.

Chapter 4 – Statement of Conformity

4.0 INTRODUCTION

This section of the report covers the conformity requirements for the Knoxville Region under both the 8-Hour Ozone Standard as well as the PM2.5 Standard. The conformity report complies with all applicable requirements found in the State Implementation Plan (SIP), Clean Air Act, Tennessee Transportation Conformity Regulation and the MPO Planning Regulations from IIJA/BIL (23 CFR 450.322).

4.1 STATEMENT OF CONFORMITY – 1997 8-HOUR OZONE STANDARD

4.1.1 OVERVIEW OF SOUTH COAST VERSUS EPA DECISION

On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in South Coast Air Quality Mgmt. District v. EPA ("South Coast II," 882 F.3d 1138) held that transportation conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone national ambient air quality standard (NAAQS) and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked. The Knoxville Region was designated as a "maintenance area" at the time of the 1997 ozone NAAQS revocation on April 6, 2015 and was also designated attainment for the 2008 ozone NAAQS on May 21, 2012.

Per the court's decision in South Coast II, beginning February 16, 2019, a transportation conformity determination for the 1997 ozone NAAQS is needed in 1997 ozone NAAQS nonattainment and maintenance areas identified by EPA for certain transportation activities, including updated or amended metropolitan MTPs and TIPs.

4.1.2 APPLICABLE GEOGRAPHY INCLUDED IN 1997 8-HOUR OZONE ORPHAN AREA

This section of the conformity determination report is specifically intended to cover what is known as the "orphan area", which are the parts of the 1997 8-hour Ozone Standard that were not included within the 2008 8-hour Ozone Standard nonattainment designation. Figure 1 in Section 1.2 above shows the geography in the Knoxville Region affected by the 1997 8-hour Ozone Standard and its relationship to the planning areas for the KRTPO and the LAMTPO. Areas entirely in green shading are considered part of the TDOT FY 2020-2023 rural area STIP, whereas those areas in green with either purple or blue overlay are covered by Knoxville and Lakeway respectively.

4.1.3 ORPHAN AREA CONFORMITY REQUIREMENTS

For the 1997 ozone NAAQS areas, transportation conformity for MTPs and TIPs for the 1997 ozone NAAQS can be demonstrated without a regional emissions analysis, per 40 CFR 93.109(c). This provision states that the regional emissions analysis requirement applies one year after the effective date of EPA's nonattainment designation for a NAAQS and until the effective date of revocation of such NAAQS for an area. The 1997 ozone NAAQS revocation was effective on April 6, 2015, and the South Coast II court upheld the revocation. As no regional emission analysis is required for this conformity determination, there is no requirement to use the latest emissions model, or budget or interim emissions tests.

Therefore, transportation conformity for the 1997 ozone NAAQS for the Knoxville and Lakeway Metropolitan Transportation Plan updates can be demonstrated by showing the remaining requirements in Table 1 in 40 CFR 93.109 have been met. These requirements, which are laid out in Section 2.4 of EPA's guidance and addressed below, include:

- Latest planning assumptions (93.110)
- Consultation (93.112)
- Transportation Control Measures (93.113)
- Fiscal constraint (93.108)

4.1.4 LATEST PLANNING ASSUMPTIONS

The use of latest planning assumptions in 40 CFR 93.110 of the conformity rule generally apply to regional emissions analysis. In the 1997 ozone NAAQS areas, the use of latest planning assumptions requirement applies to assumptions about transportation control measures (TCMs) in an approved SIP.

The Tennessee SIP does not include any TCMs, see also Section 4.1.6.

4.1.5 CONSULTATION REQUIREMENTS

The consultation requirements in 40 CFR 93.112 were addressed both for interagency consultation and public consultation. Interagency consultation was conducted with the Knoxville-Area Interagency Consultation group which includes federal partners such as FHWA, FTA, and EPA as well as state and local partners. Interagency consultation was conducted consistent with the Tennessee Conformity SIP and the

conformity regulation's requirements at 40 CFR 93.105. Refer to Chapter 5 of this report for additional information on interagency consultation.

Public consultation was conducted consistent with planning rule requirements in 23 CFR 450. Refer to Chapter 6 for additional information on public consultation.

4.1.6 TIMELY IMPLEMENTATION OF TCMS

The Tennessee SIP does not include any TCMs, therefore this does not apply in the Knoxville Region.

4.1.7 FISCAL CONSTRAINT

Transportation conformity requirements in 40 CFR 93.108 state that transportation plans and TIPs must be fiscally constrained consistent with DOT's metropolitan planning regulations at 23 CFR part 450. The 2050 MTP's for the Knoxville and Lakeway areas and the FY 2023 – 2026 TIP's for KRTPO and LAMTPO and the TDOT FY 2023 – 2026 STIP are fiscally constrained, as demonstrated in applicable sections of those documents.

4.1.8 ORPHAN AREA PROJECTS

Table D-2 in Appendix D of this report provides a listing of the projects within the geography of the 1997 8-Hour Ozone Standard "orphan area" as previously described. These include all projects currently under development by TDOT as well as the projects included in the LAMTPO 2050 MTP update. Guidance from EPA indicates that IAC consultation is still required for projects within the orphan area to determine whether they are exempt or non-exempt, but a regional significance determination is no longer required since that aspect was only applicable to the regional emissions analysis requirement. A project listing within the conformity determination report noting the project's exempt/non-exempt status is necessary because non-exempt projects need to have a conformity determination, and exempt projects do not. Also, if there's a change to a non-exempt project, then the plan/TIP will need to be amended and a new conformity determination done for the plan/TIP. If there is a change to an exempt project, determining conformity for the plan/TIP is not necessary.

4.1.9 SUMMARY OF 1997 8-HOUR STANDARD CONFORMITY ANALYSIS

The KRTPO staff has determined that the Mobility Plan 2050, LAMTPO 2050 MTP, and FY23-26 TIPs are demonstrating conformity with the 1997 8-hr Ozone standard based on the qualitative analysis performed by TPO staff and demonstrated in the CDR. Compliance with the regulations of the Clean Air Act, 40 CFR Parts 51 and 93 (Transportation Conformity Rule) and 23 CFR Part 450 (Metropolitan Planning Regulations established by FAST Act) has also been demonstrated.

4.2 STATEMENT OF CONFORMITY – 2008 OZONE STANDARD

The nonattainment designation for the 2008 Ozone Standard became effective on July 20, 2012 and included the counties of Blount, Knox and the portion of Anderson County surrounding the TVA Bull Run Fossil Plant (2000 Census Tracts 202 and 213.02). A redesignation to Attainment for this Standard was approved by EPA through a Federal Register notice on July 13, 2015 and made effective on August 12, 2015. The conformity analysis documented in this report utilizes the newly approved Motor Vehicle Emissions Budgets (MVEB).

An emissions analysis was conducted for the required analysis years of 2026, 2035, 2040 and 2050.

Table 5 below summarizes the MVEB test for all analysis years:

Table 5: MVEB Test for 2008 Ozone Standard

	Analysis Year			
Volatile Organic Compounds (VOC):	**2026**	**2035**	**2040**	**2050**
Motor Vehicle Emissions Budget (MVEB)	10.49	10.49	10.49	10.49
Projected Emissions	5.31 ✓	3.78 ✓	3.30 ✓	2.84 ✓
Oxides of Nitrogen (NOx):	**2026**	**2035**	**2040**	**2050**
Motor Vehicle Emissions Budget (MVEB)	17.69	17.69	17.69	17.69
Projected Emissions	9.85 ✓	3.89 ✓	3.05 ✓	2.80 ✓

4.2.1 SUMMARY OF 2008 8-HOUR STANDARD CONFORMITY ANALYSIS

Based on the quantitative conformity analysis the KRTPO staff has determined that the Mobility Plan 2050 and the KRTPO FY 2023-2026 TIP demonstrate conformity for the 2008 8-Hour Ozone Standard using the necessary emissions tests. Compliance with the regulations of the Clean Air Act, 40 CFR Parts 51 and 93 (Transportation Conformity Rule) and 23 CFR Part 450 (Metropolitan Planning Regulations established by IIJA/BIL) has also been demonstrated.

4.3 STATEMENT OF CONFORMITY – 2006 DAILY PM2.5 STANDARD

The Daily PM2.5 conformity analysis consists of an MVEB test for the annual PM2.5-related emissions from on-road mobile sources resulting from components such as brake and tire wear and vehicle exhaust known as "Direct PM2.5" and "Oxides of Nitrogen" (NOx) which can act as precursors to PM2.5 formation. An emissions analysis was conducted for the required analysis years of 2026, 2028, 2035, 2040 and 2050, with year 2028 being interpolated between 2026 and 2035. The results of the emissions analysis are summarized in Table 6:

Table 6: MVEB Test for 2006 Daily PM2.5 Standard

	Analysis Year				
Direct Particulate Matter 2.5:	**2026**	**2028**	**2035**	**2040**	**2050**
Motor Vehicle Emissions Budget (MVEB)	1.22	0.67	0.67	0.67	0.67
Projected Emissions	0.42 ✓	0.39 ✓	0.30 ✓	0.28 ✓	0.29 ✓
Oxides of Nitrogen (NOx):	**2026**	**2028**	**2035**	**2040**	**2050**
Motor Vehicle Emissions Budget (MVEB)	42.73	19.65	19.65	19.65	19.65
Projected Emissions	12.35 ✓	10.70 ✓	4.92 ✓	3.99 ✓	3.67 ✓

4.3.1 SUMMARY OF 2006 DAILY PM2.5 STANDARD CONFORMITY ANALYSIS

Based on the quantitative conformity analysis the KRTPO staff has determined that the Mobility Plan 2050 and the KRTPO FY 2023-2026 TIP demonstrate conformity for the 2006 Daily PM2.5 Standard using the necessary emissions tests. Compliance with the regulations of the Clean Air Act, 40 CFR Parts 51 and 93 (Transportation Conformity Rule) and 23 CFR Part 450 (Metropolitan Planning Regulations established by FAST Act) has also been demonstrated.

Chapter 5 – Interagency Consultation

5.0 INTRODUCTION

The Transportation Conformity Rule in 40 CFR Part 93.105 requires that Interagency Consultation be a part of conformity determinations. Interagency Consultation allows for formal deliberation of any issues that arise as part of the conformity analysis and allows for input from all stakeholder agencies into the process. Specific consultation procedures are specified in the Tennessee Transportation Conformity Regulation found in 1200-3-34-.01(3) of the Tennessee State Code.

5.1 PARTICIPATING AGENCIES

The Interagency Consultation Participants included representatives from the following agencies:

- Knoxville Regional TPO
- Knox County Department of Air Quality Management
- Tennessee Department of Transportation
- Tennessee Department of Environment & Conservation
- Federal Highway Administration
- United States Environmental Protection Agency
- Federal Transit Administration
- Lakeway Area Metropolitan TPO
- Great Smoky Mountains National Park Service

A list of participant names is included in Appendix C.

5.2 OVERVIEW OF CONSULTATION PROCESS

The development of this conformity determination was coordinated with the Knoxville-area Interagency Consultation group. The process began with a kickoff of the Mobility Plan 2050 development and preliminary discussion of latest planning assumptions and required model inputs on an IAC conference call held on March 20, 2024. Subsequent calls were held to further discuss various assumptions and to review drafts of the emissions analysis and documentation. The draft Conformity Determination Report was provided to the IAC group for a 30-day review between February 19, 2025 to March 20, 2025. Appendix C contains the minutes of each of the interagency meetings as well as comments and responses to the draft Conformity Determination Report.

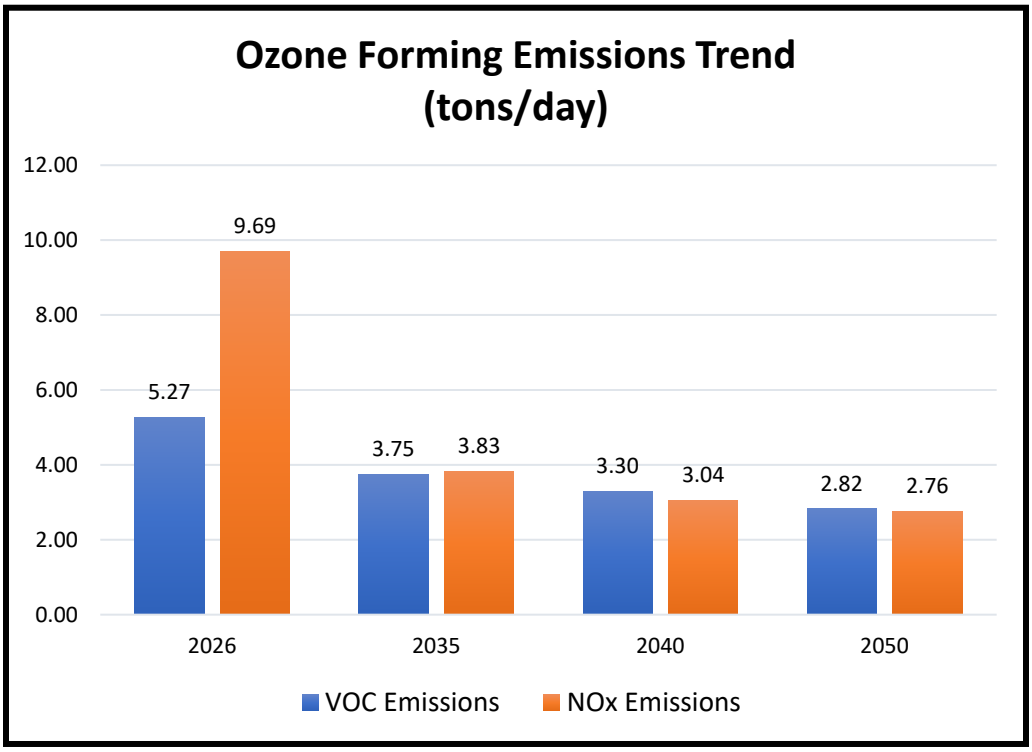
Chapter 6 – Conclusion and Summary of Comments Received

6.0 CONCLUSION

The analysis included in this report has demonstrated that the KRTPO Mobility Plan 2050 and LAMTPO 2050 Metropolitan Transportation Plan along with their accompanying FY 2023-2026 Transportation Improvement Programs as amended are in conformity with air quality regulations found in the Clean Air Act Amendments of 1990 and FAST Act.

Although Vehicle Miles of Travel are projected to increase steadily in the future, the corresponding emissions rates from vehicles are expected to decrease even more significantly according to the modeling performed by the KRTPO.

Figure 4: Ozone Emissions Trends for Life of Mobility Plan 2050



The primary reason that emission rates are projected to decline is due to stricter tailpipe emission standards enacted by EPA, most notably the "Tier 2" standards that were enacted in 1999 and phased in between 2004 to 2009. The Tier Two standards represented a 77 to 86 percent reduction in nitrogen oxide emissions for cars and a 92 to 95 percent reduction for trucks from previous standards. A primary mechanism used to

reduce emissions was through the reduction in fuel sulfur levels (both gasoline and diesel). More recently the "Tier 3" standards promulgated in 2014 and effective beginning in 2017 have further addressed tailpipe emissions from motor vehicles and will continue to become more prevalent as the fleet turns over. The MOVES model incorporates these regulations into its calculations and determines their impacts, which increase over time as the vehicle fleet turns over and includes more of the vehicles affected by the new regulations.

6.1 TRANSPORTATION CONTROL MEASURES

Currently there are no transportation control measures (TCMs) in the Tennessee SIP for the Knoxville 8-hour ozone and PM2.5 nonattainment areas. However, should TCMs be introduced in the area, nothing in the KRMP nor the Transportation Improvement Program will prohibit the timely implementation of any that are approved in the SIP for the Knoxville area.

6.2 PUBLIC INVOLVEMENT SUMMARY

The Knoxville Regional TPO conducted a 30-day comment period between March 24, 2025 and April 22, 2025 to allow for public review and comment on the Mobility Plan 2050 and accompanying Air Quality Conformity Determination. Public hearings were held with the regularly scheduled TPO Technical Committee and Executive Board meetings in April 2025 as well as a virtual public meeting held on April 8, 2025.

Copies of the Conformity Determination Report were made available on the KRTPO web site. Public notice and legal advertisements for the hearings and locations to view the draft conformity determination report were placed in newspapers by both KRTPO and LAMTPO including: The Knoxville News Sentinel, Maryville Daily Times, The Oak Ridger, Knoxville Focus (a free print and online newspaper available in Knox and surrounding counties), Loudon News Herald, Jefferson Standard Banner, East Tennessee Enlightener (paper targeted toward minority population) and Mountain Press (Sevier County).

6.3 PUBLIC COMMENT AND RESPONSE

There were no public comments received on the Air Quality Conformity Determination report. Please refer to Appendix F for a copy of the public notice that was advertised.

Appendix A – Emissions Analysis Summary

A.1 EMISSIONS FOR THE 2008 8-HOUR OZONE STANDARD ANALYSIS

Table A-1 – Volatile Organic Compounds (VOC) emissions summary by county for 2008 8-Hour Ozone Standard

	VOC Emissions (tons per day)			
	Analysis Year			
	2026	2035	2040	2050
Anderson (partial)	0.18	0.13	0.12	0.09
Blount	1.32	0.98	0.89	0.79
Knox	3.81	2.67	2.30	1.96
Total	**5.31**	**3.78**	**3.30**	**2.84**
MVEB	**10.49**	**10.49**	**10.49**	**10.49**

Table A-2 – Oxides of Nitrogen (NOx) emissions summary by county for 2008 8-Hour Ozone Standard

	NOx Emissions (tons per day)			
	Analysis Year			
	2026	2035	2040	2050
Anderson (partial)	0.21	0.07	0.05	0.04
Blount	1.48	0.54	0.43	0.38
Knox	8.16	3.27	2.57	2.38
Total	**9.85**	**3.89**	**3.05**	**2.80**
MVEB	**17.69**	**17.69**	**17.69**	**17.69**

A.2 EMISSIONS FOR THE 2006 DAILY PM2.5 STANDARD

Table A-3 –MOVES Emissions Outputs for Daily Direct PM2.5 Emissions by County

	NOx Emissions (tons per day)			
	Analysis Year			
	2026	2035	2040	2050
Anderson	1.22	0.44	0.35	0.30
Blount	1.44	0.55	0.43	0.39
Knox	8.15	3.34	2.71	2.53
Loudon	1.44	0.57	0.47	0.42
Roane (partial)	0.10	0.04	0.03	0.03
Total	**12.35**	**4.92**	**3.99**	**3.67**
MVEB	**42.73**	**19.65**	**19.65**	**19.65**

Table A-4 –MOVES Emissions Outputs for Daily NOx Emissions by County

	PM2.5 Emissions (tons per day)			
	Analysis Year			
	2026	2035	2040	2050
Anderson	0.04	0.02	0.02	0.02
Blount	0.06	0.04	0.04	0.04
Knox	0.28	0.20	0.19	0.20
Loudon	0.04	0.03	0.03	0.03
Roane (partial)	0.00	0.00	0.00	0.00
Total	**0.42**	**0.30**	**0.28**	**0.29**
MVEB	**1.22**	**0.67**	**0.67**	**0.67**

Appendix B – MOVES4 Input Development Documentation

B.1 BACKGROUND

General information regarding the MOVES4 runspec and county data manager input development was provided in Section 2.4 of this report. The purpose of this appendix is to provide additional details and example input files used for the county data manager. Several of the inputs were derived based on methodology developed as part of other efforts, primarily the development of the onroad mobile source emissions inventories to support both recent Redesignation Requests and Maintenance Plans for Ozone and PM2.5 prepared by the Tennessee Department of Environment & Conservation (TDEC). A primary source of inputs utilized by TDEC was from the Tennessee Department of Transportation (TDOT), which compiled all MOVES inputs necessary to support development of the onroad emissions for the 2023 National Emissions Inventory (NEI). These additional reference materials are not repeated in this document, but are available upon request.

B.2 MOVES COUNTY DATA MANAGER INPUT DATA SOURCES

Several of the following data sets required for MOVES are extremely large and impossible to fully copy into the following sections. Some of the smaller datasets, or parts of datasets for illustration, are included in this document and general descriptions of how each were derived are provided as well, with full data sets being available upon request to KRTPO staff.

B.2.1 METEOROLOGY

Meteorology defined in a relevant SIP for which a MVEB is being used should be incorporated into the relevant analysis. The meteorology inputs (temperature and humidity) were developed and documented by TDEC in the Redesignation Requests and Maintenance Plans for both Ozone and PM2.5 following the appropriate EPA Technical Guidance. The 1997 8-hour Ozone inputs are based on the Maintenance Plan which used a min/max temperature of 66/96 and default humidity inputs for MOBILE6.2 that have now been put through the MOBILE6 to MOVES converter. The 2008 8-hour Ozone inputs are based on an average of 3-years between 2009-2011 while the PM2.5 inputs are based on a 3-year average spanning 2012-2014. This input is the same for all counties and all analysis years for the applicable pollutant.

B.2.2 SOURCE TYPE POPULATION

Source type (i.e., vehicle type) population is used by MOVES to calculate start and evaporative emissions. In MOVES, start and resting evaporative emissions are related to the population of vehicles in an area. Since vehicle type population directly determines start and evaporative emission, users must develop local data for this input. MOVES classifies vehicles based on the way vehicles are classified in the Federal Highway Administration's HPMS (Highway Performance Monitoring System) rather than on the way they are classified in the EPA's emissions regulations. MOVES categorizes vehicles into 13 source types, which are subsets of 6 HPMS vehicle types.

In order to meet the requirement of using the "latest planning assumptions" for this conformity analysis, the TPO staff utilized the recently compiled source type population for year 2023 by TDOT and compared that against its previous year 2018 source type population data for reasonableness with the IAC group.

The TDOT source was also reviewed and presented to the Tennessee Statewide IAC group in December 2024 to allow for further vetting of this information. TDOT primarily developed this dataset using a July 2023 dataset pull from the Tennessee Department of Revenue (TDOR) which required substantial amount of processing to ensure vehicles were categorized appropriately for the MOVES source types. Some source types that are not readily available in the TDOR data such as long haul trucks were developed using the National Default Local Data methodology that has been described in EPA MOVES technical guidance documents.

Other specific data sources were utilized for some source types where information was available, which included transit buses and school buses where data is available from the transit agencies and local school districts respectively.

Following is a summary of data source used for each vehicle (source) type for this regional emissions analysis:

- Source Type 11 (Motorcycle) – Local County-specific data from TDOT 2023 NEI data
- Source Type 21 (Passenger Car) – Local County-specific data from TDOT 2023 NEI data
- Source Type 31 (Passenger Truck) – Local County-specific data from TDOT 2023 NEI data
- Source Type 32 (Light Commercial Truck) – Local County-specific data from TDOT 2023 NEI data
- Source Type 41 (Intercity Bus) – Default National Default Local Data Method applied to 2023 VMT
- Source Type 42 (Transit Bus) – Utilized 2023 National Transit Database (NTD) information and information from UT Transit (Knox County only county in study area with transit buses).
- Source Type 43 (School Bus) – Utilized TN Department of Education school bus database

- Source Type 51 (Refuse Truck) – Default National Default Local Data Method applied to 2023 VMT
- Source Type 52 (Single Unit Short-Haul Truck) – Local County-specific data from TDOT 2023 NEI data
- Source Type 53 (Single Unit Long-Haul Truck) – Default National Default Local Data Method applied to 2023 VMT
- Source Type 54 (Motorhome) – Default National Default Local Data Method applied to 2023 VMT
- Source Type 61 (Combination Short-Haul Truck) – Default National Default Local Data Method applied to 2023 VMT
- Source Type 62 (Combination Long-Haul Truck) – Default National Default Local Data Method applied to 2023 VMT

Source type population projections for future years are based on various methods as follows based on the specific vehicle type:

- Source Types 11, 21 and 31 - Growth in household vehicle ownership derived from the Knoxville Regional TPO's Travel Demand Model (TDM). The TDM has a vehicle ownership sub-model that allocates vehicle ownership based on population as part of its household population synthesizer. The vehicle ownership is used in helping the TDM determine vehicle mode choice and vehicle activity. As people population increases, the TDM adjusts the vehicle ownership in accordance with population growth and other socioeconomic characteristics. The household vehicle ownership is aggregated to the TDM Traffic Analysis Zone (TAZ) level and then further aggregated to the county level to develop an independent growth rate from the base year 2022 to future analysis years 2026, 2035, 2040 and 2050 for each county subject to air quality conformity.
- Source Type 32 – The growth in passenger vehicle VMT from the TDM is applied to the base year 2022 for each analysis year.
- Source Type 41 – The growth in overall VMT from the TDM is applied to the base year 2022 for each analysis year.
- Source Type 42 – Since transit buses (as defined by EPA in MOVES) only operate in Knox County, it was decided to utilize the overall population growth in Knox County to determine transit bus growth rate since it would be logical to assume that transit usage would increase relative to population growth.
- Source Type 43 – Growth in student population by county as calculated by the TDM household population synthesizer.
- Source Types 51, 52, 53 and 54 – The growth in "single-unit" truck VMT from the TDM is applied to the base year 2022 for each analysis year.
- Source Types 61 and 62 – The growth in "multi-unit" truck VMT from the TDM is applied to the base year 2022 for each analysis year.

Since there are two partial counties included within the nonattainment/maintenance areas for the Knoxville Region, special attention was paid to those areas to develop the sub-area source type populations for the specific affected areas.

- Anderson County – Partial Area included in the 2008 8-hour Ozone Nonattainment Areas covering the portion of Anderson County surrounding the TVA Bull Run Fossil Plant, which corresponds to Anderson County 2000 Census Tracts 202 and 213.02. In order to be consistent with past methodology used in developing the SIP MVEB, a constant factor of 0.21 is multiplied by each Source Type to derive the partial area vehicle counts. This was based on comparing population and vehicle counts in the partial area relative to the entire county.
- Roane County – Partial Area included in the 1997 Annual and 2006 Daily PM2.5 Nonattainment Areas covering the portion of Roane County surrounding the TVA Kingston Fossil Plant, which corresponds to 2000 Census Block Group 471450307002. In order to be consistent with past methodology used in developing the SIP MVEB, a constant factor of 0.013 is multiplied by each Source Type to derive the partial area vehicle counts. This was based on comparing population and vehicle counts in the partial area relative to the entire county.

In general, it is believed that the adoption of the above assumptions will lead to a conservative (high) estimate of total source type population. A comparison of the county with the largest source type population in the region (Knox County) showing the total estimated vehicle count for the previous base year of 2014 to 2018 is provided in table B-1:

Table B-1 – Knox County Source Type Population Comparison of Previous 2018 and New 2023 Base Year

Source Type ID	2018 Population	2023 Population
11	9,180	10,006
21	182,950	153,252
31	194,417	240,015
32	17,457	24,982
41	7	322
42	154	99
43	449	477
51	213	94
52	8,699	11,211
53	313	614
54	1,919	1,810
61	3,547	4,885
62	4,061	2,957
TOTAL	**423,366**	**450,724**

Table B-2 below and continued on the following page provides the breakdown of vehicle population growth by source type and county:

Table B-2 – Source Type Population Growth by County 2023 – 2050

Source Type	2023	2026	2035	2040	2050
Anderson County - Full County for PM2.5 Analysis Only					
Motorcycle	2,531	2,565	2,645	2,673	2,720
Passenger Car	28,655	29,039	29,943	30,258	30,799
Passenger Truck	46,947	47,576	49,057	49,573	50,459
Light Commercial Truck	3,687	3,737	3,926	4,074	4,169
Other Buses	64	65	68	71	72
Transit Bus	0	0	0	0	0
School Bus	70	69	69	70	71
Refuse Truck	15	15	16	16	17
Single Unit Short-haul Truck	2,414	2,446	2,566	2,636	2,757
Single Unit Long-haul Truck	98	99	104	107	112
Motor Home	304	308	323	332	347
Combination Short-haul Truck	636	646	677	698	727
Combination Long-haul Truck	466	474	496	511	532
TOTAL	**85,887**	**87,039**	**89,890**	**91,019**	**92,782**

Table B-2 – Source Type Population Growth by County 2023 – 2050 (Continued)

Source Type	2023	2026	2035	2040	2050
Blount County					
Motorcycle	6,413	6,606	7,155	7,435	7,992
Passenger Car	44,568	45,907	49,722	51,668	55,544
Passenger Truck	81,763	84,219	91,218	94,788	101,899
Light Commercial Truck	4,895	5,041	5,608	6,013	6,610
Other Buses	96	99	110	118	129
Transit Bus	0	0	0	0	0
School Bus	149	151	171	187	222
Refuse Truck	17	17	19	20	22
Single Unit Short-haul Truck	4,460	4,586	4,890	5,240	5,757
Single Unit Long-haul Truck	118	121	129	139	152
Motor Home	352	362	386	414	454
Combination Short-haul Truck	469	482	527	557	615
Combination Long-haul Truck	215	221	241	255	282
TOTAL	**143,515**	**147,812**	**160,176**	**166,834**	**179,678**
Knox County					
Motorcycle	10,006	10,220	10,861	11,192	11,912
Passenger Car	153,252	156,523	166,346	171,417	182,446
Passenger Truck	240,015	245,137	260,522	268,465	285,737
Light Commercial Truck	24,982	25,601	27,374	28,135	30,506
Other Buses	322	330	354	364	396
Transit Bus	99	101	108	111	121
School Bus	477	492	566	612	624
Refuse Truck	94	97	105	108	120
Single Unit Short-haul Truck	11,211	11,517	12,528	12,894	14,273
Single Unit Long-haul Truck	614	631	686	706	782
Motor Home	1,810	1,859	2,023	2,082	2,304
Combination Short-haul Truck	4,885	5,046	5,560	5,829	6,426
Combination Long-haul Truck	2,957	3,055	3,366	3,528	3,890
TOTAL	**450,724**	**460,609**	**490,399**	**505,443**	**539,537**
Loudon County					
Motorcycle	2,042	2,112	2,321	2,425	2,643
Passenger Car	18,695	19,336	21,249	22,203	24,197
Passenger Truck	35,188	36,395	39,995	41,790	45,544
Light Commercial Truck	1,513	1,547	1,684	1,800	1,940
Other Buses	44	45	49	53	57
Transit Bus	0	0	0	0	0
School Bus	63	64	69	76	91
Refuse Truck	15	16	18	19	20
Single Unit Short-haul Truck	1,634	1,722	1,918	2,035	2,220
Single Unit Long-haul Truck	98	103	115	122	133
Motor Home	304	320	357	379	413
Combination Short-haul Truck	843	883	982	1,037	1,146
Combination Long-haul Truck	665	697	775	818	904
TOTAL	**61,104**	**63,240**	**69,532**	**72,757**	**79,308**

Table B-2 – Source Type Population Growth by County 2023 – 2050 (Continued)

Source Type	2023	2026	2035	2040	2050
Anderson County - Partial County for Ozone Analysis					
Motorcycle	532	539	556	562	572
Passenger Car	6,018	6,099	6,289	6,355	6,468
Passenger Truck	9,859	9,991	10,302	10,411	10,597
Light Commercial Truck	774	786	843	937	899
Other Buses	13	13	14	16	15
Transit Bus	0	0	0	0	0
School Bus	15	15	15	15	15
Refuse Truck	3	3	3	3	3
Single Unit Short-haul Truck	507	513	539	565	579
Single Unit Long-haul Truck	21	21	22	23	24
Motor Home	64	65	68	71	73
Combination Short-haul Truck	134	133	136	148	140
Combination Long-haul Truck	98	97	100	108	103
TOTAL	**18,038**	**18,275**	**18,887**	**19,214**	**19,488**
Roane County - Partial County for PM2.5 Analysis					
Motorcycle	25	25	26	26	26
Passenger Car	232	234	239	239	242
Passenger Truck	402	406	414	415	420
Light Commercial Truck	12	12	13	14	15
Other Buses	1	1	1	1	1
Transit Bus	0	0	0	0	0
School Bus	1	1	1	1	1
Refuse Truck	1	1	1	1	1
Single Unit Short-haul Truck	20	21	23	24	27
Single Unit Long-haul Truck	1	1	1	1	1
Motor Home	3	3	3	4	4
Combination Short-haul Truck	9	9	11	11	13
Combination Long-haul Truck	7	7	8	9	10
TOTAL	**714**	**721**	**741**	**746**	**761**

B.2.3 AGE DISTRIBUTION

The EPA strongly recommends the use of local specific data for vehicle age distribution as it can vary greatly for various areas based on a number of factors. This input is important because of the fact that older vehicles generally exhibit higher emissions than newer vehicles due to fewer controls required to meet newer emissions standards and deterioration of other emissions control systems components. The Age Distribution inputs for this regional emissions analysis were developed using an approach of attempting to blend consistent data sources with what was used to develop the overall Source Type

Population for each vehicle type as described in the previous section. For example, cases where the TDOT NEI data source was used for vehicle population its corresponding age distribution that was provided in the same overall dataset was utilized. For source types in which the NDLD method was used it was decided to use the MOVES default age distributions that were developed on a national scale. Local data was used for age of transit and school buses.

B.2.4 VEHICLE TYPE VEHICLE MILES TRAVELED (VMT)

MOVES defines roadways into five different functional types: Off-Network, Rural Restricted Access, Rural Unrestricted Access, Urban Restricted Access and Urban Unrestricted Access. The TPO's Travel Demand Model uses a different roadway classification system, however it is easily converted to the MOVES road types as the Restricted categories involve roadways with no direct access such as Interstates and the Unrestricted road type includes all other types of roadways. The Vehicle Miles Traveled (VMT) from the TDM were then aggregated into the respective MOVES road types.

The Knoxville Regional TPO's TDM predicts average weekday traffic volumes for all arterials and collectors and some major local roads in the 10-county modeling region. The model's roadway network covers over 7,500 lane miles in total over an area of 3,725 square miles represented by 1,186 traffic analysis zones. The current version of the model also predicts the Knoxville Area Transit (KAT) average weekday system ridership and the number of average weekday bicycle and pedestrian trips within the region. All current nonattainment/maintenance area counties are included in the TDM.

The methodology used to grow VMT to the future analysis years was to compare the base year 2022 VMT developed from actual traffic count data and reported by the Tennessee Department of Transportation for the federal Highway Performance Monitoring System (HPMS) to the travel demand model VMT. Correction factors for the model volume were developed and then subsequently applied to the growth rates exhibited for each future network year of the travel demand model based on changes in population and proposed transportation projects included in the Long Range Transportation Plan.

The travel demand model forecasts VMT growth for four different vehicle types of: Passenger Vehicles, Four-Tire Commercial Vehicles, Single-Unit Trucks and Multi-Unit Trucks. Growth factors for each vehicle type were applied to the base year data separately. A special model post-processor was developed for the current TPO TDM which automates the previous process of compiling the VMT by vehicle type into a spreadsheet format and calculating growth factors to apply to each HPMS vehicle type. Table B-3 below displays this model-generated VMT growth calculator spreadsheet for the specific example of the 2050 analysis year for the 2008 Ozone Standard geography:

Table B-3 – Example VMT Growth Calculator for MOVES HPMSVType Year Input

County	HPMSVTypeID	HPMS_2022o3_vmt	growth	HPMS2050o3_vmt
Anderson	10	1,429,005	1.19	1,458,415
Anderson	25	236,678,530	1.19	241,549,526
Anderson	40	616,254	1.17	625,805
Anderson	50	6,766,279	1.17	6,871,144
Anderson	60	2,568,206	1.13	2,541,994
Blount	10	8,357,573	1.35	8,689,795
Blount	25	1,219,437,448	1.35	1,267,911,330
Blount	40	4,073,097	1.24	4,226,320
Blount	50	34,893,302	1.24	36,205,934
Blount	60	35,384,109	1.28	36,687,293
Knox	10	30,302,071	1.28	31,303,141
Knox	25	5,730,538,720	1.28	5,919,854,895
Knox	40	13,485,251	1.24	13,976,537
Knox	50	191,609,545	1.24	198,590,131
Knox	60	471,516,123	1.28	492,276,301

In order to more simply document the projected growth in VMT for each analysis year covered in this conformity determination, the table on the following page (Table B-4) depicts only the total county-level Daily VMT for each analysis year. Subsequent to running the MOVES4 model, the TPO staff reviewed the detailed activity outputs from the model run to ensure that the output VMT matched the input VMT so that it could be verified that all emissions were properly accounted for.

Table B-4 – Growth in Total Daily VMT (by Source Type)

	2022 TDOT	2026	2035	2040	2050
Anderson - P	x	693,279.1	743,785.4	828,425.6	792,540.7
Blount	3,567,522	3,708,823.8	4,122,470.9	4,419,939.9	4,853,146.7
Knox	17,636,854	18,235,619.2	19,538,830.5	20,099,307.4	21,837,568.8
Anderson Full	2,614,333	2,661,949.9	2,797,783.4	2,902,427.0	2,971,962.4
Loudon	2,498,786	2,584,770.9	2,823,810.1	3,015,419.2	3,254,724.4
Roane - P	x	165,934.8	180,253.9	190,244.9	204,516.6

EPA's MOVES model uses fractions to parse out monthly, daily, and hourly VMT. These fractions are often locally developed to represent local conditions as much as possible. The report developed by TDOT discusses the development of month and day VMT fractions. These fractions were developed from historical average HPMS data. These fractions for July were used to adjust annual average weekday VMT to July average weekday VMT for the Ozone analysis.

Hourly VMT fractions by road type were developed from the TPO's travel demand model using a new post processor created specifically for developing MOVES-ready inputs. The post-processer is required in order to disaggregate the TDM traffic volume outputs from three time periods (AM, PM and rest of day) into individual hourly volumes for each of the twenty-four hours in a day. The hourly volumes are developed primarily by pattern matching based on the locally available TDOT count data by hour, which vary by road type (urban and rural) but not source type. The travel demand model post-processor uses the four vehicle types from the TDM (passenger vehicles, four-tire commercial vehicles, single-unit trucks and multi-unit trucks) to generate hourly VMT fractions for the different source types that are associated with those categories. In addition, special hourly distributions were applied to source types 42 and 43 (transit bus and school bus) to reflect the unique operating characteristics of these vehicles; for example, school buses basically only operate during school beginning and dismissal periods. Further documentation of travel demand model post-processor is provided in a separate document that was produced by the TPO's modeling consultant.

B.2.5 AVERAGE SPEED DISTRIBUTION

Average speed distribution is the speed of each source type by road type for each hour of the day. MOVES uses 16 speed bins to group source type speed fractions. These fractions represent the amount

of time a source type spends traveling at that speed on a particular road type. Note, these fractions represent the time spent in these speed bins; these fractions do not reflect instantaneous speeds, but the average speed, including delays like congestion and traffic signals. Average speed distribution for the Knoxville Nonattainment Area is developed by the TPO's TDM along with the aforementioned model post-processer. Similar to the hourly VMT fractions, there is a need for post processing of the raw TDM outputs for average speeds on roadway links primarily for the disaggregate level of detail needed for MOVES inputs. Speed is a direct function of several roadway characteristics and the amount of congestion that is present. The model post-processor develops separate 24-hour traffic volumes for each direction of travel on every roadway link in the model network and determines the average speed based on the amount of congestion (link volume-to-capacity ratio) and other characteristics, such as presence of traffic signals. A separate speed distribution for multi-unit trucks was developed and validated against real-world speed information obtained through the National Performance Measure Research Dataset (NPMRDS). The speeds change over the course of the analysis years in this conformity analysis. The difference accounts for increased congestion and the impact of any changes to the transportation network such as road widening or new roadway construction projects.

B.2.6 ROAD TYPE DISTRIBUTION

Road type distribution is the distribution of VMT on each roadtype by sourcetype. Road type distribution data is developed using the TDM post-processor which automatically tabulates the aggregate VMT (HPMS model adjusted model volumes) by road type and calculates the percent on each road type.

B.2.7 FUELS

Data for this input including the "alternative vehicle fuel technology" (AVFT) aspect was developed and provided by TDEC. A copy of the methodology is provided as follows:

Fuel Data Development

MOVES requires fuel formulation information for each county in the domain being modeled. Similarly, these formulations should also have the associated fuel supply, or the fraction of each fuel used, by month, in each county. EPA's default data is derived and expanded from a series of samples taken at the PADD (Petroleum Administration Defense Districts) level.

EPA's Technical Guidance suggests changing the values that reflect RVP properties to reflect the regulatory requirements in the area being modeled. After reviewing the default MOVES fuel formulation data for 2026, 2035, 2040 and 2050 the RVP values do not reflect the regulatory maximum for all

months. MOVES' Fuel Wizard was used to adjust the RVP to account for the regulatory maximum RVP for fuel subtype 12, the only subtype to which the changes to the RVP apply. In addition to accounting for the regulatory maximum, a 1.0 psi waiver applies to these fuels and is accounted for in the adjustment made to the fuel RVP using the Fuel Wizard in MOVES.

AVFT Data Development

MOVES4 has a change to the AVFT input that helps to better account for the anticipated rapid growth in electric vehicle (EV) population. EPA suggests in their Technical Guidance that local data should be used to develop AVFT for source types where data is available.

AVFT data developed by TDOT from motor vehicle registration data provided by the Tennessee Department of Revenue was used as a starting point in MOVES' AVFT Tool.

One key input in using the AVFT Tool is the most recent complete model year (MY). For more information on the complete model year, see the description in Section 4.8.3 of the MOVES4 Technical Guidance. The last complete MY data contained in AVFT data is 2022 since the data was captured in calendar year 2023 (which also included some 2024 MY data as well).

Transit bus data developed for gasoline, diesel and electric fuel types for Knox County was developed from UTK and KAT transit data obtained by the Knoxville TPO for years 2008-2023. Since MOVES4 AVFT assumes some population of transit buses (source type 42) are fueled with compressed natural gas (CNG) or fuel cell, and there are no known CNG or fuel cell transit buses in the KAT fleet to date, these values are zeroed for 2008 through 2023. Similarly, there are very few EV transit buses and no fuel cell buses model 2002 through 2023. For this reason, values for CNG and fuel cell are set to zero for MY 2008 through 2023. Once the CNG and fuel cell values are zeroed out, the remaining fractions are normalized by MY. As a final check, the fractions for each source type and MY must sum to one.

Once the AVFT Tool input file was created it was imported into the AVFT Tool. Although gap filling was not necessary for most of the source types since all AVFT data were complete for 2023 and many prior years, the gap filling method was set to "Use defaults and renormalize". The selection of the last complete MY was 2022.

The analysis year chosen was 2050. The projection method selected was "National Average" for all source types except 21, 31, 32 and 52. For 21, 31, 32 and 52, since local data was provided for some of the MYs, "Proportional" was used for the projection method. In Knox County, which has transit buses

(source type 42), “Proportional” was also used to preserve the local trend into the future. This assures expected future national trends in fuel type availability while adjusting for known local conditions.

B.2.8 I/M PROGRAMS

Not applicable to the Knoxville Region

Appendix C – Interagency Consultation

C.1 INTERAGENCY CONSULTATION PARTICIPANTS

Table C-1 shows the current participants in the Knoxville Interagency Consultation process

Table C-1 – Knoxville IAC Participants

Agency	Representative(s)
Knoxville Regional Transportation Planning Organization (TPO) 400 Main Street, Suite 403 Knoxville, TN 37902 (865) 215-2500 | FAX: (865) 215-2068	Doug Burton, TPO Coordinator Mike Conger, Senior Transportation Engineer Craig Luebke, Transportation Planner Amy Brooks, Executive Director, Knoxville-Knox County Planning
Knox County Department of Air Quality Management 140 Dameron Avenue Knoxville, TN 37917 (865) 215-5900 | FAX: (865) 215-5902	Justin Mayer, Director Rebecca Larocque, Environmental Program Manager
Tennessee Department of Transportation (TDOT) 505 Deaderick Street Nashville, TN 37243 (615) 741-2848 | FAX: (615) 532-8451	Stacy Morrison, OCT Manager Troy Ebbert, Region 1 OCT Manager Chris McPhilamy, Planning Manager Degee Roberts, TDOT Team Lead Chasity Stinson, TDOT Senior Technical Specialist Mohammad Molla, TDOT Team Lead Robert Hayzlett, Transportation Program Supervisor
Tennessee Department of Environment and Conservation (TDEC), **Air Pollution Control Division** Davy Crockett Tower, 7th Floor 500 James Robertson Parkway Nashville, TN 37243 (615) 767-4825	Marc Corrigan, Environmental Consultant
Federal Highway Administration, Tennessee Division 404 BNA Drive, Building 200, Suite 508 Nashville, TN 37217 (615) 781-5767 | FAX: (615) 781-5773	Sean Santalla, Program Development Team Leader Zack Coleman, Transportation Planning Specialist Melanie Murphy, Transportation Planning Specialist
U.S. Environmental Protection Agency (EPA), Region 4 61 Forsyth Street Atlanta, GA 30303 (404) 562-9077 | FAX: (404) 562-9019	Dianna Myers, Environmental Scientist Simon Jarvis, Life Scientist Sunday Gotvald, Air Dispersion and Mobile Modeler

Agency	Representative(s)
Federal Transit Administration (FTA), Region 4 (Atlanta) 61 Forsyth Street Atlanta, GA 30303 (404) 562-3500 | FAX: (404) 562-3505	Andres Ramirez, Community Planner Michael Sherman, Community Planner
Lakeway Area Metropolitan Transportation Planning Organization (TPO) 100 W. 1st North Street Morristown, TN 37814 (423)581-0100 | FAX: (423) 585-4679	Tina Whitaker, MTPO Director
Great Smoky Mountains National Park (GSMNP), Resource Management & Science Division 1314 Cherokee Orchard Road Gatlinburg, TN 37738 (865)436-1708 | FAX: (865) 430-4753	Jim Renfro, Air Quality Branch Chief Teresa Cantrell, Transportation Planner

C.2 INTERAGENCY CONSULTATION MEETING MINUTES

The following meeting minutes were applicable to this transportation conformity determination:

C.2.1 MEETING MINUTES FOR IAC CONFERENCE CALL ON 3/20/2024

Knoxville Air Quality Interagency Consultation Conference Call
Meeting Minutes for 3/20/24

1) Roll Call

Call Participants:

Knoxville TPO:
Mike Conger
Craig Luebke

Lakeway MTPO:
Steve Neilson

EPA:
Dianna Myers
Sarah LaRocca
Richard Wong

FHWA:
Zachary Coleman

FTA:
Andres Ramirez

National Park Service:
Jim Renfro

Tennessee Department of Transportation:
Michelle Christian
Mohammad Molla
Chasity Stinson
Degee Roberts
Savannah Robertson

Tennessee Department of Environment & Conservation:
Marc Corrigan

Knox County Air Quality Management:
Justin Mayer
Rebecca Larocque

Discussion Items:

2) Discussion of Short Conformity Report for April 2024 Knoxville Regional TPO TIP Amendments

Mike Conger provided an overview of the draft short conformity report (SCR) for a set of two proposed TIP amendments that was submitted to the IAC on March 1st. Mike described the two project amendments and the use of a SCR report process that allows demonstration of conformity without a full regional emissions analysis. Mike briefly described the four major conditions that must be satisfied in the SCR process and how each of the two amendments complied with such. Mike noted that there was a request for a reduced IAC review period of 24 days instead of the normal 30 day period that would end on March 24th. Mike asked the group for any comments on the draft SCR and particularly if there was any concern regarding the shortened IAC review period.

No comments/questions were raised on this call the only other responses received to date via email were in agreement with the shortened IAC review period therefore the TPO staff assumes that there is no objection to such. Mike reminded the group that they have until the end of this week to provide any comments.

3) Discussion of Conformity Determination and Regional Emissions Analysis Process for Mobility Plan 2050

Mike Conger provided an overview of the conformity process and proposed timeline.

- Conformity Timeline

- Mike presented the draft conformity timeline and noted that it was intended as a general framework that would be tweaked as we move forward depending on actual progress being made but that it can be used to identify the key potential IAC interactions that are foreseen.
- No comments or questions on the timeline were received.

- Preliminary Review of Planning Assumptions (MVEBs, Analysis Years, Emissions Tests, Socioeconomic Projections, Emissions Model)
  - Mike presented the Air Quality Conformity Process Overview and Latest Planning Assumptions document and noted that it is also intended to be a living document that is updated subsequent to each IAC call based on information and discussions that are relevant to the proposed approach and planning assumptions being used for this particular conformity analysis effort.

  - There were no comments or questions regarding the first four sections of the document which serve primarily as general background information.

  - Section 5 regarding the applicable Motor Vehicle Emissions Budgets (MVEB) were discussed in detail since there have been recent developments affecting the potential applicable MVEB for the 2008 8-Hour Ozone Standard, summarized as follows:
    - Mike noted that he was aware that TDEC was in the final stages of developing a required 2nd 10-Year Maintenance Plan for this standard and that as part of that process a new MVEB was being proposed for year 2035 along with the removal of the existing 2026 MVEB. Mike asked Marc Corrigan from TDEC to provide an overview and current status of this action.
    - Marc Corrigan confirmed that the 2nd 10-Year Maintenance Plan including updated MVEB was recently adopted by the State Air Board and official submittal to EPA was projected to occur by the end of this month.
    - Marc stated that he specifically wanted to engage this IAC group regarding whether it would be anyone's preference to pursue an official MVEB adequacy finding from EPA, which could potentially make the new 2035 MVEB available for use in any conformity determination much sooner than if we go through the normal EPA overall SIP approval process. He noted that in separate consultation with EPA on this issue that he recently learned that it would not be possible to remove the 2026 MVEB through an adequacy determination and therefore it may not really be of any benefit to do so, i.e. we would basically just wind up with an additional budget year to address in this upcoming conformity analysis.
    - Dianna Myers responded that Marc's assessment was correct and explained the reason for the inability for EPA to remove a budget year in the Adequacy Determination process per their regulations.
    - Mike Conger responded that it did not seem advisable to pursue adequacy, but wanted to clarify the timeframes involved with respect to the conformity process with the concern being that the new SIP is

approved while we are still developing the Mobility Plan conformity analysis and having to potentially update everything in response.

- Dianna Myers clarified that EPA SIP approval timeline is up to 18 months from submission by TDEC. Marc Corrigan indicated the SIP should be submitted later this month and in his past experience it would likely take at least 9 months for approval. Dianna stated that she could not confirm any timelines at this point but often it came down to issues of level of urgency that might affect it which potentially would not be an issue in this situation.
- Mike Conger asked about whether the official EPA SIP approval would also trigger a new conformity clock.
- Diana Myers responded that it would start a new 2-year clock in which conformity would have to be demonstrated against any new MVEBs and she also mentioned that all should be aware of the MOVES grace period as well.
- Mike Conger responded that in his opinion the only drawback to not having the new MVEB available for this conformity analysis would be the potential need to do a new conformity determination after the new SIP 2-year clock which might be outside of one of the normal conformity update cycles and generate additional work, but based on the overall discussion he agreed that an Adequacy Finding was not preferred at this time.
- Mike stated that he would update this document and note that the MVEB listed in Table 1a was assumed to be the controlling one for this process based on today's discussion.

- Section 6, Proposed Analysis Years was discussed next and Mike noted that he was particularly interested in gathering IAC input since this was a critical factor in moving forward to the next steps of the overall long-range plan update as it establishes project horizon periods as well as years that the TPO would need to develop socio-economic inputs for its travel demand forecasting model.
    - Mike Conger noted that the current document needed to be revised to update the timeframe covered by the LRTP, which is 2025-2050 and reviewed the analysis year requirements.
    - Mike walked through the TPO staff's initial proposed analysis years that would potentially meet the requirements from the Conformity Regulations. Initial proposed analysis years were: 2030, 2035 (not necessary if no proposed MVEB for Ozone is established), 2040 and 2050 which were picked to minimize the number of analysis years but Mike wanted to check with the IAC specifically about the requirement to assess either of the MVEB years for Ozone or PM2.5 which are 2026 and 2028 respectively.
    - Dianna Myers responded that since those MVEB years were in the timeframe of this long-range plan that they would have to be accounted for and therefore she recommended that the TPO develop a model years for 2026 and 2035, which would also allow for interpolating 2028 to cover the PM2.5 MVEB. The TPO would then need an analysis year

for the final year of 2050 and then one in between 2035 and 2050 such as either 2040 or 2045 to satisfy the 10-year requirement.
    - Mike thanked Dianna for this clarification and guidance and stated that he would revise the document per this recommendation.

- Emissions Tests
    - Emissions tests will be against the MVEBs established with earlier discussion

- Socioeconomic Projections
    - Mike Conger provided a brief overview of the proposed sources of population and employment projections for use with the travel demand forecasting model. Caliper Corporation is under contract to conduct a "minor" model update.

- Emissions Model
    - Mike Conger clarified the most current version of MOVES is 4.0.1 with confirmation by Richard Wong from EPA.

- Mike Conger provided a brief update of the LRTP public outreach and involvement activities to date with a focus on the information presented with regard to socioeconomic projection data, trends impacting same and potential adjustments to employment numbers. He stated that much more information on this aspect and the travel demand forecasting model would be provided to the group at a subsequent IAC meeting.

4) Other Business/Next Steps

There being no other business the meeting was adjourned.

C.2.2 MEETING MINUTES FOR IAC CONFERENCE CALL ON 10/24/2024

Knoxville Air Quality Interagency Consultation Conference Call
Meeting Minutes for 10/24/24

1) Roll Call

Call Participants:

Knoxville TPO:
Mike Conger
Craig Luebke

Lakeway MTPO:
None

EPA:

Simone Jarvis
Richard Wong

FHWA:
Zachary Coleman

FTA:
None

National Park Service:
Jim Renfro

Tennessee Department of Transportation:
Chasity Stinson
Chris McPhilamy

Tennessee Department of Environment & Conservation:
Marc Corrigan

Knox County Air Quality Management:
Justin Mayer

Caliper Corporation:
Vince Bernardin

Discussion Items:

2) Regional Travel Model Update

Mike Conger provided a summary introduction to the Regional Travel Model and the update currently under development, including:

1. Socioeconomic Data Update
2. Roadway Network Update

Mike then introduced Vince Bernardin to provide additional details on the model update.

- Current model developed in 2009 an updated multiple times since then including the current effort
- Largest change has been decreased trip-making (from 9.1 trips per day to 8.4 trips per day in 2022 (7.5% decrease)
- Work from home impact, corroborated by census data
- Declining transit usage is another trend
- Spatial patterns at the county to county level are in agreement with big data sources
- Model validation meets and exceeds required standards with an overall root mean square error (RMSE) 28.8%

Marc Corrigan asked for clarification about the model being a hybrid between the traditional 4-step model and Activity-based model and Vince B. verified that was the case. Marc also mentioned that he was curious about how exactly the work from home phenomenon was being captured in the model. Vince responded that it is still somewhat crude in this minor model update effort although some aspects such as the worker income level were being captured with lower income workers tending to be less likely able to work from home.

Mike Conger noted that a new data collection effort of a Regional Household Travel Survey is under development with the survey itself expected to occur in spring of 2025. This is a pooled fund effort with 8 of the 11 MPO's statewide participating. This is an important since many changes have occurred since the last survey back in 2008 that impact travel behavior including working from home and services such as Uber and Lyft that did not exist in 2008. It is anticipated that a major model update with occur with the next Mobility Plan utilizing data from the household travel survey and Vince is under contract to assist with the visioning and scoping for that update which will include opportunities for input by this IAC group.

3) Review of Conformity Process Requirements Applicable to the Knoxville Region

Mike Conger introduced this item by noting that the document he was discussing from was intended to be a living document that would be updated as needed following these IAC discussions. Instead of viewing the document itself, Mike provided a slide presentation that covered the main topics, which will be provided to the group along with the minutes from the call. Refer to the slides for additional information with the major discussion items being summarized below:

A. Process Overview and Latest Planning Assumptions Document
   - **a.** There was discussion regarding the applicable current Motor Vehicle Emissions Budgets (MVEB) to use for the 2008 8-hour Ozone Standard since TDEC recently developed a 2nd 10-Year Maintenance Plan which established a new MVEB for the year 2035. Marc Corrigan confirmed that it was completed and Simone Jarvis noted that EPA had officially received it on April 15, 2024. Simone stated that EPA has a requirement to formally act on this new SIP within 18 months so by 10/15/2025. It was noted that on the previous IAC call that the discussion led to the conclusion that there would be no special effort to act on the MVEB in an expedited manner and therefore it appears likely that the current MVEB would still be in effect for the duration of the conformity analysis period of the Mobility Plan 2050. Simone stated that we can keep open lines of communication as it moves forward through the regular SIP approval process to ensure that everyone is aware of any official actions that might affect this assumption.

   - b. Regarding the PM2.5 MVEBs, Mike asked Marc Corrigan for an update on the potential development of a 2nd 10 year Maintenance Plan for that standard. Marc Corrigan noted that this was in the early stages of development and that TDEC was in fact likely able to pursue a "Limited Maintenance Plan" process based on the data that they have reviewed thus far. He noted that there would

be upcoming IAC discussions as it officially kicks off with a target submission to EPA by Sep. 2025.

c. Latest Emissions Model – Mike stated that the TPO was proposing to use the MOVES4 latest version however he was aware that a new MOVES5 model was due to be released later this year. He asked for any input on the appropriate model to use and Richard Wong noted the current status and the requirements for use of the models for various aspects noting that MOVES4 would still be available for conformity analyses such as this effort but for new SIPs it would likely be MOVES5 unless things were already too far underway.

- MOVES Input Descriptions
    - Meteorology – Mike received confirmation from Marc that the previous meteorology inputs from the original Maintenance Plan for Ozone were held constant for the 2nd 10-year Maintenance Plan.
    - Source Type Population – Mike noted that this is one of the inputs that we spend the most time and effort on to develop since it relies heavily on local data. He stated that he had already started working with TDOT Forecasting Office staff on deriving inputs and that TDOT was undertaking significant effort to process the large amounts of vehicle registration data obtained from the Tennessee Department of Revenue. He noted that future calls will delve more deeply into this data with the purpose of today's call to cover generally what the sources of data were and which ST's can be developed from local data versus doing a calculation from MOVES defaults known as the National Default, Local Data method.
        - Mike asked the group for guidance regarding the Source Type 41 (other bus) category and specifically how certain Daycare Buses should be treated. He noted how many of the daycares essentially operated similarly to school buses in that they often provide transportation directly from the school at the afternoon pickup to their place of business. Richard Wong responded that per MOVES Technical Guidance that he pointed the group to it suggests that these daycare buses should be considered as "other buses" but he said that he would follow up with OTAQ for confirmation. He provided a response via email following the call that confirmed this.
    - Age Distribution – Mike noted that the TPO would plan to use consistent data source for age as was used for the source type population. He asked for guidance whether it would be appropriate to hold the age distribution constant (both for local or default cases) or instead use the EPA MOVES spreadsheet tool that allows a user to project future age distribution from a given base year one. Richard Wong responded that as long as it was fully documented it probably wouldn't matter which route was chosen for this. Mike responded that it has always been past practice to hold this input constant so that would likely be the preference for this effort.

- Fuels – Mike noted that he would be working with Marc Corrigan from TDEC more on this input but did note that the "Alternative Vehicle Fueling Technologies" AVFT input in particular would require extra scrutiny as it has broadened in applicability from previous iterations of MOVES where it mainly came into play for transit buses but now is used to account for electric vehicles in the light duty fleet.

Mike Conger provided a brief Conformity Process Timeline Update for 2050 Mobility Standard and noted that there will be more frequent IAC calls over the next few months as we head towards final adoption of the long range plan.

4) Other Business/Next Steps

There was a brief mention about the new PM2.5 NAAQS and noted that the expected designation timeline is February of 2026 so it should not affect this process but was worth keeping tabs on as we move forward.

C.2.3 MEETING MINUTES FOR IAC CONFERENCE CALL ON 11/21/2024

Knoxville Air Quality Interagency Consultation Conference Call
Meeting Minutes for 11/21/24

1) Roll Call

Call Participants:

Knoxville TPO:
Mike Conger
Craig Luebke

Lakeway MTPO:
Tina Whitaker

EPA:
Dianna Myers
Simone Jarvis
Kathleen Musmanno
Richard Wong

FHWA:
Sean Santalla
Zachary Coleman

FTA:
None

National Park Service:
Jim Renfro

Tennessee Department of Transportation:
Chasity Stinson
Chris McPhilamy
Mohammad Molla
Troy Ebbert

Tennessee Department of Environment & Conservation:
Marc Corrigan

Knox County Air Quality Management:
Justin Mayer
Rebecca Larocque

Discussion Items:

2) Discussion of Process and Planning Assumptions for Conformity Determination and Regional Emissions Analysis to support the TPO Mobility Plan 2050

- Mike Conger reviewed the Conformity Process Requirements Applicable to Knoxville Region (Pollutants, MVEBs, Analysis Years, Emissions Tests, etc)
    - Mike noted that as discussed on previous calls, we are moving forward with the original 2008 8-hour Ozone MVEBs while awaiting for official approval of the new MVEBs that were developed for the recent 2nd 10-year Maintenance Plan. He asked if there were any updates from EPA's end and Simone Jarvis confirmed that there are no new status updates to report at this time.
    - Richard Wong provided a brief update on the pending MOVES 5 release
    - Marc Corrigan asked if the EPA conformity grace period of two years to use MOVES5 is effective upon the Federal Register publication or a later effective date
        - Dianna Myers and Richard Wong responded to confirm that the grace period of two years is effective upon Federal Register publication date based on what was done for MOVES4 which was released officially on 9/12/2023 and the grace period extends for a 2-year period until 9/12/2025 after which it must be used for any new regional emissions analysis for conformity.

- Discussion of Specific MOVES Inputs
    - Meteorology – held constant for all years
        - Use same inputs that were used in the applicable Maintenance Plan
    - Source Type Population – varies with expected growth projections

- Mike provided an overview of the source of data for each Source Type between local data and national default methods. He also noted that the local data was provided by work done by TDOT staff to process the large statewide vehicle registration database from the TN Dept of Revenue to support 2023 National Emissions Inventory efforts. This represents a change in methodology from the source used in the last conformity determination which relied on data procured by EPA for the 2017 NEI effort and may account for some of the differences when comparing the two. He noted that the TDOT data had recently been sent out for review and there will be opportunity to discuss it at the next statewide IAC call.
- Troy Ebbert asked if antique vehicle registrations are excluded
    - Mike Conger responded that he would need to check into this aspect as part of the overall TDOT 2023 data review and that he believed these had been previously excluded from the 2017 dataset which was used for the last conformity analysis. He asked if the TDOT staff on today's call had any information.
    - Chris McPhilamy and Mohammad Mollla responded that they did not have it on hand and it could be followed up on with Marshall Wilson at TDOT.
- Mike discussed the source type population briefly for each county in the study area noting some of the major differences between the 2018 data and new 2023 data and provided a list of summary observations:
    - There is an obvious difference in each county for allocations between passenger car and passenger truck that are probably reflective of the increase of purchase of pickups and SUVs.
    - May need to further investigate the counties where vehicles per person changed significantly to determine if our 2018 numbers overstated the vehicle population or if instead the 2023 numbers may be too low.
    - Check on Transit Bus – Mike stated that he has wondered whether this category should include Demand-response provider vehicles or only fixed-route buses but he had resolved this already in separate discussions with Marc Corrigan and by reviewing the MOVES Technical Guidance which clearly states that it is covering fixed route services only.

- Mohammad Molla asked why the charts provided in the slides were comparisons between 2018 and 2023 instead of showing year 2020 which was also an NEI year that TDOT developed inputs for?
    - Mike Conger responded that 2018 was used since it was the base year for our previous regional emissions analysis efforts and checking for consistency with those but this is a good point and we can include the 2020 numbers as another method of comparison to check against. Mike also mentioned that we were hoping at some point to receive new data from EPA which has procured another national dataset to support the 2023 NEI effort however it is unclear as to when that will become available.

- Following up on the antique vehicle issue, Mohammad Molla mentioned that 30+ year vehicles are lumped in at 30 years
    - Richard Wong indicated the range will extend to 40 years with MOVES5
- Source Type Population – Growth Projection Methods
    - Mike discussed the methods proposed for projecting each source type separately and that these were agreed upon during the previous conformity analysis and proposed to be carried forward for this one.
- Source Type Age Distribution
    - Plan is to use consistent data source (if pop. From local source, then use local data for age, from default data then use MOVES default
    - Mike raised a question for the TDOT staff about which time of year that TDOR data pull occurred since this can effect the year 0 vehicle percentage and that a mid-year data extraction would generally be preferred to limit any skew in this.
        - Marc Corrigan indicated that it was indeed in the July timeframe when this data was extracted from TDOR.

- Age Distribution – Mike noted that this is developed for base year (2023) and held constant for all years rather than trying to make assumptions about the change in vehicle purchasing patterns over time. He provided an example chart showing how the vehicle percentages in the previous data set have shifted as expected in the new data.

- Vehicle Type VMT
    - HPMSVtypeYear (total VMT) - varies with expected growth projections
    - MonthVMTFraction – these are provided by TDOT analysis of statewide vehicle count data and seasonal variation.
    - Day VMT Fraction – same as month fraction
    - Hour VMT Fraction – these are post processed from the travel demand model using pattern matching that is based on actual count data.
- Average Speed Distribution –
    - Derived from Travel Demand Model Post-Processor tool and varies over time based on travel demand and resulting congestion + impacts from project implementation.
- Road Type Distribution –
    - Derived from Travel Demand Model Post-Processor tool which automatically tabulates the aggregate VMT by road type
- Fuels – reliance on TDEC staff for inputs
    - Mike provided information regarding the new methods for developing the AVFT fractions in MOVES4 which were changed to better account for projected EV population growth and covered highlights from TDEC's documentation which will be shared along with these minutes for IAC review.
    - Marc Corrigan verified Mike Conger's summary and impacts of EV population change
    - Marc also briefly covered the fuel data information in the slides noting that this has been the established practice for how to account for the differences between our fuel composition and the EPA defaults.

- Mike provided a few example charts illustrating the AVFT inputs showing how the vehicle fueling types are projected to change in the future. Mike noted that the transit AVFT chart looked a bit unusual with the large ups and downs over the recent past bouncing between gasoline and diesel. Marc Corrigan explained that it was the nature of the transit vehicle purchasing patterns where some years only diesel vehicles are purchased and others only gasoline vehicles. He noted how the projections pivot from that starting point and apply the EPA default patterns moving forward.
- Mohammad Molla inquired about the EV projections for Passenger Vehicles – Mark Corrigan confirmed that the shown chart is the projected fleet composition

3) Other Business/Next Steps

Mike Conger reviewed the upcoming conformity timeline briefly

There being no other business the meeting was adjourned.

C.2.4 MEETING MINUTES FOR IAC CONFERENCE CALL ON 1/17/2025

Knoxville Air Quality Interagency Consultation Conference Call
Meeting Minutes for 01/17/25

1) Roll Call

Call Participants:

Knoxville TPO:
Mike Conger
Craig Luebke

Lakeway MTPO:
Tina Whitaker

EPA:
Dianna Myers
Simone Jarvis
Sunday Gotvald
Sarah LaRocca

FHWA:
Melanie Murphy
Zachary Coleman

FTA:

National Park Service:
Jim Renfro

Tennessee Department of Transportation:
Mohammad Molla
Troy Ebbert

Tennessee Department of Environment & Conservation:
Marc Corrigan

Knox County Air Quality Management:
Justin Mayer

Discussion Items:

2) Review of Process and Planning Assumptions for Conformity Determination and Regional Emissions Analysis to support the TPO Mobility Plan 2050

a. Discuss any updates or changes to assumptions or data since the previous IAC Call
b. M. Conger provided a brief review of the conformity process requirements applicable to the Knoxville Region as a refresher from items discussed on previous IAC calls. He noted that the MVEBs we have been assuming would be in effect and asked for confirmation from EPA that the proposed new Ozone 2nd 10-year Maintenance Plan budgets were still in the review process and not yet effective/available.
    - Simone Jarvis confirmed that the updated Ozone MVEBs are not yet available
c. M. Conger reviewed the various types and proposed sources for the MOVES Inputs that were previously discussed and focused on a few more notable ones such as:
    - Source Type Population – review of local vs. national default data source and that we were leveraging the recent work done by TDOT staff for the 2023 NEI effort to be our baseline.
    - M. Conger also reviewed the Source Type Population by each County in the study area and noting comparisons with previous years' values for consistency
        - M. Conger discussed the proposed process that will be done to grow the Source Type populations for future years.
        - M. Molla inquired about the trend of source type shift from cars to passenger truck/SUV type, M. Conger responded that this is what the TN Department of Revenue data is showing us as compiled by TDOT staff and his personal observation is that there are indeed a lot of pickup trucks and SUVs on the road, and probably more so in the more rural counties of our study area.

- Fuels – M. Conger stated that the TPO relies heavily on TDEC staff to put together these inputs and we have previously discussed on IAC calls but wanted to give Marc Corrigan a chance to review his process in developing the inputs and particularly the AVFT aspect which is somewhat new for MOVES 4.
    - Marc Corrigan noted that locally developed AVFT data is preferable and he briefly reviewed the information and charts that were included in the meeting presentation where the transit bus chart can look extra variable due to limited data inputs.

3) Review and Discuss Draft Mobility Plan 2050 Project List for Exempt and Regional Significance Status

a. M. Conger provided a brief summary of the draft project list, noting that the large majority are rollover from previous plan (118 rollover projects)

b. Conformity Status Overview
- Horizon Years: 2026, 2035, 2040, 2050
- Initial fiscal constraint demonstration and "Illustrative" project status were made by TPO staff and is being reviewed by the jurisdictions
- M. Conger provided a brief summary of the MTP and TIP ID numbering and conformity analysis years as well as noting project change, new project, and exempt/non-exempt flagging in the provided project list.
- The definition of "Regional Significance" was briefly discussed.
- M. Corrigan inquired to confirm that Illustrative projects are not included in the modeling. M. Conger confirmed that this is the case.
- M. Murphy inquired about two projects that were highlighted even though they are listed as Exempt that may not need to be reviewed. M. Conger concurred that this appears correct and he would fix that highlighting issue in the next version.
- M. Conger pointed out that some TIP projects flagged in red on the project list may need to be removed from the TIP, as they are not included in the current TDOT 10-Year Plan
- M. Conger pointed out the segmentation of the existing Chapman Highway widening project.
- M. Conger noted a similar segmentation of existing I-75 widening project
- C. Luebke noted about grouping projects continuation into additional horizon periods

c. M. Conger noted that the IAC members should feel free Contact TPO Staff about any project questions and that he will send the link to the online interactive map which should help facilitate the review.

d. He also noted that a detailed Crosswalk between existing FY 23-26 TIP and MTP 2050 would be developed and shared with the group since the TIP and MTP must always be consistent with one another.

e. He mentioned that Kickoff of New FY 26-29 TIP – just underway

f. Finally, he mentioned that there are some unknowns related to TDOT 10-Year Plan and ongoing study of the I-40/75 corridor that may introduce project amendments down the road.

4) Other Business/Next Steps

a. Conformity Timeline review
   - M. Conger reviewed the upcoming timeline and noted when the draft is expected for IAC review which would need to start no later than 2/21/25. He also noted that there is already another IAC call scheduled for the Knoxville area by TDEC who will be discussing the 2nd 10-Year Maintenance Plan for PM2.5 and we will piggyback on that call for updates and discussion items for this conformity process as time allows.

C.2.5 MEETING MINUTES FOR IAC CONFERENCE CALL ON 2/10/2025

Knoxville Air Quality Interagency Consultation Conference Call
Meeting Minutes for 2/10/2025

Roll Call

Knoxville TPO:

Mike Conger

Craig Luebke

Lakeway MTPO:

Tina Whitaker

EPA:

Dianna Myers

Simone Jarvis

Kathleen Musmanno

Sunday Gotvald

Josue Ortiz Borrero

FHWA:

Zachary Coleman

Melanie Murphy

Sean Santalla

FTA:

Andres Ramirez

Tennessee Department of Transportation:

Bob Hazlett

Troy Ebbert

Degee Roberts

Tennessee Department of Environment & Conservation:

Marc Corrigan

Hannah Nodell

Mark A. Reynolds

Michelle Oakes

Knox County Air Quality Management:

Rebecca Larocque

Justin Mayer

Introduction

Marc Corrigan started the discussion by introducing the Knoxville, TN maintenance area. He discussed which counties were included in the maintenance area and went on to discuss the historic nonattainment and redesignation to attainment in 2017. He wrapped up by mentioning that the 2nd 10-year maintenance plan is due to EPA September 2025.

Limited Maintenance Plan (LMP) Discussion

Hannah Nodell began the discussion of the LMP planning assumptions by going over historical PM2.5 monitoring data. She noted the spike seen in the 2016-2017 timeframe was attributable to the wildfires in the Gatlinburg area. Hannah also noted the most recent, but not complete, preliminary 2024 design values.

Hannah outlined some of the key metrics that allow an area to pursue an LMP, including there being no increase in measured PM2.5 and monitored concentrations of

PM2.5 have been stable. In the development of the LMP, TDEC APC and the Knox County AQMD will follow EPA's 2022 LMP Guidance for PM areas.

One of the benefits to pursuing an LMP is that future-year emissions projections are not required. However, an attainment year emissions inventory must be included. Also, the LMP must commit to continuing to monitor for PM2.5, contain contingency measures, as well as a number of other requirements.

Hannah continued in discussing a criterion for potential LMP areas in EPA's guidance document that outlines a statistical test of the design value to help provide for confidence in the area continuing to maintain the NAAQS. The results of the test indicate the Knoxville Area easily passes the test with a margin of safety.

Hannah also discussed some of the basics to the emissions inventory development that are proposed. She proposed the use the 2020 NEI as the emissions inventory for all necessary pollutants and precursors for the Knoxville Area. This inventory will cover all anthropogenic source sectors. Hannah indicated the inventory could also include data from EPA's 2022 EMP (Emissions Modeling Platform) if needed.

Marc continued the discussion by proposing the exclusion of a MVEB in this LMP. He outlined that PM2.5 air quality has improved in the maintenance area despite VMT growth since 2008. Marc then went over the VMT projections from the TPO's most recent CDR. Marc then brought it back around to the PM2.5 emissions projections (tons per day) from the Knoxville TPO's CDR – including projections for 2026, 2028 (interpolated), 2035, and 2045 demonstrate lower emissions over time. Marc noted there was a slight increase in the 2045 analysis year, but this amount remains below more recent years. Marc wrapped up the discussion by discussing the NOx emissions projections from the most recent Knoxville TPO CDR – similarly, this included a future NOx emissions projections. These projections indicate emissions of onroad mobile sources will remain below near-term projections.

Questions/Comments Received

Sean Santalla asked if an LMP does not includes emissions budgets, what would that look like for the transportation conformity determination process? Marc responded that the area would continue demonstrating conformity as set out, through 2028. EPA confirmed that a regional emissions analysis will still need to be developed to demonstrate that area will maintain 2006 NAAQS standard through the 2028 maintenance period. After 2028, a reginal emissions analysis will not be required. Dianna mentioned that Birmingham, AL completed an LMP on PM2.5.

Simone reminded the group that hot spot analysis will still be required throughout the maintenance period, even with an LMP.

TPO MTP Update

Mike discussed the draft Mobility Plan 2050 project list the IAC recently reviewed. He noted that most of the projects are rolled over from the current MTP. One project is expected to change from exempt to non-exempt after a local jurisdiction decided a multilane facility was warranted. A reconciled list is forthcoming that will denote all of the changes that have occurred since the last IAC call as the TPO staff has continued to meet with its jurisdictions to finalize the fiscally constrained project list.

Mike also briefly discussed that the TPO would be amending its current FY 2023-2026 TIP to ensure consistency with the new MTP. Additionally, he noted that this is the year that all MPOs in the state update their TIP's and theTPO has a call for projects out right now for that update which will be the FY 2026-2029 TIP. He mentioned that it is hoped that the projects for that new TIP will be accounted for in the new MTP such that the TPO might be able to conduct a simple short conformity report to demonstrate conformity for the new TIP but we will have to wait and see. Further information on the TIP development will be provided to the TIP as we move forward towards projected adoption in the fall of this year.

Mike brought up a recent request for a statewide TIP amendment by TDOT for a project in the so-called orphan area of Sevier County that is subject to the modified conformity process under the 1997 Ozone Standard. He noted that Bob Hayzlett from TDOT Programming was on the call to get guidance on what was needed to address conformity in order to be able to add this project to the STIP for funding of Preliminary Engineering. The project involves a new exit on I-40 that would be called exit 408 and serve the high tourist traffic areas of that region. There was discussion on how to amend this project quickly and add it to the STIP. It was not decided if the project should be pursued as an amendment to the current STIP or wait until the new MTP is adopted in the April/May timeframe. The conformity process is very unique and we don't have many past examples to go by but Dianna mentioned she would send out a previous project she is remembering in case it proved as a useful guide. Mike noted that he would also try to find out more specific design details, particularly for the proposed new connector road to serve the interchange from SR-139 and whether it was to be 2 or 4-lanes so that it could be modeled appropriately.

One of the other projects Mike was hoping to discuss today was a proposed section of the Foothills Parkway. He briefly discussed the proposal, which is to extend and build a new section of the Foothills Parkway in part of Sevier County and also within the orphan area subject to conformity for the 1997 Ozone Standard. Jim Renfro from NPS was not on the call today, so that discussion may need to be continued later.

Other Business/Discussion

Mike mentioned he and Marc are updating the IAC distribution list. Please let us know of any additions or removals.

Mike asked about the PM2.5 designation recommendations process. Marc responded that TDEC has submitted their recommendations to EPA recommending that all of Tennessee as attainment after consideration of the exceptional event petitions provided to EPA. EPA mentioned that the "120 day letter" would be sent to states on or around October 9th which would initiate the final discussion between EPA and the states on potential nonattainment areas.

C.2.6 MEETING MINUTES FOR IAC CONFERENCE CALL ON 3/5/2025

Knoxville Air Quality Interagency Consultation Conference Call
Meeting Minutes for 3/5/25

1) Roll Call

Call Participants:

Knoxville TPO:
Mike Conger
Craig Luebke

Lakeway MTPO:
Tina Whitaker

EPA:
Dianna Myers
Simone Jarvis
Sunday Gotvald

FHWA:
Zachary Coleman
Sean Santalla
Melanie Murphy

FTA:

National Park Service:
Jim Renfro

Tennessee Department of Transportation:
Degee Roberts

Robert Hayzlett

Tennessee Department of Environment & Conservation:
Marc Corrigan

Knox County Air Quality Management:
Justin Mayer
Rebecca Larocque

Discussion Items:

2) Review of draft Conformity Determination Report to support the TPO Mobility Plan 2050

a. Mike Conger provided an overview of the Conformity Determination Report document with a brief summary of each chapter and major aspects. He noted that the TPO staff was able to demonstrate conformity for the Mobility Plan based on the results of the emissions analyses for all of the pollutants that we are subject to and included tables comparing the projected emissions by analysis year and pollutant versus the allowable Motor Vehicle Emissions Budget.

b. Mike mentioned that the results in fact showed a much lower amount of NOx emissions than in past regional emissions analyses which must be attributable to the MOVES4 model versus previous efforts that used MOVES2014 and MOVES3. He asked the group if others had noticed a similar reduction if they had used MOVES4 for other studies.
  - Sunday Gotvald from EPA replied that what Mike described was consistent with what EPA had reported as being expected from the changes to MOVES4.
  - Marc Corrigan from TDEC also noted that he recalled hearing that in fact MOVES4 might generate higher emissions than MOVES3 in the very near term but does have much lower emissions in future years which make the difference seem even greater.

- Mike asked the group if there were any initial questions or comments at this stage of the IAC review process.
  - Marc inquired about the mention that Mike made about finalizing TIP amendments to go along with the adoption of the Mobility Plan and whether that would generate the need to update the travel demand model to reflect those changes and subsequently necessitate updates to the MOVES input files. Mike responded that these TIP amendments were already accounted for in the modeling for conformity and that this was to just bring the current TIP into alignment with the Mobility Plan once it is adopted and in effect.
  - Simone Jarvis from EPA made a comment not directly related to the CDR review but wanted to note that with MOVES5 there could be even higher emissions in the near term years such that some areas in the country were having issues meeting budgets in those years so she encouraged the TPO and TDEC to start testing with it to see what impacts its use might have in Knoxville region. She noted that with the grace period for its required use not ending until 12/1/2026 that there was still a lot of time to do this. She

also acknowledged that we are in a time of uncertainty related to certain vehicle standards in response to a question from Marc Corrigan about that aspect.

- Degee Roberts from TDOT had a follow-up question about whether consideration had been given for transitioning to MOVES5 for this effort. Mike replied that since we had already started down the road with using MOVES4 and we are well within its grace period it was decided to not transition to MOVES5 for this analysis.
- Robert Hayzlett from TDOT provided an update on the Sevier County project that was discussed on the previous IAC call where it was discussed for a possible STIP amendment and how that needed to be handled from a conformity standpoint. He noted that he still did not have the final details on the project and in particular for the proposed connector road which will need to be added to the functional system. It was decided that at this point we should hold off on any type of STIP amendment until further details can be pinned down and also wait until the new Mobility Plan 2050 is approved which accounts for this project in the regional project list.
- Degee asked about whether there were any unresolved IAC comments from the process documented in Appendix C of the CDR. Mike replied that at this time the information in Appendix C just documents the IAC meetings held so far and any comments that are received on the draft CDR would be added as they come in. Mike also noted that he had received a few questions so far from Sunday Gotvald who had been reviewing al of the MOVES information, she confirmed that Mike had addressed all her questions at this point.

3) Other Business/Next Steps

- Mike wrapped up the meeting by noting the timelines for the IAC review and subsequent Public review periods. He also mentioned that he would be re-running the MOVES model with a corrected version of the Day VMT Fractions file which he had used an older one for in the first run.
  - Degee Roberts asked when the draft resolutions that were noted as being provided later in the CDR would be available and Mike replied that he would be adding those in the next version that went to the IAC group as well as the Public Review version. He also noted that he was considering taking the resolution for LAMTPO's endorsement of the conformity analysis to their April meeting.
- There was brief discussion regarding both the ongoing process by TDEC to develop a 2nd 10-year Maintenance Plan for PM2.5 as well as a special study being done by the NPS that Jim Renfro gave an overview of related to pollution speciation.
- There being no further business the meeting was concluded.

C.3 PLANNING ASSUMPTIONS FOR IAC REVIEW

Knoxville TPO 2025 Long Range Transportation Plan Update
(Mobility Plan 2050)
Air Quality Conformity Process Overview
and Latest Planning Assumptions

For IAC Discussion: November 21, 2024

I. Purpose

The intent of this document is to provide the Knoxville-Area Interagency Consultation (IAC) group with background on the proposed process that the Knoxville Regional TPO is planning to conduct to determine air quality conformity for the update of its Long Range Transportation Plan (LRTP). This document is provided for discussion purposes during each IAC conference call and updated as appropriate in order to compile a final documentation of agreed-upon assumptions for model inputs and other planning factors.

II. Plan Update Schedule

A conformity determination is required for each major update to the LRTP and the federal conformity regulations require the LRTP to be updated at a minimum of every 4 years. The current LRTP, known as the Knoxville Regional Mobility Plan 2045 was adopted in April 2021 with a Conformity approval date of May 31, 2021. Therefore, the next LRTP conformity approval is due by **May 31, 2025**. A conformity process timeline has been developed showing the major milestones and potential IAC review stages.

III. Current Nonattainment/Maintenance Status

As of the current date (March 2024), the Knoxville Region is currently designated as a Maintenance Area for 3 separate NAAQS –

- 2008 8-hour Ozone Standard – Blount, Knox and part of Anderson counties

- 2006 Daily PM2.5 Standard – Anderson, Blount, Knox, Loudon and part of Roane counties
- 1997 8-hour Ozone Standard – Jefferson, Loudon, Sevier and parts of Anderson and Cocke counties. This standard had previously been revoked, but maintenance and conformity were found to still apply based on a court decision in a 2018 case known as "South Coast v. EPA". Since the maintenance area for the 1997 8-hour Ozone Standard is larger than and includes the entirety of the geographic area covered by the 2008 8-hour Ozone Standard, a conformity determination must only be done for the so-called "Orphan Area" that is outside of the 2008 8-hour Ozone Standard area. Additionally, EPA guidance has been provided that states a regional emissions analysis is not required to demonstrate conformity for the 1997 8-hour Ozone Standard and instead a condensed process of certain key elements such as documentation of IAC consultation and fiscal constraint is sufficient.

See Attachment A for maps showing the geographic coverage for each applicable NAAQS.

IV. Conformity of Mobility Plan 2050 Update

The TPO plans to conduct a full regional emissions analysis for the regular 4-year update cycle of the regional Long Range Transportation Plan (LRTP). The LRTP must go out a minimum of 20-years into the future and the TPO is proposing an ultimate horizon year of 2050 for this update and it is planned to be called the "Mobility Plan 2050". The current FY 2023 – 2026 Transportation Improvement Program (TIP) will be amended as necessary to ensure that any new projects or other changes affecting regionally significant projects are accounted for and remain consistent between the two plans. It is expected that the plan adoptions will occur in the March/April 2025 time frame. A timeline has been developed showing the primary IAC interactions and aspects of the Mobility Plan and conformity analysis that will be kept current throughout the process.

V. Current Motor Vehicle Emissions Budgets (MVEB)

Ozone:
An MVEB is available from the original Maintenance Plan approved for the 2008 8-Hour Ozone NAAQS. The Maintenance Plan contains the following MVEBs set for 2011 and 2026:

Table 1a: "Current" MVEB for 2008 Ozone Standard

	2011	**2026**
Pollutant	**(tons/day)**	
VOC	19.71	10.49
NOx	41.62	17.69

As of March 2024, TDEC is in the final stages of development of the 2nd 10-Year Maintenance Plan for the 2008 8-Hour Ozone Standard, which has proposed a new MVEB that would be set for the year 2035 and shown in the table below. The final Maintenance Plan has been sent to EPA with an official receipt date of 4/15/2024, which starts an 18 month clock for EPA to take an official action see update section below for further information. There will need to be IAC discussion regarding the use of the "current" or "proposed" MVEB in Mobility Plan 2050 conformity analysis which will largely depend on necessary timeframes that can be monitored as we move forward.

Update following 3/20/2024 IAC Discussion – it was determined that there would be no major benefit to pursuing an Adequacy Finding for the new 2035 MVEB developed for the 2nd 10-Year Maintenance Plan and it is also not likely that the full SIP approval would occur in the timeframe of this conformity determination. Therefore, the MVEB shown in Table 1a above will be the "controlling" one for this analysis but the new MVEB shown in Table 1b below is being provided for reference only.

Table 1b: "Proposed" MVEB for 2008 Ozone Standard

	2035
Pollutant	**(tons/day)**
VOC	7.22
NOx	16.74

PM2.5:

An MVEB is available from the Maintenance Plan approved for the 2006 Daily PM2.5 NAAQS. The Maintenance Plan contains the following MVEBs set for 2014 and 2028:

Table 2: MVEB for 2006 Daily PM2.5 Standard

	2014	**2028**
Pollutant	**(tons/day)**	
PM2.5	1.22	0.67
NOx	42.73	19.65

VI. Proposed Analysis Years

Analysis year requirements are described in 40 CFR 93.118 (Motor Vehicle Emissions Budget - MVEB) and 40 CFR 93.119 (Interim Emissions Tests). Since the timeframe covered by the LRTP

is from 2025-2050, and MVEBs are available for both Ozone and PM2.5, 40 CFR part 93.118 establishes the required analysis years and emissions tests. In general, the required analysis years include:

- Attainment Year for applicable pollutants – This will not apply as all attainment years are in the past.
- Last year of the timeframe of the conformity determination – This will be 2050.
- Years such that there are no more than 10 years between analysis years
- Consistency with motor vehicle emissions budget(s) must be demonstrated for each year where the applicable SIP specifically establishes an MVEB – This means 2026 (for "current" Ozone) or 2035 (for "proposed" Ozone) and 2028 (for PM2.5) must be assessed, but this can be achieved through linear interpolation between other analysis years.

Following are the proposed analysis years for the Mobility Plan 2050 conformity determination based on the above requirements:

Note: the below years are revised ones from the first version of this document based on the discussion from the 3/20/2024 IAC discussion.

- 2026 – First Analysis Year and year no greater than 10 years apart and year no later than 10 years beyond the model base year of 2022. Also meets requirement for assessing consistency with a motor vehicle emissions budget (2008 8-Hour Ozone Standard as referenced in Table 1a above) (both Ozone and PM2.5)
- 2028 – Last Year of the 2006 Daily PM2.5 Standard Maintenance Plan (interpolated and test only applicable to PM2.5, not Ozone)
- 2035 – Year no greater than 10 years apart (both Ozone and PM2.5)
- 2040 – Year no greater than 10 years apart (both Ozone and PM2.5)
- 2050 – Last Year of Transportation Plan (both Ozone and PM2.5)

VII. Emissions Tests

Emissions tests will be against the MVEBs shown above. For PM2.5 the 2014 MVEB would apply to the 2026 analysis year and the 2028 MVEB would apply to all others. For Ozone only the MVEBs established for the year 2026 in Table 1a will apply to all conformity analysis years if the new proposed MVEBs from the 2nd 10-Year Maintenance Plan do not become available as is being assumed.

VIII. Socioeconomic Data Planning Assumptions and Forecasts

The TPO staff reviewed two primary sources of population projection data – "2021 – 2070 Projections" from U.T. Center for Business & Economic Research (CBER) and "2023 Regional Projections" from Woods & Poole, Inc. (W&P). TPO staff recommended using the W&P source

for the 2050 Knoxville Regional Mobility Plan demographic forecasts as it is similar to CBER's forecast for population changes and it also provides projections for several other needed socioeconomic variables.

The use of W&P for the forecasts of socioeconomic variables was endorsed by the TPO Technical Committee and Executive Board on **April 9, 2024 and April 24, 2024** respectively.

Attachment B summarizes the population and employment growth in each county in the Knoxville Region that is subject to conformity.

IX. Travel Demand Forecasting Model Overview

Background:

The Knoxville Regional TPO maintains a 10-county travel demand forecasting model to support transportation planning activities including air quality conformity analyses. The current model is based on a special hybrid platform that blends elements of traditional trip-based (4-step) models with newer tour-based (activity) models. This hybrid model was first delivered to the TPO by the consulting firm Bernardin, Lochmueller and Associates (BLA) in 2009 and has undergone a couple of updates since that time. The first major update was completed in 2012 again by BLA and consisted primarily of validating to a 2010 base year and expanding the model geography to include all of the Lakeway Area MTPO planning area. The most recent update was completed by TPO staff with assistance from the consulting firm RSG in 2020 and consisted of updating to a base year of 2018 and other minor modifications to support development of the Mobility Plan 2045 that was adopted in April 2021.

The TPO staff has developed a new 2022 base year roadway network and associated 2022 socioeconomic base year data set for the Traffic Analysis Zones (TAZ). The year 2022 was chosen since it represents the latest available complete data set for important information such as Census socioeconomic characteristics from the 5-year American Community Survey (2018 – 2022 ACS) and the system-wide Vehicle Miles Travelled (VMT) data that is produced by TDOT at the county-level for the FHWA Highway Performance Management System (HPMS) submittal.

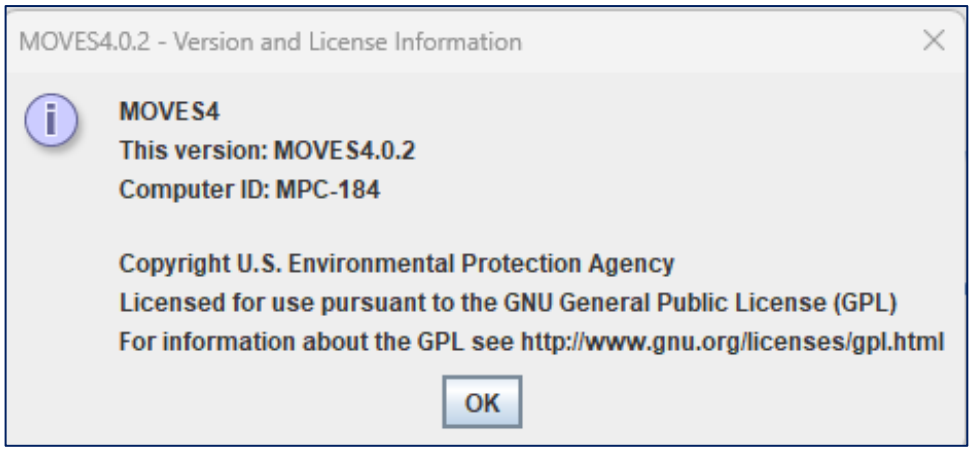
A consultant (Caliper Corporation) has completed a "minor" model update to bring it into the latest version of TransCAD software and to adjust/calibrate some parameters against 2022 "National Household Travel Survey" (NHTS) data for which TDOT acquired add-on samples statewide including the Knoxville Region. It is hoped that this data can shed some light on the post-Covid effects of increased working from home and adoption of newer technologies since the previous travel survey in 2008 which pre-dated smartphones, e-scooters and Uber/Lyft modes. A review and necessary tweaks to the custom MOVES activity inputs Post-Processor for the travel demand model that was developed for the last conformity analysis was also undertaken.

In terms of future model update activities, the TPO is participating in a 2-phase statewide effort to obtain updated household travel survey data and along with that will be conduting a visioning exercise to determine specific parameters of the next generation travel demand model. The IAC group will be engaged in that effort for information and input.

Additional documentation on the model development and validation will be provided to the IAC group as it becomes available.

X. Latest Emissions Model

The latest on-road emissions model from EPA as of this document's writing is known as MOVES4, version 4.0.1 with default database of "movesdb20240117"– see below for screenshot showing specific release and version information. This is the model that will be utilized to determine the total on-road emissions of the pollutants of concern related to Ozone and PM2.5 for each required analysis year.



Note, MOVES4 is a very recent release, first becoming available for download from EPA in mid-September 2023 and has a 2-year grace period before being required to be used for conformity. Since it appears to be very similar to MOVES3 though, it probably makes sense for the TPO to go ahead and begin using it now.

XI. MOVES4 Runspec Parameters

The MOVES model run is first set up based on a number of parameters to define the appropriate geographic scale and other aspects of the modeling domain to be utilized in the analysis, which is referred to as a "run specification" or runspec for short. Following is a list of the MOVES runspec panels and how they are proposed to be set up for the KRMP conformity analysis and based on appropriate technical guidance documentation from EPA:

1.) Scale:

- Both Pollutants – County level scale – Inventory mode

2.) Time Spans:

- Both Pollutants – Year (based on analysis years as ultimately selected, 2026, 2035, 2040 and 2050), by Hour, all hours
- Ozone – July weekday
- PM2.5 – All months, all days

3.) Geographic Bounds:

- 2008 Ozone – Anderson (partial), Blount and Knox counties
- PM2.5 – Anderson, Blount, Knox, Loudon and Roane (partial) counties
    - Note – the PM2.5 emissions will be first calculated as the total annual emissions and then that value will be divided by 365 to derive the daily PM2.5 emissions to compare against the MVEB which is for the 2006 Daily PM2.5 NAAQS.

4.) Onroad Vehicles:

- Both Pollutants – Gasoline, CNG, ethanol (E85), electricity and diesel fuels, all valid vehicle combinations

5.) Road Type:

- Both Pollutants – All road types

6.) Pollutants and Processes:

- Ozone – NOx and VOC and all other required supporting prerequisite pollutants
- PM2.5 – Primary PM2.5 (exhaust, brake and tire wear), NOx and all supporting prerequisite pollutants
- Note – unchecked the "Refueling Displacement Vapor Loss" and "Refueling Spillage Loss" to exclude refueling emissions that are instead included in the Area source emissions inventory.

7.) Output options:

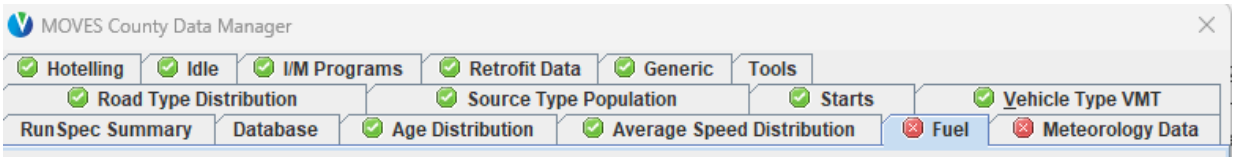
- Both Pollutants –
    - General Output tab: Units = grams, joules, miles; Activity: checked "Distance Traveled" and "Population"
    - Output Emissions Detail tab: checked "Road Type" and "Source Use Type"

XII. MOVES4 County Data Manager Input Data Sources and Assumptions

The "County Data Manager" portion of MOVES allows the user to input specific data for several required inputs that effect and are used to compute emissions. Locality-specific data is

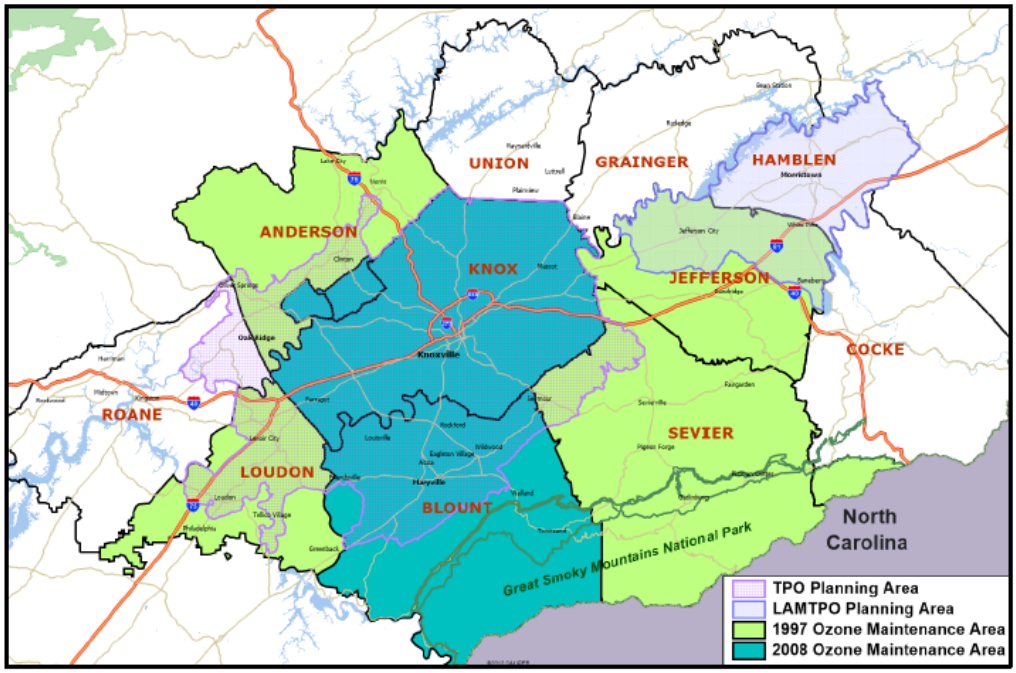
required for some inputs and is always desired if available rather than using national defaults. This document will only cover the general proposed sources for each input and more details for each of the specific inputs is provided in a separate document for IAC review called "MOVES Input Descriptions_for IAC".

Below is a screenshot showing the county data manager tabs in the MOVES software where the data is loaded for each input.

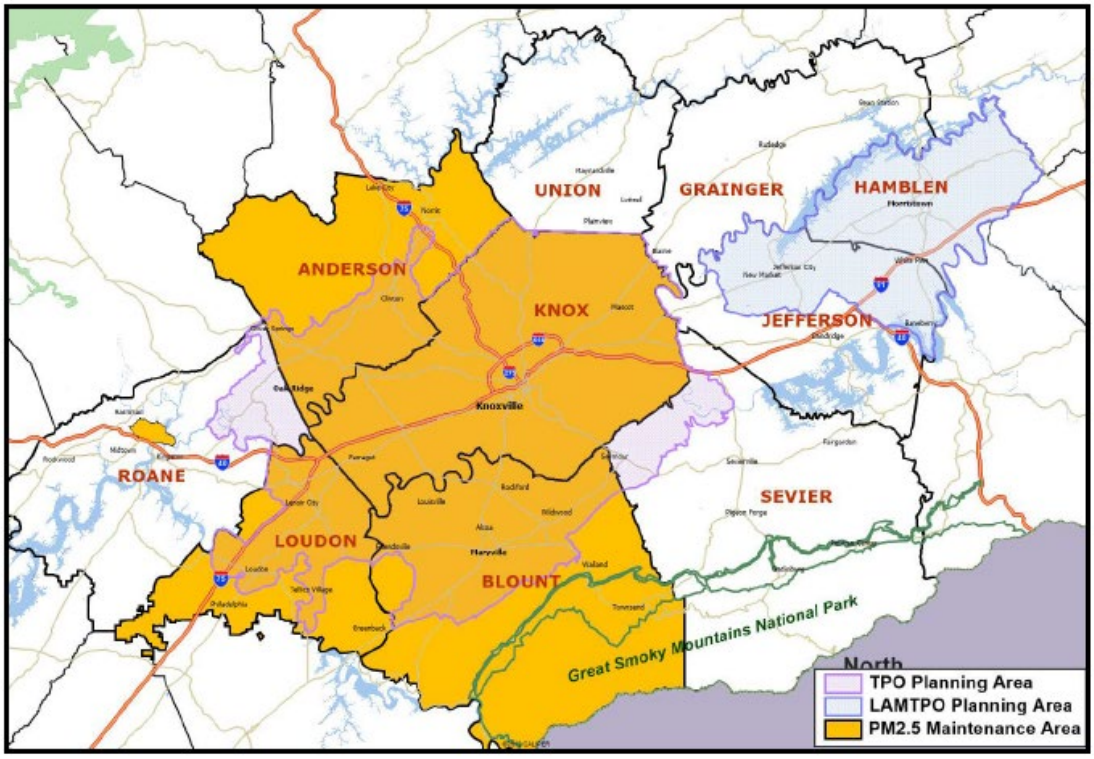


Attachment A – Maps of Maintenance Areas

1997 and 2008 Ozone Maintenance Areas



2006 Daily PM2.5 Maintenance Area



Attachment B – Population and Employment Growth Summary

I. County-Level Growth

The Knoxville Regional Travel Demand Model (KRTM) contains ten counties altogether and seven of these are subject to transportation conformity – Anderson, Blount, Jefferson, Knox, Loudon, Roane (partial) and Sevier. Significant growth in population and employment is expected, which in turn impacts the transportation system in terms of vehicle miles of travel and average speeds which are two of the major factors used to determine total mobile source emissions that are expected to be generated for the conformity analysis.

The following tables and charts depict the growth in population and employment by county.

A.) Population Growth:

	Population	Population	
COUNTY	**2022**	**2050**	**Change**
Anderson	78,913	84,591	5,678
Bount	139,958	175,416	35,458
Knox	494,574	592,702	98,128
Loudon	58,181	76,239	18,058
Roane	55,082	57,511	2,429
Sevier	98,789	134,155	35,366
TOTAL	**925,497**	**1,120,614**	**195,117**

B.) Employment Growth:

	Employment	Employment	
COUNTY	**2022**	**2050**	**Change**
Anderson	52,736	58,783	6,047
Bount	74,947	115,626	40,679
Knox	340,445	461,262	120,817
Loudon	25,739	34,240	8,501
Roane	26,937	31,642	4,705
Sevier	69,977	112,925	42,948
TOTAL	**590,781**	**814,478**	**223,697**

C.4 PARTIAL AREA EMISSIONS METHODOLOGY

I. Background:

The purpose of this document is to summarize the methodology used to account for the on-road mobile source emissions that are generated within the partial county areas subject to transportation conformity in the Knoxville Region. There are three separate partial counties as designated by EPA for various NAAQS as follows and shown in the maps at the end of this section:

- Anderson County – Partial area designated with 2008 8-Hr Ozone Standard consisting of the area surrounding the TVA Bull Run Fossil Plant and corresponding to 2000 Census Tracts 202 and 213.02. Size of area = 35.0 sq. miles, 2010 Population = 15,372.
- Cocke County – Partial area designated with 1997 8-Hr Ozone Standard consisting of the portion within the Great Smoky Mountains National Park boundary and corresponding to 2010 Census Tract 9801. Size of area = 26.5 sq. miles, 2010 Population = 4.
- Roane County – Partial area designated with 1997 and 2006 PM2.5 Annual & Daily Standards consisting of the area surrounding the TVA Kingston Fossil Plant and corresponding to 2000 Census Block Group 471450307002. Size of area = 5.8 sq. miles, 2010 Population = 711.

II. Specific Input Development for Partial Area Source Type Population:

A. Anderson County Partial Area:

In previous analyses for establishment of the Maintenance Plan and subsequent conformity determinations it was determined that an acceptable assumption would be to base the source type (vehicle) population of the Anderson County partial area on the percent of people residing within that portion of the county. A value of 21% was derived based on the latest (2010) decennial census which has the most reliable estimates of population at both the county and census tract levels. The 2010 total county population was 75,129 and the population of the partial area (census tracts 202.01, 202.02 and 213.02) was 15,553.

B. Roane County Partial Area:

The derivation of inputs for the Roane County Partial Area is essentially identical to that of the Anderson County Partial Area. The Roane County area is much smaller in terms of population however and the source type population is therefore much less. The derivation of the source type population was done using the travel demand model estimation of number of vehicles within the partial area compared with the whole county as being slightly more conservative than the percentage of people population at 1.3%. The table below is copied from the PM2.5 Maintenance Plan and shows the various metrics looked at for the partial area source type population.

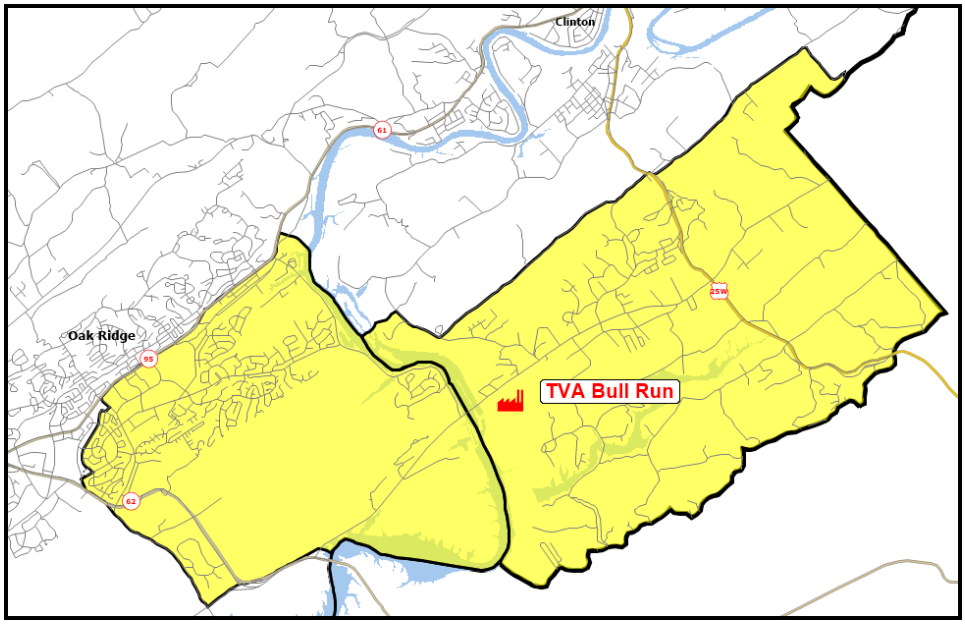
Roane County Nonattainment Area Statistics for 2010: Percentages of Entire County[a]	
Census People Population	1.1%
Census Number of Households	1.1%
Census Household Vehicles[b]	1.0%
Travel Demand Model Predicted Vehicles	1.3%

[a] Census Block Group 471450307002

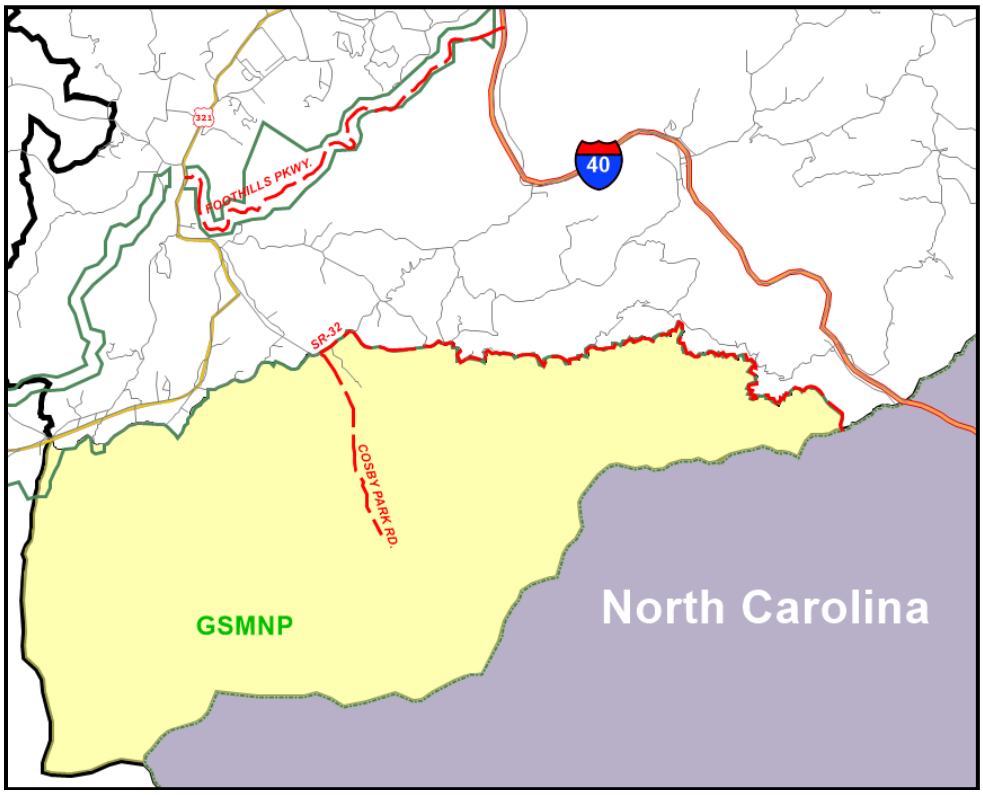
[b] 2010 Vehicle ownership is from 2010-2014 ACS 5-year estimate (margin of error +/- 140 for partial area)

C. Cocke County Partial Area: Since a regional emissions analysis is not required no further input development is needed.

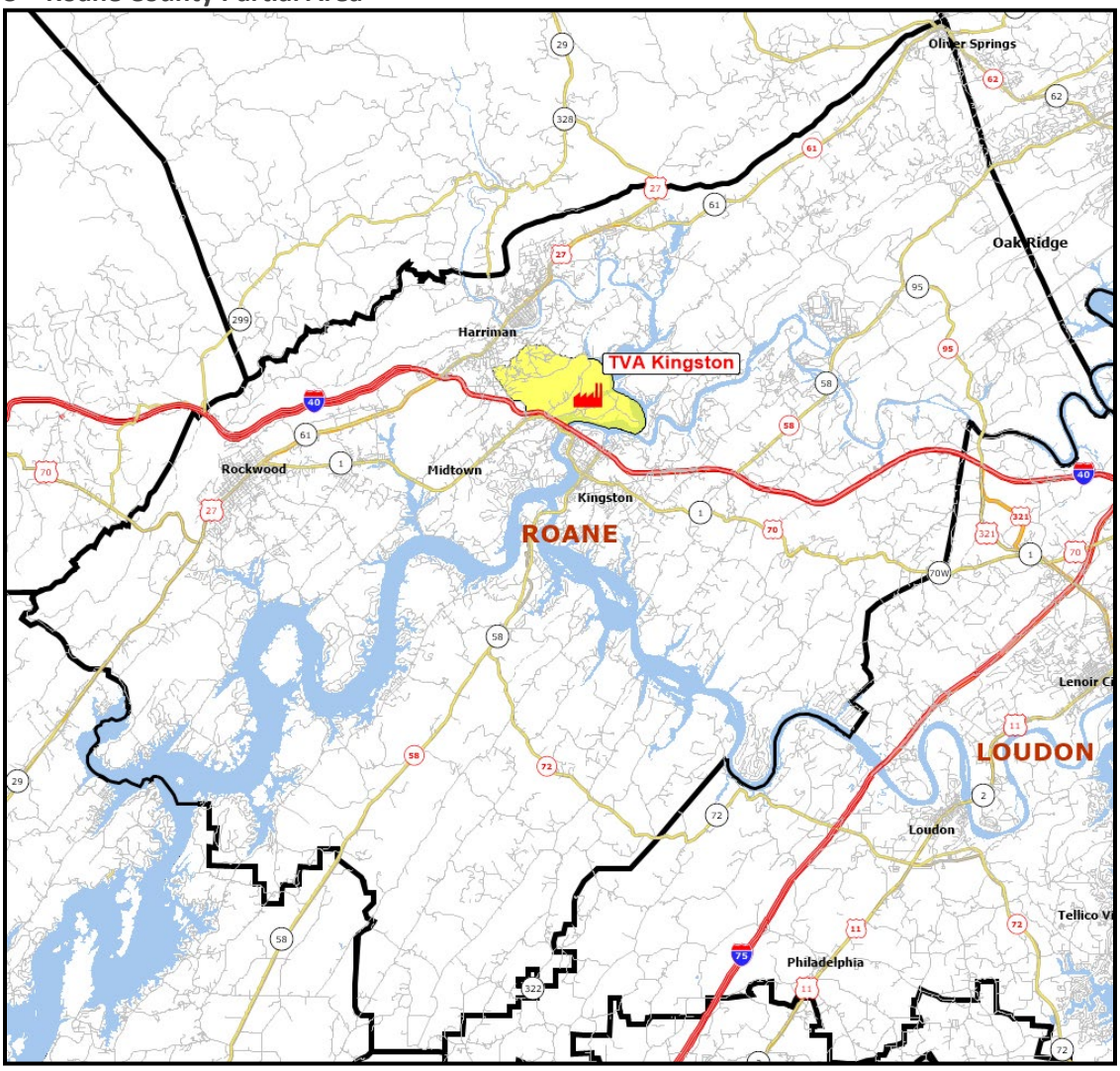
Map 1 – Anderson County Partial Area

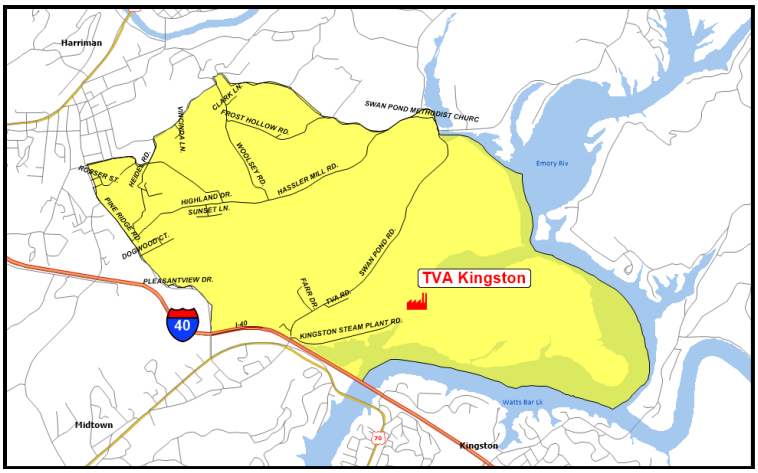


Map 2 – Cocke County Partial Area



Map 3 – Roane County Partial Area





C.5 RESPONSES TO COMMENTS FROM IAC PARTICIPANTS

Comments from EPA:

- I noticed in the file "o3_mp_26_47001_in" where the base year is 2026, the sourcetypeagedistribution data seems to be for base year 2035. Was this a mistake or could you clarify why 2035 was used? I also noticed in the year tab that both 2026 and 2035 are listed as "base year"

Response: This apparently occurred when doing a batch import of County Data Manager inputs where the importer file for the 2035 scenario accidentally overwrote the 2026 input database for Anderson County (47001). This appears to have been done after a MOVES run such that the outputs were for the correct 2026 scenario inputs however the TPO staff developed a new entire MOVES run and now this database "error" has been corrected in the updated version of the analysis.

Comments from TDEC:

- When looking at the emissions results, I found that my results in one of the runs I conducted were slightly different. For the ozone run, 2035, Knox County, for example, the NOx in table A-2 was 3.22. What I ended up with was 3.269. Running a query against your output db, I get the same. Looking at the Excel output table you provided, I get 3.269. Maybe table A-2 was not updated when you conducted the new runs? VOCs were a bit different, too.

Response: These tables showing individual county emission breakdowns apparently did not get updated between the first and second iterations of MOVES runs. The next draft will reflect the updated values.

- In looking over the summary spreadsheet for PM2.5 for 2050, I noticed that there appears to be different results between the pivot table and what is below it.

Response: These pivot tables were left over and did not get updated between the first and second iterations of MOVES runs.

- In the IAC list in the CDR, it has my old address and phone number. I have a new address and phone number included in my signature, below.

Response: Corrected

Appendix D – Mobility Plan 2050 project list with exempt and regional significance status

D.1 BACKGROUND

The purpose of this list is to specifically document the current projected horizon year for each project and to identify each project's air quality conformity exempt/non-exempt status as well as whether it has been determined to be regionally significant. It should be noted that the Mobility Plan 2050 identifies separate interim horizon years of 2030 and 2045 that were used to better define a project's priority within the required 10 year intervals for conformity purposes, however these are still consistent with the conformity project list.

D.2 LIST OF MOBILITY PLAN PROJECTS BY COUNTY AND HORIZON YEAR

The following project lists (Tables D-1 and D-2) represent the final Mobility Plan 2050 and Regional 1997 Ozone "Orphan Area" projects respectively that are being covered by this regional emissions analysis and conformity determination. The last two columns in this table are important for transportation conformity as they indicate (1) whether a project has been determined to be Exempt or Non-Exempt with respect to the requirement to demonstrate conformity, i.e. generally any project affecting roadway capacity will be considered "Non-exempt" and (2) whether a project is Regionally Significant or not. The regional significance of a project can affect whether a regional emissions analysis may be required for the project or a project change as non-regionally significant projects may be able to rely on a previous regional emissions analysis to determine conformity.

The project list is sorted by county and conformity analysis year as follows:

Counties:

- Anderson
- Blount
- Knox
- Loudon
- Sevier
- Transit Capital Projects
- TPO Regional Projects
- Regional Orphan Area Projects (Table D-2)

Conformity Analysis Years:

- 2026
- 2035
- 2040
- 2050

Table D-1 – Projects from Knoxville TPO 2050 Mobility Plan Subject to Conformity

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
Anderson County Projects												
Edgemoor Road (SR-170) - West Segment	09-101a	23-2017-037b	Oak Ridge/TDOT	Oak Ridge Hwy (SR-62)	Melton Lake Dr	2.6	Widen from 2-lanes to 4-lanes with median and/or center turn lane. Also includes bicycle/pedestrian facilities	$97,200,000	2035	Non-Exempt	N/A	Regionally Significant
Edgemoor Road (SR-170) - East Segment	09-101b	23-2017-037a	Anderson County/TDOT	Melton Lake Dr	Clinton Hwy (US-25W/SR9)	3.6	Widen from 2-lanes to 4-lanes with median and/or center turn lane. Also includes bicycle/pedestrian facilities and a new bridge over the Clinch River.	$250,600,000	2035	Non-Exempt	N/A	Regionally Significant
Emory Valley Road at Melton Lake Drive Roundabout	13-101		Oak Ridge	Intersection		0	Construct roundabout	$1,136,507	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Oak Ridge Rails to Trails	13-830	23-2023-305	Oak Ridge	Melton Lake Rd/Greenway	Scarboro Rd	4.5	Rails to Trails project on abandoned rails from Elza Gate Park at the Oak Ridge Turnpike to the Y-12 National Security Complex on Scarboro Road, and along Belgrade Road, Warehouse Road, Fairbanks Road, and Lafayette Drive.	$2,900,000	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Oak Ridge Signal Timing Optimization Program: Phase 3	19-100	23-2017-064	Oak Ridge	Various		3.44	Continues implementation of City's Advanced Traffic Management Systems (ATMS) which are a component of Intelligent Transportation Systems (ITS) that integrate various technologies specifically related to the traffic signal system to improve overall operations	$3,430,417	2035	Exempt	93.126 (Other)	N/A - Exempt
West End Corridor Intersection Improvements	21-101		Oak Ridge	Renovare Boulevard	Broadberry Avenue at Gallaher Road (SR 58)	N/A	Intersection improvements along Oak Ridge Turnpike (SR-95/SR-58) at Renovare Blvd, Novus Dr, Heritage Center Blvd, and Broadberry Ave at Gallaher Rd	$2,321,771	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Gibbs Ferry Park	23-801	23-2023-305	Anderson County	Gibbs Ferry Park			Gibbs Ferry Park Improvements and Trailhead	$2,061,400	2035	Exempt	93.126 (Other)	N/A - Exempt
Norwood Tri-County Blvd. (SR-61/SR-62) Pedestrian Mobility & Safety Project	23-802	23-2023-305	Anderson County	Midway Dr	Gail Lane		Construct sidewalk along E. Tri-County Blvd (SR-61/SR-62) from Midway Drive to Gail Lane	$889,245	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Aspire Park Support Project Greenway Connection	24-800		Clinton	From near Carden Farm Drive	near Yarnell Road	0.8	Construct Shared use path with grass strip behind curb and gutter	$9,263,821	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Blount County Projects												
Old Knoxville Hwy (SR-33) Roundabout	09-212		Blount County/TDOT	Intersection of SR-33 and Old Knoxville Pike		0	Construct a Roundabout at the Intersection of East Broadway and Old Knoxville Pike at the Eagleton Ballfield	$3,250,000	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
W Broadway Ave (SR-33/US-411) Improvements	09-242	23-2020-006	Maryville	S Cedar St	US 321	0.5	Construct additional westbound left turn lane at intersection with Lamar Alexander Pkwy and convert continuous center turn lane to additional westbound through lane along W Broadway Avenue. Project includes construction of new shared use path and other bicycle/pedestrian enhancements	$6,573,000	2035	Non-Exempt	N/A	Regionally Significant
Relocated Alcoa Hwy (SR-115/US-129) - Stage 2	09-257		Alcoa/TDOT	Proposed Interchange at Tyson Blvd	Existing SR-115 at South Singleton Station Road	4.9	Construct new 4-lane divided highway with auxiliary lanes and new interchanges at McGhee Tyson Airport access, Wright Rd, Pellissippi Pkwy (SR-162) and Singleton Station Rd. Stage construction including grade, drain, base, pave, signal lighting, ITS, greenway, retaining wall, noise walls and bridges. Project to be constructed in two stages: Stage 1 was let to construction in August 2023. Stage 2 completes tie-ins at existing SR-115 at Tyson Blvd and proposed interchange at Singleton Station Road as well as all remaining work.	$123,400,000	2035	Non-Exempt	N/A	Regionally Significant
Foothills Mall Drive Extension Phase 2	10-260	23-2020-005	Maryville	Foch Street	McCammon Ave	0.7	Construct new 2-lane road with turn lanes where needed from Foch St. to McCammon Ave., at Celtic Rd. and Reconstruct McCammon Ave. to an improved 2-lane roadway with curb & gutter to tie in with previous improvements near the Bessemer St. intersection. Project includes a multi-use path on one side throughout.	$6,190,000	2035	Non-Exempt	N/A	Not Regionally Significant
Harvest Lane Extension	13-208		Alcoa	Existing Harvest Ln terminus	Louisville Rd (SR-334)	0.2	Construct new 2-lane road with sidewalks	$2,197,013	2035	Non-Exempt	N/A	Not Regionally Significant
North Park Blvd & Airbase Rd Safety Improvements	13-210		Alcoa	Intersection		0.3	Realign North Park Boulevard to Airbase Road	$9,069,393	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Old Lowes Ferry Rd at Louisville Rd (SR-333) Intersection Improvements	13-214		Blount County	Intersection		0	Realign intersection and add turn lanes	$733,609	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Louisville Rd (SR-333/SR-334) Reconstruction - Phase 1	13-215		Blount County/TDOT	Louisville Loop Rd	Topside Rd	1.2	Reconstruct 2-lane roadway	$15,000,000	2035	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt

Table D-1 – Projects from Knoxville TPO 2050 Mobility Plan Subject to Conformity (continued)

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
Middlesettlements Rd at Miser Station Rd Intersection Improvements	13-218		Blount County	Intersection		0	Realign intersection and add turn lanes	$800,000	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Maryville to Townsend Greenway - Phase 1 (Brown Creek)	13-833	23-2023-305	Maryville	Harper Ave Trailhead	US 321	1.2	Construct a new shared use path between the existing Maryville/Alcoa Greenway at Aluminum Avenue to Lamar Alexander Pkwy along Brown Creek	$3,920,000	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Alcoa Hwy (SR-115/US-129) ITS Expansion - Ph 2	18-200b		Alcoa/TDOT	Topside Rd	Cherokee Trail Interchange	5.55	ITS Smartway Geographic Expansion	$2,767,500	2035	Exempt	93.126 (Other)	N/A - Exempt
Blount County Greenway Trail - Phase 1	18-202	23-2023-305	Blount County	US 321 at NW corner of Helton Rd	Perry's Mill Parking Area	3.3	Greenway trail contained completely within US Highway 321 right-of-way from Heritage High School to Perry's Mill Parking area. It will also include additional bike access link to Old Walland Highway across Melrose Station Bridge.	$4,750,000	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
North Hall Road Corridor Improvements	24-200		Alcoa	Associates Blvd	City Limits (south of Gill St)	1.8	Corridor-wide improvements from Hall Road (SR-35) Corridor Study report including spot intersection turn lane additions, bike and pedestrian facilities, access management and resurfacing	$15,096,600	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
SR-336 (Montvale Road) Improvements from US-321 to Miller Ave.	24-207		Maryville	From Miller Ave	US 321/SR-73 W Lamar Alexander Pkwy	0.2	Widen 0.20 mile section of SR-336 (Montvale Road) from Miller Avenue to SR-73/US-321, including bridge replacements on Montvale Road and Mountain View Avenue, with a new traffic signal at Mountain View Avenue.	$13,452,191	2035	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
West Bessemer Street Widening	24-208		Alcoa	Calderwood Rd	N Hall Rd	0.4	Widen from 2 to 5 lane cross section with center turn lane. Includes sidewalk	$14,314,557	2035	Non-Exempt	N/A	Regionally Significant
Alcoa Hwy (SR-115/US-129) Widening	09-216		Alcoa/TDOT	Pellissippi Pkwy (SR-162)	south of Little River	2.71	Reconstruct SR-115 from 4-lanes to 6-lanes, including a frontage road system with two new interchanges at Singleton Station Road and Topside Road (SR-333), modify the existing SR-115 and SR-162 interchange, and construct a multi-use path. Includes ITS expansion	$92,524,492	2040	Non-Exempt	N/A	Regionally Significant
Pellissippi Pkwy (SR-162) Extension	09-232	23-2014-025	Blount County/TDOT	Old Knoxville Hwy (SR-33)	Lamar Alexander Pkwy (US-321/SR-73)	4.4	Construct new 4-lane highway	$338,500,000	2040	Non-Exempt	N/A	Regionally Significant
US-129 Interchange Reconstruction at US-411/SR-33	24-203		Maryville	From West of Montgomery Ln	S of Mall Rd	0	Removal of the existing, grade-separated rural interchange between US-129/SR-115 at US-411/SR-33. Reconstruct a conventional,four-leg, urban, at-grade, signalized intersection with turn lanes, curb & gutter, and landscaping. Includes widening of US-129 to six lanes.	$15,476,549	2040	Non-Exempt	N/A	Regionally Significant
Realignment of SR-35 / US-411 (Sevierville Road)	24-209		Maryville	500 ft W of Washington St along US 321/SR-73	Walnut St	0.5	Construction of 2640 ft.(0.50 mi.) of new roadway on new alignment to realign Sevierville Road to become the fourth leg of the signalized intersection with US-321 / SR-73 Lamar Alexander Parkway.	$16,624,923	2040	Non-Exempt	N/A	Regionally Significant
Robert C Jackson Dr Extension - Phase 1	09-202		Alcoa	Middlesettlements Rd	Louisville Rd (SR-334)	0.7	Construct new 4-lane roadway	$15,772,272	2050	Non-Exempt	N/A	Regionally Significant
Wrights Ferry Road Center Turn Lane Improvements	09-207		Alcoa	Airbase Rd	Topside Rd	1.4	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	$13,749,508	2050	Non-Exempt	N/A	Not Regionally Significant
Ellejoy Rd Reconstruction	09-209		Blount County	Tuckaleechee Pike	Jeffries Hollow Road	3.7	Reconstruct 2-lane road with addition of turn lanes	$17,500,000	2050	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Old Niles Ferry Road Reconstruction	09-213		Blount County	Calderwood Hwy (SR-115)	Maryville City Limits	3.3	Reconstruct 2-lane road with addition of turn lanes	$10,880,650	2050	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Home Avenue Extension	09-220		Alcoa	McCammon Ave	Calderwood St	0.2	Construct new 2-lane road with center turn lane to extend Home Ave through existing shopping center to Calderwood St	$6,511,437	2050	Non-Exempt	N/A	Not Regionally Significant
US 129 Widening	17-202	23-2017-005	Alcoa/Maryville/TDOT	Hall Rd (SR-35)	US 321	2.9	Widen from 4 to 6 lanes	$26,352,103	2050	Non-Exempt	N/A	Regionally Significant
Foch Street Improvements	24-201		Maryville	Foothills Mall Dr	US 321/SR-73 (W Lamar Alexander Pkwy)	0	Re-align Foch Street to the signalized intersection with US-321 and connect Home Avenue at a "T" intersection. Improve roadway with auxiliary turn lanes where needed with concrete curb & gutter and sidewalk on both sides from Foothills Mall Drive to US-321 (W. Lamar Alexander Pkwy.).	$1,906,097	2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Home Avenue Widening	24-205		Maryville	McCammon Ave	Foch St	0.4	Widen 0.4 mile (2,300 ft.) of Home Avenue to 2-12 ft lanes with auxiliary turn lanes where needed with concrete curb & gutter and sidewalk on both sides from McCammon Avenue to Foch Street.	$1,684,458	2050	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Chapman Hwy Segment 7	24-210		Blount County	Burnett Station Rd / Old Sevierville Pk	Macon Ln	1.0	Widen to add Center Turn Lane, Drainage & Intersection Improvements	$8,872,751	2050	Non-Exempt	N/A	Not Regionally Significant

Table D-1 – Projects from Knoxville TPO 2050 Mobility Plan Subject to Conformity (continued)

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
Pellissippi Place Access Road Extension	09-204		Alcoa	Wildwood Rd	Pellissippi Place Existing Terminus	1.2	Construct new 2-lane road with center turn lane or median and bicycle/pedestrian facilities	$12,094,500	Illustrative	Non-Exempt	N/A	Regionally Significant
Burnett Station Rd Reconstruction	09-221		Blount County	Sevierville Road/SR 35/US 411	Chapman Highway/SR 71/US 441	4.4	Reconstruction of 2-lane road with addition of turn lanes	$16,500,000	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Mentor Rd Reconstruction	09-227		Blount County	Louisville Road/SR 334	Wrights Ferry Road	3.2	Reconstruct 2-lane roadway with addition of turn lanes	$18,076,369	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Morganton Rd Reconstruction - Phase 2	09-229		Blount County	Walker Rd	William Blount Drive (SR-335)	3.3	Reconstruct 2-lane roadway with addition of turn lanes	$11,671,000	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Wildwood Rd Reconstruction	09-234		Blount County	Maryville City Limits	Sevierville Rd	6.1	Reconstruct 2-lane road with addition of turn lanes	$13,500,000	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Peppermint Rd Intersection Reconstruction	09-244		Blount County	Peppermint Rd at Sevierville Rd Intersection		0	Reconstruct Intersection of Peppermint Road and Sevierville Road with the proper Turn Lanes.	$295,000	Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Topside Road (SR-333) Improvements	09-248		Alcoa/TDOT	Wrights Ferry Rd	Alcoa Hwy (SR-115/US-129)	1.3	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	$5,497,800	Illustrative	Non-Exempt	N/A	Not Regionally Significant
Montvale Rd (SR-336) Reconstruction	09-249		Blount County/TDOT	Six Mile Rd	Blockhouse Rd	1.6	Reconstruct 2-lane road with addition of turn lanes	$2,650,000	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Montvale Rd (SR-336) Widening	09-262	23-2011-082	Maryville/TDOT	Montvale Station Rd	US 321	0.6	Widen existing roadway to 2 - 12 foot travel lanes with a 12 foot center turn lane including curb and gutter, sidewalk and a multiuse path. Close SR-73 EB and WB access to Highland Ave. to construct EB right-turn lane onto SR-336; lengthen WB SR-73 left turn lane near Highland Ave	$29,022,139	Illustrative	Non-Exempt	N/A	Not Regionally Significant
Robert C Jackson Dr Extension - Ph II	13-203		Alcoa	Louisville Rd (SR-334)	US 129 Bypass (SR-115)	0.5	Construct new 4-lane roadway and grade separated interchange connecting US-129 and Associates Boulevard	$31,781,198	Illustrative	Non-Exempt	N/A	Regionally Significant
Louisville Rd (SR-333) Reconstruction - Phase 2	13-216		Blount County/TDOT	Topside Rd	Old Lowes Ferry Rd	2.9	Reconstruct 2-lane road with addition of turn lanes	$6,234,469	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Jeffries Hollow Road	21-200		Blount County	Ellejoy Road	Boling Road	1.2	Reconstruct 2-lane roadway with addition of turn lanes	$3,275,000	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Morganton Road Phase 3	21-205		Blount County	Walker Road	Henry Lane	2.3	Reconstruct 2-lane roadway with addition of turn lanes	$13,500,000	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Morganton Road Phase 4	21-206		Blount County	Henry Lane	Loudon County Line	2.4	Reconstruct 2-lane roadway with addition of turn lanes	$10,600,000	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Ralph Phelps Road	21-207		Blount County	Lowes Ferry	Louisville Road	1.8	Reconstruct 2-lane road with addition of turn lanes	$9,085,000	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Centennial Park Blvd Extension	24-202		Alcoa	Tesla Blvd	Faraday Street	0.3	Construct new two lane boulevard	$10,000,000	Illustrative	Non-Exempt	N/A	Not Regionally Significant
Marilyn Road Extension	24-204		Alcoa	Current termini	Davies St	0.1	Road Way extension to connect to Hall Community	$10,000,000	Illustrative	Non-Exempt	N/A	Not Regionally Significant
Sam Houston School Rd Widening	24-206		Alcoa	SR-33	Wildwood Rd	2.7	Roadway widening to add center turn lane and intersection Improvements	$12,000,000	Illustrative	Non-Exempt	N/A	Not Regionally Significant
Knox County Projects												
Knoxville Northwest Greenway Connector Ph. 2	13-858	23-2023-305	Knoxville	Middlebrook Pk. at Third Creek Rd.	SR 62 Western Ave. pedestrian bridge	1.7	New trail connecting from Middlebrook Pk. At Third Creek Rd. to SR 62 Western Ave. pedestrian bridge. ADA upgrades and pedestrian lighting.	$5,552,664	2026	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Knox County Advanced Traffic Management System - Phase 2	19-604	23-2017-063	Knox County	Various		N/A	Continues implementation of County's Advanced Traffic Management Systems (ATMS) which are a component of Intelligent Transportation Systems (ITS) that integrate various technologies specifically related to the traffic signal system to improve overall operations	$1,587,100	2026	Exempt	93.126 (Other)	N/A - Exempt
Gibbs Schools Pedestrian Bridge	21-801	23-2023-305	Knox County			N/A	Pedestrian Bridge over Tazewell Pk to serve Gibbs Elementary, Middle, and High Schools	$2,902,214	2026	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Union Rd/N Hobbs Rd Reconstruction	13-601	23-2014-082	Farragut	Everett Rd	Kingston Pike (SR-1)	1	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	$7,900,000	2035	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt

Table D-1 – Projects from Knoxville TPO 2050 Mobility Plan Subject to Conformity (continued)

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
I-75 at Emory Rd (SR-131) Interchange	09-652	23-2020-011	Knoxville/Knox County/TDOT			0	Reconfigure existing interchange to a Diverging Diamond Interchange to improve capacity, safety and operations.	$33,300,000	2035	Exempt	93.127 (Interchange reconfiguration)	N/A - Exempt
Washington Pike	09-615	23-2014-038	Knoxville	I-640	Murphy Rd	1.7	Widen from 2-lanes to 3/4-lanes with median/center turn lane and including pedestrian and bicycle facilities.	$27,562,822	2035	Non-Exempt	N/A	Regionally Significant
Schaad Rd Widening	09-625	23-2014-006	Knox County	Oak Ridge Hwy (SR-62)	Pleasant Ridge Rd	1.5	Widen from 2 to 4 lanes with addition of sidewalks	$24,959,040	2035	Non-Exempt	N/A	Regionally Significant
Virtue Road/Boyd Station Road Improvements - Phase 2	09-630	23-2020-002	Farragut	Willow Cove Way	1200' S of Needlegrass Ln	1.1	Widen Virtue Rd. to two 11' lanes with curb and gutter, and provide shared use path connection to existing and planned bike/ped facilities.	$9,167,000	2035	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Lovell Rd Widening (SR-131)	09-637	23-2014-002	Knox County/TDOT	Cedardale Ln	Middlebrook Pk	1.7	Widen 2-lane to 4-lane, including pedestrian and bicycle facilities.	$35,411,161	2035	Non-Exempt	N/A	Regionally Significant
Papermill Drive Complete Street	09-689		Knoxville	Weisgarber Rd	Kingston Pike (SR-1)	0.6	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	$23,000,000	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Chapman Highway Advanced Traffic Management System	13-1003	23-2014-078	Knoxville	Mountain Grove Dr	Blount Ave	6.3	Advanced Traffic Management Systems (ATMS) are a component of Intelligent Transportation Systems (ITS) that integrate various technologies specifically related to the traffic signal system to improve overall operations	$3,980,518	2035	Exempt	93.126 (Other)	N/A - Exempt
Traffic Control Equipment Upgrade - Knoxville (Advanced Traffic Management System - Broadway)	13-602	23-2014-042	Knoxville	Jackson Avenue	Colonial Circle	5.9	Advanced Traffic Management Systems (ATMS) are a component of Intelligent Transportation Systems (ITS) that integrate various technologies specifically related to the traffic signal system to improve overall operations.	$6,940,830	2035	Exempt	93.126 (Other)	N/A - Exempt
First Creek Greenway - Broadway Streetscape	13-838	23-2023-305	Knoxville	Woodland Ave	Cecil Ave	0.3	Construct a new shared use path extending First Creek Greenway from near Cecil Ave to near Woodland Ave	$2,500,000	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Knoxville South Waterfront Pedestrian/Bicycle Bridge	13-852	23-2023-305	Knovxille	Clancy Ave	UT	0.3	Construct a new pedestrian/bicycle bridge over the Tennessee River connecting the South Knoxville Waterfront redevelopment area to the University of Tennessee	$60,000,000	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Accelerated Bus Corridor Stops/Passenger Information Systems Install	17-1006	23-2017-028	Knoxville/KAT	Modified KAT Route 22 which includes portions of Church Ave., Henley St., N. Broadway, Garden Dr., Jacksboro Pk. and Essary Dr.		8.1	ABC corridor improvements include Transit Signal Priority (TSP), bus queue jump lanes, new ABC Stations (Standard and Basic), and additional pedestrian improvements along the corridor.	$12,983,520	2035	Exempt	93.126 (Other)	N/A - Exempt
Magnolia Avenue Streetscape - Phase 3	17-608a	23-2017-017	Knoxville	N. Bertrand St	N. Kyle St	0.2	Construct streetscape improvements in the existing right of way that include raised medians replacing center left-turn lane, signal improvements, bike lanes, improved sidewalks, bus pull-offs, and amenities	$5,100,598	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Magnolia Avenue Streetscape - Phase 4	17-608b		Knoxville	N. Kyle St	Spruce St	0.3	Construct streetscape improvements in the existing right of way that include raised medians replacing center left-turn lane, signal improvements, bike lanes, improved sidewalks, bus pull-offs, and amenities	$6,630,525	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
South Waterfront Greenway - East of Suttree	17-850	23-2023-305	Knoxville	Suttree Landing Park	Island Home Ave Riverwalk	0.6	Construct riverwalk trail connecting the 0.10 mile section of cantilevered riverwalk along Island Home Avenue to Suttree Landing Park riverwalk that is just east of Foggy Bottom Street along the Tennessee River.	$7,049,395	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
East Knox Greenway - Phase 1	17-901	23-2023-305	Knoxville	Willow Ave	Knoxville Botanical Gardens	1.6	The East Knox Greenway Ph. 1 will be a 1.3 mile greenway from Harriet Tubman Street to South Chesnut Street.	$5,199,550	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Tyson Fort Sanders Bike Connection	17-911	23-2023-305	Knoxville	Fort Sanders Neighborhood	Tyson Park	0.5	Construct new shared use path between Fort Sanders Neighborhood and Tyson Park	$6,650,000	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Traffic Signal Improvements for the U.T. Area	19-603	23-2017-061	Knoxville	Various		N/A	Includes Advanced Traffic Management Systems (ATMS) which are a component of Intelligent Transportation Systems (ITS) that integrate various technologies specifically related to the traffic signal system to improve overall operations.	$5,749,157	2035	Exempt	93.126 (Other)	N/A - Exempt
Woodland Ave. Complete Street	19-606	23-2020-004	Knoxville	N. Broadway	Glenwood Ave	0.5	Construction of a complete street project on Woodland Avenue from SR-33 to West Glenwood for approximately .5 miles. Project will also include bicycle lanes, pedestrian crossing improvements, sidewalks, and other ADA upgrades.	$2,902,214	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Intersection Improvement at Beaver Ridge Road and West Emory Road	21-602		Knox County/TDOT			0	Installation of turn lanes and signalization at Beaver Ridge Rd and W. Emory Rd in Karns	$2,130,000	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt

Table D-1 – Projects from Knoxville TPO 2050 Mobility Plan Subject to Conformity (continued)

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
Tazewell Pike and Fairview Road Intersection Realignment	21-604		Knox County/TDOT			0	Tazewell Pk and Fairview Rd Intersection Realignment (Intersection improvement with turn lanes and traffic signal)	$2,125,269	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
James White Parkway corridor improvements	21-605		Knoxville			1.2	Address vehicular, pedestrian, and cyclist needs in local roadway network adjacent to James White Pkwy. Includes: Hillwood Ave from Anita Dr to Island Home Ave, Anita Dr from Sevier Ave to Hillwood Ave and Sevierville Pk from Woodlawn Pk to Sevier Ave	$5,138,342	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Urban Wilderness Gateway Park	21-606	23-2023-001	Knoxville	Sevierville Pk	Bridge over TN River	1.2	Approximately 1.2 mile realignment of roadway combining all lanes to the existing southbound roadway. Interchange realignment at southern project terminus, southbound realignment at the northern terminus, extension of Gateway Park with a shared-use path that connects N/S project boundary areas and adjacent neighborhood connections.	$22,256,928	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
South Knoxville Bridge Greenway	21-800	23-2023-305	Knoxville	Anita Dr	Morningside Greenway at Riverside Dr	0.6	Construct multi-modal path along James White Pkwy	$4,201,516	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Adair to Old Broadway Connection	21-802		Knoxville	Old Broadway	N Broadway	0.2	Construct new multiuse path to connect existing path on Old Broadway to north of Adair Drive	$2,430,510	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Everett Road Widening	22-600		Knox County	El Camino Ln	Buttermilk Rd	0.8	Widen from 2 to 4 lanes with median and/or center turn lane, including bicycle and pedestrian facilities	$11,000,000	2035	Non-Exempt	N/A	Regionally Significant
Neyland Drive Pedestrian Connection	23-803	23-2023-305	Knoxville	Joan Cronan Way	Lake Loudoun Blvd		Design and construction of a sidewalk, with intersection and signal improvements to Neyland Dr/Lake Loudoun Blvd and Joan Cronan Way	$1,205,180	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Powell High School Greenway	23-804	23-2023-305	Knox County	W Emory Rd	Powell Dr (SR-131)		Construct greenway	$1,924,825	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Broadway/Hall of Fame Intersection Improvement Project	24-602		Knoxville	Intersection of Broadway and Hall of Fame Dr		0	Reconstruct and replace existing interchange with a two-lane roundabout. Improve sidewalks connecting to project and add safer pedestrian crossings at approaches to roundabout	$9,000,000	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Clinton Hwy at W. Beaver Creek Dr Intersection	24-604		Knox County	at W. Beaver Creek Dr Intersection		0	Intersection realignment includes pavement, ROW purchases, utility relocation signalization	$2,772,660	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
W. Emory Rd (SR-131) at Harrell Rd/Carpenter Rd Intersection	24-605		Knox County	at Harrell Rd/Carpenter Rd Intersection		0	SR-131 at Harrell Rd/Carpenter Rd-Clearing, earthwork, drainage, structure, paving, signing, pavement markings, signalization	$3,578,860	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Lovell Rd (SR-131) at Parkside Dr Intersection	24-606		Knox County	at Parkside Dr Intersection		0	Turn Lanes, Restriping, Signal Modifications, Sidewalk and Pedestrian Improvements	$1,510,577	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Tazewell Pike at Ridgeview and Carter	24-607		Knox County	SR-331 at Ridgeview Rd and Carter Road		0	Realignment of Carter Rd and Ridgeview Rd with Tazewell Pike to join them together in a four legged intersection to improve safety and sight distance.	$9,934,448	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Chapman Hwy Segment 1a	24-610		TDOT	From Blount Ave	Woodlawn Pk	0.7	Add/Improve Multimodal Accommodations (Sidewalk and Multiuse path), Intersection & Drainage Improvements	$21,250,000	2035	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Traffic Control Equipment Upgrade - Knoxville (Advanced Traffic Management System - Kingston Pike)	24-617		Knoxville	Huxley Rd	Metron Center Way	11.7	Advanced Traffic Management Systems (ATMS) are a component of Intelligent Transportation Systems (ITS) that integrate various technologies specifically related to the traffic signal system to improve overall operations.	$10,876,872	2035	Exempt	93.126 (Other)	N/A - Exempt
Chapman Highway Transit Signal Priority	24-618		Knoxville	Blount Ave.	Mountain Grove Dr.	6.3	Transit Signal Priority (TSP) improvements along the corridor	$1,700,000	2035	Exempt	93.126 (Other)	N/A - Exempt
Kingston Pike Transit Signal Priority	24-619		Knoxville	Henley St.	N Seven Oaks Dr.	10.8	Transit Signal Priority (TSP) improvements along the corridor.	$5,200,000	2035	Exempt	93.126 (Other)	N/A - Exempt
Hardin Valley Road Widening	24-621		Knox County	Near Pellissippi Pkwy	Campbell Station Rd	2.1	Widen from 3-lanes to 5-lanes	$16,250,000	2035	Non-Exempt	N/A	Regionally Significant
I-40/I-75/Campbell Station Road Interchange	09-629		Farragut/TDOT			0	Reconstruct existing interchange to a diverging diamond with new alignment to improve capacity, safety and operations. Project includes widening of Campbell Station Road through the interchange from 3 through lanes to 5 through lanes plus turn lanes between Snyder Rd and Campbell Lakes Dr	$120,000,000	2040	Exempt	93.127 (Interchange reconfiguration)	N/A - Exempt
Pellissippi Pkwy (SR-162)/Oak Ridge Hwy Interchange	09-649	23-2017-057	Knox County/TDOT	Interchange at Oak Ridge Hwy (SR-62)		0.45	Reconstruct interchange to a Single Point Urban Interchange and provide connection to Solway Rd	$38,878,058	2040	Non-Exempt	N/A	Regionally Significant
I-40/I-75/Watt Rd Interchange	09-651		Knox County/TDOT	Interchange at Watt Rd		0	Reconstruct existing interchange to a Single Point Urban Interchange(SPUI) to improve capacity, safety and operations. Project includes widening of Watt Rd through the interchange from 3-lanes to 4-lanes plus turn lanes between Palestine Ln and Everett Rd	$61,800,000	2040	Exempt	93.127 (Interchange reconfiguration)	N/A - Exempt

Table D-1 – Projects from Knoxville TPO 2050 Mobility Plan Subject to Conformity (continued)

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
I-75/I-640/I-275 Interchange	09-654	23-2017-038	Knoxville/TDOT	Interchange at I-640/I-275 (Sharps Gap).		0.57	Interchange reconstruction along with the addition of auxilary lanes in each direction on I-75.	$523,000,000	2040	Non-Exempt	N/A	Regionally Significant
I-40/75 Widening	09-691		Knox County /Farragut / TDOT	I-40/75 Interchange	Campbell Station Rd Interchange	5.3	Widen from 6 to 8 lanes	$35,737,185	2040	Non-Exempt	N/A	Regionally Significant
Campbell Station Rd Improvements	10-700		Farragut/Knox County	I-40	Hardin Valley Road	3.3	Widening and realignment of Campbell Station Rd from I-40 to Hardin Valley Rd	$24,610,774	2040	Non-Exempt	N/A	Regionally Significant
First Creek Greenway - North Knox	13-855		Knoxville	Edgewood Park	Mineral Springs Ave	1.3	Construct a new shared use path along First Creek connecting Edgewood Park to the proposed First Creek Greenway - Old Broadway segment at Mineral Springs Avenue	$3,192,435	2040	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Magnoila Avenue Streetscape – Phase 5	17-608c		Knoxville	Spruce St	N. Cherry St	0.4	Construct streetscape improvements in the existing right of way that include raised medians replacing center left-turn lane, signal improvements, bike lanes, improved sidewalks, bus pull-offs, and amenities	$9,660,083	2040	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Harvey Road Realignment and Railroad Overpass	24-608		Knox County	Harvey at Sanderling Ln	McFee at Red Poppy Dr	0.3	Overpass connecting Harvey Rd to Mcfee Rd.	$11,625,000	2040	Non-Exempt	N/A	Not Regionally Significant
Magnolia Ave. Transit Signal Priority	24-620		Knoxville	N Hall of Fame Dr.	N Cherry St.	1.5	Transit Signal Priority (TSP) improvements along the corridor	$700,000	2040	Exempt	93.126 (Other)	N/A - Exempt
Oak Ridge Hwy (SR-62)	09-638		Knox County/TDOT	Schaad Rd	Byington Beaver Ridge Rd	4.2	Widen from 2 to 4 lanes	$59,553,430	2050	Non-Exempt	N/A	Regionally Significant
Pellissippi Pkwy (SR-162)	09-647		Knox County/TDOT	Edgemoor Rd (SR-170)	Dutchtown Rd	6	Corridor safety and capacity improvements to include access control, interchange reconstruction, frontage roads, additional/auxiliary lanes and provision for a shared use path	$91,303,650	2050	Non-Exempt	N/A	Regionally Significant
Northshore Drive at Kingston Pike Intersection Improvements	09-658		Knoxville/TDOT	Intersection		0.5	Intersection improvements including additional turn lanes and sidewalk extensions. Replace bridge over Fourth Creek on Kingston Pike.	$17,095,686	2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Oak Ridge Hwy (SR-62)	09-673		Knox County/TDOT	Byington Beaver Ridge Rd (SR-131)	Pellissippi Pkwy (SR-162)	4.2	Widen from 2 to 4 lanes	$47,758,832	2050	Non-Exempt	N/A	Regionally Significant
I-75 Widening	09-692	23-2017-056	Knox County/TDOT	Emory Rd (SR-131)	Raccoon Valley Rd (SR-170)	4.85	Widen from 4 to 6 lanes	$139,538,446	2050	Non-Exempt	N/A	Regionally Significant
I-40/75 Auxiliary Lanes	13-603		Farragut/TDOT	Campbell Station Rd Interchange	Lovell Rd Interchange	1.4	Construct eastbound and westbound auxiliary lanes between interchanges	$11,535,000	2050	Non-Exempt	N/A	Regionally Significant
I-75 ITS Expansion	18-600		Knox County/Anderson County/TDOT	MM 109.6	SR-61 (Exit 122)	13.03	ITS expansion includes the deployment of CCTV cameras at critical interchanges. Install power and communications infrastructure and at Least 2 CCTV Cameras at each Interchange.	$4,643,542	2050	Exempt	93.126 (Other)	N/A - Exempt
I-40 Westbound Interchange at I-275	21-601		Knoxville/TDOT	I-275	Near I-640	2	Interchange access improvements and extension of two existing lanes from US129 entrance ramp to WB mainline such that one lane continues through on I-40 mainline	$65,938,301	2050	Non-Exempt	N/A	Regionally Significant
Chapman Hwy Segment 1b	24-611		TDOT	Woodlawn Pk N	Fronda Ln	1.1	Add/Improve Multimodal Accommodations (Sidewalk and Multiuse path), Intersection & Drainage Improvements	$13,310,000	2050	Non-Exempt	N/A	Not Regionally Significant
Chapman Hwy Segment 2	24-612		TDOT	Fronda Ln	Colonial Dr	1.5	Widen to add Center Turn Lane, Add Multiuse Path, Drainage & Intersection Improvements	$14,364,483	2050	Non-Exempt	N/A	Not Regionally Significant
Chapman Hwy Segment 3	24-613		TDOT	Colonial Dr	Chapman Ford Crossing	0.8	Widen to add Center Turn Lane, Add Multiuse Path & Sidewalk, Drainage & Intersection Improvements	$9,115,176	2050	Non-Exempt	N/A	Not Regionally Significant
Chapman Hwy Segment 4	24-614		TDOT	Chapman Ford Crossing	Nixon Rd	1.1	Widen to add Center Turn Lane, Add Multiuse Path, Drainage & Intersection Improvements	$8,991,270	2050	Non-Exempt	N/A	Not Regionally Significant
Chapman Hwy Segment 5	24-615		TDOT	Nixon Rd	Mountain Grove Dr	1.2	Add Multimodal Accommodations (Sidewalk and Multiuse path), Intersection & Drainage Improvements	$11,024,407	2050	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Chapman Hwy Segment 6	24-616		Knox County	Mountain Grove Dr	Hendron Chapel Dr	0.8	Widen to add Center Turn Lane, Drainage & Intersection Improvements	$6,286,886	2050	Non-Exempt	N/A	Not Regionally Significant
Emory Rd (SR-131)	09-643	23-2017-036	Knox County/TDOT	Maynardville Hwy (SR-33)	Tazewell Pk (SR-331)	4.8	Widen from 2 to 4 lanes with median and/or center turn lane, including bicycle and pedestrian facilities	$81,958,521	Illustrative	Non-Exempt	N/A	Regionally Significant
Gov John Sevier Hwy (SR-168)	09-644		Knox County/TDOT	Alcoa Hwy (SR-115/US-129)	Chapman Hwy (US-441/SR-71)	6.5	Widen from 3 to 4-lane divided roadway	$80,449,370	Illustrative	Non-Exempt	N/A	Regionally Significant
Northshore Dr (SR-332)	09-645		Knox County/TDOT	Morrell Rd	Ebenezer Rd	3.5	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	$24,262,508	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt

Table D-1 – Projects from Knoxville TPO 2050 Mobility Plan Subject to Conformity (continued)

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
Northshore Dr (SR-332)	09-646		Knox County/TDOT	Pellissippi Pkwy (SR-162)	Concord Rd (SR-332)	4.5	Reconstruct 2-lane road with addition of turn lanes and bicycle/pedestrian facilities	$30,647,379	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Maryville Pk (SR-33)	09-675		Knox County/TDOT	Gov John Sevier Hwy (SR-168)	Blount County Line	1.2	Reconstruct 2-lane road with addition of turn lanes	$6,895,660	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Northshore Drive Improvements	09-680		Knox County	Concord	Harvey Road	3.6	Widen from 2 to 4-lanes	$75,000,000	Illustrative	Non-Exempt	N/A	Regionally Significant
Middlebrook Pike Complete Street	19-605		Knoxville	Western Ave	Proctor St	0.9	Install protected bicycle facilities, improve sidewalks and upgrade bike/pedestrian treatments at three intersections. Project connects existing bike/ped facilities on University Avenue to the greenway on Middlebrook Pike at Proctor Street.	$7,056,717	Illustrative	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Magnolia Ave/Rutledge Pike/Asheville Hwy Interchange Improvements	21-600		Knoxville/TDOT			0	Construct interchange improvements to consist of intersection improvements, bike lanes and enhanced sidewalks	$14,000,000	Illustrative	Exempt	93.127 (Interchange reconfiguration)	N/A - Exempt
Strawberry Plains Pike Improvements	21-603		Knox County	I-40	Gov. John Sevier Highway	3.4	Widening of Strawberry Plains Pk from Governor John Sevier Hwy to I-40)	$46,435,423	Illustrative	Non-Exempt	N/A	Regionally Significant
Northshore Drive & Westland Drive/Lyons View Pike Roundabout	24-601		Knoxville	Intersection of Northshore Drive & Westland Drive/Lyons View Pike		0	Convert signalized intersection to a two-lane roundabout; construct islands with crosswalks and warning signage on all approaches. Includes sidewalk connection to existing sidewalks & greenway path.	$3,000,000	Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
W Emory Rd Widening	24-609		Knox County	Clinton Hwy	Karns Valley Dr	4.6	Widen W Emory Rd from 2 lanes to 5 lanes (with a TWLTL) with multimodal facilities from the intersection with Clinton Highway through to Karns Valley Dr.	$57,330,000	Illustrative	Non-Exempt	N/A	Regionally Significant
Loudon County Projects												
Grove Street Improvements	17-403		City of Loudon	US-11	SR-72	1.3	Reconstruct, milling, and resurfacing 1.32 mile of roadway with drainage improvements including curb and gutter throughout. Sidewalks repairs and installed with ADA improvements. Intersection improvements at SR72 including turn lanes and intersection improvement downtown at US11.	$6,022,360	2035	Exempt	93.126 (Resurfacing)	N/A - Exempt
US 11 at Industrial Park Drive Intersection Improvement	17-407		Lenoir City/TDOT	Intersection of US 11 at Industrial Park Dr		0.2	Intersection improvements including turn lanes and new traffic signal	$957,731	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Muddy Creek Road Intersection Realignment	17-416		Loudon County	Intersection		0.1	Realign intersection and add turn lanes	$1,442,000	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
I-75 Widening Loudon County - Segment 1	21-400a	Add to TIP	Loudon County/TDOT	US-321 (SR-73) at Exit 81	I-40/I-75 Junction	3.4	Widen 4-lane to 6-lane, may also include Bridge over I-75 NBL, LM 4.51 which is PIN 124480.01, also I-40 from LM 4.11 to 4.73	$97,400,000	2035	Non-Exempt	N/A	Regionally Significant
Old Hwy 95	24-401		Lenoir City	6th Ave.	Town Creek Pkwy	1.15	Reconstruct roadway 1.15 miles to include two twelve foot lanes curb and gutter with drainage improvements. Sidewalks and street lighting will be installed on one side of the street. Intersections along the corridor with have alignments shifted to standard designs.	$5,669,108	2035	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
I-75 Widening (Loudon) - Segment 3	21-400c		Loudon County/TDOT	SR-72 (Exit 72)	Sugar Limb Rd (SR-324) at Exit 76	5.5	Widen from 4 to 6 lanes	$68,800,000	2050	Non-Exempt		Regionally Significant
I-75 Widening (Loudon) - Segment 4	21-400d		Loudon County/TDOT	Sugar Limb Rd (SR-324) at Exit 76	SR-311 (SR-73) at Exit 81	4.8	Widen from 4 to 6 lanes	$60,000,000	2050	Non-Exempt		Regionally Significant
I-75 Widening (Loudon) - Segment 2	21-400b		Loudon County/TDOT	Pond Creek Rd (SR-323) at Exit 68	SR-72 (Exit 72)	2.4	Widen from 4 to 6 lanes	$30,000,000	Illustrative	Non-Exempt		Regionally Significant
Simpson Road	24-400		Lenoir City	US 321	Old Hwy 95	0.45	Reconstruct roadway 0.45 miles to include two twelve foot lanes curb and gutter with drainage improvements	$2,304,301	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt
Highland Park Dr	24-402		Lenoir City	US 321	SR-2/US 11	0.26	Reconstruct roadway 0.26 miles to include two twelve foot lanes curb and gutter with drainage improvements	$1,496,191	Illustrative	Exempt	93.126 (Safety, widening with no add'l lanes)	N/A - Exempt

Table D-1 – Projects from Knoxville TPO 2050 Mobility Plan Subject to Conformity (continued)

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
Sevier County Projects												
Boyds Creek Highway (SR 338) at Old Knoxville Highway Intersection Improvements	18-500	23-2017-044	Sevierville	at Old Knoxville Highway Intersection		0	Reconfigure existing intersection to improve safety and operations through geometric layout changes, addition of turn lanes, and installation of a new traffic signal.	$1,271,170	2035	Exempt	93.127 (Traffic Signalization at individual intersection)	N/A - Exempt
Boyds Creek Highway (SR 338) at Wade Road (Seymour High School) Turn Lanes	24-500		Sevier County	Intersection of Boyds Creek Hwy (SR 338) at Wade Rd		0	Restriping a right turn lane on Boyds Creek Hwy from Wade Rd to the entrance of Seymour High School and installing a westbound left turn lane on Wade Rd	$710,000	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Boyds Creek Highway (SR 338) at Porterfield Gap Rd Turn Lanes	24-501		Sevier County	Intersection of Boyds Creek Hwy (SR 338) at Porterfield Gap Rd		0	Adding a turn lane on Boyds Creek Hwy at the Porterfield Gap Rd intersection	$1,102,225	2035	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Transit Capital Projects												
Knoxville-Knox County CAC Transit Capital Project	24-1000		CAC			N/A	Purchase of demand response transit vehicles for fleet replacement	$390,000	2026	Exempt	93.126 (Transit vehicle replacement)	N/A - Exempt
Purchase KAT Vehicles - Fixed Route Buses	24-1001		KAT			N/A	Purchase of fixed-route buses for fleet replacement or minor expansion)	$8,500,000	2026	Exempt	93.126 (Transit vehicle replacement)	N/A - Exempt
Purchase KAT Paratransit Vans	24-1002		KAT			N/A	Transit Capital Purchase - Paratransit van replacement	$600,000	2026	Exempt	93.126 (Transit vehicle replacement)	N/A - Exempt
TPO Projects & Groupings												
Smart Trips	21-700		TPO	TPO Planning Area		N/A	Continuation of Smart Trips program that encourages alternatives to driving alone through an online ridematching database, incentives, marketing and outreach.	$1,083,250	N/A	Exempt	93.126 (Air Quality, promotion of ride sharing activities)	N/A - Exempt
Resurfacing Program	24-702		TPO	Throughout TPO Planning Area		N/A	Projects for preservation, rehabilitation, resurfacing and restoration	$0	N/A	Exempt	93.126 (Resurfacing)	N/A - Exempt
Safety Improvements Program	24-703		TPO	Throughout TPO Planning Area		N/A	Projects that correct or improve a hazardous road location or feature or address a highway safety problem	$0	N/A	Exempt	93.126 (Safety)	N/A - Exempt
NHS Preservation/Operations	24-704		TDOT	Throughout TPO Planning Area		N/A	Projects for preservation, rehabilitation, resurfacing and restoration of federal aid roadways	$0	N/A	Exempt	93.126 (Resurfacing)	N/A - Exempt
Safety Improvements Program	24-705		TDOT	Throughout TPO Planning Area		N/A	Projects that correct or improve a hazardous road location or feature or address a highway safety problem.	$0	N/A	Exempt	93.126 (Safety)	N/A - Exempt
Travel Congestion & Clean Air Improvement Grouping	24-706	23-2023-308	TPO	Throughout TPO Planning Area		N/A	This grouping will be used to fund projects to reduce traffic congestion and improve air quality throughout the Knoxville TPO planning area. Such projects include diesel engine retrofits, traffic flow improvements, transportation control measures, transit improvements, bicycle and pedestrian facilities and programs, travel demand management, alternative fuels and vehicles, and other activities that accomplish these objectives. Projects are required to be non-regionally significant, environmentally neutral, exempt from air quality conformity requirements, and located in the metropolitan planning area.	$0	N/A	Exempt	93.126 (Other)	N/A - Exempt

Table D-2 – Projects from the Regional "Orphan Area" Subject to 1997 8-Hour Ozone Standard Conformity

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
Regional Projects (In 1997 Ozone Maintenance area but Outside TPO Planning Area)												
Veterans Blvd (SR-449) Extension Phase 2	TDOT-132674.00		Sevier County/TDOT	Henderson Rd	SR-66 at Gists Creek Rd	3.2	Construct new 4-lane Divided Road		2035	Non-Exempt	N/A	Regionally Significant
I-40 Exit 408	TDOT-133581.00		Sevier County/TDOT			3.2	Construct New Interchange at I-40 and New 4-lane Divided Connector Road from Dumplin Valley Rd to SR-139		2035	Non-Exempt	N/A	Regionally Significant
SR-35 (US-411)	TDOT-121620.00		Sevierville/TDOT	SR-448 (North Parkway)	Eastgate Rd	1.1	Capacity and Operational Improvements at the intersection of SR-35 and SR-449 with left turn lane restrictions		2035	Exempt	93.126 (Safety)	N/A - Exempt
Veterans Blvd (SR-449) Extension Phase 1	TDOT-124788.00		Sevierville/TDOT	SR-35	Robert Henderson Rd	0.4	Construct new 5-lane Facility		2035	Non-Exempt	N/A	Regionally Significant
I-40 Bridge Replacement	TDOT - 106301.00		Jefferson County/TDOT	Bridge over French Broad River, LM 14.70		1.05	Replace Bridge		2035	Exempt	93.126 (Safety)	N/A - Exempt
Intersection of US11E and SR 92/Old Andrew Johnson Hwy	LAMTPO-17		Jefferson City	Intersection		0	Realign the intersection of US 11E and SR 92/Old Andrew Jackson Hwy; extend Overlook Rd		2040	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Chucky Pike	LAMTPO-2008		Jefferson City	Intersection		0	Reconstruct Chucky Pike with signal modifications at US 11E intersection		2040	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Intersection of SR 34/US 11E and Russell Ave	LAMTPO-2043		Jefferson City	Intersection		0	Intersection improvements: add right turn lanes on SR 34/US 11E, ped signals and sidewalks on all approaches		2040	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
SR 34/US 11E	LAMTPO-2051		Jefferson City	Russell Rd	Odyssey Rd	1.9	Intersection and access management improvements along SR 34/US 11E from Russell Ave to Odyssey Rd		2040	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Intersection of SR 32 (State St) and SR 113 (Main St)	LAMTPO-2052		White Pine	Intersection		0	Intersection improvements at SR 32 (State St) and SR 113 (Main St): add left turn lanes on SR 32 (State St) and a left turn lane on eastbound SR 113		2040	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Intersection of SR 34/US 11E and George Ave	LAMTPO-2060		Jefferson City			0	Intersection improvements at SR 34/US 11E and George Avenue: add NB right turn lane extending to Elmwood St.		2040	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Intersection of SR 34/US 11E & E. Old Andrew Johnson Hwy	LAMTPO-2007		Jefferson City	Intersection		0	Intersection improvements at SR 34/US 11E and E Old Andrew Jackson Highway: signalize the intersection		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Intersection of E. Old Andrew Johnson Hwy and Municipal Dr	LAMTPO-2009		Jefferson City	Intersection		0	Intersection improvements at E Old Andrew Jackson Hwy and Municipal Dr: Add turn lanes		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Intersection of Old Andrew Johnson Hwy and E. Main St/N. Chucky Pike	LAMTPO-2012		Jefferson City	Intersection		0	Intersection improvements at Old Andrew Jackson Hwy and E Main St./N Chucky Pike: realign offset intersection		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
US11E Sidewalks new and repair	LAMTPO-4003		Jefferson City	Chucky Pike	SR92	1.7	US11E Sidewalks new and repair		2050	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
US11E @ Odell Rd Intersection Improvements	LAMTPO-4008		Jefferson City	Intersection		0	US11E @ Odell Rd Intersection Improvements		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
US11E @ Hicks Rd Intersection Improvements	LAMTPO-4009		Jefferson City	Intersection		0	US11E @ Hicks Rd Intersection Improvements		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
US11E @ SR92_Maple St Intersection Improvements	LAMTPO-4012		Jefferson City	Intersection		0	US11E @ SR92_Maple St Intersection Improvements		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
SR92 Russell Ave @ Flat Gap Rd Improvements	LAMTPO-4013		Jefferson City	Intersection		0	SR92 Russell Ave @ Flat Gap Rd Improvements		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
US11E @ Clinch View Circle Improvements	LAMTPO-4015		Jefferson City	Intersection		0	US11E @ Clinch View Circle Improvements		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
US11E @ Pearl Ave Intersection Improvements	LAMTPO-4017		Jefferson City	Intersection		0	US11E @ Pearl Ave Intersection Improvements		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
US11E Multiuse Path in Jefferson City	LAMTPO-4019		Jefferson City	SR92	SR92 / Maple Ave	1.3	US11E Multiuse Path in Jefferson City		2050	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
Intersection of SR 341 (Roy Messer Hwy) and SR 113 (Main St)	LAMTPO-6003		White Pine	Intersection		0	Signalize the intersection of SR 341 (Roy Messer Hwy) and SR 113 (Main St)		2050	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
SR92	LAMTPO-904		Jefferson City	Old Andrew Johnson Highway	Easeley Road	0.4	Widen SR92 from 2 to 3 lanes from Old Andrew Johnson Hwy to Easley Rd		2050	Exempt	93.126 (Safety)	N/A - Exempt
Old Andrew Johnson Hwy	LAMTPO-905		Jefferson City	Branner Avenue	N. Chucky Pike	0.3	Widen Old Andrew Johnson Hwy from 2 to 3 lanes from Branner Ave to N. Chucky Pk		2050	Exempt	93.126 (Safety)	N/A - Exempt
Great Smoky Mountains National Park Foothills Parkway Section 8D	NPS-1		NPS - Sevier County	U.S. 321 (Wears Valley Rd)	U.S. 441 Gatlinburg "Spur"	9	Construct 9 miles of new access controlled scenic 2-lane parkway facility		2050	Non-Exempt	N/A	Regionally Significant
SR-73 (US-321)	TDOT - 100989.00		Sevier County/TDOT	Buckhorn Rd	SR-416	1.4	Widen from 2 to 4 lane divided		2050	Non-Exempt	N/A	Regionally Significant
SR92 at Crooke Road / Mt. Horeb Road	LAMTPO-144		Jefferson City	Intersection		0	SR92 at Crooke Road / Mt. Horeb Road ITS signalization		Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
SR92 at Oak Hills Circle / Bradford Square Drive	LAMTPO-145		Jefferson City	Intersection		0	SR92 at Oak Hills Circle / Bradford Square Drive ITS signalization		Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
SR34/US11E at Lucille Lane	LAMTPO-146		Jefferson City	Intersection		0	SR34/US11E at Lucille Lane ITS signalization and realignment of median		Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt

Table D-2 – Projects from the Regional "Orphan Area" Subject to 1997 8-Hour Ozone Standard Conformity (continued)

Project Name	KRMP ID	FY 2023-2026 TIP ID	Jurisdiction	From	To	Length (miles)	Final Description	Cost (2024 Dollars)	Conformity Analysis Year	Exempt Status	Exempt Justification	Regional Significance
SR92 at Hinchey Hollow Road / Colony Drive	LAMTPO-147		Jefferson City	Intersection		0	SR92 at Hinchey Hollow Road / Colony Drive new intersection signal and safety improvements		Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
I-81	LAMTPO-2049		Jefferson County/TDOT	Approximately 1 mile west of I-40 Interchange (Exit 1)	Near SR 341 (Roy Messer Hwy) - Exit 4	3.6	Widen I-81 from 4 to 6 lanes and add acceleration lane on I-40 WB		Illustrative	Non-Exempt	N/A	Regionally Significant
US11E Multiuse Path in Jefferson County	LAMTPO-4004		Jefferson City	Chucky Pike	Mayfield Dr	2.7	US11E Multiuse Path in Jefferson County		Illustrative	Exempt	93.126 (Bike/Ped Facilities)	N/A - Exempt
US11E @ Odyssey Rd Intersection Improvements	LAMTPO-4006		Jefferson City	Intersection		0	US11E @ Odyssey Rd Intersection Improvements		Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
SR92 George Ave Intersection Improvements	LAMTPO-4014		Jefferson City	Intersection		0	SR92 George Ave Intersection Improvements		Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
US11E @ Meadow Spring Drive Improvements	LAMTPO-4016		Jefferson City	Intersection		0	US11E @ Meadow Spring Drive Improvements		Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
US11E @ Universal Rd Intersection Improvements	LAMTPO-4018		Jefferson City	Intersection		0	US11E @ Universal Rd Intersection Improvements		Illustrative	Exempt	93.127 (Intersection Channelization)	N/A - Exempt
Widen SR32/US25E	LAMTPO-903		White Pine	I-81 Exit	SR341 / Roy Messer Highway	3.4	Widen SR32/US25E (State St) from 2 to 4 lanes from I-81 to SR341 (Roy Messer Hwy)		Illustrative	Non-Exempt	N/A	Regionally Significant
Widen I-81	LAMTPO-909		Jefferson/Hamblen County	SR341 / Exit 4	SR340 / Exit 15	11.0	Widen I-81 from 4 to 6 lanes from SR341 (Exit 4) to SR340 (Exit 15)		Illustrative	Non-Exempt	N/A	Regionally Significant
Various Roadway Resurfacing Projects in Jefferson County	LAMTPO-resurfacing		Jefferson City	Various		N/A	Roadway resurfacing on various roadways throughout Jefferson County		Various	Exempt	93.126 (Resurfacing)	N/A - Exempt

D.3 EXISTING PLUS COMMITTED ROADWAY NETWORK

The primary purpose of the model is to forecast needs and deficiencies for the roadway network in the future assuming that population and economic activity continue to grow, but no improvement projects are undertaken beyond what is known as the "Existing plus Committed" or E+C network. The model roadway network was first updated to account for changes that have happened since the prior base year of 2018 to the new 2022 base year that was used in the validation process– this is known as the "Existing" network. The primary changes since 2018 resulted from roadway projects that were completed. Table 9 is a listing of major capacity-addition projects that were completed between 2018 and 2022.

Table D-3 - Major Roadway Projects Completed between 2018 and 2022

Project Name	KRMP ID	Termini	Length (miles)	Project Description	Status
Alcoa Hwy (SR-115/US-129)	09-627	Maloney Rd to Woodson Dr	1.4	Widen 4-lane to 6-lane	Completed in 2022
Alcoa Hwy (SR-115/US-129)	09-208	Hall Rd (SR-35) to proposed interchange at Tyson Blvd	1.3	Widen from 4-lane divided to a 6-lane divided highway. Extend Tyson Boulevard under SR-115 and reconstruct Hunt Rd overpass	Completed in 2022
Chapman Hwy (US-441/SR-71)	09-626b	Evans Rd to Burnett Ln	0.9	Add center turn lane	Completed in 2021
Chapman Hwy (US-441/SR-71)	09-508	Boyds Creek Hwy (SR-338) to Macon Ln	1.2	Add center turn lane	Completed in 2022
Concord Rd (SR-332)	09-632	Turkey Creek Rd to Northshore Dr (SR-332)	0.8	Widen from 2 to 4/5 lanes	Completed in 2021
I-275 Industrial Park Access	09-618	W. Fifth Ave to Baxter Ave	0.5	Blackstock Ave: extend from Fifth Ave. to Bernard Ave.; Marion St: realign	Completed in 2022
I-640 at Broadway Interchange	09-611	I-640 at Broadway	0	Reconstruct and Relocate Ramps	Completed in 2021

Project Name	KRMP ID	Termini	Length (miles)	Project Description	Status
Pellissippi Pkwy (SR-162/I-140) and Dutchtown Rd Interchange	09-623	I-40 to Dutchtown Rd Interchange	0.4	Widen Pellissippi Pkwy from 1 to 2 lanes westbound and lengthen storage of westbound off-ramp at Dutchtown Road interchange	Completed in 2021
Pellissippi Pkwy/Hardin Valley Interchange	09-634	Interchange at Hardin Valley Rd	0	Reconfigure existing interchange to improve safety and operations. Add new northbound on-ramp in NE quadrant	Completed in 2022
Robert C. Jackson Drive Extension	09-238	Lamar Alexander Pkwy (US-321/SR-73) to Morganton Rd	1.2	Construct new 2-lane roadway with sidewalks	Completed in 2021
US 129 Widening	17-204	Mall Rd to Lamar Alexander Pkwy (US-321/SR-73)	0.7	Intersection improvements at W. Lamar Alexander Pkwy (US-321/SR-73) and addition of turn lanes	Completed in 2020
US 129 Widening	17-203	Foothills Mall Dr to Mall Rd	0.3	Intersection improvements at Foothills Mall Dr/Montgomery Ln and addition of turn lanes	Completed in 2022
US-321 (SR-73) Widening	09-423	E. Simpson Rd to north of SR-2 (US-11) in Lenoir City	1.4	Widen from 4 to 6 lanes	Completed in 2021
Western Ave (SR-62) Widening	09-610	Texas Ave to Major Ave	0.8	Widen from 2 to 5 lanes	Completed in 2020
US 411 Widening Jefferson County	N/A	SR-92 to Grapevine Hollow Rd	2.6	Widen 2-4 lane and new 4-lane	Completed 2022
SR-66 Relocated	N/A	North of I-81 to SR-160	5.7	Widen 2-4 lane and new 4-lane	Completed in 2020
Tesla Blvd	13-201	Associates Blvd to Hunt Rd (SR-335)	1.2	Construct new 4-lane	Completed in 2018
Marconi Blvd	13-206	Tesla Blvd to Springbrook Rd	0.8	Construct new 2-lane and 3-lane	Completed in 2022

In addition to the projects that were completed by 2022, other projects are considered to be "Committed" since it is reasonably certain that these will occur based on current expectations. The specific definition of a "Committed Project" for the purposes of Mobility Plan 2050 is that the project must either be currently under construction or is very likely to go to construction by July 2025 (when the new Mobility Plan takes effect). There is one minor exception to this rule that was made for two phases of Alcoa Highway (US-129/SR-115) which are not currently programmed for construction, but are assumed to be committed since all other segments of Alcoa Highway are either currently under construction or programmed for construction by FY 2026. The E+C projects form the baseline network with which subsequent roadway deficiency analyses and the Congestion Management Process analysis is undertaken with; however, it should be noted that this network does not necessarily represent the first air quality conformity horizon year (2026) since some projects such as a few Alcoa Highway segments are not projected to be open to traffic by that year given their large magnitude and length of time it will take for construction to be completed. Table 10 provides a listing of the Committed projects and their status (either under construction or funded for construction) as of May 2024:

Table D-4 - Committed Project List

Project Name	KRMP ID	Termini	Length (miles)	Project Description	Status as of May 2024
Alcoa Hwy (SR-115/US-129) Widening	09-216	Pellissippi Pkwy (SR-162) to Little River (Knox/Blount C.L.)	3.2	Widen 4-lane to 6-lane with frontage road system and new interchange at Topside Rd (SR-333). Reconfigure existing interchange at Pellissippi Pkwy (SR-162) and signalize ramps	In ROW, No Construction Funds yet but Consider entire Alcoa Hwy corridor as committed at this point
Alcoa Hwy (SR-115/US-129) Widening	09-628	North of Little River (Knox/Blount C.L.) to Maloney Rd	2.4	Widen from 4 to 6 lanes including pedestrian and bicycle facilities.	Under Construction, Completion target of mid-2025

Project Name	KRMP ID	Termini	Length (miles)	Project Description	Status as of May 2024
Alcoa Hwy (SR-115/US-129) Widening	09-653	Woodson Dr. to Cherokee Trail interchange	1.3	Widen 4-lane to 6-lane including pedestrian and bicycle facilities.	Under Construction, Completion target of late-2027
Relocated Alcoa Hwy (SR-115/US-129)	09-257 / 09-258	Proposed interchange at Tyson Blvd. to Pellissippi Pkwy (SR-162)	2.9	Construct new 4-lane divided highway with auxiliary lanes and new interchanges	Stage 1 Under Construction, Completion target of late-2027; Stage 2 construction start in 2028
Chapman Hwy (US-441/SR-71)	09-626d	Hendron Chapel Rd to Simpson Rd	0.9	Add center turn lane	Under Construction, Completion target of mid-2025
Foothills Mall Drive Extension to Foch Street	13-211	US-129 Bypass (SR-115) to Foch St.	0.5	Construct new 2-lane road with center turn lane and sidewalks	Construction Complete in 2023
Schaad Rd Extension	09-605	Middlebrook Pk (SR-169) to W of Oak Ridge Hwy (SR-62)	4.6	Construct new 4-lane roadway with sidewalks	Under Construction, Completion target of late-2024
Pleasant Ridge Rd	09-616	Knoxville City Limits to Merchant Dr	1.6	Improve 2-lane with turn lanes at major intersections	Construction beginning late 2024
Maynardville Hwy (SR-33)	N/A – Union County	Knox County line to SR-144	5.3	Widen 2-lanes to 4-lanes	Under Construction, Completion target of Fall 2026
Jake Thomas Rd	N/A – Sevier County	Teaster Ln to Veterans Blvd (SR-449)	1.9	New 4-lane with Center Turn Lane	Construction Complete in 2024
US 411 Widening and Realignment	N/A – Jefferson & Sevier	SR-92 to Sims Rd	3.5	Widen 2-4 lane and new 4-lane	Under Construction, Completion target 2026

Project Name	KRMP ID	Termini	Length (miles)	Project Description	Status as of May 2024
State Route 34 (US 11E)	N/A – Hamblen County	US 25E to E Morris Blvd	3.4	Two 12-foot travel lanes in each direction and Continuous center turn lane	Construction beginning late 2024

Appendix E – FY 2023 – 2026 Transportation Improvement Program (TIP) and Mobility Plan 2050 Project List Crosswalk

E.1 BACKGROUND

The tables on the following pages show the current full list of projects that are programmed in the Fiscal Year 2023 – 2026 Transportation Improvement Program in order to provide a crosswalk with the new Mobility Plan 2050 Project List. Information for each project's current status, Mobility Plan project ID and Horizon Year are provided in order to determine consistency between the two plans, which must be maintained at all times. Generally every project that is in the TIP must be explicitly included in the Mobility Plan with the same description and termini, with the exception of certain "grouped" minor project types that are found to be consistent with the goals and objectives of the Mobility Plan. One example of this type of project would be a roadway resurfacing project.

The table provides color codes where projects with red text indicate a likely need to amend the TIP to remove that project as it no longer is on the same timeframe based on the Mobility Plan inclusion or later horizon year than in the previous Mobility Plan. Projects with green text indicate that it is either under construction or will be soon. These projects will remain in the FY2023 – 2026 TIP but will not be carried forward into the new FY 2026 – 2029 TIP that will follow soon after the Mobility Plan is adopted later in calendar year 2025.

TIP ID	KRMP ID	PIN	Length	Lead	County	Route	Project Name	Termini	Description	FY	Phase	Tot Amount Programmed	AQ	MP 2050 Horizon Year	Status/Change
23-2011-082	09-262	101725.02	0.60	TDOT	Blount	SR-336	Montvale Road (SR-336)	Montvale Station Road to SR-73(Lamar Alexander Parkway) (IA)	Widen existing roadway to 2-12 foot travel lanes with a 12 foot center turn lane including curb and gutter, sidewalk, and a multiuse path. close SR-73 EB and WB access to Highland Ave. to Construct EB right-turn lane on to SR-336; lengthen WB SR-73 left-turn lane near Highland Ave.	2023	ROW	$9,300,000	Non-Exempt	Illustrative	Remove - Not in TDOT 10-Year Plan
23-2014-002	09-637	121508.00	1.70	TDOT	Knox	SR-131	Lovell Road (SR-131) Widening	(Lovell Road), From Cedardale Lane to Middlebrook Pike In Knoxville	Widen 2-lane to 4-lane, including pedestrian and bicycle facilities.	2024, 2026	ROW, CN	$26,490,000	Non-Exempt	2035	Under Development
23-2014-006	09-625	121731.00	1.50	Knox County	Knox	-	Schaad Rd. Widening	Schaad Rd. from Oak Ridge Hwy. (SR-62) to Pleasant Ridge Rd.	Widen 2-lane to 4-lane	2023, 2025	ROW, CN	$21,000,000	Non-Exempt	2030	Under Development
23-2014-025	09-232	101423.00	4.90	TDOT	Blount	SR-162EXT	Pellissippi Pkwy. (SR-162) Extension	(Pellissippi Parkway), From near SR-33 to SR 73 (US-321) (IA)	Construct new 4 lane	2023	ROW	$29,800,000	Non-Exempt	2040	Under Development
23-2014-032	09-617	109677.00	0.32	COK	Knox	-	Sevier Avenue - South Knoxville Waterfront Roadway Improvements	Davenport Rd. to Island Home Ave.	Roadway streetscape improvements and utility relocations along Sevier Ave and will include a new roundabout constructed at the intersection of Foggy Bottom; Sevier Ave; Island Home Road.	2024	CN	$9,991,198	Exempt	#N/A	Under Construction
23-2014-037	09-616	101008.00	1.60	COK	Knox	-	Pleasant Ridge Road	From Knoxville City Limits to the Merchant Drive/Wilkerson Road Intersection in Knoxville	Reconstruct 2-lane road with addition of turn lanes at the intersections of Pleasant Ridge Road, Sullivan Road, and Murray Drive. Project also includes the addition of bicycle and pedestrian facilities.	2023	CN	$5,497,717	Exempt	#N/A	Nearing Construction
23-2014-038	09-615	043090.00	1.70	COK	Knox	-	Washington Pike Widening	Washington Pike, North of I-640 to Murphy Road	Widen from 2-lanes to 3/4-lanes with median/center turn lane and including bike/pedestrian facilities.	2024, 2025	ROW, CN	$25,200,000	Non-Exempt	2030	Under Development
23-2014-042	13-602	120004.00	0.00	COK	Knox	-	Traffic Control Equipment Upgrade	Advanced Traffic Management System (City of Knoxville) Phase 1: Kingston Pike(US-70/SR-10, From Metron Center Way to Lovell Road and Broadway(US-441/SR-33), From Jackson Avenue to Foley Drive	Purchase of signal controllers, signal monitors, closed loop equipment and software.	2025	CN	$10,041,000	Exempt	2030	Under Development
23-2014-059	09-214	113608.00	0.58	TDOT	Blount	SR-35	Sevierville Road	From Near South Washington Street to Near Walnut Street	Reconstruct Sevierville Road(SR-35) from two lanes to three lanes, curb and gutter, and sidewalks with intersection improvements.	2023, 2026	ROW, CN	$12,409,750	Non-Exempt	#N/A	Remove - Project will change, in MP as #24-209 in HY 2040
23-2014-060	09-211	126705.00	2.30	Blount County	Blount	-	Morganton Road Roadway Improvement	Morganton Road from Foothills Mall Drive to SR-335 (William Blount Drive)	Reconstruct 2-lane road with addition of continuous center turn lane and bicycle/pedestrian facilities	2023, 2025	ROW, CN	$11,805,350	Non-Exempt	#N/A	Remove - Project will change to spot improvements w/local funds
23-2014-069	09-653	100241.03	1.60	TDOT	Knox	SR-115	Alcoa Hwy. (SR-115/US-129)	From Woodson Drive to Cherokee Trail Interchange (IA)	Widening from 4-ln to 6-ln including pedestrian and bicycle facilities.	2023	CN		Non-Exempt	#N/A	Under Construction
23-2014-078	13-1003	120004.03	6.30	COK	Knox	-	Chapman Highway ATMS: Knoxville ATMS - Phase 2	Chapman Highway(SR-71) from Blount Avenue to Mountain Grove Drive	Purchase of signal controllers, signal monitors, closed loop equipment and software. This Phase will include the expansion of the City's ATMS along Chapman Highway (SR-71/US-441).	2024	CN	$2,814,000	Exempt	2030	Under Development
23-2014-080	13-1004	122977.00	0.20	COK	Knox	-	Liberty Street from Division Street to Sutherland Avenue	Liberty Street from Division Street to Sutherland Avenue	Construction of a sidewalk on Liberty St. from Division St. to Sutherland Ave., and bicycle lanes on Liberty St., from Division St. to Knott Ave.	2023	CN	$707,864	Exempt	#N/A	Under Construction
23-2014-082	13-601	125045.00	1.00	Farragut	Knox	-	Union Road/N. Hobbs Road Improvements	Union Road, From North Hobbs Road to Everett Road and North Hobbs Road, From Union Road to Kingston Pk	Reconstruct 2-lane road with addition of turn lanes and bike/pedestrian facilities	2024	CN	$7,900,000	Exempt	2026	Under Development
23-2017-005	17-202	124754.00	2.94	TDOT	Blount	SR-115	SR-115 (US-129) Widening	From SR-73 (Lamar Alexander Pkwy) to SR- 35 (Hall Road) (IA)	Widen from four to six lanes	2023, 2024	PE-D,RW	$1,000,000	Non-Exempt	2050	Remove - Not in TDOT 10-Year Plan
23-2017-006	13-833	130845.00	1.25	Maryville	Blount	-	Maryville to Townsend Greenway - Phase 1 (Brown Creek)	Harper Ave Trailhead to East Lamar Alexander Pkwy (US 321)	Construction of a shared use path/greenway from an existing trailhead at Harper Ave. (near Aluminum Ave.) to Lamar Alexander Parkway along Browns Creek.	20,232,024	all	$3,770,000	Exempt	2030	Under Development
23-2017-009	13-838	125623.00	0.30	COK	Knox	-	First Creek Greenway - Broadway Streetscape	Woodland Ave. to Cecil Ave.	Install sidewalks, a shared use path, and pedestrian crossing improvements - extending First Creek Greenway from near Cecil Ave to near Woodland Ave	2023	all	$3,900,000	Exempt	2030	Under Development
23-2017-011	17-901	128777.00	1.30	COK	Knox	-	East Knox Greenway - Phase 1	Harriet Tubman St. to Chestnut St.	The East Knox Greenway Ph. 1 will be a 1.3 mile greenway from Harriet Tubman Street to South Chesnut Street. The project will provide an alternative bike and pedestrian corridor for the area, and will increase connectivity of the Knoxville Greenway system as a whole.	2023, 2024	RW,CN	$2,931,000	Exempt	2030	Under Development
23-2017-017	17-608a	19559.01	0.24	COK	Knox	SR-1	Magnolia Ave Streetscape - Phase 3	(US-11/70, East Magnolia Avenue), From North Bertrand Street to North Kyle Street	Construct streetscape improvements along Magnolia Avenue from N. Bertrand Street. to N. Kyle Street. Improvements will include raised medians replacing center left-turn lanes, signal improvements, bike lanes, improved sidewalks, transit stops, and amenities	2023, 2024	RW,CN	$5,300,000	Exempt	2030	Under Development
23-2017-028	17-1006	125460.00	8.10	COK	Knox	-	Accelerated Bus Corridor Stops/Passenger Information Systems Install	Modified KAT Route 22 which includes portions of Church Ave., Henley St., N. Broadway, Garden Dr., Jacksboro Pk. and Essary Dr.	ABC corridor improvements include Transit Signal Priority (TSP), bus queue jump lanes, new ABC Stations (Standard and Basic), and additional pedestrian improvements along the corridor.	2024, 2025	all	$1,274,999	Exempt	2030	Under Development

TIP ID	KRMP ID	PIN	Length	Lead	County	Route	Project Name	Termini	Description	FY	Phase	Tot Amount Programmed	AQ	MP 2050 Horizon Year	Status/Change
23-2017-036	09-643	124455.00	4.87	TDOT	Knox	SR-131	Emory Rd (SR-131)	(East Emory Road), From near SR-33 to near SR-331 (IA)	Widening 2 lanes to 4 lanes with median and; or center turn lane, including bicycle; pedestrian facilities	2023	PE-D	$4,200,000	Non-Exempt	Illustrative	Remove - Not in TDOT 10-Year Plan
23-2017-037a	09-101b	124121.02	3.63	TDOT	Anderson	SR-170	Edgemoor Road (SR-170)	From near Melton Lake Drive to SR-9 (US-25W, Clinton Highway) (IA) (TMA)	Widening 2 lanes to 4 lanes with median and; or center turn lane. Also includes bicycle; pedestrian facilities and a new bridge over the Clinch River. (Split into two segments for PE,ROW, and Construction on PINs 124121.01 and.02)	2023-2025	PE-D,RW	$31,936,850	Non-Exempt	2035	Under Development
23-2017-037b	09-101a	124121.01	2.55	TDOT	Anderson	SR-171	Edgemoor Road (SR-170)	From near SR-62 to near Melton Lake Drive (IA)(TMA)	Widening SR-170 from 2 lanes to 4 lanes with median and/or center turn lane. Improvements also include bicycle and pedestrian facilities. (Split into two segments for PE,ROW, and Construction on PINs 124121.01 and.02)	2023-2026	PE-D,RW	$5,488,450	Non-Exempt	2035	Under Development
23-2017-038	09-654	124443.00	0.57	TDOT	Knox	I-75	I-640/I-275/I-75 Interchange	Interchange at I-640/275 (Sharps Gap) (IA)	Interchange reconstruction along with addition of auxiliary lanes in each direction on I-75	2024 , 2026	PE-N,PE-D	$8,000,000	Non-Exempt	2040	Remove - out-year of TDOT 10 Year Plan
23-2017-040	09-626	124784.00	10.30	TDOT	Knox	SR-71	Chapman Hwy. (SR-71/US-441) Operational and Safety Improvements	(Chapman Hwy), From near Blount Avenue to near SR-338 (Boyds Creek Hwy) in Seymour (IA)	Intersection improvements and/or driveway improvements and/or left turn lanes at various locations throughout the project area.	2023	PE-D	$3,000,000	Exempt	#N/A	Remove - Not in TDOT 10-Year Plan
23-2017-042	09-223	127933.00	0.89	Maryville	Blount	-	Carpenters Grade Road Widening and Intersection Improvements	From Raulston Road/Peterson Lane to Cochran Road	Reconstruct 2-lane road with addition of turn lanes and sidewalk. Construct a signalized intersection at Peterson Ln, Cochran Rd and Raulston Rd intersection.	2024	all	$8,400,000	Exempt	#N/A	Under Construction
23-2017-044	18-500	128581.00	0.00	Sevierville	Sevier	SR-338	Boyds Creek Highway (SR-338) at Old Knoxville Highway Intersection Improvements	(Boyds Creek Highway), Intersection at Old Knoxville Highway, LM 10.58 in Sevierville	This project will reconfigure the existing intersection to improve safety operations through geometric layout changes, addition of turn lanes, and installation of a new traffic signal.	2024, 2025	all	$1,941,900	Exempt	2030	Under Development
23-2017-046	13-830	125624.00	2.32	Oak Ridge	Anderson	-	Oak Ridge Rails to Trails - Ph. 1	Elza Gate Park near Melton Lake Dr. to south of Briarcliff Ave.	Construction of a greenway along old rail line along Belgrade Road, Warehouse Road, Fairbanks Road beginning at the intersection of Oak Ridge Turnpike and Elza Gate and terminating at a new trailhead south of Briarcliff Ave.	2026	CN	$2,900,000	Exempt	2030	Under Development
23-2017-048	18-202	127121.00	0.95	Blount County	Blount	SR-73	Blount County Greenway Trail - Ph. 1	Helton Rd. to the west entrance to Heritage Middle School	Greenway Construction	2023	CN	$1,285,000	Exempt	2030	Under Development
23-2017-049	17-850	127815.00	0.60	COK	Knox	-	South Waterfront Greenway - East of Suttree	Suttree Landing Park to Island Home Avenue Riverwalk	Design and construction of a greenway connecting the .10 mile section of cantilevered riverwalk along Island Home Avenue to Suttree Landing Park riverwalk that is just east of Foggy Bottom Street along the Tennessee River.	2025	RW	$1,300,000	Exempt	2035	Under Development
23-2017-050	18-201	124131.00	9.20	TDOT	B/K	I-140	I-140 ITS Expansion	ITS Expansion from I-140 MM 2 to SR-115 (US-129, Alcoa HWY., Exit 11) (IA)	I-140 ITS Expansion to include the installation of a power and communication network and ITS devices such as CCTV cameras, DMS, and RDS.	2023	CN	$6,000,000	Exempt	#N/A	Under Construction
23-2017-051	18-603	127958.00	6.50	COK	Knox	-	Middlebrook Pike (SR-169) ATMS Expansion	Middlebrook Pike (SR-169)/University Ave. from College Street to Joe Hinton Road	Purchase, installation and integration of fiber optics, signal controllers, signal monitors, closed loop equipment, enhanced detection, DSRC, traffic signal cable and software. Project also includes development of new signal timing plans for the new equipment and software.	2024	CN	$2,388,240	Exempt	#N/A	Nearing Construction
23-2017-053	13-802	127949.00	2.85	Oak Ridge	Anderson	-	Oak Ridge Signal Timing Optimization Ph. 2	Oak Ridge Turnpike (SR-95) from Illinois Ave. (SR-62) to Florida Ave./Fairbanks Ave. Includes approx. 0.15 along Georgia Ave	Signal improvement to include installation of advanced traffic controllers at eleven (11) intersections, fiber optic cable to connect all fourteen (14) signals to the City's existing fiber network, non-intrusive vehicle detection, the establishment of a traffic operations center to be located in the City Central Services Complex, and the reconstruction of two (2) signals to include mast arms.	2025	CN	$3,828,307	Exempt	#N/A	Nearing Construction
23-2017-056	09-692	124451.00	5.14	TDOT	Knox	I-75	I-75	From near SR-131 (near Emory Road) to near SR-170 (near Raccoon Valley Road) (IA)	Widen from 4 to 6 lanes	2023	PE-D	$6,658,222	Non-Exempt	2050	Remove - Not in TDOT 10-Year Plan
23-2017-057	09-649	123073.00	0.45	TDOT	Knox	SR-162	SR-162	Pellissippi Pkwy (SR-162) Interchange at Oak Ridge Hwy (SR-62) in Solway (IA)	Reconstruct interchange to a Single Point Urban Interchange (SPUI) and provide connection to Solway Road	2023	PE-D/RW	$6,973,000	Non-Exempt	2040	Remove - Not in TDOT 10-Year Plan
23-2017-061	19-603	128836.00	0.00	COK	Knox	-	Traffic Signal Improvements for the U.T. Area	A total of 39 signals will be upgraded along Cumberland Ave, Neyland Dr, 17th St/Ailor, Western Ave and Joe Johnson Dr. Signal improvements along Henley St will connect two ongoing projects between Broadway and Chapman Highway.	This project will provide signal equipment upgrades at a total of 39 signals along Cumberland Avenue, Neyland Drive, 17th Street , Western Ave, and Joe Johnson Drive. Signal improvements along Henley Street will connect two ongoing projects between Broadway and Chapman Highway. Addition of following elements: an ATMS data server, DSRC capable ATC controllers, high speed wireless network, and radio equipment. This proposal will increase ATMS capabilities and decrease traffic delay by being better able to sense traffic flow and provide SPaT and related data sharing features.	2023-2026	PE, CN	$2,794,270	Exempt	2030	Under Development
23-2017-062	19-400	128840.00	8.60	Lenoir City	Loudon	-	Lenoir City CMAQ ITS Phase II	US-321 / SR-73 / SR-2 US-321 at US-70 US-321 at I-40 Ramps. (22 Traffic signals)	Phase II includes additional features not included in Phase I to enhance traffic flow and to reduce emissions. Dedicated Short Range Communications (DSRC) with Advanced Traffic Controllers (ATC) with cellular modems / batteries will be installed along with radar detection devices at 23 locations.	2024	PE-D/CN	$2,310,400	Exempt	#N/A	Under Construction

TIP ID	KRMP ID	PIN	Length	Lead	County	Route	Project Name	Termini	Description	FY	Phase	Tot Amount Programmed	AQ	MP 2050 Horizon Year	Status/Change
23-2017-063	19-604	128833.00	0.00	Knox County	Knox	-	Knox County Advanced Traffic Management System - Phase II	E. Emory Rd. (SR131) at Andersonville Pike, Norris Freeway (SR71/US4 441) at Sam Walton Way, Watt Rd I-40 EB and WB ramps, Maynardville Pk (SR 33/US 441) at Andersonville Pk. Maynardville Pk (9) and Norris Fwy (1)	Phase II will include a variety of signal upgrades at four intersections, and DSRC equipment at 11 other intersections completed during Phase 1. The proposed improvements that are included at the 4 new intersections of Phase II are the installation of new traffic signal controllers , dedicated short-range communication (DSRC) units, non- intrusive fish-eye video detection, wireless interconnect, malfunction management units (MMU), battery backups, new signal cabinets, and the development of coordinated timings. Additionally at 11 locations DSRC equipment will be added to cabinets completed during Phase 1.	2025	CN	$1,601,448	Exempt	2026	Under Development
23-2017-064	19-100	128830.00	3.44	Oak Ridge	Anderson	SR-62	Oak Ridge Signal Timing Optimization Program: Phase III	Project is primarily located along Illinois Ave, (SR 62) from Robertsville Rd to Lafayette Dr/Scarboro Rd, and along Lafayette Dr from Illinois Ave (SR 62) to Laboratory Rd	Primary elements include the installation of advanced traffic controllers (ATC) the installation/replacement of wireless interconnects, the replacement of loop detectors with non-intrusive radar vehicle detection, installation of dedicated short-range communications (DSRC) equipment and the installation of flashing yellow arrow signal heads. Additional improvements include, but are not limited to, replacing signal heads with more efficient LED signal heads, installing accessible pedestrian signals at all intersections, signing and marking upgrades, and the reconstruction of curb ramps that are not ADA compliant.	2024	PE-D	$269,000	Exempt	2030	Under Development
23-2020-002	09-630	132927.00	1.14	Farragut	Knox	-	Virtue Road/Boyd Station Road Improvements - Ph. 2	1200' south of Needlegrass Ln. to Willow Cove Way.	Widen Virtue Rd. to two 11' lanes with curb and gutter, and provide shared use path connection to existing and planned bike/ped facilities.	2023, 2025	PE-D/RW	$1,291,000	Exempt	2030	Under Development
23-2020-004	19-606	128306.00	0.50	COK	Knox	-	Woodland Avenue Complete Street	Woodland Avenue, From SR-33 (US-441, North Broadway) to West Glenwood Street	Construction of a complete street project on Woodland Avenue from SR-33 to West Glenwood for approximately .5 miles. Project will also include bicycle lanes, pedestrian crossing improvements, sidewalks, and other ADA upgrades.	2023, 2024	RW,CN	$4,000,000	Exempt	2030	Under Development
23-2020-005	10-260	132946.00	0.76	Maryville	Blount	-	Foothills Mall Dr. Extension Ph. 2	Foch St. to near Bessemer St.	Construct new 2-lane road with turn lanes where needed from Foch St. to McCammon Ave., at Celtic Rd. and Reconstruct McCammon Ave. to an improved 2-lane roadway with curb & gutter to tie in with previous improvements near the Bessemer St. intersection. Project includes a multi-use path on one side throughout.	2024, 2026	all	$6,237,759	Non-Exempt	2030	Under Development
23-2020-006	09-242	134674.00	0.45	Maryville	Blount	SR-33	SR-33 West Broadway Ave. Widening	US 321 (Lamar Alexander Pkwy.) near Montvale Rd. to South Cedar St.	Construct additional westbound left turn lane at intersection with Lamar Alexander Pkwy and convert continuous center turn lane to additional westbound through lane along W Broadway Avenue. Project includes construction of new shared use path and other bicycle/pedestrian enhancements.	2024-2026	PE/RW	$1,512,000	Non-Exempt	2030	Under Development
23-2020-011	09-652	124451.01	0.89	TDOT	Knox	I-75	I-75 at Emory Road (SR-131) Interchange	Interchange at SR-131 (Exit 112, Emory Road) (IA) (TMA)	Reconfigure interchange to a Diverging Diamond Interchange to improve capacity, safety and operations	2023, 2025	all	$35,361,222	Exempt	2030	Under Development
23-2020-012	09-257	101651.04	4.90	TDOT	Blount	SR-115	Relocated Alcoa Hwy. (SR-115/US- 129)	(Relocated Alcoa Highway), from Proposed Interchange at Tyson Blvd to Existing SR-115 at South Singleton Station Road Stage 1 (IA)	Stage construction including grade, drain, base, pave, signal, lighting, ITS, greenway, retaining wall, natural stream design, and bridge, from South of proposed Wright Road Interchange to North of proposed SR-162 (Pellissippi Parkway) interchange providing local connectivity for existing routes and destinations.	2023	CN	$181,000,000	Non-Exempt	2035	**Under Construction**
23-2023-001	21-606		1.20	COK	Knox	-	Urban Wilderness Gateway Park	From Sevierville Pike/Moody Ave. to bridge north of Anita Dr.	Approximately 1.2 mile realignment of roadway combining all lanes to the existing southbound roadway. Interchange realignment at southern project terminus, southbound realignment at the northern terminus, extension of Gateway Park with a shared-use path that connects N/S project boundary areas and adjacent neighborhood connections.	2025, 2026	PE	$2,300,000	Exempt	2030	Under Development
23-2023-200	13-860			COK	Knox	-	FTA Section 5307 Funds	TPO Planning Area	5307 formula transit funding is for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances.	all	OPER, PUR	$46,399,908	Exempt	#N/A	Ongoing/Grouping
23-2023-201	13-869			COK	Knox	-	FTA Section 5310 Funds	TPO Planning Area	5310 formula transit funding is to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act complementary paratransit services. Funding may be used for capital projects at an 80% federal and 20% local match, for operating assistance at a 50% federal and 50% local match, and administration at 100% federal funding.	all	OPER, PUR	$5,789,325	Exempt	#N/A	Ongoing/Grouping
23-2023-202	13-871			COK	Knox	-	FTA Section 5339 Funds	TPO Planning Area	5339 formula or discretionary transit funding is to provide capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities.	all	PUR	$3,650,772	Exempt	#N/A	Ongoing/Grouping
23-2023-203	21-1002			ETHRA		-	ETHRA Transit Vehicle Replacement		ETHRA will purchase transit vehicles to replace medium duty 10 passenger vehicles and wheelchair cutaway vehicles that have met their useful life guidance of 5 years and/or 150,000 miles.	2023	PUR	$116,784	Exempt	#N/A	**Complete**

TIP ID	KRMP ID	PIN	Length	Lead	County	Route	Project Name	Termini	Description	FY	Phase	Tot Amount Programmed	AQ	MP 2050 Horizon Year	Status/Change
23-2023-204	21-1000			CAC	Knox	-	CAC Transit Vehicle Replacement		CAC will purchase replacement vehicles for demand response service.	2023	PUR	$420,000	Exempt	#N/A	Complete
23-2023-205	21-1003			KAT	Knox	-	Purchase KAT Vehicles - Fixed Route Buses		KAT purchase of heavy-duty transit vehicles (buses and trolleys) replacing those that have exceeded their useful life.	2023	PUR	$1,875,000	Exempt	#N/A	Complete
23-2023-210	21-1004			KAT	Knox	-	KAT Bus Engine Overhauls		Mid-life engine overhauls on transit buses. An engine "overhaul" is a mid-life action on a major component that enables an asset to achieve its useful life and is an FTA-eligible activity under Circular 5010.1E.	2023	PUR	$460,001	Exempt	#N/A	Complete
23-2023-301	21-705			TDOT	all	-	Highway Safety Improvement Program Grouping		See TIP grouping description for a comprehensive listing of activities included but not limited for eligibility.	all	all	$11,959,152	Exempt	#N/A	Ongoing/Grouping
23-2023-302	Consistent Goal 1			TDOT	all	-	Surface Transportation System Preservation and Operation Grouping		See TIP grouping description for a comprehensive listing of activities included but not limited for eligibility	all	all	$35,340,700	Exempt	#N/A	Ongoing/Grouping
23-2023-303	21-704			TDOT	all	-	National Highway System Preservation and Operation Grouping		See TIP grouping description for a comprehensive listing of activities included but not limited for eligibility	all	all	$92,297,600	Exempt	#N/A	Ongoing/Grouping
23-2023-305	17-911			Various	all	-	STBG/STBG Transportation Alternatives (STBG-TA) Bike/Pedestrian Grouping		This grouping will be used to fund greenways, sidewalks, bike/pedestrian amenities, streetscaping, and to fund STBG - Transportation Alternatives projects, which provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects throughout the Knoxville TPO area.	all	all	$75,474,234	Exempt	2035	Ongoing/Grouping
23-2023-306	Consistent			Various	all	-	Planning and Studies Grouping		This grouping will be used to fund planning reports and studies throughout the Knoxville TPO planning area.	all	STUDY	$1,618,000	Exempt	#N/A	Ongoing/Grouping
23-2023-307	21-702			Various	all	-	Maintenance and Repair Grouping		Funds will be used for operation, maintenance, repair, or resurfacing works.	all	PE	$2,000	Exempt	#N/A	Ongoing/Grouping
23-2023-308	Consistent Goal 6			Various	all	-	Travel Congestion & Clean Air Improvement Grouping		This grouping will be used to fund projects to reduce traffic congestion and improve air quality throughout the Knoxville TPO planning area. Such projects include diesel engine retrofits, traffic flow improvements, transportation control measures, transit improvements, bicycle and pedestrian facilities and programs, travel demand management, alternative fuels and vehicles, and other activities that accomplish these objectives. Projects are required to be non-regionally significant, environmentally neutral, exempt from air quality conformity requirements, and located in the metropolitan planning area.	2023, 2024	Various	$21,909,707	Exempt	#N/A	Ongoing/Grouping

Appendix F – Public Notice and Legal Ad Proofs

The availability for a 30-day (March 24, 2025 – April 22, 2025) public review and comment for the Mobility Plan 2050 and associated Air Quality Conformity Determination Report was advertised in several regional newspapers including: The Knoxville News Sentinel, Maryville Daily Times, The Oak Ridger, Knoxville Focus (a free print and online newspaper available in Knox and surrounding counties), Loudon News Herald, Jefferson Standard Banner, East Tennessee Enlightener (paper targeted toward minority population) and Mountain Press (Sevier County). Below is a copy of the ad proof from the newspaper with the largest regional circulation which is the Knoxville News Sentinel, others are available upon request.

THANK YOU for your submission!

Your notice has been submitted for publication. Below is a confirmation of your order. You will also receive an email confirmation.

ORDER DETAILS

Order Number:
LOKR0260366
Order Status:
Submitted
Classification:
Public Notices
Package:
General Package
Total payment:
173.96
Payment Type:
Account Billed
User ID:
L0013876
External User ID:
676064

ACCOUNT INFORMATION

Knoxville-Knox County Planning
400 W Main ST # 403 DALLAS DEARMOND
Knoxville, TN 37902-2427
865-215-3810
dallas.dearmond@knoxplanning.org
Knoxville-Knox County Planning
Contract ID: GOVT

TRANSACTION REPORT

Date
March 17, 2025 9:34:36 AM EDT
Amount:
173.96

ADDITIONAL OPTIONS

1 Affidavit

SCHEDULE FOR AD NUMBER LOKR02603660

March 23, 2025
Knoxville News Sentinel

PREVIEW FOR AD NUMBER LOKR02603660

PUBLIC NOTICE

Knoxville Regional Transportation Planning Organization – Draft Mobility Plan 2050 and Air Quality Conformity Determination Report Available for Public Comment

The Knoxville Regional Transportation Planning Organization (TPO), responsible for comprehensive transportation planning in the Knoxville Urban Area including Knox County and parts of Anderson, Blount, Loudon, Roane, and Sevier Counties, is required to update its long- range transportation plan, Mobility Plan 2050, every four years.

Mobility Plan 2050 lays out a vision of what the transportation system will look like in the future. It includes federally funded and regionally significant transportation projects that are proposed over the next 20+ years. An Air Quality Conformity Determination report was prepared to demonstrate that the implementation of projects within Mobility Plan 2050 will conform with the requirements of the Clean Air Act. This ensures that federal funds will not be spent on projects that cause or contribute to any new violations of the National Ambient Air Quality Standards (NAAQS); increase the frequency or severity of NAAQS violations; or delay timely attainments of the NAAQS or any required interim milestone.

Drafts of both Mobility Plan 2050 and the Air Quality Conformity Report can be viewed and downloaded at www.knoxmobility.org. Copies of the plans are also available for review at the TPO office at 400 Main St., Suite 403, Knoxville, TN 37902. Comments can be submitted through April 22, 2025 to mobility@knoxplanning.org or mailed to the TPO's address listed above. In person and virtual public meetings have been scheduled during the month of April. Dates and additional details can be found at www.knoxmobility.org.

If you need assistance or accommodation for a disability, please contact the TPO at 865-215-3810 and we will be glad to work with you to accommodate any reasonable request.
March 23 2025
LOKR0260366

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