



OCTOBER 11, 2026

TRANSPORTATION CONFORMITY REPORT

RMS 2052 MTP AND 2027-2030 RMS TIP

EL PASO METROPOLITAN PLANNING ORGANIZATION



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LIST OF ABBREVIATIONS

AADT	Average Annual Daily Traffic
AERR	Air Emissions Reporting Requirements
ANSWT	Average Non-summer Weekday Traffic
APU	Auxiliary Power Unit
ATR	Automated Traffic Recorder
AVFT	Alternate Vehicle Fuel Technology
BD	Biodiesel
CAAA	Clean Air Act Amendments of 1990
CFR	Code of Federal Regulations
CG	Conventional Gasoline
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CNG	Compressed Natural Gas
CO	Carbon Monoxide
DFW	Dallas-Fort Worth
DOE	Department of Energy
DOT	Department of Transportation
E200	Lower Volatility Percentage
E300	Upper Volatility Percentage
EI	Emissions Inventory
EPA	Environmental Protection Agency
ETBE	Ethyl Tert-Butyl Ether
ETOH	Ethanol
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GVWR	Gross Vehicle Weight Rating
HC	Hydrocarbon
HPMS	Highway Performance Monitoring System

I/M	Inspection and Maintenance
MoSERS	Mobile Source Emission Reduction Strategies
MOVES	Motor Vehicle Emission Simulator
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization
MTBE	Methyl Tert-Butyl Ether
MTP	Metropolitan Transportation Plan
MVEB	Motor Vehicle Emissions Budget
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
OBD	Onboard Diagnostics
OD	Origin-Destination
ONI	Off-Network Idling
PACP	Pre-analysis Consensus Plan
PAH	Polycyclic Aromatic Hydrocarbons
PC	Passenger Car
PM	Particulate Matter
RIF	Road Idle Fraction
RTP	Regional Transportation Plan
RVP	Reid Vapor Pressure
SHEI	Source Hours Extended Idling
SHI	Source Hours Idling
SHO	Source Hours Operating
SHP	Source Hours Parked
SIP	State Implementation Plan
SUT	Source Use Type
T50	Temperature at which 50% of the fuel has evaporated
T90	Temperature at which 90% of the fuel has evaporated

TAME	Tert-Amyl Methyl Ether
TAZ	Traffic Analysis Zone
TCEQ	Texas Commission on Environmental Quality
TCM	Transportation Control Measure
TDM	Travel Demand Model
TERM	Transportation Emission Reduction Measure
TIP	Transportation Improvement Program
TTI	Texas A&M Transportation Institute
TxDMV	Texas Department of Motor Vehicles
TxDOT	Texas Department of Transportation
USC	U.S. Code
VHT	Vehicle Hours of Travel
VMT	Vehicle Miles of Travel
VOC	Volatile Organic Compound
VPGF	Vehicle Type of Population Growth Factor

1. EXECUTIVE SUMMARY

1.1 CONFORMITY OVERVIEW

The Clean Air Act Amendments of 1990 (CAAA) require transportation plans, programs, and projects in nonattainment and maintenance areas, funded or approved by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA), to conform to the motor vehicle emissions budgets (MVEBs) established in the state implementation plan (SIP) and deemed adequate or approved by the U.S. Environmental Protection Agency (EPA). Nonattainment areas with no MVEBs must demonstrate conformity by satisfying interim emissions test(s). Satisfying MVEBs or interim emissions tests ensure that transportation plans, programs, and projects do not produce new air quality violations, worsen existing violations, or delay the timely attainment of National Ambient Air Quality Standards (NAAQS). Section 176(c)(4) of the CAAA requires metropolitan planning organizations (MPOs), for areas designated as nonattainment and/or maintenance for a NAAQS, to conduct an air quality conformity analysis to demonstrate that metropolitan transportation plans (MTPs)/regional transportation plans (RTPs) and/or transportation improvement programs (TIPs) are consistent with the region's air quality goals.

This conformity analysis requires MVEB test(s) that must demonstrate that the total emissions for the nonattainment or maintenance area are less than or equal to the applicable SIP MVEB(s), which establish emissions ceilings for the regional transportation network. As the El Paso regional MPO, El Paso MPO is responsible for conducting the air quality conformity analysis to address the 2015 Ozone and PM₁₀ NAAQS.

In addition, this conformity analysis must satisfy the less-than-baseline interim emissions tests. For the less-than-baseline test, the build (or action scenario) emissions for each analysis year must be less than the baseline-year¹ emissions. As the El Paso MPO, El Paso MPO is responsible for conducting the air quality conformity analysis to address the 2015 Ozone NAAQS for the portion of Doña Ana County near Sunland Park, NM nonattainment area.

1.2 AIR QUALITY AND NONATTAINMENT AREA

1.2.1 Air Pollution

Pollutants covered in this conformity analysis include the following.

Precursors to ozone: Volatile organic compounds (VOCs) and nitrogen oxides (NOx):
“Ground-level ozone is a colorless compound formed when NOx and VOC chemically react in the presence of sunlight. It is not directly emitted into the air.

¹ Certain nonattainment areas are required to use one or both of the interim emissions tests before they have adequate or approved MVEB for the relevant NAAQS. One of the interim emissions tests is the baseline year test, where projected on-road mobile source emissions are compared to on-road mobile source emissions in the baseline year. The baseline year that must be used for comparison is available at <https://www.epa.gov/state-and-local-transportation/baseline-year-baseline-year-test-40-cfr-93119>.

Ground level ozone is known to trigger a variety of health problems and is particularly harmful to children, older adults, and people of all ages who have lung diseases, such as asthma” (source: EPA).

Carbon monoxide (CO): “CO is a colorless, odorless gas that can be harmful when inhaled in large amounts. CO is released when something is burned. The greatest sources of CO to outdoor air are cars, trucks and other vehicles or machinery that burn fossil fuels. Breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain. At very high levels, CO can cause dizziness, confusion, unconsciousness, and death” (source: EPA).

Particulate matter that is 10 micrometers in diameter or less (PM₁₀): “PM₁₀ are inhalable particles, with diameters that are generally 10 micrometers and smaller. PM₁₀ are either emitted directly from a source, such as construction sites, unpaved roads, fields, smokestacks, or fires, or formed in the atmosphere as a result of complex reactions of chemicals such as sulfur dioxide and nitrogen oxides, which are pollutants emitted from power plants, industries and automobiles. PM₁₀ can get deep into the lungs, and some may even get into the bloodstream” (source: EPA).

1.2.2 Nonattainment Area

Figure 1-1 shows the El Paso MPO boundary map along with boundaries for the PM₁₀ and 2015 Ozone NAAQS nonattainment areas.

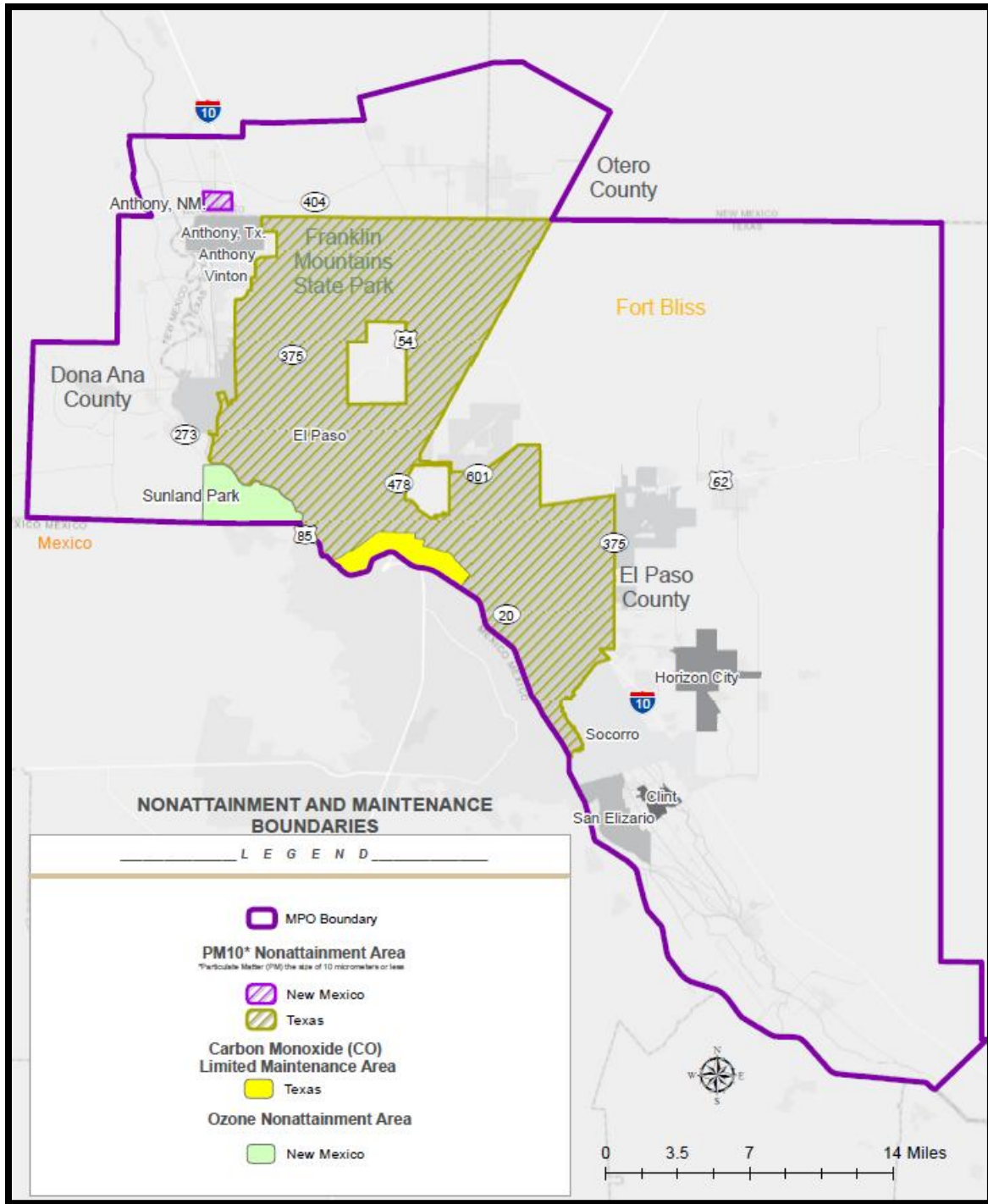


Figure 1-1. El Paso MPO Nonattainment and Maintenance Boundaries

¹As of 3/25/2026, the El Paso County area is in attainment status for 2015 Ozone NAAQS. However, the interagency consultative partners have elected to evaluate El Paso County NO_x and VOC emissions as part of this conformity analysis in case EPA issues a nonattainment designation for El Paso County in response to the D.C. Circuit Court decision before completion of this conformity process.

2015 Eight-Hour Ozone Standard Designation: Marginal Nonattainment, effective December 30, 2021 ([86 FR 67864](#)).

In August 2018, the City of Sunland Park, New Mexico and environmental petitioners challenged EPA's attainment/unclassifiable designation for El Paso County. On July 10, 2020, the D.C. Circuit Court of Appeals issued its opinion to remand (without vacatur) the El Paso County attainment designation to the EPA and require EPA to issue a revised El Paso County designation for the 2015 eight-hour ozone NAAQS as expeditiously as practicable. On December 21, 2020, TCEQ submitted supplemental information to the EPA in support of retaining El Paso County's original attainment designation. EPA sent an application [120-day letter](#) to Texas on May 25, 2021, notifying the governor that EPA intends to modify the designation for El Paso County to nonattainment as part of the existing Doña Ana partial-county (Sunland Park) ozone nonattainment area. On July 26, 2021, TCEQ submitted an application [response](#) requesting that EPA not modify El Paso County's existing attainment/unclassifiable designation consistent with all the information submitted by the state. On November 30, 2021, EPA published a final nonattainment designation for the 2015 eight-hour ozone NAAQS for El Paso County, effective December 30, 2021. EPA expanded the Sunland Park marginal nonattainment area to include all of El Paso County and renamed the area as the "El Paso-Las Cruces, Texas-New Mexico nonattainment area."

On June 30, 2023, the D.C. Circuit Court of Appeals [reversed the nonattainment designation](#) for El Paso County, finding that EPA's action was impermissibly retroactive.

The interagency consultative partners have elected to evaluate El Paso County NO_x and VOC emissions as part of this conformity analysis in case EPA issues a nonattainment designation for El Paso County in response to the D.C. Circuit decision before completion of this conformity process.

Remanded 2015 Eight-Hour Ozone Standard Designation: Attainment/Unclassifiable, effective August 3, 2018 ([83 FR 25776](#))

On October 1, 2015, EPA lowered the primary and secondary eight-hour ozone NAAQS to 0.070 parts per million (ppm) ([80 FR 65292](#)). El Paso County was designated attainment/unclassifiable under the 2015 eight-hour ozone NAAQS, effective August 3, 2018.

2008 Eight-Hour Ozone Standard Designation: Unclassifiable/Attainment, effective July 20, 2012 ([77 FR 30088](#))

On March 27, 2008, EPA lowered the primary and secondary eight-hour ozone NAAQS to 0.075 ppm ([73 FR 16436](#)). El Paso County was designated unclassifiable/attainment under the 2008 eight-hour ozone NAAQS, effective July 20, 2012.

1997 Eight-Hour Ozone Standard Designation: Attainment, effective June 15, 2004 ([69 FR 23858](#))

EPA's Phase I Implementation Rule for the eight-hour ozone standard directs that areas such as El Paso that were designated nonattainment for the previous one-hour ozone standard but attainment

for the eight-hour ozone standard must submit a maintenance plan for eight-hour ozone. The El Paso maintenance plan was approved by EPA on January 15, 2009 ([74 FR 2387](#)).

Eight-Hour CO Standard Designation: Attainment, August 4, 2008 ([73 FR 45162](#))

The El Paso CO nonattainment area was restricted to a narrow strip of the city along the Rio Grande, in El Paso County, adjacent to Ciudad Juárez, Mexico. On February 13, 2008, the state submitted a revision to the SIP containing an eight-hour CO maintenance plan to provide for El Paso continued attainment of the eight-hour CO NAAQS until 2020. The redesignation request and maintenance plan were approved by EPA on August 4, 2008.

There have been no monitored violations of the CO eight-hour standard since 2001. The maintenance plan approved by EPA in August 2008 (effective on October 3, 2008), demonstrates that El Paso will remain in attainment of the CO standard for at least ten years following EPA approval. This maintenance plan includes a commitment to submit a second 10-year maintenance plan two years before the end of the first 10-year maintenance plan period. This was satisfied by a limited maintenance plan that was adopted by the TCEQ September 7, 2016 and approved by EPA September 8, 2017, effective October 10, 2017. The maintenance plan ensures that the area remains in attainment of the CO standard. The maintenance area boundary is described in the EPA Green Book as follows: “That portion of the City of El Paso bound on the north by Highway 10 from Porfirio Diaz Street to Raynolds Street, Raynolds Street from Highway 10 to the Southern Pacific Railroad lines, the Southern Pacific Railroad lines from Raynolds Street to Highway 62, Highway 62 from the Southern Pacific Railroad lines to Highway 20 and Highway 20 from Highway 62 to Polo Inn Road; bound on the east by Polo Inn Road from Highway 20 to the Texas Mexico border; bound from the south by the Texas-Mexico border from Polo Inn Road to Porfirio Diaz Street; and bound on the west by Porfirio Diaz Street from the Texas-Mexico border to Highway 10.”

PM₁₀ Standard Designation: Moderate Nonattainment, November 6, 1991 ([56 FR 56694](#))

The City of El Paso was designated nonattainment for PM₁₀ and classified as a moderate area upon enactment of the Federal Clean Air Act (FCAA) Amendments of 1990. On November 15, 1991, Texas submitted to EPA the SIP revision for the El Paso moderate nonattainment area, to demonstrate that the area would attain the PM₁₀ NAAQS no later than December 31, 1994. Modeling of U.S. emissions indicated that the nonattainment area would have been in attainment in 1991, and at the 1994 deadline, if not for emissions transported from outside the United States. Based on §179B of the FCAA, which provides that an area does not have to meet the moderate nonattainment deadline if the state demonstrates attainment if not for emissions from another country, there was no requirement for a reasonable further progress demonstration. EPA approved the El Paso PM₁₀ SIP revision, effective February 17, 1994 ([59 FR 02535](#)).

The TCEQ submitted "Revisions to the State Implementation Plan (SIP) for Inhalable PM₁₀: 1991 PM₁₀ SIP for Moderate Area - El Paso" to the EPA in 1991. The EPA approved the SIP submittal in 1994. The PM₁₀ nonattainment area described in the EPA Green Book is the City of El Paso.

New Mexico PM₁₀ SIP

Anthony, New Mexico, in Doña Ana County, was designated as nonattainment for the PM₁₀ 24-hour NAAQS in 1991. Part of the PM₁₀ Moderate Area SIP Guidance requires anthropogenic (man-made) source categories with significant emissions to be analyzed for technical and economic feasibility of implementing control measures ([New Mexico's PM₁₀ SIP](#)). There is no PM₁₀ budget established for Anthony, NM, however, an air quality assessment may be conducted on an individual project basis, in coordination with the New Mexico consultative partners, to examine the potential effects on PM₁₀ within the Anthony, NM PM₁₀ nonattainment area.

The nonattainment area is described in the EPA Green Book as the following:

“The area bound by Anthony Quadrangle, Anthony, New Mexico - Texas. SE/4 La Mesa 15' Quadrangle, N3200 - W10630/7.5, Township 26S, Range 3E, Sections 35 and 36 as limited by the New Mexico - Texas State line on the south”.

New Mexico Ozone SIP

Doña Ana County historically had air quality problems, including particulate matter and ozone pollution. In 1995, the EPA declared a 42 square-mile region in the southeast corner of the county on the border of Texas and Mexico as a marginal nonattainment area for the 1-hour ozone standard. The nonattainment area included the City of Sunland Park, and two census designated places, Santa Teresa, and La Union. Sunland Park was officially designated as nonattainment for ozone in a Federal Register announcement published June 12, 1995 ([60 FR 30789](#)).

On April 30, 2004, EPA designated the Sunland Park area as attainment of the 1997 8-hour ozone standard. As part of implementation of the 1997 8-hour ozone standard, EPA revoked the 1-hour ozone standard in 2004. Due to this revocation, New Mexico was required to provide a 10-year [maintenance plan](#) for the Sunland Park 1997 8-hour ozone attainment area under section 110(a)(1) of the Clean Air Act. Motor vehicle emissions budgets were not required under the 110(a)(1) maintenance plan, and therefore none were developed or approved.

On October 1, 2015, the EPA revised the 8-hour Ozone NAAQS ([73 FR 16436](#)), from 0.075 parts per million (ppm) to 0.070 ppm ([80 FR 65292](#)). In 2016, New Mexico Environment Department (NMED) [recommended](#) that EPA designate a portion of Doña Ana County near Sunland Park, NM as nonattainment (Appendix A). Based on 2014-2016 ozone monitoring data, EPA designated the area as a marginal nonattainment area on June 4, 2018 (Effective August 3, 2018) ([83 FR 25776](#)).

The Sunland Park baseline emissions inventory and emissions statement SIP Revision and Certification was submitted to EPA September 10, 2020, and approved October 15, 2021 ([86 FR 57388](#)). NMED's Nonattainment New Source Review (NNSR) permitting requirements (20.2.79 NMAC; Permit-Nonattainment Areas) SIP Revision was amended by the Environmental Improvement Board on June 25, 2021, and submitted to EPA July 30, 2021, for approval in meeting the 2015 O₃ NAAQS. Please note that adoption of Reasonably Available Control Technologies (RACT) is not required for marginal ozone nonattainment areas and NMED has not included these in our SIP Revisions.

1.3 MTP AND TIP

This conformity determination is being prepared to ensure that the RMS2052 and 2027-2030 RMS TIP meet the conformity-related requirements of the CAAA, SIP, and final conformity rule (Title 40 of the Code of Federal Regulations [CFR], Parts 51 and 93).

Per 23 CFR 450.324, all projects are constrained by the financial resources estimated to be reasonably available within the transportation plan time frame. A list of the projects in the RMS 2052 and 2027-2030 RMS TIP that affect this conformity analysis is included in Appendix B—MTP and TIP of this conformity report.

1.4 ANALYSIS

This emissions analysis for determining conformity was performed under 40 CFR 93.109(c)(2)(ii)(B):

The analysis years for this conformity are:

- **2017**; since there are no adequate or approved budgets for the Doña Ana County 2015 Ozone NAAQS nonattainment area, a baseline year of 2017 has been included to satisfy the conformity rule's interim emissions test requirements 40 CFR 93.119.
- **2027**; analysis year will be solely for the Sunland Park 2015 Ozone NAAQS interim emissions test, which would satisfy the first analysis year requirement of 40 CFR 93.119(g)(1).
- **2032, 2042, and 2052** (the MTP horizon year)

The PM₁₀ MVEB applies to El Paso County.

For this conformity determination, regional emissions analysis for carbon monoxide (CO) will not be conducted based upon the U.S. Environmental Protection Agency (EPA) approval of the El Paso CO Limited Maintenance Plan (LMP) in September 2017. In accordance with CO LMPs, a regional emissions analysis for analysis years beyond 2020 is not required.

On November 20th, 2025, El Paso MPO hosted a consultative partners conference call during which participants agreed to evaluate El Paso County NO_x and VOC emissions as part of this conformity analysis in case EPA issues a nonattainment designation for El Paso County in response to the D.C. Circuit decision before completion of this conformity process.

Since there are no adequate or approved budgets for the Doña Ana County ozone nonattainment area, an interim emissions test will be used. A baseline year 2017 has been included to satisfy the conformity rule's interim emissions test requirements (40 CFR 93.119). Furthermore, the baseline year emissions need to be modeled rather than interpolated, based on the latest planning assumptions, latest emissions model and appropriate methods for estimating travel and speeds.

2027 analysis year will be solely for the Sunland Park 2015 Ozone NAAQS interim emissions test. 2027 would satisfy the first analysis year requirement of 40 CFR 93.119(g)(1).

1.5 FINDINGS

The PM₁₀, VOC, and NO_x pollutant(s) vehicle summer/winter weekday period emission results shown in Table 1-1 below demonstrate that the El Paso Metropolitan nonattainment region meets the regional air quality conformity requirements 2015 Ozone and PM₁₀ NAAQS.

Table 1-1. El Paso Texas PM₁₀ (summer/winter seasons) and potential 2015 8-hour Ozone NAAQS (summer season) nonattainment areas Conformity VMT and Emissions Analysis Summary

Analysis Year	Total VMT	NO _x ¹ Budget (Tons/Day)	NO _x Emissions (Tons/Day)	VOC ¹ Budget (Tons/Day)	VOC Emissions (Tons/Day)	PM ₁₀ ² Budget (Tons/Day)	PM ₁₀ Emissions (Tons/Day) (summer/winter)
2032	22,611,188	39.76 ⁴	5.25	36.23 ⁴	4.00	12.05 ³	6.02/6.68
2042	24,139,993	39.76 ⁴	3.35	36.23 ⁴	3.12	12.05 ³	6.40/7.11
2052	25,194,212	39.76 ⁴	3.12	36.23 ⁴	2.90	12.05 ³	6.58/7.32

¹Ozone (VOC and NO_x) include summer figures. The VOC and NO_x budget is based on the 1996 one-hour ozone SUPER SIP. Using 2017 weather station data.

²The PM₁₀ budget is based on the 1994 PM₁₀ Mobile Emissions Inventory. Using 2017 weather station data.

³[Transportation Conformity: Motor Vehicle Emissions Budgets \(MVEB PM₁₀ SIP\)](#)

⁴[Transportation Conformity: Motor Vehicle Emissions Budgets \(MVEB One-Hour Ozone SUPER SIP\)](#)

Table 1-2. Sunland Park (Dona Ana County, New Mexico) 2015 8-hour Ozone NAAQS nonattainment area VMT and the interim emissions test no-greater-than baseline year Analysis Summary (summer season) ^{1,2}

Analysis Year	Total VMT	NO _x Emissions (Tons/Day) (summer)	VOC Emissions (Tons/Day) (summer)
2017 Baseline year	97,898	0.09	0.044
2027	113,202	0.03	0.026
2032	115,342	0.02	0.021
2042	121,310	0.01	0.016
2052	126,704	0.01	0.015

¹This conformity determination demonstrates that the total emissions calculated from the modeled roadway network for future years will be at levels below the baseline year (2017) as required for the interim emissions test no-greater-than baseline year. Table 1-2 provides the conformity results for the VOC and NO_x no greater-than-baseline year emissions tests.

²El Paso regional TDM zones comprising the Sunland Park part of the El Paso-Las Cruces TX-NM ozone nonattainment area, in Doña Ana County, NM.

The results of the conformity determination demonstrate that RMS 2052 and 2027-2030 RMS TIP meet the requirements of the air quality SIP for the El Paso Metropolitan Planning nonattainment

area per the CAAA (Title 42 U.S. Code [USC], [Parts 7504, 7506 \[c\], and 7506 \[d\]](#)), as amended on November 15, 1990, and the final conformity rule ([40 CFR 51](#) and [93](#)).

2. TRANSPORTATION CONFORMITY REQUIREMENTS

2.1 WHAT IS TRANSPORTATION CONFORMITY?

As mandated under CAAA Section 176(c), transportation conformity ensures that federally supported transportation activities align with and conform to the objectives outlined in a state's SIP. A SIP serves as the state air quality blueprint for meeting the NAAQS. The SIP consists of a compilation of legally enforceable rules and regulations crafted by a state or local air quality agency. The governor of the state submits this plan to EPA for approval. The primary goal of SIP is to enhance air quality by achieving, progressing toward, or maintaining compliance with the NAAQS. Each SIP specifies emissions reductions for every pollutant or precursor, categorized by source type, including on-road motor vehicles, non-road equipment and vehicles, stationary sources, and area sources.

Before an RTP/MTP or TIP can be adopted, approved, or accepted in nonattainment areas, MPOs and the U.S. Department of Transportation (DOT) must make conformity determinations on these documents. As described in Section 176(c)(1) of the CAAA, transportation conformity is granted when the following conditions are met:

- (A) Conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards.
- (B) That such activities will not:
 - i. Cause or contribute to any new violation of any standards in any area;
 - ii. Increase the frequency or severity of any existing violation of any standard in any area; or
 - iii. Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

A new conformity determination must be performed any time an RTP/MTP is amended in a significant manner, when a region or state's air quality goals change, and/or every 4 years.

2.2 CONFORMITY REQUIREMENTS

The CAAA requires transportation plans, programs, and projects in nonattainment and maintenance areas, which are funded or approved by FHWA or FTA, to conform to the MVEBs established in the SIP, or to satisfy applicable interim emissions tests, absent MVEBs. A regional emissions analysis is the key analytic component of the transportation conformity process. It is conducted to demonstrate that:

- Regional emissions from on-road sources do not exceed the established MVEB or satisfy interim emissions test(s), absent an MVEB.

- Regional emissions from on-road sources do not cause or contribute to violations of EPA's NAAQS.
- Transportation activities are consistent with air quality goals identified in the SIP.

As stipulated by the CAAA, requirements for conformity analysis include:

- Use of the latest planning assumptions ([40 CFR 93.110](#)).
- Analysis based on the latest emission estimation model available ([40 CFR 93.111](#)).
- Interagency consultation and a public involvement process, which must be conducted during the analysis ([40 CFR 93.112](#)).
- Timely implementation of transportation control measures (TCMs) ([40 CFR 93.113](#)).
- A transportation plan and TIP that are consistent with the MVEBs established in the applicable SIP (if there is an adequate or approved SIP budget) ([40 CFR 93.118](#)).
- Inclusion of all regionally significant projects expected in the nonattainment and maintenance area in the transportation plan and/or TIP ([40 CFR 93.114](#) and [93.115](#)).

The determination of the analysis is a two-step process in metropolitan areas. The first step is for the MPO to make the initial transportation conformity determination at the local level. For the El Paso region, the El Paso MPO policy body makes this decision. The second step is for FHWA and FTA to make a joint transportation conformity determination at the federal level. Upon federal approval, a 4-year window begins during which projects, programs, and policies identified in the MTP and TIP may move toward implementation.

2.3 EMISSIONS ANALYSIS

A regional emissions analysis is the key analytic component of the transportation conformity process. The emissions analysis is conducted to demonstrate that:

- Regional emissions from on-road sources
 - Do not exceed the established MVEBs for El Paso Texas PM₁₀ and potential 2015 8-hour Ozone NAAQS nonattainment areas
 - And the analysis-year build emissions are less than the analysis-year no-build emissions for Sunland Park (Dona Ana County, New Mexico) 2015 8-hour Ozone NAAQS nonattainment area
- Regional emissions from on-road sources do not cause or contribute to violations of the EPA NAAQS.
- Transportation activities are consistent with air quality goals identified in the SIP.

2.3.1 Regional Inventory

This conformity analysis of the El Paso nonattainment area accounts for emissions resulting from the nonattainment area's RMS 2052 MTP, which includes all regionally significant projects located within the El Paso Metropolitan nonattainment area, and the effects of emission control programs adopted by an enforcing jurisdiction.

2.3.2 Emissions Tests

Conformity determinations must demonstrate consistency between expected emissions from implementing the MTP and TIP with the MVEBs in the applicable implementation plan.

This conformity analysis requires MVEB test(s) that must demonstrate that the total emissions for the nonattainment or maintenance area are less than or equal to the applicable SIP MVEB(s), which establish emissions ceilings for the regional transportation network.

As the El Paso nonattainment area's MPO, the El Paso MPO is responsible for conducting the air quality conformity analysis to address the 2015 Ozone and PM₁₀ NAAQS. The MVEB for the El Paso region is summarized in Table 2-1.

Table 2-1. NAAQS and MVEB (Tons/Day)

NAAQS	Applicable SIP	Pollutant	MVEB (Tons/Day)
2015 8-hour ozone ¹	1-hour Ozone SIP	VOC	36.23
2015 8-hour ozone ¹	1-hour Ozone SIP	NOx	39.76
PM ₁₀	1987 PM ₁₀ SIP	PM ₁₀	12.05

¹ The interagency partners have elected to evaluate El Paso County NOx and VOC emissions as part of this conformity analysis in case EPA issues a nonattainment designation for El Paso County in response to the D.C. Circuit decision before completion of this conformity process. The VOC and NOx budget is based on the 1996 one-hour ozone SUPER SIP.

In addition, this conformity analysis must satisfy the less-than-baseline interim emissions tests. For the less-than-baseline test, the build (or action scenario) emissions for each analysis year must be less than the baseline-year emissions.

For the portion of Doña Ana County near Sunland Park, NM nonattainment area, El Paso MPO is responsible for conducting the air quality conformity analysis to address the Sunland Park 2015 Ozone NAAQS interim emissions test as listed in Table 2-2.

Table 2-2. NAAQS and Pollutant for the Sunland Park nonattainment area

NAAQS	Pollutant
2015 8-hour ozone	VOC
2015 8-hour ozone	NOx

2.3.3 Analysis Years

For the emission budget test, according to the conformity rule, [40 CFR 93.106](#), the regional emission analysis years should be selected according to the following:

- Any years within the time frame of the transportation plan, provided they are not more than 10 years apart.
- The attainment year must be an analysis year if it is in the timeframe of the plan.
- The first analysis year may not be more than 10 years from the base year used to validate the travel demand model (TDM).
- The transportation plan horizon year.

Table 2-3 shows the conformity analysis years and describes their corresponding requirements for calculations.

Table 2-3. Conformity Analysis Years

Requirements	Years
Baseline Conformity Year	2017 ¹
Attainment Year	N/A
Intermediate Analysis Year(s)	2027 ² , 2032, 2042
Horizon Year	2052

N/A = not applicable.

¹Since there are no adequate or approved budgets for the Doña Ana County ozone nonattainment area, a baseline year 2017 has been included to satisfied the conformity rule's interim emissions test requirements 40 CFR 93.119.

²2027 analysis year will be solely for the Sunland Park 2015 Ozone NAAQS interim emissions test. 2027 would satisfy the first analysis year requirement of 40 CFR 93.119(g)(1).

2.4 CHECKLIST

Table 2-4 shows the checklist detailing information relevant to this conformity document.

Table 2-4. Checklist of Items Required in This Conformity Review

Item	Regulation Referenced	Item Format	Location within Report (Appendix/Chapter)
RMS 2052 MTP	Part 93 Subpart A	Independent self-supporting document (electronic file)	Appendix B—MTP and TIP
2027-2030 RMS TIP	Part 93 Subpart A	Independent self-supporting document (electronic file)	Appendix B—MTP and TIP
RMS2052 Transportation Conformity document	Part 93 Subpart A	Independent self-supporting document (electronic file)	This document
Description of version of MOVES model being used	40 CFR 93.111	Discussion contained in conformity document	Chapter 5.1
MOVES input and output files		Electronic (compressed zip file)	Appendix Section D.1 MOVES Input and Output
MOVES emission factors		Electronic (compressed zip file)	Appendix Section D.2 MOVES Emission Factors
MOVES activity		Electronic (compressed zip file)	Appendix Section D.3 Activities

Item	Regulation Referenced	Item Format	Location within Report (Appendix/Chapter)
MOVES external reference files		Electronic (compressed zip file)	Appendix Section D.1 MOVES Input and Output
MOVES utilities		Electronic (pdf)	Appendix Section D.4 Emissions Modeling Utilities
Highway Performance Monitoring System adjustment(s), factors, and approach	40 CFR 93.122(b)(3)	Discussion contained in conformity document	Chapter 4.5
Description of TDM validation, including validation year	40 CFR 93.106(a)(1)(ii)	Discussion contained in conformity document	Chapter 4.1 and Appendix Section C.1 Travel Model Validation
Vehicle miles of travel		Electronic file	Appendix Section D.5 VMT, Speed, and Emissions Summaries
Average loaded speeds		Electronic file	Chapter 4.7.4
Centerline mile summaries for each analysis year		Electronic file	Appendix Section C.2 Centerline, and Lane Miles Summaries
Definition of regionally significant roadway system		Discussion contained in conformity document	Chapter 3.3
Files containing hourly distribution by county, roadway type, and vehicle type for vehicle miles of travel, vehicle hours, average operational speed, vehicle population, NO _x emissions, and VOC emissions		Electronic files in tab-delimited summary tables	Appendix Section D.5 VMT, Speed, and Emissions Summaries
Congestion Mitigation and Air Quality Improvement Program (CMAQ) projects containing emission benefits, methodologies, and implementation dates		Identified in TIP: independent self-supporting document (electronic file)	Appendix B—MTP and TIP
Roadway system (capacity staging)		Electronic file	Appendix Section C.3 Roadway Network Files
List of non-federal projects	In response to March 2, 1999, court ruling	Identified in MTP: independent self-supporting document (electronic file)	Appendix B—MTP and TIP
List of exempt projects	40 CFR 93.105(c) 40 CFR 93.126 40 CFR 93.127 40 CFR 93.128	Identified in MTP: independent self-supporting document (electronic file)	Appendix B—MTP and TIP
Evidence of fiscal constraint	40 CFR 93.108	Identified in TIP: independent self-supporting document (electronic file) and RMS2052 MTP Chapter 8. Financial Constraint Project List	Appendix B—MTP and TIP

Item	Regulation Referenced	Item Format	Location within Report (Appendix/Chapter)
Evidence of MTP specifically describing the transportation system envisioned for each analysis year	40 CFR 93.106(a)	Identified in MTP: independent self-supporting document (electronic file)	Appendix B—MTP and TIP
Evidence of public participation and response to comments	40 CFR 93.105	Electronic file	Appendix Section G.1 Meeting Information
Endorsements and/or resolutions		Electronic file	Appendix A—Resolution of Adoption
Transportation Policy Board Adoption		Electronic file	Appendix A—Resolution of Adoption
Applicable <i>Federal Register</i> notices and related documents		Discussion contained in conformity document	Throughout the conformity document and appendices
Interagency consultation		Electronic file	Appendix F—Interagency Consultation Process

3. MTP AND TIP

3.1 RMS 2052 AND 2027-2030 RMS TIP

3.1.1 Overview

El Paso MPO serves three counties in two states; El Paso County in Texas and the southern portions of Doña Ana and Otero counties in New Mexico. This region includes the PM₁₀ and 2015 8-hour ozone nonattainment areas, which covers El Paso County, Texas and Dona Aña County, New Mexico.

On May 22, 2026, RMS 2052 MTP and the 2027-2030 RMS TIP were considered for approval by the El Paso MPO Transportation Policy Board. The RMS 2052 MTP update covers a planning period of 2026 through 2052 and contains a list of projects fiscally constrained by estimates of reasonably available revenues. This update reflects the priorities for transportation investments within the El Paso MPO metropolitan planning area (MPA). A complete listing of fiscally constrained projects, as proposed under this conformity determination, is provided in Appendix Section B.1 Project Listings. This listing denotes projects that are regionally significant or otherwise subject to transportation conformity and those projects that are exempt from transportation conformity, are exempt from regional emissions analysis, or have been determined to be not regionally significant.

3.1.2 Submittal Frequency

Consistent with the requirements of [23 USC 134](#), the transportation plan and/or TIP are required to be updated every 4 years. Since El Paso Metropolitan Area is a nonattainment area for the PM₁₀ and 2015 ozone NAAQS, every amendment or update to the transportation plan and/or TIP must show conformity to the air quality budgets coming from the latest revisions to the SIP. If more than 4 years elapsed after DOT's transportation conformity determination for a plan update, a 12-month grace period shall be in force. At the end of this 12-month grace period, DOT's existing transportation conformity determination will lapse.

A conformity determination for a transportation plan must be based on the transportation plan and all amendments. According to [40 CFR 93.104](#), each new transportation plan and/or TIP update or amendment must be demonstrated to conform before amendments are approved by the El Paso MPO Policy Board or accepted by DOT unless the amendment merely adds or deletes exempt projects listed in [40 CFR 93.126](#), [93.127](#), or [93.128](#).

According to [42 USC 7506 I\(2\)\(E\)](#), the MPO must redetermine the conformity of existing transportation plans and programs not later than 2 years after the date on which the administrator:

- i. Finds a motor vehicle emissions budget to be adequate per [40 CFR 93.118\(e\)\(4\)](#) (as in effect on October 1, 2004);
- ii. Approves an implementation plan that establishes a motor vehicle emissions budget if that budget has not yet been determined to be adequate per clause (i); or

- iii. Promulgates an implementation plan that establishes or revises a MVEB.

3.1.3 Fiscal Constraints

All transportation plans prepared by the MPO are required to be fiscally constrained. Fiscal constraint is demonstrated by a financial plan that outlines reasonably available future revenues to implement the projects listed in the transportation plan. The constraints are:

- **Long-range financial constraint:** The transportation plans' financial element must identify all sources of funds reasonably expected to be available and any innovative financial strategies that may be necessary to implement the transportation plans. The RMS 2052 update estimates \$8.9B of revenue to be reasonably available to implement the recommendations. The RMS 2052 update's total expenditure is estimated to be approximately \$7.8B.
- **Short-range financial constraint:** Financial constraint is also required for a conforming TIP, with funds programmed being equal to the total funds available. The TIP comprises the first 4 years of transportation activities in the transportation plan. The 2027-2030 RMS TIP estimates \$1.3B of revenue to be reasonably available to implement the recommendations. The 2027-2030 RMS TIP total expenditure is estimated to be approximately \$1.3B.

3.2 REGIONALLY SIGNIFICANT TRAVEL PROJECTS/PROGRAMS

Per [40 CFR 93.101](#), regionally significant projects are transportation projects (other than an exempt project) that are on a facility that serves regional transportation needs (e.g., access to and from the area outside of the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, etc.; or transportation terminals and most terminals themselves). Regionally significant projects would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel.

The determination of regionally significant projects comes from the "Regionally Significant Project" definition found in [40 CFR Section 93.101](#). The definition is as follows:

"Regionally significant project means a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel."

The networks used in the TDM consist of existing and planned future roadways. Functionally classified roadways minor arterial and above are considered regionally significant. Some roadways are contained in the model that are not regionally significant but are necessary to define the traffic analysis zone (TAZ) structure used in the TDM, facilitating TDM performance (e.g., provide access and/or connectivity to the network from/to smaller urban TAZs or rural TAZs that are not bordered by regionally significant roadways).

Projects considered regionally significant are generally those that occur on regionally significant roadways and alter roadway capacity. Projects considered exempt are generally those that do not alter roadway capacity, whether or not they occur on regionally significant roadway, and meet the project types described in 40 CFR Section 93.126. Projects considered not regionally significant are those that are not exempt per 40 CFR Section 93.126, and do not occur on roadways defined as regionally significant.

3.3 OTHER PROJECTS/PROGRAMS

3.3.1 Non-federal Projects/Programs

Non-federal projects funded by sources such as local governments and local transportation authorities, such as signal improvements, intersection improvements, and local roadway widening, may be of insufficient scale or scope to require inclusion within a transportation conformity regional emissions analysis. These non-regionally significant projects that do not require any federal project approval actions (e.g., environmental clearance or permit approvals) are not individually listed within the transportation plan and/or TIP.

3.3.2 Exempt Projects/Programs

The regulation [40 CFR 93.126](#) identifies several project types that are exempt from the requirement of a conformity determination. When a conforming transportation plan or TIP is revised to add or remove an exempt project, a new conformity determination is not required. Some of the exempt projects listed under [40 CFR 93.126](#) include the continuation of ridesharing and vanpooling promotion activities at current levels, bicycle and pedestrian facilities, railroad/highway crossings, fencing, shoulder improvements, the purchase of replacement transit vehicles, and road landscaping.

Additionally, [40 CFR 93.127](#) identifies project types that are exempt from a regional emissions analysis but may still require project-level conformity. These include intersection channelization projects, intersection signalization projects at individual intersections, interchange reconfiguration projects, changes in vertical and horizontal alignment, truck size and weight inspection stations, and bus terminals and transfer points.

Finally, [40 CFR 93.128](#) exempts traffic signal synchronization projects; however, regionally significant traffic signal synchronization projects must be included in subsequent regional emissions analyses.

4. VEHICLE ACTIVITY ESTIMATION

4.1 OVERVIEW OF THE TRAVEL MODEL

The El Paso MPO TDM serves as the source for forecasting VMT and other travel characteristics for El Paso County in Texas and the southern portions of Doña Ana and Otero counties in New Mexico. The TDM is executed in the TransCAD environment. The model base year is 2022, and the forecasted years are 2027, 2032, 2042 and 2052. The trip characteristics forecasted include the number of trips, trip origins-destinations (ODs), and travel mode. The model assigns all vehicle trips to the roadway network and produces VMT at the link level. The VMT is then processed by the emissions estimation model for developing base and forecasted years emissions.

4.2 TRANSPORTATION MODELING PROCESS

The forecasting technique is based on a four-step sequential process designed to model travel behavior and predict the level of travel demand at regional, sub-area, or small-area levels. These four steps are trip generation, trip distribution, mode choice, and roadway assignment.

4.2.1 Trip Generation Model

The basic geographic unit for the travel demand models is the TAZ. Trip generation was performed using trip rate cross-classification tables, and balancing attractions to productions. Trip generation model is done using TripCAL6, a software developed by the Texas Transportation Institute. The travel model covers 1,235 square miles which includes El Paso County in Texas, and parts of Doña Ana and Otero Counties in New Mexico; and contains 869 TAZs, of which 848 are internal zones and 21 are external zones or stations.

For this conformity analysis, the defined base year for the forecast is 2022. The demographic estimates and forecasts were developed, first as regional control totals for the entire El Paso MPO area by the Texas Demographic Center, for years 2022, 2027, 2032, 2042 and 2052. Then, through a land-use model (using UrbanSIM software) calibrated and validated for the El Paso MPO area, control total demographics for each forecast year are distributed geographically to the TAZ level, considering land-use zoning policies, land availability and cost, among other land-market variables, as well as travel accessibility conditions from the transportation networks.

4.2.2 Trip Distribution Model

The trip distribution model determines the interaction between each zone within the study area. The model connects trip ends estimated in the trip generation model, creating OD TAZ pairs and resulting in OD trip tables. This step is performed using the a doubly-constrained Gravity model available as a module within the TransCAD software.

Trips were allocated based on friction factors calibrated from Trip-Length Frequency Distributions (TLFD) by trip purpose obtained from a combination of available travel surveys and Location-Based Services (LBS) data from mobile devices. Then, a reasonableness check was performed to ensure that the modeled trip information was consistent with observed origin-

destination sample (proportional) LBS data, as well as goodness-of-fit comparisons between resulting modeled vs observed TLFDs.

4.2.3 Mode Choice Model

The mode choice model subsequently determines the mode of travel selected by travelers. This determination is performed using a Nested Logit Model. These decisions are based on the characteristics of:

- The trip maker (income and auto sufficiency).
- The trip (purpose, length, and orientation).
- The availability and utility of the competing transportation modes.

Table 4-1 shows the mode choices included.

Table 4-1. Mode Choices Modeled

Number	Mode Choice	Sub-Nests
1	Auto	1, 2, & 3+ occupancy
2	Transit	Walk access & drive access
3	Non-motorized	Walk & bicycle

4.2.4 Roadway Assignment Model

The Roadway Assignment Model loads the travel demand (trips) to the roadway network, calculates delay for congested links, and reassigns as necessary to achieve network equilibrium. This step is performed using User Equilibrium Roadway Assignment Model.

4.3 SPEED ESTIMATION PROCEDURE

As part of the TDM calibration process, speeds for each roadway facility type are estimated and further categorized by area type. These input speeds reflect the average daily travel speeds. The traffic assignment step produces estimated congested travel speeds based on traffic flows and application of the volume-delay function. The speeds input to trip distribution and mode choice are generally not consistent with the speeds output from traffic assignment. To rectify this inconsistency, results from the traffic assignment are used to re-compute zone to zone travel times (speed feedback loop). The model is re-run, and a comparison is then made between the initial and updated zone to zone travel times. If the travel times are not reasonably similar, the updated travel times are then fed back to trip distribution and mode choice. This process is repeated iteratively until a convergence criterion, or iteration limit is met.

4.4 LOCAL STREET VMT

The roadway network of the regional TDM does not contain details of local (residential) streets. However, a local street VMT estimate is possible based on data provided by the travel model.

Local street VMT is calculated for each county by multiplying the number of intrazonal trips by the intrazonal trip length and then adding the VMT from the centroid connectors. The temporal distribution is assumed to be the same as for non-local streets.

4.5 MODEL VMT ADJUSTMENTS

Adjustment factors based on the Texas Department of Transportation's (TxDOT's) Highway Performance Monitoring System (HPMS) data and automated traffic recorder (ATR) data were applied to the TDM's VMT to ensure consistent reporting across the state. For future analysis years, an HPMS adjustment factor was applied to the model-estimated time-of-day VMT prior to the estimation of time-of-day speeds. Seasonal, daily, and hourly adjustment factors, developed from ATR data, were applied to both historic and future years to convert the TDM VMT to season-specific, day-type-specific, and hourly VMT. As a result, the time-of-day speeds used in the emissions estimation are based on HPMS- and ATR-adjusted VMT. This methodology is consistent with the procedures used by the Texas A&M Transportation Institute (TTI) in developing model adjustment factors for the rest of Texas.

4.5.1 HPMS Adjustments

The HPMS adjustment factor is applied to the model-estimated time-of-day VMT prior to the estimation of time-of-day speed for future years. In this way, the time-of-day speeds used in the estimation of emissions are based on the HPMS-adjusted VMT. The factor used to reconcile model-estimated regional VMT to HPMS-estimated regional VMT is calculated by dividing the HPMS-estimated average non-summer weekday VMT on the TDM validation year:

$$HPMS\ ANSWT\ VMT = HPMS\ AADT\ VMT \times AADT_to_ANSWT\ Factor$$

$$HPMS\ Factor = HPMS\ ANSWT\ VMT / TDM\ VMT$$

Where:

$$HPMS\ ANSWT\ VMT = \text{HPMS-based annual non-summer weekday traffic VMT.}$$

$$HPMS\ AADT\ VMT = \text{HPMS-based annual average daily traffic VMT}$$

As Table 4-2 shows, the HPMS adjustment factor was calculated based on these calculations.

Table 4-2. 2022 HPMS Factor

HPMS AADT VMT ¹	AADT-to-ANSWT Factor	HPMSANSWT VMT	TDM VMT ¹	HPMS Factor ²
18,622,623.000	1.063608	19,807,171.000	18,006,439.000	1.100005

¹ Total of counties included. Counties included were El Paso County, Southern Doña Ana County, and a portion of Otero County.

² Applied to all analysis years and areas in the TDM. 2017 baseline year is using 2017 HPMS VMT to reconcile.

4.5.2 Seasonal Adjustments

Seasonal adjustment factors are used to adjust the TDM's VMT to seasonal VMT for historic years and future years. The seasonal adjustment factors were developed using the 2014 to 2023 ATR data over the years. To adjust the representative seasonal weekday traffic VMT from TDM to the specified day types in the summer and winter season, ratios were calculated:

- 1) Dividing the average day-of-week (weekday) count for the summer (June–August) or winter (December–February) episodes by ANSWT count for future years,
- 2) Dividing the average day-of-week (weekday) count for the summer (June–August) or winter (December–February) episodes by the AADT count for historic years. Table 4-3 shows the seasonal adjustment factors.

Table 4-3. Seasonal Adjustment Factors

Season	Counties	Historic Year Adjustment Factor	Future Year Adjustment Factor
Summer weekday	El Paso County, Southern Doña Ana County, and a portion of Otero County	1.02925	0.967696
Winter weekday	El Paso County, Southern Doña Ana County, and a portion of Otero County.	1.096595	1.031014

4.5.3 Hourly Adjustments

The hourly factors in Table 4-5 are used to convert the TDM output into hourly VMT. The hourly factors were developed using the 2014 to 2023 ATR data over the years.

Table 4-4. Hourly Distribution of VMT by Season

Factor	Information	
Season	Summer	Winter
Hour	Hourly Factor	
00:00–1:00	0.010846	0.009563
1:00–2:00	0.007215	0.006561
2:00–3:00	0.005870	0.005561
3:00–4:00	0.005968	0.005750
4:00–5:00	0.008663	0.008215
5:00–6:00	0.019998	0.018170
6:00–7:00	0.037990	0.038030
7:00–8:00	0.061414	0.063998
8:00–9:00	0.062268	0.063625
9:00–10:00	0.055349	0.055606
10:00–11:00	0.053289	0.053845
11:00–12:00	0.055258	0.056193
12:00–13:00	0.058304	0.059301
13:00–14:00	0.059668	0.061020
14:00–15:00	0.062166	0.063698
15:00–16:00	0.066269	0.069345
16:00–17:00	0.070171	0.073709
17:00–18:00	0.071267	0.073076
18:00–19:00	0.061898	0.062129
19:00–20:00	0.048916	0.047166
20:00–21:00	0.039984	0.036542
21:00–22:00	0.032893	0.029697
22:00–23:00	0.025890	0.022994
23:00–24:00	0.018446	0.016206
Total	1.000000	1.000000

Table 4-5. Summer Weekday Hourly VMT Distribution

Period	Hour	24-hour	4-Period
overnight	12:00 a.m. to 01:00 a.m.	0.010846	0.041290
overnight	01:00 a.m. to 02:00 a.m.	0.007215	0.027467
overnight	02:00 a.m. to 03:00 a.m.	0.005870	0.022347
overnight	03:00 a.m. to 04:00 a.m.	0.005968	0.022720

Period	Hour	24-hour	4-Period
overnight	04:00 a.m. to 05:00 a.m.	0.008663	0.032979
overnight	05:00 a.m. to 06:00 a.m.	0.019998	0.076131
overnight	06:00 a.m. to 07:00 a.m.	0.037990	0.144625
AM peak	07:00 a.m. to 08:00 a.m.	0.061414	0.343036
AM peak	08:00 a.m. to 09:00 a.m.	0.062268	0.347806
AM peak	09:00 a.m. to 10:00 a.m.	0.055349	0.309159
midday	10:00 a.m. to 11:00 a.m.	0.053289	0.184592
midday	11:00 a.m. to 12:00 p.m.	0.055258	0.191413
midday	12:00 p.m. to 01:00 p.m.	0.058304	0.201964
midday	01:00 p.m. to 02:00 p.m.	0.059668	0.206689
midday	02:00 p.m. to 03:00 p.m.	0.062166	0.215342
PM peak	03:00 p.m. to 04:00 p.m.	0.066269	0.245800
PM peak	04:00 p.m. to 05:00 p.m.	0.070171	0.260273
PM peak	05:00 p.m. to 06:00 p.m.	0.071267	0.264339
PM peak	06:00 p.m. to 07:00 p.m.	0.061898	0.229588
overnight	07:00 p.m. to 08:00 p.m.	0.048916	0.186220
overnight	08:00 p.m. to 09:00 p.m.	0.039984	0.152216
overnight	09:00 p.m. to 10:00 p.m.	0.032893	0.125221
overnight	10:00 p.m. to 11:00 a.m.	0.025890	0.098561
overnight	11:00 p.m. to 12:00 a.m.	0.018446	0.070223

Table 4-6. Winter Weekday Hourly VMT Distribution

Period	Hour	24-hour	4-Period
overnight	12:00 a.m. to 01:00 a.m.	0.009563	0.039120
overnight	01:00 a.m. to 02:00 a.m.	0.006561	0.026839
overnight	02:00 a.m. to 03:00 a.m.	0.005561	0.022749
overnight	03:00 a.m. to 04:00 a.m.	0.005750	0.023522
overnight	04:00 a.m. to 05:00 a.m.	0.008215	0.033605
overnight	05:00 a.m. to 06:00 a.m.	0.018170	0.074329
overnight	06:00 a.m. to 07:00 a.m.	0.038030	0.155571
AM peak	07:00 a.m. to 08:00 a.m.	0.063998	0.349279

Period	Hour	24-hour	4-Period
AM peak	08:00 a.m. to 09:00 a.m.	0.063625	0.347243
AM peak	09:00 a.m. to 10:00 a.m.	0.055606	0.303478
midday	10:00 a.m. to 11:00 a.m.	0.053845	0.183111
midday	11:00 a.m. to 12:00 p.m.	0.056193	0.191096
midday	12:00 p.m. to 01:00 p.m.	0.059301	0.201665
midday	01:00 p.m. to 02:00 p.m.	0.061020	0.207511
midday	02:00 p.m. to 03:00 p.m.	0.063698	0.216618
PM peak	03:00 p.m. to 04:00 p.m.	0.069345	0.249210
PM peak	04:00 p.m. to 05:00 p.m.	0.073709	0.264893
PM peak	05:00 p.m. to 06:00 p.m.	0.073076	0.262619
PM peak	06:00 p.m. to 07:00 p.m.	0.062129	0.223278
overnight	07:00 p.m. to 08:00 p.m.	0.047166	0.192943
overnight	08:00 p.m. to 09:00 p.m.	0.036542	0.149484
overnight	09:00 p.m. to 10:00 p.m.	0.029697	0.121482
overnight	10:00 p.m. to 11:00 a.m.	0.022994	0.094062
overnight	11:00 p.m. to 12:00 a.m.	0.016206	0.066294

4.5.4 Nonrecurring Congestion

Regional travel demand model does not model for nonrecurring congestion, and this emission model does not use any adjustment factor developed to account for nonrecurring congestion.

4.6 VEHICLE REGISTRATION DISTRIBUTIONS

Vehicle registration distributions were developed using the latest available Texas Department of Motor Vehicles (TxDMV) analysis-year-specific county vehicle registration data. Data from 2021 were used for the 2017 base year. The latest available data (2023) were used for the future analysis years 2027, 2032, 2042 and 2052. MOVES defaults were used where the required information was not available in the TxDMV data.

4.6.1 Age Fractions

The input values for each vehicle class are 31 age fractions representing the fraction of vehicles by age for that vehicle class as of the evaluation year. These age fractions start with the evaluation year as the first age fraction and work back in annual increments to end with the 30th fraction, which represents the fraction of vehicles of age 30 years and older. The fractions are calculated as the model-year-specific registrations in a class divided by the total vehicles registered in that class.

4.6.2 Alternative Fuel Vehicle Technology (AVFT)

AVFT fractions represent the share of vehicles by model year for each vehicle type and fuel type.

TTI developed the evaluation year-specific local gasoline, diesel and electricity fractions for the MOVES source use types passenger car, passenger truck, and light-duty truck using the 2021 TxDMV data for 2017 analysis year, and 2023 mid-year TxDMV data for all 2023 and beyond analysis years, aggregated to the TxDOT-El Paso District level.

TTI developed the evaluation year-specific local gasoline, diesel, and electricity fractions for the MOVES source use types single-unit and combination trucks using the 2021 TxDMV data for the 2017 analysis year, and 2023 mid-year TxDMV data for all 2023 and beyond analysis years, aggregated to the TxDOT-Statewide level.

TTI developed the evaluation-year-specific local diesel fractions for the MOVES single-unit and combination truck source use types using the latest TxDMV data for all analysis years. TxDOT–El Paso District aggregation applies only to passenger cars, passenger trucks, and light-duty trucks, providing a more localized representation of EV fractions using updated TxDMV registration data. Single-unit and combination truck fractions continue to use statewide aggregation, and other source types use MOVES defaults. The revised text also identifies the data vintages: 2021 TxDMV data for the 2017 analysis year and 2023 mid-year TxDMV data for analysis years 2023 and beyond. The locally developed fractions include gasoline, diesel, and electricity.

For all source types, CNG and electricity fractions were set to zero and the gasoline/diesel/flex-fuel fractions were normalized (sum to 1.0) for each source type and model year. Fuel usage for flex-fuel vehicles was set to 100 percent gasoline (in the fuel usage fraction input table).

4.7 ESTIMATION OF ON-NETWORK ACTIVITY

4.7.1 VMT Mix

VMT mix (or fractions) is very important to be able to estimate link emissions. The VMT mix is applied to the adjusted VMT in a post-process methodology to describe the share of vehicles for each vehicle type and fuel type on the road. The VMT mix enables the assignment of emission factors by vehicle type and fuel type to VMT to calculate emissions on a specified roadway facility or functional class. VMT mix is estimated for four MOVES roadway types: rural restricted (rural freeways), rural unrestricted (rural arterials and collectors), urban restricted (urban freeways), and urban unrestricted (urban arterials and collectors) for daily time periods for each of the modeled counties. Each county's roadway sections are classified as rural or urban by the vehicle activity behavior and the demographics of the county. The VMT mix methodology uses data, assumptions, and procedures from the TxDOT, TTI, and El Paso region TDM.

Consistent with the prior analysis, the VMT mixes were produced in 5-year increments and applied to analysis years as follows:

- **2015 VMT mix for 2013 through 2017 analysis years.**

- **2020 VMT mix for 2018 through 2022 analysis years.**
- **2025 VMT mix for 2023 through 2027 analysis years.**
- **2030 VMT mix for 2028 through 2032 analysis years.**
- **2040 VMT mix for 2038 through 2042 analysis years.**
- **2050 VMT mix for 2048 through 2052 analysis years.**

Using the latest available vehicle classification counts 2014 to 2023 and MOVES4 defaults, TTI estimated the time-of-day (AM peak, midday, PM peak, and overnight) VMT mixes by the four MOVES road types. No seasonal adjustments were made for VMT mix.

4.7.2 Transit Systems

In the regional TDM, the mode choice model forecasts the number and location of transit trips. The transit trips are excluded from the highway assignment and do not contribute to roadway VMT. Transit vehicle emissions are included in the regional emissions analysis through the MOVES model using the appropriate source types and operational characteristics, ensuring that emissions associated with transit operations are fully represented in the conformity determination.

4.7.3 Roadway VMT

Roadway VMT is provided by hour, county, road type and area type. Appendix Section D.5 VMT, Speed, and Emissions Summaries contains all the network years with the final VMT estimates.

4.7.4 Average Loaded Speeds

Average loaded speeds are provided by hour, county, road type, and area type. The final average loaded speeds are listed in Appendix Section D.5 VMT, Speed, and Emissions Summaries.

4.7.5 Centerline and Lane Miles.

Centerline miles and lane miles are provided by functional class and area type for each analysis year and are listed in Appendix Section C.2 Centerline, and Lane Miles Summaries.

4.8 ESTIMATION OF OFF-NETWORK ACTIVITY

County-level, hourly estimates of the off-network idling (ONI), vehicle-population-based source hours parked (SHP), and vehicle-population-based start activity were required for each vehicle type to estimate the off-network emissions. Hotelling hours including source hours extended idling (SHEI) and auxiliary power unit (APU) hours estimates were needed to estimate the off-network hotelling emissions for combination long-haul trucks only.

The vehicle population and hourly SHP, starts, ONI, SHEI, and APU hours are available in the Appendix Section D.3 Activities.

4.8.1 Vehicle Population

Vehicle population data were required to estimate SHP and vehicle start activity. The vehicle population estimates were derived from the mid-year 2023 data, county-specific vehicle registration data provided by TxDMV, TxDOT district-level VMT mix data, and HPMS-reported county-level VMT totals. The analysis year vehicle population estimates were derived from the mid-year 2023 data, county-specific vehicle registration data provided by TxDMV, TxDOT district-level VMT mix data, and HPMS-reported county-level VMT totals. Since no 2017 registration data are available for use with the 2017 baseline, the 2021 mid-year TxDMV data will be used to scale for the 2017 analysis year.

The following steps were used to disaggregate the TxDMV vehicle registration data to vehicle population data by vehicle type:

1. VMT mix data were used to calculate the proportional representation of each MOVES vehicle type within each TxDMV aggregation class (first column of Table 4-7).

Table 4-7. Vehicle Registration Aggregations¹ and Vehicle Types

Vehicle Registration Aggregation	Associated Vehicle Type
Motorcycles	MC_Gas
Passenger cars	PC_Gas; PC_Diesel; PC_Electricity
Multipurpose Passenger Vehicle (MPV) and Truck<=10000	PT_Gas; PT_Diesel; PT_Electricity LCT_Gas; LCT_Diesel; LCT_Electricity
Bus other than School Bus	Obus_Gas; Obus_Diesel; Obus_Electricity TBus_Gas; TBus_Diesel; TBus_Electricity
School Bus	SBus_Gas; SBus_Diesel; SBus_Electricity
Motorhome	MH_Gas; MH_Diesel; MH_Electricity
Count of 10000<Truck<=19500 other than Motorhome	RT_Gas; RT_Diesel; RT_Electricity SUSHT_Gas; SUSHT_Diesel; SUSHT_Electricity
19500<Truck<33000 other than Truck-Tractor and Motorhome and with sleeping cab	SULhT_Gas; SULhT_Diesel; SULhT_Electricity
19500<Truck-Tractor with no sleeping cab	CShT_Gas; CShT_Diesel; CShT_Electricity
19500<Truck-Tractor and body type is Truck-Tractor with sleeping cab	CLhT_Diesel; CShT_Electricity

¹ The VIN number in the 2023 mid-year TxDMV county registrations data extracts were used for estimating the vehicle populations.

2. The proportional fractions calculated in step 1 were multiplied by the total number of vehicles reported in each TxDMV vehicle registration category to obtain the estimated number of vehicles (populations) for each modeled MOVES vehicle type.

Analysis-year vehicle type populations were then calculated by applying a vehicle type of population growth factor (VPGF). The VPGF was calculated using each analysis year's VMT in the summer weekday scenario divided by the county-level HPMS-reported total VMT for the registration data year **2023** in the summer weekday scenario.

4.8.2 Off-Network Idling Hours

ONI is an idling activity that occurs while a vehicle is idling in a parking lot, drive-through, or driveway while waiting to pick up passengers or loading/unloading cargo. ONI applies to all MOVES source types.

TTI estimates ONI hours activity (i.e., SHI off-network) for each hour of the day using the following formula:

$$ONI\ Hours = (SHO_{network} \times TIF - SHI_{network}) / (1 - TIF)$$

Where:

- $SHO_{network}$ is the source hours operating (SHO) on each link. This is calculated by dividing the VMT associated with each link by the link's congested speed.
- $SHI_{network}$ is the total SHI that occurs on the network (idling that occurs as a component of drive cycles) and is calculated by multiplying $SHO_{network}$ by a road idle fraction (RIF). RIF is the proportion of idling (in units of time) that occurs within a drive cycle at a specified operational speed. Default values for RIF were used as defined in the MOVES data table roadidlefraction.
- TIF is the total idle fraction or total idling time on- and off-network divided by total SHO on- and off-network: $TIF = (SHI_{network} + ONI) / (SHO_{network} + ONI)$. Default values for TIF were used as defined in the MOVES data table totalidlefraction.

4.8.3 Source Hours Parked

The next activity measure needed to estimate the off-network emissions is county-level estimates of SHP by hour and vehicle type. The SHP was estimated as a function of total source hours (hours a vehicle exists) minus its hours of operation on roads (SHO is the same as vehicle hours of travel [VHT]) and its hours of ONI.

The vehicle-type SHP estimates were calculated for each hour of the day based on the link VMT and speeds, the VMT mix used in the link-based emissions analysis, and the vehicle population estimates. The VMT mix was applied to the link VMT to produce VMT estimates by vehicle type. Link VMT was divided by the link speed to produce SHO estimates. SHO and ONI were aggregated across links and then subtracted from source hours (equal to the vehicle population since source hours equal the number of hours in the period), resulting in SHP estimates by vehicle type. This was performed for each analysis year, county, and hour of the day.

4.8.4 Start Activity

Vehicle start activity was estimated using county-level vehicle-type populations and data from MOVES representing the average number of starts per vehicle type per hour. The starts per vehicle per hour were using MOVES run to calculate from the input database with local data such as the age distribution and fuel fractions of the local fleet.

TTI used MOVES runs with the input database with local input data combined with MOVES default parameters (startsageadjustment, startsmothadjust June through August average for summer or December through February average for winter, and startspervehicle) to produce hourly starts per vehicle output representative of the June through August summer or December through February winter period. The output was then post-processed to produce the scenario-specific starts per vehicle for the summer period defined by the study scope. The weekday vehicle start estimates for each vehicle type were calculated by county, analysis year, and hour of the day.

4.8.5 Hoteling: Source Hours Extended Idling and Auxiliary Power Unit Hours

Hoteling hours were calculated for heavy-duty, long-haul trucks only (i.e., SUT ID 62 in MOVES) in several steps. First, total hoteling hours for a base year were calculated using information from the latest available Texas Commission on Environmental Quality (TCEQ) extended idling study.² Scaling factors, calculated based on the ratio of analysis year long-haul truck VMT and base year long-haul truck VMT, were then used to scale these base hoteling hours to those relevant in each analysis year, which were then allocated to each hour of the day. Estimations were then made of the proportions of hoteling hours that occur in each of the four hoteling categories: idling using the main engine (SHEI), diesel APU operation, electric APU operation, or main engine off and no auxiliary power based on the MOVES “*hotellingactivitydistribution*” table.³

4.8.5.1 Estimating 24-Hour Hoteling

County-level hoteling scaling factors were developed to transform base weekday total daily hoteling hours to daily hoteling hours for each conformity analysis-year scenario. Scaling factors were calculated using the ratio of heavy-duty long-haul VMT for each scenario relative to heavy-duty long-haul VMT for a winter weekday (scenario SUT 62 VMT divided by 2017 winter weekday SUT 62 VMT).

Total daily hoteling for each county and scenario was calculated by multiplying the appropriate scaling factor by the total daily hoteling hours contained in the winter weekday total daily hoteling hours study.

4.8.5.2 Hoteling by Hour Estimation

Daily hoteling hours were allocated to each hour of the day as a function of the inverse of activity scenario hourly VHT fractions for SUT 62. The hourly VHT fractions were calculated using the hourly VHT from the SHP estimation process ($VHT = SHO$). The inverses of these hourly VHT fractions were calculated and then normalized across all hours to produce the county-level, hoteling hours hourly distribution.

If the hourly hoteling hours were greater than the SHP (for SUT 62), the final hoteling hours estimate was set to the SHP.

² *Heavy-Duty Vehicle Idle Activity Study, Final Report*. Texas A&M Transportation Institute, Environment and Air Quality Division, July 2019.

³ Only SHEI and APU diesel hoteling generates emissions. The other fractions are calculated for completeness.

4.8.5.3 SHEI and APU

SHEI and APU hours components of hoteling hours were then estimated for each hour using the hourly hoteling hours estimates, combination long-haul truck travel fractions (calculated from local age distributions and MOVES default relative mileage accumulation rates), and hoteling activity distributions for each model year.

The SHEI and APU hours activity distribution fractions (see Table 4-8) were each first multiplied by the travel distribution (model-year operating mode activity fraction multiplied by the associated mode-year travel fraction). The products of the SHEI fractions and travel fractions were then summed to produce the total SHEI fraction, and the same process was performed for APU hours to produce the total APU hours fraction. (The sum of the SHEI and APU hours fractions subtracted from 1.0 results in the fraction of hoteling hours with electric power or no power in use.)

Table 4-8. Hoteling Activity Distribution by Model Year

First Model Year	Last Model Year	200 Extended Idling	201 Hoteling Diesel Auxiliary	203 Hoteling Battery AC	204 Hoteling APU Off
1960	2009	0.80	0.00	0.00	0.20
2010	2020	0.73	0.07	0.00	0.20
2021	2023	0.48	0.24	0.08	0.20
2024	2026	0.40	0.32	0.08	0.20
2027	2060	0.36	0.32	0.12	0.20

The total SHEI and APU hours fractions were then multiplied by the hoteling hours for each hour of the day to produce the SHEI and APU hours estimates for each hour. This was performed for each analysis scenario.

5. EMISSIONS FACTOR ESTIMATION

A regional emissions analysis must be conducted for multiple analysis years to satisfy the requirements of [40 CFR 93.109](#) of the conformity rule for ozone nonattainment areas. Specifically, the regional emissions analysis is used to conduct the emission budget test (or interim emission tests) and to determine any contributions to emission reductions. The procedures for determining regional transportation-related emissions are described in [40 CFR 93.118](#) of the conformity rule. This section discusses the analysis years, and the modeling processes used to conduct the analysis.

5.1 EMISSIONS FACTOR ESTIMATION MODEL

According to [40 CFR 93.111](#) of the conformity rule, the determination must be based on the latest emission estimation model. EPA released the new MOVES model, MOVES5, that was released in December 2024, with an effective date of December 11, 2026, when the MOVES5 grace period ends. Because this conformity analysis began before the end of the grace period for using MOVES5, the MOVES4 model can still be used for this analysis.

As outlined in the pre-analysis consensus plan (PACP), included in Appendix Section F.1 Approved Pre-analysis Consensus Plan , the Interagency Consultation Partners approved the use of MOVES4 to develop 2017, 2027, 2032, 2042 and 2052 vehicle emission factors. Emission factors are one component to determine VOC, NOx and PM emissions from the region's on-road vehicles.

Table 5-1 through Table 5-6 list MOVES4 input parameters with the appropriate data source and/or methodology applied. The information listed applies to all counties and analysis years unless otherwise specified.

Table 5-1. MOVES Input Parameters and Data Source

Input Parameter	Description	Base Data Source	Notes
Vehicle population by source type	Input the number of vehicles in the geographic area to be modeled for each source type.	TxDMV data (mid-year 2023, mid-year 2021), MOVES defaults for rates runs.	- Local gasoline, diesel, and electricity source type populations by analysis year are estimated for use external to MOVES in the estimation of county level vehicle starts and source-hours-parked, and needed in the external emissions calculations, per the TTI's rates-per-activity, TDM-based method. - Populations by SUT and fuel type are a function of TxDMV mid-year vehicle registration data and VMT mix, and in the case of base and future years, population scaling factors. - Since no 2017 registration data are available for use with the 2017 baseline, the 2021 mid-year TxDMV data will be used to scale for the 2017 analysis year. - The 2023 mid-year TxDMV data will be used to scale for all the rest of the future analysis years.
Fleet age distribution by source type	Input data that provide the distribution of vehicle counts by age for each calendar year and vehicle type. TxDMV registration data were used to estimate the age distribution of vehicle types up to 31 years.	TxDMV data (mid-year 2023, mid-year 2021), MOVES defaults for motor homes, and buses.	- Age distributions will be developed using TxDMV registration data aggregated at the county level for all source types except the single-unit and combination long-haul source types, which will be statewide level. - Since no 2017 registration data are available for use with the 2017 baseline, the 2021 mid-year TxDMV data will be used for the 2017 baseline. - The 2023 mid-year TxDMV data will be used for all the rest of the future analysis years. - The distribution of age fractions should sum up to 1.0 for each source use type for each analysis year.
Fleet VMT by HPMS vehicle type	Distribute MOVES default VMT to five HPMS vehicle types.	MOVES defaults for rate runs	Local activity estimates were applied in emissions calculations external to MOVES.
Road type VMT distributions	Input MOVES default VMT by road type.	MOVES defaults for rate runs	- Local activity estimates were applied in emissions calculations external to MOVES. - The VMT fraction was distributed between the road type and must sum to 1.0 for each source type.
Average speed distribution	Input average speed data specific to vehicle type, road type, and hour of day/type of day into 16 speed bins.	MOVES defaults for rate runs	- Local activity estimates were applied in emissions calculations external to MOVES. - The sum of speed distribution over all speed bins for each road type, vehicle type, and hour/day type is 1.0.

Input Parameter	Description	Base Data Source	Notes
Fuel supply (Table 5-2)	Input data to assign existing fuels to counties, months, and years, and to assign the associated market share for each fuel.	Combination of MOVES defaults and local information.	For each analysis year and season, the local fuel supply will consist of one conventional gasoline formulation and one biodiesel formulation and one electricity formulation. (Although only the predominant fuels, gasoline and diesel, and electricity, will be modeled, the other MOVES fuel type formulations will be input as required to run the MOVES model.)
Fuel formulation (Table 5-3)	Input Texas fuel region-specific fuel properties applicable to the county.	El Paso fuel survey data from TCEQ fuel study, Department of Energy (DOE) state-level biodiesel (BD) consumption estimates and MOVES defaults for parameters.	- Conventional gasoline (CG) formulations based on the Texas Commission on Environmental Quality's (TCEQ's) summer 2017 and summer 2023 (latest available) fuel survey samples from El Paso County. - The 2017 CG properties are actual 2017 averages (fuel grade averages weighted by relative sales volumes). - The future years (2024+) CG properties are the latest available actual 2023 averages except with Reid vapor pressure (RVP), average sulfur level, and average benzene content set to the expected values (MOVES4 defaults, consistent with the pertinent regulatory standards). - The 2017 diesel sulfur level is the statewide average from TCEQ's 2017 survey. - Future years diesel sulfur was set to the current expected future year value (6 ppm), which is conservative and consistent with the statewide diesel sulfur average from TCEQ's latest (2023) survey. - The BD ester volume percentages were based on 2017 for 2017 analysis year and 2023 for all future years from the latest available (2023) DOE state-level transportation sector BD consumption estimates. - Fuel subtype IDs 12 and 21 are 10% ethanol-blend gasoline and biodiesel, respectively.
Fuel engine fraction	Input fuel engine fractions (i.e., gasoline versus diesel versus flex-fuel engine types in the vehicle population) by model year for all vehicle types.	TxDMV mid-year 2023, and mid-year 2021 registration data for particular source type diesel fractions; MOVES defaults for other source types.	- Locality-specific/MOVES default (renormalized with setting compressed natural gas [CNG] fractions to zero). - TTI developed the evaluation year-specific local gasoline, diesel and electricity fractions for the MOVES source use types passenger car, passenger truck, and light-duty truck using the 2021 TxDMV data for 2017 analysis year, and 2023 mid-year TxDMV data for all 2023 and beyond analysis years, aggregated to the TxDOT-El Paso District level.

Input Parameter	Description	Base Data Source	Notes
			- TTI developed the evaluation year-specific local gasoline, diesel, and electricity fractions for the MOVES source use types single-unit and combination trucks using the 2021 TxDMV data for the 2017 analysis year, and 2023 mid-year TxDMV data for all 2023 and beyond analysis years, aggregated to the TxDOT-Statewide level. - MOVES defaults for other source types.
Meteorology (Table 5-4)	Input county-specific data on temperature, humidity, and barometric pressure.	Average hourly from weather stations within El Paso County.	- The summer and winter season temperature and humidity data are the same values used in the previous RMS 2050 MTP emissions analysis. - These inputs were based on 2017 El Paso County weather station data, provided by TCEQ, and are consistent with TCEQ's latest (2017) El Paso periodic emissions inventory submittal to EPA required under the Air Emissions Reporting Rule.
Inspection and maintenance (I/M) coverage (Table 5-6)	Input I/M coverage records for each combination of pollutants, process, county, fuel type, regulatory class, and model year specified using this input.	TCEQ provided I/M program statistics for calculating the compliance factor input. TTI developed these inputs essentially in consultation with TCEQ.	- Begin and end model year (X, Y) define the range of model years covered, where X and Y, respectively, are calculated as YearID-24 and YearID-2. - I/M compliance factor estimates were calculated by TTI using TCEQ 2017 statewide compliance data and MOVES4 I/M compliance factor equation in MOVES4 Technical Guidance, El Paso I/M-program-specific I/M waiver rates and failure rates, and statewide average I/M compliance rates in combination with MOVES4 regulatory class coverage adjustments for 2017 analysis year. - I/M compliance factor estimates were calculated by TTI using TCEQ 2023 statewide compliance data and MOVES4 I/M compliance factor equation in MOVES4 Technical Guidance, El Paso I/M-program-specific I/M waiver rates and failure rates, and statewide average I/M compliance rates in combination with MOVES4 regulatory class coverage adjustments for future analysis years (2023 and beyond). - The model processes/pollutants affected are start and running exhaust hydrocarbon (HC), CO, NOx, and tank vapor venting HC; fuel type is gasoline; frequency is annual.

Table 5-2. Fuel Supply

Fuel Type	Fuel Formulation ID	Market Share	Market Share CV ¹
Gasoline	17103, 17703, 2313, 2473	1.0	N/A
Diesel	30176, 30600	1.0	N/A
Electricity	90	1.0	N/A

¹The market share CV is the coefficient variation of the market share. MOVES requires that market shares of all fuel types be included in order to run the model, including alternative fuel types of E85, CNG, and electricity.

Table 5-3. Fuel Properties

Factor	Information						
Fuel Type	Gasoline	Gasoline	Gasoline	Gasoline	Diesel	Diesel	Electricity
Fuel Formulation ID	17103	17703	2313	2473	30176	30600	90
Fuel Subtype ID	12	12	12	12	21	21	90
Analysis Year	2017	2017	2024+	2024+	2017	2024+	2017+
Season	Winter	Summer	Winter	Summer	Summer and Winter	Summer and Winter	Summer and Winter
RVP	11.5	6.94	11.5	7	0	0	N/A
Sulfur Level	25.0304	19.56	8.12	7.15	6.37	6	0
ETOH Volume	10	9.6	10	9.89	0	0	N/A
MTBE Volume	0	0	0	0	0	0	N/A
ETBE Volume	0	0	0	0	0	0	N/A
TAME Volume	0	0	0	0	0	0	N/A
Aromatic Content	20.8537	26.67	20.6335	27.1	0	0	N/A
Olefin Content	9.73041	5.5	9.38928	5.62	0	0	N/A
Benzene Content	0.612097	1.13	0.617	0.689	0	0	N/A
e200	49.7981	48.74	50.0065	45.96	0	0	N/A
e300	84.8353	87.84	85.7324	85.8	0	0	N/A
Vol to Wt Percent Oxy	0.3653	0.3653	0.3653	0.3653	0	0	0
BioDieselEster Volume	N/A	N/A	N/A	N/A	4.68	3.38	N/A
Cetane Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAH Content	N/A	N/A	N/A	N/A	N/A	N/A	N/A
T50	199.738	206.12	198.832	207.76	0	0	N/A
T90	321.949	306.72	318.167	315.98	0	0	0

Note: MOVES requires all on-road mobile fuel types to run, so MOVES default E85, CNG, and electricity fuel formulations were included in the input. N/A denotes not applicable.

Table 5-4. Hourly Meteorological Data

Factor	Information			
County/Area(s)	El Paso County, Texas, and Doña Ana Area and Otero County, New Mexico ¹		El Paso County, Texas, and Doña Ana Area and Otero County, New Mexico ¹	
Season	Summer		Winter	
Hour	Temperature (°F)	Relative Humidity (%)	Temperature (°F)	Relative Humidity (%)
00:00 a.m.–01:00 a.m.	79.77	42.73	48.57	45.01
01:00 a.m.–02:00 a.m.	78.51	45.05	47.44	46.81
02:00 a.m.–03:00 a.m.	77.31	47.11	46.44	48.65
03:00 a.m.–04:00 a.m.	76.27	49.05	45.46	50.32
04:00 a.m.–05:00 a.m.	75.38	50.63	44.62	51.63
05:00 a.m.–06:00 a.m.	74.47	52.45	43.71	53.29
06:00 a.m.–07:00 a.m.	73.96	53.51	43.08	54.26
07:00 a.m.–08:00 a.m.	75.19	51.26	43.39	52.85
08:00 a.m.–09:00 a.m.	77.54	46.95	45.76	48.11
09:00 a.m.–10:00 a.m.	80.13	42.42	48.91	43.16
10:00 a.m.–11:00 a.m.	82.81	37.98	52.31	38.25
11:00 a.m.–12:00 p.m.	85.38	33.88	55.29	34.22
12:00 p.m.–13:00 p.m.	87.54	30.66	57.39	31.80
13:00 p.m.–14:00 p.m.	89.27	28.03	59.07	29.61
14:00 p.m.–15:00 p.m.	90.68	25.90	60.29	27.94
15:00 p.m.–16:00 p.m.	91.85	24.01	60.83	27.40
16:00 p.m.–17:00 p.m.	92.09	24.18	60.37	28.06
17:00 p.m.–18:00 p.m.	91.62	24.77	58.77	30.20
18:00 p.m.–19:00 p.m.	90.74	25.75	56.88	32.70
19:00 p.m.–20:00 p.m.	89.02	28.24	55.16	35.17
20:00 p.m.–21:00 p.m.	86.68	32.05	53.66	37.07
21:00 p.m.–22:00 p.m.	84.78	34.61	52.16	39.26
22:00 p.m.–23:00 p.m.	82.97	37.00	50.77	41.34
23:00 p.m.–24:00 p.m.	81.28	40.04	49.58	42.97

¹ The temperature/humidity information is based on the TCEQ 2017 meteorology data for the El Paso County, Texas. Since El Paso is the only county modeled for emission rates, the values are assumed to be the same for Doña Ana Area and Otero County, New Mexico.

Table 5-5. Barometric Pressure

Period	Barometric Pressure (Inches of Mercury)
24-hr	26.169 ¹

¹The barometric pressure information is based on the TCEQ 2017 meteorology data for El Paso County, Texas. Since El Paso is the only county modeled for rates, the values are the assumed to be the same for Doña Ana Area and Otero County, New Mexico.

Table 5-6. I/M Inputs

Factor	I/M Information			
Test standards description	Two-mode, 2500 RPM/ idle test	Evaporative gas cap check	Evaporative gas cap and OBD check	Exhaust OBD check
Test Standards ID	12	41	45	51
Year ID	2017	2017	2017, 2032, 2042, 2052	2017, 2032, 2042, 2052
I/M program ID ²	21, 221	51, 251	60, 260	40, 240
Pollutant Process ID ²	101, 102, 201, 202, 301, 302	112	112	101, 102, 201, 202, 301, 302
Source use type*	21, 31, 32	21, 31, 32	21, 31, 32	21, 31, 32
Begin model year	X	X	X	X
End model year	1995 ¹	1995 ¹	Y	Y
I/M compliance	21–95.20% 31–92.56% 32–73.27%	21–95.20% 31–92.56% 32–73.27%	2017: 21–95.20% 31–92.56% 32–73.27% 2023 and beyond: 21–94.40% 31–91.78% 32–72.66%	2017: 21–95.20% 31–92.56% 32–73.27% 2023 and beyond: 21–94.40% 31–91.78% 32–72.66%

Source Use Type: 21—passenger car, 31—passenger truck, 32—light commercial truck.

¹ End model year is based on the MOVES4 default database imcoverage table by the sourceTypeID, yearID and test standards ID.

² The I/M program IDs and pollutant process IDs are based on the MOVES4 default database by the test standards IDs and year IDs.

N/A denotes not applicable.

5.2 ADJUSTMENTS TO EMISSION FACTORS

Post-processing adjustments are applied to the emission factor post-process utility developed by TTI. These adjustments are applied either before or simultaneously with the emission calculation procedures to establish the model results. Table 5-7 lists the strategies that were utilized to post-process emission factors produced by MOVES (applied before emission calculation procedures).

Table 5-7. MOVES Emissions Factor Post-processing to Be Performed by County and Year

Strategy and Post-processing Result	Analysis Year	Counties
Texas Low Emission Diesel (TxLED)	N/A	N/A

N/A denotes not applicable.

6. REGIONAL EMISSIONS DETERMINATION

To report final emission analysis results, it is necessary to account for modeled link-level emission inventories, emission factor adjustments, and MoSERS emission benefits.

6.1 MODELED EMISSIONS

After the emission factors were developed, the emission was calculated using activity estimates from TTI emission inventory estimation utilities and emission rates from MOVES4: MOVES4Utils, developed by TTI for MOVES. This utility combines vehicle activity (see Chapter 4) and emissions factors (see Chapter 5) to create emission estimates at the link level.

Table 6-1. VMT and Modeled Emissions for the PM₁₀ nonattainment area (summer/ winter seasons)

Analysis Year	VMT	PM ₁₀ (Tons/Day) ¹
MVEB	N/A	12.05 ²
2032	22,611,188	6.02/6.68
2042	24,139,993	6.40/7.11
2052	25,194,212	6.58/7.32

¹PM₁₀ emissions include summer/ winter figures. The PM₁₀ budget is based on the 1994 PM₁₀ Mobile Emissions Inventory. Using 2017 weather station data.

²[Transportation Conformity: Motor Vehicle Emissions Budgets \(MVEB PM₁₀ SIP\)](#)

Table 6-2. VMT and Modeled Emissions for the 2015 8-hour Ozone NAAQS VOC and NO_x Emission Data for the potential El Paso nonattainment area (summer season)¹

Analysis Year	VMT	NO _x (Tons/Day)	VOC (Tons/Day)
MVEB	N/A	39.76 ²	36.23 ²
2032	22,611,188	5.25	4.00
2042	24,139,993	3.35	3.12
2052	25,194,212	3.12	2.90

¹All values are average summer weekday estimates. The VMT listed are used to calculate the average speed. Using 2017 weather station data.

²[Transportation Conformity: Motor Vehicle Emissions Budgets \(MVEB One-Hour Ozone SUPER SIP\)](#)

Table 6-3. Interim emissions test no-greater-than baseline year - VMT and VOC and NOx Emission Data Dona Ana County New Mexico 2015 8- hour Ozone NAAQS nonattainment area (summer season) ^{1,2}

Analysis Year	VMT	NOx (Tons/Day)	VOC (Tons/Day)
2017	97,898	0.09	0.044
2027	113,202	0.03	0.026
2032	115,342	0.02	0.021
2042	121,310	0.01	0.016
2052	126,704	0.01	0.015

¹All values are average summer weekday estimates. The VMT listed are used to calculate the average speed. Using 2017 weather station data.

²El Paso regional TDM zones comprising the Sunland Park ozone nonattainment area, in Doña Ana County, NM.

6.2 IMPACTS FROM ADJUSTMENTS AND MOSERS

6.2.1 Mobile Source Emission Reduction Strategies

The Mobile Source Emission Reduction Strategies (MoSERS) is a collection of transportation projects or related activities with identifiable emission reduction benefits.

6.2.1.1 Transportation Control Measures

Currently there are no TCMs that the El Paso MPO region can take credit for from the 1996 one-hour ozone Super SIP contained three TCMs (projects) with a useful life of 5 to 20 years. Given that it has been more than 20 years since their implementation, the El Paso MPO is not taking any credit for them in this conformity analysis.

6.3 FINAL ANALYSIS RESULTS

Table 6-4 shows the final mobile emission results of this conformity analysis for the El Paso nonattainment area.

- “As per 40 CFR 93.118(a), to demonstrate conformity, the final emissions must be less than or equal to the maximum allowable level set forth by the MVEB for **Particulate Matter (PM₁₀)**, **Volatile Organic Compounds (VOC)**, and **Nitrogen Oxides (NOx)** in the SIP.”;

Table 6-4. VMT and Final Emissions for the El Paso Texas PM₁₀ (summer/winter seasons) and potential 2015 8-hour Ozone (summer season) nonattainment areas

Analysis Year	VMT	NO _x ^{1,4} Budget (Tons/Day)	NO _x ¹ (Tons/Day)	VOC ^{1,4} Budget (Tons/Day)	VOC ¹ (Tons/Day)	PM ₁₀ ^{2,3} Budget (Tons/Day)	PM ₁₀ ² (Tons/Day)
2032	22,611,188	39.76	5.25	36.23	4.00	12.05	6.02/6.68
2042	24,139,993	39.76	3.35	36.23	3.12	12.05	6.40/7.11
2052	25,194,212	39.76	3.12	36.23	2.90	12.05	6.58/7.32

¹Ozone (VOC and NO_x) include summer figures. The VOC and NO_x budget is based on the 1996 one-hour ozone SUPER SIP. Using 2017 weather station data.

²PM₁₀ emissions include summer/ winter figures. The PM₁₀ budget is based on the 1994 PM₁₀ Mobile Emissions Inventory. Using 2017 weather station data.

³[Transportation Conformity: Motor Vehicle Emissions Budgets \(MVEB PM₁₀ SIP\)](#)

⁴[Transportation Conformity: Motor Vehicle Emissions Budgets \(MVEB One-Hour Ozone SUPER SIP\)](#)

Table 6-5 shows the final mobile emission results of this conformity analysis for the Dona Ana, New Mexico 2015 Ozone NAAQS nonattainment area.

- As per 40 CFR 93.119 (b)(2) ii, to demonstrate conformity the emissions predicted in the “Action” scenario are not greater than emissions in the baseline year for that NAAQS for Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO_x).

Table 6-5. Interim emissions test no-greater-than baseline year -VMT and Final Emissions for the Dona Ana County New Mexico 2015 8-hour Ozone NAAQS nonattainment area (summer season)^{1,2}

Analysis Year	VMT	NO _x (Baseline) (Tons/Day)	VOC (Baseline) (Tons/Day)
2017	97,898	0.09	0.044
2027	113,202	0.03	0.026
2032	115,342	0.02	0.021
2042	121,310	0.01	0.016
2052	126,704	0.01	0.015

¹This conformity determination demonstrates that the total emissions calculated from the modeled roadway network for future years will be at levels below the baseline year (2017) as required for the interim emissions test no-greater-than baseline year. Table provides the conformity results for the VOC and NO_x no greater-than-baseline year emissions tests.

²El Paso regional TDM zones comprising the Sunland Park part of the El Paso-Las Cruces TX-NM ozone nonattainment area, in Doña Ana County, NM.

7. INTERAGENCY CONSULTATION

Regulation [40 CFR 93.112](#) of the conformity rule includes procedures for interagency consultation, resolution of conflict, and public consultation of the conformity analysis affecting the MTP and TIP. Local, state, and federal transportation and air quality agencies affected by this conformity analysis were consulted on the scope, methodologies, and products of the conformity finding. A conformity steering committee composed of representatives from El Paso MPO, TxDOT, TCEQ, TTI, FHWA, FTA⁴, and EPA were consulted regularly during the conformity process. The purpose of this group is to ensure the modeling methodology used in this conformity analysis is consistent with the on-road modeling used in the SIP and that the most recent planning assumptions were used.

Appendix F.2 Consultation Review provides the PACP and the comment/response matrix from the consultants review process for the PACP.

⁴ FHWA acts as the executive agent for FTA.

8. PUBLIC INVOLVEMENT

Public participation is recognized as an integral part of the planning process. The public participation process for transportation conformity and other transportation plans, projects, and policies includes timely public notice, full public access to technical and policy information, opportunities for early and continuing involvement, and explicit consideration and response to public input.

Public participation strategies and procedures are designed to inform the public about transportation and air quality issues, provide opportunities to involve the public in the decision-making process, and seek public and stakeholder input. Additionally, this process builds support among the public who are stakeholders in transportation investments. Public views and opinions are included in the final MTP and TIP documents. The public comment period began on April 18, 2026, and ended on May 17, 2026. Public inputs were collected via comment cards at public meetings, an online participation exercise, emails, letters, and speaking opportunities at technical committee and policy board meetings.

Each meeting consisted of an open house for the public to view exhibits providing information on the RMS 2052 MTP, 2027-2030 TIP, and the Transportation Conformity Report. Table 8-1 provides the public meeting dates, and location addresses.

Table 8-1. Public Involving Meeting Information

Number	Meeting Date	Address
1	Wednesday April 22, 2026 5:30 p.m. – 7:00 p.m.	Pat O'Rourke Recreational Center 901 N. Virginia St., El Paso TX 79902
2	Thursday April 30, 2026 5:30 p.m. – 7:00 p.m.	The Beast Urban Park 13501 Jason Crandall St., El Paso, TX 79938.
3	Saturday May 2, 2026 10:30 a.m. – 12:00 p.m.	Sunland Park Multi-Generational Center 4700 McNutt Rd., Sunland Park NM 88063
4	Wednesday, May 6, 2026 5:30 p.m. - 7:00 p.m.	Rio Vista Community Center 901 Rio Vista, El Paso, TX 79927
5	Wednesday May 13, 2026 5:30 p.m. – 7:00 p.m.	Nolan Richardson Recreation Center 4435 Maxwell Ave., El Paso TX 79904

During the 30-day public comment period for the RMS 2052 MTP, RMS 2027-2030 MTP, and related Transportation Conformity Report, El Paso MPO staff held five public meetings to solicit comments from the public. All meetings were held in-person. The meetings attracted a total of approximately 80-90 members of the public to attend. Meetings were conducted in an open house format, with a presentation provided by staff, with the opportunity for attendees to ask questions and provide comments. El Paso MPO received 71 public comments. 80% of Comments Expressed Opposition to Border Highway East/Support for Rio Bosque Wetlands Park Preservation.

The public comment and response matrix are included as Appendix G of the Transportation Conformity Report.

APPENDIX A—RESOLUTION OF ADOPTION

APPENDIX B—MTP AND TIP

RMS2052 MTP

2027-2030 TIP

B.1 PROJECT LISTINGS

Instruction: This appendix contains the project listing files in PDF.

APPENDIX C—TRANSPORTATION MODELING SYSTEM

C.1 TRAVEL MODEL VALIDATION

C.2 CENTERLINE, AND LANE MILES SUMMARIES

C.3 ROADWAY NETWORK FILES

Instruction: This appendix includes the travel model shapefiles.

APPENDIX D—EMISSIONS MODELING INFORMATION

D.1 MOVES INPUT AND OUTPUT

Instruction: This appendix includes the MOVES input county databases, MOVES RunSpec files input and output databases, and MOVES external modeling external files.

D.2 MOVES EMISSION FACTORS

Instruction: Each analysis year may be listed as its own attachment, such as Appendix D.2.1, Appendix D.2.2, etc.

D.3 ACTIVITIES

Instruction: This includes VMT, extended idling, starts, etc.

D.4 EMISSIONS MODELING UTILITIES

Instruction: This include the emission modeling utilities applied in this conformity analysis

D.5 VMT, SPEED, AND EMISSIONS SUMMARIES

Instruction: This include the VMT, speed and emission summary files of this conformity analysis.

APPENDIX E—TIMELY IMPLEMENTATION DOCUMENTATION FOR TCM

Currently there are no TCMs for which the El Paso MPO region can take credit. The 1996 one-hour ozone Super SIP contained three TCMs (projects) with a useful life of 5 to 20 years. Given that it has been more than 20 years since their implementation, the El Paso MPO is not taking any credit for them in this conformity analysis.

APPENDIX F—INTERAGENCY CONSULTATION PROCESS

F.1 APPROVED PRE-ANALYSIS CONSENSUS PLAN

F.2 CONSULTATION REVIEW

APPENDIX G—PUBLIC INVOLVEMENT PROCESS

G.1 MEETING INFORMATION