

## ATTACHMENT A

### CONSULTATION ON CONFORMITY ASSESSMENT FOR THE DRAFT FY 2016-2025 SUN CORRIDOR MPO TRANSPORTATION IMPROVEMENT PROGRAM AND DRAFT 2040 REGIONAL TRANSPORTATION PLAN

The Sun Corridor Metropolitan Planning Organization is conducting consultation on a conformity assessment for the Draft FY 2016-2025 Sun Corridor MPO Transportation Improvement Program (TIP) and the Draft 2040 Regional Transportation Plan (RTP). A new conformity determination is required on the draft TIP and 2040 Regional Transportation Plan. The conformity assessment indicates that the draft TIP and RTP satisfy the criteria specified in the federal transportation conformity rule for a conformity determination. A finding of conformity is therefore supported.

The federal conformity regulations at 40 CFR Parts 51 and 93 specify the criteria and procedures for conformity determinations for transportation plans, programs, and projects and their respective amendments. Under the federal transportation conformity rule, the principal criteria for a determination of conformity for transportation plans and programs are: (1) the TIP and Regional Transportation Plan must pass an emissions budget test with a budget that has been found to be adequate or approved by the U.S. Environmental Protection Agency (EPA) for transportation conformity purposes, or an interim emissions test; (2) the latest planning assumptions and emissions models specified for use in air quality implementation plans must be employed; (3) the TIP and Regional Transportation Plan must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and (4) consultation.

The latest conformity determination on the Sun Corridor MPO Listing of Transportation Projects for the Pinal County nonattainment areas was made by the Federal Highway Administration and Federal Transit Administration on July 9, 2015. The results of the regional emissions analysis for the Pinal County nonattainment areas are described below and in Table I.

#### Pinal County Nonattainment Areas Regional Emissions Analysis

For the Pinal County nonattainment areas, there are no adequate or approved motor vehicle emissions budgets for conformity. Therefore, the conformity interim emissions tests were applied. In selecting analysis years, the transportation conformity rule indicates that the years must be no more than ten years apart, the first year must be no more than five years beyond the year in which the conformity determination is being made, and the last year must be aligned with the transportation plan. The baseline and action tests were conducted for PM-10 for the West Pinal PM-10 Nonattainment Area and for PM-2.5 and NO<sub>x</sub> for the West Central Pinal PM-2.5 Nonattainment Area for the analysis years of 2020, 2030, 2035 and 2040. For each test, the required emissions estimates were developed using the transportation and emission modeling approaches required under the federal transportation conformity rule.

The Maricopa Association of Governments and the Sun Corridor Metropolitan Planning Organization have coordinated on this amendment for inputs to the transportation model and for consultation on the conformity analysis. Both the MAG Metropolitan Planning Area Boundary and the Sun Corridor Metropolitan Planning Area Boundary include portions of the West Pinal PM-10 Nonattainment Area and West Central Pinal PM-2.5

Nonattainment Area. Both nonattainment areas are covered by the boundaries of the two metropolitan planning organizations. Consequently, transportation conformity is required to be demonstrated for both nonattainment areas by both metropolitan planning organizations.

For PM-10, the projected emissions for the action scenario are not greater than the projected emissions for the baseline scenario for each of the years analyzed: 2020, 2030, 2035 and 2040. Since the PM-10 emissions predicted for the action scenarios are not greater than the PM-10 emissions predicted for the baseline scenarios, the conformity interim emission test is satisfied. It is also reasonable to expect the action emissions would not exceed the baseline emissions for the time periods between the analysis years.

For PM-2.5, the projected emissions for the action scenario are not greater than the projected emissions for the baseline scenario for each of the years analyzed: 2020, 2030, 2035 and 2040. Since the PM-2.5 emissions predicted for the action scenarios are not greater than the PM-2.5 emissions predicted for the baseline scenarios, the conformity interim emission test is satisfied. It is also reasonable to expect the action emissions would not exceed the baseline emissions for the time periods between the analysis years.

For NO<sub>x</sub>, the projected emissions for the action scenario are not greater than the projected emissions for the baseline scenario for each of the years analyzed: 2020, 2030, 2035 and 2040. Since the NO<sub>x</sub> emissions predicted for the action scenarios are not greater than the NO<sub>x</sub> emissions predicted for the baseline scenarios, the conformity interim emission test is satisfied. It is also reasonable to expect the action emissions would not exceed the baseline emissions for the time periods between the analysis years.

#### Latest Planning Assumptions and Emissions Models

In accordance with federal conformity requirements, the latest planning assumptions and emissions models specified for use in air quality implementation plans were employed for this conformity determination. The latest planning assumptions used for this conformity determination are consistent with the January 2014 MAG Conformity Analysis for the FY 2014-2018 Transportation Improvement Program and the 2035 Regional Transportation Plan and the January 2014 Sun Corridor Metropolitan Planning Organization 2014 Conformity Analysis, with the following exceptions:

1. On October 7, 2014, EPA published a notice of availability of the MOVES2014 mobile source emissions model which began a two-year grace period that ends on October 7, 2016, after which MOVES2014 is required to be used for transportation conformity. EPA released a revised version, MOVES2014a, on November 4, 2015. The November 2015 version of MOVES2014a is used for this regional emissions analysis. MAG has also developed a MOVESLink2014 model that coordinates the TransCAD traffic assignment output with the MOVES2014a model.
2. The most recently available vehicle registration data was used in this conformity analysis. July 2015 vehicle registration data was obtained from the Arizona Department of Transportation (ADOT) for both Maricopa County and Pinal County.
3. MOVES2014a "Regulatory Class" output was used with the July 2015 vehicle registration data to estimate VMT distributions by weight-based vehicle class for each conformity traffic assignment. These vehicle weights were used to calculate the paved road PM-10 emissions in the Pinal PM-10 Nonattainment Area for the action and

baseline scenarios in 2020, 2030 and 2040. The 2035 paved road emissions estimates were interpolated using the 2030 and 2040 values.

4. The latest projects included in the MAG FY 2014-2018 TIP and 2035 RTP, as well as projects in the new Sun Corridor MPO FY 2016-2025 TIP and 2040 RTP, were coded in the 2020, 2030, and 2040 traffic assignments used to estimate the action scenario emissions. The 2035 action scenario emissions were interpolated using the 2030 and 2040 values.

The traffic network coded in the 2020, 2030 and 2040 traffic assignments used to estimate baseline emissions for the Pinal PM-10 and PM-2.5 nonattainment areas includes regionally significant highways open to traffic, as well as transit service in operation, by December 31, 2015. In accordance with Section 93.119(h) of EPA conformity regulations, the baseline network also includes all regionally significant projects in the Pinal PM-10 Nonattainment Area, regardless of funding source, which are currently under construction or undergoing right-of-way acquisition; are programmed in FY 2015 of the previously conforming MAG FY 2014-2018 TIP; or have completed the National Environmental Policy Act (NEPA) process. The 2035 baseline emissions estimates were interpolated using the 2030 and 2040 values.

Emission reduction credit for projects in the MAG FY 2014-2018 TIP and the 2035 Regional Transportation Plan that pave unpaved roads in the Pinal PM-10 Nonattainment Area has been assumed in this conformity analysis for the 2020, 2030, 2035 and 2040 action scenarios. In addition, emission reductions for paving projects in the Sun Corridor MPO TIP and 2040 Regional Transportation Plan are applied to the 2020, 2030, 2035 and 2040 action scenarios.

All analyses were conducted using the latest planning assumptions and emissions models in force at the time the conformity analysis began on January 5, 2016. A summary of the latest planning assumptions, including population, employment, and vehicle registrations data used in the regional emissions analysis, is provided in Table 2.

#### Timely Implementation of Transportation Control Measures

As noted in the 2014 Sun Corridor Conformity Analysis, a status report on Transportation Control Measures (TCMs) is not necessary since there are no applicable plans for the West Pinal PM-10 Nonattainment Area and West Central Pinal PM-2.5 Nonattainment Area.

#### Consultation

In compliance with federal and state rules, Sun Corridor MPO is required to provide reasonable opportunity for consultation with state air and transportation agencies, local agencies, U.S. Department of Transportation, Environmental Protection Agency, and other interested parties. For this conformity analysis, a 30-day consultation period is being provided on the conformity assessment contained in this memorandum. Consultation is concluded by notifying the agencies and other interested parties of any approval action taken by the Sun Corridor MPO Executive Board and any comments received during the period of consultation.

TABLE I  
 CONFORMITY INTERIM EMISSION (ACTION/BASELINE) TEST RESULTS  
 (KILOGRAMS/DAY)  
 PINAL COUNTY PM NONATTAINMENT AREAS

	PM-10 Nonattainment Area	PM-2.5 Nonattainment Area	
Pollutant	PM-10	PM-2.5	NOx
2020			
- Action	81,805	25	1,028
- Baseline	83,646	26	1,077
2030			
- Action	82,591	19	815
- Baseline	84,486	21	1,028
2035			
- Action	83,257	23	891
- Baseline	85,108	26	1,269
2040			
- Action	84,043	26	967
- Baseline	85,730	30	1,510

TABLE 2. LATEST PLANNING ASSUMPTIONS FOR MAG CONFORMITY DETERMINATIONS

<u>Assumption</u>	<u>Source</u>	<u>MAG Models</u>	<u>Next Scheduled Update</u>
Population and Employment	Under the Governor's Executive Order 2011-04, official County projections are updated every 3 to 4 years. These official projections are used by all agencies for planning purposes. Following the release of the 2010 U.S. Census data, the Arizona Department of Administration (ADOA) prepared a new set of Maricopa County projections in December 2012. MAG developed a set of employment projections for Maricopa County that are consistent with the ADOA population projections and also prepared subcounty population and employment projections. The MAG Regional Council approved the subcounty socioeconomic projections in June 2013. In addition, Central Arizona Governments (CAG) approved the Pinal County subcounty socioeconomic projections, based on the ADOA Pinal County projections, in June 2013.	AZ-SMART (UrbanSim/OPUS)	Under the Governor's Executive Order 2011-04, official county socioeconomic projections will be developed by the Arizona Department of Administration (ADOA). It is anticipated that ADOA will complete the county level projections in 2015 and MAG will prepare subcounty socioeconomic projections for adoption by the MAG Regional Council within six months after receipt of the ADOA county level projections.
Traffic Counts	The highway models were validated in 2013 for the 2011 base year, using approximately 3,300 traffic counts collected in 2011.	TransCAD	Region-wide traffic counts are typically collected by MAG every 2-4 years, if funds are available.
Vehicle Miles of Travel	The passenger travel demand models were calibrated in 2012-2013 using data from the 2008-2009 home interview survey, 2009 Transearch data, 2010-2011 regional transit on-board survey, 2011 Truck GPS data, and 2012 Airport and ASU surveys. The recalibration effort included a complete update of the regional travel demand model based on the relevant data sets listed above. Trip generation and trip distribution were recalibrated based on the 2008-2009 National Household Travel Survey Arizona Add-On sample and 2006 - 2009 American Community Survey and Public Use Microdata Sample data sets. Mode choice was recalibrated based on the 2010 on-board survey. The truck model was recalibrated based on the new 2009 Transearch data and 2011 Truck GPS data from ATRI. Special generator sub-models were recalibrated based on 2012 regional airports and ASU travel surveys. The external travel model was recalibrated in 2011 based on the 2008 external travel study. Volume-delay functions were recalibrated in 2012-2013 based on the 2011 commercial speed data. The overall base year for the recalibrated and validated model is 2011.	TransCAD	MAG has completed a major update, development and recalibration of the regional transportation model in FY 2013. The FY 2014 Unified Planning Work Program (UPWP) includes funding for the initiation of the next series of travel surveys in calendar years 2014-2016. These surveys will form a foundation for the next round of model development and updates. Various commercial data sources will be used to maintain and incrementally update the models in between the major recalibration updates.
Speeds	The highway models were validated using 49 million traffic speed records purchased from NOKIA for calendar year 2011.	TransCAD	Travel speed studies are conducted periodically to validate the transportation models. MAG has also purchased commercial speed data for future estimation and model calibration purposes.
Vehicle Registrations	July 2015 vehicle registrations were provided by ADOT.	MOVES2014a	When newer data become available from ADOT.
Implementation Measures	Latest implementation status of commitments in prior SIPs.	N/A	Updated for every conformity analysis.