CONFORMITY DETERMINATION REPORT AMENDMENT #6

ATLANTA MAINTENANCE AREAS

IN SUPPORT OF:

The Atlanta Region's Plan (2020)

Regional Transportation Plan Amendment #6 /
Transportation Improvement Program Update

DRAFT
FOR REVIEW AND COMMENT

Atlanta Regional Commission

The contents of this report reflect the views of the persons preparing the document and those individuals are responsible for the facts and the accuracy of the data presented herein. The contents of this report do not necessarily reflect the official views of the Department of Transportation of the State of Georgia. This report does not constitute a standard, specification, or regulation.

RTP MODIFICATION HISTORY

Action	ARC Approval Date
Federally required quadrennial RTP update	February 2020
Administrative Modification	April 2020*
Amendment #1 / Administrative Modification	October 2020
Amendment #2 / Administrative Modification	March 2021
Administrative Modification	April 2021*
Administrative Modification	August 2021*
Amendment #3 / Administrative Modification	November 2021
Amendment #4 / Administrative Modification	March 2022
Amendment #5 / Administrative Modification	June 2022
Administrative Modification	August 2022*
RTP Amendment #6 / TIP Update / Admin Mod	December 2022

** No changes to the CDR documentation.*

GLOSSARY OF ACRONYMS

ARC	Atlanta Regional Commission
CBMPO	Cartersville-Bartow County Metropolitan Planning Organization
CDR	Conformity Determination Report
CFR	Code of Federal Regulations
DCA	Department of Community Affairs
FHWA	Federal Highway Administration
FTA	Federal Transit Authority
GA EPD	Georgia Environmental Protection Division
GDOT	Georgia Department of Transportation
GHMPO	Gainesville-Hall County Metropolitan Planning Organization
HOT	High-Occupancy Toll
HOV	High-Occupancy Vehicle
HPMS	Highway Performance Monitoring System
IIJA	Infrastructure Investment and Jobs Act (federal transportation bill)
I/M	Inspection and Maintenance Program
MARTA	Metropolitan Atlanta Rapid Transit Authority
MOVES	Motor Vehicle Emission Simulator
MPO	Metropolitan Planning Organization
MVEB	Motor Vehicle Emissions Budget
NAAQS	National Ambient Air Quality Standard
NO_x	Nitrogen Oxide
O_3	Ozone
PPM	Parts Per Million
RTP	Regional Transportation Plan
SIP	State Implementation Plan
SOV	Single-Occupancy Vehicle
TAC	Technical Advisory Committee
TARP RTP (2016)	The Atlanta Region's Plan RTP adopted in 2016
TARP RTP (2020)	The Atlanta Region's Plan RTP adopted in 2020
TCM	Transportation Control Measure
TIP	Transportation Improvement Program
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

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INTRODUCTION

This report serves as the sixth amendment to the Conformity Determination Report (CDR) for the Atlanta Regional Commission's (ARC) Regional Transportation Plan (RTP), originally adopted in February 2020. The RTP is the transportation component of The Atlanta Region's Plan (TARP).

This document is being revised to reflect the emissions analysis resulting from changes to project scopes and schedules conducted for RTP Amendment #6 / TIP Update (see Exhibit 1). In conjunction with the amendment/update and as reflected in this document, the time period of the Transportation Improvement Program (TIP) has been updated to cover FY 2023-2028, rather than the time period of FY 2020-2025 of previous CDR documentation.

Appropriate sections of this CDR amendment have been updated to reflect the latest planning assumptions, transportation project information, and emissions results for the 8-hr. ozone standard.

For the complete body of CDR documentation since the plan's original adoption, refer to ARC's TARP website at https://www.atlantaregionsplan.org/plans-documents-resources/.

CURRENT ATTAINMENT STATUS

Concurrent with processing of RTP Amendment #6 / TIP Update, the region's air quality status is being redesignated from nonattainment to attainment for the 2015 ozone standard. The particulars of the redesignation process are detailed in the following section. As a result of the redesignation, significant changes in the CDR documentation have been made since the last report prepared for Amendment #5 in June 2022.

8-HR. OZONE STANDARD

The Atlanta region is currently subject to three National Ambient Air Quality Standards (NAAQS) for 8-hr. ozone pollution: (1) the 1997 standard of 0.08 parts per million (ppm), (2) the 2008 standard of 0.075 ppm, and (3) the 2015 standard of 0.070 ppm.

1997 STANDARD

The 1997 standard was set to 0.08 ppm and 20 counties in the Atlanta region were designated as marginal nonattainment in 2004 (69 FR 23857): Barrow, Bartow, Carroll, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Hall, Henry, Newton, Paulding, Rockdale, Spalding, and Walton. In 2008, the Atlanta area was redesignated as moderate nonattainment. The Atlanta ozone nonattainment area was redesignated to attainment effective January 2, 2014 (78 FR 72040).

The 1997 standard was then subject to litigation regarding maintenance area conformity requirements. Per the *South Coast II* decision, this conformity determination is being made for a partial portion of the 1997 8-hour ozone NAAQS. For the 1997 ozone NAAQS areas, transportation conformity for the 1997 ozone NAAQS can be demonstrated without a regional emissions analysis, per 40 CFR 93.109(c).

On December 17, 2021, GA EPD submitted a Limited (Second) Maintenance Plan to USEPA. This document shows the state's implementation plan for continuing to attain the 1997 ozone standard into the future.

2008 STANDARD

Effective July 20, 2012 (77 FR 30087), 15 counties in the Atlanta region were designated and classified as a marginal nonattainment area under the 2008 8-hr. ozone standard of 0.075 ppm: Bartow, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, and Rockdale counties.

On July 18, 2016, GA EPD submitted a Maintenance Plan to USEPA. This document shows the state's implementation plan for continuing to attain the 2008 ozone standard into the future. Effective June 2, 2017 (82 FR 25523), EPA approved the state's implementation plan and the associated Motor Vehicle Emissions Budgets (MVEBs). This action redesignated the Atlanta region as a maintenance area.

2015 STANDARD

Effective December 28, 2015 (80 FR 65291), the 2015 8-hr. ozone standard was set at 0.070 ppm. Effective August 3, 2018 (83 FR 25776), seven counties in the Atlanta region were designated and classified as a marginal nonattainment area under the standard: Bartow, Clayton, Cobb, DeKalb, Fulton, Gwinnett, and Henry counties. The goal attainment date was set for August 3, 2021. Amendment #6 to TARP RTP (2016) met the first requirement for the seven-county region to demonstrate conformity to the 2015 standard.

On February 28, 2022, the State of Georgia, through the Georgia Environmental Protection Division (GA EPD) of the Department of Natural Resources, submitted a request for the Environmental Protection Agency (EPA) to redesignate the Atlanta, Georgia 2015 8-hour ozone nonattainment area from nonattainment to attainment for the 2015 8-hour ozone standard and to approve a State Implementation Plan (SIP) revision containing a maintenance plan for the Area. EPA issued a proposed rule on August 26, 2022 (87 FR 52487) to approve the State's plan for maintaining attainment of the 2015 8-hour ozone standard in the Area, including the motor vehicle emission budgets (MVEBs) for nitrogen oxides (NOX) and volatile organic compounds (VOC) for the years of 2018 and 2033 for the Area, incorporating the maintenance plan into the SIP, and redesignating the Area to attainment for the 2015 8-hour ozone NAAQS. The comment period on the proposed rule closed on September 26, 2022 and no comments were received. On October 17, 2022 (87 FR 62733) EPA issued a final rule, effective November 16, 2022.

The air quality conformity analysis and all documentation included in this CDR addendum assumes the final rule will be effective prior to adoption of RTP Amendment #6 / TIP Update.

RECENT CONFORMITY DETERMINATIONS

ARC adopted the latest Regional Transportation Plan element of The Atlanta Region's Plan in February 2020. Table 1 below provides a summary of conformity determinations related to the initial adoption of that plan and subsequent amendments.

Table 1: Recent Conformity Determinations

Date	RTP/TIP	NAAQS
February 18, 2020	TARP RTP (2020) / FY 2020-2025 TIP	1. 1997 8-hr. Ozone 2. 2008 8-hr. Ozone 3. 2015 8-hr. Ozone
September 14, 2020	TARP RTP (2020) / FY 2020-2025 TIP Amendment #1	1. 1997 8-hr. Ozone 2. 2008 8-hr. Ozone 3. 2015 8-hr. Ozone
March 17, 2021	TARP RTP (2020) / FY 2020-2025 TIP Amendment #2	1. 1997 8-hr. Ozone 2. 2008 8-hr. Ozone 3. 2015 8-hr. Ozone
November 16, 2021	TARP RTP (2020) / FY 2020-2025 TIP Amendment #3	1. 1997 8-hr. Ozone 2. 2008 8-hr. Ozone 3. 2015 8-hr. Ozone
March 16, 2022	TARP RTP (2020) / FY 2020-2025 TIP Amendment #4	1. 1997 8-hr. Ozone 2. 2008 8-hr. Ozone 3. 2015 8-hr. Ozone
June 14, 2022	TARP RTP (2020) / FY 2020-2025 TIP Amendment #5	1. 1997 8-hr. Ozone 2. 2008 8-hr. Ozone 3. 2015 8-hr. Ozone

STATEMENT OF CONFORMITY

The purpose of this CDR is to document compliance with the relevant elements of the Clean Air Act (Subsections 176(c) (1) (2) and (3)), the Transportation Conformity Rule (40 CFR Parts 51 and 93) and Metropolitan Planning Regulations (23 CFR Part 450) by demonstrating that RTP Amendment #6 / TIP Update conform to the purpose of the SIP for the 8-hr. ozone standards. ARC has conducted the conformity determination for the ozone nonattainment and maintenance areas, encompassing all three MPOs and parts of the state outside the boundary of the MPOs.

An updated transportation conformity analysis is required under the 8-hr. ozone standards as a result of numerous changes to regionally significant non-exempt projects contained in ARC's RTP/TIP. The conclusion of the conformity analyses, documented below, indicates that the ARC RTP/TIP support the broad intentions of the Clean Air Act for achieving and maintaining the NAAQS for ozone as outlined in the Atlanta area SIP.

STATEMENT OF CONFORMITY FOR THE 8-HR. OZONE STANDARD

For the 8-hr. ozone conformity analysis the MVEB Test is required to demonstrate conformity. The latest approved MVEBs applicable to conformity under the 8-hr. ozone standard were established by GA EPD as part of Georgia's 2008 Ozone Maintenance SIP for the 15-county area and as part of Georgia's 2015 Ozone Maintenance SIP for the 7-county area.

Ozone is not emitted directly by any source; it is formed when Oxides of Nitrogen (NOx) and Volatile Organic Compounds (VOCs) combine in the atmosphere in the presence of sunlight. Therefore, air pollution control strategies are aimed at controlling NOx and VOC. Budgets are established for these two pollutants instead of ozone directly. The transportation conformity analysis for the 15-county 8-hr. ozone maintenance area and 7-county 8 hr. ozone maintenance area was performed with the MVEB Test using the set of approved budgets outlined in Table 2.

Table 2: Approved MVEBs

Establishing SIP	Effective Date	Years Applied To	MVEBs
Georgia's 2008 Ozone Maintenance SIP	June 2, 2017	All conformity years prior to 2030	NOx: 170.15 tons/day VOC: 81.76 tons/day
Georgia's 2008 Ozone Maintenance SIP	June 2, 2017	All conformity years 2030 and later	NOx: 58 tons/day VOC: 52 tons/day
Georgia's 2015 Ozone Maintenance SIP	November 16, 2022	All conformity years prior to 2033	NOx: 99.99 tons/day VOC: 54 tons/day
Georgia's 2015 Ozone Maintenance SIP	November 16, 2022	All conformity years 2033 and later	NOx: 54 tons/day VOC: 35 tons/day

The results of the emissions analysis for RTP Amendment #6 / TIP Update demonstrate adherence to the established MVEBs. The conformity analysis was performed for the years 2020, 2030, 2040, and

2050. The 2033 7-county emissions were determined by interpolating between 2030 and 2040 emissions as decided by the Interagency Consultation Group on October 27, 2022. The analysis years meet the requirements for specific horizon years that the transportation plan must reflect as specified in 93.106(a)(1) of the Transportation Conformity Rule and specific analysis years that the regional emissions analysis must reflect per Section 93.118(b) and 93.118(d)(2).

This RTP Amendment #6 / TIP Update is the second amendment that has occurred after 2020 has passed and that also requires a modeling update. The interagency consultation process was used to determine if the horizon year 2020 should continue to be shown in the CDR and its amendments. The interagency consultation group reviewed 40 CFR 93 which requires the region to continue the practice of assuring that the first horizon year be no more than 10 years after the base year used to validate the travel demand model; and that subsequent horizon years be no more than 10 years apart from each other. The base year of ARC's travel demand model is 2015, so the first horizon year can be no further into the future than 2025. Since the 2020 network and travel demand model already exist, the interagency consultation group agreed that it was sufficient to meet the federal regulations on this point. The horizon year 2020 will continue to be represented in the CDR and its amendments until the base year of the travel demand model is updated and allows for the horizon years to be recalculated.

The update of the TIP timeframe to FY 2023-2028 is being undertaken in conjunction with RTP Amendment #6. The conformity determination for the FY 2023-2028 TIP includes the same set of projects defined by their design concept, design scope, and analysis years, as RTP Amendment #6. The RTP amendment and TIP update are financially constrained consistent per 23 CFR Part 450 Subpart C (i.e., cost feasible). The funding source for construction and operation, if applicable, of all projects is identified and presented in Appendix A of the RTP documentation. The FY 2023-2028 TIP update also meets all other planning requirements.

Upon completion of the technical conformity analysis, ARC staff have determined that RTP Amendment #6 / TIP Update demonstrates compliance with the Clean Air Act as amended in 1990 in accordance with all conformity requirements as detailed in 40 CFR Parts 51 and 93 (the Transportation Conformity Rule) and 23 CFR Part 450 (the Metropolitan Planning Regulations as established in IIJA).

INTERAGENCY CONSULTATION

RTP Amendment #6 / TIP Update draft documentation was made available to ARC planning partners through the technical and policy committees in October and November 2022, to allow time for comment prior to formal adoption or publication, in accordance with 93.105(b)(2)(iii) of the Transportation Conformity Rule. Documentation was provided to the Interagency Consultation Group on October 21, 2022 ahead of the initiation of public comment beginning on November 4, 2021. Revised RTP/TIP documentation was published online in January 2023, upon final federal approval of the RTP amendment and TIP update, fulfilling the requirements of 40 CFR 93.105(c)(7).

PUBLIC INVOLVEMENT

The public comment period for RTP Amendment #6 / TIP Update was held between November 4, 2022 and November 18, 2022.

- 15-Day Public Comment Period: A public review and comment period ran from November 4, 2022 through midnight on November 18, 2021, with a public hearing taking place on November 4, 2022. This timeframe is consistent with established policies defined in ARC's Community Engagement Plan. ARC must receive comments during this timeframe for those comments to be considered in the official record of comments. A summary of all comments received during the period and responses to the comments was presented to ARC's technical and policy committees and the ARC Board for their consideration before taking action on the amendment.
- Project Summary: A summary of the Amendment and related project list was prepared to provide the public with a user-friendly explanation of the most important elements of the amendment and is accessible on the ARC website.
- ARC staff was available for questions, comments, and speaking engagements by contacting 470-378-1563 or transportation@atlantaregional.org.
- Public Comments: Following completion of the public comment period, ARC prepared a Public Comment Report, which summarizes all stakeholder and public outreach and comments. Any comments received and corresponding responses were posted on the ARC website.

FISCAL CONSTRAINT

This amendment/update was undertaken to accomplish four key outcomes:

1) Extend the period of time covered by the TIP from FY 2020-2025 to FY 2023-2028;
2) Include new non-exempt TIP solicitation projects impacting air quality conformity;
3) Incorporate changes to project limits and financing from the Major Mobility Investment Program (MMIP); and
4) Address project cost estimate and programmatic changes that are of a time sensitive nature or cannot be handled administratively.

The maximum amount of revenue from all sources which will be available for transportation services, projects and programs through 2050 will be approximately $173 billion. Note that this forecast was made for the RTP update completed in early 2020, prior to passage of the Infrastructure Investment and Jobs Act (IIJA). A new revenue estimate will be undertaken in conjunction with the next schedule plan update due for completion in early 2024.

Specific investments totaling $71 billion have been identified and reflected in the RTP project list (Appendix A, with YOE calculations presented in Appendix D), while another $80 billion remains available for commitment to future projects yet to be identified. The overwhelming majority of these future investments are small scale maintenance and modernization projects being advanced by GDOT and local governments and do not have to be individually listed in the RTP. In addition to expenditures on projects, an additional $18 billion of the revenue generated at the state and local levels will be required to staff and operate the various agencies and departments charged with implementing projects. About $4 billion of available federal revenue remains uncommitted and could be dedicated to additional projects in future RTP amendments and updates.

The following tables demonstrate that the RTP remains fiscally constrained following incorporation of the financial changes made under RTP Amendment #6 / TIP Update.

Table 3: Fiscal Constraint Summary – Federal Highway Administration Funds ($YOE)

Demonstration of Fiscal Constraint (FHWA Formula Funds) - December 2022

ESTIMATED AGGREGATE COST OF PROGRAMMED PROJECTS (Reflects TIP Update / RTP Amendment #6)

FHWA Program *(See Note 5)*	2023	2024	2025	2026 *(See Note 2)*	2027 *(See Notes 2 and 3)*	2028 *(See Notes 2 and 3)*	LR 2026-2030 *(See Note 4)*	LR 2031-2040	LR 2041-2050	Total
Bridge Formula Program	$2,792,642	$0	$940,000	$0	$7,161,600	$0	$0	$0	$0	**$10,894,242**
Carbon Reduction Program (>200K) (ARC)	$800,000	$2,775,928	$13,031,446	$0	$0	$0	$0	$0	$0	**$16,607,374**
Congestion Mitigation & Air Quality Improvement (CMAQ)	$41,456,741	$22,873,534	$24,607,200	$0	$0	$0	$0	$0	$0	**$88,937,475**
Highway Infrastructure	$50,382,769	$9,102,672	$0	$0	$0	$0	$0	$0	$0	**$59,485,441**
Highway Safety Improvement Program (HSIP)	$39,348,000	$37,288,000	$37,288,000	$0	$0	$0	$0	$0	$0	**$113,924,000**
Railway Highway Hazard Elimination Setaside	$1,864,800	$1,864,800	$1,864,800	$0	$0	$0	$0	$0	$0	**$5,594,400**
Railway Highway Protective Devices Setaside	$1,491,200	$1,491,200	$1,491,200	$0	$0	$0	$0	$0	$0	**$4,473,600**
National Highway Performance Program (NHPP)	$322,672,472	$711,726,162	$453,024,601	$396,101,203	$359,809,249	$177,892,141	$0	$0	$0	**$2,421,225,829**
PROTECT (Y800)	$0	$5,560,785	$0	$0	$0	$0	$0	$0	$0	**$5,560,785**
STBG - Statewide Flexible (GDOT)	$96,519,320	$200,056,364	$177,566,421	$0	$0	$0	$0	$0	$0	**$474,142,105**
Off-System Bridge Setaside	$17,302,309	$22,605,463	$21,736,000	$0	$2,256,000	$0	$0	$0	$0	**$63,899,772**
STBG - Urban (>200K) (ARC)	$74,394,561	$61,916,433	$71,238,199	$14,593,638	$0	$8,000,000	$0	$0	$0	**$230,142,831**
TAP - Urban (>200K) (ARC)	$11,659,379	$9,100,320	$7,283,701	$0	$0	$0	$0	$0	$0	**$28,043,400**
TAP - Statewide (Recreational Trails Program)	$466,400	$466,400	$466,400	$0	$0	$0	$0	$0	$0	**$1,399,200**
On The Job Training and Supportive Services Program	$45,000	$0	$0	$0	$0	$0	$0	$0	$0	**$45,000**
General Federal Aid 2026-2050	$0	$0	$0	$0	$0	$0	$5,568,944,558	$10,756,740,853	$10,437,324,588	**$26,763,009,999**
Total of Project Costs	**$661,195,593**	**$1,086,828,061**	**$810,537,968**	**$410,694,841**	**$369,226,849**	**$185,892,141**	**$5,568,944,558**	**$10,756,740,853**	**$10,437,324,588**	**$30,287,385,453**
Running Total Cost	**$661,195,593**	**$1,748,023,654**	**$2,558,561,622**	**$2,969,256,463**	**$3,338,483,313**	**$3,524,375,454**	**$9,093,320,012**	**$19,850,060,865**	**$30,287,385,453**	**$30,287,385,453**

ESTIMATED AGGREGATE REVENUE (FROM TABLE E4)

Max Available FHWA Revenue *(See Note 1)*	**$881,376,201**	**$903,718,832**	**$926,580,042**	**$942,672,541**	**$959,009,303**	**$975,589,564**	**$2,005,431,543**	**$11,393,060,560**	**$13,487,192,695**	**$32,474,631,281**
Running Total Revenue	**$881,376,201**	**$1,785,095,033**	**$2,711,675,075**	**$3,654,347,616**	**$4,613,356,918**	**$5,588,946,483**	**$7,594,378,026**	**$18,987,438,586**	**$32,474,631,281**	**$32,474,631,281**

NET REVENUES MINUS COSTS

Running Total Balance (YOE)	**$220,180,608**	**$37,071,379**	**$153,113,453**	**$685,091,152**	**$1,274,873,606**	**$2,064,571,029**	**-$1,498,941,986**	**-$862,622,279**	**$2,187,245,828**	**$2,187,245,828**

(1) All revenue estimates are based on assumptions about the average share of statewide revenues which will be directed to programs and projects in the Atlanta region, as documented in RTP Appendix E / Tables E.1 to E.4. Actual amounts in any given year will fluctuate from these averages, as evidenced by the cost of projects programmed within the TIP period. GDOT has reviewed all TIP project commitments and confirms that financial resources are available to ensure no shortfall actually occurs within any individual fiscal year. Over the four year federally required TIP period (FY 2023-2026), the program is balanced and is less than revenue estimates. Note also that revenue estimates and funding programs have not yet been updated to reflect passage of the Infrastructure Investment and Jobs Act in late 2021. This will occur in conjunction with the next full update of the TIP/RTP due for completion in early 2024.

(2) Fiscal years 2026, 2027 and 2028 are only being partially programmed during this TIP Update / RTP Amendment. Additional projects and programs will be added during future administrative modifications, amendments and the full update of the TIP/RTP scheduled for completion in early 2024. As a result, running total balances shown at the bottom of the table will reduce accordingly.

(3) Fiscal years 2027 and 2028 are not considered to be part of the federally required four year TIP. For financial constraint purposes, project costs and revenue estimates are presented for information purposes only.

(4) Fiscal years 2026, 2027 and 2028 are only being partially programmed during this TIP Update / RTP Amendment, hence a LR 2026-2030 period is still required. Those projects with funds programmed in FY 2026, 2027 and/or 2028 may also have a long-range phase defined as LR 2029-2030. Those amounts are included within the total expenditures shown here. To avoid double counting the revenue attributed to FY 2026, 2027 and 2018, the revenue for this period reflects only FY 2029 and FY 2030.

(5) Italicized programs denote those which are funded from setasides established by GDOT at the statewide level. The amounts shown are in addition to commitments made from the original source program as listed above the setaside line items.

Table 4: Fiscal Constraint Summary – Federal Transit Administration ($YOE)

Demonstration of Fiscal Constraint (FTA Funds) - December 2022

ESTIMATED FORMULA FUNDING ALLOCATIONS & CIG PROGRAM AWARDS AND AGGREGATE COST OF PROGRAMMED PROJECTS (Reflects TIP Update / RTP Amendment #6)

FTA Program	2023	2024	2025	2026 *(See Note 2)*	2027 *(See Notes 2 and 3)*	2028 *(See Notes 2 and 3)*	LR 2026-2030 *(See Note 4)*	LR 2031-2040	LR 2041-2050	Total
Bus - New (80/20)	$1,550,000	$1,550,000	$1,550,000	$0	$0	$0	$9,224,050	$21,483,000	$26,704,950	**$62,062,000**
Bus and Bus Facilities Program	$4,541,343	$4,541,343	$4,541,343	$0	$0	$0	$25,378,024	$66,718,783	$76,670,358	**$182,391,194**
Clean Fuels Formula Program	$3,700,000	$3,700,000	$3,700,000	$0	$0	$0	$22,018,700	$51,282,000	$63,747,300	**$148,148,000**
Enhanced Mobility of Seniors and Individuals with Disabilities	$1,200,000	$1,200,000	$1,200,000	$0	$0	$0	$6,705,864	$14,782,596	$16,987,524	**$42,075,984**
CIG Program	$0	$0	$0	$0	$0	$0	$406,155,750	$1,329,659,100	$1,835,481,178	**$3,571,296,028**
State of Good Repair Grants	$48,591,797	$48,591,797	$48,591,797	$0	$0	$0	$271,573,371	$598,658,182	$687,952,253	**$1,703,959,196**
Transit Nonurbanized Area Formula	$760,000	$760,000	$760,000	$0	$0	$0	$42,470,472	$9,362,311	$10,758,765	**$64,871,548**
Transit Urbanized Area Formula Program	$61,736,800	$61,736,800	$61,736,800	$0	$0	$0	$344,998,820	$800,723,950	$920,157,550	**$2,251,090,720**
Total Project Costs	**$122,079,940**	**$122,079,940**	**$122,079,940**	**$0**	**$0**	**$0**	**$1,128,525,051**	**$2,892,669,922**	**$3,638,459,878**	**$8,025,894,671**
Running Total Cost	**$122,079,940**	**$244,159,880**	**$366,239,820**	**$366,239,820**	**$366,239,820**	**$366,239,820**	**$1,494,764,871**	**$4,387,434,792**	**$8,025,894,671**	**$8,025,894,671**

ESTIMATED AGGREGATE REVENUE (FROM TABLES E6 AND E7)

Estimated FTA Formula Funds Revenue *(See Note 1)*	**$143,136,653**	**$145,140,567**	**$147,172,534**	**$149,232,950**	**$151,322,211**	**$153,440,722**	**$313,356,029**	**$1,704,399,954**	**$1,958,623,963**	**$4,865,825,583**
Estimated FTA New Starts Revenue *(See Note 1)*	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$653,478,260**	**$2,178,260,870**	**$2,178,260,870**	**$5,010,000,000**
Running Total Revenue	**$143,136,653**	**$288,277,220**	**$435,449,754**	**$584,682,704**	**$736,004,915**	**$889,445,637**	**$1,856,279,926**	**$5,738,940,750**	**$9,875,825,583**	**$9,875,825,583**

NET REVENUES MINUS COSTS

Running Total Balance (YOE)	**$ 21,056,713**	**$ 44,117,340**	**$ 69,209,934**	**$ 218,442,884**	**$ 369,765,095**	**$ 523,205,817**	**$ 361,515,056**	**$ 1,351,505,958**	**$ 1,849,930,913**	**$ 1,849,930,913**

(1) All revenue estimates are based on assumptions about the average share of statewide revenues which will be directed to programs and projects in the Atlanta region, as documented in RTP Appendix E / Tables E.6 and E.7. Actual amounts in any given year will fluctuate from these averages, as evidenced by the cost of projects programmed within the TIP period. GDOT has reviewed all TIP project commitments and confirms that financial resources are available to ensure no shortfall actually occurs within any individual fiscal year. Over the four year federally required TIP period (FY 2023-2026), the program is balanced and is less than revenue estimates. Note also that revenue estimates and funding programs have not yet been updated to reflect passage of the Infrastructure Investment and Jobs Act in late 2021. This will occur in conjunction with the next full update of the TIP/RTP due for completion in early 2024.

(2) Fiscal years 2026, 2027 and 2028 are only being partially programmed during this TIP Update / RTP Amendment. Additional projects and programs will be added during future administrative modifications, amendments and the full update of the TIP/RTP scheduled for completion in early 2024. As a result, running total balances shown at the bottom of the table will reduce accordingly.

(3) Fiscal years 2027 and 2028 are not considered to be part of the federally required four year TIP. For financial constraint purposes, project costs and revenue estimates are presented for information purposes only.

(4) Fiscal years 2026, 2027 and 2028 are only being partially programmed during this TIP Update / RTP Amendment, hence a LR 2026-2030 period is still required. Those projects with funds programmed in FY 2026, 2027 and/or 2028 may also have a long-range phase defined as LR 2029-2030. Those amounts are included within the total expenditures shown here. To avoid double counting the revenue attributed to FY 2026, 2027 and 2018, the revenue for this period reflects only FY 2029 and FY 2030.

(5) Initial years of the TIP period may reflect carryover balances from previous years which were not obligated in grants during the year of apportionment. Refer to Appendix C of the RTP documentation for more information on how carryover balances are managed.

LATEST PLANNING ASSUMPTIONS

OVERVIEW

ARC updates planning assumptions including (but not limited to) population, employment, socioeconomic variables, and vehicle miles traveled (VMT) on a recurring basis. A detailed listing of the planning assumptions for this conformity analysis is outlined in Exhibit 2 – Planning Assumptions and Modeling Inputs. This document was submitted to the Interagency Consultation Group in accordance with Section 93.105(c)(1)(i) of the Transportation Conformity Rule which requires interagency review of the model(s) and associated methods and assumptions used in the regional emissions analysis. Final interagency approval was granted on September 27, 2022.

SUMMER FUEL CHANGES

Since the adoption of the initial RTP in February 2020, the 13-county MOVES modeling region is no longer subject to stricter/lower Federal Reid Vapor Pressure (RVP) standards during the summer months. Previously, MOVES inputs were modified to reflect the fuel differences for the 2-county and 13-county areas as well as improved on MOVES default fuel blend assumptions. Beginning with Amendment #1, the 13-county region is modeled using the more relaxed Federal RVP fuel standards for the entire year which matches the rest of the region. Starting with RTP Amendment #6 / TIP Update, the whole region allows for the use of MOVES defaults for fuels with MOVES3 now accurately reflecting the region.

NEW REGISTRATION DATA

Since Amendment #3, ARC has used vehicle registration data from R.L. Polk & Co. for 2020. Registration data is used in the calculation of the Age Distribution and Source Type Population input files. There were noticeable increases in emissions for all years using this new data as compared to previous emission analyses for the RTP, but all emissions have remained less than the MVEBs.

QUANTITATIVE ANALYSIS

The regional emissions analysis used to demonstrate conformity to the 8-hr. ozone standard relies on ARC's 21-county regional activity-based travel demand model. Updated travel model networks were created for each analysis year (2020, 2030, 2040, and 2050) to reflect projects as listed in RTP Amendment #6 / TIP Update. Emissions analysis was performed using USEPA's MOVES3 emissions model.

8-HR. OZONE STANDARD

The results of the emissions analysis for RTP Amendment #6 / TIP Update for all analysis years for the 8-hr. ozone nonattainment and maintenance area demonstrate adherence to conformity requirements with levels of emissions below the MVEBs contained in the Ozone Maintenance Plan SIP. Table 5 and Figure 1 document the VOC and NOx emissions for each analysis year, as compared to the applicable MVEBs.

To maintain consistency between procedures used to estimate the MVEBs included in the ozone SIPs and the conformity analysis, ARC (in consultation with GA EPD) applies an off-model adjustment to emission results for the 13-county area to reflect an emissions debit resulting from a program to exempt senior citizens from the Inspection and Maintenance (I/M) program. This program was initiated by the Georgia General Assembly in 1996 (O.C.G.A § 12-9). It exempts from emission testing vehicles ten years old or older that are driven fewer than 5,000 miles per year and are owned by persons 65 years of age or older.

It was estimated that this senior I/M exemption increased VOC and NOx emissions by 0.05 and 0.03 tons per day respectively. These amounts are reflected in Table 5. This off-model adjustment is conservatively high and was applied to the emission results for VOC and NOx to produce final emission results for each analysis year in the 13-county area where the I/M program is in place. The same credit loss is assumed for each analysis year.

Table 5: Results of the 15-County MVEB Test for the 2008 8-hr. Ozone Standards

MVEB Plan	Conformity Year	NOx in tons/day	VOC in tons/day
Georgia's 2008 Ozone Maintenance SIP for years before 2030	2020	103.34 (170.15 budgeted)	57.70 (81.76 budgeted)
Georgia's 2008 Ozone Maintenance SIP for years 2030 and after	2030	52.01 (58 budgeted)	31.37 (52 budgeted)
	2040	44.97 (58 budgeted)	25.47 (52 budgeted)
	2050	47.86 (58 budgeted)	24.93 (52 budgeted)

Table 6: Results of the 7-County MVEB Test for the 2015 8-hr. Ozone Standards

MVEB Plan	Conformity Year	NOx in tons/day	VOC in tons/day
Georgia's 2015 Ozone Maintenance SIP for years before 2033	2020	78.97 (99.99 budgeted)	44.48 (54 budgeted)
	2030	40.36 (99.99 budgeted)	23.87 (54 budgeted)
Georgia's 2015 Ozone Maintenance SIP for years 2033 and after	2033	38.74 (54 budgeted)	22.49 (35 budgeted)
	2040	35.19 (54 budgeted)	19.27 (35 budgeted)
	2050	37.43 (54 budgeted)	18.92 (35 budgeted)

Figure 1: Results of the 15-County MVEB Test for the 2008 8-hr. Ozone Standards

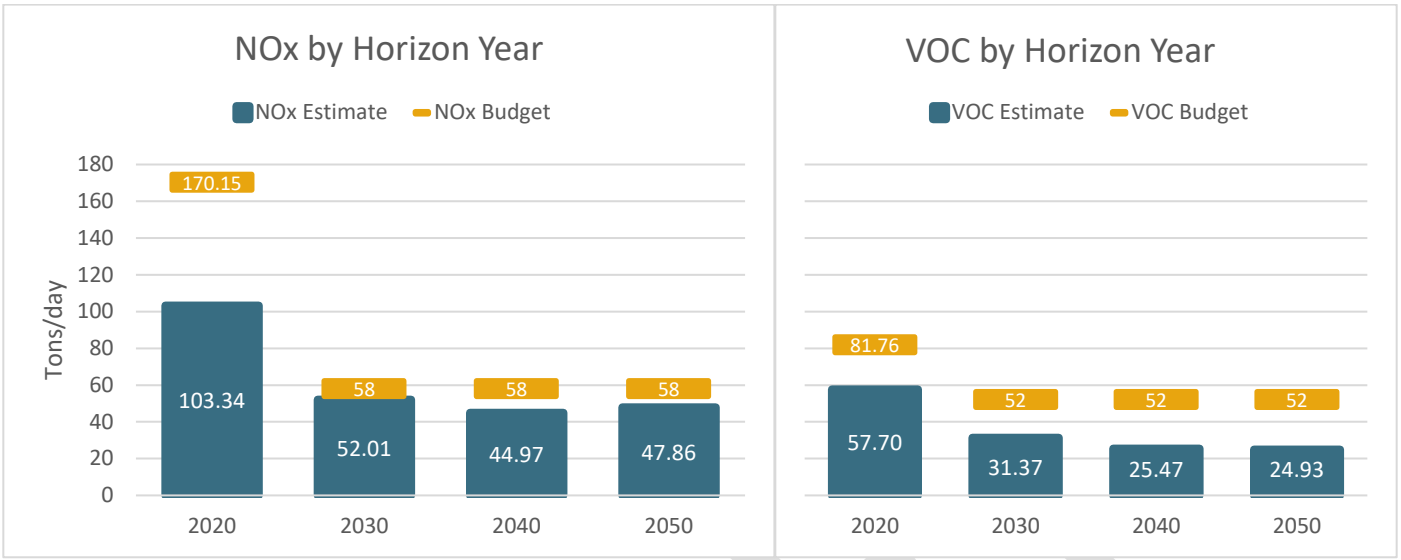
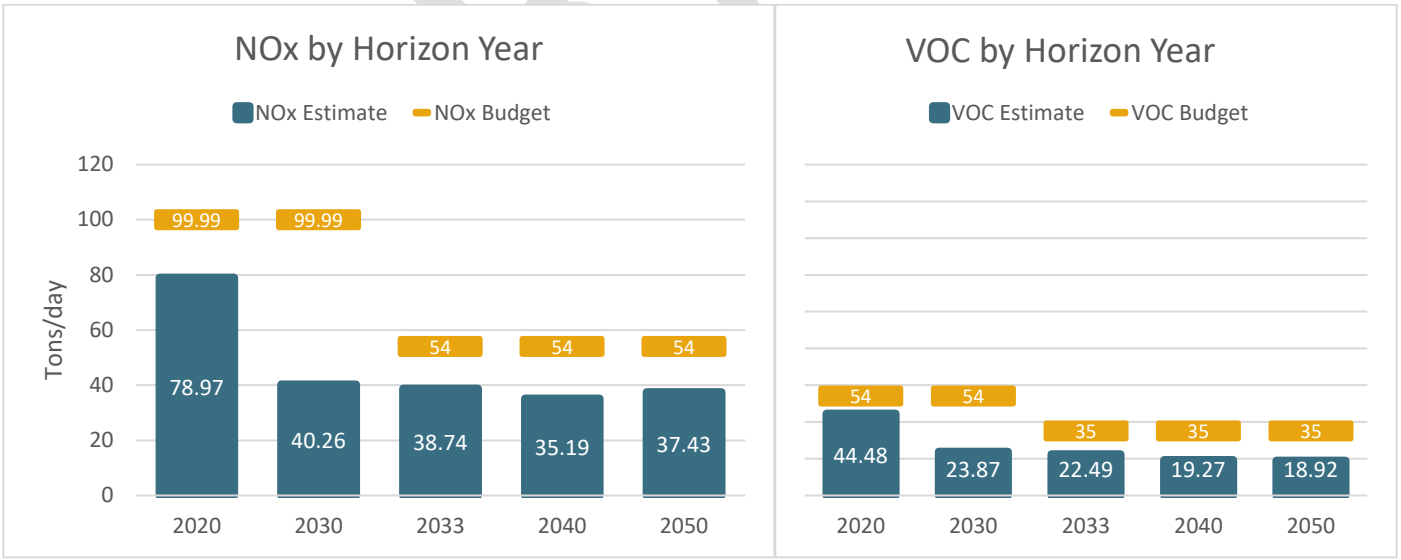


Figure 2: Results of the 7-County MVEB Test for the 2015 8-hr. Ozone Standards



EXHIBITS TO THE CDR

EXHIBIT 1: PROJECT LIST & MODELING CHANGES

EXHIBITS TO THE CDR

EXHIBIT 2: PLANNING ASSUMPTIONS AND MODELING INPUTS

2015 EIGHT-HOUR OZONE STANDARD PLANNING ASSUMPTIONS & MODELING INPUTS

General Methods and Assumptions

1) Modeling Methodology: Use the MOVES model in inventory mode to determine the total NO_x and VOC emissions in the 7-county maintenance area.
2) Analysis Years: 2020, 2030, 2033, 2040, 2050
3) Conformity Test
    a. Motor Vehicle Emission Budget (MVEB) Test[1]
        i. For years prior to 2033, 2018 MVEBs are used:
            1. NOx: 99.99 tpd
            2. VOC: 54.00 tpd
        ii. For years 2033 and later, 2033 MVEBs are used:
            1. NOx: 54.00 tpd
            2. VOC: 35.00 tpd
4) Modeling Start Date: October 2022. This start date is defined by the ARC as the initiation of the first model run for plan amendment/update.

Travel Demand Modeling Assumptions

1) Calibration Year: 2015
    a. Model calibrated/validated to the year 2015 using updated data and a comparison between estimated volumes and observed counts. See Appendix A for validation/calibration information.
2) Social/Economic Data: See Appendix B.
3) ARC's Activity-Based Travel Demand Model (ABM) is the basis for these runs. See Appendix C for an overview of ABM specifications.

Emissions Modeling Assumptions

1) Emissions Model: MOVES3 – Database: movesdb20201105
    a. Emissions Process – use MOVES in inventory mode for a July weekday
        i. For the years 2020, 2030, 2040, and 2050 modeled travel data is used to calculate emissions. For the year 2033, emissions were interpolated between 2030 and 2040 emissions.
    b. Run separately for the 6-county and 1-county portions of the nonattainment area[2]
        i. 6-county area activity, vehicle population and other inputs are assigned to Fulton County while running MOVES
        ii. 1-county area activity, vehicle population and other inputs are assigned to Bartow County while running MOVES
2) MOVES Inputs

[1] *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources*, Section 3.4.2.6, EPA420-R-92-009, USEPA Office of Air and Radiation, Office of Mobile Sources, 1992.

[2] For the 2015 eight-hour ozone NAAQS there are two sets of MOVES input files, one for the 6 counties that were once part of the former one hour nonattainment area in which a specific set of emission control measures is in place, and one for the 1 remaining county in the 2015 8-hour ozone maintenance area.

a. Road Type Distribution – Processed from the travel demand model, GDOT HPMS counts and MOVES defaults. Summarizes VMT fraction by road type and source type for the 6 and 1 counties separately.
b. Source Type Population
    i. Started with 2020 R.L. Polk & Co. registration data for the Atlanta nonattainment counties
    ii. Future analysis year data is grown from 2020 based on the ratio of MPO population estimates
    iii. Since the population of vehicle type 62 (combination long-haul trucks) can easily be underrepresented in areas with lots of through traffic, the vehicle population for MOVES source type 62 was revised using MOVES default VMT/VPOP ratios and VMT for HPMS type 60 data
c. Vehicle Type VMT
    i. HPMS VTypeYear - Processed from the travel demand model, GDOT HPMS Counts, and an EPA daily to annual VMT converter. Assigns total annual VMT by HPMS vehicle type.
    ii. Month VMT Fraction: MOVES defaults
    iii. Day VMT Fraction: MOVES defaults
    iv. Hour VMT Fraction: Derived from the travel demand model by source and road type. The fractions are determined separately for the 6 and 1 county areas.
d. I/M Programs – Applied to the 6-county area only (See Appendix D)
e. Age Distribution – Age data was derived from 2020 R.L. Polk & Co. registration data for the 6 and 1 counties separately for all vehicle types, except HDV8b (Source type 62) where MOVES defaults were used
f. Average Speed Distribution – Processed from the travel demand model with HPMS VMT adjustment factors applied. Calculates VHT by hour by speed bin by source. The distribution is determined separately for the 6 and 1 county areas.
g. Fuel – Local fuel use now matches between the 6- and 1-county areas due to the relaxation of the RVP summer fuel requirement in the 6-county area. MOVES3 was updated to correctly characterize Atlanta area fuels, so MOVES defaults were used.
h. Meteorology – July 2018 weather for Hartsfield-Jackson Atlanta International Airport was used for this analysis consistent with the 2015 Eight Hour Ozone Maintenance SIP
i. Starts – The regional travel demand model determines the number of trip starts in each of the 6 and 1 county areas. Applies only to the trips per day input. Trips per day for MOVES3 requires the activity be split by vehicle type for each of the 6 and 1 county areas. This split is accomplished by multiplying total trips per day from the regional travel demand model times the fraction of trips by each vehicle type. This fraction is calculated from vehicle population and MOVES default starts per day per vehicle. Defaults used for the rest of the start inputs.
j. Idle – MOVES defaults
k. Hotelling – MOVES defaults

3) VMT HPMS Adjustment Factors
    a. Calculated for the year 2019 (See Appendix E)
    b. HPMS adjustment in base year of calibration in accordance with Section 93.122(b)(3) of the Transportation Conformity Rule which recommends that HPMS adjustment factors be developed to reconcile travel model estimates of VMT in base year of validation to HPMS estimates for the same period

c. Summer (seasonal) adjustment to convert from average annual VMT to summer-season VMT[3]
d. Factors applied to VMT estimates generated by ARC travel demand model for 6-county portion and 1-county portion of 21-county modeling domain, separately
e. Factors aggregated up to MOVES road types from base HPMS functional classifications

4) Off-Model Calculations
   a. Senior I/M Exemption (emissions debit)
      i. The Senior I/M Exemption calculated for year 2002 is conservatively high and will be added to the regional emission inventories for each analysis year
5) TCMs
   a. No additional credit is taken in the emissions modeling process for SIP TCMs
   b. A full list of implemented TCMs is attached as Appendix F

[3] *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources*, Section 3.4.2.6, EPA420-R-92-009, USEPA Office of Air and Radiation, Office of Mobile Sources, 1992.

2008 EIGHT-HOUR OZONE STANDARD PLANNING ASSUMPTIONS & MODELING INPUTS

General Methods and Assumptions

1) Modeling Methodology: Use the MOVES model in inventory mode to determine the total NOx and VOC emissions in the 15-county maintenance area.
2) Analysis Years: 2020, 2030, 2040, 2050
3) Conformity Test
    a. Motor Vehicle Emission Budget (MVEB) Test[4]
        i. For years prior to 2030, 2014 MVEBs are used:
            1. NOx: 170.15 tpd
            2. VOC: 81.76 tpd
        ii. For years 2030 and later, 2030 MVEBs are used:
            1. NOx: 58 tpd
            2. VOC: 52 tpd
4) Modeling Start Date: October 2022. This start date is defined by the ARC as the initiation of the first model run for plan amendment/update.

Travel Demand Modeling Assumptions

1) Calibration Year: 2015
    a. Model calibrated/validated to the year 2015 using updated data and a comparison between estimated volumes and observed counts. See Appendix A for validation/calibration information.
2) Social/Economic Data: See Appendix B.
3) ARC's Activity-Based Travel Demand Model (ABM) is the basis for these runs. See Appendix C for an overview of ABM specifications.

Emissions Modeling Assumptions

1) Emissions Model: MOVES3 – Database: movesdb20201105
    a. Emissions Process – use MOVES in inventory mode for a July weekday
        i. For the years 2020, 2030, 2040 and 2050 modeled travel data is used to calculate emissions
    b. Run separately for the 13-county and 2-county portions of the nonattainment area[5]
        i. 13-county area activity, vehicle population and other inputs are assigned to Fulton County while running MOVES
        ii. 2-county area activity, vehicle population and other inputs are assigned to Bartow County while running MOVES

2) MOVES Inputs
    a. Road Type Distribution – Processed from the travel demand model, GDOT HPMS counts and

[4] *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources*, Section 3.4.2.6, EPA420-R-92-009, USEPA Office of Air and Radiation, Office of Mobile Sources, 1992.

[5] For the 2008 eight-hour ozone NAAQS there are two sets of MOVES input files, one for the 13 counties that make up the former one-hour ozone nonattainment area in which a specific set of emission control measures is in place, and one for the 2 remaining ring counties in the 2008 8-hour ozone maintenance area.

MOVES defaults. Summarizes VMT fraction by road type and source type for the 13 and 2 counties separately.

b. Source Type Population
    i. Started with 2020 R.L. Polk & Co. registration data for the Atlanta maintenance counties for the 2008 ozone NAAQS that include the nonattainment counties for the 2015 ozone NAAQSS
    ii. Future analysis year data is grown from 2020 based on the ratio of MPO population estimates
    iii. Since the population of vehicle type 62 (combination long-haul trucks) can easily be underrepresented in areas with lots of through traffic, the vehicle population for MOVES source type 62 was revised using MOVES default VMT/VPOP ratios and VMT for HPMS type 60 data
c. Vehicle Type VMT
    i. HPMS VTypeYear - Processed from the travel demand model, GDOT HPMS Counts, and an EPA daily to annual VMT converter. Assigns total annual VMT by HPMS vehicle type.
    ii. Month VMT Fraction: MOVES defaults
    iii. Day VMT Fraction: MOVES defaults
    iv. Hour VMT Fraction: Derived from the travel demand model by source and road type. The fractions are determined separately for the 13 and 2 county areas.
d. I/M Programs – Applied to the 13-county area only (See Appendix D)
e. Age Distribution – Age data was derived from 2020 R.L. Polk & Co. registration data for the 13 and 2 counties separately for all vehicle types, except HDV8b (Source type 62) where MOVES defaults were used
f. Average Speed Distribution – Processed from the travel demand model with HPMS VMT adjustment factors applied. Calculates VHT by hour by speed bin by source. The distribution is determined separately for the 13 and 2 county areas.
g. Fuel – Local fuel use now matches between the 13- and 2-county areas due to the relaxation of the RVP summer fuel requirement in the 13-county area. MOVES3 was updated to correctly characterize Atlanta area fuels, so MOVES defaults were used.
h. Meteorology – July 2014 weather for Hartsfield-Jackson Atlanta International Airport was used for this analysis consistent with the 2008 Eight Hour Ozone Maintenance SIP
i. Starts – The regional travel demand model determines the number of trip starts in each of the 13 and 2 county areas. Applies only to the trips per day input. Defaults used for the rest of the start inputs. Trips per day for MOVES3 requires the activity be split by vehicle type for each of the 13 and 2 county areas. This split is accomplished by multiplying total trips per day from the regional travel demand model times the fraction of trips by each vehicle type. This fraction is calculated from vehicle population and MOVES default starts per day per vehicle. Defaults used for the rest of the start inputs.
j. Idle – MOVES defaults
k. Hotelling – MOVES defaults

3) VMT HPMS Adjustment Factors
    a. Calculated for the year 2019 (See Appendix E)
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estimates for the same period

c. Summer (seasonal) adjustment to convert from average annual VMT to summer-season VMT[6]
d. Factors applied to VMT estimates generated by ARC travel demand model for 13-county portion and 2-county portion of 21-county modeling domain, separately
e. Factors aggregated up to MOVES road types from base HPMS functional classifications

4) Off-Model Calculations
    a. Senior I/M Exemption (emissions debit)
        i. The Senior I/M Exemption calculated for year 2002 is conservatively high and will be added to the regional emission inventories for each analysis year

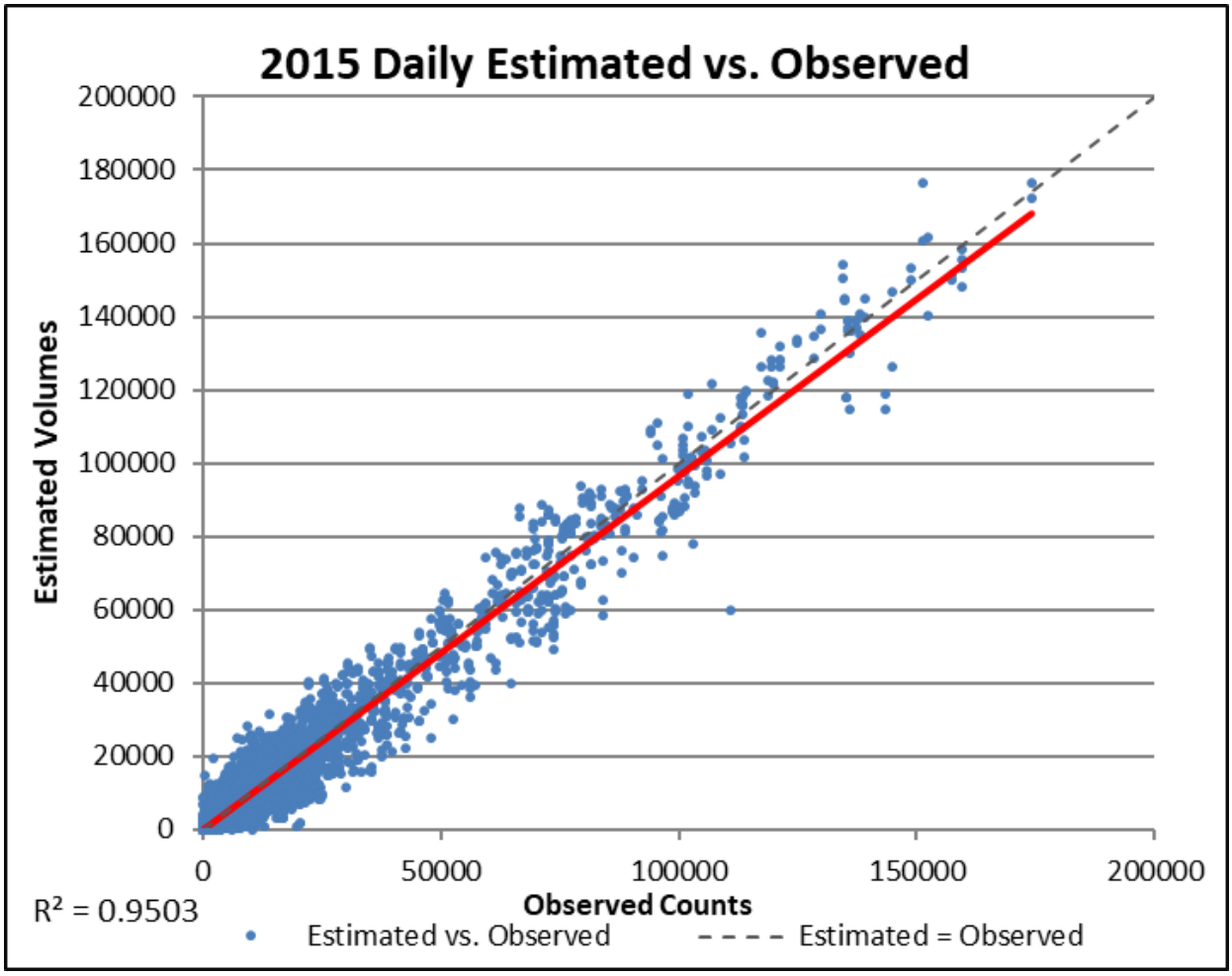
5) TCMs
    a. No additional credit is taken in the emissions modeling process for SIP TCMs
    b. A full list of implemented TCMs is attached as Appendix F

[6] *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources*, Section 3.4.2.6, EPA420-R-92-009, USEPA Office of Air and Radiation, Office of Mobile Sources, 1992.

1997 EIGHT-HOUR OZONE STANDARD PLANNING ASSUMPTIONS & MODELING INPUTS

Pursuant to EPA Guidance released on November 29, 2018 (EPA-420-B-18-050) titled "Transportation Conformity Guidance for the *South Coast II* Court Decision" emissions modeling (i.e. regional emissions analysis) is not required to demonstrate conformity for the 1997 eight- hour ozone standard (see 40 CFR 93.109(c)). As such, no planning assumptions are prepared to demonstrate conformity. Instead, the Conformity Determination Report will document the requirements to meet the 1997 standard for the orphan maintenance area in tandem with the 2008 and 2015 eight-hour ozone standards.

APPENDIX A – Model Validation



APPENDIX B – Socioeconomic Data for the Travel Model

Forecasting and Land Use Allocation Modeling

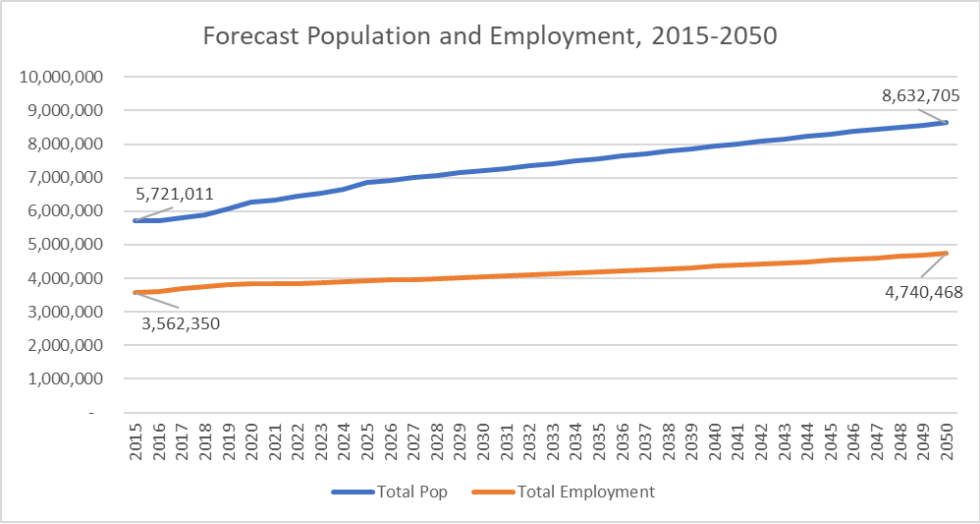
ARC uses a two-step modeling process to develop regional control totals and small area forecasts used as inputs into our Activity Based Travel Demand Model. These models include an econometric model (REMI) that uses a national forecast that is shared out to each county in the nation. We then use an "agent" model (PECAS) that simulates future location of activities and the development of space by developers. More information about these two models are below.

Prior to beginning the technical, modeling work, however, ARC starts with a Technical Advisory Committee (TAC) that reviews the assumptions and calibrations that are inherent in our econometric model. The TAC consisted of leading local economists who advised us on different scenarios we could test through the REMI model that offered more realistic assumptions and reasonable outcomes of the local economy. Based on this feedback, we modified the standard REMI model output to include different projections of labor force participation rates, and we also adjusted the early years of the model to reflect ARC's population estimates rather than REMI-generated estimates based on forecasts. This resulted in several different scenarios that created a lower bound forecast range, and mid-range and, finally an upper bound forecast range. After four meetings and several runs of the model, the TAC chose the mid-range scenario as the region's control total, which is a population of 8.6 million in the 21-county area by the year 2050.

Here are other initial findings from our ***DRAFT*** Series 16 forecasts:

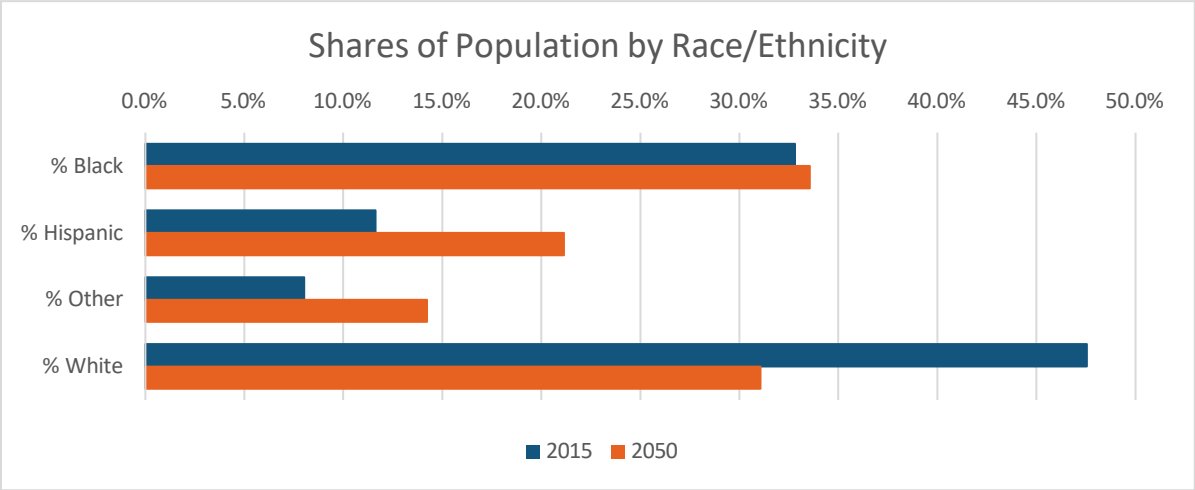
We are forecasting the region to add approximately 2.9 million new residents and close to 1.2 million more jobs between 2015 and 2050. See Figure 1 below.

Figure 1. Forecast Population and Employment Change, 2015-2050



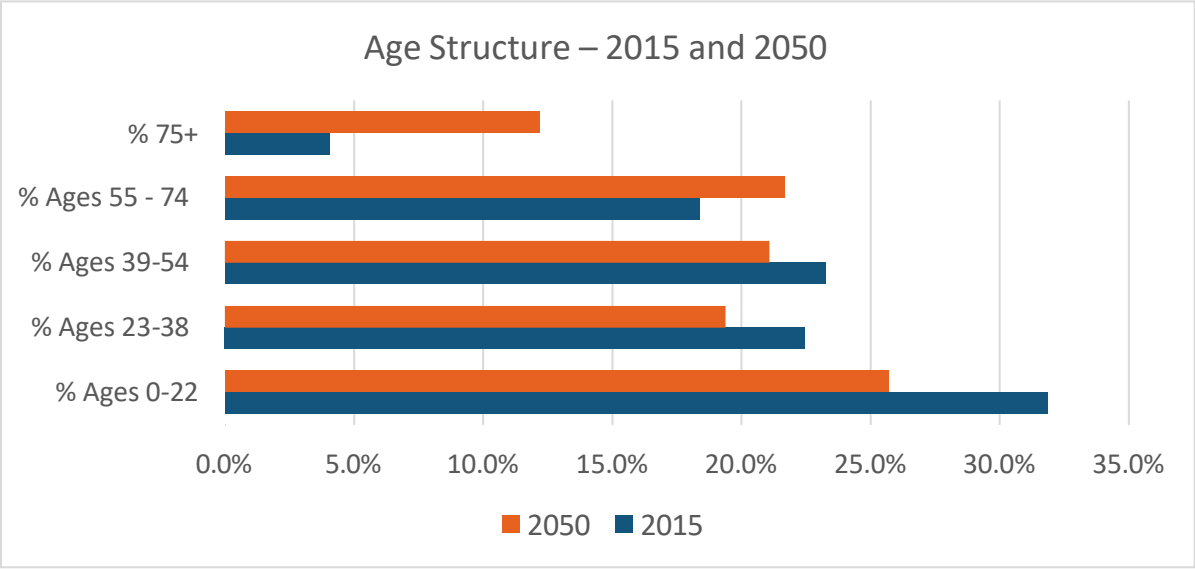
As with previous forecast series, our current Series 16 draft is forecasting a significant reduction in the overall share of White population between 2015 and 2050. See figure 2 below.

Figure 2. Share of Population by Race/Ethnicity



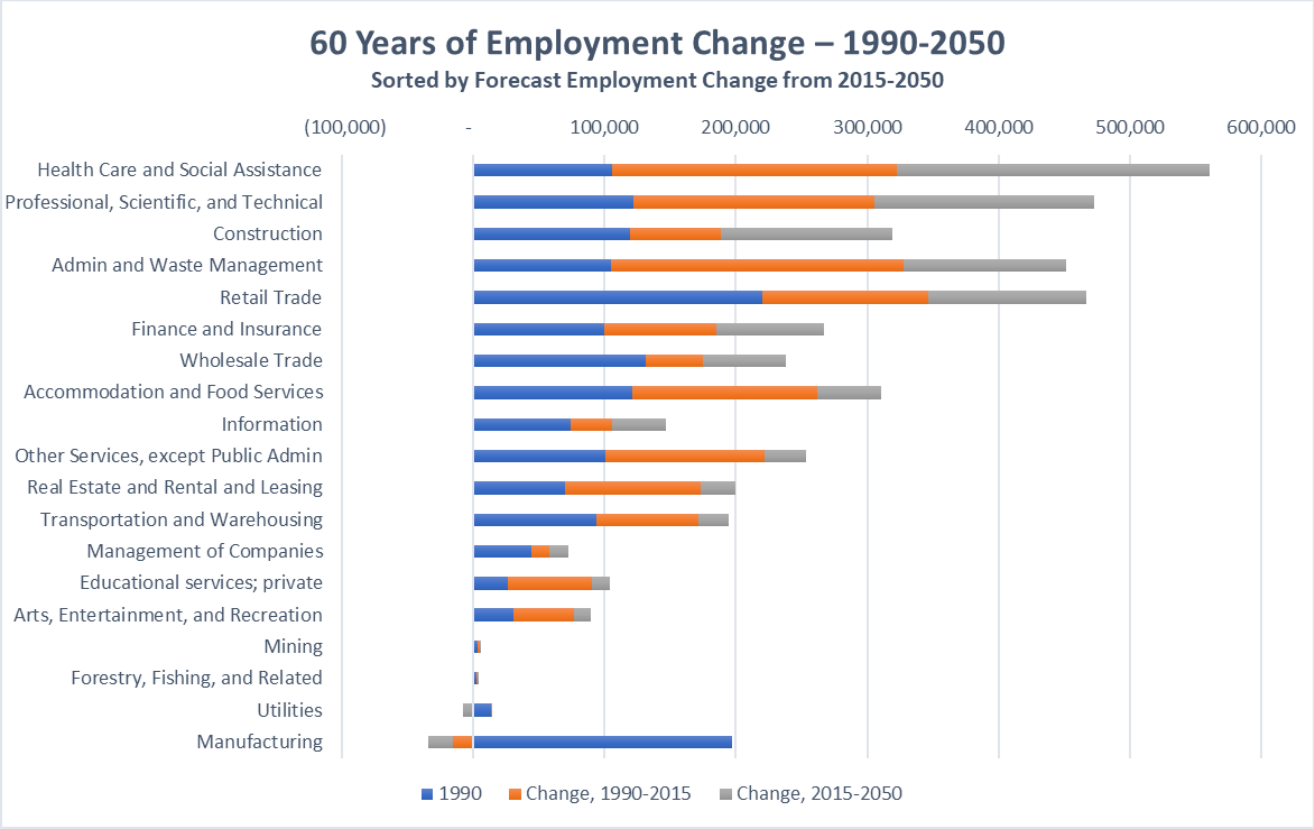
Again, in line with previous forecasts, our current Series 16 draft is also forecasting a tremendous increase in the share of 75+ population between 2015-2015. But please note – these are SHARE changes, not total population changes. So even though we are showing a reduction in the SHARE of those age 0-22, the actual population of that age cohort increases. See figure 3 below.

Figure 3. Age Structure



Finally, and again consistent with previous forecasting series, our current Series 16 draft is forecasting that the "Health Care and Social Assistance" sector will see the most jobs between 2015 and 2050. See Figure 4 below.

Figure 4. 60 Years of Employment Change: 1990-2050



REMI

The REMI model (Regional Economic Models, Inc.) is a very widely used regional economic policy analysis model. The model is used by government agencies on the national, state, and local level, as well as by private consulting firms, utilities, and universities. REMI is a structural economic forecasting and policy analysis model. It integrates input output, computable general equilibrium, econometric, and economic geography methodologies. The model is dynamic, with forecasts and simulations generated on an annual basis and behavioral responses to wage, price, and other economic factors.

PECAS for Small Area Forecasting (Land Use Allocation)

ARC reviewed state-of-the art land use models, to allocate the forecast population and employment totals to small areas, between 2007 and 2008 and selected PECAS (Production Exchange Consumption Allocation System). PECAS' main purpose is to simulate the future location of activities (industries, households and government), and the development of space by developers, for both forecasting and policy analysis. It has been used in the conformity process since 2015.

The ARC PECAS model includes the two standard PECAS modules: The Activity Allocation module (AA)

and the Space Development module (SD). AA follows an aggregate approach and represents how and why industries, government and households choose to locate in different zones or locations in the region. SD follows a microsimulation approach and simulates development at the parcel level, considering developers' profit-motivated behavior as well as land and market characteristics. These two modules interact with each other, and both also interact with the Atlanta transport model by providing it with land use data. The travel demand model, in turn, provides an indication of travel conditions for use in AA.

APPENDIX C – Model Inputs

In 2016, ARC switched from its 4-step trip-based aggregate regional travel demand model to its newly developed, and recently calibrated disaggregate activity-based model (ABM). The ABM now serves as the major travel forecasting tool in the ARC region. This model has been developed to ensure that the regional transportation planning process can rely on forecasting tools that will be adequate for new socioeconomic environments and emerging planning challenges. It is equally suitable for conventional highway projects, transit projects, and various policy studies such as highway pricing and HOV / HOT analysis. The ARC ABM is based on the CT-RAMP (Coordinated Travel Regional Activity-Based Modeling Platform) family of Activity-Based Models. This model system is an advanced, but operational, AB model that fits the needs and planning processes of ARC.

The ABM has been tailored specifically to meet ARC planning needs, considering current and future projects and policies and considering the special market segments that exist in the Atlanta region. The model system addresses requirements of the metropolitan planning process, relevant federal requirements, and provides support to ARC member agencies and other stakeholders.

1) Calibration Year: 2015
2) Project Listing: Project listings will be provided in electronic format to Interagency Consultation Group for review and include:
    a. Regionally Significant and Federally Funded
    b. Regionally Significant and Non-Federally Funded
3) Demographic Data: To be provided as separate attachment

4) Speed Data: Free-flow Speed by Area Type and Facility Type[7]

FACTYPE	ABM Area Type							
	CBD	Urban Commercial	Urban Residential	Suburban Commercial	Suburban Residential	Exurban	Rural	Facility Type
1	62	63	63	63	64	65	66	interstate/freeway
2	43	46	49	52	55	58	61	Expressway
3	43	46	49	52	55	58	61	Parkway
4	64	65	65	65	66	67	68	freeway HOV (concurrent)
5	64	65	65	65	66	67	68	freeway HOV (barrier)
6	62	63	63	63	64	65	66	freeway truck only
7	50	50	50	55	55	55	55	system to system ramp
8	35	35	35	35	35	35	35	exit ramp
9	35	35	35	35	35	35	35	entrance ramp
10	23	26	31	35	41	48	53	principal arterial
11	21	26	29	33	38	43	48	minor arterial
12	21	26	29	33	38	43	48	arterial HOV
13	21	26	29	33	38	43	48	arterial truck only
14	17	23	24	26	30	35	45	collector

5) Transit Modeling
   a. Model calibrated/validated to 2015 transit ridership empirical observations provided by transit operators
   b. Reflects results from the 2009-2010 Transit On-Board Survey, re-expanded to 2015
   c. Routes updated to reflect current operating plans
   d. Transit mode split is estimated using the mode choice model
      i. Estimates individual modal trips from the person trip movements
      ii. Composed of 15 modes, including auto by occupancy and toll/non-toll choice, walk and bike non-motorized modes, and walk and drive access to different transit line-haul modes:
         1. Auto SOV Drive Alone (Free)
         2. Auto SOV Drive Alone (Pay)
         3. Auto 2-Person Carpool (Free)
         4. Auto 2-Person Carpool (Pay)
         5. Auto 3+ Person Carpool (Free)
         6. Auto 3+ Person Carpool (Pay)
         7. Walk
         8. Bike

[7] Within the ARC travel demand and emission modeling process, free flow speeds are adjusted to reflect the increase in delay and travel time on a roadway segment as traffic volumes build and congestion levels increase. Link-level congested flow speeds are used to estimate NOx and VOC emissions as required by Sections 93.122(b)(i)-(iv) and 93.122(b)(2) of the Transportation Conformity Rule.

9. Walk-All-Transit
10. Walk-Premium Transit-Only
11. PNR-All-Transit (PNR = Park and Ride)
12. PNR-Premium Transit-Only
13. KNR-All-Transit (KNR = Kiss and Ride)
14. KNR-Premium Transit-Only
15. School Bus

iii. The mode choice model is organized in terms of seven characteristics:
1. Mathematical structure;
2. Trip purposes and choice sets;
3. Limitations on choice sets;
4. Analysis of transit access;
5. Treatment of HOV lanes;
6. Stratification by income groups; and
7. Analysis of alternative transit paths.

e. Transit Fare Modeling
i. Transit fares are based on information provided by the local transit operators throughout the Atlanta region
ii. The base year for the travel demand model is year 2015; therefore, any costs of traveling incurred within the model are representative of year 2015 dollars
iii. A CPI adjustment was applied to all the operator fares and is carried forward for all model years from 2015 and beyond
iv. The current ARC transit coding approach enables fares to be coded by mode and operator (cases where an operator has a different fare for different modes).
v. The transit fare structure includes additional fares incurred from transferring from one operator to another
vi. The fare structure results in a fare matrix which includes the total fare of the trip on a zone-to-zone level

f. 2009-2010 Transit On-Board Survey Data
i. Update of regional transit travel targets based on the re-expansion of the on-board survey data to 2015
1. Modifications to express bus and BRT transfer constants
2. Modifications to travel demand model estimates of zero-car transit work trips
3. Modifications to travel demand model estimates of kiss-and-ride passenger access and use of transit system
4. Overall evaluation of all modal constants
5. Refinement to park-and-ride lot assumptions
6. Updated walk connector and percent walk procedures

ii. Modified transit skimming procedures
iii. Re-calibrated air passenger model
iv. Assessment of travel demand model understanding of market segments and travel patterns relative to the on-board survey records

Appendix D – I/M Program

- Exhaust and Evaporative (OBD and gas cap pressure test) for 1997 and newer vehicles
  - Annual inspection required
  - Computerized test and repair OBD – Exhaust
  - Computerized test and repair OBD & GC - Evaporative
  - Applies to all LDG vehicle types
  - Three-year grace period
  - 3% waiver rate for all vehicles – Exhaust test
  - 0% waiver rate for all vehicles – Evaporative test
  - 97% compliance rate

Appendix E – VMT Adjustment Factors

Ozone VMT Adjustment Factors

Functional Class Name	Functional Classification	Factor for 13 County Area	Factor for 7 County Area
Rural Interstate	1	1.02	0.87
Rural Principal Arterial	2	0.94	0.93
Rural Minor Arterial	6	0.94	0.93
Rural Major Collector	7	1.14	0.80
Rural Minor Collector	8	1.14	0.80
Rural Local Collector	9	2.20	2.41
Urban Interstate	11	1.02	0.87
Urban Principal Arterial	12	1.02	0.87
Urban Minor Arterial	14	0.94	0.93
Urban Major Collector	16	0.94	0.93
Urban Minor Collector	17	1.14	0.80
Urban Local Collector	19	2.20	2.41

Appendix F – Status of TCMs

Per the Final Rule published by the EPA in the Federal Register on March 8, 2021 and effective April 7, 2021 titled "Air Plan Approval; GA: Non-Interference Demonstration and Maintenance Plan Revision for the Removal of Transportation Control Measures in the Atlanta Area" (86 FR 13191), ARC only has to report the status of a single TCM in the CDR and its amendments. The remainder of the TCMs have been removed from the SIP.

Description	ARC Project #	GDOT PI #	TIP	Status
INTERSECTION UPGRADE, COORDINATION & COMPUTERIZATION Sponsor(s) – GDOT in partnership with local Jurisdictions	AT 089	04Y108	93-95	Implemented
	CL 094	770600	94-96	Implemented
	CO 249	770601	94-96	Implemented
	DK 118	770603	94-96	Implemented
	FN 086	770605	94-96	Implemented
	FS 068	770605	94-96	Implemented
	GW 135	170950	94-96	Implemented
	R 098	04418	93-95	Implemented
	R 098	770391	94-96	Implemented

EXHIBITS TO THE CDR

EXHIBIT 3: INTERAGENCY CONSULTATION GROUP MEETING MINUTES

The following pages contain the approved minutes from the Interagency Consultation Group meetings since May 2022. Minutes from meetings prior to this month are included in the original CDR and subsequent amendments.

Interagency Consultation Group
May 24, 2022

MEETING SUMMARY

Attendees	
ARC	David Haynes, Guy Rousseau, John Orr, Patrick Bradshaw, Steve Lewandowski, Kyung-Hwa Kim, Sidney Douse
CBMPO	Tom Sills
Cobb	Laura Beall
Douglas	
EPA	Sarah LaRocca; Josue Ortiz Borrero
EPD	Gil Grodzinsky
FHWA	Ann-Marie Day
FTA	John Crocker
GDOT	Habte Kassa, Charles Robinson, Megan Weiss, Dan Dolder, Johnathan McLoyd
GHMPO	Joseph Boyd, Michael Haire
GRTA/SRTA	Jamie Fischer
Gwinnett	
MARTA	Natavis Harris
Other	Artagus Newell (Rome MPO)

1. Welcome & Review of Previous Meeting Summary

David Haynes called the meeting to order. He noted that the draft April 19th meeting summary was distributed for review the week prior to this meeting. No changes were suggested and the summary was accepted as final**.**

2. ARC TIP/RTP Amendment #5

Patrick Bradshaw provided a summary of the public comment process, which was open from May 5-18 and included a public hearing in conjunction with the TAQC meeting on May 11. One verbal comment was received at the public hearing and 10 written comments were received before the comment period closed. Most comments were not germane to the project changes being considered as part of the amendment. Responses to the comments are being prepared and a report will be available for review in late May. Mr. Bradshaw concluded the discussion by reminding members of the approval milestones, which will include actions by ARC, GRTA and USDOT in June**.**

3. ARC TIP/RTP Amendment #6

Mr. Bradshaw explained that ARC is compiling information for inclusion in the next amendment, which will involve travel demand modeling and an air quality analysis. Recommendations from the current TIP solicitation process will be included, as well as modifications to the managed lanes program and other issues impacting conformity. The TIP

horizon will also be extended from FY 2025 out to FY 2028. Mr. Bradshaw highlighted key review milestones and identified the proposed approval dates by various agencies which will occur in December 2022 and January 2023.

Tom Sills reported that CBMPO will be completing an RTP in early 2023 and asked if there would be a conformity analysis following Amendment #6. Mr. Haynes responded that ARC's RTP update is on the same schedule and that there will be another conformity analysis in the summer of 2023.

4. Other MPO Updates

Mr. Sills reported that there may be a couple of changes to projects in Bartow County which may need to be included in the amendment and that he would coordinate as necessary.

Joseph Boyd confirmed that GHMPO would provide a concurrence letter related to ARC's TIP Amendment #3 by the end of the week, but had nothing additional to share with the committee today.

5. New Business / Announcements

The next meeting is scheduled for June 28th. Mr. Haynes indicated that ARC will need to provide updates on the two TIP amendments. The committee should also continue the discussion begun in March related to fiscal constraint assumptions for the RTP update. No additional agenda items were proposed by other committee members today.

The meeting was subsequently adjourned.

Interagency Consultation Group
September 13, 2022

MEETING SUMMARY

Attendees	
ARC	David Haynes; Guy Rousseau; John Orr; Patrick Bradshaw; Steve Lewandowski; Kyung-Hwa Kim; Jean Hee Barrett; Kofi Wakhisi
CBMPO	Tom Sills
Cobb	Juliane Dixon-Crump
Douglas	
EPA	Dianna Myers; Sarah LaRocca; Josue Ortiz Borrero; Richard Wong; William Carnwright
EPD	Gil Grodzinsky
FHWA	Ann-Marie Day; Jared Lombard
FTA	John Crocker
GDOT	Charles Robinson; Dan Dolder; Matthew Fowler
GHMPO	
GRTA / SRTA / ATL	Jamie Fischer; Abby Marinelli
Gwinnett	
MARTA	
Other	Artagus Newell (Rome MPO)

1. Welcome & Review of Previous Meeting Summary

David Haynes called the meeting to order. He noted that the draft May 24th meeting summary was distributed for review prior to this meeting. No changes were suggested and the summary was accepted as final.

2. Ozone Redesignation and Maintenance Plan

Gil Grodzinsky reported that EPA has published a proposed rule in the Federal Register which would redesignate seven counties in the Atlanta region as being in attainment for the federal 2015 ozone standard and finalize a maintenance plan. Comments are being accepted through September 26. Publication of the final rule and effective date of the maintenance plan will depend on the nature of any comments received and the level of effort/time required to respond to them.

The immediate impact is that the rule may be finalized prior to completion of the TIP/RTP Amendment #6 process and issuance of a conformity determination by FHWA. If so, additional emissions budgets and geography specific for the 2015 ozone NAAQS would be in place under the new 2015 ozone NAAQS maintenance plan and would require conformity modeling using the new MOVES3 model. If not, only the currently existing budgets and geography would remain in place and ARC can continue to just use the MOVES2014 model. Because of this uncertainty, ARC was advised to model both scenarios and document them accordingly in the

Conformity Determination Report (CDR). The two scenarios should be presented during the public comment period. The precise nature of how the two processes are documented can be at the discretion of ARC.

All conformity modeling after Amendment #6 (e.g., for the RTP update due in early 2024) must use the MOVES3 model and follow the requirements of the maintenance plan.

3. ARC TIP/RTP Amendment #6

Patrick Bradshaw explained that ARC has compiled information for inclusion in the next amendment, which will involve travel demand modeling and an air quality analysis. Recommendations from the current TIP solicitation process will be included, as well as modifications to the managed lanes program and other issues impacting conformity modeling. A number of other changes which don't have modeling implications are also included. Mr. Bradshaw reviewed each proposed change to ensure proper assumptions on modeling requirements were being made. The group had no comments which would alter ARC's initial assumptions.

Ann-Marie Day suggested a couple of formatting modifications to the template of the document used to review modeling assumptions with IAC. Mr. Bradshaw committed to making those adjustments and will provide an updated version for the group's files prior to the initiation of the public comment period.

Mr. Haynes closed the discussion by reiterating the key milestones in the amendment process, including the public comment period in early November, ARC approvals in December, and a conformity determination sometime in late December or early January.

4. Other MPO Updates

Tom Sills reported that CBMPO is currently coordinating with ARC in developing 2050 forecasts for its planning area as part of its RTP update process. The proposed sale of 19,000 acres of land announced this week could complicate these efforts.

There was no attendee representing GHMPO, but Joseph Boyd had coordinated with Mr. Haynes prior to meeting and indicated he had nothing to report to the group.

5. New Business / Announcements

The next meeting is scheduled for September 27th. One potential agenda item was suggested, which would be an update from EPA on the status of comments received from the ozone redesignation comment period. No additional agenda items were proposed by other committee members today.

The meeting was subsequently adjourned.

Interagency Consultation Group
September 27, 2022

MEETING SUMMARY

Attendees	
ARC	David Haynes; John Orr; Steve Lewandowski; Kyung-Hwa Kim; Jean Hee Barrett; Kofi Wakhisi; Guy Rousseau; Sidney Douse
CBMPO	
Cobb	Juliane Dixon-Crump
Douglas	
EPA	Dianna Myers; William Carnwright
EPD	Kim Yunhee
FHWA	Ann-Marie Day
FTA	
GDOT	Charles Robinson; Dan Dolder; Matthew Fowler; Habte Kassa; Kimberly Grayson
GHMPO	Michael Haire
GRTA / SRTA / ATL	Jamie Fischer; Abby Marinelli
Gwinnett	
MARTA	
Other	Artagus Newell (Rome MPO)

1. Welcome & Review of Previous Meeting Summary

David Haynes (ARC) called the meeting to order. He noted that the draft September 13, 2022 meeting summary was distributed for review prior to this meeting. Gil Grodzinsky (EPD) provided a few clarification edits, which were incorporated. A revised version of the notes was subsequently distributed prior to the meeting. No additional changes were suggested and the summary was accepted as final.

2. Status of EPA Action on Ozone Redesignation and Maintenance Plan

Mr. Haynes summarized the discussion from the previous meeting on the status of a 7-county area with respect to the 2015 ozone standard. EPA submitted a draft rule to the Federal Register on August 26,2022 which proposed to redesignate this area from marginal nonattainment to attainment status. The comment period on the draft rule closed on September 26, 2022. The number and significance of any comments received would impact the timing of the rule being finalized and a maintenance plan being implemented. This would determine which set of budgets and model version must be used during the air quality conformity analysis for TIP/RTP Amendment #6 (currently underway). At the previous Interagency meeting, it was agreed that due to this uncertainty, ARC should run both scenarios and present the results in the Conformity Determination Report.

Mr. Haynes then asked Dianna Myers (EPA) to share any initial information about what was received during the comment period and how this might impact the amendment process and schedule. Ms. Myers reported that no comments were received and that EPA was confident that the final rule would be promulgated swiftly and in advance of the completion of the TIP/RTP amendment. For this reason, she recommended that ARC conduct only the analysis that is based on the maintenance plan budget and utilizes the new MOVES3 model. After brief discussion, it was agreed by consensus that the scenario in which the redesignation was not finalized prior to the amendment's completion would not be analyzed.

Additional conversation occurred related to any practical effects of the redesignation which might be noticeable by the general population. There was also a discussion on how many other regions achieved attainment status and how many did not. Both conversations were for informational purposes only and no actions by Interagency were necessary.

3. ARC TIP/RTP Amendment #6 Modeling Assumptions

Steve Lewandowski (ARC) had prepared a document summarizing the technical modeling assumptions which would be utilized for TIP/RTP Amendment #6. This document was distributed to Interagency prior to the meeting. The document was organized around the prior determination that ARC should analyze two scenarios related to the timing of the ozone redesignation. Based on the previous agenda item's outcome, it was agreed that the scenario under which the final rule was not promulgated prior to adoption of the amendment was no longer necessary and could be removed from the document.

Mr. Lewandowski then proceeded to review the key assumptions of the single scenario which will be utilized. Ms. Myers suggested a couple of technical corrections and these will be incorporated into the final document. The revised modeling assumptions documentation will then be included within the Conformity Determination Report when it is developed.

Although not present at the meeting, Mr. Grodzinsky was subsequently advised of the decision on modeling scenarios. He followed up with Mr. Haynes and Mr. Lewandowski to provide additional detailed technical guidance on the modeling process. This guidance will be followed and documented accordingly.

4. Other MPO Updates

Michael Haire indicated that CBMPO had no updates to share with the group at this time.

There was no attendee representing CBMPO.

5. New Business / Announcements

There were no additional announcements from any federal, state, regional or local partner agencies.

The next meeting is scheduled for October 25, 2022. The agenda will include an update on TIP/RTP Amendment #6, including any technical analysis results which may be available by then. Ann-Marie Day (FHWA) asked when the draft CDR would be available for review. Mr. Haynes responded that it would be provided approximately one to two weeks before the public comment period opens. He did not recall the precise date at the time, but subsequently reviewed the scheduled and notified the group that the period opens on Friday, November 4 (meaning the draft CDR should be available no later than Friday, October 27).

No additional agenda items were proposed for the October 25, 2022 meeting by other committee members today.

The meeting was subsequently adjourned.