

REGIONAL TRANSPORTATION PLAN

FEBRUARY 2020



FOREWORD

Transportation has long been the engine driving metro Atlanta's economy. We were founded as a railroad hub. And our extensive highway network, efficient heavy rail system, and world-class airport transformed metro Atlanta into one of the nation's largest, most dynamic places.

This Regional Transportation Plan demonstrates that we are committed to improving our transportation network to keep our region moving forward. Our economic competitiveness and quality of life depend on making the right investments over the next 30 years. It's imperative, if we are to keep pace with a population that's forecast to grow by 2.9 million by 2050. That's the equivalent of all of today's metro Denver moving to the Atlanta region.

In the pages that follow, you can learn about the Regional Transportation Plan and the projects that are planned in your community and along your commute – \$172.6 billion in all through 2050. This reflects the addition of significant new funding streams at the state and local levels in recent years, underscoring our dedication to improving our region's infrastructure.

It's critically important to note that metro Atlanta can't build its way out of congestion. Every thriving metro area wrestles with traffic. But that doesn't mean things can't improve. A balanced approach – better roads and highways, expanded transit, safer places to walk and bike – can make a real difference. This philosophy is at the heart of our Regional Transportation Plan.



The Atlanta region is a special place, where big-city sophistication blends effortlessly with small-town charm, where businesses soar and a vibrant creative community inspires us all. And by strategically investing in our transportation network, metro Atlanta will become an even better place to live, work, and play.

Douglas R. Hooke

Doug Hooker ARC Executive Director

UPDATE / AMENDMENT / ADMINISTRATIVE MODIFICATION HISTORY

The Regional Transportation Plan predates February 2020, however, this list reflects only those changes made since the federally required quadrennial update.

ACTION

ARC APPROVAL DATE

Federally Required Quadrennial Update

Pending - February 2020

LIST OF ACRONYMS

| AAA | Area Agency on Aging | | | | | |
|----------|---------------------------------------------------------------------------------------|--|--|--|--|--|
| ABM | Activity Based Model | | | | | |
| ADA | Americans with Disabilities Act | | | | | |
| ARTP | The Atlanta Regional Transit Plan | | | | | |
| ARWDB | Atlanta Regional Workforce Development Board | | | | | |
| ASTRoMaP | Atlanta Strategic Truck Route Network | | | | | |
| ATL | The Atlanta-Region Transit Link Authority | | | | | |
| BRT | Bus Rapid Transit | | | | | |
| CAA | Clean Air Act | | | | | |
| CB0 | Congressional Budget Office | | | | | |
| CDAP | Community Development Assistance Program | | | | | |
| CDR | Conformity Determination Report | | | | | |
| CFR | Code of Federal Regulations | | | | | |
| CID | Community Improvement District | | | | | |
| CIG | Capital Investment Grant | | | | | |
| CIP | Capital Improvement Program | | | | | |
| СМР | Congestion Management Process | | | | | |
| CTP | Comprehensive Transportation Plan | | | | | |
| CV/AV | Connected Vehicle/Autonomous Vehicle | | | | | |
| DSRC | Dedicated Short Range Communications | | | | | |
| EJ | Environmental Justice | | | | | |
| EPA | Environmental Protection Agency | | | | | |
| ES0 | Employer Service Organizations | | | | | |
| ETA | Equitable Target Area | | | | | |
| ETL | Express Toll Lanes | | | | | |
| ETOD | Equitable Transit Oriented Development | | | | | |
| FAST Act | Fixing America's Surface Transportation Act | | | | | |
| FHWA | Federal Highway Administration | | | | | |
| FTA | Federal Transit Administration | | | | | |
| GCO | Georgia Commute Options | | | | | |
| GDOT | Georgia Department of Transportation | | | | | |
| GNAHRGIS | Georgia Natural, Archaeological, and Historic Resources Geographic Information System | | | | | |
| GRTA | Georgia Regional Transportation Authority | | | | | |
| НОТ | High Occupancy Toll | | | | | |
| HOV | High Occupancy Vehicle | | | | | |
| HST | Human Services Transportation | | | | | |
| HTF | Highway Trust Fund | | | | | |
| INVEST | Infrastructure Voluntary Evaluation Sustainability Tool | | | | | |
| ITS | Intelligent Transportation Systems | | | | | |
| LCI | Livable Centers Initiative | | | | | |

| MAP-21 | Moving Ahead for Progress in the 21st Century | | | | |
|--------|----------------------------------------------------|--|--|--|--|
| MLIP | Managed Lanes Implementation Plan | | | | |
| MLSP | Managed Lanes System Plan | | | | |
| MMIP | Major Mobility Improvement Program | | | | |
| MNGWPD | Metropolitan North Georgia Water Planning District | | | | |
| MPO | Metropolitan Planning Organization | | | | |
| NAAQS | National Ambient Air Quality Standards | | | | |
| NEPA | National Environmental Policy Act | | | | |
| P3 | Public Private Partnership | | | | |
| RC | Regional Commission | | | | |
| RDP | Regional Development Plan | | | | |
| REF | Regional Ecological Framework | | | | |
| ROW | Right of Way | | | | |
| RSTF | Regional Safety Task Force | | | | |
| RSTS | Regional Strategic Transportation System | | | | |
| RTN | Regional Thoroughfare Network | | | | |
| RTOP | Regional Traffic Operations Program | | | | |
| RTP | Regional Transportation Plan | | | | |
| SHRP2 | Second Strategic Highway Research Program | | | | |
| SOV | Single Occupancy Vehicle | | | | |
| SPLOST | Special Purpose Local Option Sales Tax | | | | |
| SRTA | State Road and Tollway Authority | | | | |
| SSTP | Statewide Strategic Transportation Plan | | | | |
| STP | Surface Transportation Program | | | | |
| SWTP | Statewide Transportation Plan | | | | |
| TAP | Transportation Alternatives Program | | | | |
| TAQC | Transportation & Air Quality Committee | | | | |
| TARP | The Atlanta Region's Plan | | | | |
| тсс | Transportation Coordinating Committee | | | | |
| TDM | Transportation Demand Management | | | | |
| TEAG | Transportation Equity Advisory Group | | | | |
| TFA | Transportation Funding Act of 2015 | | | | |
| ТМА | Transportation Management Association | | | | |
| TNC | Transportation Network Company | | | | |
| ТОД | Transit Oriented Development | | | | |
| TSM0 | Transportation Systems Management and Operations | | | | |
| UASI | Urban Area Security Initiative | | | | |
| UGPM | Unified Growth Policy Map | | | | |
| USDOT | United States Department of Transportation | | | | |
| VMT | Vehicle Miles Traveled | | | | |

GOVERNING LAWS & LEGAL DEFINITIONS

THE FAST ACT: In 2015, President Obama signed the Fixing America's Surface Transportation (FAST) Act into law. The FAST Act continues the fundamental requirements for a metropolitan long-range regional transportation plan (RTP) to be updated every four years and a short-range component that reflects investment priorities for at least the next four years called the transportation improvement program (TIP).

This federal law continues the performance management approach and performance-based planning and programming requirements of the previous law, Moving Ahead for Progress in the 21st Century (MAP-21) Act, which mandated MPOs incorporate performance measures; set targets; and monitor progress related to national performance goal areas. This Act continues to uphold public involvement as the hallmark of the planning process. The law also requires the planning process to address ten planning factors, including two new planning factors presented in italics below:

- Support economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency
- Increase the safety of the transportation system for motorized and non-motorized users
- Increase the security of the transportation system for motorized and non-motorized users
- Increase the accessibility and mobility of people and for freight
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns
- Enhance the integration and connectivity of the transportation system, across and between modes, people, and freight
- Promote efficient system management and operation
- Emphasize the preservation of the existing transportation system
- Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
- Enhance travel and tourism

TITLE 23. CODE OF FEDERAL REGULATIONS

(CFR) § 450.306 AND § 450.322: In addition to the ten FAST Act planning factors, there are seven more specific requirements of an RTP defined in two sections of the Code of Federal Regulations (CFR). These sections state that a RTP must meet the following basic requirements. To understand how ARC's RTP meets and exceeds all of these requirements, see the RTP chapter title included in the bracket following the requirement.

- Assess the needs of all system users, including people driving, taking transit, walking, and bicycling [ASSESSMENT + PROCESS]
- Be developed through a robust engagement process involving citizens, elected officials, public agencies, and other key stakeholders [ASSESSMENT + PROCESS]
- Include a variety of strategies, programs, and projects to best address the identified needs [*RECOMMENDATIONS*]
- Include both a short-term element (minimum of four years) and a long-term element (minimum of 20 years) [*RECOMMENDATIONS*]

- Be fiscally constrained, meaning that projected revenues from reasonably available sources will be sufficient to cover the costs of the plan. A financially unconstrained, aspirational vision may also be developed at the MPO's discretion [*FINANCES*]
- Address all federally required performance measuring and monitoring requirements [*PERFORMANCE*]
- In regions which do not meet or are in maintenance for federal air quality standards, the plan must result in a transportation system which does not produce emission levels above specified amounts [*PERFORMANCE*]

GOVERNING LAWS & LEGAL DEFINITIONS (CONTINUED)

CLEAN AIR ACT (CAA): Federal law passed in 1970 that prescribes the national air pollution control program. The 1990 Clean Air Act amendments are the most far-reaching revisions of the original law. The Clean Air Act is administered by the Environmental Protection Agency (EPA). The State of Georgia takes the lead in carrying out the Act.

ENVIRONMENTAL JUSTICE (EJ): The

equitable distribution of costs and benefits associated with any Federal investment on all members of the community. An environmental justice policy and analysis seeks to ensure that low-income persons and people of color, in particular, benefit from Federal investments and do not experience disproportionate adverse environmental and health impacts (Executive Order [E.O.] 12898).

METROPOLITAN PLANNING ORGANIZATIONS (MPO): A group of local officials with the Federal mandate to develop transportation plans and programs for Urbanized Areas with a population of more than 50,000. MPOs are formed by agreement between local elected officials representing at least 75 percent of the population located within that area and then approved by the Governor (23 U.S. Code §134–135). MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY: Legislative initiative by the United States Congress reauthorizing and restructuring funding and planning for highway and transit programs. MAP-21 authorizes increased levels of highway and transportation funding. It was signed into law by President Obama on July 6, 2012. The FAST Act superseded MAP-21 in 2015.

REGIONALLY SIGNIFICANT PROJECT: A

project which serves regional transportation needs (such as access to and from the area outside of the region or major activity centers in the region) including, at a minimum, all principal arterial highways and all fixed guideway transit facilities that offer a significant alternative to regional highway travel (23 CFR.§450.204). These types of projects also include any project which requires the acquisition of right-of-way (ROW).

TITLE VI: The section of the Civil Rights Act of 1964 that prohibits discrimination on the basis of race, color or national origin in programs that receive federal financial assistance, including transportation projects (42 U.S. Code §2000d).

KEY REGIONAL TRANSPORTATION PLANNING DOCUMENTS

THE POLICY FRAMEWORK articulates a common vision for the future across all documents related to The Atlanta Region's Plan. The framework focuses on a threefold vision of providing world-class infrastructure, building a competitive economy, and ensuring the region is comprised of healthy and livable communities.

THE STAKEHOLDER ENGAGEMENT PLAN

seeks to ensure that The Atlanta Region's Plan reflects the full range of regional values and desires by involving a diverse spectrum of stakeholders in the development of its contents. The Stakeholder Engagement Plan strives for inclusive, creative, meaningful, and relevant community engagement.

THE REGIONAL DEVELOPMENT PLAN (RDP)

provides a starting point for regional dialogue on current issues, opportunities, and trends around the region. It dictates the programs and projects that implement the Policy Framework. The Regional Findings are a required component, and constitute the list of issues and opportunities to be addressed in the plan. The RDP previously existed as two distinct documents - The Regional Agenda and The Introduction to the Atlanta Region's Plan. **THE REGIONAL RESOURCE PLAN** enhances the visibility and management of historic, cultural, and natural resources while planning for their place as a part of our future.

THE REGIONAL TRANSPORTATION PLAN

(RTP) examines the 20-county metropolitan planning area's transportation needs through 2050. The RTP addresses anticipated growth through transportation strategies and investments that seek to improve mobility, connectivity, accessibility, safety, reliability, congestion, and transportation equity. At its core, the RTP is a statement of future transportation needs as identified by public stakeholders, local jurisdictions, ARC's planning partners, and the State. The TIP is derived from and consistent with the RTP. It reflects the investment priorities established in the RTP.

THE ATLANTA REGION'S PLAN (TARP) is a

long-range blueprint that details investments that will be made through 2050 to ensure metro Atlanta's future success and improve the region's quality of life.

LIST OF TABLES

| Table 1: Projected Population Change from 2015to 2050 by County |
|---------------------------------------------------------------------------------|
| Table 2: Projected Employment Change from2015 to 2050 by Sector19 |
| Table 3: Summary of Estimated Investments Through 2050 109 |
| Table 4: Summary of Estimated Revenues Through 2050 110 |
| Table 5: Federally Required Transit PerformanceMeasures and Targets for 2019127 |
| Table 6: Federally Required Roadway Performance Measures and Targets |
| Table 7: Project Evaluation - Current Need Measures |
| Table 8: Project Evaluation - Future Impact Measures |

LIST OF FIGURES

| Figure 1: Current and Projected Age in the Atlanta Region |
|------------------------------------------------------------------------------------|
| Figure 2: Current and Projected Race & Ethnicity in the Atlanta Region |
| Figure 3: ARC's RTP Plan Development and Approval Process |
| Figure 4: Concept 3 Project Evaluation Measures |
| Figure 5: Percent of Projects by Program Area and Program Sub-Area |
| Figure 6: TMA Purchased Transit Passes 67 |
| Figure 7: Five Strategies to Achieve a More Walkable and Bikeable Metro Atlanta |
| Figure 8: Bicycle and Pedestrian Fatalities as a Percent of All Fatalities |
| Figure 9: Percent of Project Cost by Program Area and Program Sub-Area |
| Figure 10: FHWA Performance-Based Planning and Programming Framework 126 |
| Figure 11: System Evaluation Process Flowchart |

Unless otherwise noted, all photographs are owned by ARC, in the public domain, or ARC has the rights to use the image.

LIST OF MAPS

| Map i: ARC MPO Boundary xx |
|------------------------------------------------------------------------------------|
| Map ii: Air Quality Boundariesxxi |
| Map 1: Growth of the Urbanized Area13 |
| Map 2: Population Change by County 14 |
| Map 3: Race and Ethnicity Dot Density 17 |
| Map 4: Relative Propensity to Walk & Bike 21 |
| Map 5: Comprehensive Transportation Plan Program |
| Map 6: Project Environmental Screening Tool 39 |
| Map 7: Regional Strategic Transportation System |
| Map 8: Regional Thoroughfare Network |
| Map 9: Regional Truck Routes 47 |
| Map 10: Concept 3 Projects 49 |
| Map 11: Unified Growth Policy Map 51 |
| Map 12: Environmental Justice Model 60 |
| Map 13: Protected Classes Model 61 |
| Map 14: RTP Projects by Program Area 65 |
| Map 15: Transportation Management Associations |
| Map 16: Livable Centers Initiative 75 |
| Map 17: Draft RTP Walking, Biking, and LCI Projects |
| Map 18: Draft RTP Managed Lane and Interchange and Highway Capacity Projects 92 |

| Map 19: Draft RTP Maintenance, Operations, 93 and Safety Projects |
|-------------------------------------------------------------------------------------|
| Map 20: Freight Clusters |
| Map 21: The Atlanta-region Transit Link Authority |
| Map 22: Draft RTP Transit Expansion, Operations, and Capital Management Projects102 |
| Map 23: Transit Expansion Projects by Project Type 2020-2030103 |
| Map 24: Transit Expansion Projects by Project Type 2030-2040104 |
| Map 25: Transit Expansion Projects by Project Type 2040-2050 105 |
| Map 26: Community Improvement Districts 121 |
| Map 27: Major Mobility Investment Program123 |

Unless otherwise noted, all map data comes from ARC.

TITLE VI

The Atlanta Regional Commission (ARC), as a federal grant recipient, complies with Title VI of the Civil Rights Act of 1964 and its amendments. Title VI of the Civil Rights Act of 1964 requires that no person in the United States shall, on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Presidential Executive Order 12898 addresses environmental justice in minority and low-income populations. Presidential Executive Order 13166 addresses services to those individuals with limited English proficiency. ARC is committed to enforcing the provisions of Title VI and to taking positive and realistic affirmative steps to ensure the protection of rights and opportunities for all persons affected by its programs.

If any person believes they have been discriminated against regarding the receipt of benefits or services because of race, color, or national origin, they have the right to file a complaint with ARC. For information on ARC's Title VI program, or to obtain a complaint form, see the link below.

LEARN MORE:

ARC's Title VI Plan and Program

CONTENTS

03 INTRODUCTION

09 ASSESSMENT

27 PROCESS

147 FUTURE

PERFORMANCE

127

107 FINANCES

63 RECOMMENDATIONS



OUR VISION

Atlanta is one of the world's most dynamic metropolitan areas, competing globally on the strength of our diverse population, robust economy, myriad cultural assets, and attractive lifestyles. We will win the future through intensive collaboration that honors and leverages the uniqueness of our communities.

- Atlanta Region's Plan Policy Framework





ROLE OF ARC

ARC LEGAL DESIGNATIONS

ARC coordinates regional planning efforts in areas such as aging, community services, environmental planning, governmental services, job training, land use and public facilities, as well as transportation planning. The primary roles of ARC are:

- The federally designated Metropolitan Planning Organization (MPO) for the 20-county Greater Atlanta region. As such, ARC is required to develop the long-range transportation plan that covers a minimum 20-year planning horizon.
- A designated Metropolitan Area Planning and Development Commission as well as a Regional Commission (RC) under the laws of the state of Georgia. As such, ARC operates under rules promulgated by the Georgia Department of Community Affairs.
- To provide planning staff to the Metropolitan North Georgia Water Planning District (MNGWPD), whose mission is to develop comprehensive regional and watershedspecific water resources plans for implementation by local governments.
- The administrative agency for the Atlanta Regional Workforce Development Board (ARWDB).
- The Area Agency on Aging (AAA), providing services and policy guidance to address aging issues.
- The local administrative agency for the Atlanta Urban Area Security Initiative (UASI), responsible for preparing and coordinating the region's response and recovery to homeland security issues.

ARC STRUCTURE & MEMBERSHIP

ARC is governed by a 39-member board composed of ten county commission chairs, 11 mayors, 15 citizen members, the Mayor of Atlanta, an Atlanta City Council representative, and a Department of Community Affairs representative. The actions taken by ARC's board and board committees are based on and supported by recommendations of a staff of approximately 200 professionals representing a broad range of skills and specialties.

ARC's membership includes local governments throughout the region. Some counties are considered within all elements of ARC's work, while others are only involved in one aspect. As noted in the ARC's Legal Designations section, each jurisdiction's relationship to ARC is determined by planning boundaries established through various federal and state regulations. The table on the opposite page illustrates the various boundaries for which ARC has some official level of planning and service delivery responsibilities. The map on Page xx shows the MPO boundary, the relevant boundary for the Regional Transportation Plan.



| | Metoplies hestories | Netopitan Panin Netopitan Panin Netopitan Panin | Neshert of here | A Hand Regional Main Regional Board | Jules Under Wesservill | hitaine house house and house |
|----------|---------------------|-------------------------------------------------------|-----------------|-------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Atlanta | | | | | | |
| Cherokee | | | | | | |
| Clayton | | | | | | |
| Cobb | | | | | | |
| Dekalb | | | | | | |
| Douglas | | | | | | |
| Fayette | | | | | | |
| Fulton | | | | | | |
| Gwinnett | | | | | | |
| Henry | | | | | | |
| Rockdale | | | | | | |
| Barrow | | | | | | |
| Bartow | | | | | | |
| Carroll | | | | | | |
| Coweta | | | | | | |
| Dawson | | | | | | |
| Forsyth | | | | | | |
| Hall | | | | | | |
| Jackson | | | | | | |
| Newton | | | | | | |
| Paulding | | | | | | |
| Pike | | | | | | |
| Spalding | | | | | | |
| Walton | | | | | | D |



MAP i: ARC MPO Boundary

Legend

Expressways

Counties

MP0 Boundary

ARC MPO within Georgia





MAP ii: AIR QUALITY BOUNDARIES

Legend

2015 Nonattainment Boundary

2008 Nonattainment Boundary

1997 Nonattainment Boundary

- Expressways
 - Counties

It's a fragile ecosystem we have here. There are so many components that bring people together here in Atlanta. How do you fix it all?







The last thing I want to do at the end of a work day is to get in the car and drive an hour back when I could potentially even leave a little bit earlier, get on a train and continue to work. That could be my work time. I can't do that when I'm driving myself in a car.

- EMILY L

I love coming to downtown. It can be stressful, but if I had a live, work, entertainment community, that would be ideal for me. It would be nice to have hubs like that. I see that we're headed more that way.

- BARRON M



INTRODUCTION

The Atlanta region's economy and overall quality of life relies on the ability to travel to, from, and around our communities safely and efficiently. This capability is essential if we hope to *Win the Future.*

HOW THE REGIONAL TRANSPORTATION PLAN FITS IN TO THE ATLANTA REGION'S PLAN

The Regional Transportation Plan (RTP) is one piece of The Atlanta Region's Plan (TARP). Both plans establish long-term visions and detail the policies and programs that will bring those visions to fruition. As its title may suggest, the RTP focuses on current transportation conditions, expected trends that will impact the transportation network, and documents the strategies and investments necessary to meet the multi-modal transportation needs of all residents and visitors of the Atlanta region through 2050. To learn how TARP and the RTP are implemented, see the Process Chapter.



WINNING THE FUTURE

First adopted in August 2015 and reconfirmed in 2019, the Policy Framework articulates a common vision for the future across all documents related to The Atlanta Region's Plan. The framework focuses on a threefold vision of providing world-class infrastructure, building a competitive economy, and ensuring the region is comprised of healthy and livable communities. While transportation clearly underpins the world-class infrastructure element, it also plays a critical role across the other elements of the vision and their respective goals. The figure below illustrates the six goals outlined in the Policy Framework. These six goals are inextricably linked, contingent on the success of the others. This Plan incorporates those linkages and explores the goals of a comprehensive transportation network and walkable, vibrant centers in detail.

ARC alone cannot achieve this vision of *Winning the Future*. Success will require coordinated efforts of our government partners at all levels, private and nonprofit organizations, and community support to make this vision a reality.

GOALS

Ensuring a comprehensive transportation network, incorporating regional transit and 21st Century technology

Secured, long-term water supply

GOALS

Developing additional walkable, vibrant centers that support people of all ages and abilities

Promoting health, arts and other aspects of a high quality of life

GOALS

Building the region as a globally recognized hub of innovation and prosperity

Developing a highly educated workforce, able to meet the needs of 21st Century employers



A LIVING DOCUMENT

Federal law requires an update to regional transportation plans every four years. The last quadrennial update to ARC's RTP happened in 2016.

Between 2016 and 2019, the RTP went through a series of amendments and modifications in order to reflect new and evolving transportation efforts ARC pursued, keeping it fresh and relevant.

In that way, the RTP is not a fly in amber after adoption, but rather a living document that is gradually adjusted and augmented between quadrennial updates.

WHAT'S NEW IN THIS UPDATE OF THE RTP?

There are several spheres of transportation planning that ARC has continued to strengthen and emphasize since the 2016 update, including:

- Equity and equitable outcomes
- Transportation infrastructure resilience
- Livable center and transit-oriented investments
- Safety and working towards zero deaths
- Planning for limited federal funding
- Multimodal freight planning
- Performance-based planning and target setting

There are also emerging practices and concepts ARC has worked to understand and harness, including:

- Rapid technological advancements in automated, connected, and electric vehicles
- The proliferation of new mobility services like bike share, scooters, ride-hailing services
- The data management strategies behind them all.

DOCUMENT ORGANIZATION

The Regional Transportation Plan is divided into the following seven chapters, plus an executive summary and technical appendices:

EXECUTIVE SUMMARY

The Executive Summary highlights the most significant and relevant information to create a brief synopsis of the entire Regional Transportation Plan.

INTRODUCTION

This Chapter creates the link between the RTP and TARP. It recalls the vision and goals outlined in the Policy Framework and touches on significant changes in the transportation industry since the last major update in 2016.

ASSESSMENT

The Assessment Chapter sets the stage for readers to understand our changing population, employment, and demographic landscape and the transportation implications. It also details the challenges the Atlanta region is likely to face in the future, as well as the assets we have available to overcome those challenges and even improve as a region.

PROCESS

This Chapter describes how ARC collaborates with partners and stakeholders to create a plan that is reflective of the Policy Framework, as well the practice used to identify projects that are the best use of available funds.

RECOMMENDATIONS

The Recommendations Chapter highlights the myriad programs, policies, plans, and funding efforts ARC champions in order to improve the lives of Atlanta region residents and visitors, no matter what mode by which they travel.

FINANCES

This Chapter explores the state of funding at the federal, regional, and local scale. It also describes regional expenditures and revenues, meeting the fiscally constrained requirement.

PERFORMANCE

The Performance Chapter communicates what impacts that everyday resident and visitor will feel as a result of investing in the RTP project list or foregoing building the RTP project list.

FUTURE

This Chapter lays out the ongoing transportation planning efforts at ARC. It also discusses advancements and disruptors likely to impact transportation, and how those might play out through scenario planning.

TECHNICAL APPENDICES

The Technical Appendices (A through N) house all of the methodologies and analytic components used to create this Plan, as well as the RTP project list.

Snapshot of Public Involvement



If even one day per week, every person in Atlanta chose an option other than driving, that would be a huge game-changer.



- TRACY S.



I think education is key, informing people on what's in it for them, what would the benefit be for them if they had to leave their cars home and just took the train, rapid transit, walking, stuff like that.

- KEONA J.

Expanding bus service should be the first priority, and then probably getting dedicated express bus lanes could help ease up congestion, but I think it's just connecting where people work to where people can actually access transit.





ASSESSMENT

Over the 30-year period from 2020 through 2050, the Atlanta region is forecasted to add 2.9 million residents, resulting in a total population of 8.6 million.

Metro Atlanta is an ever-evolving region of urban, suburban, and rural landscapes that provides a diverse collection of homes, jobs, and communities for the 5.7 million people currently living here. Over the next 30 years, the region expects to add another 2.9 million people (for a total of 8.6 million), requiring new homes, jobs, and communities to be developed. The RTP plans for that development by outlining the transportation investments to be made in the coming years that encourage the kind of development desired by the residents of the region.

The first step in planning for the future is to assess the present. This chapter starts the planning process by reviewing the region's current population, employment, housing, demographic, and land use conditions to lay the ground work for forecasting the future. Topics studied in other parts of The Atlanta Region's Plan, like regionally important resources and the region's workforce, are also reviewed in the RTP to ensure that a holistic approach to transportation planning is undertaken. After the review of current conditions is completed, forecasts for future conditions are produced to understand growth in the region. The goal of forecasting future conditions is not to exactly anticipate future growth, but to understand the likely patterns of growth that will influence the future. This modeled condition is merely one possible future, informed and limited by our current knowledge of factors influencing our region and its transportation system. Any subsequent forecast of future conditions can be modified to reflect different policy decisions and planning assumptions.

By understanding the likely trajectory of growth from this point forward, the RTP can more readily plan for transportation investments that respond to resident's needs and deliver the kind of communities they desire.



WELCOME TO ATLANTA

The Atlanta region remains the economic and cultural powerhouse of the southeast. Adding to this prominence is not only the ability to connect residents and visitors globally through the busiest airport in the world, but also to metro areas across the south, mid-Atlantic, and mid-west in only a few hours by way of multiple modes of travel.

Travel via airplane, bus, and personal vehicle only prospers when supplemented by viable community-oriented travel



like walking, bicycling, and transit. The RTP supports and proposes to improve both local and regional mobility options in three ways: transportation demand management, capacity enhancements, and modernization of the transportation system.

This chapter details trends the Atlanta region should expect in the next thirty years, as well as the multi-various and longstanding challenges facing the Atlanta region and the assets we can leverage, recognizing that transportation and land use decisions are intertwined in all of it.

ville

ona Beach

arleston

ndo Palm Bay



Within a 2 hour flight

Within a 6 hour personal vehicle drive

Within a 4 hour intercity bus ride

City on Amtrak Crescent Line

> Hours to New York: 16 Hours to New Orleans: 12

Metro Area ≥ 1,000,000 people Southern Metro Area ≥ 500,000 people

۶r

Hartford

New

Philadelphia

Virginia Beach

tor

chmond

eigh

Baltimore

Yorl

ovidence

REGIONAL GROWTH TRENDS

Long-range transportation planning is informed by estimates of future population and employment conditions that drive trip-making patterns and travel needs.

Metro Atlanta's urbanized area measured 2,645 square miles at the last Census in 2010 – this is the second largest urbanized area in the country with the ninth largest population. The region saw particularly robust growth leading up to the turn of the century, and has since grown at its slowest rate since the 1960s. Notably, some areas that have previously been identified as key natural resources, such as the Dog River Watershed and Arabia Mountain, have been protected from overwhelming urban development. Nevertheless, development pressures continue to threaten natural resources and increase impervious surface coverage, testing our ability to manage stormwater. Along with other major urban areas in the country, metro Atlanta will continue to face greater challenges related to urban development, climate resilience, and a changing population.

TREND PROJECTION METHODOLOGY

ARC uses a two-step modeling process to develop regional control totals and small area forecasts used as inputs into our Activity Based Transportation model. First, an econometric model (REMI) uses a national forecast that is shared out to each county in the nation. Then an "agent" model (PECAS) simulates development. More information about these two models can be found in ARC's Model Documentation.

LEARN MORE:

ARC's Model Documentation

Figure 1







MAP 1: GROWTH OF THE URBANIZED AREA

Legend

2010

Year

Major Roads
1950 Expressways
1970 Counties
1990 MPO Boundary



MAP 2: POPULATION CHANGE BY COUNTY





Table 1: Projected Population Change from 2015 to 2050 by County

DEMOGRAPHIC CHANGES

Metro Atlanta is expected to add 2.9 million residents by 2050. This growth is spread across the region - Cobb, DeKalb, Fulton, and Gwinnett will remain the most populous counties, but all MPO counties are projected to see a population increase of at least 25%. In fact, some primarily suburban and rural counties, including Barrow, Henry, Paulding, and particularly Forsyth, are expected to see more relative population growth than the core urban counties. With population growth expected across metro Atlanta, pressure on our current transportation system will only increase, and the demand for transportation options will rise. The majority of the region's residents work outside of the county they live in, and mobility across and around metro Atlanta is critical for the success of the region.

As is the case in urban areas across the country, the region's population is expected to age significantly in the coming decades. While just 4% of the population in 2015 was above the age of 75, this population share is projected to triple by 2050, creating new challenges in housing, workforce, and mobility in the region. Metro Atlanta's population is also projected to be substantially more diverse in 2050. The region's White population currently makes up nearly half of metro Atlanta residents; in 2050, that number is expected to be just under one third. Strong growth will be seen in the Hispanic population in particular. Today, there is still significant geographic separation, with high concentrations of Black populations in DeKalb, Clayton, and south Fulton and Asian and Hispanic populations clustered in northern DeKalb and Gwinnett. Metro Atlanta faces challenges in ensuring equitable access to transportation options, which must be addressed as the region continues to grow and diversify.

Figure 2 CURRENT AND PROJECTED RACE & ETHNICITY IN THE ATLANTA REGION



Note: This data refers to the model area, which includes counties outside the MPO.

16 | Regional Transportation Plan


MAP 3: RACE AND ETHNICITY DOT DENSITY

Legend

Race and Ethnicity by Census Tract

1 Dot = 100 People

- Hispanic or Latino
- Black only non-Hispanic
- Asian only non-Hispanic
- White only non-Hispanic
- Other Race / Native American / Multiple Races



MPO Boundary

EMPLOYMENT CHANGES

Employment for the 20-county region is projected to increase by 1.2 million jobs between 2015 and 2050, for a total job base of more than 4.7 million. In total, the region expects 33% growth, with the average annual employment growth rate during this period is forecast at 0.9%.

As Table 2 shows, growth in two sectors is expected to greatly outpace growth in other sectors. The Health Care and Social Assistance sector is expected to grow the most by 2050, growing by almost 74% or more than a quarter of a million jobs. The Construction sector is expected to grow at the second highest rate, adding 69% more jobs (about 131,000) by 2050. The raw growth of the Retail sector, the Professional, Scientific, and Technical Services sector, and the Administrative and Waste Management sector are all projected to be above 100,000 jobs added by 2050. Since these three sectors already have higher than average employment in the Atlanta area, the rate of growth of these sectors isn't projected to be as high as the Health Care and Construction sectors.

Two sectors are expected to lose jobs by 2050. The Utilities sector is projected to see the greatest rate of job loss, about -58% or more than 8,000 jobs. The Manufacturing sector is expected to loose more than 18,000 jobs, but this represents a slower rate of loss, at only -10% of the current workforce by 2050.

Table 2: Projected Employment Change from 2015 to 2050 by Sector

Other Services, except Public Administration Accommodation and Food Services Arts, Entertainment, and Recreation Health Care and Social Assistance Educational Services, private Administrative and Waste Management Management of Companies and Enterprises Professional, Scientific, and Technical Services Real Estate and Rental and Leasing Transportation and Warehousing Retail Trade Manufacturing Mining Forestry, Fishing, and Related



DRAFT

TRAVEL CHANGES

Travel by specific modes has remained largely consistent in recent history. The majority of metro Atlanta residents commute in single occupant vehicles. Fewer than five percent of workers currently commute by transit, walking, or biking.

Mode choice is based on a number of factors but is fundamentally predicated on development patterns and roadway design¹. Metropolitan Atlanta's historic focus on highway investments and dispersed development is closely linked to current travel patterns and predominance of single-occupancy vehicle travel. Areas that support shorter trips, reduced congestion, and increased transportation choices have wellconnected streets and more proximity between schools, parks, commercial centers, and diverse housing types. Investments within existing communities and activity centers can help ensure a safer, more accessible system that supports all mode choices and types of trips.

Metropolitan Atlanta is projected to grow from approximately 5.7 million residents to 8.6 million residents in the next thirty years. More people means increasing demands on our transportation system and a continued need to adapt and maintain existing infrastructure. But changing residential patterns and technology options also indicate opportunities for mode shifts. Emerging trends in geography, technology, and culture may indicate a different future for travel choices. Residents in urbanized areas typically have shorter trips and more transportation options, so more people living within the urban core or denser town centers can change underlying travel patterns. Increasing the availability of safer and more comfortable roadway designs along with more micro-mobility options can offer alternatives to driving or serve as key last mile connections. Teleworking is expected to become increasingly available for employees and employers alike.

Development patterns determine opportunities to travel. More opportunities to walk, bicycle, or access transit improves the region's quality of life, economic competitiveness, and health outcomes. The following map illustrates current propensity for walking and bicycling and highlights how opportunities to travel outside of a car vary widely across the region.

¹ Goldberg, David et al. (2007) "New Data for A New Era: A Summary of the SMARTRAQ Findings Linking Land Use, Transportation, Air Quality, and Health in the Atlanta Region." Retrieved October 2019 from: https://www.smartgrowthamerica.org/app/ legacy/documents/SMARTRAQSummary_000.pdf



MAP 4: RELATIVE PROPENSITY TO WALK & BIKE



CHANGES IN CLIMATE-RELATED RISKS

Planning for climate-related risks, chiefly extreme weather events that disrupt travel, damage transportation infrastructure, and pose health, safety, and economic growth risks, is of growing importance to our region. Building climate resilience is a focus at the national level too. The FAST Act expressly urges for a reduction of natural disaster vulnerability, including reducing or mitigating stormwater impacts on surface transportation.¹

Climate-related risks are already an issue here in the Atlanta region, as evidenced by more frequent and intense droughts, flash floods, snow storms, and heat waves.² See photos on the adjacent page for examples of extreme weather events that the Atlanta region has faced in recent history.

ARC is continually committed to helping the region prepare for, withstand, and recover rapidly from climate-related risks to better serve our residents and visitors who rely on the transportation system for everyday life. In 2018, we adopted the *Vulnerability and Resiliency Framework for the Atlanta Region* to begin strategically planning for and minimizing potential adverse impacts of predictable, longterm threats. After securing a grant from the Federal Highway Administration's (FHWA) Resilience Pilot Program, we spent the next year building a GIS-based tool that allows us to apply the framework to our decision-making processes and conduct a system vulnerability assessment.

Using the results of this Pilot Program effort, ARC will continue to improve our planning goals, objectives, and performance measures to be more sensitive to transportation system resiliency; better incorporate system resilience into modal and comprehensive plans; promote projects that mitigate climate-related risks and enhance system resiliency; and support projects and strategies that enhance resilient system performance.

LEARN MORE:

 Vulnerability and Resiliency Framework for the Atlanta Region

¹ Fixing America's Surface Transportation Act, December 2015, https://www.gpo.gov/fdsys/pkg/PLAW-114publ94/pdf/PLAW-114publ94.pdf

² Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States, page 25, U.S. Global Change Research Program, nca2018.globalchange.gov





Lake Lanier approached historic low water levels during a drought in 2012. The lowest level on record occurred just 3 years prior.





A winter storm referred to as "Snowmageddon" hit the region in January 2014, paralyzing interstates and disrupting both rail and bus MARTA service.





Historic flash flooding hit the region in 2009, resulting in 10 fatalities and \$500 million in damage.

REGIONAL ASSETS & CHALLENGES

Metro Atlanta will experience substantial changes to nearly all facets of daily life in the coming decades. In anticipation of these changes, we must build on our core assets in order to address both current and future challenges. The following twelve statements describe those assets and challenges. These twelve areas are interlinked so boosting any given asset can have the added benefit of improving a challenge too. The statements were established as part of ARC's Regional Development Plan, a requirement of the Georgia Department of Community Affairs. The purple text below answers the question: *How does the RTP build on these regional assets and address regional challenges*?

AIRPORT AREA PLANNING

Hartsfield-Jackson International Airport is the largest economic asset in the region and its continued success will require regional coordination of land use, transportation, and economic development in the surrounding communities.

Recognizing that passengers, employees, and goods moving to and from the airport require a variety of safe and convenient transportation options

AGING

By 2050, 20% of the region's population will be over the age of 65, which will demand changes in the provision of services and the design of communities.

Ensuring that mobility options are available for all, including those who may experience changes in abilities as they age

CLIMATE RESILIENCY

As climate patterns become increasingly volatile, metro Atlanta communities will have to overcome more frequent environmental stressors by using adaptation and mitigation strategies.

Emphasizing the need to maintain existing infrastructure good condition while ensuring that future facilities are designed to be resilient

COMMUNITY IDENTITY

To build stronger regional and local identity, communities should continue to enhance their physical and social character through creative placemaking initiatives.

Providing funding for programs to help identify and implement projects that contribute to both the creation and preservation of livable communities

ECONOMIC DEVELOPMENT

Sustained investment in infrastructure, workforce, and quality of life will be critical to ensuring the region's economic status as a global business hub.

Recognizing the role that maintaining and expanding transportation infrastructure plays in attracting businesses and offering a good quality of life for all

EQUITY

Inequities in income and race continue to be a barrier to success for residents across the region.

Addressing the fact that safe, convenient transportation options are limited for many residents attempting to access essential services, job opportunities, education, and other key destinations

HOUSING

Housing affordability is eroding across metro Atlanta and will impact our economic competitiveness if left unaddressed.

Understanding that a lack of affordable housing near jobs and other destinations increases the number and length of trips and puts a strain on both the transportation system and the individual

MOBILITY OPTIONS

Funding for transportation has increased in recent years but the need for transportation investments continues to ensure the region has mobility options.

Establishing the list of fiscally constrained transportation projects that will continue to grow regional mobility options in the coming decades

POPULATION

By 2050, the composition of the region's 8 million residents will be markedly different in terms of age, race, and ethnicity.

Responding to the needs of an increasingly diverse population with a continued need for greater transportation options

TRANSIT

The region has strong but geographically limited transit options. With the creation of a regional transit authority, significant coordination and prioritization will be required to expand transit services.

Laying the foundation for the first major expansion of the region's transit services in decades and ensures coordination between stakeholders

WORKFORCE DEVELOPMENT

To ensure the region's economic success, everyone must be prepared to advance in a productive career.

Acknowledging that a lack of mobility options across the region is a barrier to finding and maintaining jobs

WATER RESOURCES

Increased conservation efforts, use of new technology, and public awareness will continue to be critical tools to manage the region's limited water resources.

Implementing projects which are sensitive to the transportation network's impact on the natural environment

With the region's growth and projected growth, we need to take a look at expansion of all modes of transportation.



- JONATHAN H.



We still don't have sidewalks. We still don't have bicycle lanes and I haven't noticed ramps for people with disabilities. I have a problem with that because I'm disabled. Building sidewalks and bike lanes would help people get out and exercise more.

- JODIE C

I would put money into multi-use paths so you're taking people off the main road. Plus you're helping the environment, you're saving a lot on gas and emissions

- TRACEY M.



PROCESS

The RTP is developed around state, regional, and local priorities and informed by a project evaluation analysis to create balanced investments in the transportation system for the next 30 years.

THE RTP APPROVAL PROCESS

ARC does not develop the RTP in a vacuum. In order for the recommendations of the RTP to be implemented, it must be approved through five sequential actions.

The first three approval steps are internal to ARC, with the Transportation Coordinating Committee (TCC) acting first to confirm that the plan meets all technical requirements and has produced recommendations acceptable to practitioners and stakeholder agencies. TCC's recommendation is then considered by the Transportation & Air Quality Committee (TAQC). Finally, the ARC Board takes action to approve the RTP. Actions taken by the officials and agency executives that makeup TCC, TAQC, and the Board represent the MPO's official position.

Following these three ARC actions, federal law requires that the short-range component of the plan, the TIP, be approved by the Governor. In Georgia, this responsibility has been delegated to the Georgia Regional Transportation Authority (GRTA). No state action is required on the longrange portion of the plan.

The final action involves consideration of a conformity determination by the United States Department of Transportation (USDOT) and the Environmental Protection Agency (EPA) to ensure the Plan is consistent with federal air quality goals. A positive conformity determination means that the RTP meets all federal metropolitan transportation planning requirements, including being fiscally constrained, multimodal in nature, and developed through a rigorous stakeholder engagement and outreach process.

In areas where air quality does not meet EPAestablished standards, EPA works with USDOT during the review process to verify that the RTP will do its part to help the region attain those standards. Three separate technical documents, Activity Based Model Specification Report, Activity Based Model Calibration Report, and Conformity Determination Report (CDR), are used to present ARC's technical analysis methodologies and results for consideration by USDOT and EPA in issuing conformity determinations.

The flowchart on the opposite page outlines the overall RTP development and approval process, building off the previous regional plan last updated in 2016.

LEARN MORE:

- Activity Based Model Specification Report
- Activity Based Model Calibration Report
- Conformity Determination Report (note: available in February 2020)

Figure 3 ARC'S RTP PLAN DEVELOPMENT AND APPROVAL PROCESS







Competitive Economy

World-Class Infrastructure

Healthy Livable Communities

Transportation Objectives:

- Improve quality of life at the neighborhood, city, county, and regional levels
- In partnership with local communities, equitably and strategically focus resources in areas of need and importance
- Improve public health through the built environment
- Integrate sound environmental principles that ensure the region's sustainability

Transportation Objectives:

- Maintain and operate the existing transportation system to provide for reliable travel
- Improve transit and nonsingle-occupant vehicle options to boost economic competitiveness and reduce environmental impacts
- Strategically expand the transportation system while supporting local land use plans
- Provide for a safe and secure transportation network
- Promote an accessible and equitable transportation system
- Support the reliable movement of freight and goods
- Foster the application of advanced technologies to the transportation system

STATE PLANNING COORDINATION

ARC works with several state agencies to develop regional transportation project recommendations and ensure the programs developed by each agency are complementary. All state agencies work to achieve six transportation goals:

- Improve safety,
- Improve the environment,
- Maintain and preserve the current system,
- Relieve congestion,
- Improve reliability, and
- Improve freight and economic development.

The Georgia Department of Transportation (GDOT) builds, maintains, and operates much of the region's roadway network, and is the conduit through which all federal transportation funding to the State of Georgia flows. The State Road and Tollway Authority (SRTA) operates toll facilities in coordination with GDOT and is an important financial partner due to their bonding capabilities under state law. GRTA operates Atlanta's regional Xpress bus system and provides oversight of the TIP, the short-range component of the overall transportation plan, on behalf of the Governor. Federal legislation requires states to have a multimodal long-range transportation plan, called a Statewide Transportation Plan (SWTP), that outlines general investment policies over a minimum 20-year plan horizon. Additionally, Georgia legislation requires a short-range transportation investment plan, called the Statewide Strategic Transportation Plan (SSTP), that outlines specific investment strategies. GDOT develops both the SWTP and the SSTP for the state of Georgia.

GEORGIA'S STATEWIDE TRANSPORTATION PLAN (SWTP)

The SWTP assesses the current and future performance of all major transportation modes in the state. It is the technical and programmatic guide needed to meet the transportation demands of the state. The SWTP is updated every four years.

The SWTP does not enumerate specific projects, but rather identifies general approaches and strategies the state will follow clustered around three core investment categories: (1) statewide freight and logistics, (2) people mobility outside of the Atlanta region, and (3) people mobility within the Atlanta region. This structure provides key direction in the development and prioritization of projects and strategies included in the RTP. The most recent SWTP was completed in 2016, with a horizon year of 2040. GDOT is currently developing a new SWTP and SSTP and expects a final report in fall of 2020.

GEORGIA'S STATEWIDE STRATEGIC TRANSPORTATION PLAN (SSTP)

The SSTP is the official, intermodal, fiscally constrained, comprehensive transportation plan which includes programs and other activities to support the implementation of the state's strategic transportation goals and policies. The SSTP is updated every two years and requires an annual performance monitoring update.

GDOT's most updated SSTP covers investments beginning in 2018. The transportation goals and objectives defined in the SSTP address four key questions:

- What do Georgia's citizens and businesses expect and need from their transportation network?
- What levels of performance will attract and keep businesses and talent in Georgia's economy?
- What characteristics or features in a transportation system will make Georgia an attractive place to live?
- What will it take in terms of investment to drive growth across the State?

The SSTP provides specific performance metrics and targets designed to guide the appropriate selection and funding of projects to advance the state's strategic transportation goals. Tracking and monitoring of key investment strategies occurs annually through the annual progress report.

LOCAL PLANNING COORDINATION

In order to ensure that the local perspective is represented in regional planning efforts, ARC coordinates with local governments regularly through a variety of programs. These programs include the following:

COMMUNITY DEVELOPMENT ASSISTANCE PROGRAM

Through the Community Development Assistance Program (CDAP), ARC offers planning and technical support to metro Atlanta communities on issues related to housing, creative placemaking, green infrastructure, and food access, among others. This program is led by ARC's Community Development Group, with staff assistance from across the agency depending on the project subject. CDAP provides opportunities to work closely with communities in the region, allowing ARC to gain a stronger understanding of local needs regarding infrastructure, economic development, and community identity.

COMPREHENSIVE TRANSPORTATION PLAN PROGRAM

The Comprehensive Transportation Plan (CTP) program was established to ensure that transportation infrastructure has a positive impact on strengthening our economy and communities at both the local and regional levels by providing financial incentives for counties and their constituent municipalities to develop joint long-range transportation plans. Since 2005, ARC has made federal funding available to assist counties and cities in developing joint longrange transportation plans. These plans serve as the foundational building blocks of regional transportation planning efforts and are updated on a rotating cycle. The basic expected outcomes of a CTP are:

- Prioritized list of transportation investments necessary to support visions for economic development and strong communities established by cities and counties.
- Five to ten year fiscally constrained action plan which reflects currently available funding sources and feasible policy actions that can be taken at the city or county level.
- Recommendations that have been vetted through a robust community engagement process that is formally adopted by local government policy officials.
- Recommendations that leverage regional facilities, services, and programs to address local needs and priorities.
- Recommendations that can knit together previous plans and projects identified at the community level through Livable Centers Initiative (LCI) studies, Community Improvement District (CID) work programs, county or city Capital Improvement Programs (CIP), corridor studies, and other initiatives.



MAP 5: COMPREHENSIVE TRANSPORTATION PLAN PROGRAM

Legend

CTP Scheduled Update



FREIGHT ADVISORY TASK FORCE

The Freight Advisory Task Force was established nearly 20 years ago as a forum for dialogue between the freight community and the public sector on freight and goods movement issues. The task force works to address the following goals:

- Improve goods and services movement in the region
- Improve reliability of goods movement
- Minimize the cost of goods movement
- Improve characteristics of transportation system for freight movement

FREIGHT CLUSTER PLAN PROGRAM

The 2016 Atlanta Regional Freight Mobility Plan Update identified a lack of planning for local needs in industrial areas, resulting in the start of the Freight Cluster Plan program. Freight clusters have been identified as areas with the most intense industrial development in the region, and planning for these areas will provide guidance for project and policy implementation in the coming years. More information on the program can be found in the Recommendations Chapter of this plan.

LIVABLE CENTERS INITIATIVE

The Livable Centers Initiative (LCI) funds studies at the local level to focus growth in established communities, particularly those with a connection to regional transit or those that are traditional main street communities. The goals of the program include encouraging a diverse mixture of land uses, enhancing access to a range of travel modes, and fostering publicprivate partnerships and sustained community support. More information on the LCI program is in the Recommendations Chapter.

REGIONAL SAFETY TASK FORCE

In 2019, the Regional Safety Task Force (RSTF) was established to guide the region's goal of eliminating fatal and serious injuries and crashes. Consisting of a multidisciplinary group of professionals, including local planners, policymakers, and advocates, the RSTF will help ARC:

- Establish a regional safety vision,
- Identify actionable strategies and resources,
- Track our progress toward meeting regional safety targets,
- Promote better transportation project development, and
- Promote a culture of safety.

The Recommendations Chapter contains more information on ARC's safety goals and strategies.

LEARN MORE:

- Community Development Assistance Program
- Comprehensive Transportation Plan Program
- Freight Advisory Task Force
- Freight Cluster Plan Program
- Livable Centers Initiative
- Regional Safety Task Force

MODAL PLANNING COORDINATION

In addition to the comprehensive transportation planning activities which occur at the state and local levels, the recommendations of the RTP also incorporate findings of various studies and plans which focus on the needs of residents and visitors ability to move about the region. ARC's modal plans typically do not focus on a specific geography, unlike place-based efforts like LCIs or CIDs, but rather have broad applicability to the entire region. They recognize the pieces of the transportation network that serve the huge diversity of the region. The plans act as extensions to the RTP where more detailed information on modal data, analysis results, and recommendations can be obtained. The following list summarizes recent multimodal plans since the last quadrennial RTP update:

- Atlanta Regional Freight Mobility Plan (2016)
- Atlanta Region Truck Parking Assessment (2018)
- Safe Streets for Walking & Bicycling: A regional action plan for reducing traffic fatalities in metropolitan Atlanta (2018)
- Managing Mobility in the Atlanta Region: Human Services Transportation Plan (2017)
- Concept 3: Regional Transit Vision (2018)
- Regional ITS Architecture Update and Transportation Systems Management and Operations (TSMO) Vision (2020)
- Regional Human Services Transportation: Demand Response Coordination Study (2020)



SYSTEM AND PROJECT EVALUATION

ARC takes a multi-step approach to integrate projects into a network of rigorously evaluated investments that advance the transportation goals and objectives of the region. There are dual goals of this evaluation process – to understand how individual projects perform (project-level evaluation) and to understand how all projects work as a system, collectively serving the region (system-level evaluation). Project and system evaluation are the primary levers ARC has to relate the RTP's recommended project list to the broader regional goal of Winning the Future.

In some instances, project sponsors like GDOT and MARTA have gone through their own evaluation process, as well as their own stakeholder and community input process. ARC takes this into account, ensuring those performance standards achieve the RTP's vision, goals, and objectives.

Both project and system evaluations incorporate quantitative and qualitative findings. The Performance Chapter describes those measures and metrics in detail.

See the adjacent graphic which depicts a simplified version of this process.

OVERVIEW OF ARC'S EVALUATION PROCESS

1

INTEGRATE PRIORITIZED PROJECTS FROM PROJECT SPONSORS LIKE GDOT + MARTA

2

INTEGRATE UNPRIORITIZED PROJECTS FROM OTHER PROJECT SOURCES LIKE CTPs

3

EVALUATE UNPRIORITIZED PROJECTS USING ARC METHODOLOGY

4

CONDUCT SYSTEM EVALUATION OF ALL PROJECTS USING ARC METHODOLOGY

5

COMPARE SYSTEM RESULTS AGAINST PERFORMANCE MEASURES + TARGETS

ENVIRONMENTAL COORDINATION

BACKGROUND

Pursuant to 23 CFR 450.324(4)(10) – Potential Environmental Mitigation Discussion, the MPO shall facilitate a discussion of types of potential environmental mitigation activities that can be leveraged by the long-range transportation plan. ARC facilitates this discussion among the applicable Federal, State, wildlife, and other regulatory agencies and planning partners. The discussion associated with this plan update is centered around ARC's in-house geospatial analytical process that screens all proposed RTP projects, including those already programmed in the TIP. This process will be explained further in this section.

SHRP2 IMPLEMENTING "ECO-LOGICAL"

ARC relies on FHWA's Eco-Logical process to direct high-level environmental screening of RTP and TIP projects. The Eco-Logical approach is an initiative established by FHWA as a component of the Environmental Review Toolkit, intended to accelerate project delivery, while strengthening agency partnerships, reducing permitting processing times, and ultimately achieving better environmental outcomes. This nine-step approach encourages local, regional, state, and federal agencies to collaborate at the beginning of the transportation planning process; identify environmental priority areas; and include conservation and mitigation strategies in their respective infrastructure plans that correspond to the priority areas.

The most pertinent step in this process is the development of the Regional Ecological Framework (REF), which is the geospatial database used to screen transportation projects. The REF is evaluated for potential updates to existing datasets, or integration of new datasets, during each RTP update. There are no updates recommended to the REF dataset during this plan update. The current REF consists of 15 datasets or layers to be used as inputs into the REF analysis of transportation projects:

- Draft 2014 Clean Water Act §§ 305(b) & 303(d) List of Waters (TMDL - Total Maximum Daily Load)
- Brownfields
- Darter Habitat
- Endangered Species
- Floodplains
- Groundwater Recharge Areas
- Hazardous Sites Inventory
- Trout Streams
- Small Area Supply Watersheds
- Wetlands
- Georgia Metropolitan River Protection Act
 Corridor
- Historic Resources
- Current Land Use Map ("Landpro"), Agricultural and Forest Categories
- Existing Greenspace
- Undeveloped Land

RTP/TIP ENVIRONMENTAL SCREENING PROCESS

ARC developed a Project Environmental Screening Tool, a customized ArcGIS Desktop application that calculates the acreages of proposed transportation project footprint overlays, relative to the 15 key environmental resources in the REF. The acreage estimates are used to screen projects for potential impacts, project deliverability, potential scope of the National Environmental Policy Act (NEPA) review, and to proactively identify potential mitigation strategies. This screening occurs during the regional transportation planning process, prior to the proposed project being programmed in the RTP/TIP with federal funding. The results of this screening are displayed on Map 6 and can be found online by following the link below.

ARC convened the RTP Environmental Consultation Group twice during this update process. The meetings were used to present information on the scope and scale of the RTP update, as well as the latest efforts on linking planning with NEPA to accelerate project delivery. During the second meeting, the methodology and results of the Project Environmental Screening Tool were discussed.

TIP PROJECT EVALUATION FRAMEWORK DEVELOPMENT

Since the adoption of the current RTP in 2016, ARC has developed a performance-based TIP solicitation prioritization methodology and process that includes a cultural and environmental resources component in the ranking criteria for all projects seeking federal funding. A full description of the criteria, metrics, and weighting, by project type, is documented in ARC's 2019 TIP Project Evaluation Framework document.

LEARN MORE:

- SHRP2 Implementing Eco-Logical
- Online Map of Project Environmental Screening Tool Results
- TIP Project Evaluation Framework



MAP 6: PROJECT ENVIRONMENTAL SCREENING TOOL

Legend

Total Acreage Impacted



372-739 acres

Greater than 739 acres

Counties

MPO Boundary

FHWA INVEST IMPLEMENTATION

In 2017, FHWA allocated funding to ARC to implement the Infrastructure Voluntary Evaluation Sustainability Tool (INVEST), and gather lessons learned. The general objective of this scope of work was to conduct a thorough comparison and analysis of different ARC decision support tools with the INVEST – Project Development (PD) Module criteria.

Upon completion of the comparison, ARC recommended developing a new sustainability analysis tool, rather than incorporating the INVEST-PD criteria into ARC's pre-existing decision-support tools. Through this research, ARC also recommended "front loading" its planning process by leveraging INVEST-PD criteria to identify priority areas and corresponding sustainability project types that would be most effective towards achieving sustainability.

RESILIENCE PLANNING

Planning for extreme weather is of growing national importance. FHWA has recognized that the climate is changing and we should expect more extreme weather events. Assessing and mitigating our transportation vulnerabilities from extreme weather enables ARC to make conscientious investments and improve the lives of all of our residents. Through a grant from FHWA's Resilience Pilot Program, ARC has been building a GIS-based tool to assess system vulnerability. The results of this assessment will aid in future funding decisions. Integrating resilience in the decision-making process as a data-driven evaluation measure allows ARC to continue to protect particularly threatened transportation assets, while also promoting projects that help to mitigate climate risks, in order to ensure system resiliency.

WATER RESOURCE MANAGEMENT PLAN

The Water Resource Management Plan update also supports ARC's Eco-Logical work program. This regional water plan identifies three areas of focus:

- Water Supply Planning and Water Conservation
- Watershed Management
- Wastewater Generation and Treatment

The Watershed Management section details strategies and recommendations for effective stormwater management and water quality protection. It includes specific tasks and milestones for implementing these recommendations for local governments as well as regional and state agencies.

Transportation infrastructure has significant, cumulative impacts on water quality and watershed conditions. For example, transportation asset management practices can control stormwater runoff from linear facilities like roads, highways, and trails in support of the objectives of the plan. Transportation infrastructure is also susceptible to and often a contributing factor to moderate and severe flooding, and the plan includes floodplain management guidelines and policies that can guide transportation investments to benefit floodplains.

GNAHRGIS EXPANSION PROJECT

Georgia Natural, Archaeological, and Historical Geospatial Information System (GNAHRGIS) is an interactive web-based registry and geographical information system designed to catalog information about the natural, archaeological, and historic resources of Georgia.

In 2017, ARC partnered with GDOT and the University of Georgia – Carl Vinson Institute to carry out peer research on best practices for maintaining and exchanging environmental resource data among state and regional agencies. The research identified two leading models - Florida and North Carolina - that will likely influence the way Georgia enhances the GNAHRGIS and associated environmental consultation.

LEARN MORE:

- INVEST
- Resilience at ARC
- Water Resource Management Plan
- GNAHRGIS

PRIORITY NETWORKS

ARC identified four priority networks to focus limited funding of strategic projects to maintain and improve essential parts of the overall regional transportation system. Their denotation as a priority network stems from their connection to achieving the vision, goals, objectives, and policies established in the Policy Framework. The four priority networks are:

- Regional Strategic Transportation System (RSTS)
- Regional Thoroughfare Network (RTN)
- Atlanta Strategic Truck Route Network (ASTRoMaP)
- Regional Transit Vision

These regional and national priority networks are policy filters of the TIP project evaluation process, stipulating that roadway capacity projects must be located on a priority transportation network.

The remainder of this section defines each of the aforementioned four priority networks and how ARC utilizes each in its planning and decisionmaking processes.

REGIONAL STRATEGIC TRANSPORTATION SYSTEM

The RSTS is an ARC-identified network of regionally significant roadways and transit routes that are priorities for federal transportation investments. This network was originally defined in 2006 and updated during development of the 2012 long-range plan. It was not reassessed as a component of this plan update process. The RSTS network is made up of the region's highest volume trip-making patterns, including:

- Interstate highways and freeways
- National Highway System (NHS) classified facilities
- State highways, including intermodal connectors for freight facilities
- Existing and future regional transit services
- Principal arterials
- Critical minor arterials
- Other facilities that provide continuous, cross-regional mobility by ensuring adequate spacing of major roadways that connect regional activity centers, town centers, and freight corridors

This plan continues the strategy of focusing limited federal transportation funds on the RSTS. One benefit of focusing the region's limited transportation funding on these corridors in particular is that ARC can strategically select increasing roadway and transit capacity projects to only those on the RSTS, and therefore only those that would have true regional impact. The RSTS also furthers the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods, including addressing current and future transportation demand.



MAP 7: REGIONAL STRATEGIC TRANSPORTATION SYSTEM

Legend

- ----- National Highway System
- —— State Routes
- —— Arterials
- Future Routes
- Expressways
- Counties
 - MPO Boundary

REGIONAL THOROUGHFARE NETWORK

The RTN is a subset of roadways within the RSTS which serve the region's most critical mobility needs. Thoroughfares are a highvolume transportation corridor that serve mainly vehicular traffic, but also serving high-capacity transit as well as people walking and bicycling. They are our most critical connections between people, goods, and important places in the region. As such, ARC considers the RTN the highest priority for federal funding consideration.

While the RSTS identified priority facilities for the use of federal-aid funding for roadway and transit capacity expansions, an additional refinement of the RSTS was needed to:

- Highlight non-freeway corridors that promote regional commute patterns
- Accommodate Concept 3 premium transit services such as light rail and bus rapid transit
- Serve as a priority network for performance monitoring reporting initiatives
- Serve as the basis for selecting future locations for multimodal corridor studies with emphases on safety and connections to transit, employment, and essential services

The following established regional networks comprise the RTN:

- National Highway System
- Principal Arterials
- Regional Mobility Roadway Segments
- Regional Truck Routes
- Premium Transit Roadway Alignments
- GDOT Regional Traffic Signal Operations Program Corridors

Since the RTN was identified to promote mobility, connectivity, multi-modal, and freight travel at the regional scale it also acts as the Congestion Management Process (CMP) network.

LEARN MORE:

- Regional Thoroughfare Network Identification and Classification Report
- ARC's Congestion Management Process



MAP 8: REGIONAL THOROUGHFARE NETWORK

Legend

- Expressways
- Counties
- MPO Boundary

ATLANTA STRATEGIC TRUCK ROUTE NETWORK

The Atlanta Regional Freight Mobility Plan (2008) found that the region has discontinuous routes serving freight truck traffic. Many truck routes are not logical in that they stop at jurisdictional boundaries or conflict with restrictions placed in adjacent communities.

ARC recognized the need for an additional study pertaining to truck routing and operations, and thus developed the Atlanta Strategic Truck Route Master Plan (ASTRoMaP). This project, in cooperation with state and local government bodies and agencies, produced a truck route system designed to provide regional access and also guide current and future decision making on regional transportation priorities. The ASTRoMaP truck route system, represented in dark yellow in the adjacent map, strategically feeds into the national expressway system, represented in gray.

ARC developed ASTRoMaP-specific policies, guidelines, and design strategies relevant to freight planning, with specific emphasis on improving at-grade rail crossings and intersection geometrics. ASTRoMaP also served as the foundation for an update to the Atlanta Regional Freight Mobility Plan which was developed concurrently with the RTP adopted in 2016.

LEARN MORE:



Atlanta Strategic Truck Route Master Plan

Workers loading boxes onto a truck



MAP 9: REGIONAL TRUCK ROUTES

Legend

----- Regional Truck Routes

- Expressways
- Counties
- MPO Boundary

REGIONAL TRANSIT VISION

In 2018 ARC created the long-range, fiscally unconstrained vision for transit expansion in the Atlanta region. This plan, known as Concept 3, updated the transit planning and transit project evaluation process, using analytical tools and data-driven measures to create an objective and prioritized project list that advance regional goals and objectives. A subset of these projects are funded in the RTP, but not all projects have secured funding.

Each of the 50 projects, depicted in the adjacent map, were evaluated on seven measures that correspond with regional planning priorities. The seven measures are described in Figure 4 below. The 2018 Concept 3 Update also included a supplemental Data Management Plan (Appendix B), which describes the needs, challenges, and opportunities for improved data management in the regional transit planning process, and details the current and potential data flow for different data sets and sources relevant to Concept 3 and related transit plans.

Concept 3 laid the groundwork for a Regional Transit Plan and the work of the Atlanta-region Transit Link Authority.

LEARN MORE:

• Concept 3: 2018 Update

Figure 4

CONCEPT 3 PROJECT EVALUATION MEASURES



Reliability // On-time performance expectation based on MARTA's current services by mode.



Connectivity // Number of connections between the project and existing high-frequency transit services.



Efficiency // Jobs and population within 1/2 mile of station areas divided by weekday service miles.



Sensitivity // Intersections with culturally and environmentally sensitive land uses, weighted by project length.



Social Equity // Population within 1/2 mile who are non-white or under the poverty line.



Compatibility // Ratio of jobs and population within 1/2 mile.



Job Accessibility // Built-in Conveyal measures weighted by total population and social equity factors.



MAP 10: CONCEPT 3 PROJECTS

Legend Expressways Commuter Rail Counties Light Rail MPO Boundary Streetcar Express Bus Bus Rapid Transit Arterial Rapid Transit

UNIFIED GROWTH POLICY MAP

The Unified Growth Policy Map (UGPM) provides direction for future growth. The UGPM represents local plans as well as the Atlanta Region's Plan policies and forecasts. A large portion of the region is developed, but opportunities for redevelopment and new investments remain.

The UGPM is comprised of Areas and Places. Areas describe predominant land use patterns throughout the region. Areas also directly influence the future forecasted growth of the region by describing future land use patterns in each part of the region. Places reflect concentrated uses that have generally defined boundaries and provide greater detail within Areas. The Development Guide, an online map with policy guidance, provides the following for each Area and Place identified on the UGPM:

- A detailed map showing the specific location in the region
- A written description that includes a defining narrative and issue summary
- Guidelines for recommended building height and development density
- Pictures that characterize development patterns that are typical and desirable
- Implementation priorities that identify measures to achieve desired development patterns

The UGPM and Development Guide support the RTP recommendations through:

- Evaluation of Potential Transportation
 Investments: The specific policies and
 outcomes identified in the UGPM and
 Development Guide were applied in evaluating
 potential projects for inclusion in the RTP.
 Transportation investments that were
 inconsistent with regional growth objectives
 were not recommended for federal funding.
- Identification of Transportation Programs: Based on the vision articulated in the UGPM and Development Guide, existing transportation programs were extended and modified to support desired outcomes. This program helps support core regional vision objectives such as fostering growth in transit-supportive communities and Complete Streets focus areas.
- Determination of LCI Eligibility: Only those communities identified on the UGPM as Places are eligible for funding under LCI.

The UGPM provides a coherent vision for the future development of the region, and the RTP investments discussed in the Solutions section support this vision.

LEARN MORE:

 UGPM Online Map and Development Guide (note: update available in December 2019)



MAP 11: UNIFIED GROWTH POLICY MAP | DRAFT 11.01.19



DEVELOPING RURAL AREAS

Developing Rural Areas are areas in the region where little to no development has taken place, but where there is development pressure. These areas are characterized by limited single-family subdivisions, individual large single-family lots, agricultural uses, protected lands, and forests. The region should strive to protect these areas by limiting infrastructure investments to targeted areas. Limited existing infrastructure in these areas will constrain the amount of additional growth that is possible. Some transportation improvements may be needed in Developing Rural Areas, but care should be taken not to spur unwanted growth.

DEVELOPING SUBURBS

Developing Suburbs are areas in the region where suburban development has occurred, and the conventional development pattern is present but not set. These areas are characterized by residential development with pockets of commercial and industrial development. These areas represent the extent of the urban service area, and the region's first attempts at suburban smart growth can be found in these areas. There is a need in these areas for additional preservation of critical environmental, agricultural, and forest resources. Limiting existing infrastructure in these areas will constrain the amount of additional growth that is possible. Transportation improvements are needed within these Developing Suburbs, but care should be taken not to spur unwanted growth.

ESTABLISHED SUBURBS

Established Suburbs are areas in the region where suburban development has occurred. These areas are characterized by single-family subdivisions, commercial development, and office, industrial, and multi-family development in limited locations. With few remaining large parcels for additional development, these are the areas in which the region may see the least amount of land use change outside of retail and commercial areas. Preservation of existing single-family neighborhoods is important, and wholesale change will most likely not occur in those single-family subdivisions that make up a majority of these areas. However, infill and redevelopment will occur in the limited commercial areas.

MATURING NEIGHBORHOODS

Maturing Neighborhoods are areas in the region characterized by older neighborhoods that include both single- and multi-family development, as well as commercial and office uses at connected key locations. These areas represent the largest part of the region that is facing infill and redevelopment pressures. In many cases, infrastructure is in place to handle additional growth, but in some areas, infrastructure is built out with limited capacity for expansion. This may constrain the amount of additional growth possible in certain areas. Many arterial streets in this area are congested due to their use as regional connections for commuters. Limited premium transit is available in these areas. The demand for infill
development, redevelopment, and adaptive reuse of existing buildings in this area should be balanced with the preservation of existing single-family neighborhoods, as well as the need for additional public greenspace, including trails and sidewalks.

REGION CORE

The Region Core is the major economic, cultural, and transportation hub of the region. This area is the densest in terms of employment, residential, and cultural offerings throughout the region, with the most developed transit service. The Region Core can handle the most intense development; however, this infrastructure continues to need improvements as it ages and the lifestyles of metro Atlanta residents change. With a growing regional population and growing congestion, this center must maintain accessibility for all by expanding housing and multi-modal transportation options.

REGIONAL EMPLOYMENT CORRIDORS

Regional Employment Corridors represent the densest development outside of the Region Core, connecting several Regional Centers with the Region Core via existing transportation facilities. These areas contain a large share of the region's jobs within a relatively small land area. As they increase in both housing and job density, they are experiencing greater redevelopment and new uses in traditionally employment-focused areas. There is a lack of accessible public greenspace within Regional Employment Corridors, which affects quality of life for residents and workers.

RURAL AREAS

Rural Areas are areas in the region where little to no development has taken place and where there is little development pressure. These areas are characterized by sporadic large single-family lots, agricultural uses, protected lands, and forests, and they represent the limits of the urban service area in metro Atlanta. There is a desire by many residents and elected officials in these areas to keep them rural in character. Increased development threatens existing rural economic uses. The region is striving to protect these areas by limiting infrastructure investments to targeted areas. There will be a continued need to maintain existing transportation infrastructure, but care should be taken not to spur unwanted growth by inappropriate expansion of infrastructure capacity.

PUBLIC INVOLVEMENT SUBHEADER

Oluptatur, autest, intotati atia velles ex expello reperio quos dis cum explabor maio. Nequis abore etus ex eius audit od que comni re sera volupta tiorestis rem voluptureste eictaque et eatur rem quodi beribus abore, acearch ictatem simodit audit harum ipsum, explaborum fuga. Nequist exerae reptatetur? Xerit in etur magnis voles atem samus.

Ecum im verum alicimet, ipsa site laborep udaepror as audaect emporenim excesci omni rem laut quae cus assi undelic iumentia eium fuga. Pudae nos aut alignih iciendaero beat estotatatus.

Esediss itatis nonescitat aut aperspendus C iditi volendant paria nihillant.

At venis et ant que il maionsereped es dollenitibus audipienem. Nam labore nusdametur, od quae moluptas re, sit ommolo tem imenim resequis doluptatiam, quis delique placcup taturit atatur? Qui omnis quam qui veris as que se magni occus erumquu nduciisque et anditas essint.

Tatur, sequis volupti ullitae ctescia pa asped ute sinciet volupid quassuntus atur apediciis evendigent lis sinient in corionet dendit et idi sum aut que rectur?

Impero molut dolor ad mos alibusa nienim fugitior moluptat porisin istiaero officitatio blaut vid que reptior eprestrume corum re voluptiae. Nequi que occus am volendae inihici pitatibus, nimporepeles qui cus eturia quiatiumqui re nonseca tiumquamust, od quam cus molupiet, aboraes eum es molupic aborum quae venia que eaquo illa nectat et, con nonecea rchiciet volorepuda ipsam, acipidis molo maio es et volum, con non resci odi audi gui de poreri corpore, quias estiberit re, alita exero beris expe nonserf erumquatior accusdant quauETER venihillabor sim inclam et orpores maximpos non pole vendel in et asperspit ligentiis los de pro dita quaecatumqui voluptae quiaes non poreptat eum as de porro eosapic idestenia

Ped et velestrum iducipsuntio officaborata coritat quation ectuste mpostib usapere cus rerum sum est, te aut imolestem fuga. Vit quid mosape pa pro est, cuptaspernam laut volecatur? Qui cuscid untotate nimporatia venihil luptat as dercidero quia vit litem vellecte pa prorrum quiantur, te cus, quisquo blaborat alic te eos estiam sim laut aut pore nit ipsapelitia volenimin con res venda cus aut is exped quam dem volum qui ommolorita si unt odita doloreiuntis dit es estione ctecabo. Unt et, nonsedi

PUBLIC INVOLVEMENT SUBHEADER

Oluptatur, autest, intotati atia velles ex expello reperio quos dis cum explabor maio. Nequis abore etus ex eius audit od que comni re sera volupta tiorestis rem voluptureste eictaque et eatur rem quodi beribus abore, acearch ictatem simodit audit harum ipsum, explaborum fuga. Nequist exerae reptatetur? Xerit in etur magnis voles atem samus. Ecum im verum alicimet, ipsa Hervorg

udaentor us auca to temporenim excesci omni cen lluut quae cus assi undelic iumentia eium fuga. Pudae nos aut alignih iciendaero beat estotatatus.

Esediss itatis nonescitat aut aperspe rundust, iditi volendant paria nihillant.

At venis et ant que il maionsereped es dollenitibus audipienem. Nam labore nusdametur, od quae moluptas re, sit ommolo tem imenim resequis doluptatiam, quis delique placcup taturit atatur? Qui omnis quam qui veris as que se magni occus erumquu nduciisque et anditas essint.

Tatur, sequis volupti ullitae ctescia pa asped ute sinciet volupid quassuntus atur apediciis evendigent lis sinient in corionet dendit et idi sum aut que rectur?

Impero molut dolor ad mos alibusa nienim fugitior moluptat porisin istiaero officitatio blaut vid que reptior eprestrume corum re voluptiae. Nequi que occus am volendae inihici pitatibus, nimporepeles qui cus eturia quiatiumqui re nonseca tiumquamust, od quam cus molupiet, aboraes quar es molupic aborum quae venia GAGE Meeaque itta nectat et, con nonecea rchiciet volorepuda ipsam, acipidis molo maio es et volum, con non resci odi audi qui de poreri corpore, quias estiberit re, alita exero beris expe nonserf erumquatior accusdant quatur, venihillabor sim inctam et laborpores maximpos et plita non pore vendel in et asperspit ligentiis pos de pro dita quaecatumqui voluptae quiaes non poreptat eum as de porro eosapic idestenia

> Ped et velestrum iducipsuntio officaborata coritat quation ectuste mpostib usapere cus rerum sum est, te aut imolestem fuga. Vit quid mosape pa pro est, cuptaspernam laut volecatur? Qui cuscid untotate nimporatia venihil luptat as dercidero quia vit litem vellecte pa prorrum quiantur, te cus, quisquo blaborat alic te eos estiam sim laut aut pore nit ipsapelitia volenimin con res venda cus aut is exped quam dem volum qui ommolorita si unt odita doloreiuntis dit es estione ctecabo. Unt et, nonsedi

PUBLIC INVOLVEMENT SUBHEADER

Oluptatur, autest, intotati atia velles ex expello reperio quos dis cum explabor maio. Neguis abore etus ex eius audit od que comni re sera volupta tiorestis rem voluptureste eictaque et eatur rem quodi beribus abore, acearch ictatem simodit audit harum ipsum, explaborum fuqa. Neguist exerae reptatetur? Xerit in etur magnis voles atem samus.

Ecum im verum alicimet, ipsa site laborep udaepror as audaect emporenim excesci omni rem laut quae cus assi undelic iumentia eium fuga. Pudae nos aut alignih iciendaero beat estotatatus.

Impero molut dolor ad mos alibusa nienim fugitior moluptat porisin istiaero officitatio blaut vid que reptior eprestrume corum re voluptiae. Nequi que occus am volendae inihici pitatibus, nimporepeles qui cus eturia quiatiumqui re nonseca tiumquamust, od quam cus molupiet, aboraes eum es molupic aborum quae venia que eaquo illa nectat et, con nonecea rchiciet volorepuda ipsam, acipidis molo maio es et volum, con non resci odi audi qui de poreri corpore, quias estiberit re, alita exero beris expe nonserf erumquatior accusdant gour, venihillabor sim inetam as maximpos et elità nonto Esediss itatis nonescitat aut apers per monto iditi volendant paris inniten At venil Et antique it maionserenedies dollenitibus audipienem PamilaBar h et asperspit ligentiis qui voluptae quiaes orro eosapic idestenia

nusdametur, od quae moluptas re, sit ommolo tem imenim resequis doluptatiam, quis delique placcup taturit atatur? Qui omnis quam qui veris as que se magni occus erumquu nduciisque et anditas essint.

Tatur, sequis volupti ullitae ctescia pa asped ute sinciet volupid quassuntus atur apediciis evendigent lis sinient in corionet dendit et idi sum aut que rectur?

Ped et velestrum iducipsuntio officaborata coritat quation ectuste mpostib usapere cus rerum sum est, te aut imolestem fuga. Vit quid mosape pa pro est, cuptaspernam laut volecatur? Qui cuscid untotate nimporatia venihil luptat as dercidero quia vit litem vellecte pa prorrum quiantur, te cus, quisquo blaborat alic te eos estiam sim laut aut pore nit ipsapelitia volenimin con res venda cus aut is exped quam dem volum qui ommolorita si unt odita doloreiuntis dit es estione ctecabo. Unt et. nonsedi

EQUITY ANALYSES

Equity is important to ARC. We know that a diversity of safe and efficient transportation options is essential to provide residents with improved job access, especially higher income jobs; access to essential services such as hospitals, educational facilities, grocery stores, commercial centers, and greenspace; as well as other opportunities needed to maintain a high quality of life. We also know that policies, structure, and systems have sustained and contributed to inequities in the Atlanta region. ARC recognizes that the Atlanta region must be a place where all people have equitable opportunities to thrive. This section details the "upstream" policies, practices, and structures related to transportation that ARC has influenced in an effort to create more equitable outcomes.

QUANTITATIVE EQUITY ANALYSIS

Federal guidance, such as Environmental Justice and Title VI, protects specific populations and requires planning organizations to address disproportionately high health or environmental burdens affecting these communities. As a first step in equity planning, federal guidance outlines identifying where specific populations live. ARC maintains two equity analyses – the Protected Classes Model and the Environmental Justice Model.

THE PROTECTED CLASSES MODEL

This model analyzes concentrations of the nine populations protected under Title VI of the Civil Rights Act and considered within the Executive Order on Environmental Justice. Those populations are:

- Ethnic minority
- Female
- Foreign born
- Limited English proficiency
- Low-income
- Older adults
- People with disabilities
- Racial minority
- Youth

Additional considerations were added based on FHWA's Environmental Justice recommendations (2017), FTA's Environmental Justice policy guidance (2012), and FTA's Title VI requirements and guidelines (2012). The results indicate population concentrations relative to the region. ARC uses the results of the analysis to demonstrate compliance with this guidance and demonstrate fair treatment of those population groups.

LEARN MORE:

• Regional Equity and Inclusion Page

THE ENVIRONMENTAL JUSTICE MODEL

ARC examines racial minority, ethnic minority, and low-income populations in an analysis distinct from all federally protected classes because these three inputs are considered indicators of the greatest inequality in the Atlanta region. ARC previously analyzed these three inputs and referred to the results as Equitable Target Areas (ETA). The environmental justice (EJ) model supplants the ETA index methodology and nomenclature.

The results of the EJ model guide regional transportation and land use planning investments. In particular, the ARC TIP Project Evaluation Framework utilizes the results of this analysis to score and rank proposed projects. The regional analysis results are not the end-all for identifying and addressing disproportionately high and adverse effects, but rather one tool to leverage in our regional environmental justice efforts. This technical perspective is further refined and calibrated by qualitative knowledge, community engagement, and policy and program development.

TRANSPORTATION EQUITY ADVISORY GROUP

The Transportation Equity Advisory Group (TEAG) was created to connect equity advocates with transportation planners and agencies from around the region so that they (equity advocates, transportation planners, and agencies) will all be able to better understand and influence transportation planning process and outcomes while being a voice for the needs of the most disenfranchised. The goal of TEAG is:

To create a more balanced ecosystem with representation from groups throughout the region to providing space for advocates, community leaders, and ARC staff to come together and learn from each other.

TEAG envisions a transportation system that is efficient, accessible, and equitable; equity strategies that improve outcomes for the most disenfranchised people in our region; the region's disenfranchised populations are an asset who bring their talents and skills to the region.

Since their first convening in 2018, TEAG has already shifted the engagement and planning process of the Atlanta Regional Commission. The advisory members consistently generate ideas and work tasks based on their expertise and priorities. ARC staff have been able to respond to these thoughts and questions via additional research and refinement of regional planning processes. In particular, TEAG has influenced:

- How ARC defines equity
- How the definition of equity is manifested in ARC's quantitative analyses
- How DASH displays and relays equity information in approachable terms
- The ARC Transportation Community Engagement Modules
- How projects are evaluated in the TIP Project Evaluation Framework criteria, moving away from a binary measure to a more granular measure
- How crash data is reported in ARC's Plans, specifically disaggregating by race and age in *Safe Streets for Walking and Bicycling*

TEAG has also provided input on:

- The engagement tool for ARC's Resilience and Durability Project
- The RTP transit project list
- How to measure benefits and burdens of transportation projects at the local-scale
- ARC's Disadvantaged Business Enterprise procurement requirements
- Future work tasks for ARC staff, including membership expansion and engagement and developing stronger connections with our planning partners at GDOT



MAP 12: ENVIRONMENTAL JUSTICE MODEL

Legend





MAP 13: PROTECTED CLASSES MODEL

Legend

Concentration of Protected Classes



We're on the right track - getting rid of fossil fuel burning vehicles that we currently have. Anything will help.



- JEAN-CLAUDE B.



We are very auto-centric, very autooriented. We certainly need to invest more in other modes and other facilities to accommodate other modes – complete streets, obviously, transit – yes. Atlanta and the region are doing so much better, but we definitely have room to do more.

- STEVE C

I think we need more sidewalks...on every street and more street lights would make the city safer as a whole. If we could get more heavy rail and expanded bus services that would be great.

- CAMERON D.



RECOMMENDATIONS

The Atlanta region must invest in projects and programs that modernize, expand, and maintain our transportation infrastructure. The recommendations envision a world-class multimodal network designed to support our competitive economy, and healthy and livable communities.

A VISION FOR 2050

The RTP contains robust transportation infrastructure investments – from pedestrian safety measures to congestion management – designed to improve mobility, access, and safety for all of the Atlanta region's residents and visitors. This ambitious list of recommendations addresses the varied challenges faced across the region and provides a higher quality of life for everyone.

The Recommendations Chapter provides an overview of the proposed long-term investments that will impact the region's residents and visitors, as well as the region's growth and development. The recommendations are grouped into three program areas — Demand Management, Expansion, and Modernization & Maintenance — and eight corresponding subareas. Figure 5 on the following page provides a breakdown of the percent of projects by program area and sub-area. See the Finance Chapter for a breakdown of the costs of projects by program area and sub-area. An in-depth report on the Plan's entire set of recommendations can be found in Appendix A: RTP Project List. Additionally, ARC's interactive online mapping tool showcases the locations of individual infrastructure projects across the region and more details about each project.

LEARN MORE:

• Online Map of Draft RTP Projects

Figure 5 PERCENT OF PROJECTS BY PROGRAM AREA AND PROGRAM SUB-AREA

See Finance Chapter for a breakdown of project cost by program area and program sub-area







MAP 14: DRAFT RTP PROJECTS BY PROGRAM AREA

Legend



INVESTMENTS BY PROGRAM AREA

DEMAND MANAGEMENT

The demand management program area includes those programs and projects that fulfill the demand for transportation by promoting non-single-occupancy-vehicle modes and comprehensive infrastructure. LCI program funding is reflected here, as is funding for Transportation Demand Management (TDM) projects that enhance the region's air quality. Last-mile connectivity projects that enhance the transportation network for people walking and bicycling can help to shift trips that otherwise would have taken place in a car to more active modes, providing both public health and roadway congestion benefits.

There are 281 projects and programs under the demand management program area, and these programs and projects account for 12% of the recommendations.

EXPANSION

The expansion program area includes those programs and projects that build on existing infrastructure to prepare the region for the expected and unexpected rigors of tomorrow. Ongoing projects like the conversion of existing HOV facilities into HOT facilities and the construction of the Beltline fall into the expansion program area. New projects that provide premium and high-capacity transit service and those that add capacity to the roadway system are also included here. There are 900 projects and programs under the expansion program area, and these account for 38% of the RTP's overall investment.

MAINTENANCE & MODERNIZATION

The modernization program area includes those programs and projects that focus on maintaining the safe and efficient operation of the existing transportation network. The modernization programs and projects included in the RTP span both roadway and alternative modes of transportation. Bridge replacements and signal upgrades are contained in the modernization project list, as are investments in clean fuel transit vehicles.

There are 1153 projects and programs under the modernization program area, and these programs and projects account for 50% of the recommendations.

REDUCING DEMAND ON OUR TRANSPORTATION SYSTEM

The most cost efficient and sustainable way to leverage maximum value from our existing infrastructure is to reduce the number and length of trips it serves. TDM is seeks to reduce roadway congestion and demand for single occupancy vehicle (SOV) travel by redistributing travel demand to non-single occupancy-vehicle modes, times, and routes. The Mobility Services Group of ARC heads the region's TDM efforts with the focus of changing travel behavior in the region. As such, the program markets incentives and programs that encourage SOV drivers to take transit, telework, carpool, vanpool, walk or bike to and from work.

MOBILITY SERVICES OVERVIEW

ARC established the first regional TDM program in 1994, providing outreach to employers and commuters. Through these efforts, metro Atlanta has become a leader in the use of TDM strategies to minimize peak hour commuter congestion. In 2013, ARC adopted the Atlanta Regional TDM Plan which is a long-range plan that defines a strategic framework for developing and integrating TDM strategies into planning, project development, and system operations investment decision-making.

The Georgia Commute Options (GCO) program, managed by ARC and funded by GDOT, operates on a regional scale, providing commuter incentives, no-idling education, and programs for schools and employer assistance in the adoption of alternative commuting. ARC also provides significant grant funding to Transportation Management Associations (TMAs), shown on Map 15, to conduct commuter and employer outreach in seven regional activity centers.

In 2018, the Regional TDM Program, consisting of GCO and 7 TMAs, had 635 employer partners with a total of 342,296 employees. In addition, there were 110 Property Manager Partners. Employer Partners in the regional TDM network purchased 186,806 transit passes in 2018, accounting for \$14,300,351 in revenue to the regional transit partners.

Additionally, ARC funds a free commuter ride matching and a safety net program, Guaranteed Ride Home, in which commute alternative participants receive a free ride home in the case of an unexpected event.

\$15,000,000 \$10,000,000 \$10,000,000 \$12,854,411 \$12,854,411 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$15,000,000 \$12,854,411 \$12,854,411 \$12,854,411 \$12,854,411 \$12,854,411 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,300,351 \$14,3

Figure 6 TMA PURCHASED TRANSIT PASSES

Recommendations | 67

One of the central intentions of the TDM Plan is to better integrate travel planning with transportation planning, system operations, land use, economic development, and healthy communities. The effective implementation of the Regional TDM Programs results in spreading peak period congestion, decreased SOV trips, reduced vehicle miles traveled (VMT), and reduced emissions throughout the region. These efforts support and are integrated with the larger aims of the region as outlined in The Atlanta Region's Plan.

By promoting, raising awareness of, and incentivizing the use of alternative transportation modes, the regional TDM program aims to maximize the value, connectivity, and efficiency of the existing regional transportation infrastructure. Ensuring a comprehensive transportation network requires the promotion of transit, car/vanpool, biking, walking, and teleworking in order to maximize the potential of these infrastructural networks. In 2017, the Atlanta region was number two in the nation for businesses that telework according to Forbes. As companies try to attract and retain entry-level employees, they are providing more options that foster work-life balance.

The Atlanta region has seen tremendous growth in TDM over the past three years. In addition, the region has identified several areas that offer potential to continue to make gains in reducing single occupant vehicle trips, each of which are described on the following pages.



Xpress bus 410 on I-85



MAP 15: TRANSPORTATION MANAGEMENT ASSOCIATIONS

Legend

Transportation Management Associations

- Major Roads
- Expressways
- ____ Counties
 - MPO Boundary

TDM AND CONSTRUCTION MITIGATION

As the region continues to struggle with challenges around congestion and impacted mobility, major construction projects will be necessary to ensure the long-term mobility of our community and the Atlanta region. An example of how TDM can positively impact construction projects is demonstrated through the Transform 285/400 TDM and Communications Project. Facilitated by ARC, public and private companies from across the region convene regularly to discuss commuter challenges due to construction and how to mitigate those challenges. Some strategies include providing incentives to commuters that carpool and vanpool, promoting transit ridership, and working with companies to offer or enhance their telework program.

TELEWORKING IS ON THE RISE

Companies across the region are learning that offering flexible work options such as working from home, compressed work schedules, and flexible hours results in increased productivity and enhanced quality of life for their employees. GCO offers telework and flexible work counseling, FlexWork, to hundreds of employers in the region. Year after year, GCO has received support from Georgia Governor's Office in promoting telework and designating a full week each year to "Telework Week." Employers across the state are encouraged to start or fine-tune their existing telework program in efforts to reduce emissions, vehicle miles traveled, and congestion on our roadways during peak hours. As the region continues to grow and the state continues to attract more businesses, telework will likely follow suit.



BICYCLING IS ON THE RISE

Over the past several years, metro Atlanta has increased investments in bicycle infrastructure, which is both a response to and a cause for increased bicycling activity. Infrastructure expansion has consisted of on-road bike lanes and cycle-tracks, as well as separated multiuse paths. In addition, ARC has developed the annual Atlanta Bike Challenge: Biketober as part of GCO's suite of programs promoting alternative transportation modes. This broad and inclusive approach to growing the region's share of people bicycling is based on a behavior change model that recognizes the fact that people are not likely to go straight from never riding a bike to riding one to work. Instead, they are likely to begin with a recreational trip on the weekend and then, once they get comfortable on a bike, move on to cycling for daily errands and, eventually, to work.



REGIONAL TRANSIT PROMOTION AND AWARENESS

Increasing public awareness of available transit services and encouraging non-riders to try transit are focal areas of ARC's TDM program. Since 2016, Mobility Services has launched the regional Try Transit promotion working with GCO employer partners and transportation management associations. Thousands of commuters have participated in the program resulting in growing number of people who have changed their commute option to transit. Through a robust social media campaign, blog posts, outdoor billboards, video content, and targeted digital ads, GCO is able to reach a wide audience and share transit messaging. In early 2019, GCO played a major role in educating nearly 10,000 Super Bowl LIII volunteers on various commute options, including transit.



NATIONAL MODEL FOR INFUSING TDM AT SPECIAL EVENTS

Mobility Services launched a Super Bowl version of Try Transit in response to this large-scale event in a heavily populated urban environment. The potential to have dramatic impacts on traffic and congestion before, during, and after the event is well documented in location after location. The influx of event organizers and staff, media, set up crews, food and supply deliveries, and general logistical needs often negatively impact mobility in the period prior to the event. Of course, attendees create additional congestion, and the breakdown of the event continues those impacts for more time with street closures for loading and removing materials from the venue and surrounding areas.

Based on past experience, GCO determined that a multi-pronged approach to this challenge would provide the best results. A strong focus on promoting telework at a regional scale, encouraging the use of transit for anyone needing to access downtown Atlanta, and working closely with all transit organizations, employers, and partners in the region to spread these messages were the key elements of the overall program.

REGIONAL TDM EVALUATION FRAMEWORK

A Regional TDM Evaluation Framework that sets forth Guiding Principles was established by the GCO Evaluation Team following a series of workshops and input sessions with the Employer Service Organizations (ESOs). The TDM Evaluation Framework Guiding Principles will:

- Estimate and emphasize the value of TDM investment
- Connect TDM program goals to regional plans and goals
- Measure performance against key steps that influence behavior change
- Assess performance by outcomes not inputs

LEARN MORE:

• Regional TDM Evaluation Framework

GROWTH AND DEVELOPMENT SOLUTIONS

Rapid growth in the Atlanta region has both amplified issues and created opportunities over the past several decades. While growth brings new and better job opportunities and an improved quality of life, it can also result in situations where the transportation infrastructure has not been able to keep pace or was ill-suited to meet the types of demands placed on it. The Atlanta Region's Plan recognizes the direct relationship between how land is used and what transportation services will be most effective. This section explores programs and initiatives where proactive decisions can help the region grow in a more sustainable manner without compromising the health of our economy.

Livable Centers Initiative (LCI)

Since the program's start in 2000, the Livable Centers Initiative (LCI) has played a substantial role in mobilizing the region to action on issues including better street design and land use policy, increased density, and a growing appetite for transit. Capitalizing on the growing support for livable communities and tighter integration of transportation and land use planning, The Atlanta Region's Plan continues efforts to focus growth in established communities through LCI. The program prioritizes funding studies in TOD Centers, areas with a direct connection to the high-capacity regional transit system, and Local Centers, areas that are traditional main street and downtown communities. The goals of the program are consistent with the vision of world

class infrastructure, healthy livable communities, and a competitive economy laid out in the Policy Framework:

- Encourage a diverse mixture of land uses, including residential, employment, shopping, and recreation options, which are accessible by people of all ages, abilities, and income levels.
- Enhance access to a range of travel modes including transit, roadways, walking, and biking, and increase roadway connectivity to provide optimal access to all uses within the study area.
- Foster public-private partnerships and sustained community support through an outreach process that promotes the involvement of all stakeholders, including those historically under-served or underrepresented.



Live music in downtown College Park



Downtown Woodstock

The award of federal funding for LCI transportation projects to communities that have demonstrated implementation of their plans has incentivized many of the current 120 LCI communities to enact policies that support the goals and objectives of their plan (i.e. by adopting new zoning or design guidelines).

ARC will continue to support the creation of livable centers and the implementation of existing and future LCI studies. Overall funding for the LCI program is projected at approximately \$1.1 billion through the year 2050. The program is one of the key emphasis areas identified for Surface Transportation Block Grant Program (STBGP) and Transportation Alternatives Program (TAP) funding available each year in the TIP.

Funded projects will support multimodal travel, more livable and affordable neighborhoods, and the development of jobs and housing in existing town centers and near transit. Encouraging future growth within LCI areas increases transit ridership, promotes more bicycle and walking trips, and shortens the length of automobile trips, thus helping to reduce both vehicle miles traveled and emissions of carbon dioxide and other pollutants.



MAP 16: LIVABLE CENTERS INITIATIVE

Legend

- LCI Communities
- —— Major Roads
- —— Expressways
- Counties
 - MPO Boundary

Transit Oriented Development (TOD)

Transit Oriented Development (TOD) is a type of pedestrian-friendly development that includes a mixture of housing, office, retail, and/or other amenities closely integrated with transit. Some of the benefits of TOD include increased transit ridership, reduced congestion and greenhouse gas emissions, walkable communities that accommodate healthy lifestyles, expanded mobility choices and improved access to jobs, and increased property values.

Because development around transit can attract high-income populations and have a considerable impact on property values, planning for equitable TOD (ETOD) is crucial. ETOD attempts to address critical community needs, weaving them into the fabric of transit development and creating mixedincome communities that make connections to employment opportunities, healthy food, affordable housing, quality schools, parks, arts and cultural activities, and healthcare for everyone.

In 2010, MARTA created TOD Guidelines to provide a framework for designing and constructing successful projects based on four principles: relative density, a mixture of land uses, a great public realm, and a new approach to parking. Following the publishing of the Guidelines, MARTA published station profiles with information on demographics, current surrounding land uses, and development potential. The TransFormation Alliance at ARC – a collaboration between public, private, and nonprofit groups dedicated to creating mixedincome communities integrated into transit – has also created station profiles to provide an understanding of the communities surrounding stations and offer specific ETOD strategies for each station area. This information underscores the importance of understanding and addressing specific community needs, which vary based on the surrounding area and should dictate the type of development at each station.

While the region has been slow to fully leverage the potential of land adjacent to transit, there are notable examples where a concerted effort to reshape development patterns have proven successful. For instance, the Lindbergh MARTA station was initially planned over 20 years ago, making it one of the first and most comprehensive examples of TOD in metro Atlanta. MARTA is working to take advantage of underutilized space and parking lots at stations around the region, creating residential, commercial, and office space at stations including Edgewood, Chamblee, Avondale Estates, and King Memorial. Residential development will include a mixture of income levels, with some units set aside for low income and/or senior residents.

As the LCI program prioritizes communities served by high-capacity transit, a growing number of communities in the region have plans in place which are generally consistent with the principles of successful TOD.

WALKING & BICYCLING SOLUTIONS

Walking and bicycling are essential transportation options for the health and vitality of metropolitan Atlanta. Many shorter trips can be accomplished on foot or by bike, including commuting to work, accessing transit, and traveling within regional activity centers. Many longer trips can pair walking or bicycling with public transit for regional connectivity. Walking and bicycling continue to grow in importance as the region pivots towards increased urban growth, individuals pursue healthier activities, and communities seek to become more competitive in attracting businesses and supporting residents.

ARC's regional walking and bicycling plan – titled Walk. Bike. Thrive!: A regional vision for a more walkable, bikeable, and livable metropolitan Atlanta – envisions a region of livable communities where waking, bicycling, regional trails, and transit are safe, convenient, and normal.

The Atlanta region has seen continual growth in the numbers of people walking and bicycling but also more people being injured or killed while traveling. More can be done to encourage active transportation by making these trips safer and more convenient. *Walk. Bike. Thrive!* recommends five actions to increase walking and bicycling in the region:

- Support community-scale walking and bicycling networks.
- Address the region's growing transportation safety and equity issues.
- Provide first- and last-mile connections to regional transit systems.
- Promote complete streets for urban centers and multimodal thoroughfares.
- Connect and complete a regional-scale trail network.

Each of these actions are detailed in a series of plan supplements: *Regional Trail Report* (2016) outlines regionally-significant trail connections; *Bike to Ride* (2017) lays out regional transitaccess strategies; *Safe Streets for Walking & Bicycling* (2018) is a safety action plan for additional insights into systemic safety issues. The *Complete Streets Workbook* and forthcoming *Regional Bicycle Connectivity Assessment* (pending) inform project development and prioritization decisions to support more walking and bicycling.

All of these strategies revolve around three main goals to improve the mobility, safety, and economic competitiveness of both individuals and communities within the region.

Figure 7 FIVE STRATEGIES TO ACHIEVE A MORE WALKABLE AND BIKEABLE METRO ATLANTA

Focus investments to support walkable communities

A metropolitan area is boosted by having more walkable and bikeable communities. The region uses transportation and development tools to support active trips along connected street grids with access to parks, schools, commercial areas, transit service, and a mix of housing types.

Address safety and equity issues

The region uses every investment to help decrease pedestrian and bicyclist fatalities and serious injuries as well as providing sidewalks and bikeways for populations that rely on walking and biking out of necessity.

Connect regional trail system

Multi-use paths and trails serve as comfortable "walking and bicycling superhighways" at a regional scale. The region develops partnerships between state, local, and non-profit organizations to make critical regional trail connections.

A MORE WALKABLE & BIKABLE METRO ATLANTA

. Build complete streets

Walkable communities are best supported by complete streets. Suburban arterial roads need to be multi-modal thoroughfares. The region identifies barriers to walking and biking and relentlessly works to address them as opportunities arise.

Improve access to transit

Longer regional trips are best served by walking and bicycling combined with transit. The region works to improve walking and biking access to transit stops and improve the quality and quantity of regional transit service.

Mobility is the ability for people to move around. Metropolitan Atlanta is geographically large with long distances between destinations. The region's low density and dispersed land use patterns mean walking and bicycling are often inconvenient for many trips. Region-wide averages for bicycling and walking travel are generally low, but areas with concentrations of destinations – city cores, town centers, activity centers, and denser neighborhoods - or better access to regional transit tend to have rates of walking, bicycling, and transit higher than the regional average. Even within walkable communities, the quality of pedestrian or bicycling infrastructure determines trip levels - comfortable facilities enable trips while lack of comfort discourages travel. Walking and bicycling, especially paired with regional transit options, can be convenient when supported by compact communities and high-quality facilities.

Safety is often cited as a significant barrier for people to choose walking or bicycling for regular trips. This is understandable as metropolitan Atlanta suffers crash, injury, and fatality rates significantly higher than national averages. While the region must focus on making walking and bicycling safer, risk is not equally distributed in the region. Core centers and neighborhoods have generally lower risk per miles traveled while suburban arterials and commercial areas have significantly higher risks. Across the region several consistent factors – including roadway width and automobile speeds – predictably contribute to injuries and fatalities for people walking and bicycling. Reducing dangerous roadway features by building complete streets and multimodal thoroughfares will contribute to eliminating injuries and fatalities from metropolitan Atlanta's roads.

Walking and bicycling are increasingly critical to the success of competitive urban areas. The economic health of the region and its residents is tied strongly to business opportunities and access to jobs. Metro Atlanta businesses and employers are competing with cities around the country to attract talent. Quality-of-life projects and supporting walkable communities (as well as investments in education) are two of the most valuable economic investments for the region. Conversely, long commute times are the best predictor of economic immobility so ensuring convenient transit and low-cost transportation options is vital to ensuring the economic success of employees. Walking, bicycling, transit, and trails help attract and retain talented employees while providing affordable options for everyone. Removing mobility and safety barriers to make walking and bicycling normal is essential for improving regional economic competitiveness.

To address walking and bicycling travel needs, ARC has routinely used federal Surface Transportation Program (STP) funds to develop bicycle and pedestrian projects as well as firstand last-mile transit access projects. Between FY 2016 and FY 2019, ARC awarded \$25.2 million (averaging about \$6.3 million per year) in federal TAP funds towards regionally significant bicycle, pedestrian, and multi-use trail projects across the region.

ARC plans to continue using all available federal funds for advancing regionally-significant pedestrian, bicycle, trail, and transit-access projects while maintain the focus of TAP funds on completing a regional trail network. Overall funding for bicycle and pedestrian infrastructure in the region is projected at approximately \$785 million through the year 2050. This does not reflect additional projects directly funded and sponsored at the local level. The LCI program, discussed earlier in this section, is another regional use of federal funds to develop pedestrian and bicycle infrastructure as part of its program focus to advance multi-modal transportation corridors that support livable communities.

The adjacent map depicts the proposed walking, bicycling, and LCI projects recommended in the RTP.



People biking in a buffered bike lane on Ponce de Leon Avenue NE.



MAP 17: DRAFT RTP WALKING, BICYCLING, AND LCI PROJECTS

Legend

- —— Walking and Bicycling Facilities and LCI
- —— Major Roads
- —— Expressways
- Counties
 - ____ MPO Boundary

SAFETY SNAPSHOT OF THE ATLANTA REGION'



27% of fatal crashes involved alcohol

of all crashes **69%** occurred on roadways with less than 4 lanes

of all crashes occurred 81% on roadways with a speed limits of 35 MPH on roadways with posted or greater

on average, more than

276,600 crashes

occur every year in the Atlanta region

resulting in 642 deaths

resulting in 7,777 serious injuries

that's almost 2 per day

that's over 21 per day

GEARS Data (2014 - 2018) | Obtained Spring 2019 82 | Regional Transportation Plan

SAFETY SOLUTIONS FOR ALL ROADWAY USERS

These numbers inspire us to do better.

Crashes resulting in people dying or becoming seriously injured are a preventable transportation, public health, and equity issue in the Atlanta region. ARC is committed to a regional safety approach to eliminate fatal and serious injury crashes that is data-driven, proactive, and aggressive.

Figure 8 BICYCLE & PEDESTRIAN FATALITIES AS A PERCENT OF ALL FATALITIES



² ARC's Activity Based Model - 2015 Mode Share

SAFE SYSTEM APPROACH

Safety and a person's perception of safety significantly influences their choice of transportation, travel behavior, and sense of comfort. We know that this is especially true for people walking and bicycling as they are more vulnerable than people inside a motor vehicle. We also know that the burdens of traffic violence and the benefits of traffic safety measures are unequally distributed throughout our region. To work towards an ambitious target of zero fatalities by 2030, ARC is embracing a Safe System approach.

A complete description of the Safe System approach and strategies in which ARC can influence regional safety as it relates to ARC's bicycle and pedestrian program are detailed in *Safe Streets for Walking and Bicycling*. This report serves as a model for applying the Safe

SAFE TRAVEL FOR ALL



System approach, including careful data analysis of risk factors and identification of evidencebased solutions. ARC looks to develop this datadriven all-modes safety strategy as part of its next work program, and with guidance from the Regional Safety Task Force.

What is the Safe System Approach?

The Safe System approach is a holistic, systemsbased strategy that: accounts for all roadway users; anticipates that humans will makes mistakes; and shares responsibility for safety between individual road users and system designers.

What this means in practice is that roadways are designed to prevent crashes from happening at speeds and in situations where the human body cannot physically survive the impact.

For ARC, this means complementing our traditional approach by proactively identifying corridors and intersections based on risk factors, including locations with and without a crash history, and funding cost-effective strategies to address safety issues system-wide.

HOW IS SAFETY REFLECTED IN ARC'S WORK?

PROJECT DEVELOPMENT

Influencing project development and design is a challenge for ARC given our position upstream from a project's design and engineering, and the fact that ARC does not manage projects throughout their lifetime. Plus, there is no consistent agreement between agency partners about what "great projects" look like, but illustrating typologies and connecting design elements to regional goals is critical to moving the needle on safety and mobility. This is especially true considering some of the smallest pieces of transportation projects have outsized impacts on travel options, particularly for vulnerable roadway users.

One tool that has enabled ARC to tie specific design elements that promote safer mobility to bigger regional safety goals and policies is the TIP Project Evaluation Framework. This datadriven prioritization process, which includes LCI projects and feasibility studies, allows ARC to prioritize design elements, including evidencebased safety measures, and to anticipate project development needs.

Ultimately, safe design and prioritizing safety needs to be integrated across the full range of ARC's planning work, including CTPs and modespecific plans. Future work programs should also consider regular safety progress reports to understand what improvements have occurred and for whom, and where opportunities to address safety still exist. DRAFT

REGIONAL SAFETY TASK FORCE

In 2019, ARC started convening a Regional Safety Task Force (RSTF) in order to lead the region towards zero traffic deaths. RSTF will help ARC: establish a regional safety vision; identify actionable strategies and resources; track our progress toward meeting regional safety targets; promote better transportation project development; and promote a culture of safety.

To date, RSTF has provided input on crash data challenges, helped ARC refine the safety criteria in the TIP Project Evaluation Framework, and supported the development of ARC's own regional safety targets. In 2020, RSTF will continue to influence the transportation planning processes of ARC, GDOT, MARTA, and other transportation agencies, guide the development of a regional safety strategy for all modes of transportation, and convene some of the brightest and most progressive multi-disciplinary professionals to catalyze positive safety outcomes in the Atlanta region.

ROADWAY SOLUTIONS

All transportation users interact with the Atlanta region's extensive roadway network at some point during their trip, whether commuting on the interstate, crossing a street, or riding a bus. Keeping the network well maintained is crucial for reliability and the safety of all its users. This section of the RTP highlights a variety of different types of planned major roadway investments which will make travel by roadway more reliable and efficient.

ROAD AND BRIDGE PRESERVATION

Maintenance is crucial to supporting our roadway infrastructure. Keeping up with maintenance can prevent larger, more disruptive problems as infrastructure ages. ARC's 2015 Transportation Assessment found that approximately 95% of RSTS roads had pavement in good condition and approximately 95% of bridges are also currently in good condition. These figures are higher than the national average of 70 to 75% and 90% respectively. Conditions, however, vary significantly based on the functional classification of the roadway and by jurisdiction.

The RTP commits \$49.2 billion through 2050 to regionally significant resurfacing, bridge upgrades, bridge replacements, and other routine maintenance roadway projects.

ROADWAY SYSTEM OPTIMIZATION AND SAFETY

Transportation Systems Management and Operations (TSMO) is a set of strategies that focus on operational improvements that can maintain and even restore the performance of the existing transportation system before extra capacity is needed. Many solutions are part of the TSMO toolbox including Intelligent Transportation Systems (ITS) and roadway design. As technology improves, TSMO solutions continue to grow, with the ability to:

- Reduce injuries and fatalities resulting from vehicle crashes
- Alleviate congestion
- Safely and efficiently manage traffic during significant roadway incidents
- Improve travel time reliability
- Provide traveler information
- Facilitate improved travel conditions during special events
- Increase safety for pedestrians and cyclists
- Increase reliability and efficiency for transit

The Atlanta region has a demonstrated commitment to management and operations solutions. For example, prior to the 1996 Olympics, the Advanced Transportation Management System, NAVIGATOR, was developed. It uses video detection, radar detectors, and more than 450 closed-circuit television cameras to monitor traffic flow and upgraded more than 400 traffic intersections to improve signal coordination in the region. The region's utilization of new technologies continues today under the program sub-area Road System Optimization and Safety. The current TIP includes 277 of these projects, from signal synchronization to autonomous vehicles. The Atlanta region is fast becoming one of the most connected in the country thanks to GDOT's Regional Traffic Operations Program (RTOP), which is deploying Dedicated Short Range Communications (DSRC), a form of vehicle to vehicle communication, to thousands of intersections.

Local governments are also taking advantage of technology solutions as a cost-effective strategies for increasing safety, reliability, and mobility. Connected Vehicle/Autonomous Vehicle (CV/AV) projects are being increasingly utilized to improve transit services, create safer and faster routes for emergency vehicles, and to give better information to roadway users. Some of the connected and autonomous vehicle projects happening around the region include:

- DeKalb County, MARTA Local Bus Transit Signal Priority
- City of Atlanta, MARTA Summerhill Bus Rapid Transit - Transit Signal Priority
- City of Atlanta North Ave Corridor Transit Signal Priority, DSRC, Automated Shuttle
- Gwinnett County Peachtree Industrial Boulevard Smart Corridor - DSRC and Cellular, Emergency Vehicle Pre-emption, Transit Signal Priority, Remote School Zone Beacon Control
- City of Marietta Fire/EMS Signal preemption
- City of Chamblee Automated Shuttle
- Peachtree Corners Automated Shuttle
- Aerotropolis Virginia Avenue Automated Shuttle

ARC is currently undergoing a regional TSMO planning process to ensure everyone in the region sees the value of using TSMO solutions and to create a regional vision to guide investment in technology. The Regional TSMO Plan will be complete in March 2020 and will include a Strategic plan and a Deployment Guide that will be used to prioritize projects.

LEARN MORE:

- RTOP
- Regional TSMO Plan

INTERCHANGE BOTTLENECKS

As the region's population and economy grows, sometimes the existing infrastructure is unable to accommodate the growth. One fail point that can have a large regional impact is bottlenecks at interchanges, especially when it is near a major roadway or employment center. As part of the Congestion Management Process (CMP), ARC analyzes the major bottlenecks in the region on DASH, a visualization tool for Federal and agency specific performance measures. The Regional Policy Framework also includes addressing major bottlenecks as a strategy for both goods and people movement.

Programmed interchange improvements include upgrades or expansions to existing interchanges and in some cases, building new ones. Interchange upgrade/reconstruction projects typically involve the reconfiguration of existing lanes, rehabilitation or replacement of an existing bridge, or reconfiguration of the on/off ramps to help make traffic flow more efficiently. Interchange expansions can involve the addition of through lanes or expanding the possible movements available to drivers. The following partial list of RTP interchange projects are expected to be delivered in the next ten years:

- I-285 North at SR 400 in Fulton County Interchange Reconstruction
- I-285 West at I-20 West in Fulton County Interchange Reconstruction
- I-285 East at I-20 East in DeKalb County Interchange Reconstruction
- I-85 South at SR 74 and SR 138 in Fulton County – Interchange Reconstructions
- I-85 North at North Druid Hills Road in DeKalb County – Interchange Reconstruction
- I-85 North at McGinnis Ferry Road in Gwinnett County – New Interchange
- I-20 East at SR 20/138 in Rockdale County Interchange Reconstruction
- SR 316 at SR 11, SR 53, SR 211, Kilcrease Road and Winder West Bypass in Barrow County – New Interchanges
- SR 316 at US29 and Drowning Creek Road in Gwinnett County – New Interchanges
- SR 400 at SR 369 and McGinnis Ferry Road in Forsyth County – New Interchanges

LEARN MORE:

• DASH
EXPANDING ROADWAY CAPACITY STRATEGICALLY

While there are many solutions to mitigating congestion, expanding capacity is sometimes necessary. ARC understands that the Atlanta region's roadway network is expansive and serves many purposes and modes. As such, many policies in the Policy Framework outline what kind of roadways would be considered appropriate for capacity expansion and what accommodations need to be made for nonmotorists in an expansion project. Several policy networks exist for prioritization purposes including the Regional Strategic Transportation System (RSTS), the Regional Thoroughfare Network (RTN), and the Atlanta Strategic Truck Route Map (ASTRoMap). Several other considerations guide capacity expansion considerations including:

- Focus on the most congested corridors where additional capacity can provide positive long-term impacts.
- Encourage multi-jurisdictional and key subregional priorities.
- Consider the location of key emergency evacuation routes.
- Support the movement of freight.
- Emphasize cost effectiveness.
- Limit investment in rural areas, except to connect regionally significant employment and commercial centers.

To ensure all capacity expansion projects accommodate all roadway users, ARC also requires arterial projects be implemented as complete streets. A complete street project ensures that the design of the roadway is context-sensitive. This can include amenities to support transit services, provisions of pedestrian and bicycle facilities, and the provision of safe crossings and intersections. This policy is key to ensuring our residents and visitors can move safely around the region.

The RTP includes 215 arterial widenings and new alignment projects which will collectively add almost 600 lane-miles of capacity to the arterial network by 2050. The following partial list of RTP arterial projects are expected to be delivered in the next ten years:

- SR 237 (Piedmont Road) from Lenox Road to SR 141 in City of Atlanta (Peachtree Road) -Widening
- Winder West Bypass from SR 211 to SR 53 in Barrow County – New Alignment
- Villa Rica Bypass from SR 61 Bypass to SR
 101 in Carroll County New Alignment
- SR 20 from I-575 in Cherokee County to SR 371 (Post Road) in Forsyth County – Widening
- US 23 from SR 138 to I-675 in Clayton County
 Widening

- US 19/41 from Tara Road to SR 54 (Fayetteville Road) in Clayton County – Widening
- SR 92 (Dallas Acworth Road) from Paulding County Line to US 41 in Cobb County – Widening
- SR 154 (Sharpsburg McCollum Road) from SR
 54 to US 29 in Coweta County Widening
- Panola Road from US 278 (Covington Highway) to Snapfinger Woods Drive in DeKalb County – Widening
- Lee Road / South Sweetwater Road from Vulcan Drive to Skyview Drive in Douglas County – Widening
- East Fayetteville Bypass from Corinth Road to County Line Road in Fayette County – New Alignment
- Various Segments of SR 9, SR 120 and SR 141 in Fulton County – Widening
- SR 9 from Fulton County Line to SR 306 (Keith Bridge Road) in Forsyth County – Widening
- Sugarloaf Parkway from SR 316 to I-85 in Gwinnett County – New Alignment
- US 23 from Downtown McDonough to SR 138 in Henry County – Widening
- SR 162 (Salem Road) from Old Salem Road to Brown Bridge Road in Newton County -Widening
- Various Segments of SR 92 in Paulding County

 Widening

- Sigman Road from Lester Road to Old Covington Highway in Rockdale County -Widening
- SR 20 from North Sharon Church Road to US
 78 in Walton County Widening

For freeways, GDOT's policy is that new capacity added within the Atlanta region be managed through a combination of vehicle occupancy and tolling restrictions. There are two exceptions to this policy, where there are currently only two lanes in each direction, and auxiliary "add/drop" lanes between interchanges to create longer and safer weave zones. One major non-managed capacity project fits these criteria and is proposed for the freeway network in the RTP:

 I-985 from I-85 North in Gwinnett County to SR 53 in Hall County – Widening

INCREASING RELIABILITY THROUGH MANAGED LANES

Another strategy to ease highly congested freeways is to build managed lanes. A managed lane, or express lane, is typically a "freewaywithin-a-freeway" where a set of lanes is separated from the general-purpose lanes by usage restrictions such as time of day, vehicle occupancy, pricing, or some combination of these. Limiting the usage of these facilities helps to regulate demand, increase reliability and improve transit and other forms of ride sharing.

There are a number of managed lanes currently in operation across the Atlanta region. Some examples include:

- High Occupancy Vehicle (HOV) lanes: no single occupant vehicle can use this lane
- High Occupancy Toll (HOT) lanes: single occupant vehicles and 2-person carpools pay a toll
- Express Toll Lanes (ETL): all vehicles except registered buses pay a toll
- Reversible Express Toll Lanes (ETL): all vehicles except registered buses pay a toll, only available at peak times

GDOT is committed to creating a managed lane network through the Atlanta region. As part of the Major Mobility Investment Program (MMIP) announced by the Governor in 2016, several express lane projects were accelerated. For more information about the impacts of managed lanes on the Atlanta region see GDOT's Managed Lanes System Plan (MLSP) from 2010 and the Managed Lanes Implementation Plan (MLIP) from 2013. The constrained RTP includes over 140 miles of new express lane corridors that will be built by 2050.

LEARN MORE:

- Major Mobility Investment Program
- Managed Lanes System Plan
- Managed Lanes Implementation Plan



MAP 18: DRAFT RTP MANAGED LANE AND INTERCHANGE AND HIGHWAY CAPACITY PROJECTS

Legend



– Major Roads

Expressways

Counties

MPO Boundary



MAP 19: DRAFT RTP MAINTENANCE, OPERATIONS, AND SAFETY PROJECTS

Legend

- Roadway Maintenance, Operations, and Safety

— Major Roads

Expressways

Counties

MPO Boundary

GOODS MOVEMENT SOLUTIONS

The Atlanta region is a global leader in freight and logistics, forming a key component of the region's economic base. In 2018, freight dependent jobs were responsible for about \$514.8 billion of economic output, or 38% of the total regional output. This is projected to increase to about \$1.2 trillion in 2050. These industries include transportation/warehousing, manufacturing, wholesale, construction, and retail. Jobs in transportation/warehousing, manufacturing, and other goods movement/ logistics roles can play a role in ladders of opportunity, as many of these jobs provide a livable wage but typically do not require a college education.

Metro Atlanta is the third largest inland port in the United States behind only Chicago and Dallas. This global logistics presence is built on world class infrastructure in four modal pillars:

TRUCK

Approximately 25% of the U.S. population is within a one day truck drive from Atlanta, and more than 80% of the U.S. commercial and consumer markets can be reached within two days. The RTP seeks to balance the growing importance of regional and national truck travel, recognizing that truck access and connectivity are paramount to our economic vitality.

RAIL

With CSX and Norfolk Southern facilities and rail lines, metro Atlanta is served by two Class I railroads, three intermodal terminals, multiple classification and bulk rail yards and direct service to the Port of Savannah.

SEA

The region benefits from being only 250 miles from the Port of Savannah, the fourth busiest port and fastest growing container port in the US. At 1,200 acres, the Port of Savannah's Garden City terminal is the largest container facility in the nation. In fiscal year 2018 (July 2017 - June 2018), the Georgia Ports Authority handled a record 4.2 million Twenty-foot Equivalent container Units, an 8% increase from the previous year. At 1,700 acres, Colonel's Island at the Port of Brunswick is the nation's largest autoport and handled 1.25 million tons of roll-on/roll-off in fiscal year 2018.

AIR

Hartsfield-Jackson Atlanta International Airport is the 14th busiest cargo airport in the US by landed weight, has 1.3 million square feet of total on-airport air cargo warehouse space, and its cargo services features operations by more than 100 licensed customs brokers and 200 domestic and international freight forwarders. Freight is vital to the regional economy and is central to the Atlanta region's growth. The Atlanta Regional Freight Mobility Plan (2008) and the Atlanta Truck Route Master Plan (2010), have provided the guiding input for ARC's freight policies. From 2015-2016, ARC undertook an update to the Atlanta Regional Freight Mobility Plan, which involved revisiting data, assumptions, and recommendations from the original plan document.

The 2016 Atlanta Regional Freight Mobility Plan Update identifies numerous projects in the RTP which directly support freight and goods movement. These projects, along with additional programs, policies and recommendations on future planning initiatives to support this important component of our region's economy, are detailed in that document. A key need identified in the plan was the need for a local freight planning program. The locations of seven freight clusters and related freight cluster plans that have received funding are shown in Map 20. The 2016 Atlanta Regional Freight Mobility Plan Update, the Atlanta Regional Truck Parking Assessment Study, and each of these freight cluster plans will continue to provide guidance for freight planning and project and policy implementation in the coming years.

LEARN MORE:

- Atlanta Regional Freight Mobility Plan
- Atlanta Truck Route Master Plan
- Atlanta Regional Truck Parking Assessment Study



Freight trains headed south of Atlanta



MAP 20: FREIGHT CLUSTERS

Legend



TRANSIT SOLUTIONS

STATE OF THE REGION

Transit continues to be a centerpiece of transportation solutions in the Atlanta region. Recent legislation shows the importance of transit to the region with the City of Atlanta approving More MARTA and the Georgia General Assembly focusing on metro Atlanta transit in recent legislative sessions. Meanwhile several Atlanta region counties have recently started fixed route bus service while others are studying what type of bus service or emerging technologies could meet resident's mobility needs.

REGIONAL PLANNING AND COORDINATION

ARC & THE ATL

Regional transit planning and coordination is evolving with the creation of new operators and the passage of new legislation. The Georgia legislature passed HB 930 in 2018 establishing the Atlanta-region Transit Link Authority (The ATL). The ATL and ARC coordinate with the regional transit operators to plan and program funding for transit projects in the Atlanta region.

There are several similarities and differences between the two agencies' transit planning functions. The ATL is focused on a legislated 13 county region whereas ARC is focused on a 20 county region centered on the Census's Atlanta Urbanized Area. Both agencies coordinate to develop a shortrange list of funded projects advancing to implementation, as well as long-range fiscally constrained plans. For ARC, this fiscally unconstrained project list was called Concept 3. The newly formed The ATL is currently developing its fiscally unconstrained plan, The Atlanta Regional Transit Plan (ARTP). The two agencies and operators coordinate to ensure consistency amongst these plans.

EXTERNAL COORDINATION

Both ARC and The ATL work with transit operators in the region to facilitate dialogue on planning coordination. The two agencies co-host a bi-monthly Transit Operators Group focused on planning collaboration. The agencies both lead diverse transit studies focused on the entire region as well as studies focused on single transit entities. For example, ARC is leading a Regional Demand Response Coordination Study for the MPO region and also assisting several counties outside of the ATL region utilize funds for transit feasibility studies. Similarly, the ATL is anticipating focusing on items of regional significance such as a regional transit fare study. The ATL is also the region's Designated Recipient and responsible for working with the MPO to disperse FTA formula funds to eligible transit operators in the region.



MAP 21: THE ATLANTA-REGION TRANSIT LINK AUTHORITY

Legend



- —— Major Roads
- ——— Expressways
- ____ Counties
 - MPO Boundary

EXISTING TRANSIT SERVICE

TRANSIT PROVIDERS

Multiple transit providers serve metropolitan Atlanta utilizing rail, fixed route bus service and a variety of demand response transportation services. MARTA is the largest transit provider serving Clayton, Dekalb and Fulton counties. MARTA operates two heavy rail lines as well as fixed route bus routes and paratransit service. Several other metro Atlanta counties operate both fixed route bus service and the required complementary paratransit service. This includes Cherokee Area Transportation System, CobbLinc, Connect Douglas, Gwinnett County Transit and Henry County Transit. SRTA also operates the Xpress commuter bus service to park-and-ride lots in participating metro Atlanta counties.



Eastbound MARTA train leaving Downtown

Major Advances in Transit Since 2016

- Creation of ATL Authority
- Passage of More MARTA sales tax in the City of Atlanta
- Fulton County Transit Master Plan
- Connect Gwinnett Transit Plan
- Dekalb County Transit Master Plan
- Clayton County High Capacity Transit Corridor Planning
- Transit Feasibility Studies in: Forsyth County, Newton County, and Spalding County (pending)
- Cobb County CTP Update (ongoing)
- Express Lanes System Implementation

DEMAND RESPONSE TRANSPORTATION

The five fixed route bus operators in the region also operate paratransit demand response service within at least a three-quarter mile buffer of their respective fixed route bus service as required by the Americans with Disabilities Act (ADA). Each operator sets their eligibility requirements that must adhere to ADA requirements. The service is typically focused on using sedans and vans with wheel chair lifts to provide mobility options to older adults and persons with disabilities.

Several counties in the Atlanta region do not have fixed route bus service but do offer demand response transit service for older adults and persons with disabilities. In addition to county run services, several nonprofits provide transit service in the region, each with their own service areas and eligibility criteria. For example, the Center for Pan Asian Community Services provides shuttle service that focuses on connecting immigrants in Dekalb and Gwinnett counties to employment opportunities and community resources.

The concept of demand response transportation is evolving to better meet individual's mobility needs. Operators are exploring new technologies and route concepts that increase travel flexibility for all travelers. Gwinnett County Transit implemented a flex route pilot project in the City of Snellville that uses a smart phone app and phone call service to schedule shuttle trips along a deviating route in Gwinnett County. The microtransit pilot project received a lot of praise for using technology to meet both ADA and bus service delivery needs.

TRANSIT EXPANSION OPPORTUNITIES

MORE MARTA

City of Atlanta voters approved a half-penny sales tax in 2016 dedicated to expanding MARTA service in Atlanta under what is called the More MARTA program. The MARTA board gathered public input to refine the More MARTA project in the fall of 2018. The program is expected to generate approximately \$2.7 billion in transit funding over the next 40 years. All of the More MARTA bus rapid transit and rail expansion projects are reflected in this Plan.

FULTON COUNTY

The Fulton County Transit Master Plan (2018) created a vision for transit expansion in Fulton County outside of Atlanta. In May 2019, Fulton County Commissioners refined the project list to determine which projects could be funded by additional voter-approved 20-cent sales tax increase. The two major high capacity projects on the list include bus rapid transit on GA-400 from the North Springs Station to Winward Parkway and bus rapid transit on South Fulton Parkway from the College Park Station to GA-92.

I-285 TOP END TRANSIT STUDY

The potential 0.2 cent sales tax funded Fulton County project list also includes bus rapid transit along the top end of I-285. Other planning initiatives include recommendations for bus rapid transit along I-285. Mayors from the municipalities along the top end of I-285 are wrapping up an *I-285 Transit Feasibility Study* between West Paces Ferry Road in Cobb County to Northlake Mall in DeKalb County. The *Dekalb County Transit Master Plan* also includes bus rapid transit recommendations along I-285 from the Fulton-Dekalb northern border at Perimeter Center to the Panthersville area south of I-20.

DEKALB COUNTY

DeKalb County will wrap up the *DeKalb County* Transit Master Plan in the second half of 2019. The goal of the plan is to establish project lists in the event that DeKalb County Commissioners decide to ask residents to approve an additional half-cent or full penny tax for transit expansion projects. The RTP project list assumes that the additional half-cent sales tax is put to a vote and passes given the history of transit support in the county. The project list will be updated as needed to reflect the results of the vote. Both the half-cent and full penny project lists focus on bus rapid transit projects that are geographically distributed throughout DeKalb County since funding projections no longer support the previous project list.

CLAYTON COUNTY

Clayton County is working with MARTA on finalizing plans for a commuter rail project to connect the City of Lovejoy to the East Point MARTA station. A bus rapid transit project would also run in the vicinity of the existing MARTA routes 191 and 196. The RTP reflects the current timelines and cost estimates available acknowledging that updates will be needed once the projects have finalized agreements.

GWINNETT AND COBB COUNTIES

Gwinnett and Cobb counties both have avenues per HB 930 to join MARTA if their respective citizens vote to join. Gwinnett County voted in March of 2019 not to join MARTA, so the RTP only shows one BRT expansion project in Gwinnett County from the Doraville Station to Suglarloaf Mills. Cobb County may decide to ask voters if all or a portion of the county will join MARTA and implement an additional sales tax to fund transit expansion projects. Similar to Gwinnett, the RTP shows modest transit expansion in Cobb County with the approved alignment of the Connect Cobb BRT. The RTP will be updated as needed if Gwinnett and Cobb Counties approve additional funding for major transit expansion projects.

OTHER BUS EXPANSION

The RTP primarily reflects known high capacity fixed guideway transit projects. Additional fixed route bus expansion is anticipated to occur throughout the region. The Xpress commuter bus service is exploring how to better connect suburban areas to Hartsfield Jackson International Airport and planning for additional park-and-ride locations focused on GDOT's managed lane expansion. In addition, several urbanizing counties are studying how to better provide transit service, whether that be targeted towards aging populations or new fixed route bus service open to the public. Operators are also exploring how to utilize technology to operate microtransit/flex routes that better serve the public using apps and deviating bus service.

LEARN MORE:

DeKalb County Transit Master Plan



MAP 22: DRAFT RTP TRANSIT EXPANSION, OPERATIONS, AND CAPITAL MANAGEMENT PROJECTS

Legend

----- Transit Expansion

- Major Roads
- Transit Operations and Capital Management _____ Expressways
- ----- Existing Rail Transit

- Counties
- MPO Boundary



MAP 23: TRANSIT EXPANSION PROJECTS BY PROJECT TYPE | 2020 - 2030

Legend

Bus Rapid Transit
 Light Rail Transit
 High Capacity Premium Transit
 Existing Rail
 MPO Boundary



MAP 24: TRANSIT EXPANSION PROJECTS BY PROJECT TYPE | 2030 - 2040

Legend

Bus Rapid Transit
Light Rail Transit
High Capacity Premium Transit
Existing Rail
MPO Boundary



MAP 25: TRANSIT EXPANSION PROJECTS BY PROJECT TYPE | 2040 - 2050

Legend

Bus Rapid Transit
 Light Rail Transit
 High Capacity Premium Transit
 Existing Rail
 MPO Boundary

We should enforce the phase out of fossil fuel vehicles, gasoline cars, create new options for people on mass transit.

- ELIZABETH T.





I think by focusing just on the word "transportation," it's problematic, because you really need to take a systemic look at the whole. The way people live and the way people move – it can't be talked about in isolation.

- ALLEN R.

I think making sure the roads are clear of potholes and the bridges are still secure and maintained properly and invest in light rail or connecting transit between counties.

- JASON



FINANCES

The RTP estimates that total expected revenues from all sources will be \$172.6 billion and total expected plan investments will be \$172.6 billion. The plan is fiscally constrained.

The RTP is required by law to be fiscally constrained, meaning that there will be enough revenue to cover the expected spending over the life of the plan. Revenue sources include federal funds from the USDOT, state funds collected from the motor fuel tax and other fees, local funds collected primarily from sales taxes, transit fares, private sector property tax assessments, and other sources.

In order to compare the value of revenues and expenses over the 30-year horizon of the plan, the RTP uses a convention called "year of expenditure" (YOE) to express amounts. YOE means that the dollar value shown includes inflation between now and the year that the project is implemented. The average annual inflation rate assumed for this plan is 2.2%. Global economic trends over the past decade, as well as federal monetary policy, indicate a strong likelihood that inflationary pressure will remain weak, but stable. The relatively low, but stable inflation rate will increase the likelihood that project costs for projects planned in the outer years of the plan will remain within a reasonable range assumed for plan balancing purposes.

The maximum amount of revenue from all sources which will be available for transportation services, projects and programs through 2050 will be more than \$172 billion. Specific investments totaling \$70 billion have been DRAFT identified and reflected in the RTP project list (Appendix A: RTP Project List), 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.

Because the \$172 billion of revenue matches the combined \$172 billion of expenditures, the plan is fiscally constrained. The remainder of this chapter explains the sources of all these numbers in greater detail.

Figure 9 on the following page provides a breakdown of the percent of investment by program area and sub-area. See the Recommendations Chapter for a breakdown of the number of projects by program area and subarea.

Figure 9 PERCENT OF PROJECT COST BY PROGRAM AREA AND PROGRAM SUB-AREA





Table 3: Summary of Estimated Investments Through 2050

ESTIMATED INVESTMENTS THROUGH 2050

| Investment Program Areas | Percent of Total | Subtotals |
|--------------------------------------------------------|------------------|-----------------|
| MAINTENANCE & MODERNIZATION | | |
| Road and Bridge Preservation | 28.5% | \$49.2 Billion |
| Road System Optimization and Safety | 12.3% | \$21.3 Billion |
| Transit Operation and Capital Management (All Systems) | 18.3% | \$31.6 Billion |
| MAINTENANCE & MODERNIZATION SUBTOTAL | 59.2% | \$102.1 Billion |
| EXPANSION | | |
| Managed Lanes | 9.4% | \$16.2 Billion |
| Interchange and Highway Expansion | 6.4% | \$11.1 Billion |
| Transit Expansion | 6.3% | \$10.9 Billion |
| EXPANSION SUBTOTAL | 22.1% | \$38.2 Billion |
| DEMAND MANAGEMENT | | |
| Walking, Bicycling, and LCI | 3.0% | \$5.2 Billion |
| TDM and Other Programs and Initiatives | 2.6% | \$4.5 Billion |
| DEMAND MANAGEMENT SUBTOTAL | 5.6% | \$9.7 Billion |
| OTHER COSTS | | |
| Administrative Costs | 10.4% | \$18.0 Billion |
| Unprogramed Funding | 2.7% | \$4.7 Billion |
| OTHER COSTS SUBTOTAL | 13.2% | \$22.7 Billion |
| TOTAL INVESTMENTS | 100% | \$172.6 Billion |

Table 4: Summary of Estimated Revenues Through 2050

| Revenue Source | Percent of Total | Subtotals |
|------------------------------------------------------|------------------|-----------------|
| FEDERAL | | |
| FHWA Formula Funding plus Adjustments | 20.2% | \$34.9 Billion |
| FHWA Discretionary Funding | 0.2% | \$0.3 Billion |
| FTA Formula Funding plus Adjustments | 6.0% | \$10.3 Billion |
| FEDERAL SUBTOTAL | 26.4% | \$45.5 Billion |
| STATE | | |
| Region's Share of Excise Taxes | 26.0% | \$44.9 Billion |
| Region's Share of Lodging Fees | 2.5% | \$4.4 Billion |
| Region's Share of Heavy Vehicle Impact Fees | 0.2% | \$0.3 Billion |
| Region's Share of Electric Vehicle Registration Fees | 0.03% | \$0.05 Billion |
| Region's Share of General Fund Appropriations | 0.2% | \$0.4 Billion |
| STATE SUBTOTAL | 29.0% | \$50.0 Billion |
| LOCAL | | |
| SPLOST Revenues | 8.3% | \$14.3 Billion |
| T-SPLOST Revenues | 4.8% | \$8.2 Billion |
| MARTA Sales Tax Revenues | 14.3% | \$24.6 Billion |
| MARTA Farebox and Other Revenue | 4.2% | \$7.2 Billion |
| City and County General Funds | 10.4% | \$18.0 Billion |
| Non-MARTA Transit Agency Revenues | 1.6% | \$2.8 Billion |
| LOCAL SUBTOTAL | 43.5% | \$75.1 Billion |
| PRIVATE | | |
| CIDs and Other Revenue | 1.2% | \$2.0 Billion |
| PRIVATE SUBTOTAL | 1.2% | \$2.0 Billion |
| TOTAL REVENUE | 100% | \$172.6 Billion |

ESTIMATED REVENUES THROUGH 2050

OVERVIEW OF FINANCIAL TRENDS

Transportation programs and projects in the Atlanta region are funded from a combination of revenue sources. Before getting into the details, a few key recent developments related to transportation finance are worth highlighting.

FEDERAL FUNDING INSTABILITY

The FAST Act was signed into law by President Obama in 2015. After several years of short-term extensions, it provided a stable federal revenue stream for transportation projects, with over \$300 billion dedicated for highway, transit, freight, bicycle/pedestrian and other projects. It is set to expire in late 2020 and Congressional debate over its successor is currently in a preliminary stage. A major complication for the next federal funding act is that the plan's principal revenue source is from a motor fuel tax which has not increased since 1993. Due to project cost inflation and increased vehicle fuel economy standards, the amount of revenue collected by the tax has not kept pace with federal funding commitments and the gap has been closed by bailouts from the general fund. If this imbalance is not corrected, it could result in up to a 40% drop in funding levels as soon as FY 2021.

CREATION OF THE ATL

In May 2018, Governor Nathan Deal signed HB 930 into law, creating The ATL. The ATL's jurisdiction covers 13 counties in the Atlanta region: Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale. The ATL is responsible for coordinating transit funding and planning among the various operators serving the region. The new law also allows those counties to raise sales taxes in order to fund transit, if their voters approve. As of this plan update, no jurisdiction has proposed a referendum under this legislation. Fulton County, DeKalb County and Clayton County impose a sales tax dedicated to MARTA which predates HB 930. A vote in Gwinnett County to join MARTA failed in March 2019.

MORE MARTA FUNDING

In November 2016, a referendum passed to increase the MARTA sales tax rate from 1.0% to 1.5% within the City of Atlanta. Over the 40-year timeframe of the More MARTA tax, approximately \$2.7 billion will be available to improve and expand transit services within the City. A package of projects was approved in October 2018 and have been incorporated into the RTP. The program includes funding for transit expansion on the Beltline, the Clifton Corridor, and Campbellton Road, among other corridors.

ENSURING THE PLAN IS FISCALLY CONSTRAINED

An RTP is considered financially constrained if projected project costs do not exceed projected revenues that are reasonably expected to be available during the time frame of the plan. Major transportation projects can move forward only if they are included in a plan which meets all federal planning process requirements, including a demonstration that fiscal constraint has been achieved.

REVENUE ASSUMPTIONS

The RTP's financial assumptions and forecasts are developed in consultation with ARC's Financial Planning Team. Composed of representatives of federal and state agencies, public transit operators, and other stakeholders, the Financial Planning Team reviews major assumptions regarding the levels of future revenues and cost estimation methodologies. The plan's financial forecasts reflect this partnership.

Detailed tables demonstrating how federal, state and local revenue forecasts were derived are provided in Appendices E: Federal Financial Forecasts and Demonstration of Fiscal Constraint, F: State Financial Forecasts and G: Local Financial Forecasts, respectively.

ESTIMATING PROJECT COSTS

ARC generally relies on project sponsors for developing, submitting and updating project costs. As a project moves through the development and design process, the scope of the project often changes as various potential designs are identified, evaluated and refined. This frequently results in the cost of the project changing also. Each time the RTP is amended or updated, the most recent project costs must be incorporated and fiscal constraint of the overall plan must be demonstrated again.

YEAR-OF-EXPENDITURE PROJECT COSTS

Costs presented in the project listings in Appendices A: RTP Project List and B: FY 2020-2025 TIP Project List are already inflated within the six-year TIP period. But long-range phases are presented in current year dollars since a precise schedule for implementation has not yet been defined. A phase advanced in the 2031-2040 timeframe, for example, could occur anywhere within that period, resulting in a different cost based on whether the project is undertaken earlier or later in the decade. For this reason, all long range costs are aggregated and inflated to a mid-year point of the timeframe. For the 2031-2040 period, for example, an average YOE assumed is 2035. Appendix D: Year of Expenditure Calculations shows the results of these YOE adjustments for each project.

The one exception to this approach to presenting costs are those projects comprising the MMIP. Figures for those projects are already inflated since they represent actual payments made on the debt issued to implement them.

COMPARISON OF PROJECT COSTS AND REVENUES

This graphic summarizes federal, state and local financial revenues which will be available through 2050 to fund the recommendations of this plan. The total amount collected is estimated at \$172.6 billion, of which approximately \$18 billion will be required to fund the administrative functions of the various state and local transportation agencies responsible for designing, building, operating and maintaining the projects and programs recommended in this plan. The net revenue of \$153.7 billion is greater than the \$149.3 billion cost of the plan's proposed investments. It is important to note, as discussed in the introduction to this section, that only about \$70.0 billion of projects and programs have been individually listed in Appendix A, with the remainder being small-scale projects to be identified at a later date.

FEDERAL FUNDING FORECASTS

Funding on the federal level comes from federal taxes on fuel, heavy-duty trucks, and, to a growing extent, general funds. Taxes are charged for each gallon of fuel purchased (18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel). Tax revenues are paid into the Highway Trust Fund (HTF), which is separated into two accounts – a highway account and a mass transit account. The highway account receives about 84% of the proceeds from gasoline fuel taxes, with the remaining 16% is dedicated to the mass transit account.

STATUS OF THE HIGHWAY TRUST FUND

According to the Congressional Budget Office (CBO), the current trajectory of the HTF is unsustainable. For many years, the trust fund has not collected enough revenue to cover previous financial commitments, resulting in steadily accumulating annual shortfalls. Since 2008, the Congress has avoided bankruptcy of the trust fund by transferring approximately \$140 billion from the general fund of the Treasury. According to the CBO, should current levels of spending continue, along with the current taxing regimen in place on motor fuels, the HTF will require an additional \$176 billion to remain solvent over the next decade. Currently HTF spending outpaces revenues by approximately \$12 billion annually and is expected to gradually widen to \$26 billion annually by 2029.

RTP recommendations are based on the assumption that policy action will be taken to maintain the solvency of the HTF. The obligation limits for Georgia are used as the base to forecasting federal funds. Current federal funding levels are then forecast to increase in the future. Based on historical trends a 1.4% annual growth rate was applied to forecast federal funds beyond the timeframe of the FAST Act. Funds from the HTF are apportioned to states through FHWA and FTA.

FHWA FUNDING ASSUMPTIONS AND ESTIMATES

Assumptions on the Atlanta region's share of FHWA formula funds apportioned to Georgia were developed in consultation with federal and state agencies. The region's share of statewide employment was agreed to as an acceptable method to calculate a regional share of revenues, since economic activity could be considered a more reasonable proxy for transportation mobility needs than just overall population. Accordingly, ARC's share of statewide FHWA funding is assumed to rise from about 58% currently to nearly 63% by the year 2050.

The available federal highway funds are net principal and interest payments on outstanding and anticipated GARVEE and GRB bonds during the RTP timeframe. The Georgia State Financing and Investment Commission and SRTA provided information on bond debt payment. These debt payment obligations have been accounted for in the level of available funding. FHWA also has a variety of discretionary programs where funds are awarded to eligible sponsors via a competitive application process. Awards under these programs have been instrumental in implementing portions of the Beltline trail, the initial phase of the streetcar system, and the managed lane network. Since the programs are extremely competitive and funding priorities can shift over time, no assumptions are made in this plan regarding FHWA discretionary programs being available to finance future projects. A small number have already been awarded a total of \$266 million of discretionary funds in the past and will be implemented within the TIP period.

In consultation with the Financial Planning Team, baseline estimates are forecast to increase for FHWA sources by 1.4% annually. This rate is less than base line inflation rate of 2.2%, meaning that growth in revenue will not keep pace with inflation.

Based on these assumptions, ARC forecasts that approximately \$34.9 billion of FHWA formula funds will be available to the region between 2020 and 2050. Calculations of FHWA funding forecasts are detailed in Appendix E.

FTA FUNDING ASSUMPTIONS AND ESTIMATES

FTA formula funds are allocated directly to counties using a formula which mimics the national apportionment process and is based on population and transit service operating data. Funds for counties within the MARTA service area are automatically directed to that agency, while funds for other counties may be used to support their local transit agency, redirected to SRTA to support regional Xpress services, accrued for use by a future operator, or returned to the regional pot for distribution. Based on concurrence from the Financial Planning Team, FTA formula funds are forecast to increase at a rate of 1.4% annually. Through 2050, this will yield approximately \$5.3 billion.

Due to the costs involved with major transit capacity expansion projects, project sponsors rely upon federal assistance to construct projects, especially from the Federal Transit Administration's Section 5309 Capital Investment Grants (CIG) program. CIG funding is awarded through merit based, discretionary grants issued on an annual basis. All awardees must also match at least 20 percent of the federal grant amount, though the national average for the local share has consistently been over 50 percent in recent years.

Through a recent analysis of previous CIG awards and consultation with regional planning partners, ARC has determined approximately \$5.0 billion in discretionary funding could be considered reasonably available over the next 30 years. Approximately \$3.6 billion is dedicated to projects identified as priorities from a focused planning process and which have an existing dedicated local revenue source available for match funds. Coupled with an assumed approximate \$7.3 billion in locally sourced matching funds, approximately \$10.9 billion in total funding will be used to expand the Region's transit network, with about \$1.4 billion of possible federal funding held in reserve for dedication in future plan updates to additional projects as full financial packages are identified.

FTA also periodically awards funds to transit agencies through other nationwide competitive programs. Since these announcements are generally small, typically only a few million dollars or less, and sporadic in nature, no assumptions are made in this plan regarding their availability to finance projects.

Calculations of FTA funding forecasts are detailed in Appendix E.

STATE FUNDING FORECASTS

Passage of the Transportation Funding Act of 2015 (TFA) by the Georgia Legislature had dramatic impacts on the RTP. The new structure is generating a substantial amount of additional statewide revenue and also permits counties to pursue supplemental funding opportunities as well. The current primary sources for state funding for transportation are:

- An excise tax on gasoline and diesel fuel, which will be indexed and adjusted yearly based on fuel efficiency of vehicles registered in the state and the Consumer Price Index. For 2019, the gasoline tax rate is 27.5¢ gallon and the diesel fuel tax rate is 30.8¢ per gallon.
- An annual truck/bus "highway user impact fee" that is collected when a vehicle's tag is renewed each year. An amount of \$50 is assessed for vehicles from 15,500 lbs. to 26,000 lbs. and \$100 for those vehicles greater than 26,001 lbs.
- A \$5 per night fee on hotel and motel stays.
- An annual \$200 user fee on privately owned electric vehicles and an annual \$300 user fee for commercial vehicles.
- Limited funds are appropriate from the state general fund each year for transportation, primarily for rural transit match requirements. Only a small percentage is available for use on projects and programs in the Atlanta region.
- Variable rate tolls are collected on the region's express lane network, based on congestion levels. These funds are generally directly reinvested in the network to support operations and maintenance and are not included in any totals presented in this section. If and when SRTA and GDOT report

that excess toll revenues are being generated and can be used to fund other projects and programs, those amounts will be reflected in future RTP updates.

The estimation of the Atlanta region's share follows the same methodology used to estimate the region's share of forecasted federal funds. This results in an estimated \$50.0 billion being available from state sources to support transportation investments in the region through 2050.

Calculations of state revenue forecasts are detailed in Appendix F.

LOCAL FUNDING FORECASTS

In the Atlanta Region, approximately 85% of roadways and 52% of bridges are owned and maintained by a city or county government. Nearly one-half of all miles driven occur on these facilities. Transportation funds generated by local sources, either for a match against federal and state awards, or to advance projects independently of those sources, are an important part of the financing picture.

The RTP assumes that approximately \$75.0 billion will be available from existing local revenue sources to support investment in the transportation system. These funds may be used as match against federal and state funds, or they may be used to support 100% financed projects. In many cases, these 100% locally financed projects are not considered regionally significant and do not impact the region's air quality conformity analysis. Therefore, they do not need to be included in the RTP project list. Examples of these projects would include resurfacing of local streets, building sidewalks, installing traffic signals and addressing routine maintenance needs such as mowing, street lighting, and litter collection.

Calculations of state revenue forecasts are detailed in Appendix G.

SPECIAL PURPOSE LOCAL OPTION SALES TAX (SPLOST)

A SPLOST is a financing method for funding capital outlay projects in the State of Georgia. It

is an optional 1% sales tax levied by a county for the purpose of building parks, schools, roads and other public facilities. The revenue generated cannot be used towards operating expenses or most other maintenance projects, with the exception of roads and bridges.

In the Atlanta region, local governments typically dedicate a portion of SPLOST revenues to fund transportation, with dedicated funds ranging anywhere from 30% to 100% of total SPLOST revenues. Many counties have a long-term history of approving and renewing SPLOST programs. However, SPLOST programs are subject to voter approval and run for a limited period, usually five years, and are therefore not a completely reliable source of transportation funding. For purposes of this plan, though, those counties with a wellestablished track record passing SPLOSTs were assumed to continue to have this revenue stream available through 2050.

T-SPLOSTs are a variation of traditional SPLOSTs in which 100% of the revenue collected must be dedicated to transportation. This is the mechanism now being utilized by the City of Atlanta and Fulton County to fund local projects. They were expressly permitted under TFA and can also be levied by any other jurisdictions which already have an existing SPLOST, although none have proposed ballot initiatives to impose a T-SPLOST as of 2019. SPLOSTs and T-SPLOSTs are expected to generate approximately \$22.5 billion in revenue for transportation services, projects and programs through 2050.

MARTA REVENUES

In Georgia, as required by the Georgia Constitution. state motor fuel tax revenues cannot support transit or any transportation purpose other than roadways and bridges. Since there is not a dedicated state funding source for transit, the stability of state general funds allocated to transit as well as locally derived transit funds are crucial to the future of Georgia's transit systems. The U.S. Department of Transportation requires a commitment for operating support from state, regional, or local governments before allowing federal funds to be spent on the construction and implementation of transit projects. The majority of transit operating funds must come from state and local funding resources as federal transit operating funds are very limited.

MARTA is the only transit system in the Region supported by a multi-jurisdiction sales tax. Until 2017, a 1% tax was levied on purchases made within Fulton County, DeKalb County and Clayton County. In November 2016, residents of the City of Atlanta voted to increase the rate for transactions within the city to 1.5%. The change became effective in April 2017. The tax rate in the remainder of MARTA's service area remains at 1%. MARTA's other revenue streams include farebox collections, parking fees at selected rail stations, advertising agreements, lease income, title ad valorem tax collections and interest.

Combined, these revenue sources are forecast to generate nearly \$31.8 billion for MARTA to maintain and operate its existing services, plus expand the system in the future.

OTHER LOCAL SOURCES

Many jurisdictions dedicate some portion of property tax revenues, permit fees and other local revenue sources to transportation through the general fund budgeting process. A large share of these funds is typically dedicated to the administrative functions of public works, engineering and transportation departments, with SPLOSTs and awards from federal/ state sources being more important revenue streams for capital projects and programs. It is estimated that counties will dedicate \$5.8 billion of general fund revenues to run these departments through 2050, while cities will contribute \$12.2 billion.

Several jurisdictions in the Atlanta Region operate their own transit systems. Funding for these systems also depends on local general fund support, along with some federal assistance, fares collected from passengers and advertising agreements. Collectively, the region's transit operators (excluding MARTA) are estimated to receive \$2.8 billion from all funding sources through 2050.

PRIVATE FUNDING OPPORTUNITIES

Transportation infrastructure investment has historically been thought of as exclusively a governmental function, using a combination of taxes and user fees collected from system users. In recent years, however, the private sector has become an increasingly important partner in delivering, maintaining and operating a wide array of transportation projects. Private sector participation in Georgia occurs primarily through GDOT's Public Private Partnership (P3) program or through CIDs.

PUBLIC PRIVATE PARTNERSHIPS

GDOT is responsible for the development and implementation of a statewide program for project delivery through the P3 program. The P3 program may provide alternate delivery methods that could bring much-needed transportation projects to the State that would not be possible through traditional processes and existing funding.

P3 projects leverage limited transportation funds by partnering with the private sector using a variety of innovative delivery methods. Georgia now has a P3 framework that can leverage existing funding and improve project delivery rates through private sector innovation. The end result will be increased mobility and greater choice in travel options for the citizens of the State and the traveling public. GDOT is required to identify and submit to the State Transportation Board a list of projects on the Statewide Transportation Improvement Program, or otherwise identified, that should be considered for pursuit as Public Private Partnerships. That list is to be submitted to the State Transportation Board on July 31st of each odd numbered year. The goal is to identify those projects that afford the greatest gains in congestion mitigation or promotion of economic development for Georgia.

Once projects have been identified, they go through a rigorous screening process to determine their viability as a P3 project and identify how they compare to other projects under consideration. This allows for focused project development and effective use of the Department's limited resources.

The I-75 / I-575 Northwest Corridor managed lanes were delivered via a P3 arrangement and the I-285 at SR 400 interchange reconstruction project is being implemented in a similar manner. Future delivery of the rest of the plan's managed lane vision will rely on such partnerships as well. In addition, this model is increasingly being explored as a way to deliver major transit expansion projects, although no deals have been announced to date. To date, direct financial contributions from the private sector have been minimal in the state's P3 program, with GDOT primarily seeking arrangements that streamline delivery while utilizing bonds backed by existing revenue streams. As individual P3s are negotiated, their financial arrangements are embedded within the costs of the project and reflected in an updated fiscal constraint analysis. The RTP makes no assumptions on large direct influxes of private sector dollars.

COMMUNITY IMPROVEMENT DISTRICTS

A CID is a self-taxing district that uses additional property tax dollars to improve its district such as accelerating transportation and infrastructure improvement projects. CIDs are comprised of private commercial properties zoned as Office/ Industrial and Retail properties. Residential and multi-family properties are not taxable by a CID.

A CID is created through state enabling legislation and a vote by the majority of the corporate property owners in the defined district. It takes the agreement of a simple majority of the commercial property owners within the district to create a Community Improvement District. In addition, it is required that this simple majority of owners must represent at least 75% of the taxable value of the commercial property located within the proposed CID. Commercial property owners agree to assess themselves additional ad-valorem real estate taxes in order to address critical issues such as traffic and safety. That money is collected by the Tax Commissioner of the local government and returned to the district by its respective county, and a board of directors then seeks to leverage that money and garner infrastructure improvements for the area. Some examples of how this money might be spent include environmental and engineering feasibility studies, funding new construction projects, upgrades to already funded projects, maintaining existing transportation features, and direct spending (traffic control officers).

CIDs require the recommitment of participating property owners each six years. As of 2019, 29 CIDs are in operation within the five core counties of metro Atlanta. The majority of funding generated by these entities is leveraged to secure federal funding and is therefore counted as local match for fiscal constraint purposes in this plan. Collectively, the existing CIDs are expected to generate about \$1.1 billion in revenue through 2050.



MAP 26: COMMUNITY IMPROVEMENT DISTRICTS

Legend



- —— Major Roads
- —— Expressways
- ____ Counties
 - MPO Boundary

MAJOR MOBILITY INVESTMENT PROGRAM

In January 2016, Governor Deal unveiled the MMIP, a package of projects around the state to be advanced using additional funds made available under the federal FAST Act and the state's Transportation Funding Act of 2015. These eleven projects will be financed through direct payments or through public-private partnerships, whereby a private sector partner provides a revenue stream to design and construct the facility in the short term, with repayment being made by the state through a series of regularly scheduled installment payments over a longer period of time. This arrangement allows travelers in Georgia to receive benefits of the new facilities more quickly.

This financing approach presents challenges for how to document the MMIP in The Atlanta Region's Plan. If all eleven projects were implemented using cash on hand, the total cost would be approximately \$11 billion. However, fiscal constraint requirements for a federally required regional transportation plan demand that the cost of debt service be incorporated into those calculations. To do this requires presenting the annual installment payments in year of expenditure dollars, which is different from the way costs are shown in the project lists for all other "pay as you go" projects. Another challenge is that only seven of the eleven projects are located entirely within the Atlanta region - two others are located partially within the region, and two are located entirely in the Savannah region. Only about 11% of the footprint of the I-85 widening from SR 211 to US 129 is within the MPO area, while about 22% of the I-75 Commercial Vehicle Lanes are. This plan does not need to account for the share of costs outside of our region in its fiscal constraint analysis. For the two projects only partially within the region, costs shown in the project lists in the appendices reflect amounts which have been prorated accordingly. The lists do not include the two projects located on I-16 in the Savannah region at all.

Finally, the financing period for several MMIP projects will stretch beyond the 2050 horizon year of this plan. While the project lists do indicate a lump sum balance remaining to be paid past 2050, those amounts are not considered in the fiscal constraint analysis.



MAP 27: MAJOR MOBILITY INVESTMENT PROGRAM



I would like to see us rework MARTA and expand especially into Cobb County.

- JACKSON H.





I think the BeltLine is a great project and I think so many different people's lives have been improved because of it, and it's allowed for folks to become more engaged in their community and have a better civic life. The suburbs are trending towards that. We have a long way to go.

- JESUS R.

I always think about the youth and folks that live at the very end of the bus line and still have to walk a mile to get to their apartment. We know that bus lines are extra important, because not everyone is going to have a train station near their house. So really expanding buses would be more help<u>ful.</u>

- ABIODUN H.


PERFORMANCE

Evaluating the performance of the RTP projects on the regional transportation system helps us better understand their impact and the extent to which these investments achieve desired outcomes and provide the best return on our investments.

OVERVIEW OF PERFORMANCE-BASED PLANNING

As described in the Governing Laws and Legal Definitions section at the beginning of the RTP, The FAST Act established national performance goal areas and USDOT established national performance measures through the Final Planning Rule.

The Final Rule requires MPOs to link investment priorities to the achievement of national performance targets in key goal areas such as safety, bridge and pavement condition, congestion, reliability, and air quality. It also established that MPO transportation planning processes use a performance-based approach to decision-making in support of these national goals, reflect those targets in the RTP, and monitor progress. Tables 5 and 6 on pages 127-129 depict the FHWA and FTA required performance measures as well as ARC's concurrence with state targets or our regional progress towards achieving the targets.

ARC'S PERFORMANCE-BASED APPROACH TO THE RTP

The federal performance-based planning and programming framework (Figure 10 on page 126) helps states, regions, and cities better understand the consequences and benefits of their transportation investments. ARC's performance-based approach to the RTP mirrors that of FHWA. ARC recognizes that the Atlanta region faces increasing funding limitations coupled with increasing infrastructure demands and therefore needs accountable and transparent decision-making processes.

It is imperative that transportation investments recommended in the RTP contribute to achieving the goals and objectives set forth in the Policy Framework. Maintaining our existing system, ensuring that it functions as efficiently and safely as possible, and making strategic investments to expand travel options and increase system capacity is no guarantee of complete success.

Reporting the evaluation findings of the RTP project list against our goals, performance measures, and targets communicates to the public, our stakeholders, and our project sponsors how well these project priorities achieve desired outcomes.

Figure 10 FHWA PERFORMANCE-BASED PLANNING AND PROGRAMMING FRAMEWORK



Table 5 FEDERALLY REQUIRED TRANSIT PERFORMANCE MEASURES AND TARGETS

| Performance Measure | 2020 Target (MAXIMUM) | 2019 Performance |
|----------------------------------------------------------------------------------------|-------------------------------------------|------------------|
| EQUIPMENT | | |
| | Automobile: 50% | 58% |
| Percent service vehicles (by type) meeting or exceeding useful life benchmark | Truck and other rubber tire vehicles: 50% | 68% |
| FACILITIES | | |
| | Passenger: 50% | 9% |
| Percent of facilities (by group) that are | Passenger parking: 50% | 10% |
| Requirements Model (TERM)Scale | Maintenance: 50% | 0% |
| | Administrative: 50% | 0% |
| INFRASTRUCTURE | | |
| Percent of track segments (by mode) that | Heavy rail: 5% | 3% |
| have performance restrictions | Streetcar: 0% | 0% |
| ROLLING STOCK | | |
| | Automobile: 22% | 67% |
| | Over the road bus: 30% | 1% |
| | Bus: 30% | 22% |
| Percent revenue vehicles (by type) meeting or exceeding useful life benchmark (ULB) | Cutaway bus: 50% | 42% |
| , , , , , , , , , , , , , , , , , , , | Heavy rail passenger car: 20% | 0% |
| | Light rail vehicle: 25% | 0% |
| | Van: 25% | 32% |

Note: All transit targets are reported annually

Table 6 FEDERALLY REQUIRED ROADWAY PERFORMANCE MEASURES AND TARGETS

| Performance Measure | Statewide Target | Atlanta Region Target | Target Duration (Years) |
|--------------------------------------------------------------------|------------------------------------------|--------------------------|-------------------------------|
| AIR QUALITY (SET IN 2018) | | | |
| | <u>></u> 205.7 kg/day VOC | Concurred with GDOT | 2 |
| Total emissions reduction | <u>></u> 386.6 kg/day VOC | Concurred with GDOT | 4 |
| | <u>></u> 563.3 kg/day NO _x | Concurred with GDOT | 2 |
| | ≥ 1,085.0 kg/day NO _x | Concurred with GDOT | 4 |
| BRIDGE CONDITION (SET IN 2018) | | | |
| Percent of NHS bridges classified as in good condition | <u>></u> 60% | Concurred with GDOT | 2 and 4 |
| Percent of NHS bridges classified as in poor condition | <u><</u> 10% | Concurred with GDOT | 2 and 4 |
| CONGESTION (SET IN 2018) | | | |
| Annual hours of peak-hour excessive delay per capita | <u><</u> 24.6 hours | Concurred with GDOT | 4 |
| Percent of non-single occupant vehicle travel | <u>≥</u> 22.1% | Concurred with GDOT | 2 and 4 |
| PAVEMENT CONDITION (SET IN 2018) | | | |
| Percent of pavement on Interstate System in good condition | <u>≥</u> 50% | Concurred with GDOT | 4 |
| Percent of pavement on Interstate System in poor condition | <u><</u> 5% | Concurred with GDOT | 4 |
| Percent of pavement on non- Interstate System in good condition | <u>></u> 40% | Concurred with GDOT | 4 |
| Percent of pavement on non- Interstate System in poor condition | <u><</u> 12% | Concurred with GDOT | 4 |

| Performance Measure | Statewide Target | Atlanta Region Target | Target Duration (Years) |
|-----------------------------------------------------------------------------|---------------------------------------------------------|--------------------------|-------------------------------|
| RELIABILITY (SET IN 2018) | | | |
| Percent of person miles traveled on Interstate System that are reliable | <u>></u> 73% (2 year) and <u>></u> 67% (4 year) | Concurred with GDOT | 2 and 4 |
| Percent of person miles traveled on non-Interstate System that are reliable | <u>></u> 81% | Concurred with GDOT | 4 |
| Truck travel time reliability index | <u><</u> 1.66 (2 year) and <u><</u> 1.78 (4 year) | Concurred with GDOT | 2 and 4 |
| SAFETY (SET IN 2020) | | | |
| Number of fatalities | ≤1,698 (5 year rolling average) | Pending | 1 |
| Fatality rate per 100 million VMT | <1.28 (5 year rolling average) | Pending | 1 |
| Number of serious injuries | 24,094 (5 year rolling average) | Pending | 1 |
| Serious injury rate per 100 million VMT | 21.8 (5 year rolling average) | Pending | 1 |
| Number of non-motorized fatalities and serious injuries | ≤1,163 (5 year rolling average) | Pending | 1 |

PROJECT EVALUATION

The project evaluation process aims to ensure that our investments connect to and advance the regional goals of world-class infrastructure, healthy livable communities, and a competitive economy.

OVERVIEW OF THE EVALUATION PROCESS

As a key technical function of an MPO, ARC continually refines its methods for project evaluation as new data sources and policies emerge, and public opinions shift. ARC's current project technical evaluation is twofold, incorporating both quantitative and qualitative approaches. On the quantitative side, the project evaluation process utilizes national datasets, data derived from our planning partners, and modeled data developed in-house. ARC uses this data in planning scenarios and visualization tools to test project performance across a variety of measures and metrics. This analytical approach is paired with policy and community support considerations to paint a comprehensive understanding of whether a project will fulfill regional goals of world-class infrastructure, healthy livable communities, and a competitive economy.

The evaluation process is conducted through two temporal lenses: current need and future impact. Separating projects into these two dimensions has enabled ARC to fine tune the accuracy of the evaluation methodologies and better reflect differences in regional priorities.

The current need lens considers the necessity of the project to move the needle on safety, congestion, accessibility, equity, reliability, air quality, and goods movement. This approach uses a "fused" centerline roadway network or "Key Network" that contains of myriad of data including ARC's policy networks and travel speed to analyze congestion and crash rates. The future impact lens considers the effect on the transportation network from an air quality, congestion, accessibility, goods movement, deliverability, impact, and use perspective.

Table 7: Project Evaluation - Current Need Measures

| Variable | Measure | Calculation | Source |
|---------------|--------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------|
| Accessibility | Opportunity to reach TAZs | Regional accessibility build scenario - regional accessibility no build scenario | VISUM |
| Air Quality | Particulate matter (PM) | Average level of PM by project | Atlanta Roadside Emissions Exposure Study (AREES) |
| Congestion | Travel time index (TTI) | Average TTI by project | INRIX |
| Equity | Environmental justice communities | Intersects most concentrated census tracts | ARC's environmental justice analysis |
| Freight | Truck network | On or off network | ASTRoMaP |
| Reliability | Buffer index | 95th percentile for average travel time | INRIX |
| Safety | Crash rate | Crash rate/average crash rate by facility type | Georgia Electronic Reporting System (GEARS) |
| Use | Percent Traffic Volume | Flow bundle analysis | VISUM |

Table 8: Project Evaluation - Future Impact Measures

| Variable | Measure | Calculation | Source |
|----------------|---------------------------|----------------------------------------------------------------------------------------|------------------------------|
| Accessibility | Opportunity to reach TAZs | Regional accessibility build scenario - regional accessibility no build scenario | VISUM |
| Air Quality | Particulate matter (PM) | PM kg/year 2040 build scenario - PM kg/year 2040 no build scenario | AREES |
| Congestion | Vehicle Hour Delay (VHD) | Regional VHD build scenario - regional VHD no build scenario | VISUM |
| Deliverability | Environmental impacts | Average number of environmental resources | Environmental resources data |
| Freight | Truck VMT | Regional truck VMT build scenario - regional truck VMT no build | VISUM |
| Impact | Volume/mile | Number of trips/length of project | VISUM |
| Use | Percent Traffic Volume | Flow bundle analysis | VISUM |

SYSTEM EVALUATION

The system evaluation process is composed of two primary elements: the regional travel demand model and the regional air quality assessment. Figure 11 details how these elements interact with each other.

TRAVEL DEMAND MODELING

ARC's Activity-Based Model (ABM) is the current regional travel demand model used to assess system performance. The ABM models both household-level and person-level travel choices including intra-household interactions between household members. The ABM reflects and responds to detailed demographic information, including household structure, aging, income changes, and other key attributes. The model is calibrated using data from regional household travel surveys, regional transit on-board surveys, and observational data from partners like GDOT. To learn more about ARC's travel demand modeling process, see the ARC's Model Documentation.

The ABM analyzes three scenarios – current conditions of the Atlanta region's transportation system, as well as the regional transportation system with and without RTP investments. The results of these analyses are found later in this chapter.

AIR QUALITY ASSESSMENT

The Clean Air Act requires the EPA to set limits on how much of a particular pollutant can be in the air anywhere in the United States by establishing National Ambient Air Quality Standards (NAAQS). EPA sets these standards then designates areas as either in attainment of the NAAQS or as nonattainment of the NAAQS. EPA tasks states with creating a plan to reach attainment of the NAAQS. The projects recommended in the RTP must be shown to conform to the purposes of the state's plan to attain the NAAQS. To demonstrate conformity, the system is subjected to technical analysis (among other requirements) to determine future emissions resulting from projects recommended by the RTP.

The Atlanta region is currently designated as a maintenance area for the 1997 8-hr. ozone NAAQS and the 2008 8-hr. ozone NAAQS. The region is currently designated as a marginal nonattainment area for the 2015 8-hr. ozone NAAQS. See Map ii for these boundaries.

By interagency agreement, ARC performs the technical analysis for the neighboring MPOs in Cartersville-Bartow County and Gainesville-Hall County. Parts of the territory of these MPOs in included in the Atlanta maintenance and nonattainment areas. To learn more about the conformity process, see the Conformity Determination Report produced concurrently with this RTP.

LEARN MORE:

- ARC's Model Documentation
- Conformity Determination Report (note: available in February 2020)

Figure 11 SYSTEM EVALUATION PROCESS FLOWCHART



ARC'S PERFORMANCE MEASURES AND WHAT THEY SEEK TO DO

Performance measures are the critical link between the RTP project list and our vision to *Win the Future*. They are also a powerful tool ARC can use to comprehensively evaluate projects, communicate tradeoffs between investment scenarios, and ultimately build confidence in our stakeholders and the public if these strategic investments indicate they will be beneficial and impactful.

In the future, ARC looks to expand and re-focus its performance measures to better align with our overarching transportation goals of multimodalism, safety, livability, access, equity, and resiliency. ARC will also look to add performance targets with each performance measure to set quantifiable goals for achieving the Atlanta region's desired outcomes.

HOW TO READ THE PERFORMANCE MEASURE ANALYSIS

The performance measures listed in this section provide an "at-a-glance" overview of how the RTP project list as a system performs. These performance measures are centered around cost incurred due to congestion (measured in time and dollars), mode choice, impact on environmental justice communities, transit ridership, and performance of the managed lane system. Each performance measure includes the desired trend, current conditions, and then system performance with and without investing in the RTP project list. The arrow underneath the investment scenario indicates which way the trend will continue in the future. The color of the arrow indicates the severity of the change. If the trend without investments is the opposite of the desired trend and worse than the scenario with investments, the arrow will be red. If the trend with investments is the opposite of the desired trend but better than the without investments scenario, the arrow will be orange.

Similarly, if the trend without investments follows the desired trend but is not as high performing than the investment scenario, the arrow will be yellow. If the trend with investments follows the desired trend and also better than the without investments scenario, the arrow will be green.

SUMMARY OF HOW THE RTP SYSTEM OF PROJECTS PERFORM

Of the performance measures ARC uses to evaluate system performance, there is not a single indication that the region will be better off in 2050 without these recommended investments than with them.

In particular, this system of projects supports dramatic increases in transit ridership across the region and between activity centers. The system of projects also supports positive mode share trends for the region for walking, bicycling, and transit use.

The RTP system of project recommendations shows that while it may not achieve the desired trend for some performance measures, particularly those related to personal vehicle travel time and congestion costs, it does always show an improvement over not investing in our future.

The recommended project list through 2050 contains robust and varied projects intended to provide Atlanta region residents and visitors with travel choices that are reliable, safe, and efficient. This Plan, and the transportation system of 2050, will sharpen our collective ability to *Win the Future*.

A Note on Performance Analysis

Any analysis of system performance is limited by available data and tools, which are rarely adept at considering the impacts of disruptive technologies, economic shocks, or evolving social attitudes and preferences. With the inability to accurately forecast national and global conditions 20+ years in the future, system performance metrics largely represent what to expect if current trends continue.

Any number of factors could dramatically alter the reality of what travel conditions in 2050 will actually be like and how that impacts our economy and the health of our communities. See the Future Chapter to learn more about how ARC is taking these variables into consideration as part of its ongoing planning process.

Average Commute Travel Time in Minutes by Personal Vehicle

With 8.6 million residents expected in the region by 2050, roadway capacity projects for personal vehicles alone will not be able to meet the demand for a safe, accessible, and convenient transportation system. The RTP projects reflect solutions intended to mitigate worsening commute times while also pivoting to solutions that are multi-modal, providing residents and visitors with more travel options.

| | | 2050 without RTP | 2050 with RTP | |
|---------------------------------------------------------------------------------------------------------------|------------|----------------------------|---------------------------|--|
| Desired Trend | Today | Project Investments | Project Investments | |
| | 31 minutes | 35 minutes 13% increase | 33 minutes 7% increase | |
| Supporting Objective: Maintain and operate the existing transportation system to provide for reliable travel. | | | | |

Total Surface Transportation Congestion Cost Per Person by Dollars

Atlanta residents incur a hidden expense of both their time and fuel when sitting in roadway congestion. Lost time means we have less time for work productivity and fewer opportunities for recreation and social connections. It also means increased pollutants from vehicle emissions, increased goods movement costs, increased unreliability, increased stress, and more frequent crashes.¹

| | | 2050 without RTP | 2050 with RTP |
|---------------|---------|----------------------------|-------------------------|
| Desired Trend | Today | Project Investments | Project Investments |
| | \$1,403 | \$2,671 90% increase | \$1,916 37% increase |

Supporting Objective: Maintain and operate the existing transportation system to provide for reliable travel.

¹ USDOT Assessing the Full Costs of Congestion on Surface Transportation Systems and Reducing Them through Pricing (2009)

Transit Ridership between Activity Centers

The region's activity centers are centralized nodes where residents and visitors can live, work, and play. While increasing transit ridership on the whole is a desired outcome of the RTP project list, this performance measure underscores the importance of transportation and land use efficiency, supporting investments that promote connectivity amongst areas in the region with demonstrated regional significance.

| | | 2050 without RTP | 2050 with RTP | |
|------------------------------------------------------------------------------------------------------|---------------|-------------------------------|-------------------------------|--|
| Desired Trend | Today | Project Investments | Project Investments | |
| | 11,690 riders | 15,423 riders 32% increase | 20,956 riders 79% increase | |
| Supporting Objective: Strategically expand the transportation system while supporting local land use | | | | |

plans.

Regional Transit Ridership

The region must continue to invest in modes like transit that move people efficiently, conveniently, and safely. The RTP project list includes transit expansion, operations, and capital management projects that have projected ridership productivity increases. This increase, even in the without investments scenario, is likely due to improved transit-supportive development and access, co-locating with population and employment density, and the general population increase in the region.

| | | 2050 without RTP | 2050 with RTP |
|---------------|----------------|--------------------------------|-----------------------------------|
| Desired Trend | Today | Project Investments | Project Investments |
| | 510,520 riders | 738,038 riders 45% increase | 1,100,797 riders 116% increase |

Supporting Objective: Improve transit and nonsingle-occupant vehicle options to boost economic competitiveness and reduce environmental impacts.

Average Speed during Morning Peak of General Purpose Lanes

Given the forecasted population and likely VMT increase for the region by 2050, it is unsurprising that the average speed during peak conditions for general lanes would worsen. Instead, the systems analysis showcases that conditions could be even worse in the future if the region does not make investments today. It is important to note that, as consistent with the Safe Systems approach, performance measures related to a desired increase in speed are limited to interstates.

| | | 2050 without RTP | 2050 with RTP | |
|---------------------------------------------------------------------------------------------------------------|--------|------------------------|-------------------------|--|
| Desired Trend | Today | Project Investments | Project Investments | |
| | 49 MPH | 41 MPH 16% decrease | 45 MPH ▼ 8% decrease | |
| Supporting Objective: Maintain and operate the existing transportation system to provide for reliable travel. | | | | |

Average Speed during Morning Peak of Managed Lanes

Adding highway capacity is an unsustainable and costly method that temporarily relieves congestion. Managed lanes are one tool the Atlanta region employs to better manage the speed or flow of traffic, provide travel-time savings, and provide a more reliable trip time. While the RTP projects focused on improving the managed lane system show a slight decrease even with investments, the speed of people in cars and trucks using these lanes will be better off than without an investment.

| | | 2050 without RTP | 2050 with RTP |
|---------------|--------|------------------------|-----------------------|
| Desired Trend | Today | Project Investments | Project Investments |
| | 63 MPH | 54 MPH 14% decrease | 59 MPH 6% decrease |

Supporting Objective: Maintain and operate the existing transportation system to provide for reliable travel.

Average Speed during Evening Peak of General Purpose Lanes

Given the forecasted population and likely VMT increase for the region by 2050, it is unsurprising that the average speed during peak conditions for general lanes would worsen. Instead, the systems analysis showcases that conditions could be even worse in the future if the region does not make investments today. It is important to note that, as consistent with the Safe Systems approach, performance measures related to a desired increase in speed are limited to interstates.

| | | 2050 without RTP | 2050 with RTP | |
|---------------------------------------------------------------------------------------------------------------|--------|------------------------|--------------------------|--|
| Desired Trend | Today | Project Investments | Project Investments | |
| | 48 MPH | 39 MPH 19% decrease | 42 MPH ↓ 12% decrease | |
| Supporting Objective: Maintain and operate the existing transportation system to provide for reliable travel. | | | | |

Average Speed during Evening Peak of Managed Lanes

Adding highway capacity is an unsustainable and costly method that temporarily relieves congestion. Managed lanes are one tool the Atlanta region employs to better manage the speed or flow of traffic, provide travel-time savings, and provide a more reliable trip time. While the RTP projects focused on improving the managed lane system show a slight decrease even with investments, the speed of people in cars and trucks using these lanes will be better off than without an investment.

| | | 2050 without RTP | 2050 with RTP |
|---------------|--------|------------------------|-----------------------|
| Desired Trend | Today | Project Investments | Project Investments |
| | 61 MPH | 52 MPH 15% decrease | 59 MPH 3% decrease |

Supporting Objective: Maintain and operate the existing transportation system to provide for reliable travel.

Mode Choice for Regional Population

The preference and behavior of people traveling in the Atlanta region is influenced by our regional transportation system. As a region facing increasing mobility demands and limited funding, we know the most efficient way to move people is outside of single occupancy vehicles. The RTP project list shows positive trends for walking, bicycling, and transit, but room for improvement for SOV and HOV.

SINGLE OCCUPANCY VEHICLE (SOV)

| Desired Trend | Today | 2050 without RTP Project Investments | 2050 with RTP Project Investments |
|---------------------|-----------|-----------------------------------------|--------------------------------------|
| | 51.1% | 52.0% 0.9% increase | 51.4% 0.3% increase |
| HIGH OCCUPANCY VEHI | CLE (HOV) | | |
| | | 2050 without RTP | 2050 with RTP |
| Desired Trend | Today | Project Investments | Project Investments |
| | 39.7% | 39.6% • O.1% decrease | 39.6% • O.1% decrease |

2050 without RTP 2050 with RTP **Desired Trend** Today **Project Investments** Project Investments 4.1% 4.2% 4.1% 0% change O.1% increase TRANSIT 2050 without RTP 2050 with RTP **Desired Trend** Today **Project Investments** Project Investments 0.9% 1.2% 0.9% 0.3% increase 0% change

WALKING OR BICYCLING

Supporting Objectives: Improve transit and nonsingle-occupant vehicle options to boost economic competitiveness and reduce environmental impacts.

Improve public health through the built environment.

Mode Choice in Census Tracts with High Concentrations of Environmental Justice Populations

A transportation system that works for everyone is characterized by a choice in mode, high-quality access, safety, and convenience, and evenly shared impact and externalities.

SINGLE OCCUPANCY VEHICLE

| Desired Trend | Today | 2050 without RTP Project Investments | 2050 with RTP Project Investments |
|------------------------|-------|-----------------------------------------|--------------------------------------|
| | 46.4% | 46.8% 0.4% increase | 45.5% 0.9% decrease |
| HIGH OCCUPANCY VEHICLE | | | |
| | | 2050 without RTP | 2050 with RTP |
| Desired Trend | Today | Project Investments | Project Investments |
| | 40.3% | 40.2% • 0.1% decrease | 39.9% • 0.4% decrease |

| | | 2050 without RTP | 2050 with RTP |
|---------------|-------|----------------------------|-----------------------|
| Desired Trend | Today | Project Investments | Project Investments |
| | 6.0% | 6.1% O.1% increase | 6.7% 0.7% increase |
| TRANSIT | | | |
| | | 2050 without RTP | 2050 with RTP |
| Desired Trend | Today | Project Investments | Project Investments |
| | 2.6% | 2.9% O.3% increase | 3.7% 1.1% increase |

WALKING OR BICYCLING

Supporting Goals: Improve transit and nonsingle-occupant vehicle options to boost economic competitiveness and reduce environmental impacts.

Improve public health through the built environment.

Promote an accessible and equitable transportation system.

Air Quality

Ground-level ozone causes visible smog conditions and results in poor health outcomes like asthma. The emissions of oxides of nitrogen (NOx) and volatile organic compounds (VOC) from the transportation sector are a direct precursor to the presence of ozone. ARC works with the US EPA to limit the amount of ozone precursors from vehicles on the road. The RTP recommendations are expected to produce ozone precursors well below the maximum limit set by the EPA.

NO_x EMISSIONS

| | Budget | 2050 without RTP | 2050 with RTP |
|---------------|----------------|------------------------------|------------------------------|
| Desired Trend | (Tons per Day) | Project Investments | Project Investments |
| | 58 tpd | 25.28 tpd 56.4% below max | 25.32 tpd 56.3% below max |
| VOC EMISSIONS | Budget | 2050 without RTP | 2050 with RTP |
| Desired Trend | (Tons per Day) | Project Investments | Project Investments |
| | 52 tpd | 25.26 tpd 51% below max | 24.86 tpd 52% below max |

Supporting Objective: Improve transit and nonsingle-occupant vehicle options to boost economic competitiveness and reduce environmental impacts.

Improve public health through the built environment.

Integrate sound environmental management principles that ensure the region's sustainability.

Commercial Vehicle Delay Cost

Freight logistics are dependent on a reliable and cost-effective trip in order to support the region's economic growth. Delays in those trips happen for a variety of reasons - congestion, traffic incidents, bad weather, work zones, poor signal timing - but the demand for freight continues. The RTP project list, while not achieving the desired trend, minimizes the delay cost freight delivery would incur if investments were not made.

| | | 2050 without RTP | 2050 with RTP |
|-----------------------------------|-------------------|----------------------|----------------------|
| Desired Trend | Today | Project Investments | Project Investments |
| | \$25 | \$41 64% increase | \$34 36% increase |
| Supporting Goal: Sup and goods | port the reliable | movement of freight | |

Walking and Bicycling Trips from Activity Centers

Promoting walking and biking trips is a key goal of the RTP. Investments in walking and biking infrastructure included in the RTP are effective as evidenced by the dramatic uptick in walking and biking trips from major activity centers in the region under the investment scenario. Activity centers include areas such as the airport, downtown, Buckhead, Cumberland, and other areas of dense development that include a wide variety of jobs, housing opportunities, and recreational facilities.

| | | 2050 without RTP | 2050 with RTP |
|---------------|---------|---------------------|---------------------|
| Desired Trend | Today | Project Investments | Project Investments |
| * | | | |
| | | 177,544 | 192,389 |
| | 121,441 | 46% increase | 58% increase |

Supporting Objective: Improve quality of life at the neighborhood, city, county and regional levels.

In partnership with local communities, equitably and strategically focus resources in areas of need and importance. Atlanta is doing a great job with the Beltline, but it could definitely be expanded.

- JOSHUA L.





The last-mile and firstmile connectivity are key, and I think that we need to not think that MARTA or that any one mode is going to be a one-size fits all for everybody. We've got to really get creative.

- SHERRY W.



FUTURE

ARC's vision for the future includes supporting projects that create a safe, multi-modal, and resilient environment that adapts to technological advances for all residents.

A LIVING PLAN

The Atlanta Region's Plan is more than a static document updated every four years, and the RTP is no exception. While it does lay out a clearly defined set of policies, projects, and programs which are intended to help our region *Win the Future*, it does so from the perspective of a single point in time. What seems practical, costeffective, and desirable today may not seem so in 10, 20, or 30 years.

The true purpose of this plan is not to articulate every action to be undertaken in the future, but rather to define a general vision and set us on a reasonable path forward. While the path may have unexpected obstacles, the vision should remain constant. The commitment to creating world-class infrastructure, a competitive economy, and healthy livable communities should not change, although the most appropriate means to achieve that vision might. Even the definition of what each of these outcomes means may be different for somebody looking back from the future compared to us looking forward from today. The Atlanta Region's Plan is intended to be adaptable and responsive to change. What seems practical, cost-effective and desirable today may not be so in the future, so course corrections will be made regularly. New strategies will be tried and those which become obsolete will be retired. The plan will undoubtedly evolve considerably in coming years, which is the way the process should and must work if we truly hope to *Win the Future*. This section explores some of the ongoing work at ARC that may help the plan evolve to stay timely, relevant, and effective.

ONGOING WORK IN THE REGION

Some nascent work at ARC is ongoing but not yet directly reflected in the projects and solutions outlined in the RTP. This work is vital to the evolution of ARC and its planning goals and will be incorporated in future updates to the RTP.

HST PLAN

ARC completed the Human Services Transportation Plan (HST) in 2017. The plan reviews a broad range of transportation options design to meet the needs of the region's residents with disabilities and/or low incomes, older adults, veterans, and individuals with limited English proficiency. The HST Plan identifies the unique needs of these communities and provides strategies and solutions to address those needs across the region.

TSM0

Transportation Systems Management and Operations (TSMO) is a set of strategies that focus on operational improvements that can maintain and even restore the performance of the existing transportation system before extra capacity is needed. Many solutions are part of the TSMO toolbox including Intelligent Transportation System (ITS) and roadway design.

In 2016, ARC held a TSMO Capability Maturity Model Self-Assessment Workshop to evaluate the state of the practice and develop next steps in advancing the effectiveness of regional TSMO efforts. Several next steps were outlined during the workshop including establishing a TSMO vision for the region and creating guidance for local partners on expanding their TSMO capabilities. ARC has researched data governance best practices and is working to identify pilot projects for advanced technology deployments. A draft version of the ITS Architecture is available for review on ARC's website.

RESILIENCY

Planning to ensure a safe and reliable transportation system is a key objective outlined in the RTP. Resiliency planning works to minimize disruptions to the transportation system from increasingly extreme weather events like flooding, snow and ice storms, and heat waves, and from unpredictable and sudden disruptions like the I-85 bridge collapse.

In 2017, ARC hosted a resilient communities workshop to share best practices with stakeholders. Also in 2017, ARC completed its Vulnerability and Resiliency Framework that outlines the process for ARC to integrate resilience to disasters into the transportation planning process. Building on this work, ARC won an FHWA grant in 2018 to participate in the Extreme Weather and Durability Pilot program. The pilot focuses on studying hydrological challenges due to flooding and the impact of extreme heat on transportation infrastructure and its users. ARC is in the process of developing tools to assess these risks to the region.

IMPLEMENTING VISION ZERO

ARC is committed to a regional safety approach to eliminate fatal and serious injury crashes that is data-driven, proactive, and aggressive. To that end, ARC has convened the RSTF to lead the region towards zero traffic deaths. The RSTF will help ARC establish a regional safety vision, identify actionable strategies and resources, track progress toward meeting regional safety targets, promote better transportation project development, and promote a culture of safety.

MODELING AUTOMATED VEHICLES

The ARC ABM is the region's Travel Demand Model that replicates household-level and person-level travel choices to model future travel in the region. The ABM is continuously updated to reflect the most up-to-date travel patterns in the region. The model will be updated to reflect the advent of automated vehicles and their potential to disrupt travel patterns in the future. Until AV's are publicly available and in widespread use, the model's AV features will be based on academic research and assumptions.

PLANNING FOR EQUITABLE OUTCOMES

ARC is careful to ensure that its policies and activities do not disproportionately impact members of the communities who, through federal guidance, have been identified as protected classes. The TEAG is one component of ARC's efforts to work towards a more equitable process. TEAG connects subject-matter experts with transportation planners and agencies from around the region to help ensure that the voice of vulnerable populations is heard and considered throughout the planning process.

ARC developed two equity models to help the agency identify vulnerable populations and quantify the impacts of proposed projects on those populations. The Protected Classes Model identifies nine protected populations throughout the region. The EJ Model considers racial minority, ethnic minority, and low-income populations to highlight the areas of greatest potential inequality in the region. The TIP Project Evaluation Framework uses the results of the EJ Model to help score and rank proposed projects.

LEARN MORE:

- HST Plan
- TSMO
- Resilience at ARC
- Regional Safety Task Force
- Transportation Equity Advisory Group

TECHNOLOGY ADVANCEMENTS AND DISRUPTIONS

While the RTP directly plans for the problems of today using available technology, it is prudent to keep current with technological advancements and disruptors that have the potential to impact future plans and developments. The list below is a selection of technologies and disruptors that ARC believes will impact future plans.

AUTOMATED VEHICLES

Most vehicles today are partially automated and can maintain safe distances from other vehicles while in cruise control, alert drivers to obstacles. and stay inside lane markings. Fully automated vehicles will be able drive themselves with no direction from a human. The potential outcomes of a fully autonomous fleet include fewer crashes, faster speeds, and potentially higher VMT. In the Atlanta region several low speed autonomous shuttle pilots are already underway. These pilots help us learn more about the potential benefits and obstacles of implementation. In preparation for an autonomous future, ARC is setting the region up for success by ensuring our infrastructure is well maintained, solidifying our transit options, and encouraging healthy land use.

CONNECTED VEHICLES

Connected vehicles can communicate with other vehicles (V2V), roadway infrastructure (V2I), or everything (V2X). Message systems in the vehicle alert drivers to dangerous situations or simply when a light will turn green. The Atlanta region has already embraced connected vehicle technologies for their positive impacts on safety, congestion, and air quality. ARC is now setting up a partnership with GDOT on a project to equip every signal in the region with connected technologies to ensure the future of the region. While connected vehicles have their own benefits, they will also be necessary for a fully autonomous fleet to navigate things like complicated urban areas and work zones.

SHARED MOBILITY

Transportation Network Companies (TNCs) like Uber and Lyft have become a popular mode of transportation for many people in the Atlanta region. These businesses will become more profitable with fully autonomous and electric fleets has it will reduce the cost of drivers an maintenance. The potential for having subscriptions to shared rides is often referred to as Mobility As A Service, or MaaS. The benefits of shared autonomous fleets are that they could mitigate some of the potentially harmful effects of personal autonomous vehicles, for instance an increase in VMT from zero occupancy vehicles. TNCs complement other vehicle-for-hire modes like traditional taxis.

DOCKLESS MOBILITY

The world of shared micro mobility has expanded a great deal in a short period of time. New options, like scooters and electric bikes have joined the traditional bike share model. The most disruptive aspect of these changes has been the shift to dockless systems. In traditional docked shares, the equipment must be returned to a dock or the rider is charged fee. In a dockless system, apps are used to find the equipment, which can be left anywhere within the service zone. This has the potential to create clutter on sidewalks and potentially dangerous obstacles. ARC is encouraging local governments to do curbside management studies and with shared micro mobility companies to maintain their equipment and keep our infrastructure safe.

ALTERNATIVE FUELS

Electric vehicles run on a battery and need to be plugged in to charge. Some advantages of true electric vehicles, as opposed to hybrid electric vehicles with an internal combustion engine, is that they have zero emissions and are low maintenance. While the overall air quality advantage of electric vehicles varies based on how the electricity was generated, vehicle emissions have outsized health impacts on people as they share the same space, particularly in urban environments. Electric vehicles' lack of an internal combustion engine also reduces its number of moving parts reducing the amount and cost of maintenance. These qualities along with the trend of better, cheaper batteries ensures the future of electric vehicles.

The FAST Act required FHWA to establish a common understanding of alternative fuels in the US and to establish alternative fuel corridors. There are five recognized alternative fuels: electric vehicle charging, hydrogen, propane, liquid natural gas, and compressed natural gas. The existing alternative fuels corridor network covers more than 135,000 miles of the National Highway System. These designated corridors provide a sufficient number of facilities to allow for corridor travel using one or more alternative fuels.

Interstates 75 and 85 in the Atlanta region have been designated as alternative fuel corridors. ARC expects further development of alternative fuel facilities along these corridors and will continue to support local governments who are building supply infrastructure and transit operators who are testing electric and other alternative fuel vehicles.

PLANNING FOR AN UNCERTAIN FUTURE

Visioning and scenario planning plays an important role in the long-range planning process. Technology is rapidly evolving and could change the way we live our daily lives, from where we work to how move around and socialize. We should not assume the trends of the past, but rather explore the underlying social, technological, economic, and political drivers of change to understand their potential impacts. These drivers of change will shape the future of the region.

SCENARIO PLANNING

In previous efforts, ARC has used scenario planning to test many different land use and transportation scenarios to help policy-makers better understand the impact of growth on the region. Throughout 2016 and into 2017, leveraging the help of a USDOT SHRP2 grant, ARC undertook a scenario planning process to further explore global and regional drivers of change. This work began with the identification of nine key disruptive influences or "drivers of change" which are most likely to have major implications on our ability to *Win the Future*. The next step in this exploratory scenario process involved identifying plausible relationships between key drivers of change and weaving them into four distinct alternate futures:

- Full Steam Ahead
- Technology Reigns
- Fierce Headwinds
- Green Growth

These scenarios represent a set of possibilities that can help guide future policy discussions. They were then analyzed for transportation impacts using a variety of modeling tools. Key deliverables from this process were detailed scenario narratives, analysis results from the modeling, and an online tool which will allow individuals to estimate the likelihood of various trends. The online tool identifies which alternate future most closely aligns with the user's responses and allow the user to explore that scenario (as well as the other three) in more detail.

TRANSPORTATION TECHNOLOGY

Several of the key drivers of change relate to the impacts technology will have on mobility options. How will such technologies begin to transform the Atlanta region and how does this morph our long-term vision for transportation?

Recognizing the importance that technology has on current and future travel behavior, ARC began a robust review of technological trends in 2016. The resulting Regional Transportation Technology Policy Report includes a detailed look at how these trends might influence national and regional travel behavior and the implications for current policy. The report also recommends policy options that can guide these changes towards positive outcomes. These policies are grouped into six focus areas:

- Data sharing and support
- Infrastructure planning and investment
- Managing travel demand and mobility services
- Physical environment
- Workforce development and innovation
- Equitable access

The growth of technology is uncertain and ultimately unforeseeable. Just as the RTP responds to changes in land use and travel patterns, so too will the Regional Transportation Technology Policy Report respond to changes in the technological landscape. The focus areas we consider important and transformative today may have minor roles to play in the future. Likewise, topics that have not yet risen into our field of view may come to dominate the landscape in years to come.

LEARN MORE:

Scenario planning at ARC

MOVING FORWARD

The recommendations contained herein collectively transform and progress the transportation landscape of the Atlanta region. They further our regional priorities of healthy livable communities, world-class transportation infrastructure, and a competitive economy.

The Atlanta region is the beating heart of the South – a place of movement, commerce, and culture. There is a powerful, pulsing rhythm of our streets and railways as they carry goods, ideas, and every kind of person into and out of our region. Our plan will enable us to continue growing and thriving far into the 21st century.

Together, we can Win the Future.





