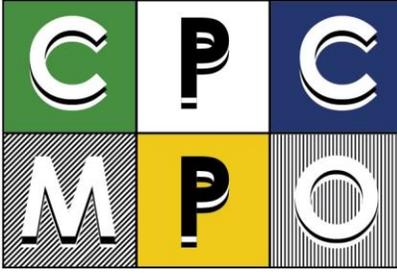




2045

METROPOLITAN TRANSPORTATION PLAN

FINAL



COLUMBUS - PHENIX CITY

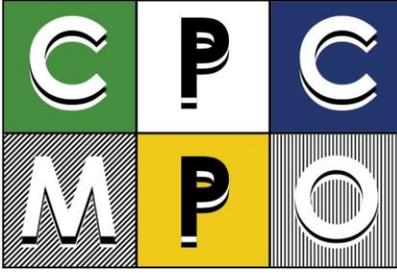
METROPOLITAN PLANNING ORGANIZATION

2045 METROPOLITAN TRANSPORTATION PLAN UPDATE

View this document at <http://www.columbusga.org/Planning>

For Information regarding this document, please contact
Lynda R. Temples, Principal Transportation Planner
Columbus-Phenix City Transportation Study
420 10th Street, 2nd Floor
P.O. Box 1340
Columbus, Georgia 31902
Telephone: 706-225-3938
Email: ltemples@columbusga.org

Date Adopted: December 16, 2019



COLUMBUS - PHENIX CITY

METROPOLITAN PLANNING ORGANIZATION

2045 METROPOLITAN TRANSPORTATION PLAN UPDATE

The 2045 Metropolitan Transportation Plan (MTP) was prepared as a cooperative effort of the U.S. Department of Transportation, Federal Highway Administration, Federal Transit Administration, the Alabama Department of Transportation, the Georgia Department of Transportation, and local participating governments, in fulfillment of requirements under Section 134 of Title 23 and Section 5303 of Title 49 of the United States Code, in the Code of Federal Regulations, Title 23, Part 450 and in Public Law 112-141 (FAST Act), Sections 1201 and 1202, July 2016. The contents of this document do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

The Columbus-Phenix City MPO complies with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.), which states that “no person in the United States shall, on the ground 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.” In addition to Title VI, there are other Nondiscrimination statutes that afford legal protection. These statutes include the following: Section 162 (a) of the Federal-Aid Highway Act of 1973 (23 U.S.C. 324) (sex), Age Discrimination Act of 1975 (age), and Section 504 of the Rehabilitation Act of 1973 / Americans with Disabilities Act of 1990 (disability),

RESOLUTION

**COLUMBUS-PHENIX CITY TRANSPORTATION STUDY
POLICY COMMITTEE
ENDORSEMENT OF THE 2045 METROPOLITAN TRANSPORTATION PLAN**

WHEREAS: the Fixing America's Surface Transportation Act or Fast Act requires the Metropolitan Planning Organization, in cooperation with participants in the planning process, develop and update the Metropolitan Transportation Plan (MTP) every five (5) years; and

WHEREAS: the Columbus-Phenix City Transportation Study (C-PCTS) has been designated by the Governors of Georgia and Alabama as the Metropolitan Planning Organization for the Columbus-Phenix City Metropolitan area; and

WHEREAS: the Columbus-Phenix City Metropolitan Planning Organization (MPO) is required by the Federal Highway Administration and FAST Act to prepare and update every five (5) years to the Metropolitan Transportation Plan that considers transportation needs for the region for a 25 year period; and

WHEREAS: the C-PCTS has made efforts to obtain the participation of public and private transit operations in the development and implementation of transit – related projects in the MTP; and

WHEREAS: the urban transportation planning regulations require that the MTP be a product of a planning process certified in conformance with all applicable requirements of law and regulation; and

WHEREAS: the Columbus-Phenix City Transportation Study, the Georgia Department of Transportation, the Alabama Department of Transportation, the Federal Transit Administration, and the Federal Highway Administration have reviewed the organization and activities of the planning process and found them to be in conformance with the requirements of the law and regulations; and

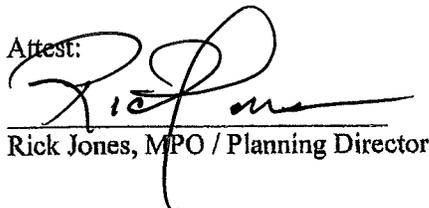
NOW, THEREFORE, BE IT RESOLVED that the Columbus-Phenix City Transportation Study Policy Committee finds that the requirements of applicable laws and regulations regarding metropolitan transportation planning have been met and its chairman authorized to execute a joint certification to this effect with the Georgia Department of Transportation, the Alabama Department of Transportation, the Federal Transit Administration, and the Federal Highway Administration.



Mayor B.H. "Skip" Henderson, III, Chairman
Policy Committee

12/16/19
Date

Attest:



Rick Jones, MPO / Planning Director

Columbus-Phenix City Transportation Study Metropolitan Planning Organization Transportation Improvement Program System Performance Report

Background

Pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21) Act enacted in 2012 and the Fixing America's Surface Transportation Act (FAST Act) enacted in 2015, state Departments of Transportation (DOT) and Metropolitan Planning Organizations (MPO) must apply a transportation performance management approach in carrying out their federally-required transportation planning and programming activities. The process requires the establishment and use of a coordinated performance-based approach to transportation decision-making to support national goals for the federal-aid highway and public transportation programs.

On May 27, 2016, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) issued the Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Final Rule (The Planning Rule).¹ This regulation implements the transportation planning and transportation performance management provisions of MAP-21 and the FAST Act.

In accordance with The Planning Rule and the Georgia Performance Management Agreement between the Georgia DOT (GDOT) and the Georgia Association of Metropolitan Planning Organizations (GAMPO), GDOT and each Georgia MPO must publish a System Performance Report for applicable performance measures in their respective statewide and metropolitan transportation plans and programs. The System Performance Report presents the condition and performance of the transportation system with respect to required performance measures, documents performance targets and progress achieved in meeting the targets in comparison with previous reports. This is required for the following:

- In any statewide or metropolitan transportation plan or program amended or adopted after May 27, 2018, for Highway Safety/PM1 measures;
- In any statewide or metropolitan transportation plan or program amended or adopted after October 1, 2018, for transit asset measures;
- In any statewide or metropolitan transportation plan or program amended or adopted after May 20, 2019, for Pavement and Bridge Condition/PM2 and System Performance, Freight, and Congestion Mitigation and Air Quality/PM3 measures; and
- In any statewide or metropolitan transportation plan or program amended or adopted after July 20, 2021, for transit safety measures.

The Columbus-Phenix City Transportation Study MPO Fiscal Year (FY) 2018-2021 Transportation Improvement Program (TIP) was adopted on October 24, 2017. Per the Planning Rule and the Georgia Performance Management Agreement, the System Performance Report for the Columbus-Phenix City Transportation Study MPO's FY 2018-2021 TIP is included, herein,

¹ 23 CFR 450.314

for the required Highway Safety/PM1, Bridge and Pavement Condition/PM2, and System Performance, and Freight.

Highway Safety/PM1

Effective April 14, 2016, the FHWA established the highway safety performance measures² to carry out the Highway Safety Improvement Program (HSIP). These performance measures are:

1. Number of fatalities;
2. Rate of fatalities per 100 million vehicle miles traveled;
3. Number of serious injuries;
4. Rate of serious injuries per 100 million vehicle miles traveled; and
5. Number of combined non-motorized fatalities and non-motorized serious injuries.

Safety performance targets are provided annually by the States to FHWA for each safety performance measure. Current statewide safety targets address calendar year 2019 and are based on an anticipated five-year rolling average (2015-2019). Georgia statewide safety performance targets for 2019 are included in Table 1, along with statewide safety performance for the two most recent reporting periods³. The Columbus-Phenix City Transportation Study MPO adopted/approved the Georgia statewide safety performance targets on January 15, 2019.

The latest safety conditions will be updated annually on a rolling 5-year window and reflected within each subsequent System Performance Report, to track performance over time in relation to baseline conditions and established targets.

Table 1. Highway Safety/PM1, System Conditions and Performance

Performance Measures	Georgia Statewide Performance (Five-Year Rolling Average 2012-2016)	Georgia Statewide Performance (Five-Year Rolling Average 2013-2017)	2019 Georgia Statewide Performance Target (Five-Year Rolling Average 2015-2019)
Number of Fatalities	1,305.2	1376.6	1,655.0
Rate of Fatalities per 100 Million Vehicle Miles Traveled	1.148	1.172	1.310
Number of Serious Injuries	17,404.6	23,126.8	24,324.0
Rate of Serious Injuries per 100 Million Vehicle Miles Traveled	15.348	19.756	18.900
Number of Combined Non-Motorized Fatalities and Non-Motorized Serious Injuries	1,138.0	978.4	1,126.0

The Columbus-Phenix City Transportation Study MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional

² 23 CFR Part 490, Subpart B

³ https://safety.fhwa.dot.gov/hsip/spm/state_safety_targets/

performance targets. As such, the FY 2018-2021 TIP planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes; specifically, the Georgia Strategic Highway Safety Plan (SHSP), the Georgia Highway Safety Improvement Program (HSIP), the current 2040 Georgia Statewide Transportation Plan (SWTP), and the current Columbus-Phenix City Transportation Study 2040 Metropolitan Transportation Plan (MTP).

- The Georgia SHSP is intended to reduce the number of fatalities and serious injuries resulting from motor vehicle crashes on public roads in Georgia. Existing highway safety plans are aligned and coordinated with the SHSP, including (but not limited to) the Georgia HSIP, MPO and local agencies' safety plans. The SHSP guides GDOT, the Georgia MPOs, and other safety partners in addressing safety and defines a framework for implementation activities to be carried out across Georgia.
- The GDOT HSIP annual report provide for a continuous and systematic process that identifies and reviews traffic safety issues around the state to identify locations with potential for improvement. The ultimate goal of the HSIP process is to reduce the number of crashes, injuries and fatalities by eliminating certain predominant types of crashes through the implementation of engineering solutions.
- The GDOT SWTP summarizes transportation deficiencies across the state and defines an investment portfolio across highway and transit capacity, highway preservation, highway safety, and highway operations over the 25-year plan horizon. Investment priorities reflect optimal performance impacts across each investment program given anticipated transportation revenues.
- The Columbus-Phenix City Transportation Study (MPO) 2040 MTP increases the safety of the transportation system for motorized and non-motorized users as required by the Planning Rule. The RTP identifies safety needs within the metropolitan planning area and provides funding for targeted safety improvements.

To support progress towards approved highway safety targets, the FY 2018-2021 TIP includes a number of key safety investments. A total of \$10,234,701.00 has been programmed in the FY 2018-2021 TIP to improve highway safety; averaging approximately \$4,123,823.75 per year.

Pavement and Bridge Condition/PM2

Effective May 20, 2017, FHWA established performance measures to assess pavement condition⁴ and bridge condition⁵ for the National Highway Performance Program. This second FHWA performance measure rule (PM2) established six performance measures:

1. Percent of Interstate pavements in good condition;
2. Percent of Interstate pavements in poor condition;
3. Percent of non-Interstate National Highway System (NHS) pavements in good condition;
4. Percent of non-Interstate NHS pavements in poor condition;
5. Percent of NHS bridges by deck area classified as in good condition; and
6. Percent of NHS bridges by deck area classified as in poor condition.

Pavement Condition Measures

The pavement condition measures represent the percentage of lane-miles on the Interstate or non-Interstate NHS that are in good condition or poor condition. FHWA established five metrics to assess pavement condition: International Roughness Index (IRI); cracking percent; rutting; faulting; and Present Serviceability Rating (PSR). For each metric, a threshold is used to establish good, fair, or poor condition.

Pavement condition is assessed using these metrics and thresholds. A pavement section in good condition if three metric ratings are good, and in poor condition if two or more metric ratings are poor. Pavement sections that are not good or poor are considered fair.

The pavement condition measures are expressed as a percentage of all applicable roads in good or poor condition. Pavement in good condition suggests that no major investment is needed. Pavement in poor condition suggests major reconstruction investment is needed due to either ride quality or a structural deficiency.

Bridge Condition Measures

The bridge condition measures represent the percentage of bridges, by deck area, on the NHS that are in good condition or poor condition. The condition of each bridge is evaluated by assessing four bridge components: deck, superstructure, substructure, and culverts. FHWA created a metric rating threshold for each component to establish good, fair, or poor condition. Every bridge on the NHS is evaluated using these component ratings. If the lowest rating of the four metrics is greater than or equal to seven, the structure is classified as good. If the lowest rating is less than or equal to four, the structure is classified as poor. If the lowest rating is five or six, it is classified as fair.

To determine the percent of bridges in good or in poor condition, the sum of total deck area of good or poor NHS bridges is divided by the total deck area of bridges carrying the NHS. Deck area is computed using structure length and either deck width or approach roadway width. Good condition suggests that no major investment is needed. Bridges in poor condition are safe to drive on; however, they are nearing a point where substantial reconstruction or replacement is needed.

⁴ 23 CFR Part 490, Subpart C

⁵ 23 CFR Part 490, Subpart D

Pavement and Bridge Targets

Pavement and bridge condition performance is assessed and reported over a four-year performance period. The first performance period began on January 1, 2018, and runs through December 31, 2021. GDOT reported baseline PM2 performance and targets to FHWA on October 1, 2018, and will report updated performance information at the midpoint and end of the performance period. The second four-year performance period will cover January 1, 2022, to December 31, 2025, with additional performance periods following every four years.

The PM2 rule requires states and MPOs to establish two-year and/or four-year performance targets for each PM2 measure. Current two-year targets represent expected pavement and bridge condition at the end of calendar year 2019, while the current four-year targets represent expected condition at the end of calendar year 2021.

States establish targets as follows:

- Percent of Interstate pavements in good and poor condition – four-year targets;
- Percent of non-Interstate NHS pavements in good and poor condition – two-year and four-year targets; and
- Percent of NHS bridges by deck area in good and poor condition – two-year and four-year targets.

MPOs establish four-year targets for each measure by either agreeing to program projects that will support the statewide targets, or setting quantifiable targets for the MPO's planning area that differ from the state targets.

GDOT established current statewide two-year and four-year PM2 targets on May 16, 2018. The Columbus-Phenix City Transportation Study MPO adopted/approved the Georgia statewide PM2 targets on June 19, 2018. Table 5 presents statewide baseline performance for each PM2 measure as well as the current two-year and four-year statewide targets established by GDOT.

On or before October 1, 2020, GDOT will provide FHWA a detailed report of pavement and bridge condition performance covering the period of January 1, 2018, to December 31, 2019. GDOT and the Columbus-Phenix City Transportation Study MPO will have the opportunity at that time to revisit the four-year PM2 targets.

Table 5. Pavement and Bridge Condition/PM2 Performance and Targets

Performance Measures	Georgia Performance (Baseline)	Georgia 2-year Target (2019)	Georgia 4-year Target (2021)
Percent of Interstate pavements in good condition	60%	N/A	≥50%
Percent of Interstate pavements in poor condition	4%	N/A	≤5%
Percent of non-Interstate NHS pavements in good condition	44%	≥40%	≥40%
Percent of non-Interstate NHS pavements in poor condition	10%	≤12%	≤12%
Percent of NHS bridges (by deck area) in good condition	49.1%	≥60%	≥60%
Percent of NHS bridges (by deck area) in poor condition	1.35%	≤10%	≤10%

The Columbus-Phenix City Transportation Study MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the FY 2018-2021 TIP planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes; specifically, Georgia’s Transportation Asset Management Plan (TAMP), the Georgia Interstate Preservation Plan, the current 2040 Georgia Statewide Transportation Plan (SWTP), and the Columbus-Phenix City Transportation Study (MPO) 2040 Metropolitan Transportation Plan (MTP).

- MAP-21 requires GDOT to develop a TAMP for all NHS pavements and bridges within the state. GDOT’s TAMP must include investment strategies leading to a program of projects that would make progress toward achievement of GDOT’s statewide pavement and bridge condition targets.
- The Georgia Interstate Preservation Plan applied a risk profile to identify and communicate Interstate preservation priorities; this process leveraged a combination of asset management techniques with risk management concepts to prioritize specific investment strategies for the Interstate system in Georgia.
- The GDOT SWTP summarizes transportation deficiencies across the state and defines an investment portfolio across highway and transit capacity, highway preservation, highway safety, and highway operations over the 25-year plan horizon. Investment priorities reflect optimal performance impacts across each investment program given anticipated transportation revenues.
- The Columbus-Phenix City Transportation Study (MPO) 2040 MTP addresses infrastructure preservation and identifies pavement and bridge infrastructure needs within the metropolitan planning area, and allocates funding for targeted infrastructure improvements.

To support progress towards GDOT’s statewide PM2 targets, the FY 2018-2021 TIP includes a number of investments that will maintain pavement and bridge condition performance. Investments in pavement and bridge condition include pavement replacement and reconstruction, bridge replacement and reconstruction, new bridge and pavement capacity, and system resiliency projects that improve NHS bridge components (e.g., upgrading culverts).

A total of \$7,615,776 for bridges has been programmed in the FY 2018-2021 TIP to improve conditions; averaging approximately \$1,903,944. A total of \$882,645,530 for NHS maintenance for pavement statewide; averaging approximately \$220,631,383 per year.

System Performance, Freight, and Congestion Mitigation & Air Quality Improvement Program (PM3)

Effective May 20, 2017, FHWA established measures to assess performance of the National Highway System⁶, freight movement on the Interstate system⁷, and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program⁸. This third FHWA performance measure rule (PM3) established six performance measures, described below.

National Highway System Performance:

1. Percent of person-miles on the Interstate system that are reliable;
2. Percent of person-miles on the non-Interstate NHS that are reliable;

Freight Movement on the Interstate:

3. Truck Travel Time Reliability Index (TTTR);

Congestion Mitigation and Air Quality Improvement (CMAQ) Program:

4. Annual hours of peak hour excessive delay per capita (PHED);
5. Percent of non-single occupant vehicle travel (Non-SOV); and
6. Cumulative two-year and four-year reduction of on-road mobile source emissions for CMAQ funded projects (CMAQ Emission Reduction).

The CMAQ performance measures apply to states and MPOs with projects financed with CMAQ funds whose boundary contains any part of a nonattainment or maintenance area for ozone, carbon monoxide or particulate matter. The Columbus-Phenix City Transportation Study MPO meets air quality standards, therefore, the CMAQ measures do not apply and are not reflected in the System Performance Report.

System Performance Measures

The two System Performance measures assess the reliability of travel times on the Interstate or non-Interstate NHS system. The performance metric used to calculate reliability is the Level of Travel Time Reliability (LOTTR). LOTTR is defined as the ratio of longer travel times (80th percentile) to a normal travel time (50th percentile) over all applicable roads during four time periods (AM peak, Mid-day, PM peak, and weekends) that cover the hours of 6 AM to 8 PM each day.

The LOTTR ratio is calculated for each segment of applicable roadway, essentially comparing the segment with itself. A segment is deemed to be reliable if its LOTTR is less than 1.5 during all four time periods. If one or more time periods has a LOTTR of 1.5 or above, that segment is unreliable.

The measures are expressed as the percent of person-miles traveled on the Interstate or non-Interstate NHS system that are reliable. Person-miles take into account the number of people traveling in buses, cars, and trucks over these roadway segments. To determine total person

⁶ 23 CFR Part 490, Subpart E

⁷ 23 CFR Part 490, Subpart F

⁸ 23 CFR Part 490, Subparts G and H

miles traveled, the vehicle miles traveled (VMT) on each segment is multiplied by average vehicle occupancy. To calculate the percent of person miles traveled that are reliable, the sum of the number of reliable person miles traveled is divided by the sum of total person miles traveled.

Freight Movement Performance Measure

The Freight Movement performance measure assesses reliability for trucks traveling on the Interstate. A TTTR ratio is generated by dividing the 95th percentile truck travel time by a normal travel time (50th percentile) for each segment of the Interstate system over five time periods throughout weekdays and weekends (AM peak, Mid-day, PM peak, weekend, and overnight) that cover all hours of the day. For each segment, the highest TTTR value among the five time periods is multiplied by the length of the segment. The sum of all length-weighted segments is then divided by the total length of Interstate to generate the TTTR Index.

PM3 Performance Targets

Performance for the PM3 measures is assessed and reported over a four-year performance period. For all PM3 measures except the CMAQ Emission Reduction measure, the first performance period began on January 1, 2018, and will end on December 31, 2021. GDOT reported baseline PM3 performance and targets to FHWA on October 1, 2018, and will report updated performance information at the midpoint and end of the performance period. The second four-year performance period will cover January 1, 2022, to December 31, with additional performance periods following every four years.

The PM3 rule requires state DOTs and MPOs to establish two-year and/or four-year performance targets for each PM3 measure. For all targets except CMAQ Emission Reductions, the current two-year and four-year targets represent expected performance at the end of calendar years 2019 and 2021, respectively.

States establish targets as follows:

- Percent of person-miles on the Interstate system that are reliable – two-year and four-year targets;
- Percent of person-miles on the non-Interstate NHS that are reliable – four-year targets;
- Truck Travel Time Reliability – two-year and four-year targets;
- Annual hours of peak hour excessive delay per capita (PHED) – four-year targets;
- Percent of non-single occupant vehicle travel (Non-SOV) – two-year and four-year targets; and
- CMAQ Emission Reductions – two-year and four-year targets.

MPOs establish four-year targets for the System Performance and Freight Movement. MPOs establish targets by either agreeing to program projects that will support the statewide targets, or setting quantifiable targets for the MPO's planning area that differ from the state targets.

GDOT established statewide PM3 targets on May 16, 2018. The Columbus-Phenix City Transportation Study (MPO) adopted/approved the Georgia statewide PM3 targets on June 19, 2018. Table 6 presents statewide baseline performance for each PM3 measure as well as the current two-year and four-year statewide targets established by GDOT.

On or before October 1, 2020, GDOT will provide FHWA a detailed report of PM3 performance covering the period of January 1, 2018, to December 31, 2019. GDOT and the Columbus-Phenix City Transportation Study (MPO) will have the opportunity at that time to revisit the four-year PM3 targets.

The Columbus-Phenix City Transportation Study (MPO) recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the FY 2018 - 2021 TIP planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes; specifically, the Georgia Statewide Freight and Logistics Action Plan, the current 2040 Georgia Statewide Transportation Plan (SWTP), and the Columbus-Phenix City Transportation Study (MPO) 2040 Metropolitan Transportation Plan (MTP).

- GDOT's Statewide Freight and Logistics Action Plan defines the conditions and performance of the state freight system and identifies the policies and investments that will enhance Georgia's highway freight mobility well into the future. The Plan identifies freight needs and the criteria Georgia will use to determine investments in freight, and prioritizes freight investments across modes.
- The GDOT SWTP summarizes transportation deficiencies across the state and defines an investment portfolio across highway and transit capacity, highway preservation, highway safety, and highway operations over the 25-year plan horizon. Investment priorities reflect optimal performance impacts across each investment program given anticipated transportation revenues.
- The Columbus-Phenix City Transportation Study (MPO) 2040 MTP addresses reliability, freight movement, congestion, [and emissions], identifies needs for each of these issues within the metropolitan planning area, and allocates funding for targeted improvements. The Columbus-Phenix City Transportation Study (MPO) is in the process of reviewing RFP's to hire a consultant to perform a corridor study on the J.R. Allen Parkway / US 80 Highway. This study will address freight movement, congestion and reliability. The study can be located in the 2019/2020 Unified Planning Work Program (UPWP).

To support progress towards GDOT's statewide PM3 targets, the FY 2018-2021 TIP devotes a significant amount of resources to projects that will address passenger and highway freight reliability and delay, [reduce SOV travel, and reduce emissions].

A total of \$0 has been programmed in the FY 2018-2021 TIP to address system performance; averaging approximately \$0 per year.

A total of \$0 has been programmed in the FY 2018-2021 TIP to address truck travel time reliability; averaging approximately \$0 per year.

TABLE OF CONTENTS

Chapter 1: Introduction

1.1	Background	1
1.2	Laws and Regulations	3
1.3	Plan Adoption and Amendment Process	5
1.4	Study Purpose / MTP Study Process	6
1.5	2045 Metropolitan Transportation Plan Development	13
1.6	Statement of Consistency of the Metropolitan Transportation Plan with Other Plans	14
	MPO Acronyms	16

Chapter 2: Performance Based Planning

2.1	Overview of Performance Based Planning	17
2.2	Planning Factors	20
2.3	Performance Targets	26
2.4	Project Contribution to Performance Targets	36

Chapter 3: Socioeconomic Data

3.1	Introduction	41
3.2	Population and Household Data Trends	41
3.3	Projected Household Data	43
3.4	Employment Data Trends	45

Chapter 4: Land Use

4.1	Population	51
4.2	Growth Scenarios	52
4.3	Columbus Comprehensive Plan	52
4.4	Phenix City Comprehensive Community Master Plan	57
4.5	Russell County Comprehensive Plan	61

4.6	Lee County Master Plan ~~~~~	62
4.7	Cusseta-Chattahoochee County Comprehensive Plan ~~~~~	63
4.8	Harris County Comprehensive Plan ~~~~~	66

Chapter 5: Transportation Needs and Infrastructure

5.1	Road Classification ~~~~~	71
5.2	Safety Analysis ~~~~~	74
5.3	Congestion Management Process ~~~~~	79
5.4	Regional Travel Demand Model ~~~~~	88
5.5	Bridges ~~~~~	103
5.6	Railroad Grade Crossings Evaluation ~~~~~	106
5.7	Railroads – Crossings and Intermodal Yards ~~~~~	112
5.8	Ports, Waterways, Airports ~~~~~	112
5.9	Freight and Good Movement ~~~~~	113
5.10	Freight Analysis Framework ~~~~~	117
5.11	Proposed Investment Strategies and Recommendations ~~~~~	120

Chapter 6: Multi-Modal Transportation

6.1	Bicycle / Pedestrian ~~~~~	121
6.2	Public Transportation (Transit) ~~~~~	128

Chapter 7: Project Recommendations

7.1	Project and Program Selection Process ~~~~~	142
7.2	Plan Implementation ~~~~~	146
7.3	Amendment Process ~~~~~	147
7.4	Performance Based Planning ~~~~~	149
7.5	Project Costs ~~~~~	155
7.6	Special Transportation Studies ~~~~~	158
7.7	Proposed Major Projects and Financial Information ~~~~~	159

7.8 Proposed Transit Projects ~~~~~ 215

Chapter 8: Environmental Mitigation and Air Quality

8.1 Environmental Mitigation ~~~~~ 216

8.2 Air Quality ~~~~~ 218

Chapter 9 – Public Engagement

9.1 Participation Activities ~~~~~221

9.2 General Public Outreach ~~~~~ 231

9.3 Results of 2045 MTP Public Survey ~~~~~ 235

Chapter 10 – Financial Plan ~~~~~ 263

Appendix A – Traffic Model Development ~~~~~ 272

TABLES

- Table 1-1: Data Collection Summary, Category Data Resources
- Table 1-2: Stakeholder Focus Group Meeting Participants
- Table 1-3: MPO Acronyms
- Table 2-1: C-PCTS Goals & Objectives – 2045 Planning Factors
- Table 2-2: National Performance Measures & Targets
- Table 2-3: Project Contribution to Performance Targets
- Table 3-1: Summary of MPO Socioeconomic Data
- Table 3-2: Commonly Used Ratios of Density
- Table 3-3: Elderly Populations in 2000
- Table 3-4: Elderly Populations in 2010
- Table 3-5: REMI Anticipated Changes in Employment for the Columbus Region – 2010 through 2060
- Table 3-6: Top Employers in the Columbus, GA – Phenix City Region
- Table 4-1: Historical Population Growth for Counties in the C-PCTS MPO Area
- Table 5-1: Collision Statistics by County in the C-PCTS MPO 2016 – 2018
- Table 5-2: Top Ten Intersections for Vehicle Collisions – 2016 – 2018
- Table 5-3: Routes Measured in 2016 Congestion Management Process
- Table 5-4: Findings of the 2016 CMP
- Table 5-5: Descriptions of Levels of Service
- Table 5-6: 2015 Model Validation
- Table 5-7: Rating System for Evaluating Bridge Sufficiency
- Table 5-8: Listing of Bridges with Lowest Sufficiency Ratings in the C-PCTS MPO Area
- Table 5-9: Railroad Crossings Ranked by Collision Probability Ratings
- Table 5-10: Columbus Airport Inventory and Flight Statistics
- Table 6-1: Schedule and Fares for Area Transit Systems
- Table 7-1: Project Listing with Goals and Objectives
- Table 7-A: Financial Balancing Table
- Table 7-2: GDOT's Cost Per Mile
- Table 7-3: Proposed Projects with estimated costs
- Table 8-1: Potential Climate Adaption Strategies
- Table 9-1: Earmarked Infrastructure Categories of Muscogee County LOST Sales Tax
- Table 9-2: Estimated Revenue under Muscogee County LOST Sales Tax
- Table 9-3: Total Expected Highway Funds (Federal) for FY 2020 – FY 2045
- Table 9-4: Federal Funding Programs Funding Category Description
- Table 9-5: State and Local Funding Programs
- Table 9-6: Estimate of Total Funds Available for Transportation in C-PCTS Region

CHAPTER 1 – INTRODUCTION

1.1 Background:

The Columbus-Phenix City Transportation Study (C-PCTS) is one (1) of sixteen (16) Metropolitan Planning Organizations in the State of Georgia and one (1) of twelve (12) in the State of Alabama. In 1964, the C-PCTS was designated a Metropolitan Planning Organization (MPO) through the Federal-Aid Highway Act 1962. An MPO is defined as a transportation policy-making body made up from representatives of local governments and transportation agencies with authority and responsibility in metropolitan planning areas. The Act also required Governors of each state to formally designate local government entities to make up a MPO in each urbanized area with a population of 50,000 persons or more. Listed below are several core functions of the MPO:

- Program and allocate federal funds to transportation projects and infrastructure investments through identifying and evaluating alternative transportation improvement options.
- Create and coordinate policy that guides transportation planning in its area of jurisdiction. A key element of policy development is that it is data driven, goal focused and anticipated outputs are measurable.
- Establish and manage a fair and impartial setting for effective regional decision making in the metropolitan area. Transparent decision making through active public involvement is a key requirement. Successful existing and future transportation plans seek to incorporate and sustain a significant level of public input.
- Prepare and maintain a Metropolitan Transportation Plan (MTP). Preparation of this document usually occurs once every five (5) years and has a typical planning horizon between 20 to 30 years.
- Develop a Transportation Improvement Program (TIP), which is similar to the MTP, however with a much shorter planning horizon, e.g., four (4) years. Transportation projects presented in the TIP are also included in the MTP.

The Columbus-Phenix City MTP fulfills the Federal requirements for a Metropolitan Planning Organization (MPO) Plan. The provisions for MPO plans are described under Section 134 of Title 23 and Section 5303 of Title 49 of the United States Code, in the Code of Federal Regulations, Title 23, Part 450 and in Public Law 112-141 (FAST Act), Sections 1201 and 1202, July 2016.

A continuing, cooperative, and comprehensive transportation planning process that results in plans and programs that consider all transportation modes and supports metropolitan community development and social goals. These plans and programs shall lead to the development and operation of an integrated, intermodal transportation system that facilitates the efficient, economic movement of people and goods (23 CFR 450.300).

MPO's do not implement transportation projects but facilitate their construction or initiation through the allocation of federal funds or by the creation of a policy environment conducive to transportation planning, outcomes monitoring and / or land use development. MPOs assist local jurisdictions to access federal and state financial resources by ensuring their transportation planning efforts meet federal and state regulations. Collaborating with state and / or county agencies, the Columbus-Phenix City Transportation Study (C-PCTS) MPO provides the public

and interested stakeholders reasonable and meaningful opportunities to participate in the transportation planning process

Federal Regulations (23 CFR 450.322) require MPOs to develop long-range transportation plans which identify the projected transportation demand of persons and goods in the metropolitan planning area over the period of the plan (a minimum of 20 years). In addition, MPOs have been required (23 CFR 450.316) to develop transportation plans and programs that are consistent with projects of potential transportation demand. This demand is based on the interrelated levels of activity in the areas of economic, demographic, environmental protection, growth management, and land use activities in accordance with metropolitan and local development goals.

The Metropolitan Transportation Plan (MTP) is the instrument for coordinating the metropolitan long-range transportation planning in the City of Columbus, Georgia, the City of Phenix City, Alabama, as well as Muscogee County, Chattahoochee County and a portion of Harris County in Georgia and a portion of Lee and Russell Counties in Alabama. The MTP identifies transportation improvements that will be needed in the Columbus-Phenix City area over the next 25 years. The MTP planning process is comprehensive, including all modes, cooperative, involving a broad array of stakeholders and other interested parties and continuous, being updated at least every five years. The planning process is established in Federal statute and is required for areas designated as “urbanized” (population 50,000 and above). The MTP is one of the key products of the planning process for the Columbus-Phenix City Metropolitan Planning Organization (C-PCTS MPO).

The 2040 Columbus-Phenix City MTP was adopted on December 16, 2014. Previous MTP’s that have guided the transportation program in the area include the 2035 Plan, adopted in 2009, 2030 Plan, adopted in 2004, 2025 Plan, adopted in 1999, and the 2020 Plan, adopted in 1995. The first LRTP (then known as a “Transportation Needs Report”) and was developed for the Columbus-Phenix City MPO in 1970, six years after the region was designated as an urbanized area.

The C-PCTS MPO started its first comprehensive regional transportation planning effort one year following its formation by forecasting travel demand to a horizon year of 1985. The C-PCTS MPO applied the forecasts to prepare a Transportation Needs Report in 1970, the region’s first-ever comprehensive transportation plan. The Transportation Needs Report was updated in 1979, 1986, 1996, 1999, 2004, 2009 and 2014. With each update, the C-PCTS MPO has repeated the inventory of existing conditions; strengthened and revised projections of growth; and reiterated the analysis of current and projected travel demand, taking into account changes in development patterns and travel behavior.

The development of any long-range transportation plan is challenging because it must effectively meld federal, state, and local concerns including transportation and land use. For the C-PCTS MPO, it faces an even greater challenge as a “bi-state” planning area which is bifurcated by the Chattahoochee River and subject to different planning regulations and policies associated with two state governments (Georgia and Alabama), two State Departments of Transportation, five counties (or portions thereof), a consolidated government for Muscogee County which represents the City of Columbus, GA, and several smaller cities, including Phenix City, AL whose boundaries are in both Lee and Russell Counties. The Policy, Technical, and Citizens Advisory Committees of the

C-PCTS MPO include representatives from both states in a cooperative, organized and orderly structure.

The purpose of developing a long range plan is to foster the development and implementations of improvement projects that will culminate into an integrated intermodal transportation system and ease the efficient movement of people and goods. The 2045 Metropolitan Transportation Plan will serve as the guide for transportation investment for the region over the next 25 years. The MTP update is the result of a 20-month concentrated study effort by the C-PCTS MPO, conducted in cooperation with federal, state, regional, and local planning partners and the public.

Travel demand models have become the primary tools used to identify the existing and future travel demand of person and vehicle travel and determine the transportation plans and programs that would be necessary to implement in order to address the travel patterns. The MTP planning process must also include citizen and public official involvement and participation and must include a financial plan that provides a plan for funding transportation improvements over the next 20 to 25 years.

1.2 Laws and Regulations:

Federal legislation provides the guiding framework that governs the transportation planning process for all metropolitan planning organizations (MPO's) including the Columbus-Phenix City Transportation Study MPO. The 2045 MTP is developed in accordance with all Federal laws and regulations.

On December 4, 2015, President Barack Obama signed into law the *Fixing America's Surface Transportation Act or FAST Act*". It is the first law enacted in over ten years that provides long-term funding certainty for surface transportation, meaning States and local governments can move forward with critical transportation projects. The FAST Act largely maintains current program structures and funding shares between highways and transit. It is a down payment for building a 21st century transportation system, increasing funding by 11 percent over five years. The law also makes changes and reforms to many Federal transportation programs, including streamlining the approval processes for new transportation projects, providing new safety tools, and establishing new programs to advance critical freight projects. Outlined below are the provisions in The FAST Act:

PROJECT DELIVERY: The FAST Act adopted a number of Administrative proposals to further speed the permitting processes while still protecting environmental and historic treasures and codifying the online system to track projects and interagency coordination processes.

FREIGHT: The FAST Act would establish both formula and discretionary grant programs to fund critical transportation projects that would benefit freight movement. The Act emphasizes the importance of Federal coordination to focus local governments on the needs of freight transportation providers.

INNOVATIVE FINANCE BUREAU: The FAST Act establishes a new National Surface Transportation and Innovative Finance Bureau within the Department to serve as a one-stop shop for state and local governments to receive federal funding, financing or technical assistance. This builds on the work of the Department's Build American Transportation Investment Center and provides additional tools to improve coordination across the Department to promote innovative finance mechanisms. The Bureau is tasked with the responsibility to drive efficiency in the permitting process.

TIFIA: The TIFIA Loan program provides important financing options for large projects and public-private partnerships. The FAST Act includes organizational changes that will provide an opportunity for important structural improvements with the potential to accelerate the delivery of innovative finance projects.

SAFETY: The FAST Act includes authority sought by the Administration to prohibit rental car companies from knowingly renting vehicles that are subject to safety recalls. It also increased maximum fines against non-compliant auto manufactures from \$35 million to \$105 million. The law also will help bolster the Department's safety oversight of transit agencies and streamlines the Federal truck and bus safety grant programs, giving more flexibility to States to improve safety in these areas.

TRANSIT: The FAST Act includes a number of positive provisions, including reinstating the popular bus discretionary grant program and strengthening the Buy America requirements that promote domestic manufacturing through vehicle and truck purchases.

LADDERS OF OPPORTUNITY: The FAST Act includes a number of items that strengthens workforce training and improve regional planning. Notably, FAST Act makes Transit Oriented Development (TOD) expenses eligible for funding under highway and rail credit programs. TOD promotes dense commercial and residential development near transit hubs in an effort to shore up transit ridership and promote walk-able, sustainable land use.

Described below are other requirements of the MPO planning process include compliance with a number of existing laws, regulations, and policy directives.

- The Americans with Disabilities Act (ADA) of 1990 mandates equal opportunity for, and prohibits discrimination against, individuals with disabilities. In particular, Title II of the ADA and Section 504 of the Rehabilitation Act of 1973 requires State, local, and regional agencies to provide transportation programs, services, and activities that are accessible to all individuals.
- Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, or national origin. Section 162a of the Federal-Aid Highway Act of 1973 to 1976 (Section 324, Title 23 U.S.C.), the enabling legislation of the Federal Highway Administration (FHWA), prohibits discrimination based on gender.
- The Uniform Relocation Assistance and Real Property Acquisition Act of 1970 prohibits unfair and inequitable treatment of persons as a result of projects that are undertaken with

federal financial assistance. The Civil Rights Restoration Act of 1987 clarified the intent of Title VI to include all programs and activities of federal aid recipients and contractors whether those programs and activities are federally-funded or not. Environmental Justice is a concept founded in the intent of the non-discrimination prohibitions of the federal legislation.

- The incorporation of Environmental Justice and non-discrimination principles into transportation planning and decision-making processes as well as project-specific environmental reviews as founded in *Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* and reaffirmed in both the United States Department of Transportation (US DOT) Order 5610.2 (a), *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations and FTA Circular 4703.1 Environmental Justice Policy Guidance for Federal Transit Administration Recipients*. These policy directives require federal agencies and grant recipients of federal funds to identify and address disproportionately high and/or adverse environmental or human health effects that any of its programs, policies, and/or activities may have on minority and low-income populations. Further, each agency and grant recipient must work to prevent the denial, reduction, or delay of benefits received by minority and low-income populations and must develop policies and strategies to ensure full and fair participation by affected populations in transportation decisions.
- In 2009, the US DOT, the US Department of Housing and Urban Development (HUD), and US EPA announced a new Interagency Partnership for Sustainable Communities to improve access to affordable housing, provide more transportation options, and lower transportation costs while protecting the environment in communities nationwide. The partnership established six livability principals: provide more transportation choices; promote equitable-affordable housing; enhance economic competitiveness; support existing communities; coordinate and leverage policies and investments; and value communities and neighborhoods. MPOs are encouraged to incorporate these livability principles into their plans and programs to ensure that transportation investments support both mobility and broader community goals.

The 2045 MTP for the Columbus-Phenix City Transportation Study MPO reflects compliance with the federal requirements of the FAST Act, the CAAA, and the above provisions.

1.3 Plan Adoption and Amendment Process

Developing and updating a metropolitan transportation plan (MTP) takes considerable time (generally 12 to 18 months or longer) given the amount of data and information that must be considered in the plan. As part of the plan development process, opportunities are provided for public and stakeholder input, which is an important activity in determining transportation needs and priorities, and aiding in the ultimate recommendations of the plan.

Once a draft plan has been developed, a formal review process is required of the draft document. This review process includes an initial review by state and federal agencies as well as the MPO Technical and Policy Committees to ensure compliance with various federal transportation

planning requirements. Once this review is completed a formal public review and comment period of the draft MTP is conducted, which is a minimum of 30-days. After the C-PCTS MPO has initiated the public review process on the draft MTP, the C-PCTS MPO generally holds an advertised public meeting to review and obtain final comments from the public. At the end of the public comment period and after public comments have been addressed or considered, the C-PCTS MPO endorses/adopts the MTP and submits it to the appropriate state and federal agencies.

Amendments to the MTP can and do occur once a plan has been adopted. These amendments can occur for various reasons – changes in project schedules and costs, unknown development changes, or changes in priorities. While the intent is to avoid such mid-cycle changes, amendments do occur. Any such amendment to the MTP must follow the same public review process and procedures as that of adopting the plan, as per the C-PCTS MPO’s Public Participation Plan (PPP) (available at: www.columbusga.gov/Planning).

1.4 Study Purpose / MTP Study Process:

The purpose of the 2045 MTP is to coordinate and facilitate the planning, programming, and budgeting of transportation facilities and services within the Columbus-Phenix City metropolitan area, coordinating decisions in Georgia and Alabama. The plan is to reflect the region’s shared vision for its future. It is to provide strategies to develop transportation facilities, which will adequately serve future mobility needs, maintain, and enhance the quality of life within the region.

The MTP Study Process involved the following phases:

Goals and Objectives:

To accomplish this, the C-PCTS MPO initiated a study process that defined goals and objectives for the 2045 MTP. Goals and objectives would provide guidelines to the planning process and would define the means by which specific proposed improvements will be evaluated. A preliminary list of goals and objectives based on the FAST Act metropolitan planning factors were prepared to promote stakeholder and public input and were refined to reflect the goals and objectives of the C-PCTS MPO member communities.

Data Collection:

Concurrent with the identification of goals and objectives, a comprehensive data gathering effort was undertaken to inventory the existing regional transportation network. Information was gathered to obtain a thorough understanding of how the system functions today, so that a picture of how it might function in the future could be prepared in subsequent steps. Both the physical and operational transportation system characteristics, including programmed improvements were assessed. The primary areas of focus were:

- ✚ Highways
- ✚ Bicycle and Pedestrian Facilities
- ✚ Congestion
- ✚ Ports / Waterways
- ✚ Freight and Goods Movement
- ✚ Airports
- ✚ Transit

- ✚ Rail and Freight Flows
- ✚ Accident History and Safety
- ✚ Intermodal Connectivity
- ✚ Bridges

Due to the complexity and breath of information needed to make informed decisions for a metropolitan area MTP, data was collected from many sources, including private, local, State and Federal agencies. A rigorous effort was made in order to collect the wide range of data needed in order to establish a valid database for the project base year and to confidently complete the needed analysis for future projections. It is the base year data and the future year projections that is entered into the travel demand model, which provides valuable information to the C-PCTS MPO and its citizens. Table 1-1 lists the data resources obtained and utilized in completing the 2045 C-PCTS MPO MTP Update.

Table 1-1 – Data Collection Summary, Category Data Resources

Category	Data Resources:
Plans / Land Use	2038 Columbus Comprehensive Plan and Future Land Use Plan 2012 Phenix City Comprehensive Plan 2030 Auburn Comprehensive Plan 2020 Opelika Comprehensive Plan 2010 Lee County Master Plan 2019 Harris County Comprehensive Plan 2012 Russell County Comprehensive Plan & Future Land Use Plan 2040 Columbus-Phenix City MPO Long Range Transportation Plan 2018-2021 Columbus-Phenix City Trans. Improvement Program 2014 Columbus Alternative Transportation Plan
Socioeconomic Data	2000 and 2010 US Census Data 2015 American Community Survey Updates 2013 Regional Labor Statistics from Ga. & Ala. Dept. of Labor Population Projections from the Governor’s Office of Planning and Budgets, C-PCTS 2040 MTP, and On The Map Data (Census)
Roadway Data	GDOT Traffic Analysis & Data Application (TADA) ALDOT 2013 Regional Traffic Count Data 2015 GDOT and ALDOT Roadway Functional Classification Maps for Muscogee, Chattahoochee, Harris, Lee and Russell Counties
Transit System	Columbus METRA System Transit Development Plan Lee-Russell Public Transit Passenger Guide
Bicycle and Pedestrian	River Valley Regional Commission – 2016 Regional Bicycle Plan

Airport	Columbus Metropolitan Airport (CSG) Master Record, Federal Aviation Administration
Geographic Information System Files	Columbus Planning Department Georgia Department of Transportation Alabama Department of Transportation United States Census Bureau City of Phenix City, Alabama ESRI

Existing and Future Conditions Evaluation:

An assessment of the character and performance of the existing and anticipated transportation system was conducted to identify transportation needs and opportunities and to establish baseline traffic conditions for the remainder of the study. The information was gathered through discussion with the public, and other key stakeholders in the region and through the extensive data collection effort.

Needs and Opportunities Identification:

The process of identifying needs relied on a combination of technical analysis and assessment, input from the public and advisory committee members and addressing the goals set forth in the MTP. Needs identification varies by specific project type(s). Examples include:

- Roadway Capacity – Most of the technical analysis for identifying roadway capacity needs is based on output from the travel demand model. Other considerations could include the ability to accommodate freight, service to activity centers, promoting future land use and growth patterns, and serving traditionally underserved populations.
- Roadway Maintenance and Operations – Identification of roadway-related operations and maintenance needs for several categories (e.g., bridges and resurfacing) primarily comes from ALDOT and local government representatives through coordination on the respective work programs. Much like roadway capacity improvements, other factors such as freight travel and overall traffic volumes are also considered.
- Bicycle and Pedestrian - Bicycle and pedestrian needs are identified by evaluating gaps in the current network, particularly related land uses that promote bicycle travel such as schools, parks, and other activity centers.
- Transit – Transit needs are identified based on an assessment of ridership trends and service characteristics.

Transportation System Improvements Identification:

Improvement projects were identified to address the needs identified under previous phases of the study. Additional improvement projects, identified under the previous update (the 2040 MTP) that were not carried out, were reviewed for relevance and will be carried out into the 2045 MTP Update analysis for reconsideration, as appropriate.

Proposed Improvements Analysis:

A future conditions evaluation of the transportation network was conducted by the C-PCTS MPO to evaluate the proposed transportation improvements. A Travel Demand Forecasting Model (TDM) served as the primary tool for predicting future travel conditions. A TDM is a model system that replicates travel on a representation of the transportation system network. For a future conditions assessment, the Columbus-Phenix City model network was subjected to anticipated future 2045-land use, population, and employment growth.

The model generated a demand for travel on the roadways in response to the future year conditions. Information such as traffic volume, vehicle trips, delay and congestion are an output of the model. The result of the initial analysis is a prediction of future year travel conditions if no further improvements are carried out beyond those currently committed.

Following the initial evaluation, other future year roadway networks were developed to measure the impact of anticipated future conditions, this time in the presence of the proposed improvement strategies. Traffic volume, vehicle, and congestion were forecast under this second scenario and compared with other models to measure the impacts / effectiveness of the proposed transportation improvements on travel demand. This information will be used in the final phases of the MTP Update to prioritize improvement projects.

Project Prioritizing:

Some changes in federal and state policy have occurred since the adoption of the previous 2040 MTP. The FAST Act sets policy priorities for federal transportation funding. Among these requirements is the development of performance measures to evaluate the overall success of projects and policies. The proposed improvements along with the performance targets will be prioritized with respect to several factors including impacts on travel demand, cost, community benefits, and safety considerations. Specific project development efforts will focus first on those thought to be of highest priority.

Public Participation

Development and utilization of public participation is central to developing a transportation plan that responds to the communities' need and wishes. The guidance and benchmarks in the 2018 Public Participation Plan were utilized to guide the planning process by ensuring open, timely, and meaningful public participation in the transportation decision-making process (see Appendix A). The following paragraphs summarize the Public participation activities and tools developed to outreach to citizens and key stakeholders within the region.

- In Alabama, all MPO and Advisory Committee meetings are subject to applicable provisions of the Alabama Open Meetings Act, Alabama Code §36-25A.
- The Technical Coordinating Committee was the subcommittee for the 2045 MTP Update. The subcommittee provided information on data and other requirements, which were used to establish transportation needs and priorities. Subcommittee meetings provided a forum for discussion and review of the study approach, prior to the presentation of methodologies, findings, and recommendations to the public. The Committee offered local insight to the project and kept the study grounded and in context.

- Presented below is a list of the 2045 MTP Update Subcommittee members:

Rick Jones, Director of Planning, Columbus, Chair
 Jim Adcock, Master Planner, Fort Benning
 Matt Leverette, Division Pre-Construction Engineer, Alabama DOT
 Tom Bickel, Board of Commissioners, Chattahoochee County
 Shawn Blakeney, Russell County Engineer
 Jacqueline R. Williams, Transportation Planning Specialist, Georgia DOT
 Patti Cullen, Executive Director, River Valley Regional Commission
 Kevin Khoo, Traffic Engineer, Columbus
 Felton Grant, Transportation Planning Coordinator, Columbus
 Justin Hardee, Lee County Engineer
 Pam Hodge, Deputy City Manager, Columbus
 Amber Clark, Director, Columbus Airport
 Wallace Hunter, City Manager, Phenix City
 Ramsey Ashmore, Montgomery Area Traffic Engineer, Alabama DOT
 Angel Moore, City Engineer, Phenix City
 Adam Smith, Pre-Construction Engineer, Georgia DOT
 Jeremy Whittlesey, METRA, Columbus
 Clint Andrews, Federal Highway Administration, Alabama
 Josh Kervin, Southeast Region Pre-Construction Engineer, Alabama DOT
 Suzanne Burnette, Lee-Russell Council of Governments
 Carol Comer, Multi-modal Planning Division, Georgia DOT
 Andrew Edwards, Planning Team Leader, and FHWA, Georgia
 Michael Hora, PE, Asst. State Local Transportation Engineer – Planning,
 Alabama DOT
 Dennis Caliyo, Chairman, Citizens Advisory Committee
 Olivia Lewis, Federal Highway Administration, Georgia
 Harland Smith, District Planning & Programming Coordinator, Georgia DOT
 Tim Toomy, Area Engineer, Georgia DOT

- The C-PCTS MPO employed a project database to record the names and contact information of interested citizens and other project participants. The database was utilized for mailings, newsletters, and meeting announcements. A copy of the database report is included in Appendix A.
- Brochures were established to communicate the role and function of the C-PCTS MPO, to share information on the C-PCTS MPO environmental justice efforts, and to describe the MTP process.
- The C-PCTS MPO prepared a bilingual version of the brochures to outreach the Spanish-speaking populations within the region. Brochures were presented in Appendix A. Additionally, the C-PCTS MPO has staff who are fluent in Spanish and were able to assist with any translation needs that might arise during this planning process.

- Media outreach effort was implemented to increase attendance, participation and diversity at public meetings. C-PCTS MPO Staff placed newspaper ads and public service announcements to notify the public on the meetings. Ads were displayed in Government buildings, public libraries, the Columbus Ledger-Enquirer, Columbus Times, and the Phenix Citizen. Bulletins about the public meetings were advertised on the C-PCTS MPO web site, through its “In-Touch” direct e-mailing system as well as on the C-PCTS MPO site on the Facebook online social network.

Table 1-2 Stakeholder Focus Group Meeting Participants

Invitee	Position	Attended February Meeting	Attended May Meeting	Attended August Meeting
Rick Jones	Director – C-PCTS MPO	X	X	X
Lynda Temples	Transportation Planner – C-PCTS MPO	X	X	X
Addie Britt	Transportation Planner – C-PCTS MPO	X	X	X
Will Johnson	Planning Manager - Columbus			X
Pam Hodge	Deputy City Manager - Columbus	X	X	
Rosa Evans	Director – METRA Transit - Columbus	X		X
Donna Newman	Engineering Director - Columbus	X	X	X
Jim Livingston	Director – River Valley Regional Commission	X		X
Dennis Caliyo	Chairman – C-PCTS MPO Citizens Advisory Committee	X		
Lisa Sandt	Lee-Russell Council of Governments – PEX - Transit	X		
Wallace Hunter	City Manager – City of Phenix City			
Laura Lee Bernstein	County Administrator – Cusseta/Chattahoochee County		X	X
Joy Norman	Mayor’s Commission for Persons with Disabilities - Columbus	X		
Robert Jones	Environmental Management Division – Fort Benning	X		
Buddy Nelms	Ride on Bikes	X		
Becky Langston	Chairman, Harris County Board of Commissioners	X	X	X
Elizabeth Barker	Executive Director – Historic Columbus Foundation	X		
Donna Tompkins	Sheriff, Columbus Consolidated Government	X	X	X
Heath Taylor	Sheriff, Russell County, Alabama			
Jay Jones	Sheriff, Lee County, Alabama			
Susan Cooper	Interim President, Urban League	X		
Steve Davis	Columbus Water Works	X		
Pace Halter	W.C. Bradley Company	X		
Julio Portillo	Executive Director, Midtown Columbus, Inc.			
Peggy Martin	Chairman, Russell County Commission			
Scott Johnson	City of Smiths Station, Alabama, City Clerk	X	X	
Ross Horner	President, Uptown Columbus, Inc.		X	X

Peter Bowden	President, Columbus Convention & Visitors Bureau		X	
Tim Chitwood	Columbus Ledger-Enquirer Newspaper			
Daniel Wyatt	Lee Russell Council of Governments, Transportation Planner	X		
Bob Jeswald	WRBL TV			
Jacqueline Screws	President, Chattahoochee Valley Community College	X	X	
Thomas Helton	Columbus State University	X	X	X
Lorette Hoover	President, Columbus Technical College	X	X	
Scott Ferguson	President & CEO, United Way of Columbus			
Ricky Boren	Chief, Columbus Police Department			
Ray Smith	Chief, Phenix City Police Department			
Mike Jolley	Sheriff, Harris County Sheriff's Department			
Angela Vickers	Muscogee County School District			
George Steuber	Deputy Garrison Commander, USAG – Fort Benning			
Sharon Borger	Easter Seals of Columbus			
Hank Lynch	Sheriff, Chattahoochee County Sheriff's Department			
Reggie Luther	Big Dog Running, Bicycle Columbus	X	X	X
Frank Filgo	Alabama Trucking Association			
Ed Crowell	Georgia Motor Trucking Association			
Derrick Battle	Southeastern Freight			
Annie Mazyck	Citizens Advisory Committee – Freight Representative	X	X	X
Conner Poe	Norfolk – Southern Railroad			
Isaiah Hugley	City Manager, Columbus Consolidated Government	X		
Laura Lee Bernstein	Chattahoochee County Commission			X
Lisa Deason	City of Smiths Station – Communications Director	X	X	
Alfred Parham	Muscogee County School District			
Radney Simpson	Office of Planning, Georgia DOT			X
Tom Caiafa	Office of Planning, Georgia DOT		X	
Jackie Williams	Office of Planning, Georgia DOT		X	X
Olivia Lewis	Federal Highway Administration, GA			
Andrew Edwards	Federal Highway Administration, GA			

The 2045 MTP will serve as a regional blue print and policy guide for comprehensive, cooperative, and continuing metropolitan transportation planning process throughout the C-PCTS MPO planning area. The planning process guiding the development of the 2045 MTP update incorporates a multi-modal approach to transportation planning. This includes planning for highways, intermodal and freight movement, public transportation, pedestrian and bike paths. This type of planning focuses on the users of motorized vehicles; in addition to pedestrians, bicyclists and other users of non-motorized transportation modes, such as the elderly, veterans, and persons

with disabilities. Other planning considerations addressed through this planning process include land use and transportation linkages, community health, traffic safety, and security. The 2045 MTP has a 20-year horizon and sets the improvements to the transportation system for the mobility needs of all users across the region regardless of race, national origin, ethnicity, age, religion, or income.

This strategic planning approach encompasses an examination of existing transportation conditions to identify deficiencies and other impediments to safe travel and transport of people, goods / freight and services across the region; conducting a data analysis of existing and future socio-economic demographic trends in population, housing, employment, economic growth and location of land development; developing and conducting the regional travel demand model to gauge existing and future traffic volumes across the system; and as well as conducting a transportation system needs assessment to determine both short and long-term improvements. Finally, the planning process will develop a financial plan to fund recommended transportation improvements proposed in the C-PCTS MPO planning area.

1.5 2045 Metropolitan Transportation Plan Development

The development of the C-PCTS MPO 2045 Metropolitan Transportation Plan (MTP) is a continuation of efforts last undertaken in 2014 to update the document to a forecast year of 2045. As part of that comprehensive planning effort, C-PCTS MPO developed four goals to guide the study process.

- The preservation of the existing transportation facilities and assurance that each was used in their most efficient manner. This continues to be an important goal because funding constraints will limit the state's ability to rebuild its entire infrastructure. Additionally, improvements in operational efficiency may be achieved relatively rapidly in a more cost effective manner.
- Relieve current congestion and forestall future congestion through coordination with land use plans and decision-making. In large measure land use dictates the demand reflected on our transportation network by defining locations and magnitude of origins such as residences and destinations such as employment, education, and shopping. As the Columbus-Phenix City region continues to experience significant growth in suburban areas and surrounding counties, transportation investments will be made to sustain an acceptable level of accessibility and mobility.
- Reflect the regions continuing commitment to pedestrian and bicycle transportation and public transit. These are important elements in any transportation plan because they provide alternatives to use of the private automobile and hold the potential for enhancing the community's quality of life.
- Build on the theme of alternative transportation modes and enhanced operational efficiency by introducing multi-modal plans and programs designed to create a seamless transportation system with efficient and effective operations.

Goal Statements	Strategies
Preserve the quality and capacity of transportation facilities and the street and highway network by using and developing all modes of transportation to their highest and most efficient use:	<ul style="list-style-type: none"> • Pavement Management System • Congestion Management Process • Mapped Street Ordinance • Complete Streets • Alternative Transportation Plan • Freight / Rail Concerns • Air Quality Issues
Develop and implement appropriate land use controls to help relieve and prevent congestion from occurring to the point that it compromises the functional ability of the primary thoroughfare system.	<ul style="list-style-type: none"> • Comprehensive Plan Coordination – Macro • Project Review - Micro
Develop and expand present and alternative modes of transportation, such as increased bikeways, walkways, and motorized public transportation.	<ul style="list-style-type: none"> • Develop and protect alternative mode corridors • Expand public transportation • Congestion Management Process • Intelligent Transportation System • Transportation Demand Management
Develop and implement policies that enhance and protect the environment. This includes a Multi-Modal Transportation System which includes an Alternative Transportation System. This type of system aids in relieving traffic congestion, reducing air pollution and offers energy saving alternative modes of transportation.	<ul style="list-style-type: none"> • Congestion Management System • Intelligent Transportation System • Maintenance Management System • Monitoring Air Quality • Alternative Transportation Plan

1.6 Statement of Consistency of the Metropolitan Transportation Plan with Other Plans

Under the metropolitan planning process, transportation plans and TIPs shall be developed with due consideration of other related planning activities...”TIP specificity is found in 6001(a)(j)(c)(c): “Each project shall be consistent with the long-range transportation plan...” The latter is an implied instruction to include all plans in the TIP development process and is carried forward in FHWA interpretation of the revised 23 USC 134, and is to be found in 23 CFR 450.324. The MPO addresses this requirement by including planning and economic development personnel from the state and local level on the Technical Coordinating Committee / Citizens Advisory Committee (TCC/CAC).

In addition, the C-PCTS MPO consults with agencies and officials responsible for other planning activities within the Study Area that are affected by transportation when developing the Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP). This includes Federal, State, and Local agencies responsible for:

- Economic growth and development
- Environmental protection
- Airport operations
- Freight movement
- Land use management
- Natural resources
- Conservation
- Historic preservation
- Human service transportation providers

These agencies and are invited to attend all MPO TCC / CAC and Policy Committee meetings so as to be involved in the transportation planning process continuously. In addition, a request to these agencies is made to compare the draft MTP and TIP with their plans, maps, and inventories.

Incorporating these key individuals in the transportation planning process allows for broad acknowledgement of transportation planning and land use development activities at the local and regional level, which can afford opportunities for cooperation and coordination.

TABLE 1-3 MPO ACRONYMS

ALDOT – Alabama Department of Transportation
3 C’s – Continuing, Comprehensive, Cooperative
CFR – Code of Federal Regulations
CAC – Citizens Advisory Committee
C-PCTS – Columbus-Phenix City Transportation Study
EPA – Environmental Protection Agency
FAST Act – Fixing America’s Surface Transportation Act
FHWA – Federal Highway Administration
FTA – Federal Transit Administration
GDOT – Georgia Department of Transportation
GIS – Graphic Information Systems
HPMS – Highway Performance Monitoring System
HSIP – Highway Safety Improvement Program
ITS – Intelligent Transportation Systems
LEP – Limited English Proficiency
LOS – Level of Service
LRTP – Long Range Transportation Plan
MAP-21 – Moving Ahead for Progress in the 21st Century
MPO – Metropolitan Planning Organization
MTP – Metropolitan Transportation Plan
NEPA – National Environmental Protection Act
PCC – Policy Coordinating Committee
PL – Planning Funds (Highway) Allocated for the MPO
STIP – State Transportation Improvement Program
TA – Transportation Alternatives
TCC – Technical Coordinating Committee
TDP – Transit Development Plan
TAZ – Traffic Analysis Zone
TIA – Transportation Investment Act
TIP – Transportation Improvement Program
TSPLOST – Transportation Special Local Option Sales Tax
UPWP – Unified Planning Work Program
UZA – Census Urbanized Areas
Z230 – MPO controlled funds from FHWA/GDOT

CHAPTER 2 – PERFORMANCE BASED PLANNING (GOALS AND OBJECTIVES)

Formulation of Goals and Objectives is an important first step in the development of the Metropolitan Transportation Plan. Goals and objectives serve as means to focus planning activities on those items that represent critical issues and concerns reflected in the results of public outreach activities. They also serve as a means to consider the potential improvements suggested in response to needs and deficiencies identified in the evaluation of current and future conditions.

2.1 Overview of Performance-Based Planning

Over the past two decades, transportation agencies have been applying “performance measures” – a strategic approach that uses performance data to help achieve desired outcomes – to support decision-making. Performance management is credited with improving project and program delivery, informing investment decision making, focusing staff on leadership priorities, and providing greater transparency and accountability to the public.

Performance-based planning and programming (PBPP) refers to transportation agencies’ application of performance management in their planning and programming to achieve desired outcomes for the multi-modal transportation system. For MPO’s this embraces a range of activities and products together with other agencies, stakeholders, and the public as part of the 3C Metropolitan Transportation Planning Process.

The goal of PBPP is to ensure that transportation investment decisions – both long-term planning and short-term programming – are based on their ability to meet established goals.

The cornerstone of *Moving Ahead for Progress in the 21st Century’s* (MAP-21) highway program transformation is this movement to performance-and outcome-based results. The current transportation authorization legislation, the *Fixing America’s Surface Transportation (FAST) Act*, continues the performance-based planning and programming provisions established under MAP-21.



Figure 1

States will invest resources in projects to achieve individual state targets that collectively will make Progress toward national goals, as detailed in the FAST Act.

- **Safety** - Achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure condition** - Maintain the highway infrastructure asset system in a state of good repair.
- **Congestion reduction** - Achieve a significant reduction in congestion on the National Highway System.
- **System reliability** - Improve the efficiency of the surface transportation system.
- **Freight movement and economic vitality** - Improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental sustainability** - Enhance the performance of the transportation system while protecting and enhancing the natural environment.
- **Reduced project delivery delays** - Reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Performance Based Planning

In addition to the cooperative, continuous, and comprehensive planning process and the incorporation of the federal planning factors, the FAST Act also includes a requirement for performance-based planning. As stated in the legislation, *“the metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decision-making to support the national goals...”*

The typical, basic planning process for an MTP update includes the following steps:

- Existing conditions analysis
- Review and update of goals
- Establish objectives
- Finalize project list
- Financial analysis
- Prioritize and financially constrained project list
- Develop the plan documentation

Figure 2 on the following page outlines the Performance Based Planning Process

Figure 2 – Flow Chart

Project Inputs:
List of Projects to Test:
Performance Input:
AADT/AADTT
Reliability Inputs:
V/C, LOS, NPRMDS
Safety Inputs:
Crash/Type, rates, severity
Freight Generation:
Existing and Future
Multimodal Inputs:
Planning Facilities, Transit Expansions, Airport Access

Project Performance Assessment

Performance Measures Thresholds

Qualitative Assessment Criteria

Base Analysis Results Without Weighing

Priority Weighting Analysis

Unconstrained Prioritized List

Constrained Prioritized List

Public Engagement

Stakeholder Engagement

C-PCTS MPO

2.2 Planning Factors

The FAST Act continues the emphasis raised in MAP-21 on performance based outcomes, requiring that the metropolitan transportation planning process “shall be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following planning factors:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency while promoting consistency among transportation improvements and state and local planning growth and economic development patterns.

Goal: A globally competitive, diversified economy that protects and enhances our natural environment:

Metrics:

- Number of demolished structures during construction of transportation projects.
- Acres of agricultural land or vacant properties converted to another use.
- Number of rezoning cases that negatively affect the transportation network.

- Increase the safety of the transportation system for motorized and non-motorized users.

Goal: A safe transportation system:

Metrics:

- Number of automobile collisions per year
- Number of bike crashes and fatalities per year
- Number of pedestrian fatalities per year
 - ◇ Objective 1: Locate the top five (5) most dangerous intersections
 - ◇ Objective 2: Continue to educate drivers and bicyclists – pedestrians about safely sharing the road.

- Increase the security of the transportation system for motorized and non-motorized users.

Goal: A secure transportation system:

Metrics:

- Improve the safety of transit facilities including stops and vehicles
- Support the development of regional preparedness and evacuation planning.

- Increase the accessibility and mobility of people and for freight:

Goal: An accessible transportation system:

Metrics:

- Dial-A-Ride ridership per year
- Average Truck Speed on the National Highway System
 - ◇ Objective 1 – Strive to integrate local, regional, and national transportation systems to facilitate movement of people and freight between modes
 - ◇ Objective 2 – Support freight facilities connecting the region to national and global markets
 - ◇ Objective 3 – Enhance connectivity between housing, jobs, services, and educational facilities

- ◇ Objective 4 – Continue to improve system accessibility for people with special transportation needs, including persons with disabilities, the elderly, and the young and low-income populations. Increase ADA compliance with intersection improvements
 - ◇ Objective 5: Encourage land use policy that supports access for disabled persons, efficient mass transit, and non-motorized travel
 - ◇ Objective 6: Number of projects that comply with Complete Streets. (A complete street is a safe, accessible, and convenient street for all users regardless of transportation mode, age, or physical ability. Complete streets adequately provide for bicyclists, pedestrians, transit riders, and motorists. Complete streets promote healthy communities and reductions in traffic congestion by offering viable alternatives to driving)
- Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and Local planned growth and economic development patterns.

Goal: A sustainable transportation system:

Metrics:

- Percentage of workers commuting by bus
 - Percentage of workers commuting by bicycle
 - Percentage of workers commuting by walking
 - ◇ Objective 1: Continue working with the local bicyclists and organizations to create a safer community for pedestrians and cyclists
 - ◇ Objective 2: Create inventory of bike lanes mileages and types as a shape file
 - ◇ Objective 3: Update inventory of sidewalk mileage and type as shape file
 - ◇ Objective 4: Continue to add bike-pedestrian infrastructure to the network
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

Goal: An integrated transportation system:

Metrics:

- Promote the use of Park and Ride locations
 - Percentage of workers commuting by bus
 - Percentage of workers commuting from other counties
 - ◇ Objective 1: Reduce congestion on major freight and passenger routes
 - ◇ Objective 2: Improve the internal connectivity of the transportation network
 - ◇ Objective 3: Increase access, expansion and improve the reliability of public mass transit
- Promote efficient system management and operation.

Goal: An efficient transportation system:

Metrics:

- Level of Travel Time Reliability (LOTTR)
- Peak Hour Travel Time Ratio (PHTTR)
- Truck Travel Time Reliability (TTTR)

- Emphasize the preservation of the existing transportation system.
Goal: Maximize transportation system:
Metrics:
 - Number of rezoning cases that do not have a negative impact on the transportation system
 - Number of completed projects or projects under construction that increase capacity without widening the road

- Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of the surface transportation.
Goal:
Metrics:
 - Gallons of storm water diverted off roadways and land use changes
 - ◇ Staff will work with architectural / engineering firms contracted to design the project on reducing storm water impacts for all road projects. Creating watersheds, detention ponds, etc., can control storm water.

- Enhance travel and tourism.
Goal:
Metrics:
 - Number of visitors to Columbus and surrounding counties / cities
 - ◇ Objective 1: Encourage the use of the River Walk
 - ◇ Objective 2: Encourage the use of the Fall Line Trace and the Follow Me Trail
 - ◇ Objective 4: Congestion Mitigation during events
 - ◇ Objective 5: Identify funds for the Environmental Impact Study for the High Speed Rail Project
 - ◇ Objective 6: Completion of the Mott’s Green Plaza Project
 - ◇ Objective 7: Completion of the Dragonfly Trails

Table 2-1 Outlines the C-PCTS MPO Goals and Objectives for the 2045 MTP Planning Factors

FAST Act National Planning Factors	FAST Act National Goals	GA 2040 SWTP/2015 SSTP State Goals	C-PCTS 2045 MTP Goals	C-PCTS 2045 MTP Objectives	C-PCTS 2045 MTP Performance Measures	Data Source
Increase the accessibility and mobility of people and for freight	*To achieve a significant reduction in congestion on the National Highway System *To improve the efficiency of the surface transportation system	*Relieve congestion and improve reliability *Improve freight movement and economic development opportunities	Assure that freight moves safely and efficiently while minimizing impacts on sensitive community areas.	*To allow for truck circulation and movement *To provide for the special infrastructure needs	*AADT *Level of Service *Vehicle to Capacity Ratio *Access to Employment and Activity Centers	*GDOT Traffic Analysis and Data Application & Traffic Demand Model *ALDOT Traffic Counts *GIS Assessment & U.S. Census
Promote efficient system management and operation	*To achieve a significant reduction in congestion on the National Highway System *To improve the efficiency of the surface transportation system *To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating and project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices	Relieve congestion and improve reliability	Assure that transportation investments – capital, operating, and maintenance costs – effectively and safely serve the transportation needs.	*To establish priorities for implementation of transportation improvement projects. *To create facilities and services that respond to the needs of the community, neighborhoods, and adjoining properties. *To encourage trips by pedestrians and bicycle trips. *To minimize impact on environmental resources, wetlands, wildlife, historical, water quality.	*AADT *Level of Service *Volume to Capacity Ratio *Signalization Optimization	*GDOT Traffic Analysis and Data Application & Traffic Demand Model *ALDOT's Traffic Counts *Public Works, Engineering/Traffic Departments
Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and Local planning growth and economic development patterns	To enhance the performance of the transportation system while protecting and enhancing the natural environment	Improve the environment	*To reduce auto-related emissions *To minimize and avoid noise impacts	*To conform to regional and local land use plans providing connectivity & mobility *To reduce sprawl and foster compact, mixed use development patterns. *To promote site development that provides the opportunity for access & on-side circulation *To protect existing neighborhoods and community integrity	*Impacts to the natural environment associated with transportation projects. *Reduce gaps within multi-modal networks *Project inclusion of green infrastructure elements and techniques. *Reduction in vehicle miles of travel.	*Local public works/engineering *Project review *GIS Assessment *Traffic Analysis and Data Application.
Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight	*To achieve a significant reduction in congestion on the National Highway System *To improve the efficient of the surface transportation system	Relieve congestion and improve reliability.	*Build, operate and maintain an interconnected network of transportation facilities that meet the needs of motorists, transit riders, pedestrians, cyclists, and shippers and receivers.	*To provide physical connections among modes. *To create a seamless public transportation system – service, fares, and operations.	*Provide Pedestrian Linkages. *Encourage Intermodal Transfer. *Inter-agency/inter-governmental coordination.	*Local Public Works/Engineering Departments *Project Review *GIS Assessment *National Performance Management Data Research Set.

*Denotes new sentence.

FAST Act National Planning Factors	FAST Act National Goals	GA 2040 SWTP/2015 SSTP State Goals	C-PCTS 2045 MTP Goals	C-PCTS 2045 MTP Objectives	C-PCTS 2045 MTP Performance Measures	Data Source
Emphasize the preservation of the existing transportation system	To maintain the highway infrastructure asset system in a state of good repair	Maintain and preserve the existing transportation system	Preserve the quality and capacity of transportation facilities and the street and highway network by using and developing all modes of transportation to their highest and most efficient use.	<ul style="list-style-type: none"> *To minimize congestion and delay on main travel arteries *To adequately fund routine maintenance and rehabilitation-pavement, bridges, etc. *To achieve a well maintained transit fleet 	<ul style="list-style-type: none"> *Staff will track number of converted properties that negatively affect the transportation network. *Percent of NHS Bridges in Poor condition as a percentage of total NHS bridge deck area. *Percent of NHS bridges in Good condition as a percentage of total NHS bridge deck area. *Percent of non-interstate roads meeting GDOT maintenance standards. 	<ul style="list-style-type: none"> *GDOT *Public Works/Engineering Departments
<p>Increase the safety of the transportation system for motorized and non-motorized users</p> <p>Increase the security of the transportation system for motorized and non-motorized users</p>	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads	Improve safety	Reduce crashes and fatalities and enhance security.	<ul style="list-style-type: none"> *To reduce the number and severity of accidents involving vehicles, bicyclists, pedestrians, and others. *To correct systematically high crash locations. 	<ul style="list-style-type: none"> *Number of fatalities in the calendar year and rate of fatalities per 100 million VMT) *Number of serious injuries per calendar year and number of serious injuries per 100 million VMT. *Number of bicycle/pedestrian injuries and fatalities in the calendar year. 	<ul style="list-style-type: none"> *Georgia Electronic Accident Reporting System (GEARS) *Critical Analysis Reporting Environment (CARE) *GDOT Traffic Analysis & Data Application
Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency	<ul style="list-style-type: none"> *To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development *To achieve a significant reduction in congestion on the National Highway System *To improve the efficiency of the surface transportation system 	Improve freight movement and economic development opportunities	Contribute to the economic vitality and quality of life supporting continued growth and development	<ul style="list-style-type: none"> *Provide transportation linkages to employment, business, retail activity, and other activity centers *To maintain accessibility in heavily traveled corridors 	<ul style="list-style-type: none"> *Identify congestion areas by collecting travel time data. *Project cost/vehicle miles of travel. *Projects include bicycle and pedestrian facilities. 	<ul style="list-style-type: none"> *National Performance Management Research Data Set (NPMRDS) *GDOT's TADA for Traffic Counts *ALDOT's Traffic Counts
Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation	<ul style="list-style-type: none"> *To maintain the highway infrastructure asset system in a state of good repair *To enhance the performance of the transportation system while protecting and enhancing the natural environment 	The 2040 SWTP/2015 SSTP do not currently address this federal goal	Improve livability and the quality of the transportation system.	<ul style="list-style-type: none"> *Maximize livability by addressing recurring and non-recurring congestion *Determine vulnerable areas that impact the transportation network and target investments to mitigate *Identify deficiencies in storm-water infrastructure related to transportation and develop mitigation strategies 	<ul style="list-style-type: none"> *Reduction in system vulnerability *Agency coordination to address incident-related, non-recurring congestion *Incorporation of multimodal facilities *Inter-agency strategies identifying stormwater issues/impacts on the transportation system 	<ul style="list-style-type: none"> *GDOT & ALDOT *Public Works/Engineering Departments *Project Review *Local Emergency Management Agencies

Enhancing travel and tourism	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development	The 2040 SWTP/2015 SSTP does not currently address this federal goal.	Provide a network that enhances regional accessibility for travel and tourism	<ul style="list-style-type: none"> *Promote investments in transportation facilities that provide access to tourist *Promote investments in multimodal transportation facilities that encourage use by visitors *Promote investments in transportation facilities that support/provide greater accessibility to public airport 	<ul style="list-style-type: none"> *Connections to regional tourist attractions *Availability of multimodal transportation services targeting to visitors 	<ul style="list-style-type: none"> *GDOT/ALDOT *Local Convention and Visitors Bureau *Local Public Works/Engineering Departments
------------------------------	--	---	---	---	---	---

*Denotes new sentence

The USDOT has also identified the following three Planning Emphasis Areas for MPOs to consider in their planning process.

1. Models of Regional Planning Cooperation

The Columbus-Phenix City Transportation Study MPO will promote cooperation and coordination across MPO boundaries to ensure a regional approach to transportation planning. In 2014, the MPO, Transit Agencies, and Cities/Counties within the urbanized area signed a memorandum of agreement. As urbanized boundaries are changed, this agreement is update.

2. Access to Essential Services

The Columbus-Phenix City Transportation Study MPO, as part of the transportation planning process, is identifying transportation connectivity gaps in access to essential services. The MPO worked with the local transit agency to identify gaps in transit services and determined cost effective improvements that resulted in a better transit system. The MPO will continue to look at identifying transportation connectivity within the urbanized area.

3. MAP-21 and FAST Act Implementation

The Columbus-Phenix City Transportation Study MPO will continue to participate in the development and implementation of a performance management approach to transportation planning and programming, which will include the development and use of performance measures, target setting, performance reporting, and transportation investments that support the achievement of performance targets.

2.3 Performance Targets

Federal transportation legislation places greater emphasis on system performance and national performance management measures to guide a performance-based planning process at the metropolitan and state level. States, MPOs, and operators of public transportation are required to establish and coordinate targets they set in key national performance areas, linking planning and programming to performance targets.

In January 2017, FHWA and FTA promulgated the remaining set of final rules on performance measures to assess performance in 12 areas of the Federal-aid highway program and for transit agencies that receive FTA Federal financial assistance (under 49 U.S.C.). Specifically, these agencies are expected to set performance targets to monitor, assess, and utilize to improve the state of good repair of their capital assets and the safety performance of their public transportation systems.

National Transportation Performance Measures and State Targets

The FAST Act also prescribed the national goals for performance management to be included in Transportation Plans at the state and local levels. The states and MPO's are required to coordinate to develop measures and targets for transportation plans in the areas of safety, interstate, and NHS pavement condition, interstate and NHS bridge condition, system reliability, freight reliability, peak hour excessive delay, and total emissions reduction. These measures are broken into three groups with incremental implementation:

- PM1: Safety Performance Measures: Initial targets were adopted in 2018 and are updated annually by February 27
- PM2: Pavement and Bridge Condition on Interstate and non-Interstate NHS roads: Initial Targets were adopted in 2018 and will be updated every four years
- PM3: Travel Time Reliability, Peak Hour Excessive Delay, and Freight Reliability on Interstate and non-Interstate NHS roads: Initial Targets were adopted in 2018 and will be updated every four years.

Table 2-2 provides a summary of these established measures. By May 27, 2018, MPO's, states, and public transportation providers were required to have jointly agreed upon provisions for cooperatively developing and sharing information related to transportation performance data, the selection of performance targets, the reporting of performance. The C-PCTS MPO's next MTP will be highly influenced by these performance measures, targets, and progress toward attainment of critical outcomes.

Table 2-2

RULEMAKING	23 CFR & 49 CFR	FINAL PERFORMANCE MEASURES	MEASURE APPLICABILITY
Safety PM Final Rule			
	Part 490.207(a)(1)	Number of fatalities	All public roads
	Part 490.207(a)(2)	Rate of Fatalities	All public roads
	Part 490.207(a)(3)	Number of serious injuries	All public roads
	Part 490.207(a)(4)	Rate of serious injuries	All public roads
	Part 490.207(a)(5)	Number of non-motorized fatalities and non-motorized serious injuries	All public roads
Infrastructure PM Final Rule			
	Part 490.307(a)(1)	Percentage of pavements of the Interstate System in Good condition	The Interstate System
	Part 490.307(a)(2)	Percentage of pavements of the Interstate System in Poor condition	The Interstate System
	Part 490.307(a)(3)	Percentage of pavements of the non-Interstate NHS in Good condition	The non-Interstate NHS Roadways
	Part 490.307(a)(4)	Percentage of pavements of the non-Interstate NHS in Poor condition	The non-Interstate NHS Roadways
	Part 490.307(c)(1)	Percentage of NHS bridges classified as in Good condition	NHS
	Part 490.407(c)(2)	Percentage of NHS bridges classified as in Poor condition	NHS

System Performance PM Final Rule			
	Part 490.507(a)(1)	Percent of the Person-Miles Traveled on the Interstate that are Reliable	The Interstate System
	Part 490.507(a)(2)	Percent of the Person-Miles Traveled on the Interstate that are Reliable	The non-Interstate NHS Roadways
	Part 490.507(b)	Percent Change in Tailpipe CO2 Emissions on the NHS Compared to the Calendar Year 2017 Level	NHS
	Part 490.607	Truck Travel Time Reliability (TTTR) Index	The Interstate System
	Part 490.707(a)	Annual Hours of Peak Hour Excessive Delay Per Capita	The NHS is urbanized areas with a population over 1 million for the first performance period and in urbanized areas with a population over 200,000 for the second and all other performance periods that are also in nonattainment or maintenance areas for ozone(O3), carbon monoxide (CO), or particulate matter (PM10 and PM2.5)
	Part 490.707(b)	Percent of Non-Single Occupant Vehicle (SOV) Travel	
	Part 490.807	Total Emissions Reduction	All projects financed with funds from the 23 U.S.C. 149 CMAQ program apportioned to State DOTs in areas designated as non-attainment or maintenance for ozone (O3), carbon monoxide (CO), or particulate matter (PM10 and PM2.5)
Transit Performance PM Final Rule			
	Part 670	Public Transportation Safety Program - provides the framework for FTA to monitor, oversee, and enforce transit safety, based on the methods and principles of Safety Management Systems	Performance targets based on the safety performance criteria
	Parts 625 and 630	Transit Asset Management - defines the term "state of good repair" and establishes minimum Federal requirements for transit asset management	Performance measures for Equipment, Rolling Stock, Infrastructure, and Facilities

Per the last two transportation bills (MAP 21 & the FAST Act), the Columbus-Phenix City Transportation Study MPO adopted GDOT's and ALDOT's performance targets for Safety (PM1), PM2, PM3 and the Transit targets.

Safety Performance Targets (PM1):

The FAST Act required MPOs to develop specific safety performance targets or agree to support those developed by GDOT. C-PCTS MPO agreed to support the Safety Performance Targets identified by ALDOT and GDOT, which are updated annually on a rolling five-year average. These targets shown below provide a critical element of the performance based planning framework and ongoing performance management.

Alabama Department of Transportation (ALDOT) Safety Targets:

- Number of Fatalities – To maintain the 5-year rolling average for traffic fatalities under the projected 932.0 (2015-2019) 5-year average by December 2019.
- Rate of Fatalities per 100 million vehicle miles traveled (VMT) – To maintain the 5-year rolling average for the rate of traffic fatalities per 100 million VMT under the projected 1.330 (2015-2019) 5-year by December 2019.
- Number of Serious Injuries – To maintain the 5-year rolling average for serious injuries under the projected 8469.0 (2015-2019) 5-year average by December 2019.
- Rate of Serious injuries per 100 million VMT – To maintain the 5-year rolling average for the rate of serious injuries per 100 million VMT under the projected 12.080 (2015-2019) 5-year average by December 2019.
- Number of Non-motorized Fatalities and Serious Injuries – To maintain the 5-year rolling average for non-motorized fatalities and serious injuries under the projected 394.0 (2015-2019) 5-year average by December 2019.

Georgia Department of Transportation (GDOT) Safety Targets:

- Number of Fatalities – To maintain the 5-year rolling average for traffic fatalities under the projected 1,655 (2015-2019) 5-year average by December 2019.
- Rate of Fatalities per 100 million vehicle miles traveled (VMT) – To maintain the 5-year rolling average for the rate of traffic fatalities per 100 million VMT under the projected 1.31 (2015-2019) 5-year by December 2019.
- Number of Serious Injuries – To maintain the 5-year rolling average for serious injuries under the projected 24,324 (2015-2019) 5-year average by December 2019.
- Rate of Serious injuries per 100 million VMT – To maintain the 5-year rolling average for the rate of serious injuries per 100 million VMT under the projected 18.9 (2015-2019) 5-year average by December 2019.
- Number of Non-motorized Fatalities and Serious Injuries – To maintain the 5-year rolling average for non-motorized fatalities and serious injuries under the projected 1,126 (2015-2019) 5-year average by December 2019.

Bridge / Pavement Targets (PM2):

The PM2 targets consist of the pavement and bridge condition measures on all interstates and non-interstate roadways designated as part of the National Highway System (NHS). As with the safety performance measures, MPOs could develop their own specific targets or agree to support ALDOT’s and GDOT’s targets. The targets in this group are updated every four years after the initial adoption, and with a possible revision at the two-year interim. C-PCTS MPO agreed to support the PM2 targets developed by ALDOT and GDOT. These targets, shown below provide a critical element of the performance based planning framework and ongoing performance management.

Georgia DOT - PM 2 Targets - Bridge Level of Service Measures:

ASSET	PERFORMANCE MEASURE	DESCRIPTION	TARGET
Bridge Structures	Percent of NHS Bridges in Poor condition as a percentage of total NHS bridge deck area	Bridge Conditions are based on the results of inspections on all Bridge structures. Bridges rated as “Poor” are safe to drive on; however, they are nearing a point where it is necessary to either replace the bridge or extend its service life through substantial rehabilitation investments.	≤ 10% (NHS) in Poor Condition
Bridge Structures	Percent of NHS Bridges in Good condition as a percentage of total NHS bridge deck area	Bridges rated as “Good” will be evaluated as to cost of to maintain Good condition. Bridges rated as “Fair” will be evaluated as to cost of replacement vs rehabilitation to bring the structure back to a condition rated of Good.	≥ 60% (NHS) in Good Condition

Georgia DOT - PM 2 Targets – Pavement Level of Service Measures:

ASSET	PERFORMANCE MEASURE	DESCRIPTION	TARGET
Interstate NHS	Percent of Interstate NHS pavements in Poor condition	Pavement conditions are measured through field inspections. Pavements in “poor” condition are in need of work due to either the ride quality or due to a structural deficiency.	≤ 5% in Poor Condition
Interstate NHS	Percent of Interstate NHS pavements in Good condition	Interstate pavement rated as “good” will be considered for potential preservation treatments to maintain the “good” rating.	≥ 50% in Good Condition
Non-Interstate NHS	Percent of NHS pavements in Poor condition	Non-interstate NHS pavements in “poor” condition are in need of major maintenance. These will be evaluated for potential projects.	≤ 12% in Poor Condition
Non-Interstate NHS	Percent of NHS pavements in Good condition	Non-interstate NHS pavements in “good” condition will be evaluated for potential preservation treatments.	≥ 40% in Good Condition

Alabama DOT – PM 2 Targets – Bridge and Pavement Level of Service Measures

- **PM2 Measure: % of NHS bridges by deck area classified as in good condition**
 - Percentage of good condition bridge deck area for 2017: 28.4%
 - Explanation of Condition Grade: The condition grade is based on the National Bridge Inventory (NBI) condition ratings for Bridge Deck, Bridge Superstructure, Bridge Substructure, and Culvert.
 - 2-year Performance Target: No less than 27% (2019)
 - 4-year Performance Target: No less than 27% (2021)

- **PM2 Measure: % of NHS bridges by deck area classified as in poor condition**
 - Percentage of poor condition bridge deck area for 2017: 2.0%
 - Explanation of Condition Grade: The condition grade is based on the National Bridge Inventory (NBI) condition ratings for Bridge Deck, Bridge Superstructure, Bridge Substructure, and Culvert.
 - 2-year Performance Target: No greater than 3% (2019)
 - 4-year Performance Target: No greater than 3% (2021)

- **PM2 Measure: % of Interstate pavement in good condition**
 - ALDOT’s Internal Pavement Condition Rating Score for 2017: 76.98%
 - Explanation of Pavement Condition: Starting in January of 2018, ALDOT will start collecting the following metrics for pavement; Internal Roughness Index (IRI), rutting, cracking %, and faulting. Once this data has been evaluated, the pavement will be placed in either good, fair, or poor condition.
 - 4-year Performance Target: Greater than 50% (2021)

- **PM2 Measure: % of Interstate pavement in poor condition**
 - ALDOT’s Internal Pavement Condition Rating Score for 2017: 8.33%
 - Explanation of Pavement Condition: Starting in January of 2018, ALDOT will start collecting the following metrics for pavement; Internal Roughness Index (IRI), rutting, cracking %, and faulting. Once the data has been evaluated, the pavement will be placed in either good, fair, or poor condition.
 - 4-year Performance Target: Less than 5% (2021)
 -

- **PM2 Measure: % of non-Interstate NHS pavement in good condition**
 - ALDOT’s Internal Pavement Condition Rating Score for 2017: 66.23%
 - Explanation of Pavement Condition: Starting in January of 2018, ALDOT will start collecting the following metrics for pavement; Internal Roughness Index (IRI), rutting, cracking %, and faulting. Once the data has been evaluated, the pavement will be placed in either good, fair, or poor condition.
 - 2-year Performance Target: Greater than 40% (2019)
 - 4-year Performance Target: Greater than 40% (2021)

- **PM2 Measure: % of non-Interstate NHS pavement in poor condition**
 - ALDOT’s Internal Pavement Condition Rating Score for 2017: 12.57%
 - Explanation of Pavement Condition: Starting in January of 2018, ALDOT will start collecting the following metrics for pavement; Internal Roughness Index (IRI), rutting, cracking %, and faulting. Once this data has been evaluated, the pavement will be placed in either good, fair, or poor condition.
 - 2-year Performance Target: Less than 5% (2019)
 - 4-year Performance Target: Less than 5% (2021)

Travel Time Reliability Targets (PM3):

The PM3 targets consist of travel time reliability, freight reliability, peak hour excessive delay, and total emissions reduction on all interstates and non-interstate NHS roadways. Similar to PM2, these targets are updated every four years, with possible revisions at the two-year interim. C-PCTS MPO agreed to support the PM2 targets developed by ALDOT and GDOT. These targets, shown below provide a critical element of the performance based planning framework and ongoing performance management.

Travel Time Reliability Targets (PM3) - GDOT

National Safety Performance Measures	GDOT PM 3 – 2-Year Target	GDOT PM3 – 4-Year Target
Percentage of Person – Miles Traveled on the Interstate System that are Reliable	73.0%	67.0%
Percentage of Person-Miles Traveled on Non-Interstate NHS that are Reliable	N/A	81.0%
Truck Travel Time Reliability (TTTR) Index (Interstate)	1.66%	1.78%
Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita*	N/A	24.6 Hours
Percent of Non-Single Occupancy Vehicle (SOV) Travel*	22.1%	22.1%
Total Emissions Reduction	VOC: 205.7 kg/day; NOx: 563.3 kg/day	VOC: 386.6 kg/day; NOx: 1,085.0 kg/day

**GDOT, Atlanta Regional Commission and Cartersville-Bartow Metropolitan Planning Organization are required to establish and report single targets for Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita and Percent of Non-Single Occupancy Vehicle (SOV) Travel for Atlanta urbanized area.*

Travel Time Reliability Targets (PM3) - ALDOT:

- PM3 Measure: % of Person-Miles traveled on Interstate System that is Reliable
 - Baseline Score for 2017: 96.4%
 - Explanation of Baseline Score: 96.4% of all Alabama Interstate travel is reliable (where reliable is defined as 80% of travel times being less than 150% of the average travel time)
 - 2-Year Performance Target: 96.4% (2019)
 - 4-Year Performance Target: 96.4% (2021)
- PM3 Measure: % of Person-Miles traveled on Non-Interstate NHS System that is Reliable
 - Baseline Score for 2017: 93.8%
 - Explanation of Baseline Score: 93.8% of all Alabama Non-Interstate NHS travel is reliable (where reliable is defined as 80% of travel times being less than 150% of the average travel time)
 - 2-Year Performance Target: 93.7% (not required to report to FHWA by 4-Year maybe adjusted at this time)
 - 4-Year Performance Target: 93.6% (2021)
- PM3 Measure: Truck Travel Time Reliability Index
 - Baseline Score for 2017: 1.19
 - Explanation of Baseline Score: Across Alabama, the 95th percentile interstate truck travel times are on average 19% greater than the 50th percentile (average) travel time.
 - 2-Year Performance Target: 1.20 (2019)
 - 4-Year Performance Target: 1.21 (2021)

Transit Performance Measures (PM4)

Transit Asset Performance Measures – PM4 - GDOT

Asset Category/Class	Total Number	Useful Life Benchmark (ULB)	Number Exceeding ULB3/3.0 TERM Rating	% Exceeding ULB/3.0 TERM Rating	Proposed FY 19 Targets
Rolling Stock	775		96	12.4%	
BU-Bus (35' - 40')	82	14 years	8	9.8%	15%
BU-Bus (29' - 30')	54	12 years	21	38.9%	35%
CU-Cutaway Bus	593	7 years	52	8.8%	10%
MV-Minivan	1	8 years	1	100.0%	50%
SB-School Bus (4) *	33	15 years	8	24.2%	50%
VN-Van	12	8 years	6	50.0%	50%
Equipment	55		23	42.6%	
AO - Automobile	18	8 years	11	61.1%	55%
Trucks and other Rubber Tire Vehicles	31	10 years	11	35.5%	55%
Equip. > \$50,000(5)	6	14 years	n/a	n/a	n/a
Facilities	83		7	8.4%	
Administration	62	n/a	2	3.2%	25%
Maintenance	11	n/a	5	45.5%	25%
Passenger / Parking Facilities	10	n/a	0	0.0%	10%

* School Buses are handled by the Muscogee County School District and not METRA Transit nor the City of Columbus.

Transit Asset Performance Measures – PM4 - ALDOT

- Asset Category; Rolling Stock (All revenue vehicles)
 - Performance Measures
 - Age - % of revenue vehicles within a particular asset class that have been met or exceed their Useful Life Benchmark
 - Performance Targets
 - Vans – reduce by 10% of current active inventory
 - Cutaway Buses – reduce by 10% of current active inventory
 - Body-in-Chassis – reduce by 10% of current active inventory
 - Full size buses – reduce by 10% of current active inventory
 - ◇ Statewide Goals will be to replace at least
 - ❖ 26 vans
 - ❖ 3 small buses (16-21 Passengers)
 - ❖ 4 small buses (24-27 Passengers)
- Asset Category: Equipment (Non-revenue vehicles)
 - Performance Measures
 - Age - % of revenue vehicles within a particular asset class that have met or exceed their Useful Life Benchmark
 - Performance Targets
 - Overall reduction in the current inventory by 10%
 - ◇ Equipment is defined as nonexpendable, tangible property, having a useful life of at least one year. (ALDOT will inventory only FTA purchased equipment over \$50,000.00)
- Asset Category: Facilities (ALDOT will only rate FTA funded facilities)
 - Performance Measures
 - Conditions - % of facilities with a condition rating below 3.0 on a FTA Transit Economic Requirement Modal (TERM) Scale
 - Performance Targets
 - No more than 20% of FTA funded Facilities to have a rating of below 3.0 (Good) Condition

2.4 Project Contribution to Performance Targets

An assessment of the 2045 financially constrained plan and the Transportation Improvement Program is required to show how these projects are expected to positively affect the performance targets. Each of these projects was individually assessed to ensure that each contributed to these performance targets. This assessment is found in Table 2-3.

2045 Project ID	PI#	Project Name	Safety PM	PM2: Pavement and Bridge	PM3: Travel, Freight, Reliability, Delay
	0013601	SR 219 @ Schley Creek	X	X	
	0013743	SR 520 / US 280 @ Bagley Creek	X	X	
	0013926	SR 85 / US 27 ALT SB & NB @ CR 1660 / Miller Road	X	X	
	0014170	SR 22 Spur @ Weracoba Creek	X	X	
	0006446	SR 1 / US 27 - Veteran's Parkway	X		X
		Cusseta Road Roundabout			X
		Brown Avenue Roundabout	X		X
		Williams Road Widening	X		X
		Forrest Road Widening	X		X
	0015559	SR 520 / US 280 @ Chattahoochee River	X	X	
	0013940	SR 22 / US 80 @ Kendall Creek	X	X	
	350796	Buena Vista Road Corridor Improvements	X		X
	350860	Farr Road Widening	X		X
	332780	St. Mary's Road Widening	X		X
	0008483	CR 2228 / Buena Vista Road	X		X
	0009293	SR 1 / US 27 - Veteran's Parkway	X		X
	0016508	SR 520 / US 27 @ First Division Road 7.5 MI NW of Cusseta, GA	X		X
	351200	Miller Road Widening	X		X
	0005749	Whittlesey Road Widening	X		X
		Whitesville Road Widening	X		X
		Cusseta Road Widening	X	X	X
		Woodruff Farm Road	X		X
		Williams Road @ I-185 NB Exit Ramp	X		X
		County Line Road Widening	X	X	X
		Buena Vista Road @ Wright Dr. / Hunt Ave.	X		X
		Buena Vista Road at McBride Dr. / Floyd Road	X		X
		Dillingham Street Bridge	X	X	
		University Avenue (Road Diet)	X		
		High Speed Rail			
		Cusseta Road Bike Lanes	X		
		Hamilton Road Bike Lanes	X		
		Victory Drive Bike Lanes	X		
		38th Street Bike Lanes	X		
		Broad Street (Cusseta) Streetscapes	X		
		South Lumpkin Road Streetscapes	X		

2045 Project ID	PI#	Project Name	Safety PM	PM2: Pavement and Bridge	PM3: Travel, Freight, Reliability, Delay
	100067449	Replace Bridge on Seale Road over Cochgalechee CR. BIN 004291	X	X	
	100067544	Resurface CR-318		X	
	100067545	Resurface CR-249		X	
	100067563	Resurface Freeman Road		X	
	100067546	Resurface CR-379		X	
	100067565	Resurface Owens Road - Section 1		X	
		Resurface State Docks Road		X	
		Resurface Opelika Road		X	
		Resurface CR-246		X	
	100067566	Resurface McClendon Road		X	
	100067564	Resurface Owens Road - Section 3		X	
		Resurface Seale Road		X	
		Resurface CR-212		X	
		Resurface Wright Drive		X	
		Resurface Knowles Road		X	
		Resurface Terminal Road		X	
		Resurface CR-248 (Summerville Road)		X	
		Replace Culvert at 13th Street & 28th Ave		X	
		Resurface Patterson Road		X	
	100067446	Resurface 16th Avenue / Ingersol Court		X	
		Resurface 4th Place		X	
		Resurface CR-240		X	
		Resurface CR-427		X	
		Resurface CR-235		X	
		Resurface CR-145		X	
		Resurface CR-179		X	
		Resurface CR-236		X	
		Resurface CR-158		X	
		Resurface CR-208		X	
		Resurface CR-246		X	
		Resurface Woodland Road		X	
		Resurface Brickyard Road		X	
		Resurface Sandfort Road		X	
		Resurface Coffield Drive		X	
		Resurface Barrow Road		X	
		Resurface Opelika Road		X	
		Resurface Auburn Road		X	

2045 Project ID	PI#	Project Name	Safety PM	PM2: Pavement and Bridge	PM3: Travel, Freight, Reliability, Delay
		Resurface Seale Road		X	
		Resurface South Seale Road		X	
		Resurface Uchee Hill Hwy		X	
		Resurface 4th Avenue		X	
		Resurface Lakewood Drive		X	
		Resurface 36th Street		X	
		Resurface Idle Hour Drive		X	
		Resurface 5th Avenue		X	
		Resurface Explorer Drive		X	
		Resurface Summerville Road		X	
		Resurface Stadium Drive		X	
		Resurface Summerville Road		X	
		Resurface Summerville Road		X	
		Resurface Riverchase Drive		X	
		Resurface Silver Lake Drive		X	
		Resurface Stadium Drive		X	
		Resurface Airport Road		X	
		Resurface Bridgewater Drive		X	
		Resurface Lakewood Drive		X	
		Resurface 8th Court		X	
		Resurface Opelika Road		X	
		Resurface 4th Avenue		X	
		Resurface 14th Street @ Broad Street		X	
		Resurface 14th Street @ 5th Avenue		X	
		Resurface Summerville Road		X	
		Resurface Stadium Drive		X	
		Resurface Broad Street		X	
		Resurface Stadium Drive		X	
		Resurface Lakewood Drive		X	
		Resurface Whitewater Avenue		X	
		Resurface 16th Street		X	
		Resurface 20th Avenue		X	
		Resurface Dillingham Street		X	
		Resurface 17th Avenue		X	
		Resurface Sandfort Road		X	
		Resurface Auburn Avenue		X	
		Resurface 14th Street		X	
		Resurface Crawford Road		X	
		Resurface 5th Street South		X	
		Resurface 34th Avenue S.		X	

2045 Project ID	PI#	Project Name	Safety PM	PM2: Pavement and Bridge	PM3: Travel, Freight, Reliability, Delay
		Resurface Fontaine Road		X	
		Resurface Seale Road		X	
		Resurface Wright Road		X	
		Resurface 10th Avenue S		X	
		Resurface Colin Powell Parkway		X	
		Resurface Seale Road		X	
		Resurface Fontaine Road		X	
		Resurface Meadowlane Drive		X	
		Resurface 5th Avenue		X	
		Resurface Sandfort Road		X	
		Resurface Crosswinds Road		X	
		Resurface Summerville Road		X	
		Resurface Stadium Drive		X	
		Resurface MLK, Jr. Pkwy, North Lane		X	
		Resurface MLK, Jr. Pkwy, South Lane		X	
		Resurface Seale Road		X	
		Resurface Broad Street		X	
		Resurface Dillingham Street		X	
		Resurface Sandfort Road		X	
	0017138	Military Drive	X		
	100070663	SR-165 - Addition of Turn Lane	X	X	X

	Wright Road		X	
PI#	Project Name	Safety PM	PM2: Pavement and Bridge	PM3: Travel, Freight, Reliability, Delay
	10th Avenue S		X	
	Colin Powell Parkway		X	
	Seale Road		X	
	Fontaine Road		X	
	Meadowlane Drive		X	
	5th Avenue		X	
	Sandfort Road		X	
	Crosswinds Road		X	
	Summerville Road		X	
	Stadium Drive		X	
	MLK, Jr. Pkwy, North Lane		X	
	MLK, Jr. Pkwy, South Lane		X	
	Seale Road		X	
	Broad Street		X	
	Dillingham Street		X	
	Sandfort Road		X	
0017138	Military Drive	X		
100070663	SR-165 - Addition of Turn Lane	X	X	X

CHAPTER 3 – SOCIOECONOMIC DATA

3.1 Introduction:

Socioeconomic data quantifies the systems and structures that is often looked at from a qualitative lens. By finding ways to account for trends in population, household, and economic data, organizations like the Columbus-Phenix City Transportation Study Metropolitan Planning Organization has the ability to examine current factors to forecast future needs. In particular, when a Metropolitan Planning Organization (MPO) combines the above trends with the region's traffic systems, a plethora of information can be synthesized. In this chapter, socioeconomic data will be utilized to understand current and future needs, while also providing an overview of the Columbus-Phenix City region.

In general, this section of the MTP utilizes a multitude of data sources. In particular, population, household, and employment data was derived from Transportation Analysis Zones (TAZs), 2010 Census data, the Georgia Governor's Office of Planning and Budget, and other resources from previous studies and documents that were conducted for the Columbus-Phenix City Transportation Study MPO. While the 2010 Census data, along with other Census Bureau resources (i.e. American Community Survey) were some of the most up to date resources available, the 2020 Census will be conducted on Wednesday, April 1st, 2020. Once this document is finalized and published, some of the statistics seen in this chapter may change slightly, however, since this chapter is focused on socioeconomic data which has been fairly consistent, the changes should not be statistically significant. The Columbus-Phenix City Transportation Study MPO is interested to see how the 2020 Census will affect the region's planning in the near future, and if any significant changes do occur, they will be reflected in future documents.

3.2 Population and Household Data Trends:

As can be seen in previous MTPs and other studies within the MPO area, much of the growth within the Columbus-Phenix City has been concentrating in suburban and rural areas of the MPO region, with some influx in the revitalization efforts in urban areas, such as downtowns and historic or older neighborhoods.

According to the Columbus-Phenix City MPO's most recent TAZ study, the 2045 projected population will be around 336,302. Again, this information may change when newer data points become available, such as the 2020 Decennial Census. The 2045 household projections show the Columbus-Phenix City region at around 123,007 households. In previous MTPs, such as the Columbus-Phenix City MPO's 2040 MTP, population and household trends were estimated to be higher, mostly in sections of counties that are not within the Columbus-Phenix City's jurisdiction. State growth rates, that were estimated to be higher (i.e. Georgia overall is estimated to experience high levels of growth within the near future) were centered around large metropolitan areas (i.e. Atlanta, GA) that also do not affect the Columbus-Phenix City MPO directly. Counties within the Columbus-Phenix City MPO that are in Alabama, only Lee County, as of the most recent 2000-2010 Census data is expected to see any major and/or significant growth within the stated period. Again, this trend is only in sections of the county that do not fall within the Columbus-Phenix City MPO. Minimal increases can be seen in Muscogee and Russell counties, while Chattahoochee

County is expected to lose a fair amount of households and overall population. Harris County, which is a suburban/rural county within the MPO region is expected to grow in terms of its population and households. This county is a prime example of the current trends that are being reflected nationwide, with Muscogee and Russell counties (which are more urban and have denser downtowns and older neighborhoods) are following suit in terms of the revitalization of urban centers.

Table 3.1 – Summary of MPO Socioeconomic Data

County	Population		Households		Employment	
	2010	2040	2010	2040	2010	2040
Muscogee County	189,885	217,798	74,097	88,768	106,651	140,566
Lee County (Phenix City, Smith's Station, Unincorporated)	34,163	42,465	12,686	16,149	2,324	3,168
Russell County (Phenix City, Unincorporated)	38,473	43,782	15,654	18,847	9,588	11,458
Harris County	2,052	3,376	706	1,240	20	42
Chattahoochee County	11,267	8,157	1,945	12,050	12,050	15,882
Total MPO	275,840	315,578	126,949	130,633	130,633	171,115

County	Population 2045	Households 2045	Employment 2045	Students (K-12) 2045	University Students 2045
Total MPO	336,302	123,007	111,374	77,697	13,859

Occupation (Employment)	Manufacturing, Transportation, Communication, Utilities, Warehousing, etc.	Service	Retail	Agriculture, Mining, Construction.
	15,859	77,386	12,752	5,377

Continually, these trends align with the ongoing historical, present, and projected decreases in household sizes. While these trends occur for a variety of reasons, this phenomena does allow for newer ways to efficiently maximize current and future transportation systems and creates a diverse set of impacts, challenges, and opportunities for new solutions to create a more balanced and accessible transit network for changing demographics/users.

The above table also identifies the Columbus-Phenix City’s projected 2045 population, household, employment, and education data. The data above reflects levels that are considered within reasonable limits according to GDOT standards and practices.

Table 3.2 Commonly Used Ratios of Density

Variable	Ratio		GDOT's Recommended Range	
	2010	2040	2010	2040
Persons per Household	2.73		2.00 - 3.00	
Employees per Household	0.91		1.00 - 3.00	
Proportion of Population Enrolled in Schools	23.1%		Around 20% for K-12	
Persons Per Acre	0.34		< 10.00	
Households per Acre	0.13		< 6.00	

The above table shows commonly used ratios for analyzing SE data. On a regional scale, the above statistics are within acceptable ranges according to GDOT standards and practices.

3.3 Projected Household Data:

On a regional level the Columbus-Phenix City Transportation Study MPO is expected to have a forecasted household ratio increase of .07 or 7%. This is a modest increase and falls within previously projected trends. As can be seen in the previous table, projected employees per household, while not too far from GDOT's recommended range, does fall short. However, this does reflect previously noted projections in past studies and local, regional, state, and national trends - there is and will be an aging population to consider. This also creates diverse needs and impacts for projected transportation systems and networks.

Table 3.3 Elderly Populations in 2000

County	2000		
	Total Population	65 and Over	% Total Population
Muscogee County	186,291	21,817	11.7%
Lee County	115,092	9,337	8.1%
Russell County	49,756	6,541	13.1%
Chattahoochee County	14,882	268	1.8%
Harris County	23,695	2,830	11.9%
MPO Total	389,716	40,793	10.5%

Table 3.4 Elderly Populations in 2010

County	2010		
	Total Population	65 and Over	% Total Population
Muscogee County	189,885	22,082	11.6%
Lee County	140,247	12,716	9.1%
Russell County	52,947	6,720	12.7%
Chattahoochee County	11,267	420	3.7%
Harris County	32,024	4,238	13.2%
MPO Total	426,370	46,176	10.8%

In the above tables, the trends in aging can be seen through historical data from the 2000-2010 Census. Continually, while the 2020 Census has not been conducted yet, it is estimated that the region will see similar figures, or at least the data reflects the ongoing trends that the Columbus-Phenix City area should expect to see an aging population. This presents a need for the region to contribute considerable attention to investing and increasing the efficiency and accessibility of alternative modes to transit (i.e. bike/ped/public transit facilities and structures) that allow for residents to age in place.

As seen in the above tables, the majority of the Columbus-Phenix City region’s aging/elderly population is projected to reside in Muscogee County, which is estimated to be at around 47.8%. Lee (27.5%), Russell (14.6%), Harris (9.2%), and Chattahoochee (.9%) counties following. Within the Columbus-Phenix City MPO jurisdiction, there are only two public transit systems that are operational (METRA in Muscogee County and PEX in Phenix City). While biking facilities are beginning to flourish within the MPO, primarily in the urban centers of Muscogee County and Russell County, there are still significant needs to expand upon these services, public transit routes, and increasing individuals’ access to safe walking facilities such as sidewalks, crosswalks, and other alternative modes of transit. This will again be particularly important as trends move towards more balanced roadways for all users and the need to support populations who may not be able or want to use automobiles.

3.4 Employment Data Trends

While employees per household is expected to be on the lower part of the spectrum, according to GDOT’s recommended range, there will still be an anticipated increase in employment status/opportunities particularly in Muscogee County. Continually, once the 2020 Census has been published, it is expected due to the rapid changes within the urban centers of Muscogee and Russell counties, there may be more trends, particularly related to employment, that will need to be analyzed for future purposes.

Table 3.5 REMI Anticipated Changes in Employment for the Columbus Region – 2010 through 2060

Employment	2010	2020	2030	2040	2050	2060
Mining	260	250	266	272	268	259
Utilities	528	488	405	356	327	318
Construction	10,811	17,847	19,549	20,498	21,975	22,734
Manufacturing	15,078	13,368	12,625	12,311	12,681	13,285
Wholesale Trade	4,540	4,470	4,412	4,397	4,380	4,340
Retail Trade	22,474	23,719	23,559	24,693	26,536	27,960
Transportation and Warehousing	4,628	5,267	5,815	6,671	7,798	9,488
Information	6,257	7,472	7,175	6,997	6,850	6,900
Finance and Insurance	11,154	12,603	13,188	13,729	14,157	14,117
Real Estate, Rental, and Leasing	2,116	9,087	9,518	10,236	11,164	12,193
Professional and Technical Services	10,137	12,433	12,849	13,983	15,460	17,823
Management of Companies and Enterprises	1,909	1,890	2,007	2,145	2,265	2,390
Administrative and Waste Services	12,579	14,348	15,244	16,789	18,503	21,240
Educational Services	1,940	2,689	2,804	2,965	3,172	3,474
Health Care and Social Assistance	20,043	28,540	33,121	38,279	45,101	52,950
Arts, Entertainment, and Recreation	2,680	3,272	3,558	4,037	4,791	5,890
Accommodation and Food Service	18,397	21,497	23,254	25,920	29,412	33,232
Other Services (except Public Administration)	13,830	18,432	19,626	21,387	23,733	26,662
Forestry and Logging, Fishing, Hunting, and Trapping	698	620	632	743	981	1,374
Agriculture and Forestry Support Services, Other	138	160	178	196	206	207
Oil and Gas Extraction	0	0	0	0	0	0
Government	45,172	49,259	51,565	55,047	59,886	65,491
Farm	1,142	966	861	786	772	739
Total:	211,429	248,695	262,211	282,447	310,418	343,265

Above are REMI predictions for different types of employment within the Columbus-Phenix City MPO region. Many of the changes within employment sectors reflect local, regional, state, and national trends. For example, Health Care and Social Assistance occupations are expected to have significant increases, again due to an overall aging population, while employment in sectors such as Manufacturing and Mining have modest increases and/or decreases respectively, due to changing local/regional markets and increased globalization.

Table 3.6 Top Employers in the Columbus, GA – Phenix City Region

Top Employers in Greater Columbus, GA Region	Top Employers in Phenix City, AL
Fort Benning - US Army Muscogee County School District (MCSD) Total Systems (TSYS) Columbus Regional Healthcare System AFLAC Kia Motors Manufacturing Georgia Columbus Consolidated Government Pezold Management St. Francis Hospital, Inc. BlueCross BlueShield Callaway Gardens Columbus State Univeristy Koch Foods MeadWestvaco Mahrt Operations Johnson's Controls, Inc. Synovus Financial Corp. Synyder's - Lance Inc. Harris County School System West Central Georgia Regional Heatcraft North America Columbus Bank and Trust Company Pratt & Whitney Carmike Cinemas W.C. Bradley Company AT&T GA	MeadWestvaco Phenix City Board of Education Russell County Board of Education AlaTrade Foods, LLC Jack Hughston Memorial Hospital Kudzu IIG MinWool Boral Brick ILJIN Alabama Vectorply Regional Rehab Hospital

The above tables represent the current top employers within the Greater Columbus, GA region and the Phenix-City, AL. The employment data in this chapter was primarily based on 2010 Census data, US Census Longitudinal Employer-Household Dynamics (LEHD) data and the Columbus-Phenix City’s most recent Traffic Analysis Zone (TAZ) update.

Figure 3: 2045 Employment Density Per TAZ

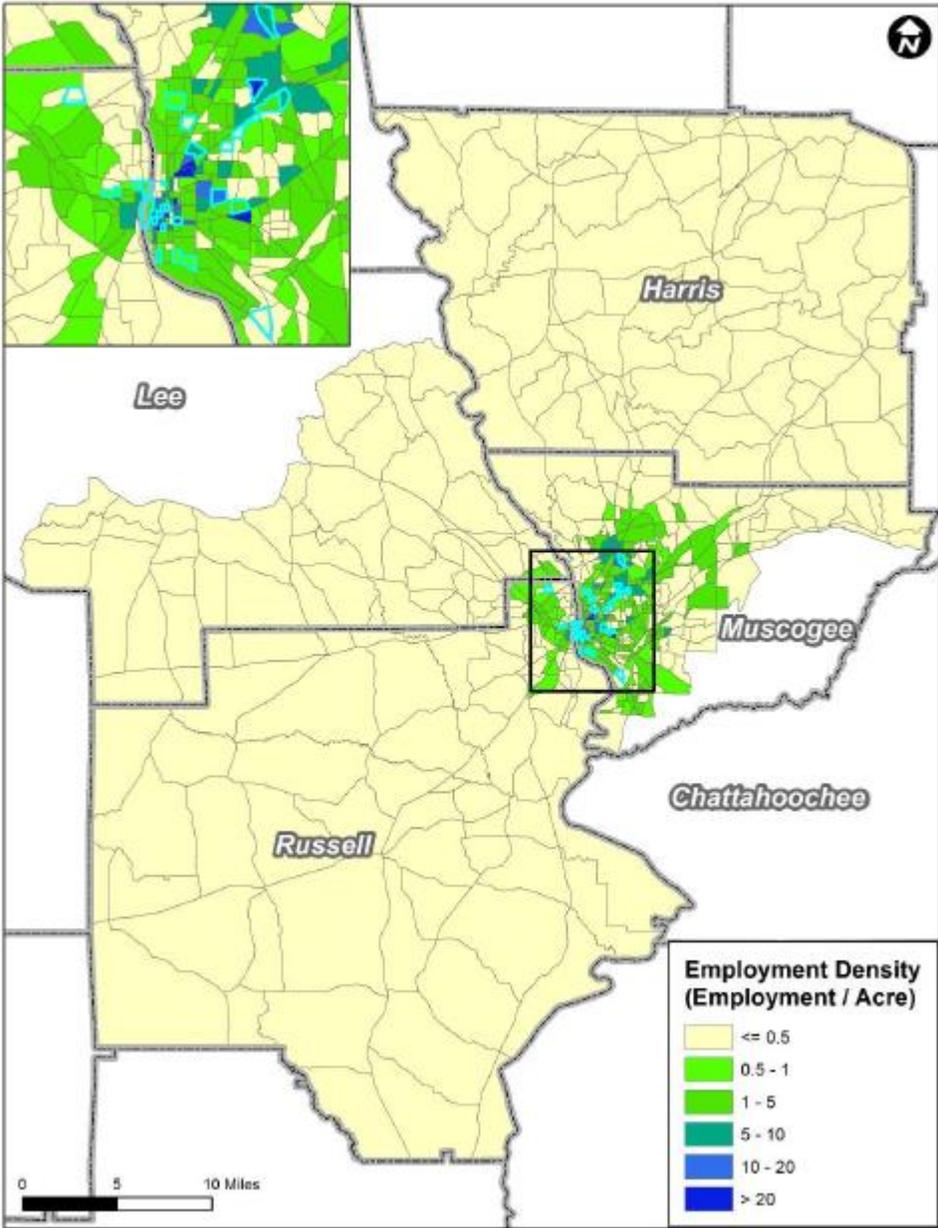


Figure 4: Inflow/Outflow for All Primary Jobs in Columbus, GA

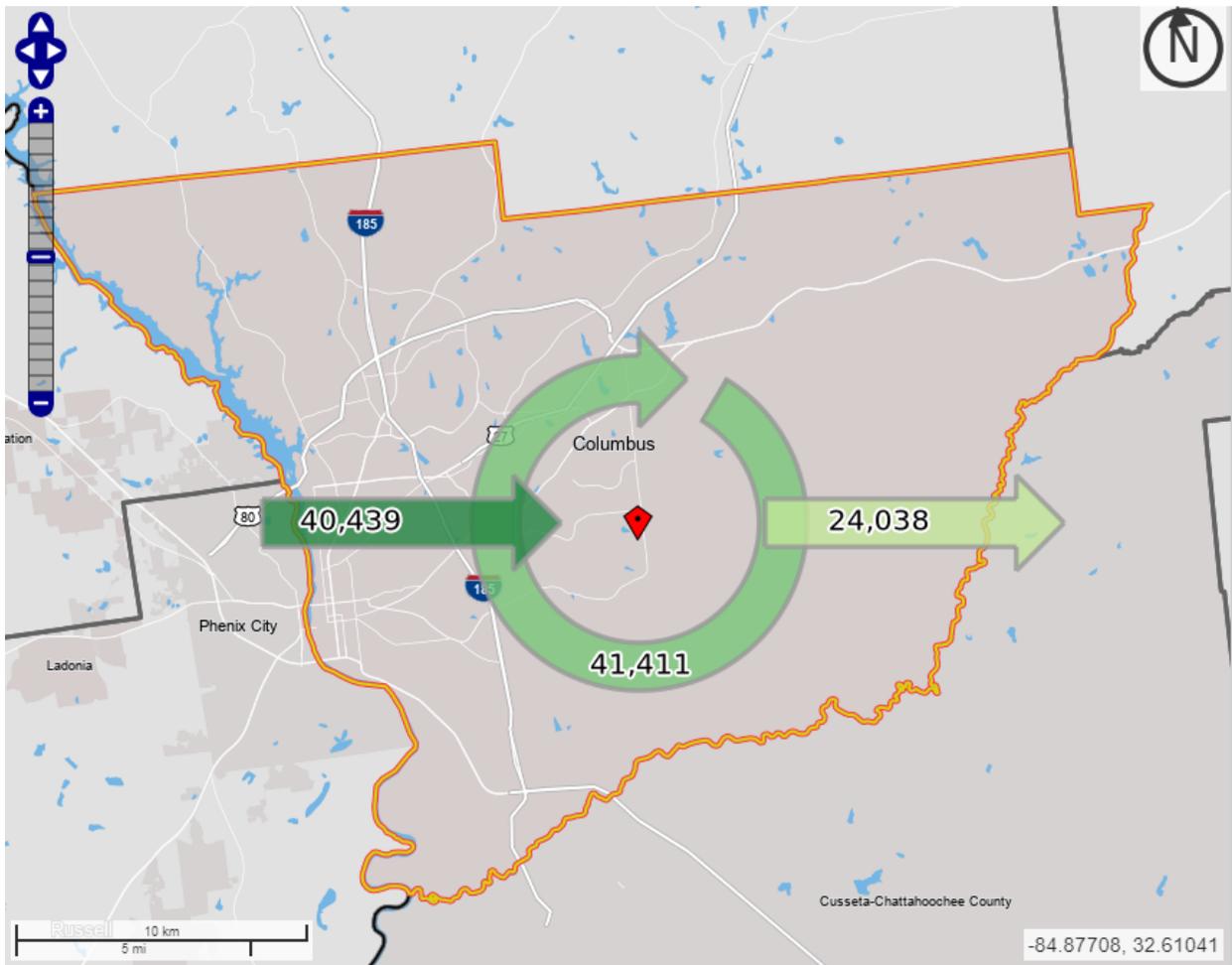


Figure 5: Inflow/Outflow for All Primary Jobs in Phenix City, AL

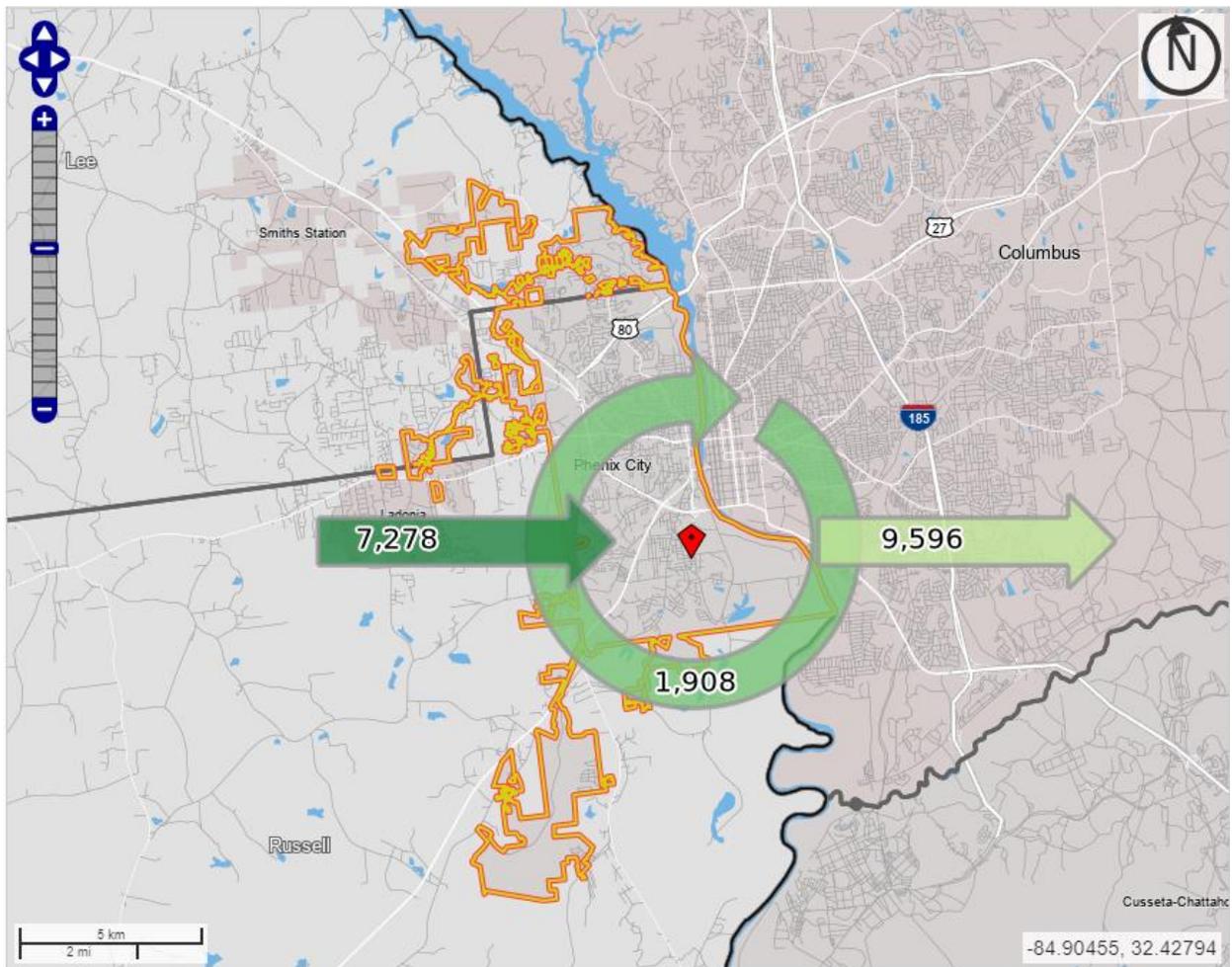
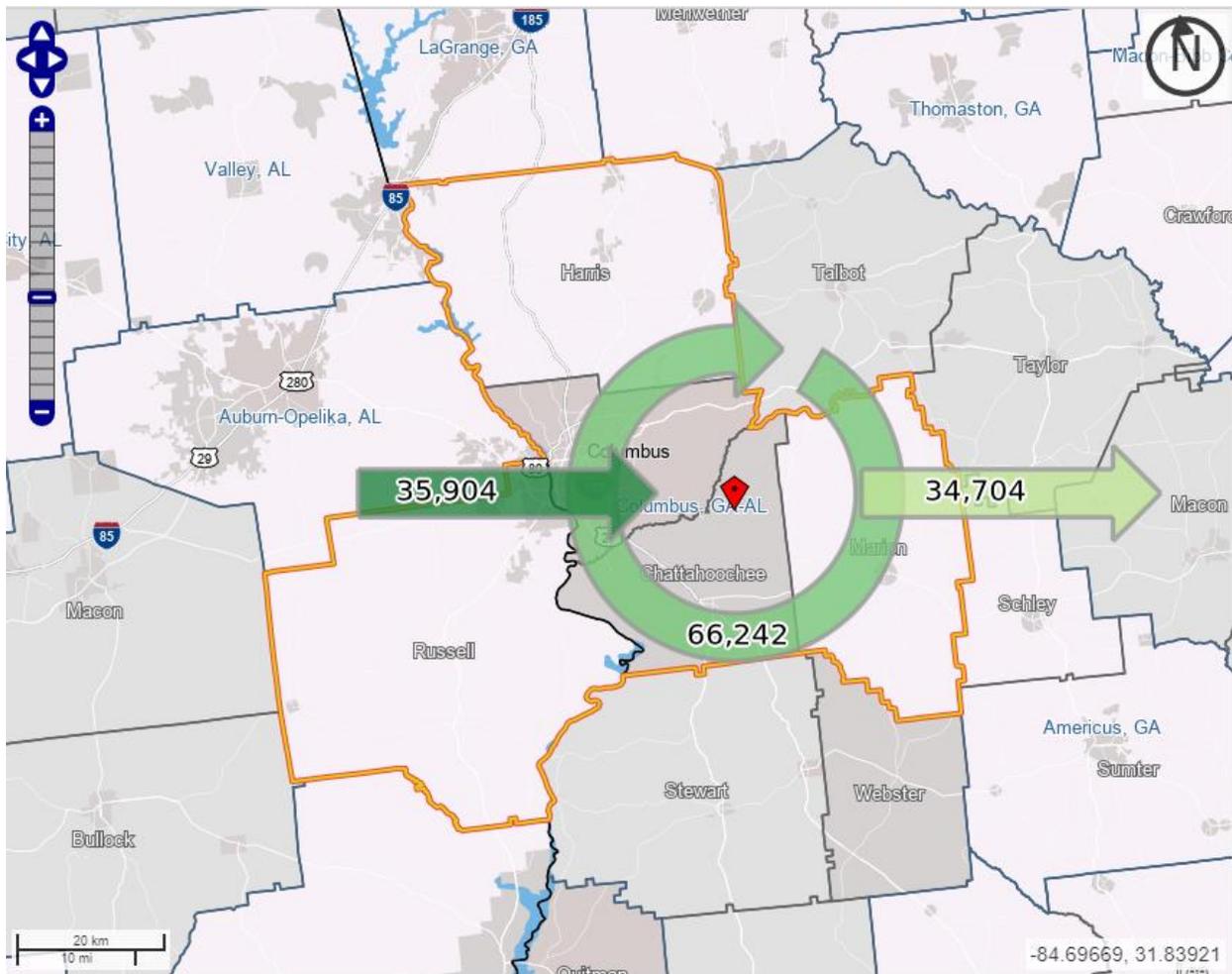


Figure 6: Inflow/Outflow for all Primary Jobs in the Columbus, GA – AL Region



Currently, as can be seen by the above maps and tables, many of those who are employed in the Columbus-Phenix City MPO region live and work primarily in this region. Additionally, there are an estimated 35,904 individuals that travel into the MPO region to work and an estimated 34,704 individuals that leave the MPO region for employment. This aligns with the above tables that show a predominant amount of the MPO workforce is employed by organizations within Muscogee County. As stated before, this trend is projected to continue into future decades, including 2045.

Conclusions

In 2045, the Columbus-Phenix City MPO region is expected to fall in line with previous studies and analyses on projected population, household, and employment statistics. While the 2020 Census will be published after the Columbus-Phenix City MPO's finalized 2045 MTP, based on previous studies, analyses, and current TAZ data, the Columbus-Phenix City MPO is expected to stay within the noted trends and projections.

CHAPTER 4 – LAND USE

Development of the 2045 MTP is based on the existing and future land use policies and plans, as described within this document. Plans, policies, and anticipated growth areas within the region were considered in the development of the future population and employment forecasts for the CPCTS-MPO region. Land use and the transportation network are fundamental building blocks of community development; they are defining aspects of a community’s character. The location, density, type, and mixture of land uses can have an impact on the amount of travel and have a bearing on mode choice. Roadways can act as connectors or as barriers between land uses and communities, and traffic congestion can affect the desirability of developments along a highway corridor. In short, land use and transportation planning are inextricably linked. Transportation investments can significantly affect surrounding land use, and conversely, land use patterns can strongly influence transportation facilities planning decision-making. By integrating land use and transportation, transportation improvement projects and land use management strategies can support and reinforce one another. The C-PCTS MPO is seeking to blend land use planning with transportation planning. For this 2045 MTP Update, the C-PCTS MPO considered the correlation between land use and transportation in the development of proposed transportation improvement projects. They also addressed this important relationship by integrating future land use into the development of the future year Regional Travel Demand Model Network.

4.1 Population

Below is the selected historical decennial Census data and most recent American Community Survey estimates for the populations of Harris, Chattahoochee, Muscogee, Lee, and Russell Counties.

Table 4-1
Historical Population Growth for Counties in the C-PCTS MPO Area

Muscogee County	1970	1980	1990	2000	2008	2010	2018
Population	16,7377	170,108	179,278	186,291	186,984	189,885	194,164
Population Change	8,754	2,731	9,170	7,013	693	2,091	4,279
Percentage Change	6.00%	2.00%	5.00%	4.00%	0.00%	1.50%	2.80%
Lee County	1970	1980	1990	2000	2008	2010	2018
Population	61,268	76,286	87,146	11,5092	127,940	140,247	163,941
Population Change	11,514	15,015	10,863	27,946	12,848	12,307	23,694
Percentage Change	23.00%	25.00%	14.00%	32.00%	10.00%	9.62%	9.75%
Russell County	1970	1980	1990	2000	2008	2010	2018
Population	45,394	47,356	46,860	49,756	49,634	52,949	57,781
Population Change	-957	1,962	-496	2,896	-122	3,315	4,832
Percentage Change	-2.00%	4.00%	-1.00%	6.00%	0.00%	6.70%	7.3%
Chattahoochee County	1970	1980	1990	2000	2008	2010	2018
Population	25,813	21,732	16,934	14,882	13,754	11,267	10,684
Population Change	12,802	-4,081	-4,798	-2,052	-1,128	-2,307	-583
Percentage Change	98.00%	-9.00%	-23.00%	-14.00%	-8.00%	-16.90%	1.00%
Harris County	1970	1980	1990	2000	2008	2010	2018
Population	17,788	15,464	11,520	23,695	28,912	32,024	34,943
Population Change	4,634	2,324	3,944	12,175	5,217	3,112	2,451
Percentage Change	35.00%	-13.06%	-25.50%	105.68%	22.01%	10.76%	13.08%

Source: US Census Bureau, American Community Survey

The data indicates a moderate growth during the last 40 years in Muscogee and Russell County, relative to Lee County. Much of Lee County's growth has occurred within the Auburn-Opelika corridor, outside of the Columbus GA-AL MSA (and C-PCTS MPO boundary). They are both part of the neighboring MPO known as Lee-Russell Council of Governments. This makes up 61% of the MSA total population. Rapid residential growth is occurring around Ladonia on US Highway 80 and starting to occur in the Fort Mitchell area along 165, from which one can access Fort Benning via its back gate at the Eddy Bridge.

We have calculated about 24% of Lee County and 72% of Russell County's employment residential population falls within the boundaries of the Columbus-Phenix City Metropolitan Planning Organization. It is also important to note that a considerable percentage of Chattahoochee County's land area and population are on the Fort Benning Army base. Accordingly, the County population is subject to significant fluctuation due to military deployments, rather than drastic circumstances in the County itself.

4.2 Growth Scenarios

A future land use scenario takes into account the regions and use planning policy direction was under taken as part of the MTP update modeling effort. The C-PCTS MPO applied the land use scenario in the development of projections for the regional travel demand model. The C-PCTS MPO distributed future population and employment using the land use scenario as a quote.

The land use scenario is a set of circumstances that the C-PCTS MPO feels is the probable reflection of what the metropolitan area will look like by the year 2045, which was what the recently completed Comprehensive Plan for Columbus envisioned, twenty years ahead. The land use scenario identifies factors that will influence or lead to growth in the future. By identifying these factors, a prediction can be made on the growth location and quantity.

The land use scenario developed by the C-PCTS MPO is based on the future land use plan of Muscogee, Harris, and Chattahoochee counties in Georgia and the city of Phenix City, Russell and Lee Counties in Alabama. The following information illustrates the current realities within the aforementioned jurisdictions and their growth goals and policies as they move forward over the next 20 or more years.

4.3 Columbus Comprehensive Plan

The Columbus Comprehensive Plan for 2038 shapes the development, growth, and management of Columbus over the next 20 years.

Columbus is a vibrant and diverse riverside community, committed to building a sustainable future for generations to come. This Comprehensive Plan draws on renewed inspiration from public input to take a forward-thinking and innovative approach in planning for the future in a fast-paced, technology-driven, constantly changing world. The Comprehensive Plan provides the 20-year road map for the City's future.

Columbus is expected to experience moderate employment and population growth. Currently, Columbus' population sits around 194,000 residents. By 2040, population is projected to remain relatively steady with more substantial growth occurring outside the city limits. Cities with relatively stagnant population levels still require future planning and growth strategies to compete in a regional economy.

Land Use

The Land Use Chapter of the Comprehensive Plan provides a history of the development of Columbus, as well as existing and future development patterns. Unique attributes in Columbus require land use categories with character-based categories, consistent with the approach encouraged by the Department of Community Affairs. One of those unique attributes is the fall line, which runs from Augusta to Columbus. During the Mesozoic Era (251-65.5 million years ago), the fall line was the shoreline of the Atlantic Ocean; today it separates the Upper Coastal Plain sedimentary rocks to the south from Piedmont crystalline rocks to the north. The fall line's geology is also notable for its impacts on early transportation in Georgia and consequently on the state's commercial and urban development. A second unique attribute is the Chattahoochee River. Columbus has removed dams to return the river to its original form. By returning normal flow to the river, it will be ideal conditions to reinvigorate natural vegetation and create habitats for shoal bass. Each of these areas required careful assessment and planning to protect physical and environmental resources and chart future growth and stewardship.

The Columbus Existing Land Use Map is based on the most recent GIS information. Where multiple uses are found on a single parcel, the dominant land use has been mapped. Conventional land use categories are used to describe existing land use patterns, whereas a character-based classification system is used in discussing and planning future land use. The character of each of these areas varies greatly because of the distinctly different land use patterns.

Columbus is highly urbanized. Except for the Northwest and the Panhandle, the city is largely built-out and growing chiefly through redevelopment in established urban areas. Urban neighborhoods that have declined in population and vacant industrial lands represent an opportunity for internal growth in the form of infill redevelopment.

The Comprehensive Plan sets the vision for the community and includes a Future Land Use Map (FLUM) with several land use categories that serves as a guide for zoning decisions in the community. The FLUM is a visual representation of the city's future development policy. Interpretation of the FLUM should be considered along with all zoning requests, local policy reviews, and conclusions when policy-makers consider land development questions or requests. The FLUM and its uses contained within, give direction for regulating development with the goal of maintaining and furthering consistent character within each area as defined by a vision.

Figure 7: Existing Land Use for Muscogee County (Columbus), GA

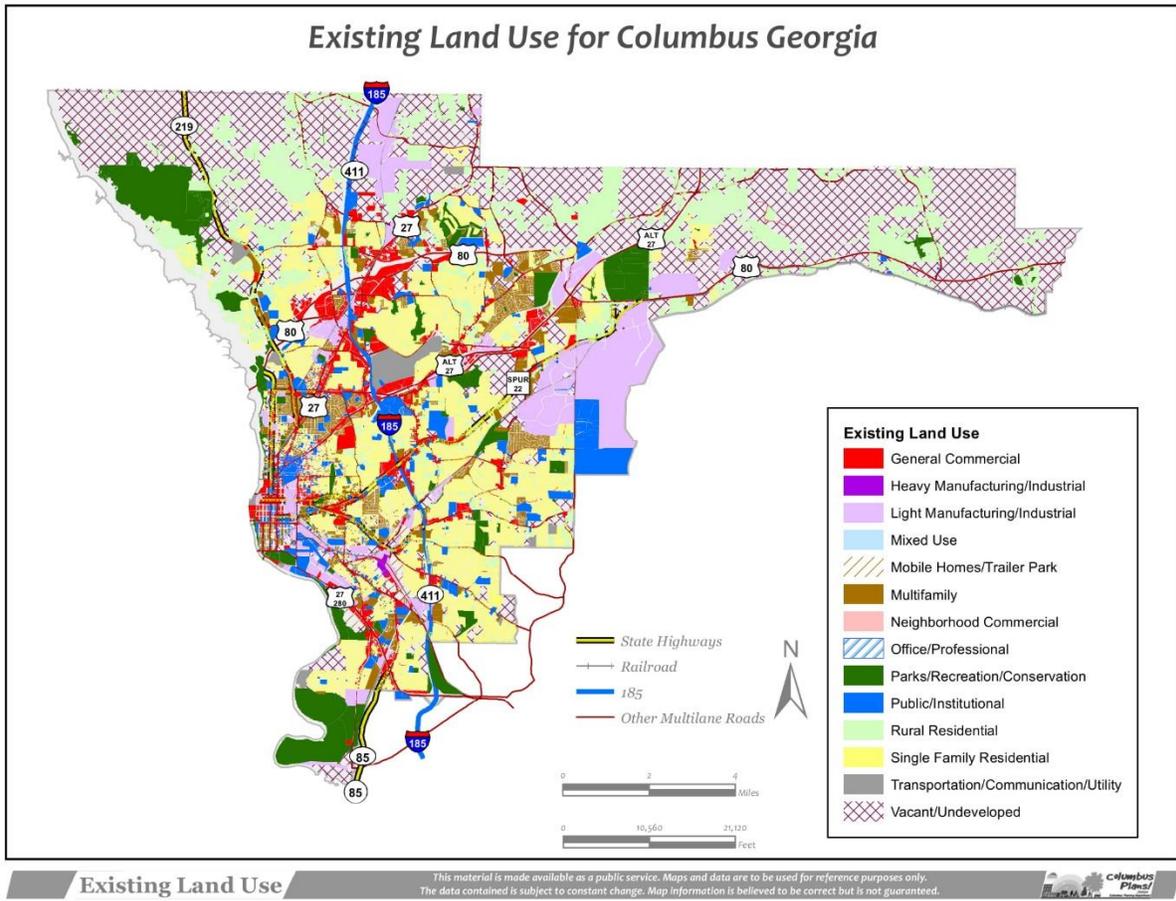
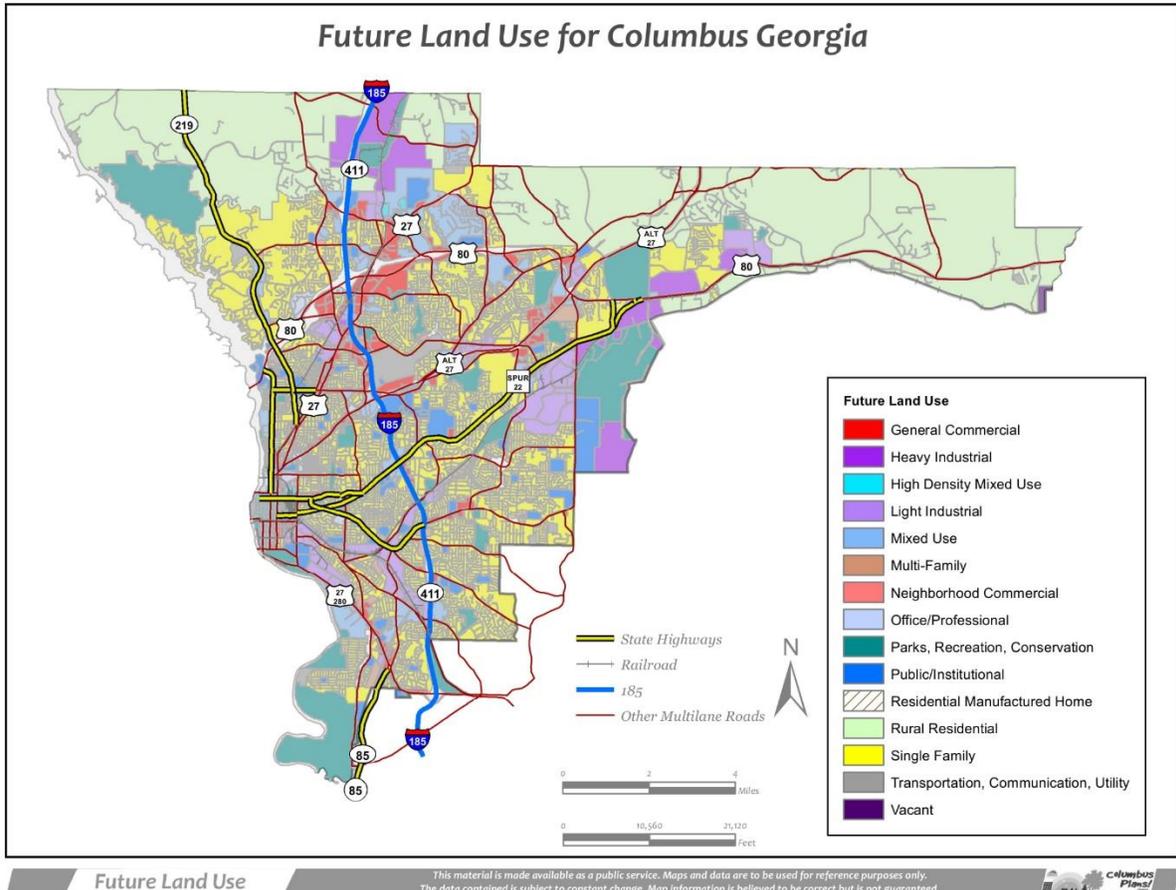


Figure 8: Future Land Use for Muscogee County (Columbus), Georgia



Regional Development

Columbus is located in west central Georgia along the Chattahoochee River. It is bordered on the west by the State of Alabama. Columbus is comprised of numerous natural resources, primarily caused by its location along the fall line. Early development was cited on the riverbank and the bluffs to the east. More development that is recent has occurred in Northwest Columbus, the Panhandle, and Southeast Columbus. Despite the aforementioned development, Greenfield development has slowed and gray field development has increased.

Columbus is comprised of 221 square miles of land and water. Much of the remaining undeveloped land is held by large landowners, in conservation easements, or geographically and geologically difficult to develop. Future growth is being directed back into the urban core of Columbus.

Housing Profile

Columbus is the most urbanized and populous county in the west central Georgia and east central Alabama. Columbus serves as an economic, cultural, educational, and government hub of the region and is home to the Army Maneuver Center of Excellence, Fort Benning.

The region has seen a fair rate of growth over the past 20 years and is expected to continue at or above this level slightly as the attractiveness of the region to military retirees and millennials increases. Economic growth in the region is also expected to remain strong, supporting forecasts for continued population growth at or above the current level.

Columbus is the most populous county in the Columbus Metropolitan Statistical Area (MSA), which includes Marion, Chattahoochee, and Harris Counties in Georgia and Russell County and part of Lee County in Alabama. Columbus is also the largest county in the Columbus-Auburn-Opelika GA-AL CSA, which includes the aforementioned counties as well as Lee County Alabama and Chambers County, Alabama. US Census Bureau defines the boundaries of these areas. The population of the MSA has grown substantially since 1970, and projections show continued growth into future decades.

Within Columbus, high growth rates were experienced during the 1990s and 2000s in the rural areas of northwest Columbus and the Panhandle. Those areas have seen growth due to the Great Recession of 2008, issues with terrain in the northwest, and the Fort Benning Digital Ranges in the Panhandle.

Columbus has preserved the role of its vibrant downtown as the nucleus of regional activity. The city's historic downtown and historic neighborhoods are an exceptional example of colonial-era town planning that survived the centuries and thrives today. For that reason, downtown Columbus maintains a high quality pedestrian environment.

Areas lying to the east of the city are extensively developed, and further development is limited by physical constraints (Fort Benning). Areas lying to the north of the city are primarily estate lots and commercial development. Development pressures will arise as the widening of US 27 nears completion.

Transportation facilities strongly influence growth and land use patterns in the county. These facilities include the J.R. Allen Parkway, the Columbus Airport, road, and rail networks serving extensive industrial districts associated with airport and seaport functions, Lawson Army Airfield, Interstate I-185, and GA 520.

4-4 Phenix City Comprehensive Community Master Plan

Located along the west bank of the Chattahoochee River, Phenix City serves as the regional hub and gateway to East Central Alabama. The strategic location of the City along the Chattahoochee River has allowed them to grow and prosper along with neighboring Columbus, Georgia. Over the past decade, Phenix City has grown from a population of 28,200 to around 37,000, according to 2018 estimates. Projections continue to reflect opportunities for continued growth and improvement in the city.

Phenix City's Comprehensive Plan was coordinated with the recently adopted Russell County Comprehensive County Master Plan. The Russell County Master Plan addresses areas, which are outside of the municipal limits within Russell County, such as Phenix City. Phenix City is part of the Lee-Russell Council of Governments and is affected by plans for development of the Lee-Russell region. A major component of the engagement with the LRCOG, in which Phenix City regularly participates, is the development of the Lee-Russell CEDS and subsequent updates. As part of the Columbus-Phenix City MPO, Phenix City is included in all transportation planning efforts, which includes the city in the Metropolitan Transportation Plan, and Transportation Improvement Program for the C-PCTS MPO.

Land Use

The City of Phenix City will adopt a Land Use Plan and update the Zoning Ordinance and Subdivision Regulations as needed for consistency with the Comprehensive Plan. The City will consider unique opportunities for camping, such as along Holland Creek, and outfitter and supply services that will enhance the Chattahoochee River whitewater course.

Significant residential growth is taking place to the northeast of the urban core. This growth has taken place in Lee County, stimulated by the access that the North Bypass (US Highway 80 – JR Allen Parkway) affords and the presence of vacant / undeveloped land. The population of Lee County has more than doubled over the past 40 years and residential development to support this growth has increased rapidly. Additionally, major residential growth is occurring along the US 80 corridor in Ladonia and along the Alabama 165 corridor around Fort Mitchell.

Mixed housing characterizes the older urban core. In and adjacent to downtown Phenix City, residential developments are characterized by low income housing. Phenix City is removing visual clutter, like obsolete signage, derelict buildings, and overgrown lots, from the main corridors into and within the City. Properties within the historic neighborhoods near the downtown area show signs of neglect; therefore, Phenix City has made a concerted effort to condemn neglected housing in effort to rehabilitate neighborhoods. In the older developed portions of downtown Phenix City, sidewalks do exist, however, they are discontinuous and the city has recognized this and has started a sidewalk rehabilitation project to correct this discontinuity.

Figure 9: Existing Land Use Map for Phenix City, Alabama

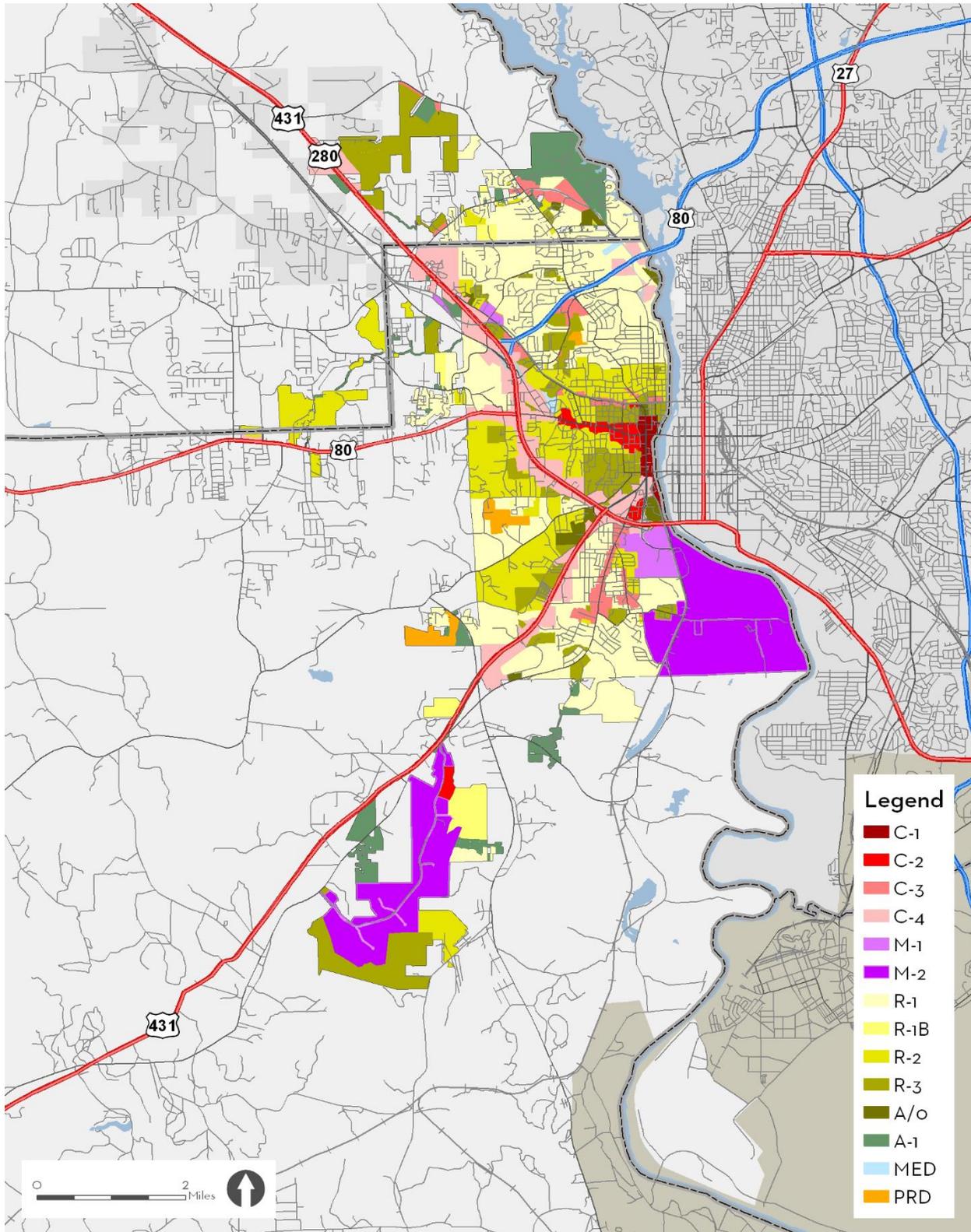
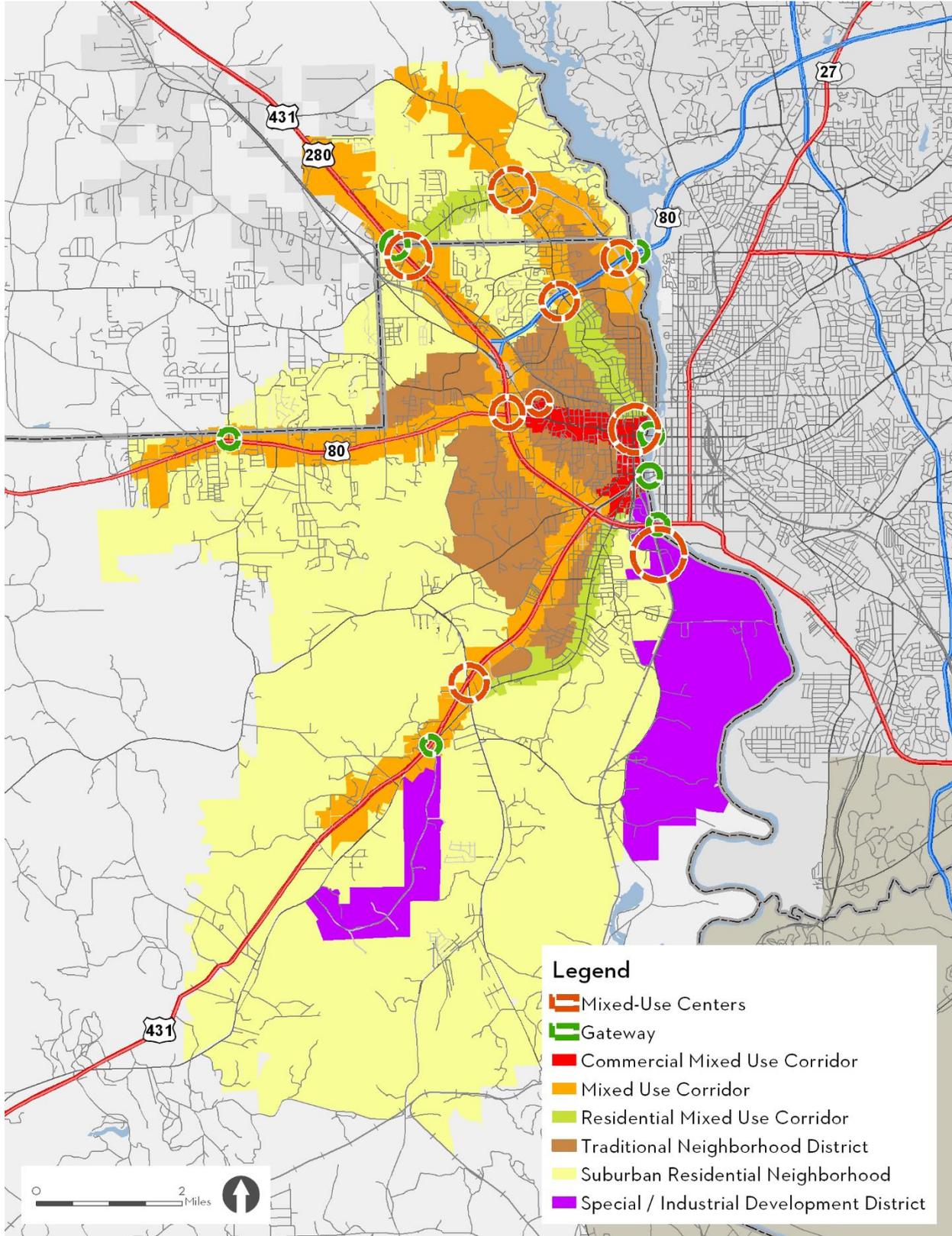


Figure 10: Future Land Use Map for Phenix City, Alabama



Regional Development

The geographic location of Downtown is intuitive along the Chattahoochee River and in close proximity to downtown Columbus. Recently, several major initiatives have been underway in downtown Phenix City to improve the economic atmosphere and encourage more future growth. Improvements began with a Broad Street streetscape program from 13th Street to Holland Creek that improved pedestrian access along Broad Street and provided on-street parking facilities. The Russell County Commission has also been involved with improvements downtown through the relocation of county administrative offices to the vacant Mead Building at the intersection of Broad Street and Dillingham Street. In that same process, the County also made significant improvements to the existing County Courthouse along 14th Street for judicial services. Troy University constructed a new downtown campus along 3rd Avenue, which brings significant investment and employment to downtown, along with the City's participation and development of a new hotel, conference center parking deck, etc.

Two important centers of activity should be supported along the northern corridor of Summerville Road, one along the intersection of US-Highway 80 and the other at the intersection with Riverchase Drive. Phenix City should partner in the development and redevelopment of these areas. Infrastructure improvements within these centers should reflect the increased intensity of activity.

Housing Profile

Currently Alabama's 15th largest city, Phenix City has experienced significant growth over the past two decades. Much of this growth can be attributed to newly annexed areas of northeast Russell County and southeast Lee County, which is absorbing most of the county's growing population.

When compared to larger regions, Phenix City's population trends are put into perspective and its significance to the region and the state is emphasized. It is an engine for population growth in the county, the region, and the state, and future population projections indicate that it will continue to be such.

Population projections indicate the region and Phenix City will grow at a significantly higher rate compared to historical trends. For Russell County, the growth rates will increase by roughly double over the next thirty years, with most of the growth occurring in the northeast portion of the county, within Phenix City and the surrounding area. With most of the new population growth occurring on the fringe of the city limits or in currently unincorporated parts of the county, neighborhood revitalization efforts are important to sustain economic development within the central parts of the city, especially in historically significant neighborhoods.

The City is served by many different types of neighborhoods, from inner neighborhoods that were developed early in the city's history, to newer large lot rural residential type neighborhoods. Surrounding the downtown core of Phenix City are the inner, mature, neighborhoods many of which contain historically significant structures that have been designated by the Alabama Historical Commission. These neighborhoods are composed of typically modest homes that are shaded by mature trees.

Phenix City is well served throughout the region through a system of federal, state, county, and local roads. All of Phenix City is within the boundary of the Columbus-Phenix City Transportation Study Metropolitan Planning Organization, which serves to fund improvements along federal and state highways.

4-5 Russell County Comprehensive Plan

(Russell County does not have existing or future land use maps)

Russell County is located in East Central Alabama, on the boundary between Alabama and Georgia. The County is included in the bi-state Columbus-Phenix City MSA and is proximate to Atlanta and Montgomery as well as other mid-sized cities like Columbus, Auburn and Opelika. Russell County is part of the Lee-Russell Council of Governments and the Columbus-Phenix City Metropolitan Planning Organization. Russell County is greatly impacted by the US Federal Government, especially the US Army, and has in its boundaries, part of the Fort Benning Military Base. The location of Russell County on the Chattahoochee River also connects the county of the gulf coast and larger river region.

Land Use

Land use in Russell County, outside of Phenix City, has historically been and continues to be rural in character. Agricultural and woodlands are the dominant features on the landscape. Approximately 90% of the current land cover in the county is forest, agriculture or scrub grasslands. Russell County had 222,121 acres of forest in 2001 totaling around 53% of the county's land cover. The developed areas of the County are mostly in the northeastern part of the County in Phenix City. Developed areas also extend along the major transportation arteries and reflect corridor development trends in the county. However, the developed areas only make up 8.1% of the county, which is around 34,107 acres.

Regional Development

According to the U.S. Census, Russell County's 2010 population was 52,947, an increase of a little over 3,200 since 2000. During the same period, 2000-2010, the population of Phenix City increased from 28,265 to 32,128 or about 3,800. This means that the area of the population in the county, outside of Phenix City actually decreased by approximately 600 people. Based on the C-PCTS MPO Transportation Modeling projections, the future population growth is expected to be greatest in the northeast quarter of the county. This area includes census tracts and traffic zones between Seale and up to and including Phenix City, along the US Highway-80 corridor and the Alabama Highway-165 corridor toward Ft. Mitchell. The remainder of the County is expected to grow; however, increases are expected to be far less than the northeast quarter.

Housing Profile

Urbanized and suburban land use in Russell County is mainly concentrated in Phenix City, including the historic city core and along major corridors, US-280, US-431, & US-80, etc. There are small concentrations of housing and limited commercial uses in Hurtsboro and Seale, however, these are not extensive and there are large rural undeveloped areas in between. The land in central, southern, and southwest parts of the county has been mostly timber and agricultural. There has been some concentration of industry near Phenix City and a few sites close to the river and railroad. Much of the county has been underserved by sewer and has remained very low density. This

pattern has begun to change, with growth, especially near the west gate of Fort Benning in the Fort Mitchell area.

Residential uses are located throughout the county, concentrations are found in the Phenix City, Hurtsboro, Seale areas. The predominant form of residential use is single family with small amounts of multi-family, duplex, etc. residential uses found scattered in the county.

4-6 Lee County Master Plan

(Lee County does not have existing or future land use maps)

Lee County is north of Russell County and is one of the fastest growing counties in Alabama for several decades. Opelika is the county seat and Auburn University has been a major influence on the county. Opelika and Auburn have a history of strong industrial and commercial centers. Added to this historical trend toward increased growth is the military base at Fort Benning, Georgia and other regional trends. The recent and anticipated continued growth is occurring in a county with a rural background and history.

Lee County is part of a region, which influences its growth and development. Lee County is also affected by proximity to Fort Benning, the Columbus, Georgia metro area and its proximity to Montgomery and Atlanta along the Interstate-85 corridor. The county is also made up of sub-areas of the county including incorporated political jurisdictions as well as physical places – communities, neighborhoods and other places.

The Lee County Commission is committed to managing changes in the use and preservation of land in such a fashion that adequate and appropriate spaces are provided for residential, institutional, commercial and industrial purposes; and to ensure that rural and natural areas critical of the county's natural environment are conserved and protected.

Land Use

Land use in Lee County ranges from urban centers and suburban neighborhood growth in Auburn and Opelika to rural farm and timberland surrounding these centers and neighborhoods. Between is a growing suburban edge with a mix of commercial and residential uses. Smiths Station in the southeastern portion of the county is characterized by smaller, rural community development and suburban neighborhoods of Columbus and Phenix City as well as Auburn and Opelika; Beulah, Beauregard, Loachapoka and other communities are characterized as residential, agricultural communities related to Opelika and Auburn.

Key assets and opportunities include compact urban centers, older close-in subdivisions and attractive rural areas. Key constraints include spreading low-density development, conflicting with the rural landscape and competing with the rural centers.

Regional Development

Lee County is served by Interstate-85 as the main transportation spine along with other major arterial roads such as US Highway-80, US Highway-29, US Highway-280, and US-431. These major routes carry high volumes of traffic. Increasing traffic is occurring on county roads where there is increasing development and local streets serve the urban centers and suburban neighborhoods, mostly in the incorporated communities.

Lee County has been a fast growing county for many years, anchored by Auburn University and robust industrial development. Future projections of population suggest continued growth, fueled by the Kia Plant located in West Point, Georgia. It is expected that the population in the county will grow by 30,000 - 50,000 in the next 20 years, which is comparable to the existing population of Auburn / Opelika area. This population growth is expected to be split between Auburn, Opelika and the southeast portion of the county.

Responsible growth throughout the county that is well planned and managed, incorporating appropriate standards in order to protect residential areas, preserve agricultural and natural lands, encourage the revitalization of vacant or deteriorated areas, and promote economic development and growth in the county and local economy; and community design throughout the county that emphasizes protection of historic resources, effective integration of green spaces, incorporation of appropriate signage, landscape, and design elements and encouragement of attractive, walkable communities that reflect the county's small town and rural charm as well as more urban districts.

Housing Profile

Housing conditions within Lee County are generally good. There are pockets of older housing in limited areas and new housing throughout the county. Neighborhoods range from historical neighborhoods in Auburn and Opelika to older suburban patterns and new suburban neighborhoods near the urban centers. There are less dense and more rural/suburban neighborhoods in areas like Smiths Station, Loachapoka, etc; and other low density residential neighborhoods mixed with rural neighborhoods in much of the county. A variety of housing choices is important to current and future residents.

Key assets and opportunities include south neighborhoods and new residential development opportunities in urban, suburban, and rural areas. Key constraints include the need for revitalization and in-fill urban areas, the threat of more scattered residential and the need for services in the rural areas.

4-7 Cusseta-Chattahoochee County Comprehensive Plan

Cusseta-Chattahoochee County is located in West Central Georgia, on the boundary between Alabama and Georgia. The County is included in the bi-state Columbus-Phenix City MSA and is proximate to Atlanta and Montgomery as well as other mid-sized cities like Columbus, Auburn and Opelika. Cusseta-Chattahoochee County is part of the River Valley Regional Commission and the Columbus-Phenix City Metropolitan Planning Organization. Cusseta-Chattahoochee County is the most impacted jurisdiction by the US Federal Government (the US Army) and has in its boundaries most of the Fort Benning Military Base. The location of Cusseta-Chattahoochee County on the Chattahoochee River also connects the county of the Gulf coast and larger river region.

Land Use

Land use in Cusseta-Chattahoochee County has historically been and continues to be rural in character. Agricultural and woodlands are the dominant features on the landscape. The developed areas of the County are mostly in the northeastern part of the County in Cusseta. Other developed

areas are confined to Fort Benning, such as Harmony Church, the PX and the commissary, and Martin Army Hospital. Fort Benning's presence hinders Cusseta-Chattahoochee County's opportunities to expand their property tax base. Other development limitations are hindered by lack of adequate infrastructure, limited population (outside of Fort Benning), and limited investment.

Figure 15: Existing Land Use Map for Chattahoochee County, Georgia

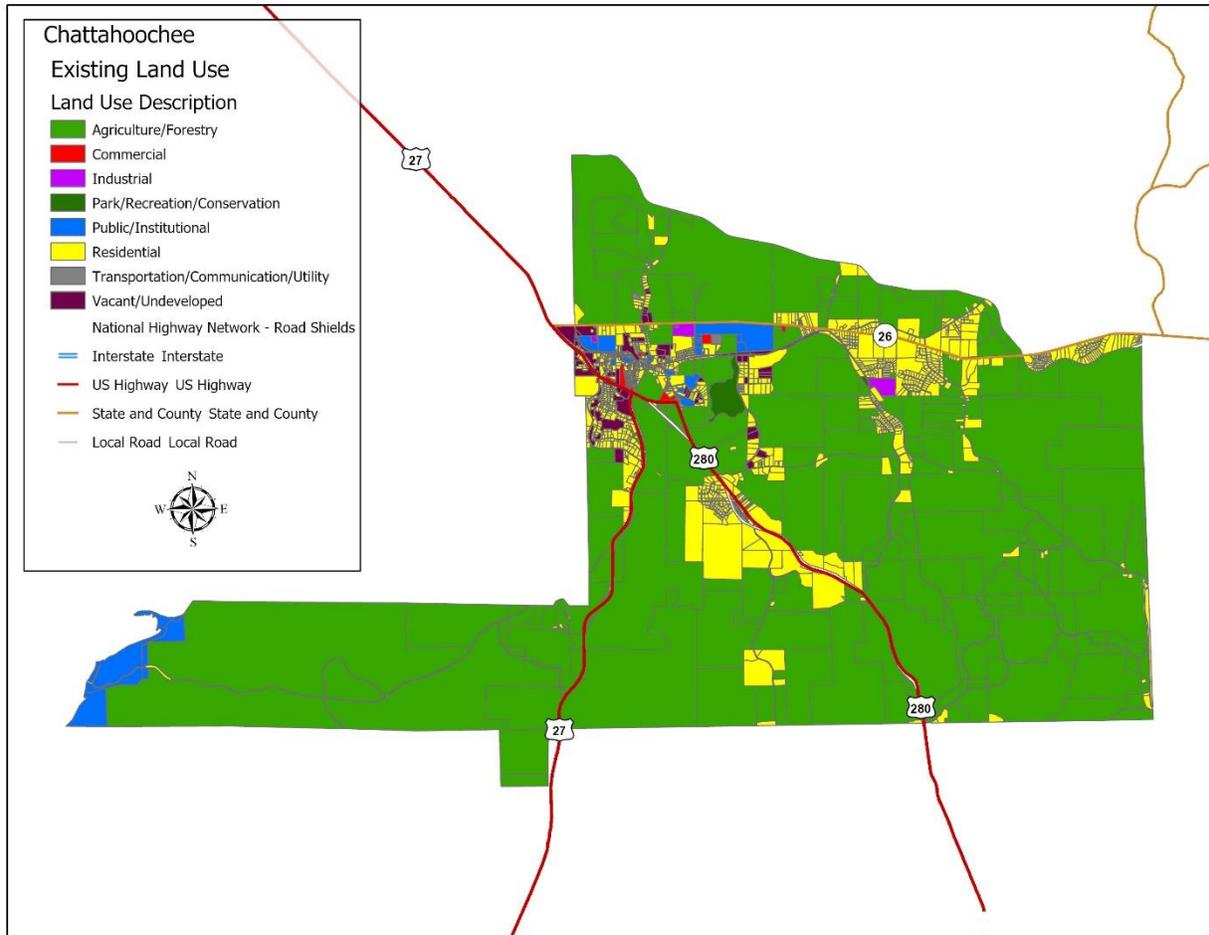
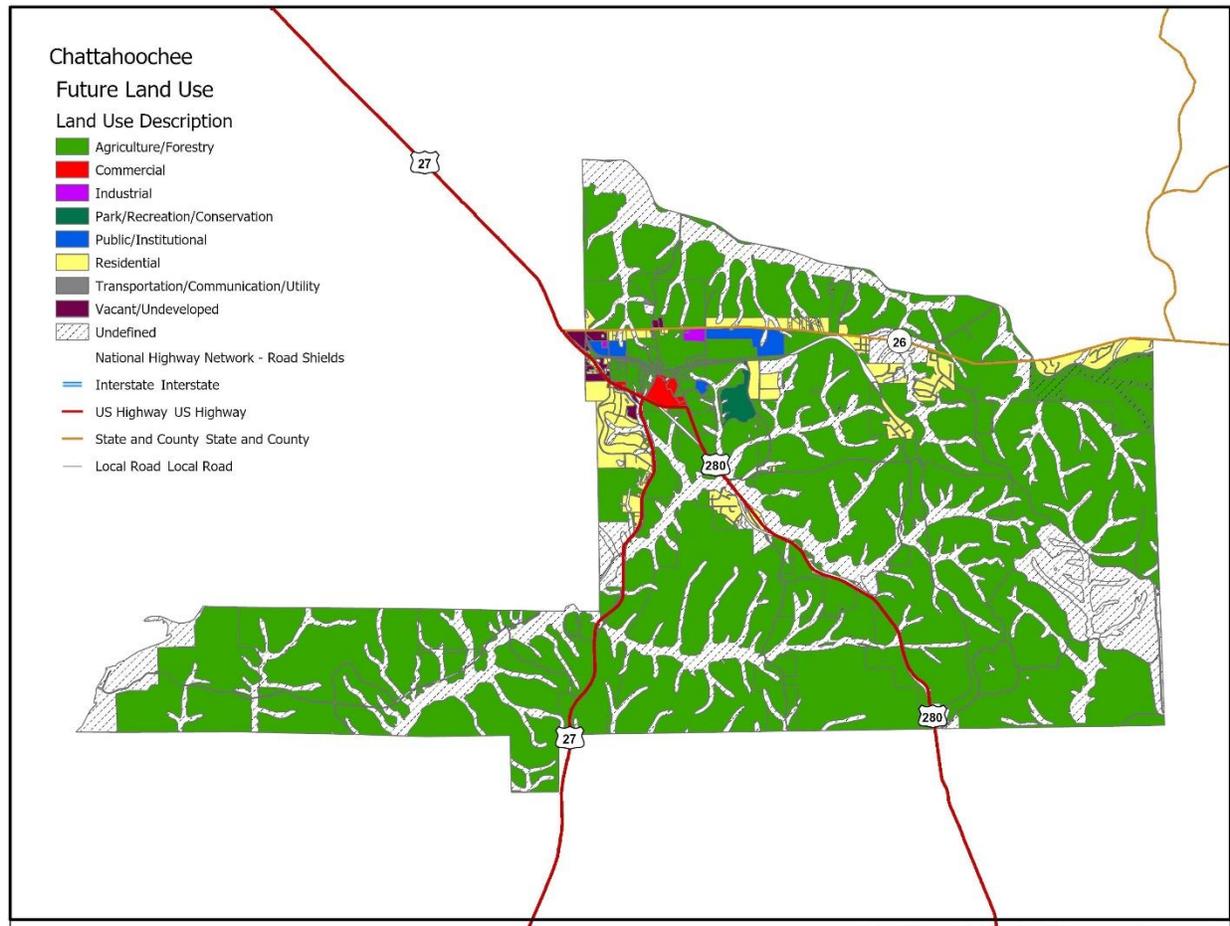


Figure 16: Future Land Use Map for Chattahoochee County, Georgia



Regional Development

According to the U.S. Census, Cusseta-Chattahoochee County’s 2010 population was 11,267, an increase of a little over 583 since 2000. Cusseta-Chattahoochee County has population fluctuations often due to deployments at Fort Benning. County officials must be actively involved in transportation planning activities with the Columbus-Phenix City MPO and the Georgia Department of Transportation. Chattahoochee County will continue to maintain open communication and dialogue with the neighboring counties and cities throughout the planning process. Chattahoochee County will steer economic development that will aid Cusseta-Chattahoochee County in becoming more self-sufficient to include offering all needed and desired services locally as well as increased local job opportunities.

Housing Profile

Outside of Fort Benning, clustered housing in Cusseta-Chattahoochee County is mainly concentrated in Cusseta. There are small concentrations of housing and limited commercial uses along U.S. 280, however, these are not extensive and there are large rural undeveloped areas in between. Housing stock in Cusseta-Chattahoochee County consists of a mixture of traditional

single-family stick-built homes, multi-family units and manufactured and mobile home units. The 2000 housing inventory consisted of 3,316 housing units; only 33 units were added by 2010. Mobile homes coming into the housing inventory increased tremendously; from 453 in 1990 to 658 in 2000, a 45 percent increase. In 2000, Chattahoochee County's total housing stock consisted of 58% single-family units, 22% multi-family units and less than 20% are mobile home units. A high majority of the county's housing units are renter occupied. Roughly 20% of the Cusseta-Chattahoochee County homeowners were cost burdened; 20% of renters paid less than 30% of income on housing cost, 5% of renters paid 30 to 49% of gross income on housing, and 2% of renters paid more than 50% of gross income on housing.

4-8 Harris County Comprehensive Plan

Harris County is located in West Central Georgia, on the boundary between Alabama and Georgia. The County is included in the bi-state Columbus-Phenix City MSA and is proximate to Atlanta and Montgomery as well as other mid-sized cities like Columbus, Auburn and Opelika. Harris County is part of the River Valley Regional Commission and the Columbus-Phenix City Metropolitan Planning Organization. The location of Harris on the Chattahoochee River connects the county to the larger river region.

Given its unique location, untapped potential and dedicated leadership, Harris County will become a model of planning residential and business development that ensures sufficient managed economic growth to enhance the quality of life of its residents.

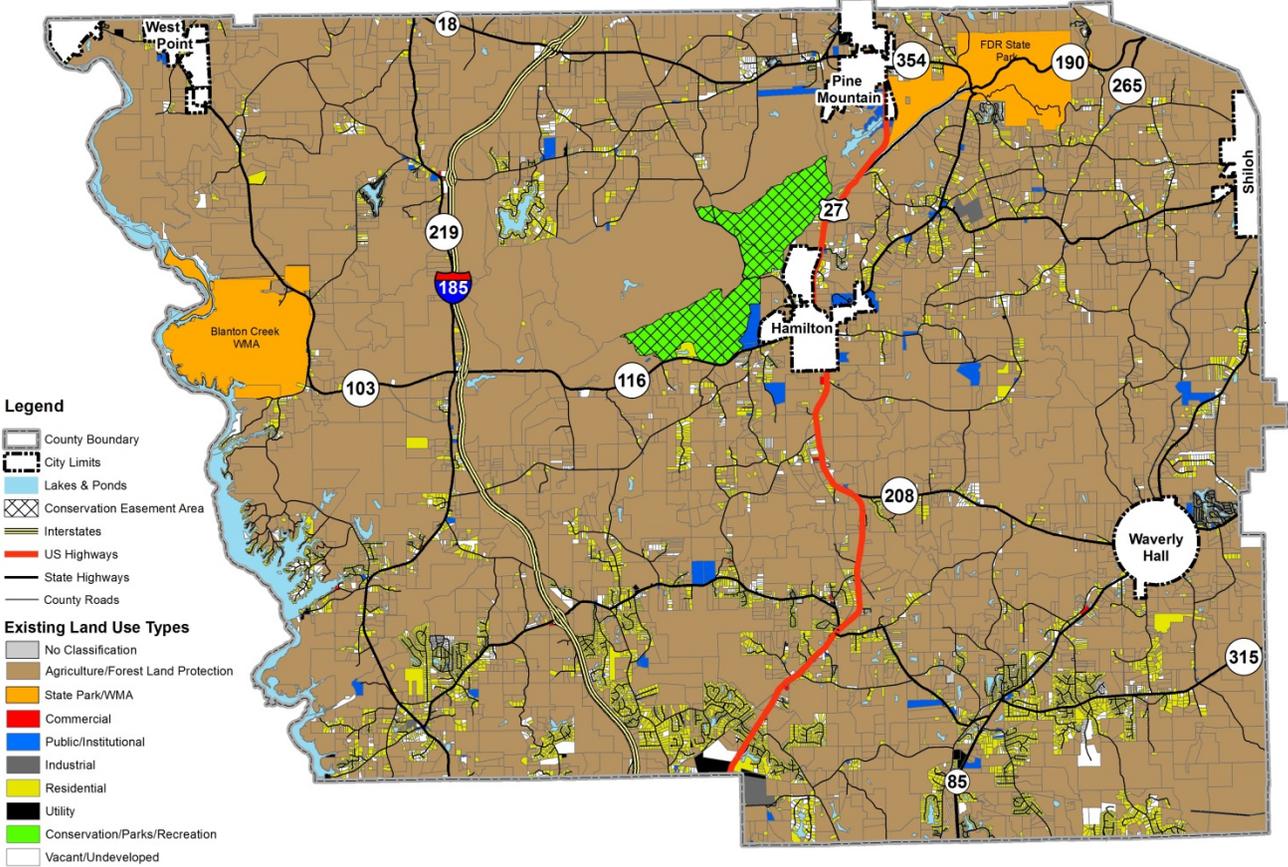
Land Use

An analysis of existing development patterns provides an understanding of the use of land at a specific point in time. An existing land use map is the first step in gaining an understanding of not only what land uses exist and where they are, but how they interact. The purpose of this section is to map and review existing land use in Harris County; look at areas in need of attention; areas in need of protection; and areas with development opportunities.

The citizens of Harris County wish to create and maintain an environmentally sensitive land use system centered upon the single-family home but allowing for various and appropriately located residential, commercial, and industrial types and densities.

Key challenges to Harris County officials include developing a land use system that protects environmentally sensitive areas and creates/maintains a greenspace/open space preservation system. Another challenge is integrating walking and biking opportunities into the land use scheme and creating connectivity between future and existing developments. The following table illustrates the acreage and percent of county total land dedicated to existing land uses.

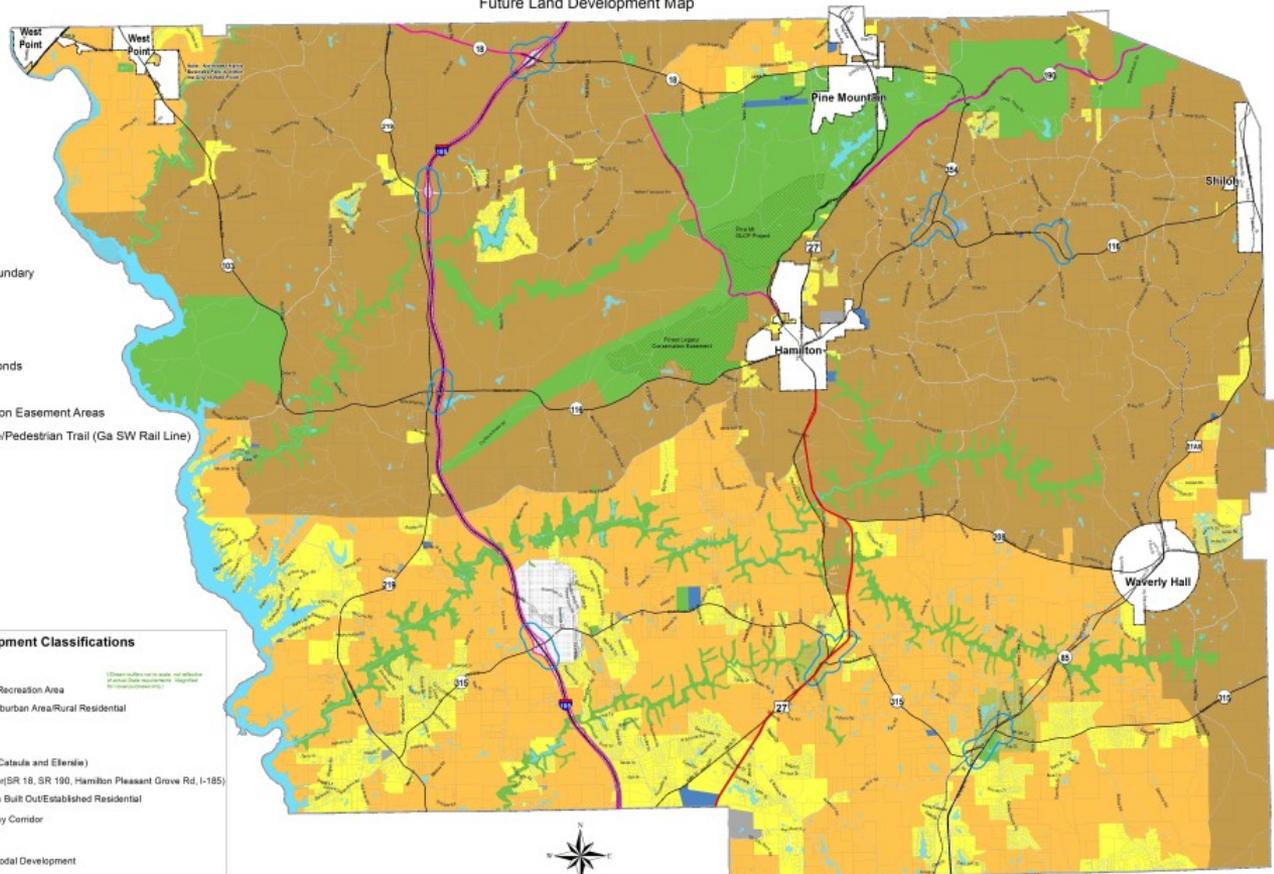
Harris County, Georgia Existing Land Use



- Legend**
- County Boundary
 - City Limits
 - Lakes & Ponds
 - Conservation Easement Area
 - Interstates
 - US Highways
 - State Highways
 - County Roads
- Existing Land Use Types**
- No Classification
 - Agriculture/Forest Land Protection
 - State Park/WMA
 - Commercial
 - Public/Institutional
 - Industrial
 - Residential
 - Utility
 - Conservation/Parks/Recreation
 - Vacant/Undeveloped

Harris County, Georgia

Future Land Development Map



- County Boundary
- City Limits
- Railroad
- Rivers
- Lakes & Ponds
- Parcels
- Conservation Easement Areas
- Linear Bike/Pedestrian Trail (Ga SW Rail Line)

Future Development Classifications

- Agricultural
 - Conservation/Recreation Area
 - Developing Suburban Area/Rural Residential
 - Industrial
 - Other
 - Rural Village (Cataula and Elberta)
 - Scenic Corridor (SR 18, SR 190, Hamilton Pleasant Grove Rd, I-185)
 - Suburban Area Built Out/Established Residential
 - US 27 Gateway Corridor
 - Mixed Use
 - Commercial Nodal Development
- (Green outline is used for outline of areas that require a separate planning process)

Last Updated: 3-17-2014



Regional Development

According to the U.S. Census, Harris County experienced a population growth of 33 percent or 5,907 persons from 1990 to 2000. Population growth continued at a rate of 35 percent or 8,329 persons between 2000 and 2010. An estimate for population growth continued at 16 percent change or 5,549 persons between 2018 and 2030.

Land use in Harris County has historically been and continues to be rural in character. Agricultural and woodlands are the dominant features on the landscape. Approximately 81.81% of the current land cover in the county is forest and agriculture. Harris County had 243,795 acres of forest in 2018. The developed areas of the County are mostly in the various towns and the southern part of the County. The next highest land-use is single family residential, which occupies over 8.73% of existing land-uses (26,025 acres or more). Most residential development is in the south and the west (along Lake Harding).

The majority of development will continue to occur in the southern third of Harris County below SR 315. A major mixed-use development, The Grove, located at the intersection of I-185 and SR 315 was given development approval in 2007. The general development pattern in this area is linear with subdivisions popping-up along existing local and state routes. The majority of development is single-family residential on 2-acre tracts. Public infrastructure has followed development and has been put in place in areas anticipating future development. Harris County is working on expanding water capacity and making transportation improvements in this area. Due to the advent of Kia, other development is expected to occur in the northwest section of Harris County around the junction of SR 103 and SR 18. Development will follow SR 103 south along the Chattahoochee River to Flat Shoals Creek. Development pressure is also likely to mount between SR 315 and Lower Blue Springs Road from Lake Harding to US Highway 27. SR 18 west of Pine Mountain to Hopewell Church Road can also expect continued development pressure.

Housing Profile

Housing consists of a mixture of traditional single-family stick-built homes in the unincorporated area of Harris County with a small number of mobile and manufactured homes spread throughout the unincorporated area. The cities and towns of Harris County have single-family stick-built homes plus duplexes and multi-family units and a small amount of manufactured and mobile home housing units. In general, manufactured homes in Harris County including the cities have decreased since 1990 while the number of vacant units in Harris County has increased.

The 2000 housing inventory consisted of 10,288 housing units. By 2013, that number had grown to 13,844 units. Most of the growth is attributable to new single-family homes in the southern part of Harris County. Long Leaf subdivision in Pine Mountain and two new subdivisions in Hamilton have also added new homes to the county total. In 2013, the total housing stock was 89% single family units, 8% manufactured or mobile homes, and 3% duplexes or multi-family units. Interestingly the percentage of mobile homes in Harris County has dropped from 22% of the overall housing stock in 1990 to 8% today. The absolute number of units has also fallen over that same period. The number of multi-family or duplex units has remained stagnant with the net loss of two units between 1990 and 2013. Only 14% of total housing in Harris County is rental, compared to 30% statewide, which puts Harris County well below the rental housing percentages in Georgia. Housing cost in Harris County is high when compared to the state of Georgia, with a

median housing value of \$208,880 in 2013 in Harris County. This compares to the state's median 2013 value of \$156,400. From a cost burden, this means that 30% of Harris County's homeowners may have difficulty affording necessities such as food, clothing, transportation and medical care. Renters appear to pay less of their incomes on housing with only 14 percent paying more than 30 percent of their income on rent. The cost burden for renters is much higher in the cities and towns of Harris County. Forty-eight percent of renters in the State of Georgia pay more than 30 percent of their income on rent; while 29% of homeowners in the state of Georgia pay more than 30% of their income on housing cost.

CHAPTER 5

TRANSPORTATION NEEDS AND INFRASTRUCTURE

Maintenance and preservation of transportation infrastructure is a critical component of the 2045 MTP. The purpose of the system maintenance and preservation is to gain insight into existing and future infrastructure needs to ensure the region can continue to provide safe, efficient, and well-maintained assets critical to the region's economic vitality and quality of life.

5.1 Road Classification

Road and bridges comprise the most fundamental elements of the region's transportation infrastructure. Even with significant investments in alternative modes by the year 2045, automobiles, trucks, and other highway-related modes will still constitute the core of all transportation facilities.

Existing Conditions / Future Developments

The most often used means of organization of a highway system is via "functional classification." Because roadways are intended to provide both access to adjacent property and regional mobility functions, various functional classes of roadways are designated based on a balance between these access and mobility functions. As a means to standardize and seek uniformity in functional classification nationwide, the 1968 Federal Highway Act requested each state to classify all road, streets, and highways into functional classes as a better way to help establish federal-aid policies and programs.

In consultation with the C-PCTS MPO, the Georgia Department of Transportation updates the road classifications as least every ten years. The functional class definitions are as follows:

Major Arterial Streets and Highways

Major arterial streets and highways contain the greatest proportion of through or long-distance travel. Such facilities serve the high-volume travel corridors that connect the major generators of traffic. The selected routes should provide an integrated system for complete circulation of traffic, including ties to the major rural highways entering the urban area.

Experience has shown that this class normally accommodates 30-40 percent of the region's travel on 5-10 percent of the street and highway network. Generally, major arterials include all the higher traffic volume streets, except those serving short trips or those serving as alternatives to more direct facilities (i.e., interstate, freeways, and expressways, and other principal arterials).

Interstate Principal Arterials

Interstate principal arterials are the primary through travel route and serve the longest trip lengths. They connect the region with other areas in the state and other states. They serve the longest trip desires; they carry the major portion of trips entering and leaving the urban area as well as most of through movements to bypass the central city. In addition, significant intra-area travels, such as between central business districts and outlying residential areas, are served by this system.

Urban Freeways and Expressways

Freeways are designed solely for rapid, uninterrupted travel over long distances. Design features include two or more one-way directional lanes divided by a median, access, and egress with selected arterial streets, by one-way ramps, joining the through lanes.

There are grade separations and no provisions for private access. Expressways are highways with two or more lanes in each direction, no access to abutting property, and no on-street parking, median barriers, wide spacing between intersections, and high operating speeds.

Urban Principal Arterials

Urban principal arterials serve the major centers of activity of a metropolitan area, the highest traffic volume corridors, and the longest trip desires; and should carry a high proportion of the total urban area travel on a minimum of mileage. It carries the major portion of trips entering and leaving the urban area, as well as most of through movements desiring to bypass the central city. Frequently, the urban principal arterial system will carry important intra-urban as well as inter-city bus routes.

Minor Arterial Streets

Minor arterial streets and highways interconnect urban principal arterials and serve to link cities and larger towns. Minor arterial streets and highways serve less concentrated traffic-generating areas such as neighborhood shopping centers and schools. This class distributes medium traffic volumes. Minor arterial streets serve as boundaries to neighborhoods and collect traffic from collector streets. Although the predominant functions of minor arterial streets are the movement of through traffic, they also provide for considerable local traffic that originates or is destined to points along the corridor.

Collector Streets

Collector streets collect traffic from local streets in residential neighborhoods and channel it onto the arterial system. Conversely, it provides direct service to residential areas, local parks, churches, etc. To preserve the amenities of neighborhoods, collectors are usually spaced about a half-mile apart to collect traffic from local streets and convey it to arterial streets and highways. Collector streets serve as local bus routes. Direct access to abutting land is essential; parking and traffic controls are usually necessary to insure safe and efficient through movement of moderate to low traffic volumes.

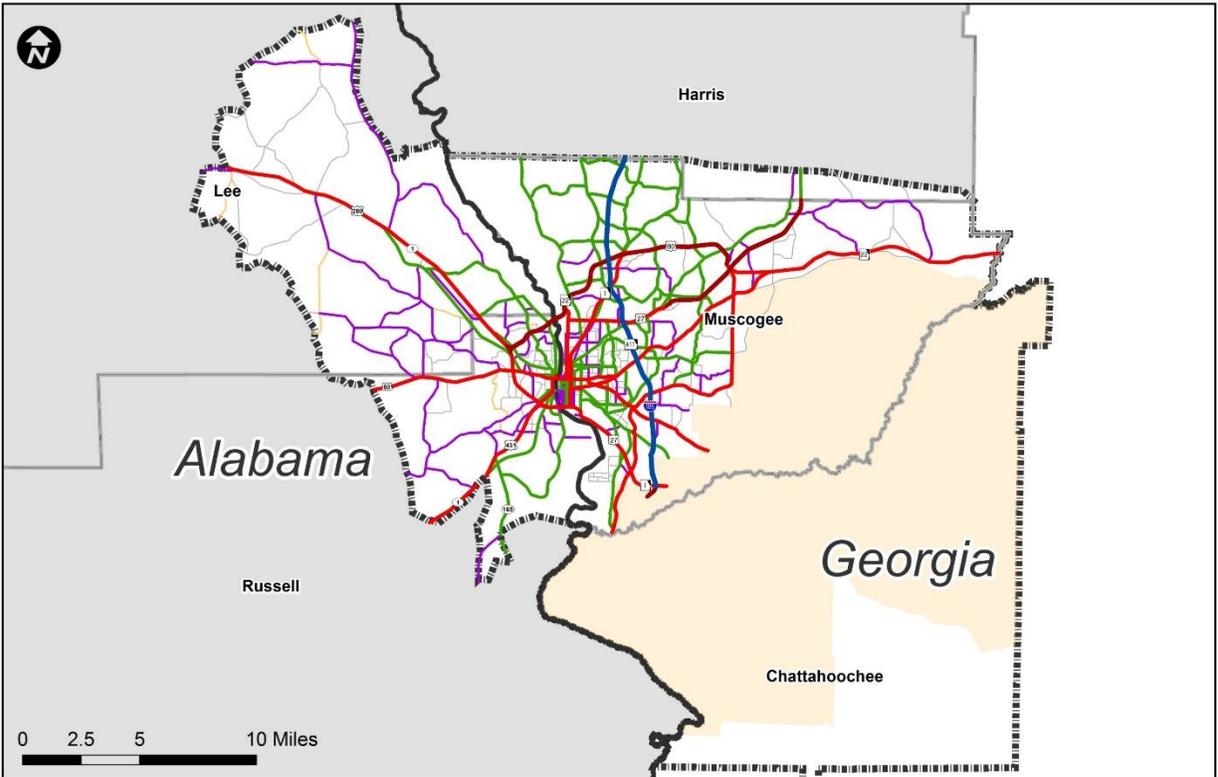
Local Streets

Local streets serve primarily to provide direct land access and access to the higher roadway systems. They provide service to travelers over relatively short distances as compared to collectors or other higher systems. They allow access to individual homes, shops, and similar traffic destinations. Local streets serve short trips at low speeds, and service to through traffic movement usually is deliberately discouraged.

2015 Highway Network

Maps 5-1 depicts the functionally classified roadways within the C-PCTS MPO planning area.

MAP 5-1
Functional Classification Map



Legend

Functional Classification

-  Interstate
 -  Freeway/Expressway
 -  Principal Arterial
 -  Minor Arterial
 -  Major Collector
 -  Minor Collector
 -  Local
-
-  Fort Benning
 -  State
 -  MPO Boundary
 -  Counties

5.2 Safety Analysis

Safety is a critical concern in assessing the transportation network. In addition to supporting GDOT's and ALDOT's safety performance measures, C-PCTS MPO completed safety and crash analysis for the plan update.

Collision data records for Muscogee, Harris, and Chattahoochee Counties in Georgia were obtained from the Georgia Electronic Accident Reporting System (GEARS). The Traffic Engineering Department of CCG processes the statistical information. Collision data was obtained from ALDOT Crash Data (University of Alabama – Center of Advanced Public Safety) for Lee and Russell Counties and the City of Phenix City in Alabama

For each of the reported collisions in the database, the following information was available:

- Month, date, year and time of day
- County and City location
- Roadway or intersection location (ALDOT does not release this information)
- Manner of collision
- Degree of injury suffered in the collision

Table 5-1 below shows the summary of collisions for each of the last three years by county.

Table 5-1
Collision Statistics by County in the C-PCTS MPO 2016 to 2018

COUNTY	MUSCOGEE	CHATT. CO.	HARRIS*	LEE*	RUSSELL*
2016					
Number of Collisions	635	0	1	8,830	3,943
Number of Injuries	22	0	5	1,230	842
Number of Fatalities	27	0	8	16	30
Collisions Involving Pedestrians	7	0	0	24	21
2017					
Number of Collisions	726	11	5	8,530	2,899
Number of Injuries	27	0	7	1,261	894
Number of Fatalities	23	4	9	15	15
Collisions Involving Pedestrians	3	0	0	18	4
2018					
Number of Collisions	745	4	2	8,053	3,953
Number of Injuries	14	0	1	1,198	827
Number of Fatalities	22	2	9	18	16
Collisions Involving Pedestrians	6	0	6	17	10

Source: Columbus Consolidated Government Traffic Engineering Department, GDOT
Georgia Electronic Accident Reporting System, ALDOT Crash Data (University of
Alabama – Center of Advanced Public Safety)

*Accident data for Harris County in Georgia and Lee and Russell Counties in Alabama includes the entire county.

Collision Severity

Severity ranking often differs significantly from frequency rating for a variety of reasons. The most common reason is the speed of vehicles involved, which is evidenced by the number of multi-lane or limited-access facilities listed in both severity ranking tables.

The data that we used to rank locations by severity came from two different procedures. For Phenix City, the severity rates were provided by ALDOT’s Office of Safety Operations within the Design Bureau. This rate of severity was computed based on the following formula:

Total Accidents

$$\text{Severity} = \frac{10[3(A) + 2(B) + C + 5(F)]}{\text{Total Accidents}}$$

Where:

- A equals “Type A” injury crashes (carried away from scene)
- B equals “Type B” injury crashes (bruising or swelling)
- C equals “Type C” injury crashes (minor pain or fainting)
- F equals crashes, which involve a fatality

The responding law enforcement personnel record this type of injury in the field. Because of the potential for different levels of detail in the raw data, a direct comparison should not be made between the severity rates reported for Phenix City and those calculated for Columbus. That is, the top 20 intersections within the C-PCTS MPO should not be prioritized by ranking all 20 intersections in one list. Rather, by providing separate lists for each jurisdiction, each jurisdiction can further study locations under independent processes.

Intersections within the C-PCTS MPO should not be prioritized by ranking all 20 intersections in one list. By providing separate lists of each jurisdiction, each jurisdiction can further study locations under independent processes. Detailed safety studies should be conducted by these intersections to determine the probable causes of collisions and recommend actions that can be taken to reduce the frequency and severity of collisions. These studies should include evaluation of original collision reports and careful analysis of the details involved in each crash, such as directions of travel, vehicle maneuvers, time of week/day of year, weather, drunk/distracted driving, driver comments, existing traffic control and the presence of unusual circumstances, such as special events in the area or road construction. A predominant cause is often easily identified. Recommended roadway or intersection improvements can be identified to remove or alleviate dangerous conditions.

Table 5-2
Top Ten intersections for Vehicle Collisions – 2016-2018

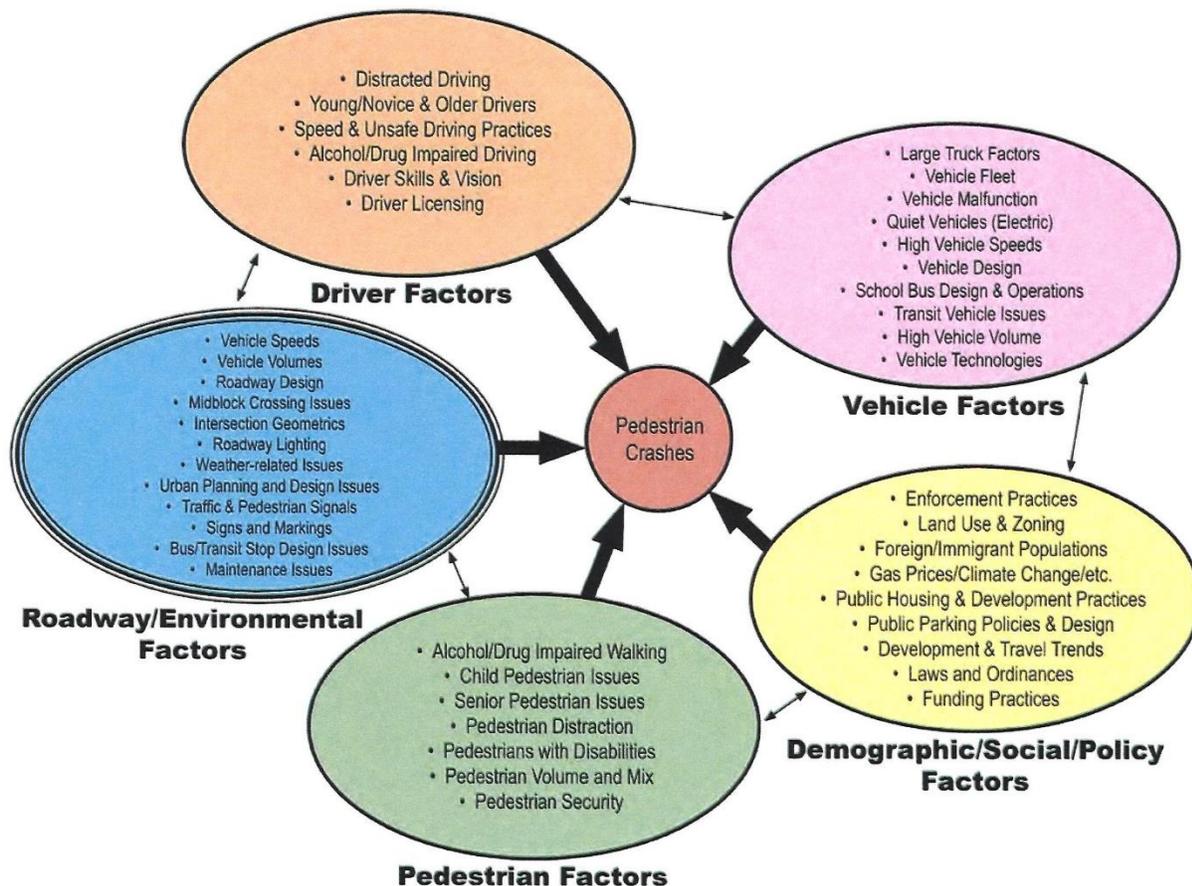
STREET	INTERSECTION	2016	2017	2018	TOTAL
5555 Whittlesey Boulevard	Columbus Park Crossing Shopping Center	103	94	75	272
5448 Whittlesey Boulevard	Near Adams Farm Drive	53	44	62	159
I-185	Macon Road	32	25	30	87
6475 Gateway Road	At Talokas Lane	37	32	34	103
2801 Airport Thruway	Smoke Drive	37	30	37	104
3131 Manchester Expressway	(Peachtree Mall)	63	39	40	142
1591 Bradley Park Drive	Bradley Park Access Road	48	34	49	131
5550 Whittlesey Boulevard	Columbus Park Crossing Shopping Center	26	28	26	80
3201 Macon Road	Cross County Plaza Shopping Center	55	40	73	168
3515 Victory Drive	Benning Drive		51	60	111

Source: Columbus Consolidated Government – Traffic Engineering Department

(The Alabama Department of Transportation has directed that accident locations not be shown or presented in association with descriptions of transportation projects, facilities, or locations within the State of Alabama.)

Detailed safety studies should be conducted at these intersections to determine the probable cause of collisions and recommend actions that can be taken to reduce the frequency and severity of collisions. These studies should include evaluation of original collision reports and careful analysis of the details involved in each crash such as direction of travel, vehicles maneuvers, time of day/day of week/day of year, weather, DUI, driver comments, existing traffic control devices, and non-recurring circumstances like special events or road construction. A dominant cause is often easily identified. Recommended roadway or intersection improvements can be identified to remove or alleviate dangerous conditions.

Figure 19 - Pedestrian Crash Causes



Highway Strategic Safety Plans

A Strategic Highway Safety Plan (SHSP) is a highly coordinated, statewide plan that establishes optimum strategies, projects, and programs along multiple agencies to reduce highway fatalities and serious injuries on all public roads. The Highway Safety Plan is used to justify, develop, implement, monitor, and evaluate traffic safety activities for improvements throughout the federal fiscal year.

The Transportation Bill – SAFETEA-LU directed each state to develop its own SHSP. The Alabama Department of Transportation developed and adopted their plan in 2006 and updated it in 2009, 2012, and 2017. The Georgia Department of Transportation developed and adopted their SHSP in 2005 and updated it annually, with the last one in 2019.

Most of the countermeasures fall outside the MPO’s specialization and area of control and are related to driver behavior. The exceptions are proposed roadway improvements that are related to older or at risk drivers and land departure crashes. These countermeasures proposed either blanket improvements to signage, signals, and markings or site-specific improvements to address issues at high crash sites.

System Maintenance and Preservation (Pavement)

Overall, the region’s pavement is in a good state of repair. Pavement condition is measured using the International Roughness Index (IRI), consistent with Moving Ahead for Progress in the 21st Century (MAP-21) / Fixing America’s Surface Transportation (FAST) Act performance management requirements. The cost to keep the region’s (Federal-aid) transportation infrastructure (576 Miles) in good working order, in today’s dollars, would be \$156,618,910.00 to meet all maintenance needs and achieve optimal/maximum performance. These cost increase greatly when presented in Year-of-Expenditure (YOE) - \$4.0 billion to meet all maintenance needs over the life of the 2045 MTP. The resurfacing projects identified within the MTP will utilize the pavement targets as outlined below:

Georgia DOT - PM 2 Targets – Pavement Level of Service Measures:

ASSET	PERFORMANCE MEASURE	DESCRIPTION	TARGET
Interstate NHS	Percent of Interstate NHS pavements in Poor condition	Pavement conditions are measured through field inspections. Pavements in “poor” condition are in need of work due to either the ride quality or due to a structural deficiency.	≤ 5% in Poor Condition
Interstate NHS	Percent of Interstate NHS pavements in Good condition	Interstate pavement rated as “good” will be considered for potential preservation treatments to maintain the “good” rating.	≥ 50% in Good Condition
Non-Interstate NHS	Percent of NHS pavements in Poor condition	Non-interstate NHS pavements in “poor” condition are in need of major maintenance. These will be evaluated for potential projects.	≤ 12% in Poor Condition
Non-Interstate NHS	Percent of NHS pavements in Good condition	Non-interstate NHS pavements in “good” condition will be evaluated for potential preservation treatments.	≥ 40% in Good Condition

Alabama DOT – PM 2 Targets – Pavement Level of Service Measures

- **PM2 Measure: % of Interstate pavement in good condition**
 - ALDOT’s Internal Pavement Condition Rating Score for 2017: 76.98%
 - Explanation of Pavement Condition: Starting in January of 2018, ALDOT will start collecting the following metrics for pavement; Internal Roughness Index (IRI), rutting, cracking %, and faulting. Once this data has been evaluated, the pavement will be placed in either good, fair, or poor condition.
 - 4-year Performance Target: Greater than 50% (2021)

- **PM2 Measure: % of Interstate pavement in poor condition**
 - ALDOT’s Internal Pavement Condition Rating Score for 2017: 8.33%
 - Explanation of Pavement Condition: Starting in January of 2018, ALDOT will start collecting the following metrics for pavement; Internal Roughness Index (IRI), rutting, cracking %, and faulting. Once the data has been evaluated, the pavement will be placed in either good, fair, or poor condition.
 - 4-year Performance Target: Less than 5% (2021)

- **PM2 Measure: % of non-Interstate NHS pavement in good condition**
 - ALDOT’s Internal Pavement Condition Rating Score for 2017: 66.23%
 - Explanation of Pavement Condition: Starting in January of 2018, ALDOT will start collecting the following metrics for pavement; Internal Roughness Index (IRI), rutting, cracking %, and faulting. Once the data has been evaluated, the pavement will be placed in either good, fair, or poor condition.
 - 2-year Performance Target: Greater than 40% (2019)
 - 4-year Performance Target: Greater than 40% (2021)

- **PM2 Measure: % of non-Interstate NHS pavement in poor condition**
 - ALDOT’s Internal Pavement Condition Rating Score for 2017: 12.57%
 - Explanation of Pavement Condition: Starting in January of 2018, ALDOT will start collecting the following metrics for pavement; Internal Roughness Index (IRI), rutting, cracking %, and faulting. Once this data has been evaluated, the pavement will be placed in either good, fair, or poor condition.
 - 2-year Performance Target: Less than 5% (2019)
 - 4-year Performance Target: Less than 5% (2021)

5.3 Congestion Management Process

The 2016 update to the Congestion Management Process is a separate report issued by the C-PCTS MPO. Using the CMP allows the C-PCTS MPO and other transportation entities to gauge accurately where congestion problems are occurring and thus assist with the overall project prioritization process.

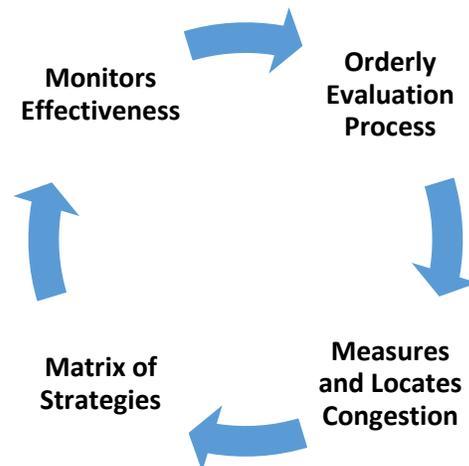
Overall, the transportation network within the Columbus-Phenix City MPO Urbanized boundary continues to function with only Peak Hours of congestion.

Under federal regulations, the Congestion Management Process is required of all metropolitan areas with a population of greater than 200,000. The C-PCTS MPO has now conducted five iterations of this study (2003, 2005, 2007, 2009, and 2011). All roadways deemed “regionally significant” were included for measurement in this study. The CMP is a systematic approach, collaboratively developed and implemented throughout the metropolitan region to provide for the safe and effective management and operation of new and existing transportation facilities with demand reduction and operational management strategies.

A key task in the development of a Congestion Management Process is the identification and structuring of congestion mitigation strategies in a fashion that is easily understood by not only technical staff, but also the public.

As shown in Figure 2-1 below, the components of the Congestion Management Process form a continuous cycle of transportation planning activities. By monitoring the effectiveness of congestion mitigation strategies and evaluating their benefits in an orderly, consistent manner, planners and decision makers can improve their ability, over time, to select the most cost-effective strategies appropriate to their specific local conditions and needs.

Figure 20



Study Tasks

Activities undertaken during the development of the Congestion Management Process study

1. Identify Corridors to be Measured;
2. Define Goals and feasible Congestion Management Strategies;
3. Development of Congestion Related Performance Measures;
4. Data Collection and Monitoring;
5. Summary of Findings and Recommendations;

As previously described the Congestion Management Process consist of “7 Steps”. With the 2011 version, policy guidance revisions led to the addition of a new step, making it an “8 Step” process.

1. Develop Congestion Management Objectives;

The objective of the C-PCMPO is to have a baseline target of Level of Service “C” or better roads in our route network. Level of Service can be defined as a term used to qualitatively describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety.

2. Identify Area of Application;

Our objective is to measure levels of congestion and delay along major corridors in our network during three different periods of day.

3. Define System or Network of Interest;

Thirty-two different segments of roadway in the Columbus-Phenix City region were selected for measurement in the 2016 Congestion Management Process report. Their individual characteristics, such as intersections, speed limits and roadway category were programmed into our software package; TravTime.

4. Develop Performance Measures;

The TravTime software used in this study offered a variety of data set results from which we could choose for use in this report. This study opted to use “Congested Time”. This is represented as the period of time (in seconds) where the monitored vehicle recording data traveled below 20 miles per hour. This category of measurement was chosen as the indicator of system performance as it is a relatively easy to understand.

5. Institute System Performance Monitoring Plan;

The routes of the Congestion Management Process are subject to varying degrees of monitoring, ranging from recurring presence and evaluation in biannual reports, to individual corridor and intersection capacity studies to regular monitoring through our soon to be operational Automated Traffic Management Center. As improvement projects are completed, such as Whittlesey Road, Veteran’s Parkway, Forrest Road, and Moon Road widening, we will continue to monitor conditions to see how traffic flow has been affected.

6. Identify and Evaluate Strategies;

Identifying strategies to achieve operations objectives is best accomplished when transportation planners and system operations collaborate. Planners have access to data on current and forecasts on future mobility concerns. Operators of transit and freight have practical awareness of existing conditions as well as the best practices utilized elsewhere that could be implemented.

Maintenance and Operations (M&O) strategies may also be implemented. This aims to enhance system performance based on the infrastructure that we already have, as opposed to building new physical capacity. It is important to note that M&O does not encompass traditional maintenance activities, such as grading, pothole repair, or resurfacing. Rather, M&O strategies focus on optimizing the performance of the transportation system.

- Operating Existing Capacity More Efficiently: Getting more out of what we have through improvements to system operations. These could include:
 - Metering traffic onto freeways;
 - Optimizing the timing of traffic signals;
 - Improving incident response;
 - Adjusting transit service schedules;
 - Improving management of work zones;
 - Identifying weather and road surface problems and rapidly targeting responses;
 - Installing a transit signal priority system;
 - Implementing access management;

- Demand Management: Encouraging changes in travel mode, time, location, or route. These changes could include:
 - Programs that encourage transit use, ridesharing, bicycling, and walking;
 - Parking management;
 - Employer-based programs;
 - Telecommuting programs;
 - Providing real-time information on transit schedules and arrivals.

- Land Use Strategies: Strategies designed to alter development patterns and design. These strategies could include:
 - Transit-oriented development;
 - Clustering development;
 - Urban design;

- Infrastructure Development: New highway, transit, or bicycle/pedestrian capacity. This sort of development could include:
 - Adding capacity to the transit system (buses, urban, or commuter rail);
 - Adding travel lanes on major freeways and streets;
 - Removing bottlenecks by realigning intersections;
 - Installing overpasses or underpasses at congested locations.

7. Implement Selected Strategies and Manage Transportation System; and

8. Monitor Strategy Effectiveness;

Successive congestion management process reports can illustrate whether strategies have been effective. Monitoring and evaluation helps to inform better decision making by transportation planners and engineers. The ways in which this may occur are as follows:

- Better understanding of the effectiveness of transportation strategies and investments. This helps with the planning of future investments and strategies to meet regional objectives;
- Fine-tuning the operation of projects already implemented and the implementation of on-going operations programs (e.g. signal re-timing, bus schedule revisions);

- Helping to calibrate and refine planning models, such as the Columbus-Phenix City traffic model, so that conditions are properly reflected;
- Improving collaboration between agencies in collecting and monitoring data, which can yield benefits in terms of both developing and refining operations objectives and performance measures as well as in identifying successful strategies;

Monitoring and evaluating information also improves the effectiveness of communications with decision makers, stakeholders, and the public, enabling:

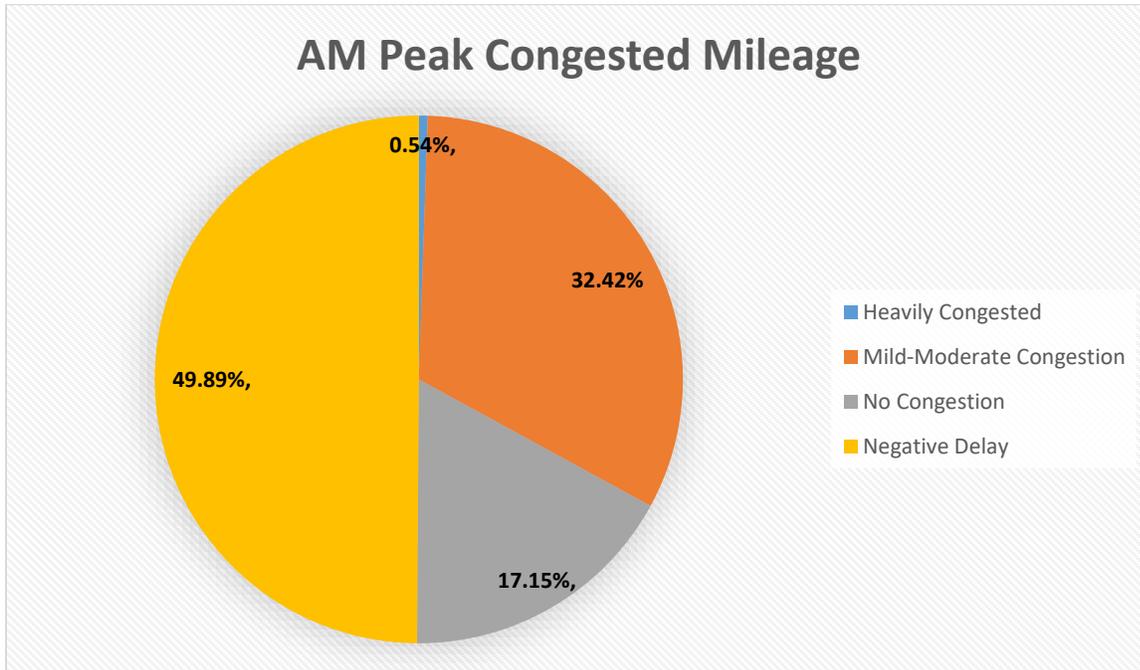
- Understanding the current status of transportation system performance more clearly, based on valid data rather than anecdotal perception;
- A way to see how progress has been made in meeting operations objectives and where opportunity for further improvement remains;

Activities C-PCTS MPO conducted an analysis of currently congested roadway segments. Based on extensive data collection, priorities were established for further study. Table 5-3 illustrates the congestion-monitoring network defined for the Columbus-Phenix City area and Table 5-4 identifies the results of the overall analysis.

Table 5-3

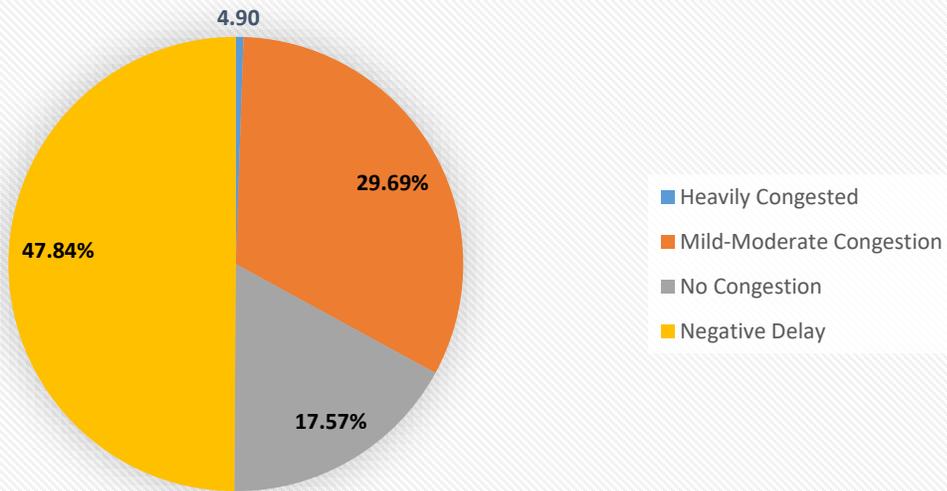
ROUTES MEASURED IN 2016 CONGESTION MANAGEMENT PROCESS				
ROUTE	BEGIN	END	COUNTY	DISTANCE
Alabama 165	US 431	101ST Airborne Road	Russell	8.13
Opelika Road	Crawford Road (13th St)	US 280	Russell/Lee	2.26
US 280	Lee Road	Veteran's Parkway	Russell	11.47
US 280	2nd Avenue	Interstate I-185	Muscogee	5.47
Buena Vista Road	Macon Road	Schatulga Road	Muscogee	6.63
Cusseta Road	10th Avenue	Fort Benning Reservation	Muscogee	3.32
Schatulga Road/Flat Rock Rd	Buena Vista Road	Beaver Run Rd (US 80)	Muscogee	3.85
St. Mary's Road	Buena Vista Road	Fort Benning Reservation	Muscogee	5.26
54th Street/Airport Thruway	River Road	Miller Road	Muscogee	4.09
Interstate 185	Smith Road	Victory Road	Muscogee	15.22
US 80 (J.R. Allen Parkway)	US 280	Lynch Road	Muscogee/Lee	13.9
Warm Springs Road	County Line Road	Milgen Road	Muscogee	6.97
Armour Road	Warm Springs Road	Sowega Road	Muscogee	1.89
Miller Road	Airport Thruway	Macon Road	Muscogee	2.7
2nd Avenue	Victory Drive	J.R. Allen Parkway	Muscogee	3.15
Floyd Road/Woodruff Farm Rd	Buena Vista Road	Milgen Road	Muscogee	4.39
Lee Road 248/Summerville Rd	US 280	Alabama 169	Lee	7.77
Talbotton Road/Milgen Road	Flat Rock Road	2nd Avenue	Muscogee	8.46
13th Street	10th Ave (Phenix City)	Macon Road	Muscogee	3.33
Moon Road/Williams Road	Whitesville Road	Miller Road	Muscogee	4.9
Manchester Expressway	2nd Avenue	J.R. Allen Parkway	Muscogee	7.57
Whitesville Road	Williams Road	Airport Thurway	Muscogee	6.43
Bradley Park Drive	River Road	Whittlesey Road	Muscogee	1.63
Double Churches Road	River Road	Veteran's Parkway	Muscogee	3.03
Macon Road	10th Avenue	Beaver Run Rd (US 80)	Muscogee	10.25
Pierce Road/Riverchase Drive	US 280	Stadium Drive	Lee	1.88
River Road	Veteran's Parkway	Double Churches Road	Muscogee	4.26
Schomburg Road	Warm Springs Road	Grey Rock Road	Muscogee	3.85
Stadium Drive	US 280	Riverchase Drive	Lee	3.14
Crawford Drive (US 80)	AL-169	3rd Avenue	Russell	11.82
University Avenue	US 27	Macon Road	Muscogee	1.44
Martin L. King, Jr. Boulevard	10th Avenue	Buena Vista Road	Muscogee	2.26

Table 5-4
Findings of the 2016 CMP



Heavily Congested	1.43 Miles	0.54%
Mild-Moderately Congested	86.55 Miles	32.42%
No Congestion	45.79 Miles	17.15%
Negative Delay	133.18 Miles	49.89%
Total Network	266.95 Miles	100%

PM Peak Congested Mileage



Heavily Congested	13.09 Miles	4.90%
Mild-Moderately Congested	79.25 Miles	29.69%
No Congestion	46.89 Miles	17.57%
Negative Delay	127.72 Miles	47.84%
Total Network	266.95 Miles	100%

Traffic Count Collection / Analysis

C-PCTS MPO utilized Traffic count data from GDOT, and ALDOT counters to monitor roadway system performance. Often, travel time / delay runs will highlight segments along a route, or at an intersection, where traffic counts may need to be collected. These “as needed” counts are an important component of the system monitoring process. Time and delay runs and traffic counts serve as integral inputs to the third mechanism to monitor system performance.

The Congestion Management Process is as much of way of thinking about congestion related issues as it is a set of technical tools. To put it another way, it uses a number of analytic tools to define and identify congestion near an activity center, in a corridor or an entire region and offers strategies, where applicable, to reduce congestion or mitigate the impacts of congestion.

The Congestion Management Process benefits greatly from a systematic approach to collecting and managing data for performance measurement. Collection of travel and delay time data is an important component of this process, but is not sufficient in and of itself for the purposes of effectively managing congestion. The Congestion Management Process also requires analysis and strategy development components. The Congestion Management Process is intended to provide strategies for inclusion in the metropolitan transportation plan, and may be used for intermediate and short-term planning purposes.

CMP Strategies

Strategies are grouped into the following broad categories:

1. Adding more Base Capacity

Increasing the number and size of highways and providing more transit and freight rail service. This can include expanding the base capacity (by adding additional lanes or building new highways) as well as redesigning specific bottlenecks such as interchanges and intersections to increase their capacity. This approach is not always possible due to constraints, both physical and fiscal, but it remains an important approach to addressing congestion, alone and in combination with other strategies.

Examples:

- Adding travel lanes on freeways, roads, and streets;
- Adding capacity to the transit system.

2. Operating Existing Capacity more Efficiently

Getting more out of what we have. This strategy deals with the operation of the existing network of streets, highways, transit systems, and freight services. Many operations-based strategies are enhanced by the use of enhanced technologies or intelligent transportation system projects. Examples of strategies that could be potentially deployed include:

Examples:

- Optimizing the timing of traffic signals;
- Pre-emptive action or faster responses to traffic incidents;
- Restricting turns at key intersections;
- Geometric improvements to roads and intersections;
- Converting streets to one-way operations; and
- Access management.

3. Efficient Travel and Land Use Patterns that Generate Less Congestion

Utilization of Travel Demand Management (TDM), encouragement of nonautomotive travel and land use management are strategies aimed to reduce the number of single-occupancy vehicle trips. In some instances, the goal is to substitute communications for travel, or to encourage regional cooperation to change development patterns and reduce sprawl.

Examples:

- Programs that encourage transit use and ridesharing;
- Curbside and parking management;
- Flexible Work Hours;
- Telecommuting Programs;

- Bikeways and other strategies that promote non-motorized travel;
- Land use controls or zoning;
- Growth management restrictions such as urban growth boundaries;
- Development policies that support transit oriented designs for corridors and communities involving homes, employment centers and retail areas.
- Incentives for high-density development, such as tax incentives

Overall Intent

The intent of the Congestion Management Process is to protect the region's investment in, and improve the effectiveness of, the existing and future transportation networks. This is achieved by using the Congestion Management Process to provide decision makers with information about transportation system performance and alternative strategies to reduce congestion, and enhance the mobility of persons and goods.

5.4 Regional Travel Demand Model

An important tool in analyzing existing and future transportation needs is the Travel Demand Model, which is maintained and updated by the GDOT Modeling Division. The regional travel demand model can serve a dual purpose with respect to monitoring system performance. First, it provides a method of determining speed and volume values on facilities not directly observed under either of the system monitoring processes described above. Second, it allows for the forecasting the future traffic congestion along broadly defined roadway corridors or activity center areas.

Some ways in which travel demand can be visually represented is through the development of "build/no build" scenario traffic models and travel time shed models. The build/no build traffic model depicts various scenarios depicting the effect that building or omitting planning transportation improvements would have on traffic volumes. How the model works is as follows: demographic forecasts are made as to the likely number of homes, businesses and retail stores in a specific area.

Formulas are then applied to calculate how many daily trips each would generate as well as attract. These projections are then aggregated to depict what overall traffic volumes would be in the area. These volumes are then "loaded" by the software to try to get all of the trips completed, from origin to destination, using the road network. Various projects can be added or detracted from the network, which then affects the volumes on existing roads. If a new project were to be represented on the model, some of the traffic in the network would be diverted to the new route. If a project is not built, this traffic is diverted to existing routes. The model calculates what the likely path of trips will be, given the route network and costs in terms of time and distance, between the point of origin and the destination. Doing this allows planners to forecast where future investment may be needed and thus begin the process of preparing projects to address identified issues.

Why Travel Demand Model?

§450.324 Development and content of the **metropolitan transportation plan**.

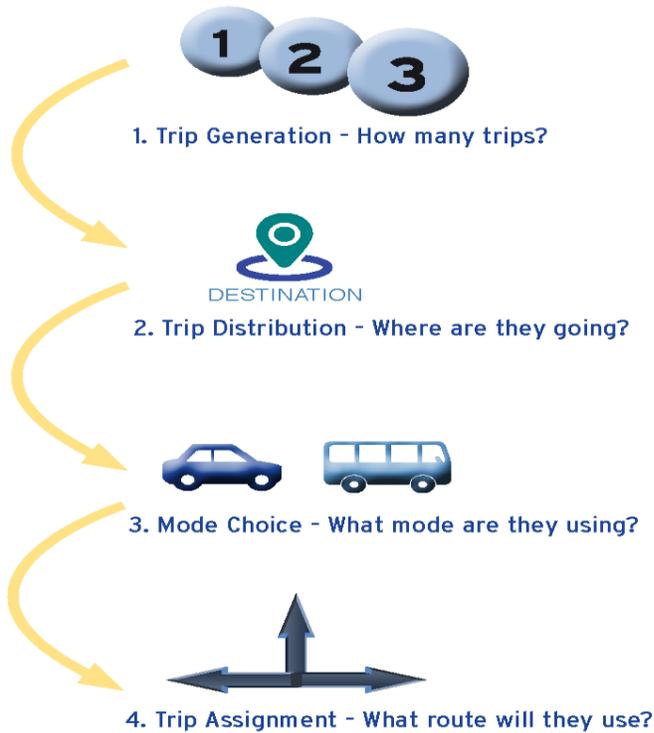
- (a) The metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon as of the effective date. In formulating the transportation plan, the MPO shall consider factors described in § 450.306 as the factors relate to a minimum 20-year forecast period. In nonattainment and maintenance areas, the effective date of the transportation plan shall be the date of a conformity, determination issued by the FHWA and FTA. In attainment areas, the effective date of the transportation plan shall be its date of adoption by the MPO.
- (f) The metropolitan transportation plan at a minimum shall include:
- (1) The current and projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan;
 - (2) Existing and proposed transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, non-motorized transportation facilities (e.g., pedestrian walkways and bicycle facilities), and intermodal connectors that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan;
 - (3) A description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with § 450.306(d).
 - (4) A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in § 450.306(d), including –
 - (i) Progress achieved by the metropolitan planning organization in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data; and
 - (ii) For metropolitan planning organizations that voluntarily elect the develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets.

What is a Travel Demand Model and its Purpose?

- State-of-the-art analysis tool
- To replicate the existing trip making characteristics
- To forecast future travel demand
- To identify transportation network deficiencies and prioritize projects.

Figure 21

Travel Demand Model Four-Step Approach

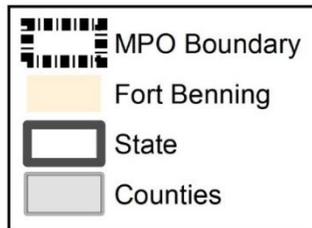
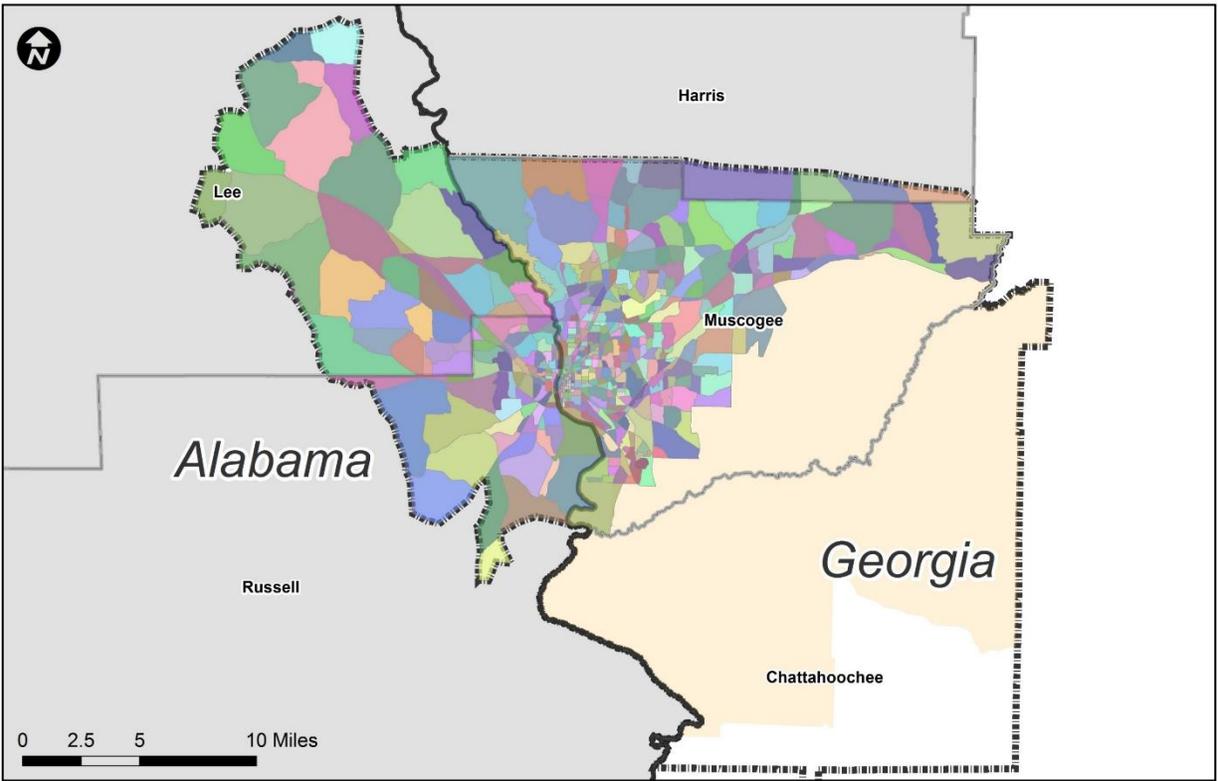


Components of the Travel Demand Model

Trip generation determines the “productions” and “attractions” produced for each TAZ based on households and employment, respectively. Each TAZ contains people and households that generate vehicle trips. Each TAZ also contains employment and retail that attracts some of those trips. Trip distribution creates relationships between TAZs based on the number of generated trips in the “origin” TAZ, number of attracted trips to the “destination” TAZ, and the travel time between each pair of TAZs. The result of trip distribution shows how many trips occur between each pair of TAZs.

Trip assignment takes the trips allocated between TAZs and assigns them to specific roadway segments or paths between specific pairs of TAZs. The trip assignment step allocates those trips to specific roadway segments based on the shortest travel time between the two TAZs. By accumulating all assigned trips from all TAZ pairs on all roadway segments, the travel demand model provides an estimate of future traffic volumes for each segment in the roadway network. The TAZ map is shown on Figure 6 on the following page.

Map 5-2: 2015 Traffic Analysis Zones (TAZ)



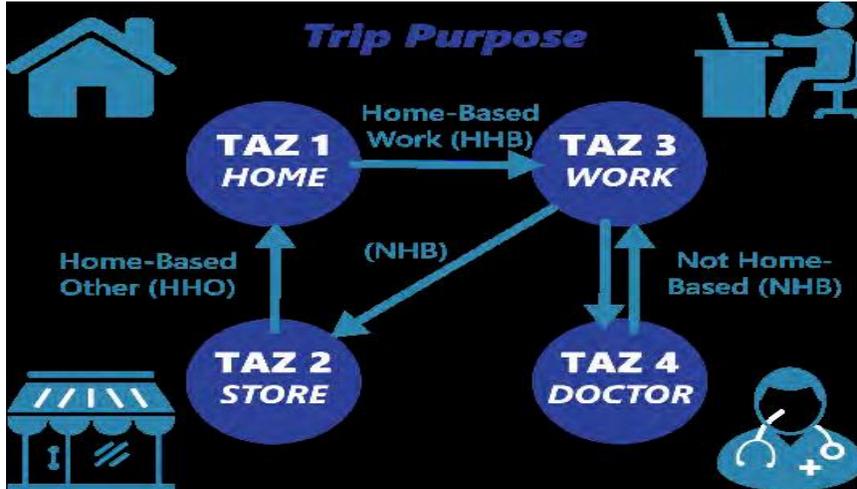
Total Number of TAZs:

Model Area: 654

MPO Area: 518

Note: Multi color represents different TAZs

Figure 22



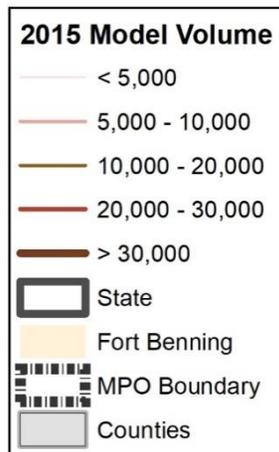
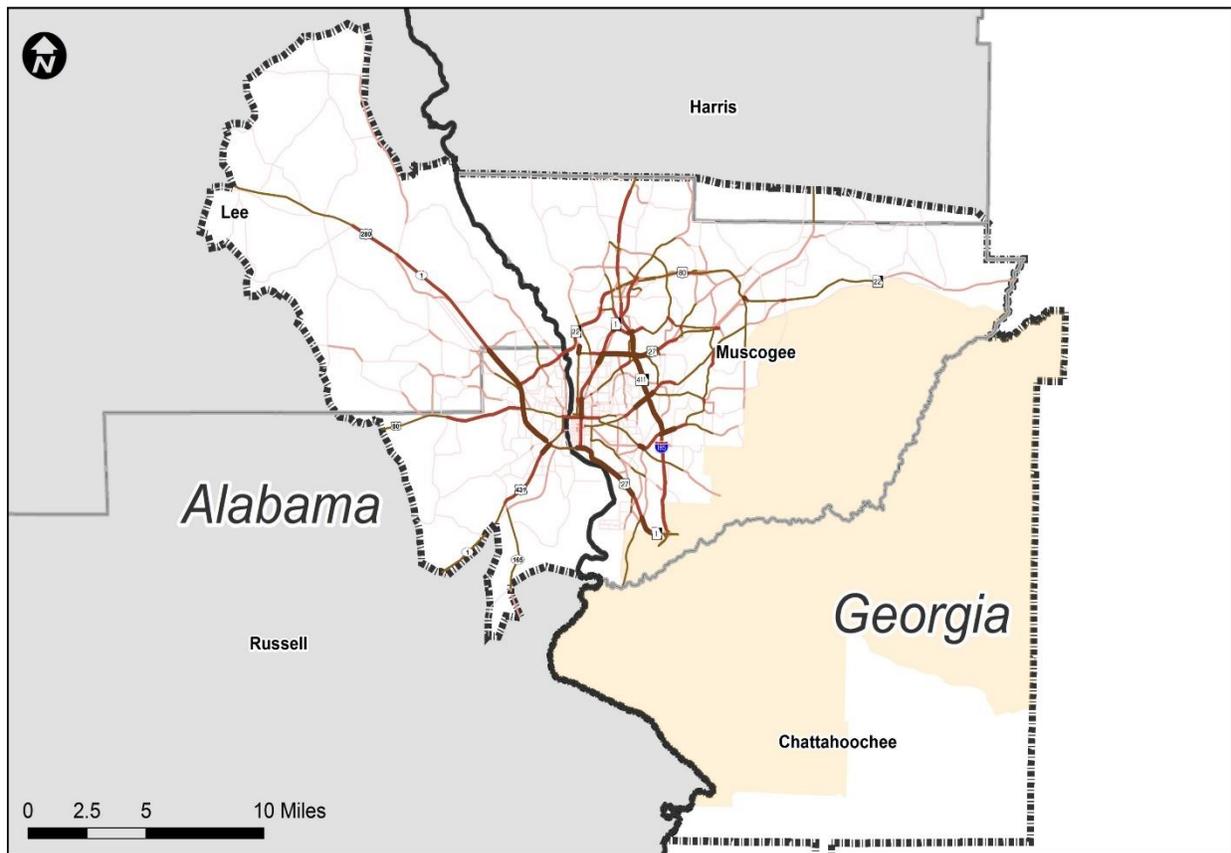
Like all computer processes, travel demand models are dependent on accurate input data. Checking model validity is essential. The “base year condition” is used to check model accuracy by using the existing roadway network and existing socio-economic data, and comparing the model results against actual roadway counts. Through an iterative process called calibration, variables within the roadway networks are adjusted to vary the model’s predicted traffic volumes. When a wide variety of statistical goals are met, the model is accepted as calibrated, and the adjusted roadway network is “loaded” with the future-year socio-economic data, and future-year runs are made.

Model runs representing future year conditions can explore many different alternatives. Roads can be widened or completely new roads inserted into the network. Intersection improvements or traffic signal synchronization can be modeled using higher street travel speeds. The model makes it easy to study the effects, expanded, or curtailed residential growth in different parts of the community.

Travel Demand Model Results

The first step in the modeling process is to understand the 2015, or base year conditions. Figure 5 --- on the following page depicts these modeled traffic volumes for the region. These base year values will be the foundation for the future year projections. The darkest red depicts the facilities with volumes of greater than 30,000 vehicles per day. The darkest orange shows the facilities with between 20,000 to 30,000 vehicles per day. The heaviest volumes are found along I-185, U.S. 80/J.R. Allen Parkway, and US 280/431 and at various intersections in the urban core.

Map 5-3: 2015 Total Daily Traffic Volumes



Note: Total volume for both direction

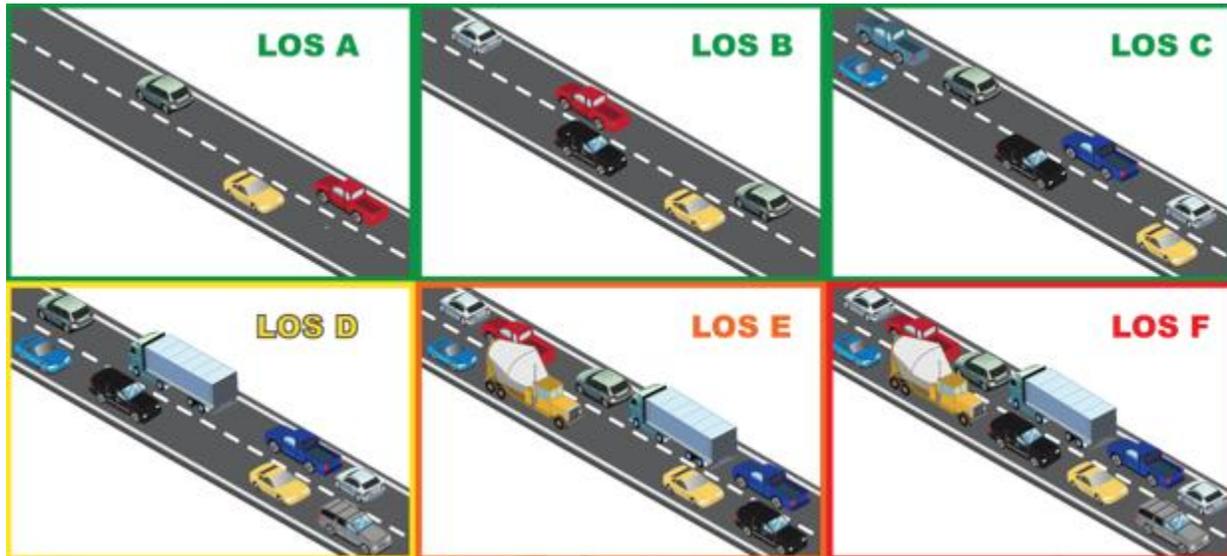
Operations Performance Review

Volume-to-capacity ratio is a key tool for identifying roadway segments that are operating at a deficient level of service. Level of service (LOS) designations are letter grades “A” through “F”, which are similar to report card grades. Level of service “A” is considered the best and a free flow condition, with grades “E” and “F” indicating unsatisfactory operations. While “A” is the best level of service, transportation infrastructure investments are expensive and funding resources are constrained, which makes achieving LOS “A” on all facilities in a transportation network infeasible. Generally, an acceptable LOS is defined as “D” or better for urbanized areas. Table 5-5- shows the letter grades for each Level of Service and provides a brief description of traffic flows associated with each, while Figure 000 graphically describes LOS.

Table 5-5 – (General Descriptions of Levels of Service (LOS))

Level of Service	Description
A	Represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high.
B	Within the range of stable flow, but the presence of others in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A.
C	Within the range of stable flow, but LOS C marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
D	LOS D represents high-density, but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
E	LOS E represents operating conditions at or near capacity levels. Freedom to maneuver within the traffic stream is extremely difficult. Comfort and convenience levels are extremely poor and driver frustration is generally high.
F	LOS F is used to define forced or breakdown flow. This condition exists when the amount of traffic approaching a point exceeds the amount that can traverse the point.

Figure 23 – Level of Service



Corridors Experiencing a Vehicles-to-Capacity Ratio Over 0.55 (2015 Existing Network)

A daily Level of Service is calculated by the daily traffic on a facility derived from the model and dividing that number by the daily capacity of the roadway. A daily Level of Service of less than 0.7 indicates that the roadways are operating at LOS C or better. LOS D has an operational value between 0.7 and 0.85; LOS E between 0.85 and 1.0 and LOS F is greater than 1.

Table 5-6
2015 Model Validation

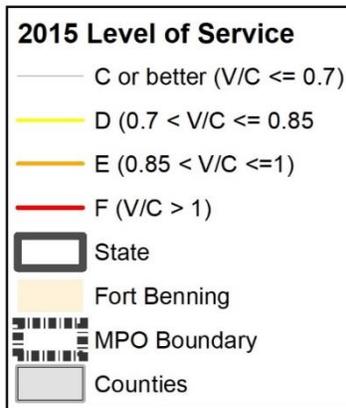
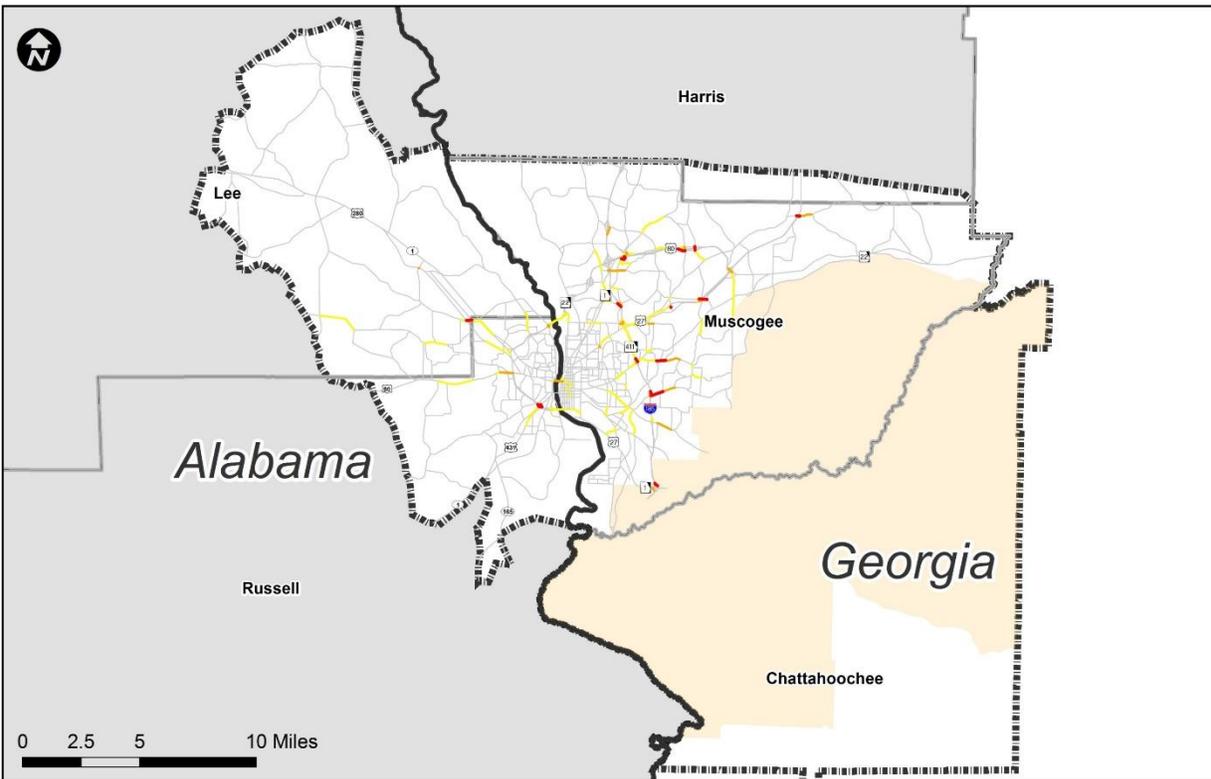
2015 MODEL VALIDATION								
Model Area Highway Mileage & Vehicle Miles Traveled (VMT) by Facility Type								
Facility Type	Mileage (miles)		VMT (1000, miles)		VMT Distribution		VMT Difference (Model vs. Observed)	
	Observed (1)	Model	Observed (1)	Model	Observed (1)	Model	Difference	%
Interstates	37	35	1,337	1,373	19%	20%	36	2.70%
Expressway	20	21	659	567	9%	8%	-92	14.0%
Principal Arterial	146	147	2,280	2,320	33%	33%	40	1.80%
Minor Arterial	292	291	1,680	1,648	24%	24%	-32	1.90%
Collectors	585	565	995	1,022	15%	15%	27	2.70%
Total	1,080	1,059	6,951	6,930	100%	100%	-21	0.30%

(1) 2015 GDOT VMT – GDOT Mileage by Route and Road System Report 445
http://www.dot.ga.gov/DriveSmart/Data/Documents/400%20Series/445/DPP445_2015.pdf

Maps were created to show the congestions on the roadway networks mentioned above. Daily Volume-to-Capacity (V/C) ratio of 0.7 is chosen as the cutoff point. Though a value of 0.7 may not indicate a serious congestion level, it is high, warranting further attention.

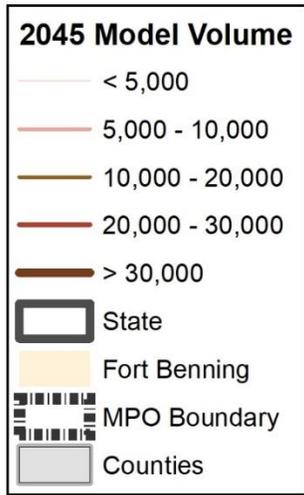
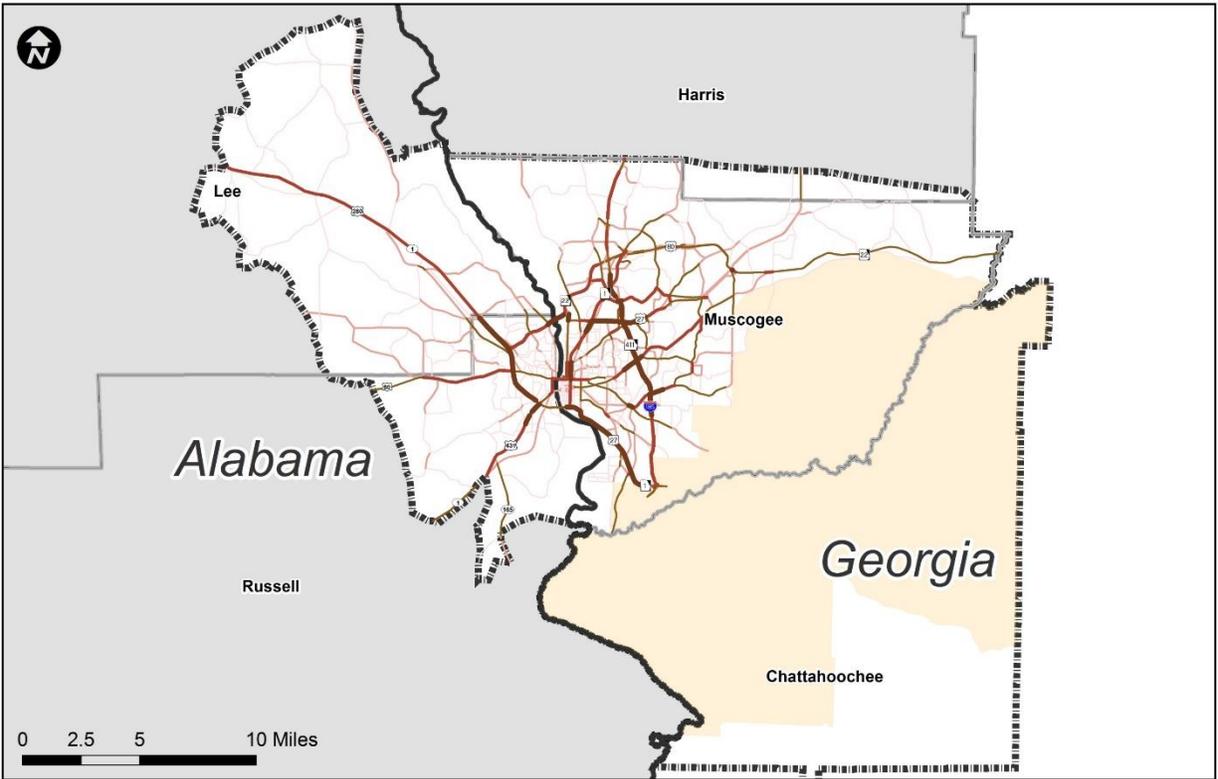
As seen from Maps 5-4, 5-5, 5-6, and 5-7, more links are congested in the 2045 network, compared with 2019 base year. If no improvements were made to the highway network to the year 2045, it still would be called on to carry the number of trips forecasted for 2045. Major travel corridors will become markedly more congested.

Map 5-4: 2015 Daily Level of Service (LOS)



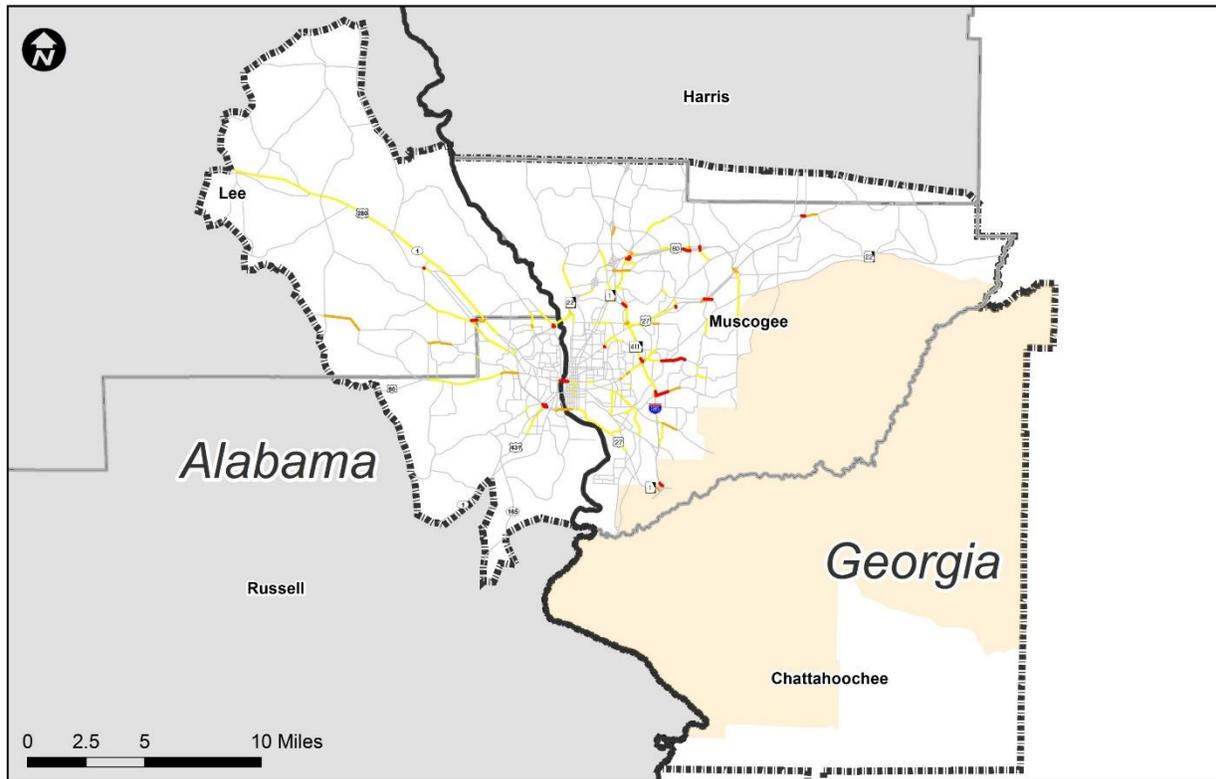
$$LOS = \frac{\textit{Modeled Daily Traffic}}{\textit{Daily Capacity}}$$

Map 5-5: 2045 “Do-Nothing” Daily Total Daily Traffic Volumes



$$LOS = \frac{\textit{Modeled Daily Traffic}}{\textit{Daily Capacity}}$$

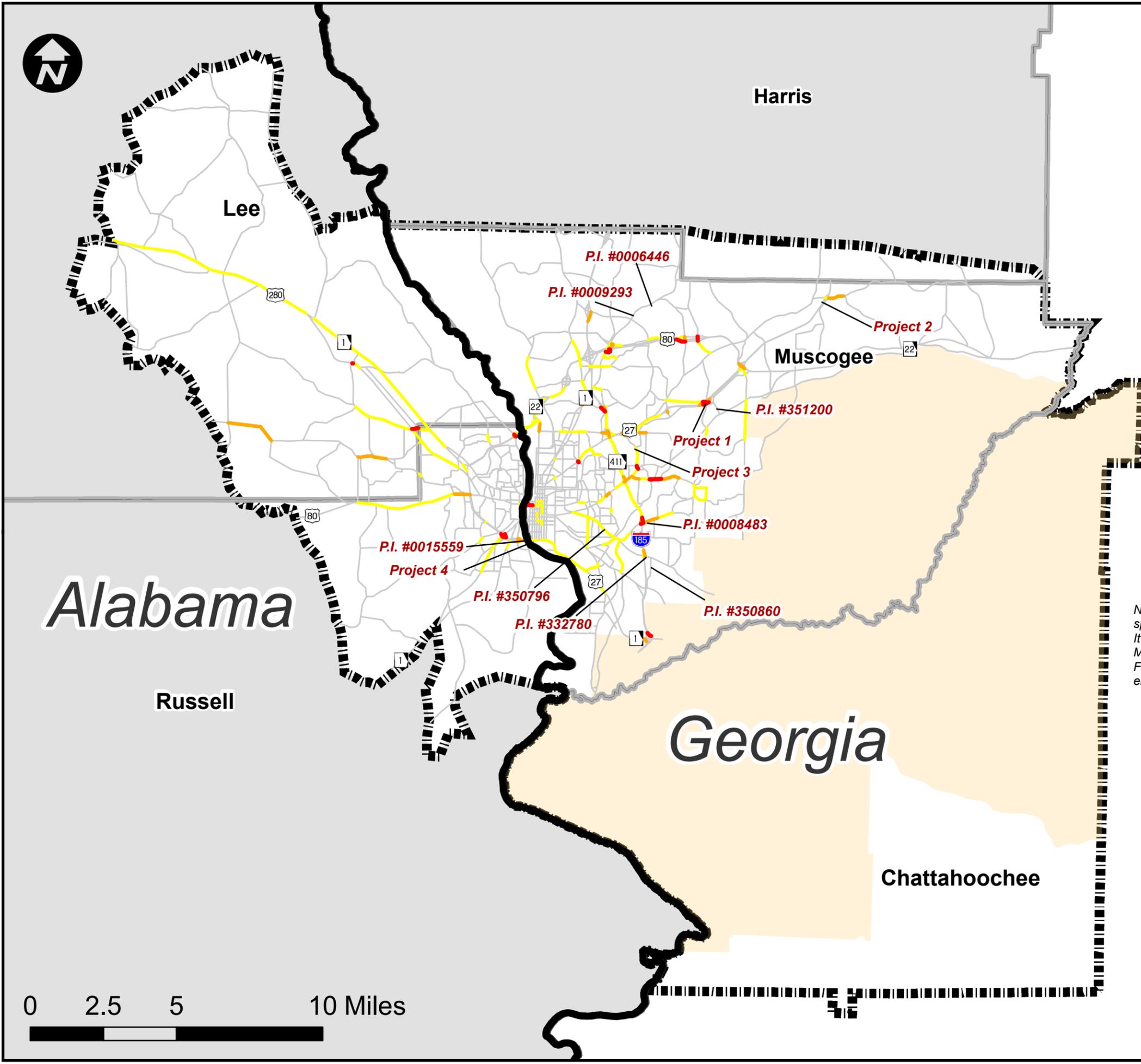
Map 5-6: 2045 “No-Nothing” Daily Level of Service (LOS)



2045 Level of Service

- C or better ($V/C \leq 0.7$)
- D ($0.7 < V/C \leq 0.85$)
- E ($0.85 < V/C \leq 1$)
- F ($V/C > 1$)
- ▭ State
- ▭ Fort Benning
- ▭ MPO Boundary
- ▭ Counties

$$LOS = \frac{\text{Modeled Daily Traffic}}{\text{Daily Capacity}}$$



Alabama

Georgia



5th Network (Remainder of Programmed MTP Projects) Columbus-Phenix City MPO

P.I. #	Project	Type
351200	Miller Road from Warm Springs Rd to Macon Rd	Widening
332780	St. Mary's Road from Robin Rd to Northstar Dr	Widening
350860	Farr Road from Old Cusseta Rd to St. Mary Rd	Widening
350796	Buena Vista Road from Illges Rd to Wynnton Rd	Widening & Road Diet
0006446	SR 1 / US 27 Veteran's Parkway from Turnberry Ln to SR 315	Widening
0008483	CS 2228/Buena Vista Road from Linden Cir to Floyd Rd	Widening
0009293	SR 1/US 27 - Veteran's Parkway from Old Moon Rd to Turnberry Lane	Widening
0015559	SR 520/US 280 @ Chattahoochee River in Columbus	Bridge Replacement
1	Woodruff Farm Road from Miller Rd to Milgen Rd	New Road under Manchester Expressway / ALT 85
2	County Line Road from Manchester Expressway to Mehaffey Rd	Interchange Improvements & Widen Bridge
3	University Avenue from Manchester Expressway to Macon Rd	Road Diet
4	SR 520 / US 280 (Victory Drive, Columbus) from End of Bridge to 6th Avenue	Widen

Projects Not Included in 5th Network

P.I. #	Project	Type	Reason why is not included
0011434	CR 62/ Cusseta Rd from Benning Rd to Stanton Dr	Roadway Rehab	No capacity is added
0013926	SR 85/US 27 ALT SB & NB @ CR 1660/Miller Rd in Columbus	Bridge Replacement	No capacity is added
0016508	SR 520 / US 27 @ First Division Rd 7.5 MI NW of Cusseta	Bridge	No capacity is added
0005749	Whittlesey Rd from Whitesville Rd to Bradley Park Dr	Widening	local road which is not in the network
	Cusseta Road from N. Lumpkin Rd to 23rd Avenue	Roundabout	No capacity is added
	Brown Avenue from Cusseta Rd to Andrews Rd	Roundabout	No capacity is added
	Williams Road from veteran's Pkwy to Franciscan Woods Dr	Widening	No capacity is added
	Forrest Road from Macon Rd to Woodruff Farm Rd	Widening & Intersection	No capacity is added
	Woodland Drive from US Hwy 165 to Sandford Rd	Widen and Resurface	No capacity is added
	Williams Road @ I-185 (North Bound Exit Ramp)	Interchange	No capacity is added
	Brickyard Road from Alabama Hwy 165 to City Limits - Phenix City	Widen and Resurface	No capacity is added
	Whitesville Road from Whittlesey Rd to Williams Rd	Widening	No capacity is added
	CR - 235 from CR - 240 to CR - 246	Widen and Resurface	No capacity is added
	Sandfort Road form Little Uchee Creek to City Limits - Phenix City	Widen and Resurface	No capacity is added
	Cusseta Road from 10th Avenue to North Lumpkin Rd	Widening	No capacity is added
	CR - 145 from CR - 149 to US 280	Widen and Resurface	No capacity is added
	Coffield Drive from US Hwy 80 to County Line	Widen and Resurface	No capacity is added
	Barrow Road from U.S. Hwy 80 to County line	Widen and Resurface	No capacity is added
	CR - 179 from CR - 246 to US 280	Widen and Resurface	No capacity is added
	Opelika Road from County Line to City Limits - Phenix City	Widen and Resurface	No capacity is added
	Buena Vista Road from Hunt Avenue to Wright Dr	Intersection	No capacity is added
	Buena Vista Road from Floyd Rd to McBride Dr	Intersection	No capacity is added
	Auburn Road from City Limits - Phenix City to County Line	Widen and Resurface	No capacity is added
	Seale Road from Alabama Hwy 165 to City Limits - Phenix City	Widen and Resurface	No capacity is added
	South Seale Road from US Hwy 431 to Alabama Hwy 165	Widen and Resurface	No capacity is added
	Dillingham Street Bridge from Bay Avenue to Broad St	Bridge Restoration	No capacity is added
	Uchee Hill Highway from US Hwy 431 to End	Widen and Resurface	No capacity is added
	Bradley Road from Nuckols Rd to State Route 165	Widen and Resurface	No capacity is added
	CR - 212 from Russell County Line to CR - 240	Widen and Resurface	No capacity is added
	Terminal Road from Alabama Hwy 165 to End	Widen and Resurface	No capacity is added

NOTE: The MPO model is a regional model that is validated on the regional basis and not for specific corridors. It is able to provide general guidance on where the volume is exceeding the capacity, but the MPO model alone would not be sufficient for determining/confirming a Logical Termini. For a Logical Termini, additional information like traffic counts, sub-area validation and environmental impacts will need to be collected and conducted.

- LOS = Modeled Daily Traffic / Daily Capacity
- Daily Capacity is estimated using peak hour factor (K-factor) and directional split factor (D-factor)
- K-factor and D-factor are based on Highway Capacity Manual 2016.

2045 Level of Service

- C or better ($V/C \leq 0.7$)
- D ($0.7 < V/C \leq 0.85$)
- E ($0.85 < V/C \leq 1$)
- F ($V/C > 1$)

State
 Fort Benning
 MPO Boundary
 Counties



6th Network (Financially Constrained) Columbus-Phenix City MPO

P.I. #	Project	Type
351200	Miller Road from Warm Springs Rd to Macon Rd	Widening
332780	St. Mary's Road from Robin Rd to Northstar Dr	Widening
350860	Farr Road from Old Cusseta Rd to St. Mary Rd	Widening
350796	Buena Vista Road from Illges Rd to Wynnton Rd	Widening & Road Diet
0006446	SR 1 / US 27 Veteran's Parkway from Turnberry Ln to SR 315	Widening
0008483	CS 2228/Buena Vista Road from Linden Cir to Floyd Rd	Widening
0009293	SR 1/US 27 - Veteran's Parkway from Old Moon Rd to Turnberry Lane	Widening
0015559	SR 520/US 280 @ Chattahoochee River in Columbus	Bridge Replacement
1	Woodruff Farm Road from Miller Rd to Milgen Rd	New Road under Manchester Expressway / ALT 85
2	County Line Road from Manchester Expressway to Mehaffey Rd	Interchange Improvements & Widen Bridge
3	University Avenue from Manchester Expressway to Macon Rd	Road Diet

See Page 2 for the table for the projects that are not included in the 6th network

Alabama

Russell

Georgia

Chattahoochee

Harris

Lee

Muscogee

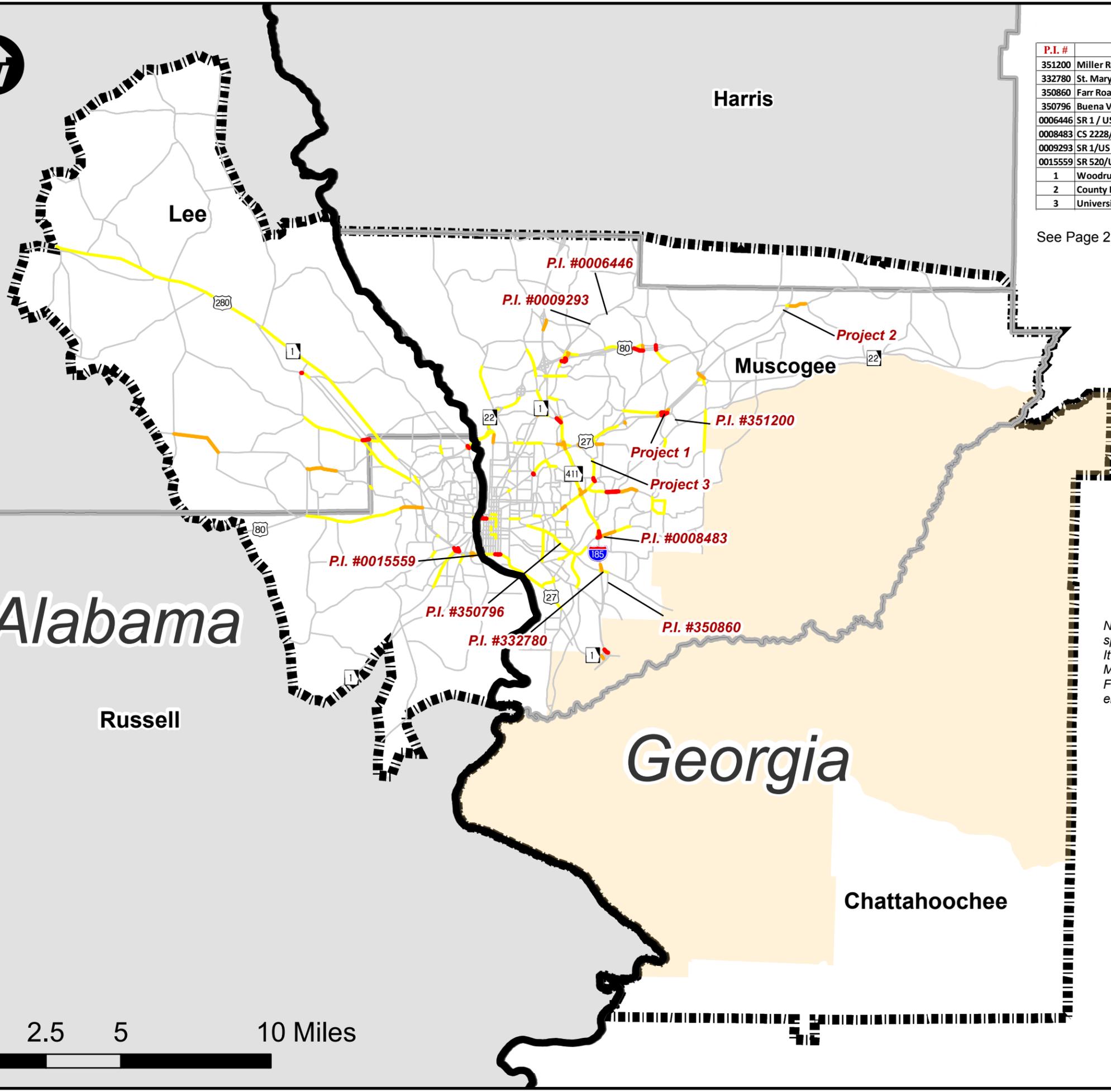
0 2.5 5 10 Miles

NOTE: The MPO model is a regional model that is validated on the regional basis and not for specific corridors. It is able to provide general guidance on where the volume is exceeding the capacity, but the MPO model alone would not be sufficient for determining/confirming a Logical Termini. For a Logical Termini, additional information like traffic counts, sub-area validation and environmental impacts will need to be collected and conducted.

- LOS = Modeled Daily Traffic / Daily Capacity
- Daily Capacity is estimated using peak hour factor (K-factor) and directional split factor (D-factor)
- K-factor and D-factor are based on Highway Capacity Manual 2016.

2045 Level of Service

- C or better ($V/C \leq 0.7$)
- D ($0.7 < V/C \leq 0.85$)
- E ($0.85 < V/C \leq 1$)
- F ($V/C > 1$)
- ▭ State
- ▭ Fort Benning
- ▭ MPO Boundary
- ▭ Counties



5.5 Bridges

It is important to overall regional mobility and safety that all roadway bridges and other structures such as sign or pedestrian structure be maintained in good condition and remains serviceable for loads and traffic likely to be carried. According to federal regulation, all structures must be inspected at least once every two years and appropriate ratings assigned. The Federal Highway Administration (FHWA), in consultation with the States, has assigned a sufficiency rating (SR) to each bridge (20 ft. or more) inventoried. Formula (SR) rating factors are as outlined in the current “recording and Coding Guide for Structures Inventory and Appraisal (SI&A) of the Nation’s bridges may be found deficient by either structural or functional terms. Structurally deficient bridges are those unable to carry the loads and traffic anticipated in a safe manner. Functionally obsolete bridges are those that do not have the capacity to carry the volume of traffic anticipated to be carried during its service life.

The Federal Highway Administration has developed a formula for prioritizing bridges that evaluate the above parameters, and provides an overall rating for the bridge called the “sufficiency”. The sufficiency ratings assigns numerical values ranging from 0 to 100 to a given bridge with the following percentage points applied to each parameter:

Table 5-7
Rating System for Evaluating Bridge Sufficiency

Grading Category	Percentage of Overall Sufficiency Score
Structural Adequacy	55
Functional adequacy and serviceability	35
Essential for Public Use	15
Cumulative Top Score	100

Federal Highway Bridge Replacement and Rehabilitation Program

A bridge must be at least 20’ in length to qualify for replacement or rehabilitation funds. A sufficiency rating of less than 50 and classification as structural deficient or functionally obsolete is required to qualify a bridge for replacement, whereas, a sufficiency rating of less than 80 will qualify a bridge for rehabilitation. The following is a discussion of the three major parameters:

Structural Adequacy – This is determined from a list of posted bridges, bridge inspection reports, district recommendations, and is part of the sufficiency rating. This is the most important factor in the evaluation process as a bridge failure could be catastrophic. The actual field conditions of the bridges are determined by reviewing the bridge inspection reports. The recommendations from the districts, which reflect first-hand knowledge of the relative condition of the various bridges in their jurisdiction, are also very helpful in determining structural adequacy.

Functional Adequacy and Serviceability – This is determined from the bridge inspection reports, district recommendations, and is part of the sufficiency rating. The geometry of the bridge is evaluated in the bridge inspection report. Generally, the most important factor of the bridges' geometry is the clear roadway width. Narrow bridges can be widened rather than replaced if they are structurally adequate. Serviceability is related to factors like stream scour, maintenance of movable bridges, and deck deterioration, etc. The frequency and severity of marine, railroad and automotive traffic accidents are important factors. They are reflected in the bridge inspection reports and district recommendations.

Essential for Public Use – This is determined by the traffic count, class of highway, available detour routes, and is part of the sufficiency rating. The structural and functional adequacy of the bridge is evaluated with the traffic count to minimize the exposure of motorists to unsafe conditions. If two bridges exist with the same degree of inadequacy, the one with the higher volume of traffic would receive the greatest priority. Additionally, if the bridge is on a truck or school bus route or crosses a major river or street, it would, similarly, receive extra attention. Non-redundant routes (those without available detours) would have a higher priority than redundant routes.

Using data from the National Bridge Inventory (NBI) structures within the C-PCTS MPO planning area were examined to determine their overall sufficiency rating. The NBI is a nationally maintained aggregation of structure inventory and appraisal data collected to fulfill the requirements of the federally mandated National Bridge Inspection Standards. Each State shall prepare and maintain an inventory of all bridges subject to the NBIS.

Of the bridges included in the inventory, 14 were rated at below the 50% rating threshold. For these structures:

- 7 were in Muscogee County
- 0 were in Chattahoochee County
- 3 were in Harris County
- 0 was in Lee County
- 4 were in Russell County

Table 5-8 lists the ten structures for Muscogee County, and Harris County in Georgia and the top ten in Lee and Russell Counties in Alabama, which have the lowest sufficiency ratings. It should be emphasized that these bridges are still safe for vehicular travel, but may be subject to weight restrictions or other prohibitions on the type of vehicles, which may cross. It at any time, a bridge is determined to be structurally unsound for light vehicular or pedestrian travel, it is closed immediately.

Table 5-8
Listing of Bridges with Lowest Sufficiency Ratings in the C-PCTS MPO Area

GEORGIA BRIDGES

Location	ID #	Rating	County
Ossahatchie Creek @ US 27 Alt / SR 85	145-0008-0	48.9%	Harris
Ossahatchie Creek @ Harris Road	145-5019-0	47.6%	Harris
Ossahatchie Creek @ Mt. Airy Road	145-5021-0	36.1%	Harris
SR 85 (US 27 ALT) 11.53 N @ Psalmond Road	215-0025-0	48.2%	Muscogee
M-8056 Miller Road @ US 27 ALT. SBL	215-0031-0	45.7%	Muscogee
I-185 (SR 411) Exit 4 @ Buena Vista Road	215-0047-0	47.6%	Muscogee
Lindsey Creek @ Decatur Street	215-5017-0	44.0%	Muscogee
Lindsey Creek @ Morris Road	215-0094-0	48.8%	Muscogee
NS Railroad @ 6th Avenue	215-0129-0	49.9%	Muscogee
NS RR & RR Street @ SR 85	215-5051-0	49.7%	Muscogee

ALABAMA BRIDGES

Location	ID #	Rating	County
CO 115 @ Stafford Creek	000541	19.0%	Russell
28th Avenue @ Trib Holland Creek	015595	27.0%	Russell
20th Avenue @ Holland Creek	008667	40.9%	Russell
CO 137 @ Uchee Creek	000260	45.2%	Russell
2nd Avenue @ CSX Railroad	001209	50.7%	Lee
CO 28 @ Horselot Creek	002937	52.8%	Russell
Broad Street @ Holland Creek	001088	56.6%	Russell
CO 39 @ Uchee Creek	007022	58.0%	Russell
CO 137 @ Uchee Creek Relief	001899	58.3%	Russell
CO 137 @ Little Uchee Creek Relief	002233	58.3%	Russell

5.6 Railroad Grade Crossings Evaluation

The C-PCTS MPO consulted with the datum tables prepared by the Federal Railroad Administration (FRA) to prepare a listing of which road/rail grade crossings have the highest probability of accidents occurring. The FRA utilizes a computer model called the Web Accident Prediction System (WBAPS) to generate reports listing public highway-rail intersections for a State, County, City or railroad ranked by predicted collisions per year. These reports include brief lists of the Inventory record and the collisions over the last 10 years along with a list of contacts for further information.

The model, which provides the user an analytical tool, which combined with other site-specific information, can assist in determining where scarce highway-rail grade crossing resources can best be directed. This computer model does not rank crossings in terms of most to least dangerous. Use of WBAPS data in this manner is incorrect and misleading.

The lists produced are only for public at-grade highway-rail intersections for the entity listed at the top of the page. The parameters shown are those used in the collision prediction calculation.

RANK: Crossings are listed in order and ranked with the highest collision prediction value first.

PRED COLLS: The accident prediction value is the probability that a collision between a train and a highway vehicle will occur at the crossing in a year.

CROSSING: The unique, site specific identifying DOT/AAR Crossing Inventory Number.

RR: The alphabetic abbreviation for the railroad name.

CITY: The city in (or near) which the crossing is located.

ROAD: The name of the road, street, or highway (if provided) where the crossing is located.

NUM OF COLLISIONS: The number of accidents reported to FRA in each of the years indicated. Note: Most recent year is partial year (data is not for the complete calendar year) unless Accidents per Year is "AS OF DECEMBER 31".

DATE CHG: The date of the latest change of the warning device category at the crossing which impacts the collision prediction calculation, e.g., a change from crossbucks to flashing lights, or flashing lights to gates. The accident prediction calculation utilizes three different formulas, on each for (1) passive devices, (2) flashing lights only, and (3) flashing lights with gates. When a date is shown, the collision history prior to the indicated year-month is not included in calculating the accident prediction value.

WD: The type of warning device shown on the current inventory record for the crossing where:
FQ: Four Quadrant Gates; GT: All Other Gates; FL: Flashing lights; HS: Wigwags, Highway
Signals, Bells, or Other Activated; SP: Special Protection (e.g., a flagman); SS: Stop Signs; XB:
Cross bucks; OS: Other Signs or Signals; NO: No Signs or Signals.
TOTAL TRAINS: Number of total trains per day.

TOTAL TRACKS: Total number of railroad tracks between the warning devices at the crossing.

TTBL SPD: The maximum timetable (allowable) speed for trains through the crossing.

HWY PVD: Is the highway paved on both sides of the crossing.

HWY LNS: Number of lanes of roadway at crossing.

AADT: The Average Annual Daily Traffic count for highway vehicles using the crossing.

Table 5-9 on the following pages consist of railroad crossings within Chattahoochee and Muscogee
Counties in Georgia, Lee, and Russell Counties in Alabama

Tables 5-9: Columbus-Phenix City MPO Region
Railroad Crossings Ranked by Collision Probability Ratings

RANK	PREDICTED COLLISION	CROSSING ID	RR CO	STATE	COUNTY	CITY	ROAD	NUMBER OF COLLISIONS					WD	TOT TRN	TOT TRK	TTBL SPD	HWY PVD	HWY LNS	AADT
								2018	2017	2016	2015	2014							
1	0.000785	635721F	NS	GA	Chattahoochee	Cusseta	Broad St	0	0	0	0	0	NO	0	1	10	YES	2	1,030
2	0.000304	635723U	NS	GA	Chattahoochee	Cusseta	McNaughton St	0	0	0	0	0	NO	0	1	10	YES	1	715
3	0.000304	635727W	NS	GA	Chattahoochee	Cusseta	Railroad St	0	0	0	0	0	SS	0	1	10	YES	1	194
4	0.000304	635725H	NS	GA	Chattahoochee	Cusseta	Lafayette St	0	0	0	0	0	SS	0	1	10	YES	2	480
5	0.000304	635719E	NS	GA	Chattahoochee	Cusseta	Firetower Rd	0	0	0	0	0	NO	0	1	10	YES	2	709
6	0.000304	635724B	NS	GA	Chattahoochee	Cusseta	McNaughton St	0	0	0	0	0	NO	0	1	10	YES	2	715
7	0.000168	635718X	NS	GA	Chattahoochee	Cusseta	Manta Road	0	0	0	0	0	NO	0	1	10	NO	2	80

RANK	PREDICTED COLLISION	CROSSING ID	RR CO	STATE	COUNTY	CITY	ROAD	NUMBER OF COLLISIONS					WD	TOT TRN	TOT TRK	TTBL SPD	HWY PVD	HWY LNS	AADT
								2018	2017	2016	2015	2014							
1	0.189825	718968S	NS	GA	Muscogee	Columbus	2nd Avenue	0	0	0	0	0	SS	9	1	30	YES	3	3741
2	0.155711	635751X	CCHA	GA	Muscogee	Columbus	10th Avenue	0	1	0	0	1	XB	6	1	10	YES	4	6090
3	0.122115	635764Y	CCHA	GA	Muscogee	Columbus	Veteran's Parkway	0	0	0	0	0	XB	4	1	10	YES	4	4050
4	0.088552	718893V	NS	GA	Muscogee	Columbus	12th Street	0	0	0	0	0	XB	13	5	10	YES	2	3000
5	0.070990	718960M	NS	GA	Muscogee	Columbus	8th Avenue	0	0	1	0	0	XB	12	1	10	YES	2	1569
6	0.052521	719030H	NS	GA	Muscogee	Columbus	18th Street	0	0	0	0	1	XB	4	1	15	YES	2	1440
7	0.041187	718915T	NS	GA	Muscogee	Columbus	Buena Vista Road	0	0	0	0	0	GT	13	1	10	YES	7	26800
8	0.040350	719056K	NS	GA	Muscogee	Columbus	Manchester Expressway	0	0	1	0	0	GT	1	1	15	YES	5	18600
9	0.031377	718965W	NS	GA	Muscogee	Columbus	5th Avenue @ 9th Street	0	0	0	0	0	SS	12	1	30	YES	3	1569
10	0.029889	635762K	CCHA	GA	Muscogee	Columbus	6th Avenue @ 6th Street	0	0	0	0	0	XB	7	1	10	YES	5	3380
11	0.029791	718902S	NS	GA	Muscogee	Columbus	10th Avenue	0	0	0	0	0	GT	14	3	10	YES	4	8840
12	0.029447	635743F	GNWR	GA	Muscogee	Columbus	Aldridge Road	0	0	0	0	0	XB	1	2	10	YES	2	1569
13	0.029159	635759C	CCHA	GA	Muscogee	Columbus	10th Avenue	0	0	0	0	0	XB	4	1	10	YES	4	7400
14	0.026731	718971A	NS	GA	Muscogee	Columbus	Front Avenue	0	0	0	0	0	SS	9	1	30	YES	4	1569
15	0.024795	718898E	NS	GA	Muscogee	Columbus	5th Avenue	0	0	0	0	0	GT	12	2	15	YES	4	5700
16	0.024384	719054W	NS	GA	Muscogee	Columbus	9th Avenue	0	0	0	0	0	XB	9	2	15	YES	2	1320
17	0.024795	718898E	NS	GA	Muscogee	Columbus	10th Street	0	0	0	0	0	XB	7	8	10	YES	4	2330
18	0.024384	719054W	NS	GA	Muscogee	Columbus	Apex Road	0	0	0	0	0	FL	4	1	15	YES	2	3620
19	0.024035	718969Y	NS	GA	Muscogee	Columbus	1st Avenue @ 9th Street	0	0	0	0	0	SS	9	1	30	YES	4	1070
20	0.023843	718967K	NS	GA	Muscogee	Columbus	3rd Avenue @ 9th Street	0	0	0	0	0	SS	9	1	30	YES	2	1040
21	0.021910	726269M	NS	GA	Muscogee	Columbus	Woodruff Farm Road	0	0	0	0	0	GT	6	1	40	YES	4	15580
22	0.021457	733984N	NS	GA	Muscogee	Columbus	Pope Road	0	0	0	0	0	XB	6	1	40	YES	2	75
23	0.021041	635766M	CCHA	GA	Muscogee	Columbus	6th Street	0	0	0	0	0	XB	4	1	10	YES	2	2300
24	0.020706	718966D	NS	GA	Muscogee	Columbus	Veteran's Parkway	0	0	0	0	0	HS	12	1	15	YES	4	19000
25	0.020548	718970T	NS	GA	Muscogee	Columbus	Broadway (9th Street)	0	0	0	0	0	XB	9	1	15	YES	4	850
26	0.020356	733980L	NS	GA	Muscogee	Columbus	Technology Parkway	0	0	0	0	0	GT	6	1	40	YES	6	4310
27	0.020171	719055D	NS	GA	Muscogee	Columbus	River Road	0	0	0	0	0	GT	3	1	15	YES	5	13430
28	0.019823	733975P	NS	GA	Muscogee	Columbus	Forrest Road	0	0	0	0	0	GT	6	1	49	YES	4	10100
29	0.019534	635765F	CCHA	GA	Muscogee	Columbus	6th Street	0	0	0	0	0	XB	4	1	10	YES	2	1790
30	0.018776	635760W	CCHA	GA	Muscogee	Columbus	8th Avenue	0	0	0	0	0	XB	4	1	10	YES	2	1569

RANK	PREDICTED COLLISION	CROSSING ID	RR CO	STATE	COUNTY	CITY	ROAD	NUMBER OF COLLISIONS					WD	TOT TRN	TOT TRK	TTBL SPD	HWY PVD	HWY LNS	AADT
								2018	2017	2016	2015	2014							
4	0.049914	728150X	NS	Alabama	Lee	Smiths Station	Lee Road	0	0	0	0	1	FL	8	1	50	YES	2	8,770
9	0.024656	728165M	NS	Alabama	Lee	Salem	CR 633	0	0	0	0	0	SS	6	1	50	YES	2	160
11	0.021038	728156N	NS	Alabama	Lee	Smiths Station	Lee Road 288	0	0	0	0	0	SS	8	1	50	YES	2	500
14	0.018459	728160D	NS	Alabama	Lee	Phenix City	CR 250	0	0	0	0	0	SS	6	2	50	YES	2	430
22	0.014667	728153T	NS	Alabama	Lee	Smiths Station	Summerville Road	0	0	0	0	0	GT	8	2	50	YES	2	4,570
24	0.013558	728157V	NS	Alabama	Lee	Smiths Station	Lee Road 644	0	0	0	0	0	SS	8	1	50	YES	2	120

RANK	PREDICTED COLLISION	CROSSING ID	RR CO	STATE	COUNTY	CITY	ROAD	NUMBER OF COLLISIONS					WD	TOT TRN	TOT TRK	TTBL SPD	HWY PVD	HWY LNS	AADT
								2018	2017	2016	2015	2014							
1	0.057529	718992T	NS	Alabama	Russell	Phenix City	11th Avenue	0	0	1	0	0	XB	8	1	50	YES	2	470
2	0.049880	719019H	CCHA	Alabama	Russell	Phenix City	State Docks Road	0	0	0	0	1	XB	3	1	25	YES	2	1,580
3	0.049383	718998J	NS	Alabama	Russell	Phenix City	Stadium Drive	1	0	0	0	0	GT	8	1	50	YES	2	7,670
4	0.041074	719004T	NS	Alabama	Russell	Phenix City	Lakewood Drive	0	0	0	0	1	FL	6	1	25	YES	2	4,620
5	0.035641	719020C	CCHA	Alabama	Russell	Phenix City	State Docks Road	0	0	0	0	1	XB	3	1	25	YES	2	210
6	0.029922	728425D	CCHA	Alabama	Russell	Phenix City	Patterson Road	0	1	0	0	0	XB	3	1	20	YES	2	60
7	0.025909	719013S	CCHA	Alabama	Russell	Phenix City	Brickyard Road	0	0	0	0	0	XB	5	1	30	YES	2	4,040
8	0.025909	719012K	CCHA	Alabama	Russell	Phenix City	Brickyard Road	0	0	0	0	0	XB	5	1	30	YES	2	4,040
9	0.021427	719011D	CCHA	Alabama	Russell	Phenix City	Colin Powell Parkway	0	0	0	0	0	SS	3	1	30	YES	2	3,450
10	0.020364	719017U	CCHA	Alabama	Russell	Phenix City	State Docks Road	0	0	0	0	0	XB	3	1	25	YES	2	3,220
12	0.01833	728682B	CCHA	Alabama	Russell	Phenix City	Knuckles Road	0	0	0	0	0	SS	5	1	25	YES	2	1,360
13	0.018226	719003L	NS	Alabama	Russell	Phenix City	S. Railroad Street	0	0	0	0	0	FL	6	1	20	YES	2	7,280
14	0.017221	728427S	CCHA	Alabama	Russell	Phenix City	Owens Road	0	0	0	0	0	SS	3	1	20	YES	2	2,050
15	0.016052	728148W	NS	Alabama	Russell	Phenix City	Allen Road	0	0	0	0	0	GT	6	1	50	YES	2	8,770
16	0.015050	728431G	CCHA	Alabama	Russell	Phenix City	Bradley Road	0	0	0	0	0	XB	3	1	20	YES	2	1,330
17	0.014563	719016M	CCHA	Alabama	Russell	Phenix City	6th Place S	0	0	0	0	0	SS	3	1	25	YES	2	1080
18	0.014027	719024E	CCHA	Alabama	Russell	Phenix City	Brickyard Road	0	0	0	0	0	XB	3	1	25	YES	2	960
19	0.011952	728430A	CCHA	Alabama	Russell	Phenix City	SR 165	0	0	0	0	0	GT	3	1	20	YES	2	6,080
20	0.011818	719023X	CCHA	Alabama	Russell	Phenix City	Fontaine Road	0	0	0	0	0	XB	4	1	20	YES	3	470
21	0.011756	719022R	CCHA	Alabama	Russell	Phenix City	Brickyard Road	0	0	0	0	0	XB	1	1	20	YES	2	1,850
22	0.010810	719005A	CCHA	Alabama	Russell	Phenix City	Brickyard Road	0	0	0	0	0	XB	2	1	10	YES	2	2,090
23	0.009869	718993A	NS	Alabama	Russell	Phenix City	Thirteenth Avenue	0	0	0	0	0	GT	8	1	50	YES	2	980
24	0.009321	719001X	NS	Alabama	Russell	Phenix City	28th Street	0	0	0	0	0	GT	8	1	25	YES	2	790
25	0.006680	719014Y	NS	Alabama	Russell	Phenix City	Meadowlane Drive	0	0	0	0	0	SS	1	1	30	YES	2	281
26	0.005811	719027A	CCHA	Alabama	Russell	Phenix City	Brickyard Road	0	0	0	0	0	GT	3	1	25	YES	2	670
27	0.004638	728419A	CCHA	Alabama	Russell	Phenix City	Holy Trinity Road	0	0	0	0	0	SS	3	1	10	YES	2	50
28	0.004074	718996V	CCHA	Alabama	Russell	Phenix City	16th Avenue	0	0	0	0	0	XB	4	1	20	YES	2	50
29	0.002953	719007N	NS	Alabama	Russell	Phenix City	7th Avenue	0	0	0	0	0	SS	2	2	10	YES	2	50
30	0.002819	728421B	NS	Alabama	Russell	Phenix City	Terminal Road	0	0	0	0	0	XB	3	1	20	YES	2	10

5.7 Railroads – Crossings and Intermodal Yards

Current rail freight volumes are anticipated to grow at a modest 10 percent over the next 10 years. Capacity is not expected to be an issue in accommodating this growth. However, efficiency and safety for both rail and road/highway traffic can be increased through addressing congested areas of both rail and road traffic and upgrading signal and warning devices at high-volume, at grade crossings.

At-grade rail crossings present the greatest safety issues to rail operations within the C-PCTS MPO. Identification and upgrade of the high-volume, high-risk crossings should be a priority for community planners. There are 354 at-grade rail crossings in the five county C-PCTS MPO area. The breakdown by county is as follows: (Ref: US Department of Transportation – Federal Railroad Administration)

- Muscogee County – 191
- Lee County – 87
- Russell County – 76
- Chattahoochee County – 76
- Harris County – 42

Safety concerns are greatest at crossings with the highest traffic levels, or daily crossings, in terms of both trains and highway vehicles. Analysis of these crossings focused on at-grade crossings with an Average Daily Train count (ADT) of five (5) or more and an Average Daily Vehicle (ADV) count of over 5,000.

5.8 Ports, Waterways, Airports

Purpose and Justification

The C-PCTS MPO recognizes the value of an efficient integrated multi modal transportation system for goods and people movement to compete in the domestic and global marketplace. Besides land-based transportation, airports and waterways make up important elements to intermodal transportation system. The Federal government has placed a high priority on these critical components of the transportation infrastructure to promote national security.

Ports & Waterways

The Chattahoochee River is a defining feature within the Columbus-Phenix City Metropolitan Planning region. At one time, there were two primary inland ports that served the Chattahoochee River: the Phenix City’s Alabama State Docks system and the Port of Columbus. These ports are no longer in service. That Alabama State Port Authority sold the Phenix City asset in December 2018. The Port of Columbus was purchased by the City of Columbus in 2018.

Aviation & Airports

The Columbus Airport handles approximately 50,000 take-offs and landings each year. In addition, the airport employees approximately 200 people and a recent state analysis showed that the airport has a \$70 million impact on the state economy. The airport covers 610 acres and two runways, one measuring 7,000 feet, the other 3,900 feet. Below are more operational statistics for the airport.

Table 5-10
Columbus Airport Inventory and Flight Statistics

Single Engine Planes Based at Airport	107
Multi-Engine Planes Based at Airport	9
Jet Planes Based at Airport	8
Total Number of Airplanes Based at Airport	124
Helicopters Based at Airport	1
Gliders Based at Airport	1
Military Airplanes based at Airport	0
Ultra-Light Airplanes at Airport	1
Number of Air Carrier Flights (Annual)	190
Number of Air Taxi Flights (Annual)	2,721
Number of Local General Aviation Flights (Annual)	14,493
Number of Itinerant General Aviation Flights (Annual)	12,889
Number of Military Flights (Annual)	647
Total Number of Flights (Annual)	30,940
Number of Ultra-Light Flights (Annual)	0
Runway Dimensions:	
Runway 6/24	6,997' x 150'
Runway 12/31	3,997' x 75'

5.9 Freight and Good Movement

This section of the Columbus–Phenix City MPOs' Metropolitan Transportation Plan summarizes the freight transportation infrastructure and freight volumes within the Columbus-Phenix City Metropolitan Planning region. Based on this collected data and analysis, an assessment of freight mobility and infrastructure demands in the Muscogee, Harris, Chattahoochee, Lee and Russell County study area will be provided.

Purpose and Justification

The purpose of this goods movement analysis is to identify freight transport infrastructure issues that affect shipping and freight transport efficiency and safety within the Columbus-Phenix City Metropolitan Planning region. Road, rail and air infrastructure and utilization levels are identified and future use/freight volume forecasted.

The purpose of the freight analysis is to provide insight into the following:

- Specific problems at specific locations that may lead to project specific recommendations;
- Broad issues that relate to limitations in the overall system which may lead to policy recommendations; and

- Patterns and trends regarding the nature of transport needs for freight goods and services that may lead to strategic recommendations.

Existing Conditions and Future Developments

The following section provides a description and inventory of the existing freight infrastructure for the four-county study area. Road, rail and air facilities, current and projected freight movement and planned infrastructure improvements are identified.

Interstate and Highway Corridors

The primary interstate/highway freight corridors for goods originating and terminating within the Columbus-Phenix City Metropolitan Planning Organization (C-PCTS MPO) have been identified through a freight density mapping effort utilizing Federal Highway Administration (FHWA) Freight Analytical Framework (FAF) data. Freight density maps illustrate the annual volume of freight (in tons) that moves via a designated road, highway or interstate.

The FAF data utilized for this task is based on national 2017 commodity flow data, modified to focus on the four-county C-PCTS MPO area. Total freight (by origin and destination) for the C-PCTS MPO was then fed into a freight flow model which, based on origin and destination points, assigned freight density (goods movement by volume) to interstates and highways. Freight volumes were forecast to 2025 levels and the process was repeated.

From this effort, the primary freight corridors and flows for goods movement in the C-PCTS MPO have been identified and forecasted. This forecast, coupled with highway capacity data, allows us to identify potential bottlenecks and specific network constraints, which are addressed in the Needs Analysis section of this chapter.

Rail

There are no passenger rail service in the C-PCTS MPO area at this time. However, there are nearly 169 miles of active rail line, with each railroad operating the following length of track:

- | | |
|--|-----------|
| • Norfolk Southern (Class I) | 116 miles |
| • CSX (Class I) | 25 miles |
| • Columbus & Chattahoochee Railroad (CCHA)
(Alabama only - Class III) | 28 miles |

Freight traveling on the CSX line is primarily through traffic with origin and destination points outside the C-PCTS MPO, thus no freight flows are depicted on the C-PCTS MPO rail freight density maps.

The primary Columbus-Phenix City intermodal (truck to rail transfer capabilities) are located in Columbus and serve Norfolk Southern and CSX traffic. Rail bridges in Lee County and Phenix City warrant further attention to ensure their safety, selective grade separation at freight rail / highway grade crossings (there are 87 crossings in Lee County and 76 crossings in Russell County), and the need for a rail spur connection in Phenix City to the NS.

The three primary freight facilities include the following:

- Norfolk Southern Bulk Terminal – east of Webster Avenue, central downtown Columbus;
- Old Dominion Freight Line – Manchester Expressway, north of downtown Columbus;
- W.R. Grace Terminal – Victory Drive, south of downtown Columbus on GSWR spur

Truck-to-rail intermodal activity is limited, however, due to the nature of commodities shipped via rail to and from the Metropolitan Planning Area. Non-containerized bulk commodities are the primary goods shipped via rail. Bulk commodities tend to favor single mode (usually rail or water) transport from origin to destination, while containerized freight is more conducive to intermodal transfer.

It is anticipated that efficiency and safety issues (current and future), not capacity concerns, will drive the need for rail infrastructure investment within the Metropolitan Planning Area.

Aviation

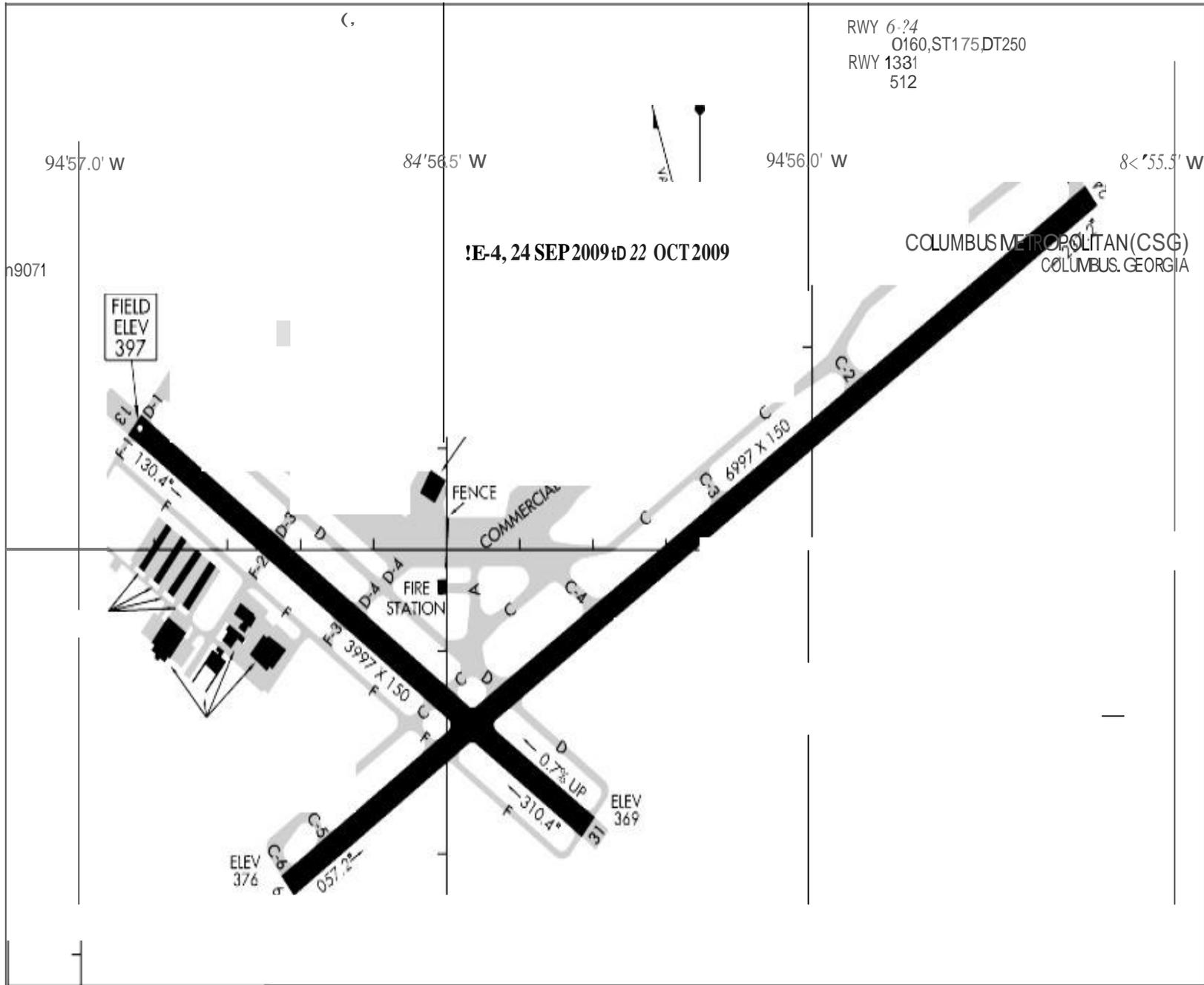
The Columbus Airport is the primary commercial airport within the Columbus-Phenix City MPO. The primary highway access to the airport from the north and south is via Interstate I-185. Other highways in the vicinity are U.S. Highway 27 and U.S. Highway 80, and Georgia Highway 85. Situated on 610 acres, the airport is owned and operated by the Columbus Airport Commission. The airport accommodates a variety of aviation related activities including commercial service, corporate/business jets, recreational flying and air cargo.

The Columbus Airport handles approximately 31,000 take-offs and landings each year. In addition, the airport employs approximately 200 people. State analysis shows that the airport has a \$70 million impact on the state economy. The airport covers 610 acres and two runways, one measuring 7,000 feet, the other 4,000 feet.

The largest shipper is Federal Express, which carries mostly material from TSYs and other financial institutions. The airport handles approximately 100,000 passengers annually now for commercial flights, which consists of three roundtrip Atlantic Southeast Airways (Delta subsidiary) trips to Atlanta's Hartsfield-Jackson International Airport. Efforts are underway to attract additional carriers to return to Columbus, perhaps to allow for service connections to other hub cities.

Before airline deregulation in the late 1970's, the Columbus Airport saw annual passenger volumes of 400,000 annually, as the airport offered direct connections to 27 different destinations. However, once deregulation was incorporated and the controls of the Civilian Aeronautics Board (which regulated which airlines could fly where) eliminated – many of the passenger airlines eventually pulled up their stakes in Columbus, having decided to reallocate their planes to more lucrative routes.

Getting commercial airlines or freight operations to come back to Columbus will be a challenging proposition, given the proximity of Atlanta's Hartsfield-Jackson International Airport (90 miles northeast). However, attention should be given to marketing the airport as a facility where private passenger craft can stop to get fuel or maintenance performed.



AIRPORT DIAGRAM

56000665

N

As illustrated in the Airport Diagram (Map 5-) Columbus Metropolitan Airport has two runways, of which the primary is capable of supporting commercial and air cargo narrow body jet aircraft. The primary runway, Runway 05/23, is 6,998 feet long by 150 feet wide with an ILS precision approach aid.

The Airport does not have a dedicated air cargo ramp or facilities. All air cargo activity takes place at the commercial carrier ramp or the general aviation ramp served by the Airport's FBO (fixed base operator). The Airport's FBO is a full service facility offering a maintenance facility, a fuel concession that provides AvGas and Jet A fuels and aircraft parking with landside access sufficient to support air cargo activity. There is a 3,200 square foot general aviation terminal/administration building and a 53,000 square foot commercial service terminal building.

The Georgia Statewide Aviation System Plan indicates that the Columbus Metropolitan Airport is expected to reach 37% of its available annual operating capacity by 2026.

According to TAA T-100 report data, Fed Ex activity accounts for over 90 percent of the Airport's air cargo volume. Most of the remaining volume is transported in the belly space of Atlantic Southeast Airlines passenger flights. Inbound air cargo volumes are slightly higher than outbound by a nine percent margin. This is primarily due to greater inbound volumes on Atlantic Southeast flights surviving from Hartsfield-Jackson Atlanta International Airport. Over 97 percent of Columbus Metropolitan Airport's air cargo flows through Atlanta (both inbound and outbound), through most of this freight does not necessarily originate or terminate there.

An air cargo volume forecast for the Airport was conducted through the year 2037 utilizing domestic Boeing forecast factors from the Boeing World Air Cargo Forecast 2018-2037. Following several years of weak demand and a lagging recovery following the global economic downturn, air cargo traffic fully recovered in 2017. Air cargo traffic grew 10.1 percent, more than double the long-term average growth rate of 4.2 percent. Air cargo has never been solely an airport-to-airport service. Rather, air cargo is a single component of a transportation infrastructure that lines the shipper and the consignee. Trucking offers door-to-door and factory-to-distribution center service, which air transport alone cannot provide.

Needs Analysis (Results), Connectivity

Based on the current and anticipated freight volumes, infrastructure demands and freight corridor densities identified for each mode in the previous section, the following section identifies specific deficiencies and needs within the Columbus-Phenix City area affecting goods movement capacity, efficiency, and safety.

5.10 Freight Analysis Framework

The primary interstate/highway freight corridors for goods originating and terminating within the Columbus-Phenix City MPO have been identified through a freight density mapping effort utilizing FHWA (Federal Highway Administration) Freight Analytical Framework (FAF) data. Freight density maps illustrate the annual volume of freight (in tons) that moves via a designated road, highway or interstate. The FAF data utilized for this task is based on national 2017 commodity flow data, modified to focus on the MPO area. Total freight (by origin and destination)

for the MPO was then fed into a freight flow model which, based on origin and destination points, assigned freight density (goods movement by volume) to MPO interstates and highways.

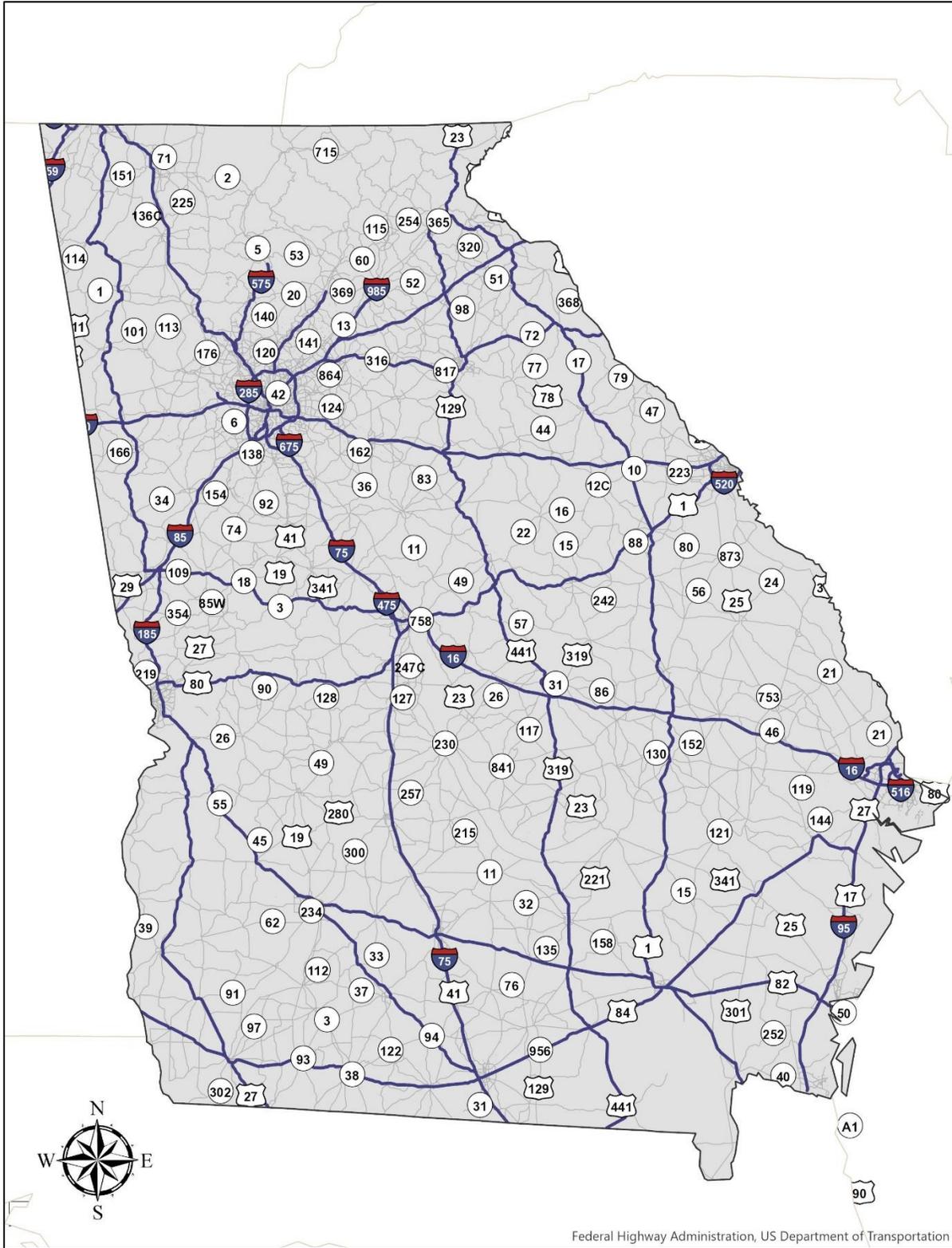
Freight volumes were then forecast to 2027 levels and the process was repeated. From this effort, the primary freight corridors and flows for goods movement in the Columbus-Phenix City MPO have been identified and forecasted. This forecast, coupled with highway capacity data, allows us to identify potential bottlenecks and specific network constraints, which are addressed in the Needs Analysis section of this chapter.

As illustrated in Map 5-#, the primary goods movement corridors for truck traffic in the Columbus-Phenix City MPO, as identified through FAF Freight density mapping, including the following:

- I-185 north to I-85, Atlanta, I-75 and I-20
- I-85 south to I-65 and the I-10 Corridor
- U.S. Highway 80 west to I-65
- U.S. Highway 280 northwest to Birmingham, I-20, I-59 and I-65
- U.S. Highway 27 south to I-10 and I-75

Through the freight density mapping effort, primary highway and interstate goods movement corridors were identified based on highest volume (annual tonnage) of freight transported via the corridor. This volume data and routing structure (both 2017 data and 2045 forecast) was applied against established capacity (all vehicles) for each highway and interstate within the MPO. The result is an identification of the volume to capacity ratio (V/C) at peak congestion period on C-PCTS MPO roads, highlighting the road segments in danger of exceeding capacity.

Map 5- Statewide Freight Map



5.11 Proposed Investment Strategies and Recommendations

Traffic Signal Synchronization and Maintenance

Traffic signal systems require significant maintenance programs and continual efforts to update signal timings for improving synchronization as well as funding for new signals that can be integrated into an existing network.

Traffic signal retiming and synchronization are two of the most effective techniques to alleviate traffic congestion. Traffic volumes change with time, as new neighborhoods are built, new offices or industries are opened and occupied and roadway improvements are built. Drivers are adaptable and as traffic conditions change, they will shift to alternate routes or difference commuting times. Such shifts must be met by revised traffic signal timings, which are typically recommended for intervals of three years at each intersection or whenever a major change in land use or a roadway characteristic has occurred.

Effective traffic signal operation depends on two major elements; equipment and people. The high tech field equipment requires continuing maintenance, as it is subject to environmental conditions vastly difference from equipment situated in a climate controlled office. Retiming and synchronization depends on availability and training of people. Traffic counts, accurate knowledge of intersections as well as the latest computer hardware and software are as essential to the effort as the trained and experienced staff needed to develop and modify the signal timing patterns.

CHAPTER 6

MULTI-MODAL TRANSPORTATION

All transportation systems are multimodal by necessity, with different modes serving different purposes and functions. Air travel provides fast connections across long distances, waterway connections can decrease costs for freight movement, and even travel by a personal automobile starts and ends as pedestrian trips walking to and from the vehicle. It is important to note that significant portions of the population do not, or cannot, travel by personal automobile including transportation-disadvantaged populations (people with disabilities, the elderly, individuals with limited English proficiency) or persons that elect not to use a personal vehicle by choice. A flexible and robust multimodal transportation system is needed to support vibrant and livable communities that meet a broad set of mobility needs and is critical for supporting economic competitiveness and growth.

6-1 Bicycle / Pedestrian

The bicycle / pedestrian element of the MTP has been developed to contribute to the goal of enhancing the regions quality of life by expanding and presenting alternative modes of transportation such as bike lanes, multi-use paths and sidewalks. This element was developed to promote an efficient, safe transportation system, while protecting and enhancing the environment and promoting energy conservation.

This section evaluates the existing conditions in the C-PCTS-MPO area by using data supplied by government agencies and information gathered as by talking with local bike enthusiasts and other members of the public. After the needs and opportunities are assessed, the next step will be to develop and evaluate the alternatives. The overall success of this plan will be measured by the improvement in bike/pedestrian facilities, a reduction in single occupancy vehicle trips, improved mobility and accessibility for the under-served connectivity, a reduction in congestion and improved air quality.

The Columbus-Phenix City area has been attracting statewide bicycle tours and developing an off-road network of paths such as the Fall Line Trace, the Columbus River Walk, and the newly completed Follow Me Trail and Martin Luther King, Jr., Boulevard multi-use trails. These trails are designated as part of the Dragonfly Trails. Both communities have worked towards making their communities more bicycle and pedestrian friendly. Since 2009, the C-PCTS-MPO participates in the “Bike to Work Day” sponsored by the River Valley Regional Commission (RVRC). The Bike to Work Day encourages employees and employers to come together to make use of and provide support for alternative modes of commuting to work. In 2011, the RVRC created Bicycle Week, which includes the following:

- Ride with the Mayor
- Ride of Silence
- Bike to Work Day

Consideration of Bicycle and Pedestrian Access on Proposed Facilities

C-PCTS MPO conducted an investigation of the existing conditions of bicycle and pedestrian infrastructure as part of the 2045 MTP update. C-PCTS MPO will utilize *FHWA's Strategic Agenda for Pedestrian and Bicycle Transportation*, released in 2016. This publication focuses around four goals for the nation's bicycle and pedestrian system:

- Networks: Achieve safe, accessible, comfortable, and connected multimodal networks in communities throughout the United States;
- Safety: Improve safety for people walking and bicycling;
- Equity: Promote equity throughout the transportation planning, design, funding, implementation, and evaluation process; and
- Trips: Get more people walking and bicycling.

One of the top priority actions outlined in *FHWA's Strategic Agenda for Pedestrian and Bicycle Transportation* is to "Initiate a coordinated and comprehensive effort among all DOT stakeholders to expand the availability and deployment of data about pedestrian and bicycle network infrastructure".

In the summer of 2012, C-PCTS MPO along with the City of Columbus initiated the Columbus Alternative Transportation Study (ATP). This study focused on the transportation needs of those who bike, walk, and use public transit as a mode of transportation. The plan proposed an additional 125 miles of pedestrian amenities (including sidewalks, road diets, and trails) and 139 miles of bicycle amenities (including bike lanes and sharrows which are street markings indicating where vehicles must share the road with bicyclists and trails).

Since the implementation of the 2012 ATP, there have been 6 miles of on-street bike facilities, 4 miles of sidewalks and around 10 miles of shared-use bicycle and pedestrian facilities built / installed in the Columbus-Phenix City urbanized area.

C-PCTS MPO has conducted an inventory of sidewalks, bicycle / pedestrian paths, and bike lanes. There are 367 miles of sidewalks, 6 miles of on-street bike facilities, and 51.38 miles of shared-use bicycle and pedestrian facilities in the Columbus and-Phenix City urbanized area. This data will help C-PCTS MPO staff track changes in multi-modal network coverage over time and progress towards implementing planned facilities. C-PCTS MPO staff will work with the Engineering Departments within the counties / cities within the MPO urbanized area to inventory crosswalks and areas where there is pedestrian traffic to ensure that these areas are well lighted.

Complete Streets Policy

In 2014, The City of Columbus passed its first ever-Complete Streets Resolution. The purpose of the Complete Streets Policy is to establish cities / counties as a livable community with enhanced mobility, equity, and vitality in all neighborhoods and for people of all ages and abilities, through the design, maintenance, and use of the right-of-ways. The MPO along with the City of Columbus and the Lee-Russell Council of Governments aim to create a robust, efficiently operated, and well-connected transit network, a well-defined pedestrian and bicycle system, and to promote the improvement of public health, safety, economic growth, and quality of life. In 2018, Columbus amended the Complete Streets Policy calling for adoption of design standards and formation of a

Compliance Committee. Abiding by these principals, Complete Streets Policy shall establish standard practices and procedures for the communities within the urbanized area. Design applications should come from reputable sources that have been field-tested and measured for effectiveness and safety. Complete Streets designs should consider the importance of creating corridors where all users can feel safe and are inviting through aesthetic design to use such facilities.

Complete Streets Design Standards

The C-PCTS MPO shall use the best and latest design guidance, standards, and recommendations available to maximize design flexibility and innovation, and always be aware that design solutions should balance user and modal needs. This includes a shift toward designing at the human scale for the needs and comfort of all people and travelers, in considering issues such as street design and width, desired operating speed, hierarchy of streets, and connectivity. Design criteria shall not purely prescriptive but shall be based on the thoughtful application of engineering, architectural, and urban design principles. These materials include, but are not limited to:

- The United States Department of Transportation Federal Highway Administration's Manual of Uniform Traffic Design Control
- The United States Department of Transportation Federal Highway Administration Traffic Monitoring Guide
- The American Association of State Highway and Transportation Official's (AASHTO) Policy on Geometric Design of Highways and Streets and Guide for Planning, Designing and Operating Pedestrian Facilities
- The National Association of City Transportation Officials (NACTO) Urban Street Design Guide and Urban Bikeway Design Guide
- Final Circulars and guidelines issued by the Federal Transit Administration including design requirements abiding by the Americans with Disabilities Act, Title VI, and Environmental Justice
- Documents and plans created for the Cities and Counties within the MPO such as Comprehensive Plans, and documents and plans created by C-PCTS MPO such as the Metropolitan Transportation Plan and the Alternative Transportation Plan.

If in the event that the above guides or any future guides conflict or are unclear on any element of a proposed design, the appropriate authority shall select the design guidance that best fits the context of the project, the safety of users, and achieves the goals of Complete Streets.

Attention to Aesthetic

Complete Streets are beautiful, interesting, and comfortable places for all people. The design of cities begins with the design of streets as community places where people want to be. As part of the public realm, streets shall be held to a higher standard for urban design at a human scale. Multi-modal accommodations and all MPO projects in the right-of-way shall be approached as opportunities to enhance the aesthetic qualities of its public realm through the thoughtful creation of place. Wherever feasible, streetscapes shall protect and include street trees and native plants, and incorporate landscape architecture, public art, pedestrian amenities and wayfinding signage, sidewalk cafes and street-facing retail, and/or other elements that enhance the attractiveness of the cities / counties and foster healthy economic development.

Bicycle and Pedestrian Facility Placement Considerations

The Columbus-Phenix City MPO will consider adding bike facilities on new projects where feasible unless exceptional circumstances exist as stated below:

- Locations where bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, an effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.
- The cost of establishing a bikeway or walkway in the project area would be excessively disproportionate to the need or probable use.
- Where sparseness of population or other factors indicate an absence of existing and future need.
- Examples of where this may be applicable should include scenarios where a street is a cul-de-sac with four or fewer dwellings or the street has severe topographic or natural resource constraints.

Guidance from the Federal Highway Administration on this issue states that “due consideration” of bicycle and pedestrian needs should include, at a minimum, a presumption that bicyclists and pedestrians will be accommodated in the design of new and improved transportation facilities. In the planning, design and operation of transportation facilities, bicyclists, and pedestrians should be included as a matter of routine, and the decision not to accommodate them should be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access either by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling.

Another accessibility-based pedestrian design procedure relates to the Americans with Disabilities Act (ADA); this law requires that when agencies provide transportation options, they must be accessible for persons with disabilities. For example, these improvements could occur through upgrades of existing ramps and sidewalks or as part of resurfacing or other construction projects. In 2013, the City of Columbus along with the C-PCTS MPO developed an ADA Transition Plan. The City of Columbus is in the process of securing funds to implement projects identified in this document. In 2016, the City of Phenix City developed their ADA Transition Plan and is currently completing a project utilizing Transportation Alternative (TA) funding. This project includes constructing a sidewalk with landscaping along 14th Street between Broad Street and 5th Avenue.

Connectivity

Connectivity measures the degree to which the pedestrian network connects to the street system and various destinations. It includes an assessment of how well the existing pedestrian networks comply with spacing requirements for access ways and the ease with which pedestrians can get to various destinations. The ease of street crossing (measured by looking at the frequency of crossing opportunities, roadway capacity, motor vehicle speeds, the presence of signals, and the presence of pedestrian islands) is one measure of connectivity and would affect the degree to which pedestrians use existing facilities. The inability of pedestrians to cross streets easily would reduce walkability in any particular area of corridor, reduce system connectivity, and affect pedestrian safety. To this end, the City of Columbus and Phenix City has placed pedestrian activated or automated cycle pedestrian crosswalk signals at most intersections and has ensured that crosswalk areas are well marked in accordance with AASHTO standards.

Continuity

Continuity measures whether there is a continuous sidewalk, which would be particularly important in pedestrian high access zones. Considered at a regional level, continuity would also refer to gaps in networks of sidewalks. Gaps in networks where there is a high potential for walkability would point to areas or corridors with a high priority for gap closures.

System Coverage

System coverage captures the extent of pedestrian facilities available. Assessing the percent of sidewalks provided along arterials, major collectors, and neighborhood routes within pedestrian access zones could help determine the need to extend the existing system to capture latent pedestrian demand in areas of high pedestrian access or need.

Areas where demand paths have been created, where no pedestrian facilities currently exist, would point to a natural demand for extending coverage. Where demand paths end, one may see people crossing several lanes of traffic to get to nearby neighborhoods. Often, demand paths are found near low-income housing, rental communities, industrial areas or bus stops. Individuals and households that do not own automobiles may often be seen walking along demand paths. The terminals of demand paths may provide cues on the appropriate pedestrian facilities to support safe pedestrian movements to walking destinations.

Demographic Analysis

Understanding the demographics of residents of particular cities and regions is an important input for determining the types of pedestrian facilities that could enhance existing quality of life. Some areas may emerge as having a high potential for recreational pedestrian facilities. In other areas, dominated by lower-income populations that are transit dependent, the more pressing needs may be for pedestrian facilities that enhance transportation between destinations including transit terminals and other modes of transportation.

Areas with a high concentration of disabled or elderly residents may require additional time on the crossing phase, or other technological adjustments. However, it is important not to spend too much time or money on unnecessary demographic data. For example, much analysis has been done on the gender of the pedestrian or crash victim. This information is of limited value since there is not one engineering treatment used for women, and another for men.

Funding Opportunities

The Columbus-Phenix City MPO will seek funding through FHWA to update the Multi-Modal Transportation Plan (Previously the Alternative Transportation Plan) and to construct multi-use trails, bike lanes, and sidewalks. The Multi-Modal Transportation Plan will act as a guide in directing the C-PCTS MPO to construct a complete bike/pedestrian network. It will allow for a more detailed analysis and allow for greater public involvement with the planning of bike/pedestrian facilities in the future.

In order for the C-PCTS MPO to be successful in building a functional bike/pedestrian plan, there must be proper coordination with GDOT, ALDOT, and all regional and local planning agencies. Continued coordination with agencies such as the River Valley Regional Commission will allow for a well-connected network outside the C-PCTS MPO boundary.

Ways to Better Enable Non-Vehicular Transportation Options

There is a potential to use existing easements owned by the local governments to reduce the cost of right-of-way acquisition for multi-use or shared paths. In some instances, it may be appropriate to acquire transportation right of way “on top” of an existing easement. Consideration is given to the compatibility of the existing use with the addition of a bicycle or shared use path. Where uses are not in conflict, the acquisition cost would be minimal because of the restrictions of the existing easement. This strategy may also be effective with some private easements such as power company easements.

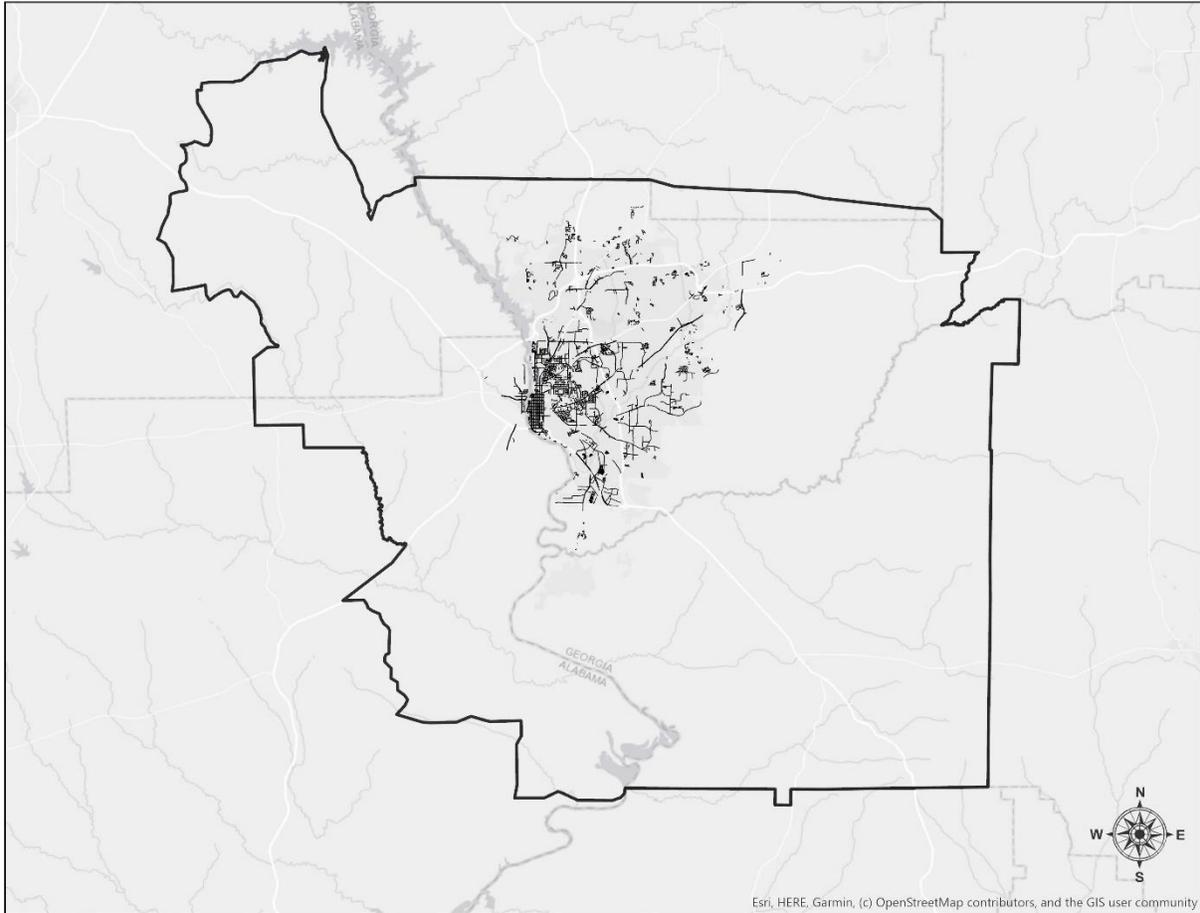
Sidewalk Activities

Generally, the implementation of sidewalks rests with the local governments in Muscogee, Harris, Lee, Russell, and Chattahoochee Counties. The development and application of a bike / pedestrian suitability rating system would facilitate evaluation, such as the systems from the Georgia Department of Transportation cited in Table 6-1. Sidewalk requests are normally generated by a public request in which the city would evaluate and prioritize annually. Some factors that have traditionally been utilized to consider and prioritize sidewalk projects are as follows:

- Traffic volume on adjacent roads
- Proximity of traffic signals and posted speed on road
- Right-of-Way that would be requested for project
- Roadway profile
- Functional classification
- Evidence of existing pedestrian use
- Segment fill gap in the sidewalk system
- Provides new sidewalk where one does not exist
- Are adjacent to transit routes
- Adjacent to land-use and zoning designation
- Located within school region

Sidewalk design standards have been developed by the American with Disabilities Act (ADA), by the Georgia and Alabama Departments of Transportation, and the American Association of State Highway Transportation Officials (AASHTO). GDOT developed the Georgia Pedestrian and Streetscape Guide in 2003 and updated it in March 2019. This guide was developed to aid jurisdictions in pedestrian facility design. The local transportation and public works departments to make sure that pedestrian facilities in the C-PCTS MPO are constructed to the highest standards could adopt these design standards.

Map 6-1: Sidewalks throughout the MPO Region



In 2017, the Alabama Department of Transportation's (ALDOT) Metropolitan Planning and Multi-modal Services Bureau updated the Alabama Statewide Bicycle and Pedestrian Plan that was previously done in 2004. The purpose of the plan is to establish a vision for bicycling and walking as modes of transportation in Alabama. This plan will help guide investment in bicycle and pedestrian facilities that maximize limited available funding.

Intermodal Opportunities

As mandated by the FAST Act, it is important to design a bicycle transportation system that allows for the transition between bicycle and other transportation modes. Whereas, the coexistence of bicycles and motorized vehicles has been examined in this document, the following areas should be addressed whenever possible:

- Bicycle Accommodation on Transit Buses – Intermodal transitions between bike / pedestrian facilities to transit encourage the use of both modes of transportation. Currently, METRA has 45 buses and 34 are equipped with bicycle racks. As funding allows, eventually, the bus fleet will all be equipped with the bike racks. All future buses purchased may be equipped with the bike racks. The presence of bike racks allow travelers to ride their bikes farther than they would if they were to walk to catch a bus, thus increasing the potential ridership for one bus stop. The expanded radius from the transit stops may also encourage ridership in lower density residential areas with the transit service area in Columbus. Currently, there is no such capability for accommodation on Lee County transit vehicles, due to their smaller size.

6-2 Public Transportation (Transit)

This section discusses the public transportation services in the Columbus area, the purpose and need for these services, existing conditions and future developments – how these will potentially affect the type and extent of public transportation services, reports the results of the needs analysis and discusses some potential funding strategies to provide recommended services.

Transit Performance Measures are outlined in Chapter 2 – Performance Targets

Transit System Purpose / Justification

By 2045, population growth / housing is projected to remain relatively steady with more substantial growth occurring in Harris County in Georgia and Lee and Russell Counties in Alabama. Fort Benning will continue to be a place where people from all over the region travel to and from work each day. Because of these commuting patterns, the lack of travel options and thus heavy reliance on individual travel by automobile, there are future air quality concerns as well as the effect of future rising gasoline prices and shortages on the economy.

Multimodal Needs

To meet the region's need and to respond to both the continuation and changes in travel patterns, the transportation network must be multi-modal and travel's need to have other modes available to them as options to driving alone in their cars. Thus, public transportation has to be a part of the total transportation solution to addressing a continued, acceptable level of mobility for the region. Transit plays a key role in increasing the tourism appeal of the River Walk investment and in connecting Fort Benning personnel to attractions such as the River Walk and other regional activities.

Challenges to Regional Public Transit

The major challenges to providing expanded public transportation services and making it an option to single occupant travel include:

- How to provide service for those workers and others coming from outside the service area;
- How to meet the needs of the existing and transit dependent riders while appealing to the choice riders;
- How can transit enhance air quality and the environment;
- How to educate developers about providing access;
- Access via public transportation service;
- How to increase service frequencies/decrease passenger wait times; and
- How to expand service to evenings / late night and weekends for shift workers;
- How to pay for expanded enhanced service and operations;

Description of Existing Conditions and Commuting Patterns

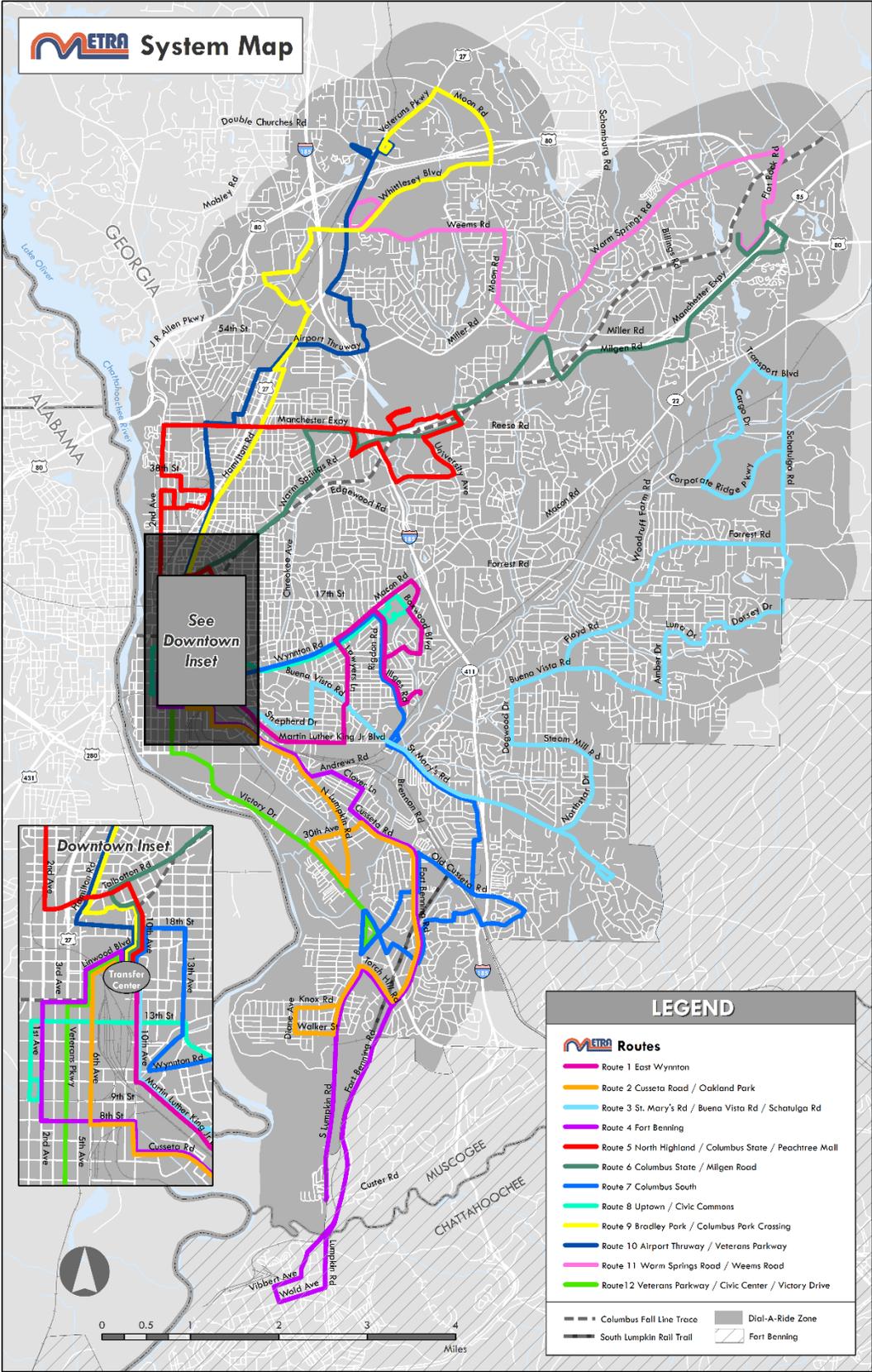
Public transportation has been a part of the fabric of the region since 1868 and the need for public transportation as an integrated component of the transportation network is continuing to increase. While the need is increasing, funding is only going to meet the existing need and current service levels with only modest increases. This is due partly to the fact that many commuters do not consider public transportation an available travel option because current services are limited to county service areas and thus do not meet the travel demand for cross county, regional mobility.

METRA and PEX provide public transportation to the region as regular fixed route and paratransit services. METRA provides services to Muscogee County and are operated as a function of the Columbus Consolidated Government. PEX or the Phenix City Express is overseen by the Lee-Russell County Council of Governments and provides services to both Lee and Russell Counties.

These services are primarily a collection distribution function bringing people into Columbus for jobs in the morning and bringing them back to Lee and Russell Counties in the evening. PEX buses used to bring Lee and Russell County residents into the Columbus METRA transfer center where they could either board METRA buses or walk to take other modes for their final destinations. However, the policy for PEX changed and while one of their buses does cross the Chattahoochee River, the bus stops only at Broadway and 13th Street before turning around and heading back to Alabama.

Maps 6-1 and 6-2 depicts the routes of the public transportation routes serving the region. Table 6-1 outlines the schedule and fares for PEX and the fares for METRA.

METRA System Map



LRPT Transit Routes & Stops

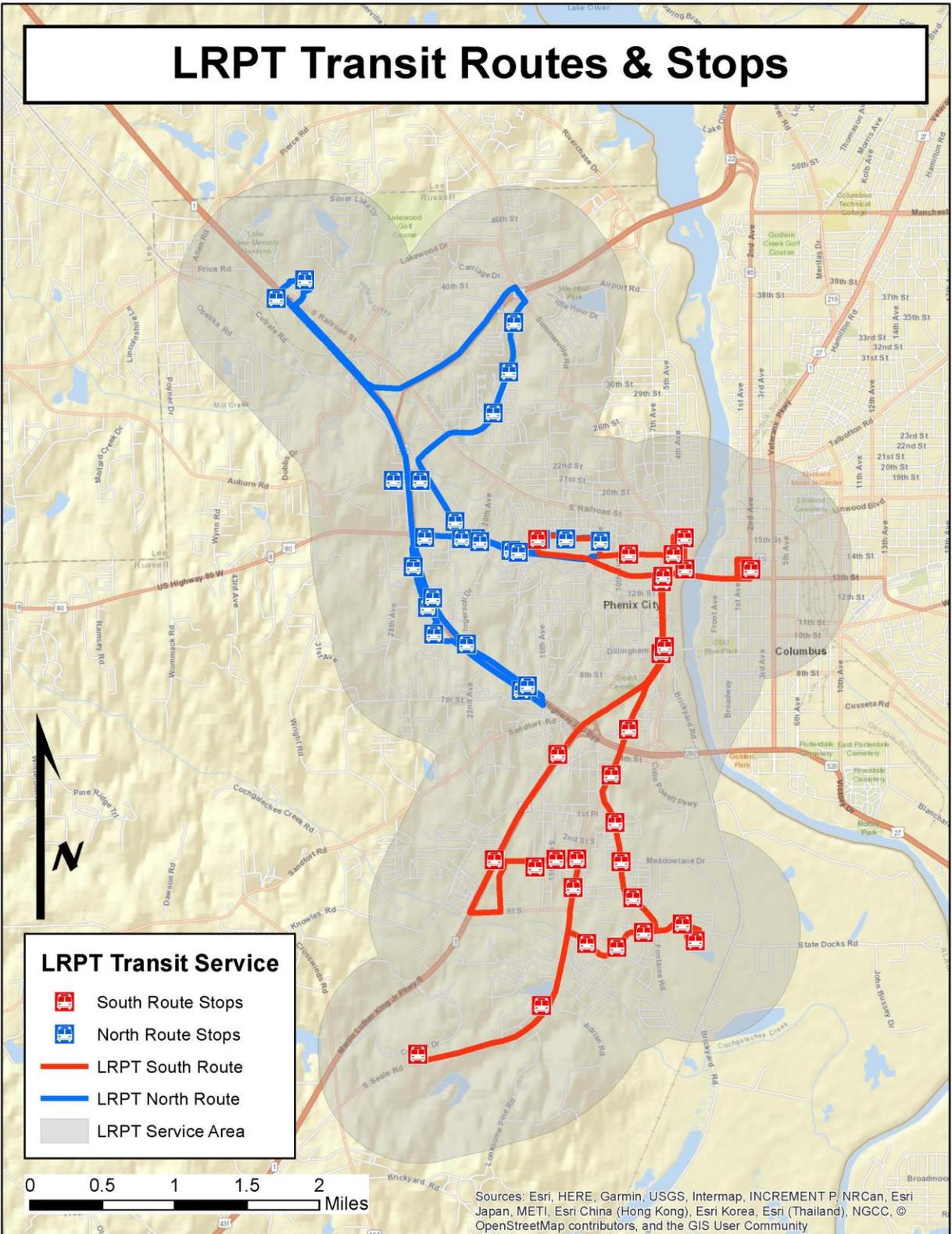


Table 6-1
Schedule and Fares for Area Transit Systems

FARE SCHEDULE FOR PHENIX CITY EXPRESS (PEX)		
Location	Fare (One-Way Trip)	Fare (15 One-Way Trips)
Adults	\$1.00	\$14.00
Senior Citizens/Disabled/Medicare Card with Picture ID	\$0.50	\$7.50
Children (6 - 17)	\$0.75	\$11.25
Children (5 and under)	Free	Free

Source: Lee-Russell Council of Governments

FARE SCHEDULE FOR METRA (COLUMBUS TRANSIT)		
Riders	Daily	Swipe Cards (Weekly/ Bi-Weekly/Monthly)
Adult Fare	\$1.30	\$15.50 / \$28.00 / \$53.00
Adult Fare - Fort Benning	\$1.90	\$0.00
Senior Citizen / Disabled	\$0.65	\$0.00
Senior Citizen / Disabled - Fort Benning (I.D. Required)	\$0.95	\$7.75 / \$14.00 / \$26.50
Student (I.D. Required)	\$1.00	N/A - N/A - \$23.00
Child (Taller than fare box)	\$1.30	\$0.00
Child (Smaller than fare box in seat)	\$1.00	\$0.00
Child (Smaller than fare box in arms) - Only one child can be held	Free	Free
Dial-A-Ride (I.D. Required)	\$2.50	\$0.00

Source: METRA System - (Columbus Consolidated Government - Columbus Transit)

METRA – Columbus Transit

The METRA transfer center is located in downtown Columbus on Linwood Boulevard between 8th and 9th Avenues. All METRA routes begin and end at the transfer center. The center is used by METRA buses and includes nine (9) bus bays, an enclosed passenger waiting area (capacity for 80 people) with restrooms and operator amenities, convenience vending and a ticket window where passengers can buy passes and get system information. There is a commercial bay for the Veteran’s Administration bus, and other transit providers.

METRA operates a fixed route service from 4:00 AM to 10:00 PM, Monday through Saturday. The Dial-A-Ride service, which is a complementary para-transit service available for qualified individuals that cannot use a regular fixed route service. In 2018, METRA had 1,315,422 passenger trips annually. In 2018, annual revenues were \$1,059,536.00 and annual operating expenses were \$4,884,493.00.

The shared ride system is centered along local, fixed route, bus service, extending $\frac{3}{4}$ of a mile on either side of the route or a mile and a half for routes that have service along one side of the corridor. METRA’s entire fleet is ramp or lift accessible for persons with disabilities.

Phenix City Express (PEX) and Lee-Russell Public Transit (LRPT)

Public transportation in Lee/Russell Counties are both urban and rural. The Lee-Russell Council of Governments (LRCOG) based in Auburn, Alabama administer both these programs. Phenix City Express (PEX) operates in Phenix City and Lee-Russell Public Transit (LRPT) operates in Auburn / Opelika and Lee County.

PEX operates a fixed route and paratransit service within the city limits of Phenix City with service available from 8:00 A.M. to 4:00 P.M. – Monday thru Friday. However, the PEX fixed route travels to Columbus, GA to drop passengers off at a METRA stop to allow riders to transfer to a METRA bus. PEX also offers a paratransit service into Columbus, GA for medical visits.

LRPT operates a demand response system in both Lee and Russell Counties, with service available from 6:00 A.M. to 6:00 P.M. – Monday thru Friday, with reservations required a minimum of one (1) day in advance. This service focuses on getting individuals from Russell and Lee Counties into Auburn and Opelika.

Future Needs for Regional Transit

Muscogee County is expected to continue to play a major role in the economy of the region accounting for 80% of the anticipated employment growth for the next 30 years. The need for peak period, regional and cross-country travel will increase over time.

With both METRA and PEX having a service focus that is geographic and limited to the political boundaries of the counties that pay for the service, it is not likely that these cross-country needs can be addressed with the current public transportation service provision structure.

As growth and development continue north and east of the study region and in other counties, public transportation will continue to lose ground as an available, viable travel option for many who commute into the region daily for work and services. In addition, growth in the north eastern Muscogee County and southern Lee County is beyond the existing public transportation routes, indicating a need to either expand the current route structure or connect these areas to the existing structure via a system of park and ride lots or other transfer facilities.

These needs include:

Connectivity:

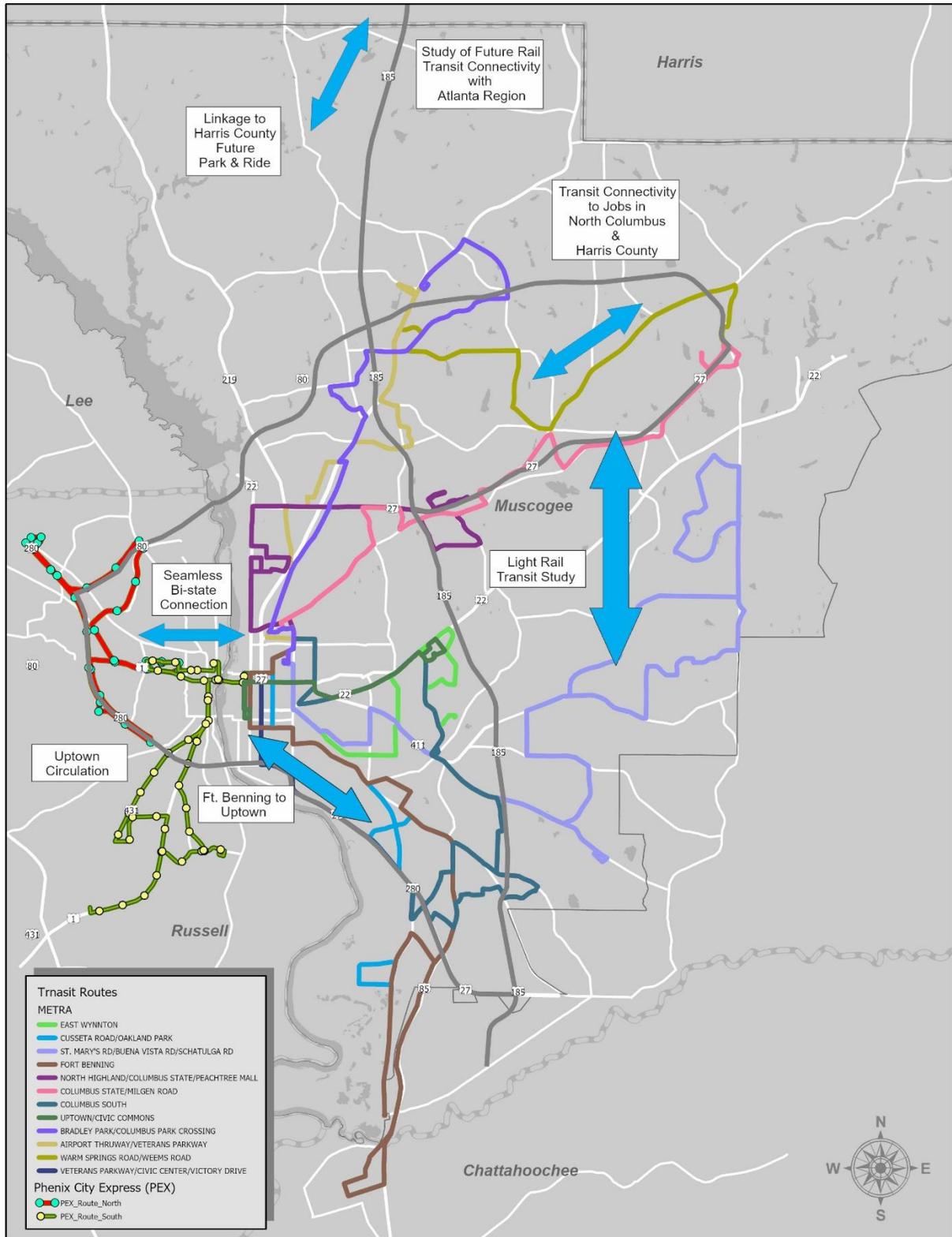
- Access to jobs in north Columbus and Harris and Chattahoochee Counties
- Access to technology jobs in the north east
- Access from Fort Benning to the downtown core area
- Improved downtown circulation
- Seamless bi-state transit services
- Support for reverse commuting options
- Tourism
- Providing transit connectivity into Chattahoochee & Harris Counties

In addition, other objectives to add to this list include:

- Making the downtown pedestrian / passenger environment more friendly and safe
- Improving service effectiveness
- Increasing ridership levels
- Enhancing air quality using clean burning vehicle types and technology
- Enhancing the tourism environment
- Improve mobility for people who do not qualify for paratransit service whose mobility needs are not met by regular fixed route service
- Assisting in managing the transportation needs of special events
- Including an assessment of transit service when considering the mobility needs of planned new development
- Identifying funding strategies to support the provision of regional public transportation services

Please refer to Map 6-4 on the following page to see these needs.

Map 6-4
C-PCMPO Regional Transit Service Objectives



Transit Trends

As previously discussed, Columbus will continue to be a key part of the economic core for the region meaning the number of people commuting into the core for jobs will likely increase since 80% of the job growth for the region is anticipated to occur in Columbus. In addition, the population is moving out to areas of available undeveloped land made accessible by US 80 in northeastern Muscogee County and Harris County and development in the south of the region in southern Lee County and the potential revitalization in south Columbus.

Commuting Options

This pushes residential development out beyond the present public transportation route network and service areas, eliminating it as an alternative transportation option for the trip to work. To assist in meeting this mobility need, public transportation has to investigate ways to connect with these developments and provide an attractive service to choice riders.

Residents that live close in to the core of the region will put pressure on the public transportation network to provide reverse commuter trips to be able to take advantage of the potential job opportunities developing in the north and the northeast. New industries examining opportunities to relocate or build in the area may be deterred by the lack of viable public transportation options for getting a core of service sectors workers to available jobs.

Alabama Needs

Phenix City, Lee and Russell County residents need expanded public transportation options to commute to jobs and other services in the Columbus core area. Without these, those without access to a private automobile and those that do not drive or qualify for the limited paratransit service offered in these areas will find their mobility severely limited.

Changes in commute patterns may require a serious examination and reconfiguration of the existing public transportation route network to service suburb-to-suburb travel demand. In addition, a second north transfer center may be required to facilitate attractive service in these areas and not require a transfer to take place in the downtown core area to reach a destination in these newly developed areas. A system of strategically located park and ride lots, developed over time may be needed to support the extension of viable public transportation service to these areas.

The current Phenix City service is operating at its capacity providing basic services to transit dependent individuals for non-home based work trips (shopping, medical services, etc.) and does not provide the type and level of services need to support home based work trips to the jobs in the Columbus core area.

Funding Needs for Regional Transit

Both Phenix City and METRA need funds to determine the efficiency of their existing systems. While METRA does survey work on its system and periodic ride checks and prepared a new Transit Development Plan, which was presented to representatives of the Federal Transit Administration (FTA) in 2012, when the C-PCTS MPO was undergoing its quadrennial certification process by the Federal Highway Administration (FHWA). For both systems, this is matter of funding and staffing. These short range plans provide a roadmap for the future expansion

of service identifying the need for and the look of new service lines, the maintenance of service levels and financial planning to support service needs.

Multimodal Planning

If public transportation is to help the region address future mobility needs, deter future, anticipated traffic congestion, and enhance opportunities for tourism, transit service providers must be an integral part of the planning of the development of the region. This means making the consideration of public transit services, service areas/routes and plans a part of the development review process. Encouraging new development of locate for access to transit services and generating a willingness among the development community to help pay for then enhancement and expansion of these services. Also required is a regional context and service provision structure for transit service, which allows for the effective planning and funding of these services across jurisdictional lines so the regional mobility needs might be able to address by viable travel options provided by transit.

Requirements for New Development

Because the public transportation network should not and cannot function well in a vacuum, it needs to be part of the overall comprehensive transportation planning process. This process must start when new development concepts are put on the table if future traffic congestion is to be effectively addressed through the planned investments in transportation improvements.

Traffic impact studies should incorporate transit as a means of access and mobility for a new development and not always recommend new roadways, roadway widening, and geometric roadway improvements as the only viable way of access and mobility. The current plans of the area transit providers should be used as input to these studies.

New development should be encouraged to locate along existing and planned transit lines. Developer incentives could be given, such as a relaxation of onsite parking requirements if convenient and viable access to transit is planned and facilitated by the design of the development. Developers and investors could be encouraged to meet with transit providers to discuss their mobility and access needs, and how transit could meet these needs.

Criteria/Standards for Establishing Transit Service

Transit providers should develop a set of criteria/standards that set thresholds as to when and what type of service that would be offered in a new developing or redeveloping area. Some transit providers have criteria that specify when existing service routes are close to new development, the routes are extended. For example: transit service routes within 1 to 3 miles of new development might automatically get extended when the new development has 1,000 employees or would have a resident population of 350 and above. For developments with less than 500 employees the transit provider and employer would work together to provide access to and from the existing end of transit service routes.

Transit providers could also provide ride share matching services to these employers to encourage shared ride travel and employers could subsidize transit passes to encourage non-single occupant vehicle commutes. There may also be a need to set standards for judging the efficiency of existing service, such as riders per revenue mile or revenue hour. The adoption of these types of service monitors would help to identify unproductive service that might be scaled back or reconfigured so

that new service or needed service extensions could be implemented. There are numerous examples and set standards of good transit planning that may be able to be adapted for use in the study region.

New service lines and modified service scenarios might also be a part of these standards. Industries with shift workers who would require late night, early morning or weekend service might work with the transit provider to have service hours extended to provide access for shift workers, this type of lifeline service would be highly tailored and would require some cost sharing from employers, developers, and investors. This standard could be based on the size of the potential work force, since the transit provider could not afford to provide the service without some reasonable expectation of a certain level of ridership.

Public transportation service planning (both short and long term) must recognize the new development and demographic trends and be structured to address these trends in a viable and affordable manner. Strong residential development trends in a certain area may make that area the first priority for the provision of new service and or the extension of existing routes. Thus, transit providers must have the resources and tools to create the database and conduct needed attitudinal surveys to determine both the need and desire for new service lines and extensions.

These resources do not have to reside with the transit providers – they could be provided by the C-PCTS MPO, the Chamber of Commerce, the economic development department or other entities. However, such research and data must meet the needs of the service designers and providers.

Transit Fleet Management and Improvements

Transit has a key role to play in helping enhance the environment, conserving energy and help maintain clean air standards. Transit provider plans for fleet replacement as vehicles reached the need of their service life should consider new technology for clean fuel burning vehicles that are energy efficient. The Columbus METRA system uses Compressed Natural Gas (CNG) buses on a small portion of their fleet.

Use of Intelligent Transportation Systems (ITS) can help with on time service provision and efficient use of equipment and guaranteed travel times. Some localities elsewhere have utilized GPS receivers installed in their transit buses to provide riders with reports on the approximate wait and arrival time to rider's cell phones or to animated displays at bus shelters. This provides riders with the confidence of knowing when a bus will be arriving and whether it might be delayed. All of these are elements of making transit a more attractive and viable travel option.

Proposed Investment Strategies and Recommendations

Several recommendations for public transportation have been developed as a result of this study effort. Some of these have previously been discussed in other portions of this chapter, however all are summarized below.

- Investigating the development of a regional public transportation authority;
- Studying methods for providing linkages for commuters via park and ride lots and the initiation of express bus service;

- Improving downtown, bi-state circulation in the core area of the region;
- Continuing to enhance the safety and pedestrian environment for downtown patrons. Broadway makes use of the raised tables at crosswalk areas to inhibit speeding from motorists;
- Improving access to jobs in new, developing areas. Improving access to technology jobs within the region;
- Improving mobility for persons who do not qualify for para-transit service or other programs and whose needs are not met by regular fixed route service;
- Continuing to implement a broad based public awareness campaign to promote the benefits of public transportation. The Columbus METRA system has a transit awareness day each October;
- Establishing a database of regional travel needs and attitudes including existing and potential, future transit riders;
- Investigating service options for shift workers and potential Sunday riders;
- Investigating options for expanding the service schedule and service frequency;
- Investigating ways to include public transportation providers in the regional development review process.

Promoting the development and adoption of incentives to get developers to include transit in their strategic planning and location analysis.

- Encourage the incorporation of transit and other modal (bike, pedestrian) improvements in the design and development of roadway projects;
- Promoting transit and other mode friendly land use controls and development ordinances;
- Establish service standards and criteria for the provision of new service / service lines, the extension of existing routes to respond to demographic, travel, and development trends in the region;
- Identifying alternative revenue sources;
- Investigation the development of a regional public transportation authority with the ability to raise revenue on a regional basis;
- Attracting / promoting public / private partnership (Fort Benning could be a potential partner).

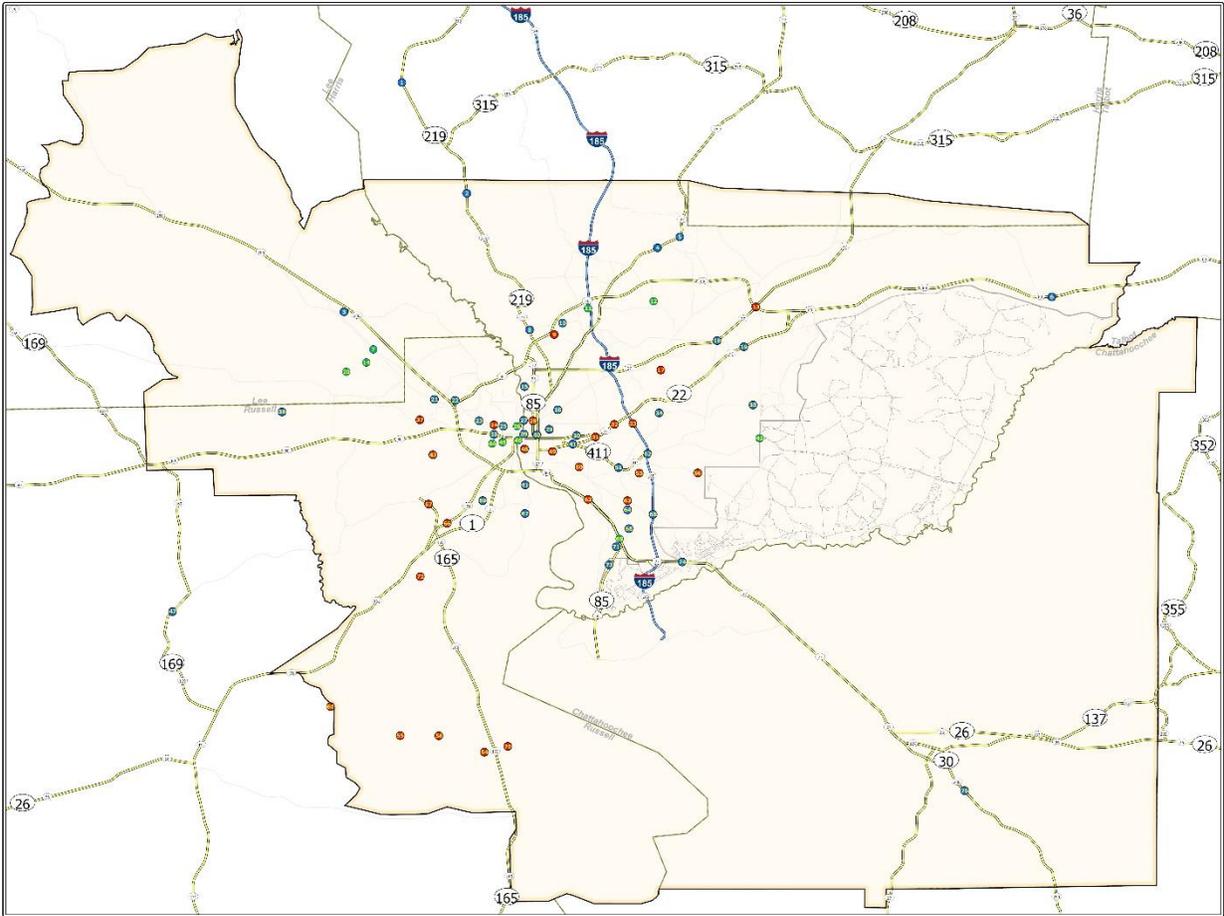
CHAPTER 7

PROJECT RECOMMENDATIONS

This section includes the recommended planned improvements for the Columbus-Phenix City MPO area over the planning horizon. Needed transportation improvements were identified based on a review of previous planning efforts, agency involvement, citizen and stakeholder input, and results from the C-PCTS MPO's regional travel demand model. This information was then balanced against the C-PCTS MPO's projected financial revenue availability, which subsequently resulted in the recommended projects of this Plan. Transportation improvements within the recommended plan are financially constrained (i.e. have been balanced against forecasted revenues presented in the Financial Plan).

Map 7-1 provides a visual representation of the projects outlined in the 2045 MTP update over the plan horizon within the Columbus-Phenix City MPO area.

Map 7-1: Project Map



7.1 Project and Program Selection Process

Proposed improvements are prioritized with respect to several factors including impacts on travel demand, cost community benefits, and safety considerations. Specific project development efforts will focus first on those thought to be of highest priority.

Project Evaluation Factors:

A & B – Congestion Relief (8) Points

A – Existing Level of Congestion = existing volume/existing capacity.

Four (4) points: $V/C > 1$

Three (3) points: $V/C > 0.85$ and $V/C < 1.0$

Two (2) points: $V/C > 0.70$ and $V/C < 0.84$

One (1) point: $V/C < 0.7$

B – Future Level of Congestion = future volume/existing capacity.

Four (4) points: $V/C > 1$

Three (3) points: $V/C > 0.85$ and $V/C < 1.0$

Two (2) points: $V/C > 0.70$ and $V/C < 0.84$

One (1) point: $V/C < 0.7$

(Determined from Year 2035 Columbus No-Build Traffic Model)

C – Service to Major Activity Centers (3) points

Three (3) points: Project provides improvements in access to an existing regional major activity center – OR- project reduces single-occupant vehicle travel to, between, and within activity centers.

Two (2) points: Project provides improvements in access to a future local major activity center – OR – project reduces single-occupant vehicle within activity centers.

One (1) point: Project does not benefit activity centers.

D – Freight Use (3) points: Substantial service to freight movement or facility servicing substantial freight movements

Three (3) points: Project enhances the ability for a National Highway System Route, Interstate Route, or other major state or local route to efficiently move freight.

Two (2) points: Project maintains the ability for a National Highway System Route, Interstate Route, or other major state or local route to efficiently move freight.

One (1) point: Project impairs the ability for a National Highway System Route, Interstate Route, or other major state or local route to efficiently move freight.

*Projects that increase capacity, improve roadway geometry, increase average travel speed, improve access, and/or improve mobility would be awarded a higher point value. Projects that make the movement of trucks more difficult and less efficient would be awarded a lower point value.

E – Vehicle Crash Incidence (3 points): Potential to Reduce Crash History (3 points): Project with Highest Crash Rate (Segment rate)

Three (3) points: Project in area ranked in top 1/3rd crash rates (segment rate)

Two (2) points: Project in area ranked in middle third of crash rates (segment rate)

One (1) point: Project within lowest 1/3rd of crash rates (segment rate)

F – Bike/Pedestrian Accommodation (3 points): Contributor to improved accessibility for pedestrians and bicyclists

Three (3) points: Project provides positive benefit to pedestrian and bicycle safety (i.e. provides new sidewalks, bikeways, multiuse paths, trails, improved crossings, and similar)

Two (2) points: Project will not change conditions for pedestrians or bicyclists

One (1) point: Project will negatively impact bicycle or pedestrian facilities and accommodation

*Projects that include improvements to the pedestrian and bicycle system that enhance safety and accommodation above existing conditions, would be awarded more points. Projects that maintain the status quo or have negative impacts would be awarded fewer points.

G – Natural Environment (3 points): Impact on wetlands, watersheds, ecosystems, Impact on wetlands, watersheds, ecosystems, air, and water quality

Three (3) points: Project has significant and measureable net positive impact on wetlands, watersheds, ecosystems, air, and water quality.

Two (2) points: Project is neutral in its environmental impact, neither providing significant benefit or detriment to the environment

One (1) point: Project has significant and net negative impact on wetlands, watersheds, ecosystems, air, and water quality

*Projects that contribute to improvements in water and air quality; restore or increase (appropriately) wetlands, and project ecosystems would be awarded higher point values. Projects that involve significant mitigation and remediation of wetlands and impact sensitive ecosystems would be awarded lower point values.

H – Neighborhood (3) points: Impact on neighborhoods, communities, and historic and archaeological sites

Three (3) points: Project has a net positive impact on neighborhood, community, historic, or archaeological elements in the community. The project is sensitive to the area context. Project has limited or no impact to significant community elements (schools, churches, archaeological sites, homes, cultural amenities, etc.) and provides measurable benefit in terms of aesthetics, safety, and accommodation of all modes of transportation

Two (2) points: Project is neutral in its impact on neighborhood, community, historic, or archaeological elements in the community. The project is somewhat context sensitive; however, it has some measurable and real impact to community elements (schools, churches, archaeological sites, homes, cultural amenities, etc.)

One (1) point: Project has a net negative impact on neighborhood, communities, and historic and archaeological sites. Project encourages unsustainable growth.

*Streetscape, bikeway, trail, sidewalk, transit, context-sensitive roadway modification, and similar projects would be awarded higher point values. Significant road widening and projects that require significant “takings” and that have substantial community impacts would be awarded lower point values.

I – Adherence to Existing State/Local Plans (4 points)

Three (3) points: Adherence to existing street and highway, master, regional, and local modal plans

Two (2) points: Project is state project

One (1) point: Project is not a part of any of the aforementioned plans, nor has local support

*Projects programmed in local capital improvement programs, regional programs, and statewide programs and that are a part of adopted plans would be awarded the highest number of points. Projects that are not programmed or a part of adopted plans would be awarded the fewest number of points.

J – Feasibility (3 points): Reasonable cost, efficient, resourceful, having positive long-term economic impacts

Three (3) points: Project has been studied thru completion or preliminary engineering or a feasibility study completed feasibility study, project has begun design work

Two (2) points: Project has undergone some level of preliminary engineering or feasibility study, the ability to be implemented

One (1) point: Project is undefined, except by long range or comprehensive plan

*Projects that have demonstrated feasibility for implementation are awarded the highest number of points. These projects will often have had a supporting feasibility study, concept design, and engineering completed. Projects that are less well-defined are awarded fewer points.

K – Project Ready (3 points)

Three (3) points: Project ready to go (designed and mostly funded)

Two (2) points: Project is well-defined (designed and partially funded)

One (1) point: Project expands an existing or constructs a new road but does not have funding identified

*Projects that are ready and have some or all the funding needed would be awarded higher point values. Projects that are less well-defined and do not have funding would receive fewer points.

L – Growth Areas (3 points): Promotion of sensible, sustainable growth

Three (3) points: Project promotes, encourages, and supports sustainable patterns of growth

Two (2) points: Project neither promotes or discourages sustainable patterns of growth

One (1) point: Project encourages unsustainable patterns of growth

*Projects that support and enhance existing stable communities and/or planned nodes of responsible growth would be awarded more points. Projects that promote or extend unsustainable patterns or development would be awarded fewer points.

M – Intermodal (3 points): Enhancement of intermodal access

Three (3) points: Project is on a transit route, a designated bicycle route and in a pedestrian activity area

Two (2) points: Project is on a transit route or a designated bicycle route or pedestrian activity area

One (1) point: Project is not on a transit route, a designated bicycle route nor is in a pedestrian activity area.

All modes of transportation continue to be reflected in the 2045 MTP Update based on a continuing, cooperative, and comprehensive technical and planning process. All transportation facilities are included in the process (including major roadways, public transportation facilities, multimodal and intermodal facilities, non-motorized transportation facilities, and intermodal connectors).

The proposed priority improvement projects presented herein were identified using multiple sources:

- 2045 Metropolitan Transportation Plan (MTP) Update Analysis
- 2040 Metropolitan Transportation Plan (MTP)
- 2018-2021 Transportation Improvement Program (TIP)
- Alabama Proposed Projects (Phenix City, Lee and Russell Counties)
- Chattahoochee Projects (Chattahoochee County)
- Capital Improvement Program (CIP) – Columbus Consolidated Government
- Alabama Department of Transportation (ALDOT)
- Georgia Department of Transportation (GDOT)

For consideration in the MTP Update, MPO Staff reviewed projects along with the Georgia and Alabama Department of Transportation, Muscogee, Chattahoochee, Harris Counties in Georgia, and the City of Phenix City, Lee and Russell Counties in Alabama. Projects identified in the 2040 MTP as well as projects in Tier II of the 2018-2021 TIP were reviewed and submitted for inclusion in the 2045 MTP along with new projects.

7.2 Plan Implementation

Implementation of project recommendations for the MTP occurs through the programming of transportation improvements on a scheduled basis, which is linked to annual state and federal funding appropriations. For projects within the C-PCTS MPO area that are federally or state funded or considered regionally significant, the C-PCTS MPO, in consultation with the appropriate member jurisdictions, GDOT, ALDOT, and transit agencies, with input from the public, determines which projects are to be advanced from the MTP into the C-PCTS MPO's short-term Transportation Improvement Program (TIP).

The TIP is a planning/programming document developed and adopted by the C-PCTS MPO in response to transportation goals, priorities, and needs in the C-PCTS MPO area as presented in the C-PCTS MPO's MTP. The TIP is a four-year program for all modes of transportation that is updated every three years. It not only addresses major transportation improvements as well as transit and other transportation investments. Projects that are added to the TIP for funding and implementation must be consistent with the goals, priorities, project recommendations, and strategies of the MTP. This consistency ensures for a continuing, cooperative, and comprehensive planning process that guides development of integrated planning and decision-making by the C-PCTS MPO.

The C-PCTS MPO also maintains an annual work program (referred to as the Unified Planning Work Program or UPWP) that outlines the planning activities in the region to be undertaken by the C-PCTS MPO during the fiscal year. Planning activities of the C-PCTS MPO are influenced by the goals and priorities of the MTP and frame a large portion of the C-PCTS MPO's work program activities. Examples of these activities, which support implementation of the C-PCTS MPO's MTP, include undertaking subarea and sub-regional studies that allow for the C-PCTS MPO to better understand transportation needs in the region, maintaining avenues and opportunities for public and stakeholder input on projects and decisions by the C-PCTS MPO, and updating planning data and tools for future analysis of transportation needs in the region. Additionally, the C-PCTS MPO is actively involved in monitoring and coordinating projects from the MTP into the TIP. Through this continuous planning process, the C-PCTS MPO plays an active role in implementing the recommendations of the MTP and supporting an integrated planning process within the C-PCTS MPO area.

7.3 Amendment Process

The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) issued the Final Rule to revise the Statewide and Metropolitan Planning regulations incorporating changes from the Moving Ahead for Progress in the 21st Century Act (MAP-21) that was signed into law on July 6, 2012. The revised regulations clearly define administrative modifications and amendments as actions to update plans and programs. 23 Code of Federal Regulations (CFR) Part 450.104 defines administrative modifications and amendments as follows:

- Administrative modification “means a minor revision to a long-range statewide or metropolitan transportation plan, Transportation Improvement Program (TIP), or Statewide Transportation Improvement Program (STIP) that includes minor changes to project/project phase costs, minor changes to funding sources of previously-included projects, and minor changes to project/project phase initiation dates. Administrative Modification is a revision that does not require public review and comment, re-demonstration of fiscal constraint, or a conformity determination (in nonattainment and maintenance areas).”
- Amendment “means a revision to a long-range statewide or metropolitan transportation plan, TIP, or STIP that involves a major change to a project included in a metropolitan transportation plan, TIP, or STIP, including the addition or deletion of a project or major change in project cost, project/project phase initiation dates, or a major change in design concept or design scope (e.g., changing project termini or the number of through traffic lanes). Changes to projects that are included only for illustrative purposes do not require an amendment. An amendment is a revision that requires public review and comment, re-demonstration of fiscal constraint, or a conformity determination (for metropolitan transportation plans and TIPs involving “non-exempt” projects in nonattainment and maintenance areas). In the context of a long-range statewide transportation plan, an amendment is a revision approved by the State in accordance with its public involvement process.”

The following procedures have been developed for processing administrative modifications and amendments to the STIP and Metropolitan Planning Organizations (MPOs) TIPs and Metropolitan Transportation Plans (LRTPs). Processes described below detail procedures that are to be used to update an existing approved STIP or TIP and associated plan, if applicable. A key element of the amendment process is to assure that funding balances are maintained.

Administrative Modifications for Initial Authorizations

The following actions are eligible as Administrative Modifications to the STIP/TIP/LRTP:

- A. Revise a project description without changing the project scope, conflicting with the environmental document or changing the conformity finding in nonattainment and maintenance areas (less than 10% change in project termini). This change would not alter the original project intent.

- B. Splitting or combining projects.
- C. Federal funding category change.
- D. Minor changes in expenditures for transit projects.
- E. Roadway project phases may have a cost increase less than \$2,000,000 or 20% of the amount to be authorized.
- F. Shifting projects within the 4-year STIP as long as the subsequent annual draft STIP was submitted prior to September 30.
- G. Projects may be funded from lump sum banks as long as they are consistent with category definitions.

An administrative modification can be processed in accordance with these procedures provided that:

- 1). It does not affect the air quality conformity determination.
- 2). It does not impact financial constraint.
- 3). It does not require public review and comment.

The administrative modification process consists of a monthly list of notifications from GDOT to all involved parties, with change summaries sent on a monthly basis to the FHWA and FTA by the GDOT.

The GDOT will submit quarterly reports detailing projects drawn from each lump sum bank with remaining balance to the FHWA.

Amendment for Initial Authorizations

The following actions are eligible as Amendments to the STIP/TIP/MTP:

- A. Addition or deletion of a project.
- B. Addition or deletion of a phase of a project.
- C. Roadway project phases that increase in cost over the thresholds described in the Administrative Modification section.
- D. Addition of an annual TIP.

- E. Major change to scope of work of an existing project. A major change would be any change that alters the original intent i.e. a change in the number of through lanes, a change in termini of more than 10 percent.
- F. Shifting projects within the 4-year STIP, which require re-demonstration of fiscal constraint or when the subsequent annual draft STIP was not submitted prior to September 30. (See Administrative Modification item F).

Amendments to the STIP/TIP/LRTP will be developed in accordance with the provisions of 23 CFR Part 450. This requires public review and comment and responses to all comments, either individually or in summary form. For amendments in MPO areas, the public review process should be carried out in accordance with the procedures outlined in the Participation Plan. The GDOT will assure that the amendment process and the public involvement procedures have been followed. Cost changes made to the second, third, and fourth years of the STIP will be balanced during the STIP yearly update process. All amendments should be approved by FHWA and/or FTA.

Notes:

1. The date a TIP becomes effective is when the Governor or his designee approves it. For non-attainment and maintenance areas, the effective date of the TIP is based on the date of U.S. Department of Transportation's positive finding of conformity.\
2. The date of the STIP becomes effective is when FHWA and FTA approve it.
3. The STIP is developed on the state fiscal year which is July 1 – June 30 (Georgia) and October 1 – September 30 (Alabama).
4. Funds for cost increases will come from those set aside in the STIP financial plan by the GDOT for modifications and cost increases. Fiscal Constraint will be maintained in the STIP at all times.

7.4 Performance Based Planning

Pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21) enacted in 2012 and the Fixing America's Surface Transportation Act (FAST Act) enacted in 2015, State Departments of Transportation (DOT's) and Metropolitan Planning Organizations (MPO's) must apply a transportation performance management approach in carrying out their federally-required transportation planning and programming activities. The process requires the establishment and use of a coordinated performance-based approach to transportation decision-making to support national goals for the federal-aid highway and public transportation programs.

Performance-based planning and programming (PBPP) refers to transportation agencies' application for performance management in their planning and programming to achieve desired outcomes for the multi-modal transportation system. For MPO's this embraces a range of activities and products together with other agencies, stakeholders, and the public as part of the 3C Metropolitan Transportation Planning Process.

The goal of PBPP is to ensure that transportation investment decisions – both long-term planning and short-term programming – are based on their ability to meet established goals. States will invest resources in projects to achieve individual state targets that collectively will make Progress toward national goals, as detailed in the FAST Act. The Columbus-Phenix City Transportation Study MPO established goals and objectives that align with national goals in Table 7 - -- on the following page.

On May 27, 2016, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) issued the Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Final Rule (The Planning Rule).¹ This regulation implements the transportation planning and transportation performance management provisions of MAP-21 and the FAST Act. Outlined below are the performance targets that are developed and updated annually by FHWA/GDOT/ALDOT and adopted by the Columbus-Phenix City Transportation Study (MPO).

Safety (vehicles, pedestrians, bicyclists)

Travel Time (Cars & Freight)

Pavement / Bridges

The MPO will also look at projects that will connect pedestrians/bicyclists to major activity centers, have a positive impact on neighborhoods, feasibility, promote sensible, sustainable growth, and enhancement of intermodal access.

¹ 23 CFR 450.314

Project Name	Project Type	Project Description	C-PCTS MPO 2045 GOALS								
			Accessibility and Mobility: Assure that freight moves safely and efficiently while minimizing impacts on sensitive community areas.	System Management and Operation: Assure that transportation investments- capital, operating, and maintenance costs - effectively and safety serve the transportation need.	Environment and Quality of Life: Reduce auto related emissions. Minimize and avoid noise impacts.	Integration and Connectivity: Build, operate and maintain an interconnected network of transportation facilities that meet the needs of motorists, transit riders, pedestrians, cyclists, and shippers and receivers.	System Preservation: Preserve the quality and capacity of transportation facilities and the street and highway network by using and developing all modes of transportation to their highest and most efficient use.	Increase the Safety and Security: Reduce crashes and fatalities and enhance security.	Economic Vitality: Contribute to the economic vitality and quality of life supporting continued growth and development.	Improve the Resiliency and Realibility of the Transportation System & Stormwater Impacts: Improve livability and the quality of the transportation system.	Enhance travel and tourism: Provide a network that enhances regional accessibility for travel and tourism.
Buena Vista Road @ Floyd Road & McBride Drive	Intersection & Operational Improvements	Intersection Improvements	X	X	X	X	X	X	X	X	
Dillingham Street Bridge @ Bay Avenue & Broad Street	Bridge	Bridge Restoration	X	X	X	X	X	X	X	X	X
University Avenue from Manchester Expressway to Macon Road	Complete Streets	Reduce lanes from 4 to 3 lanes with bicycle/pedestrian facilities	X	X	X	X	X	X	X	X	X
High Speed Rail from Columbus to Atlanta	Regional Connectivity	Add Rail Line	X	X	X	X	X	X	X		X
Broad Street (Cusseta) from Anderson Road to Osteen Street - Streetscape	Complete Streets	Add bicycle / pedestrian facilities	X	X	X	X	X	X	X	X	X
SR 219 @ Schley Creek	Bridge	Bridge Replacement	X	X		X	X			X	
SR 520 / US 280 @ Bagley Creek	Bridge	Bridge Replacement	X	X		X	X			X	
SR 85 / US 27 ALT SB & NB @ CR 1660/Miller Road	Bridge	Bridge Replacement	X	X		X	X			X	
SR 22 Spur @ Weraboba Creek	Bridge	Bridge Replacement	X	X		X	X			X	
SR 520 / US 280 @ Chattahoochee River	Bridge	Bridge Replacement	X	X		X	X			X	
SR 22 / US 80 @ Kendall Creek	Bridge	Bridge Replacement	X	X		X	X			X	
Seale Road over Cochgalechee Creek. BIN 004291	Bridge	Bridge Replacement	X	X		X	X			X	
SR 520 / US 27 @ First Divison Road 7.5 MI NW of Cusseta	Bridge	Bridge Replacement	X	X		X	X			X	

Project Name	Project Type	Project Description	C-PCTS MPO 2045 OBJECTIVES								
			Accessibility and Mobility: *To allow for truck circulation and movement *To provide for the special infrastructure needs	System Management and Operation: To establish priorities for implementation of transportation improvement projects. *To create facilities and services that respond to the needs of the community, neighborhoods, and adjoining properties. *To encourage trips by pedestrians and bicycle trips. *To minimize impact on environmental resources, wetlands, wildlife, historical, water quality.	Environment and Quality of Life: *To conform to regional and local land use plans providing connectivity & mobility *To reduce sprawl and foster compact, mixed use development patterns. *To promote site development that provides the opportunity for access & on-side circulation *To protect existing neighborhoods and community integrity	Integration and Connectivity: *To provide physical connections among modes. *To create a seamless public transportation system – service, fares, and operations.	System Preservation: *To minimize congestion and delay on main travel arteries *To adequately fund routine maintenance and rehabilitation-pavement, bridges, etc. *To achieve a well maintained transit fleet	Increase the Safety and Security: *To reduce the number and severity of accidents involving vehicles, bicyclists, pedestrians, and others. *To correct systematically high crash locations.	Economic Vitality: *Provide transportation linkages to employment, business, retail activity, and other activity centers *To maintain accessibility in heavily traveled corridors	Improve the Resiliency and Realibility of the Transportation System & Stormwater Impacts: *Maximize livability by addressing recurring and non-recurring congestion *Determine vulnerable areas that impact the transportation network and target investments to mitigate *Identify deficiencies in storm-water infrastructure related to transportation and develop mitigation strategies	Enhance travel and tourism: *Promote investments in transportation facilities that provide access to tourist *Promote investments in multimodal transportation facilities that encourage use by visitors *Promote investments in transportation facilities that support/provide greater accessibility to public airport
Whitesville Road from Whittlsey Road to Williams Road	Roadway Capacity	Widen from 2 to 3 lanes	X	X	X	X	X	X	X	X	X
Cusseta Road from 10th Avenue to North Lumpkin Road	Roadway Capacity	Widen from 2 to 3 lanes	X	X	X	X	X	X	X	X	X
Woodruff Farm Road Extension	Operational Improvements	Construct a 4 lane roadway	X	X	X	X	X	X	X	X	X
Williams Road @ I-185 NB Exit Ramp	Intersection & Operational Improvements	Interchange Improvments / Possible Roundabout	X	X	X	X	X	X			
County Line Road @ Manchester Expressway and Mehaffey Road	Intersection & Operational Improvements	Interchange Improvments & Widen Bridge from 2 to 4 lanes	X	X	X	X	X	X	X	X	
Buena Vista Road @ Hunt Avenue & Wright Drive	Intersection & Operational Improvements	Intersection Improvements	X	X	X	X	X	X	X	X	
Buena Vista Road @ Floyd Road & McBridge Drive	Intersection & Operational Improvements	Intersection Improvements	X	X	X	X	X	X	X	X	
Dillingham Street Bridge @ Bay Avenue & Broad Street	Bridge	Bridge Restoration	X	X	X	X	X	X	X	X	X
University Avenue from Manchester Expressway to Macon Road	Complete Streets	Reduce lanes from 4 to 3 lanes with bicycle/pedestrian facilities	X	X	X	X	X	X	X	X	X
High Speed Rail from Columbus to Atlanta	Regional Connectivity	Add Rail Line							X		X

C-PCTS MPO 2045 OBJECTIVES											
Project Name	Project Type	Project Description	Accessibility and Mobility:	System Management and Operation:	Environment and Quality of Life:	Integration and Connectivity:	System Preservation:	Increase the Safety and Security:	Economic Vitality:	Improve the Resiliency and Realibility of the Transportation System & Stormwater Impacts:	Enhance travel and tourism:
			*To allow for truck circulation and movement *To provide for the special infrastructure needs	To establish priorities for implementation of transportation improvement projects. *To create facilities and services that respond to the needs of the community, neighborhoods, and adjoining properties. *To encourage trips by pedestrians and bicycle trips. *To minimize impact on environmental resources, wetlands, wildlife, historical, water quality.	*To conform to regional and local land use plans providing connectivity & mobility *To reduce sprawl and foster compact, mixed use development patterns. *To promote site development that provides the opportunity for access & on-side circulation *To protect existing neighborhoods and community integrity	*To provide physical connections among modes. *To create a seamless public transportation system – service, fares, and operations.	*To minimize congestion and delay on main travel arteries *To adequately fund routine maintenance and rehabilitation-pavement, bridges, etc. *To achieve a well maintained transit fleet	*To reduce the number and severity of accidents involving vehicles, bicyclists, pedestrians, and others. *To correct systematically high crash locations.	*To provide transportation linkages to employment, business, retail activity, and other activity centers *To maintain accessibility in heavily traveled corridors	*Maximize livability by addressing recurring and non-recurring congestion *Determine vulnerable areas that impact the transportation network and target investments to mitigate *Identify deficiencies in storm-water infrastructure related to transportation and develop mitigation strategies	*Promote investments in transportation facilities that provide access to tourist *Promote investments in multimodal transportation facilities that encourage use by visitors *Promote investments in transportation facilities that support/provide greater accessibility to public airport
Broad Street (Cusseta) from Anderson Road to Osteen Street - Streetscape	Complete Streets	Add bicycle / pedestrian facilities		X	X	X		X			
SR 219 @ Schley Creek	Bridge	Bridge Replacement	X				X				
SR 520 / US 280 @ Bagley Creek	Bridge	Bridge Replacement	X				X				
SR 85 / US 27 ALT SB & NB @ CR 1660/Miller Road	Bridge	Bridge Replacement	X				X				
SR 22 Spur @ Weraboba Creek	Bridge	Bridge Replacement	X				X				
SR 520 / US 280 @ Chattahoochee River	Bridge	Bridge Replacement	X				X				
SR 22 / US 80 @ Kendall Creek	Bridge	Bridge Replacement	X				X				
Seale Road over Cochgalechee Creek. BIN 004291	Bridge	Bridge Replacement	X				X				
SR 520 / US 27 @ First Divison Road 7.5 MI NW of Cusseta	Bridge	Bridge Replacement	X				X				

7.5 Project Costs

The fiscally constrained portion of the 2045 MTP includes only those projects that can be expected to be funded within the time horizon of the plan. There are one-hundred and thirty-seven (137) priority projects proposed within the category. Preliminary engineering, right-of-way, utilities, and construction costs have been developed for each of the major proposed projects; the total cost of implementation is estimated to be over \$277 million. Table 7-A outlines the Financial Balancing. This table has been placed in Chapter 9 (Financial Plan) as well.

TABLE 7-A - FINANCIAL BALANCING	
SHORT TERM PROJECT COST (2020 - 2024)	\$74,116,882.87
MID-LONG TERM PROJECT COST (2025 - 2045)	\$203,589,055.85
TOTAL PROJECT COST	\$277,705,938.72
TOTAL AVAILABLE REVENUES	\$814,730,898.00
BALANCE	\$537,024,959.28

Planning level cost estimates were developed for all Georgia projects evaluated as part of the 2045 MTP Update. GDOT's statewide per mile cost estimates were used for the construction cost estimates. MPO staff used 10% of the construction cost to determine the cost for Preliminary Engineering and 20% for the Right-of-Way per project. Table 7-2 on the following pages outline GDOT's per mile cost estimates. Russell and Lee Counties and the City of Phenix City in Alabama did all the cost estimates for the Alabama projects.

Table 7-2

Primary Work Type	Improvement Type	Lanes Added	Total Avg. Cost per Mile
Acceleration/Decel Lane	Minor Widening	1	\$1,100,000
Auxiliary Lanes	Reconstruction with Added Capacity	1	\$3,200,000
Barriers	Environmental Improvements	0	\$200,000
	Safety Improvements	0	\$100,000
Bicycle/Ped. Facility	Other Enhancements	-2	\$8,400,000
		0	\$1,500,000
	Restoration, Rehabilitation, & Resurfacing	0	\$1,600,000
Bridge Painting	Restoration, Rehabilitation, & Resurfacing	0	\$400,000
Bridges	Bridge Rehabilitation with No Added Capacity	0	\$1,800,000
	Bridge Replacement with Added Capacity	0*	\$3,200,000
		1	\$1,900,000
		2	\$5,400,000
		3	\$9,700,000
	Bridge Replacement with No Added Capacity	0	\$6,400,000
		2	\$12,300,000
	Construction of New Bridges	0	\$6,400,000
		2	\$4,500,000
		4	\$13,300,000
	Major Widening	2	\$19,700,000
	Minor Widening	0	4,300,000
	Other Enhancements	0	\$4,000,000
	Reconstruction with Added Capacity	0*	\$7,200,000
	Restoration, Rehabilitation, & Resurfacing	0	1,100,000
Safety Improvements	0	\$12,600,000	
Concrete Rehab	Restoration, Rehabilitation, & Resurfacing	0	\$2,400,000
Culvert	Restoration, Rehabilitation, & Resurfacing	0	\$300,000
Drainage Improvements	Restoration, Rehabilitation, & Resurfacing	0	\$2,100,000
Fence	Restoration, Rehabilitation, & Resurfacing	0	\$1,500,000
Guardrail	Traffic Management/Traffic Engineering	0	\$5,000,000
Interchange	Bridge Rehabilitation with No Added Capacity	0	\$2,700,000
	Bridge Replacement with Added Capacity	0*	\$6,800,000
		2	\$8,300,000
	Bridge Replacement with No Added Capacity	0	\$9,300,000
	Construction of New Bridges	0	\$8,700,000
		4	\$7,200,000
	Major Widening	2	\$9,400,000
	Minor Widening	0	\$10,800,000
Reconstruction with Added Capacity	0*	\$4,100,000	
		2	\$26,700,000
		4	\$6,800,000

Interchange (Continued)	Reconstruction with No Added Capacity	0	\$11,100,000
	Restoration, Rehabilitation, & Resurfacing	0	\$25,900,000
	Safety Improvements	0	\$9,100,000
	Traffic Management/Traffic Engineering	0	\$1,100,000
Intersection Improvement	Construction of New Roads	0	\$11,000,000
	Minor Widening	0	\$6,500,000
	Other Enhancements	0	\$3,100,000
	Reconstruction with Added Capacity	0*	\$5,800,000
	Restoration, Rehabilitation, & Resurfacing	0	\$1,000,000
	Safety Improvements	0	\$2,600,000
		1	\$3,000,000
	Traffic Management/Traffic Engineering	0	\$5,900,000
ITS	Traffic Management/Traffic Engineering	0	\$100,000
Landscaping	Environmental Improvements	0	\$1,500,000
	Other Enhancements	0	\$1,200,000
Lightening	Safety Improvements	0	\$2,400,000
	Other Enhancements	0	\$1,200,000
Managed Lanes	Major Widening	2	\$4,000,000
	Traffic Management/Traffic Engineering	2	\$5,700,000
Managed Lanes Total			\$3,000,000
Median Crossovers	Safety Improvements	0	\$900,000
Median Crossovers Total			\$900,000
Median Work	Restoration, Rehabilitation, & Resurfacing	0	\$1,000,000
	Safety Improvements	0	\$1,400,000
Minor Widen & Resurface	Minor Widening	0	\$700,000
	Restoration, Rehabilitation, & Resurfacing	0	\$1,000,000
Miscellaneous Improvements	Other Enhancements	0	\$1,500,000
	Reconstruction with No Added Capacity	0	\$3,300,000
	Restoration, Rehabilitation, & Resurfacing	0	\$1,800,000
	Safety Improvements	-2	\$800,000
		0	\$500,000
		2	\$600,000
Multi-Use Trail	Other Enhancements	0	\$900,000
Operational Improvement	Bridge Replacement with No Added Capacity	0	\$3,200,000
	Minor Widening	0	\$5,100,000
	Other Enhancements	0	\$2,900,000
	Safety Improvements	0	\$100,000
	Traffic Management/Traffic Engineering	0	\$300,000
Passing Lanes	Minor Widening	0	\$500,000
		1	\$1,500,000
	Restoration, Rehabilitation, & Resurfacing	0	\$200,000
	Safety Improvements	0	\$2,100,000

Pavement Markings	Restoration, Rehabilitation, & Resurfacing	0	\$100,000
Pavement Rehab	Restoration, Rehabilitation, & Resurfacing	0	\$100,000
Pedestrian Crossings	Safety Improvements	0	\$1,000,000
	Traffic Management/Traffic Engineering	0	\$600,000
Pipe	Safety Improvements	0	\$500,000
Railroad Crossing	Traffic Management/Traffic Engineering	0	\$28,600,000
Realignment	Minor Widening	0	\$4,000,000
		2	\$3,900,000
	Relocation with Added Capacity	2	\$5,300,000
		6	\$71,000,000
	Relocation with No Added Capacity	0	\$2,200,000
	Safety Improvements	0	\$1,700,000
	Traffic Management/Traffic Engineering	0	\$900,000
Resurface & Maintenance	Restoration, Rehabilitation, & Resurfacing	0	\$200,000
	Safety Improvements	0	\$200,000
	(blank)	0	\$200,000
Resurface & Maintenance	Restoration, Rehabilitation, & Resurfacing	-2	\$100,000
Roadway Project	Construction of New Roads	2	\$1,800,000
		4	\$7,200,000
	Minor Widening	0	\$2,400,000
	Other Enhancements	0	\$800,000
		2	\$4,400,000
	Relocation with Added Capacity	6	\$13,000,000
	Restoration, Rehabilitation, & Resurfacing	0	\$1,800,000
	Safety Improvements	0	\$800,000
Roundabout	Bridge Replacement with No Added Capacity	0	\$2,900,000
	Minor Widening	0	\$3,200,000
	Safety Improvements	0	\$3,200,000
		4	\$7,800,000
	Traffic Management/Traffic Engineering	0	\$1,600,000
RRX Warning Device	Safety Improvements	0	\$900,000
Rumble Strips	Safety Improvements	0	\$100,000
Shoulder Work	Safety Improvements	0	\$100,000
Sidewalks	Other Enhancements	0	\$500,000
	Safety Improvements	0	\$1,100,000
Signals	Safety Improvements	0	\$700,000
	Traffic Management/Traffic Engineering	0	\$500,000
Signing	Restoration, Rehabilitation, & Resurfacing	0	\$2,100,000
Streetscapes	Other Enhancements	0	\$1,800,000
TE-Bike/Ped Facility	Other Enhancements	0	\$700,000
TE-Historic Preservation	Other Enhancements	0	\$3,200,000
TE-Landscape/Beautify	Environmental Improvements	0	\$500,000
	Other Enhancements	0	\$1,300,000

TE-Rehab Hist Trans Bldg	Other Enhancements	0	\$1,700,000
TE-Scenic Hwy/Welcome Ctr	Other Enhancements	0	\$400,000
TE-Transportation Museum	Other Enhancements	0	\$3,800,000
Tollway Facility	Other Enhancements	0	\$4,400,000
Turn Lanes	Minor Widening	0	\$900,000
	Restoration, Rehabilitation, & Resurfacing	0	\$1,100,000
	Safety Improvements	0	\$1,500,000
Widening	Bridge Rehabilitation with No Added Capacity	1	\$4,900,000
	Bridge Replacement with No Added Capacity	2	\$11,900,000
	Construction of New Roads	0	\$22,800,000
	Major Widening	0	\$2,600,000
		1	\$2,100,000
		2	\$3,200,000
		3	\$4,300,000
		4	\$3,000,000
	Minor Widening	2	\$2,900,000
	Reconstruction with Added Capacity	2	\$2,800,000
	Safety Improvements	1	\$4,300,000
		2	\$5,700,000
	Traffic Management/Traffic Engineering	0	\$100,000

The items listed reflect Planning level per mile cost estimates and are subject to change during formal project plan development. PE cost projections can be assumed at 10% of CST cost.

* Improvements with Added Capacity and 0 added lanes refer to addition of additional paved shoulder width, bike lanes, or sidewalk capacity.

7.6 Special Transportation Studies

Beyond the projects proposed several needs were identified for which specific potential projects could not be immediately identified. These needs require further detailed corridor studies and will address transportation congestion, connectivity, other modes of transportation, and safety issues within the Columbus-Phenix City Metropolitan Planning Region.

STUDY	STUDY AREA	STUDY PURPOSE
A	11th Street Viaduct and Martin L. King, Jr, Boulevard at 10th Street (Railyard)	Connectivity/safety/improved mobility for traffic in this area
B	New Bridge over Chattahoochee River	Connectivity / Regional Development
C	Highway 26 @ US 520 in Cusseta (Chattahoochee County)	Safety Issues due to high accident rate
D	U.S. Highway 80 (Phenix City, AL)	Connectivity/safety/improved mobility for traffic in this area
E	Regional Freight Study	Regional Development
F	Brennan Road Streetscape Study (Buena Vista Road to Cusseta Road)	Complete Streets
G	Regional Sidewalk Study	ADA Compliance/Pedestrian Safety
H	I-14 Study	Connectivity / Regional Development

7.7 Proposed Major Projects and Financial Information

The list of the proposed major projects with estimated costs is presented in Table 7-2 on the following pages. Individual project pages were added for projects that impact the transportation network.

Historical funding received from Georgia and Alabama Departments of Transportation was used to determine the projected federal and state revenues to 2045 for the C-PCTS MPO area. GDOT provided cost estimates for projects already programmed in the GDOT Construction Work Program for each phase of project development. The C-PCTS MPO utilized the Georgia Department of Transportation's cost per mile for construction phase of the project development. The C-PCTS MPO used 10% of the construction cost to determine the cost for Preliminary Engineering, and 15% of the construction cost to determine the Right-of-Way phase. For each project phase (PE, ROW, and Construction), a 2% inflation rate was used for projects in Georgia that are scheduled from 2025 to 2045. For projects in Alabama, a 4% inflation rate was used.

Local funding for road, bicycle, and pedestrian projects come primarily from the general funds of the local governments or through a Special Local Option Sales Tax / Local Option Sales Tax. The City of Columbus also has access to transportation funds through the passing of the TIA/TSPLOST (Transportation Investment Act/Transportation Special Local Option Sales Tax) and LOST (Local Option Sales Tax). The River Valley was one of three regions that voted for the TSPLOST which expires in 2022.

C-PCMPO - 2045 METROPOLITAN TRANSPORTATION PLAN

Table 7-2 - 2045 Metropolitan Transportation Plan Major Projects

COLUMBUS, HARRIS AND CHATTAHOOCHEE COUNTY: 2020-2024 SHORT RANGE PROJECTS (*With inflation factor of 2% per year for projects not yet programmed through GDOT)

P.I. #	Projects	From	To	Type	Lanes Existing	Lanes Proposed	Length (Miles)	PE	R/W	Utilities & CST	Category
0013601	SR 219 @ Schley Creek			Bridge Improvements				Authorized	\$279,000.00	\$3,944,788.21	Bridge
0013743	SR 520 / US 280 @ Bagley Creek			Bridge Improvements				Authorized	Authorized	\$2,997,332.00	Bridge
0013926	SR 85 / US 27 ALT SB & NB @ CR 1660 / Miller Road			Bridge Improvements				Authorized	\$500,000.00	\$7,960,951.51	Bridge
0014170	SR 22 Spur @ Weracoba Creek			Bridge Improvements				Authorized	\$171,000.00	\$1,801,777.81	Bridge
0006446	SR 1 / US 27 - Veteran's Parkway	Turnberry Lane (Muscogee Cty)	SR 315 (Harris Cty)	Widening	2	3 & 4	6.26	\$1,500,000.00	\$5,000,000.00	\$13,500,000.00	Roadway Capacity
	Cusseta Road	North Lumpkin Road	23rd Avenue	Roundabout				\$450,000.00	\$1,000,000.00	\$4,000,000.00	Safety Improvements
	Brown Avenue	Cusseta Road	Andrews Road	Roundabout				\$450,000.00	\$1,000,000.00	\$4,000,000.00	Safety Improvements
	Williams Road	SR 1 / US 27 - Veteran's Parkway	Francisoan Woods Drive (Private Rd)	Widening	2	3	1.28	\$300,000.00	\$525,000.00	\$3,700,000.00	Roadway Capacity
	Forrest Road	Macon Road	Woodruff Farm Road	Widening & Intersection Improvements	2	3	2.16	\$600,000.00	\$1,150,000.00	\$4,600,000.00	Roadway Capacity
0017138	Military Drive	Infantry Road	Hampton Inn	Construct new Road	0	2		\$240,000.00	\$0.00	\$928,000.00	Connectivity
								\$3,540,000.00	\$9,625,000.00	\$47,432,849.53	
								2020-2024 PROJECT COSTS		\$60,597,849.53	
								2020-2024 PROJECTED FUNDING		\$118,408,655.00	
								MARGIN		\$57,810,805.47	

C-PCMPO - 2045 METROPOLITAN TRANSPORTATION PLAN

Table 7-2 - 2045 Metropolitan Transportation Plan Major Projects

COLUMBUS, HARRIS AND CHATTAHOOCHEE COUNTY: 2025-2045 MID & LONG TERM RANGE PROJECTS (WITH INFLATION FACTOR OF 2% EVERY YEAR, APPLIED)

P.I. #	Projects	From	To	Type	Lanes Existing	Lanes Proposed	Length (Miles)	PE	R/W	Utilities & CST	Category
0015559	SR 520 / US 280 @ Chattahoochee River			Bridge Replacement	4	4 or 6		\$600,000.00	\$500,000.00	\$10,250,000.00	Bridge
0013940	SR 22 / US 80 @ Kendall Creek			Bridge Improvements				Authorized	\$0.00	\$2,000,000.00	Bridge
350796	Buena Vista Road Corridor Improvements	Wynnton Road	Illges Road	Widening & Road Diet	2 and 4	3	1.66	\$525,000.00	\$1,200,000.00	\$7,000,000.00	Roadway Capacity
350860	Farr Road	Old Cusseta Road	St. Mary's Road	Widening	2	3	1.04	\$330,000.00	\$550,000.00	\$2,200,000.00	Roadway Capacity
332780	St. Mary's Road	Robin Road	Northstar Drive	Widening	2	4	1.25	\$545,000.00	\$907,000.00	\$9,600,000.00	Roadway Capacity
0008483	CR 2228 / Buena Vista Road	Linden Circle	Floyd Road	Widening	4	6	1.01	\$600,000.00	\$9,000,000.00	\$12,312,901.00	Roadway Capacity
0009293	SR 1 / US 27 - Veteran's Parkway	Old Moon Road	Turnberry Lane	Widening	4	6	1.56	\$300,000.00	\$0.00	\$3,043,000.00	Roadway Capacity
0016508	Division Road 7.5 MI NW of Cusseta, GA			Bridge Replacement	2	2	0.40	\$750,000.00	\$250,000.00	\$3,500,000.00	Bridge
351200	Miller Road	Warm Springs Road	Milgen Road	Widening	2	3 or 4	3.30	\$1,435,500.00	\$2,392,500.00	\$9,570,000.00	Roadway Capacity
0005749	Whittlesey Road	Whitesville Road	Bradley Park Drive	Widening	2	4	0.27	\$439,857.52	\$1,183,500.00	\$2,038,675.00	Roadway Capacity
	Whitesville Road	Whittlesey Road	Williams Road	Widening	2	3	2.20	\$695,000.00	\$1,155,000.00	\$4,620,000.00	Roadway Capacity
	Cusseta Road	10th Avenue	North Lumpkin Road	Widening	2	3	1.47	\$463,000.00	\$775,000.00	\$3,087,000.00	Roadway Capacity
	Woodruff Farm Road	Miller Road	Milgen Road	New Road		4	0.15	\$250,000.00	\$1,500,000.00	\$7,200,000.00	Operational Improvements
	Williams Road @ I-185 NB Exit Ramp			Interchange Improvements / Possible Roundabout				\$1,000,000.00	\$750,000.00	\$7,800,000.00	Intersection & Operational Improvements
	County Line Road	Manchester Expressway	Mehaffey Road	Interchange Improvement & Widen Bridge	2	4	0.18	\$1,458,000.00	\$2,430,000.00	\$9,720,000.00	Intersection & Operational Improvements
	Buena Vista Road	Hunt Avenue	Wright Drive	Intersection Improvements				\$975,000.00	\$1,625,000.00	\$6,500,000.00	Intersection & Operational Improvements
	Buena Vista Road	Floyd Road	McBride Drive	Intersection Improvements				\$975,000.00	\$1,625,000.00	\$6,500,000.00	Intersection & Operational Improvements
	Dillingham Street Bridge	Bay Avenue (Columbus)	Broad Street (Phenix City)	Bridge Restoration				\$270,000.00	\$450,000.00	\$1,800,000.00	Bridge
	University Avenue	Manchester Expressway	Macon Road	Road Diet	4	3	1.24	\$120,000.00	\$0.00	\$800,000.00	Bicycle/Pedestrian/Complete Streets
	High Speed Rail	Columbus	Atlanta	Add Rail Line				\$8,160,000.00			Regional Connectivity
	Cusseta Road	South Oakview Avenue	Brown Avenue	Add Bike Lanes			0.9	\$8,000.00	\$0.00	\$45,000.00	Bicycle/Pedestrian/Complete Streets
	Hamilton Road	Manchester Expressway	19th Street	Add Bike Lanes			2.1	\$10,000.00	\$0.00	\$60,000.00	Bicycle/Pedestrian/Complete Streets

C-PCMPO - 2045 METROPOLITAN TRANSPORTATION PLAN

Table 7-2 - 2045 Metropolitan Transportation Plan Major Projects

PHENIX CITY, LEE COUNTY AND RUSSELL COUNTY: 2020-2024 SHORT RANGE PROJECTS (NO INFLATION FACTOR APPLIED)

P.I. #	Projects	From	To	Type	Lanes Existing	Lanes Proposed	Length (Miles)	PE	R/W	Utilities & CST	Category
100067449	Replace Bridge on Seale Road over Cochgalechee CR. BIN 004291			Bridge Replacement				\$32,000.00	\$0.00	\$440,000.00	Bridge
100067544	Resurface CR-318	CR-248	CR-249	Resurface				\$0.00	\$0.00	\$1,056,000.00	Maintenance
100067545	Resurface CR-249	CR-379	CR-318	Resurface				\$0.00	\$0.00	\$442,000.00	Maintenance
100067563	Resurface Freeman Road	Sandfort Road	U.S. 431	Resurface			2.3	\$0.00	\$0.00	\$402,500.00	Maintenance
100067546	Resurface CR-379	U.S. 280	Bridge over Lake Harding	Resurface				\$0.00	\$0.00	\$1,300,000.00	Maintenance
100063093	Resurface Lato Road	Uchee Hill Highway	Tarver Road	Resurface			2.88	\$0.00	\$0.00	\$504,000.00	Maintenance
100063094	Resurface Tarver Road	Lato Road	Nuckols Road	Resurface			2.24	\$0.00	\$0.00	\$392,000.00	Maintenance
	Resurface Knowles Road	4th Place	16th Avenue & 4th Place	Resurface				\$37,200.00	\$0.00	\$248,000.00	Maintenance
	Resurface 43rd Street	Summerville Road	End	Resurface				\$32,760.00	\$0.00	\$272,697.81	Maintenance
100067565	Resurface Owens Road - Section 1	S.R. 165	McClendon Road	Resurface				\$0.00	\$0.00	\$210,000.00	Maintenance
	Resurface State Docks Road	Brickyard Road	End	Resurface				\$84,000.00	\$0.00	\$560,000.00	Maintenance
	Resurface Opelika Road	U.S. 280	N/W to City Limits	Resurface				\$60,000.00	\$0.00	\$400,000.00	Maintenance
	Resurface CR-246	CR-430 S	CR-430 N	Resurface				\$0.00	\$0.00	\$870,000.00	Maintenance
100067566	Resurface McClendon Road	Owens Road	Owens Road	Resurface			1.884	\$0.00	\$0.00	\$329,700.00	Maintenance
100067564	Resurface Owens Road - Section 3	Patterson Road	McClendon Road	Resurface			0.496	\$0.00	\$0.00	\$86,800.00	Maintenance
	Resurface Seale Road	5th Street S.	City Limits	Resurface				\$108,000.00	\$0.00	\$787,557.93	Maintenance
	Resurface CR-212	Russell County Line	CR-240	Resurface				\$0.00	\$0.00	\$416,000.00	Maintenance
	Resurface Wright Drive	Sandfort Road	N/W to City Limits	Resurface				\$42,000.00	\$0.00	\$280,000.00	Maintenance
	Resurface Knowles Road	City Limits	U.S. 431	Resurface				\$112,800.00	\$0.00	\$876,328.53	Maintenance
	Resurface Terminal Road	Alabama 165	End	Resurface			2.7	\$0.00	\$0.00	\$472,500.00	Maintenance
	Resurface CR-248 (Summerville Road)	U.S. 280	City Limits	Resurface				\$0.00	\$0.00	\$1,014,000.00	Maintenance
	Resurface Patterson Road	Alabama Highway 165	Pavement	Resurface			1.661	\$0.00	\$0.00	\$290,675.00	Maintenance
100067446	Resurface 16th Avenue / Ingersol Court	Crawford Road	Highway 280 / 431 North	Resurface				\$0.00	\$0.00	\$540,592.89	Maintenance
	Resurface 4th Place	Seale Road	Knowles Road	Resurface				\$0.00	\$0.00	\$76,111.18	Maintenance
100070663	SR-165 @ CR-24 (Addition of turn lane)			Adding Turn Lane				\$45,000.00	\$75,750.00	\$622,060.00	Safety
								\$553,760.00	\$75,750.00	\$12,889,523.34	
								2020-2024 PROJECT COSTS			\$13,519,033.34
								2020-2024 PROJECTED FUNDING			\$15,000,000.00
								MARGIN			\$1,480,966.66

C-PCMPO - 2045 METROPOLITAN TRANSPORTATION PLAN

Table 7-2 - 2045 Metropolitan Transportation Plan Major Projects with Inflation Factors Applied

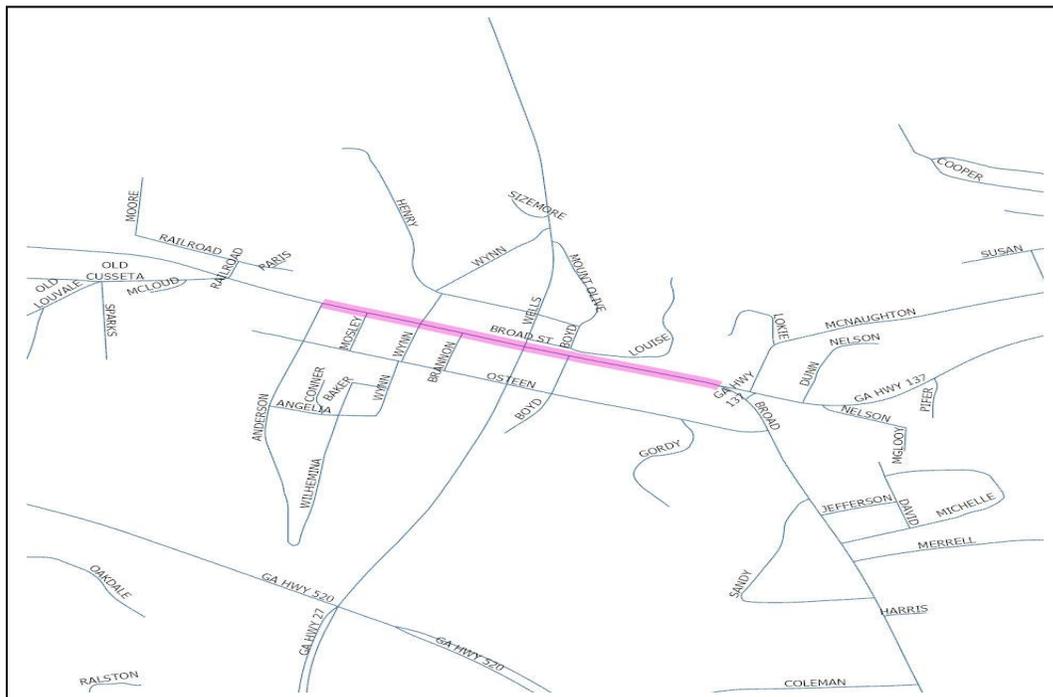
PHENIX CITY, LEE COUNTY AND RUSSELL COUNTY: 2025-2045 LONG TERM RANGE PROJECTS (WITH INFLATION FACTOR OF 1% EVERY YEAR, APPLIED)

P.I. #	Project Name	From	To	Type	Lanes Existing	Lanes Proposed	Length (Miles)	PE	R/W	Utilities & CST	Category
	Resurface CR-240	CR-206	Russell County Line	Resurface			8.2	\$0.00	\$0.00	\$2,665,000.00	Maintenance
	Resurface CR-427	Russell County Line	Summerville Road	Resurface			1.8	\$0.00	\$0.00	\$810,000.00	Maintenance
	Resurface CR-235	CR-240	CR-246	Resurface			2.4	\$0.00	\$0.00	\$780,000.00	Maintenance
	Resurface CR-145	CR-149	U.S. 280	Resurface			3.2	\$0.00	\$0.00	\$1,040,000.00	Maintenance
	Resurface CR-179	CR-246	U.S. 280	Resurface			2.6	\$0.00	\$0.00	\$845,000.00	Maintenance
	Resurface CR-236	CR-240	Russell County Line	Resurface			1.3	\$0.00	\$0.00	\$520,000.00	Maintenance
	Resurface CR-158	CR-252	CR-379	Resurface			5.3	\$0.00	\$0.00	\$2,385,000.00	Maintenance
	Resurface CR-208	Russell County Line	CR-240	Resurface			2.7	\$0.00	\$0.00	\$1,147,500.00	Maintenance
	Resurface CR-246	CR-179	CR-298	Resurface			4.7	\$0.00	\$0.00	\$1,762,500.00	Maintenance
	Resurface Woodland Road	U.S. Highway 80	Sandfort Road	Resurface			3.4	\$0.00	\$0.00	\$595,000.00	Maintenance
	Resurface Brickyard Road	Alabama Highway 165	City Limits (Phenix City)	Resurface			3.7	\$0.00	\$0.00	\$647,500.00	Maintenance
	Resurface Sandfort Road	Little Uchee Creek	City Limits (Phenix City)	Resurface			5.086	\$0.00	\$0.00	\$890,050.00	Maintenance
	Resurface Coffield Drive	U.S. Highway 80	County Line	Resurface			0.301	\$0.00	\$0.00	\$52,675.00	Maintenance
	Resurface Barrow Road	U.S. Highway 80	County Line	Resurface			0.099	\$0.00	\$0.00	\$17,325.00	Maintenance
	Resurface Opelika Road	County Line	City Limits (Phenix City)	Resurface			1.358	\$0.00	\$0.00	\$237,650.00	Maintenance
	Resurface Auburn Road	City Limits (Phenix City)	County Line	Resurface			1.204	\$0.00	\$0.00	\$210,700.00	Maintenance
	Resurface Seale Road	Alabama Highway 165	City Limits (Phenix City)	Resurface			0.65	\$0.00	\$0.00	\$113,750.00	Maintenance
	Resurface South Seale Road	U.S. Highway 431	Alabama Highway 165	Resurface			0.62	\$0.00	\$0.00	\$108,500.00	Maintenance
	Resurface Uchee Hill Hwy	U.S. Highway 431	End	Resurface			6.382	\$0.00	\$0.00	\$1,116,850.00	Maintenance
	4th Avenue	Idle Hour Drive	21st Place	Resurface			0.76	\$0.00	\$0.00	\$408,985.67	Maintenance
	Lakewood Drive	Summerville Road	South Railroad Street	Resurface			1.36	\$0.00	\$0.00	\$734,360.96	Maintenance
	36th Street	Summerville Road E. Side	Idle Hour Drive	Resurface			0.2	\$0.00	\$0.00	\$112,019.78	Maintenance
	Idle Hour Drive	5th Avenue	36th Street	Resurface			0.88	\$0.00	\$0.00	\$476,407.15	Maintenance
	5th Avenue	Airport Road	Idle Hour Drive	Resurface			0.48	\$0.00	\$0.00	\$259,327.48	Maintenance
	Explorer Drive	Pierce Road	Silver Lake Drive	Resurface			0.71	\$0.00	\$0.00	\$383,689.89	Maintenance
	Summerville Road	Carriage Drive	300' North of 37th St.	Resurface			0.33	\$0.00	\$0.00	\$178,840.92	Maintenance
	Stadium Drive	North edge of the Gardens	Summerville Road	Resurface			0.3	\$0.00	\$0.00	\$165,877.60	Maintenance
	Summerville Road	St. Andrews Way	Carriage Drive	Resurface			1.78	\$0.00	\$0.00	\$958,522.63	Maintenance
	Summerville Road	300' North of 37th Street	26th Street	Resurface			0.98	\$0.00	\$0.00	\$528,321.48	Maintenance
	Riverchase Drive	Airport Road	Summerville Road	Resurface			2.358	\$0.00	\$0.00	\$1,267,068.00	Maintenance
	Silver Lake Drive	Bridgewater Drive	Explorer Drive	Resurface			0.484	\$0.00	\$0.00	\$260,070.27	Maintenance
	Stadium Drive	19th Avenue	North Edge of the Gardens	Resurface			0.58	\$0.00	\$0.00	\$313,816.16	Maintenance
	Airport Road	Summerville Road	5th Avenue	Resurface			0.9	\$0.00	\$0.00	\$485,961.75	Maintenance
	Bridgewater Drive	Lakewood Drive	Park Drive	Resurface			0.237	\$0.00	\$0.00	\$127,364.12	Maintenance
	Lakewood Drive	South Railroad Street	Railroad Tracks	Resurface			0.07	\$0.00	\$0.00	\$37,872.43	Maintenance
	8th Court	Dillingham Street	9th Street	Resurface			0.037	\$0.00	\$0.00	\$20,289.53	Maintenance
	Opelika Road	Highway 280	Crawford Road	Resurface			0.744	\$0.00	\$0.00	\$400,000.88	Maintenance
	4th Avenue	16th Street	21st Place	Resurface			0.486	\$0.00	\$0.00	\$261,209.91	Maintenance
	14th Street	Broad Street	Crawford Road	Resurface			0.5	\$0.00	\$0.00	\$272,321.33	Maintenance

P.I. #	Project Name	From	To	Type	Lanes Existing	Lanes Proposed	Length (Miles)	PE	R/W	Utilities & CST	Category	
	14th Street	5th Avenue	Broad Street	Resurface			0.06	\$0.00	\$0.00	\$36,854.91	Maintenance	
	Summerville Road	25th Street	Broad Street	Resurface			0.7	\$0.00	\$0.00	\$379,945.38	Maintenance	
	Stadium Drive	South Railroad St.	Opelika Road	Resurface			0.26	\$0.00	\$0.00	\$141,701.11	Maintenance	
	Broad Street	Crawford Road	Dillingham Street	Resurface			0.5	\$0.00	\$0.00	\$274,824.45	Maintenance	
	Stadium Drive	South Railroad St.	22nd Avenue	Resurface			0.09	\$0.00	\$0.00	\$50,021.73	Maintenance	
	Lakewood Drive	Opelika Road	Railroad Tracks	Resurface			0.32	\$0.00	\$0.00	\$172,705.22	Maintenance	
	Whitewater Avenue	16th Street	13th Street	Resurface			0.25	\$0.00	\$0.00	\$135,616.28	Maintenance	
	16th Street	Broad Street	1st Avenue	Resurface			0.26	\$0.00	\$0.00	\$140,958.31	Maintenance	
	20th Avenue	South Railroad St.	Crawford Road	Resurface			0.44	\$0.00	\$0.00	\$236,677.28	Maintenance	
	Dillingham Street	11th Avenue	Broad Street	Resurface			0.358	\$0.00	\$0.00	\$192,842.12	Maintenance	
	17th Avenue	South Railroad St.	Crawford Road	Resurface			0.41	\$0.00	\$0.00	\$224,985.87	Maintenance	
	Sandfort Road	Dillingham Street	Highway 280	Resurface			0.64	\$0.00	\$0.00	\$344,637.12	Maintenance	
	Auburn Avenue	City Limits	Crawford Road	Resurface			0.37	\$0.00	\$0.00	\$199,639.22	Maintenance	
	14th Street	5th Avenue	Whitewater Avenue	Resurface			0.08	\$0.00	\$0.00	\$43,458.67	Maintenance	
	Crawford Road	Highway 431/280	East City Limits	Resurface			1.93	\$0.00	\$0.00	\$1,038,826.03	Maintenance	
	5th Street South	Knowles Road	US 431	Resurface			0.17	\$0.00	\$0.00	\$96,166.68	Maintenance	
	34th Avenue S.	Sandfort Road	Knowles Road	Resurface			0.419	\$0.00	\$0.00	\$225,148.67	Maintenance	
	Fontaine Road	10th Avenue S.	6th Place S	Resurface			0.37	\$0.00	\$0.00	\$199,272.91	Maintenance	
	Seale Road	10th Avenue S.	5th Street S	Resurface			0.831	\$0.00	\$0.00	\$446,837.75	Maintenance	
	Wright Road	Crawford Road	City Limits	Resurface			0.33	\$0.00	\$0.00	\$180,407.92	Maintenance	
	10th Avenue S	Seale Road	Fontaine Road	Resurface			0.69	\$0.00	\$0.00	\$370,746.92	Maintenance	
	Colin Powell Parkway	MLK, Jr. Pkwy	Brickyard Road	Resurface			1.28	\$0.00	\$0.00	\$689,040.21	Maintenance	
	Seale Road	Highway 280	10th Avenue S	Resurface			0.3	\$0.00	\$0.00	\$165,775.85	Maintenance	
	Fontaine Road	6th Place S	Railroad Tracks	Resurface			0.8	\$0.00	\$0.00	\$430,862.54	Maintenance	
	Meadowlane Drive	10th Avenue S	Brickyard Road	Resurface			0.73	\$0.00	\$0.00	\$393,631.15	Maintenance	
	5th Avenue	Dillingham Street	7th Street	Resurface			0.31	\$0.00	\$0.00	\$169,042.12	Maintenance	
	Sandfort Road	7th Street	City Limits	Resurface			1.87	\$0.00	\$0.00	\$1,008,635.94	Maintenance	
	Crosswinds Road	Cedar Lane	Highway 431 S	Resurface			0.54	\$0.00	\$0.00	\$291,216.84	Maintenance	
	Summerville Road	25th Street	26th Street	Resurface			0.09	\$0.00	\$0.00	\$50,723.83	Maintenance	
	Stadium Drive	22nd Avenue	19th Avenue	Resurface			0.18	\$0.00	\$0.00	\$99,972.24	Maintenance	
	MLK, Jr. Pkwy, North Lane	8th Place	Broad Street	Resurface			0.12	\$0.00	\$0.00	\$68,032.00	Maintenance	
	MLK, Jr. Pkwy, South Lane	8th Place	Broad Street	Resurface			0.12	\$0.00	\$0.00	\$68,032.00	Maintenance	
	Seale Road	Highway 280	Broad Street	Resurface			0.4	\$0.00	\$0.00	\$217,934.39	Maintenance	
	Broad Street	MLK Jr. Pwy	Dillingham Street	Resurface			0.06	\$0.00	\$0.00	\$34,779.15	Maintenance	
	Dillingham Street	5th Avenue	Broad Street	Resurface			0.08	\$0.00	\$0.00	\$44,252.34	Maintenance	
	Sandfort Road	7th Street	Highway 280	Resurface			0.07	\$0.00	\$0.00	\$40,589.24	Maintenance	
								\$0.00	\$0.00	\$32,502,122.33		
											2025-2045 PROJECT COSTS	\$32,502,122.33
											2025-2045 PROJECTED FUNDING	\$121,593,178.00
											MARGIN	\$89,091,055.67

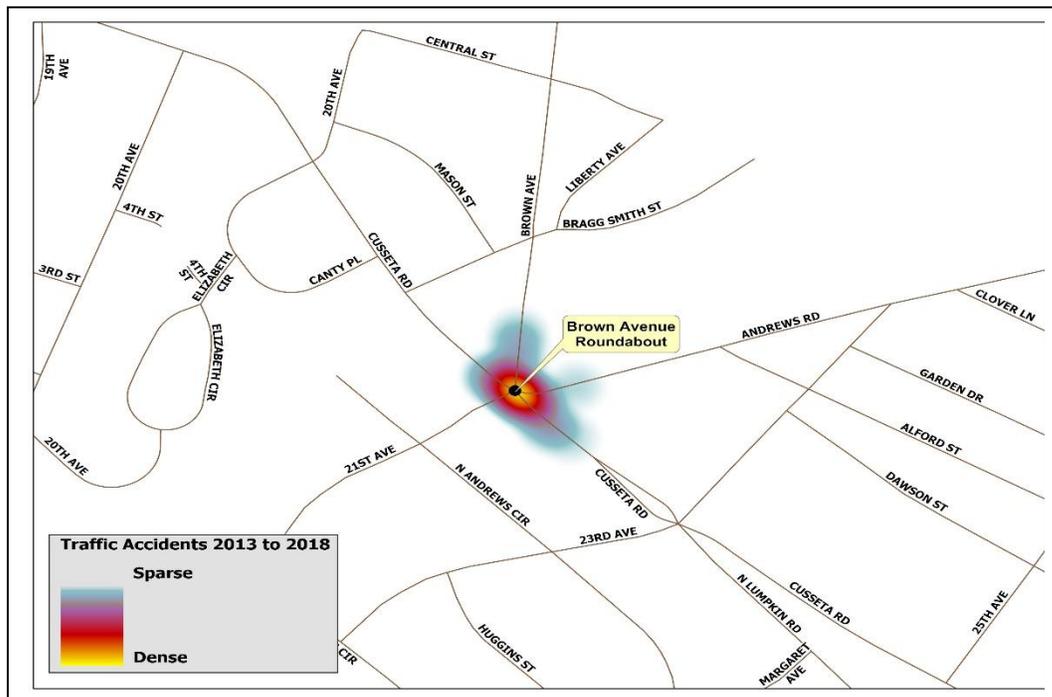
Project Name: Streetscape on Broad Street (Cusseta) from Anderson Road to Osteen Street.		Project ID:
Project Description: Construct a streetscape along Broad Street with pedestrian and bicycle facilities.		County: Cusseta P.I. #
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 350,000.00
Right-of-Way (ROW):	\$	\$ 500,000.00
Construction (CST):	\$	\$ 7,000,000.00
Project Cost	\$	\$ 7,850,000.00
Federal Cost (\$)	\$	\$ 6,280,000.00
State Cost (\$)	\$	\$ 0.00
Local Cost (\$)	\$	\$ 1,570,000.00

PROJECT LOCATION

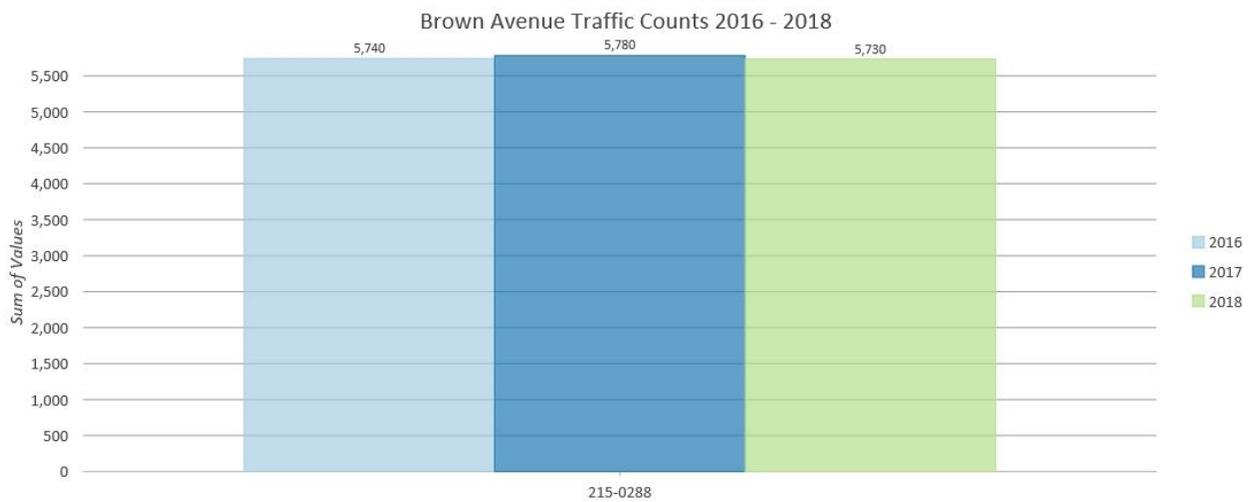
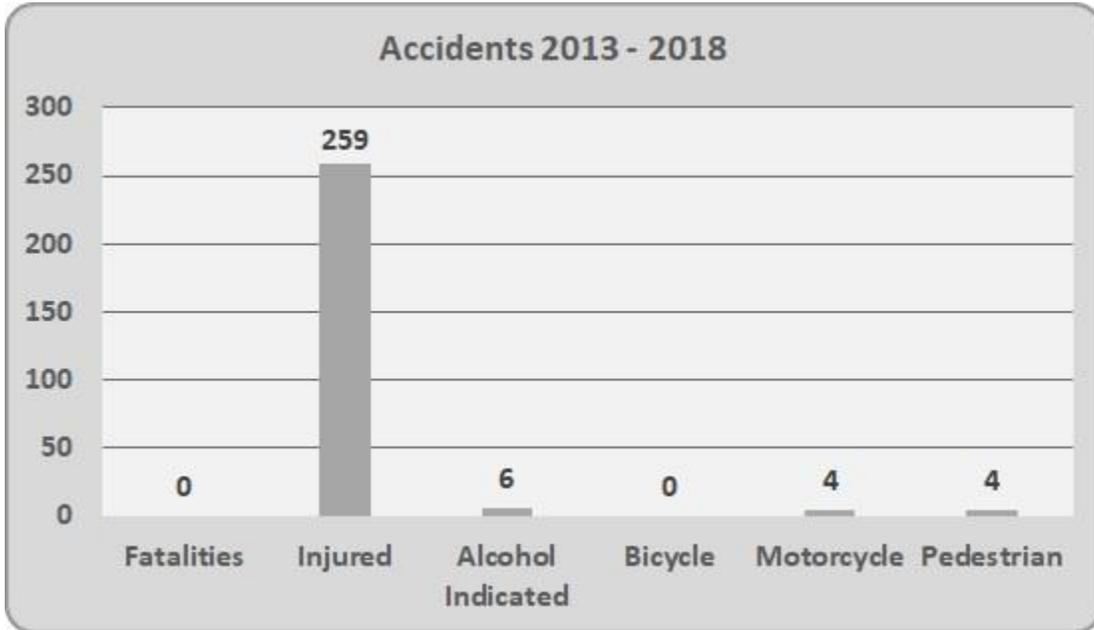


Project Name: Brown Avenue @ Cusseta Road and Andrews Road		Project ID:
Project Description: Construct Roundabout. Project will include pedestrian/bicycle facilities.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes: 2	# of Lanes Planned: 3
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ 450,000.00	\$
Right-of-Way (ROW):	\$ 1,000,000.00	\$
Construction (CST):	\$ 4,000,000.00	\$
Project Cost	\$ 5,450,000.00	\$
Federal Cost (\$)	\$ 4,360,000.00	\$
State Cost (\$)	\$ 0.00	\$
Local Cost (\$)	\$ 1,090,000.00	\$

PROJECT LOCATION

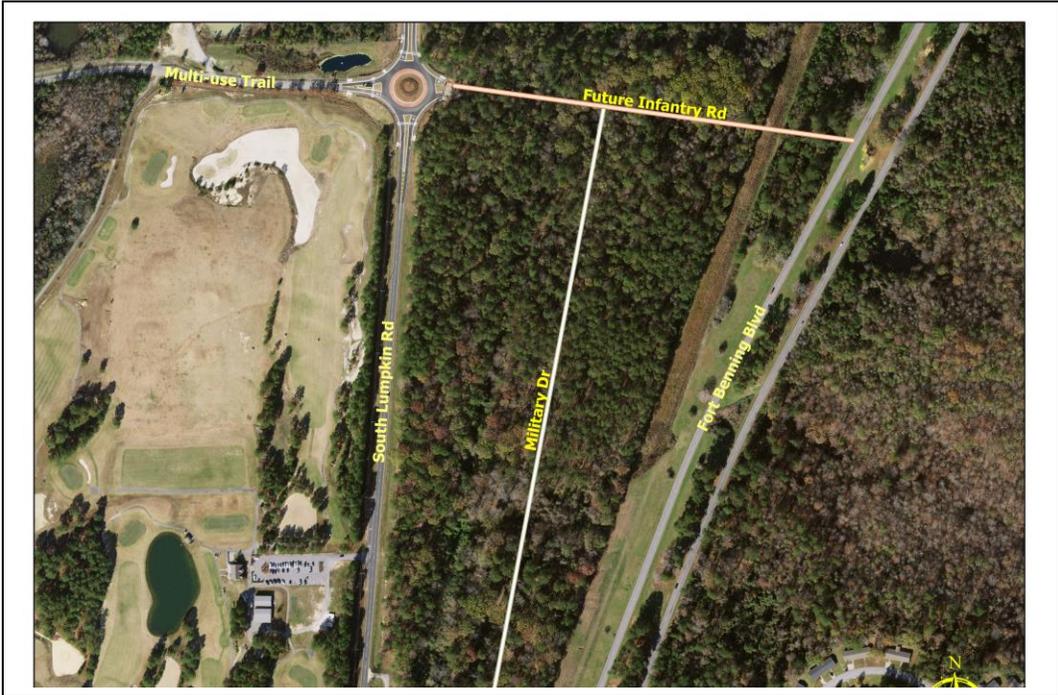


**Brown Avenue @ Cusseta Road & Andrews Road Roundabout
Accident and Traffic Count Data**



Project Name: Construct Military Drive		Project ID: 0017138
Project Description: Construct a new 2-lane road. Project to include pedestrian / bicycle facilities.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes: 0	# of Lanes Planned: 2
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ 240,000.00	\$
Right-of-Way (ROW):	\$ 0.00	\$
Construction (CST):	\$ 2,320,000.00	\$
Project Cost	\$ 2,560,000.00	\$
Federal Cost (\$)	\$ 1,120,000.00	\$
State Cost (\$)	\$ 1,160,000.00	\$
Local Cost (\$)	\$ 280,000.00	\$

PROJECT LOCATION



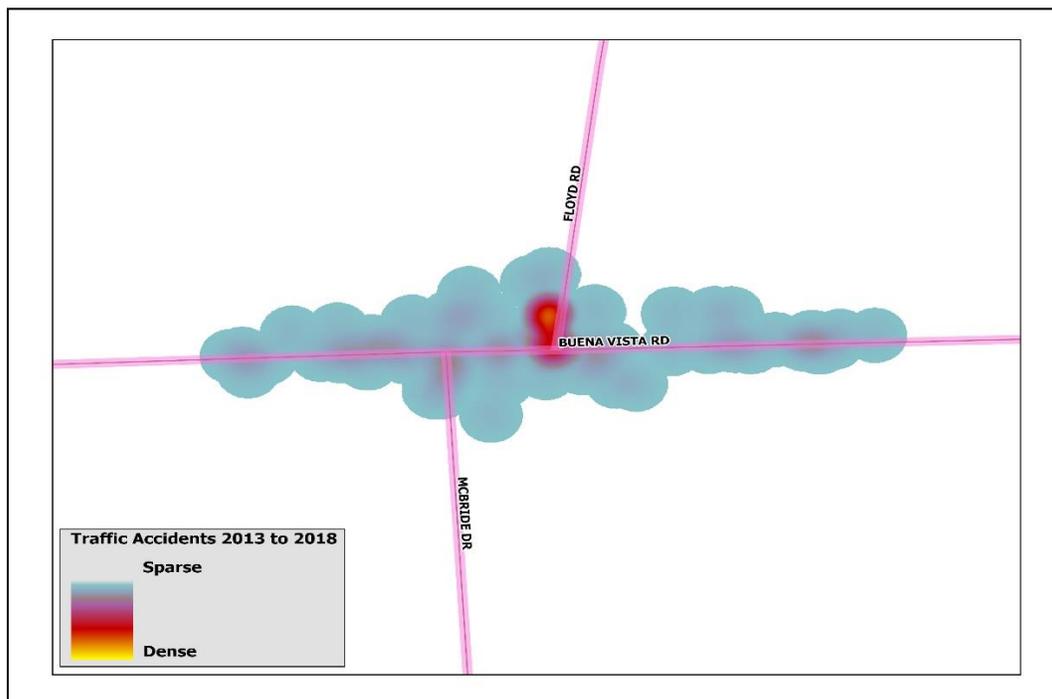
Project Name: Addition of Left Turn Lane on SR-165 @ CR-24		Project ID: 100070663
Project Description: Adding left turn lane on SR-165 at CR-24		County: Russell County P.I. #
Length (Miles):	# of Existing Lanes: 0	# of Lanes Planned:
DOT District #:	Congressional Dist. #:	RC:
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ 45,000.00	\$
Right-of-Way (ROW):	\$ 75,750.00	\$
Construction (CST & UTL):	\$ 622,060.00	\$
Project Cost	\$ 742,810.00	\$
Federal Cost (\$)	\$ 668,619.00	\$
State Cost (\$)	\$ 74,191.00	\$
Local Cost (\$)	\$ 0.00	\$

PROJECT LOCATION

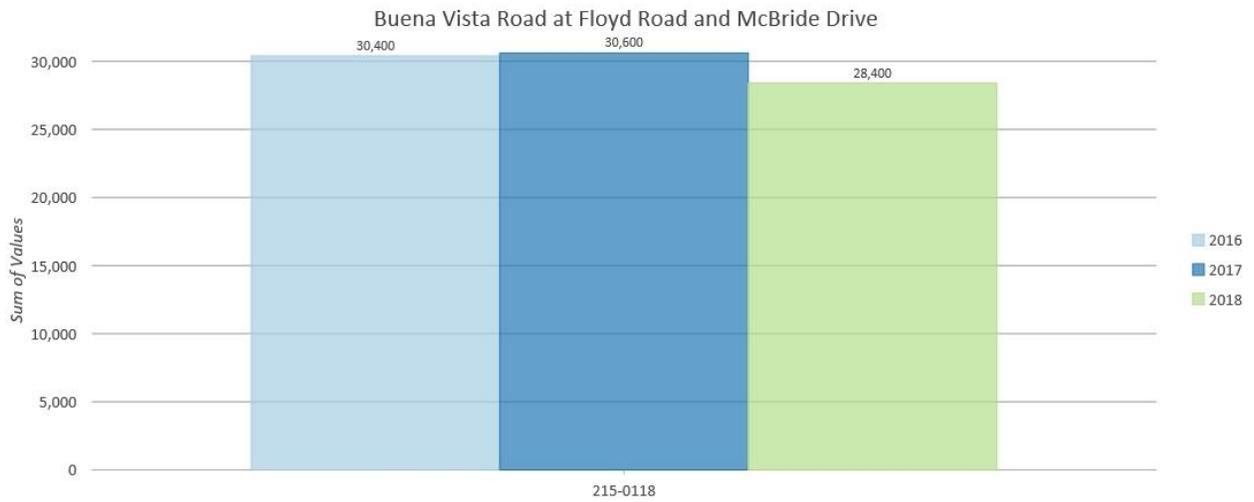
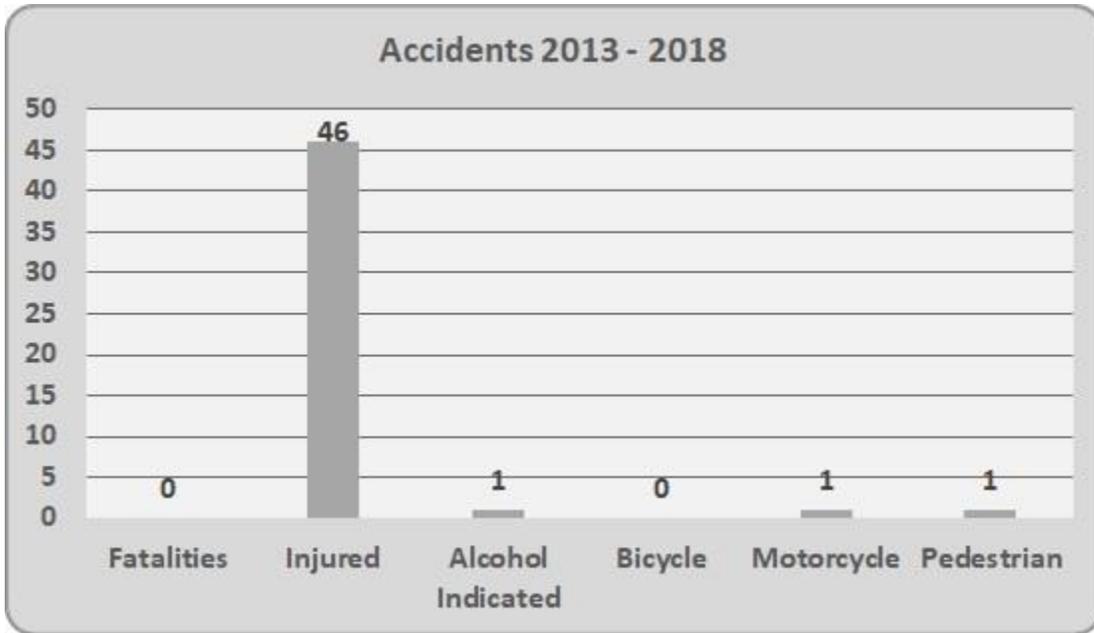


Project Name: Buena Vista Road at Floyd Road and McBride Drive		Project ID:
Project Description: Intersection Improvements to include pedestrian / bicycle facilities.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 975,000.00
Right-of-Way (ROW):	\$	\$ 1,625,000.00
Construction (CST):	\$	\$ 6,500,000.00
Project Cost	\$	\$ 9,100,000.00
Federal Cost (\$)	\$	\$ 7,280,000.00
State Cost (\$)	\$	\$ 0.00
Local Cost (\$)	\$	\$ 1,820,000.00

PROJECT LOCATION

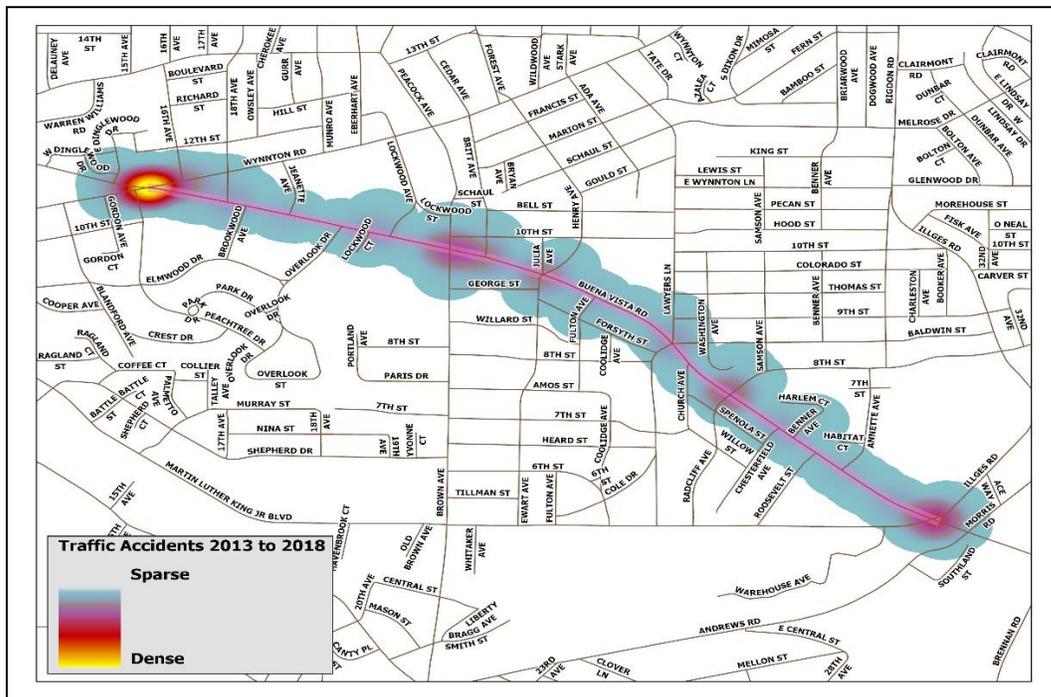


Buena Vista Road @ Floyd Road and McBride Drive Accident and Traffic Count Data

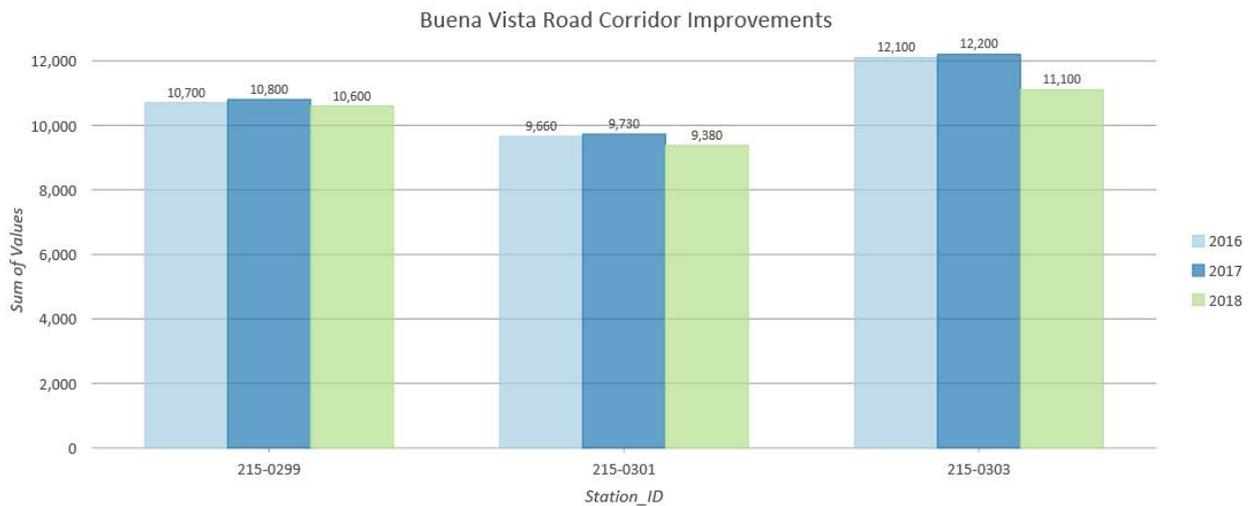
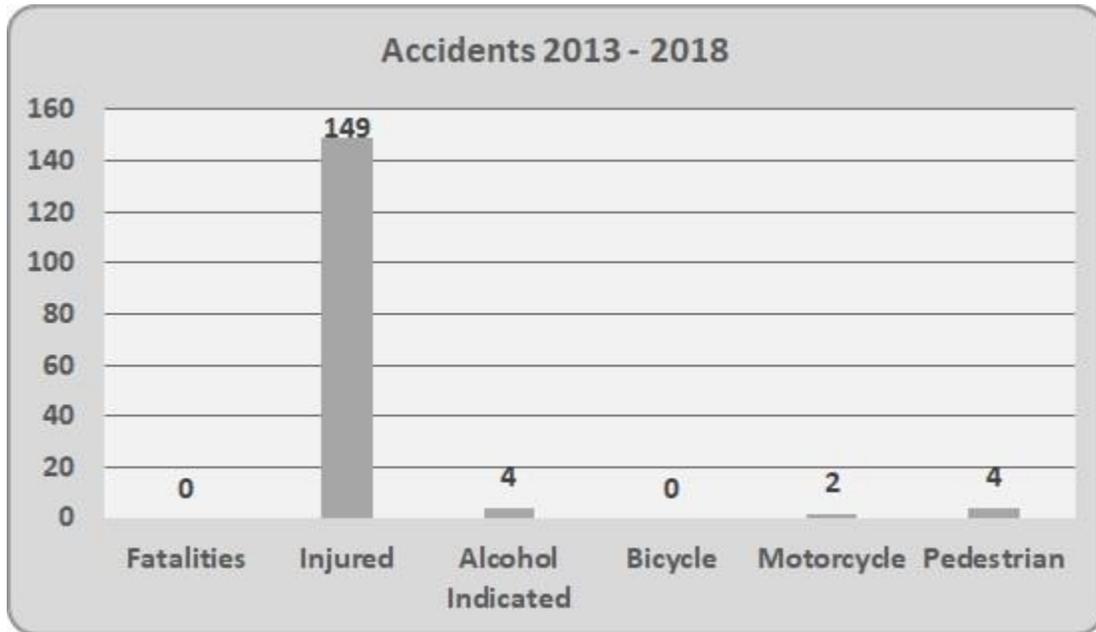


Project Name: Widen Buena Vista Road - Corridor Improvements from Wynnton Road to Illges Road.		Project ID:
Project Description: Widen Buena Vista Road from 2 to 3 lanes between Brown Avenue and Illges Road and reduce the lanes from 4 to 3 lanes from Wynnton Road to Brown Avenue. Project will include Pedestrian/Bicycle facilities.		County: Muscogee P.I. # 350796
Length (Miles): 1.66	# of Existing Lanes: 2 & 4	# of Lanes Planned: 3
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 525,000.00
Right-of-Way (ROW):	\$	\$ 1,200,000.00
Construction (CST):	\$	\$ 7,000,000.00
Project Cost	\$	\$ 9,725,000.00
Federal Cost (\$)	\$	\$ 7,780,000.00
State Cost (\$)	\$	\$ 0.00
Local Cost (\$)	\$	\$ 1,945,000.00

PROJECT LOCATION

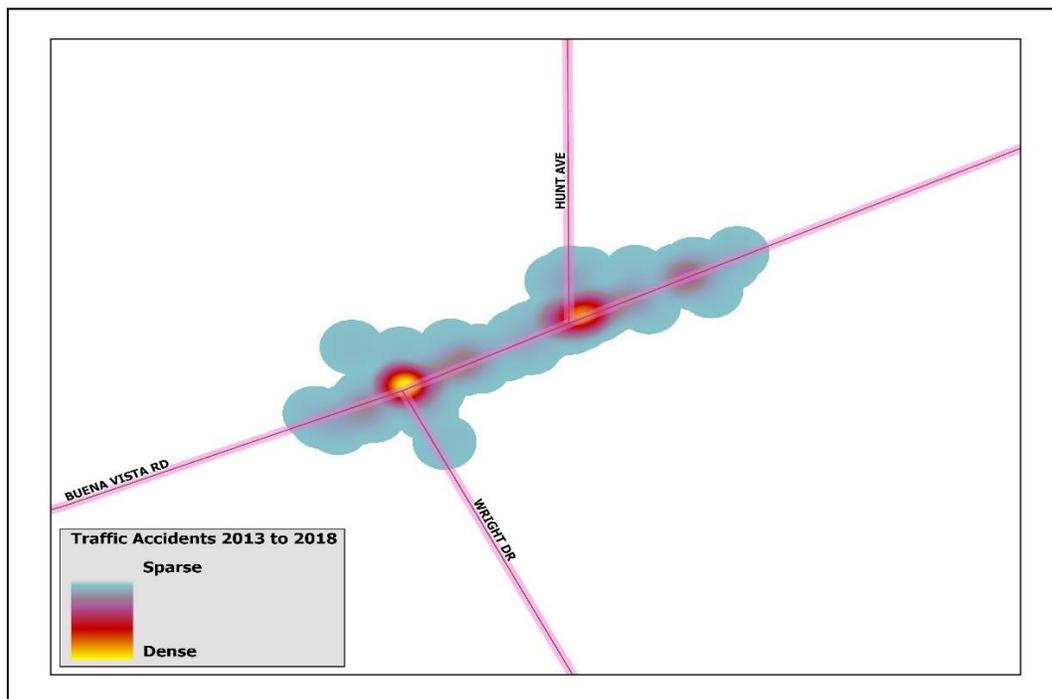


Widen Buena Vista Road – Corridor Improvements Accident and Traffic Count Data

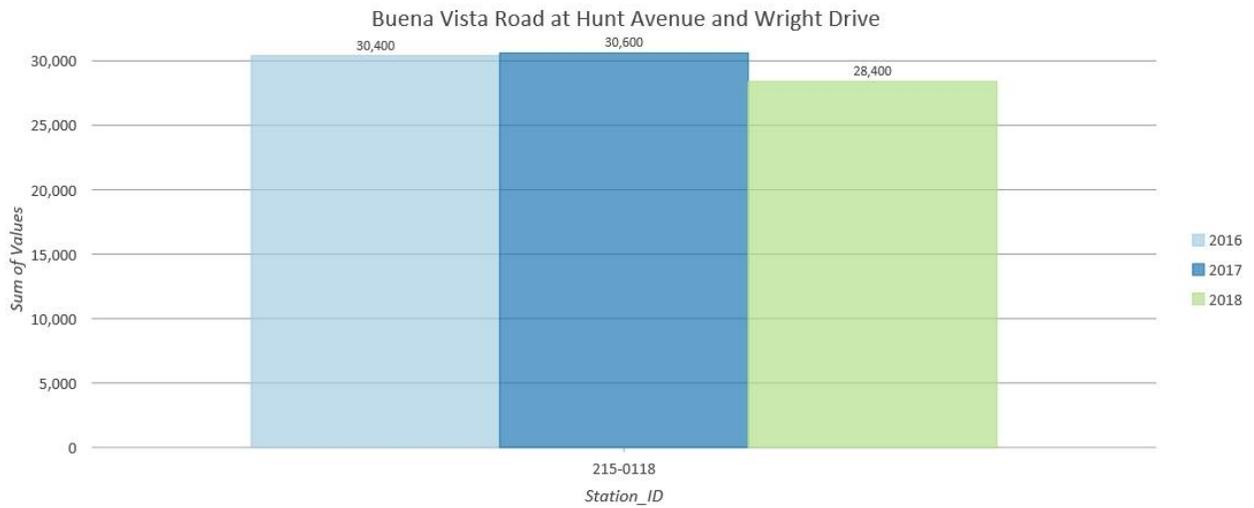
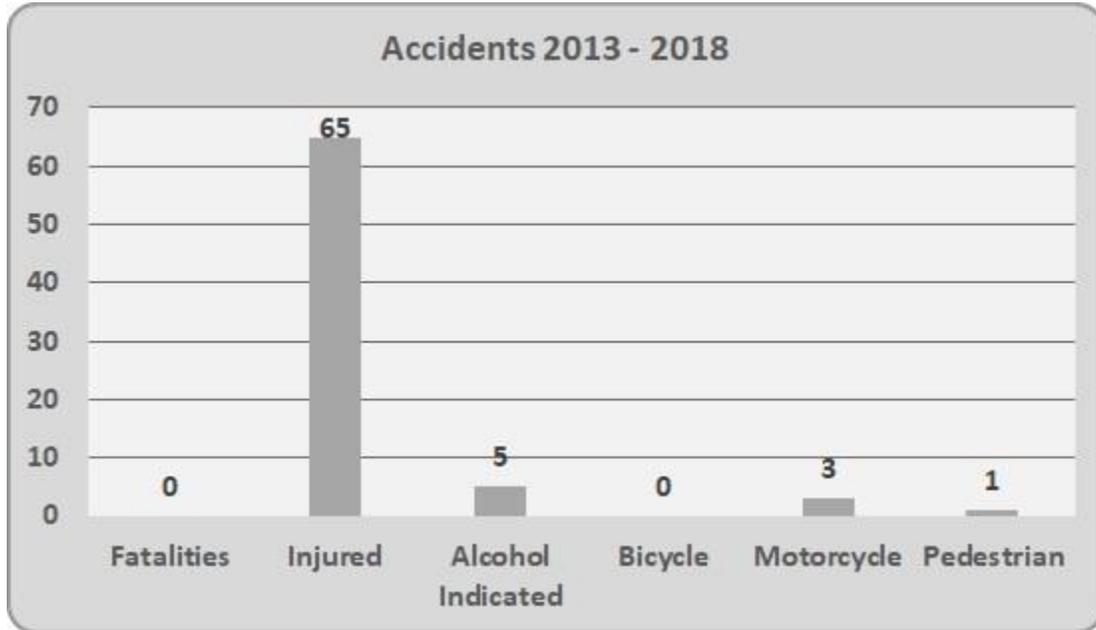


Project Name: Buena Vista Road at Hunt Avenue and Wright Drive.		Project ID:
Project Description: Intersection Improvements to include pedestrian / bicycle facilities.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 975,000.00
Right-of-Way (ROW):	\$	\$ 1,625,000.00
Construction (CST):	\$	\$ 6,500,000.00
Project Cost	\$	\$ 9,100,000.00
Federal Cost (\$)	\$	\$ 7,280,000.00
State Cost (\$)	\$	\$ 0.00
Local Cost (\$)	\$	\$ 1,820,000.00

PROJECT LOCATION

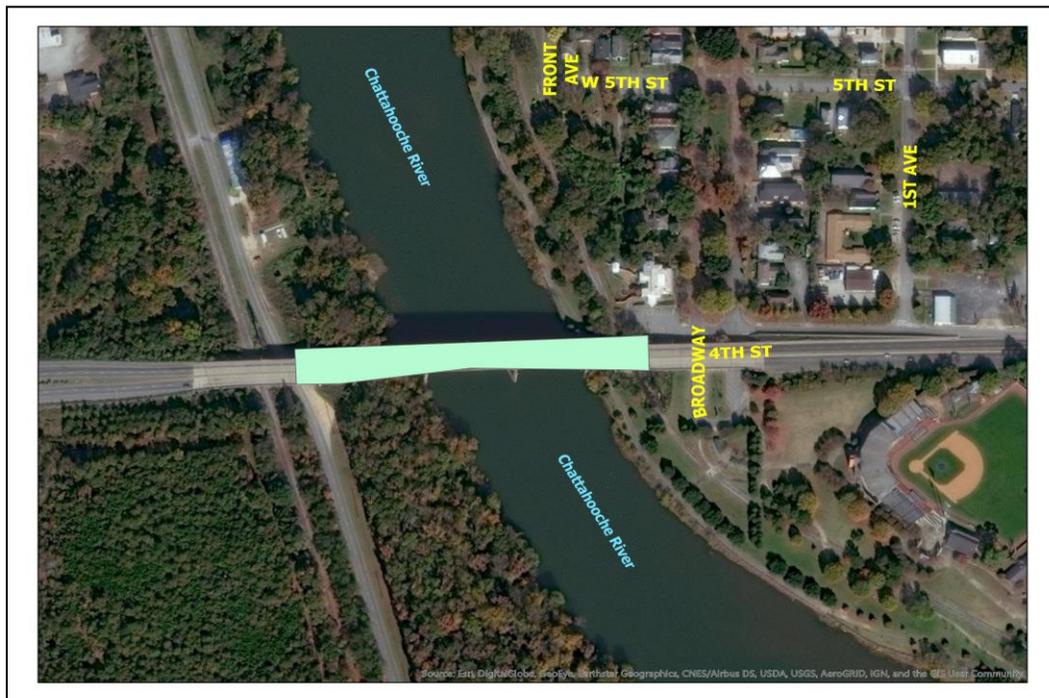


Buena Vista Road @ Hunt Avenue and Wright Drive Accident and Traffic Data



Project Name: SR 520 / US 280 @ Chattahoochee River		Project ID:
Project Description: Bridge Replacement. Project to include pedestrian/bicycle facilities if feasible.		County: Muscogee P.I. # 0015559
Length (Miles):	# of Existing Lanes: 4	# of Lanes Planned: 4 or 6
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 600,000.00
Right-of-Way (ROW):	\$	\$ 500,000.00
Construction (CST):	\$	\$ 10,250,000.00
Project Cost	\$	\$ 11,350,000.00
Federal Cost (\$)	\$	\$ 9,080,000.00
State Cost (\$)	\$	\$ 2,270,000.00
Local Cost (\$)	\$	\$ 0.00

PROJECT LOCATION

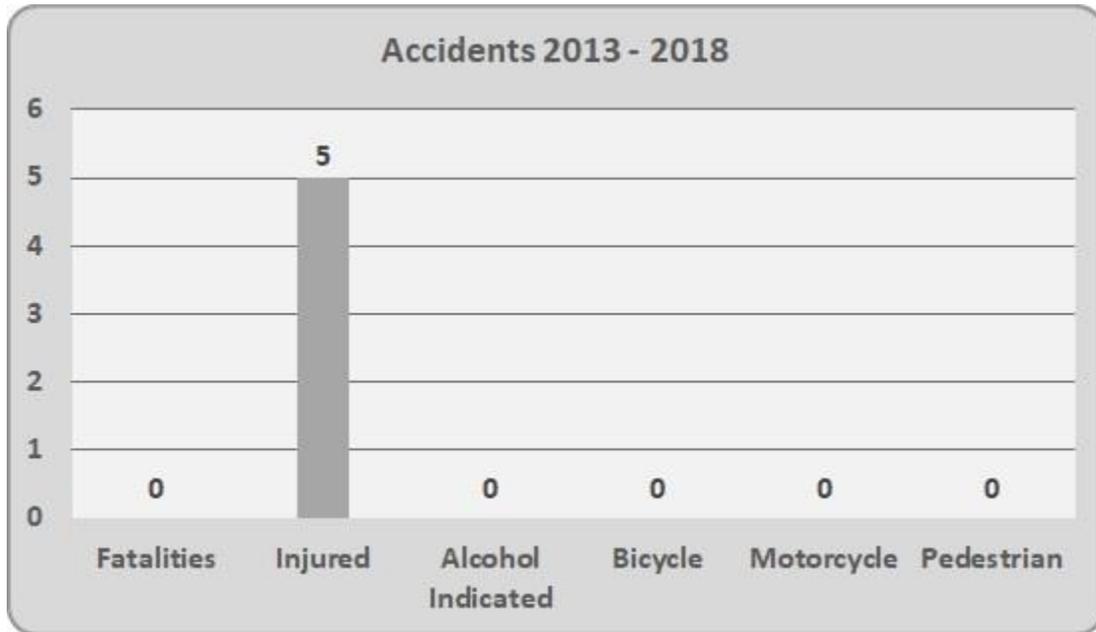


Project Name: County Line Road @ Manchester Expressway and Mehaffey Road.		Project ID:
Project Description: Interchange Improvements and Widen Bridge from 2-lanes to 4-lanes. Project to include pedestrian / bicycle facilities.		County: Muscogee P.I. #
Length (Miles): 0.18	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 1,458,000.00
Right-of-Way (ROW):	\$	\$ 2,430,000.00
Construction (CST):	\$	\$ 9,720,000.00
Project Cost	\$	\$ 13,608,000.00
Federal Cost (\$)	\$	\$ 10,886,400.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 2,721,600.00

PROJECT LOCATION

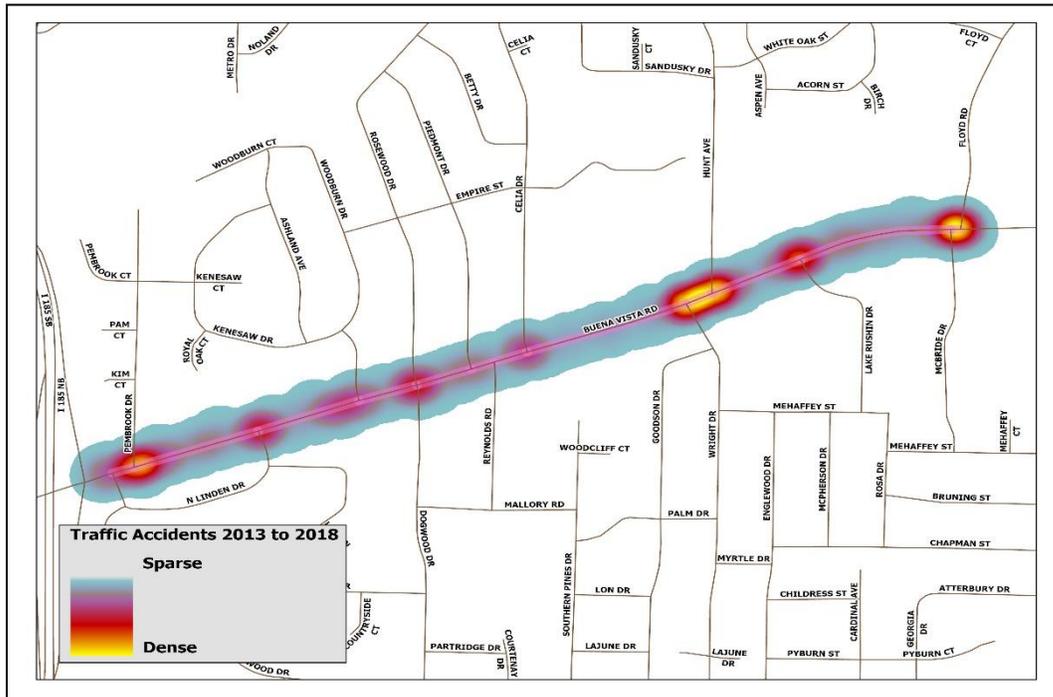


County Line Road @ Manchester Expressway & Mehaffey Road Accident and Traffic Count Data

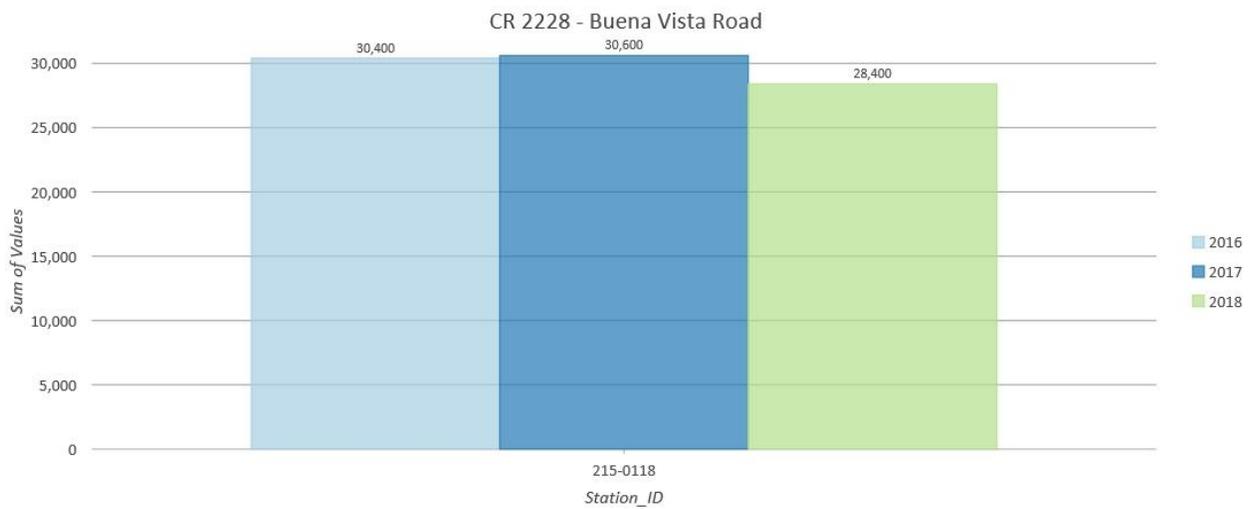
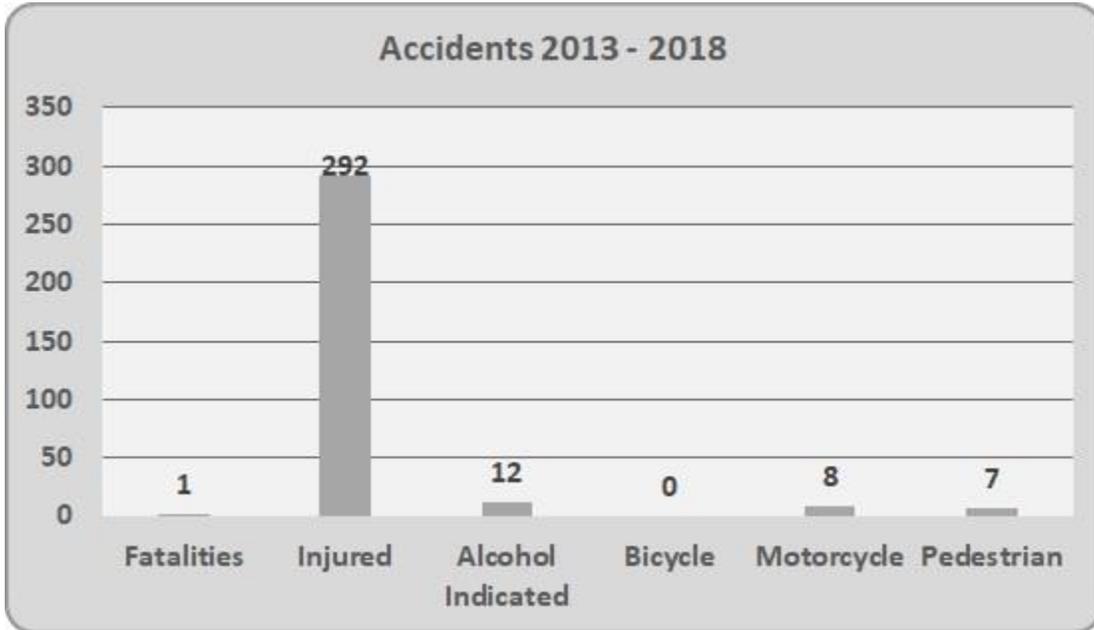


Project Name: Widen CR 2228 / Buena Vista Road from Linden Circle to Floyd Road		Project ID:
Project Description: Widen CR 2228 / Buena Vista Road from 4 to 6 lanes. Project will include Pedestrian/Bicycle facilities.		County: Muscogee P.I. # 0008483
Length (Miles): 1.01	# of Existing Lanes: 4	# of Lanes Planned: 6
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 600,000.00
Right-of-Way (ROW):	\$	\$ 9,000,000.00
Construction (CST):	\$	\$ 12,312,901.00
Project Cost	\$	\$ 21,912,901.00
Federal Cost (\$)	\$	\$ 17,530,320.80
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 4,382,580.20

PROJECT LOCATION

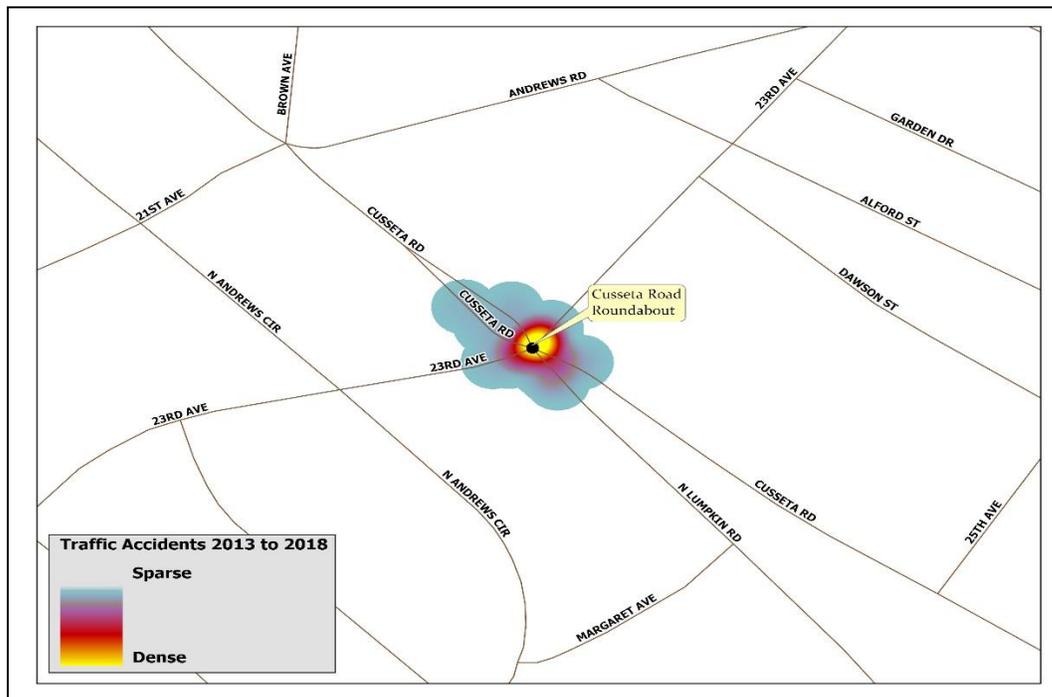


Widen CR 2228/Buena Vista Road from Linden Circle to Floyd Road Accident and Traffic Count Data

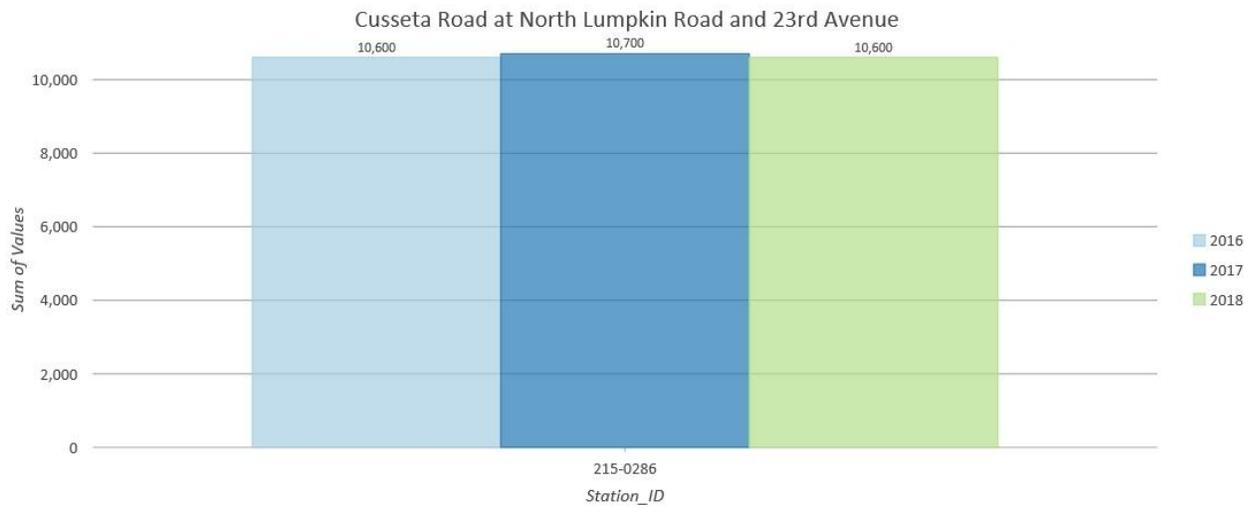
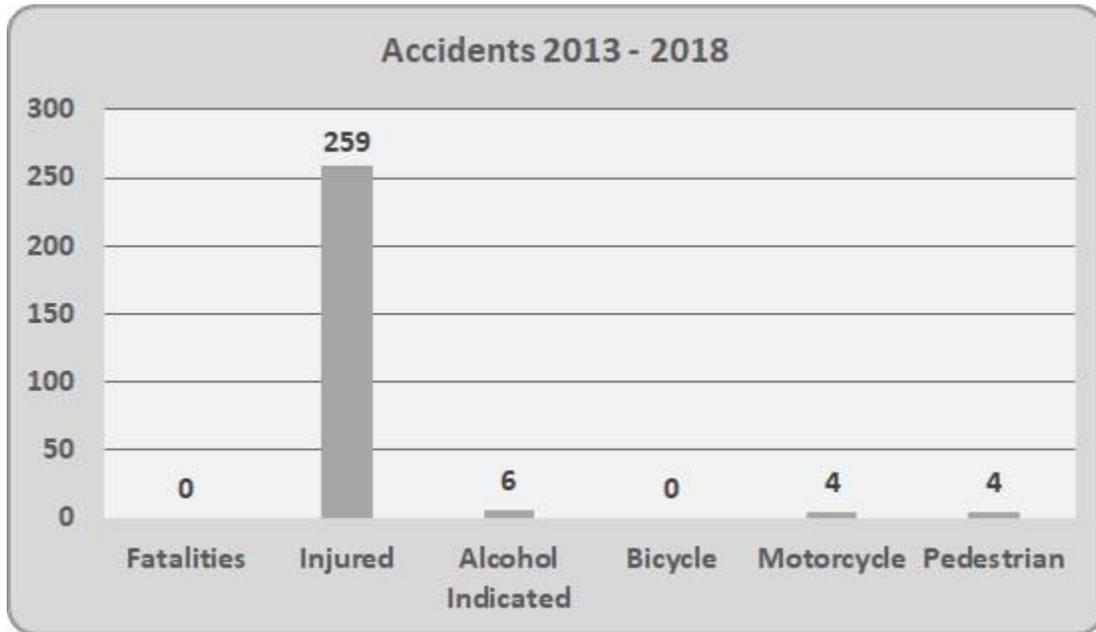


Project Name: Cusseta Road @ North Lumpkin Road and 23 rd Avenue		Project ID:
Project Description: Construct Roundabout. Project will include pedestrian/bicycle facilities.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes: 2	# of Lanes Planned: 2
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ 450,000.00	\$
Right-of-Way (ROW):	\$ 1,000,000.00	\$
Construction (CST):	\$ 4,000,000.00	\$
Project Cost	\$ 5,450,000.00	\$
Federal Cost (\$)	\$ 4,360,000.00	\$
State Cost (\$)	\$	\$
Local Cost (\$)	\$ 1,090,000.00	\$

PROJECT LOCATION

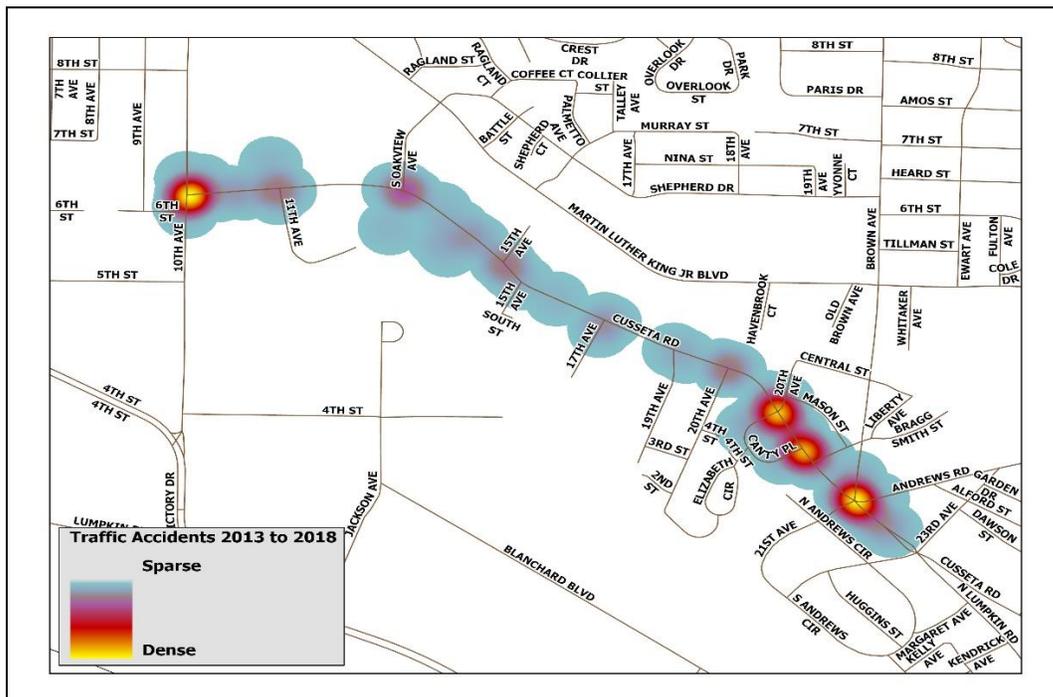


Cusseta Road @ North Lumpkin Road and 23rd Avenue Accident and Traffic Count Data

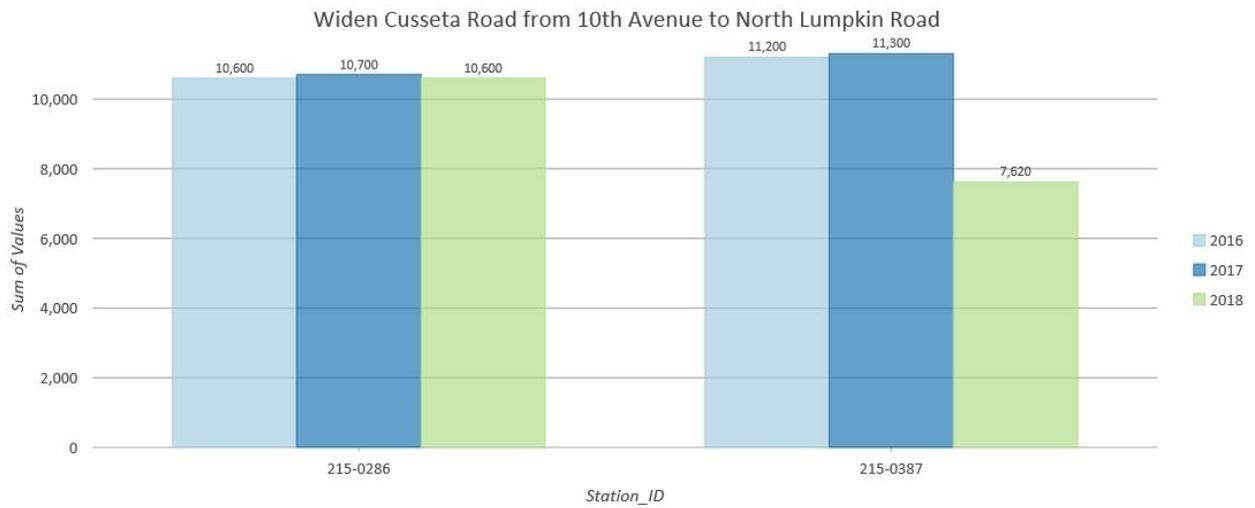
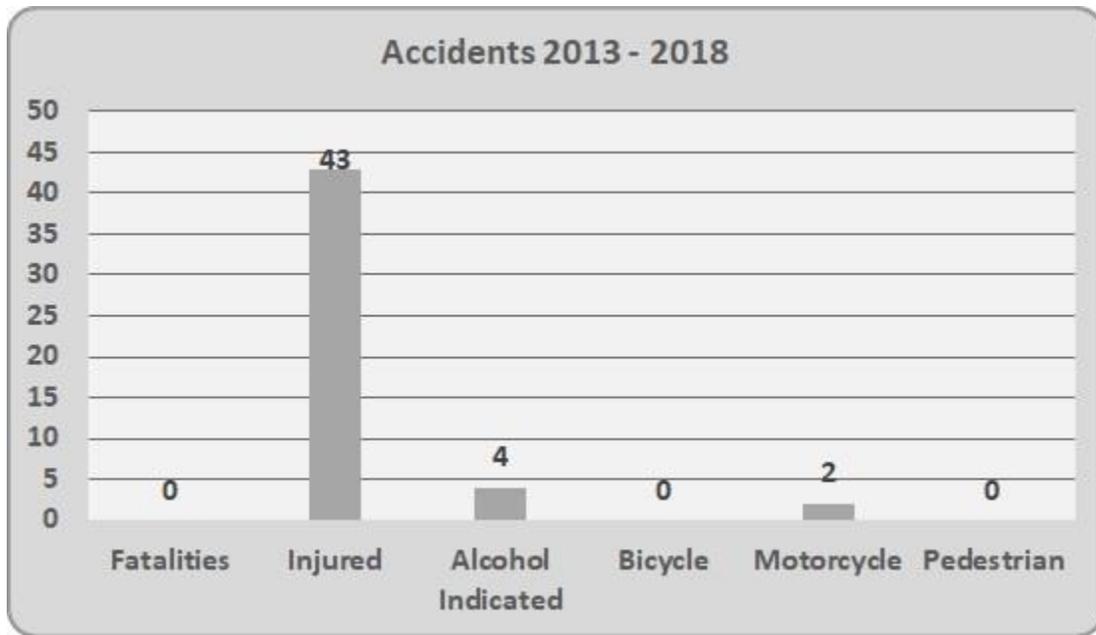


Project Name: Widen Cusseta Road from 10 th Avenue to North Lumpkin Road		Project ID:
Project Description: Widen Cusseta Road from 2-lanes to 3 lanes with intersection improvements. Project to include pedestrian / bicycle facilities.		County: Muscogee P.I. #
Length (Miles): 1.47	# of Existing Lanes: 2	# of Lanes Planned: 3
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 463,000.00
Right-of-Way (ROW):	\$	\$ 775,000.00
Construction (CST):	\$	\$ 3,087,000.00
Project Cost	\$	\$ 4,325,000.00
Federal Cost (\$)	\$	\$ 3,450,000.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 865,000.00

PROJECT LOCATION



Widen Cusseta Road from 10th Avenue to North Lumpkin Road Accident and Traffic Count Data



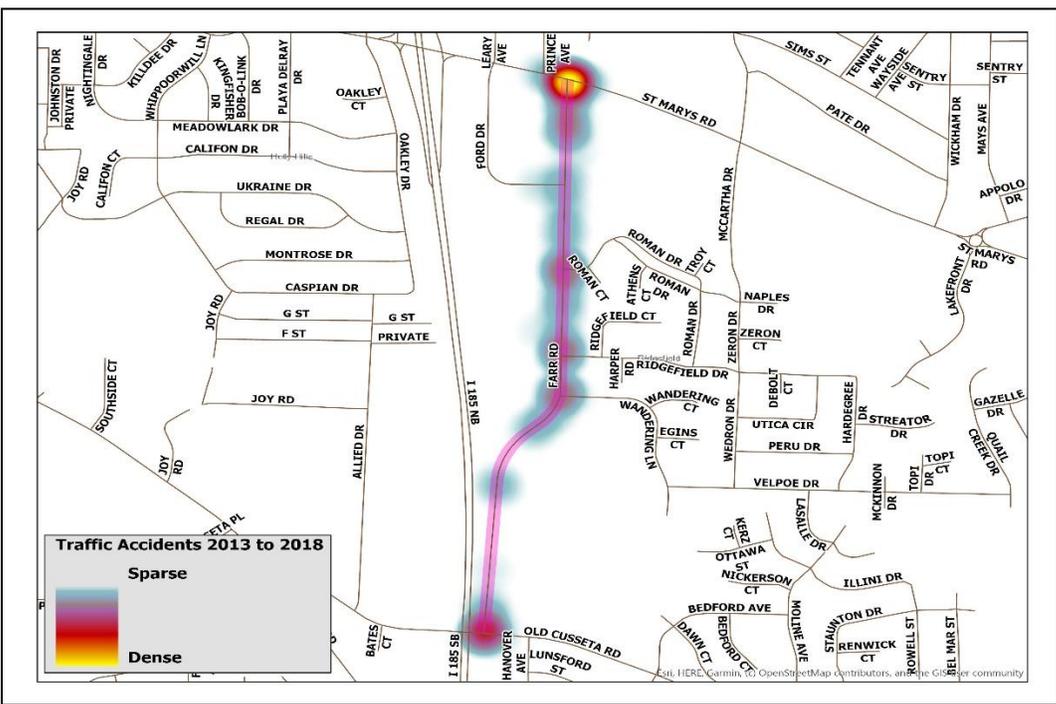
Project Name: Dillingham Street Bridge Restoration from Bay Avenue (Columbus) and Broad Street (Phenix City)		Project ID:
Project Description: Restore Dillingham Bridge.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 270,000.00
Right-of-Way (ROW):	\$	\$ 450,000.00
Construction (CST):	\$	\$ 1,800,000.00
Project Cost	\$	\$ 2,520,000.00
Federal Cost (\$)	\$	\$ 2,016,000.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 504,000.00

PROJECT LOCATION

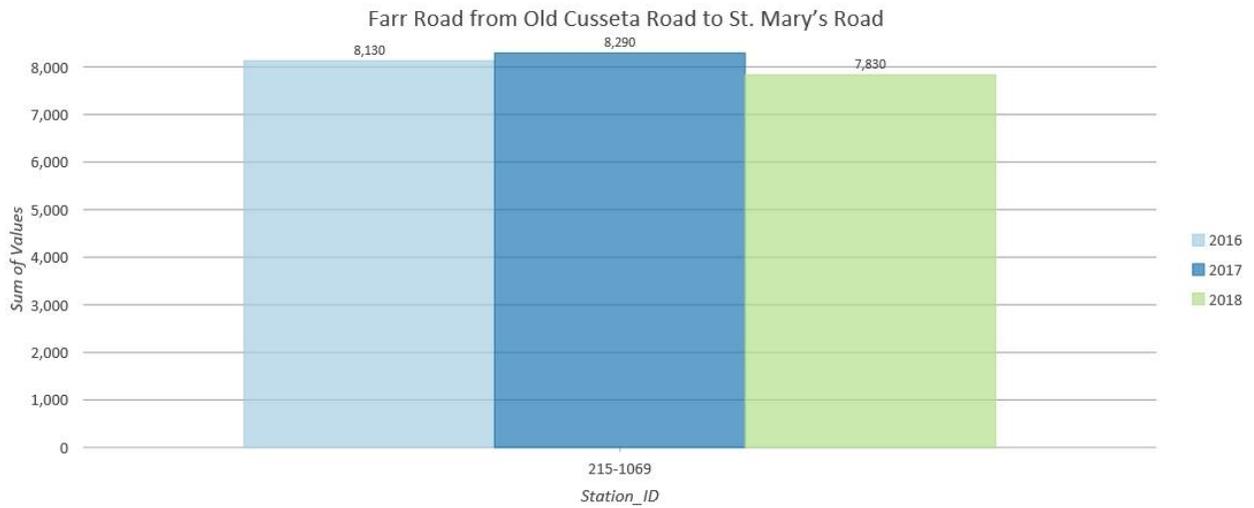
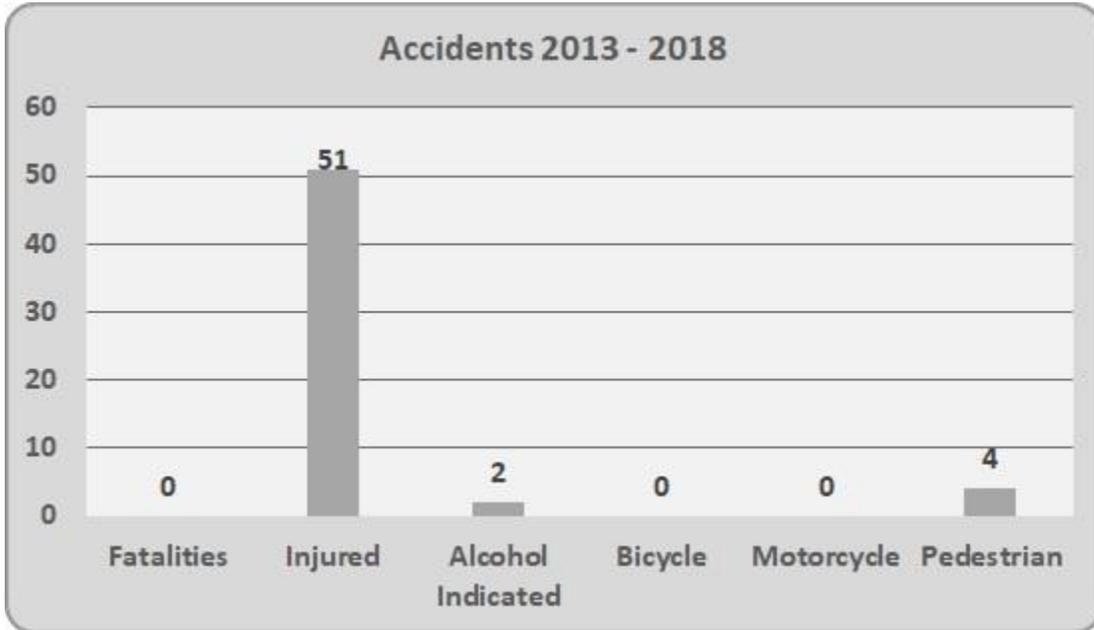


Project Name: Widen Farr Road from Old Cusseta Road to St. Mary's Road		Project ID:
Project Description: Widen Farr Road from 2 to 3 lanes. Project will include Pedestrian/Bicycle facilities.		County: Muscogee P.I. # 350796
Length (Miles): 1.04	# of Existing Lanes: 2	# of Lanes Planned: 3
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 330,000.00
Right-of-Way (ROW):	\$	\$ 550,000.00
Construction (CST):	\$	\$ 2,200,000.00
Project Cost	\$	\$ 3,080,000.00
Federal Cost (\$)	\$	\$ 2,464,000.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 616,000.00

PROJECT LOCATION

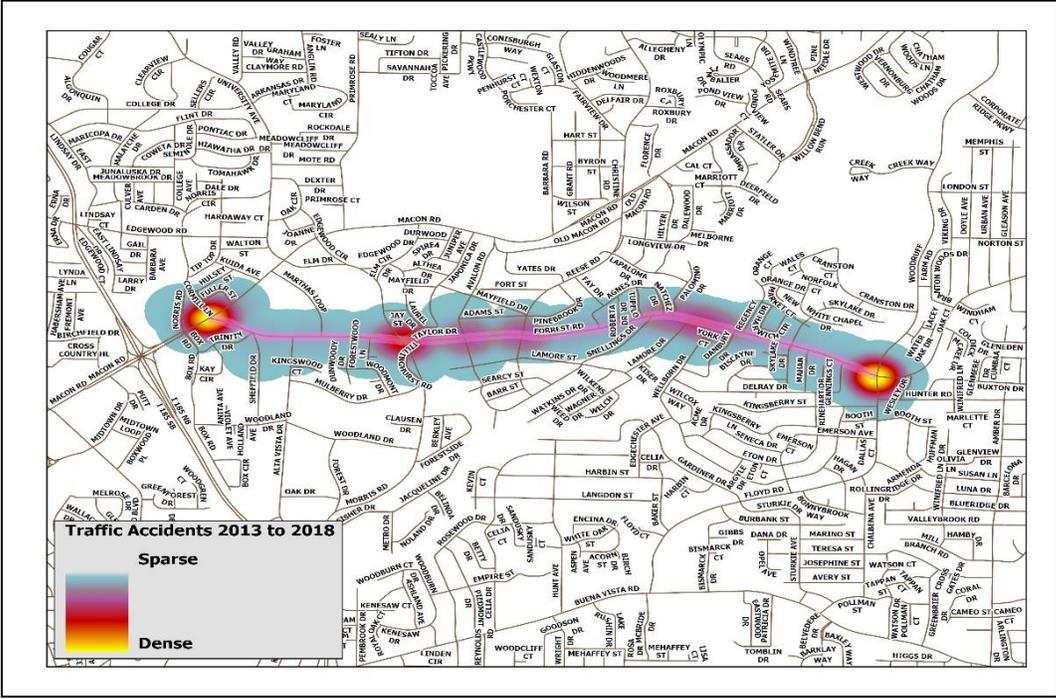


Widen Farr Road from Old Cusseta Road to St. Mary's Road Accident and Traffic Count Data

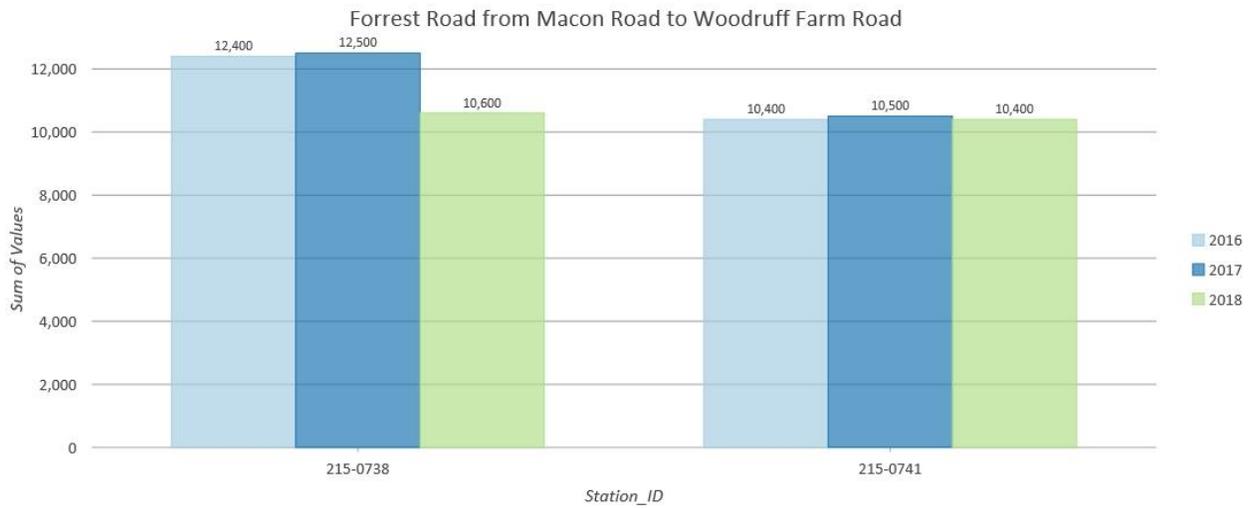
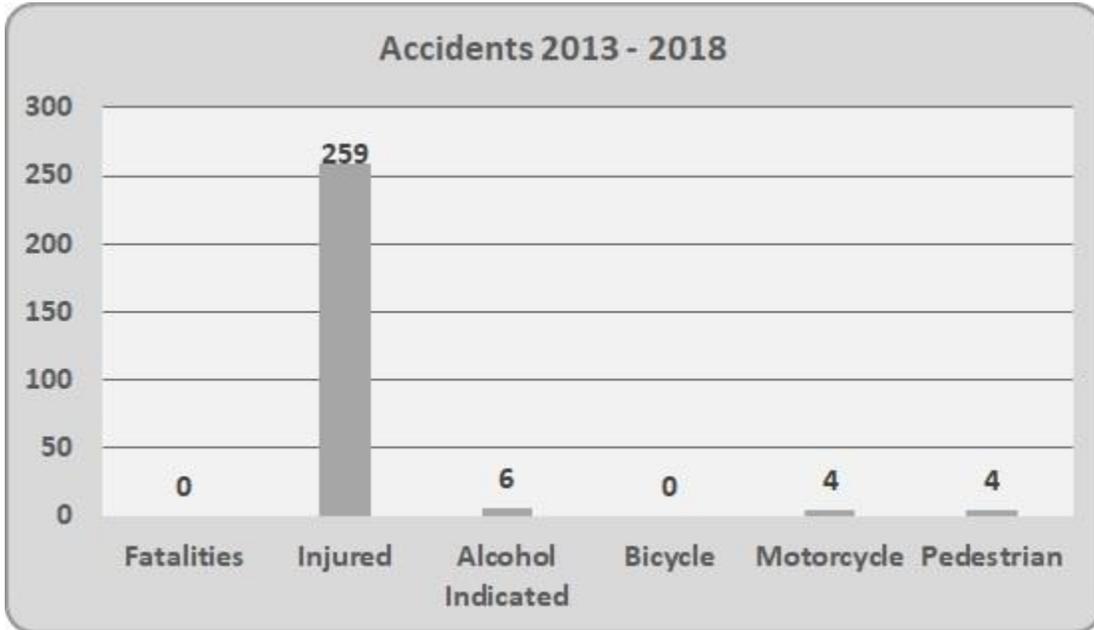


Project Name: Widen Forrest Road from Macon Road to Woodruff Farm Road		Project ID:
Project Description: Widen Forrest Road from 2-lanes to 3-lanes with Intersection Improvements. Project will include pedestrian/bicycle facilities.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes: 2	# of Lanes Planned: 3
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ 600,000.00	\$
Right-of-Way (ROW):	\$ 1,150,000.00	\$
Construction (CST):	\$ 4,600,000.00	\$
Project Cost	\$ 6,350,000.00	\$
Federal Cost (\$)	\$ 5,080,000.00	\$
State Cost (\$)	\$	\$
Local Cost (\$)	\$ 1,270,000.00	\$

PROJECT LOCATION



Widen Forrest Road from Macon Road to Woodruff Farm Road Accident and Traffic Count Data



Project Name: SR 22 / US 80 @ Kendall Creek		Project ID:
Project Description: Replace Bridge over Kendall Creek.		County: Muscogee P.I. # 0013940
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ Authorized
Right-of-Way (ROW):	\$	\$ 0.00
Construction (CST):	\$	\$ 2,000,000.00
Project Cost	\$	\$ 2,000,000.00
Federal Cost (\$)	\$	\$ 1,600,000.00
State Cost (\$)	\$	\$ 400,000.00
Local Cost (\$)	\$	\$

PROJECT LOCATION



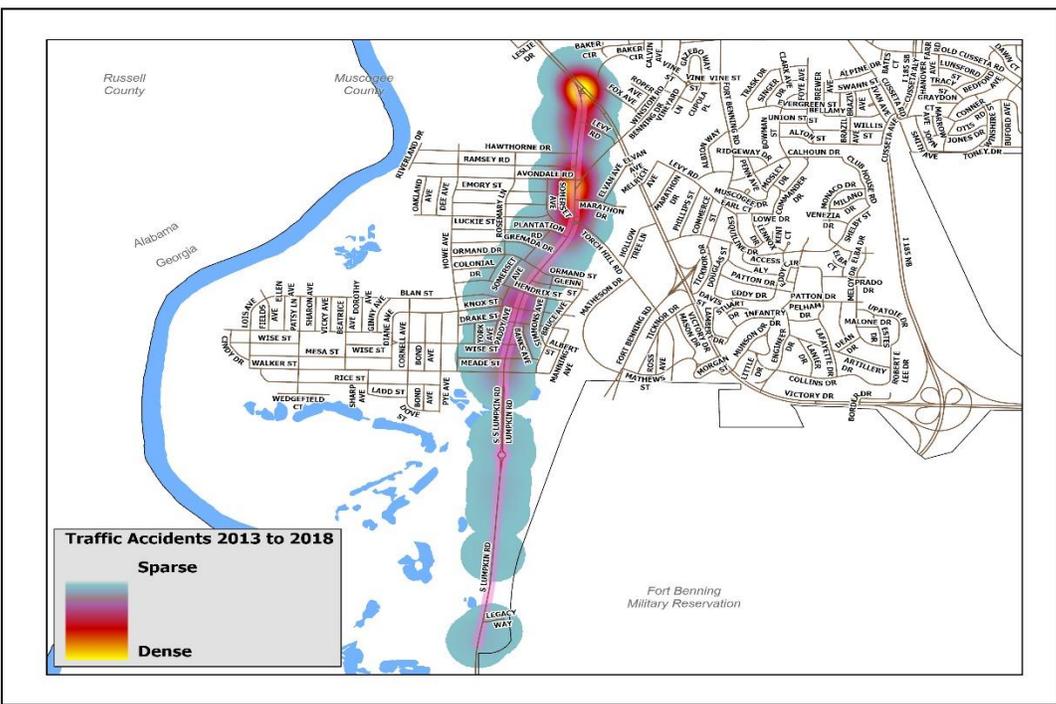
Project Name: Replace Bridge on Seale Road over Cochgalechee CR. BIN 004291		Project ID:
Project Description: Replace Bridge		County: Phenix City P.I. # 100067449
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #:	Congressional Dist. #:	RC:
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 32,000.00
Right-of-Way (ROW):	\$	\$ 0.00
Construction (CST):	\$	\$ 440,000.00
Project Cost	\$	\$ 472,000.00
Federal Cost (\$)	\$	\$ 377,600.00
State Cost (\$)	\$	\$
Local/Other Cost (\$)	\$	\$ 94,400.00

PROJECT LOCATION

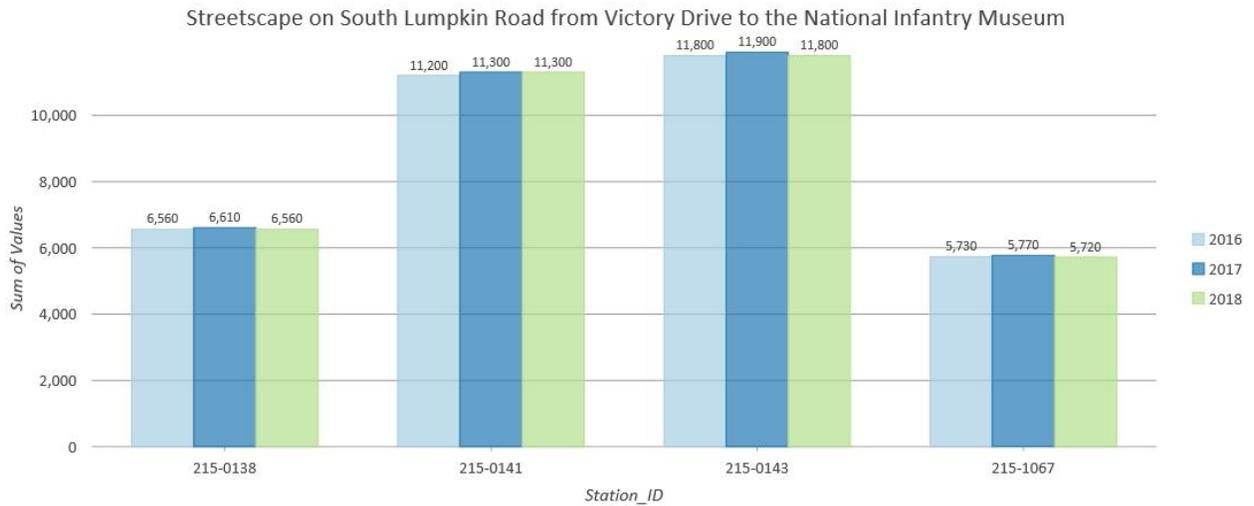
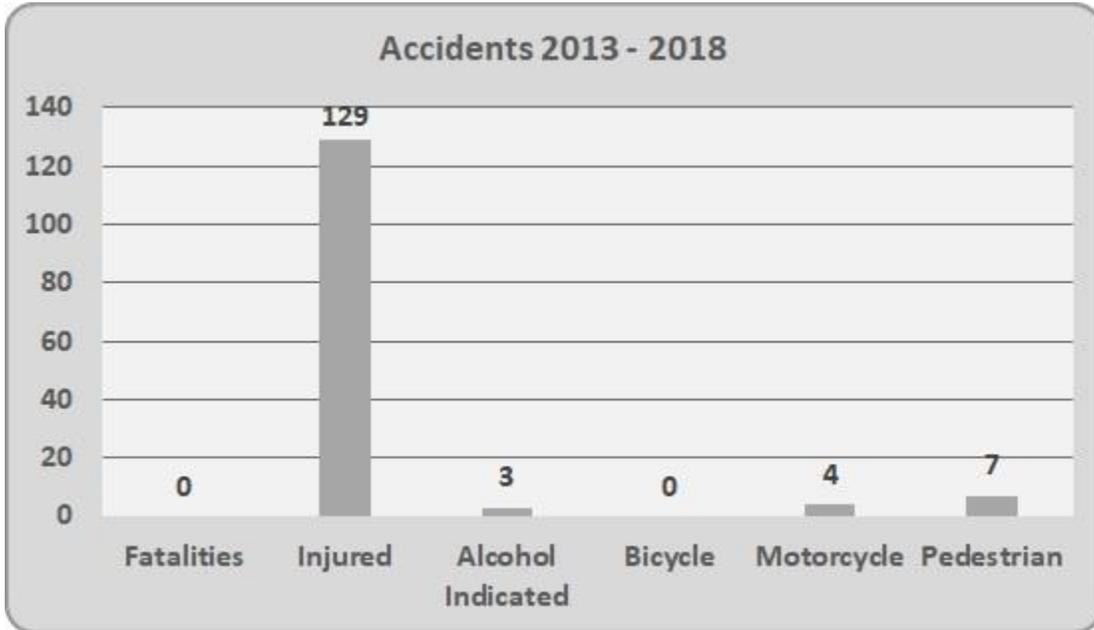


Project Name: Streetscape on South Lumpkin Road from Victory Drive to the National Infantry Museum.		Project ID:
Project Description: Construct a streetscape along South Lumpkin Road with pedestrian and bicycle facilities.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ 760,000.00	\$
Right-of-Way (ROW):	\$ 1,269,000.00	\$
Construction (CST):	\$ 5,076,000.00	\$
Project Cost	\$ 7,105,000.00	\$
Federal Cost (\$)	\$ 5,684,000.00	\$
State Cost (\$)	\$	\$
Local Cost (\$)	\$ 1,421,000.00	\$

PROJECT LOCATION



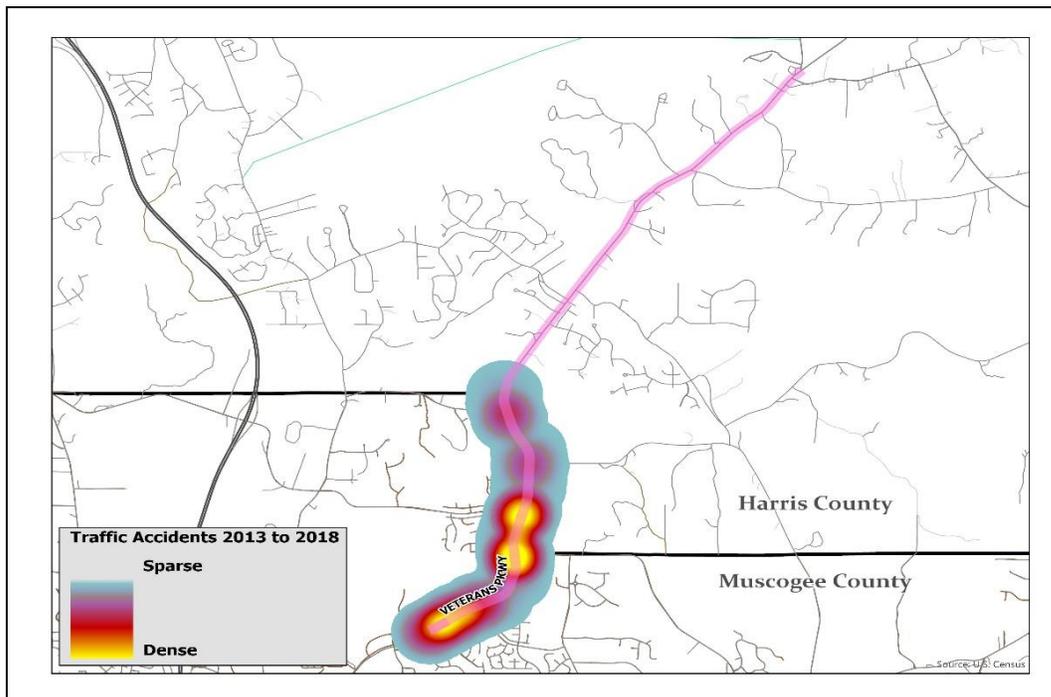
Streetscape on South Lumpkin Road from Victory Drive to National Infantry Museum Accident and Traffic Count Data



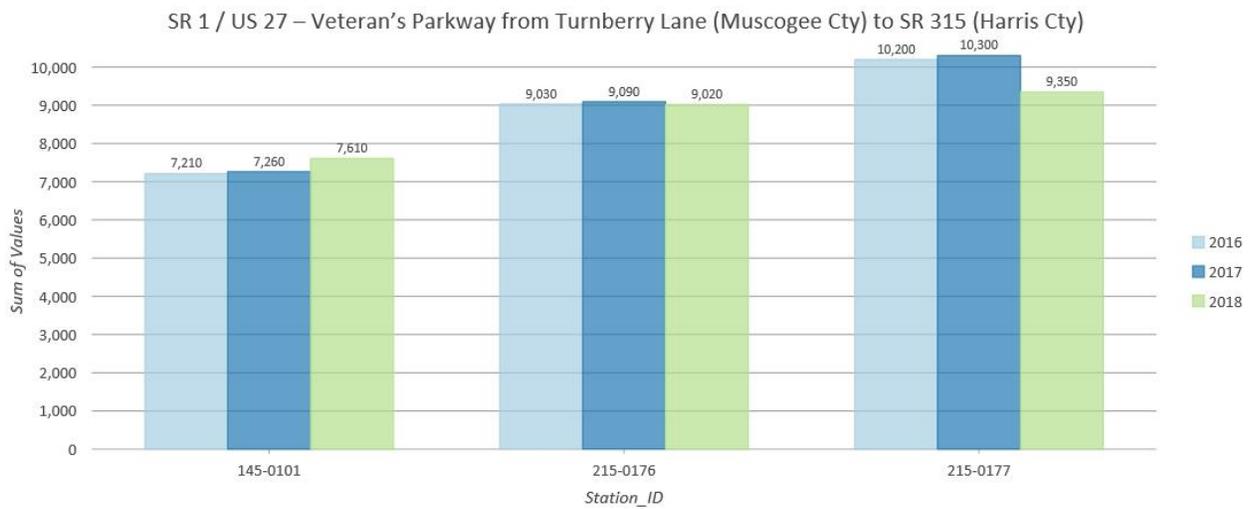
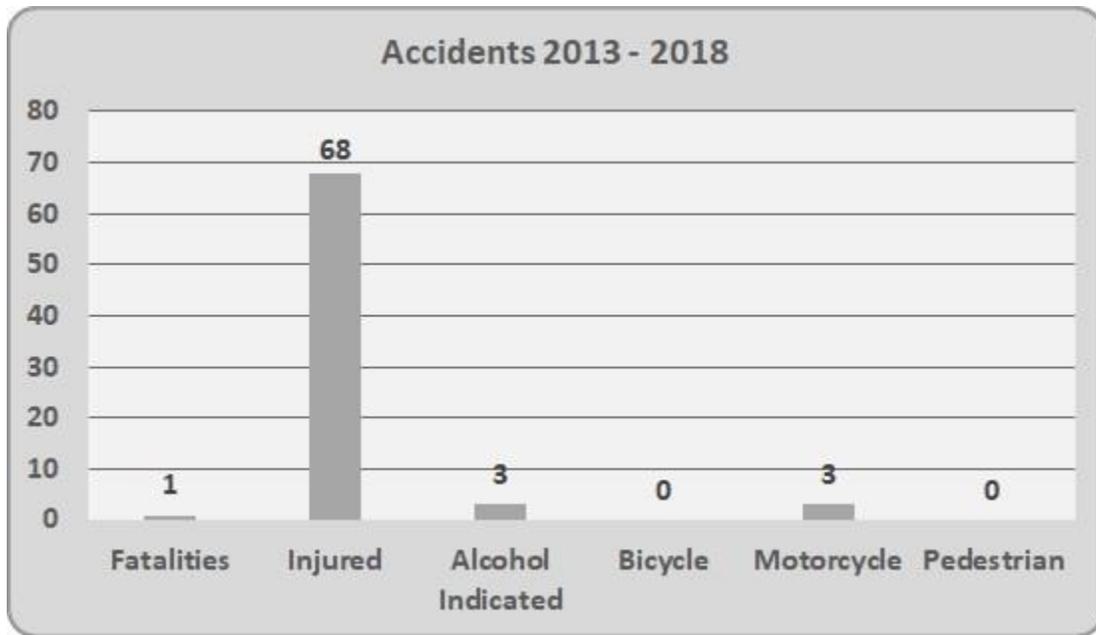
Project Name: SR 1 / US 27 – Veteran’s Parkway from Turnberry Lane (Muscogee Cty) to SR 315 (Harris Cty)		Project ID:
Project Description: Widen existing 2-lane road to 3 and 4 lanes. Pedestrian and bicycle facilities will be included.		County: Muscogee/Harris P.I. # 0006446
Length (Miles): 6.26	# of Existing Lanes: 2	# of Lanes Planned: 3 and 4
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ 135,604.58	\$
Right-of-Way (ROW):	\$	\$
Construction (CST):	\$	\$
Project Cost	\$ 135,604.58	\$
Federal Cost (\$)	\$	\$
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$

Other funding - Transportation Investment Act (TIA) Funds of \$13,250,000.00 and HB 170 State Funds of \$25,000,000.00 for PE, RW, and CST.

PROJECT LOCATION

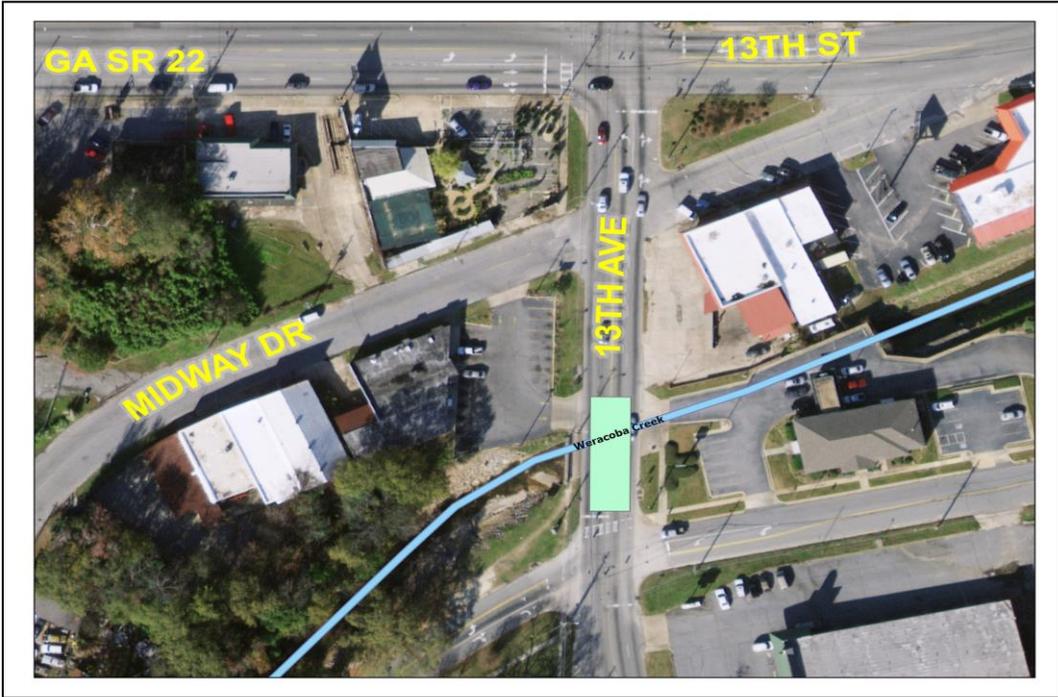


**SR 1 / US 27 – Veteran’s Parkway from Turnberry Lane (Muscogee County) to SR 315
(Harris County)
Accident and Traffic Count Data**



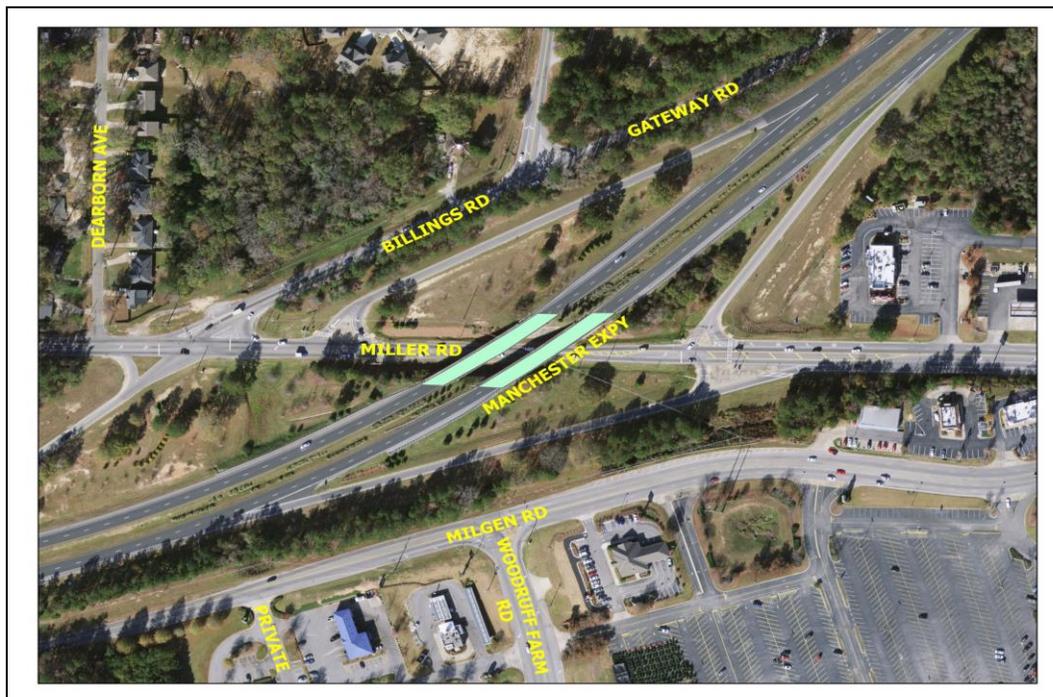
Project Name: SR 22 Spur @ Weracoba Creek		Project ID:
Project Description: Replace bridge over Weracoba Creek		County: Muscogee P.I. # 0014170
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ Authorized	\$
Right-of-Way (ROW):	\$ 171,000.00	\$
Construction (CST):	\$ 1,801,777.81	\$
Project Cost	\$ 1,972,777.81	\$
Federal Cost (\$)	\$ 1,578,222.25	\$
State Cost (\$)	\$ 394,555.56	\$
Local Cost (\$)	\$	\$

PROJECT LOCATION



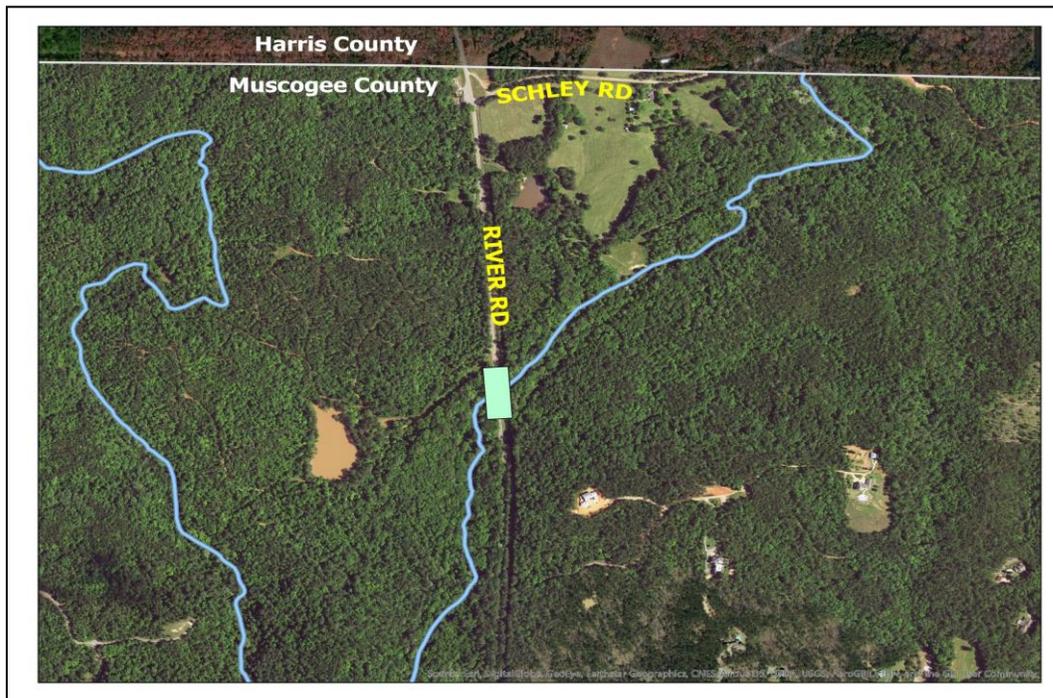
Project Name: SR 85 / US 27 ALT SB & NB @ CR 1660 / Miller Road		Project ID:
Project Description: Replace bridge at Miller and Manchester Expressway (SR 85/US 27 ALT)		County: Muscogee P.I. # 0013926
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ Authorized	\$
Right-of-Way (ROW):	\$ 500,000.00	\$
Construction (CST):	\$ 7,960,951.51	\$
Project Cost	\$ 8,460,951.51	\$
Federal Cost (\$)	\$ 6,768,761.21	\$
State Cost (\$)	\$ 1,692,190.30	\$
Local Cost (\$)	\$	\$

PROJECT LOCATION



Project Name: SR 219 @ Schley Creek		Project ID:
Project Description: Replace bridge over Schley Creek.		County: Muscogee P.I. # 0013601
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ Authorized	\$
Right-of-Way (ROW):	\$ 279,000.00	\$
Construction (CST):	\$ 3,944,788.21	\$
Project Cost	\$ 4,223,788.21	\$
Federal Cost (\$)	\$ 3,379,030.57	\$
State Cost (\$)	\$ 844,757.64	\$
Local Cost (\$)	\$	\$

PROJECT LOCATION



Project Name: Replace Bridge on SR 520 / US 27 @ First Division Road 7.5 MI NW of Cusseta		Project ID:
Project Description: Replace bridge on SR 520 / US 27 @ First Division Road.		County: Chattahoochee P.I. # 0016508
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 750,000.00
Right-of-Way (ROW):	\$	\$ 250,000.00
Construction (CST):	\$	\$ 3,500,000.00
Project Cost	\$	\$ 4,500,000.00
Federal Cost (\$)	\$	\$ 3,600,000.00
State Cost (\$)	\$	\$ 900,000.00
Local Cost (\$)	\$	\$

PROJECT LOCATION



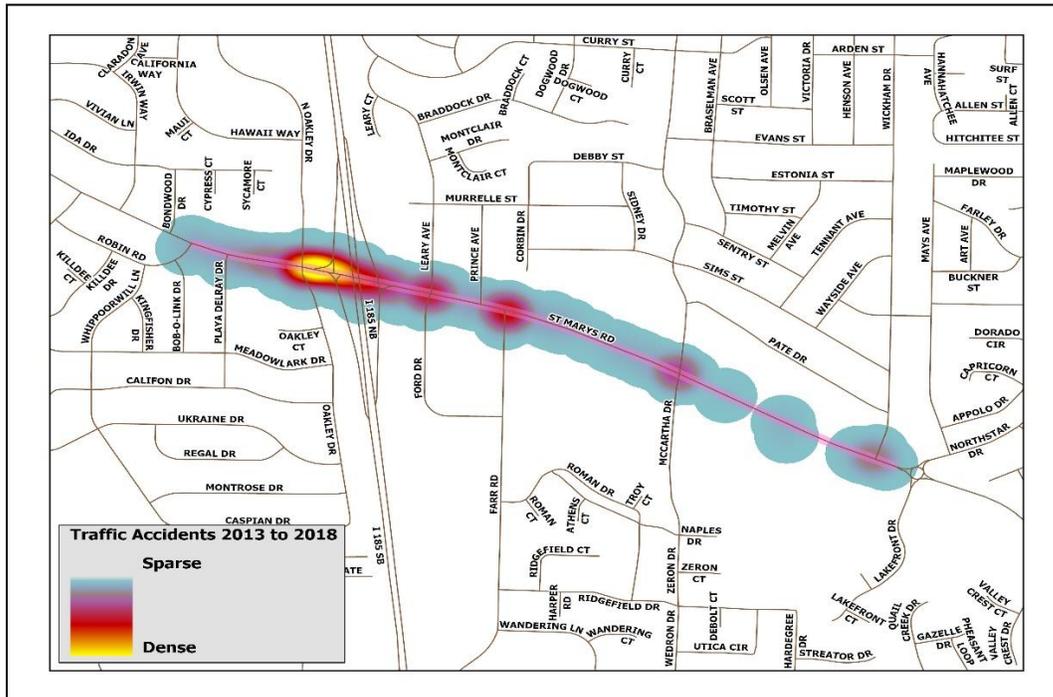
Project Name: SR 520 / US 280 @ Bagley Creek		Project ID:
Project Description: Replace bridge over Bagley Creek.		County: Chattahoochee P.I. # 0013743
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ Authorized	\$
Right-of-Way (ROW):	\$ Authorized	\$
Construction (CST):	\$ 2,997,332.00	\$
Project Cost	\$ 2,997,332.00	\$
Federal Cost (\$)	\$ 2,397,865.60	\$
State Cost (\$)	\$ 599,466.40	\$
Local Cost (\$)	\$	\$

PROJECT LOCATION

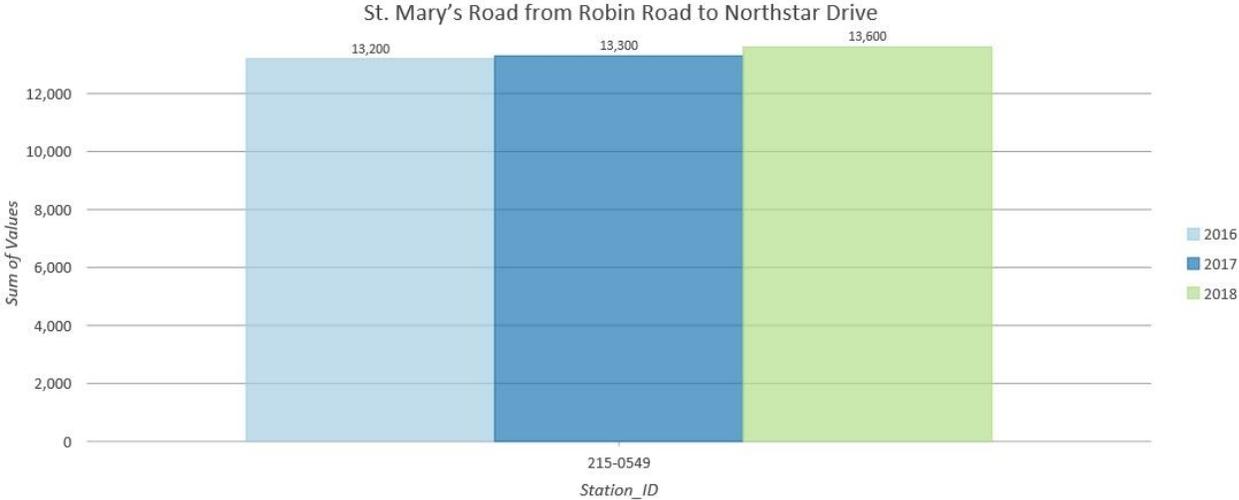
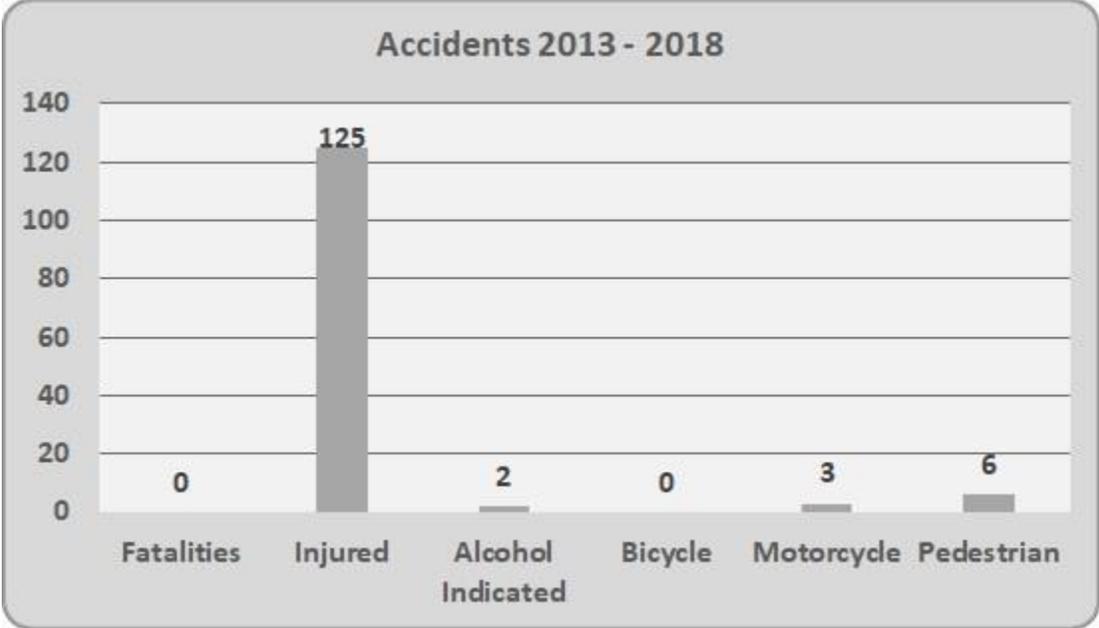


Project Name: Widen St. Mary's Road from Robin Road to Northstar Drive		Project ID:
Project Description: Widen St. Mary's Road from 2 to 3 lanes. Project will include Pedestrian/Bicycle facilities.		County: Muscogee P.I. # 332780
Length (Miles): 1.25	# of Existing Lanes: 2	# of Lanes Planned: 4
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 545,000.00
Right-of-Way (ROW):	\$	\$ 907,000.00
Construction (CST):	\$	\$ 9,600,000.00
Project Cost	\$	\$ 11,052,000.00
Federal Cost (\$)	\$	\$ 8,841,600.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 2,210,400.00

PROJECT LOCATION

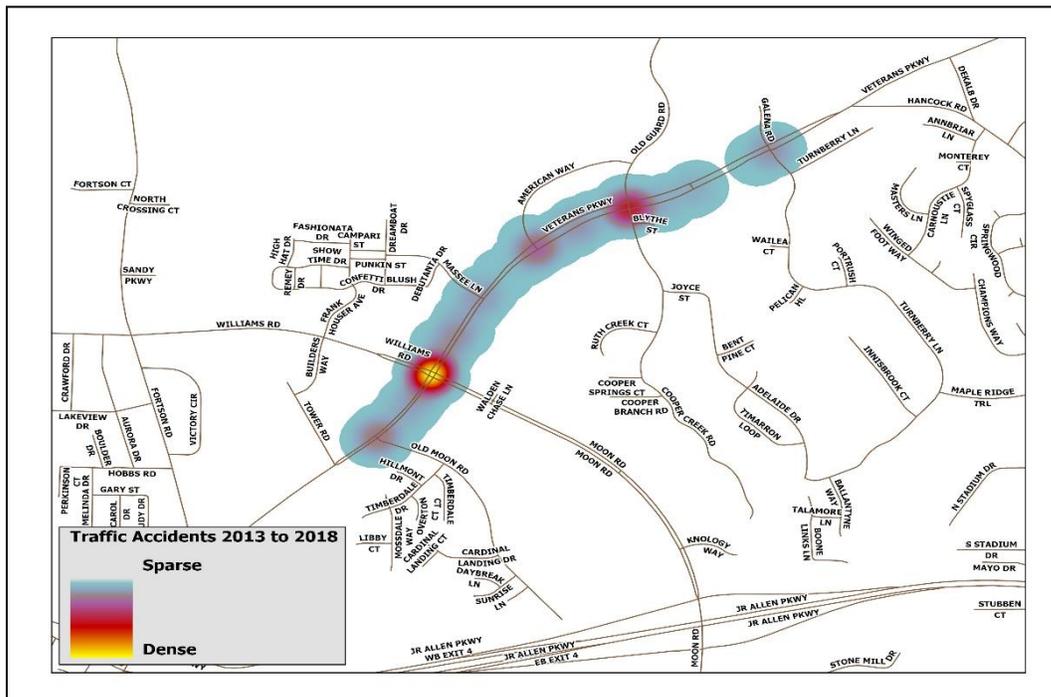


**Widen St. Mary's Road from Robin Road to Northstar Drive
Accident and Traffic Count Data**

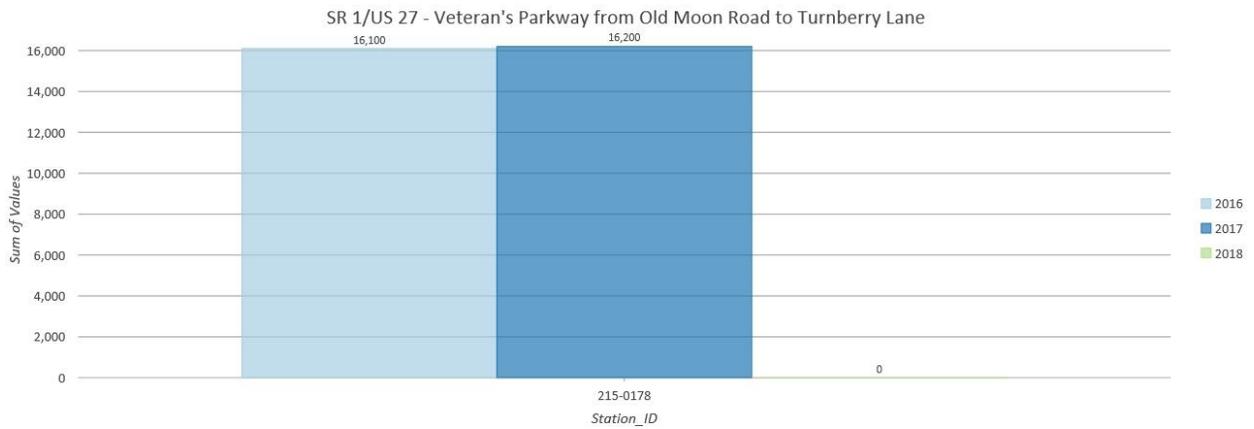
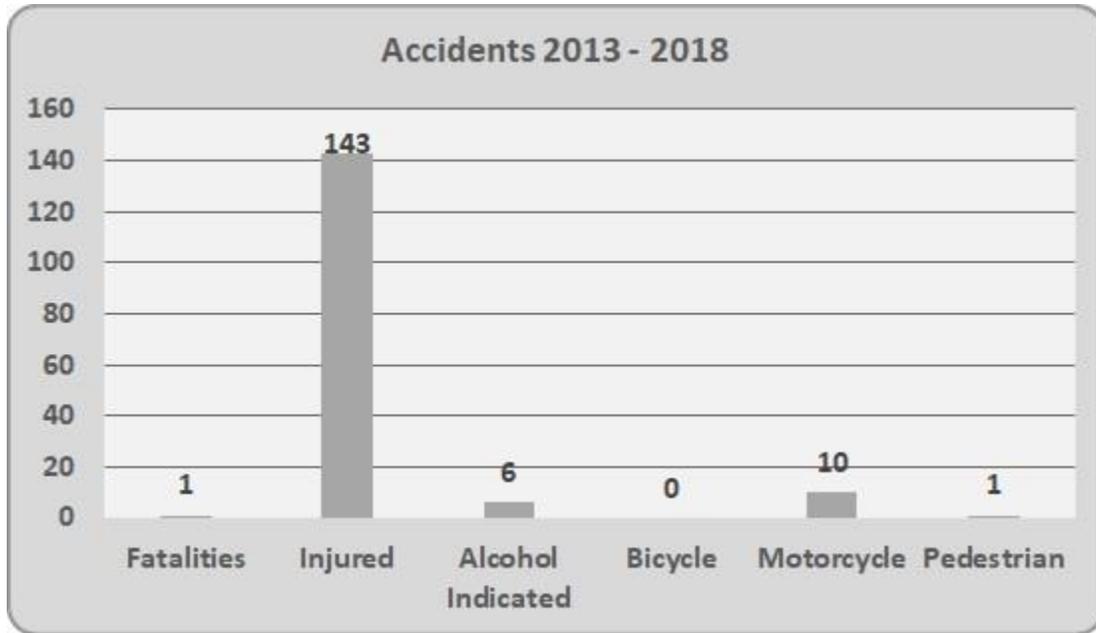


Project Name: Widen SR 1 – US 27 – Veteran’s Parkway from Old Moon Road to Turnberry Lane (6 Lanes)		Project ID:
Project Description: Widen SR 1 – US 27 – Veteran’s Parkway from 4 to 6 lanes. Project will include Pedestrian/Bicycle facilities.		County: Muscogee P.I. # 0009293
Length (Miles): 1.56	# of Existing Lanes: 4	# of Lanes Planned: 6
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 300,000.00
Right-of-Way (ROW):	\$	\$ 0.00
Construction (CST):	\$	\$ 3,043,000.00
Project Cost	\$	\$ 3,343,000.00
Federal Cost (\$)	\$	\$ 2,674,400.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 668,600.00

PROJECT LOCATION

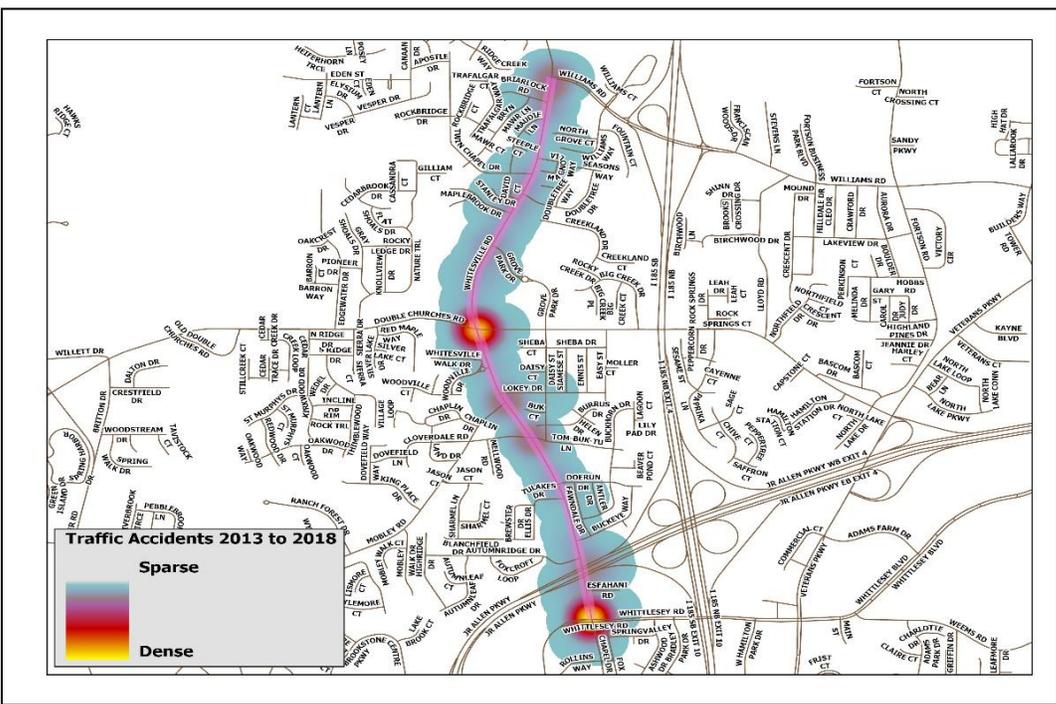


**Widen SR 1 / US 27 / Veteran's Parkway from Old Moon Road to Turnberry Lane
(6 Lanes)
Accident and Traffic Count Data**

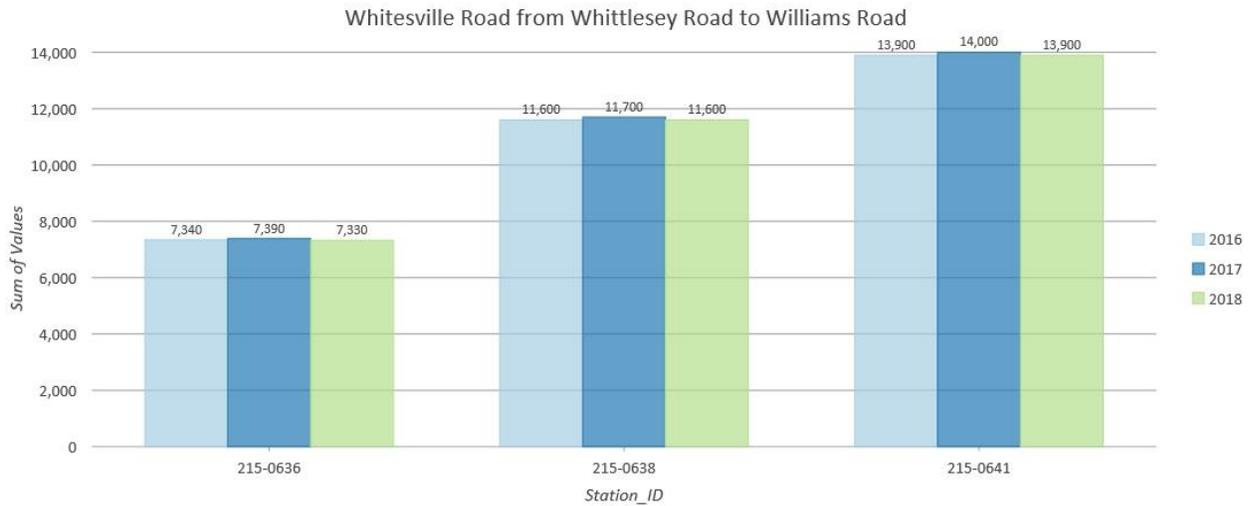
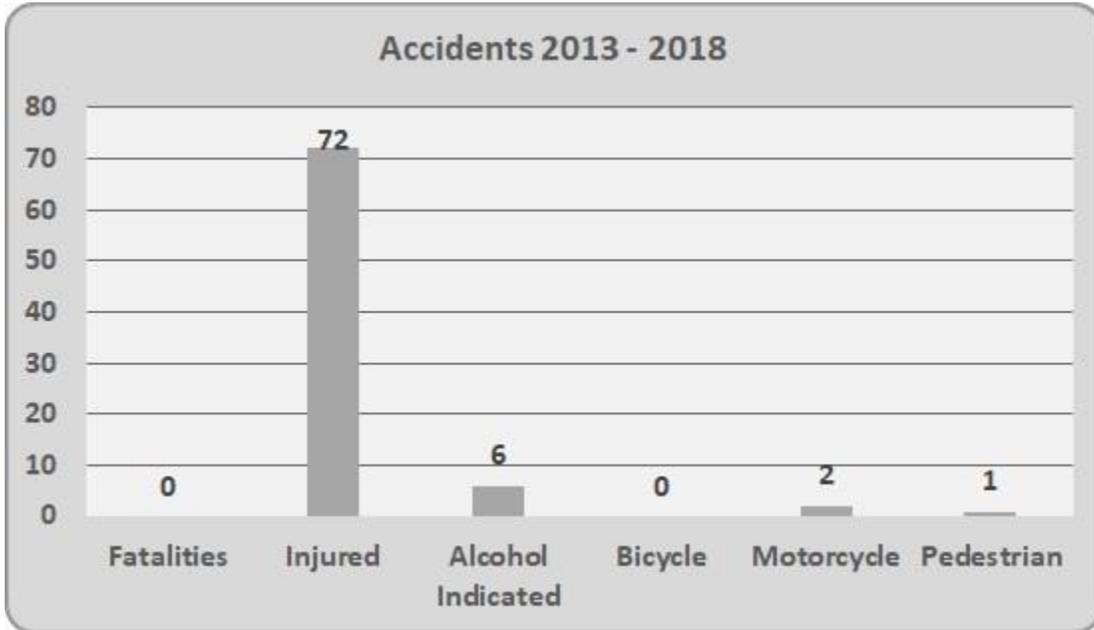


Project Name: Widen Whitesville Road from Whittlesey Road to Williams Road.		Project ID:
Project Description: Widen Whitesville Road from 2-lanes to 3 lanes with intersection improvements. Project to include pedestrian / bicycle facilities.		County: Muscogee P.I. #
Length (Miles): 2.20	# of Existing Lanes: 2	# of Lanes Planned: 4
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 695,000.00
Right-of-Way (ROW):	\$	\$ 1,155,000.00
Construction (CST):	\$	\$ 4,620,000.00
Project Cost	\$	\$ 6,470,000.00
Federal Cost (\$)	\$	\$ 5,176,000.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 1,294,000.00

PROJECT LOCATION



Widen Whitesville Road from Whittlesey Road to Williams Road Accident and Traffic Count Data

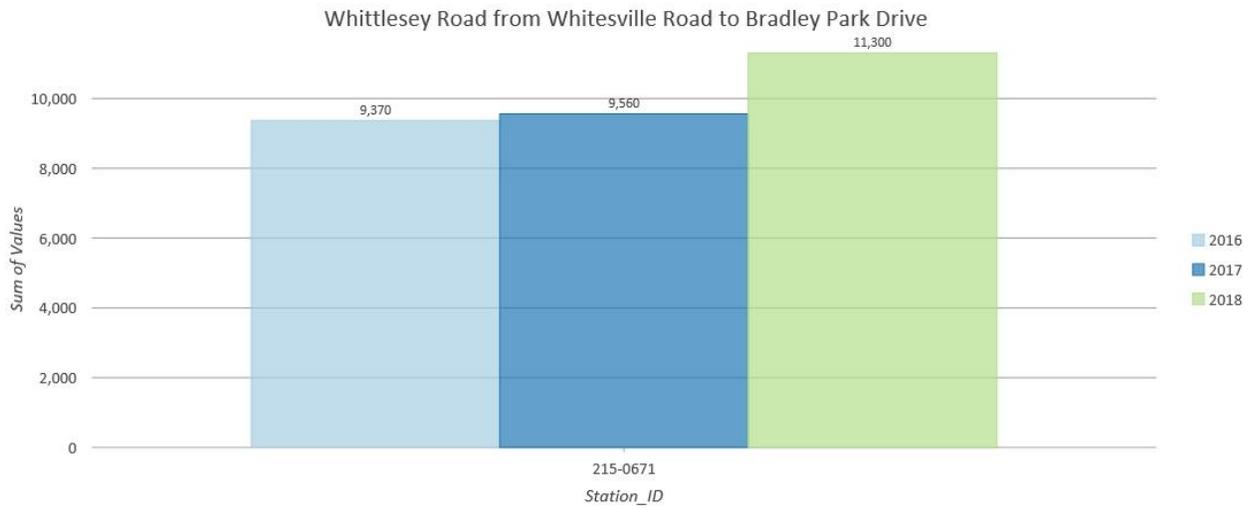
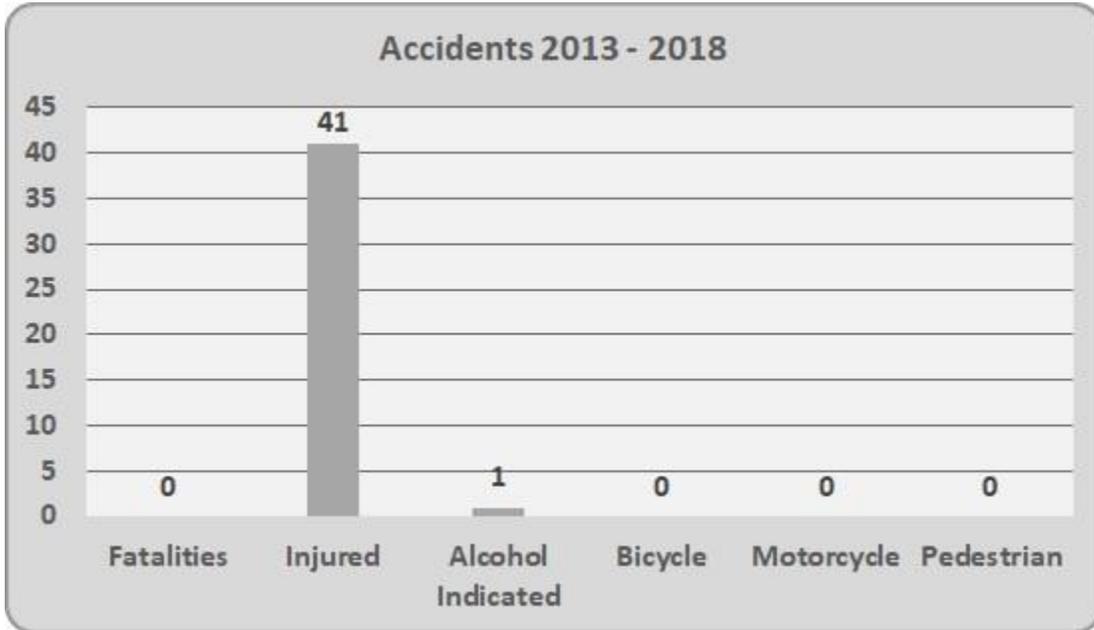


Project Name: Widen Whittlesey Road from Whitesville Road to Bradley Park Drive.		Project ID:
Project Description: Widen Whittlesey Road from 2-lanes to 4 lanes with intersection improvements. Project to include pedestrian / bicycle facilities.		County: Muscogee P.I. # 0005749
Length (Miles): 0.27	# of Existing Lanes: 2	# of Lanes Planned: 4
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 439,857.52
Right-of-Way (ROW):	\$	\$ 1,183,500.00
Construction (CST):	\$	\$ 2,038,675.00
Project Cost	\$	\$ 3,662,032.55
Federal Cost (\$)	\$	\$ 2,929,626.04
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 732,406.51

PROJECT LOCATION

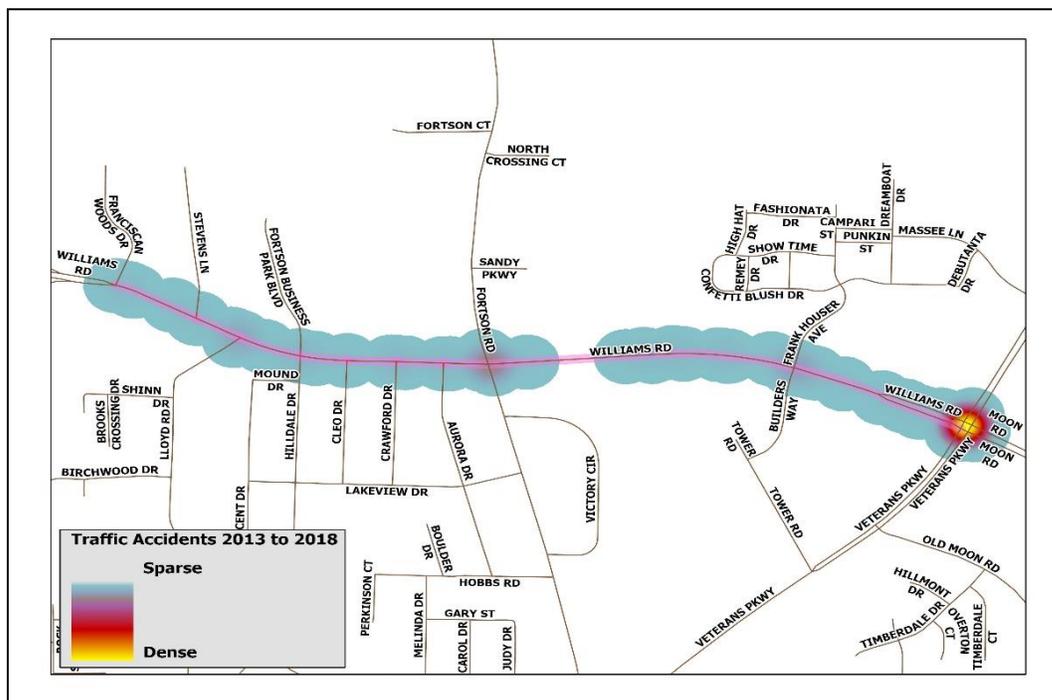


Widen Whittlesey Road from Whitesville Road to Bradley Park Drive Accident and Traffic Count Data

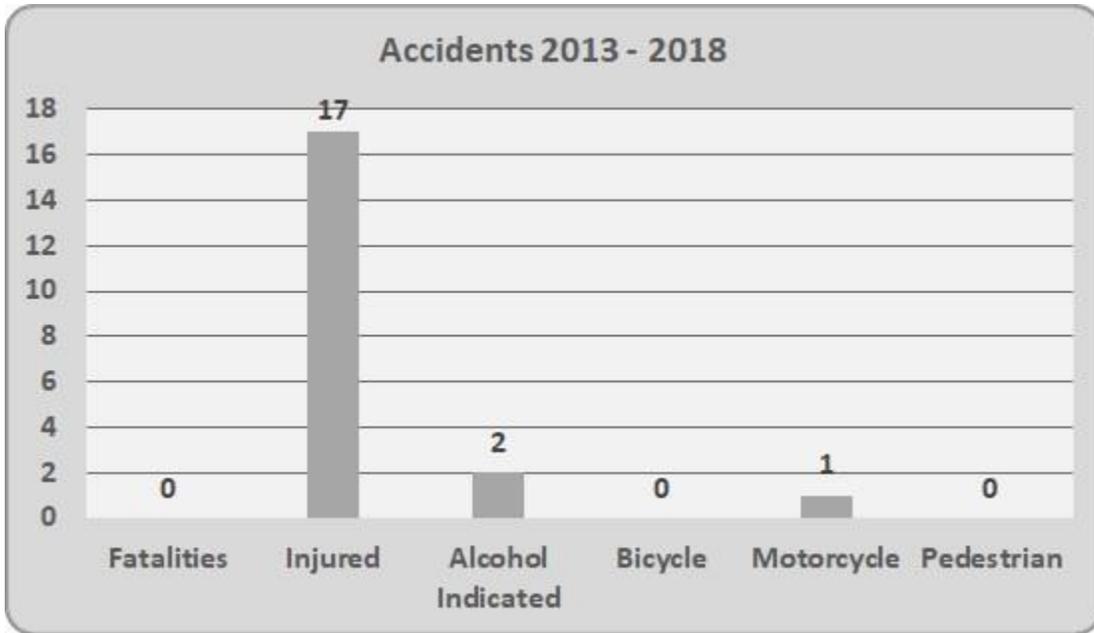


Project Name: Widen Williams Road from SR 1/US 27 – Veteran’s Parkway to Francisoan Woods Drive (Private Rd)		Project ID:
Project Description: Widen Williams Road from 2-lanes to 3-lanes. Project will include pedestrian/bicycle facilities.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes: 2	# of Lanes Planned: 3
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$ 300,000.00	\$
Right-of-Way (ROW):	\$ 525,000.00	\$
Construction (CST):	\$ 3,700,000.00	\$
Project Cost	\$ 4,525,000.00	\$
Federal Cost (\$)	\$ 3,620,000.00	\$
State Cost (\$)	\$	\$
Local Cost (\$)	\$ 905,000.00	\$

PROJECT LOCATION

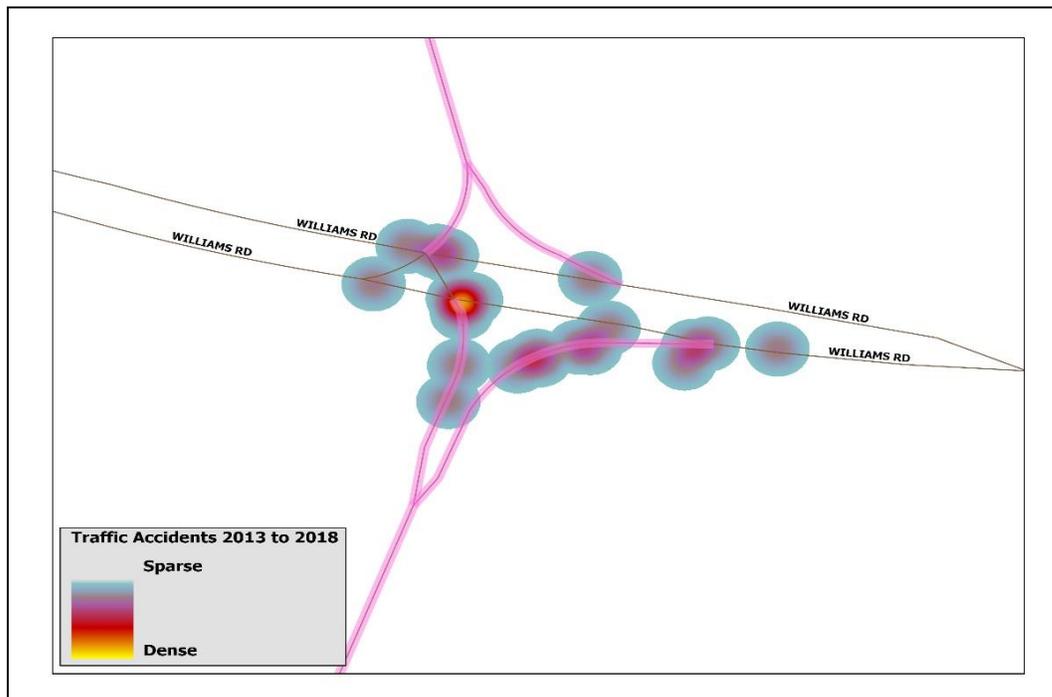


**Widen Williams Road from SR 1 / US 27 / Veteran's Parkway to
Francisoan Woods Drive (Private Road)
Accident and Traffic Count Data**

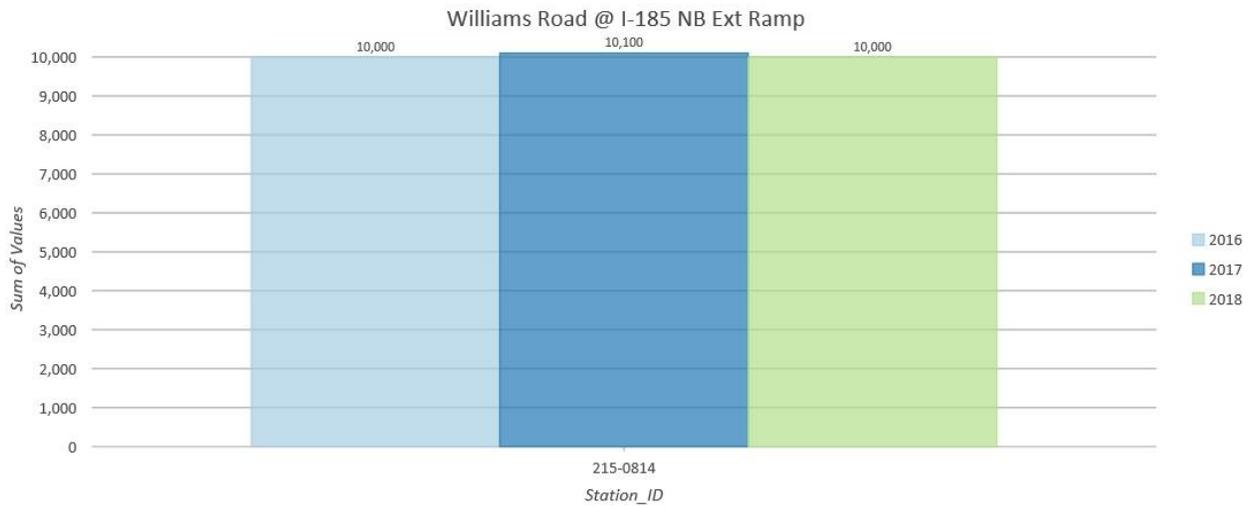
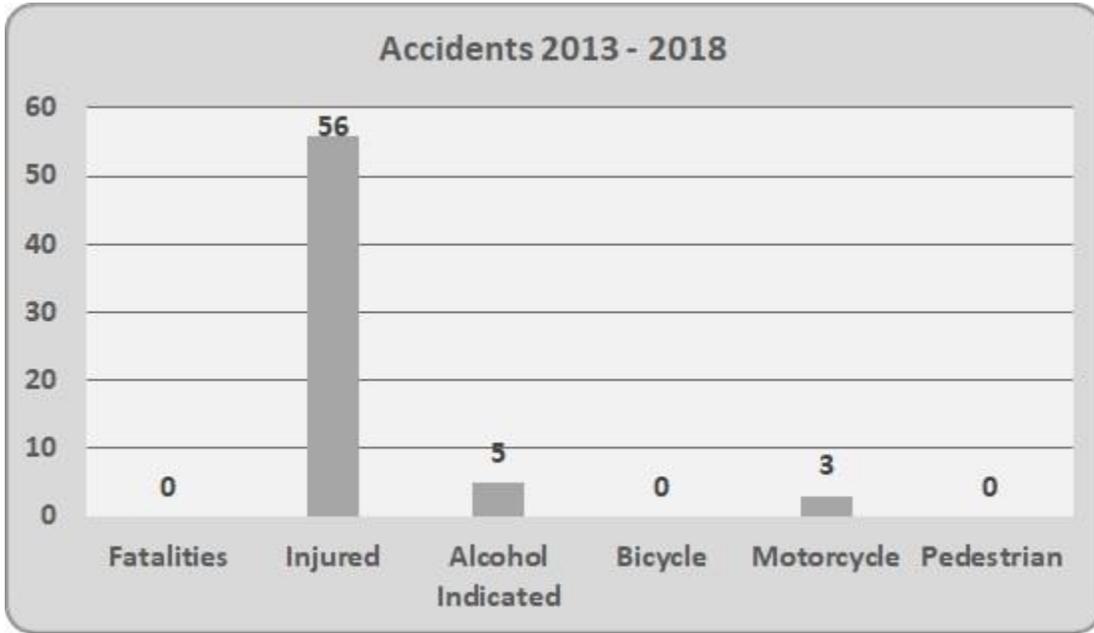


Project Name: Williams Road @ I-185 NB Ext Ramp		Project ID:
Project Description: Interchange Improvements / Possible Roundabout. Project to include pedestrian / bicycle facilities.		County: Muscogee P.I. #
Length (Miles):	# of Existing Lanes:	# of Lanes Planned:
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 1,000,000.00
Right-of-Way (ROW):	\$	\$ 750,000.00
Construction (CST):	\$	\$ 7,800,000.00
Project Cost	\$	\$ 9,550,000.00
Federal Cost (\$)	\$	\$ 7,640,000.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 1,910,000.00

PROJECT LOCATION

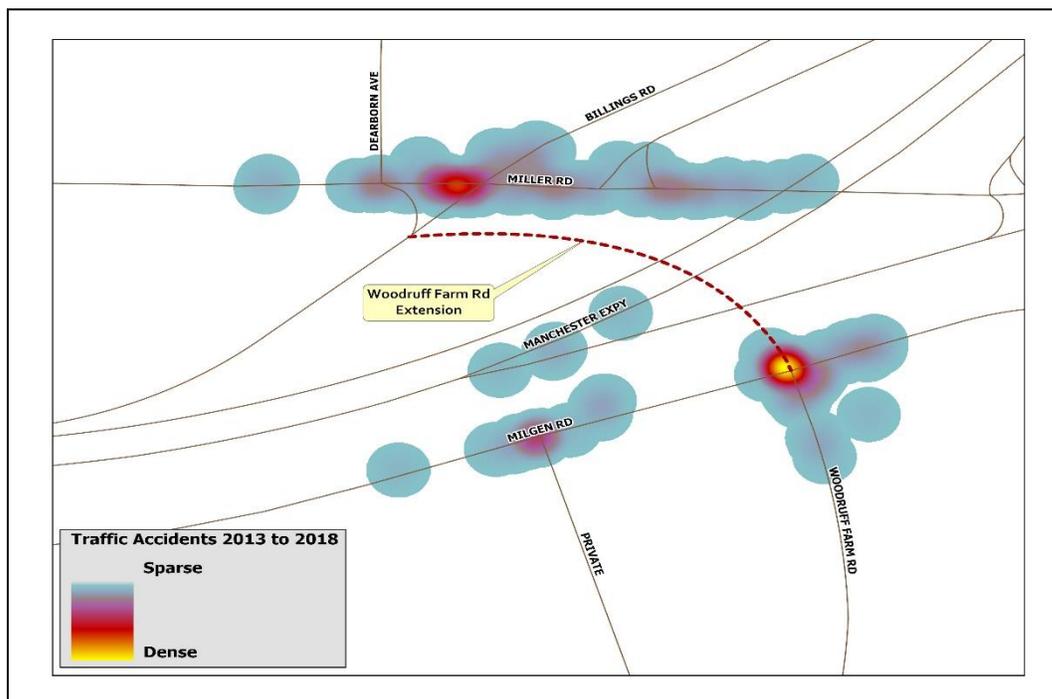


Williams Road @ I-185 Ramp Improvements Accident and Traffic Count Data

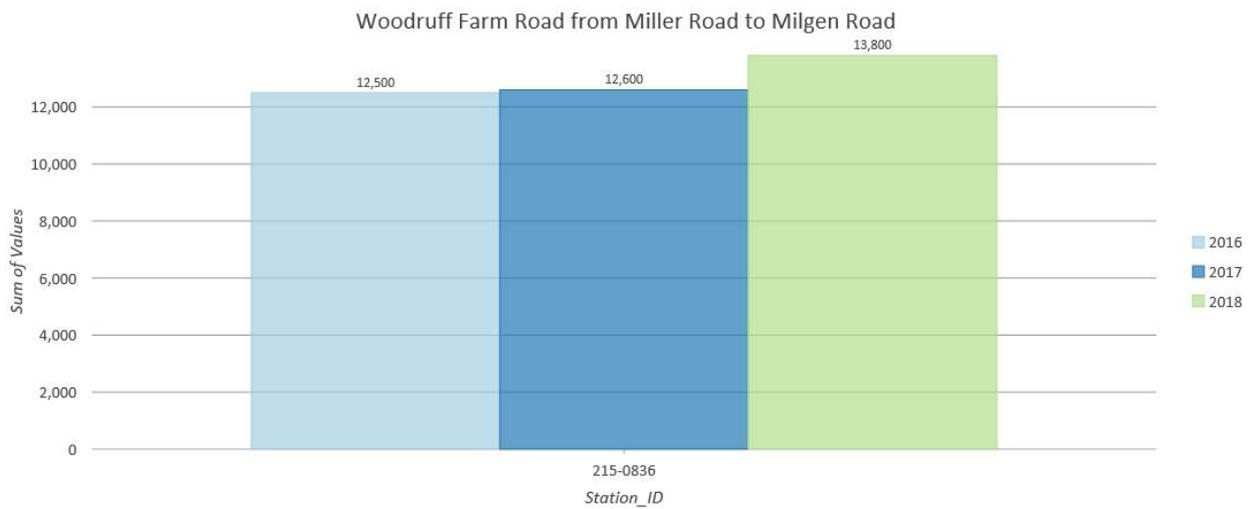
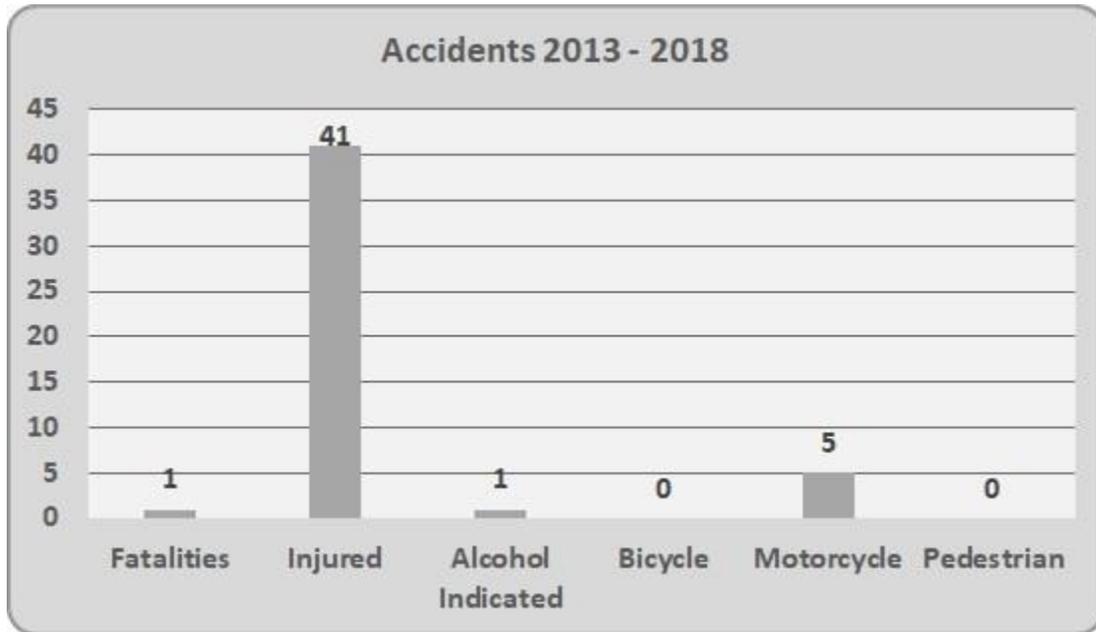


Project Name: Extend Woodruff Farm Road from Miller Road to Milgen Road		Project ID:
Project Description: Construct a new 4-lane road. Project to include pedestrian / bicycle facilities.		County: Muscogee P.I. #
Length (Miles): 0.15	# of Existing Lanes: 0	# of Lanes Planned: 4
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 250,000.00
Right-of-Way (ROW):	\$	\$ 1,500,000.00
Construction (CST):	\$	\$ 7,200,000.00
Project Cost	\$	\$ 8,950,000.00
Federal Cost (\$)	\$	\$ 7,160,000.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 1,790,000.00

PROJECT LOCATION

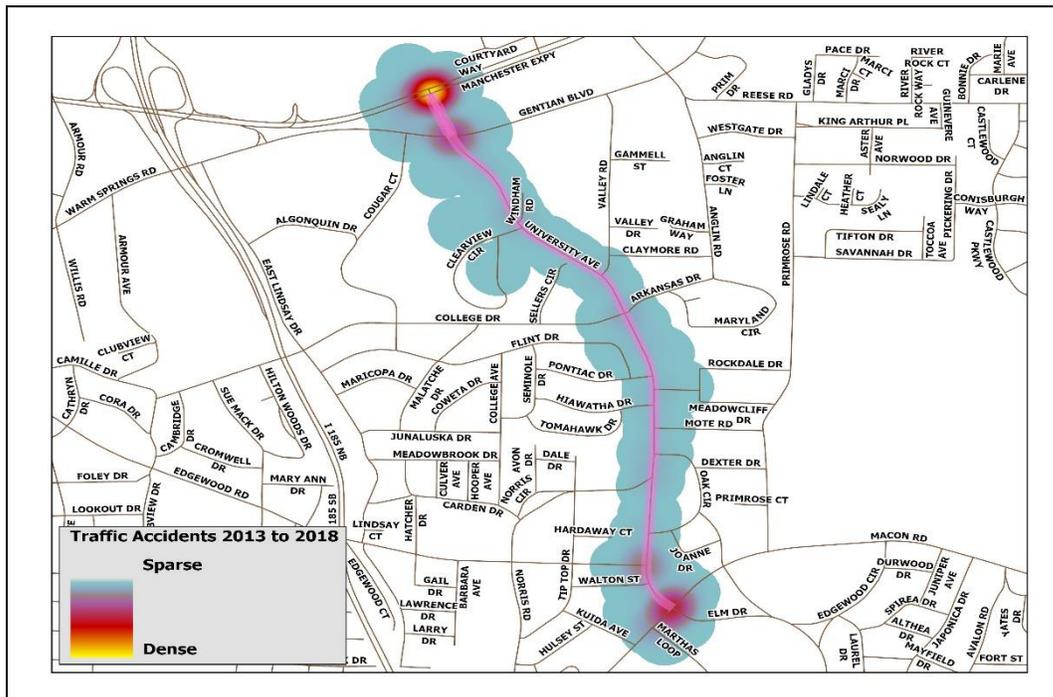


Woodruff Farm Road Accident and Traffic Count Data

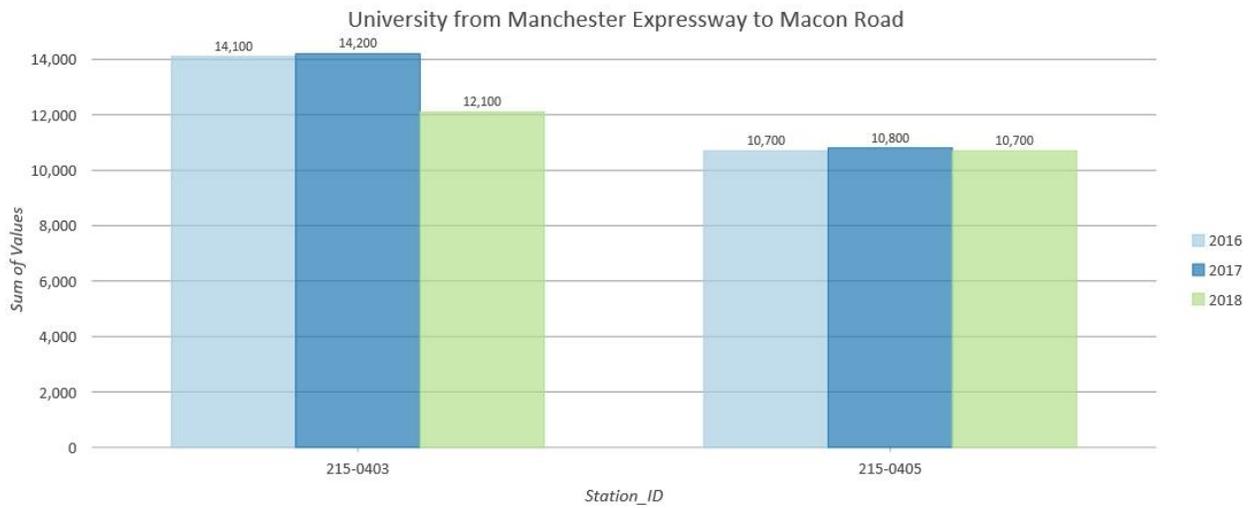
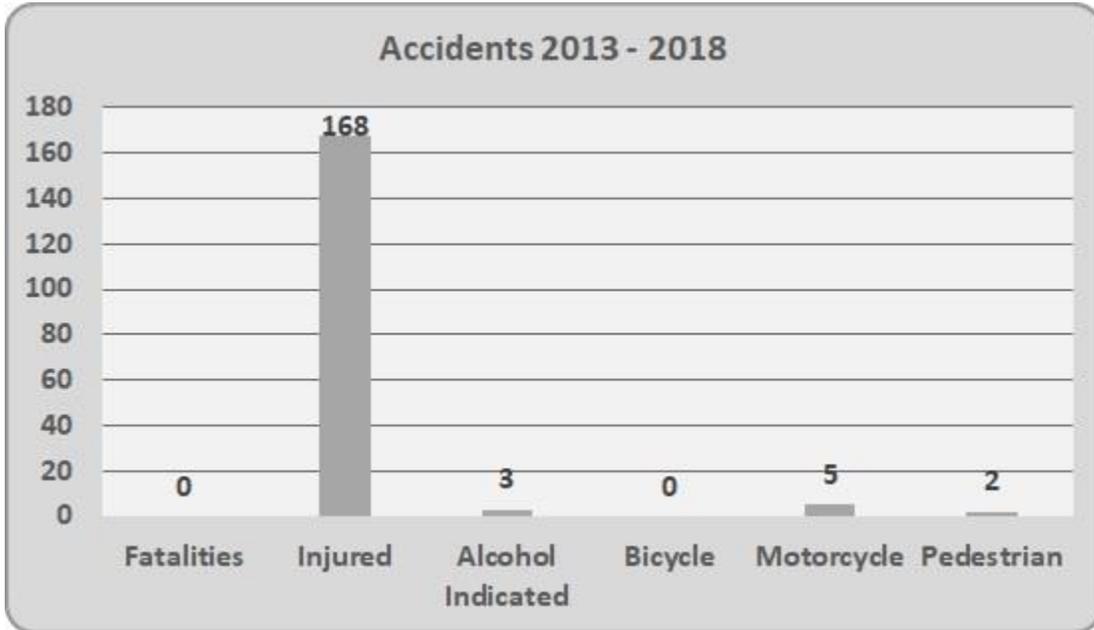


Project Name: Reduce University Avenue from Macon Road to Manchester Expressway from 4 lanes to 3 lanes with Pedestrian and Bicycle Facilities		Project ID:
Project Description: Reduce the lanes on University Avenue from 4 to 3 lanes with intersection improvements and pedestrian / bicycle facilities.		County: Muscogee P.I. #
Length (Miles): 1.24	# of Existing Lanes: 4	# of Lanes Planned: 3
DOT District #: 3	Congressional Dist. #: 2	RC: River Valley
Average Daily Traffic Volumes:		
Project Phase	FY 2020 - 2025 Short Range Cost	FY 2026 - FY 2045 Long Range Cost
Preliminary Engineering (PE):	\$	\$ 250,000.00
Right-of-Way (ROW):	\$	\$ 1,500,000.00
Construction (CST):	\$	\$ 7,200,000.00
Project Cost	\$	\$ 8,950,000.00
Federal Cost (\$)	\$	\$ 7,160,000.00
State Cost (\$)	\$	\$
Local Cost (\$)	\$	\$ 1,790,000.00

PROJECT LOCATION



University Avenue from Macon Road to University Avenue – Road Diet Accident and Traffic Count Data



7.8 Proposed Transit Projects

METRA / Columbus:

1. Continue transit connections with future alternative transportation biking and walking trails.
2. Continue connections to key retail and employment locations requiring transit access.
3. Continue to support the use of existing and future park and ride locations throughout the urban service area.
4. Continue to transition disabled para-transit customers to fixed route buses by increasing on-street access once the rider exits the bus and then becomes a pedestrian.
5. Continue to coordinate transit and travel access with public and private non-emergency transit services.
6. If feasible, convert

PEX / Phenix City:

1. Identify funding sources to continue and expand transit services.
2. Promote marketing in Phenix City to improve ridership.
3. Continue to purchase and replace cameras and tablets as needed in operations.
4. Replace fixed route and para-transit vehicles based on the useful life and on the availability of match funding.
5. Replace bus stop signs and / or add shelters and benches.
6. Construct a fenced parking lot for transit vehicles and small building to house supplies and tablets.

CHAPTER 8

ENVIRONMENTAL MITIGATION AND AIR QUALITY

8.1 Environmental Mitigation

As part of the environmental review of the larger process, all projects receiving Federal funding will be subject to the provisions of the National Environmental Policy Act of 1969 (NEPA). This process allows the relevant Federal, state, and/or local agencies to identify potential environmental impacts associated with each project and delineate means to avoid or mitigate against those impacts. While a NEPA-level analysis is not required for the projects identified in the plan at this time, both MAP-21 and the FAST Act do require that the Metropolitan Planning Organization (MPO) coordinate the State and Federal agencies to reflect the potential environmental mitigation activities that should be considered in the development of the plan. Relevant activities are summarized below.

Transportation System Resilience

In recent years, climate change has become a significant global concern. While variations in global temperatures are normal and cyclical in nature, a preponderance of scientific evidence suggests that human activities are contributing to the current observed climate trends and associated extreme weather events. The emission of greenhouse gases, which in part occurs because of fossil fuel combustion, has been identified as a potential contributing factor. Subsequently, automobile use is generally thought to be a contributing agent. Currently, there is no clear Federal policy¹ on climate change as it relates to long-range transportation planning.

In terms of transportation infrastructure, efforts to increase the resiliency of the region's roads, bridges, railways, and airports, to stand up to increasing temperatures and changes in weather patterns can ensure that the transportation system continues to function and disruptions to the movement of people are minimized. Recent trends indicate that certain severe weather stressors are now impacting transportation infrastructure more often than in the past. As the century progresses, the threats posed by these weather hazards, most notably extreme precipitation are projected to continue to increase in severity and/or frequency. Of these hazards, extreme precipitation and extreme temperature are emphasized because both may have direct and potentially significant impacts on transportation infrastructure. Extreme precipitation may contribute to flooding, erosion, washouts, scour, and failures of culverts, embankments, and other structures. Extreme temperatures, especially those exceeding 95 degrees F, can result in detrimental structural expansion (of bridges, for instance), pavement rutting due to softened asphalt, "blow ups" of concrete road panels, and railroad track kinking. Very high heat days may also have deleterious effects on the health of highway crews (or airport ground crews) and, by

¹The Council of Environmental Quality (CEQ) has withdrawn its final guidance for Federal agencies on how to consider greenhouse gas emissions and the effects of climate change in National Environmental Policy Act (NEPA) reviews, a Notice of Availability for which was published on August 5, 2016 (81 FR 51866). As explained in the Notice of Availability, the withdrawn guidance was not a regulation. Pursuant to Executive Order 13783, "Promoting Energy Independence and Economic Growth," of March 28, 2017, the guidance has been withdrawn for further consideration. The withdrawal of the guidance does not change any law, regulation, or other legally binding requirement.

extension, may limit the hours during which they can perform essential maintenance and construction duties. Because transportation infrastructure is often expected to last for decades – or more –, it is prudent to factor potential future climate conditions and extreme weather events into today’s management and investment decisions to help cost-effectively and proactively mitigate risks.

The C-PCTS MPO strives to promote a multimodal transportation system that encourages the efficient use and movement of private automobiles, as well as alternative transportation choices such as walking, bicycling, and public transit. These provisions minimize the negative environmental impacts of transportation infrastructure across a broad set of environmental and health outcomes. They also minimize the impacts of travel demand on our system helping to improve the sustainability and resiliency of our transportation infrastructure over the long term.

Table 8-1 Potential Climate Adaption Strategies

<p style="text-align: center;">PLANNING</p>	<p>MPT/TIP development of projects that mitigate risk (including strategic abandonment, creation of redundant routes / modes, etc.).</p> <p>Hazard mitigation / evacuation planning (supports operations).</p> <p>Asset management (identify strategies coinciding with cycles).</p>
<p style="text-align: center;">DESIGN</p>	<p>Update of standards and specifications for greater robustness.</p> <p>Engineering for greater resiliency (evaluation, structural, materials, capacity, location, etc.).</p> <p>Hazards review during design development.</p>
<p style="text-align: center;">OPERATIONS</p>	<p>Traffic operations, Intelligent Transportation Systems (ITS) to mitigate climate impacts.</p> <p>Emergency maintenance protocols (proactive and reactive).</p> <p>Emergency response (monitoring, patrolling, responding, etc.).</p>

8.2 Air Quality

The federal government adopted ambient air quality standards in 1990 under the Clean Air Act (CAA) Amendment. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) served to combine air and transportation planning. For MPOs who are deemed non-attainment for air quality (non-attainment areas are geographic areas that do not meet the federal air quality standards, by revised state implementation plan and transportation conformity requirements), a conformity determination is required for every MTP and Transportation Improvement Program (TIP).

A state implementation plan (SIP) is established for non-attainment areas including a legally enforceable schedule of emission reductions to meet National Ambient Air Quality Standards; it establishes a motor vehicle emissions budget, which establishes a maximum limit for transportation related emissions. In non-attainment and maintenance areas (areas that formerly violated but currently meet federal air quality standards), the Clean Air Act requires that MPOs take action to reduce emissions from on-road mobile sources. The MPO must demonstrate timely implementation of transportation control measures. To ensure accountability, federal transportation funds are withheld, if conformity between the MTP or TIP and SIP cannot be demonstrated. If a conformity lapse occurs, only transportation control measures from the SIP and exempt emissions-neutral projects may proceed.

The C-PC MPO area is currently considered in attainment/unclassifiable (a designation assigned to an area with EPA cannot determine attainment status due to lack of quality or complete data) with Federal air quality standards. In the past, particulates have been a concern within the region. In the past, particulates have been a concern within the region. Fine particle pollution is a mixture of microscopic solids and liquid droplets suspended in air. Fine particles can be emitted directly (such as smoke from a fire) or formed in the atmosphere from power plant, industrial and mobile source emissions of gases such as sulfur dioxide and nitrogen oxides. Fine particles less than or equal to 2.5 micrometers in diameter (called PM 2.5 and measuring about one-thirtieth the diameter of an average human hair), pose the greatest risk.

In 2016, the Environmental Protection Agency issued a decision to retain the existing 2008 standards without revision. The primary and secondary Pb standards are 0.15 micrograms per cubic meter Pb in total suspended particles as a 3-month average.

A listing of resource and regulatory agencies whom would be invited to be actively involved in the consultation process concerning a proposed project are listed below:

Georgia Department of Community Affairs
60 Executive Park South
Atlanta, Georgia 30329
Phone: 404-679-4915
www.dca.state.ga.us

Georgia Department of Economic Development
75 Fifth Street, NW, Suite 1200
Atlanta, Georgia 30308
Phone: 912-965-2782
www.georgia.org

Georgia Ports Authority
P.O. Box 2406
Savannah, Georgia 31402
Phone: 800-342-8012
www.gaports.com

Georgia Department of Natural Resources
2 Martin Luther King, Jr. Drive, SE
Suite 1252 East Tower
Atlanta, Georgia 30334
Phone: 404-656-3500
www.gadnr.org

Georgia Department of Natural Resources
Historic Preservation Division
34 Peachtree Street, Suite 1600
Atlanta, Georgia 30303
Phone: 404-656-2840 (Reception)
404-651-5180 (Management & Information Unit)
www.gashpo.org

Environmental Protection Division
Georgia Department of Natural Resources
2 Martin Luther King, Jr. Drive
Suite 1152, East Tower
Atlanta, Georgia 30334
Phone: 404-657-5947
www.gaepd.org

Georgia Department of Natural Resources
Headquarters Office
Wildlife Division
2070 U.S. Highway 278 S.E.
Social Circle, Georgia 30025
Fisheries: 770-918-6146
Game: 770-918-6400
Gen. Information: 770-918-6408
Wildlife: 770-761-3035
www.georgiawildlife.org

Georgia Department of Natural Resources
State Parks & Historic Sites
2 Martin Luther King, Jr. Drive SE
Suite 1352, East Tower
Atlanta, Georgia 30334
Phone: 404-656-2770
www.gastateparks.org

Georgia Department of Natural Resources
Coastal Resources
One Conservation Way
Brunswick, Georgia 31520
Phone: 912-264-7218
www.crd.dnr.state.ga.us

Georgia Department of Transportation
One Georgia Center
600 Peachtree Street, NW
Atlanta, Georgia 30308
Phone: 404-631-1990
www.dot.ga.gov

Alabama Department of Transportation
1409 Coliseum Boulevard
Montgomery, Alabama 36110
334-242-6206
www.dot.state.al.us

CHAPTER 9 - PUBLIC ENGAGEMENT

Public and stakeholder engagement is a critical and required element of any transportation plan. The 2045 Metropolitan Transportation Plan conducted four (4) public meetings and three (3) stakeholder meetings throughout the plan development to provide opportunity for the public and key stakeholders across transportation and non-transportation sections to provide input on transportation challenges and opportunities in the Metropolitan Planning Area (MPA). Outreach efforts for the 2045 MTP Update shifted focus to targeted engagement around key issues and challenges identified during broader 2040 outreach efforts. In this manner, the conversation did not “start over” around previous, recently articulated transportation needs. Instead, it served to refine the Columbus-Phenix City Transportation Study MPO’s (C-PCTS MPO) understanding of investment challenges and improved identification and evaluation of potential transportation studies.

Stakeholders involvement and responsible for other types of planning activities affected by transportation (e.g., state and local economic development and growth/land management, tourism, environmental protection, conservation/preservation, intermodal planning) were consulted, with planning activities coordinate where possible. Documentation of the public engagement process is included in Appendix A – Public Engagement Report.

As with every transportation plan, the 2045 MTP Update public engagement process meets the C-PCTS MPO’s adopted Public Participation Plan (PPP) requirements². The PPP serves as a guide for public involvement activities and provide for all citizens, state and local agencies, providers of freight/intermodal and transit and multimodal transportation services, representatives and users of pedestrian and bicycle facilities, nonprofit organizations, and disabled and transportation disadvantaged persons to have reasonable opportunity to comment on the transportation plan. It supports coordination and consideration of other related planning activities across this broad range of stakeholders. This plan update continues to adhere to the provisions under Title VI of the Civil Rights Act that prohibits discrimination based on race, color, or national origin.

9.1 Participation Activities

The C-PCTS MPO held three stakeholder committee meetings during the 2045 MTP Update.

Columbus-Phenix City Metropolitan Planning Organization
2045 Metropolitan Transportation Plan Stakeholder Meeting #1
Columbus Public Library - 3000 Macon Road
February 25, 2019
11:30 A.M. to 1:00 P.M.

In Attendance:

STAKEHOLDER MEETING #1 - FEBRUARY 25, 2019	
Attendee	Organization
Elizabeth Barker	Historic Columbus Foundation
Addie Britt	C-PCTS MPO
Suzanne Burnette	Lee-Russell Council of Governments
Dennis Caliyo	Citizens Advisory Committee - MPO
Brandon Cockrell	Fort Benning
Jim Livingston	River Valley Regional Commission
Rosa Evans	METRA - Columbus Consolidated Government
Pace Halter	W.C. Bradley Company
Thomas Helton	Columbus State University
Richard Bishop	Mayor's Office - Columbus Consolidated Government
Pam Hodge	Columbus Consolidated Government
Tommy Wilson	Columbus Technical College
Isaiah Hugley	Columbus Consolidated Government
Lisa Deason	City of Smith's Station, Alabama
Rick Jones	C-PCTS MPO
Becky Langston	Harris County Board of Commissioners
Reggie Luther	Bicycle Columbus / Big Dog Running Company
Annie Mazyck	Citizens Advisory Committee - Freight Representative - MPO
Donna Newman	Columbus Consolidated Government
Joy Norman	Mayor's Commission for Persons with Disabilities
Jackie Screws	Chattahoochee Valley Community
Lynda Temples	C-PCTS MPO
Donna Thompkins	Muscogee County Sheriff's Department
Steve Vaughn	Fort Benning
Daniel Wyatt	Lee-Russell Council of Governments
Lisa Sandt	Lee-Russell Council of Governments
Joseph Labrande	Fort Benning
Kevin White	Columbus Water Works

Comments / Minutes

For the first half of the meeting, Rick Jones, C-PCTS MPO Director gave a presentation that included a power point presentation on the MTP planning process, including a flow chart of how projects become a reality through the federally required planning process. Handouts containing a plan flow chart, a map of the MPO Urbanized Planning area, and a listing of projects in the 2040 MTP were available for each attendee. Mr. Jones discussed the survey that is currently on the website and handouts were available to each attendee to fill out that day or to access the survey online.

Power Point Presentation is located in Appendix ##

At that time, Mr. Jones asked the following questions and opened the floor for attendees to ask questions or provide comments.

What's good about transportation in Columbus and the surrounding areas?

Good Leadership
Proximity to Destinations
METRA's far reach
Students use METRA
Traffic good overall
Work being done throughout the city
Fort Benning gateway is well done

What's bad / needs improvement?

Macon / I-185 congestion in the morning
Transportation deficiency for CVCC/rural areas of Alabama
Government services spread out / harder to access
2nd Avenue / JR Allen congestion at peak times
County Line Road / Manchester Expressway congestion at peak times
US 280 congestion in Alabama
US 80 / Gateway congestion near Kitten Lake
Pedestrian Injuries / fatalities
Unpaved / failing roads in rural areas

New Ideas

Utilize existing infrastructure
Plan for ridesharing
Plan for financial stability
Prepare for market disruptors (i.e. Scooters)
Learn/Project future growth of the region
Facilitate inter-city travel / Be prepared for regional growth

What could have an Impact?

Brain drain from lack of transit options
Funding issues from market disruptors
National disasters / Man-Made disasters
Not projecting future growth
Difficulty scaling transit options quickly
Education about transportation options

With no further questions or comments, Rick Jones thanked everyone for their time and mentioned that there will be future opportunities for comment and participation.

Columbus-Phenix City Metropolitan Planning Organization
 2045 Metropolitan Transportation Plan Stakeholder Meeting #2
 Columbus Consolidated Government Annex – 420 10th Street
 May 16, 2019
 11:30 A.M. to 1:00 P.M.

In Attendance:

STAKEHOLDER MEETING #2 - MAY 20, 2019	
Attendee	Organization
Tommy Wilson	Columbus Technical College
Becky Langston	Harris County Board of Commissioners
Donna Newman	Columbus Consolidated Government
Kevin Khoo	Columbus Consolidated Government
Peter Bowden	Columbus Convention & Visitors Bureau, President
Jacqueline Williams	Georgia Department of Transportation
Tom Caiafa	Georgia Department of Transportation
Reggie Luther	Bicycle Columbus / Big Dog Running Company
Donna Thompkins	Muscogee County Sheriff's Department
Ross Horner	Uptown Columbus
Paula Dukes	
Allison Slocum	River Valley Regional Commission
Jason Powers	Columbus Water Works
Annie Mazyck	Citizens Advisory Committee - Freight Representative - MPO
Frank Hardiman	Columbus State University
Jackie Screws	Chattahoochee Valley Community
Rick Jones	C-PCTS MPO
Millicent Burden	C-PCTS MPO
Lynda Temples	C-PCTS MPO
Felton Grant	C-PCTS MPO
David Cooper	C-PCTS MPO
Addie Britt	C-PCTS MPO
Pam Hodge	Columbus Consolidated Government
Trey Wilkinson	Columbus Consolidated Government

Comments / Minutes

Rick Jones, C-PCTS MPO Director welcomed the MTP Stakeholders to the meeting and they were given packets that included the GDOT explanation of the modeling process for the networks and that they ran the model based on Socio-economic data that the C-PCTS MPO provided to them. Mr. Jones gave a power point presentation on the modeling process. Mr. Jones explained that this plan looks out 20 years for the future needs of our transportation network and that we were developing the final networks needed for the Travel Demand Model. These networks only require projects that add capacity to the road network. The final network will be financially constrained, which is a FHWA requirement.

Travel Demand Model Presentation is located in Appendix ##

The focus of the meeting was on the presentation and the future transportation network. Questions were asked on how pedestrian and bicycle was included in the network. Mr. Jones explained that the travel demand model only focuses on vehicle movement. Once a project is identified, the pedestrian/bicycle facilities can be included when the project is designed and constructed. Other questions were asked on the congested areas and how we can determine if a road improvement is needed to relieve congestion on the corridor. MPO Staff and the Stakeholders discussed concerns about the J.R. Allen Parkway/US 80 and the traffic congestion at Beaver Run / Flat Rock Road on the in Georgia and Summerville Road interchange and US 280/431 intersection in Alabama. Mr. Jones discussed the study that the MPO is currently funding that will look at this corridor in Georgia. The City of Phenix City will look at doing a similar study in Alabama in the near future.

With no further questions or comments, Rick Jones thanked everyone for their time and mentioned that there will one more stakeholder meeting sometime in August.

Columbus-Phenix City Metropolitan Planning Organization
 2045 Metropolitan Transportation Plan Stakeholder Meeting #3
 Columbus Consolidated Government Annex – 420 10th Street
 August 22, 2019
 11:30 A.M. to 1:00 P.M.

In Attendance:

STAKEHOLDER MEETING #3 - AUGUST 22, 2019	
Attendee	Organization
Laura Lee Bernstein	Chattahoochee County Board of Commissioners
Addie Britt	C-PCTS MPO
Rosa Evans	METRA - Columbus Consolidated Government
Bryon Harris	Columbus State University
Pam Hodge	Columbus Consolidated Government
Ross Horner	Uptown Columbus
Michael Pattillo	City of Phenix City
Will Johnson	Columbus Consolidated Government
Rick Jones	C-PCTS MPO
Becky Langston	Harris County Board of Commissioners
Angel Moore	City of Phenix City
Reggie Luther	Bicycle Columbus/Big Dog Running Company
Annie Mazyck	Citizens Advisory Committee - Freight Representative - MPO
Donna Newman	Columbus Consolidated Government
Joy Norman	Mayor's Commission for Persons with Disabilities
Lynda Temples	C-PCTS MPO
Donna Thompkins	Muscogee County Sheriff's Department
Jacqueline Williams	Georgia Department of Transportation
Robert Sheridan	METRA - Columbus Consolidated Government
Latoya Jones	Federal Highway Administration
Jim Livingston	River Valley Regional Commission
Radney Simpson	Georgia Department of Transportation
Felton Grant	C-PCTS MPO
David Cooper	C-PCTS MPO
Rex Wilkinson	Columbus Consolidated Government
Millicent Burden	C-PCTS MPO

Comments / Minutes

Rick Jones, C-PCTS MPO Director welcomed the MTP Stakeholders to the meeting and packets that included the final project list that is financially constrained per FHWA requirements were available to the committee. The handout also included maps with the accident data for each project that affects the transportation network. This data included pedestrian and bicycle related accidents. Stakeholders asked about the timeline for the projects and staff explained the process to move these projects from the MTP to the four-year TIP. Staff and the stakeholders talked about the 13th Street corridor and if there are any plans to improve the flow of traffic along with pedestrian and bicycle facilities. Mr. Jones informed them that at this time the MPO does not have plans to pursue a project for 13th Street. Stakeholders asked if the City of Columbus' Complete Streets Policy would part of the design for the some projects in the documents. MPO staff stated that it would depend on what type of project it is.

With no further questions or comments, Rick Jones thanked everyone for their time.

The following is a list of invitees and the organization that they represent:

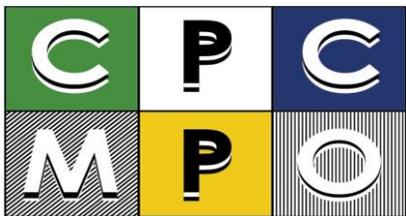
2045 METROPOLITAN TRANSPORTATION PLAN STAKEHOLDER LIST			
Title	First Name	Last Name	Organization
Mr.	Rick	Jones	Director, C-PCTS MPO
Mrs.	Lynda	Temples	Transportation Planner, C-PCTS MPO
Ms.	Addie	Britt	Transportation Planner, C-PCTS MPO
Mr.	Will	Johnson	Manager, CCG Planning Department
Mrs.	Pam	Hodge	Deputy City Manager, Columbus Consolidated Government
Ms.	Rosa	Evans	Director, METRA Transit
Mrs.	Donna	Newman	Engineering Director, Columbus Consolidated Government
Mrs.	Patti	Cullen	Director, River Valley Regional Commission
Mr.	Dennis	Caliyo	Chairman, MPO Citizens Advisory Committee
Ms.	Suzanne	Burnette	Lee-Russell Council of Governments - Transit
Mr.	Wallace	Hunter	City Manager - City of Phenix City
Mr.	Joe	Addison	Cusseta-Chattahoochee County - County Administrator
Ms.	Joy	Norman	Mayor's Commission for Persons with Disabilities
Mr.	Robert	Jones	Environmental Management Division
Mr.	Buddy	Nelms	Ride On Bikes
Ms.	Becky	Langston	Harris County, Board of Commissioners, Chairman
Ms.	Elizabeth	Barker	Executive Director, Historic Columbus Foundation
Sheriff	Donna	Tompkins	Muscogee County Sheriff's Department
Sheriff	Heath	Taylor	Russell County Sheriff's Department
Sheriff	Jay	Jones	Lee County Sheriff's Office Department
Ms.	Susan	Cooper	Interim President, Urban League of Greater Columbus, Inc.
Mr.	Steve	Davis	Columbus Water Works
Mr.	Pace	Halter	W.C. Bradley Company
Mr.	Julio	Portillo	Executive Director, Midtown Columbus, Inc.
Mrs.	Peggy	Martin	Russell County Commission
Mr.	Scott	Johnson	City of Smiths Station, Alabama - City Clerk
Mr.	Ross	Horner	Uptown Columbus, Inc., President
Mr.	Peter	Bowden	Columbus Convention & Visitors Bureau, President
Mr.	Tim	Chitwood	Columbus Ledger-Enquirer Newspaper
Mr.	Daniel	Wyatt	Lee Russell Council of Governments - Transportation Planner

2045 METROPOLITAN TRANSPORTATION PLAN STAKEHOLDER LIST			
Title	First Name	Last Name	Organization
Mr.	Bob	Jeswald	WRBL TV
Dr.	Jacqueline	Screws	Chattahoochee Valley Community College, President
Mr.	Thomas	Helton	Columbus State University
Ms.	Lorette	Hoover	Columbus Technical College - President
Mr.	Scott	Ferguson	United Way of Columbus, President & CEO
Chief	Ricky	Boren	Columbus Police Department
Chief	Ray	Smith	Phenix City Police Department
Sheriff	Mike	Jolley	Harris County Sheriff's Department
Ms.	Angela	Vickers	Muscogee County School District
Mr.	George	Steuber	Deputy Garrison Commander, USAG - Fort Benning
Ms.	Sharon	Borger	Easter Seals of Columbus
Sheriff	Hank	Lynch	Chattahoochee County Sheriff's Department
Mr.	Reggie	Luther	Big Dog Running, Bicycle Columbus
Mr.	Frank	Filgo	Alabama Trucking Association
Mr.	Ed	Crowell	Georgia Motor Trucking Association
Mr.	Derrick	Battle	Southeastern Freight
Ms.	Annie	Mazyck	Citizens Advisory Committee - Freight Representative
Mr.	Conner	Poe	Norfolk-Southern Railroad
Mr.	Isaiah	Hugley	City Manager - Columbus Consolidated Government
Mr.	Damon	Hoyte	Chattahoochee County Commission
Ms.	Lisa	Deason	City of Smiths Station - Communications Director
Dr.	Alfred	Parham	Muscogee County School District
Mr.	Radney	Simpson	Georgia Department of Transportation, Office of Planning
Mr.	Tom	Caiafa	Georgia Department of Transportation, Office of Planning
Ms.	Jackie	Williams	Georgia Department of Transportation, Office of Planning
Ms.	Olivia	Lewis	Federal Highway Administration, Georgia Division
Mr.	Andrew	Edwards	Federal Highway Administration, Georgia Division

9.2 General Public Outreach

C-PCTS MPO staff conducted a set of public kick-off meetings in three different geographic locations to provide an overview of the previous 2040 MTP and the latest existing conditions for this 2045 MTP update. Staff hosted these meetings in the evenings between 5:30 – 7:00 P.M. Hard copy comment forms and a website input form provided opportunity to obtain any specific input desired by participants.

MPO staff advertised the meetings on CCG TV as well as newspaper advertisements that ran for two weeks in the Columbus Ledger and Enquirer. MPO staff sent a press release to other media outlets. Flyers were distributed to local libraries, local businesses, and government agencies.



COLUMBUS - PHENIX CITY

METROPOLITAN PLANNING ORGANIZATION

MEDIA RELEASE

March 6, 2019

2045 METROPOLITAN TRANSPORTATION PLAN UPDATE

On Monday, March 11, 2019, the Columbus-Phenix City Transportation Study – Metropolitan Planning Organization will begin a series of public meetings to discuss transportation needs throughout the bi-city.

Over the next 25 years, our region will experience continued growth; Growth that will add additional pressure to our existing transportation system by transporting additional goods, services, and people.

The Columbus-Phenix City Metropolitan Planning Organization (C-PCTS MPO) is currently updating the 2045 Metropolitan Transportation Plan. Citizen input is an important component to update this plan accurately.

We want to know your needs and concerns in regards to the transportation system in Columbus and surrounding areas. We encourage you to attend to one of the three open house public meetings scheduled during the second (2nd) full week of March.

The meeting schedule is as follows:

2045 Metropolitan Transportation Plan Public Meetings			
DATE	TIME	LOCATION	
Monday, March 11	5:30 PM	Columbus Public Library 3000 Macon Road Columbus, GA 31906	SYNOVUS ROOM A
Tuesday, March 12	5:30 PM	Idle Hour Recreation Center 439 Broad Street Phenix City, AL 36867	
Thursday, March 14	5:30 PM	James Thornton Memorial Building 215 McNaughton Street Cusseta, GA 31805	

Contact Information: Rick Jones, Planning Director

(706) 225-3936

P.O. Box 1340

420 10th Street

Columbus, Georgia 31902

Phone: 706-653-4421

Email: CPCMPO@columbusga.org

www.columbusga.gov/mpo

First Round of Public Meetings Dates

March 11, 2019 – Columbus Public Library – 3000 Macon Road, Columbus, GA

March 12, 2019 – Idle Hour Community Center – 3743 Moon Lake Drive, Phenix City, AL

March 14, 2019 – James Thornton Memorial Building – 215 McNaughton Street, Cusseta, GA

WHERE DO YOU WANT TO GO?

**Open House
Public Meetings
5:30 PM**

Locations

Monday, March 11th, 2019

Columbus Public Library
3000 Macon Road
Columbus, Georgia 31906

Tuesday, March 12th, 2019

Idle Hour Community Center
3743 Moon Lake Drive
Phenix City, AL 36867

Thursday, March 14th, 2019

James Thorton Memorial Building
215 McNaughton Street
Cusseta, Georgia 31805

Over the next 25 years, our region will experience continued growth, Growth that will add additional pressure to our existing transportation system by transporting additional goods, services and people.

The Columbus-Phenix City Metropolitan Planning Organization (CPCMPO) is currently updating the 2045 Metropolitan Transportation Plan. Your input is very important in order to accurately update this plan!

We encourage you to attend the final open house public meetings scheduled during the second week in March, 2019.

Comments are also being received via mail, email and phone. See information below:

Mailing address: Columbus - Phenix City MPO
P. O. Box 1340
Columbus, GA 31902

Phone: 706-653-4421

E-Mail: cpcmpo@columbusga.org



NO FORMAL PRESENTATION

Everyone is Encouraged to Attend!

MTP Public Meeting #1
Columbus Public Library
3000 Macon Road
Columbus, Georgia 31906

Staff in attendance: Rick Jones, Lynda Temples, Addie Britt, Rosa Evans, Millicent Burden

Rick Jones introduced the Metropolitan Transportation Planning process, mentioned the availability of the Public Comment survey and that we would have two other meetings scheduled on March 12 and March 14. Citizens were given a packet that included projects that were listed in the 2040 MTP, a map showing the MPO boundaries, a map outlining the sidewalks within the counties/cities within the MPO urbanized boundaries, and other materials concerning transportation.

Citizens shared their concerns about pedestrian and bicycle safety on the roads in Columbus. The lack of sidewalks near schools, in neighborhoods, and around public places was another concern. Most of the citizens feel like the roadway network works well with only congestion during peak hours.

MTP Public Meeting #3
Idle Hour Park Community Center
3743 Moon Lake Drive
Phenix City, Alabama 36867

Staff in Attendance: Rick Jones, Lynda Temples, Addie Britt

Rick Jones introduced the Metropolitan Transportation Planning process and informed the group of the availability of the Public Comment survey. The survey is available on the website and hard copies are available. Mr. Jones also stated that we are having one more meeting scheduled for March 14 in Cusseta, GA. Citizens were given a packet that included projects that were listed in the 2040 MTP, a map showing the MPO boundaries, a map outlining the sidewalks within the counties/cities within the MPO urbanized boundaries, and other materials concerning transportation.

The citizens in attendance talked about the need for road improvements, more sidewalks and bike trails throughout the Phenix City area. Citizens asked about how projects are financed and what type of projects can be done with the amount of money allocated to the area.

MTP Public Meeting #2
James Thornton Memorial Building
215 McNaughton Street
Cusseta, Georgia 31805

Staff in Attendance: Rick Jones, Lynda Temples, Addie Britt

Rick Jones introduced the Metropolitan Transportation Planning process and informed the group of the availability of the Public Comment survey. The survey is available on the website and hard copies are available. Mr. Jones also stated that we are having one more meeting scheduled for March 14 in Cusseta, GA. Citizens were given a packet that included projects that were listed in the 2040 MTP, a map showing the MPO boundaries, a map outlining the sidewalks within the counties/cities within the MPO urbanized boundaries, and other materials concerning transportation.

Citizens voiced the need for a transit system between Cusseta and Columbus/Fort Benning area. A question was asked how funding is allocated for projects in the area and what type of projects can be done. Staff updated them on the available funding for a streetscape project that the City of Cusseta would like to have done.

Final Public Meeting

November 5, 2019 – Columbus Consolidated Government Annex Conference Room, 420 10th Street, Columbus, GA

WHERE DO YOU WANT TO GO?

Open House Public Meeting 5:30 PM

Tuesday, November 5th, 2019

Location

Columbus Government Center
Annex
1st Floor Conference Room
420 10th Street
Columbus, Georgia 31902

Over the next 25 years, our region will experience continued growth. Said growth will add additional pressure to our existing transportation system by transporting additional goods, services and people.



The Columbus-Phenix City Metropolitan Planning Organization (CPCMPO) is currently updating the 2045 Metropolitan Transportation Plan. Your input is very important in order to accurately update this plan!



We encourage you to attend the final open house public meeting.



Comments are also being received via mail, email and phone.

See information below:

Mailing address: Columbus - Phenix City MPO
P. O. Box 1340
Columbus, GA 31902

Phone: 706-653-4421

E-Mail: cpcmpo@columbusga.org



NO FORMAL PRESENTATION

Everyone is Encouraged to Attend!

MTP Public Meeting #4
Columbus Government Center Annex
420 10th Street
Columbus, Georgia 31902

Staff in Attendance: Lynda Temples, Addie Britt

Lynda Temples introduced staff to the citizens in attendance and explained the MTP process. Staff distributed a list that includes projects identified in the Draft 2045 MTP and other materials concerning transportation.

Citizens voiced the need for more sidewalks and lighted cross walks.

9-3 Results of 2045 MTP Public Survey

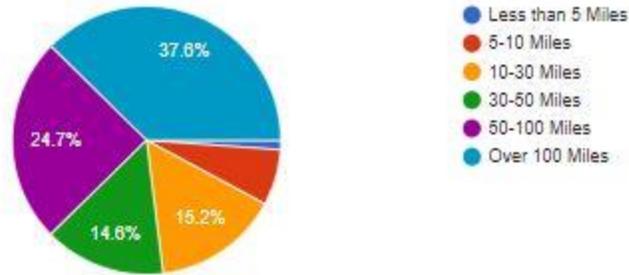
The C-PCTS MPO distributed surveys to attendees at our Metropolitan Transportation Plan public meetings as well as via our website, <http://www.columbusga.org/planning>, on social media outlets such as Facebook and LinkedIn, as well as our mailing list to determine community perspectives on transportation through a series of questions with multiple-choice answers.

Zip Codes	Number of Responses Living at Zip Code
31909	44
31907	24
31904	22
31906	14
31820	10
31901	6
31804	6
36869	5
36867	5
36877	5
31903	5
31808	3
36870	3
36832	2
31811	2
31807	1
31831	1
36856	1
30096	1
31816	1
319906	1
36854	1
319007	1
31829	1
31803	1
31833	1
36801	1
36967	1
36804	1
31826	1
31805	1
31004	1

Zip Codes	Number of Respones Working at Zip Code
31901	70
31907	25
31909	19
31902	17
31904	15
31906	7
31820	2
31829	2
31905	2
31903	2
31811	1
39840	1
35869	1
30308	1
0	1
31006	1

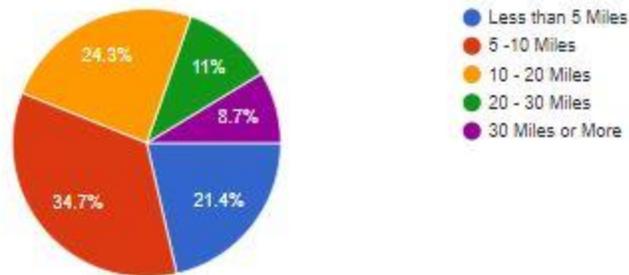
In a typical week, how many miles do you drive your automobile?

178 responses



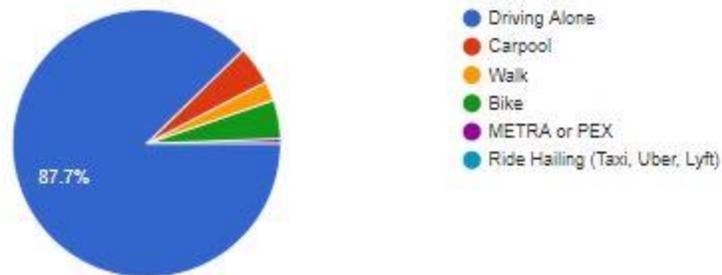
How far is your commute to and from work?

173 responses



How do you usually get to work?

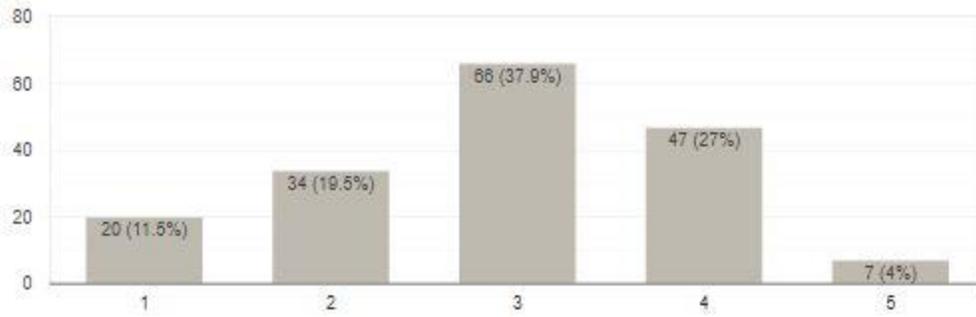
171 responses



Tell us how satisfied you are with our current transportation system

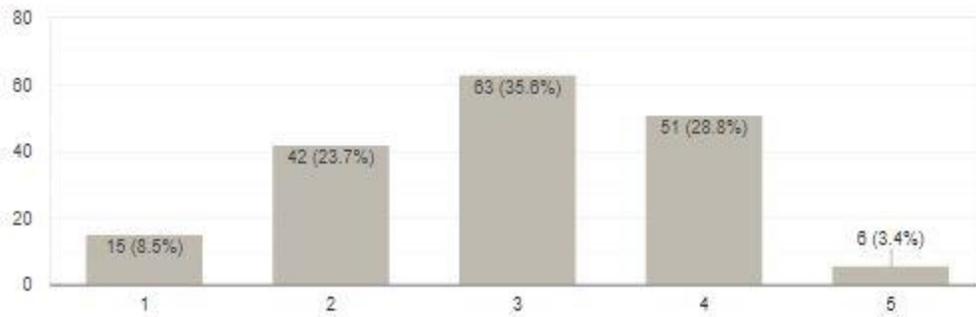
Congestion on Major Streets

174 responses



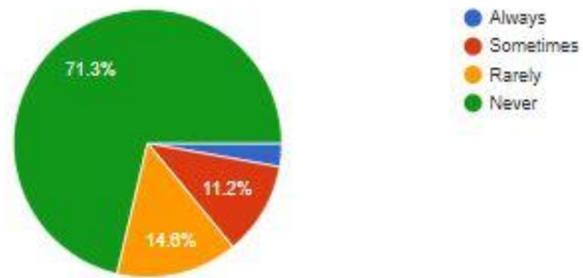
Condition of roads you typically drive on

177 responses



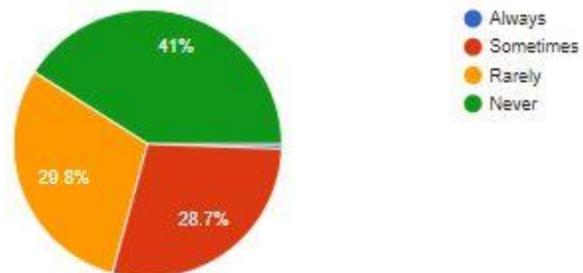
How often do you travel by bicycle?

178 responses



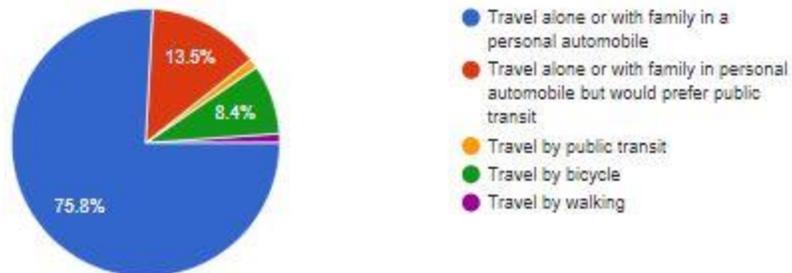
How often do you travel by walking?

178 responses



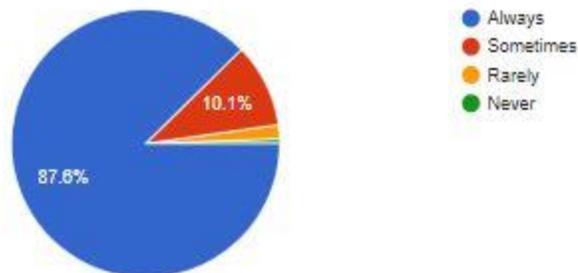
Which of the following statements best describes your preference for travel in and around the Columbus-Phenix City area?

178 responses



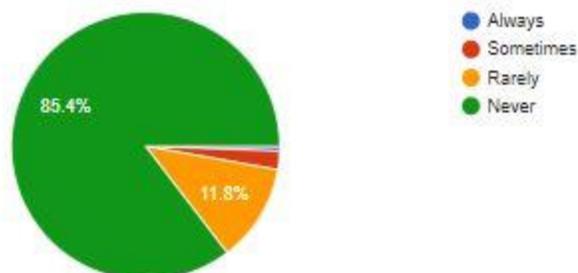
How often do you travel by personal automobile?

178 responses



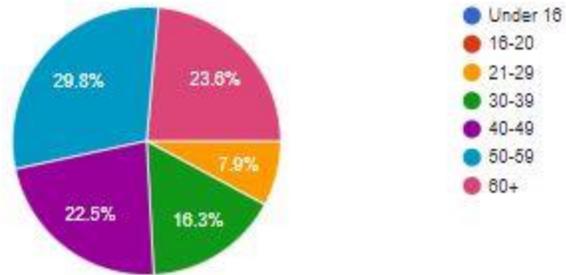
How often do you travel by Bus?

178 responses



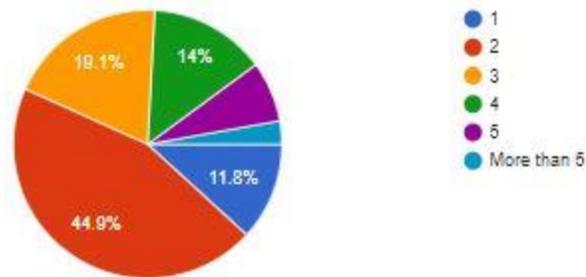
Which category includes your age?

178 responses



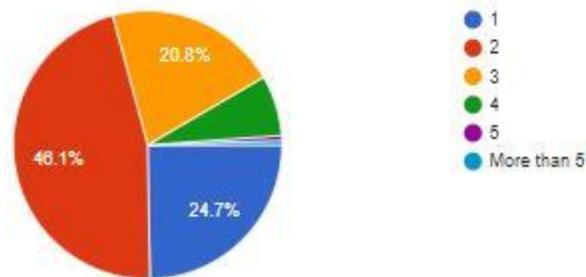
How many people currently live in your household?

178 responses



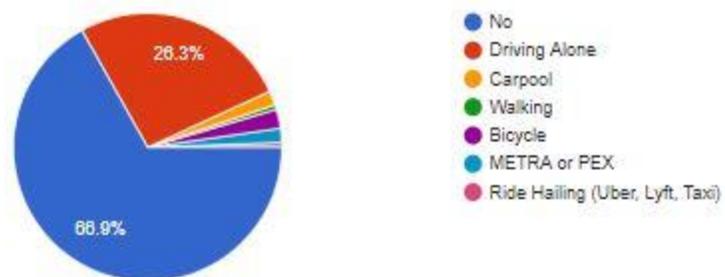
How many vehicles do you own?

178 responses



Does anyone in your household commute to work by a different means of transportation than you and if so what is it?

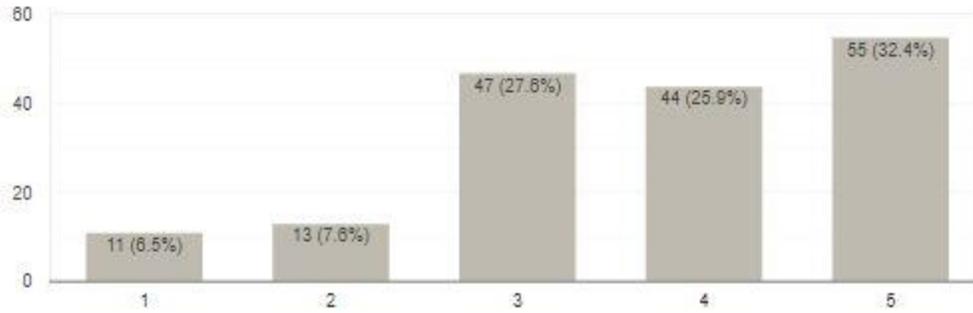
175 responses



Tell us what you consider to be the most effective ways to reduce congestion and air pollution

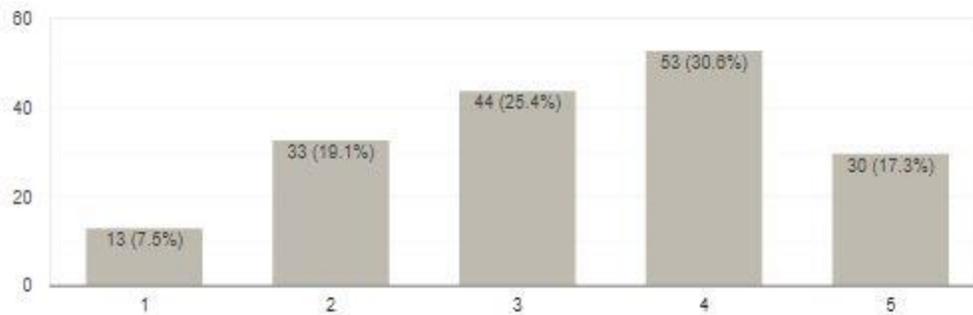
Flexible Work Hours

170 responses



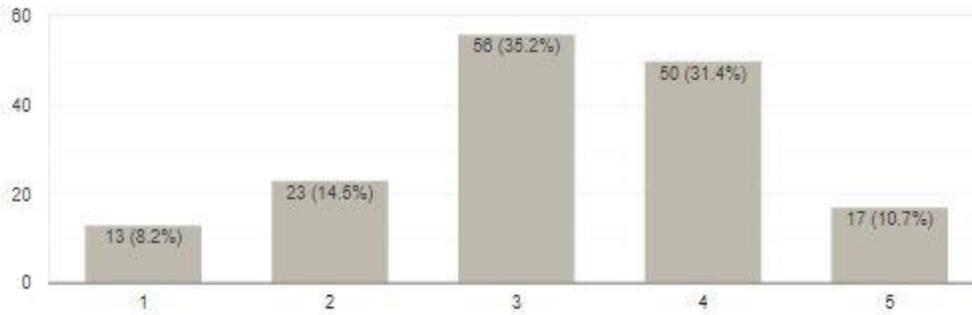
Promoting ridesharing/carpooling

173 responses



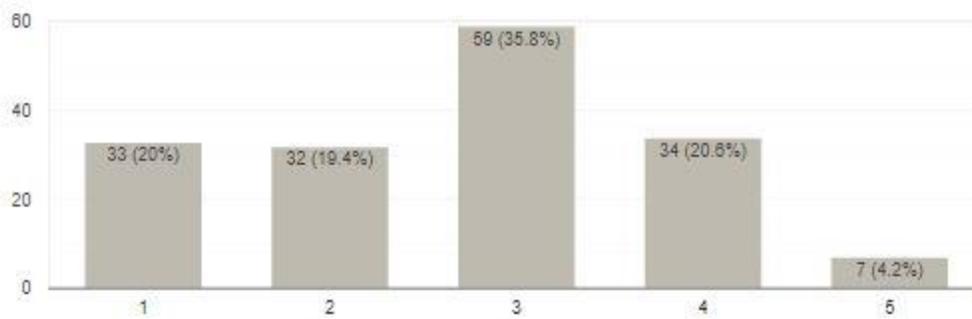
Condition and connectivity of biking/walking trails

159 responses



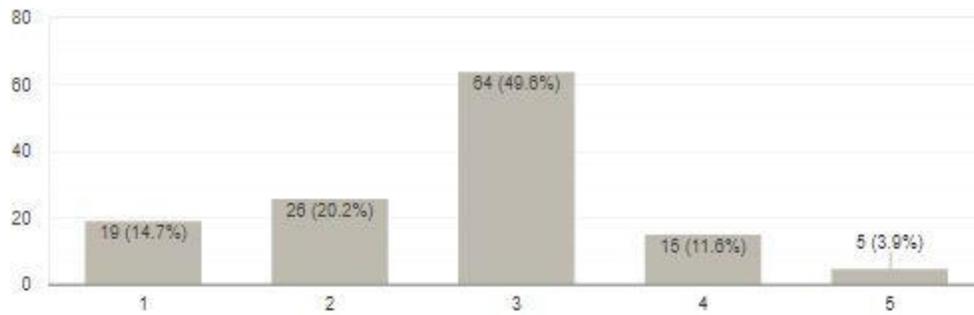
Safety for pedestrians and bicyclists

165 responses



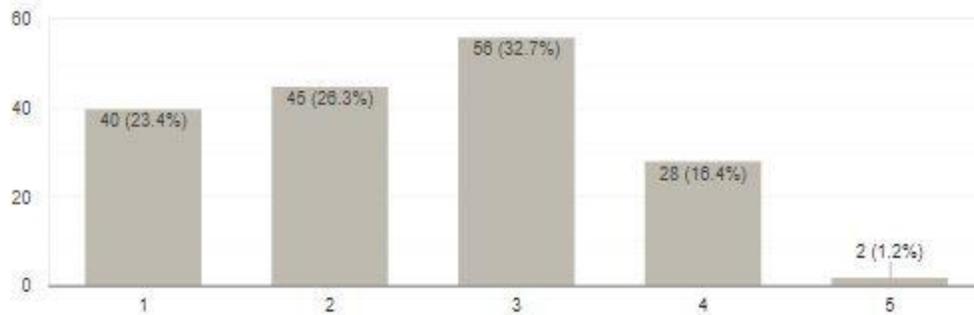
Specialized transit for the elderly and disabled

129 responses



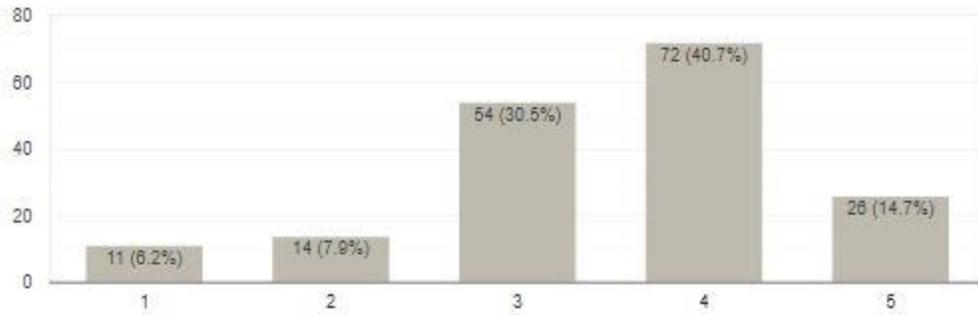
Condition and availability of sidewalks

171 responses



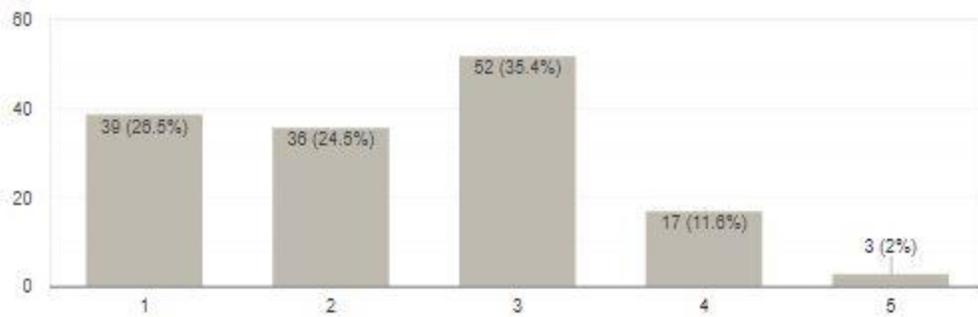
Directional signage on roads and/or trails and sidewalks

177 responses



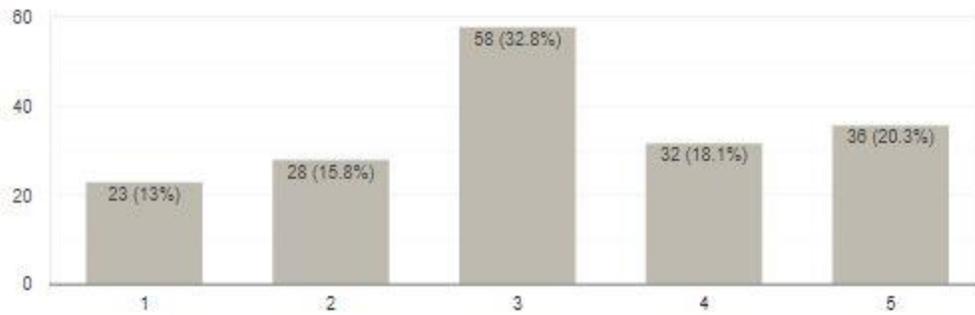
Public transit system usability and convenience

147 responses



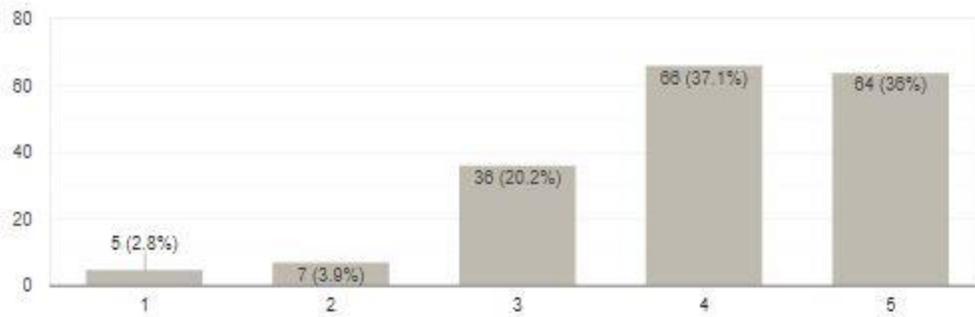
Constructing new roads and highways

177 responses



Safety improvements at intersections

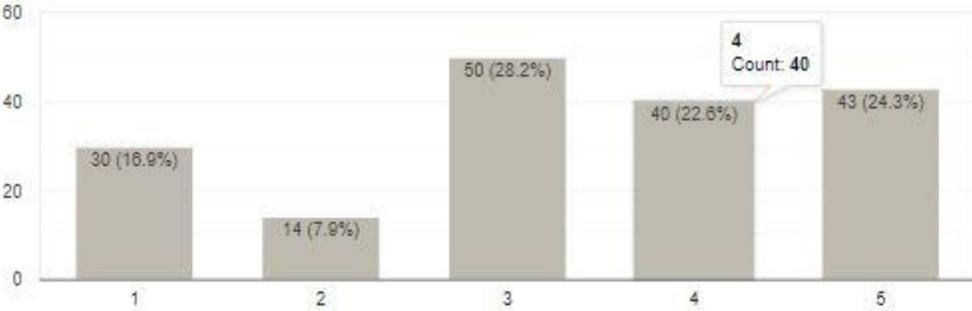
178 responses



Tell us about your priorities

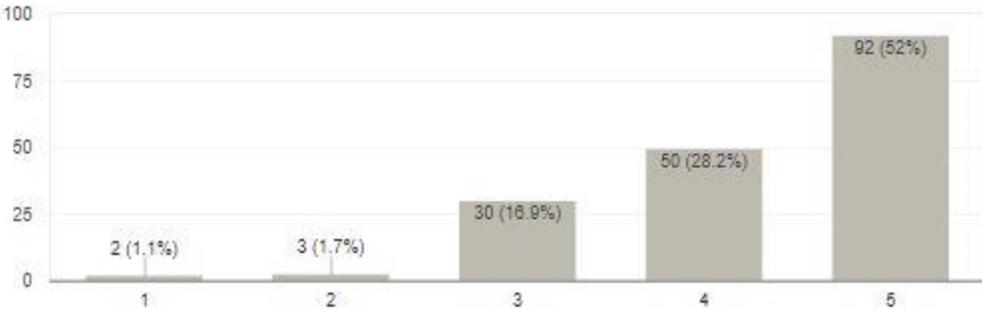
Widening existing roads

177 responses



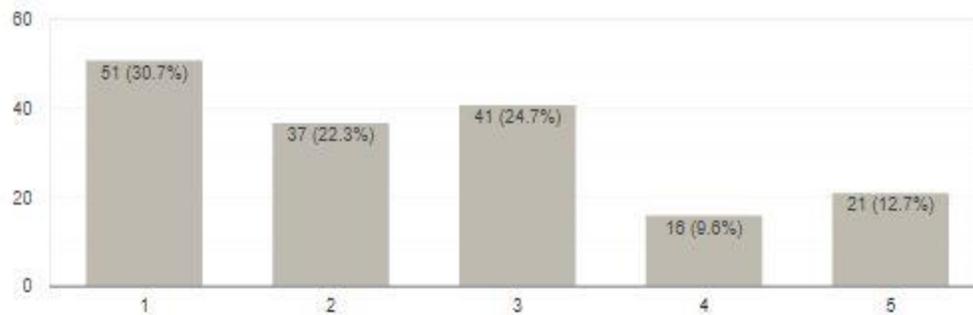
Maintenance of existing roads

177 responses



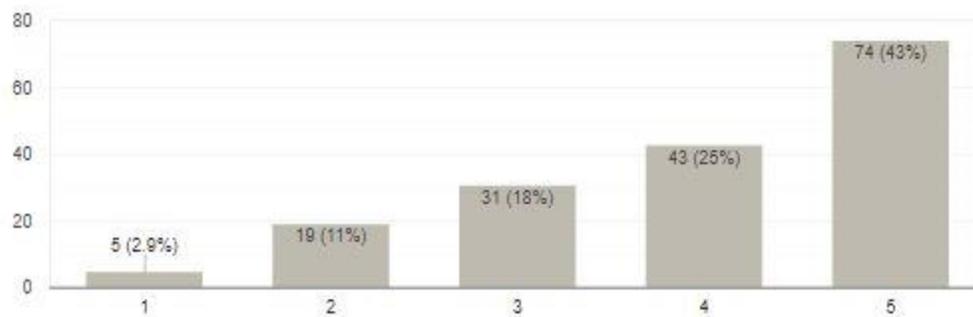
Reducing the number of lanes to accomodate bicylces and pedestrians

166 responses



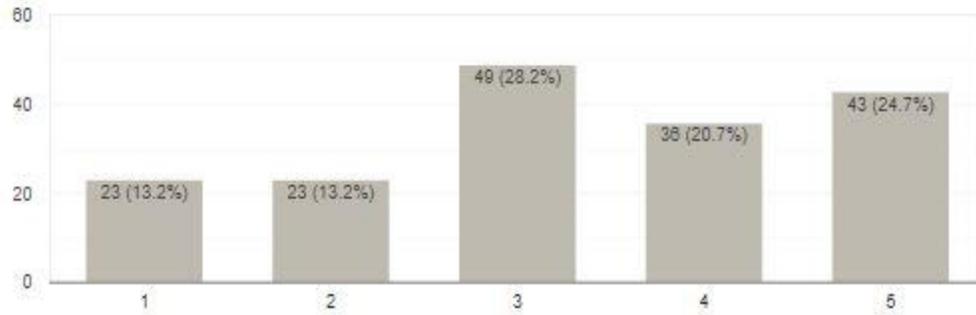
Building more and improving existing sidewalks

172 responses



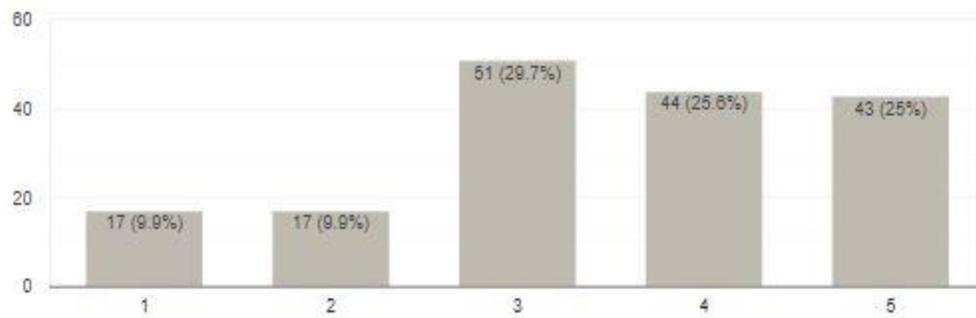
Build more and/or widen existing roads

174 responses



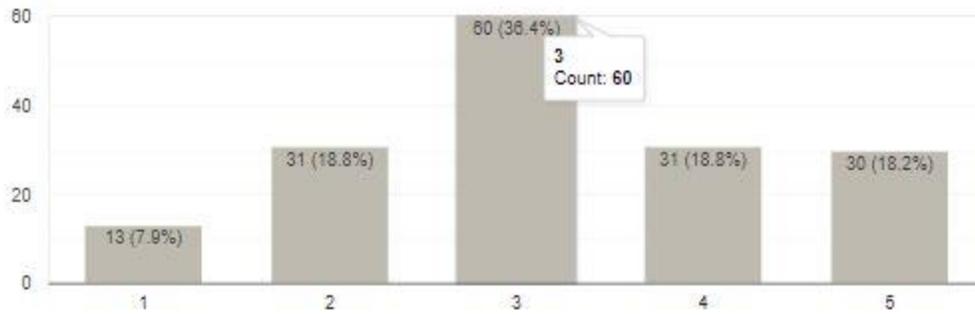
Building dedicated bike lanes along roads

172 responses



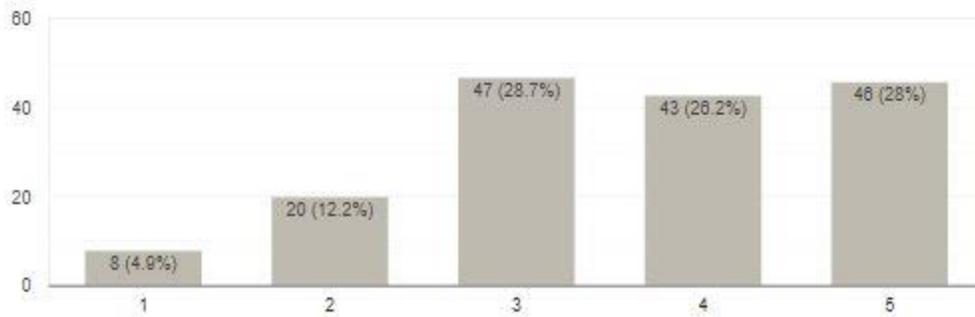
Reducing transit fees

165 responses



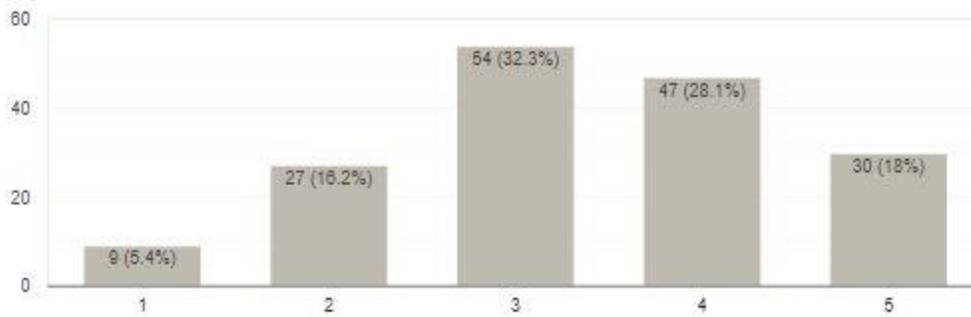
Increasing the number of transit stops

164 responses



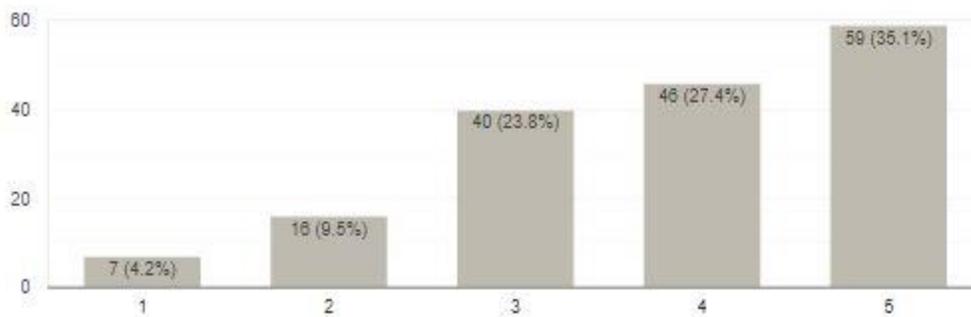
Better marketing and visibility of public transportation

167 responses



Improving and increasing transit service

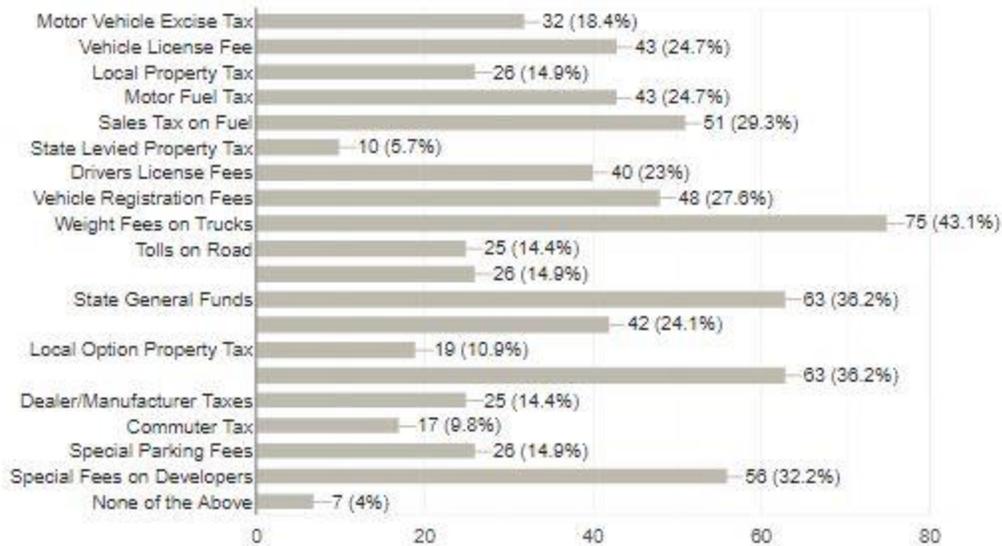
168 responses



How should we pay for transportation improvements?

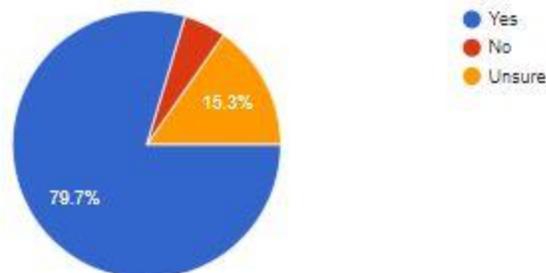
Please select any of the below you believe are appropriate sources of funding for transportation improvements

174 responses



Do you think private developers should help pay for mitigating the effects their developments might have on the transportation network?

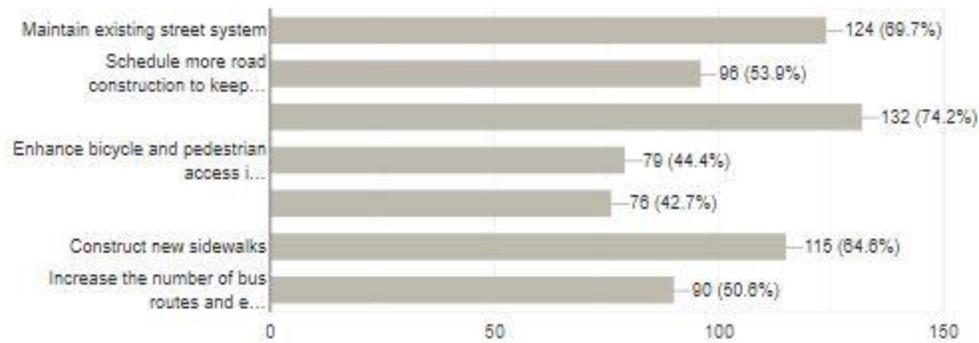
177 responses



Tell us your top four priorities

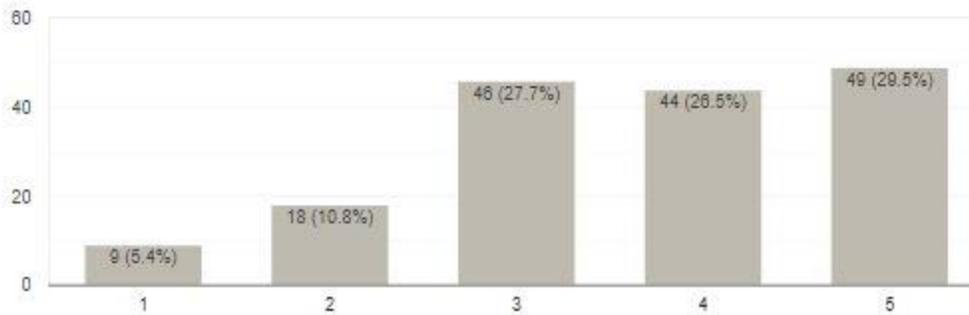
Select your top four priorities for transportation funding

178 responses



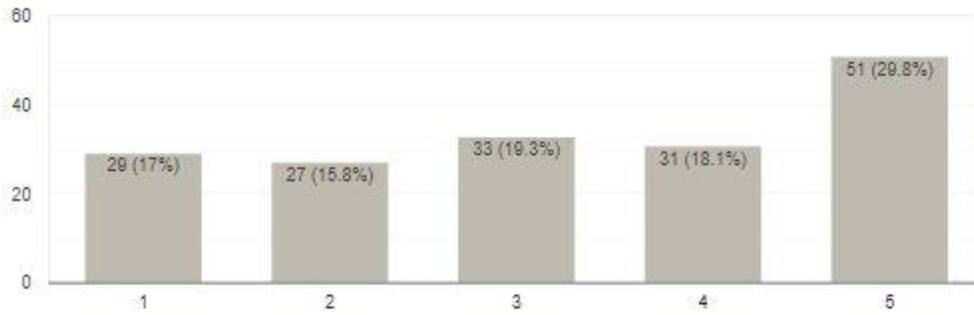
Expand bus/transit service for the elderly and disabled population

166 responses



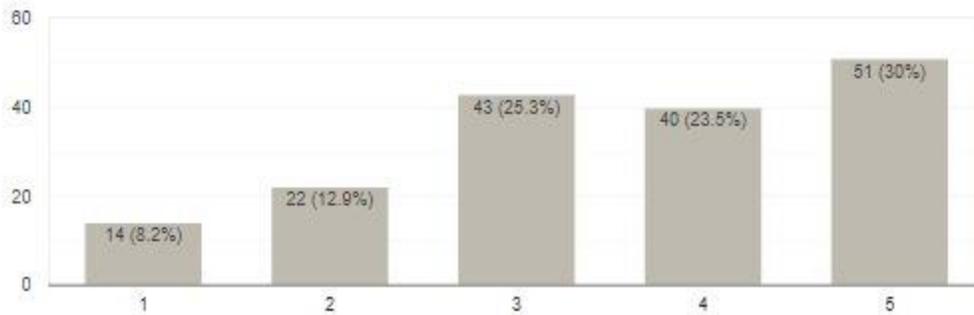
Restructuring existing roadways to accommodate more bicycle and pedestrian use

171 responses



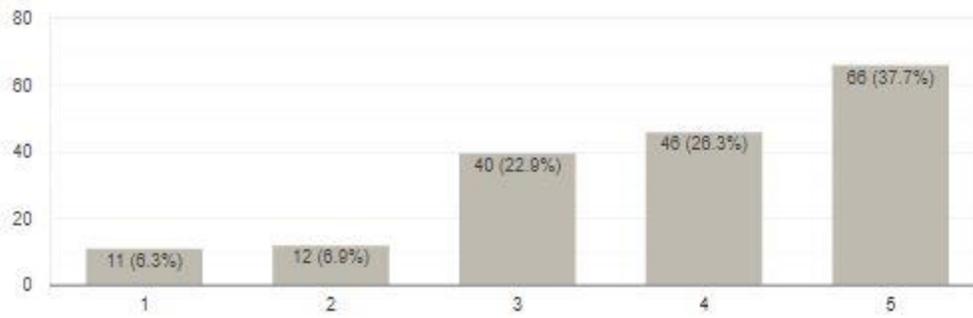
Expand bus/transit service for rush hour commuter needs

170 responses



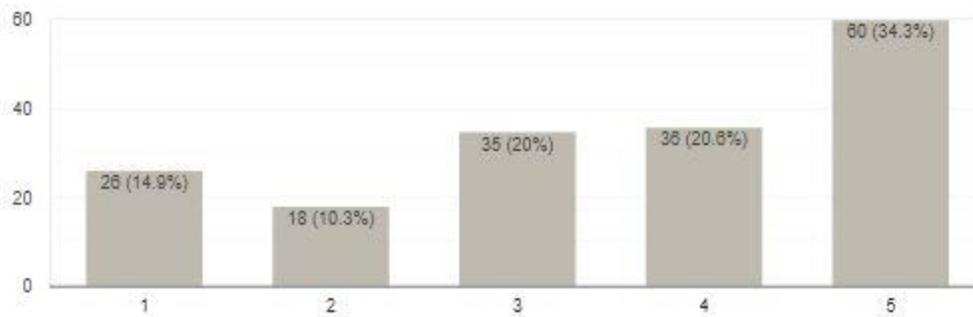
Improving traffic flow at intersections with reconfiguration of traffic patterns including roundabouts

175 responses



Constructing more bicycle and pedestrian paths

175 responses



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

County of Residence: Muscogee

Date: 3 / 11 / 19

1. How did you hear about the 2019 MTP Update?

- Social Media
- Local Newspaper
- Television
- Radio
- On the grapevine (from someone you know)
- City Employee
- Email
- Flyer in Mail
- Other: _____

2. Was this public meeting informative?

- Yes
- No
- Somewhat

3. Do you have a better understanding of how transportation projects are selected in your county?

- Yes
- No
- Somewhat



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

4. Have the transportation needs of your county been met as of 2019?

- Yes
- No
- Somewhat

5. Have the transportation needs of your household been met as of 2019?

- Yes
- No
- Somewhat

6. Do you believe C-PCMPO will be able to meet your household's and your county's transportation needs?

- Yes
- No
- Somewhat

7. Any additional comments?

Last Mile Transportation



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

County of Residence: Muskege

Date: 3/11/2019

1. How did you hear about the 2019 MTP Update?

- Social Media
- Local Newspaper
- Television
- Radio
- On the grapevine (from someone you know)
- City Employee
- Email
- Flyer in Mail
- Other: _____

2. Was this public meeting informative?

- Yes
- No
- Somewhat

3. Do you have a better understanding of how transportation projects are selected in your county?

- Yes
- No
- Somewhat



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

4. Have the transportation needs of your county been met as of 2019?

- Yes
- No
- Somewhat

5. Have the transportation needs of your household been met as of 2019?

- Yes
- No
- Somewhat

6. Do you believe C-PCMPO will be able to meet your household's and your county's transportation needs?

- Yes
- No
- Somewhat

7. Any additional comments?

- Please address ~~how~~ what are the safety issues in our areas.*
- Address sidewalk network. Map with dots is too zoomed out.*



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

4. Have the transportation needs of your county been met as of 2019?

- Yes
- No
- Somewhat

5. Have the transportation needs of your household been met as of 2019?

- Yes
- No
- Somewhat

6. Do you believe C-PCMPO will be able to meet your household's and your county's transportation needs?

- Yes
- No
- Somewhat

7. Any additional comments?

Not really 😞



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

County of Residence: Muscogee

Date: 3 / 11 / 2019

1. How did you hear about the 2019 MTP Update?

- Social Media
- Local Newspaper
- Television
- Radio
- On the grapevine (from someone you know)
- City Employee
- Email
- Flyer in Mail
- Other: _____

2. Was this public meeting informative?

- Yes
- No
- Somewhat

3. Do you have a better understanding of how transportation projects are selected in your county?

- Yes
- No
- Somewhat



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

County of Residence: Lee

Date: 03 / 12 / 19

1. How did you hear about the 2019 MTP Update?

- Social Media
- Local Newspaper
- Television
- Radio
- On the grapevine (from someone you know)
- City Employee
- Email
- Flyer in Mail
- Other: _____

2. Was this public meeting informative?

- Yes
- No
- Somewhat

3. Do you have a better understanding of how transportation projects are selected in your county?

- Yes
- No
- Somewhat



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

4. Have the transportation needs of your county been met as of 2019?

- Yes
- No
- Somewhat

5. Have the transportation needs of your household been met as of 2019?

- Yes
- No
- Somewhat

6. Do you believe C-PCMPO will be able to meet your household's and your county's transportation needs?

- Yes
- No
- Somewhat

7. Any additional comments?



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

County of Residence: _____

Musogee

Date: 3 / 12 / 19

1. How did you hear about the 2019 MTP Update?

- Social Media
- Local Newspaper
- Television
- Radio
- On the grapevine (from someone you know)
- City Employee
- Email
- Flyer in Mail
- Other: Community Mtg in Phoenix City

2. Was this public meeting informative?

- Yes
- No
- Somewhat

3. Do you have a better understanding of how transportation projects are selected in your county?

- Yes
- No
- Somewhat



2045 METROPOLITAN TRANSPORTATION PLAN

COMMENT FORM

Please tell us how we did and how we can improve on engaging the community in the future. **Select the answers that best represent your thoughts on today's public meeting.**

4. **Have the transportation needs of your county been met as of 2019?**

- Yes
- No
- Somewhat

5. **Have the transportation needs of your household been met as of 2019?**

- Yes
- No
- Somewhat

6. **Do you believe C-PCMPO will be able to meet your household's and your county's transportation needs?**

- Yes
- No
- Somewhat

7. **Any additional comments?**



MTP COMMENTS

Lynda Temples

From: Rod Turochy <rodturochy@auburn.edu>
Sent: Thursday, November 7, 2019 5:35 PM
To: Lynda Temples
Cc: Fair, Bryan
Subject: [EXTERNAL] Comments on draft MTP
Attachments: summaryofcomments_phenixcity_draft_lrtp_11052019.pdf

Ms. Temples,

Bryan Fair with ALDOT gave me your contact information. He had asked me to review the draft LRTP/MTP and provide comments. The attached file includes my comments and suggestions. Please let me know if you have any questions about them.

Thanks,
Rod Turochy

Rod E. Turochy, Ph.D., P.E.
James M. Hunnicutt Professor of Traffic Engineering
Director, Alabama Transportation Assistance Program (Alabama LTAP Center)
Department of Civil Engineering
238 Harbert Engineering Center
Auburn University
Auburn, AL 36849

Phone: 334-844-6271
Fax: 334-844-6290
Email: rodturochy@auburn.edu

**Draft Review of the Draft 2045 LRTP for the Columbus – Phenix City MPO
November 5, 2019**

Comments pertaining to content:

Is there an Executive Summary (stand-alone document) available?

Fiscal constraint could not be fully verified. Table 9-3 on page 264 notes that data are still awaited from ALDOT and GDOT, yet the preceding paragraph lists total amounts, but not for all funding categories listed in the table.

23 CFR 450.306(d)(4) mentions coordination with other plans. Have all relevant plans been referenced in the MTP? For example, has the State Freight Plan been examined to verify that relevant material is included in the MTP. This plan is not referred to in the MTP.

Table 2-1, starting on page 23, lists only 9 of the 10 planning factors noted in the preceding text (from 23 CFR 450.306(b)). Was factor 3 (increase the security...) intentionally left off this table?

Comments pertaining to spelling, grammar, formatting, etc.:

Page 13 – first line of first full paragraph – should “encompass” be “encompasses”?

Page 17 – second sentence should read “Goals and objectives serve as...”

Page 27 – second paragraph, second sentence should read “...public transportation providers...”

Page 43 – top of page “Table 3.2 Commonly Used Ratios of Density”

Page 71 – last paragraph title should read “Interstate Principal Arterials”

Page 75 – second paragraph – update the name and location of ALDOT’s safety programs to reflect its organizational move two years ago – replace “ALDOT’s Safety Program, a component of the Multimodal Transportation Division” with “ALDOT’s Office of Safety Operations within the Design Bureau”

Section 5.2 in general – consider replacing “accident” with “crash”

Line 78 – third paragraph, first line – “countermeasures” is one word

Figure numbering is inconsistent. Also, it would be helpful to have a list of figures with page numbers in the Table of Contents, as has been done for tables. Some figures appear without any corresponding narrative in the text. For example, Figure 19 appears on page 77 but is not mentioned in the text. Also, on page 80, Figure 20 is referred to in the preceding paragraph as “Figure 2-1 below...” At the bottom of page 92, “Figure 5...” is referenced, but the figure is actually labeled as Map 5-3.

Page 123 – first line should be “Abiding by these principles”

Page 123 – the first reference material in the bullet list should read “...Manual on Uniform Traffic Control Devices”

Page 267 – the fourth paragraph reads “Tables 6 and 7...”, but the actual Tables are numbered 9-3 and 9-4. It would be a good idea to check all table, figure, and map numbering, and then list each category within the Table of Contents.

CHAPTER 9: FINANCIAL PLAN

The purpose of a financial plan is to demonstrate fiscal constraint for all funded projects. This ensures that the transportation plan reflects realistic assumptions about future revenues compared to project costs for all projects funding in the plan. Metropolitan planning regulations require that a metropolitan long range transportation plan contain a funding strategy that demonstrates how it can be implemented, indicates resources from public and private sources that are reasonably expected to be available to carry out the plan, and recommends any additional financing strategies for identified projects and programs.

The FAST Act requires that the MTP be financially feasible and demonstrate fiscal constraint for all funded projects through the 20-year planning horizon. Implementation of transportation improvements is contingent on available funding and a plan is considered fiscally constrained when the project costs do not exceed the projected revenues.

The three major funding sources for transportation projects are Federal, State, and local funds. A transportation project can be funded through various programs under the three funding sources. The Columbus-Phenix City Transportation Study (MPO) has historically utilized Federal funds for the primary capital-funding source. This is still true for the portion of the MPO that is located in Alabama, however for the portion in Georgia; the citizens voted for a LOST (2009) in Columbus and the TSPLOST (2012) which passed in three regions throughout the state. The Muscogee County Local Option Sales Tax (LOST), which is expected to yield approximately \$35 Million a year and the SPLOST/TIA Discretionary funds, which is expected to yield \$2.5 Million a year, which will end in 2022.

Table 9-1: Earmarked Infrastructure Categories of Muscogee County LOST Sales Tax

Funding Group:	FY 2020
Facility Improvements	\$750,000
Information Technology Infrastructure	\$913,610
Road Infrastructure	\$1,400,000
Storm Water Infrastructure	\$300,000
Total Earmarked Amount:	\$3,363,610

The Columbus Consolidated Government Finance Department provided figures concerning the LOST and SPLOST revenue collection and the monies allocated to earmarked projects.

Table 9-2: Estimated Revenue under Muscogee County LOST Sales Tax

Estimated Collected Revenue From LOST 1% Sales Tax (FY 2020- FY 2045)	\$870,000,000
Estimated amount of Revenue From LOST 1% Sales Tax to be Allocated to Law Enforcement (70%) (FY 2020- FY 2045)	\$609,000,000
Estimated amount of Collected Revenue From LOST 1% Sales Tax to be Allocated to Infrastructure (30%) (FY 2020-FY 2045)	\$261,000,000
Estimated amount of Collected Revenue from LOST 1% Sales Tax to be Available for Transportation Projects after Infrastructure Group Earmark Deductions (FY 2020- FY 2045)	\$35,000,000

In addition to these funds, it is anticipated that an additional \$814,730,898.00 million will be available to the Columbus-Phenix City MPO, based on the projected funding amounts provided by GDOT and ALDOT for the 2045 LRTP. The GDOT estimate for twenty-five years for transportation projects amounts to \$685,372,846.00 million for the MPO. GDOT has estimated a cost of \$103,566,014.00 for maintenance projects within the MPO area over the next 25 years. ALDOT provided an estimate dated January 25, 2019, “Phenix City Urban Area – Highway Capacity, Operation and Maintenance Costs, Federal Funds Only”. In this estimate, twenty-five years of federal funds for the Alabama side of the MPO (FY 2020 to FY 2045) were calculated to amount to \$129,358,052.00 million.

Table 9-3: Total Expected Highway Funds (Federal) for FY 2020 – FY 2045

Category	Georgia	Alabama
Interstate Maintenance Total		\$42,426,540.00
National Highway System Total		\$34,272,000.00
Surface Transportation Program Total		\$52,659,512.00
Trails Program Total		\$0.00
Safety Total		\$0.00
Other Funds Total (SRTS, TAP, ATRIP)		\$0.00
Total All Categories	\$685,372,846.00	\$129,358,052.00
GDOT Operating & Maintenance Cost	\$103,566,014.00	

Category breakdown from GDOT is no longer available

Roadway Project Cost Estimates (In YOE Dollars)

The fiscally constrained portion of the 2045 LRTP included only those projects that can be expected to be funded within the time horizon of the plan. We worked to follow the guidance of the FHWA and the FTA for fiscal constraint. This included sufficient financial information to demonstrate which projects are to be implemented using current revenues and which projects are to be implemented using proposed revenue sources (while the system as a whole is being adequately operated and maintained).

134 priority projects were proposed within this category. Preliminary engineering, right-of-way and construction costs were developed for each of the major proposed projects; the total cost of implementation is estimated to be over \$255 million.

The following summarizes the methodology utilized to calculate the project cost estimates in YOE dollars.

1. The project phases of each Long Range Transportation Plan project, which include Preliminary Engineering (PE), Right of Way (ROW), Utilities, and Construction (CST), were reviewed by Columbus-Phenix City MPO Staff to determine which of three cost band periods best matched the priority and schedule of each phase. The cost band periods are presented and described below.
 - a. 2020-2024:
 - Coincides with GDOT and ALDOT short-range planning period and the proposed FY 2018 – FY 2021 Transportation Improvement Program (TIP).
 - Represents phases of projects scheduled to be completed in this time range using the best available data from GDOT, ALDOT, and the Columbus-Phenix City MPO>
 - Includes project phase costs that reflect the most current project cost estimates from GDOT and ALDOT. No inflation factor is applied to projects programmed in the TIP for FY 2018 – FY 2021, since these projects are already inflation-adjusted by GDOT.
 - If costs were not available from GDOT or ALDOT, the GDOT Cost Estimation System Tool was utilized to develop new project costs (including preliminary engineering, right of way, utility, and construction cost estimates, as applicable).
 - b. 2025-2045:
 - Incorporates either the GDOT-obtained cost estimates, ALDOT obtained cost estimates, or new estimates developed using GDOT's Cost Estimation System Tool with the appropriate escalation inflation factor (2% for Georgia projects and 4% for Alabama projects) calculated for YOE 2045.
 - If a project phase was authorized prior to the adoption of the Framework Mobility Plan, the project phase cost is not included in the plan.
 - Funding source by project phase is not tracked; on the cost totals by phase (PE, ROW, Utilities, and CST) are calculated, since project phase funding details are not tracked by GDOT.

Financial forecasts (for revenues and costs) to develop our LRTP utilized an inflation rate to reflect “year of expenditure” on our projects. This incorporated inflation adjustments out to the year 2045. In consultation with both the FHWA and GDOT, we utilized an inflation factor of 2% per year for preliminary engineering (PE), for right of way (ROW) acquisition, and construction (CN) for the projects within Georgia. Long range project cost estimates were performed through the use of GDOT Cost Per Mile

The estimated cost for all phases of projects for Phenix City, Lee and Russell Counties are calculated by the City / Counties. For the short range projects, there was not an inflation factor applied, however for the long term projects; there was an inflation factor of 4% for every year.

In our four year Transportation Improvement Program (TIP) we have fixed numbers on what our allocations from the federal government will be across several broad “lump sum” categories. These allocations are from Georgia Department of Transportation (GDOT). Allocations from Alabama Department of Transportation (ALDOT) are programmed differently. The MPO gets a lump sum amount for projects which are used by Phenix City, part of Lee County and Russell County that is within the MPO boundaries. This money can be used for numerous types of projects from resurfacing to widening.

Transit Funding for Columbus-Phenix City MPO Region:

We utilized the Federal Transit Administration Section 5307 Grant Amounts provided to us by the Georgia Department of Transportation and Alabama Department of Transportation for their respective portions of the MPO.

It is anticipated that there will be approximately \$181 million available for the Columbus METRA and \$28 million for the Phenix City PEX bus transit system.

METRA System – Anticipated Section 5307 Funding (FY 2020 - FY 2045)	\$181,092,258
PEX System – Anticipated Section 5307 Funding (FY 2020 - FY 2045) *	\$ 28,121,403
Total Funding:	\$209,213,661
<p>* ALDOT provided their estimates for FY 2020-FY 2045 for PEX. Georgia figures for METRA were calculated by planning staff for FY 2020 – FY 2045 based off the 2018-2021 TIP. Figures for each successive year following 2019 reflected a 2.5% annual increase for inflation.</p>	

Process for Developing the Financially Constrained Long Range Transportation Plan

The development of the financially-constrained project list used the 2045 LRTP and the interim YOE update as a basis, including a review of previous project priorities.

A review of the current status of each project was conducted, as well as a review of previously identified project termini and descriptions. This effort was completed by members of the Columbus-Phenix City MPO Technical Coordinating Committee (TCC). Projects that were determined to have a lower priority by the TCC were moved to the vision plan, while projects with substantial progress, such as right of way funding authorized or right of way acquisition already underway, were given a higher priority.

Using this methodology, projects were reviewed and incorporated into the financially-constrained Long Range Transportation Plan until the total estimated expenditures for the roadway category equaled the total estimated revenues. It should be noted again that existing federal and state regulations specify the types of projects that are eligible for certain funding categories, so money allocated to one category cannot simply be moved to fund another category of projects. For example, federal money identified for interstate improvements cannot be reassigned to transit projects, nor can transit funds be spent on other types of projects.

Tables 9-4 and 9-5 provide a brief overview of the various federal transportation funding programs available to the Columbus-Phenix City MPO region.

Table 9-4: Federal Funding Programs Funding Category Description

National Highway Performance Program (NHPP)	Funding for improvements to rural and urban roads that are part of the NHPP, including the Interstate Highway System and designated connections to major intermodal terminals/facilities. Under certain circumstances, NHPP funds may be used to fund transit improvements in NHPP corridors.
Surface Transportation Program (STP) Funds	Funds are generally used by States and localities for any roads, including National Highway System (NHS) roads that are not functionally classified as local or minor collectors. A portion of STP funds are sub-allocated to the Columbus-Phenix City MPO from state and federal transportation agencies.

Surface Transportation Block Grant Program	<p>Funds may be used for any of the following activities:</p> <ul style="list-style-type: none"> - Facilities for pedestrians and bicyclists - Provision of safety and educational items for pedestrians and bicyclists - Acquisition of easements for scenic or historic sites - Scenic or historic highway programs - Landscaping or other beautifications - Historic preservation - Rehabilitation/operation of historic transportation buildings, structures or facilities - Preservation of abandoned railroad corridors
Interstate Maintenance (IM)	Funds for resurfacing, restoration, and rehabilitation of the Interstate Highway System. These funds cannot be used for constructing new facilities or to add capacity to the existing interstate system
Bridge Replacement (BR)	Funds for the replacement, rehabilitation, or systematic preventive maintenance of substandard bridges both on and off the federal system.
Demonstration or High Priority Projects (HPP)	Congressionally authorized funds, or earmarks designated for specific projects.
Transit Programs	<ul style="list-style-type: none"> - Section 5307 Urbanized Area Formula Program; - Section 5309 Capital Investment Programs; - Section 5310 capital-only funding for the transportation needs of the elderly or individuals with disabilities;

Table 9-5: State and Local Funding Programs

State Bonds	Revenue from State Bonds
State Motor Fuel Tax	26 cents per gallon (gasoline) plus 4% state sales tax (1% goes to the general fund) plus local option taxes on motor fuels. This cannot be used for funding transit projects.
State Aid	Includes Local Maintenance and Improvement Grant funding and to local jurisdictions for resurfacing projects and State Aid funding; the amount of available State Aid funding has been drastically reduced over the past few years.
Gateway Grants	Funding for roadside enhancement and beautification projects along Georgia’s roadsides.
Local Option Sales Tax (LOST)	An additional 1-cent sales tax levied by jurisdictions upon approval by public referendum. Typically, a portion of a local jurisdiction’s LOST or SPLOST (special purpose local option sales tax). Revenues from this can be used to fund transportation improvements. A LOST (or SPLOST) program must include a specific list of projects to be completed using the revenues.
Special Local Option Sales Tax (SPLOST) or the Transportation Investment Act (TIA)	The Transportation Investment Act (TIA) was passed in July 2012 by Georgia voters in the regions of Central Savannah River Area, Heart of Georgia-Altamaha, and River Valley. A one percent regional sales tax will fund a specific list of transportation projects over a ten year period. Ends in 2022.

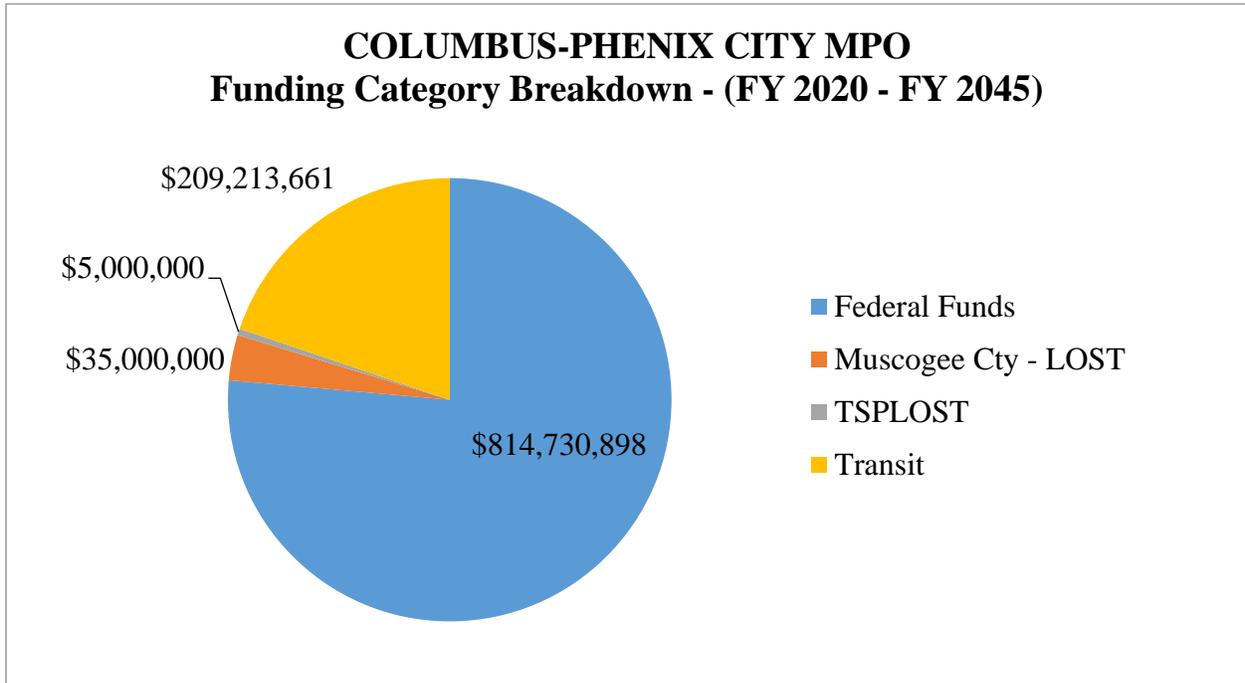
Funding Projections:

Historic trends for the Columbus-Phenix City region were reviewed to help project future revenues for roadway transportation projects. Stakeholder agencies were also consulted as part of the determination of future available transportation funding. Table 8 presents a summary of revenues available to the Columbus-Phenix City MPO region through year 2045 (in YOE).

Table 9-6: Estimate of Total Funds Available for Transportation in Columbus-Phenix City MPO Region (FY 2020 – FY 2045)

Federal Funds Expected (FY 2020 – FY 2045) – (GA & AL)	\$814,730,898.00
Muscogee County – Local Option Sales Tax for Transportation (FY 2020 – FY 2045)	\$35,000,000.00
Regional – Special Local Option Sales Tax (TSPLOST) – (FY 2020 – FY 2022)	\$5,000,000.00
5307 Federal Transit Funding for METRA and PEX (FY 2020 – FY 2045)	\$209,213,661.00
Transportation Funding Anticipated for the Columbus-Phenix City MPO Region (FY 2020 – FY 2045)	\$1,063,944,559.00

Columbus-Phenix City MPO Funding Category Breakdown – (FY 2020 to FY 2045)



FINANCIAL BALANCING	
SHORT TERM PROJECT COST (2020 - 2024)	\$74,116,882.87
MID-LONG TERM PROJECT COST (2025 - 2045)	\$203,589,055.85
TOTAL PROJECT COST	\$277,705,938.72
TOTAL AVAILABLE REVENUES	\$814,730,898.00
BALANCE	\$537,024,959.28

APPENDIX A

TRAVEL DEMAND MODEL DEVELOPMENT

A.1 – Travel Demand Forecasting Model

Transportation system studies are periodically performed by GDOT and the Columbus-Phenix City Transportation Study - Metropolitan Planning Organization (C-PCTS MPO) to determine what types of transportation improvements or investments would best serve the public. GDOT and the C-PC MPO are primarily responsible for technical studies concerning the roadway system.

A travel demand forecasting (TDF) model is used by GDOT and C-PCTS MPO to evaluate the performance of the roadway system in and around Columbus and Phenix City. The C-PCTS MPO model is a traditional urban area analysis tool that is used to identify where major improvements should be made to its principal thoroughfare system. Since there is usually more than one strategy proposed to address future congestion and safety concerns, the model is frequently used to study which combination of improvements provides the most end-user benefits. A TDF model, however, is only one resource drawn on to identify needs. Staff from the City of Columbus, the City of Phenix City, Russell and Lee Counties in Alabama, Harris and Chattahoochee Counties in Georgia as well as GDOT and ALDOT were also involved in the process of identifying potential projects.

The C-PCTS MPO model was developed by GDOT for the C-PCTS MPO 2045 MTP. The process of projecting travel 25 years into the future has a strong correlation with the level of growth anticipated for the region and where that growth inside the community planning are connected to the transportation planning process.

The other key element of the model is called a highway network. A highway network consists of links and nodes that represent roadway segments and intersections. The attributes of links contain characteristics of roadways such as speed, distance, number of lanes, area type (density of population and employment), facility type (similar to functional classification) and capacity. The attributes of nodes contain positional, two dimensional x and y coordinates to enable the network file to be displayed pictorially. The node representing a traffic analysis zone (TAZ) also includes socioeconomic data of TAZ such as population, households, employment, school enrollment, median income, and acreage.

A.2 – Methods and Assumptions

Introduction

This memorandum documents the process of allocating base year (2015) travel demand model socioeconomic data for the purpose of updating the Columbus-Phenix City Transportation Study Metropolitan Planning Organization (C-PCTS MPO) Metropolitan Transportation Plan (MTP) to the year 2045. The TAZ geography utilized for the travel demand model that represents the C-PCTS MPO area includes:

- ◇ Portions of Muscogee County, Georgia (omitting Fort Benning)

- ◇ Portions of Lee County, Alabama (omitting the northwest corner of the county including Cities of Auburn and Opelika)
- ◇ All of Harris County, Georgia
- ◇ All of Russell County, Alabama
- ◇ Although the C-PCTS MPO model accounts for the Fort Benning military base in Chattahoochee County, it was not incorporated into the socio-economic data and street network as there is no publicly available information on interactions occurring on the base.

The process of allocating the socioeconomic data to the TAZs was conducted in coordination with the C-PCTS MPO and the Georgia Department of Transportation (GDOT). The methodology employed utilized the best available data at the time of the allocation process and followed the instructions of the GDOT reference guide (published August 2018), *Georgia MPO Travel Demand Models Socio-Economic Data Development Guides*.

The final dataset includes a total of eleven (11) attributes which represent conditions in the 692 Transportation Analysis Zones (TAZs) located within the geography of the travel demand model utilized to represent the C-PCTS MPO area.

	FOUR-COUNTY AREA TOTALS			C-PCTS MPO AREA TOTALS		
	2015	2045	% Change	2015	2045	% Change
Population	324,593	336,468	4%	265,124	274,182	3%
Household	112,942	136,804	11%	101,333	110,029	9%
Total Employment	111,183	113,183	2%	101,333	104,495	2%
MTCUW Employment	17,323	17,907	3%	14,911	15,411	3%
Service Employment	76,148	77,685	2%	71,365	72,714	2%
Retail Employment	12,482	12,771	2%	11,906	12,170	2%
AMC Employment	5,230	5,376	3%	4,110	4,200	2%
Median Home	\$40,972	\$40,972	0%	\$40,972	\$40,972	0%
School Enrollment	58,928	58,928	0%	45,875	45,875	0%
College Students	13,659	13,859	1%	13,659	13,859	1%
Acreage	981,418	981,418	0%	215,327	215,327	0%

The model presentation by GDOT to the C-PCTS MPO is included below:



Columbus-Phenix City MPO Travel Demand Model 2019 Update

Technical Coordinating Committee Meeting
April 16, 2019

Presented by
Habte Kassa
Georgia Department of Transportation
Office of Planning
404.631.1797 / hkassa@dot.ga.gov



Background

- Federal legislation requires Metropolitan Transportation Plan (MTP) updates every five years
- The MTP covers a minimum 20-year planning horizon with fiscal constraint
- The next MTP must be adopted by December 16, 2019
- MAP-21 / FAST Act requires performance-based approach

Why Travel Demand Model?

§ 450.324 Development and content of the metropolitan transportation plan.

(f) The metropolitan transportation plan shall, at a minimum, include:

(1) The current and projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan;

(2) Existing and proposed transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, nonmotorized transportation facilities (e.g., pedestrian walkways and bicycle facilities), and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan.

(3) A description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with § 450.306(d).

(4) A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in § 450.306(d), including -

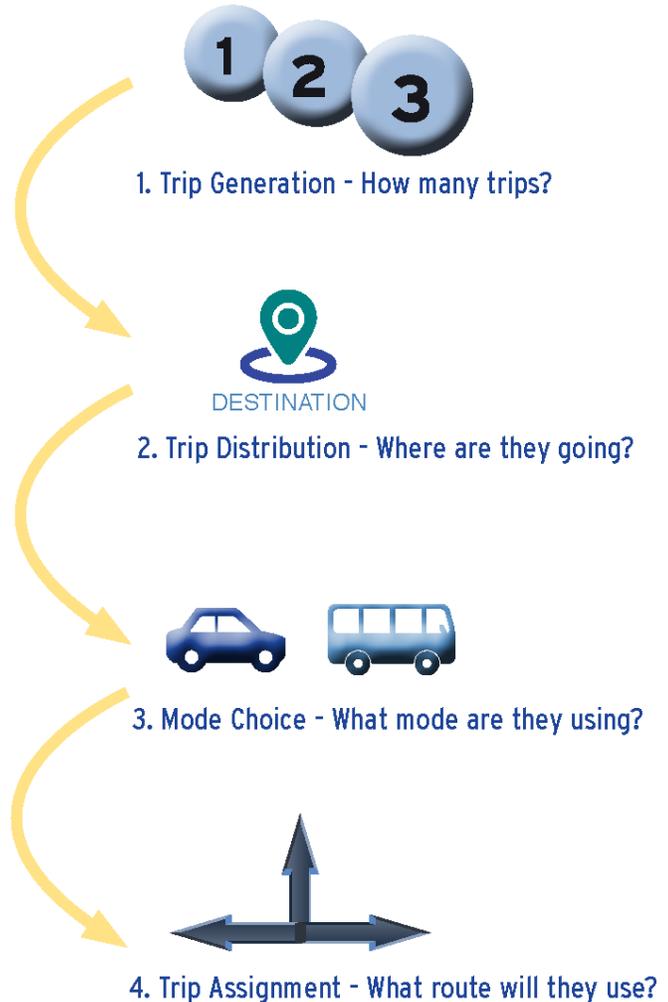
(i) Progress achieved by the metropolitan planning organization in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data; and

(ii) For metropolitan planning organizations that voluntarily elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets.

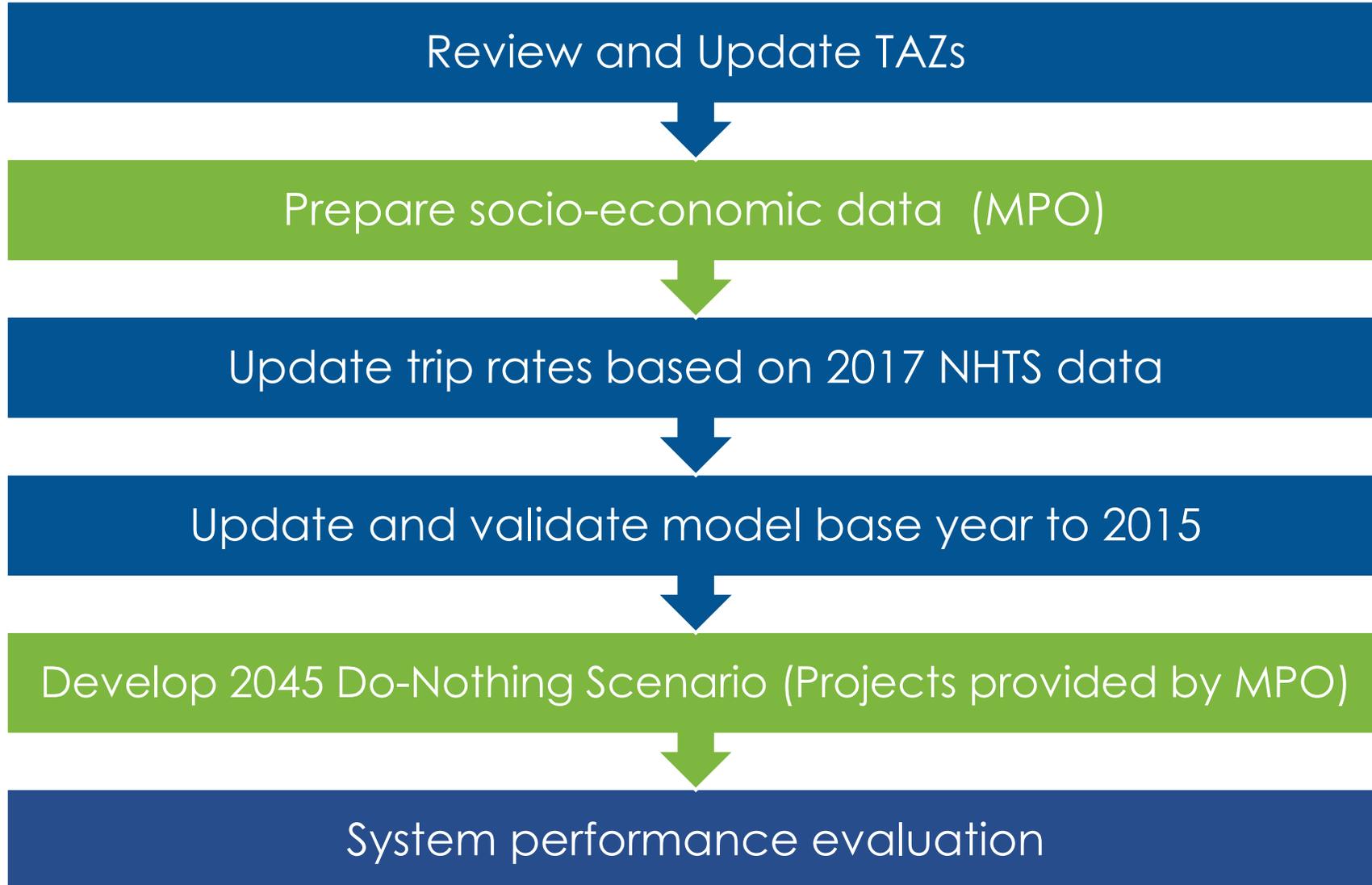
What is a Travel Demand Model and its Purpose?

- State-of-the-art analysis tool
- To replicate the existing trip making characteristics
- To forecast future travel demand
- To identify transportation network deficiencies and prioritize projects.

Travel Demand Model Four-Step Approach

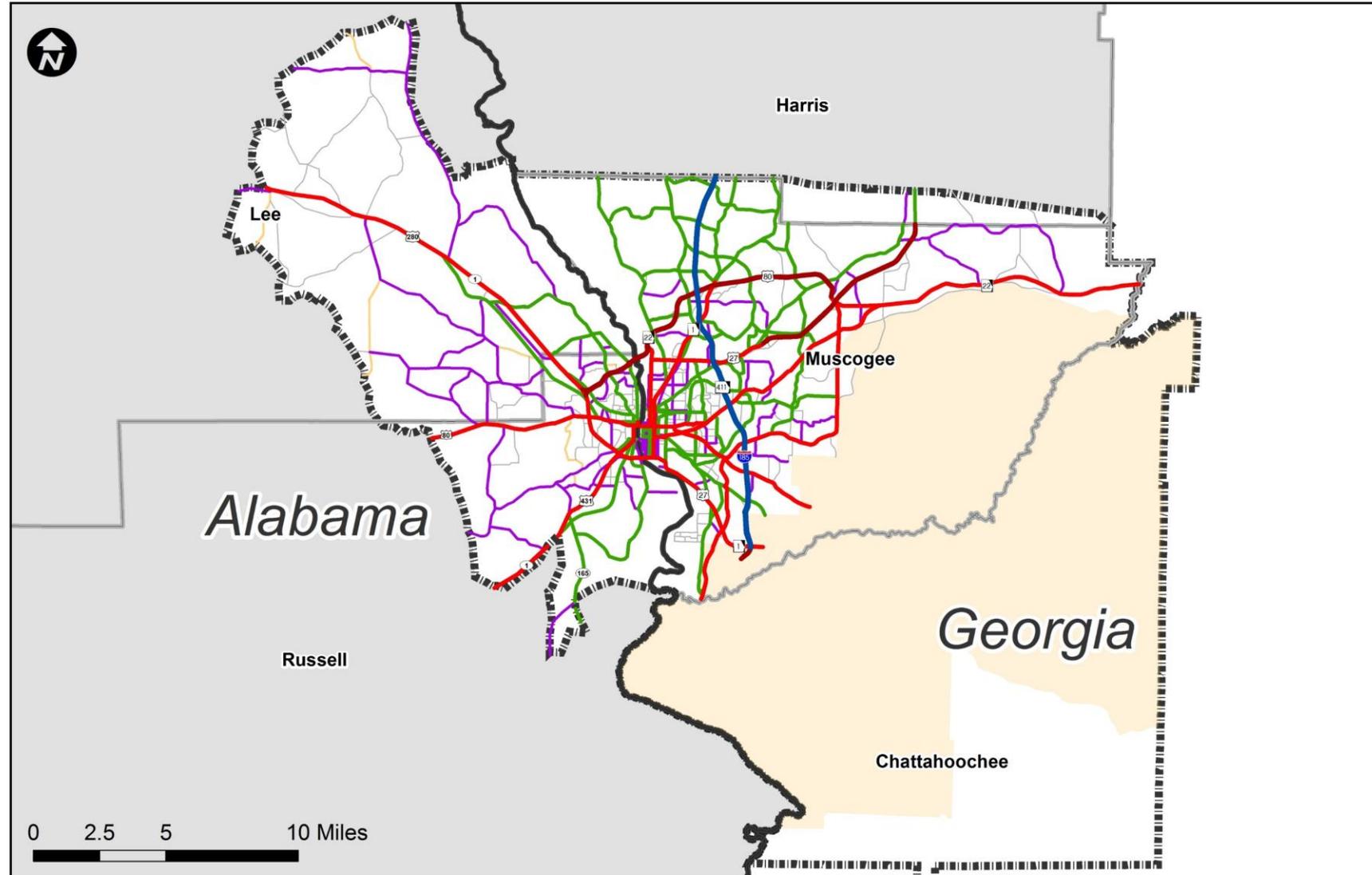


Travel Demand Model Major Activities



2015 Model Inputs





2015 Highway Network

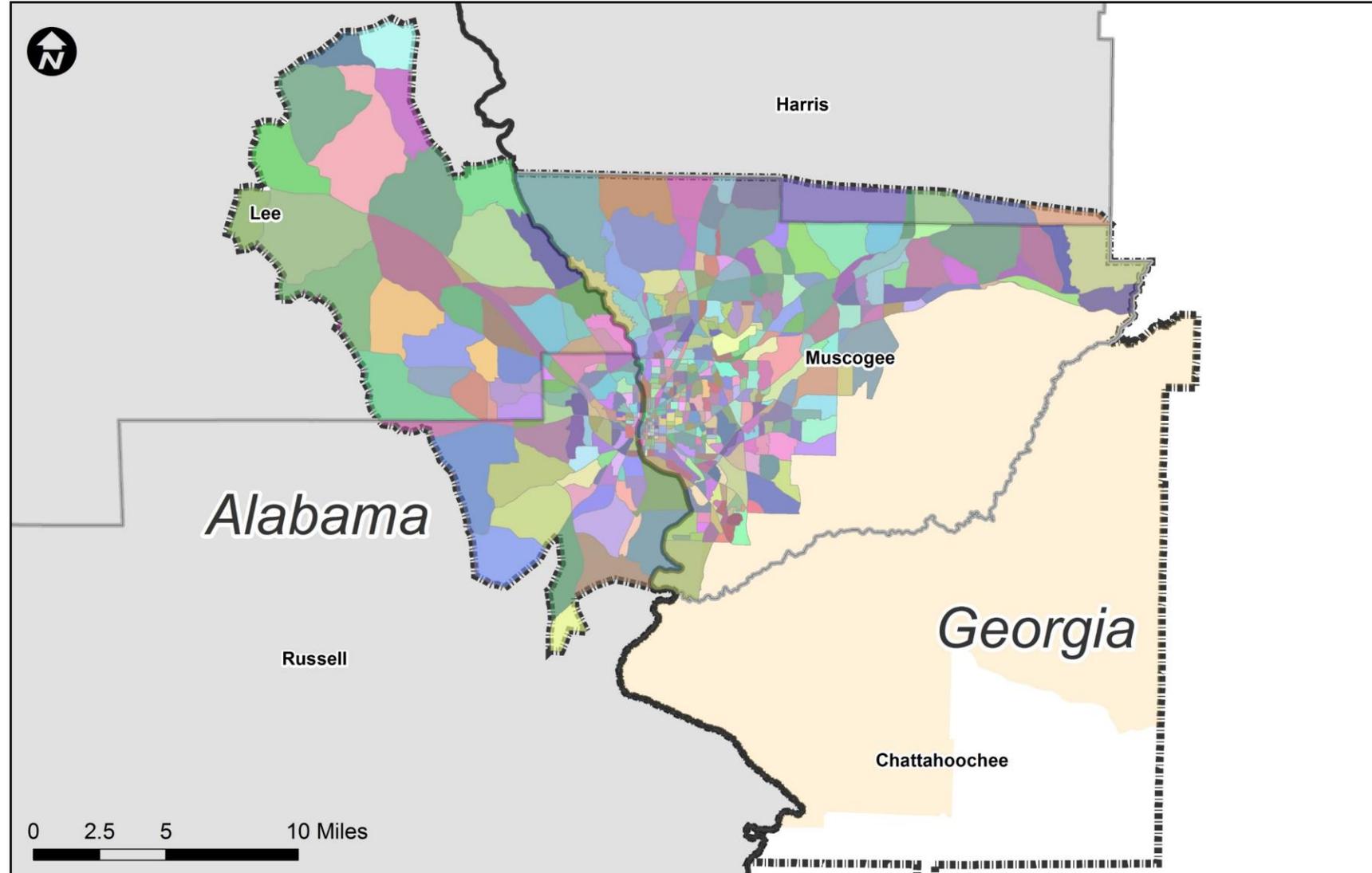
Legend

Functional Classification

- Interstate
- Freeway/Expressway
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local

- Fort Benning
- State
- MPO Boundary
- Counties

Functional Classification Data Source:
GDOT 2015 Road Characteristics Data



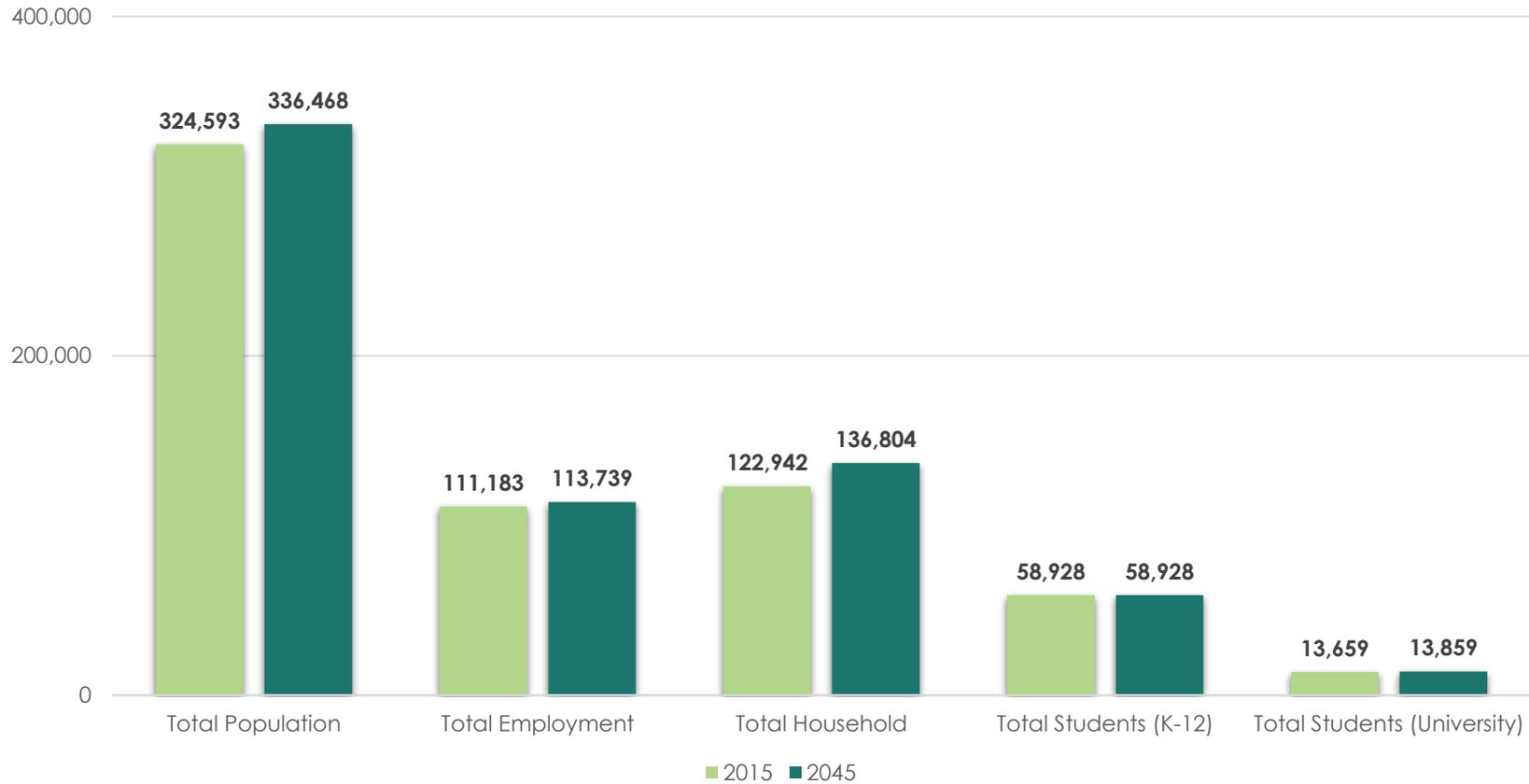
2015 Traffic Analysis Zones (TAZ)

Total Number of TAZs:

- Model Area: 654
- MPO Area: 518

Socio-economic Data Provided by MPO Staff

2015 and 2045 CPC MPO Socioeconomic Data



4% ↑

2% ↑

11% ↑

0% ↑

1% ↑

percent Growth

Base Year Model Outputs

Model Validation Results





2015 Model Validation

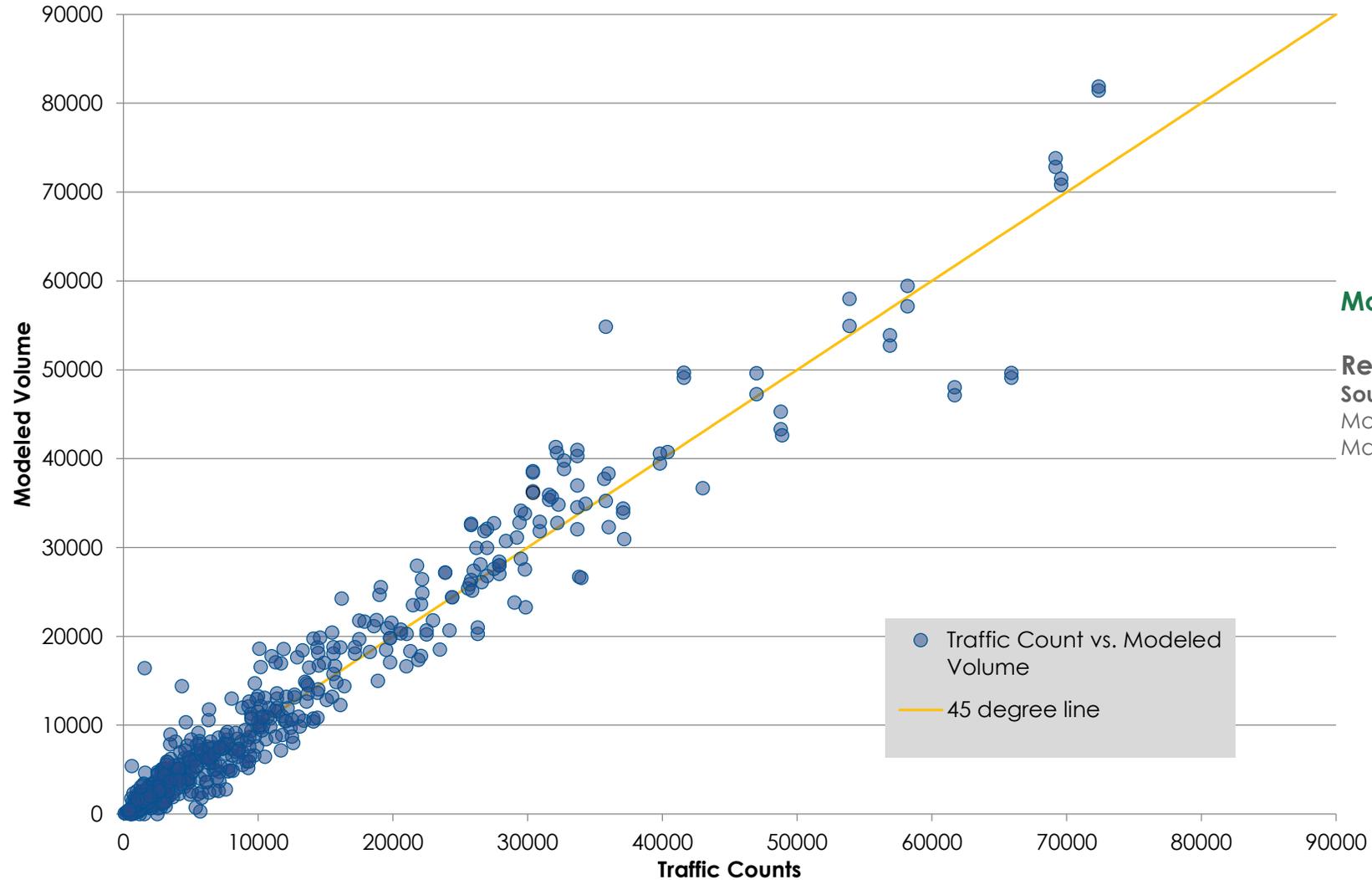
Model Area Highway Mileage & Vehicle Miles Traveled (VMT) by Facility Type

Facility Type	Mileage (miles)		VMT (1000,miles)		VMT Distribution		VMT Difference (Model vs. Observed)	
	Observed ⁽¹⁾	Model	Observed ⁽¹⁾	Model	Observed ⁽¹⁾	Model	Difference	%
Interstates	37	35	1,337	1,373	19%	20%	36	2.7%
Expressway	20	21	659	567	9%	8%	-92	-14.0%
Principal Arterial	146	147	2,280	2,320	33%	33%	40	1.8%
Minor Arterial	292	291	1,680	1,648	24%	24%	-32	-1.9%
Collectors	585	565	995	1,022	15%	15%	27	2.7%
Total	1,080	1,059	6,951	6,930	100%	100%	-21	-0.3%

(1) 2015 GDOT VMT – GDOT Mileage by Route and Road System Report 445.
http://www.dot.ga.gov/DriveSmart/Data/Documents/400%20Series/445/DPP445_2015.pdf



Traffic Counts vs. Modeled Volume

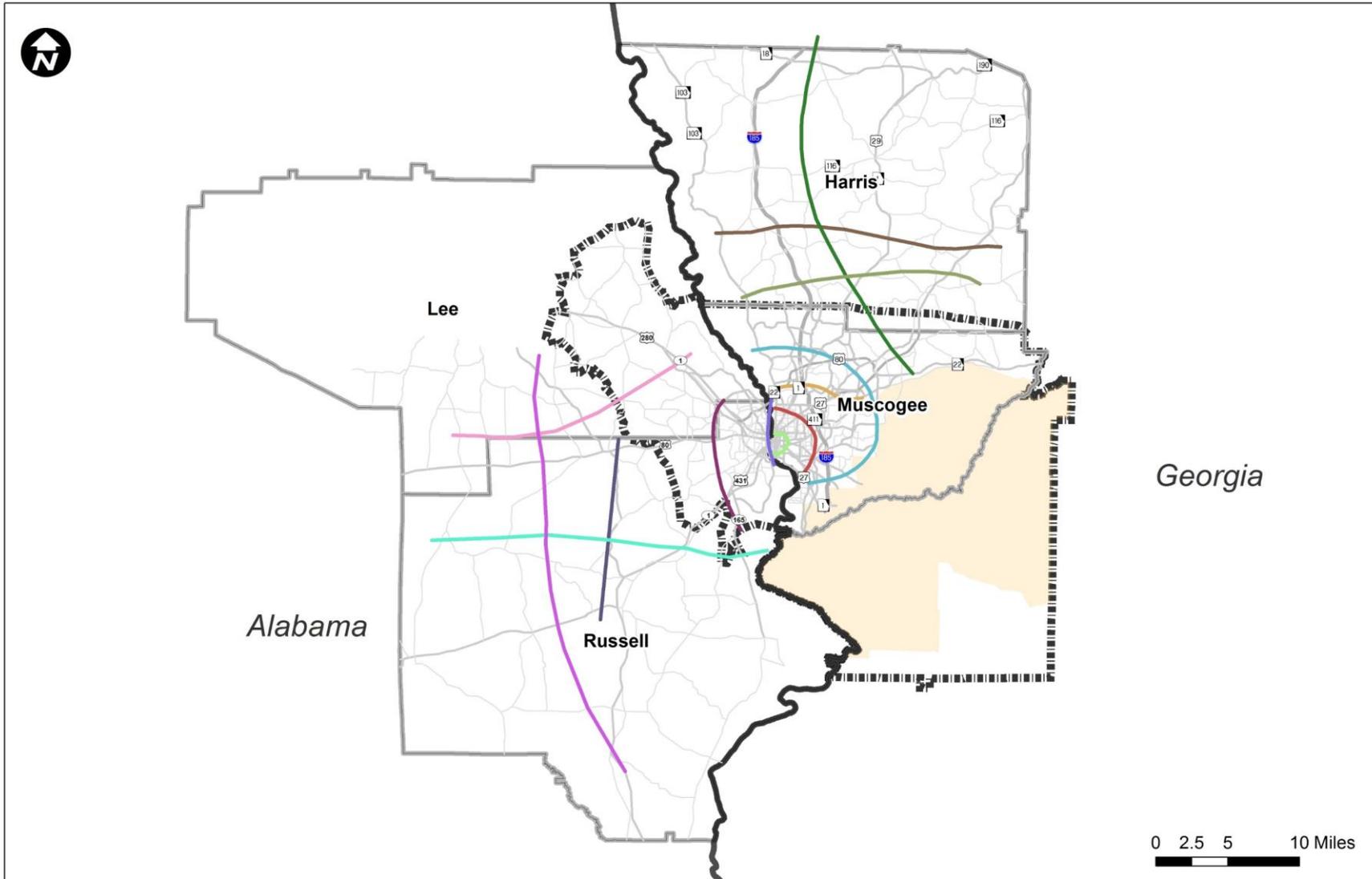


Model R-squared = 0.95

Recommended target R-squared = 0.88

Source:
Model Validation and Reasonableness Checking Manual, Second Edition, FHWA, 2010

Screenline Validation

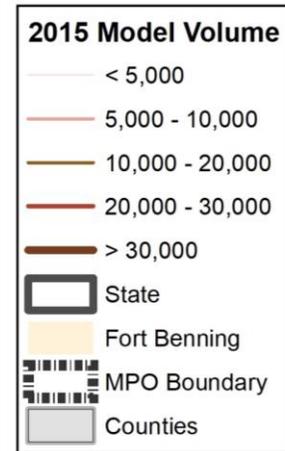


Screenlines

- 1: Chattahoochee River N-S Line
- 2: Columbus CBD - acr around the CBD
- 3: E Columbus N-S Line
- 4: NE Columbus N-S Line
- 5: E Columbus E-W Line
- 6: Phenix City N-S Line
- 7: East Lee County E-W Line
- 8: Harris County E-W Line
- 9: Harris County N-S Line
- 10: Russell County N-S Line
- 11: Russell County E-W Line
- 12: Muscogee County E-W Line
- 13: South Lee County N-S Line

- Fort Benning
- State
- MPO Boundary
- Counties

2015 Total Daily Traffic Volumes



Note: Total volume for both direction

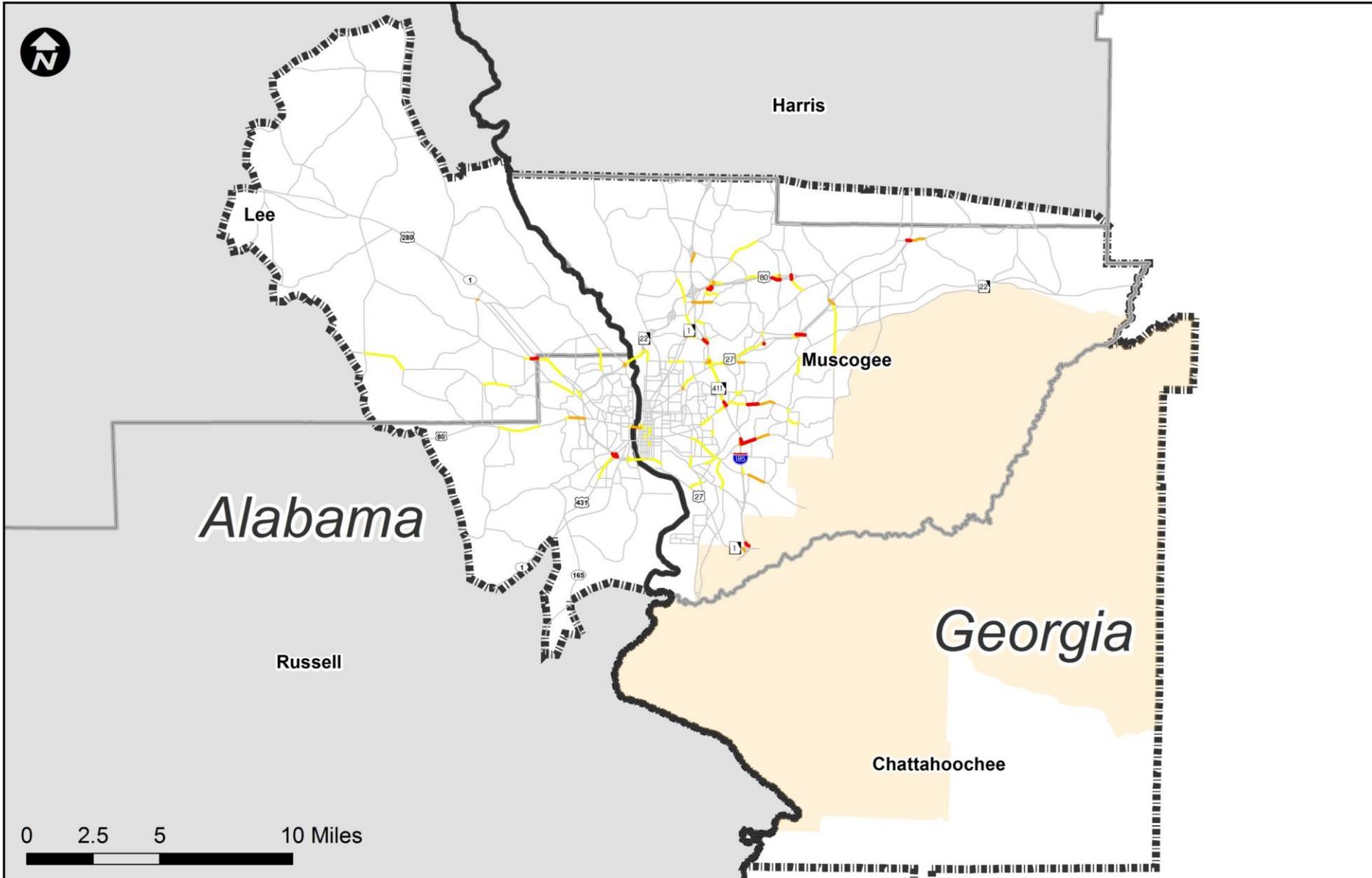
Level of Service (LOS)

- Based on 2016 Highway Capacity Manual (HCM) methodology
- LOS was derived using the Travel Demand Model
- LOS compares volumes along the roadway to the capacity of that roadway



2015 Daily Level of Service (LOS)

$$LOS = \frac{\text{Modeled Daily Traffic}}{\text{Daily Capacity}}$$



2015 Level of Service	
	C or better (V/C <= 0.7)
	D (0.7 < V/C <= 0.85)
	E (0.85 < V/C <= 1)
	F (V/C > 1)
	State
	Fort Benning
	MPO Boundary
	Counties

Future Year Model Outputs

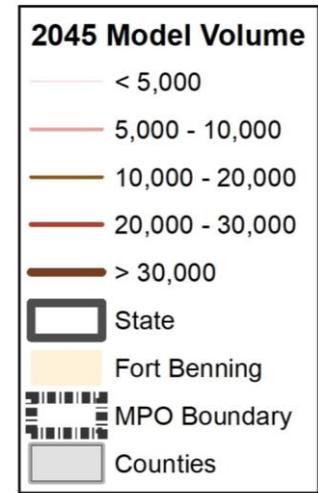


2045 MTP Scenarios

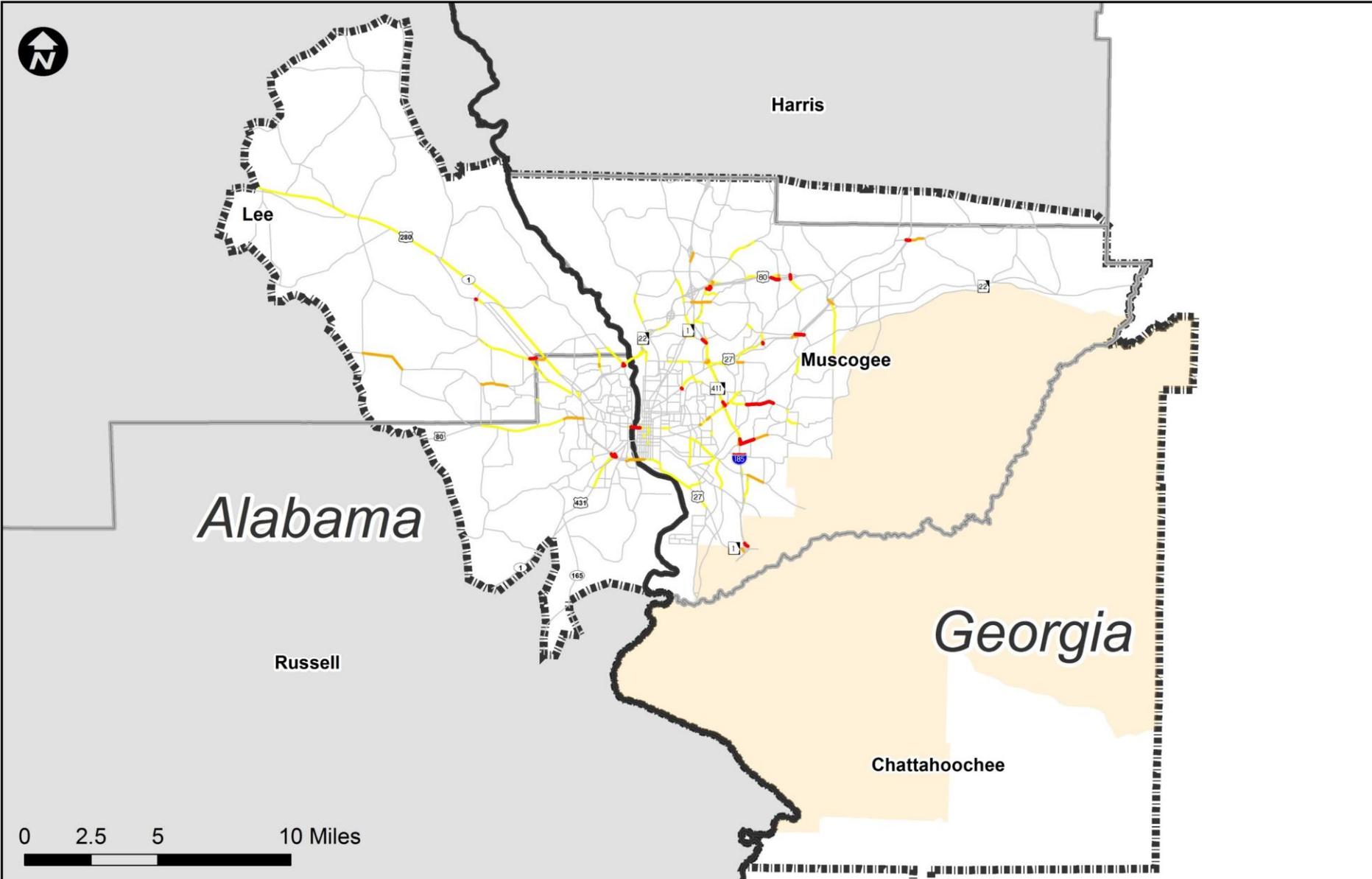
1. Do-Nothing
2. Existing + Committed
3. Completion of STIP/TIP system projects
4. Metropolitan Transportation Plan system projects
5. Financially Constrained Plan projects



2045 "Do-Nothing" Total Daily Traffic Volumes



Note: Total volume for both direction

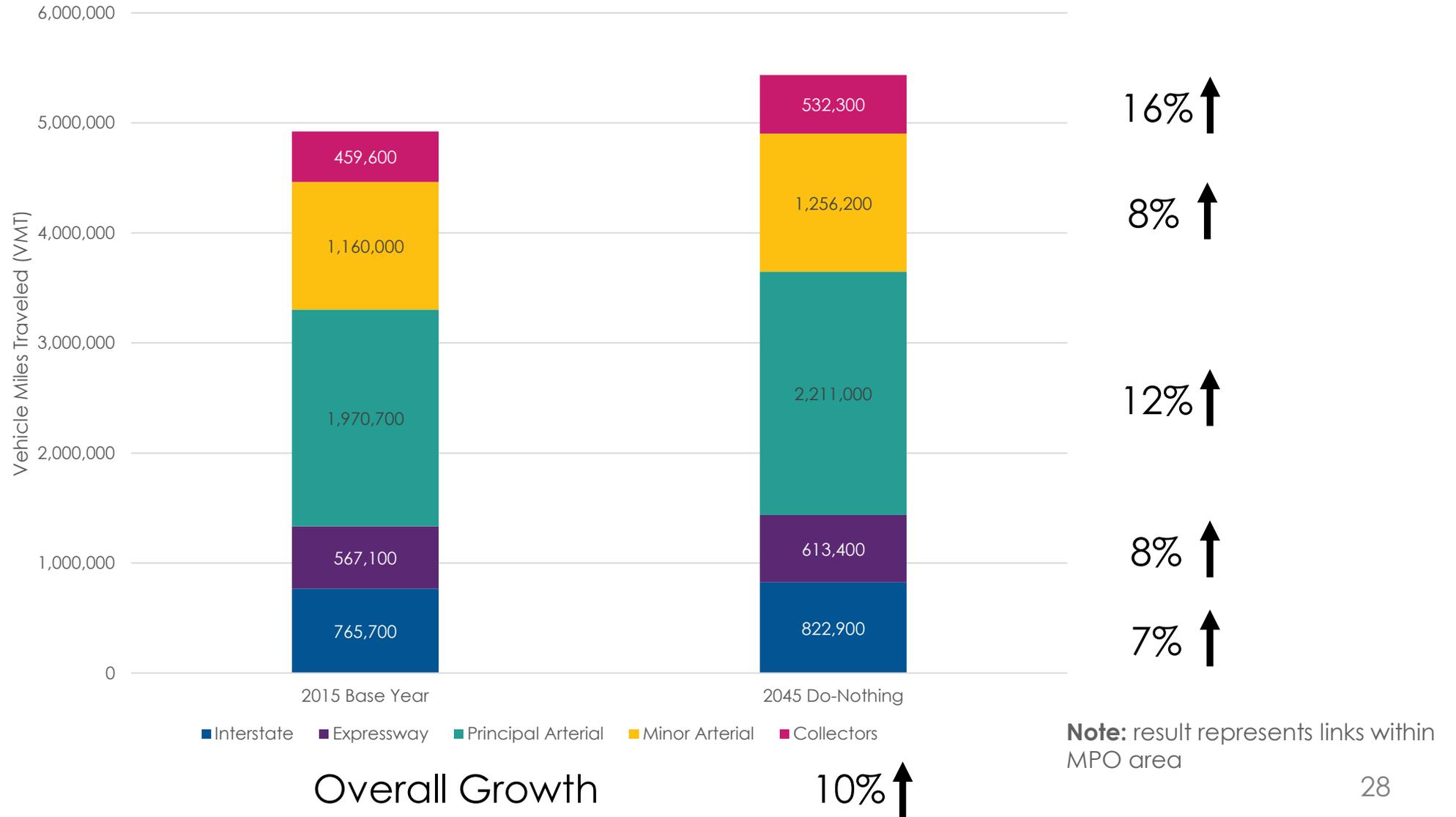


2045 “Do-Nothing” Daily Level of Service (LOS)

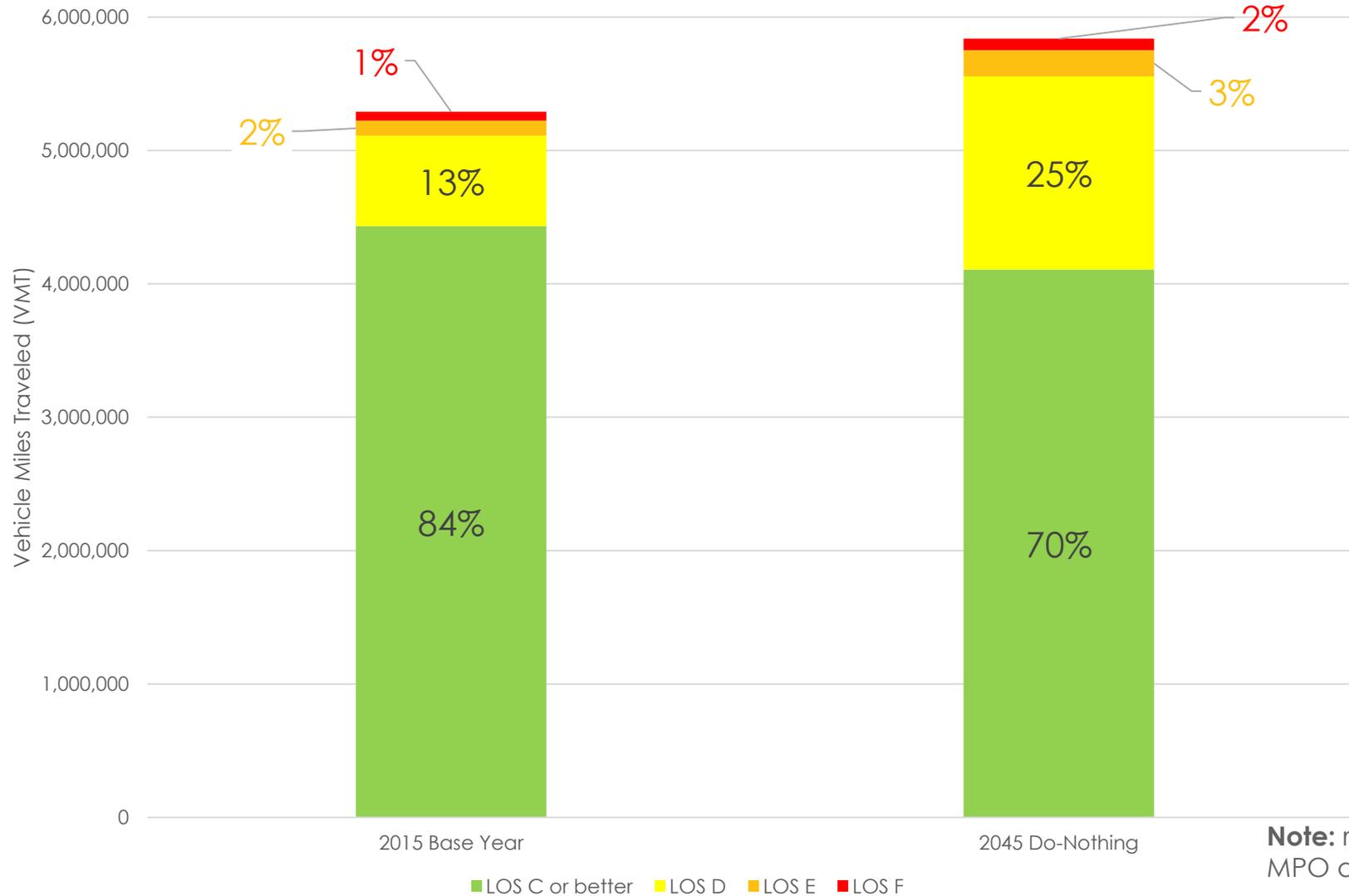
$$LOS = \frac{\text{Modeled Daily Traffic}}{\text{Daily Capacity}}$$

2045 Level of Service	
	C or better (V/C <= 0.7)
	D (0.7 < V/C <= 0.85)
	E (0.85 < V/C <= 1)
	F (V/C > 1)
	State
	MPO Boundary
	Counties

Daily Vehicle Miles of Travel (VMT) by Facility Type



Daily Vehicle Miles of Travel (VMT) by Level of Service



Note: result represents links within MPO area

Daily Vehicle Hours of Travel (VHT) by Facility Type



Overall Growth

17% ↑

Note: result represents links within MPO area

Next Steps

- MPO staff provides project list for remaining scenarios
- Evaluate remaining future year MTP scenarios
- Analyze system performance
- Provide outputs to MPO planners to prioritize projects

THANK
YOU
Questions ?