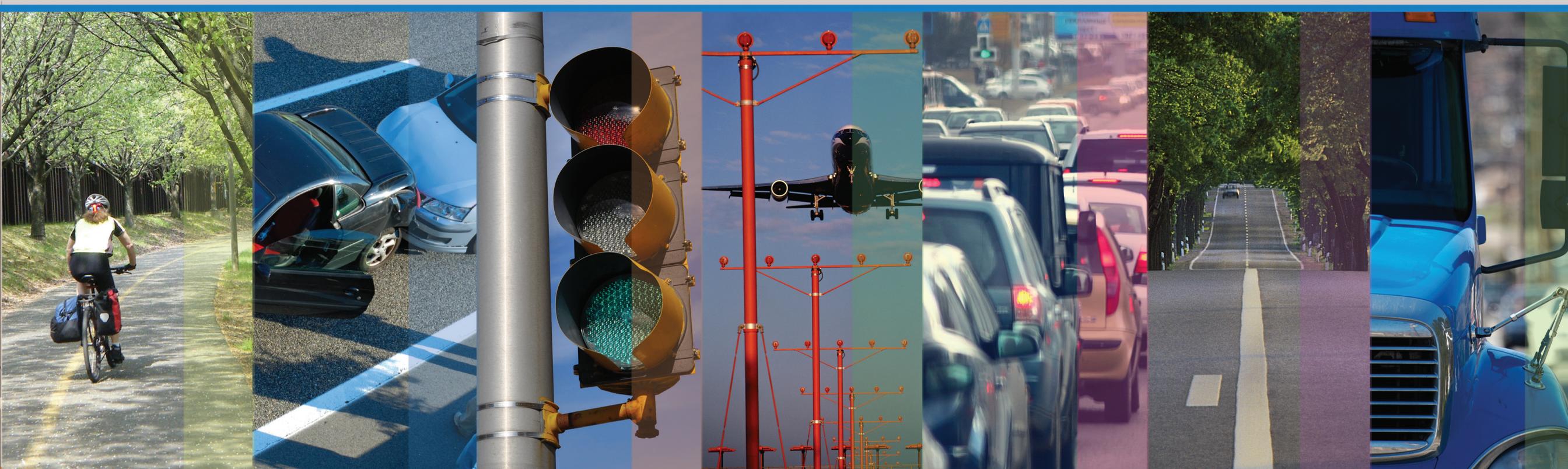


2040 Statewide Transportation Plan/ 2015 Statewide Strategic Transportation Plan



January 2016



PLAN OVERVIEW

TRANSPORTATION IN GEORGIA

Georgia’s transportation system drives Georgia’s economy, the success of our communities, and our quality of life. Continued investment in improving transportation and mobility within the State is essential to improving and maintaining Georgia’s economic standing and retaining our high quality of life.

Federal legislation¹ requires states to have a multimodal long-range transportation plan that outlines general investment policies over a minimum 20-year plan horizon. Long-range Statewide Transportation Plans (SWTP) must

¹ Moving Ahead for Progress in the 21st Century (MAP-21), Title 23 U.S.C., <https://www.fhwa.dot.gov/map21/legislation.cfm>.

be continually evaluated and periodically updated as appropriate, typically every four to five years. The most recent Georgia long-range transportation plan, the *2005-2035 Georgia Statewide Transportation Plan*, was completed and approved in January 2006.

State legislation² requires a transportation investment plan with specific investment strategies identified to advance economic growth in the State. This Statewide Strategic Transportation Plan (SSTP) must be updated every two years with ongoing monitoring of key strategies through an annual performance-monitoring progress report. The most recent SSTP was completed in September 2013.

² Statewide Strategic Transportation Plan, OCGA 32-2-411.

Our transportation system drives Georgia’s economy, the success of our communities, and our own quality of life.



In 2014, Georgia was named the #1 state in the U.S. for Business.
CNBC, 2014.



Of all 50 states, Georgia ranks #16 in the cost of living.
U.S. Chamber of Commerce’s Enterprising State’s Report, 2012.



Georgia consistently ranks highly for having some of the smoothest roadway pavement in the country.
Federal Highway Administration.



Georgia ranks as the #3 top place in the world to make films.
P3 Magazine.

This plan, for the first time, combines the traditional transportation analyses of the federally required long-range transportation plan with the strategic business case for transportation investment required by the State.

The 2040 SWTP/2015 SSTP documented herein meets all state and federal transportation planning requirements for Georgia. This plan, for the first time, combines the traditional transportation analyses of the federally required long-range transportation plan with the strategic business case for

transportation investment required by the State. The 2040 SWTP/2015 SSTP provides a comprehensive look at transportation issues and investment needs in Georgia now and through the year 2040. It forecasts available funding for transportation investment and develops a set of strategic, financially

constrained investment recommendations to meet the transportation demands of the State.³

³ Additional technical material developed as part of the 2040 SWTP/2015 SSTP is included in: Appendix A (Study Methodology), Appendix B (Literature Review), Appendix C (Data Collection), Appendix D (Existing Conditions), Appendix E (Revenue Forecast), Appendix F (Economic Forecast), Appendix G (Future Deficiencies), Appendix H (Economic Impact), and Appendix I (Public Involvement).

HIGHWAYS



123,546
center line miles

15%
owned by GDOT

supporting
215 million
vehicle miles traveled (VMT)

BRIDGES



14,739 bridges
(including culverts)

55 percent
owned by GDOT

TRANSIT



15 urban fixed-route
transit providers

supporting
152 million
bus riders in 2012

FREIGHT RAIL



4,844 miles
of active track

supporting
193 million
tons of goods in 2010

AIRPORTS



104 publicly
owned airports

includes
9 commercial
service airports

supporting
47 million
commercial passengers in 2012

BIKE/PEDESTRIAN



14 state
bike routes

supporting
75,000+ bicycle/
pedestrian commuters in 2010

MARINE PORTS



3 ports
in operation

supporting
27 million
tons of goods in 2010

EXISTING TRANSPORTATION SYSTEM

Georgia’s transportation system is planned and constructed by several agencies across the State, including the Georgia Department of Transportation (GDOT), individual cities and counties, and port, airport, and transit authorities. GDOT shares responsibility for planning and programming transportation funding with 16 Metropolitan Planning Organizations (MPO) in urbanized areas across the State. GDOT has the responsibility to maintain and operate the roadways which it owns in urban areas.

While the 2040 SWTP/2015 SSTP focuses on the transportation assets owned and operated by GDOT, it touches upon all of the transportation facilities in the State which include roadways, public transportation, railroads, airports, marine ports, and bicycle/pedestrian facilities. It presents statewide economic and transportation demand forecasts given expected population and employment growth and assesses the current and future performance of all these modes over the plan horizon.

The existing transportation system in Georgia is comprised of the following:⁴

⁴ Detail on existing infrastructure and network performance by mode is included in Appendix D (Existing Conditions).

- **Highway System**

- Over 123,000 center-line miles⁵ on the Georgia highway system. Of total center line miles, approximately 31,000 (25 percent) are part of the Federal Aid System (FAS) and eligible for federal transportation funding; this includes both GDOT-owned and non-GDOT-owned facilities. Approximately 18,000 miles are both GDOT-owned and on the FAS (15 percent of total center line miles).
- 14,739 bridges (includes culverts), 55 percent of which is GDOT owned.
- Supports over 215 million vehicle-miles traveled (VMT) on the FAS; 90 percent of the vehicle-miles on the FAS are on GDOT-owned roads.

- **Transit**

- Fifteen urban fixed-route transit providers, supporting over 152 million riders in 2012 (bus and rail).
- Comprehensive network of service providers in rural areas of the State supporting rural human services mobility needs.

⁵ Mileage is reported as center line miles; this excludes the double counting of directionally separated roads, and roads that are designated with multiple signage.

- **Freight Rail**

- Over 6,000 track miles of freight rail, 4,844 of which are active, supporting the movement of 193 million tons of goods in 2010.
- 301 track miles of passenger rail in Georgia, supporting two rail corridors and just under 568,000 passengers in Georgia in 2011 to 2012.

- **Airports**

- 104 publicly owned airports, 9 of which offer commercial services, with over 2 million general aviation flights and 73,000 commercial flights annually.
- The 9 commercial service airports supported 47 million enplaned passengers in 2012.

- **Ports**

- Three ports currently in operation, moving over 27 million tons of goods in 2010.

- **Bicycle Network**

- Fourteen state bike routes, totaling over 2,900 miles, 70 percent on GDOT-owned state routes, supporting just over 75,000 bicycle commuters in 2010.

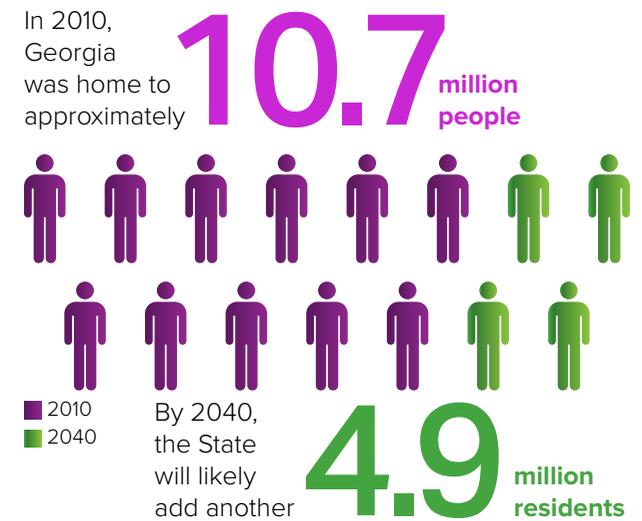
The share of the total population accounted for by persons 65 and older will almost double from 10 to 19 percent, while the share of working age population will decrease from 61 to 55 percent.

ANTICIPATED GROWTH TRENDS

Transportation investment, population and employment growth, and economic growth are closely linked. As infrastructure investments are made the results are experienced not only by the traveler in improved travel time, reliability, comfort and safety, but also in the economy through improved productivity and growth. Economic factors such as employment, industry structure, and population all influence transportation demand in return. The performance and condition of the transportation system in Georgia will directly impact these relationships that drive economic growth in the State. A summary of population, employment, and economic growth projections developed as part of the 2040 SWTP/2015 SSTP is provided in the following section.⁶

POPULATION GROWTH. Georgia has ranked as one of the fastest-growing states population-wise in the nation for many decades, and continues to add people at a higher rate than the national average. Population growth did slow during 2008/2009, but continued despite an actual decline in employment. Georgia is projected to continue to grow faster than the national average although the rate of growth will taper compared to recent decades. The State's

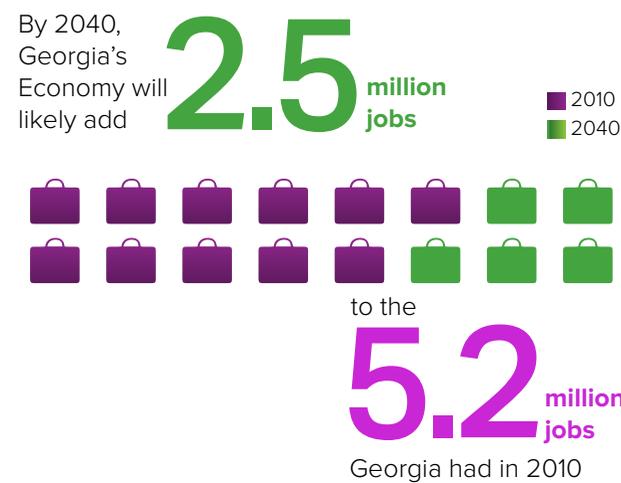
⁶ Detail on economic growth projections is provided in Appendix F (Economic Forecast).



transportation system will, accordingly, need to grow and adapt to accommodate the needs of new residents. By 2040, the State is forecast to have a population of approximately 15.6 million compared to around 10.7 million in 2010.

Along with continued strong population growth, the age distribution of Georgia's population also will change. As the baby boom generation retires, many people will move to southern and southwestern areas of the nation and Georgia will see a significant increase in the number of residents age 65 and older. The share of the total population accounted for by persons 65 and older will almost double from 10 to 19 percent, while the share of working age population will decrease from 61 to 55 percent. The transportation system will have to be modified in many ways to reflect this changing demographic make-up.

EMPLOYMENT GROWTH. Several major industry employment trends taking place today in Georgia are expected to continue over the next 30 years. Job growth will continue to be dominated by the service sector which is forecast to grow by over 100 percent between 2000 and 2040. This sector includes business and professional occupations (i.e., engineering, architecture, administrative, and managerial), healthcare, recreation, and education. Manufacturing is forecast to continue its decline of recent years due to increased foreign competition, with a forecast drop in employment of 42 percent. Actual output may increase, however, as manufacturers continue to implement new technologies to improve productivity. The construction industry, currently the second largest in the State behind only services, will continue to grow as commercial and residential structures are needed to meet population and employment demand. By 2040, the State is



forecast to have approximately 7.7 million jobs compared to approximately 5.2 million jobs in 2010, an increase of approximately 2.5 million jobs.

ECONOMIC GROWTH. The pace of Georgia's economic growth is a key determinant of transportation demand as higher economic growth results in increased employment and production of goods and services, which in turn places more demand on the transportation system. Gross State Product (GSP) measures the total production of goods and services in a state. The State's overall average annual growth rate between 2000 and 2040 is forecasted to be 2.3 percent. Among the fastest growing sectors are transportation, communications, and utility industries, which are expected to grow even faster than services. The service and finance, insurance, and real estate (FIRE) industries will continue to account for the largest share of the economy. The government and manufacturing sectors are forecast to have the largest declines.

PERFORMANCE-BASED PLAN DEVELOPMENT

Performance measurement is a critical element of a strategic planning process. It provides a level of transparency and objectivity that is critical for plan development and implementation. Performance-based planning takes place within an overall Performance Framework, depicted in Figure 1 (page 5).

Figure 1. Performance-Based Planning Process



The transportation community has become increasingly proactive in implementing performance-based planning over the last decade. Recent, significant transportation funding issues have served as an immediate driver for developing more structured and transparent performance-based decision-making processes. In addition, MAP-21 has advanced performance-based federal highway aid, i.e., allocation of federal dollars based on demonstrated performance of projects in relation to seven national goal areas – Safety, Preservation, Congestion Reduction, Reliability, Freight/Economic Growth, Environment, and Project Delivery. According to the U.S. Department of Transportation (U.S. DOT), MAP-21 “transforms the policy and programmatic framework for investments... the cornerstone of [which] is the transition to a performance and outcome-based program.” MAP-21 requires U.S. DOT to develop performance measures for pavement conditions, bridge conditions, injuries and fatalities, traffic congestion, on-road mobile source emissions, and freight movement. States will invest resources in projects to achieve individual targets that collectively will make progress toward these national goals.⁷

⁷ Note that Project Delivery is addressed via the 2015 SSTP Execution Framework; reference the *2015 Statewide Strategic Transportation Plan* section (page 66).

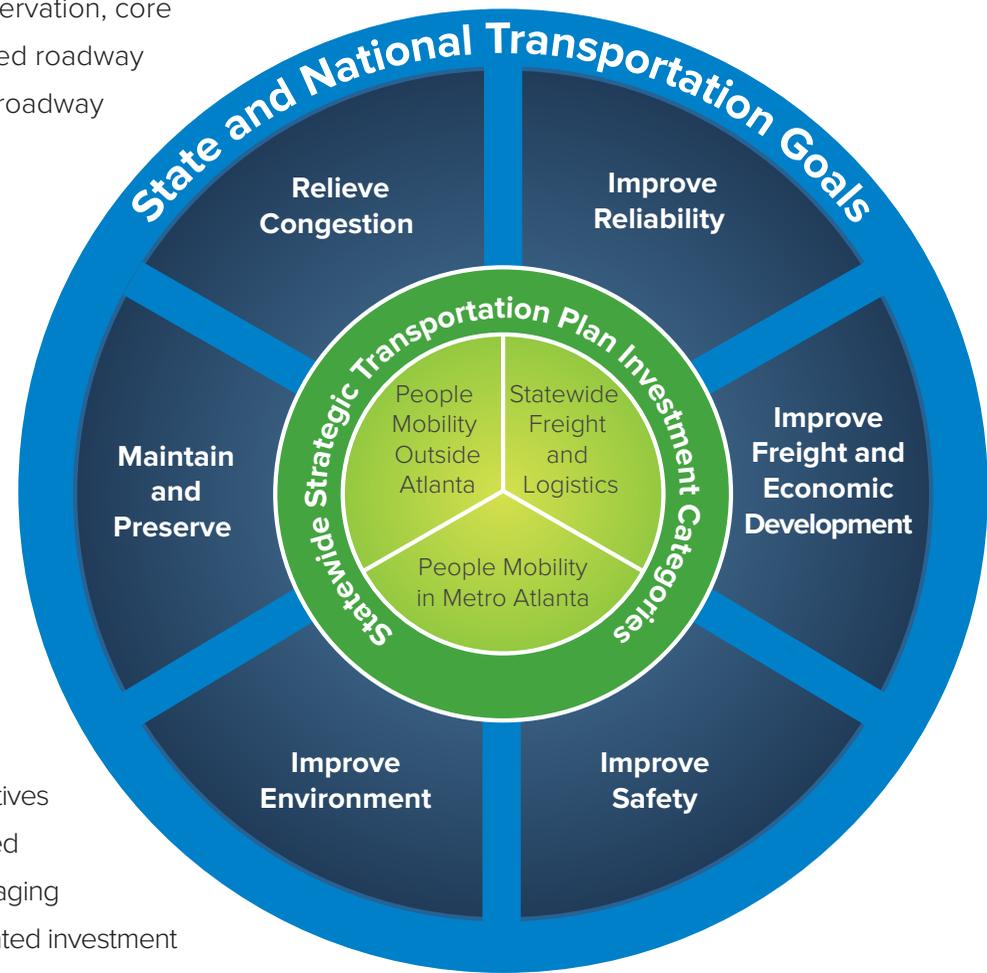
At the state level, in Georgia, the SSTP requires a strategic, performance-based plan focused on economic growth. It guides state transportation decisions across three investment categories:

1. Statewide Freight and Logistics.
2. People Mobility (excluding Atlanta).
3. People Mobility in Metro Atlanta.

An integrated set of investment objectives that focus on system preservation, core transit operations, improved roadway operations, and strategic roadway capacity expansion that is coupled with improved land use planning have shaped the transportation investment philosophy of the State since the inception of the SSTP in 2010. An annual progress report monitors execution of SSTP strategies and reports system performance across key investment programs.

Both federal and state initiatives advance performance-based planning principles, encouraging more strategic, results-oriented investment

decisions in the context of a constrained funding environment. Federal requirements focus on state transportation plans that advance a core set of transportation goals, and adherence to a set of corresponding performance measures and targets to monitor and report progress towards those goals. To date, statewide practice has focused on defining goals and performance measures to evaluate plan recommendations, with much less



emphasis on execution of the plan through target-setting and reporting. The SSTP has focused primarily on defining specific investment objectives needed to advance economic growth, as well as tracking and monitoring implementation of the key investment strategies through the annual progress report.

The 2040 SWTP/2015 SSTP provides a unique opportunity to leverage both federal and state performance emphasis areas, with MAP-21 providing the broad framework and transportation goals for the plan and the SSTP providing the unique state-defined objectives needed to advance those goals. The integrated planning effort also enables a consistent set of targets to be established between the SWTP and SSTP to ensure GDOT is monitoring and reporting plan implementation and associated performance impacts in a standardized and complementary manner.

The 2040 SWTP/2015 SSTP provides a unique opportunity to leverage both federal and state performance emphasis areas.

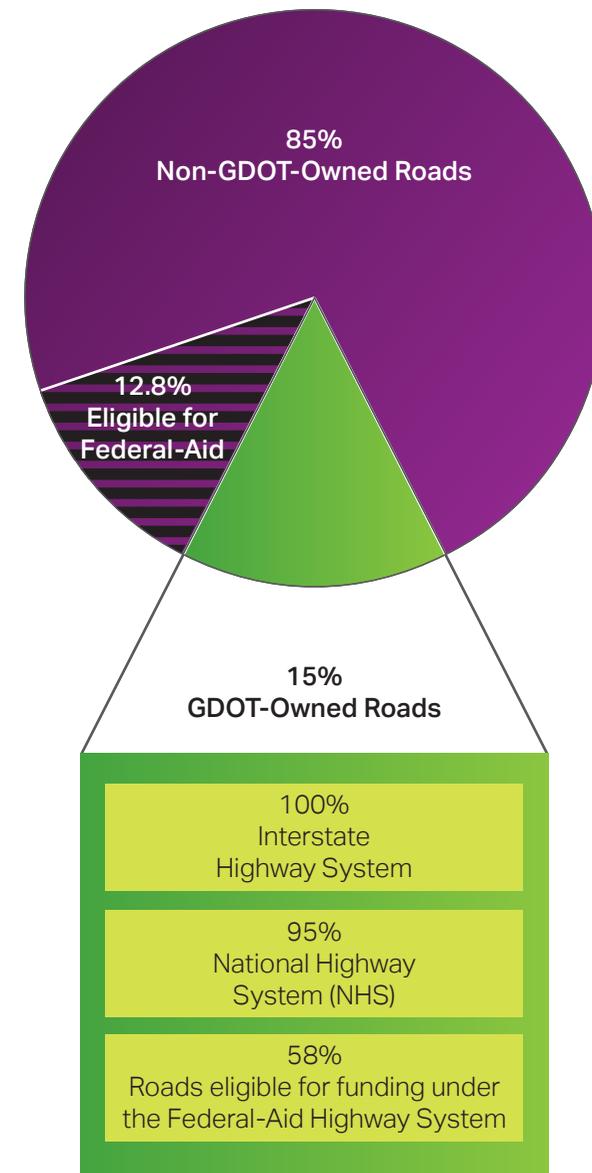
INVESTMENT NEEDS

HIGHWAY

A primary mission of GDOT is to plan, maintain, and operate Georgia’s highway system. This responsibility includes the portion of the highway system that GDOT owns, as well as administering U.S. DOT funds for those portions of the highway system that it does not own, but which are eligible for federal transportation funding (Figure 2, page 8).

There are over 123,000 center lane miles of public roads in Georgia, of which GDOT owns only 15 percent. However, the GDOT-owned roads are among the most heavily traveled in Georgia, including the Interstate Highway System and large portions of the National Highway System (NHS), and FAS.

Investment needs for the Georgia highway system are summarized across five highway programs – pavement, bridges, roadway capacity, roadway operations, and safety. For each highway program a performance curve is included which presents performance impacts in the year 2040 given average annual funding levels applied over the plan horizon. Average annual funding levels used to build out each performance curve are capped by investment need, not by available revenue; i.e., the point in



Source: Cambridge Systematics from GDOT’s 2008 HPMS Submittal.

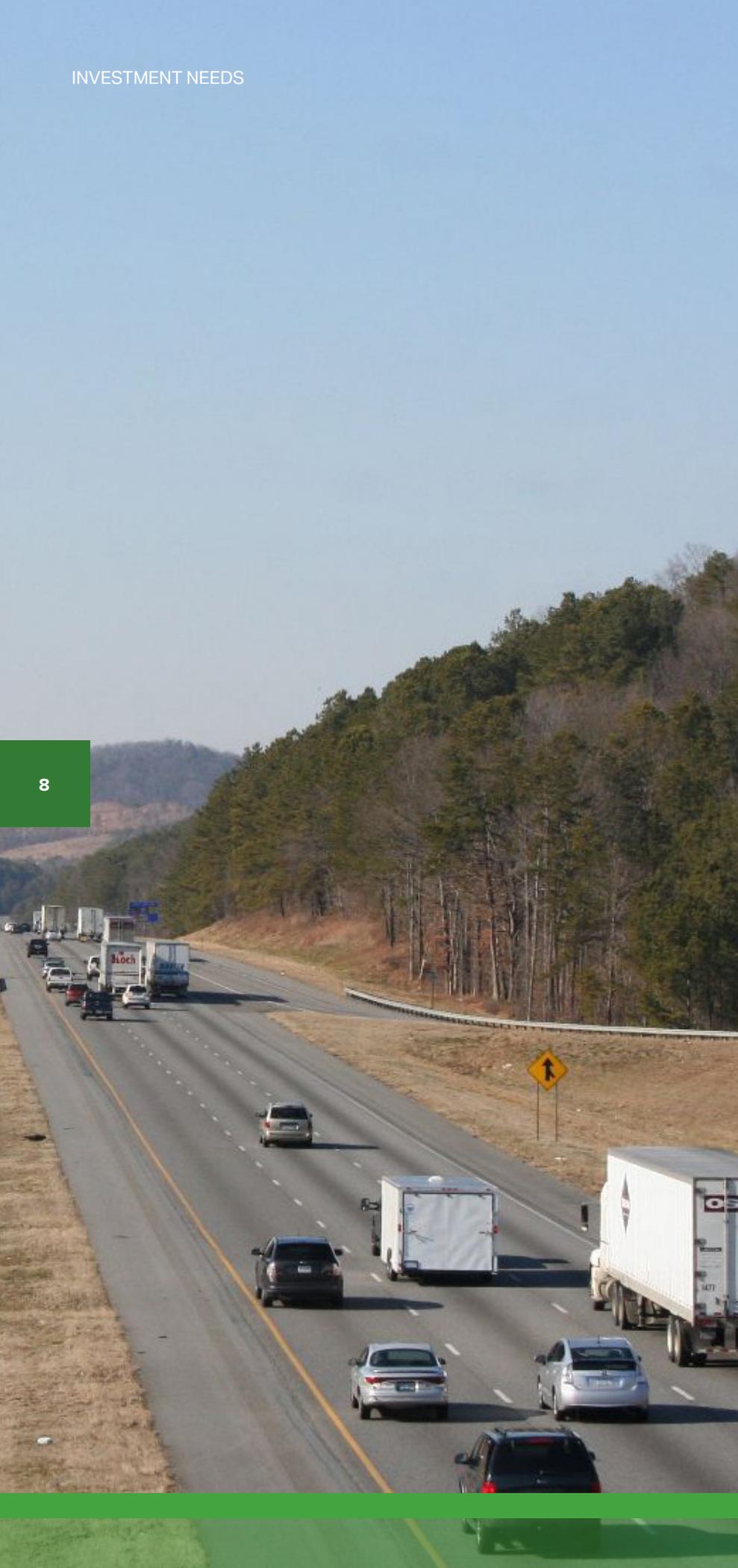
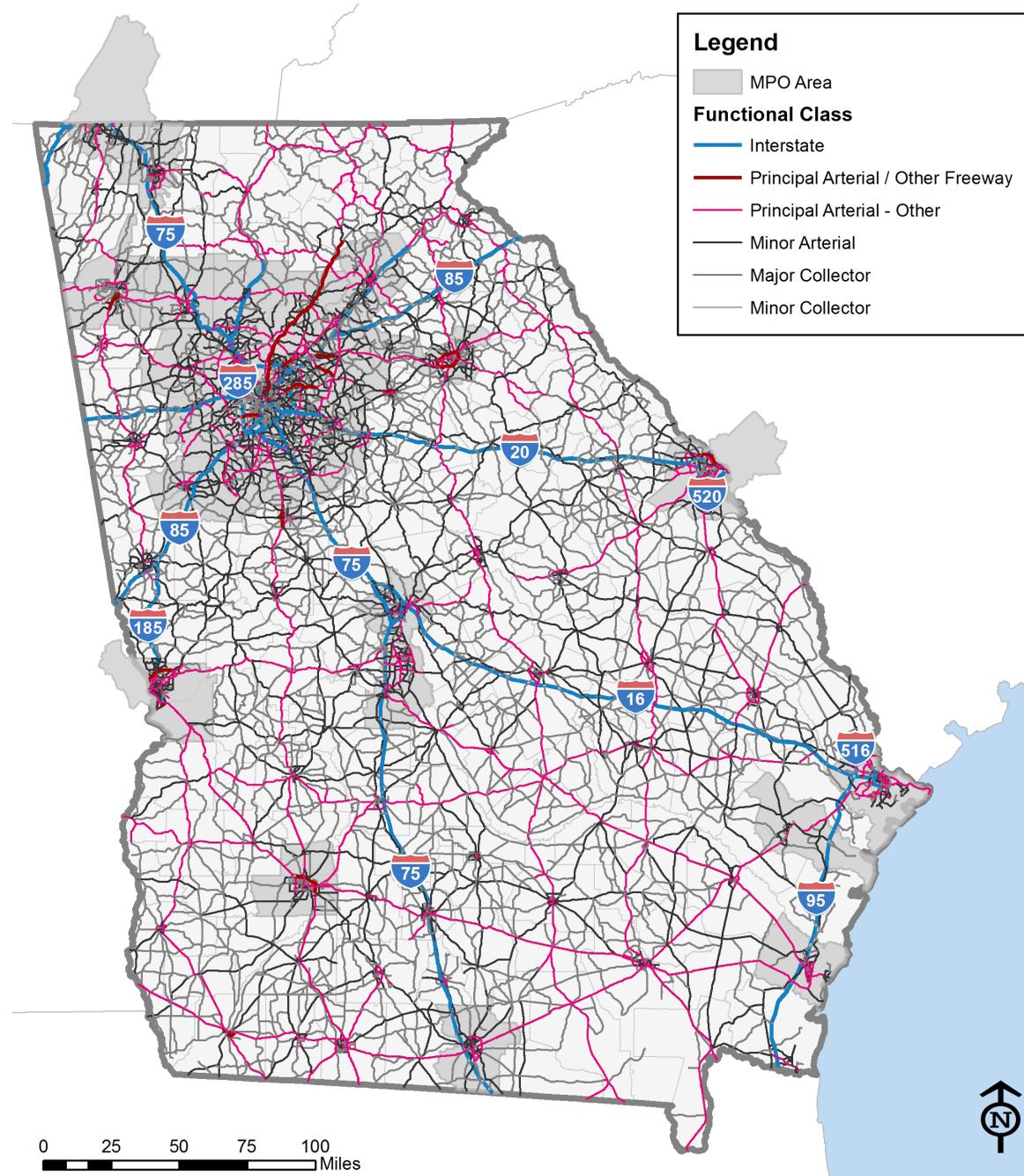


Figure 2. Federal-Aid Highways in Georgia



Source: Westats and Cambridge Systematics, 2040 SWTP/2015 SSTP.

the curve where performance flattens reflects a maximum funding level at which investment needs are cost-effectively addressed. These curves facilitated an understanding of future performance within each program given varying levels of investment. The performance curves served as the backbone for an investment tradeoff analysis that was conducted as part of 2040 SWTP/2015 SSTP development to inform a set of performance-based, financially constrained investment recommendations (refer to the Recommendations section of this plan, pages 58-59).

PAVEMENT

The pavement condition of Georgia’s transportation network is vital for resident’s day-to-day activities and the State’s commerce. Pavement condition can affect highway users in several ways. Pavement roughness affects not only riding quality, but also fuel consumption, tire wear, maintenance and repair costs, and in the end, the life of the vehicle. It also can affect road users’ travel time and safety. A well-maintained roadway can reduce overall vehicle operating costs for personal and commercial vehicles and support roadway safety through the prevention of potholes and uneven lanes.

For the 2040 SWTP/2015 SSTP, the current and future physical condition of existing roadway pavements in Georgia was measured using the Highway Economic Requirements System-State (HERS-ST) model⁸ which reports forecasts of future pavement condition using the International Roughness Index (IRI). The IRI measures ride quality; i.e., pavement smoothness. It does not measure the condition of the entire pavement structure. The IRI is used to report pavement conditions annually by each state to the Federal Highway Administration (FHWA) through the Highway Performance Monitoring System (HPMS)⁹ which serves as a primary input into HERS-ST performance projections. At the state level, GDOT measures pavement quality through a combination of both ride quality and condition through its COPACES system. Because the IRI is the expected performance measurement method to be used for purposes of MAP-21 performance

⁸ HERS-ST is an economic analysis tool that uses engineering standards to identify highway deficiencies, and then applies economic criteria to select the most cost-effective mix of improvements for system-wide implementation. <https://www.fhwa.dot.gov/infrastructure/asstmgmt/hersindex.cfm>.

⁹ The HPMS is a national level highway information system that includes data on the extent, condition, performance, use and operating characteristics of the nation’s highways. <https://www.fhwa.dot.gov/policyinformation/hpms.cfm>.

reporting, it is applied as part of 2040 SWTP/2015 highway needs analysis to ensure federal performance monitoring requirements are addressed.

A well-maintained roadway can reduce overall vehicle operating costs for personal and commercial vehicles and support roadway safety through the prevention of potholes and uneven lanes.

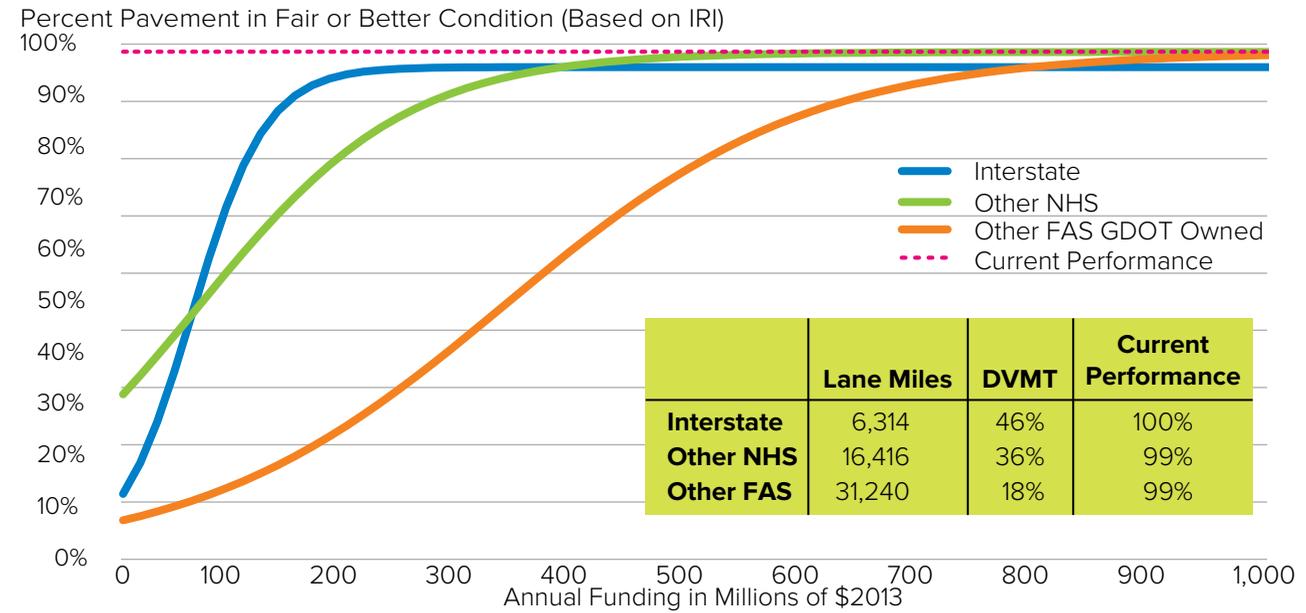
A minimum performance threshold of 95 percent of the Interstate Highway System in fair or better condition (as measured by IRI) is currently proposed as part of MAP-21 draft rulemaking.¹⁰ Georgia currently exceeds this threshold on the Interstate Highway System. In fact, according to the IRI pavement scoring system, almost

¹⁰ <https://www.federalregister.gov/articles/2015/01/05/2014-30085/national-performance-management-measures-assessing-pavement-condition-for-the-national-highway>, January 2015.

100 percent of pavement miles on the entire GDOT-owned, Federal Aid System are in fair or better condition.

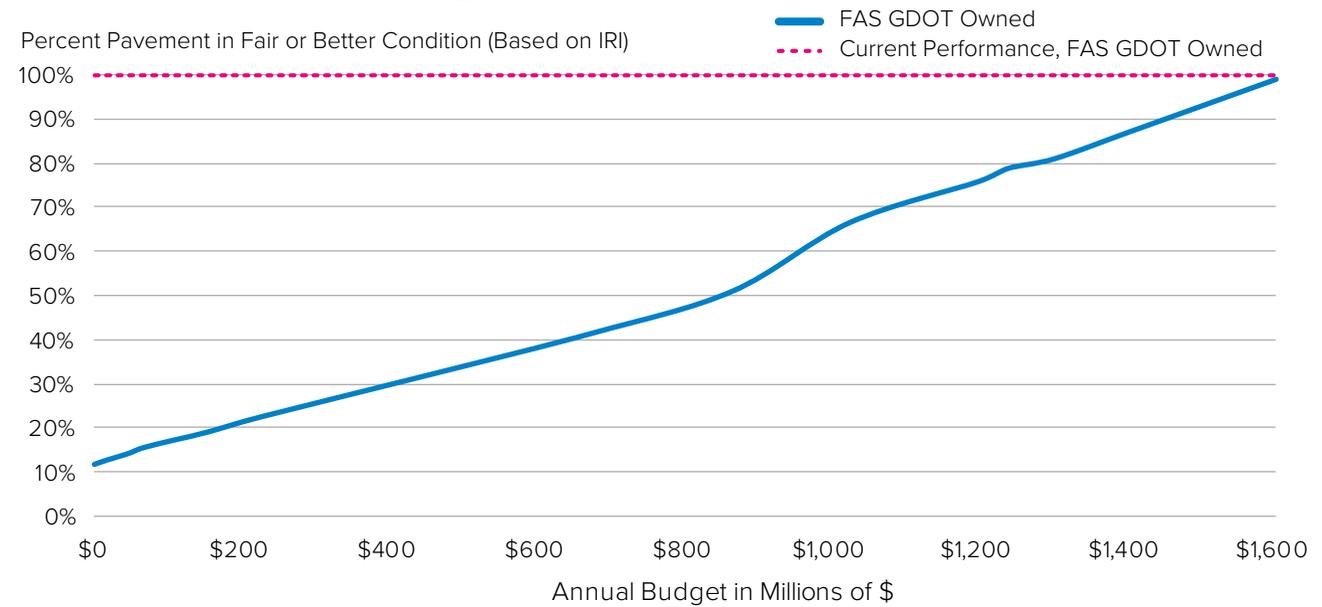
Despite today's excellent pavement conditions, even if demand along a roadway segment is constant or decreases, pavement performance will deteriorate with age. Therefore, it is necessary to specify some level of funding over the plan horizon to properly address long-term deficiencies. HERS-ST was used to compute pavement performance forecasts in the year 2040, in terms of IRI, at varying annual funding levels (Figures 3 and 4, page 10). Performance curves are shown in Figure 3 for the Interstate Highway System (Interstate), the Non-Interstate National Highway System (other NHS), and the remaining Federal Aid System, GDOT-owned (other FAS GDOT-owned). The performance versus funding relationship for the entire GDOT-owned, Federal Aid System is shown in Figure 4. Current performance is highlighted in both figures for context.

Figure 3. Pavement Performance in 2040 by Road Class



Source: Cambridge Systematics, 2040 SWTP/2015 SSTP.

Figure 4. Pavement Performance in 2040 for the GDOT-Owned, Federal Aid System



Source: Cambridge Systematics, 2040 SWTP/2015 SSTP.

As shown in Figure 4, at current annual funding levels of approximately \$277 million per year¹¹, pavement conditions are forecast to deteriorate sharply across the GDOT owned system by 2040, from approximately 100 percent of the system in fair or better condition today to only 22 percent of the system in fair or better condition.

To meet minimum federal thresholds of performance that will require at least 95 percent of the Interstate Highway System in fair or better condition, as well as ensure adequate conditions on the remainder of the GDOT-owned FAS system, approximately \$1.07 billion per year is needed – almost tripling today’s annual funding levels. Approximately \$1.6 billion per year is needed to ensure today’s excellent pavement condition levels – which exceed proposed MAP-21 performance thresholds – are carried forward in the future.¹²



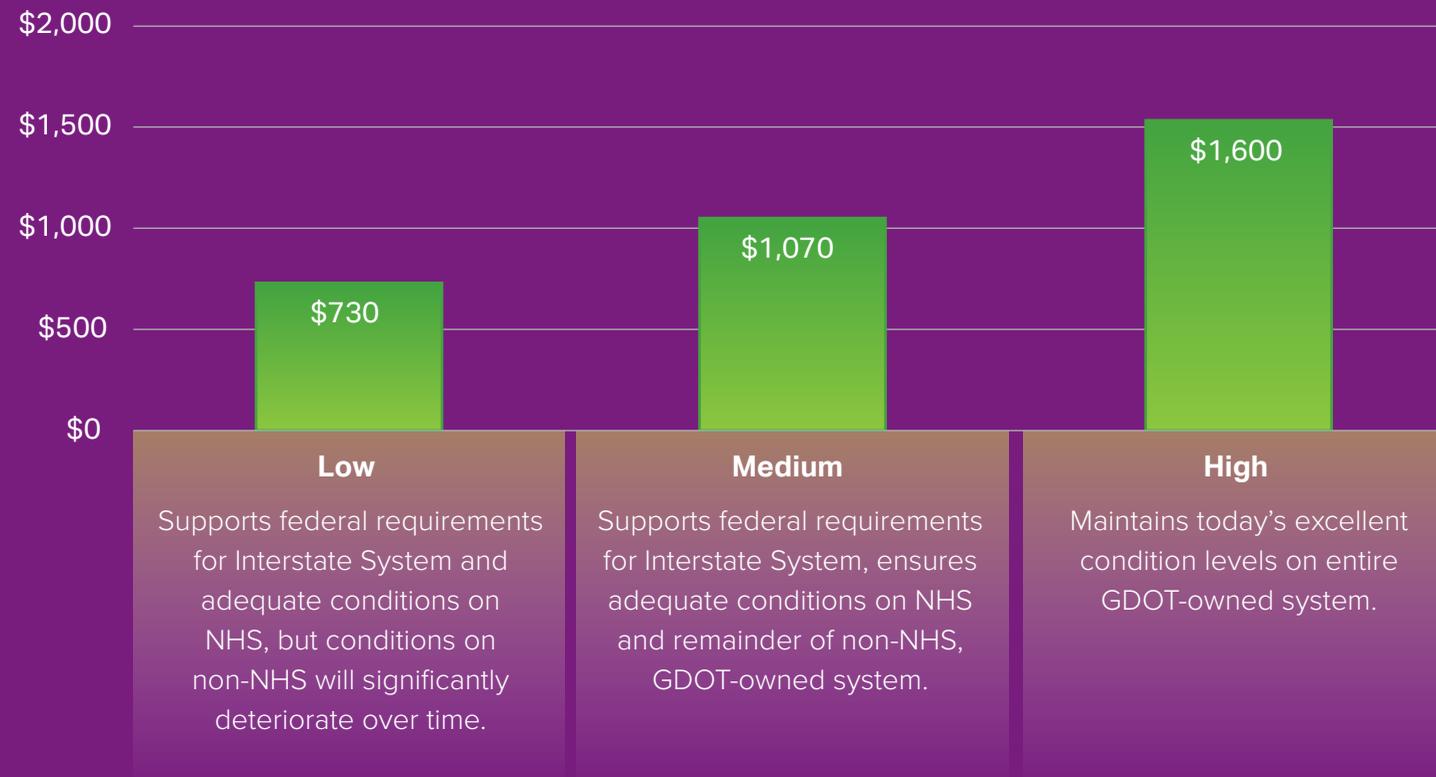
Pavement conditions are forecast to deteriorate sharply across the GDOT owned system by 2040, from approximately 100 percent of the system in fair or better condition today to only 22 percent of the system in fair or better condition.

¹¹ Average annual spending from the 2014-2017 State Transportation Improvement Program.

¹² Total investment needs to maintain pavement conditions on GDOT-owned facilities over the plan horizon, as summarized here, reflect IRI projections of pavement smoothness. These projections may under represent investment needs based on COPACES projections of pavement quality and condition.

FUNDING LEVELS

*\$Millions Per Year



* As part of plan development an analysis of performance impacts by funding level was completed for highway-oriented investments. Reference Plan Recommendations for more detail.

INVESTMENT NEEDS

- Pavement conditions are expected to deteriorate significantly if historic spending levels are carried forward; only 22 percent of the state-owned federal-aid system will be in fair or better condition compared to almost 100 percent today.
- Aggressive investment over today's spending levels will be needed to meet federal performance thresholds, reduce commercial and private vehicle operating costs, and improve safety.
- Transportation networks critical to the state economy (priority freight corridors and Interstate System) will require priority funding.

BRIDGE

There are 14,739 bridge structures on public roads in Georgia, including culverts, with a total deck area of approximately 100 million square feet. GDOT owns 55 percent of these bridges, but those bridges represent 77 percent of the bridge deck area in the State.

The condition of these bridges are dependent on not only structural integrity, but also whether its design can handle the amount of traffic traversing the bridge. Specifically, bridge performance has been defined by whether a bridge is Structurally Deficient (SD) or Functionally Obsolete (FO). Structural deficiencies are characterized by deteriorated conditions of significant bridge elements and potentially reduced load-carrying capacity. A “structurally deficient” designation does not imply that a bridge is unsafe, but such bridges typically require significant maintenance, repair, and operational restrictions to remain in service, and would eventually require major rehabilitation or replacement to address the underlying deficiency.

A bridge is considered Functionally Obsolete when it does not meet current design standards (for criteria such as lane width), either because the volume of traffic carried by the bridge exceeds the level anticipated when the bridge was constructed and/or the relevant design standards have been

revised. Addressing functional deficiencies may require the widening or replacement of the structure. Rural bridges tend to have a higher percentage of structural deficiencies, while urban bridges have a higher incidence of functional obsolescence due to rising traffic volumes.

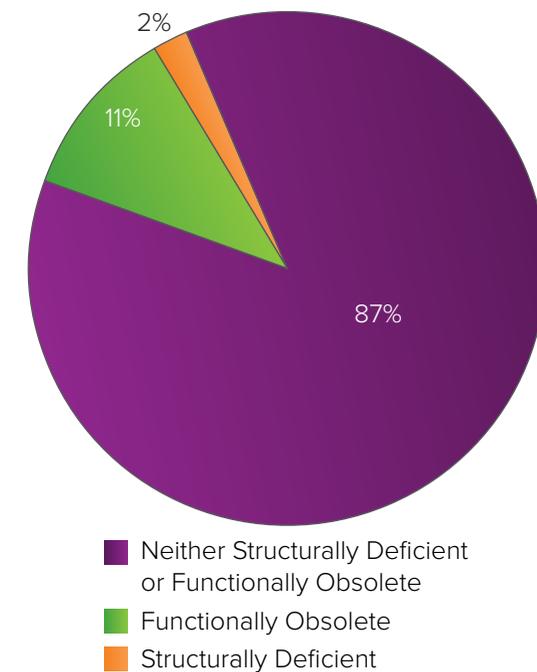
The majority of GDOT-owned bridges are neither structurally deficient nor functionally obsolete. This is similarly true for the deck area of bridges owned by GDOT, with only 2 percent of the deck area being on structurally deficient bridges and 11 percent of the deck area on functionally obsolete bridges (Figure 5, page 13).

This low percentage of bridges rated as SD or FO is similar among those located on the Interstate Highway System, NHS, and FAS for which federal funding is administered by GDOT. Even the structures not on any of these systems, which are owned by entities other than GDOT, only have 10 percent of their bridges as SD and 14 percent as FO.

Continued maintenance and preservation of Georgia’s bridges over the plan horizon is critical. The National Bridge Investment Analysis System (NBIAS)¹³ was used to estimate bridge

¹³ The National Bridge Investment Analysis System was developed for assessing national bridge investment needs. It is used to model investments in bridge repair, rehabilitation, and functional improvements for annual reports to U.S. Congress. <https://www.fhwa.dot.gov/policy/2013cpr/appendixb.cfm>.

Figure 5. Percent of Bridge Deck Area (GDOT-Owned Bridges) by Performance



Source: Cambridge Systematics from GDOT’s 2012 National Bridge Inventory Submittal.

performance of the existing federal-aid bridge network in the State (excluding culverts) at varying funding levels in the year 2040. NBIAS calculates the number of bridges and the percentage of deck area on nonstructurally deficient bridges based on bridge deck, super, and sub-structure. The percent deck area on nonstructurally deficient bridges, as defined by NBIAS, is used to report bridge conditions, consistent with the expected performance

Bridge conditions are forecast to deteriorate slightly across the federal-aid bridge system by 2040, from approximately 98 percent of the deck area on nonstructurally deficient bridges today to approximately 90 percent.

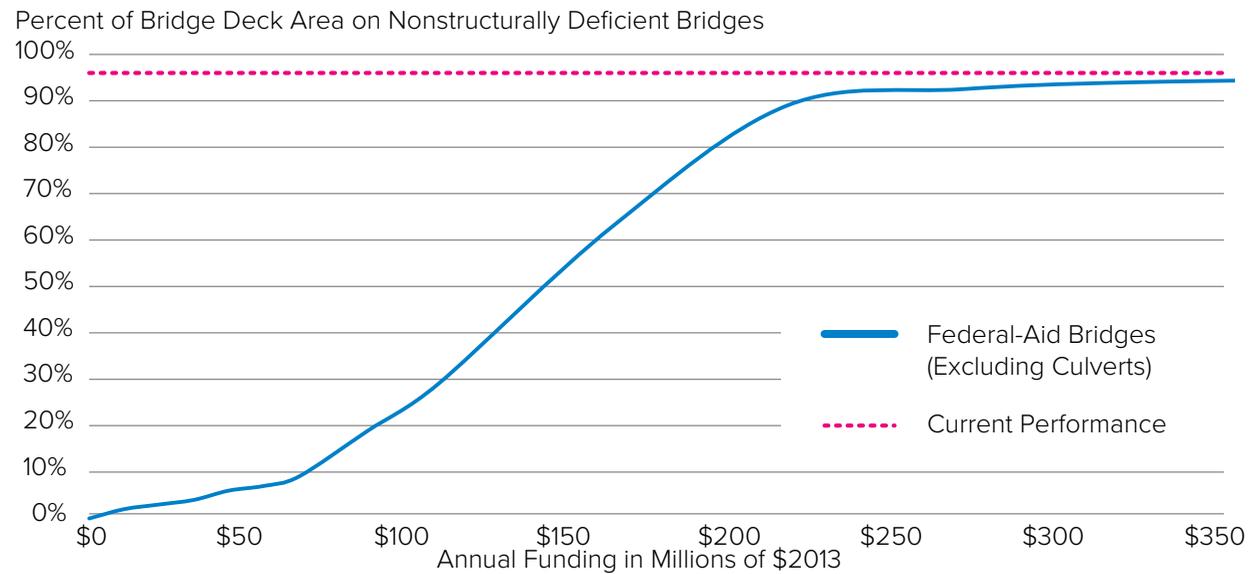
measure for purposes of MAP-21 performance reporting. Bridge condition data is collected by each state and reported to the FHWA through the National Bridge Inventory (NBI), the primary input into NBIAS performance projections.¹⁴

Proposed MAP-21 performance regulations define a minimum performance threshold of 90 percent of bridge deck area on non-SD bridges for the NHS.¹⁵ Currently, approximately 98 percent of bridge deck area on all federal-aid bridges in

¹⁴ The NBI is a national database compiled by FHWA for all federal-aid bridges and bridge structures. <https://www.fhwa.dot.gov/bridge/nbi.cfm>.

¹⁵ <https://www.federalregister.gov/articles/2015/01/05/2014-30085/national-performance-management-measures-assessing-pavement-condition-for-the-national-highway>.

Figure 6. Bridge Performance (Federal-Aid System) in 2040



Source: Cambridge Systematics, 2040 SWTP/2015 SSTP.

Georgia are on non-SD bridges, exceeding the proposed MAP-21 performance threshold.

Future performance in the year 2040 is presented in Figure 6 (page 14) given average annual funding levels over the plan horizon, as projected through NBIAS. As shown in Figure 6, at current annual funding levels of approximately \$236 million per year,¹⁶ bridge conditions are forecast to deteriorate slightly across the federal-aid bridge system by 2040, from approximately 98 percent of the deck area on nonstructurally deficient bridges today to approximately 90 percent.

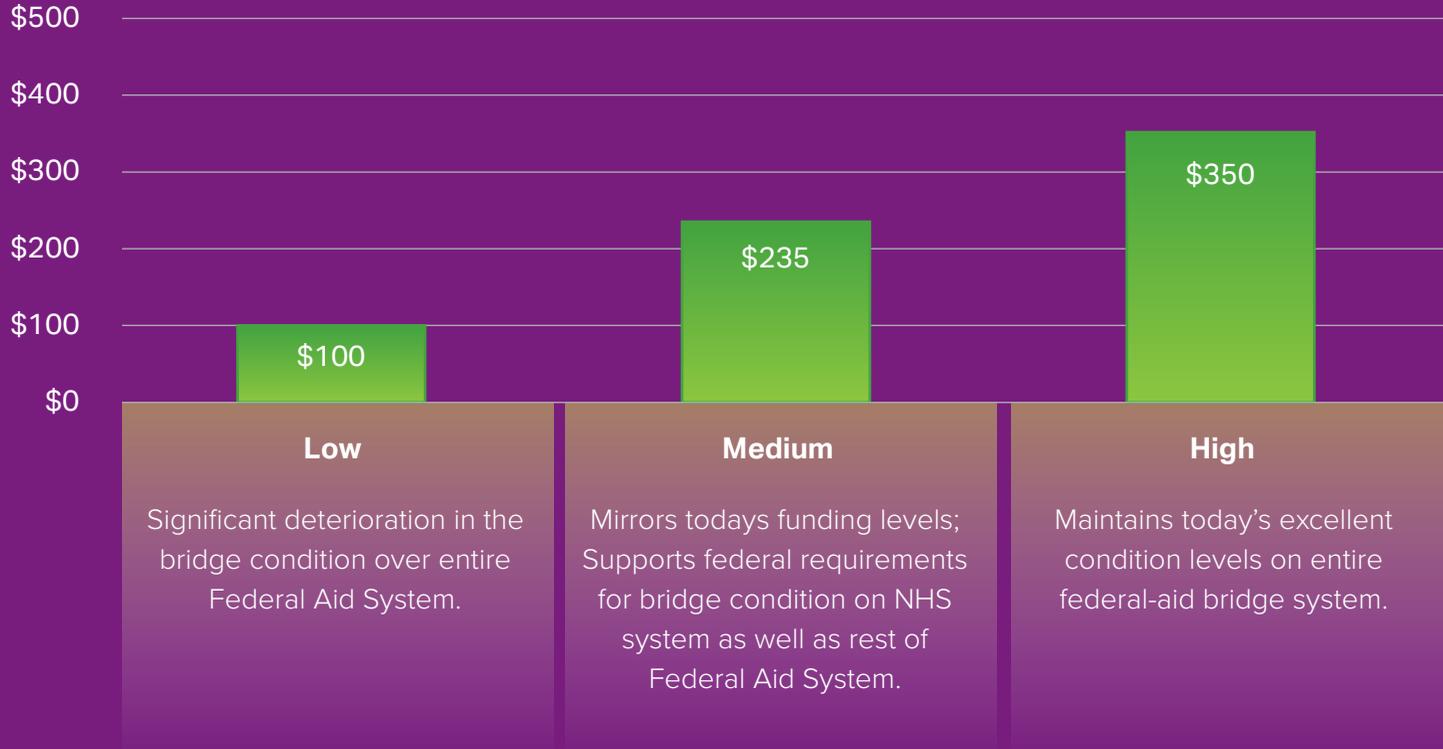
¹⁶ Average annual spending from the 2014-2017 State Transportation Improvement Program.

While current annual funding levels are estimated to be enough to address proposed minimum MAP-21 performance thresholds that will require at least 90 percent of deck area on the NHS to be on non-structurally deficient bridges, it is a decrease from today's excellent bridge condition levels. Approximately \$350 million per year is needed to replicates today's excellent bridge conditions as shown in Figure 6.¹⁷

¹⁷ Total investment needs to maintain federal-aid bridges over the plan horizon, as summarized here, reflect NBIAS projections and measures of structural deficiency. These investment levels may under represent investment needs based on GDOT's measures of bridge deficiency.

FUNDING LEVELS

*\$Millions Per Year



INVESTMENT NEEDS

- Approximately 2 percent of deck area on GDOT-owned bridges are Structurally Deficient today.
- Eleven percent of deck area on GDOT-owned bridges are functionally obsolete today.
- Continued investment at existing funding levels is expected to result in lower levels of bridge condition for the entire federal-aid bridge system over the plan horizon.

* As part of plan development an analysis of performance impacts by funding level was completed for highway-oriented investments. Reference Plan Recommendations for more detail.



CAPACITY

The capacity of the road system depends on the number of lanes and the operation of those lanes, such as the presence of traffic signals and roadway width. These factors establish how many vehicles can travel along a roadway within a designated amount of time. Roadways with too little capacity can cause delays, gridlocks, and increased travel times.

Understanding where roadways have volumes that exceed capacity is necessary to address where capacity improvements are needed the most. For the 2040 SWTP/2015 SSTP, Level of Service (LOS) is used to represent daily volume to capacity ratios (V/C) to identify where roadway capacity needs exist.

Currently, the LOS on the FAS in Georgia, including the NHS, averages LOS B.¹⁸ For the Interstate System the average is LOS C. The commonly accepted design standard for roads in rural areas is LOS C and for roads in urban areas is LOS D. Overall, across the State and on an average daily basis, nonaccess

controlled roadways average LOS B and access-controlled roadways average LOS C. However, peak-hour conditions on certain roadways, particularly in the Atlanta metropolitan region and other urbanized areas, can be as low as LOS F, meaning that the roadways are operating over capacity and are highly congested.

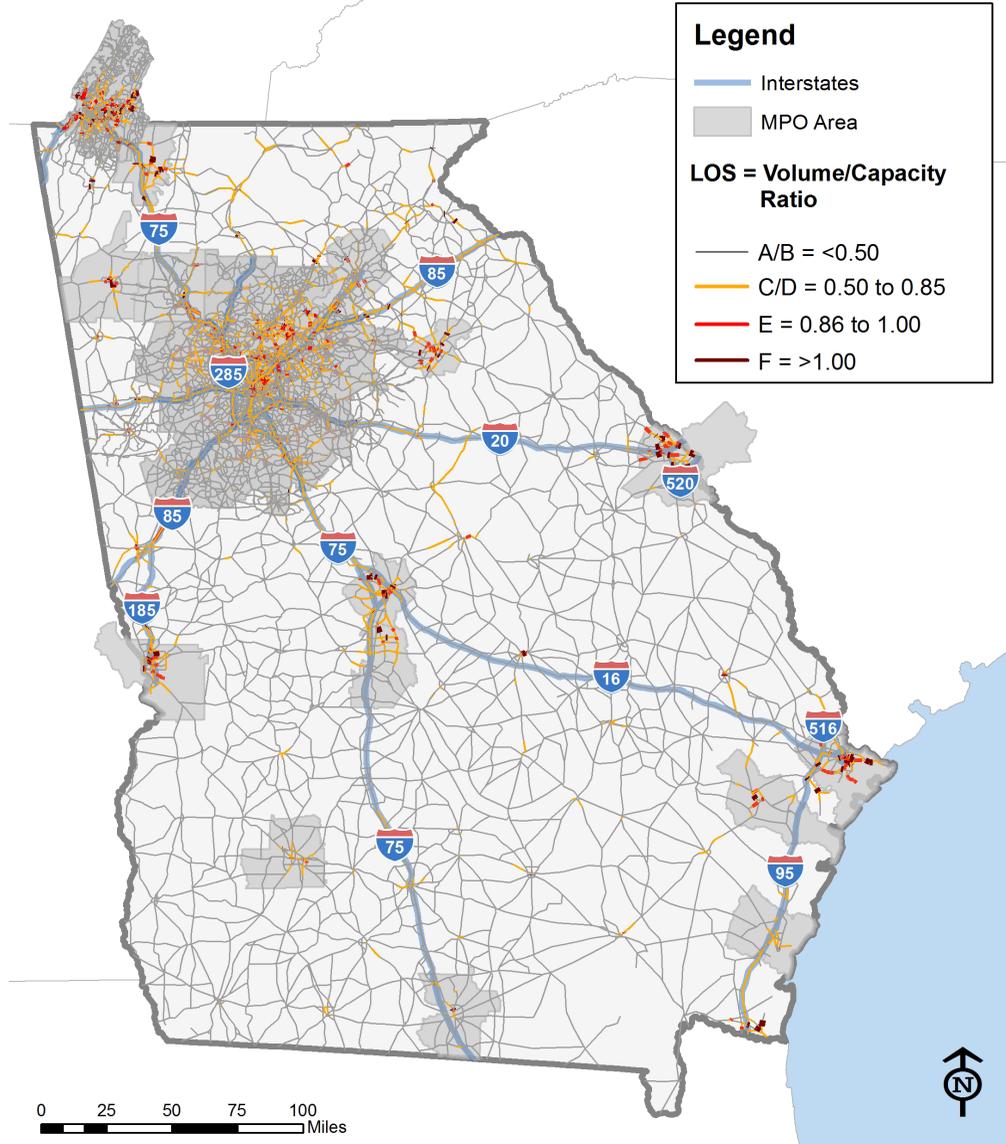
Traffic volumes are expected to increase by 2040 given anticipated population and employment growth. Forecast growth rates will lead to increased congestion, in particular in the Atlanta region. In 2040, road performance for the NHS deteriorates to an average LOS C, with significantly more locations operating at LOS E/F (Figure 7, page 17).

Forecast growth rates will lead to increased congestion, in particular in the Atlanta region.

¹⁸ Level of Service conditions were determined by extracting highway links for each system of interest from the GDOT Statewide Model and calculating a weighted average V/C ratio by link length. LOS thresholds are defined within the GDOT Statewide Model; reference Figure 7, page 17 for V/C ratio thresholds.

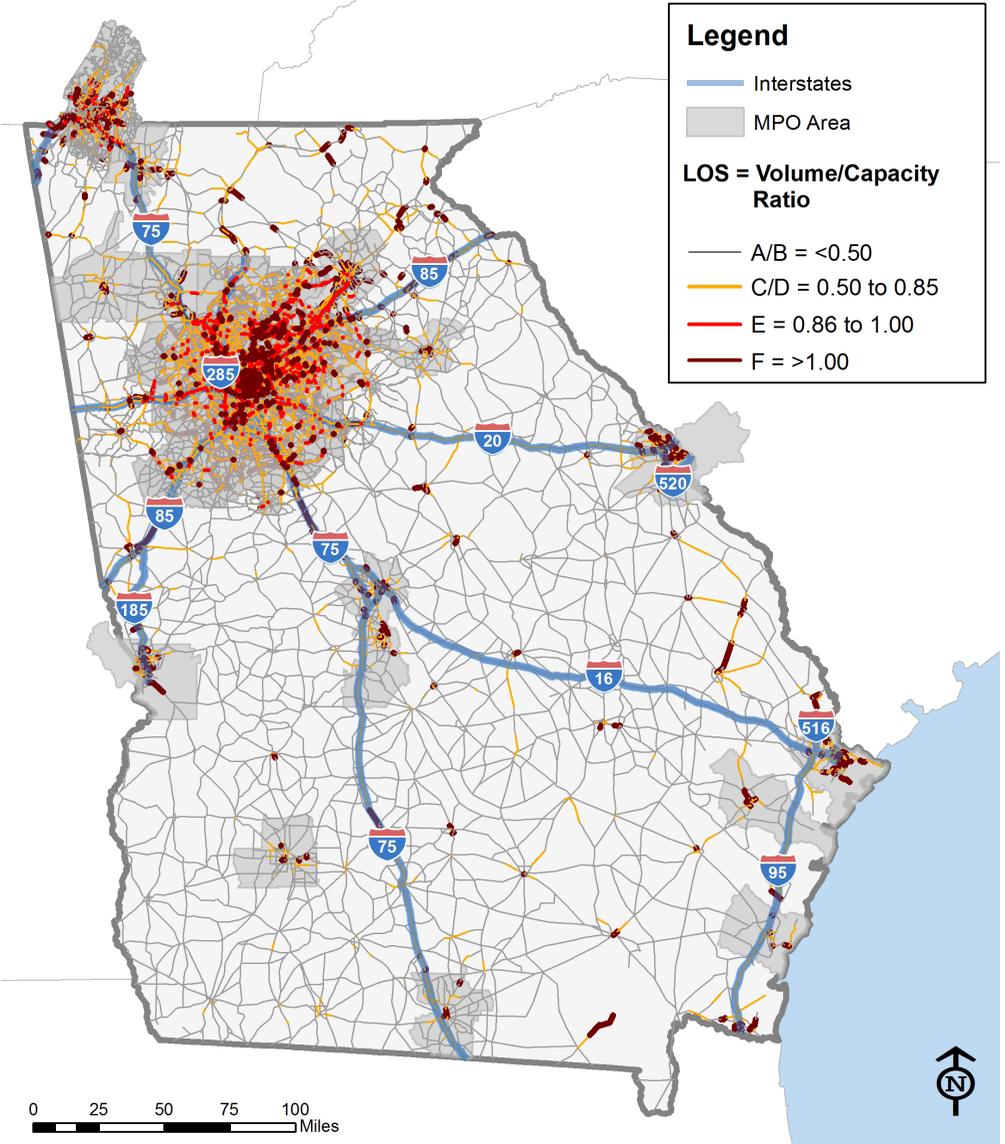
Figure 7. Existing and Future Daily LOS on Federal-Aid Highways

Existing (2010) Daily LOS



Source: GDOT 2010 Statewide Model and MPO Travel Demand Models.

Future (2040 Existing and Committed) Daily LOS



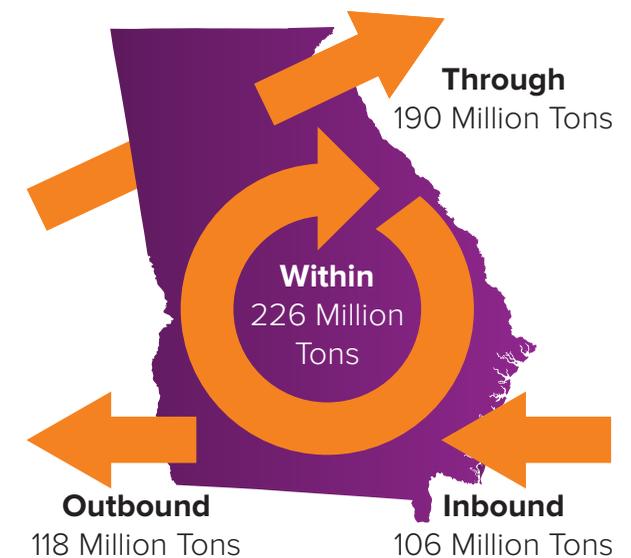
Source: GDOT Statewide and MPO Travel Demand Models.

An increase in freight truck traffic also can affect roadway capacity, due to larger vehicles and slower speeds. The efficient movement of goods is vital for continued economic development and growth. The presence of key freight assets in the State, such as the Port of Savannah and Hartsfield-Jackson Atlanta International Airport (HJIA) drives the importance of freight to the State's economy. The Interstate System is the preferred roadway to use for trucks as it has the highest design speeds and the most compatible geometric features for trucking operations. Therefore, the capacity of the Interstate System is a significant element of the quality of trucking operations, as well as roadways within the official Statewide Designated Freight Corridors network, which was adopted by the Georgia State Transportation Board in August 2013 (Figure 8, page 19).

The trucking industry carries the vast majority of the freight moved in the State, hauling 75 percent of the total freight tonnage in Georgia. This is due to its flexibility in terms of being able to handle varying shipment sizes and last-mile connectivity. As of 2007, approximately 640.8 million tons of goods traveled by truck, 35 percent of which had an origin and destination in Georgia. By 2040, the amount of truck traffic is expected to double. Given the

importance of freight and the trucking industry to the Georgia economy, a strategic focus on improving roadway capacity and operations in and around freight hotspots is critical.

Type of Movement 2007 Tons



By 2040, the amount of truck traffic is expected to double.

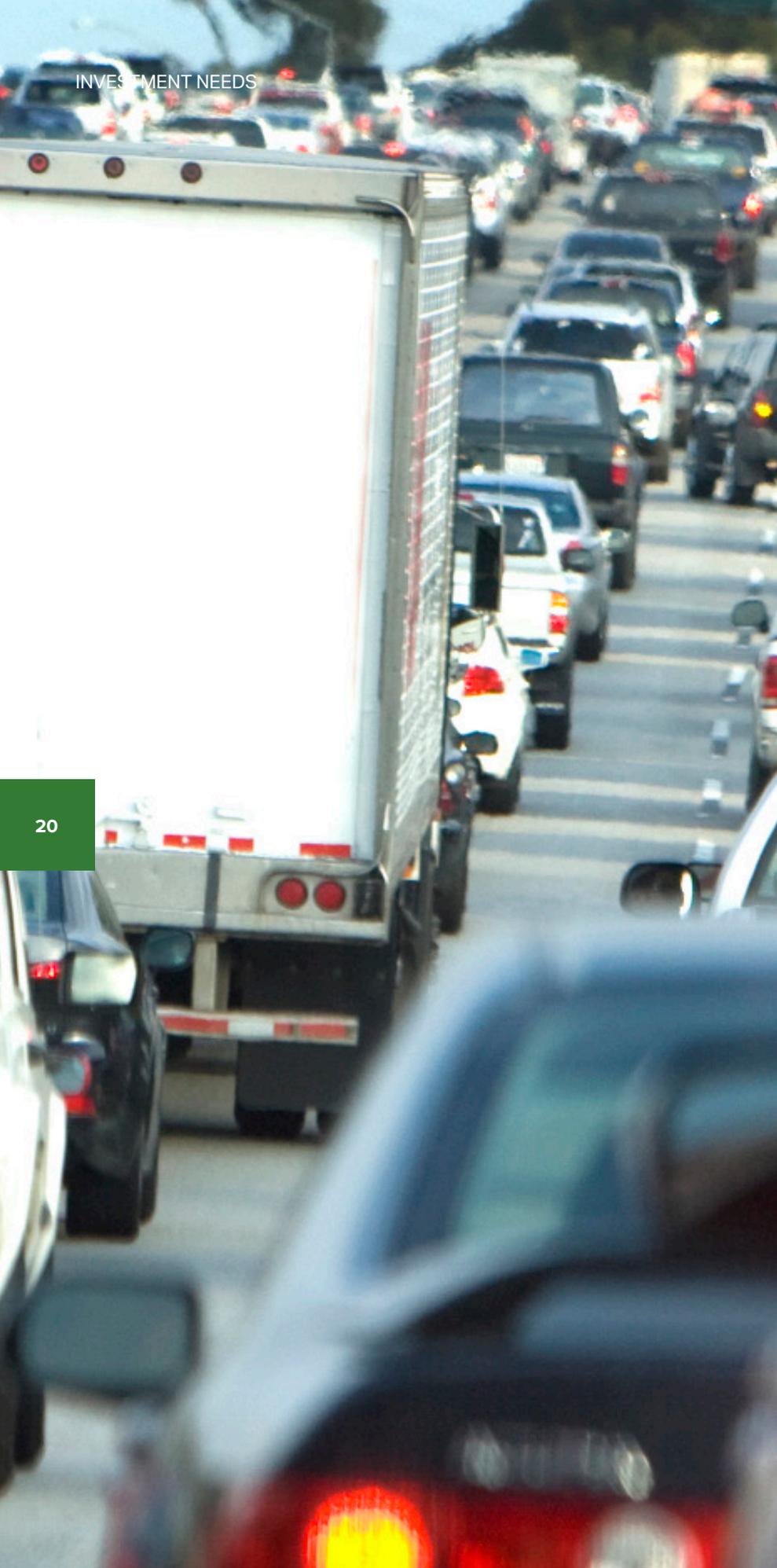
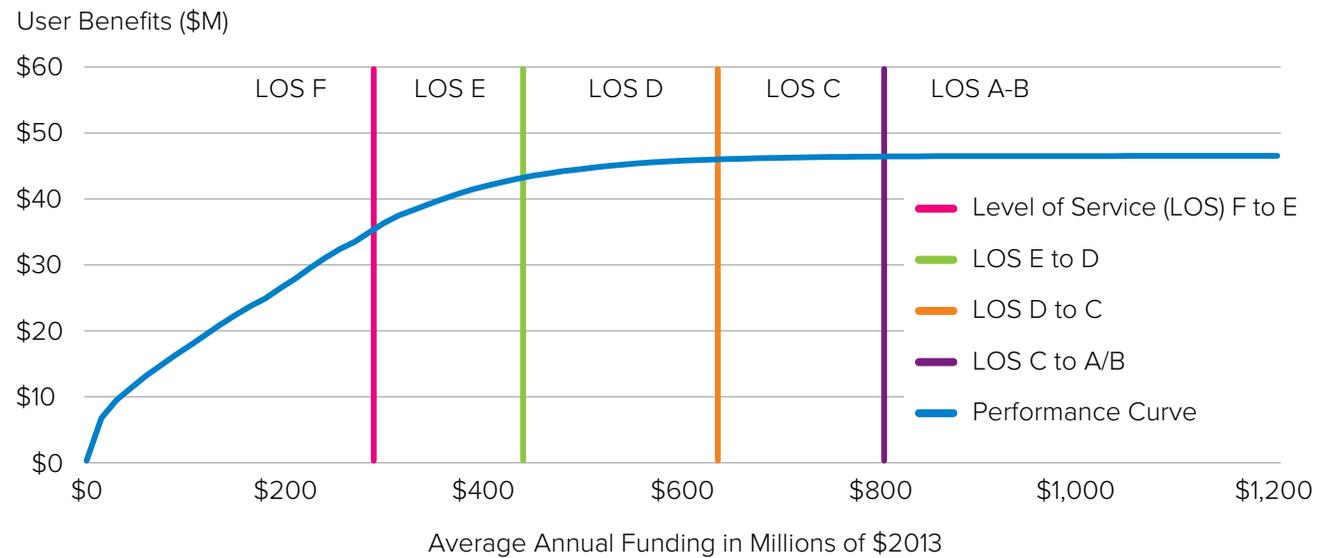


Figure 9. Roadway Capacity Performance in 2040



Source: Cambridge Systematics, 2040 SWTP/2015 SSTP.

Figure 9 (page 20) presents projected roadway performance in the year 2040 given average annual funding levels for roadway capacity improvements over the plan horizon. Congestion impacts were modeled using the GDOT 2010 statewide model. Auto and truck vehicle-hours of delay savings were estimated given varying funding levels for roadway capacity investments and translated to total user benefits given auto and truck values of time. GDOT spends approximately \$740 million per year on roadway capacity

improvements today.¹⁹ This funding level is projected to save approximately \$48 million in user costs derived from travel delay savings. These savings are gained from a projected \$73 million congestion cost due to delay in the year 2040. This funding level is estimated to be enough to address all LOS D-F deficiencies across the network, as well as maintain portions of LOS C. All LOS impacts reflect average travel conditions across the statewide transportation network.

¹⁹ Average annual funding derived from the 2014-2017 State Transportation Improvement Program.

FUNDING LEVELS

*\$Millions Per Year



* As part of plan development an analysis of performance impacts by funding level was completed for highway-oriented investments. Reference Plan Recommendations for more detail.

INVESTMENT NEEDS

- The number of vehicle trips is forecast to increase by 1.5 percent per year; congestion levels are expected to increase on the NHS as a result, particularly in the Atlanta region.
- Truck traffic is expected to double by 2040, compounding congestion issues.
- Increasing congestion will result in deteriorating reliability and an increasing number of accidents.

OPERATIONS

Operational improvements on the State's roadway system improve the overall efficiency and quality of the network without having to add significant physical capacity. Infrastructure such as traffic signals, ramp metering, and signal coordination can decrease overall travel time, improve safety, and reduce traffic delay. GDOT has recognized the need to install, upgrade, and invest in traffic operations as a cost-effective way to address mobility needs. GDOT currently has a variety of programs focusing on operational improvements, including, but not limited to:

- **Regional Traffic Operations Program (RTOP)/Synchronizing Traffic Lights.** RTOP is a program specifically focused on synchronizing traffic lights on Atlanta's busiest arterial roadways. These corridors also are monitored to quickly find and repair problems.
- **Variable Speed Limits.** Speed limit signs that change based on road, traffic, and weather conditions. These signs are focused on slowing down traffic ahead of congestion to smooth traffic flow, further avoid crashes, and reduce stop-and-go traffic.
- **Capacity-Related Improvements.** Roadway designs, such as roundabouts and diverging diamond interchanges, can affect the capacity of the roadway and improve operations. Certain designs, dependent on the traffic volume and other factors, can reduce queues and delays.
- **Ramp Metering.** A signal controller that regulates traffic flow entering an Interstate, breaking up platoons of vehicles and helping maintain a steadier flow of traffic.

Operational improvements on the State's roadway system improve the overall efficiency and quality of the network without having to add significant physical capacity.

The 2040 SWTP/2015 SSTP supports these and other operational improvements, specifically investments focused on user delay reduction through projects involving traffic signal coordination, ramp metering, and incident response. GDOT

has been historically involved in implementing these project types, especially in areas of high congestion and unreliable traffic conditions.

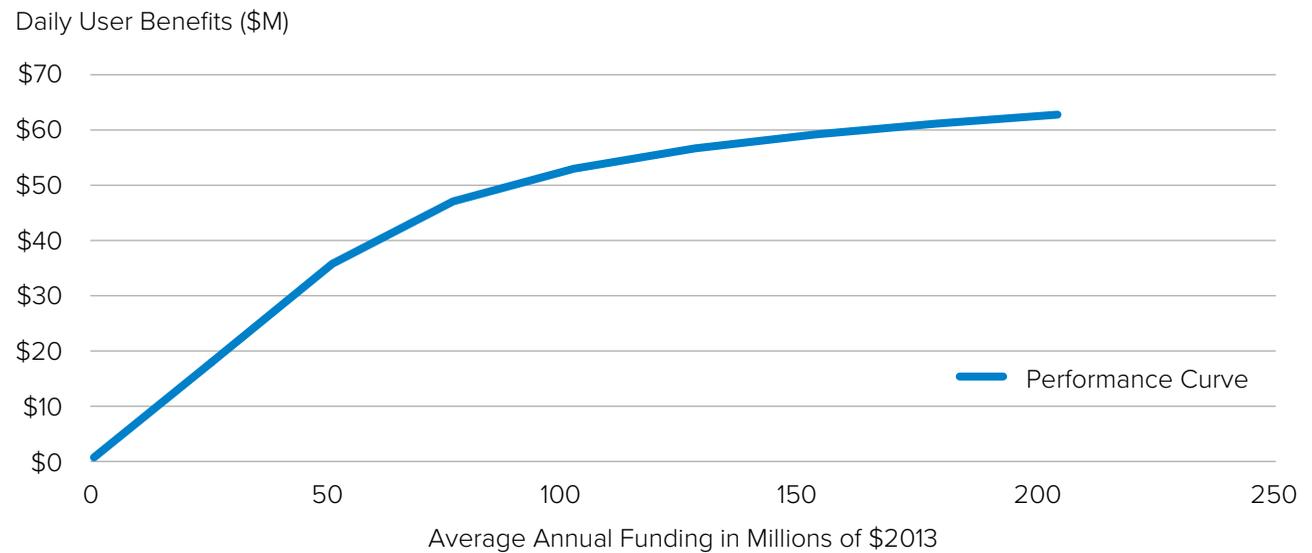
Figure 10 (page 23) presents projected performance impacts derived from operational improvements in the year 2040 given average annual funding levels over the plan horizon. Operational impacts were modeled for signal coordination, ramp metering, and incident response programs only using benefit-cost relationships derived for these programs from the *2014-2018 GDOT Transportation Asset Management Implementation Plan*.²⁰ Performance impacts are presented as monetary user benefits derived from auto and truck vehicle-hours of delay savings given auto and truck values of time.

Currently, GDOT spends approximately \$78 million per year on roadway operations improvements.²¹ This funding level is projected to save approximately \$47 million in user costs derived from travel delay savings. Additional funding for operations up to approximately \$200 million per year, as demonstrated in the performance curve, can yield potentially significant, additional benefits for roadway users.

²⁰ <http://www.dot.ga.gov/BuildSmart/Programs/Documents/AssetMgmt/TAMPlan.pdf>.

²¹ Average annual funding derived from the *2014-2017 State Transportation Improvement Program*.

Figure 10. Roadway Operations Performance in 2040



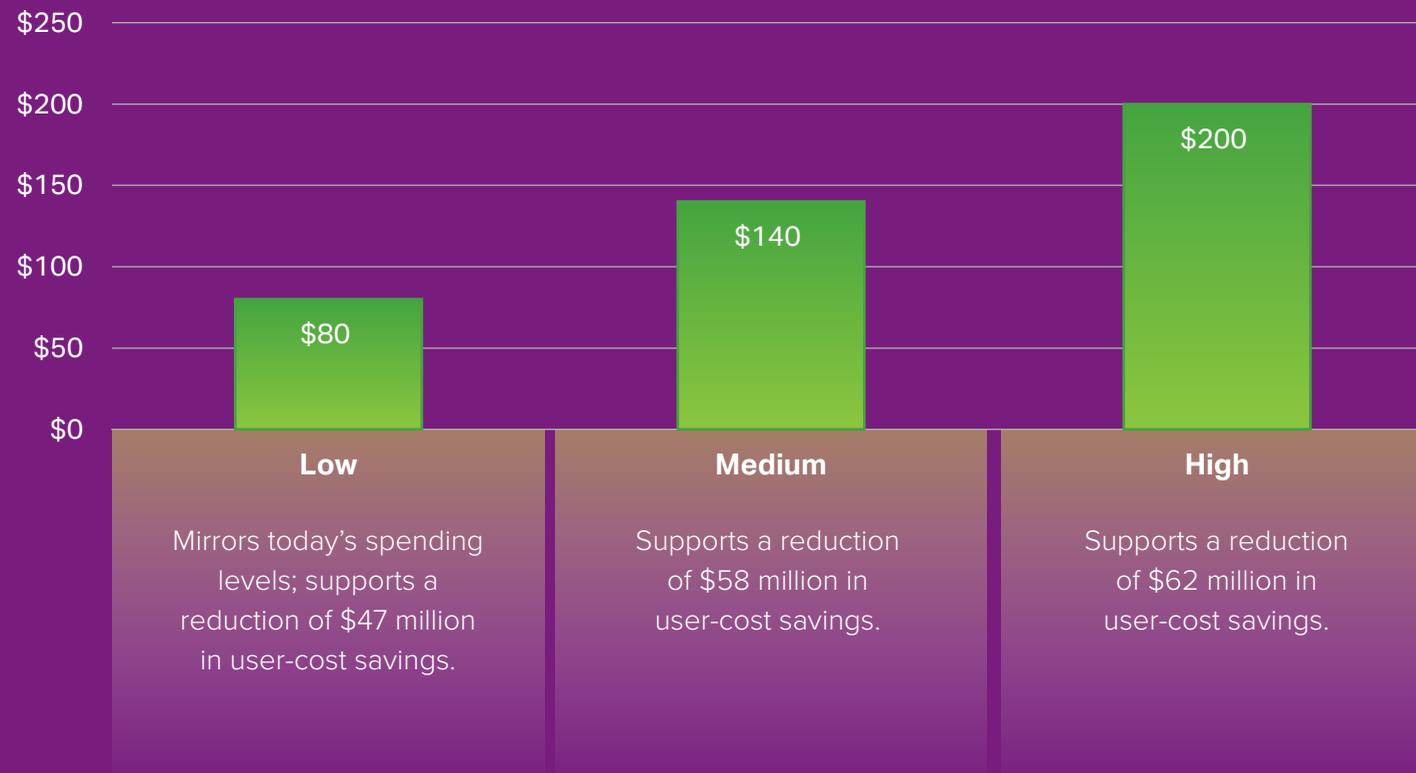
Investment in signal coordination, ramp metering, and incident response programs only.

Source: Cambridge Systematics, 2040 SWTP/2015 SSTP.



FUNDING LEVELS

*\$Millions Per Year



INVESTMENT NEEDS

- Continued focus on signal coordination, ramp metering, and incident response as key operational investments.
- Tailored operational improvements that align with specific roadway types and community context.

* As part of plan development an analysis of performance impacts by funding level was completed for highway-oriented investments. Reference Plan Recommendations for more detail.

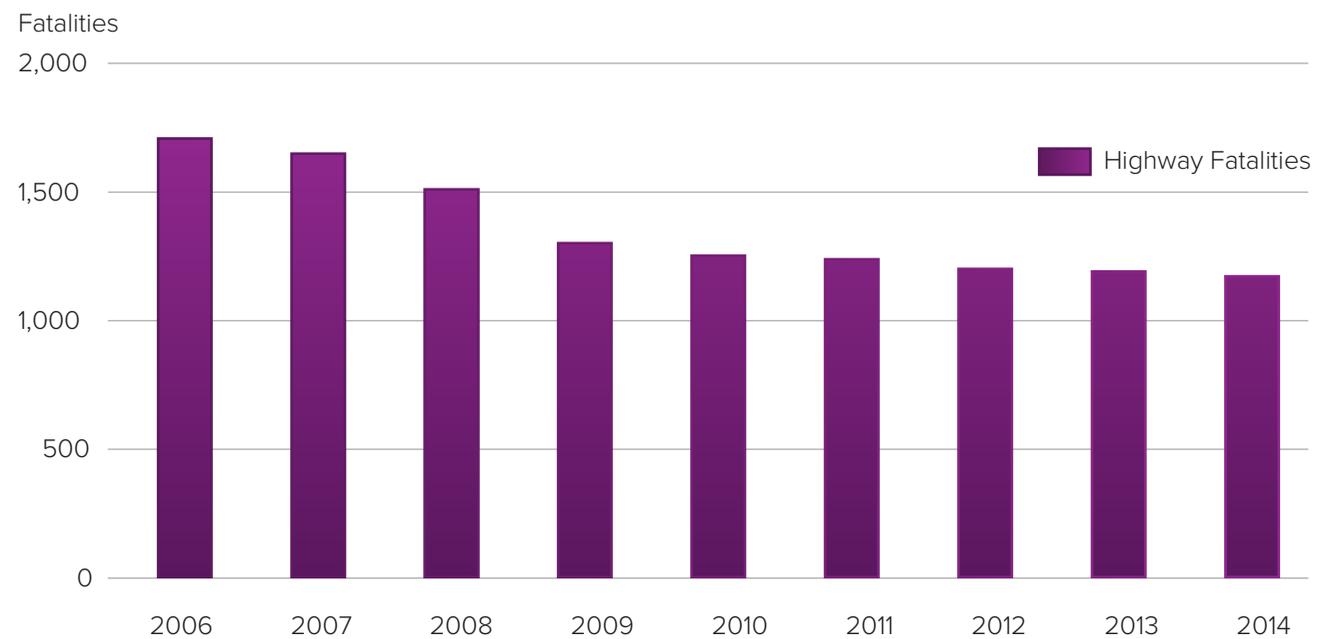
SAFETY

Safety on Georgia's roads is the highest priority for GDOT. The State has worked *Towards Zero Deaths* for years. With an increase in expected population, visitors, and licensed drivers, highway safety will remain a priority and concern for GDOT and all roadway users.

Highway safety can be measured by the number and rate of fatalities, injuries of varying levels, and property damage crashes. While the State has experienced a stable, consistent reduction in fatalities for nine consecutive years (Figure 11, page 25), current data is showing an increase in fatalities in 2015. This would be the first increase in Georgia in a decade. Single vehicle crashes (i.e., a single vehicle hitting a fixed object) account for 49 percent of these fatalities, and the main cause appears to be distracted driving. Drivers, now more than ever, are driving distracted or impaired. Seventy-four percent of fatalities today are attributed to driver behavior.

Seventy-four percent of fatalities today are attributed to driver behavior.

Figure 11. Annual Fatalities on Georgia Highway System



Given this trend, GDOT has proactively initiated the *DriveAlert ArriveAlive* campaign to reduce fatalities on Georgia's roads. The campaign is an aggressive year-long effort (May 2015 through April 2016) to alert the public to a surge in preventable traffic fatalities in 2015 and to encourage simple changes in driving behavior to turn the tide on these crashes and fatalities. It focuses on educating drivers about how making simple changes in their driving behavior can prevent crashes, and increase their safety and the safety of their passengers, other motorists, pedestrians, and bicyclists.

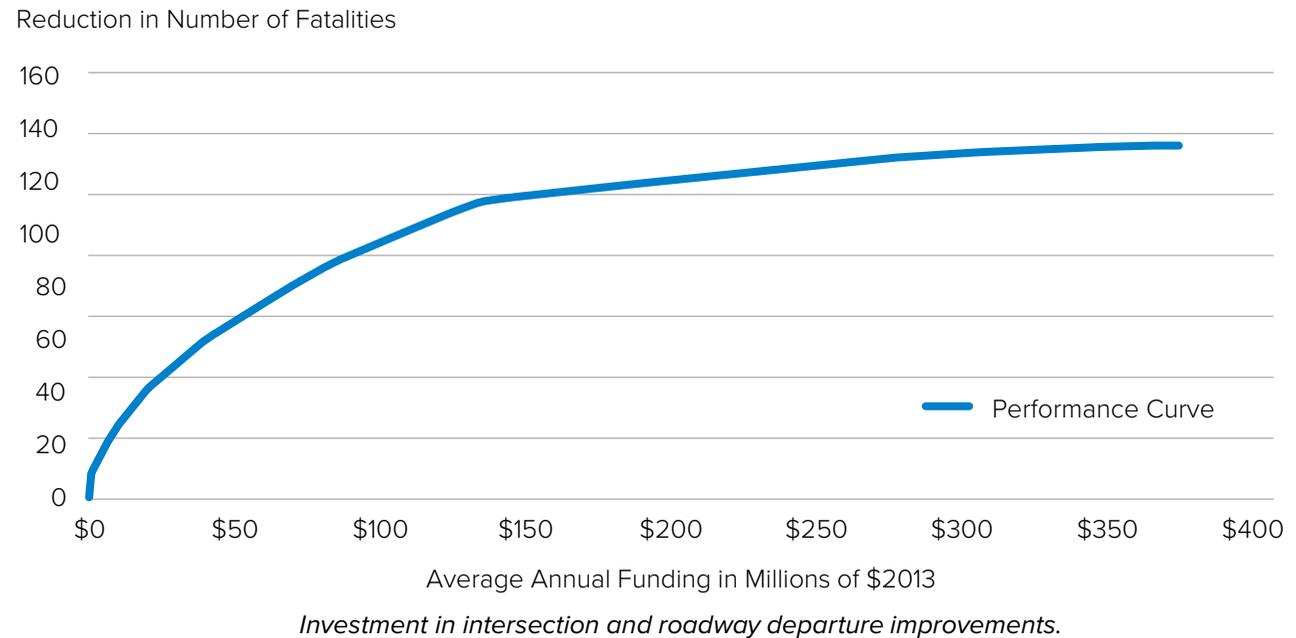
The *DriveAlert ArriveAlive* campaign is a partnership between GDOT, the Governor's Office of Highway Safety (GOHS) and the Department of Public Safety (DPS). These agencies also partner through ongoing *Strategic Highway Safety Plan* development (SHSP). The Governor's Strategic Highway Safety Plan outlines the State's strategy to reduce highway crashes, injuries, and fatalities based on safety data, patterns, and trends which reveal crash and/or hot spot locations that have an overrepresented number of crashes in relation to the amount of traffic.

Because traffic safety issues are sensitive to a variety of factors and are not stagnant, the Georgia SHSP is updated annually to adjust its strategies to meet current conditions. The data-driven emphasis areas identified in the SHSP provide a framework and direction for infrastructure and behavior-related safety improvements. While behavioral issues are the dominating safety issues today, the SHSP has defined critical emphasis areas as they relate specifically to infrastructure. The SHSP currently defines two critical safety emphasis areas related to roadway infrastructure – intersection crashes and roadway departures. These emphasis areas were the focus of 2040 SWTP/2015 SSTP safety analysis.

The SHSP currently defines two critical safety emphasis areas related to roadway infrastructure – intersection crashes and roadway departures.

Figure 12 (page 26) presents projected performance impacts derived from safety

Figure 12. Safety Performance in 2040



Source: Cambridge Systematics, 2040 SWTP/2015 SSTP.

improvements in the year 2040 given average annual funding levels over the plan horizon. Safety impacts were modeled for intersection and roadway departure improvements only using benefit-cost relationships derived for these programs from the 2014-2018 GDOT Transportation Asset Management Implementation Plan. Performance impacts are presented as a reduction in the number of fatalities, which is a focus of proposed MAP-21 performance regulations.²²

²² <https://www.federalregister.gov/articles/2014/03/11/>

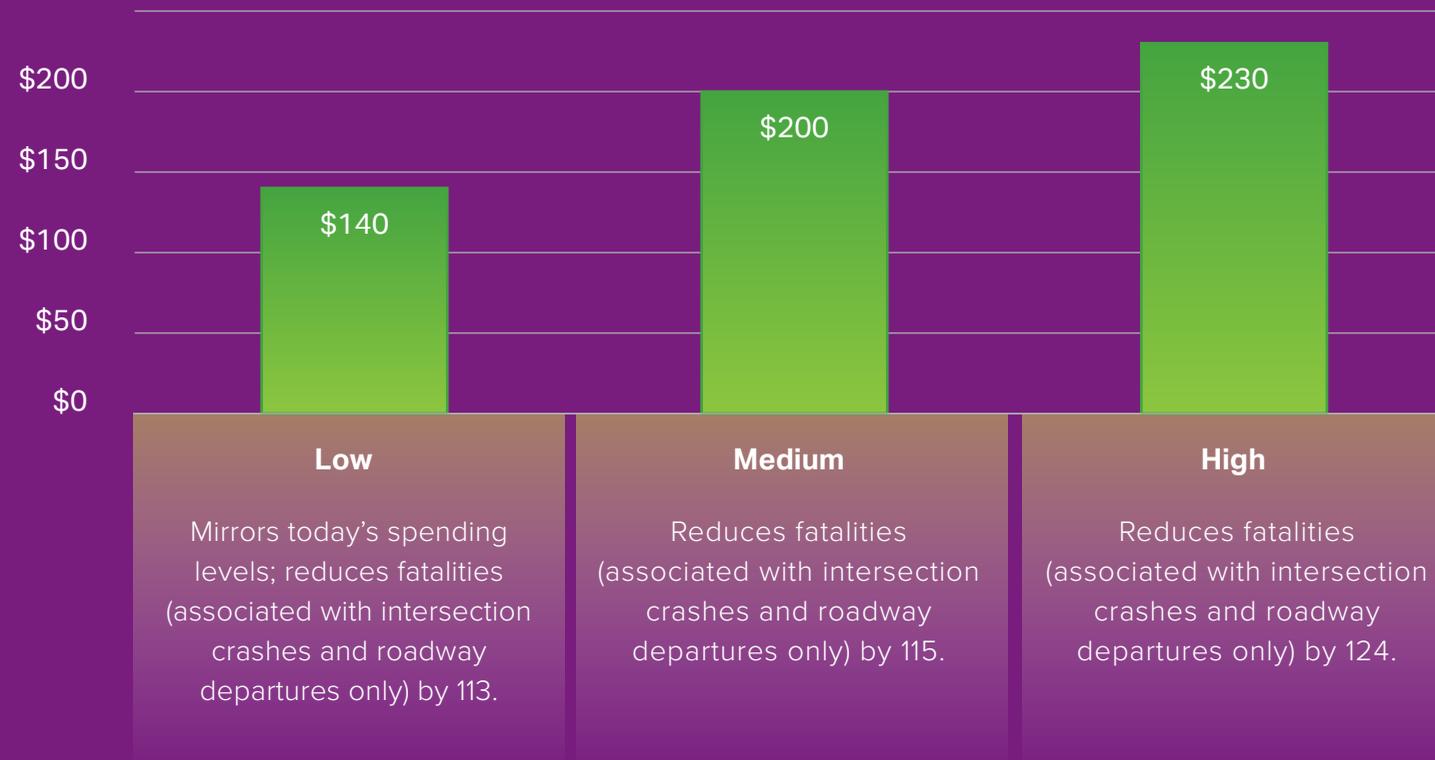
Currently, GDOT spends approximately \$144 million per year on stand-alone safety improvements.²³ This funding level is projected to reduce fatalities by approximately 113 per year. While current safety spending levels have supported a downward trend in fatalities and serious injury crashes, additional funding is needed to ensure continued progress in the future.

2014-05152/national-performance-management-measures-highway-safety-improvement-program, March 2014.

²³ Average annual funding derived from the 2014-2017 State Transportation Improvement Program.

FUNDING LEVELS

*\$Millions Per Year



* As part of plan development an analysis of performance impacts by funding level was completed for highway-oriented investments. Reference Plan Recommendations for more detail.

INVESTMENT NEEDS

- Behavioral issues are now a leading cause of crashes in the State.
- Roadway departures and intersection crashes remain a top safety challenge across the state, as it relates to roadway infrastructure.
- Continued traffic safety data analysis is needed to identify crash hot spots and top contributions to crashes.
- Crashes involving bicycle and pedestrian users are on the rise as demand for multimodal travel increases; enhanced design and construction efforts are needed to prevent infrastructure-related crashes for all roadway users.




 marta

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PUBLIC TRANSPORTATION

Approximately 81 percent of the population of Georgia today is served by transit, either through urban fixed-route, paratransit/on-demand or rural human services (demand-responsive service). Statewide, about 2.26 percent of commuters take transit to work; in the Atlanta region the figure rises to 12.66 percent. People also use transit to perform other significant functions of daily life, including medical appointments, shopping, personal and recreational trips.

URBAN TRANSIT

There are 15 urban fixed-route transit providers in Georgia, four of which are located within the boundaries of the Atlanta MPO and are classified as “Very Large,” serving a population greater than 1,000,000. The Metropolitan Atlanta Rapid Transit Authority (MARTA) is the largest public transit provider and only heavy rail system in the State. Figure 13 (page 29) illustrates the geographic distribution and classification of the 15 urban fixed-route transit systems throughout the State as of 2012. The 156 park-and-rides facilities in the State also support many of these urban transit providers, most of which are located with the Atlanta

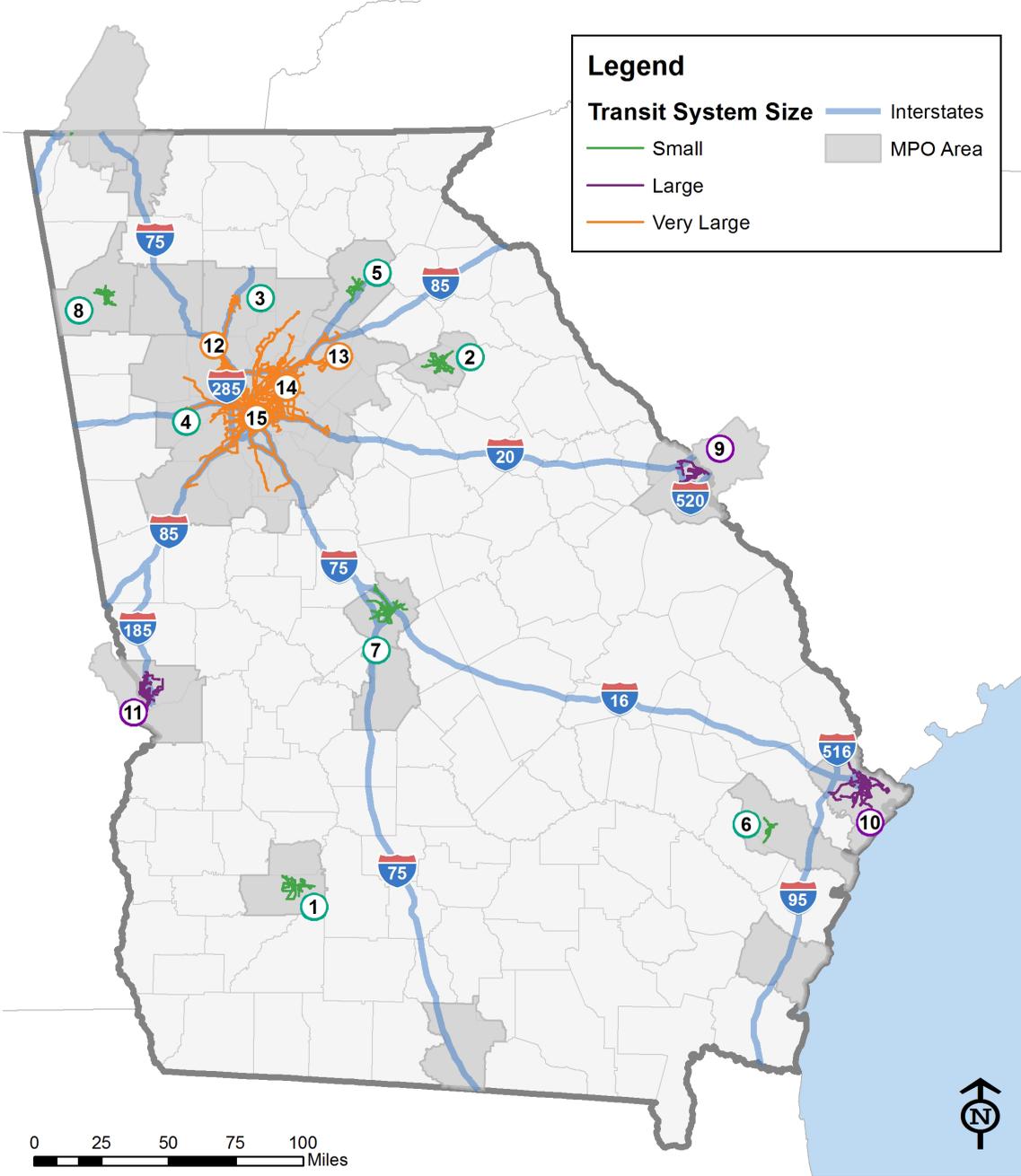
metropolitan area and are in proximity to the Interstate System.²⁴

The number of customers using these systems is measured in the form of ridership. Besides MARTA, Chatham County Transit (CAT) had the highest ridership in 2012, closely followed by Cobb County Transit (CCT). The majority of the transit systems experienced increases in ridership between 2007 and 2009; however, several systems showed a loss in ridership between 2009 and 2011 during the recession, most of which have since rebounded (Figure 14, page 30). Urban transit ridership is comparable to national averages, with larger- and medium/small-sized systems in Georgia having a higher average ridership when compared to the national average.

The majority of these fixed-route urban transit providers also provide paratransit service. The population served by these programs includes, but is not limited to, older adults, low-income individuals, those who do not own a vehicle, and individuals with disabilities.

²⁴ Other transit systems in the State include transit systems and shuttles for universities, such as the Georgia Institute of Technology’s Stinger Shuttles and the University of Georgia’s Campus Transit. Shuttles that service dense employment areas, such as Buckhead (BUC Shuttle) and Atlantic Station (Free Ride), provide additional transportation options and connect to urban transit providers, including MARTA and GRTA.

Figure 13. Urban Fixed-Route Transit Systems



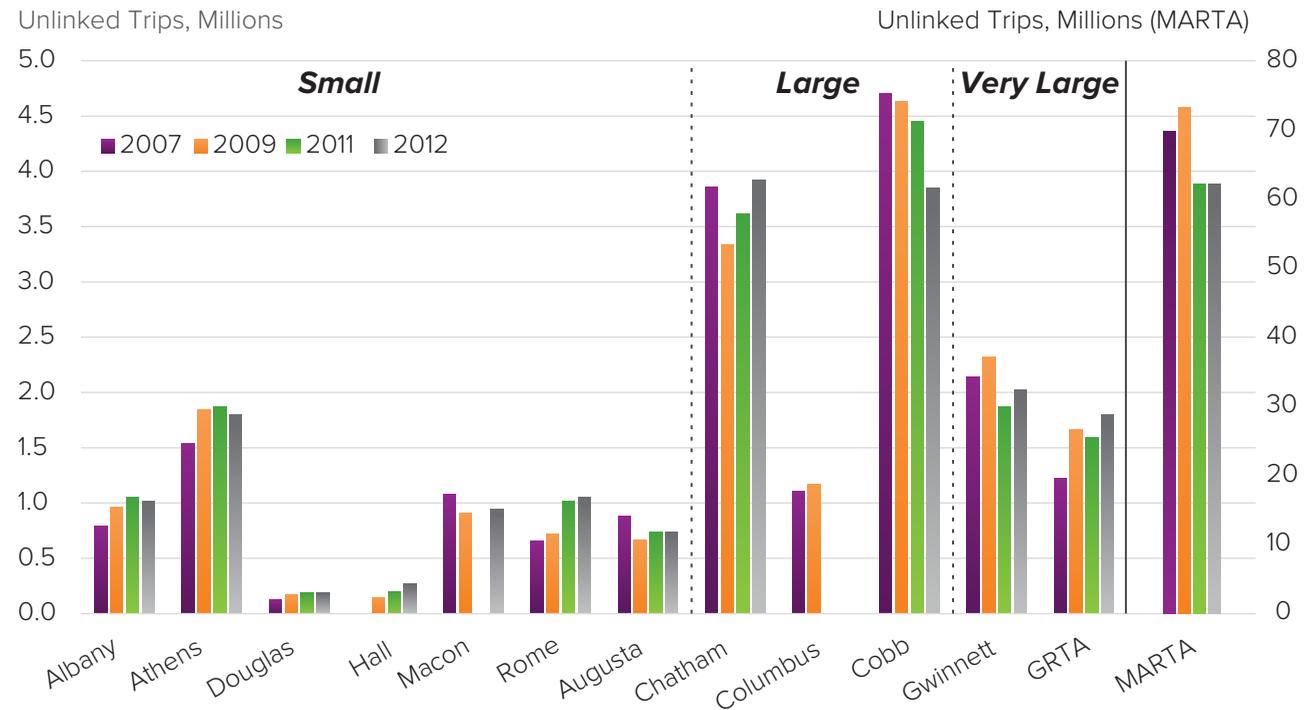
Source: GDOT, MARTA, Albany Transit System, Athens Transit System, APT, CAT, CCT, METRA, Douglas County Rideshare, GCT, GRTA, HAT, LT, MTA, RTD.

Urban Fixed-Route Transit Systems

Size	Number ID	Fixed-Route Transit System
Small	1	Albany Transit System
	2	Athens Transit System
	3	Cherokee Area Transit System
	4	Douglas County Rideshare
	5	Hall Area Transit
	6	Liberty Transit
	7	Macon-Bibb County Transit Authority
	8	Rome Transit Department
Large	9	Augusta Public Transit
	10	Chatham Area Transit Authority
	11	Columbus Transit System
Very Large	12	Cobb Community Transit
	13	Gwinnett County Transit
	14	Georgia Regional Transit Authority
	15	Metropolitan Atlanta Rapid Transit Authority

There are urban areas in the State currently without fixed route transit service which have population density to support, including: Cartersville, Valdosta, Brunswick, Dalton, and Warner-Robins.

Figure 14. Bus Urban Transit System Ridership 2007 to 2012



In urban areas already served by transit, about 10 percent of the densely populated areas which could support transit, have no service. In addition, there are urban areas in the State currently without fixed-route transit service which have population density to support, including Cartersville, Valdosta, Brunswick, Dalton, and Warner-Robins.

Currently 125 of Georgia's 159 counties have access to either urban fixed-route or rural demand-responsive transit services.

RURAL TRANSIT

Another component of public transportation in Georgia are rural transit programs. GDOT, along with other human service transit providers, including the Department of Human Services (DHS) and Department of Community Health (DCH) coordinates rural human services transportation (RHST) across the State. Similar to urban transit provider's paratransit services, rural transit programs are focused on improving

mobility options to older adults, low-income individuals, those who do not own a vehicle, and/or individuals with disabilities, typically through demand-responsive service. The Southwest Georgia Regional Commission had the highest ridership among rural providers in 2012 at over 333,000 trips.

Currently 125 of Georgia's 159 counties have access to either urban fixed-route or rural demand-responsive transit services. Thirty-four

counties do not currently have access to demand-responsive service; these counties fall almost entirely in rural areas. Areas of the state lacking in demand-responsive service include Regional Commission areas of Southern Georgia, Heart of Georgia, River Valley, Central Savannah River Area, Northeast Georgia, and Middle Georgia districts.



URBAN INVESTMENT NEEDS

- Multiple transit-supportive clusters in the Atlanta urbanized area are not served by transit.
- The Brunswick, Cartersville, Dalton, Warner Robins, and Valdosta urbanized areas lack fixed-route transit service, as does Georgia's portion of the Chattanooga urbanized area.
- Potential demand exists for park-and-ride facilities along key interstates around Atlanta, Macon, Brunswick, and Augusta.

RURAL INVESTMENT NEEDS

- Thirty-four counties do not have access to public transportation; these counties are primarily rural.
- Over 700,000 persons remain unserved by rural service; this is more than 20 percent of the rural population outside of urban counties.
- Additional operating funds for Rural and Human Service Transportation (RHST) are needed to meet the projected increase in demand.

BICYCLE AND PEDESTRIAN

Bicycle and pedestrian infrastructure is located throughout the entire State, such as recreational trails, sidewalks, and bicycle lanes. Due to the scale and trip length for most pedestrians and cyclists, needs for nonmotorized transportation are generally identified and sponsored at the regional and/or local level. GDOT supports the incorporation of bicycle, pedestrian, and transit facilities along state-maintained facilities when specific GDOT warrants for pedestrian, bicycle, and transit accommodations are met, as identified through its complete streets policy. Adopted Fall of 2012, GDOT’s Complete Streets Policy aims to incorporate pedestrians, bicyclists, and transit users/vehicles into transportation infrastructure projects. The purpose of the policy is to improve the access, mobility, and safety of all transportation users and address these needs starting at the planning stages of a project. The accommodations for these modes of transportation are required under specified conditions, such as when the need or probable use of alternative modes is high. This may include the incorporation of sidewalks, safe intersection crossings, bicycle lanes, and/or transit stops into transportation projects.

Regardless of the presence of bicycle accommodations, bicyclists are legally allowed on any roadway other than those that specifically

exclude nonmotorized modes of transportation (e.g., in Georgia, bicycles are not permitted on Interstates). However, many bicyclists prefer roads with bicycle infrastructure, which includes signed shared roadways, bicycle lanes, paved shoulders that are considered “bikeable,” and shared-use path facilities. Bicycle lanes are GDOT’s preferred bicycle facility type.²⁵

GDOT has identified a network of 14 designated bicycle routes across the State totaling 2,943 miles. Approximately 70 percent of this network is on GDOT-owned state routes and includes both paved shoulders and bicycle lanes. This network connects population centers throughout the State and is intended to primarily serve longer distance riders between and within these areas (Figure 15, page 34). Despite the robust coverage of the statewide system, gaps in the continuity of bicycle-friendly infrastructure (e.g., wide and/or paved shoulders) exist. Increasing vehicular traffic also is posing a challenge for the usage and safety of the state bicycle system as seen on routes such as Northern Crescent, Appalachian Gateway, Little White House, Central, and March to the Sea.

²⁵ Bicycle lanes and related improvements shall be incorporated into all widening and reconstruction projects when there is an existing bikeway or if the project is on an approved Bicycle Route. *GDOT Design Policy Manual*, Chapter 6.12.

Bicycle Lanes



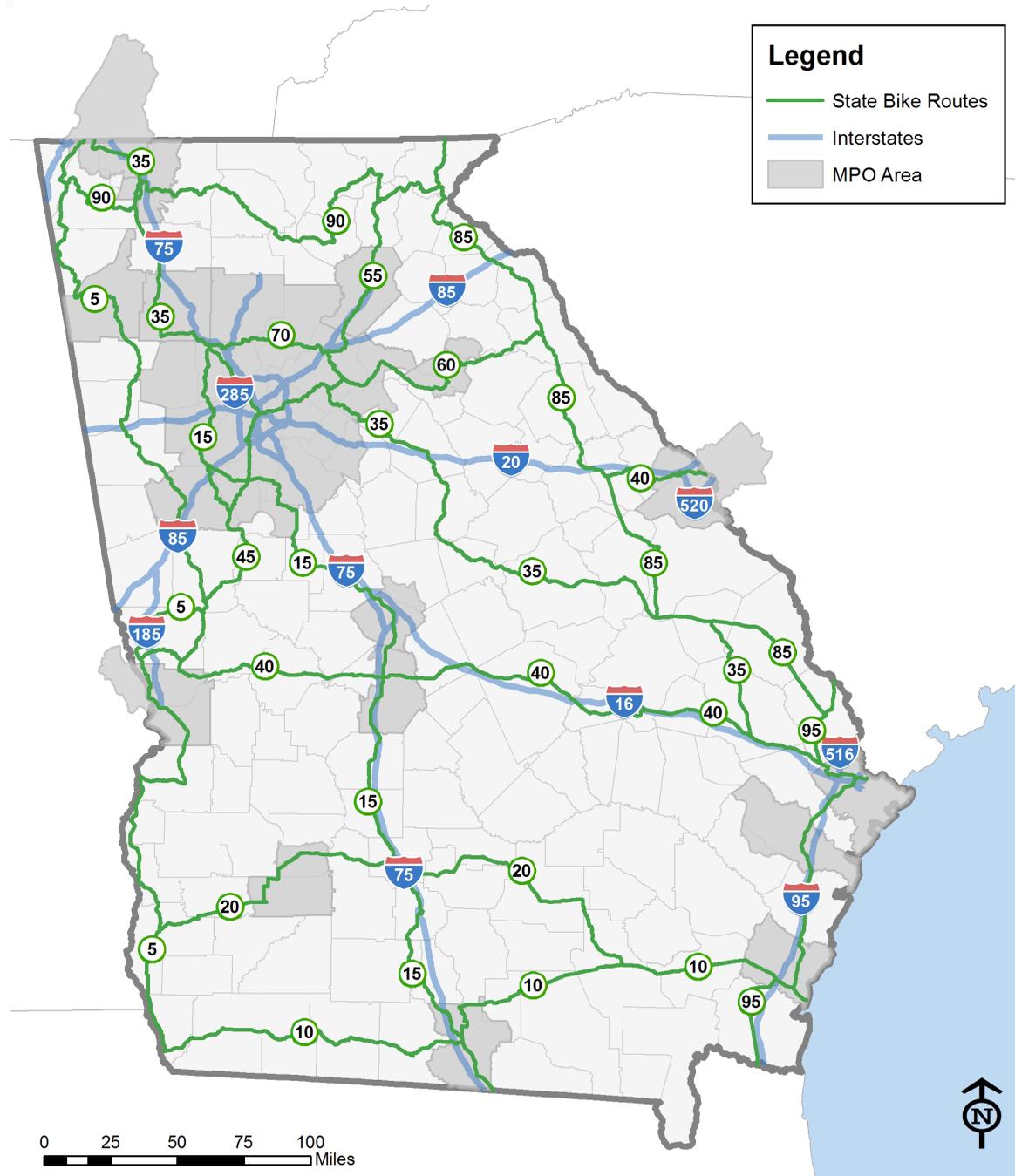
Shared-Use Paths



Signed Bicycle Routes



Figure 15. Georgia State Bicycle Routes



Source: GDOT.

Urban Fixed-Route Transit Systems

Direction	Route Number	Route Name
East-West	10	Southern Crossing
	20	Wiregrass
	40	TransGeorgia
	50	Augusta Link
	60	Athens Link
	70	Northern Crescent
	90	Mountain Crossing
North-South	5	Chattahoochee Trace
	15	Central
	35	March to the Sea
	45	Little White House
	55	Appalachian Gateway
	85	Savannah River Run
	95	Coastal
	15	Metropolitan Atlanta Rapid Transit Authority

GDOT has identified a network of 14 designated bicycle routes across the State totaling 2,943 miles.

Beyond this designated state bicycle route system, there are numerous bicycle facilities, many of which are bicycle routes that are designated by local governments, MPOs, and Regional Commissions. Urban and suburban environments also are the location of pedestrian infrastructure, consisting primarily of sidewalks and shared-use paths. There are over 2,800 miles of sidewalks on federal-aid roads in Georgia, of which almost 40 percent lies in the Atlanta region.

The presence of bicycle and pedestrian facilities and the higher densities of urbanized areas results in a higher share of bicycle and pedestrian commuters. Statewide, 1.8 percent of commuters bike or walk from their home location to work; many urban areas have a higher share, including Athens (6.2 percent), Atlanta (5.1 percent), and Savannah (4.3 percent).

There are over 2,800 miles of sidewalks on federal-aid roads in Georgia, of which almost 40 percent lies in the Atlanta region.

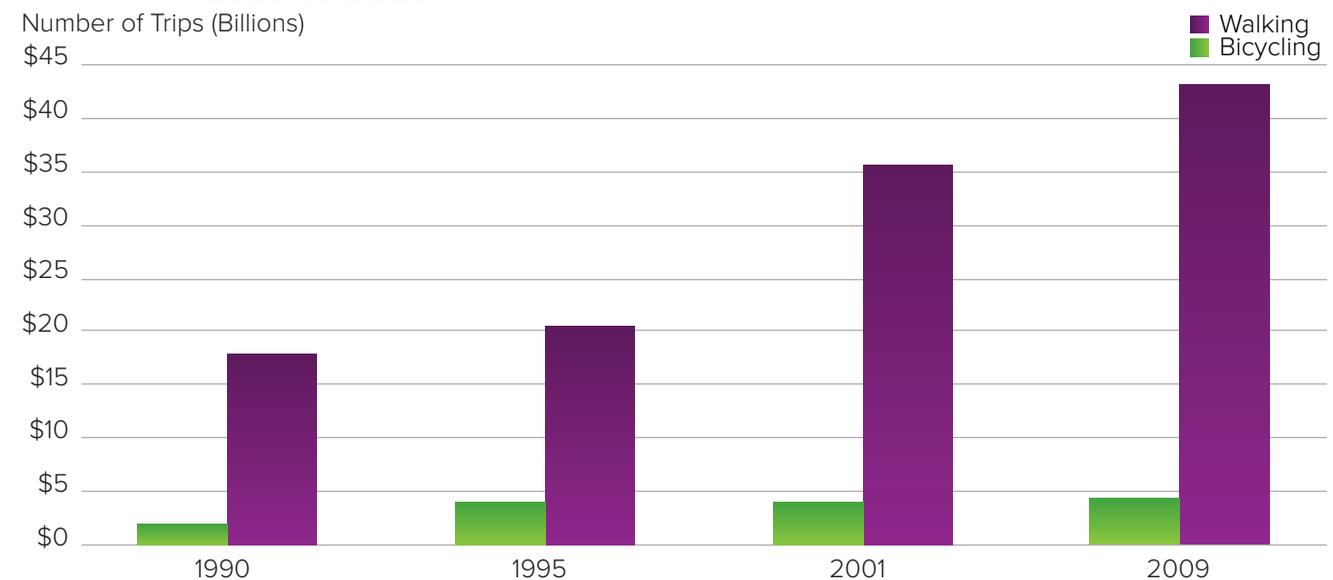
The number of bicyclists and pedestrians has been increasing in response to population growth as well as a shift to these alternative modes of transportation. In the United States, the share of trips taken on a bicycle or walking has increased significantly over the last two decades (Figure 16, page 35). This trend is expected to continue into the future both at the national and state level given increasing demand for nonautomobile travel options and growing elderly population.

This higher share of users also results in more crashes involving a bicyclist or pedestrian. Between 2010 and 2012, 1,125 crashes occurred

involving a bicycle and 3,204 crashes occurred involving a pedestrian. As the number of cyclists and pedestrians increase, safer infrastructure and public outreach to share the road can combat these types of crashes.

Between 2010 and 2012, 1,125 crashes occurred involving a bicycle and 3,204 crashes occurred involving a pedestrian.

Figure 16. Number of U.S. Trips Taken by Bicycling and Walking 1990 to 2009



Source: National Household Travel Survey via The National Bicycling and Walking Study: 15-Year Status Report, May 2010, Federal Highway Administration.

INVESTMENT NEEDS

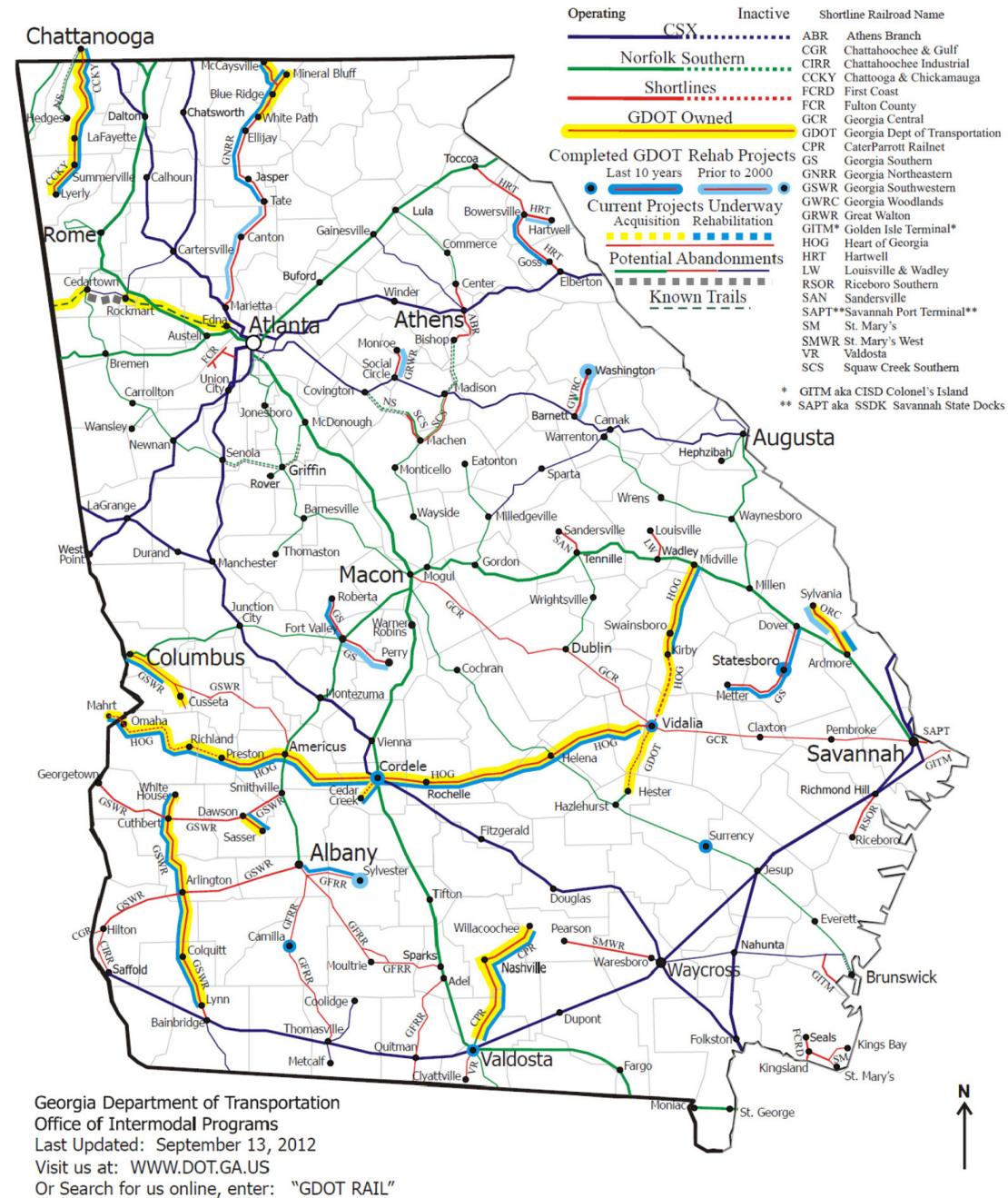
- Increased demand for bicycle and pedestrian facilities is expected in the coming decades, in both urban and rural areas of the State.
- Gaps in continuity exist along the statewide bicycle network.
- Increasing vehicular traffic poses a challenge for some portions of the State's bicycle routes.
- The bicycle travel conditions on the Northern Crescent, Appalachian Gateway, Little White House, Central, and March to the Sea statewide bike routes have deteriorated due to traffic and shoulder conditions.
- Bicycle and pedestrian crashes are on the rise, particularly in high-demand locations such as Atlanta and Savannah metropolitan areas.



FREIGHT RAIL

Georgia serves as an important connection for freight rail, serving two large east coast Class I railroads and many intermodal hubs. There are over 6,000 miles of railroad track in the State with approximately 4,844 in active service. Norfolk Southern (NS) and CSX Transportation (CSX), operate 70 percent of this trackage. The remaining miles are operated by 23 Class III or Short-Line railroads. GDOT and the State Property Commission own 676 miles of track which is leased out to various operators. The Class I rail lines connect rail hubs in Atlanta to the Midwest and to marine ports in Georgia and Florida. The two busiest corridors are the CSX corridor between Jacksonville, Florida and Tennessee via Waycross, Cordele, and Atlanta, and a parallel NS corridor via Cordele, Macon, and Atlanta. The primary intermodal (rail/truck) terminals are located in Atlanta and Savannah, the latter of which primarily serves marine port traffic (Figure 17, page 37).

Figure 17. Georgia's Rail Network



Source: <http://www.dot.ga.gov/travelinggeorgia/rail/Documents/FreightRailMap.pdf>

In 2007, Georgia’s freight railroads moved 210 million tons of freight valued at \$213 billion. Rail is the second most heavily used mode in the State after trucking, with 25 percent of freight tonnage and 10 percent of freight value transported by rail in 2007. By 2040, it is projected that the railroads will carry more than 343 million tons of freight annually, valued at \$468 billion, an increase of 64 percent by tonnage and 120 percent by value, but still account for about 25 percent of all freight tonnage (Figure 18, page 38).

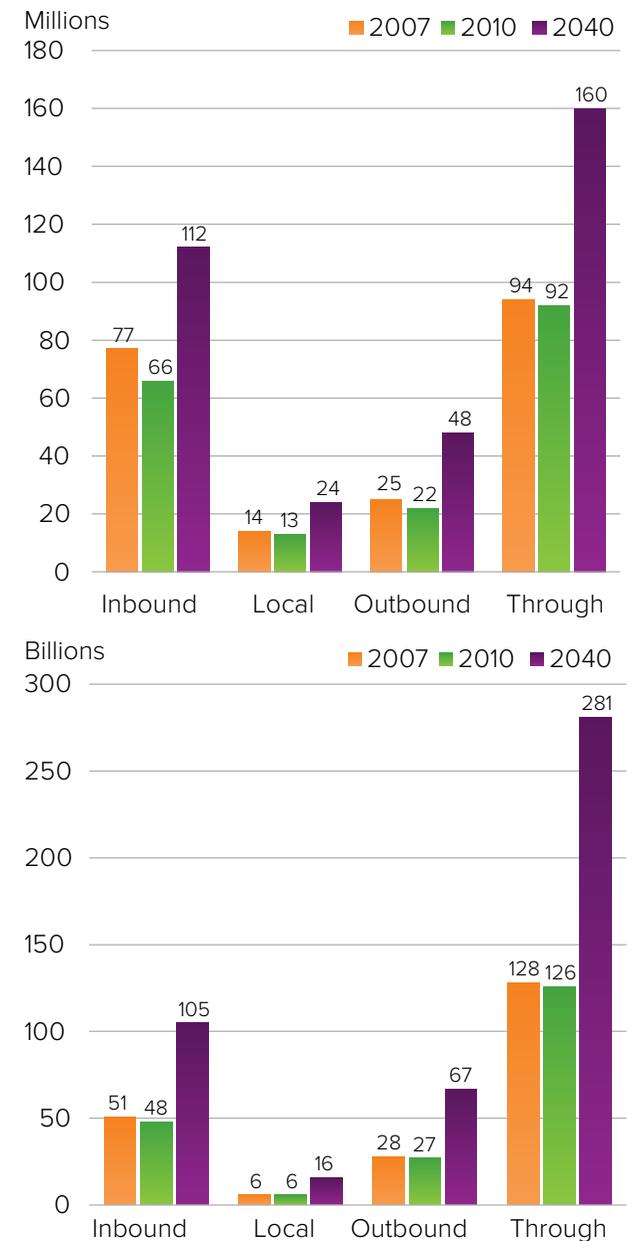
In 2007, Georgia’s freight railroads moved 210 million tons of freight valued at \$213 billion.

Most rail freight traffic currently is through traffic, both in terms of tonnage and value. This pattern is expected to continue through 2040. Inbound traffic accounted for approximately one-third of the total freight rail tonnage, with the largest inbound commodities, including coal, nonmetallic minerals, and clay, concrete, glass, and stone products.

By 2040, it is projected that the railroads will carry more than 343 million tons of freight annually, valued at \$468 billion, an increase of 64 percent by tonnage and 120 percent by value.

As presented in the recent 2015 *Georgia State Rail Plan*, key investment needs for the freight rail system include: upgrading and maintaining track infrastructure for short-line railroads port-rail connections, capacity improvements, and modernization improvements such as positive train control.

Figure 18. Georgia Rail Freight Flows by Direction 2007 to 2040, Weight in Tons (Top) and Value (Bottom)



INVESTMENT NEEDS

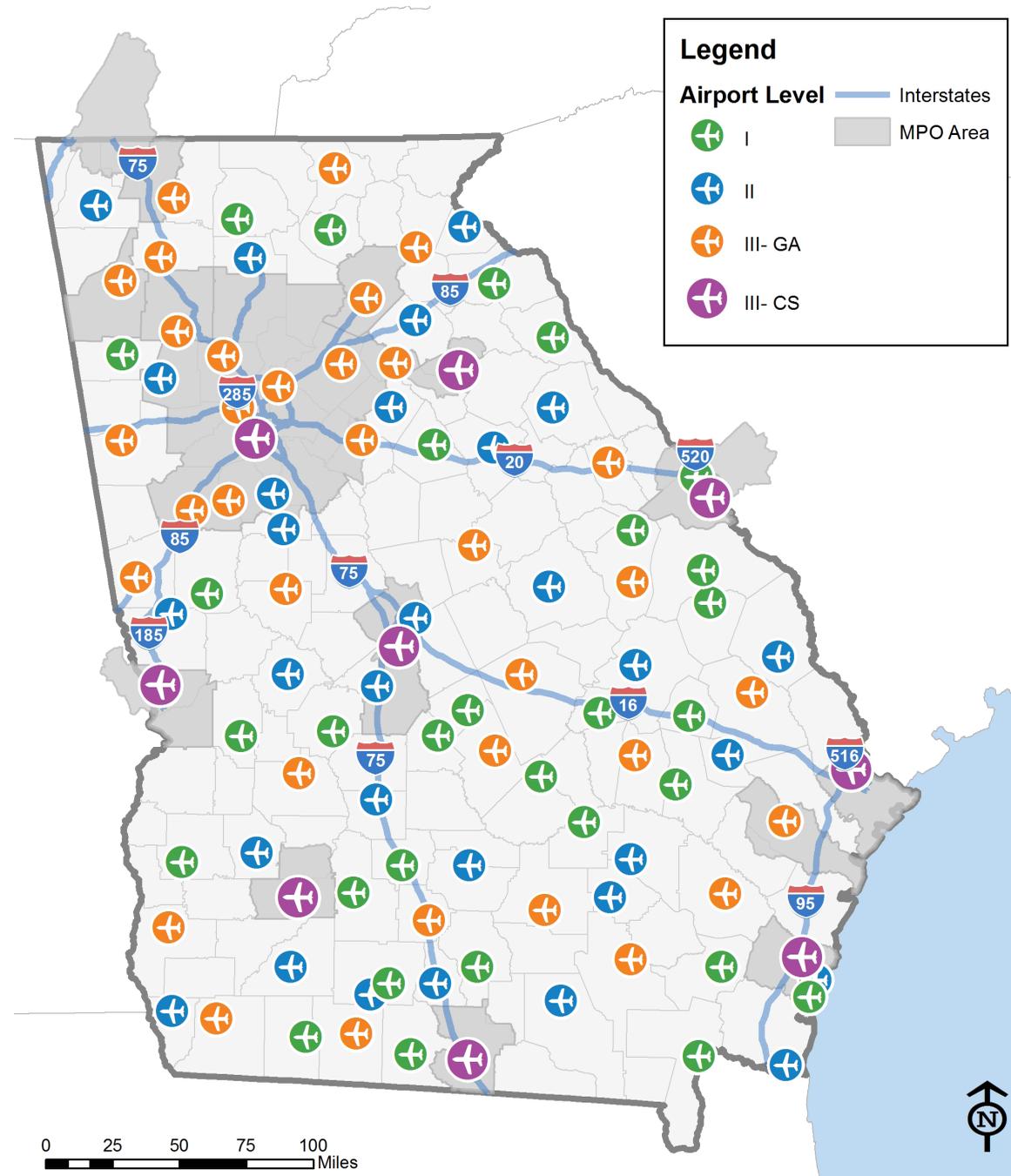
- Modernization improvements are needed; e.g., short-line track infrastructure requires upgrades to the current industry standard of 286,000 pound per railcar, increases in vertical clearance will be necessary to handle double-stack container railcars and tri-level auto carriers.
- Major system bottlenecks and at-grade rail crossings are inhibiting rail movement and require investment.
- Improved port-rail access, storage and operating efficiencies are needed.
- Improved last-mile connections to freight-rail facilities are needed.

AVIATION

There are 104 publicly owned and used airports throughout the State, of which nine offer scheduled commercial service, and the remaining 95 classified as general aviation (Figure 19, page 40). GDOT is most involved with the general aviation airports and in providing last-mile roadway access to all of the airports. Each airport is classified as a Level I (minimum standard general aviation), Level II (business airport of local impact), or Level III (business airport of regional significance and/or commercial facility) based on the role it plays in the aviation system.



Figure 19. Overview of Public Airports by Level of Service



Sources: GDOT, FAA (September 2013).

There are over 2 million general aviation flights and 73,000 commercial flights annually. The nine commercial airports handle approximately 47 million annual boardings, of which 46 million are handled by the Hartsfield-Jackson Atlanta International Airport (HJAIA). The next busiest commercial airport is the Savannah-Hilton Head International Airport (SAV), with just under 800,000 annual boardings. Most airports currently have excess capacity. Sixty-one percent of Level I general aviation airports currently meet facility and service objectives. Ten Level III airports require longer primary runways to meet facility objectives.

Nine commercial airports handle approximately 47 million annual boardings, of which 46 million are handled by the Hartsfield-Jackson Atlanta International Airport.

Although enplanements at commercial service airports outside of HJAIA have stagnated in recent years, the total number of takeoffs and landings is expected to increase in the future among all three classifications.

Cargo services also are a component of airports, with three airports with air cargo volumes above 1,000 annual tons in 200: HJAIA, the Southwest Georgia Regional Airport, and Savannah-Hilton Head International Airport. HJAIA represents more than 95 percent of the total air cargo volume in Georgia, with over 50 percent of commodities classified as miscellaneous mixed shipments or mail and contract traffic. Air cargo growth at HJAIA is expected to face growing competition from other larger international airports in the future.



INVESTMENT NEEDS

- Enplanements at commercial service airports outside of HJAIA have stagnated in recent years and air cargo growth at HJAIA is facing competition from other larger international airports; improved connections to the broader transportation system are needed to allow commercial airports to operate as economic engines throughout the State.
- Additional/upgraded runway extensions, runway layouts, turnarounds, and aircraft parking and maintenance areas are required in order to comply with FAA regulations.
- Aging pavement conditions are impacting safety at some facilities.
- Most airports are operating at excess capacity; improving operations may attract demand; e.g., through purchasing or upgrading instrument approaches such as runway and taxiway lighting upgrades, installation of precision approach path indicator (PAPI), and automated surface observing systems for weather tracking.
- Landside expansions such as terminal areas, parking spaces, and other fixed-based operators are needed to support the general aviation services.

MARINE PORTS

There are three marine port complexes owned and operated by the Georgia Ports Authority (GPA): the Ports of Savannah, Brunswick, and Bainbridge, the largest of which is Savannah. There also are dozens of private terminals along the Georgia coast and the inland waterways, typically owned and operated by companies that exclusively ship their own products. GDOT's primary role is to provide last-mile roadway access to the ports.

Port volumes at GPA ports had record highs for fiscal year 2013, with 27.2 million tons of cargo moved across all GPA terminals. This included large increases in tons of cargo for specific commodities, such as biofuels, including wood pellets and auto and machinery units.

Volumes by Port in FY 2010

Port of Savannah
24 Million Tons
\$9 Billion Dollars



Port of Brunswick
2 Million Tons
\$287 Million Dollars

Port of Bainbridge
82 Thousand Tons

The Port of Savannah is vital to the State's economy and is, overall, the fourth-largest container port in the U.S., handling about 3 million 20-foot-equivalent (TEU) container units annually. In addition, it is the second largest export port in the U.S. and has 37 weekly container ship calls, which is the second highest on the East Coast.

The Port of Savannah handles container, refrigerated, break-bulk, and roll-on/roll-off cargo such as automobiles. The Garden City Terminal, located seven miles upriver from downtown Savannah, is the largest GPA facility and the largest single terminal container operation in North America. This contributes to the large variety of commodities that are shipped through the facility, including wood pulp, food, furniture, and paper products, among many others.

The Port of Savannah's current channel depth is 42 feet; however, construction is underway to deepen that to 47 feet to consistently serve larger ships that will start traveling through the Panama Canal. This deepening of the channel also increases the efficiency and safety of cargo vessel operations. Additional landside capacity may be needed and access improvements for both trucks and trains will be critical at the Port of Savannah to accommodate future growth projections.

The Port of Savannah is vital to the State's economy and is, overall, the fourth largest container port in the U.S., handling about 3 million 20-foot-equivalent (TEU) container units annually.

INVESTMENT NEEDS

- Access improvements for both trucks and trains at the Port of Savannah are needed to accommodate future growth projections resulting from the widening of the Panama Canal.
- Rail spurs and storage yards need to be upgraded at the Port of Brunswick.
- Additional capacity in the Garden City Terminal is needed to meet forecast future demand, particularly for 20-foot equivalent (TEU) containers.
- Improved rail access to the East River Terminal and Lanier Docks in Brunswick.



REVENUE PROJECTIONS

FINANCIALLY CONSTRAINED REVENUE

Recommendations for the 2040 SWTP/2015 SSTP are constrained to available projected revenue, to ensure the investment approach and expected performance impacts are feasible and implementable over the plan horizon. This advances a key tenet of MAP-21 and the SSTP which promotes strategic, results-oriented investment decisions that optimize performance within a constrained funding environment.

FUNDING OVERVIEW

Transportation in Georgia has typically been funded through federal funds and state revenues collected from taxes and fees related to the transportation sector. Traditionally, these sources have consisted of:

- Federal Highway Administration Funds;
- Federal Transit Administration Grants;
- State Motor Fuel Excise Taxes; and
- State General Fund Appropriations.

While these sources have been effective in funding the existing transportation system, revenues have not been growing

commensurate with needs. On May 4, 2015, the Georgia General Assembly approved the Transportation Funding Act of 2015. The new transportation bill, effective July 1, 2015, represents new state funding sources specifically for transportation purposes. The bill introduced the following changes:

- **State Motor Fuel Excise Tax Rates.** The bill eliminated the state motor fuel sales tax and raised the state excise tax for gasoline and diesel vehicles, all starting on July 1, 2015. The new tax rates also will be indexed to inflation and to the rising fuel efficiency standards of vehicles.
- **Hotel/Motel Nightly Fee.** A hotel/motel fee was promulgated for each calendar day a room, lodging, or accommodations are rented or leased.
- **Heavy Vehicle Annual Impact Fee.** An annual highway impact fee for heavy vehicles was implemented.
- **Alternative Fuel Vehicle Fees.** An alternative fuel vehicle annual registration fee was implemented for commercial and noncommercial vehicles.
- **Tax Credits.** Tax credits on low/zero-emission vehicles were eliminated.

For the 2040 SWTP/2015 SSTP, GDOT evaluated each of the traditional and new revenue sources and projected these over a 25-year planning period using conservative assumptions to support a set of financially realistic investment recommendations for the plan. The assumptions reflect current funding policy and revenue that is reasonably expected to be available over the life of the transportation plan.^{26,27}

FORECAST METHODOLOGY

To develop revenue projections, historical revenue information was compiled to determine appropriate growth rates over the 2040 SWTP/2015 SSTP plan horizon.

Funding allocations from FHWA programs were projected from the apportionments for the State of Georgia authorized for FY 2013 and FY 2014 by MAP-21. Apportionments for Georgia were discounted by 8 percent, assuming that the

²⁶ Appendix E – Revenue Forecast – provides and in-depth review of Georgia’s transportation funding sources and a detailed summary of the assumptions used to generate revenue projections.

²⁷ Local (non-federal or state) transportation revenues were also projected, but for informational purposes only. Locally generated revenue was projected as a cross-check on the long-term viability of local match for federal revenue projections. The SWTP/SSTP did not, however, address the specifics of how local funds will be generated nor allocated over the life of the plan.

With the new state revenue sources promulgated by the Transportation Funding Act of 2015, the net funding expected to be available from federal and state sources is estimated at \$65 billion – approximately \$2.5 billion per year, an average annual revenue increase of 48 percent.

Obligation Authority for the State of Georgia is 92 percent, based on historic apportionments. After FY 2014, revenues were projected to grow at 1 percent per year, consistent with GDOT policy assumptions and the Congressional Budget Office (CBO) annual growth forecast of the Highway Trust Fund (HTF) over the next 10 years.

Georgia’s FTA funding allocations for FY 2013 were obtained from MAP-21. Excluding Sections 5303 and 5304 (i.e., Metropolitan and Statewide Planning Program), total grant allocations were \$168 million. An annual growth rate of 1 percent was assumed thereafter, consistent with GDOT policy assumptions and CBO’s growth forecast of the HTF.

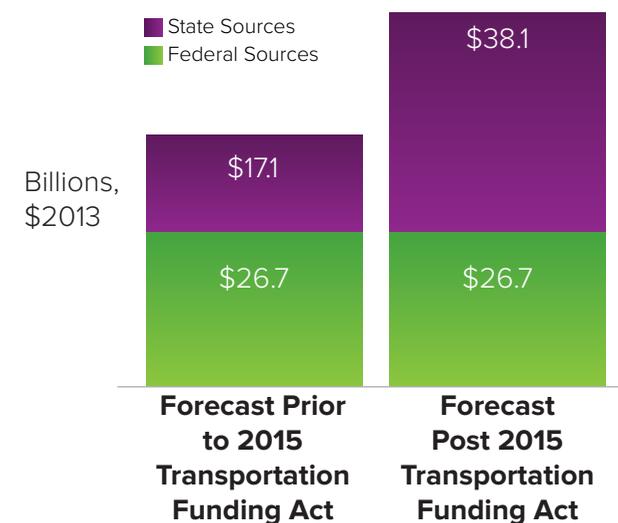
Georgia’s primary state funding source for highway projects is from taxes collected on motor fuels. MFT revenue projections were developed using a methodology that recognized adopted fuel efficiency (Corporate Average Fuel Economy (CAFE)) standards and future automobile and truck travel demand. Table 1 (page 47) summarizes the assumptions used for each of the revenue sources.

FUTURE REVENUE PROJECTIONS

Prior to the Transportation Funding Act of 2015, transportation revenue projections

were estimated at \$44 billion²⁸ (2013 dollars) across federal and state sources over the 2040 plan horizon – approximately \$1.7 billion per year. With the new state revenue sources promulgated by the Transportation Funding Act of 2015, the net funding expected to be available from federal and state sources is estimated at \$65 billion – approximately \$2.5 billion per year, an average annual revenue increase of 48 percent (Figure 20, page 46). Figure 21 (page 48) shows the anticipated revenues as annual estimates, in both year of expenditure dollars and in constant 2013 dollars.

Figure 20. Georgia Transportation Revenue Projections 2015-2040, 2013 Dollars

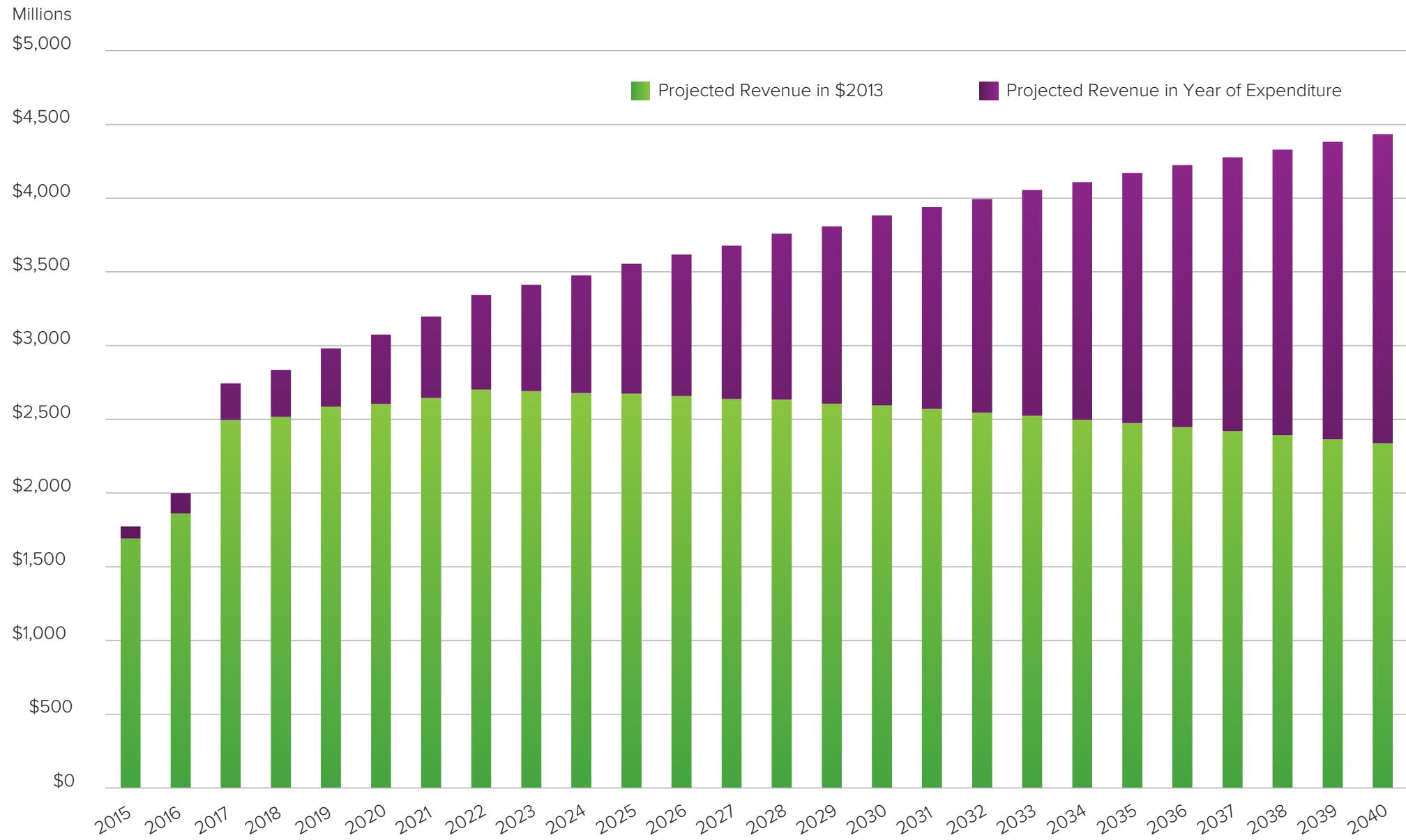


²⁸ Net funding, after debt obligations are considered.

Table 1. Revenue Assumptions

Funding Source	Assumptions
Federal Highway Administration	<ul style="list-style-type: none"> Georgia FY 2014 apportionments discounted by eight percent. Annual growth rate of one percent, consistent with GDOT policy. Metropolitan Planning and State Planning and Research funds were excluded.
Federal Transit Administration	<ul style="list-style-type: none"> Annual growth rate of one percent. No grants from Section 5309 – Fixed-Guideway Capital Investment awarded. Metropolitan Planning programs and State Planning and Research funds were excluded.
State General Fund Appropriations	<ul style="list-style-type: none"> No allocation for highways; assumed constant allocation of \$3 million in Year of Expenditure (YOE) for transit.
State Motor Fuel Excise Taxes	<ul style="list-style-type: none"> Fuel efficiency of the entire “on-the-road” fleet of cars and light trucks is consistent with AEO 2013 projections. Future annual growth of VMT projections is consistent with statewide travel demand model. The excise tax rates are indexed to the average fuel economy of vehicles and to changes in the Consumer Price Index (the latter is only for the first three fiscal years).
Hotel Night Fee	<ul style="list-style-type: none"> Revenue estimate range between \$170-190 million per year (in nominal dollars) was assumed.
Heavy Vehicle Annual Impact Fee	<ul style="list-style-type: none"> Fee of \$50 for vehicles weighing between 15,500 and 26,000 pounds and of \$100 for vehicles weighing more than 26,001 pounds. No annual growth was assumed for the number of heavy vehicles and fees are not indexed.
Alternative Fuel Vehicle Fees (AFV)	<ul style="list-style-type: none"> Annual fee of \$200 for noncommercial vehicles. Annual fee of \$300 for commercial vehicles. Fees are indexed to the average fuel economy of vehicles. Only for the first three fiscal years, the resulting fees will additionally be indexed to changes in the Consumer Price Index (CPI). Fees applicable to vehicles operating on alternative fuel except for vehicles which operate primarily on compressed natural gas, liquefied natural gas, or liquefied petroleum gas. Annual growth rate of 5 percent for electric vehicles.
Alternative Fuel Vehicle Tax Credits	<ul style="list-style-type: none"> Revenue estimate range between \$15-18 million per year (in nominal dollars) was assumed.

Figure 21. Net Projected Federal and State Revenue by Year



Note: Net revenue (after debt obligations are considered).

FINANCIALLY UNCONSTRAINED REVENUE

As part of 2040 SWTP/2015 SSTP development, an unconstrained revenue forecast was developed. The unconstrained revenue estimate is based on total programmatic transportation needs based on projected future deficiencies across seven investment programs (pavement, bridge, roadway capacity, transit capacity, safety, operations, and bicycle/pedestrian). With this approach, unconstrained revenue estimates are “reverse-engineered” given future transportation investment needs; i.e., total needs define total unconstrained revenues.

To define the unconstrained revenue estimate for each investment program, total funding needs were estimated in the following manner:

- **Pavement.** Funding levels needed to maintain today’s excellent pavement conditions across the entire GDOT-owned, FAS; i.e., at approximately 100 percent of pavement in fair or better condition,²⁹ a level that exceeds proposed MAP-21 performance thresholds.
- **Bridge.** Funding levels needed to maintain today’s excellent bridge conditions across the entire FAS; i.e. at, approximately 98 percent of bridge deck area on nonstructurally deficient

²⁹ As measured by IRI, the proposed MAP-21 performance measurement method for pavement.

- bridges;³⁰ a level that exceeds proposed MAP-21 performance thresholds.
- **Roadway Capacity.** Funding levels needed to address LOS C and worse deficiencies across the statewide roadway network.
 - **Transit Capacity.** Funding level needed to address transit capacity needs across the State, to include transit capacity projects included in constrained MPO long-range transportation plans, investment to support new transit service to underserved portions of urban areas, and expansion of rural human services transportation to currently unserved rural areas of the state; funding levels reflect capital funding only, not funding for ongoing operations and maintenance.
 - **Operations.** Funding level reflects a maximum spending level that optimizes performance across key operational investments reflected in 2040 SWTP/2015 SSTP analysis (signal coordination, ramp metering, incident response).
 - **Safety.** Funding levels reflect a maximum spending level that optimizes safety impacts across key safety programs reflected in 2040 SWTP/2015 SSTP analysis (intersection crashes and roadway departures).

³⁰ As measured by NBIAS structural deficiency standards, consistent with the proposed MAP-21 performance measurement methods for bridges.

- **Bike/Pedestrian.** Funding level reflects continued funding for the federal Transportation Alternatives Program at today’s levels.

These maximum funding estimates were summed across all investment programs. Total funding needs which comprise the unconstrained revenue estimate are shown in Table 2 (page 49).

Table 2. Unconstrained Revenue Estimate

Investment Program	Annual Funding Needed to Address Needs (Millions/Year)	Unconstrained Revenue Estimate – Total Funding Needed to Address Needs Over Plan Horizon (Billions)
Pavement	\$1,600	\$40
Bridge	\$350	\$9
Roadway Capacity	\$800	\$20
Operations	\$200	\$5
Safety	\$230	\$6
Transit Capacity	\$200	\$5
Bicycle/Pedestrian	\$50	\$1
Total	\$3,430	\$86 billion in investment need over plan horizon

The total needs-based, unconstrained revenue estimate is \$86 billion. The total funding gap identified for the 2040 SWTP/2015 SSTP is approximately \$21 billion over the life of the transportation plan (\$86 billion in needs minus \$65 billion in revenue projected).

PUBLIC AND STAKEHOLDER OUTREACH

OUTREACH METHODS

The Georgia DOT is committed to involving state, regional, and local stakeholders and citizens across Georgia in its transportation planning decisions.³¹ At the inception of the 2040 SWTP/2015 SSTP, a Public and Stakeholder Engagement Plan was developed to meet the following outreach objectives:

- Identify opportunities and activities to receive input from a wide range of stakeholders and citizens,
- Meet all regulations pertaining to public engagement and transportation planning in Georgia, and
- Exceed the expectations of these regulations in terms of reaching an unprecedented number of Georgians to inform and involve them in the transportation planning process.

Outreach was conducted at each stage of the plan development process to understand the

³¹ Reference Appendix H (Public Outreach) for detail on public outreach methods applied for the 2040 SWTP/2015 SSTP.

public and stakeholders' views on existing and future transportation conditions, future needs and deficiencies, and desired transportation investments for various program areas.

The general public interested in statewide transportation issues cannot be characterized as a single, homogeneous group of individuals and organizations. The outreach methods defined for the 2040 SWTP/2015 SSTP were designed to accommodate a variety of public audiences ("markets") which differ in terms of demographic characteristics, preferred methods of receiving information, levels of understanding of transportation issues, and personal attitudes towards transportation in Georgia (Table 3, page 50).

WHAT DID THE STAKEHOLDERS TELL US?

- Preserve and maintain the existing system;
- Provide access and mobility for everyone;
- Use resources efficiently;
- Support freight and goods movement;
- Give Georgians more transportation options; and
- Reduce congestion.

Table 3. Public Involvement Market Segments

Market Segments	Description
General Public	All citizens of Georgia, typically "casually interested"
Wired and Hungry for News	Tend to be younger (though not entirely), actively "wired in" to various social and electronic media outlets
Highly Motivated to Participate	Individuals and organizations active in government activities, particularly engaged in transportation matters
Not Traditionally Involved	Less engaged, less access to technology, low level understanding of issues, underserved communities
Government and Public Sector Partners	Broad array of State, regional, and local officials and agencies, partners in accomplishing the Governor's statewide goals
Business, Logistics and Economic Development	Represent the business interests in Georgia, as well as those who rely on the State's transportation network to support their business activities

Keeping in mind the various market segments identified in Table 3, tailored public engagement techniques were identified for each group. The following techniques provided opportunities for engagement:

- A project web site served as a hub for project communications with the public by providing general information, surveys, and technical reports.
- As part of the 2040 SWTP/2015 SSTP, GDOT developed an on-line scenario planning tool that enabled members

of the public to engage in investment scenario analyses. The tool allowed the user to define unique investment scenarios across seven investment program areas (pavement, bridge, road capacity, transit capacity, operations, safety, bike/pedestrian) within constrained revenue projections. For each scenario, the user was able to test the performance implications of assigned funding levels to better understand performance tradeoffs within a constrained funding environment.



- In lieu of traditional public meetings, the project team attended seven festivals during October 2013 in each GDOT district to engage citizens. These festivals included:
 - Georgia Apple Festival (District 6);
 - Big Red Apple Festival (District 1);
 - Atlanta Streets Alive (District 7);
 - Shade Days in Gay (District 3);
 - Kaolin Festival (District 2);
 - Georgia Peanut Festival (District 4); and
 - Rock Shrimp Festival (District 5).
- A school curriculum transportation lesson was prepared and provided to 5th graders in each GDOT district. The lesson was followed up with a family travel survey students completed at home with their parents. The survey was designed to gather the thoughts and preferences on the local and statewide transportation system, and gain a better understanding of mobility challenges faced by Georgians, particularly those in EJ communities.
- A Stakeholder Advisory Committee (SAC) was organized and convened to gather input from the Department's internal and external agency partners. Members in the SAC included representatives from the government and public sectors, along

The outreach efforts resulted in feedback from 2,455 surveys

- *1,383 on-line scenario planning surveys*
- *128 surveys completed during the coordination with local/rural elected officials, counties and cities*
- *605 surveys collected at community outreach events*
- *241 surveys completed on the project web site*
- *98 travel surveys collected during the school curriculum outreach*

with business stakeholders who rely on Georgia’s transportation network to support their business activities.

- Rural/local elected officials, counties and cities were engaged at annual conferences and invited to participate in a survey to collect information on transportation needs.
- Georgia’s MPOs were tapped for information on transportation needs through the Georgia Association of Metropolitan Planning Organization (GAMPO) meetings.

- A Private-Sector Roundtable was held to engage representatives from Georgia’s major industries and businesses in a discussion on transportation’s linkages to economic development and discuss their preferred transportation investment strategies for the 2040 SWTP/2015 SSTP, specifically where goods movement is concerned.

These focused techniques allow for targeted engagement. Table 4 (page 52) shows the engagement techniques used throughout the 2040 SWTP/2015 SSTP by market segment.

Table 4. Audiences Targeted by Engagement Technique

Engagement Technique	General Public	Wired and Hungry for News	Highly Motivated to Participate	Not Traditionally Involved	Government and Public Sectors	Business, Logistics and Economic Development
Project Web Site	✓	✓	✓	✓	✓	✓
On-line Scenario Planning Tool	✓	✓	✓	✓	✓	✓
Community Outreach	✓	✓	✓	✓		
School Curriculum/Family Travel Survey	✓			✓		
Stakeholder Advisory Committee (SAC)					✓	✓
Coordination with Rural Local Elected Officials/Counties/Cities					✓	
Coordination with Metropolitan Planning Organizations (MPO)					✓	
Private Sector Roundtable						✓

OUTCOMES OF OUTREACH EFFORTS

The varying public involvement techniques were used throughout the 2040 SWTP/2015 SSTP development process providing insight on what issues matter to residents, officials, and businesses from all areas of the State. The varying types of techniques allowed all audiences a chance to become involved in the SWTP/SSTP process, develop a better understanding of past and future trends of the State's transportation network, and provide input into long-term investment policy.

The outreach efforts resulted in feedback from 2,455 surveys (1,383 on-line scenario planning surveys, 128 surveys completed during the coordination with local/rural elected officials, counties and cities; 605 surveys collected at community outreach events, 241 surveys completed on the project web site, and 98 travel surveys collected during the school curriculum outreach). Information was also presented to stakeholders across eight key meetings (three Stakeholder Advisory Committee meetings, two rural/local elected officials' conferences, two MPO conferences/meetings, and one private sector round table meeting).



A performance-based tradeoff analysis was applied as part of the 2040 SWTP/2015 SSTP effort to support a data-driven and structured process for exploring the performance implications of potential investment scenarios.

PLAN RECOMMENDATIONS

INVESTMENT SCENARIOS

Transportation needs in Georgia outweigh expected revenues. While the Transportation Funding Act of 2015 provides a significant infusion of revenue to the State, transportation and associated economic development needs remain. A key part of the 2040 SWTP/2015 SSTP planning process was to determine how best to allocate limited funds in a manner that optimizes performance and supports progress towards long-term transportation goals and objectives. For example, how much money should be spent on preserving the existing transportation network versus expanding it? Or within the preservation program, how much should be allocated to pavement needs versus bridge needs? All transportation agencies face these types of tough decisions. Most agencies address them through a combination of historic funding precedent and/or ad hoc policy development. In contrast, a performance-based tradeoff analysis was applied as part of the 2040 SWTP/2015 SSTP effort to support a data-driven and structured process for exploring the performance implications of potential investment scenarios.

As part of plan development, a tradeoff analysis tool³² was developed to allow GDOT to explore options for allocating money among six program areas – Pavement, Bridge, Roadway Capacity, Roadway Operations, Safety, and Transit Capacity. The tool is based on the relationship between funding and performance for each program area allowing GDOT to consider performance implications of investment over the long term. The user can control how much total funding is available for distribution across all investment programs, within constrained revenue projections of \$65 billion (across federal and state revenue sources). Performance impacts of programmatic funding levels were estimated in the year 2040 given average annual funding levels assigned to each program between the years 2015 to 2040. As the dollar amount of investment is increased, the underlying performance of each asset category improves. As more dollars are expended, performance improves until eventually it levels off at high levels of expenditure. This flattening out point on the curve is where the optimal economic level of investment lies, or where the “biggest bang for the buck,” is achieved.

³² Optics Performance Dashboard, Cambridge Systematics, 2015.

Table 5. Performance Measures Applied for Investment Tradeoff Analysis

Investment Program	Performance Measure	Current Performance
Pavement	Percent lane-miles fair or better condition ^a	100 percent (federal-aid, GDOT owned)
Bridge	Percent Deck Area on Nonstructurally Deficient Bridges ^b	98 percent (federal-aid)
Roadway Capacity	User Delay Savings	\$32 million lost to delay today \$73 million lost to delay in 2040 (under a baseline/no-build scenario)
Roadway Operations		
Safety	Fatality Reduction	1,170 fatalities per year (2014)
Transit Capacity	Percent Population Accessible to Transit	81 percent

^a As measured by IRI, the proposed pavement performance measure for MAP-21. MAP-21 establishes a minimum threshold of 95 percent lane miles in fair or better condition on the Interstate System.

^b Consistent with the proposed bridge performance measure via MAP-21. MAP-21 establishes a minimum threshold of 90 percent deck area on nonstructurally deficient bridges for the National Highway System.

Performance was measured for each program using one select performance measure, capable of reflecting network-level impacts of varying fund levels and where underlying data and tools supported modeling future performance impacts (Table 5, page 55). All performance measures were aligned, where possible, with anticipated federal performance metrics that will be established through MAP-21 performance monitoring regulations. These measures support planning-level, predictive analysis of performance impacts in the year 2040 to

support federal performance requirements.³³

Bicycle and pedestrian investment was also reflected in the tradeoff analysis through a continued set-aside of two percent funding for stand-alone multimodal investments, consistent with today’s federal Transportation Alternative Program funding levels.

³³ These performance measures differ in application from the measures applied through GDOT’s Performance Management Dashboard. Both sets of performance measures evaluate progress towards the same investment goals, with federal/ MAP-21-oriented measures supporting predictive planning-level measurements and state/ GDOT-specified measures supporting empirical performance monitoring and progress reporting.

Figure 22 (page 56) presents two investment scenarios resulting from the tradeoff analysis. In both scenarios funds are allocated based on the following:

1. Funding needed to meet minimum pavement and bridge performance thresholds as required by MAP-21.
2. Emphasis areas defined in the SSTP which endorse relatively high investment in highway preservation and operational improvements, in core transit operations, and strategic investment in highway capital expansion projects.

SCENARIO PERFORMANCE BY INVESTMENT PROGRAM

The performance impacts of each scenario is presented by investment program. The first scenario (Traditional Revenue) demonstrates performance impacts in the year 2040 given revenue projections of \$44 billion based off of traditional revenue sources, prior to the Transportation Funding Act of 2015. The second scenario (New Revenue) reflects performance implications with the final revenue projections of \$65 billion, as enabled by the Transportation Funding Act. Both are compared to a 2040 baseline scenario assuming current spending levels by investment program are carried forward in the future.

As indicated in Figure 22, the New Transportation Revenue scenario defines a funding allocation that optimizes performance across all investment programs. Key highlights of this scenario include:

- Increased total safety spending resulting in continued fatality reductions over the plan horizon;
- Pavement and bridge conditions that meet anticipated federal performance thresholds;
- A significant decrease in congestion and increase in user delay savings due to roadway capacity improvements, even at a lower capacity spending level than today;
- Increased roadway operations spending yielding significant auto and truck delay savings (and corresponding increase in user delay savings) across the highway network;
- Significantly increased access to transit across both urban and rural populations in the State; and
- Increased funding for bicycle and pedestrian capital investments at a level that mirrors today's (percentage) funding allocations.

Figure 22. Performance Impacts of Alternative Investment Scenarios

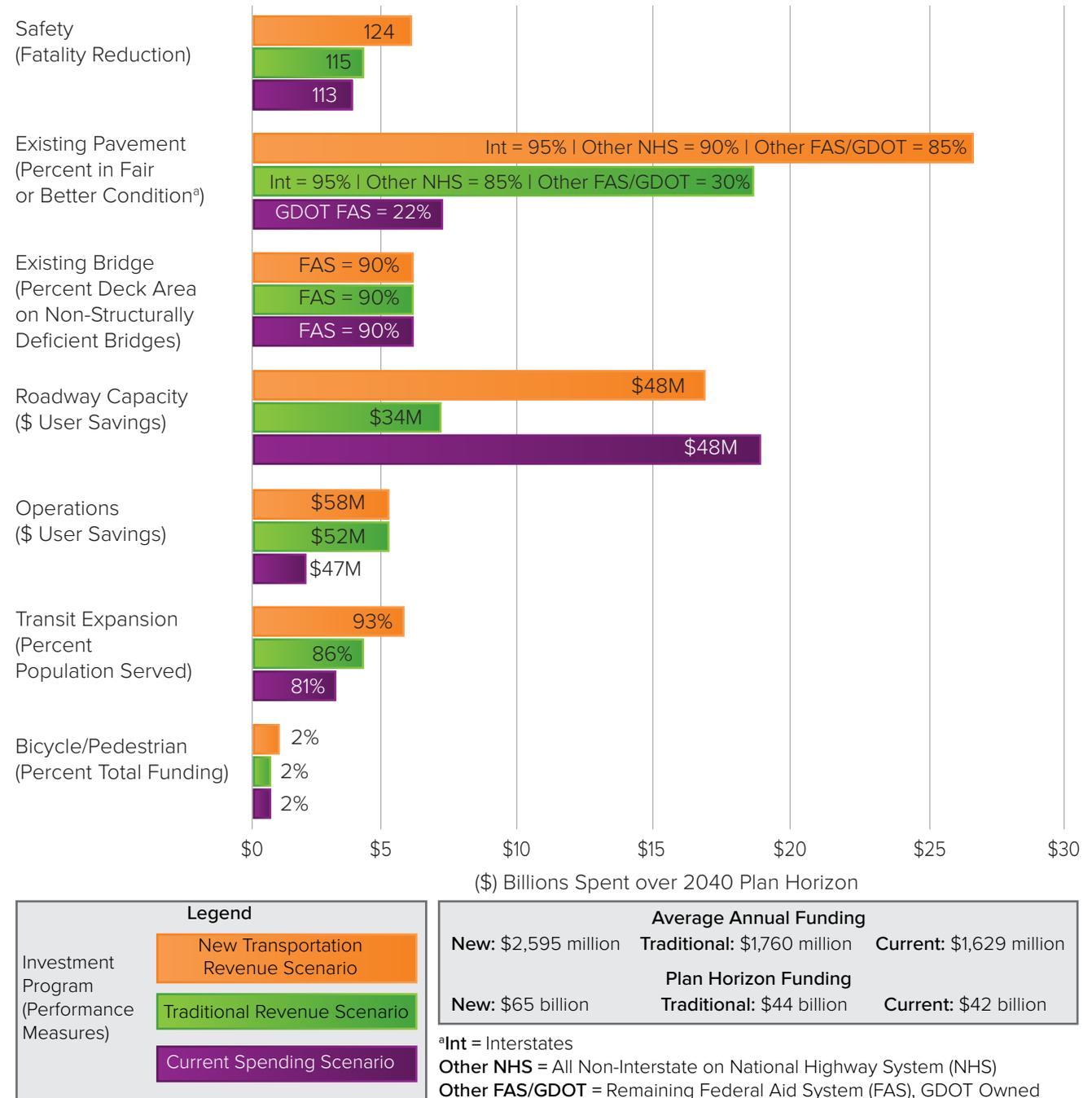


Table 6. Total Estimated Economic Impact of Alternative Investment Scenarios

	Current Spending Scenario	Traditional Revenue Scenario	New Revenue Scenario
Employment (Permanent Jobs Created Over Plan Horizon)	-7,179	9,440	10,618
Gross State Product (in Millions of 2014\$)	-\$20,245	\$27,361	\$30,677
Personal Income (in Millions of 2014\$)	-\$13,594	\$16,108	\$17,884
Cost Savings per Georgia Licensed Driver per Year (in 2014\$)	-\$183	\$144	\$158

^a REMI economic projections conducted for 2040 SWTP/2015 SSTP.

ECONOMIC IMPACT OF INVESTMENT SCENARIOS

The economic impacts of each scenario were also analyzed and are summarized in Table 6 (page 57). Economic impacts were derived from the changes in total transportation costs for residents and businesses due to roadway improvements, lower vehicle operating costs for personal and commercial vehicles given improved pavement conditions, and growth stimulated by multimodal improvements.³⁴ These economic benefits reflect the cumulative economic impacts over the plan horizon.

Georgia’s economy is projected to expand by an average annual rate of 2.3 percent through 2040.³⁵ As summarized in Table 6, under a Current

³⁴ Reference Appendix H for more detail on economic impact analysis.

³⁵ REMI economic projections conducted for 2040 SWTP/2015 SSTP.

Spending Scenario, Georgia will see negative economic impacts across all three economic metrics over the plan horizon; i.e., jobs, GSP, and personal income will not grow as fast as projections indicate. Further, increased transportation cost resulting from this investment scenario is estimated to represent, on average, an additional *expenditure* of nearly \$183 per Georgia licensed driver per year. In contrast, increased transportation spending under the Traditional Revenue Scenario with an SSTP investment focus are expected to yield \$144 in cost savings per year per Georgia licensed driver due to reduced congestion and better pavement quality. Under the New Revenue Scenario with an SSTP Investment Focus, economic growth across all three key metrics is accelerated. Additionally, each Georgia licensed driver is anticipated to save nearly \$160 per year due to reduced congestion-related delays and improved pavement conditions.

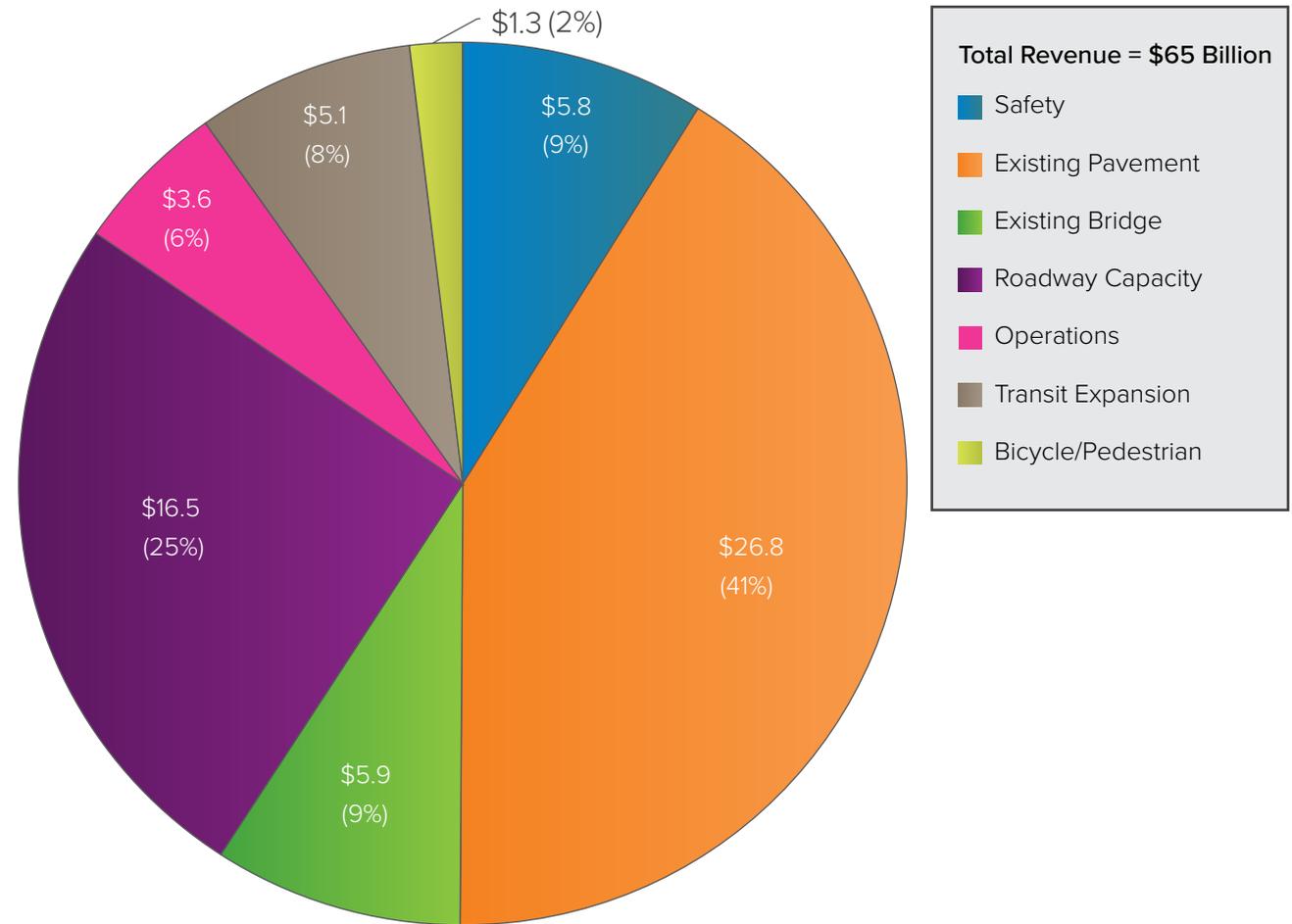
Under the New Revenue Scenario with an SSTP Investment Focus, economic growth across all three key metrics is accelerated. Additionally, each Georgia licensed driver is anticipated to save nearly \$160 per year due to reduced congestion-related delays and improved pavement conditions.

PREFERRED INVESTMENT SCENARIO

The investment scenario/tradeoff analysis produced funding amounts by key investment program and a corresponding set of realistic, achievable performance levels – as reflected in the New Transportation Revenue Scenario. These “funding targets” provide GDOT a general investment portfolio which optimizes performance across investment programs, within constrained revenue projections (Figure 23, page 58). The funding split reflects adequate funding needed to achieve minimum federal performance thresholds, while still supporting SSTP/state-oriented investment objectives.

These funding “targets” provide GDOT a general investment portfolio which optimizes performance across investment programs, within constrained revenue projections.

Figure 23. Recommended Funding Split Across Investment Programs



RECOMMENDED INVESTMENT STRATEGIES

The 2040 SWTP/2015 SSTP investment recommendations are presented here as key investment strategies for the programs summarized above, as well as intermodal programs evaluated during plan development.

Recommendations are derived from the needs analysis that was conducted for each transportation mode and are intended to serve as guidance for how to spend available revenue within each mode over the plan horizon. These investment recommendations are mirrored between the 2040 SWTP and 2015 SSTP.

Pavement

- Aggressive investment in pavement over today’s spending levels to meet federal and state performance expectations, reduce commercial and private vehicle operating costs, and improve safety.
- Invest on priority corridors (e.g., priority freight corridors, Interstate Highway System).
- Reconsider size of Federal Aid System to reduce overall pavement maintenance burden over time.

Bridge

- Continued investment in bridge network at approximately today’s funding levels to maintain and improve overall system and meet federal and state performance expectations.

Roadway Capacity

- Focus roadway capacity expansions on priority freight corridors.

Roadway Operations

- Improve network reliability through managed lanes systems in metro Atlanta.
- Continue to apply comprehensive operational investments (e.g., ramp metering, incident response, signal coordination).

Safety

- Implement Strategic Highway Safety Plan.
- Continued focus on high crash intersections and roadway departure improvements to reduce serious injuries and fatalities resulting from infrastructure deficiencies.
- Continued, aggressive education efforts on safety needs to address fatality reductions, in particular.

Transit Capacity

- Continue to support fixed route service in urbanized areas not currently served and expanded/improved transit to underserved portions of urbanized areas.
- Continue to support expansion of rural transit to counties without rural human services transportation.
- Support transit enhancements for existing service, e.g., new park-and-ride facilities inside and outside of metro Atlanta, express bus expansion in Atlanta.

Bicycle/Pedestrian

- Continue to implement GDOT complete streets policy.
- Improve tracking and reporting of bicycle and pedestrian funding allocations.

Intermodal (Freight-Rail, Ports, Aviation)

- Continue to promote and enhance rail safety.
- Collect more data on tracks and bridges, hazardous materials, grade crossings.
- Collaborate with neighboring states on regional solutions to freight challenges.
- Increase goods movement by rail; e.g., support GDOT-owned short line upgrades, remove key freight bottlenecks, improve grade crossings.
- Improve port-rail access, storage and operating efficiencies.
- Improve last-mile connections to intermodal facilities (port, aviation, rail).
- Modernize systems to accommodate more stringent federal standards.

2015 STATEWIDE STRATEGIC TRANSPORTATION PLAN

INTRODUCTION

The Statewide Strategic Transportation Plan (SSTP) is the official, comprehensive, fiscally constrained transportation plan that includes projects, programs, and other activities to support implementation of the State's strategic transportation goals and policies. The SSTP was first approved by the State Transportation Board and Governor in June 2010 setting the strategic direction for future transportation investment within the State. It was subsequently updated in September 2013 and has been updated a second time, herein, as part of the 2040 SWTP/2015 SSTP – in keeping with the required biennial update cycle.

The 2010 SSTP was originally developed to make the “business case” for transportation investment in the State of Georgia and directly helped to advance two critically important state transportation funding initiatives – the Regional Transportation Referendum promulgated through the Transportation Investment Act of 2010 and, most recently, the Transportation Funding Act of 2015. It followed a strategic

planning process that was outcome-driven, return-on-investment oriented, and based on best practices from the public and private sectors. The original transportation goals and objectives were developed through a process designed to understand what is important to Georgia's transportation customers, addressing four key questions:

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

It concluded that an investment strategy that focused on maximizing the performance of the existing system along with more strategic and cost-effective capital investments could transform Georgia's transportation network. Recognizing the unique investment needs across the State, the SSTP focused on increasing Georgia's return on transportation investment through a tailored investment

approach. This approach guides funding across three investment categories – Statewide Freight and Logistics, People Mobility in Metro Atlanta, and People Mobility (excluding Metro Atlanta) – and four integrated investment strategies – system preservation, core transit operations, improved roadway operations, and strategic roadway capacity expansion that is coupled with improved land use planning.

The 2015 SSTP serves as the second biennial revision of the SSTP as required by state law. It carries forward the same investment philosophy outlined in the inaugural SSTP with an emphasis on:

1. Alignment with the long-range 2040 SWTP through investment goals and objectives.
2. Updated priority investment strategies to align with long-range SWTP recommendations.
3. Specification of an execution framework to support performance monitoring efforts needed to improve investment decision-making for the SWTP and SSTP efforts moving forward.

KEY DEVELOPMENTS SINCE 2013 SSTP

While developments at the federal level are nominal as final regulations to implement key

MAP-21 provisions are delayed and reauthorization of federal funding is being managed through continued short-term funding extensions, there has been significant activity at the state level as it relates to transportation funding. Sales tax revenue collections continue in the three regions where the Transportation Investment Act passed, supporting the expedited delivery of a number of local transportation investments. In addition, the Transportation Funding Act of 2015 was implemented yielding a stable, long-term statewide transportation funding source for the State of Georgia.

REGIONAL TRANSPORTATION REFERENDUM (UPDATE)

The Transportation Investment Act of 2010 (TIA), which enabled the Regional Transportation Referendum, created 12 special districts in Georgia and provided the citizens in each the opportunity to vote on a 10-year, one percent regional transportation sales tax to fund a list of transportation projects selected by their local elected officials. Three regions (the Central Savannah River District, the River Valley District, and the Heart of Georgia District) approved the referendum on July 31, 2012.

As required by TIA, the funds collected in each region must be spent in the region and are not subject to congressional balancing

laws. Seventy-five percent of each region's proceeds will be used to fund the projects on the final investment list that was approved by the Regional Roundtable made up of mayors and county commissioners from the region. The remaining 25 percent of each region's proceeds will be divided among the region's local governments to be spent on transportation projects of each government's choosing. That money is distributed using a formula based on population and road mileage.

The sales tax is expected to increase transportation investments by a collective total of \$1.8 billion over the 10-year life span of the tax, across the three regions where the referendum passed.

Over \$352 million in RTR revenue has been collected in the three regions in less than

Over \$352 million in RTR revenue has been collected in the three regions in less than three years to advance 145 projects.

three years to advance 145 projects. That is more than three years of funding that GDOT provides to all local governments. It also is greater than one-third of the total federal funds Georgia receives each year. These funds can be put to numerous transportation uses by local governments on everything from projects to equipment to operations. In addition, projects completely funded with state revenue such as this, avoid often lengthy and cumbersome federal processes for project delivery allowing them to be delivered quicker. In January of this year, RTR projects were the only ones that advanced while GDOT had over 100 federal-funded projects on hold due to lack of federal funds.³⁶

In January of this year, RTR projects were the only ones that advanced while GDOT had over 100 federal-funded projects on hold due to lack of federal funds.

³⁶ <http://www.dot.ga.gov/AboutGeorgia/Pages/PostDetails.aspx?blogID=11>.

The new revenue enabled by the Transportation Funding Act of 2015 yields approximately \$38 billion over the life of the plan, an increase in state revenue of approximately \$20 billion or 123 percent.

TRANSPORTATION FUNDING ACT OF 2015

On May 4, 2015, the Georgia Transportation Funding Act of 2015 (House Bill 170) was signed into law. The new transportation bill, effective July 1, 2015, represents new state funding sources specifically for transportation purposes. The new bill introduced the following changes:

- State Motor Fuel Excise Tax Rates.** The bill eliminated the state sales tax and raised the state excise tax from 7.5 cents per gallon to 26 cents per gallon for gasoline and to 29 cents per gallon for diesel, all starting on July 1, 2015. The new tax rates will annually be indexed to the rising fuel efficiency standards of vehicles. The tax rates also will be indexed for Consumer Price Index (CPI) increases up to fiscal year (FY) 2019, with future indexing being tied only to the fuel efficiencies (e.g., Corporate Average Fuel Economy (CAFE) standards).
- Hotel/Motel Nightly Fee.** A \$5 per night hotel/motel fee for each calendar day a room, lodging, or accommodations are rented or leased (excludes extended stay rentals).
- Heavy Vehicle Annual Impact Fee.** Addition of an annual highway impact fee for heavy vehicles at a rate of \$50 for vehicles weighing between 15,500 and

26,000 pounds and \$100 for vehicles weighing more than 26,001 pounds.

- Alternative Fuel Vehicle Fees.** Institutes a \$200 noncommercial and a \$300 commercial alternative fuel vehicle annual registration fee.
- Tax Credits.** Eliminates the \$2,500/\$5,000 tax credits on low/zero-emission vehicles, respectively.

The new revenue enabled by the Transportation Funding Act of 2015 yields approximately \$38 billion over the life of the plan, an increase in state revenue of approximately \$20 billion or 123 percent.

2040 STATEWIDE TRANSPORTATION PLAN

In May 2013, GDOT initiated the required update to its long-range statewide transportation plan – the 2040 SWTP. A key objective of the plan update was the integration and alignment of the SSTP to ensure a consistent planning process and a corresponding set of investment recommendations to guide GDOT investment decisions in the future. The 2040 SWTP/2015 SSTP combines the traditional transportation analyses of the federally required long-range transportation plan with the strategic business

case for transportation investment required by the State. It provides a comprehensive look at transportation issues and investment needs in Georgia now and through the year 2040.

ALIGNING THE 2040 SWTP AND 2015 SSTP

Both the 2040 SWTP and 2015 SSTP require adherence to performance-based planning principles to ensure both federal and state strategic planning needs are addressed. As part of 2040 SWTP and 2015 SSTP development, an integrated performance framework was developed to ensure the SWTP and SSTP were developed in a coordinated and complimentary manner and that investment recommendations ensure progress towards a consistent set of long-range investment goals. The performance framework is shown in Figure 24 (page 64). The following is a summary of each step in the process as applied for the 2040 SWTP/2015 SSTP to inform plan recommendations.

GOALS

Transportation goals have been directly aligned for the 2040 SWTP and 2015 SSTP. They reflect desired, long-term outcomes for transportation investment. The goals are consistent with the national transportation

goals established via MAP-21.³⁷ They also support Georgia Governor Nathan Deal's vision for a lean and responsive state government that allows communities, individuals, and businesses to prosper, including the Governor's goals to: reduce injury and loss of life on Georgia's roads; improve the movement of people and goods across and within the State; leverage public-private partnerships and improve intergovernmental cooperation for successful infrastructure development; and expand Georgia's role as a major logistics hub for global commerce.

OBJECTIVES

Transportation objectives reflect specific strategies that will be applied to achieve long-term goals. For the 2040 SWTP/2015 SSTP transportation objectives reflect the investment categories and priorities defined as part the SSTP investment philosophy since its inception. Integrating SSTP investment categories in this manner allows the unique Georgia investment philosophy to define the methods for supporting federal transportation needs as well as the State's own specific investment needs.

³⁷ MAP-21 also includes a goal related to Improved Project Delivery that is addressed through SSTP implementation.

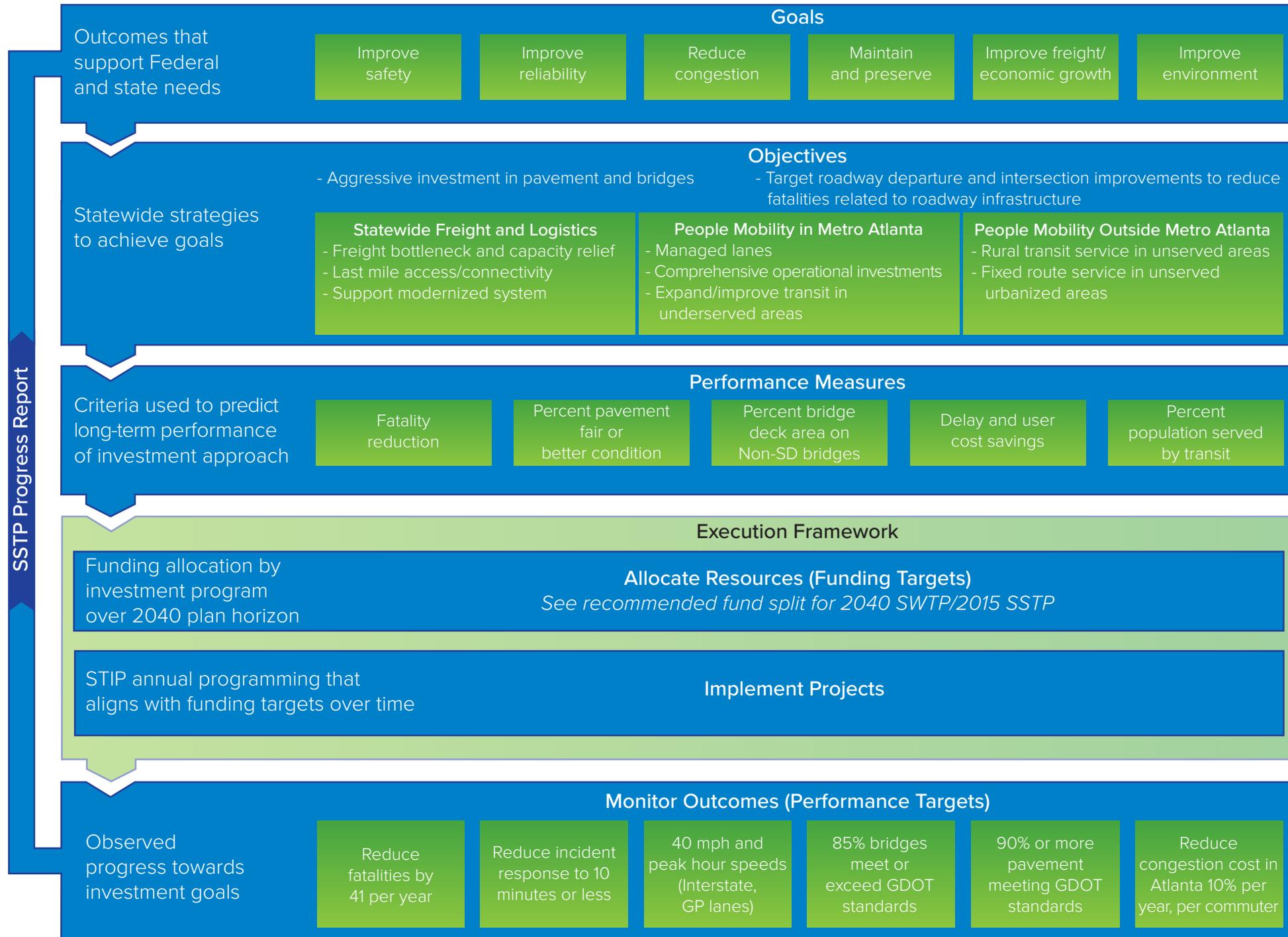
PERFORMANCE MEASURES

The performance measures applied as part of 2040 SWTP/2015 SSTP reflect a discrete set of evaluation criteria used to evaluate performance tradeoffs of potential investment scenarios in context of long-range goals. The performance measures are planning level, and predictive in nature, supporting a performance snapshot in the year 2040. They align with anticipated federal performance measures associated with MAP-21 performance monitoring requirements.

ALLOCATE RESOURCES/ FUNDING TARGETS

Resource allocation is the first key step within the SSTP execution framework, linking planning recommendations to funding decisions. Within the 2040 SWTP/2015 SSTP process, funding targets were developed as part of a constrained investment tradeoff analysis to support optimal performance across key investment programs over the plan horizon.

Figure 24. 2040 SWTP/2015 SSTP Performance Framework



IMPLEMENT PROJECTS

Project implementation through effective project delivery is the second critical piece of the SSTP execution framework. Within the performance framework, this necessitates annual programming through the GDOT Statewide Transportation Improvement Program (STIP) to be brought in line with long-range funding targets over time.

MONITOR OUTCOMES/ PERFORMANCE TARGETS

Performance targets define the point at which a goal is achieved. Executing the SSTP includes setting performance targets that, if attained, would advance the State’s strategic transportation goals.

Performance targets support 2040 SWTP/2015 SSTP goals and align directly with the Department’s performance management system, the “GDOT Performance Management Dashboard.”³⁸ Integration via the Performance Management dashboard ensures GDOT is measuring and reporting progress in a consistent and uniform fashion. It also enables more specific statewide performance thresholds, *above and beyond federal thresholds*, to be prioritized and effectively communicated through statewide

³⁸ <http://www.dot.ga.gov/BS/Performance/>.

targets so that they can better inform future funding decisions.

SSTP PROGRESS REPORT

The purpose of the SSTP Progress Report is to track the execution of the SSTP and to measure the resulting performance of Georgia’s transportation network. Results of the monitoring and reporting process are intended to service as a key feedback mechanism between outcomes and investment decisions to support improved planning and decision-making.

2040 SWTP/2015 SSTP INVESTMENT RECOMMENDATIONS

The integrated, performance-based approach applied as part of plan development yielded a recommended funding split across key investment programs and a set of priority investment strategies to guide decision-making in the future (Figure 25, page 65). Recommendations were based off of a detailed needs analysis across transportation modes. They emphasize priority strategies to be applied within a constrained funding environment. The same set of priority investment recommendations are represented in the 2040 SWTP and 2015 SSTP.

Investment strategies are summarized and organized in Table 7 (page 66) by SSTP investment category. Note that recommended strategies that apply to all categories (Statewide Freight and Logistics, People Mobility in Metro Atlanta, People Mobility Excluding Metro Atlanta) are included separately.

Figure 25. Recommended Funding Split over Plan Horizon In Billions

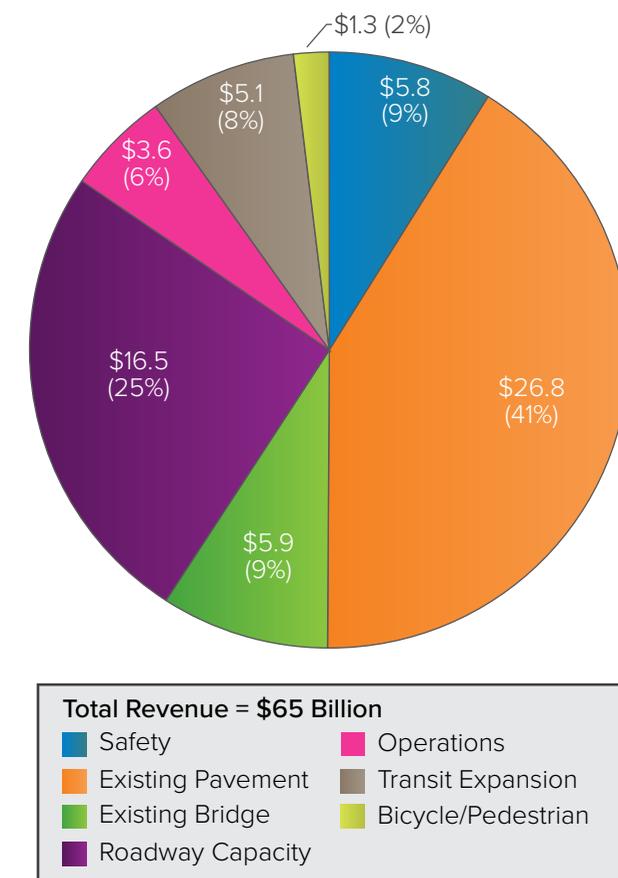


Table 7. 2040 SWTP/2015 SSTP Investment Strategies by SSTP Investment Category

SSTP Investment Category	Investment Strategies
All Categories	<ul style="list-style-type: none"> ● Aggressive spending on pavement, with emphasis on priority corridors (e.g., Interstate System and priority freight corridors); reconsider size of Federal Aid System to reduce pavement maintenance burden over time. ● Continued aggressive spending on bridges across the entire Federal Aid System. ● Implement SHSP – Target roadway departure and intersection crashes to reduce fatalities associated with roadway infrastructure. ● Continued implementation of complete streets policy.
Statewide Freight and Logistics	<ul style="list-style-type: none"> ● Focus roadway expansion on priority freight corridors. ● Improve rail safety, data collection and collaboration. ● Support short-line upgrades. ● Remove bottlenecks and improve grade crossings. ● Improve last-mile access to intermodal facilities. ● Improve port-rail access, storage and operating efficiencies. ● Support modernized system.
People Mobility in Metro Atlanta	<ul style="list-style-type: none"> ● Improve network reliability through managed-lanes systems and comprehensive operational investments. ● Expand/improve transit in underserved portion of region.
People Mobility Excluding Metro Atlanta	<ul style="list-style-type: none"> ● Support fixed-route service to urbanized areas currently unserved. ● Expand rural transit service to unserved counties.

IMPLEMENTING THE SSTP

The execution framework within the performance-based planning process developed for the 2040 SWTP/2015 SSTP (Figure 24, page 64) provides the key link between long-term planning decisions and on-the-ground change. It requires annual, short-term programming decisions made through

the STIP to evolve over time so that they support the investment portfolio envisioned through the long-range plan. Tracking funding allocations at the programmatic level is recommended for future SWTP/SSTP updates to monitor funding trends over time.

In addition to tracking at the programmatic level, monitoring project delivery will continue to be a focus of the SSTP. Project

implementation is also now a priority within federal legislation which defined Project Delivery as one of the national goals in MAP-21. GDOT currently tracks project delivery through its Performance Management Dashboard which tracks and reports Right-of-way Authorized on Schedule, Construction Authorized on Schedule, and Projects Constructed on Schedule.

While overall project delivery trends have improved over the last decade, reduced resources and funding challenges have made meeting project schedules a challenge more recently. GDOT continues to use strategies such as “cradle to grave” project managers; stabilization of projects in the STIP; innovative delivery methods and coordination with partnering agencies to meet this challenge.³⁹

Tracking funding allocations at the programmatic level is recommended for future SWTP/SSTP updates to monitor funding trends over time.

The passage of a stable, state-supported transportation revenue source via the Transportation Funding Act of 2015 will also provide additional opportunity to improve project delivery. The new state funding source will allow for a large increase in the number of wholly state funded projects within the State

³⁹ <http://www.dot.ga.gov/BS/Performance>.

construction work program and STIP. GDOT can deliver these projects using a streamlined delivery process (state process) that will ensure a shorter project delivery time than is normally achieved through the federal project delivery process (the federal process).

The streamlined state process is outlined in the GDOT Plan Development Process (PDP) Manual and applies to projects (both state and local funded projects) developed through the Georgia Environmental Policy Act of 1991 (GEPA).⁴⁰ The state process includes the same major steps as the federal process, but with significantly more flexibility in terms of scheduling the phases of project delivery. For example, the state process allows:

- Overlapping major process steps which means that subsequent steps may begin before a preceding step has been completed; and
- Right-of-Way acquisition to begin early in project development, before or after GEPA approval.

While efficiencies associated with delivering projects through the state process will vary by project type and context, GDOT currently

⁴⁰ <http://www.dot.ga.gov/PartnerSmart/DesignManuals/PDP/PDP.pdf>.

estimates a conservative 12-month time savings for a standard roadway capacity improvement delivered through the state process. This time savings is estimated for the environmental review phase only.

Projects that are entirely state funded, particularly large, complex projects, may also benefit from additional flexibility to apply innovative Design-Build project delivery methods. New roadways, interchanges, bridges/tunnels, managed lanes projects as an example may benefit from private sector expertise and innovation in design, construction, financing, and operations/maintenance. These projects may be most appropriate for application of innovative delivery methods as these larger projects would yield the greatest potential for time and cost savings associated with expedited delivery. National literature cites innovative project delivery impacts of between 3-14 percent reduction in project duration and between 2-5 percent reduction in project cost as a result.⁴¹ This enables federal funding to be directed towards “shovel-ready” general

⁴¹ Research conducted as part of 2040 SWTP/2015 SSTP; reference National Institutes of Standards and Technology, Construction Industry Institute, University of Colorado-Boulder, NCHRP Synthesis 379 (2008), Hale (2009), Shrestha et al. (2010), Minchin et al. (2013).

The SSTP Progress Report helps the state make prioritized transportation investment decisions by monitoring the execution of the SSTP and the performance of the transportation system throughout the State.

maintenance, safety, or operations investments that are not likely to have significant environmental review challenges, allowing the entire federal/state funded transportation program to be delivered more quickly.

Project/plan delivery and SSTP implementation will be tracked and reported through the SSTP Progress Report. State law requires the GDOT Director of Planning to report annually on the progress of projects and programs in the SSTP. The SSTP Progress Report helps the State make prioritized transportation investment decisions by monitoring the execution of the SSTP and the performance of the transportation system throughout the State including:

- Measuring the performance of Georgia's existing transportation network in order to demonstrate the extent to which the State is on the right track toward achieving its transportation goals;
- Ensuring plans for Georgia's future transportation network support the goals and objectives of the SSTP; and
- Monitoring the implementation of Georgia's transportation plans to ensure the on-time and on-budget delivery of strategic investments.

The SSTP Progress Report reviews current performance status and trends related to the performance targets identified in GDOT's Performance Management Dashboard. A snapshot of current performance is provided in Figure 26 (page 69).



Figure 26. GDOT Performance Management Dashboard

Performance Measures		Value	Target	Status
SAFETY	Reduction in Annual Highway Fatalities AREA: STATEWIDE Year: 2014	19 Fewer Fatalities	≥41 Fewer Fatalities	
	Average HERO Response Time AREA: STATEWIDE Year: 2014	13 Minutes	≤10 Minutes	
MAINTENANCE	Percent of State-Owned Bridges Meeting GDOT Standards AREA: STATEWIDE Year: 2014	92%	≥85%	
	Percent of Interstates Meeting Maintenance Standards AREA: STATEWIDE Year: 2014	74%	90%	
	Percent of State-Owned Non-Interstate Roads Meeting Maintenance Standards AREA: STATEWIDE Year: 2014	73%	90%	
PLANNING AND CONSTRUCTION	Percent of Right-of-Way Authorized On Time AREA: STATEWIDE Year: 2014	56%	75%	
	Percent of Construction Authorized On Time AREA: STATEWIDE Year: 2014	69%	80%	
	Percent of Projects Constructed On Time AREA: STATEWIDE Year: 2014	76%	80%	
	Percent of Projects Constructed On Budget AREA: STATEWIDE Year: 2014	93.91%	90%	
	Annual Congestion Cost Per Peak Auto Commuter AREA: STATEWIDE Year: 2014	\$1,130	≥10% Reduction in Cost per Year	
	Morning Peak-Hour Speeds on General Lanes AREA: METRO ATLANTA Year: 2014	37 mph	≥40+ mph	
	Evening Peak-Hour Speeds on General Lanes AREA: METRO ATLANTA Year: 2014	38 mph	≥40+ mph	

