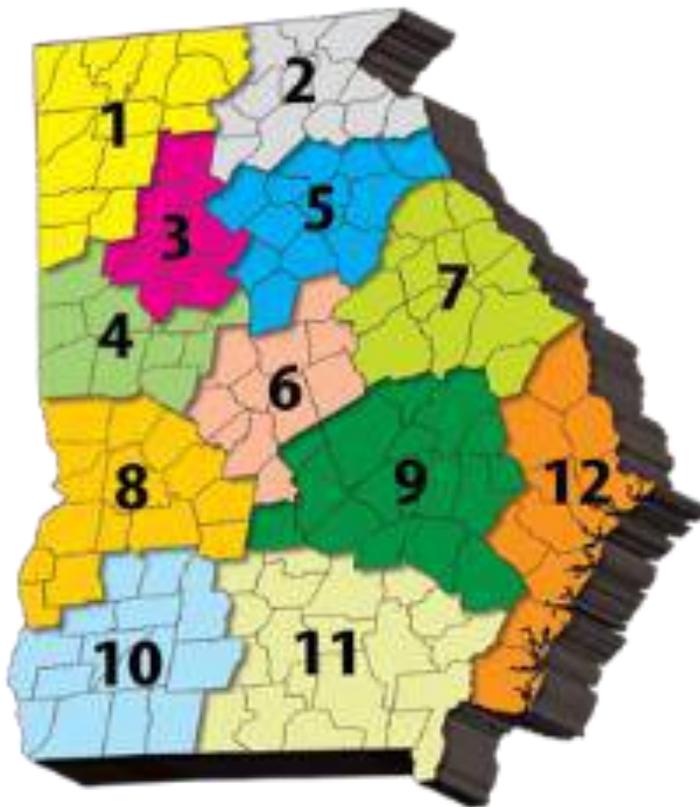


Georgia Public Policy Foundation
ISSUE ANALYSIS

GETTING GEORGIA GOING:

An Analysis of the Referendum
On Georgia's
Transportation Special Purpose
Local Option Sales Tax



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By Baruch Feigenbaum

EXECUTIVE SUMMARY

Overview

On July 31, 2012, voters in 12 regions in Georgia, including a 10-county metro Atlanta region, will decide whether to enact a 1 percent Special Purpose Local Option Sales Tax (T-SPLOST) for transportation.

The list of transportation projects for each region is unique and each region's voters will need to acquaint themselves with the relevant details of their list. Along with the Coastal Georgia region, which involves the Savannah-area freight- and port-related projects, probably the most crucial region for the July 31 vote is the metro Atlanta region, which not only has the greatest congestion and mobility challenges but the greatest population concentration in the state. For this reason, this paper focuses on the metro Atlanta region.

With Georgia ranked 49th in transportation spending, the question should be not whether there is a need to increase investment in the state's transportation network, but what is the best, most efficient and politically realistic way to do so. Given this framework, there are reasons for voting for and against the legislation.

Pro:

- Several of the projects fix regional problems, including the intersection of Interstate 285 and Georgia 400 in Sandy Springs and the intersection of I-20 and I-285 in Atlanta.
- The project list includes transit funding. This list provides proportionally excess funding to transit. However, transit is important for Atlanta's future and should receive some regional and state funding.
- Local road funding decreases if the tax fails. Currently, the state provides 90 percent of the costs of maintaining local roads. The state's share will decrease to 70 percent in the regions that do not pass the tax. This will significantly increase the burden on local governments.
- The referendum's failure would delay transportation improvements. While other funding sources can be considered, it will take time for them to be implemented. The region can vote on a different project list in 2014; however, that list may not be any better. Passage of any transportation spending will involve political bargaining.

Con:

- A sales tax funding mechanism has no relationship to transportation. Sales taxes are regressive and in this case provide no incentive for people to weigh the cost of their trip. There is no link between a market basket that a person buys and the quantity of transportation a person uses. Telecommuters would pay more in taxes than they consume in transportation.
- Most of the projects on the metro Atlanta regional list are not "regional." These highway improvements and transit expansions benefit primarily one city or county.
- The metro Atlanta list allocates too much money to transit, particularly rail transit. Only 3.6 percent of metro Atlanta commuters use transit. While the referendum has the understandable goal of increasing this amount, a 52 percent split of the funds is too high.
- There is no long-term plan. This project list spends money based on political preferences, not the development of a regional highway and transit network.

This paper examines in detail the 1 percent transportation sales tax, with particular focus on the metro Atlanta region, where highways are some of the most congested in the nation, the population concentration is the highest and congestion relief most needed.

This paper examines in detail the 1 percent transportation sales tax, with particular focus on the metro Atlanta region, where highways are some of the most congested in the nation, the population concentration is the highest and congestion relief most needed. The major sections include:

- I. **History and Overview:** This section details Atlanta's transportation history; why Atlanta is in this situation; the different parts of the Transportation Investment Act; the number of committees the legislation created; and the controversial aspects of the referendum.
- II. **Revenue Source:** The funding and financial analysis compares a sales tax to other revenue sources such as gas taxes, vehicle-miles-traveled fees, user tolls, "value capture" and general fund revenue.
- III. **Quality of Project List:** This part examines the different projects, including whether projects are related to transportation and how the overall list could be improved. It details where funds will be spent and whether this funding is proportional to population. Further, it examines the selected transit options, including the mix of rail and bus and whether rail is appropriate for metro Atlanta.
- IV. **Costs of Transit:** As a snapshot of transit costs, this section compares transit projects in Atlanta to other projects across the United States. The costs and the type of projects are compared with cities similar to Atlanta.
- V. **Alternative Approaches:** This section examines methods for reducing congestion and increasing mobility. It suggests alternate ways to fix Atlanta's traffic problems.

Over the past 10 years, Atlanta has invested poorly in transportation. Business leaders are concerned this puts Atlanta at a competitive disadvantage compared to cities with comprehensive transportation strategies such as Charlotte, Dallas and Houston.

Residents of each of the 12 Georgia regions will vote separately on whether to raise their sales tax by one penny to fund the transportation list of their region. In the Atlanta region, 85 percent of the funds raised will support projects in the region while 15 percent of the funds will be portioned out for locally decided projects; across the rest of the state, that share is 75-25. There is no "opt-out"

vote for a city or county in a region. For example, if the region as a whole approves the sales tax but Fayette County voters reject it, Fayette's citizens will still have to pay the extra penny.

A sales tax is cheap and easy to collect. Additionally, a significant percentage of the tax is expected to be paid by tourists. However, a sales tax is also regressive. A sales tax is charged on the amount of products or goods purchased; the amount of products a person purchases has no relationship to the number of miles a person travels. There are many alternatives, including local gas taxes, restructuring the gas tax, vehicle-miles traveled (VMT) fees, value capture fees, a state infrastructure bank, toll roads, public-private partnerships (PPPs) and TIFIA federal loans. Financing sources such as bonding should also be considered.

Political realities make it impossible to create a perfect project list. However, the metro Atlanta region's project list in particular has several shortcomings. First, there is no regional framework. Instead of creating a highway grid or a regional transit system, the list contains numerous local-centric projects frequently chosen for political reasons. Despite the requirements, only 44 of the 126 highway projects and 19 of the 32 transit projects are truly regional, affecting multiple cities or counties. Only 87 of the 126 highway projects and 23 of the 32 the transit projects are necessarily related to congestion mitigation.

Many of the highway projects are labeled "operational." Operational is a vague definition. These projects might improve transportation or offer recreation or economic development opportunities. Without more detail it is impossible to determine the goals of these projects. Several of the road projects and 18 of the 32 transit projects also fail any cost-effectiveness test. Six of the transit projects have other factors such as high cost or utility relocations that are not considered.

Projects also are not geographically distributed in an equitable manner. The city of Atlanta has 10 percent of the region's population yet receives 27 percent of the funds. Fayette County has only 2.5 percent of the region's population and 80 percent of county residents work outside the county. Yet Fayette still receives 2.2 percent of the funds. Gwinnett, with almost 20 percent of the population, receives less than 14 percent of the funds, while Cobb has 17 percent of the population and receives 11 percent of the funds. Additionally, projects are not well distributed within city limits. All of Atlanta's transit projects and 19 of the 28 highway projects are located in the northern half of the city. While the northern half is growing more quickly, the large discrepancy between north and south is troubling.

The project list also dedicates a significant share of the region's transit funds to rail. As a result of its low density and its large percentage of single-family homes, most of metro Atlanta is a poor market for rail transit. To create successful rail transit, the metro area would have to intensively increase population density. Building rail transit first and hoping that local officials will change density requirements later does not create successful rail systems. That said, even with Atlanta's low density there are some rail lines that could move significant numbers of people somewhat more cost effectively. Unfortunately, these are not the lines the tax will fund. The transit project that receives the most funding is the Atlanta BeltLine. The BeltLine receives more than 10 percent of the total regional funding. From a transportation perspective, the BeltLine is one of the worst Atlanta projects.

An Atlanta project list focused on mobility and congestion mitigation would include a network of upgraded expressways, managed arterials and enhanced Bus Rapid Transit (BRT) service. Modifying the Downtown Connector or creating a parallel expressway west of downtown could substantially reduce congestion. The region could benefit from a second east-west expressway. Managed lanes could be added to each expressway, offering free rides to three-person carpools

and tolled, reliable travel times to single-occupant vehicles. More importantly, buses and vanpools could use these lanes at no charge, providing reliable travel times. Studies, as well as Atlanta's experience, show that creating reliable travel times with short headways – greater frequency of service – does more to increase transit ridership than other transit improvements. These managed lanes could also offer guaranteed free-flow conditions to emergency vehicles. Finally, better traffic synchronization, lengthened left-turn lanes and queue jumpers can dramatically decrease congestion on arterial roads.

PART I: HISTORY AND OVERVIEW

A History Rich in Transportation

Atlanta has a long history as a transportation hub. The Five Points area of Downtown was chosen as a railroad hub because it was the first location south of the Appalachian Mountains where trains could turn around.¹ In fact, the city's original name was Terminus. The name was changed to Marthasville in 1843 and to Atlanta in 1845.

In 1929 the city purchased Candler Field, the beginning of what is now called Atlanta's Hartsfield-Jackson International Airport, the world's busiest passenger airport. In the 1950s and 1960s the Georgia Department of Transportation built most of the Atlanta interstates including I-20, I-75, I-85 and I-285. In 1972 the Metropolitan Atlanta Rapid Transit Authority (MARTA) purchased the Atlanta Transit System and began expanding its routes and building a rail system. The first train, the East Line, began operating in 1979. MARTA opened rail extensions in 1989 and 2002 but the soaring costs of new rail have prevented further extensions.

While the Georgia Department of Transportation (GDOT) was able to widen many Atlanta highways from the 1970s through the 1990s, by the mid-1990s there was little right-of-way for further expansion. GDOT could not afford to buy surrounding property and public support for highway expansion was weakening. As a result, GDOT was less successful in building the Stone Mountain Freeway (US 78) and I-485 through the city of Atlanta because of highway opposition and resistance from neighborhood coalitions.

MARTA proposed building rail service supported by a one-cent sales tax in Clayton, Cobb, DeKalb, Fulton and Gwinnett counties. A 1968 referendum to create rail failed. But a second vote with a modified route system succeeded in DeKalb and Fulton counties and in the city of Atlanta. Clayton, Cobb and Gwinnett counties voted "No" to MARTA service. Cobb and Gwinnett voters have rejected MARTA multiple times.

Atlanta's Interstates have been congested since GDOT ran out of room – and the money to buy more room – to widen them. GDOT invested heavily in expressways but Atlanta lacks a well-developed network of supporting arterials. Atlanta's transit system covers a small geographic area with large headways, or frequency, between buses and rail cars. While coverage has always been lacking, MARTA train and bus cutbacks have increased headways significantly in the last seven years.² In 2011, according to the American Public Transportation Association, MARTA saw ridership decline by an average of 3 percent on buses and 3.5 percent on rail. Local bus service in Cobb, Gwinnett and the Georgia Regional Transportation Authority (GRTA) has increased the

1 New Georgia Encyclopedia, Cities and Counties, Atlanta, February 2012, www.georgiaencyclopedia.org/nge/Article.jsp?id=h-2207, accessed March 9, 2012.

2 Ariel Hart, "MARTA Cuts Roll Out Saturday," Atlanta-Journal Constitution, September 23, 2010, <http://www.ajc.com/news/atlanta/marta-cuts-roll-out-620232.html>

region's bus coverage area.³ However, none of these buses run on Sundays and most reach less than 30 percent of the county's population.

Unfortunately, the metro Atlanta region has been unable to reach a consensus on how to solve its transportation challenges. In 1998, when the Atlanta region lost federal highway dollars because it violated federal air quality standards, Governor Roy Barnes created GRTA.⁴ GRTA operates a network of express buses from the city of Atlanta to suburban locations in 12 counties (including 3 outside the metro region). Barnes proposed other transportation improvements, including an Outer Perimeter. The contentious location of the proposed Outer Perimeter, or Northern Arc, was one of the reasons that Barnes lost to Sonny Perdue in the 2002 gubernatorial election. Barnes had extensive plans for GRTA and his loss left GRTA in limbo. Governor Perdue vowed to make transportation a priority but spent little time addressing the issues. Perdue successfully convinced the Georgia General Assembly to pass the Transportation Investment Act of 2010, which among other actions, allowed local regions to ask voters to approve a 1 percent sales tax dedicated to transportation projects and programs.

Transportation Investment Act Details

The Transportation Investment Act (TIA) became law in June 2010.⁵ The act divides the state into 12 geographic regions. Each region has between 10 and 18 counties. Estimates of the funds that would be generated by the sales tax range from \$398 million in the Heart of Georgia region to \$8.5 billion in the Atlanta region.⁶ The TIA authorized the creation of four different commissions to choose, monitor and review each region's infrastructure projects: a Regional Roundtable, Transit Governance Study Commission, a Rural and Human Services Transportation Component and a Citizens Review Panel.⁷

The Regional Roundtable consists of the chairman of each county commission and one mayor from each county, appointed by all the mayors in that county.⁸ Each roundtable selected five members to an executive committee with three non-voting legislators appointed by the chairs of the transportation committee in both the House and the Senate. The executive committee developed the final list of projects to be voted on.

The metro Atlanta roundtable was composed of the chief executive official of each of the 10 counties, a mayor from each of the 10 counties elected by other mayors in the county and the mayor of Atlanta. The members chose the Atlanta Regional Commission to perform much of the analytical and support work for the project list.

3 State of Georgia, Public Transportation, January 2012, www.georgia.gov/00/channel_title/0,2094,4802_5013,00.html, accessed March 2012.

4 Georgia Regional Transportation Authority, 2001 Annual Report, January 2002, www.grta.org/PDF_Files/News/GRTA_Report.pdf, accessed March 2012.

5 Atlanta Regional Commission, Transportation Investment Act: Final Report, Approved Investment List, Atlanta Roundtable Region, October 15, 2011, www.metroatlantatransportationreferendum.com/documents/final_report.pdf, accessed February 7, 2012.

6 Georgia Department of Transportation, Project List and Final Investment Report, October 15, 2011, <http://dot.ga.gov/localgovernment/FundingPrograms/transreferendum/Pages/ProjectList.aspx>, accessed February 7, 2012.

7 Georgia General Assembly, House Bill 277, Transportation Investment Act of 2010, June 2, 2010, www.it3.ga.gov/Documents/HB277-BreakdownbySection.pdf, accessed February 12, 2012.

8 Georgia General Assembly, accessed February 12, 2012.

In the Atlanta region, a Transit Governance Study Commission was also formed.⁹ The commission released a report on how to combine the public transportation entities in the Atlanta region.

The TIA created both the Georgia Coordinating Committee for Rural and Human Services Transportation and the State Advisory Subcommittee for Rural and Human Services Transportation.¹⁰ These will study rural and human services transportation, analyze program coordination and delivery, and identify improvements and cost savings measures. The committee will submit a final report to the State each September 1. The State will submit this report and budget recommendations to the General Assembly by January 15.

Each region that passes the sales tax may create a Citizens Review Panel.¹¹ The panel will consist of three citizen members appointed by the Speaker of the House and two citizen members appointed by the Lieutenant Governor. The panel will meet at least three times a year. It will review progress on the planning and construction of projects and exchange information with GDOT and GRTA. It will publish its findings on a designated Web site and write reports to GDOT, the State Revenue Commissioner and the Georgia General Assembly beginning in January 2013.

The Department of Revenue Commissioner will create a Web site and report the status of a project and whether it is over or under budget.¹² GDOT and GRTA will determine how a project will be designed and constructed, whether by the department, local government, another public entity or a private entity.

The Act also specifies who manages the construction projects.¹³ In some cases, construction projects can run over budget. Strong financial management is important. The Georgia State Financing and Investment Commission (GSFIC) will contract its financial management authority with either GDOT or GRTA. For highway projects in Atlanta and all projects in the other areas of the state, GDOT will oversee the construction with area governments. GRTA in conjunction with local transit sponsors will manage transit projects in the metro Atlanta region.

In the Atlanta region, the process followed these steps. After the TIA became law, the Atlanta Regional Roundtable was tasked with creating a project list. First, an unconstrained investment list was developed by GDOT with input from local governments, the Atlanta Regional Commission, transit operators, and other stakeholders.¹⁴ This \$22.9 billion list included requests from local governments, transit agencies, and other organizations. This was released June 1, 2011.

Second, the Constrained Draft Investment List was developed by the Roundtable Executive Committee in collaboration with the GDOT Planning Director and was released. This \$6.14 million list was approved August 15, 2011. The Roundtable executive committee was to have based its selections on four goals:

- 1) Achieve the best value for taxpayers' dollars and improve the region's transportation

9 Ibid.

10 Ibid.

11 Ibid.

12 Ibid.

13 Ibid.

14 Georgia Department of Transportation, Transportation Investment Act of 2010: Attachment B Timeline for Creation of Investment Criteria and Lists, June 2, 2010, www.it3.ga.gov/Documents/ProcessFlow-Timeline-AttachmentB.pdf, accessed February 14, 2012.

- network
- 2) Deliver transportation projects on time and on budget
 - 3) Achieve public support for projects funded by the regional sales tax and public trust that state and local governments will deliver on their promises
 - 4) Improve regional mobility to the greatest extent possible with any new funding.

There were 12 public meetings for the public to comment on the Constrained Draft Investment List. The final step was the Final Investment List that was approved by the Roundtable using the draft list as a starting point. This list was approved October 13, 2011.

Contentious Parts of the Law

No opt-out: Each region can levy a 1 percent sales tax for 10 years but individual counties are not allowed to opt out.

The vote is based on the population of the region, not the county. For example, in a hypothetical situation a majority of voters in only four counties (DeKalb, Fulton, Gwinnett and Henry) of the Atlanta region approve the tax 60 percent yes to 40 percent no. The other six counties vote 40 percent yes and 60 percent no. Since the four counties of DeKalb, Fulton, Gwinnett and Henry have more voters, the tax will pass even though a majority (six) of the counties rejected it.

Several Fayette County leaders have threatened to withdraw the county from the Atlanta region if the referendum passes.¹⁵ Leaders maintain that exempting one county would be challenging. If voters in Henry County approve the list but those in Clayton do not, would potential improvements to US 23 stop at the county line? This could worsen congestion. Others note that commuting patterns do not stop at county lines and many residents of Fayette County work in Fulton County and would use infrastructure for which they have not paid.

Regional Funding: Local governments in each region will keep a certain percentage of the funding to spend on local projects. In the Atlanta region this percentage is 15 percent; in the rest of the state it is 25 percent. Local government funding will be determined 20 percent by population and 80 percent by centerline miles.

No Congressional Balancing: The act has several unique provisions. The sales tax revenue is not subject to congressional district balancing. Unlike traditional gas tax revenue that must be equally appropriated based on population to Georgia's 13 congressional districts, the 1 percent sales tax proceeds are based on sales in each region. Sales are forecast to be much higher in the Atlanta region than any other region.

Reduced State Aid to Local Roads if Voters Reject: There are consequences for transportation agencies if voters do not approve the tax. Currently the state pays 90 percent of the cost to maintain local roads through the Local Maintenance and Improvement Grant Program and local governments pay 10 percent. If the sales tax is approved in the district, these percentages do not change. If the sales tax is not approved in the district, the state would reduce its share to 70

If the sales tax is not approved in the district, the state would reduce its share to 70 percent in the Local Maintenance and Improvement Grant Program and local governments would then have to pay 30 percent.

¹⁵ Ariel Hart, "Transportation Referendum Prompts Calls for Secession," Atlanta Journal-Constitution, October 21, 2010, www.ajc.com/news/transportation-referendum/transportation-referendum-prompts-calls-687560.html, accessed February 24, 2012.

percent in the Local Maintenance and Improvement Grant Program and local governments would then have to pay 30 percent. Local maintenance and improvement grants fund paving and maintenance of neighborhood streets. Rejecting the tax will lead to a higher local share, reducing local projects in addition to state projects. In regions where the referendum fails, significantly less state money will be available for routine road maintenance.

Changes to MARTA: The law makes several changes to MARTA. First, it eliminates the requirement that MARTA spend 50 percent of its funding on capital expenses and 50 percent on operating expenses. The law allows Clayton, Cobb and Gwinnett counties to approve MARTA systems; it also reduces MARTA's board from 18 to 11 members.

Transit Governance Proposal: A regional transit governance task force was created and met to create a state entity in charge of transit. The task force had trouble deciding how much power the state should have over a service to which it provides limited funding. Fulton and DeKalb leaders were upset over a 2012 bill based on the task force draft legislation that would put GRTA in charge of transit governance. The bill died in committee. A second bill, introduced by Democrats to create metropolitan transit authorities, upset rural Republican leaders and also died in committee. No transit governance proposal is included in the 2012 T-SPLOST vote.

This wording will appear on the July 31st ballot: "Shall _____ County's transportation system and the transportation network in this region and the state be improved by providing for a 1 percent special district transportation sales and use tax for the purpose of transportation projects and programs for a period of ten years?"¹⁶

PART II: FUNDING MECHANISM

Overview

The Transportation Investment Act's funding mechanism is a 1 percent sales tax. Some states have raised sales taxes to pay for transportation.¹⁷ Other states have considered other fees or taxes. Georgia transportation improvements could also be funded by local property taxes, gas taxes, excise taxes, license plate fees, vehicle-miles-traveled (VMT) fees, value capture, federal Transportation Infrastructure Finance and Innovation Act (TIFIA) loans, toll roads, bonds including Grant Anticipation Revenue Vehicle (GARVEE) and Grant Anticipation Note (GAN), state infrastructure banks and private activity bonds.

This section will first explore the revenue from the 1 percent sales tax and then consider the pluses and minuses for the other revenue sources.

The 1 percent sales tax is expected to generate an estimated \$8.468 billion in the Atlanta region.¹⁸ After adjusting for inflation, the real revenue is estimated to be \$7.224 billion. Fifteen percent of this total will be returned to the local cities and counties in the region. The estimates assume, therefore, that a total of \$6.2 billion can be used on regional projects.

¹⁶ Ibid.

¹⁷ American Association of State Highway and Transportation Officials Excellence in Project Finance, Transportation Funding and Financing: Local Option Sales Taxes, January 1, 2011, www.transportation-finance.org/funding_financing/funding/local_funding/option_sales_taxes.aspx, accessed March 1, 2012.

¹⁸ Georgia Department of Transportation, 1% regional Sales Tax for Transportation Revenue Forecast, June 14, 2011, www.it3.ga.gov/Documents/RevenueProjection-Methodology-061411.pdf, accessed March 5, 2012.

Sales Tax

A sales tax has several advantages. It is cheap and easy to collect. The additional 1 percent sales tax would be collected the same way as the standard state 4 percent sales tax, and optional county sales taxes of 1-4 percent are already collected. Retailers will simply make a small formula change in their sales tax computer formula. Another advantage (to metro Atlanta taxpayers) is that tourists and residents of other parts of Georgia will also pay the tax when they visit the 10-county metro area. This lowers the amount paid by residents of the 10-county region. Additionally, a small increase in the sales tax can raise a substantial amount of money. Over 10 years, the tax in the Atlanta region is forecasted to raise more than \$8 billion.

A sales tax also has several disadvantages. There is no link between a market basket that a person buys and the quantity of transportation a person uses. Telecommuters would pay more in taxes than they consume in transportation; extreme commuters (workers who commute more than 50 miles per day) would pay less. A sales tax is also regressive: Lower-income residents pay the same tax rate as everybody else, but the amount is a far higher percentage of their incomes than those of wealthier residents.

A sales tax offers some perverse benefits that are out of step with the metro area's transportation policy. Commuters will benefit from living in lower-sales tax counties on the region's periphery far from their place of work and commuting long distances as opposed to residing in more centralized locations such as the higher-taxed city of Atlanta.

A sales tax is more dependent on economic conditions than other taxes and fees; it is one of the least reliable revenue forms. During the recession, sales tax collections declined by around 10 percent.¹⁹ Sales tax collections in the 10-county area grew 5.9 percent between 1997 and 2007 but only 2.9 percent between 1997 and 2010. This was due to tax collections declining 3 percent between 2007 and 2010. The State Fiscal Economist determined the amount of sales tax money that will be collected between 2013 and 2022 based on past and current fiscal trends.²⁰ This standard growth forecast assumes a sales tax growth of 4.3 percent. The low growth forecast assumes a sales tax growth of 4.1 percent. Both are significantly higher than the 2.9 percent growth over the 13-year period from 1997-2010. While the state used generally conservative numbers in its growth forecasts, sales tax receipts are based on non-predictable swings of the economy.

Other Funding Options

Is there a funding mechanism that is better than the sales tax? Following is an explanation of types of funding, a forecast of potential revenue and pros and cons of each funding source.

Higher gas taxes: Georgia has one of the lowest base taxes for gasoline. Georgia also charges an excise tax (more information follows). Georgia's base gasoline tax rate is 7.5 cents per gallon.²¹ This amount has not been raised since 1971 and is not indexed for inflation. As cars become more fuel efficient, the revenue from the base tax rate shrinks.

Positives: Directly related to how much fuel motorists consume.

Negatives: Somewhat regressive; not directly related to how much people drive; declining tax base.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Atlanta Regional Commission, Bridging the Gap 2010: Investigating Solutions for Transportation Funding Alternatives in the Atlanta Region, July 2010, www.atlantaregional.com/File%20Library/Transportation/Financing_Transportation/tp_finance_alternatives_report_030510.pdf, accessed March 2, 2012, p. 2.

Higher excise taxes: Georgia collects a 4 percent sales tax on the average retail price of fuel.²² Three percent is dedicated to roads and transit and 1 percent goes to the general fund. The overall rate could be increased; the one cent that supports the general fund could be dedicated to roads and transit.

Positives: Directly related to how much fuel motorists consume.

Negatives: Somewhat regressive; not directly related to how much people drive.

License plate fees: Georgia drivers pay \$20 for a tag and \$18 for a title.²³ These fees go to the general fund to support transportation investments. These fees could be increased. Georgia also has special-interest license plates dedicated to universities, wildlife, professional sports teams and other causes. All proceeds from these plates go to special clubs set up to administer the license plates; none of the fees go to improve transportation. The state could attach an additional fee to these license plates and dedicate the funding to transportation.

Positives: Related to driving, easy to collect.

Negatives: Relatively small amount. Dedicated funding requires a constitutional amendment; funds going into general revenue are not necessarily used for their intended purpose.

Vehicle-miles-traveled Fees: Vehicle-miles-traveled (VMT) fees are the most direct highway user fee. Drivers pay for the exact amount of travel that they use. As cars become more fuel-efficient and hybrid and total electric vehicles become a larger share of the fleet, gas tax collections will shrink and the gas station will become a less effective revenue collector. A VMT fee would charge a flat rate per mile, perhaps one cent. Collection would be electronic through toll transponders. Trials are under way in Maryland, Oregon, and Texas.²⁴

Positives: Most pure user fee. Can be adjusted/tied to inflation.

Negatives: Administration and collection costs high. Privacy concerns.

Value Capture: Particularly useful for transit. Within a set distance of a transit stop or highway, transportation infrastructure costs are funded by land rent derived from development.²⁵ The amount paid in fees is based on the value gained from the transit by property owners. The increase in land values ranges from 5-10 percent for residential properties to 10-30 percent for commercial properties. This method has successfully paid for transit systems in Hong Kong, Hawaii, and Washington, D.C.

Positives: Market-based approach. Works well for transit.

Negatives: Works only where transit increases land values. Exact increase in values can be challenging to determine.

TIFIA Loans: The TIFIA program provides federal credit assistance in direct loans, loan guarantees and lines of credit.²⁶ The loans are available for "nationally or regionally significant surface transportation projects," including highway, transit and rail. The program is designed to fill market gaps and leverage substantial private co-investment by providing projects with

22 Ibid.

23 Ibid, p. 7.

24 National Cooperative Highway Research Project, System Trials to Demonstrate Mileage-Based Road Use Charges, October 2010, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_w161.pdf, accessed March 4, 2012, p 19.

25 Victoria Transport Policy Institute, Financing Transit Systems Through Value Capture, November 24, 2011, www.vtpi.org/smith.pdf, accessed March 5, 2012.

26 American Association of State Highway and Transportation Officials Center for Excellence in Project Finance, Transportation Infrastructure Finance and Innovation Act, January 1, 2011, www.transportation-finance.org/funding_financing/financing/credit_assistance/tifia.aspx, accessed March 1, 2012.

supplemental or subordinate debt. Congress is proposing to increase the budget authority of this program to \$1 billion per year, which would support \$10 billion per year in loans in the pending multi-year transportation bill. Projects must have a dedicated revenue source to repay the loan.

Positives: A loan program providing funds for highway, transit and rail projects.

Negatives: Not appropriate for all projects. The demand nationally exceeds the available funds. The loans are subject to federal budget cuts.

Toll Roads: Particularly helpful for new capacity or substantial rebuilds. Users pay the costs of construction and maintenance of the road through user fees.

Positives: True user fee. Eliminates highway subsidies.

Negatives: Unpopular, can be regressive.

Public-Private Partnerships: Public-private partnerships, or PPPs, are contractual agreements between a public agency and the private sector for the provision of facilities or services. PPPs are not themselves a funding source, but are a means of marshaling private-sector finance and shifting major risks from taxpayers to the private sector. States are increasingly using PPPs to provide and/or manage transportation capacity in both highways and transit.

Positives: Can be a good way to finance large projects using revenue sources such as tolls. The state and the private sector each manage the part most appropriate for each.

Negatives: Not appropriate for all projects.

Bonding: Bonds that can be used include Grant Anticipation Revenue Vehicle (GARVEE) and Grant Anticipation Note (GAN), Revenue, Limited, Private Activity, Tax Credit and General Obligation (GO) Bonds. Bonds raise the capital for a project up front, and must be paid off over time from a dedicated revenue stream. The mechanism is similar to financing a home purchase via a mortgage, rather than buying it for cash.²⁷ Bonds are a financing tool.

GARVEEs and GANs are debt-financing instruments with the pledge of future federal-grant monies for debt service.²⁸ Bonding allows the state to accelerate construction timelines and to spread the cost of a transportation facility over its useful life. There are various types of bonds:

- Revenue bonds are used to finance projects that generate revenue, generally from user fees.
- General Obligation (GO) bonds are issued for municipal projects that do not generate revenue and are backed by the taxing power of the issuer.
- Limited and special tax bonds are payable from a pledge of a specific tax.
- Hybrid bonds have characteristics of both revenue and General Obligation bonds.
- Private activity bonds are revenue bonds that allow private-sector activity including development, design, finance, construction, operation and maintenance while maintaining the tax-exempt status.
- Tax credit bonds are a debt instrument where investors/bondholders receive federal tax credits instead of cash interest payments.

Positives: Available to governments with good credit ratings.

Negatives: Requires good credit rating. Not appropriate for all projects. Federal Highway Trust Fund receipts and spending are on unsustainable trajectories and the future of federal funding is uncertain.

²⁷ American Association of State Highway and Transportation Officials Center for Excellence in Project Finance, Bonding and Debt Instruments, January 1, 2011, www.transportation-finance.org/funding_financing/financing/bonding_debt_instruments/ accessed March 1, 2012.

²⁸ Ibid.

State Infrastructure Banks: State Infrastructure Banks (SIBs) function as banks that loan money at favorable terms. A total of 34 states and Puerto Rico have some form of infrastructure bank. Georgia is one of five states with a state-capitalized infrastructure bank.²⁹ The bank has awarded limited funds and has \$30 million available.

Positives: A loan program backed by public budget with low interest rates.

Negatives: A loan program backed by taxpayer funds in trying economic times. Covers only part of the cost of project. Not applicable for all projects.

The proposed sales tax is easy to collect and tourists and through travelers would contribute some of the revenue.

Funding and Financing Overview

There are many different methods to fund highways and transit. The proposed sales tax is easy to collect and tourists and through travelers would contribute some of the revenue. But it has three major negatives that should limit its use:

- It is not a user fee; there is no relationship between the amount of goods purchased and the amount of transportation utilized.
- It is regressive. Low-income areas of Atlanta would pay a 9 percent sales tax that is one of the highest rates in the country while many other counties would pay an 8 percent sales tax. While Georgia tax burdens are generally lower than the national average, this would not be the case for the sales tax burden.
- If the economy should enter another recession anywhere near as significant as the 2007-2010 event, the estimates for collected revenue will be too high. Sales taxes are affected more by the economy than other transportation fees. As an example, Denver, Colo., is currently struggling to complete transportation projects because the sales tax revenue generated is insufficient and construction costs climbed.

There are ways of securing sufficient revenue other than through a sales tax. The first is to identify one or two major funding mechanisms. The second is to find a variety of smaller funding tools. Both have political advantages and disadvantages. One or two major mechanisms require simpler legislation and fewer changes. However, citizens who are more negatively affected by tax or fee increases are likely to balk at the large increases.

Using a variety of smaller tools will require more legislation and comprehensive change, something many politicians may resist as burdensome. But this approach has a lower impact on any tax or fee, and as a result, any one person's tax burden. A larger number of smaller mechanisms also are likely to create a more robust system less affected by external economic events. The decision is up to policy-makers; this paper will provide an example of both options.

Funding and Financing Options (Over 10 Years)

- 1) Dedicate fourth penny of Georgia motor fuel sales tax to transportation (minimum \$200 million)³⁰
- 2) Increase license plate fee by \$10; it's currently \$20 annually (\$450 million)³¹
- 3) Value-capture for rail transit (\$200 million)³²
- 4) Fuel-tax restructuring; flat motor fuel sales tax that does not vary with the price of gas, no

29 Ariel Hart, "State Infrastructure Bank has \$30 Million Sitting Idle," Atlanta Journal-Constitution, March 24, 2011, www.ajc.com/news/georgia-politics-elections/state-infrastructure-bank-has-885112.html, accessed March 5, 2012.

30 Based on Atlanta Regional Commission 2010 data.

31 Ibid.

32 Number is an estimate and determined from studies in Florida,

excise tax (\$5 billion)³³

5) Increase Georgia's motor fuel excise tax (currently 7.5 cents per gallon) by 3 cents (\$600 million)³⁴

6) Add 4 cents to prepaid motor fuel sales tax (\$4 billion)³⁵

7) Add license fees to specialty plates only (\$450 million)³⁶

8) Vehicle-Miles-Traveled (VMT) Fees (\$12 billion)³⁷

9) Toll roads (\$8 billion)³⁸

10) GARVEEs/GANs (\$1 billion)³⁹

11) Other Bonds: Revenue, General Obligation, Limited/Special Tax, Hybrid, Private Activity, Tax Credit, Non-profits (\$2 billion)⁴⁰

12) State Infrastructure Bank state funds (\$1 billion)⁴¹

13) Leveraging Federal Funds (varies)

The choices below detail different combinations of funding and financing options that could raise close to \$9 billion over 10 years:

Choice 1: (8 of the funding/financing options) Many possible options: excise tax penny increase + license plate fees + value capture for rail + portion of tolls + portion of GARVEE/GAN financing + portion of bond financing + portion of state infrastructure bank + portion of federal funding.

Choice 2: (1 funding/financing option) VMT fees only.

Choice 3: (3 funding/financing options) portion of excise tax + toll roads + federal funds.

Sales tax proponents point out that the 1 percent sales tax would raise approximately \$7.9 billion for the Atlanta region over 10 years and is one of the few mechanisms that can raise this amount. These and other combinations could raise comparable amounts via other funding and/or financing options.

This report does not recommend any particular action or funding mechanism. It compares and contrasts the different alternatives. The state may also already be planning to use several of these options whether the T-SPLOST passes or not.

33 Based on Atlanta Regional Commission 2010 data.

34 Ibid.

35 Ibid.

36 Ibid.

37 Ibid.

38 Robert Poole, Reducing Congestion in Atlanta: A Bold New Approach to Increasing Mobility, Policy Study No. 351, (Los Angeles, CA: Reason Foundation, November 2006), p. 5

39 United States Department of Transportation, Federal Highway Administration, Tools and Programs: Federal Debt Financing Tools, Grant Anticipation Revenue Vehicles, January 1, 2012, www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/garvees/index.htm, April 3, 2012.

40 United States Department of Transportation, Federal Highway Administration, Tools and Programs: Federal Debt Financing Tools, January 1, 2012, www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/index.htm, April 3, 2012.

41 American Association of State Highway and Transportation Officials Center for Excellence in Project Finance, State Infrastructure Banks, 2011, www.transportation-finance.org/funding_financing/financing/credit_assistance/state_infrastructure_banks.aspx, accessed April 3, 2012.

PART III: PROBLEMS WITH THE PROJECT LIST

Keeping in mind that there are 12 regions and 12 separate project lists intended to meet the of each region, some lists are closer than others in addressing a particular region's transportation challenges and more likely to persuade voters. Likewise, some projects are more appropriate than others in each list. In other words, not every project is advantageous to transportation policy in every region but a preponderance of evidence that they will benefit a region overall will encourage each region's voters to approve.

Generally, the other 11 regions beside metro Atlanta have project lists that are more mobility related, more cost-effective, and based on the current and realistic future travel patterns of area residents. For example, the Three Rivers region (Region 4) is expected to raise just over \$947 million. In the regional list, 86 percent of the funds would support highways, 4 percent transit, 5 percent non-motorized transportation, 6 percent aviation, and a smaller amount for intelligent transportation systems. This region has no major cities so it is very different from metro Atlanta. As a result its ideal share of transit funding is less than the Atlanta's region. Further, this list is not perfect; slightly more transit funding and slightly less non-motorized funding would be appropriate. But much like the other 10 regions outside Atlanta, this is a project list that has mostly cost-effective, congestion-reducing highway and transit projects and very few poor projects.

Some lists are closer than others in addressing a particular region's transportation challenges and more likely to persuade voters.

Along with \$1.6 billion list of Coastal Georgia region projects that include the Savannah-area freight- and port-related projects, probably the most crucial list in the state is linked to the metro Atlanta region. This is because the metro Atlanta 10-county region not only has the greatest congestion and mobility challenges but the greatest population concentration in the state.

For these reasons, this paper's focus is on metro Atlanta.

This section contrasts some of the positive aspects of the metro Atlanta project list with some of the negative aspects. The section looks at 12 projects on the list, a representative sample of Atlanta projects highlighting good, satisfactory and poor projects. The tables in Appendix A analyze all highway and transit projects in the Atlanta region by five criteria. (To access the list of 12 projects and Appendix A, go to www.georgiapolicy.org/pub/transportation/AppendixA.pdf.)

The chart includes the name of the project; the type of improvement; the total T-SPLOST funds for the project; any other sources of funding; the metro jurisdiction; whether the project is regional; whether the project is transportation-related; whether the project can be considered cost-effective; whether the project is the best solution to current/future problems, and whether constructing the project causes other issues.

Transportation planners, policy-makers and engineers created solid selection criteria. GDOT, GRTA and ARC provided the analysis. Unfortunately, because political realities intervened, some of the projects selected served political goals, not transportation goals.

Related to Transportation and Regional?

All projects selected for inclusion on the project list were to meet two criteria. First, they are

supposed to be transportation related.⁴² Projects are considered transportation related if their primary goal is to enable movement of people and goods from point A to point B. They are not transportation related if the primary purpose is economic development, environmental protection or recreation. Second, projects from the regional list are supposed to fund regional infrastructure.⁴³ Highway projects are considered regional if they serve major arterials or a higher road classification. Transit projects are regional if they connect more than one county or serve an area totaling more than 1 million. (Local governments may use their share of the local set-aside as local funds to pave roads, create city bus services, widen or improve city roads or any other transportation use.)

In order to ensure the Atlanta region spends its money in the most efficient way, the preferred solutions should also be cost-effective. To screen out marginal projects, for this paper's purposes a project is considered cost-effective if its benefit-to-cost ratio is 1.5 or higher.

Certain projects on the Atlanta region's list do not pass these tests. Some projects are not related to transportation while others are local in nature. Still others are neither related to transportation nor regional projects. Certain projects may spur economic development or reduce pollution but have no transportation benefits. Encouraging economic development and creating a cleaner environment are admirable and desirable goals, but not related to transportation and should not be supported by a transportation tax. Many of the projects are local highway widenings or local transit lines that are portrayed as regional projects.

In order to ensure the Atlanta region spends its money in the most efficient way, the preferred solutions should also be cost-effective.

Sometimes, determining whether a project is local or regional is challenging. In this case, however, the number of road operational projects and transit lines providing no regional benefit is problematic.

Inequitable Distribution

Much of the challenge in finalizing the project list was ensuring that the funding was distributed to projects across the metro area. Politics is an inevitable part of the process, and politicians want new highways or transit services in their areas.

Some residents of South DeKalb and the county NAACP have complained that their area was shortchanged in the project lists.⁴⁴ They point out that a proposed rail line near I-20 has been in the planning stages for 10 years. Yet the BeltLine horizontal transit link, a much newer concept, was selected for rail funding while the I-20 line received preliminary bus funding.

South DeKalb County is not the only area that would receive less money than it contributes. Without a doubt, commuting is a regional activity and determining the correct amount of funding for each area poses a challenge. Projects are supposed to be funded regionally to solve metropolitan transportation problems. Consequently, it is expected that there will not always be a completely proportional split of tax dollars among county projects.

42 Atlanta Regional Commission, Transportation Roundtable Approves Project Criteria, Elects Executive Committee, December 17, 2012, www.atlantaregional.com/about-us/news-press/press-releases/transportation-roundtable-approves-project-criteria-elects-executive-committee, March 5, 2012.
43 Ibid.

44 Tom Sabulis, "No Rail Line Yields Tax Opposition," Atlanta Journal-Constitution, February 27, 2012, www.ajc.com/opinion/naacp-no-rail-line-1365063.html, accessed March 9, 2012.

Geographic boundaries are still important for two reasons, however. First, voters will resent tax dollars being spent elsewhere. And second, every county in metro Atlanta has transportation problems; some are more pressing or more regional but projects are needed in every county.

Only 425,000 residents live in the city of Atlanta.⁴⁵ That is just 10 percent of the region's population. Yet Atlanta would receive 27 percent of all the region's funding. Atlanta boosters argue that because many more people work in the city than live in the city, it is vital to provide transportation options from the suburbs to the employment centers of Downtown, Midtown and Buckhead. However, most of Atlanta's projects do not perform well in transporting people from one area of the city to another area. Every municipality except the City of Atlanta would contribute more in sales tax funds than it receives in projects:

- Cobb County has 17 percent of the population but would receive only 11 percent of the funds.
- Gwinnett has 20 percent of the population but would receive only 14 percent of the funds.
- Fayette County, where more than 80 percent of the residents are employed outside the county, would receive 2.2 percent of the funding. While certain Fayette projects could improve inter-county commuting most of the projects would not.

There are several problems with the final split. Several of the major projects are detailed on the next page. The complete funding splits and population splits are available in the spreadsheets in Appendix A at www.georgiapolicy.org/pub/transportation/AppendixA.pdf.

Transit Funding is Not Proportional

The Atlanta region project list devotes more funding to transit than to highways. The project list spends 52 percent of the funds on transit when only 3.6 percent of commuters in the 10-county area choose transit. Increasing transit service is a laudable goal but it should not come at the expense of developing and maintaining a quality highway network – the preferred travel mode. One reason that the region allocates more funds to transit proportionally is the large number of rail projects. As explained below, rail transit is problematic for Atlanta.

Transit Funding is Predominantly Rail

The Atlanta project list has several rail and rail study projects. Rail lines work well in densely populated areas with zoning codes that encourage density. This includes U.S. cities such as New York, Washington, D.C., and Chicago, as well as many foreign cities in China, Japan and parts of Europe.

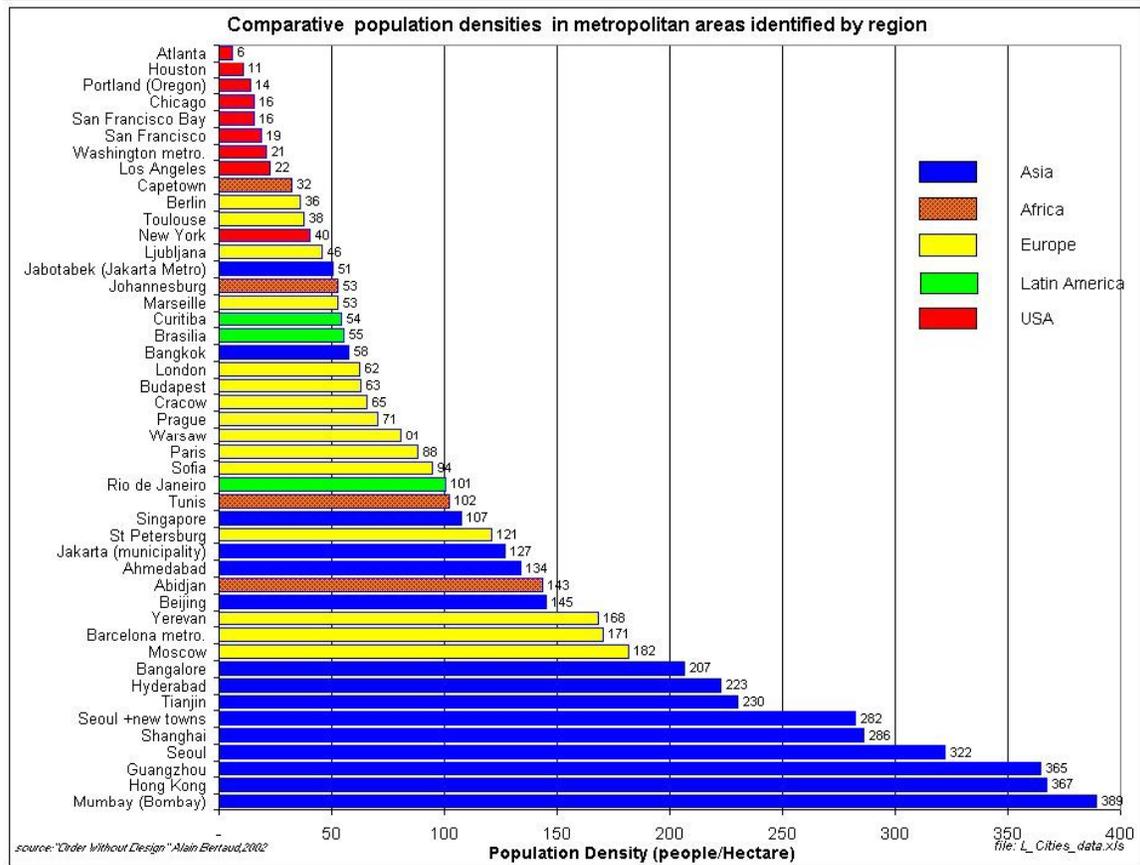
Building successful rail lines in metro Atlanta, however, is a challenge. While building a rail system is an admirable goal, such a system will be a failure without the population density to support it. Proponents of rail transit suggest placing the train then changing the land-use restrictions. This is putting the cart before the horse. The first step is to change zoning and land-development ordinances and reserve the corridor right of way. Next, allow population and density to grow until there is sufficient support for a rail line. If and when Atlanta reaches that density, then the rail line can be constructed.

Increasing transit service is a laudable goal but it should not come at the expense of developing and maintaining a quality highway network.

45 U.S. Census Bureau, American FactFinder

Some cities with very high population densities have had enormous success with Bus Rapid Transit (BRT) lines. Bogota, Colombia, and Curitiba, Brazil, have built lower-cost BRT lines in place of more expensive rail lines.⁴⁶ Both cities have experienced economic development gains in the same way as if they had constructed rail systems, but at a much lower cost.

Chart 1: Population Density of People per Hectare for World Cities⁴⁷



Source: Alain Bertaud and Robert Poole, *Density in Atlanta: Implications for Traffic and Transit*

Bus systems and BRT lines offer excellent transit options. Buses are a far more appropriate transit technology for cities with Atlanta's density. The project list allocates funds for GRTA's express service (\$95 million), Clayton County's local bus service (\$100 million), Gwinnett County bus service (\$40 million) and BRT service along Piedmont/Roswell Road (\$50 million) and along I-20 in East DeKalb County (\$225 million).⁴⁸

Rail service makes up the majority of the transit projects and the vast majority of the funding. The BeltLine East-West Transit Line (streetcar project) receives \$600 million of the total. Cobb received \$689 million for "enhanced premium transit service" between the Arts Center and Acworth; "Phase 1" would provide fixed guideway improvements between Cumberland/Galleria and the MARTA Arts Center Station. (This route could be developed as BRT, but policy-makers

46 Victoria Transport Policy Institute, Bus Rapid Transit, June 9, 2011, www.vtpi.org/tm/tm120.htm, accessed March 12, 2012.

47 Alain Bertaud and Robert Poole, *Density in Atlanta: Implications for Traffic and Transit*, Policy Brief No. 61, (Los Angeles, CA: Reason Foundation, April 2007).

48 Atlanta Regional Commission.

have expressed a preference for rail.) Another \$700 million is dedicated to rail transit service between Lindbergh Center and Emory University. Gwinnett received \$95 million for the I-85 North Transit Corridor. While the preferred option has not been finalized, rail service has been the preference in previous studies. Maintenance for MARTA rail receives \$533 million, or 17 percent of the total funding. There is no doubt the region should maintain the existing rail service. Nevertheless, the expense of maintaining rail lines is another reason to consider other options.

The region is missing the opportunity to provide cost-effective BRT service. The prudent approach would be for the region to invest in a regionwide Managed Lanes (express toll lanes) system, which GDOT already has plans to implement. Such a system would enable high-quality, high-speed, seamless and flexible transit service. But it would do much more.

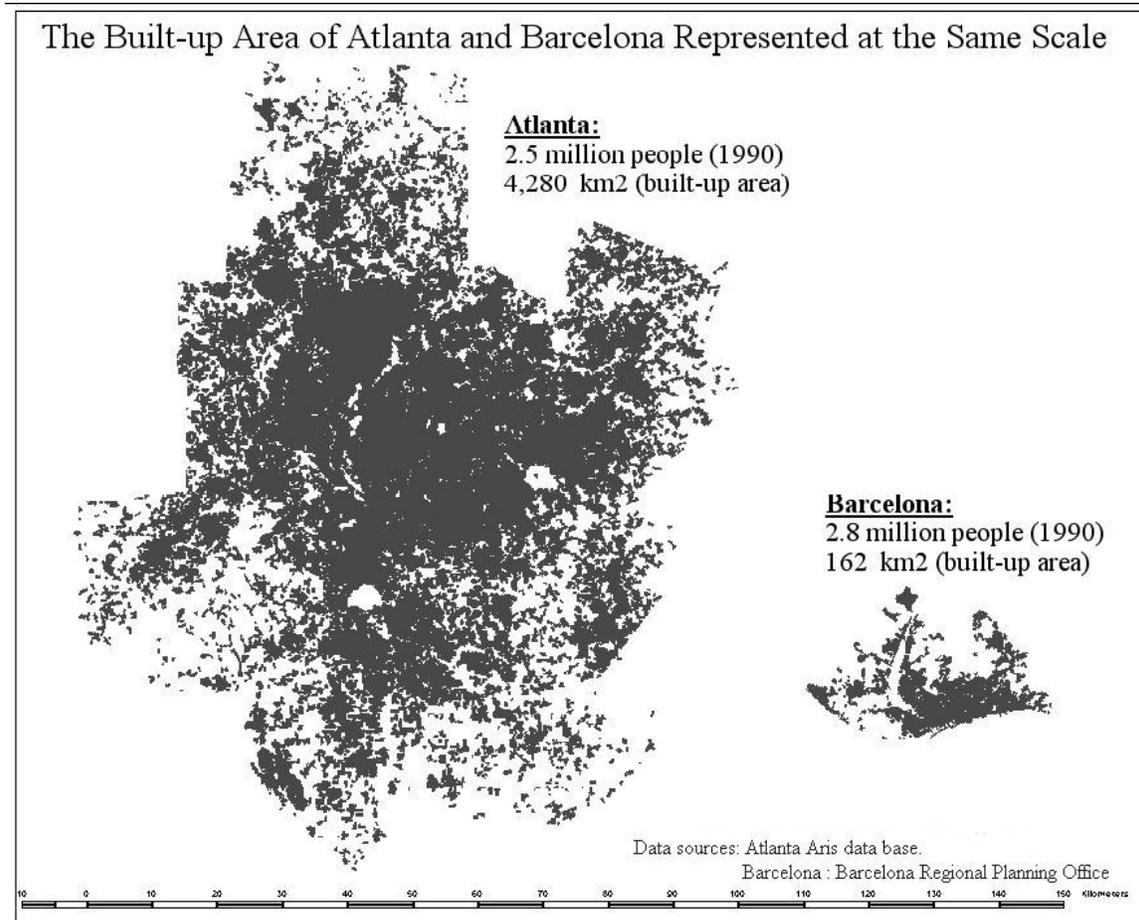
It would provide guaranteed travel times to buses, vanpools and three-or-more-person carpools. The new lanes would be built alongside existing corridors so congestion is decreased on the highway networks. GDOT, GRTA and the State Road and Tollway Authority (SRTA) have developed a plan for a network of managed lanes. GDOT is building two reversible lanes on the I-75 corridor south of Atlanta from I-675 to SR 155.⁴⁹ Future projects include I-285 from I-75 to I-85 and I-75/I-575 north of I-285.

The project list includes no money for these projects, however, even though they would improve highways and transit service, would be regional in nature, and would have good cost-benefit ratios. High-quality BRT service could be established in the I-75 High-Occupancy Vehicle (HOV) lane between the MARTA Arts Center station and Cumberland. The only cost would be buying and operating the buses. Rail service, on the other hand, would require acquiring the right of way along a built-out corridor – certain to generate huge controversy and enormous cost – constructing the track and buying and operating the trains. This approach is certain to be far more expensive.

49 Georgia Department of Transportation, I-75 Express Lanes, January 1, 2012, www.dot.state.ga.us/travelinggeorgia/expresslanes/I75expresslanes/Pages/default.aspx, accessed March 14, 2012.

The following picture details the differences in land use between Atlanta and Barcelona. Despite having the same populations, Atlanta uses 30 times the physical land area as Barcelona. This density is one of the reasons fixed-rail is successful in Barcelona but not in Atlanta.

Atlanta and Barcelona built-up area represented at the same scale.⁵⁰



Source: Alain Bertaud and Robert Poole, *Density in Atlanta: Implications for Traffic and Transit*

Not a Regional Plan

More troubling than the spending is that this project list lacks any sense of cohesiveness. The component projects do not come together to form a regional plan. The ARC has highlighted how Atlanta lacks both a comprehensive highway and transit network, but political realities intervened as the project list was finalized.

Many of Atlanta's highways boast 12-15 lanes. When a wreck closes one highway, however, commuters have few alternative routes. Atlanta's arterial network adds to the problem. Among major cities (those with metro-area populations over 4 million), Atlanta has one of the worst arterial networks in the country.⁵¹ Widening SR 92 in Fayette County may provide some local relief but the road does not link to a regional network.

⁵⁰ Bertaud and Poole, *Density in Atlanta: Implications for Traffic and Transit*.

⁵¹ Aaron Renn, "Is it Game Over for Atlanta?," *Newgeography.com*, May 19, 2010, www.newgeography.com/content/001574-is-it-game-over-atlanta, accessed May 16, 2012.

The transit list includes rail projects inside I-285 but few lines outside the Perimeter. The MARTA system serves only two counties and the two proposed light-rail and streetcar lines add more service in those same two counties. If metro Atlanta is committed to building rail, it would make more sense for possible rail lines in the counties of Clayton (commuter rail from Atlanta to Lovejoy), Cobb (rail from I-285 to Wade Green Road) and Gwinnett (from Doraville MARTA Station to Gwinnett Arena). At least these lines would form a regional network. Yet two of these projects would receive what is essentially study money and the third possible line receives no funding at all.

The best idea would be to abandon the plans for a rail network that Atlanta cannot afford and substitute a transit network that the region can afford: a cost-effective BRT network. The next section will explain the significant advantages for BRT in cities similar to Atlanta.

The project list has these problems because politicians, not local engineers and planners, decided the selections. There is no denying that political realities are present in all transportation plans, but politics shaped the metro Atlanta plan mostly for the negative.

PART IV: NATIONWIDE COSTS OF TRANSIT PROJECTS

What are the differences in cost between bus and rail transit systems? The following chart compiles data from the National Transit Database for BRT and rail systems in Atlanta and comparable markets. Because of density and development patterns, Atlanta is more comparable to Southern and Western cities with decentralized building patterns than Northeastern and Midwestern cities with compact urban forms.

The charts on the following pages compare costs for rail service in other metro areas similar to Atlanta for Heavy Rail (HR), Light Rail (LR), and Commuter Rail (CR). Tables 3-5 include relatively successful rail services in New York (HR and CR), Boston (LR) and Washington, D.C. (HR). Table 7 examines several (BRT) systems. Since BRT is a newer technology not well utilized in the United States, there are not as many systems.

Table 1 compares the cost of building new HR, LR and CR service. Costs are annualized by dividing the total cost by 12.5. (This is the industry standard). All figures are in 2008 dollars. The average cost per mile is also included.

Table 1: Capital Costs of Heavy, Light, and Commuter Rail⁵²

Urban Area	Mode	Capital Cost	Annualized	Miles	Cost per Mile (millions)
Atlanta	HR	\$4,187M	334.2	51.9	81
Los Angeles	HR	\$7,801M	622.8	17.1	458
Miami	HR	\$2,008M	160.3	28.0	72
Washington, D.C.	HR	\$18,232M	1,455.6	106.3	172
Charlotte	LR	\$472M	37.7	4.7	100
Dallas	LR	\$3,560M	284.2	49.2	72
Denver	LR	\$1,523M	121.6	36.2	42
Houston	LR	\$434M	34.7	9.1	48
Dallas	CR	\$544M	43.4	23.8	23
Los Angeles	CR	\$1,574M	125.7	327.9	5
Miami	CR	\$857M	68.4	76.1	11
Nashville	CR	\$43M	3.4	16.5	3

Source: Randal O'Toole, Defining Success: The Case Against Rail Transit, Policy Analysis No. 663, (Cato Institute, March 2010)

Table 2 compares the capital and operating costs of rail with bus. This table examines whether cities could replace their rail systems with BRT. All cities similar to Atlanta can provide the same level of transit service at a much lower cost with BRT compared with rail.

Table 2: Capital and Operating Costs of Heavy, Light, and Commuter Rail

Urban Area	Mode	Maximum Cars in Service	AM Peak Rider Per Car	Replacement Buses Needed	Change in Annualized Capital Costs (\$ millions)	Change in Operating Costs (\$ millions)	Total Net/ Cost Savings (\$ millions)
Atlanta	HR	33	42	56	(331.4)	203.9	(127.6)
Los Angeles	HR	70	47	132	(616.3)	8.8	(607.5)
Miami	HR	84	28	95	(155.6)	(7.4)	(163)
Washington	HR	810	43	1,385	(1,387.30)	346.7	(1,040.6)
Charlotte	LR	14	40	22	(36.6)	(2.4)	(39)
Denver	LR	101	26	107	(116.3)	50.3	(66)
Dallas	LR	85	50	171	(275.8)	8.1	(267.6)
Houston	LR	17	50	34	(60.9)	0.6	(60.3)
Dallas	CR	34	37	50	(40.4)	(12.2)	(52.6)
Los Angeles	CR	141	80	451	(97.9)	169.3	71.5
Miami	CR	27	92	100	(62.3)	44.5	(17.7)
Nashville	CR	4	15	4	(3.2)	(2.3)	(5.5)

Source: Randal O'Toole, Defining Success: The Case Against Rail Transit, Policy Analysis No. 663, (Cato Institute, March 2010)

⁵² Randal O'Toole, Defining Success The Case Against Rail Transit, Policy Analysis No. 663, (Washington D.C.: Cato Institute, March 2010).

Table 3 examines the profitability and ridership of rail. Fares do not cover 100 percent of operating costs on any U.S. rail system. Fixed-rail systems might be appropriate if fares cover at least 50 percent of their operating costs and 25 percent of their capital costs. Systems in dense Northeastern cities that are more appropriate for transit are highlighted in blue. Of Sunbelt city systems, Los Angeles' commuter rail network is the only system where farebox revenue covers at least 50 percent of operating costs and 25 percent of total costs.

Table 3: Profitability and Ridership of Heavy, Light, and Commuter Rail Lines

Urban Area	Mode	Fare/ Operating Cost	Fare/ Total Cost	Loss Per Trip (Dollars)	Occupancy Per Car	Total Weekday Riders
Atlanta	HR	31.10%	10.00%	5.34	25.6	266,869
Los Angeles	HR	33.20%	4.40%	15.76	36.3	134,665
Miami	HR	16.10%	5.50%	12.38	19.9	62,307
Washington	HR	60.60%	20.70%	6.09	23.5	971,490
New York	HR	67.00%	42.50%	1.21	28.8	7,822,158
Boston	LR	58.80%	36.50%	1.75	32.6	256,128
Charlotte	LR	17.10%	3.40%	20.14	27.3	11,678
Denver	LR	52.70%	13.40%	6.85	14.3	67,196
Dallas	LR	15.50%	3.70%	18.50	28.9	65,757
Houston	LR	33.20%	15.80%	3.67	33.7	40,567
Dallas	CR	9.20%	2.20%	46.14	24.0	9,730
Los Angeles	CR	50.40%	26.40%	15.33	41.9	47,210
Miami	CR	16.50%	7.20%	29.16	31.0	13,228
Nashville	CR	15.20%	8.30%	41.03	15.1	667
New York Metro-North	CR	58.60%	42.50%	8.19	36.9	285,613

Source: Randal O'Toole, Defining Success: The Case Against Rail Transit, Policy Analysis No. 663, (Washington D.C.: Cato Institute, March 2010)

Table 4 examines transit trips per capita in 1985 and in 2008. Many cities opened new rail lines only to see the percentage of commuters who use transit decline. Dense Northeastern cities that are more appropriate for transit are highlighted in blue.

Table 4: Transit Trips per Capita for Selected Cities

Urban Area	1985	2008
Atlanta	83	39
Boston	106	90
Charlotte	22	23
Dallas	18	16
Denver	40	47
Houston	25	22
Los Angeles	56	51
Miami	22	30
Nashville	17	12
New York	201	215
Washington, D.C.	102	116

Source: Randal O'Toole, Defining Success: The Case Against Rail Transit, Policy Analysis No. 663, (Cato Institute, March 2010)

Table 5 examines the percentage of transit trips before rail and after rail. New service should increase the percentage of commuters using transit. This occurred in only five of 11 cities. Dense Northeastern cities that are more appropriate for transit are highlighted in blue.

Table 5: Transit's Share of Commuting

Urban Area	Year Rail System Opened	Commute Share Of Transit Prior to Rail	2008 Commute Share of Transit
Atlanta	1979	9.1	4.6
Boston	1900	13.5	13.3
Charlotte	2007	5.5	3.6
Dallas	1996	2.7	2.2
Denver	1994	4.7	5.8
Houston	2004	3.8	3.2
Los Angeles	1988	5.9	6.7
Miami	1984	4.3	3.9
Nashville	2006	1.3	1.8
New York	1900	30.7	32.5
Washington, D.C.	1976	16.7	16.8

Source: Randal O'Toole, Defining Success The Case Against Rail Transit, Policy Analysis No. 663, (Cato Institute, March 2010)

Table 6 compares the operating costs per vehicle-revenue mile. Rail is cheaper than some other transit technologies, including Cable Car and Automated Guideway. Bus is the cheapest.

Table 6: Average Operating Costs Per Vehicle-Revenue Mile

Bus (diesel or gas)	\$9.24
Heavy Rail	\$9.35
Commuter Rail	\$13.91
Light Rail	\$14.53
Streetcar	\$16.94
Bus (trolley)	\$19.07
Automated Guideway	\$21.86
Cable Car	\$107.31

Source: Randal O'Toole, Defining Success The Case Against Rail Transit, Policy Analysis No. 663, (Cato Institute, March 2010)

Table 7 details BRT information for several systems in operation. BRT is a newer technology, so there is less information available.

Table 7: Bus Rapid Transit Information⁵³

System/City	Length (miles)	Vehicles in Service	Average Weekday Ridership	Capital Cost (\$M)	Capital cost per Mile (\$M)	Capital Cost per Passenger (\$M)
King County/Seattle	11	16	N/A	\$262	\$23.8	N/A
MAX main/Kansas City	6	14	4,800	\$23	\$3.8	.00079
New York	9	N/A	46,000	\$10.5	\$1.2	.0002
Gallatin Rd/ Nashville	12	7	1,800	10	\$1.2	.006
Pittsburgh	8.1	N/A	N/A	\$326.8	\$40.3	N/A
Heathline/Cleveland	9.4	N/A	10,500	\$200	\$21.3	.02
700/900 series routes except HRT Los Angeles (22 lines)	372.2	431	233,986	N/A	N/A	N/A
South Busway/Miami	20	57	25,000	\$53.4	\$2.7	.002
Main Street Link/ Phoenix	13	10	1,174	\$0.5	\$1.5	.02
36 South MAX/ Salt Lake City	10	7	4,400	\$7	\$0.7	.002

Source: National Bus Rapid Transit Institute, Currently Operating, March 2011 accessed from www.nbrti.org/docs/pdf/Survey/BRT_Currently%20Operating.pdf

The seven tables demonstrate the high cost of rail service. There are some metro areas where rail service is a reasonable option. Compact, large Northeastern metro areas provide quality rail service and require smaller subsidies per passenger. The older systems of Boston and New York have paid off their construction costs. While New York has 215 transit trips per capita, Washington has 116 and Boston has 90. The next closest city, Los Angeles, has only 52. Transit has almost 33 percent of the commute share in New York, almost 17 percent in Washington, D.C., and more than 13 percent in Boston. Among the Sunbelt cities, Los Angeles has the highest percentage of transit users: less than 7 percent.

While rail transit is always expensive, in some cities it is more appropriate. For example, replacing Washington Metropolitan Area Transit Authority's (WMATA) heavy rail would require 1,385 buses, a large number, each with its own driver. Such a number could not fit on D.C.'s streets. Additionally, fares fund 61 percent of the operating costs and 21 percent of the total costs. While not outstanding, this is one of the highest rates of any U.S. city. WMATA has increased transit trips per capita and the actual percentage of commuters who use transit. WMATA still has large capital costs and, increasingly, a backlog of maintenance for the system.

How does MARTA heavy rail compare? MARTA would need 56 buses to replace its rail service,

⁵³ National Bus Rapid Transit Institute, Currently Operating BRT, March 2011, www.nbrti.org/docs/pdf/Survey/BRT_Currently%20Operating.pdf, accessed March 15, 2012.

a relatively low number. MARTA fares cover less than a third of its operating cost and 10 percent of its total cost. MARTA's transit trips per capita decreased by 50 percent between 1985 and 2008; its share of commuters has decreased by almost 50 percent since the inception of its rail service in 1979.

Atlanta's rapid population growth is a factor, but land-use and zoning policy is the big reason rail-transit is not successful. Many people buy houses far from where they work on cheap suburban land, then travel to numerous dispersed business centers in the metro area, not one central destination. Rail transit needs dense neighborhoods with mid- and high-rise buildings within a quarter of a mile of rail transit stops. Many metro Atlanta counties have three-story building height maximum and minimum parking requirements for transit-accessible buildings. Rail transit could not be realistic without major changes in land-use ordinances and zoning codes.

The timing from planning to operating tends to be far shorter for BRT than for rail-based alternatives and capital costs tend to be considerably lower.

MARTA bus service serves different customers than its rail system. The buses serve low-income, transit-dependent neighborhoods while the rail system largely serves high-income, transit choice populations. The expense of operating rail lines led many cities to cut back on bus service. For example, Atlanta bus service increased 3.1 percent between 1972 and 1979 but was cut back after the rail system was completed. Both Houston and Dallas have cut service after building light-rail networks. Los Angeles cut routes in 2006 only to have a federal judge rule the transit operator discriminated against minorities and order the system to restore many of the routes. In 2012, the operator again cut 800,000 hours of service, mostly in low-income communities. The Federal Transit Administration recommended that the agency review the latest cuts.

Several studies have compared BRT systems and light-rail systems. The U.S. Government Accountability Office found that the capital costs per mile between \$680,000 for buses on city streets to \$9 million for buses in HOV lanes "compared favorably" with light rail capital costs.⁵⁴ Both systems were equivalent in operating costs.

Bus systems have an advantage in flexibility. They can be rerouted to accommodate changing traffic patterns and can operate on busways, managed lanes or arterial streets. Buses have other advantages: The timing from planning to operating tends to be far shorter for BRT than for rail-based alternatives and capital costs tend to be considerably lower. It is much cheaper to establish a full network using bus-based mass transit.

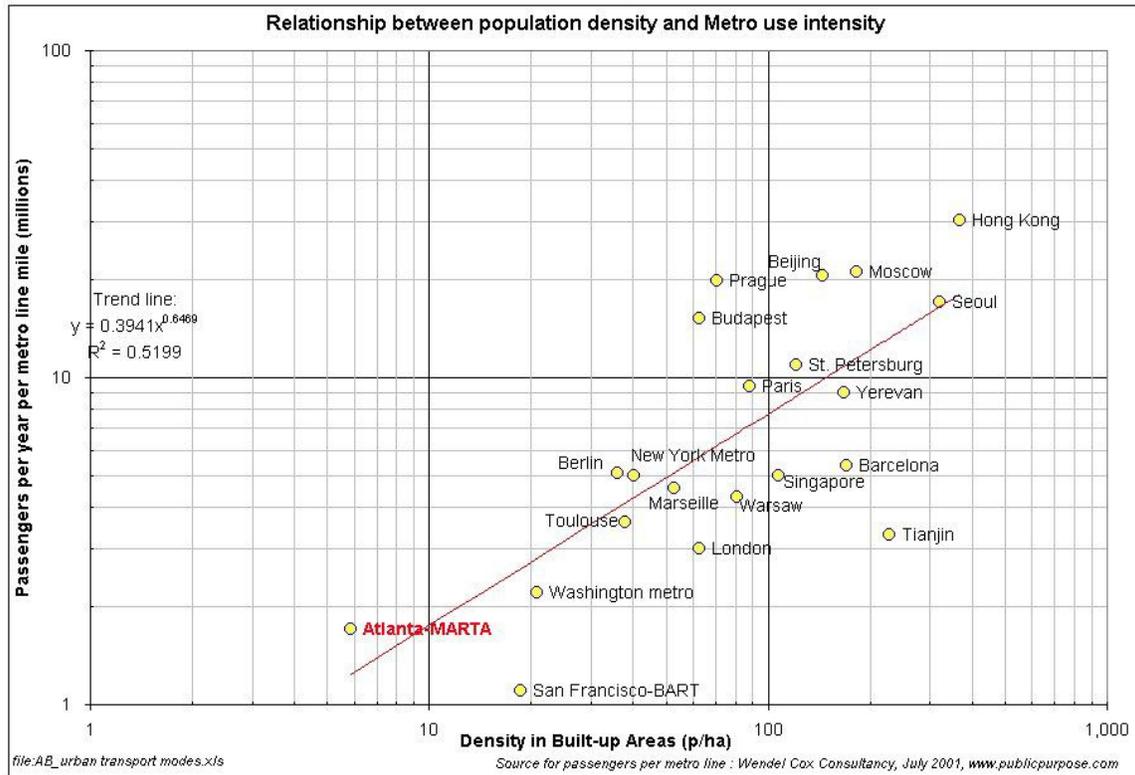
Unfortunately, the public has a negative perception of buses.⁵⁵ Additionally, U.S. BRT systems have fallen short of foreign systems because the United States has more automobiles and fewer transit riders.

54 JayEtta Hecker, United States Government Accountability Office, *Bus Rapid Transit Offers Communities a Flexible Mass Transit Option*, (Washington D.C.: 2003), p. 3.

55 *Ibid*, p. 13.

The following graph shows the difference in density between Atlanta and other metropolitan areas with heavy rail.

Graph 1: Relationship Between Population Density and Metro Use Intensity⁵⁶



PART V: ALTERNATIVE APPROACHES

Metro Atlanta needs to develop a seamless transportation network of highway and transit. There are two major problems with Atlanta's network.

The first problem is lack of redundancy. A redundant network offers multiple ways to travel from point A to point B. Atlanta often has just one reasonable route. Commuters traveling from downtown Atlanta to Lawrenceville take the downtown connector, I-85 and SR-316. However, if a wreck snarls I-85 northeast of I-285, there are few options. There is not another expressway to choose as an alternative. The arterial network that should serve as the backbone for transportation is underdeveloped. Atlanta has quite possibly the worst arterial network of any of the 10 largest metro areas in the country. A great deal of attention is focused on the shortcomings of the region's transit network, but the region's highway network is not much better. Creating a grid network would improve Atlanta's traffic flow. Two examples of cities with effective grid networks are Dallas and Minneapolis.

⁵⁶ Harry Richardson, *Urban Sprawl in Western Europe and the United States* (Burlington, Vermont: Ashgate, 2005), p 295.

The second problem is the cost of maintaining existing transit service. The Atlanta region has numerous bus services and a heavy rail line that carries far fewer riders than it was designed for. The maintenance and construction costs of rail lines are very high. Bus service is cheaper to maintain because the construction and maintenance costs of highways are paid for largely by automobile users. Rail lines are used exclusively by trains. The proposed BeltLine streetcar will cost less to construct than heavy rail, but it still requires an in-ground track and, most likely, overhead wires.

The conversion of the I-85 HOV lanes to High-Occupancy Toll (HOT) lanes has reduced bus travel time on the I-85 corridor and increased the number of transit users by one-third.

Rail transit remains popular for several reasons. Riders consider trains more attractive than buses; some riders think buses are for "other people," not them. Additionally, proponents believe rail transit, because it is a fixed, "permanent" mode, is better at stimulating economic development than buses. All of these assumptions are incorrect.

Buses can be very attractive; cheaper buses maximize the frequency of service, which many communities value above other factors. However, even the costlier, more luxurious buses can offer a much higher frequency of service than a train line over the same distance. Rail can stimulate economic development, but that is not necessarily the case. Innovative zoning and flexible land uses have more influence on economic development than putting down a rail line.

MARTA has many stations in differing geographic areas, including North Springs, Ashby, King Memorial and Lakewood with no transit-oriented development. Buses can create economic development. Similar to rail, innovative zoning and flexible land uses make the difference. Curitiba, Brazil, has boomed over the last 20 years thank to BRT. The city, which features densities some 10 times higher than Atlanta, has a zoning code that encourages tall buildings next to the bus line and densities tapering over a quarter-mile in both directions from the line.⁵⁷

Atlanta should construct a comprehensive BRT system network. This BRT network can take advantage of the planned managed lanes on the region's expressways to offer fast and reliable travel times. GRTA already operates buses on many of these highways. The conversion of the I-85 HOV lanes to High-Occupancy Toll (HOT) lanes has reduced bus travel time on the I-85 corridor and increased the number of transit users by one-third. Other expressways outside the Perimeter have not converted the managed lanes from HOV to HOT. Despite GRTA's desire to increase the number of routes and expand its successful service, the Atlanta region's project list does not contain any funds for new HOT managed lanes that could expand the transit network.

These new managed lanes can help reduce congestion as well. In the past, GDOT has continually widened roads such as the Downtown Connector, from four lanes to 15 lanes in some places. Yet the connector is as congested as ever. Why? Several factors, including Atlanta's growth and the lack of a strong highway network play a role, but the biggest reason is induced demand.

Induced demand occurs when congested non-priced highways are widened. For example, I-75/85 is congested at 5:30 weekday evenings between the Brookwood Interchange and I-20. If GDOT

57 David Levinson, University of Minnesota Nexus System Course 5212, Curitiba Brazil BRT Case Study, March 2011, <http://nexus.umn.edu/Courses/ce5212/Case3/Curitiba.pdf>, accessed March 20, 2012.

adds two lanes in each direction to the highway, it becomes congestion-free in the short-term. Motorists who previously used Northside Parkway as an alternative or commuted at 6:30 p.m. would start using the Downtown Connector at 5:30 p.m. After several years the highway will become congested again and GDOT will need to widen the highway again and after another two years it will become congested again, etc.

While widening highways makes travel more convenient, reduces congestion, reduces pollution and increases the number of vehicles that travel on a highway, it does not reduce congestion over the long term. This does not mean that the region should not expand highways or should invest a disproportionate amount of funds in transit. It simply means that growing metro areas cannot end the congestion by widening (expanding capacity) alone.

What is needed is pricing, which helps solve these congestion problems by ensuring commuters pay the accurate costs for their trips. A highway is more valuable during rush hour. It should not cost the same amount to use at 5 p.m. as 5 a.m. This practice is not uncommon to consumers: Consider how airlines raise the price of flights during high-demand periods such as holidays, and hotels charge more for rooms during high season.

Priced lanes can be used for free by transit vehicles, three-person carpools and vanpools. The capacity increase provides congestion relief: Such managed lanes can carry 50 percent more people per hour during rush-hour than general-purpose lanes.

Trucks: Atlanta is a major freight hub. Much of the highway traffic is trucks. Some of these vehicles do not even stop in Atlanta. Two options should be considered, both of which would increase capacity in the Atlanta region and improve traffic flow:

- An optional toll-truckway could provide major reductions in congestion.⁵⁸ The truck lanes would need to be added to I-75 south, I-75 north and I-85 north. Inside the Perimeter there are several options for this toll truckway: Build the truckway on a new expressway through Atlanta, which would minimize the number of miles of lanes built. A proposal to build truck lanes through the densest parts of the city could be very controversial. (A proposal to do this by tunneling under the city generated opposition in neighborhoods that would be impacted.) A second option is to build the truckway along I-285. While this is less controversial, it requires more miles of road. The right of way along I-285 is limited in spots; as a result the state would have to buy new right-of-way, elevate, or tunnel parts of the road. None of these options is cheap but they would all significantly reduce congestion.
- A freight bypass, which the Georgia Public Policy Foundation has previously recommended, would reduce traffic in Atlanta and add capacity by diverting unnecessary truck traffic.⁵⁹ Georgia can use existing infrastructure – roads largely completed or in the budget – and enhance economic opportunities around the state as traffic is diverted from Atlanta. Completing the Columbus-Augusta Fall Line freeway; enhancing U.S. 27 along Georgia's western border and creating a western arc from Macon around Atlanta to Tennessee would divert the increasing freight and through traffic that otherwise must travel through Atlanta (Interstates 75, 85, 20 and 285) and reduces Atlanta's capacity needs. Helped by a new freight distribution center in Middle Georgia, perhaps in Macon

58 Robert Poole, Reducing Congestion in Atlanta: A Bold New Approach to Increasing Mobility, p. 32.

59 Benita Dodd, Road to Congestion Relief Leads ... Somewhere Else
www.gppf.org/article.asp?RT=&p=pub/Transportation/transbuild081121.htm

or farther south, freight traffic would be more evenly dispersed as it passes through and bypasses towns in various directions.

Arterials: One of Atlanta's largest transportation challenges is its lack of arterials. Arterials are the backbone of any transportation network. Many of the problems on Atlanta's highway network can be traced to its poor arterial network. Atlanta should make three significant changes to its arterial network.

The first and most significant is using overpasses or underpasses to bypass congestion at signalized intersections on major arterials. State Road 120 and State Road 140 provide an excellent alternative to I-285 north of Atlanta. Unfortunately, during rush-hour these highways become congested, particularly at intersections. From SR 9 in Roswell to I-75 in Marietta, State Road 120 (Roswell Road) has three intersections that could benefit from grade separations: Johnson Ferry Road, Old Canton Road and East Piedmont Road. These overpasses or underpasses will be costly to construct, so they would be well-suited to being paid for via an electronically collected toll.

Georgia can use existing infrastructure – roads largely completed or in the budget – and enhance economic opportunities around the state as traffic is diverted from Atlanta.

The second change is to lengthen and extend the duration of traffic lights on major arterials. If major arterials had total cycle lengths of four minutes, this would allow three minutes of uninterrupted green for the major arterial at many intersections. This would significantly reduce delays at most intersections, even during rush-hour. The light cycles should also be synchronized. Unsynchronized light cycles increase pollution, wear and tear, traffic wrecks and driver discomfort. Synchronizing traffic signals is one of the least expensive and most cost-effective congestion-reduction solutions. Yet metro Atlanta municipalities lag many other areas of the country in implementing this technology.

The third change is to lengthen turn lanes and add raised medians. Lengthening turn lanes prevents vehicles from clogging through lanes during rush hour. Adding medians prevents dangerous mid-block left turns and left turns out of businesses without traffic signals. These dangerous turns cause a large percentage of traffic wrecks. This inexpensive solution, when used judiciously, can significantly improve traffic flow during rush hour.

Atlanta also needs to relieve congestion on the Downtown Connector between Langford Expressway and the Brookwood Interchange. There are three possible solutions. One solution would be a tunnel linking I-675 and Georgia 400. While new technology including deep-bore tunneling which reduces the side effects of traditional tunnels, any new road capacity in this area is politically unrealistic.

There are two other options. One is constructing a north/south expressway west of the Downtown Connector. One possible route would link the current Brookwood Interchange with I-85 near the airport. A second alternative is to reconstruct and potentially double-deck the Downtown Connector. The Downtown Connector could be capped, much like I-670 in Columbus, Ohio, creating continuous north-south park space for the city of Atlanta from I-20 to the Brookwood Interchange. This would also help reconnect neighborhoods that were cut off when the Downtown Connector was built. Both options would be expensive; all possible revenue sources would need to be considered.

Many of the most promising expressway improvements were highlighted in the Reason Foundation's 2006 Atlanta mobility study.⁶⁰ More details on tolled overpasses and underpasses are available in a recently released Reason Foundation study on focusing on Southeast Florida.⁶¹

The following maps compare Atlanta's expressway system with Dallas' and Minneapolis' systems. There is a misconception that extensive expressway networks exist only in the largest cities such as Los Angeles, and that these networks lead to major congestion. But Dallas is about the same size as Atlanta and Minneapolis is significantly smaller. Both cities have much more developed highway and arterial networks than Atlanta. Atlanta has several very wide expressways but does not have a well-developed highway network.

Synchronizing traffic signals is one of the least expensive and most cost-effective congestion-reduction solutions. Yet metro Atlanta municipalities lag many other areas of the country in implementing this technology.

60 Poole, Reducing Congestion in Atlanta: A Bold New Approach to Increasing Mobility, p. 22.

61 Robert Poole, Increasing Mobility in Southeast Florida: A New Approach Based on Pricing and Bus Rapid Transit, Policy Study No. 400, (Los Angeles, CA: Reason Foundation, March 2012).

Map 1: Atlanta Expressway Network⁶²



62 Ibid, p. 6.

Map 2: Dallas Expressway Network



Map 3: Minneapolis Expressway Network



The next table compares the highway and arterial networks of metropolitan areas that grew rapidly after World War II. Atlanta has very few arterial lane miles per square mile.

Table 8: Comparative Data on Freeways and Arterials⁶³

Urban Area	Pop	Expwy VMT	Expwy Lane-mi	Expwy VMT Lane-mi	Arterial Lane-mi	Area sq. mi.	Arterial lane mi per sq mi	Arterial VMT (000)
Atlanta	3,005	43,590	2,285	19.08	1,390	1,830	0.76	10,300
Dallas	4,300	51,870	3,105	16.70	4,050	1,935	2.09	25,810
Denver	2,050	17,960	1,140	15.75	1,820	855	2.13	14,675
Houston	3,750	46,665	2,460	18.97	2,900	1,800	1.61	19,290
Minneapolis	2,475	27,580	1,590	17.52	1,325	1,245	1.06	8,560
Phoenix	3,005	23,610	1,325	17.82	3,060	1,140	2.68	18,095

Source: Robert Poole, *Reducing Congestion in Atlanta: A Bold New Approach to Increasing Mobility*, Policy Study No. 351, (Los Angeles, CA: Reason Foundation, November 2006)

63 Ibid, p. 8.

Table 9 uses 2010 census data. Compared to other large metro areas, Atlanta drivers are more likely to drive alone and less likely to use public transit, bike or walk.

Table 9: 2010 Commute by Mode (Metropolitan Statistical Area)⁶⁴

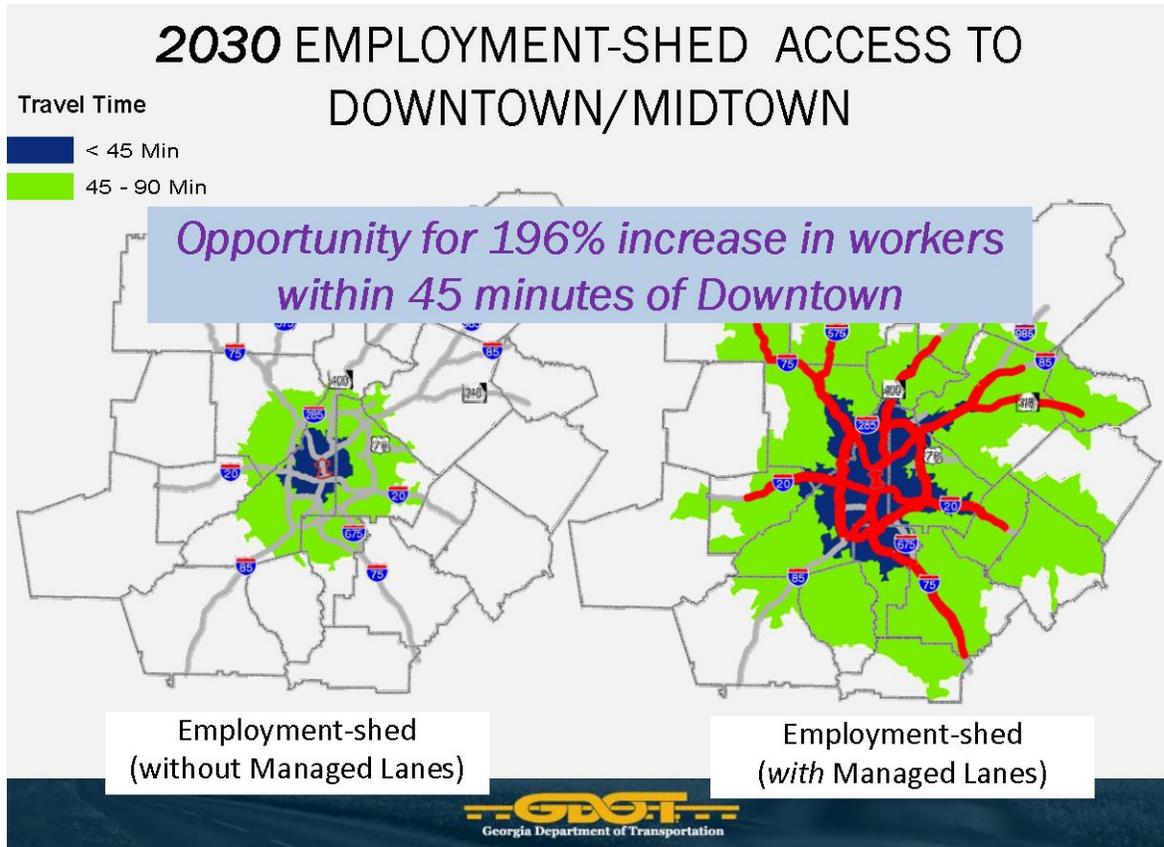
City	Drive Alone	Carpool	Public Transit	Bike	Walk	Telecommute
Atlanta	77.5	10.9	3.6	0.2	1.4	5.1
Boston	69.4	8.1	11.9	0.8	5.0	4.0
Chicago	70.9	9.1	11.5	0.5	3.0	3.8
Dallas	80.1	11.4	1.6	0.2	1.4	4.0
Houston	78.5	12.3	2.6	0.3	1.5	3.3
Los Angeles	73.5	11.2	6.1	0.8	2.6	4.6
New York City	50.4	7.2	30.5	0.4	6.1	3.7
Philadelphia	73.4	8.7	9.3	0.5	3.7	3.5
San Francisco	62.3	10.4	14.5	1.4	4.3	5.5
Washington, D.C.	66.2	11.1	13.9	0.5	3.0	4.4

Source: 2009 American Fact Finder Community Survey, U.S. Census

64 United States Census Bureau

The next figure shows the 2030 workforce within 45 minutes of the Downtown/Midtown area with and without Managed Lanes.

Figure 1: 2030 Employment Shed Access to Downtown/Midtown with Managed Lane Network and without Managed Lane Network⁶⁵



Source: Atlanta Regional Managed Lane System Plan, Georgia Department of Transportation, Office of Planning

65 State Transportation Board, Metro-Atlanta Managed Lanes System Plan, September 17, 2009, www.dot.state.ga.us/aboutGeorgiadot/Board/Documents/2009%20Meetings%20Presentations/September/ManagedLanes.pdf, accessed April 20, 2012.

PART VI: ANALYSIS AND CONCLUSION

Metro Atlanta residents will decide on July 31, 2012, whether to raise their sales tax by one penny to fund a list of transportation improvements.

What should voters do?

Metro Atlanta ranks high in congestion; residents waste a significant portion of their time stuck in traffic. Transit service in Atlanta is poor. Both frequency and coverage are below other cities of similar size. The Atlanta region needs to solve its congestion issues, but the referendum faces substantial hurdles.

The sales tax funding mechanism has nothing to do with transportation. It is politically easier to increase one tax, especially a tax where tourists contribute a significant amount. However, the amount of goods purchased by a person has no relationship to the number of miles driven by that person. Additionally, sales taxes are one of the most regressive taxes. If approved, sales taxes in the metro area would range from 7 percent to 9 percent. These taxes would be a significant burden on lower income residents. Gas taxes, VMT fees, value capture, tolls and bonds would be much better sources. Making greater use of these sources in the short-term would be more challenging and may take longer. Doing so, however, would provide a more robust funding source less affected by the boom-and-bust cycles in the economy.

The metro Atlanta project list raises questions, although political challenges make creating the perfect list impossible. Regional projects such as improving the I-285 and Georgia 400 intersection and bringing MARTA to a state of good repair are excellent projects that deserve a place on the list. Many other projects should not be on the list. Many local road widening projects are included, particularly in Fayette County. And the list funds some of the most questionable rail transit projects. Compared to rail, bus capital costs are substantially lower and buses can be easily moved if development patterns change.

Fixed-rail transit is most effective in an extremely dense region, which Atlanta is not. Even if the region were to fund fixed-rail projects, those along the Perimeter, in Gwinnett County, commuter rail to Athens and commuter rail to Lovejoy are better projects. The BeltLine connector is an economic development project, not a transportation project, and was included to encourage residents of northeast Atlanta to approve the tax. The proposed I-75 rail line from Midtown to Cumberland serves a corridor with existing, quality express bus service while ignoring the far busier and more congested I-75 corridor from I-285 to Acworth. While this project was theoretically removed, \$700 million is an extraordinarily high number to improve BRT service in the corridor.

Several projects have purely economic development benefits while others have purely environmental benefits. Transportation projects with economic or environmental benefits can effectively solve multiple problems. But purely environmental or economic development projects have no role in a transportation project list that was to be selected for the best use of taxpayer dollars. It is not clear that the proposed solution is always the most optimal solution. Several projects propose widening when operational improvements might be better, and vice versa. A substantial number of the Atlanta projects are coded as operational with no project details. While these might be excellent projects, without more information it is impossible to know. Certainly, having exact project details for something eight years away is challenging. Yet the fact that Atlanta's list includes vague, few or no details on a number of projects is very unsettling.

Having an exact funding balance among the 10 counties and the city of Atlanta is impossible. The City of Atlanta has a large share of the employment base and is in the center of the region so it deserves a higher percentage of funds than its population. But receiving 27 percent of the funding when it has only 10 percent of the population is not equitable. Fayette County would receive 2.2 percent of the funding despite having only 2.5 percent of the area's population and almost no employment. Since more than 80 percent of Fayette's residents travel outside the county for employment, Fayette's share is too high. Cobb and Gwinnett would each receive substantially less funding than they proportionally "deserve."

While a new 1 percent sales tax can be voted on in 2014, becoming effective in January 2015, these are two more years in which Georgia will underinvest in transportation.

There are many ways that mobility can be improved. This paper recommends that a network of HOT managed lanes be added to Atlanta's expressway system, as GDOT intends to do. The lanes could be free for three-person carpools, vanpools and transit vehicles. Single-person vehicles would pay a toll if they choose to use the lanes. These lanes will improve traffic flow, reducing congestion and total travel times. The biggest advantage of managed lanes may go to transit. Currently on most highways buses must sit in the same traffic congestion as cars because either there are no managed lanes or the HOV lane is overcrowded. This plan adds managed lanes onto existing expressways and offers reliable travel speeds on expressways with existing managed lanes. This will increase the frequency and quality of transit service and the total transit ridership.

The paper also recommends converting some of the most congested arterials into managed arterials, with tolled overpasses or underpasses at major signalized intersections. While tolled arterial roads are a tough sell for Atlantans, the region has many strong contenders for managed arterials, including SR-120 and SR-140, that could significantly reduce congestion.

The Atlanta project list has shortcomings but there are also problems with rejecting it outright. First, if the tax is voted down, the law requires the state to reduce the matching funding to local municipalities from 90 percent to 70 percent. Currently if a city wants to widen a road, the state provides 90 cents for every dollar. Areas that vote no on the transportation penny will see their matching funds reduced to 70 cents per dollar. A "no" vote could exacerbate funding problems in the metro area. As a result of congressional balancing, where GDOT is required to provide equal funds to each congressional district, and higher land and construction costs, metro Atlanta's transportation dollars don't go as far as they do in other regions.

The second problem with voting no on the transportation list is the reality that Georgia ranks 49th in transportation spending. This is, in part, thanks to prudent spending and projects. But it means the state also may not have enough funds to maintain roads, let alone widen or build new ones. While a new 1 percent sales tax can be voted on in 2014, becoming effective in January 2015, these are two more years in which Georgia will underinvest in transportation. A new vote could be based on a less political and more mobility-focused project list. Meanwhile, the advantage goes to competing regions such as Charlotte, Houston and Dallas.

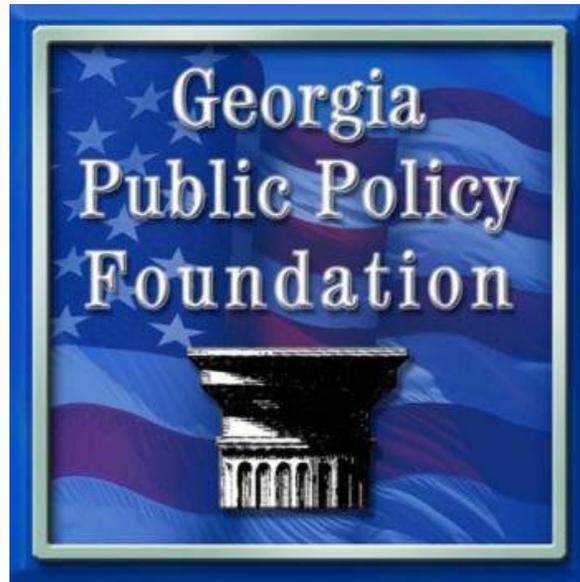
No plan is perfect. It is clear that Georgia has underinvested in its transportation infrastructure. Around the state and in Atlanta, voters have justification for approving or rejecting the penny transportation sales tax. Is it good that it will rebuild the I-285/Georgia 400 interchange and bring the MARTA system to a state of good repair? Is it troubling to see the focus on the BeltLine, the

location of the transit lines, and the large number of unconnected highway projects? Should the funding come from a sales tax, despite that not being the ideal funding mechanism for transportation? Should Georgia regions reject the sales tax and risk losing local transportation funding? Until July 31 – and likely beyond – the debate will rage on.

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