EXECUTIVE SUMMARY
# TABLE OF CONTENTS

1.0 INTRODUCTION ................................................................. 1  
2.0 ABOUT THE RPCGB ............................................................ 3  
3.0 PLAN DEVELOPMENT .......................................................... 5  
   3.1 VISION ........................................................................ 6  
4.0 MAJOR THEMES ................................................................. 7  
5.0 GOALS AND OBJECTIVES .................................................. 9  
6.0 ISSUES AND CHALLENGES ............................................... 11  
   6.1 VEHICLE MILES TRAVELED (VMT) .................................. 12  
   6.2 CONGESTION .............................................................. 12  
   6.3 DECREASING MOBILITY ............................................... 12  
   6.4 ACCESS TO OPPORTUNITIES ......................................... 12  
   6.5 CHANGING ECONOMY ................................................ 13  
   6.6 AGING INFRASTRUCTURE ............................................ 14  
   6.7 FINANCIAL RESOURCES .............................................. 17  
7.0 STRATEGIES FOR ADDRESSING CHALLENGES .................... 19  
   7.1 PLACEMAKING ............................................................ 20  
   7.2 PROVIDING TRAVEL CHOICES ....................................... 21  
      7.2.1 PUBLIC TRANSPORTATION ................................... 21  
      7.2.2 BICYCLE AND PEDESTRIAN TRAVEL ..................... 21  
      7.2.3 IMPROVING EFFICIENCY ..................................... 23  
      7.2.4 INFRASTRUCTURE PRESERVATION, MODERNIZATION, AND EXPANSION .................................................. 24  
       7.2.5 IMPROVING THE FREIGHT SYSTEM ....................... 27  
8.0 FINANCIAL PLAN ............................................................... 29  
9.0 IMPLEMENTATION ............................................................. 31  
   9.1 TRANSPORTATION IMPROVEMENT PROGRAM .................. 32  
   9.2 ACCELERATING PROJECT DELIVERY ................................ 32  
   9.3 EXPLORING NEW FUNDING OPPORTUNITIES .................... 32  
   9.4 SHORT-TERM POLICY ACTIONS .................................... 33  
   9.5 LONG TERM ORGANIZATIONAL CHANGES ....................... 34  
10.0 MEASURING PROGRESS .................................................... 35  
11.0 CONCLUSION ................................................................. 43  
12.0 SANCTIONS ................................................................. 45
LIST OF FIGURES

FIGURE 1. TRANSPORTATION PLANNING STUDY AREA ............................................. 2
FIGURE 2. EFFECTIVENESS OF TRANSIT IN BIRMINGHAM .................................. 13
FIGURE 3. PAVEMENT CONDITIONS ON MAJOR ROADWAYS ................................. 15
FIGURE 4. BRIDGE SUFFICIENCY RATING ................................................................. 16
FIGURE 6. 2040 VISIONARY PLAN CAPACITY PROJECTS ..................................... 25
FIGURE 7. 2040 NON-EXEMPT PROJECTS (CAPACITY PROJECTS) ....................... 26
FIGURE 8. ROADWAY DESIGN FOR FREIGHT ......................................................... 28

LIST OF TABLES

TABLE 1. FEDERAL FUNDING FOR CAPACITY AND OPERATIONS AND MAINTENANCE - ROADWAY (YEAR 2014 DOLLARS) ................................................................. 30
TABLE 2: CORRELATION OF RTP THEMES, NATIONAL TRANSPORTATION GOALS, AND FEDERAL LIVABILITY PRINCIPLES .................................................. 36
1.0 INTRODUCTION
The value of the transportation system is in its network. It’s not about roads, transit, or trails, but the sum of these.

The Birmingham 2040 Regional Transportation Plan (RTP) guides development of the Greater Birmingham region’s transportation system. The RTP also considers economic growth, land use, development patterns, and infrastructure investments. Led by the Regional Planning Commission of Greater Birmingham (RPCGB), the RTP represents a shared vision for sustainable growth for the Greater Birmingham region, an area comprised of Blount, Chilton, Jefferson, Shelby, St. Clair, and Walker counties. The RTP presents information about the region’s transportation network and describes how it currently functions.

*Figure 1. Transportation Planning Study Area*
ABOUT THE RPCGB
The most recent federal transportation legislation, Moving Ahead for Progress in the 21st Century (MAP-21), requires transportation planning be completed through MPOs. The authority for the Regional Transportation Plan is found in other federal legislation and guidance such as 23 United State Code (U.S.C) 134 (d)(1) (a-i); 49 U.S.C. 5303 (f ); 42 U.S.C. 2000d et. seq. (Title VI of the Civil Rights Act of 1964 as amended); Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations; and the National Environmental policy Act of 1969 (NEPA). The interpretative Code of Federal Regulations (CFR) is 23 CFR 450.306(a).

Across the six-county region, transportation planning and programming responsibilities fall to the RPCGB and the Alabama Department of Transportation (ALDOT). In the metropolitan planning area, the Metropolitan Planning Organization (MPO) is charged with developing a fiscally constrained regional transportation plan and four year transportation improvement program (TIP). The MPO is staffed and administered by RPCGB.

ALDOT has designated RPCGB as the rural planning organization for the rural areas adjacent to the metropolitan planning area. The Heart of Alabama Regional Planning Organization (HARPO) is staffed by RPCGB and informs priorities for transportation project funding. Figure 1 illustrates the transportation planning study area. Members of MPO and HARPO include representatives of local governments, state transportation agencies, and local transit agencies.

Seven documents are to be produced by all MPOs at regular intervals:

- Long-Range Transportation Plan aka Regional Transportation Plan (RTP)
- Transportation Improvement Program (TIP)
- Unified Planning Work Program (UPWP)
- Congestion Management Process (CMP)
- Public Participation Program (PPP)
- Active (non-motorized) Transportation Plan (ATP)
- Rural Planning Organization Work Program (RPOWP)
3.0
PLAN DEVELOPMENT
Public involvement is a critical element of the RTP. The RPCGB collaborated with three key (3) audiences:

- **Elected Officials and Policy Makers** - local elected officials and public sector planning partners such as the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Alabama Department of Transportation (ALDOT), and local planning and transportation departments.

- **Private Sector Entities** - local chambers of commerce, regional business interests, transportation infrastructure and development experts, and industry specific organizations.

- **Individual Citizens and Interest Groups** - garden clubs, community and neighborhood associations, transit advocates, local policy advocacy groups, and other groups and individuals.

These audiences were engaged throughout the planning process to provide input about transportation priorities and policy decisions. Attention was given to ensure that minority and low-income communities and traditionally underserved and uninvolved were actively involved in the process. To that end, a transportation ambassador program was established where members of the MPO’s Transportation Citizens Committee reached out to their neighbors and local civic organizations. Transportation Ambassadors were trained in meeting facilitation strategies and provided with pre-packaged materials. These meeting-in-a-box materials were designed to facilitate focus group discussions, document conversations, and capture needed input from communities. In addition, the RPCGB actively interacted with people throughout the region and used varying mediums to engage stakeholders, including public meetings and workshops, radio and television advertisements, public comment through write-in campaigns, and online communication.

### 3.1 VISION

Through implementation of economically-viable transportation projects, Greater Birmingham will solidify its reputation as a nationally and globally competitive place to live, work, and do business.
4.0 MAJOR THEMES
The RTP’s major themes were derived from conversations held with multiple stakeholders about challenges to be overcome, local and regional aspirations for growth and development, economy, and quality of life. These things compel us to think critically about travel and our transportation future. Over the course of these discussions, a set of four themes emerged. These themes relate to the ways in which the RTP will address short and long-term modifications to the transportation system to sustain future generations.

- **Livability** - The regional transportation system will encourage and support opportunities to create livable places, while developing communities that afford existing and future residents a chance to enjoy a better quality of life, lead healthy lifestyles, and enjoy opportunities to work, live, and play.

- **Sustainability** - The RTP will provide a framework that establishes strategies to support maintenance of a safe, convenient, high-performing multimodal transportation system without sacrificing the financial stability of current or future generations.

- **Prosperity** - The regional transportation system will provide solutions that capitalize on the region’s strategic location and assist with the creation of opportunities for business, investment, and employment.

- **Process and Progress** - The regional transportation system will realize improvements through coordination, increased funding, and strategies that increase transparency.
5.0

GOALS AND OBJECTIVES
**Goal 1: Implement Transportation Projects and Programs that Improve the Region’s Quality of Life**

Quality of Life focuses on human interaction with the environment and is specific to place and time. It includes an interrelated set of economic, spatial, and social components that are complex and subjective, and may rely on different factors in different regions. Elected officials, agency stakeholders, and the public all expressed a desire for the region to be comprised of different types of places that address the needs of a diverse community.

**Goal 2: Develop a Sustainable Regional Transportation System**

Sustainability is a multifaceted, dynamic, flexible, and powerful concept. The RPCGB is proposing that a *Triple Bottom Line* framework be used to measure positive and negative impacts of a change. The concepts of the triple bottom line include considerations of:

- **Economic Vitality** - A sustainable transportation system will support economic growth while developing infrastructure in a cost-efficient manner. That is, development, operation, and maintenance of transportation infrastructure and services will consider affordability, long-term maintenance cost expectations, and public support. Additionally, user costs for transportation facilities and parking should be priced based on market demand.

- **Equity** - A sustainable transportation system will meet societal needs by making infrastructure and services physically and financially accessible, safe, and secure. Generally, this requires development of multimodal transportation alternatives that serve community needs.

- **Environmental Stewardship** - A sustainable transportation system will provide infrastructure and services that lead to reduced emissions and pollution, protection of natural resources, and a cleaner, healthier environment.

**Goal 3: Advance Regional Transportation System Policies and Investments to Support Economic Growth and Global Competitiveness**

In order for the region to effect meaningful transportation system improvements and to position itself as a center for business, a substantial increase in transportation system investment is necessary. Not only is an increase in funding needed, but also a deliberate investment in the types of facilities, services, and geographic locations. Smart investments will encourage new commercial development and innovative, cutting-edge industries and attract a technically savvy, culturally diverse workforce.
6.0
ISSUES AND CHALLENGES
The challenges facing the region are overwhelming. Addressing them requires complex and long-term solutions. When combined, the region’s limited mobility, poor air quality, maintenance backlog, and funding challenges present an imposing threat to economic vitality and quality of life for current and future residents. These issues, if left unresolved, could lead to lost economic investment and dissuade potential residents from locating to the region.

6.1 VEHICLE MILES TRAVELED (VMT)

Despite the relatively small population of the region, commute distances are among the longest in the nation. This issue is due to the development of suburban sprawl and a lack of transportation alternatives. This has led to an increase in the total number of vehicle miles traveled (VMT) at a time when most of the nation is experiencing a decline in travel distances.

VMT is a measure of demand on the highway system. Ten vehicles, each traveling five miles on a highway, equals 50 VMT. The region’s highways see daily work week VMT between 27 and 30 million miles. For decades, these numbers have been on an upward trend due to increases in regional population and employment, as well as residential development occurring farther from major employment centers. Beginning in 2008, the region experienced a decline in VMT. Speculatively, this is thought to be a result of the economic downturn and a rise in unemployment.

6.2 CONGESTION

The region’s roadways are growing more congested and traffic relief is critical, especially if the region is going to attract new businesses and residents. Failing to address congestion will have serious economic consequences and will eventually lead to a loss in the total number of jobs as companies relocate elsewhere. However, simply relying on a single-tiered solution of widening roadways will only create more sprawl and congestion.

Significant congestion occurs on several important routes in the region. The ongoing Birmingham Regional Congestion Management Process (CMP) has identified that 132.6 lane-miles of interstate roadways and 79.55 lane-miles of arterial roadways (17% on interstates and 11% on arterial roads) were congested during peak travel hours. Congestion occurred on 44 center line miles of roadways based on the ratio of traffic volume over capacity. Forecasts of future traffic conditions show that business as usual will result in 123 miles of congestion by 2040. The implications are straightforward:

- More areas/roadway segments that experience congested conditions
- Longer lasting periods of congested travel
- More intense congestion periods with reduced travel times/speeds

6.3 DECREASING MOBILITY

Travel Time Index (TTI) is defined as the ratio of the travel time during the peak period to the time required to make the same trip at free-flowing speeds. A value of 1.3, for example, indicates that a peak-period trip takes 30% longer than a free-flow trip. Hence, a higher TTI indicates a higher level of congestion delays.

For detailed information on travel times and congestion delays, please refer to Chapter ___.

6.4 ACCESS TO OPPORTUNITIES

In 2011, the Brookings Metropolitan Policy Program published Missed Opportunity Transit and Jobs in Metropolitan America, which provides background information on the factors that influence the reach and efficiency of transit in metropolitan areas. The report presents characteristics of transit access across and within the largest 100 U.S. metropolitan areas. Additionally, the report assesses factors that relate to how well transit serves metropolitan populations and connects them to employment. Figure 2 on page 13 shows the results for the Birmingham-Hoover metropolitan area.
6.5 CHANGING ECONOMY

Transportation is critical to economic growth and vitality. The region’s diverse economy is built around Eds and Meds (education and medical services), FIRE (finance, insurance, and real estate) related industries, technology-based businesses, service-related trades, mining, and agriculture, all of which require a range of transportation services. Road closures and congestion impair local businesses. When travel options become unreliable, it discourages existing businesses from expanding and new businesses from locating within the region, resulting in stagnation of the local economy.

Source: Brookings Institute. Missed Opportunity: Transit and Jobs in Metropolitan America
6.6 AGING INFRASTRUCTURE

Pavement Conditions - ALDOT tracks pavement conditions on interstate highways, U.S. highways, state routes, and other major roadways. They also monitor and report on bridge conditions (formerly sufficiency rating). This information is tracked and reported in the highway performance monitoring system (HPMS).

According to information obtained from HPMS, of the Birmingham metropolitan planning area’s 647 centerline miles, 29 (4.5%) are considered mediocre; another 13.5 (2.1%) are considered poor. Mediocre and poor pavement conditions indicate that the roadway is in need of, or will soon need, repair (see Figure 3). There is little to no data available about roadway surface conditions for county or local roadways.

Poorly maintained roads cost motorists an additional $141/year in repairs and vehicle operating expenses.

Source: ASCE 2012 Infrastructure Report Card
Figure 3. Pavement Conditions on Major Roadways

Source: RPCGB Linear Referencing System/ALDOT Highway Performance Monitoring System
**Bridges** - There are a total of 915 bridges identified in HPMS for the Birmingham metropolitan planning area. Of these, 273 (29.8%) had sufficiency ratings between 50 and 80, meaning that the bridge was eligible to expend federal funds for rehabilitation. An additional 98 (10.7%) had sufficiency ratings below 50. This means that these facilities are eligible to expend federal funds for replacement (see Figure 4).

*Figure 4. Bridge Sufficiency Rating*

Source: RPCGB Linear Referencing System/ALDOT Highway Performance Monitoring System
6.7 FINANCIAL RESOURCES

Federal fuel taxes, which supply the vast majority of the revenues flowing into the Highway Trust Fund for surface transportation programs, have not increased since 1993. As a result, revenues are no longer able to meet funding commitments and the Highway Trust Fund has been nearly exhausted. Facing a continuing multibillion-dollar shortfall in highway funding, Congress has had to step in and provide multiple infusions into the Fund totaling tens of billions of dollars. Reauthorization of the latest Federal Surface Transportation Act, Moving Ahead for Progress in the 21st Century (MAP-21), did not provide the additional funding that many expected, and its short timeframe (a two-year authorization set to expire on October 1, 2014) means that the Fund will again exhaust its balance.

Meanwhile, the State of Alabama and the Greater Birmingham region, like the nation, struggles to fund transportation programs at adequate levels into the future. This uncertainty impacts state and local plans and also impacts programs for future transportation investments, causing projects to be delayed, and ultimately increasing project costs.

Changing Focus - New investments in transportation infrastructure require additional resources for maintenance and preservation throughout the life of the facility. While construction of new facilities in the region has become uncommon in recent years, investments are being made to ensure the existing system operates more efficiently. Some of these investments—like the adaptive signal system, access management, and critical intersection modifications that have been installed U.S. 280 corridor—have significantly improved operational efficiency. These actions have introduced technologies and strategies that require an expanded and relatively new type of maintenance commitment. In addition, they have challenged existing maintenance and operational budgets.

Aging Population - As baby boomers age, the population of persons 65 and over will represent an increased share of the region’s total residents. As this group moves into a different phase of their lives, it is expected that their travel behavior will change, and increasingly rely on alternatives to driving. The American Association of Retired Persons (AARP) has recognized this potential change in travel behavior, and has become a strong advocate for public transportation, trails, and complete streets, all of which improve personal mobility, increase safety, and improve quality of life for people of all ages and lifestyles.

Quality of Life - There is a growing interest in addressing quality of life concerns through changes to the built environment. Chief among these is an interest in improving public health concerns by providing and restructuring services that encourage and support active transportation. Active transportation refers to active travel modes, such as walking and biking. With extensive evidence that highly active lifestyles lead to reduced medical costs and increased life expectancy, investments in active transportation can relieve societal cost burdens in other sectors. Providing infrastructure for active transportation also improves the economy. Communities that have invested in trails, bike lanes, and transit have experienced increases in real estate value and tax revenues. They have also seen an increase in neighborhood stability, desirability, and public recognition.
7.0 STRATEGIES FOR ADDRESSING CHALLENGES
7.1 PLACEMAKING

Development patterns shape travel patterns. Disconnected developments and low densities make travel challenging. Separation between land uses makes driving a necessity, as few amenities can be easily accessed. Commercial development stretches out along highway corridors, new subdivisions pop up after a new freeway is built or a new exit opens, and shopping malls and gas stations congregate at busy interchanges. Conversely, grid systems encourage more balanced development patterns, mixed uses create alternative opportunities to reach desired destinations, and higher densities encourage commercial demand. No matter what a development looks like, travel times and access play large roles in real estate values and demand.

Placemaking is a dynamic, strategic approach to development based on a community’s strengths. It also is a powerful tool for influencing travel demand and encouraging economic revitalization. RPCGB has long recognized that the link between transportation and land use can shape the way that people and goods travel. Likewise, RPCGB also understands that this connection can be a catalyst for revitalization and sustainable development.

Because of the challenges facing the region’s long term development and sustainability, the RTP documents existing land development trends and patterns and provides suggestions for how areas might develop in order to minimize negative transportation-related impacts and maximize positive quality of life benefits. Key principles espoused by this concept include:

- Preservation of Open space
- Increasing transportation choices
- Fostering distinct, attractive places to live for people throughout the region

**Strategy 1: Incorporate Land Use Considerations into the Project Prioritization Process**

Incorporating land use considerations into the transportation decision-making process is important for connectivity. As such, the RPCGB will continue to develop and refine transportation and land use performance measures in order to better assess both built and operational efficiencies, with a focus on key corridors. As projects are submitted to the MPO for review and funding, it is recommended that the MPO inquire about the expected impacts of the project on land use. After examining results from projects in which no such inquiry was made, it is clear this connection is vital when assessing long-term viability and impact. This consideration should be made whenever a project will influence travel time or mode choice.

**Strategy 2: Strengthen the Building Communities Program**

The Building Communities program has assisted communities in assessing land uses and development patterns in context with the existing or expected travel network. The RTP continues its support of Building Communities and the MPO will continue to provide funding for this program in order to maintain a practical strategy for encouraging smart transportation and land use connections.

**Strategy 3: Consider Opportunities to Create a Better Balance of Demand and Supply**

No matter the growth rate of a region, there is more to residential choice than simply supply of housing compared to demand. People derive preference regarding where they prefer to live and then examine housing availability and price to find a location that suits them. The same conditions apply when opening a business. This leads to some areas that are highly demanded, while others have abundant supply leading to vacancy and blight. In Greater Birmingham, this demand has led to sprawled development patterns with ultra-low density, creating traffic congestion, and making it difficult to create town centers and transit hubs. One method for combating sprawl is densification. This can be achieved in high demand areas without substantial negative impacts to real estate values. By creating high-value, high-quality townhomes or condominiums in key centers of highly-demanded communities, communities can improve walkability, opportunities for quality commercial developments, and a greater array of housing options, which will help retain real estate values.
Conversely, in areas with abundant supply, placemaking interventions can be used to induce demand. This can be achieved through public improvements, such as landscaping and public parks, or private development of commercial centers that attract outside residents. However, it is important to recognize that such opportunities may not be feasible for all areas. As such, RPCGB recommends conscious and targeted investments that create strong places which will encourage additional development.

### 7.2 PROVIDING TRAVEL CHOICES

#### 7.2.1 PUBLIC TRANSPORTATION

The RTP emphasizes the importance of public transit in the region’s future success. Long range transit planning efforts have focused on developing and deploying transit technologies to improve traveler information and provide trip planning assistance, while focusing on improving services for both local routes and along major travel corridors. These enhancements will improve the overall travel experience for system users.

**Strategy 1: Improve Local Transit Services**

Local Bus Service is the backbone of any transit system. It provides basic transportation for access to jobs and services located throughout the community. Improving on-time performance, reliability, and frequency are all critical to changing public and governmental perceptions about transit, increasing ridership, and garnering additional funding.

**Strategy 2: Make Incremental Improvements to the System**

In addition to endorsing the BJCTA’s improvements to the local transit services, the RTP recommends that a number of incremental improvements, as envisioned by the many different transit corridor plans and studies, be implemented. These incremental changes include neighborhood circulator services, limited stop and commuter services, and higher density transit stops and/or community hubs/stations.

**Strategy 3: Increase Access to Services**

The RTP recommends increasing access to transit by connecting non-motorized infrastructure, such as sidewalks and trails, that connect with transit routes. In addition, the RTP recommends that improvements be made to the paratransit and human service transit networks in order to connect them with one another and with fixed-route services. Finally, the RTP recommends that the overall transit service area be expanded by moving away from the existing hub and spoke system and going to a nodal system designed around high density stations, dubbed super stops, incorporating placemaking principles in order to develop transit oriented and transit ready development around the super stops, and increasing density along high-capacity, high-speed transit corridors.

#### 7.2.2 BICYCLE AND PEDESTRIAN TRAVEL

A transportation system is not complete without bicycle and pedestrian components. These travel options provide essential connections between communities and activity centers. They are particularly important in developing preferred places such as walkable communities that offer businesses and residents increased choices in how they live, work, shop, and play. This process is referred to as placemaking, and a strong bicycle and pedestrian program, combined with strong placemaking, gives the region’s residents an option for travel beyond one person driving one vehicle. It creates a community where it is possible to live, work, and enjoy life all in the same area.

The main strategies addressed in the development of the Active Transportation Plan, the bicycle and pedestrian portion of the RTP, centers on developing a regional trail network that links communities with locally developed facilities to fill network gaps. Additional considerations include increasing access to transit, improving pedestrian safety, addressing corridors with high potential for alternative travel, and improving mobility in areas that are currently difficult to access.
Good performance measures should be based on data that is easily obtainable and monitors change. The data must be quantifiable and measurable, so that it is not subject to opinion.

RPCGB regularly advocates for sidewalks, trails, on-street accommodations for public transit vehicles, bicycles, and private cars. RPCGB has hosted FHWA’s Every Day Counts Technical Peer Exchanges and provided courses for both the professional engineering community and active transportation advocates in order to educate them about incorporating design to address multimodal travel, safety, and congested conditions, and encouraging modification of travel behaviors.

The region covers a wide spectrum of development patterns, ranging from dense urban centers to undeveloped rural hilltops. The one-size-fits-all approach that historically has been taken towards transportation facility design is proving to be inflexible and costly, especially in urban and suburban communities where right-of-way is limited and lifestyles tend to be more diverse. Reimagining rights-of-way and prioritizing public space in urban areas has become a challenge. As such, improving street design in urban environments is imperative.

The RPCGB will continue to work with the Southern District Institute of Transportation Engineers to educate the transportation engineering community in both the public and private sectors about the flexibility afforded in recent revisions of the Green Book, liability, and tort reform. RPCGB will also continue its advocacy and support for the North American Conference of Transportation Officials (NACTO) Urban Street Design manual. This guide provides alternative designs specific to urban travel facilities. RPCGB also will follow up with ALDOT and local project sponsors about roadway design elements as a project.

As described previously, a lot of work has been conducted around active transportation, looking at the placement and design of non-motorized travel facilities. Considerable debate is ongoing about the design of on-road facilities in urban and suburban areas of the region. Likewise, there is some debate about the appropriateness of active transportation facilities in the region’s rural areas. RPCGB will continue to facilitate meaningful discussions around non-motorized facility design and educate state, county, and local governments and transportation agencies about guidelines using the Urban Street Design Guide, Urban Bikeway Design Guide, and tort liability. Additionally, RPCGB will utilize its resources, namely Transportation Alternatives Program (TAP) funding, to encourage the development of additional active transportation facilities.

As discussed in the Regional Freight Plan, ensuring freight mobility is integrated into the RTP is critical, and the existing freight strategy should be incorporated into the planning process. To further this goal, the TIP selection process should incorporate freight into project prioritization and selection. The importance of freight operations in support of economic activity should be evaluated and weighted appropriately for each roadway facility considered for funding in the TIP.

In the interest of developing and encouraging alternative transportation, a program should be developed based on the active transportation plan and the strategy within the RTP. This program should include three components: system development, information sharing, and education.
7.2.3 IMPROVING EFFICIENCY

The RTP focuses on improving the arterial roadway network by adding capacity at intersections and using technology to increase efficiency. The RTP includes a transportation system management and operations (TSMO) component that addresses how to reduce congestion, increase safety, and improve quality of life using tools such as smart traffic signals, variable speed limit signs, and electronic message boards to provide drivers with travel times or notifications of accidents or road conditions. The 2040 RTP also continues the 2035 RTP’s call for stepping up effort to integrate the freeway and arterial systems by advancing interchange improvements and auxiliary lanes, as well as focusing on improving arterial traffic flows with low-dollar capital improvements such as intersection improvements. To accomplish these improvements, the RTP establishes a process for identifying and incorporating TSMO strategies either into existing projects or as standalone TSMO projects.

**Strategy 1: Incorporate TSMO strategies into the Project Prioritization and Selection Process**

The TSMO element of the RTP recommends that the CMC be responsible for incorporating TSMO strategies into the project selection. Ideally, project prioritization will be partially determined by the CMC’s assessment of TSMO benefits that a project demonstrates.

**Strategy 2: Improve Incident and Emergency Management Procedures**

Reestablishing the Incident Management Function (IMF) group as a congestion management committee (CMC) will allow for coordination, communication and cooperation between multiagency incident responders. IMF will serve as the regional clearinghouse for incident management data and will critique responses to past traffic incidents. Through this analysis, the group will be able to develop strategies for improved incident management and identify steps to improve response coordination. It is envisioned that the IMF will be comprised of representatives from RPCGB, ALDOT, the Jefferson and Shelby County Emergency Management Agencies (EMA), local law enforcement agencies, and fire and rescue services.

**Strategy 3: Develop a Bottleneck Elimination Program**

The RTP recommends that a bottleneck elimination program, similar to the TOPICS program, be reestablished under a new name in order to avoid confusion with legacy projects that are still active in the ALDOT system. Specific criteria should be developed by the MPO’s Transportation Technical Committee to determine project eligibility.

**Strategy 4: Establish a Corridor Management Program**

Optimize traffic signals and incorporate intelligent transportation system (ITS) operations on the established arterial roadway network. This program would incorporate creation of regional thoroughfare and corridor access management plans to develop an ideal management program for the region. To further optimize the system, corridor managers are proposed to oversee all aspects of day-to-day operations of major corridors in the system.

**Strategy 5: Integrate Safety into Operations**

Safety has always been given high consideration when improving and operating the transportation system. New technologies allow for active management that incorporates preventative and responsive safety elements. ITS technologies are becoming more effective, inexpensive, and common. Incorporating these into the travel system can lower collision rates, encourage safer travel, and allow the system to operate more efficiently, even during emergency or maintenance situations.
Strategy 6: Improve Systems Level Partnerships and Interagency Collaboration

IMF strives for improved communications before, during, and after traffic incidents as a critical element for improving safety. Beginning in 2008 when the IMF was first assembled, the Jefferson County EMA, as an IMF member, advocated for the deployment of a web-based communications tool called Web Emergency Operations Center (WebEOC). WebEOC would allow ALDOT’s traffic management center (TMC), neighboring county EMAs, local emergency dispatch centers, and local TMCs to communicate seamlessly with one another during traffic and emergency incidents. This is done through WebEOC message boards, which allow dispatchers, emergency managers, and responders to post updated information, equipment needs, clearance time estimates, and resolutions. This information can then be communicated to the public as appropriate.

Strategy 7: Advance Demand Management Practices

The RTP is set to provide approximately $35 million of funding for CommuteSmart to continue its existing services, pursue new opportunities, expand its geographic service areas, and develop programs as commuter choices continue to change.

Strategy 8: Improve Transit Technologies

Creating a modern transit system involves a system connecting riders and data for more efficient planning, operations, and investment. RPCGB suggests implementation of TSMO strategies that will speed up transit operations, make transit use more convenient, and allow for data collection.

7.2.4 INFRASTRUCTURE PRESERVATION, MODERNIZATION, AND EXPANSION

Infrastructure Preservation and Modernization - Like the 2035 RTP, the 2040 RTP focuses allocation of available funding to preserve and maintain existing deficiencies in the region’s transportation infrastructure. Many of the roads and bridges that make up the region’s highway infrastructure are in or near a state of disrepair resulting from insufficient and/or deferred maintenance. This disrepair results in increased travel times and unsafe travel conditions that can cause damage to vehicles and lead to traffic incidents that cause injuries or fatalities. These conditions are partially due to prioritization of new projects over maintenance of existing infrastructure and contribute to higher long-term costs, sprawl, and low-return developments, resulting in financial loss to the region.

The 2035 RTP first introduced the Fix It First strategy as a maintenance approach. This places priority on maintaining and preserving the existing system excepting new infrastructure that is inextricably linked to the maintenance of the existing system. As a policy, Fix It First is intended to maximize the value of past investments, maximize positive impact for residents, efficiently utilize limited resources, and reinvest in existing communities.

Smart Expansion - A majority of the region’s residents will continue to rely on their personal vehicles for future travel needs. Additionally, the future movement of freight will require a strong regional road network. The RTP includes federal, state, and local highway projects considered financially feasible.

The RTP’s Visionary Plan Capacity Projects map identifies strategic priorities for projects and programs that are regionally significant, but require new revenue sources to be implemented. These projects are more conceptual in nature and have not had preliminary studies completed. The Visionary Plan projects are candidates for additional study or funding in the longer-term.

For a list of visionary and fiscally constrained roadway capacity projects, refer to Appendix A of the RTP.
Figure 6. 2040 Visionary Plan Capacity Projects

2040 Regional Transportation Plan
Visionary Plan Capacity Projects
Birmingham Metropolitan Planning Area Based On US 2010 Census Data

Source: RPCGB
Figure 7. 2040 Non-Exempt Projects (Capacity Projects)

2040 Regional Transportation Plan
Non-Exempt Projects (Capacity Projects)
Birmingham Metropolitan Planning Area Based On US 2010 Census Data

Legend
Conformity Analysis Years
- Green: 2024
- Orange: 2030
- Red: 2040

Source: RPCGB
**Strategy 1: Make Fix It First and Smart Expansion Policies that Guide Future Project Selection**

The MPO and RPCGB adopted a Fix It First policy as part of the 2035 RTP. However, this policy was not fully integrated into the project prioritization and selection process. The application of Fix It First simply requires yes answers to the following questions:

- Is this project fixing a problem on existing facilities?
- Will this project help to improve the existing system?

Application of the Smart Expansion policy considers the identified need and the cost-benefit of a new and/or expanded project. As part of this policy, project sponsors will be rewarded for projects that meet or exceed performance targets. Project methodologies should be noted so that future projects can be implemented using lessons learned from past efforts.

**Strategy 2: Infrastructure Maintenance Fund**

The MPO set aside $10 million in the first year of the FY2012-15 TIP to assist local governments with roadway resurfacing. This program highlighted a gap in funding for surface transportation systems as there are also maintenance needs for bridges, trails, sidewalks, and transit.

The RTP’s recommendation is for a continual set-aside of attributable funding for general infrastructure maintenance. Ideally, this would assist with repairs and continuing maintenance for all modes of surface transportation. The fund would limit the amount that any single applicant could access in a single fiscal year, as well as limit the funding allocation to any single project. This also would take into consideration project type and population. Finally, the fund would need to be replenished at the beginning of each fiscal year. This fund should be developed by the TIP subcommittee and approved by the MPO Policy Board. Ultimately, it should be considered for inclusion in a regionally funded program or referendum.

**7.2.5 IMPROVING THE FREIGHT SYSTEM**

The movement of freight affects everyone, whether you are stuck at a rail crossing or in traffic with double-trailer semis. Keeping passengers and freight moving is a tall order. Virtually everything we purchase arrives through the movement of freight. This RTP seeks to promote comprehensive planning that will lead to investments and operational improvements that can keep people, freight, and our economy moving without sacrificing the environment or quality of life. The RTP’s freight component also focuses on identifying opportunities for partnerships and collaboration, as well as maintaining and developing freight infrastructure and services.

**Strategy 1: Identify and Prioritize Major Freight Routes**

Truck traffic has a significant impact on the local roadways of communities across the region. If not properly managed, truck traffic could lead to a decreased quality of life and lost economic development opportunities for local governments.

Regional truck routes play a vital role in providing for the mobility of freight into, out of, through, and within the region. Conversely, local truck routes provide connections to major freight activity centers and the regional freight network. Both are key components in the transportation system’s continuing ability to serve increasing demands for truck traffic.

This strategy will provide for prioritized truck corridors, designating specific roadways as freight friendly streets, and incorporating truck-friendly roadway design and pavement maintenance so that trucks might be better accommodated within the existing and future urban fabric. This strategy also will help to reduce conflicts between freight, commuters, and other travel modes.
**Strategy 2: Capitalize on Existing Freight Network**

One of the region’s greatest assets is its roadway and freight rail networks. The RTP considers the role of freight in the region’s continued economic vitality. It calls for a balanced freight transportation system that capitalizes on the existing roadway, rail, and air transport facilities. The idea of this strategy is to improve on the system that already exists and to make it better.

*Figure 8. Roadway Design for Freight*

Source: City of Portland

**Strategy 3: Close Gaps in the Freight Network**

Closing gaps is accomplished by identifying disconnects between modes and/or facilities, deficiencies, and bottlenecks in the network, and systematically working to eliminate, minimize, or mitigate these shortcomings.

**Strategy 4: Integrate Freight Considerations into Land Use Decisions**

While freight generating activity is prevalent throughout the region, there are concentrations of activity located in large and small industrial areas as well as in some mixed-use office/industrial centers. Generally, these areas generate truck trips that include short trips that are internal to the region and long-haul trips that have destinations outside of the region. They also attract trips from outside of the region. These centers are economic engines and improving access to and between them is an

The freight component of the RTP recommends the development of freight villages. A freight village is a facility where access is provided to rails, trucks, ports, and/or airports. These facilities enhance the integration and connectivity of the transportation system for people and freight as well as large scale manufacturing. Freight villages serve as economic drivers by offering lower logistics costs and creating jobs in warehouses, distribution centers, manufacturing, packaging plants, and other value-added businesses.

The increase in warehousing and terminal facilities in support of industrial and manufacturing sectors is a major benefit to an area’s economy. However, if these uses are in locations adjacent to neighborhoods, historic districts or schools and are accessed by local roads, significant problems can arise.

One major concern facing the City of Birmingham and the region’s urban core is the loss of industrial lands. Economic developers are reporting that industrial and logistics business prospects are increasingly seeking out locations that have strong access to both rail and interstates. However, the existing land areas where this type of access exists is either not large enough to accommodate these industries or are adjacent to residential locations, making them incompatible with the freight uses.
8.0

FINANCIAL PLAN
The basic purpose of the Birmingham 2040 Regional Transportation Plan is to provide an investment strategy that represents the priorities of local and state transportation agencies for meeting regional goals based on reasonable assumptions of available resources. Federal law requires that the RTP be financially feasible. Current transportation funding is primarily derived from federal, state, and local gasoline taxes. The RTP’s financial plan identifies how much money is available to support the region’s transportation investments. The plan includes a core revenue forecast of existing local, state, and federal sources along with funding sources that are reasonably available over the plan’s time horizon.

The 2035 RTP, adopted in 2010, identified that a significant gap existed between identified transportation needs and available funding. At that time, the region chose to remove transportation projects in order to help the plan meet the financially feasible requirement.

The RPCGB believes that the responsible course is to base the RTP on a continuation of present revenue sources. The plan has not presumed new sources of revenue based on future actions of either the voters or the legislature. Over the plan horizon running through 2040, the RTP investment strategy is projected to cost about $2.4 billion (year-of-expenditure) for roadway projects. The following table presents a distribution of these funds by funding category. The table also presents the distribution of funds for capacity projects (adding lanes or new roads) vs. operations and maintenance. About 44% of the funding will be spent maintaining and improving operations on existing roadways over the next 25 years.

*Table 1. Federal Funding for Capacity and Operations and Maintenance - Roadway (Year 2014 Dollars)*

<table>
<thead>
<tr>
<th>MAP-21 Categories</th>
<th>25 Year Funding Projections</th>
<th>Annual Average</th>
<th>25 Yr Capacity Project Funding</th>
<th>25 Yr Operations and Maintenance Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Highway Performance Program (NHPP)*</td>
<td>$1,361,419,714</td>
<td>$54,456,789</td>
<td>$896,567,005</td>
<td>$464,852,709</td>
</tr>
<tr>
<td>Surface Transportation Program-Bham MPO (STPBH)</td>
<td>$394,392,250</td>
<td>$15,775,690</td>
<td>$200,905,811</td>
<td>$193,486,439</td>
</tr>
<tr>
<td>Surface Transportation Program-Other (STPAA)**</td>
<td>$122,768,681</td>
<td>$4,910,747</td>
<td>$85,270,940</td>
<td>$37,497,741</td>
</tr>
<tr>
<td>Other Bridge Funding</td>
<td>$65,940,315</td>
<td>$2,637,613</td>
<td>$17,659,714</td>
<td>$48,280,601</td>
</tr>
<tr>
<td>Congestion Mitigation and Air Quality (CMAQ)</td>
<td>$272,563,975</td>
<td>$10,902,559</td>
<td>$0</td>
<td>$272,563,975</td>
</tr>
<tr>
<td>Highway Safety Improvement Program (HSIP)</td>
<td>$39,681,050</td>
<td>$1,587,242</td>
<td>$0</td>
<td>$39,681,050</td>
</tr>
<tr>
<td>Transportation Alternatives Program (TAP)</td>
<td>$29,947,775</td>
<td>$1,197,911</td>
<td>$0</td>
<td>$29,947,775</td>
</tr>
<tr>
<td>Appalachian Highway System***</td>
<td>$147,939,079</td>
<td>-</td>
<td>$147,939,079</td>
<td>-</td>
</tr>
<tr>
<td>High Priority and Congressional Earmark Funding***</td>
<td>$9,563,195</td>
<td>-</td>
<td>$9,563,195</td>
<td>-</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td>$2,444,216,034</td>
<td>$91,468,550</td>
<td>$1,357,905,744</td>
<td>$1,086,310,290</td>
</tr>
</tbody>
</table>

* Includes $25.5 million for the first year and an additional $50,000 per year for 25 years for the Northern Beltline.

** Includes $66,146,702 million of ATRIPS funding

*** Includes funding from capacity projects authorized in fiscal years 2013 and 2014

The region should consider efforts to seek alternative funding mechanisms to improve the regional transportation system. In fact, a number of innovative funding mechanisms might be considered as they could potentially open up new avenues for non-traditional funding, and result in more improvements for the transportation system.
IMPLEMENTATION
The region should consider efforts to seek alternative funding mechanisms to improve the regional transportation system. In fact, a number of innovative funding mechanisms might be considered as they could potentially open up new avenues for non-traditional funding, and result in more improvements for the transportation system.

9.1 TRANSPORTATION IMPROVEMENT PROGRAM

The RTP is only the first step towards achieving the region’s transportation vision and goals. However, achieving beneficial results is the true measure of success. To that end, the transportation improvement program (TIP) is the region’s primary implementation tool for advancing transportation programs and projects. The TIP is designed to meet the following purposes:

- To serve as a short-range implementation tool to achieve compliance with the goals of the RTP
- To establish a prioritization of projects to effectively utilize federal funds as they become available
- To identify and implement transportation improvements which will reduce congestion, increase mobility and safety, and enhance the region’s air quality
- To identify proposed transportation projects by mode, type of improvement, funding source(s), and geographic area
- To estimate the costs of projects proposed for federal funding, consistent with the federal funds anticipated to be available

9.2 ACCELERATING PROJECT DELIVERY

Project delivery procedures can be onerous, especially in regard to meeting federal requirements. Historically, the environmental review process has proven to be highly time-consuming, adding years to the project development process. MAP-21 continues Every Day Counts (EDC), a federal initiative that places greater emphasis on speeding up project delivery by employing innovations, enhancing safety, and helping to protect the environment. To that end, the RPCGB has developed and deployed programs specifically designed to streamline project development and delivery.

Advance Planning Programming and Logical Engineering (APPLE) Program - In 2011, RPCGB developed the APPLE program, designed to assist local governments in development and advancement of transportation projects. The program informs the decision-making process by providing feasibility analysis conducted by RPCGB, which includes recommendations about whether or not to pursue the project and potential funding sources. The APPLE program includes an early NEPA screening that identifies the problem, purpose and need, and project scope.

Building Communities Program - The Building Communities Program addresses transportation concerns by considering the impact of land use on travel. Transportation projects identified through the Building Communities plans often move into the APPLE program.

9.3 EXPLORING NEW FUNDING OPPORTUNITIES

Regional Funding - In addition to emphasizing strategies to maintain the existing transportation system and ways to reward projects that encourage innovative and cost-effectiveness, the RTP calls for exploring new options to fund more projects. The previous RTP called for the development of a regional funding source, as well as providing additional tools and/or powers to county governments to develop local funding sources.

The need for a regional funding source is important as there are many projects that will provide benefits for more than a single jurisdiction. Regional funding options would look to collect revenues for transportation infrastructure and services across jurisdictional boundaries and apply this funding to projects of regional significance. One advantage of regional funding is financial freedom. That is, monies would be available to use as leverage for federal funding and private grants, along with seed money to attract private partners. These funds also might be used to fully fund projects if there is a strong desire to do so. It is known that projects funded with federal monies tend to cost significantly more than projects that use state or local funds. Additionally, federally funded projects do not get implemented very quickly. The provision of a regional funding source would enable decision-makers to better assess whether or not the pursuit of the project is worth the additional time, effort, and expense of securing federal funding.
Local Funding - In addition to securing regional funding, county and local governments need to be empowered to raise and administer a locally collected revenue source. There are several potential revenue sources that might be employed to provide additional funding for transportation infrastructure and services. Like the regional funding options described above, local funding sources would afford counties and cities a measure of financial independence. As it stands now, most local governments fund transportation infrastructure improvements out of their general fund, meaning that transportation projects have to compete with other needs. Local funding would enable communities to decide whether or not they should attempt to leverage federal or state monies. It also gives them the ability to decide whether or not they should fund transportation projects on their own. This is particularly useful when it comes to local economic development, as it provides increased flexibility and speed. Flexibility and speed are key tools when it comes to recruiting residential and commercial development interests.

Public-Private Partnerships - The principal objective in recommending that the region explore partnerships with private equity partners is to: (1) attract new capital sources for selected projects; and (2) explore concepts that accelerate project development and delivery through risk-sharing mechanisms such as design-build construction methodologies. A Public-Private Partnership (P3) could help the region to identify specific highway and/or transit projects that are best suited for delivery by means of a partnership with public sector entities. The P3 concept encompasses several project delivery approaches, all of which are variations of the design-build model. The common objective of these approaches is to facilitate private sector participation in the provision of public works projects, thereby sharing with private partners some or all of the traditional public responsibility and risks for financing, designing, constructing, maintaining and/or operating infrastructure projects. Public-Private Partnerships have been successfully implemented in other cities in the U.S. and in countries around the world for both highways and transit development.

Seeking private sector financial participation to develop and deliver RTP projects could supplement available funds and/or enable more flexible funding methods. More importantly, this project delivery approach could also accelerate the construction of projects, with repayment to the private sector by funds programmed for later years and/or by project-generated revenues. Such an approach provides potentially greater flexibility in leveraging existing revenue sources than the more common and traditional mechanisms such as bonding.

9.4 SHORT-TERM POLICY ACTIONS

Fix It First - The primary objective of a fix-it-first policy is to bring the existing system into a state of good repair and to improve its safety and efficiency. Ideally, fix-it-first will not add capacity to the transportation system. However, adding capacity may be a necessity for maintenance projects.

Rewarding Success - Encouraging innovation and cost-efficiency by rewarding successful practices and projects is an important part of the implementation toolkit. These can be tied to performance-based planning—setting performance objectives for projects.

Data Analytics - Successful implementation of the RTP is partly a function of monitoring and assessing how well the program and project commitments identified in the plan are delivered and to what extent they achieve their intended results. Effective plan management will help the region identify if guidelines set forth in the RTP were followed, and if projects are having intended impacts on the region. The ability to answer these questions improves public transparency and accountability. Additionally, better managing the plan will assist the RPCGB to provide actionable data which can be used to improve plan delivery and inform development of future plans.
9.5 LONG TERM ORGANIZATIONAL CHANGES

Regional Transportation Commission - The RPCGB has significantly evolved over the past decade. The RPCGB has taken a more direct role in developing, implementing and maintaining programs and projects beginning with the development and operations of the ClasTran paratransit services, and running through and including:

- CommuteSmart Rideshare (Birmingham) program
- Alabama Partners for Clean Air programs
- Numerous transit corridor planning efforts
- Birmingham Regional Transportation System Management and Operations (TSMO) Plan  
  (Note: the TSMO plan was developed as part of this RTP’s planning process)
- Building Communities program
- Advanced Planning Programming and Logical Engineering (APPLE) Programs (identified previously)
- Birmingham Bikeshare program (to be implemented in Federal fiscal year/calendar year 2015), and
- City of Birmingham disaster recovery implementation program (Pratt Community)

Much like the evolutionary changes that occur in nature, the growth of the RPCGB to include the operational and administrative programs identified above happened because of necessity. Gaps and/or shortcomings in service delivery demanded that some government or entity take on the responsibility of implementing those programs and projects of regional concern. The RPCGB is one of a small handful of agencies that can operate across jurisdictional boundaries, and is the only regional entity in the metropolitan planning area when it comes to transportation. Because the RPCGB also administers the Heart of Alabama Rural Planning Organization, the agency is in a position to serve as both a regional transportation planning and implementing.

Consideration by the region’s leadership should be given to enabling the RPCGB to take the next step in its evolution—to start the transformation of the RPCGB from a planning only organization into a regional transportation commission. Ideally, the RPCGB will continue with its current roles of administering the metropolitan planning process, providing community and land planning services, grant preparation services, and other advisory services as needed. However, given the role that that RPCGB is currently playing in public transit service planning and delivery, alternative transportation system development, programmatic delivery, and transportation project development, specific authorities might be granted to the RPCGB to enable it to become more actively involved in transit service delivery, non-motorized transportation facility operations and maintenance, and transportation system management.
10.0 MEASURING PROGRESS
Sound measurement ensures that the right decisions are made for operations and expansion, and for building confidence in the system. Monitoring efforts and their outcomes is good because it communicates what has been achieved and where subsequent efforts can be focused.

MAP-21 places upon metropolitan planning organizations the obligation to monitor and review the regional transportation plan. The information gained from this monitoring process is intended to help the Birmingham MPO take stock of progress and challenges so that the organization might revise the plan. Monitoring information also is intended to inform future reviews of the RTP and provide guidance for where and how the MPO might change its policy and/or programmatic direction, as well as choose better projects.

At the time of the writing of the 2040 RTP, the U.S. Department of Transportation (USDOT) had developed and promulgated performance measures for both safety and freight; they have not provided performance measures for any of the other goal areas. Likewise, ALDOT has not provided any transportation performance measures as they are awaiting guidance from the USDOT. They have, however, provided guidance and performance measures to support livability, based on the Federal Livability Principles. The RTP identifies how its themes and vision relate to the national transportation goals and the Federal Livability Principles.

Table 2: Correlation of RTP Themes, National Transportation Goals, and Federal Livability Principles

<table>
<thead>
<tr>
<th>RTP Theme</th>
<th>National Transportation Goal</th>
<th>Federal Livability Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livability/Quality of Life</td>
<td>• Safety</td>
<td>• Transportation Choice</td>
</tr>
<tr>
<td></td>
<td>• Congestion Reduction</td>
<td>• Promote Equitable, Affordable Housing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Value Communities and Neighborhood</td>
</tr>
<tr>
<td>Sustainability</td>
<td>• Infrastructure Condition</td>
<td>• Support Existing Communities</td>
</tr>
<tr>
<td></td>
<td>• Environmental Sustainability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• System Reliability</td>
<td></td>
</tr>
<tr>
<td>Prosperity</td>
<td>• Freight Movement and Economic Vitality</td>
<td>• Enhance Economic Competitiveness</td>
</tr>
<tr>
<td>Process and Progress</td>
<td>• Reduced Project Delays</td>
<td>• Coordinate and Leverage Federal Policies and Investments</td>
</tr>
<tr>
<td>(Implementation)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The RTP will be judged on how well it helps the region maintain and enhance its quality of life. Its goals and objectives address the plan’s four major themes. These are presented below, along with a number of proposed performance measures. At the time of this writing, the nation is awaiting the promulgation of MAP-21’s final rules for the metropolitan planning process, and especially those addressing national performance measures. These rules are nearly two years overdue. However, the Birmingham MPO felt that it was imperative to not be in a position where it was reacting to federal mandates for performance measures after the fact, but rather to establish meaningful performance measures for the RTP. As such, the RTP presents a series of performance measures that will evaluate the plan on how well it addresses its goals and objectives, which include standards for mobility, accessibility and connectivity. Performance measures will also enable the RPCGB to monitor how well the region is meeting federal air quality standards, as well as how the transportation system is helping to address quality of life issues.
A Performance Monitoring Report (PMR) will be developed to identify and establish system benchmarks. It will also define a monitoring process for the regional transportation system across multiple modes so that progress towards meeting established goals might be tracked as the plan moves forward.

**Theme 1 - Livability**

**Goal:** Encourage and support opportunities to create livable places, develop communities, improve quality of life, improve health and well-being, and create opportunities for both improved work and leisure environments.

High quality of life and transportation options are inextricably linked. Good options for travel to work, shop, and recreate allow residents a greater level of choice. These options do not just impact those who choose to use them, but all other system users, as more options create better distributions of travelers between modes, especially if those options are dependable, reliable, and expedient. This provides more freedom and opportunity for all residents, while encouraging healthy choices.

<table>
<thead>
<tr>
<th>LIVABILITY</th>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Regional Mobility</td>
<td>Travel Time Index</td>
<td>A measure of congested travel time compared to free-flow travel time</td>
</tr>
<tr>
<td></td>
<td>Vehicle Miles Travelled (VMT)</td>
<td>Total miles travelled by all vehicles in the region</td>
</tr>
<tr>
<td></td>
<td>Congested Vehicle Hours Travelled</td>
<td>Total daily travel time delay due to congestion</td>
</tr>
<tr>
<td></td>
<td>Percentage Increase in Travel Time Due to Congestion</td>
<td>Increase in travel time due to congestion on roadways</td>
</tr>
<tr>
<td>Improve Accessibility to Services, Opportunities, and Affordable Housing</td>
<td>Travel Time to Activity Centers by Peak Travel Period</td>
<td>A calculation of travel time to/from identified regional activity centers</td>
</tr>
<tr>
<td></td>
<td>Household Access to Activity Centers by Travel Time</td>
<td>Number of households that can access identified activity centers within a given amount of time</td>
</tr>
<tr>
<td></td>
<td>Services and Resources Accessible by Transit</td>
<td>Opportunity index by transit service area and travel distance</td>
</tr>
<tr>
<td>Provide Transportation Choice</td>
<td>Public Transit Service Area</td>
<td>All areas of the region within 3/4ths of a mile of a transit line</td>
</tr>
<tr>
<td></td>
<td>Transit Service Hours per Capita</td>
<td>Total hours of transit service per person in the region</td>
</tr>
<tr>
<td></td>
<td>Total Bikeway Miles</td>
<td>Total miles of bicycle infrastructure in the region</td>
</tr>
<tr>
<td></td>
<td>Total Trail Miles</td>
<td>Total miles of off-road public trails in the region</td>
</tr>
<tr>
<td></td>
<td>Ratio of Bikeway Miles to Major Roadways</td>
<td>Total Bikeway Miles divided by total miles of major roadways within arterial and collector functional classifications</td>
</tr>
<tr>
<td></td>
<td>Ratio of Trail Miles to Major Roadways</td>
<td>Total Off-Road Trail Miles divided by total miles of major roadways within arterial and collector functional classifications</td>
</tr>
<tr>
<td></td>
<td>Mode Share for Alternative Transportation Modes</td>
<td>Percentage of total trips made by transit, bicycle, or walking</td>
</tr>
<tr>
<td>Improve Traveler Safety and System Security</td>
<td>Crash Incident Rate</td>
<td>Total crashes per 1 million VMT</td>
</tr>
<tr>
<td></td>
<td>Total Crash Incident Hotspots</td>
<td>Number of locations with significantly above average total incident rates</td>
</tr>
<tr>
<td></td>
<td>Incidents by Travel Mode</td>
<td>Number of injuries or fatalities occurring to drivers and passengers in private vehicles, transit riders, pedestrians, and bicyclists</td>
</tr>
<tr>
<td>Support Healthy Communities</td>
<td>Total Regional Air Quality Alerts</td>
<td>Total number of orange or red flag air quality alerts occurring the region</td>
</tr>
<tr>
<td>Value Communities and Neighborhoods</td>
<td>Employment to Housing Ratios</td>
<td>Comparison of jobs and total households in sub-areas throughout the region to determine if job availability and housing are interlinked</td>
</tr>
<tr>
<td>Support Existing Communities</td>
<td>Employment Stability and Income</td>
<td>Quarterly measure of payrolls, monthly employment, workforce composition, and worker turnover through the Longitudinal Employer-Household Dynamics model.</td>
</tr>
</tbody>
</table>
**Theme 2 - Sustainability**

**Goal:** Develop a sustainable regional transportation system

Ensuring adequate maintenance of transportation infrastructure and services, and providing enhancements that improve system reliability are fundamental to the existing transportation system. However, a long-term sustainable revenue source is needed to address maintenance needs. Taxes collected on motor fuels are the primary source of funding for many transportation improvements. The State gasoline tax is 16 cents per gallon and the federal gasoline tax is 18.4 cents per gallon for a combined 34.4 cents per gallon. For many years, fuel taxes have been a steady and ample source of revenue to fund transportation improvements; however, in recent years a number of factors have contributed to the diminished capacity of this source to adequately fund the transportation system. Two of the most influential factors include the impacts of inflation (these taxes are not automatically adjusted for inflation) and improved fuel efficiency, which, while a good step for environmental sustainability and air quality, leads to less fuel tax revenues. State and federal fuel taxes were last increased in 1992 and 1993, respectively.

<table>
<thead>
<tr>
<th>SUSTAINABILITY</th>
<th>Objective</th>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System Maintenance</strong></td>
<td>Pavement Condition by Functional Classification</td>
<td>Evaluation of pavement condition on regional roads, categorized by functional classification to identify the road’s importance in regional transport</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bridge Rating by Functional Classification</td>
<td>Evaluation of bridges in the region from the American Society of Civil Engineers Infrastructure Report Card, categorized by functional classification to identify the road’s importance in regional transport</td>
<td></td>
</tr>
<tr>
<td><strong>Improve System Management and Operation</strong></td>
<td>Travel Time Reliability Index</td>
<td>Percentage of time that travel time is within expectations, important in giving drivers a strong approximation of travel time to their destinations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CommuteSmart Traffic Demand Management Database Registrants</td>
<td>Total registrants enrolled in CommuteSmart programs to benefit from use of alternative travel modes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total TSMO Projects</td>
<td>Total projects that heavily include TSMO elements most likely technology, intersection, and transit system improvements</td>
<td></td>
</tr>
<tr>
<td><strong>Ensure Full Funding of the Transportation System</strong></td>
<td>Ratio of Maintenance Expenditures to Expansion Expenditures by Mode</td>
<td>Consideration of how funding is being spent to assess how maintenance and expansion projects are comparatively prioritized by mode</td>
<td></td>
</tr>
<tr>
<td><strong>Protect the Environment</strong></td>
<td>VMT per Capita</td>
<td>Total VMT per person in the region.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fuel Savings per Capita</td>
<td>Calculation of the impact of alternative commutes measured by reduction in vehicle trips divided by an estimate of fuel efficiency of vehicles.</td>
<td></td>
</tr>
</tbody>
</table>
**Theme 3 - Prosperity**

**Goal:** Advance regional transportation system policies and investments to support economic growth and global competitiveness.

In 2010, the Birmingham-Hoover metropolitan statistical area (MSA), which includes the region plus Bibb County, accounted for 34.7 percent of the Alabama Gross Domestic Product. To remain a key player in the state and national economies, facilities must be available that allow for the steady flow of people and goods. It is important that freight data be monitored and taken into consideration as the transportation system is developed and improved. The continued efficient movement of goods will have a positive impact on the region’s economy and quality of life.

<table>
<thead>
<tr>
<th><strong>PROSPERITY</strong> Objective</th>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Support Global Economic Competitiveness</strong></td>
<td>Value of Freight Moved Through the Region</td>
<td>Total value of freight transported through the region in USD</td>
</tr>
<tr>
<td></td>
<td>Freight Mode Share</td>
<td>Total freight vehicle movements as a portion of vehicle trips in the region</td>
</tr>
<tr>
<td></td>
<td>Freight Tonnage by Mode</td>
<td>Weight of freight moved throughout the region by truck, rail, ship, or air</td>
</tr>
<tr>
<td></td>
<td>Rail Movements per Day</td>
<td>Total train sets passing through the region each day by railroad segment. This can be used to determine and explain delays at at-grade crossings</td>
</tr>
<tr>
<td><strong>Support Local Economic Competitiveness</strong></td>
<td>Travel Time Reliability Index for Interstate Highways</td>
<td>Travel Time Reliability Index Measures as they relate to interstate highways – the primary freight routes. This helps determine congestion costs for shipping.</td>
</tr>
<tr>
<td></td>
<td>Delay Hours for Freight</td>
<td>Total trip hours for trucks minus total free-flow trip time</td>
</tr>
<tr>
<td></td>
<td>Truck Average Travel Speed</td>
<td>Calculation of average travel speed for freight vehicles on regional interstates</td>
</tr>
<tr>
<td><strong>Provide Affordable Transportation Options for Commuters</strong></td>
<td>H + T Affordability Index</td>
<td>Calculation of how much commutes cost employees in the region based on cost of living</td>
</tr>
<tr>
<td></td>
<td>Cost of Congestion per Traveler</td>
<td>Measure of economic loss due to congestion based on the average economic value per hour of travelers in the region multiplied by VHT in congestion</td>
</tr>
</tbody>
</table>
Theme 4 - Process and Progress

Although there is no specific goal associated with this theme, discussions about transparency in the planning process and implementation permeated the many discussions held across the varying constituent groups that were engaged in the RTP’s development. Concerns about the timeliness of project implementation have been an issue for well over a decade, and continue to be raised by the region’s Congressional leadership, FHWA, state and local leaders, agency officials, citizens, and the media. The ultimate goal of any planning process is to see the recommendations become reality. To this end, the RTP presents some specific objectives for implementation:

- Provide for timely project planning and implementation.
- Develop cost-effective projects and programs associated with construction, operations, and maintenance of the regional transportation system.

<table>
<thead>
<tr>
<th>PROCESS AND PROGRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective</strong></td>
</tr>
<tr>
<td>Provide Timely Project Planning and Implementation</td>
</tr>
<tr>
<td>Develop Cost-Effective Projects and Programs</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Coordinate Policies and Leverage Funding</td>
</tr>
</tbody>
</table>
CONCLUSION
The Greater Birmingham region can transform and position itself for a promising future. In order to achieve this goal, we must acknowledge the value of what we have, capitalize on our strengths, and creatively apply both tried and new strategies to become a model of fiscal sustainability, prosperity, and productivity.

The plan defines regional policy and establishes a collective vision to optimize the transportation system. It also provides guidance about investing in transportation infrastructure and service improvements. These efforts, if diligently pursued, will help ensure consistency in both the way the MPO does business and the development of the overall system. They also will greatly help to improve the quality of life for all residents in the region.

Developing an efficient, cleaner and financially sustainable transportation system remains a daunting challenge. However, the RTP shows us what is possible in the long term. It spells out incremental steps that can be taken to make substantive changes that will lead to long term benefits. This is especially true if we use our existing resources wisely.

The RTP’s development process has not shied away from the ever-present issue of funding, and has demonstrated that there are real impacts to shortages in transportation funding. While the RTP assumes the return of a robust economy, it also is realistic in its assessment of the existing fiscal reality. It calls for new funding sources and changes in the way that the region addresses its ongoing challenges, as well as how the Birmingham MPO does business. Strategies such as Public Private Partnerships and changes to the RPCGB/MPO structure may be potential solutions to funding shortfalls.

Through this plan process, the region’s leaders have faced this new reality and are stepping up to meet the challenges. Their embrace of the concepts and strategies in the RTP demonstrates their willingness for change, and recognizes that there is a better way to balance transportation needs and create livable places. Likewise, the region’s citizenry and businesses are doing their part to support these concepts. Residents and businesses are making investments in places long forgotten and thought to be dead, as well as making new places more accessible. Along with the region’s local elected officials, they will need to speak with one voice and let the state’s legislators and federal officials know that they need to do their part to help make the RTP’s vision become reality.
12.0
SANCTIONS
The preparation of this report has been financed in part through grants from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

This document was developed for use by the Regional Planning Commission of Greater Birmingham, the Birmingham Metropolitan Planning Organization, the Heart of Alabama Rural Planning Organization, the Alabama Department of Transportation, the Greater Birmingham region’s local governments and partnering agencies for planning purposes.

The Regional Planning Commission of Greater Birmingham is not liable for any direct, indirect, special, incidental or consequential damages (such as, but not limited to, damages for loss of profits, business, savings or data) related to the use of this document or information produced as a result of this document or its interpretation. This information is publicly available and is provided with no warranty or promises of any kind whatsoever, express or implied, including warranties for merchantability or fitness for a particular purpose.

While every effort is made to confirm the accuracy of the information provided within this document and any analytical methods used to develop the information, no assurance of accuracy can be or is given. By using this document and the information in any way, the User is acknowledging this limitation, and is agreeing to use the document and the information therein at his or her own risk.
For more information about the Regional Planning Commission of Greater Birmingham and the Birmingham 2040 Regional Transportation Plan, visit www.rpcgb.org/transportation.

Regional Planning Commission of Greater Birmingham
Two 20th Street North, Suite 1200
Birmingham, Alabama 35203
Phone: (205) 251-8139
Fax: (205) 328-3304