Birmingham Metropolitan Planning Area

2030 Long Range Transportation Plan

January 2006

Prepared by the Regional Planning Commission of Greater Birmingham on behalf of the Birmingham Metropolitan Planning Organization
# Table of Contents

## Chapter 1: Introduction
- Legislative Mandates ........................................................................................................... 3
- MPO Roles, Responsibilities, and Structure ........................................................................... 4
- Past Planning Activities ......................................................................................................... 5
- Review of Relevant Studies and Plans ................................................................................... 6
- Long Range Transportation Plan Elements ......................................................................... 10
- Transportation Planning Process ........................................................................................... 14

## Chapter 2: Where We Are, Where We Are Going: A Profile of the Birmingham Region
- Introduction .......................................................................................................................... 20
- Transportation Challenges .................................................................................................... 20
- Demographic Profile ............................................................................................................. 24
- Regional Transportation System Characteristics .................................................................. 30
- Congestion Management System ....................................................................................... 46

## Chapter 3: Where We Want to Be: Continuing Through the 21st Century
- Regional Transportation Principles ...................................................................................... 48

## Chapter 4: What We Really Need: Transportation System Deficiency Assessment
- Roadway Network Needs Assessment .................................................................................. 58
- Transit Needs Assessment .................................................................................................... 61
- Bicycle and Pedestrian Needs Assessment ......................................................................... 64

## Chapter 5: Can We Pay For It: Financial Resources
- Introduction .......................................................................................................................... 70
- Revenue Analysis ................................................................................................................ 71
- Revenue and Expenses Forecast .......................................................................................... 79

## Chapter 6: Getting to There from Here: Birmingham Long Range Transportation Plan
- Performance Based Evaluation: Establishing Priorities ......................................................... 89
- Environmental Assessment .................................................................................................. 92
- Recommended Plan .............................................................................................................. 94
List of Tables

Table 2-1: Population and Racial Estimates and Projections 1990 - 2030 ........................................... 29
Table 2-2: Regional Employment Concentration Destinations by Employee Origins .................... 33
Table 2-3: Transportation System Performance Indicators ................................................................. 37
Table 2-4: Metropolitan Regions TTI Traffic Congestion Ranking ..................................................... 38
Table 2-5: Birmingham LOS Criteria .................................................................................................. 38
Table 2-6: Percentage of Miles of Congested Roadways ................................................................. 39
Table 2-7: Percentage of Miles of Congested Roadways ................................................................. 43
Table 2-8: Total Trips by Trip Purpose .............................................................................................. 43
Table 2-9: 2002 Regional AM Peak and 24-Hour Measures ............................................................. 44
Table 2-10: VMT by Functional Classification .................................................................................... 45
Table 2-11: 2004 Carpool Program Impacts ..................................................................................... 46
Table 2-12: 2004 Vanpool Program Impacts ..................................................................................... 46
Table 3-1: Comparison of Federal Planning Factors and Goals ......................................................... 50
Table 5-1: Birmingham Metropolitan Planning Area SAFETEA-LU Earmarks ............................. 80
Table 5-2: Birmingham Metropolitan Area Revenue Forecast ........................................................... 85
Table 5-3: Estimated Expenses By Project Category .......................................................................... 86

List of Figures

Figure 1-1: Birmingham Metropolitan Planning Area ........................................................................... 2
Figure 1-2: Birmingham MPO Structure ............................................................................................. 4
Figure 2-1: Population Change 2000 – 2030 ..................................................................................... 21
Figure 2-2: Employment Change 2000 - 2030 .................................................................................. 22
Figure 2-3: Geographic Hierarchy ...................................................................................................... 24
Figure 2-4: Non-White Population Distribution ............................................................................... 26
Figure 2-5: Low-Income Population Distribution .............................................................................. 27
Figure 2-6: Population Age 65 and Older ......................................................................................... 28
Figure 2-8: Employment Concentrations .......................................................................................... 31
Figure 2-9: County Planning Districts ............................................................................................... 32
Figure 2-10: Birmingham's Existing Transportation System .............................................................. 34
Figure 2-11: Base Year Roadway Level of Service ......................................................................... 40
Figure 2-12: 2030 LRTP No-Build Scenario Roadway Level of Service ........................................... 41
Appendix

Appendix A: 2030 Recommended Birmingham LRTP – Project Listing
Appendix B: Travel Demand Model Review and Documentation
Appendix C: Public Involvement Report
Appendix D: Project Evaluation and Prioritization Methodology
Appendix E: Non-Motorized Transportation Policies and Implementation Strategies
Appendix F: Community Design and Transportation Facility Concepts
Appendix G: 2030 Demographic Projections
Appendix H: Regional Transit Improvement Strategy
Appendix I: Glossary of Acronyms and Terms
Chapter 1: Introduction

Background

Sustained economic growth and the associated impacts of that growth on critical transportation, water, and social infrastructure are among the greatest challenges that the Birmingham region faces. The ability to sustain this growth is at question, and the increasing realization that financial resources needed to provide critical transportation infrastructure will not be adequate to meet future demand is a primary driver of the development of this, the Birmingham Long Range Transportation Plan (LRTP), the Long Range Transportation Plan for the Birmingham metropolitan area.

The Regional Planning Commission of Greater Birmingham is the host agency for the Birmingham Metropolitan Planning Organization (MPO), and is responsible for developing and maintaining both the Birmingham Long Range Transportation Plan and the Birmingham Transportation Improvement Program (TIP). The primary purpose of the 2030 Birmingham Long Range Transportation Plan is to provide a vision for satisfying the existing and anticipated demands on the transportation system serving the two-county Birmingham metropolitan planning area which includes Jefferson and Shelby Counties. Prepared by the Birmingham Metropolitan Planning Organization, the 2030 Birmingham LRTP serves as a guide for transportation system improvements in the Birmingham metropolitan area, and is the focal point of the MPO’s planning programs and activities. The 2030 LRTP is essentially a “blueprint” for the next twenty-five (25) years, and in accordance with federal requirements, addresses short-term, mid-term, and long-term transportation system needs, identifying and making provision for a set of strategies, actions, and improvements for developing an integrated intermodal transportation system that facilitates the efficient movement of people and goods.

The LRTP covers the transportation systems of the jurisdictions located within the Birmingham MPO service area, along with those components of the State of Alabama’s transportation system that are geographically situated within these two counties. The Birmingham LRTP gives consideration to the multimodal, interdependent nature of the metropolitan area’s transportation system. The process addresses the region’s highway, transit, bicycle, and pedestrian modes.

The Federal Highway Administration and the Federal Transit Administration mandate that each urbanized area with a base population of 50,000 or more must have an organized planning process that results in a transportation plan consistent with the planned development for the area. Any metropolitan region that fails to meet this requirement may be penalized by denial of federal capital and operating funds. Figure 1-1 illustrates the planning area.
Figure 1-1: Birmingham Metropolitan Planning Area
Legislative Mandates

The Federal Highway Administration and the Federal Transit Administration mandate that each urbanized area with a base population of 50,000 or more must have an organized planning process that results in a transportation plan consistent with the planned development for the area. Any metropolitan region that fails to meet this requirement may be penalized by denial of federal capital and operating funds.

The 2030 LRTP has been prepared under the federally mandated regulations of the Clean Air Act Amendments (CAAA) of 1990, Transportation Equity Act for the 21st Century (TEA-21) and, the Safe Accountable Flexible Efficient Transportation Equity Act a Legacy for User (SAFETEA-LU). TEA-21 requires that long range transportation plans consider seven planning factors:

1. Support for the economic vitality of the metropolitan area, particularly by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety and security of the transportation system for motorized and non-motorized users.
3. Increase the accessibility and mobility options available to both people and freight.
4. Protect and enhance the environment, promote energy conservation, and improve the overall quality of life.
5. Enhance the integration and connectivity of the transportation system, across and between modes, for people and for freight.
6. Promote efficient system management and operation.
7. Emphasize the preservation of the existing transportation system.

SAFETEA-LU, passed on August 10, 2005, reaffirms the direction originally established under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and advanced by TEA-21. It additionally, focuses attention on both safety and security by recognizing the importance of transportation system safety programs and improvements from those issues that related specifically to transportation system security. SAFETEA-LU also recognizes the importance of social service agencies in providing transportation services for the transportation disadvantaged, and requires closer coordination between both public transportation and social service transportation service providers.

These federal initiatives, along with the current transportation guidance, requires long range metropolitan transportation plans to include only those projects that can be delivered with funds expected to be available during the timeframe of the planning period. Under the provisions of TEA-21, metropolitan transportation planning must examined in a broad context and the system’s performance judged by reasonable responses to community concerns about land use, environmental protection, economic competitiveness, energy efficiency and, congestion reduction in addition to overall regional mobility. Environmental provisions of TEA-21 are major drivers in the update cycle for the LRTP. Because the Birmingham region is designated as a “maintenance” area with regard to its air quality, it is required that the LRTP be updated every three years. In addition, both TEA-21 and SAFETEA-LU place emphasis on the movement of people and goods rather than on vehicles. The breadth of transportation system considerations is also expanded under SAFETEA-LU and transfers additional decision-making authority from states to local governments. Local transportation plan elements are designed to meet the
requirements of federal legislation as well as transportation system goals of both the state and the Birmingham region.

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**MPO Roles, Responsibilities, and Structure**

The Birmingham Metropolitan Planning Organization is responsible for:

- Development of a regional multi-modal transportation planning program
- Allocation of funding for the coordinated implementation of transportation programs, projects, and services, and
- Addressing congestion and transportation related air quality through effective management of new and existing facilities

These tasks are intended to address some of the significant issues facing the Birmingham area, including the need to improve air quality, balance the needs and requirements of the various
modes of travel, and to manage area congestion. In addition, the strong growth in both population and employment that is being experienced throughout the planning area makes it important to address transportation needs within a coordinated regional context. The MPO is the forum in which this occurs.

- The MPO functions under a committee structure comprised of:
  - The MPO Subcommittee
  - Transportation Technical Committee, and
  - Transportation Citizen’s Committee

The MPO subcommittee provides policy direction and a forum for transportation and air quality decisions. Comprised of a subset of appointed members who represent the full voting membership of the Metropolitan Planning Organization, the MPO subcommittee meets monthly to discuss issues and review and approve major planning reports, documents, activities, and proposed modifications to both the LRTP and Transportation Improvement Program (TIP).

Likewise, the Transportation Technical Committee and the Transportation Citizen’s Committee also meet monthly to provide input and recommendations to MPO staff and to the MPO subcommittee regarding planning reports, documents, activities, and proposed modifications to the LRTP and TIP. The TTC is comprised of departmental administrators for agencies involved in transportation and land use planning. This includes planning commissions, engineering (public and private), public works departments, transit authorities, and other transportation related agencies. The basic responsibilities of the TTC include the on-going administration for transportation planning activities and the development of plans and documents such as this LRTP and the TIP. The TCC is comprised of citizens who reside within the MPO area, and provide public input and direction regarding public input of the larger populace. They also have similar duties as the TTC as it relates to providing input on plan reports, documents, activities, and proposed modification of both the LRTP and the TIP.

The MPO technical staff is physically located within the Regional Planning Commission of Greater Birmingham, and provides professional and administrative services for Jefferson and Shelby Counties. In 2006, the MPO technical staff will also provide technical assistance and professional services to Blount, Chilton, St. Clair, and Walker Counties which are poised to become members of a Rural Planning Organization. Planning activities are led by the Transportation Planning Director. Figure 1-2 describes the MPO structure.

**Past Planning Activities**

A review of the major planning activities over the past 10 years shows the dynamic and evolving nature of transportation planning in the Birmingham region and how transportation priorities have slowly shifted to recognize regional mobility priorities as well as the need for a balanced, multimodal transportation system. Highlighted planning activities during this time frame include:
<table>
<thead>
<tr>
<th>Title</th>
<th>Subject</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birmingham Area Regional Transportation Alternatives Analysis</td>
<td>Development of regional transit system plan identifying potential transit corridors and modes via the Section 5309 alternatives analysis process for Jefferson and Shelby counties</td>
<td>September 2004</td>
</tr>
<tr>
<td>Documentation of the Transportation Planning and Public Involvement Process</td>
<td>Update of the documentation of the who, why, where, when and how of the MPO's public involvement process</td>
<td>Revised January 2004</td>
</tr>
<tr>
<td>Birmingham Area 2025 Long Range Transportation Plan</td>
<td>Project level improvements to the area highway network and conformity determination.</td>
<td>June 2002</td>
</tr>
<tr>
<td>Birmingham - Jefferson County Transit Authority Comprehensive Operational Analysis</td>
<td>Review and recommendations for the current operational characteristics of the transit system</td>
<td>November 2001</td>
</tr>
<tr>
<td>Strategic Regional Multimodal Mobility Plan (Three Parts)</td>
<td>A component of the overall Commute Smart Program. Plan included elements for educational and public outreach, TMA resource guide and marketing and informational materials.</td>
<td>June 1998</td>
</tr>
<tr>
<td>Transportation Demand Management Plan</td>
<td></td>
<td>January 2000</td>
</tr>
<tr>
<td>2. Congestion Management System Subarea Corridor Evaluations</td>
<td>Results of the application of the CMS to corridors and segments of the system</td>
<td>June 1998</td>
</tr>
<tr>
<td>3. Preliminary High Occupancy Vehicle Lanes and Park And Ride Demand Analysis</td>
<td>Analysis of potential HOV lanes and park and ride lot locations to support both HOV lanes and express bus service</td>
<td>June 1998</td>
</tr>
<tr>
<td>Birmingham Area Bicycle, Pedestrian and Greenway Plan</td>
<td>Comprehensive review of resources, policies and potential projects for the two county area pertaining to bicycle and pedestrian activities.</td>
<td>August 1996</td>
</tr>
<tr>
<td>Intermodal Management System for Jefferson and Shelby Counties</td>
<td>Comprehensive exam of the of the transportation network that incorporates both the public and private infrastructure for the movement of both people and goods.</td>
<td>June 1996</td>
</tr>
</tbody>
</table>

**Review of Relevant Studies and Plans**

The Long Range Transportation Plan is a consistently evolving document. The capacity component of the Long Range Transportation Plan typically requires the most intensive review and documentation, and this plan reaffirmation like the last plan update, did not deviate from the established pattern. In assembling the information for the LRTP, the MPO is also cognizant of the conformity analysis to which each of the capacity projects is subject. For this plan update capacity projects where modeled based on five different conformity analysis years. The first year, the E+C or base network is set as 2002; the second year is set as 2009; the third year is set as 2015, and the fourth year as 2025. Finally, the out year of the plan is set as 2030. Capacity projects are grouped according to the year they will have an impact on the transportation network, and may be open to traffic either by or before the conformity year in which it appears as long as it is not open to traffic on or before the previous conformity year. In short, this does not prevent work from beginning prior to the conformity year but the final construction that will open the project to traffic cannot cross the tested or modeled year.
Take for example a project like Corridor X (future I-22). Corridor X appears in two different conformity years, 2009 and 2015. The projects that complete Corridor X through US-78 interchange appear in 2009 and the projects that complete the roadway through US-31 appear in 2015. Work on the segments up to US-78 will be open to traffic by 2008 and must appear in the 2009 conformity test. The remaining roadway segments through US-31 are likely to be open to traffic between 2011 and 2012 and are therefore tested in the 2015 conformity year. The same is true of the Northern Beltline which appears in three different conformity years, with work on preliminary engineering, right-of-way acquisition and utility relocation proceeding in advance of construction and the open to traffic date does not cross conformity years.

Intelligent Transportation Systems (ITS), bicycle and pedestrian facilities and initiatives, intermodal access projects, transit projects as well as additional non-capacity programs and projects are represented within the LRTP in manner similar to capacity projects. That is, these programs and projects are grouped by conformity year. However, since the majority of the projects are not subject to conformity testing as they add no additional roadway capacity, their grouping represents an effort to meet another important constraint of long range transportation plan development, fiscal constraint. The LRTP in addition to being subject to the air quality conformity analysis must also demonstrate fiscal constraint. The Long Range Transportation Plan’s fiscal constraint is demonstrated in Chapter 7 Financial Capacity Analysis. In addition, projects in the LRTP are shown in comparison to the percentage of anticipated federal and state revenues for the Birmingham region as well as those funds that are anticipated to be available statewide. The financial analysis goes deeper for projects funded with Birmingham Attributable and Congestion Mitigation and Air Quality funding, comparing annual appropriations and estimated project costs within the bracketed years with potential funding for the same time period.

**Current Work**

The In-Town Transit Partnership, an Alternatives Analysis and Draft Environmental Impact Statement for Downtown Birmingham, the University of Alabama at Birmingham, and the adjacent in-town neighborhoods is currently being completed in order to satisfy Federal Transit Administration requirements for entry into the Section 5309 New Starts program as well as to satisfy the National Environmental Policy Act requirements administered by the Council of Environmental Quality. This work breaks out the downtown area corridor that was initially identified in the regional transit system study completed in 2004, and provides an in-depth analysis of transit strategies, modes and routes in the downtown area. In addition, the study will identify future interfaces with the envisioned overall transit system. The Regional Planning Commission of Greater Birmingham, as staff to the Birmingham Metropolitan Planning Organization, is managing the study. This effort will result in a further review and update of the Birmingham Area Long Range Transportation Plan as well as provide the Metropolitan Planning Organization with a fully calibrated and validated mode choice model for the regional travel demand model.

This fiscal constraint requirement effected the placement of the additional high-technology transit and highway projects (light-rail, bus rapid transit, high-occupancy vehicle lanes, etc.), developed from the Alternatives Analysis Project (New Starts). These projects are shown in the visionary element of the LRTP. The transit projects shown in the LRTP represent the current level of transit operations and expansion to the existing bus transit system within the anticipated financial ability of the Birmingham-Jefferson County Transit Authority and the efforts of the MPO to support transit activity through the use of Congestion Mitigation and Air Quality funding, Job Access Reverse Commute funding, and other existing funding sources. Transit projects shown in the LRTP also demonstrate the MPO’s efforts to advance planning efforts that will prepare
individual high-capacity/high-speed transit projects to enter into the FTA Section 5309 New Starts program by completing alternatives analysis as well as satisfy NEPA requirements by completing environmental impact statement work for the In-town Transit Partnership project as well as the pursuit of options within the I-65 corridor.

Without an adequately funded local source of dedicated funding for the proposed New Starts projects, the 2030 LRTP could not demonstrate a fiscally constrained transit element. Placing these projects in the LRTP allows us to consider them through the public involvement process and when we are able to define a local source of funding we can proceed to move these projects within the LRTP.

Several regional projects are anticipated to be conducted by the Birmingham MPO during the life of the 2030 Birmingham Long Range Transportation Plan. The projects shown are by no means exhaustive, but are inclusive of projects in the current Unified Planning Work Program and projects that are expected to be undertaken beyond the current fiscal year. Following is a description of each.

- **Long-Range Planning for Livable Communities, Framework for Growth, Transit Oriented Development Districts.** This project has several components first of which includes a framework, design guidelines and ordinances that focus on neighborhoods as the building blocks of the region that enables the integration of land use and transportation decisions. The second component will produce models for community planning and development, and standards for county and community planning. Thirdly, a corridor pilot planning project will be undertaken that develops conceptual land use recommendations and policy action steps that enhance pedestrian, bicyclist, vehicular and mass transit activity. And lastly, Transit Oriented Development (TOD) design guidelines and ordinances will be incorporated into local comprehensive plans and zoning ordinances.

- **Long Range Transportation Planning to Include Urban/Non-Urban Connection Plan.** A multi-county transportation plan will be developed that encompasses multiple MPOs as well as an Urban/Non-Urban Connections Plan that analyzes the impact of transportation activities immediately external to Jefferson and Shelby Counties and coordinates rural transportation plans with the MPO Long Range Transportation Plan.

- **Long Range Transportation Planning for Alternatives Analysis and New Starts Transit Activities.** A New Starts application will be submitted to the Federal Transit Administration for preliminary engineering approval after completions of a Federal Transit Administration approved grant for the development of an environmental review document. Modifications will be made to the Long Range Transportation Plan to reflect fiscally constrained/adequate funding for proposed transit projects.

- **Long-Range Planning for Northern Beltline Corridor Study for Economic Development, Context Sensitive Design, Access Management and Land Use.** Phase One of the Scope of Work includes stakeholder identification, and data assembly. Phase Two includes stakeholder education and request for proposals formulation including an economic impact study, context sensitive design charrette, access management seminar, and land use plan scope of work. In subsequent fiscal years, a corridor plan will be developed and implemented.
• **The Regional Open Space Greenway Plan** is an open space/greenprint plan that targets areas where the protection of land, water, historic and cultural resources will also increase the opportunities to connect communities with non-motorized transportation infrastructure identified in the Long Range Transportation Plan.

• **Voluntary Air Quality Program** is promoted by the Alabama Partners for Clean Air (APCA) through an annual marketing campaign and has the goal of getting individuals to consider alternative travel modes in an effort to improve air quality. Businesses are also encouraged to promote and support alternative commuting modes for their employees, providing them with current and forecast information about air quality conditions as well as information and possibly financial support for transit and ridesharing. Television and radio ads/commercials, print materials to include print advertising and pamphlets, and promotional items are typical marketing strategies this program has undertaken.

• **Local Transportation and Comprehensive Plans.** A template will be developed that defines components of a transportation element for a local comprehensive plan, including major thoroughfare plans. The transportation component will be completed for local comprehensive plans in cooperation with RPC planning division. Local thoroughfare plans that include a functionally classified network with accompanying design and development standards will be developed and technical assistance will be provided in development of countywide thoroughfare plans.

• **Short-Range Transit Planning (Jobs Access, Paratransit Plans).** An update of the Birmingham Coordinated Social Service Transportation Study will be produced to provide assessment and recommendations to continuing social service coordination efforts by CLASTRAN and the Transit Authority to include Welfare to Work and Jobs Access activities.

• **Park-and-Ride Lot Design.** Construction plans will be developed for sites selected during preliminary site evaluation process will include environmental studies; mobilizations and basic control survey; project alignment, profile and data gathering; utility survey; geotechnical investigations and recommendations; preparation of materials report; and right-of-way map; deeds and tract sketches.

• **The CommuteSmart Program** is comprised of many different elements aimed at reducing congestion, increasing vehicle occupancy, and promoting the use of alternate transportation modes. The Rideshare Program seeks to increase the number of active vanpools and active, regular carpools. A schoolpool pilot program is being established and will be implemented for the 2005-2006 school year. Improvements have been made to the ridematching software and the CommuteSmart program will provide on-going training for Employee Transportation Coordinators. The Park and Ride program is moving into design of three (3) public park and ride sites located on ALDOT right-of-way in major transportation corridors and developing sample agreements for local governments use as they pursue joint use park and ride sites.

• **Highway 78 Corridor Project.** An engineering committee will assess problem areas along the corridor in which small construction projects may have a significant impact of reducing crashes. A workshop will be held with police officers and engineers as a means to document improvements to be undertaken in the corridor.
• **Traffic Model Development.** Trip generation capability will be developed using Community-Based Regional Planning model (CORPLAN) to evaluate the impacts of alternative land use scenarios or the long-term transportation performance.

• **Communities of Choice.** Funding flexibility will allow CMAQ funds to be used for a program, to be included in the TIP, that will program and fund projects related to community sidewalk projects and off-road trails and greenway projects. Specific criteria will be developed by the MPO that will be used to evaluate applications submitted by local governments.

### Long Range Transportation Plan Elements

#### Capacity Improvements

The Long Range Plan identifies improvements to the transportation network for a twenty-five year period. Capacity projects are just one element of the plan. A complete listing of projects with critical technical information is shown in the project listing section of the 2030 Long Range Transportation Plan.

The capacity component of the LRTP consistently requires the most intensive review and documentation and this plan update did not change this pattern. In assembling the information for the LRTP the MPO must also be cognizant of preparing projects for a conformity analysis. For this plan update capacity projects where modeled based on five different conformity analysis years. The first year, the E+C or base network was set as 2002; the second year was 2009 followed by 2015, 2025 and finally 2030. Capacity projects are grouped according to the year they will have an impact on the transportation network, the year they will be opened to traffic. This does not prevent work from beginning prior to this year but the final construction that will open the project to traffic cannot cross the tested or modeled year. So a project like Corridor X appears in two different conformity years, 2009 and 2015. The projects that complete Corridor X through US-78 interchange appear in 2009 and the projects that complete the roadway through US-31 appear in 2015. Work on the segments up to US-78 will be open to traffic by 2008 and must appear in the 2009 conformity test. The other segments through US-31 may be open to traffic by 2011 or 2012 and are tested in the 2015 conformity year. This pattern of construction dates and conformity year appears through the project listing section of the document. Much the same happens for the Northern Beltline with it appearing in three different conformity years, and once again work on preliminary engineering, right-of-way acquisition and utility relocation can proceed as long as the open to traffic date does not cross the conformity boundary.

Projects included in the conformity determination include Corridor X (Future I-22), the Northern Beltline, Valleydale Road Interchange improvements, widening of I-59, widening of I-65 through the SR-119 interchange and also includes projects identified for congressional earmarks such as the realignment of SR-261 in Helena, the SR-25 by-pass in Calera, the Sulfur Springs Rd. by-pass in Hoover, Lakeshore Parkway extension, Finley Blvd. extension and the widening of US-78.

The projects are grouped by Map Identification Number, with all elements associated with a particular project being grouped together. The tables also list the proposed funding, the functional classification of the roadway segment and show the number of lanes before the planned improvement and the number of lanes after improvements. Also shown are the estimated total costs for each of the project. In the case where an entire corridor is being improved, the total cost for each all of the associated project elements i.e. bridge widening,
base and paving, right-of-way acquisition, etc., are also included. When reviewing the projects please note you will either see a nine-digit number (ie.1000033219) or the words “LRP Project” associated with a project. This indicates that the project has proceeded to the point that it has been included in the ALDOT’s data system and funding has been designated or that is still a long range plan element and it is still a project for which funding and/or sponsorship must be fully developed. A guide to the acronyms and codes appear in Appendix I: Glossary of Acronyms and Terms.

**On Road Highway Projects**
Railroad/highway crossing, hazard elimination program, safer non-federal-aid system roads, shoulder improvements, increasing sight distance, safety improvement program, traffic control devices and operating assistance other than signalization projects, railroad/highway crossing warning devices, guardrails, median barriers, crash cushions, pavement resurfacing and/or rehabilitation, pavement marking demonstration, emergency relief (23 U.S.C. 125), fencing, skid treatments, safety roadside rest areas, adding medians, truck climbing lanes outside the urbanized area, lighting improvements, widening narrow pavements or reconstructing bridges (no additional travel lanes), emergency truck pullovers.

**Transit Priorities**
The 2030 LRTP includes transit projects and/or programs for which committed funding or existing congressional earmarks have been identified. This includes the FTA Section 5307 formula funding for BJCTA, continued funding for Central Alabama Coordinated Social Service Transportation (CLASTRAN) services, and projects and/or programs identified in the Birmingham-Jefferson County Transit Authority’s Transit Development Program, Comprehensive Operational Analysis, or annual fiscal budget. It also includes the continued work on refining the new starts alternatives through preliminary engineering and draft environmental documents.

Important in its absence from this update of the 2030 Long Range Plan are the projects identified in the Birmingham Regional Transportation Alternatives Analysis. The Birmingham Regional Transportation Alternatives Analysis studied current and future transportation needs in the Birmingham area (Jefferson and Shelby counties). This exhaustive $2.25 million dollar study identified potential system wide improvements that may be eligible for “New Starts” transit funding from the Federal Transit Administration. It identified appropriate transportation strategies and improvements to study area transportation services and facilities. The inability to fund these projects is the reason these projects have been shifted to the visionary element of the 2030 LRTP.

Including these projects in the current plan is only permissible in the visionary section of the plan where it is not required to show a fiscal constraint. Additional high-technology transit and highway projects (light-rail, bus rapid transit, high-occupancy vehicle lanes, etc.), developed from the Alternatives Analysis Project (New Starts) can be included in an additional Long-Range Plan when funding is identified. This would include any locally preferred transit and highway related alternatives for the five corridors undergoing analysis.

**Congestion Management**

**Signal and Intersection Projects**
These appear as separate sections of the projects list because of the importance in reducing vehicle emissions. Intersection Improvements projects ease the flow of traffic through existing intersections without adding capacity. Such projects include addition of left turn lanes (including
continuous bi-directional left turn lanes) or traffic flow improvements that remove existing bottlenecks to traffic flow. Signal Interconnect projects are identified that increase the average speed of autos through a series of congested intersections, thereby reducing emissions. Projects selected are typically classified as exempt, meaning they do not undergo the rigorous process of conformity determination for their effect on the area’s air quality, intersection projects are exempt under the guidelines of 40 CFR, Part 93, Section 127; traffic signal synchronization projects may be approved, funded, and implemented without a conformity determination under the guidelines 40 CFR, Part 93, Section 128. However all regionally significant projects must in included in all future conformity determinations.

Signalization projects in the 2030 Long Range Plan update span US-31 from Gardendale to Bessemer, US-78 west and US-78 east, US-11 from Bessemer to Trussville, SR-75 from Huffman to Pinson, SR-79 from I-59 through Tarrant as well as SR-149 and Lakeshore Parkway. These projects will begin to finish a system wide series of signalization projects along state routes accomplish with Birmingham Attributable funds.

Commuter Services Programs
The CommuteSmart Commuter Services program began as a demonstration project in 1999. It is now in its fifth year, and is no longer a demonstration program, but a key component of the Birmingham Congestion Management System. The program has grown in popularity and success over the years. In addition to the carpool and vanpool programs, the CommuteSmart Commuter Services program has also aided several of the region’s large employers to establish worksite trip reduction programs by providing access to resources such as the federal Commuter Choice tax incentives, as well as providing direct assistance in establishing and/or formalizing parking, telecommute, and alternate work schedule policies. Funding is included for the continuation of ride-sharing and vanpooling promotion activities at current levels.

Freight and Goods Movements Priorities
Intermodal Access Projects
Intermodal facilities are those sites or structures where persons or goods can transfer or can be transferred from one mode of transportation to another. The current Intermodal Management Plan was developed in 1996 in response to Section 1304 of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. Facilities examined included bus transit facilities, pipeline terminal facilities, port facilities, railroad facilities, and trucking facilities.

Concerns identified in the study included the identification of locations where maneuvering is difficult, where traffic signals may be needed and where merging lanes may be needed; and locations with congestion, inadequate road signing, inadequate pavement and inadequate clearance. Resolutions of these types of problems are usually relatively low cost capital improvement projects. The study identified over 15 projects to come forward to the Long Range Transportation Plan. Several of the identified projects had also been identified as capacity and safety projects regardless of their intermodal implications.

ITS and ITS Related Projects
The State of Alabama had begun a major ITS initiative in the Birmingham metropolitan area. The funding for this initiative is the Congestion Mitigation and Air Quality (CMAQ) program. The development of the metropolitan Birmingham ITS system was undertaken without benefit of a written set of goals, objectives and strategies for the regional system, ALDOT, the MPO and critical stakeholders are currently developing these goals, objectives and strategies. This system developed initially from ALDOT’s Congestion Management Plan for State routes
completed in 1995. The system is supplemented by complementary ITS system projects in Birmingham, Hoover and Vestavia Hills. A highly visible component of the overall program is the Alabama Service and Assistance Patrol (ASAP), which respond to Interstate incidents in an effort to clear the accident and return traffic flow to normal. One of the principal objectives of this project is the creation of a communications infrastructure to help integrate the highway and emergency service agencies in the Birmingham area. The project intends to connect CCTV cameras, vehicle detection system capabilities, and dynamic message sign control software, advanced traffic signal control and incident/congestion tracking and management. Current projects for this system have been moved to 2010 to allow for development and review of this element of the plan.

**Bicycle and Pedestrian Project Priorities**

The existing Birmingham Area Long Range Plan with its' current horizon year of 2030 has been reviewed for content and applicable projects. No significant changes have been required to the existing project components or strategies. Bicycle and pedestrian projects continue to move slowly but steadily toward completion. The 2030 LRTP relies on the work done during the Birmingham Area Bicycle, Pedestrian & Greenway Plan of 1996. A complete listing of all current and future projects is included in the Birmingham Area Long Range Plan project listing section. All projects are identified and mapped, potential project sponsors are noted and conformity status determined. The 2030 Long Range Plan conformity test does not take any credit either on model or off model for VMT reduction attributable to bicycle or pedestrian projects. However, all potential bicycle and pedestrian projects are evaluated for VMT reduction before moving into the bi-annual Transportation Improvement Program (TIP).

**Additional Non-Capacity Projects**

This category of projects represents the entire set of off model system improvements not accounted for previously. The Clean Air Act, codified as CFR 40, identifies multiple classes of projects that may be advanced to construction and are exempt form a conformity determination of a Long Range Plan. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. Projects listed in this section of the 2030 Long Range Plan include:

- **Air Quality Projects**
  
  Funding is included for the continuation of educational efforts of the Ozone Awareness program. The Ozone Awareness program is strengthening its link to the CommuteSmart Commuter Services program and public transportation, and is pursuing joint messaging as well as promoting the services offered by both as viable commute options.

- **Safety**
  
  Safety issues are one of the Federal Highway Administration's main emphasis areas, and projects that designed to address safety concerns are exempt from conformity review. In order to ensure that transportation safety concerns are being attended to within the Birmingham MPO planning area, the Regional Planning Commission of Greater Birmingham established a Highway/Traffic Safety Committee that extends beyond the two county MPO planning area, but covers each of the six counties served by RPCGB. This committee is oriented towards traffic and law enforcement professionals. However, the committee is not geared exclusively towards law enforcement, and actively seeks participation from the public, health care agencies, and the traffic engineering, business and education communities. Meeting monthly, the committee structure provides a forum where problems can be identified and projects implemented at the grass roots level. Highway and Traffic Safety problems may be addressed through educational approaches (correct use of child
restraint systems, defensive driving for older drivers, promoting bike helmet use), enforcement techniques, (speeding blizzes, seat belt use, DUI) or engineering solutions (warrant studies, pedestrian cross-walks, signage). Funding for specific projects can come from local, state, or federal sources. It might also come from a combination of resources. This process is still maturing and will evolve over time into a system for developing projects for entry into the LRTP.

Projects funded under the safety category include bridge replacement and rehabilitation projects, lighting upgrades, pavement rehabilitation and resurfacing projects, Interstate ramp modifications (U.S 280/I-459), at-grade railroad crossing mitigation projects, and non-capacity turn lane projects.

- Other Projects
  Specific activities which do not involve or lead directly to construction, such as; planning and technical studies, grants for training and research programs, planning activities conducted pursuant to Titles 23 and 49 U.S.C., federal-aid systems revisions, engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action, noise attenuation, emergency or hardship advance land acquisitions (23 CFR 712.204(d)), acquisition of scenic easements, plantings, landscaping, etc., sign removal, directional and informational signs, transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities) and repair of damage caused by natural disasters, civil unrest, or terrorist acts.

Transportation Planning Process
In general, the 2030 Birmingham Long Range Transportation Plan covers the transportation systems of the jurisdictions comprising the Birmingham metropolitan planning area as well as the state transportation system that is geographically located within the metropolitan planning area. The Birmingham LRTP considers the multimodal, interdependent nature of the region’s transportation system, and addresses highways, public transportation, bicycle and pedestrian facilities, as well as projects and programs to better manage transportation demand and congestion.

The MPO is comprised of representatives from the City of Birmingham, Jefferson County, Jefferson County Municipalities, and Shelby County. Representation is based upon population for each district. Also, representatives from Alabama Department of Transportation (ALDOT), Birmingham-Jefferson County Transit Authority (BJCTA) and Jefferson County State Legislative Delegation sit on the MPO.

The MPO has one standing subcommittee, namely the MPO Subcommittee. The MPO Subcommittee has an ad-hoc TIP Subcommittee. Two standing committees make recommendations to the MPO. These committees include the Transportation Technical Committee and the Transportation Citizens Committee. The Technical Committee has an ad-hoc ITS Subcommittee. The Citizens Committee has four subcommittees including the Air Quality Subcommittee, the Nominating/Membership Subcommittee, the Public Involvement Subcommittee and the Transit Subcommittee. The Citizens Committee, Technical Committee and MPO Subcommittee provide input to the full MPO. The RPC/MPO Coordinating Committee is a subcommittee of the MPO and was established to improve coordination between the RPC and the MPO, specifically integrating MPO transportation plans with other regional comprehensive and land development plans.
In terms of determining which projects to pursue within the Unified Planning Work Program, the MPO consults the Regional Planning Commission’s Annual Work Plan. This work plan outlines the planning goals and group tasks for the agency as a whole. Elected officials who sit on the agency’s Executive Committee develop the document. In addition to this, the MPO receives an annual emphasis letter from the Alabama Department of Transportation and the Federal Highway Administration that outlines goals and objectives that metropolitan areas need to pursue. Finally, the MPO works with the BJCTA to identify tasks. (See enclosed document).

**Public Involvement**

The Birmingham Metropolitan Planning Organization is continually working to improve public involvement in the overall planning process. The MPO acknowledges that this process could be better, but by the same token, has made great strides to ensure that the region’s citizenry are actively involved in the transportation planning process, particularly as they relate to specific projects. Most projects that are currently underway are overseen by task forces that include citizen, business and public representation. This follows the model that was established by the Regional Growth Alliance. The regularly scheduled meetings held by these groups provide opportunities for local input in the projects. Additionally, the MPO includes the public in the transportation decision making process, and includes regular monthly meetings of a Transportation Citizens Committee. This committee has the opportunity to review projects and programs that come before the MPO, requests for amendments and/or changes to both the Long Range Transportation Plan and the Transportation Improvement Program, and other adopted planning documents. Public involvement events associated with all major planning studies are also conducted.

In January 2004, the MPO produced the updated *Documentation of the Transportation Planning and Public Involvement Process* that outlines the circumstances under which public meeting are held, the notification process and how meetings are conducted and the evaluation methodology for measuring the effectiveness of the public involvement process. Public involvement meeting results are documented and distributed to the MPO subcommittee, MPO and the RPCGB, and posted on the MPO/RPCBG website and in libraries throughout the metropolitan planning area. Information is made available to citizens, affected public agencies, private transportation providers and other segments of the community. The evaluation component of the process contains quantitative and qualitative indicators or effectiveness. An evaluation form is distributed at the meeting that solicits information on how attendees heard about the meeting and their opinion on the format and implementation of the meeting. The document includes comments provided to BJCTA on development of an amended public involvement process for that organization.

**Environmental Justice**

The MPO produced *Process & Approach to Environmental Justice* in January 2003 and is in the process of updating that report. Three principles were identified in the 2003 report to ensure environmental justice considerations are integrated into the transportation planning and development process.

- Continued evaluation of the public involvement process to ensure that it adequately eliminates any participation barriers for the active involvement of low-income and/or minority populations in regional transportation decision making.
- Use of analytical capabilities to assess whether transportation programs and projects place a disproportionately high and adverse impact on low income and minority populations.
• Identify residential, employment, and transportation patterns of low income and minority populations so that their needs can be identified and addressed, and the benefits and burdens of transportation investments can be fairly distributed.

The MPO continues to make improvements to its public involvement process by improving contacts with minority media, radio, TV and print as well as by adding more names to the minority/low income portion of the master contacts mailing list. The agency also has developed closer partnerships with agencies that represent minority and/or low-income groups and uses focus groups to better determine the needs of low-income/minority populations.

Issues that directly relate the region’s overall future including issues relating to the quality of life such as air quality, congestion, and economic development have been addressed and incorporated. The development of the 2030 LRTP includes five major planning tasks that are described more completely throughout this document. These task areas include:

**Fiscal Capacity and Project Costs**

The 2030 Birmingham Long Range Transportation Plan’s affordability is a major issue, as the investment element must fall within the fiscal constraints identified in the analysis of the region’s long-range financial capacity. A conservative approach to developing revenue forecasts was used based on analysis provided by the Alabama Department of Transportation.

**Socio-Economic Data to 2030**

Federal regulations governing the metropolitan transportation planning process require that the latest planning assumptions available be used in the development of a long range transportation plan, and that such a plan maintain, at a minimum, a 20-year horizon. For these reasons, the forecasts for populations, households, and employment were updated to year 2030. Data is developed for small geographic areas called transportation analysis zones (TAZ) throughout the region. A detailed explanation of how this was accomplished is included later in this document.

**Prioritization Process**

Several factors influence how the MPO establishes project priorities. One factor is the RPC Work Plan. A second factor is the goals established under TEA-21 that have been incorporated into the project ranking system. A third factor is balancing these goals with funding source eligibility from STP, Enhancement, CMAQ and other funding categories.

That being said, the Birmingham Metropolitan Planning Organization conducts project prioritization as a two-dimensional process. First, a policy-level evaluation of projects is conducted by the Metropolitan Planning Organization’s member committees, and jurisdictions and/or State agencies submitting candidate projects are asked to provide a justification for the candidate project, illustrating how well the projects support regional goals and objectives. Project submittals are then technically evaluated by the Birmingham MPO staff based on approved analysis criteria and methodologies, and include consideration of model outputs as well as subjective criteria.

The MPO incorporates the TEA-21 Planning Factors of economic vitality, safety and security, accessibility and mobility, environment, integration and connectivity, system management and preservation into both its Long Range and Short Range Transportation Plans. These seven factors were condensed into five transportation planning goals and will be discussed in Chapter 4 of this document.
The MPO developed evaluation criteria or performance indicators for each goal and uses these criteria as outlined in the document Areawide Transportation Planning Goals to evaluate and rank projects submitted for inclusion in the Transportation Improvement Program. The Economic Vitality goal, for example, evaluated projects on the following measures: number of employees per square mile within a 2-mile wide corridor of the project, the future year percentage change of employees within a 2-mile wide corridor of the project, and the number of low income households within a 2-mile wide corridor of the project. Each measure has a specific ranking methodology and range of point scores. The total maximum points for the Economic Vitality goal are 18 out of 100 possible points. This system has been in place since 1992, and all projects included in the TIP and LRTP since that time have addressed these planning factors.

Evaluation of Network Performance Measures
Once a list of projects has been identified and evaluated through the prioritization process, consideration was given to the necessary funding needed to preserve, maintain, and operate the existing transportation system. From this, a draft of the preferred Long Range Transportation Plan programs and projects is developed. This array of programs, projects, and strategies is presented to the public in order to obtain their reaction and comments to the mix of projects. Once responses to public comment have been completed, a final draft of the Long Range Transportation Plan programs and projects is developed and the complete package of projects is evaluated against performance measures including:

- Congestion as measured by Volume/Capacity
- Amount of Delay
- Air Quality Conformity
- Transportation System Accessibility

Birmingham Metropolitan Planning Organization Approval and Documentation
Following the final public hearing, Birmingham MPO staff will prepare responses to the comments received during those meetings and prepared a public involvement report. That report is included as an Appendix C to this document. The Birmingham Metropolitan Planning Organization is set to approve the LRTP in March 2006, ahead of the April 2006 Air Quality Conformity deadline. Upon approval of the document by the MPO, copies of the final document and the accompanying appendices will be finalized, printed, and distributed.

Transportation Improvement Program Development Summary
Federal law charges Metropolitan Planning Organizations (MPO) with the responsibility for developing and approving the Transportation Improvement Program. In cooperation with the Alabama Department of Transportation (ALDOT), the Birmingham-Jefferson County Transit Authority (BJCTA), and local governments, the Birmingham MPO programs projects funded with Surface Transportation Program (STP)-Birmingham attributable. The MPO directly programs funds for STP-Enhancement, and Congestion Mitigation and Air Quality (CMAQ) funds. In addition, the Birmingham MPO also reviews ALDOT and BJCTA submitted projects for consistency with the LRTP.

The Birmingham Transportation Improvement Program (TIP) specifically identifies the federally funded transportation improvements and management actions to be completed by ALDOT, BJCTA, local governments, and other sponsors over a 5-year period.

The Long Range Transportation Plan serves as a guide for the development of a multimodal transportation system that addresses existing needs as well responds to future growth. It is understood that the LRTP also influences how growth occurs by specifying regional
transportation goals, policies, and strategies that support major capital improvements that advance the objectives of the plan.

The TIP will specifically identify and program projects for federal funding in order to implement the Long Range Transportation Plan. The TIP may also fund studies that advance projects programmed into the visionary element of the LRTP. In this way, these projects might also be advanced in readiness so that they might become elements in the fiscally constrained Long Range Transportation Plan. Finally, the TIP also notes major state and locally funded transportation projects that are ongoing in the Birmingham region.

As required by federal law, the TIP must be fiscally constrained to funds expected to be available. All projects selected to receive federal surface transportation funds must be identified in the TIP.

The TIP is prepared and adopted by the Birmingham Metropolitan Planning Organization in cooperation with ALDOT, and the BJCTA. A separate document, A Policy on the Procedures for Preparing the Birmingham Transportation Improvement Program, is being prepared by MPO staff to articulate the policies for developing the TIP and selecting projects to be included. This policy document, upon its completion, will be reviewed and modified as necessary by the MPO and both state and federal partners. Once a final policy has been developed, the MPO membership will approve the document and it will be applied in the development of the next TIP.

Air Quality Conformity Process
The LRTP and TIP for Jefferson and Shelby Counties follows the metropolitan planning process established in federal regulations for metropolitan transportation planning. This metropolitan planning process establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas. Program oversight is a joint FHWA/FTA responsibility.

Provisions retained from previous legislation in the metropolitan planning process delineated in TEA-21 include:

- Local officials, in cooperation with the State and transit operators, remain responsible for determining the best mix of transportation investments to meet metropolitan transportation needs.
- Metropolitan Planning Organizations are responsible for adopting the plan; the Governor and MPO approve the transportation improvement program.
- A 20-year planning perspective, air quality consistency, fiscal constraint, and public involvement established under ISTEA.
- A Congestion Management System is still required in urbanized area larger than 200,000 population metropolitan areas.
- DOT certification of the planning process in urbanized area larger than 200,000 population metropolitan areas.
- An emphasis on alternatives to capacity additions is retained through the Single Occupant Vehicle project limit in urbanized area larger than 200,000 population metropolitan areas, which are non-attainment areas for air quality.
In TEA-21, §1203(f), the previous sixteen planning factors from the Intermodal Surface Transportation Equity Act (ISTEA) are consolidated into seven broad areas to be considered in the planning process:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety and security of the transportation system for motorized and non-motorized users;
3. Increase the accessibility and mobility options available to people and for freight;
4. Protect and enhance the environment, promote energy conservation and improve quality of life;
5. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
6. Promote efficient system management and operation; and
7. Emphasize the preservation of the existing transportation system.

As discussed previously, the Birmingham MPO has taken these seven factors and combined them into five (5) key emphasis areas, using them also to establish overall regional goals for the movement of people and goods.
Chapter 2: Where We Are, Where We Are Going: A Profile of the Birmingham Region

Introduction
The Regional Planning Commission of Greater Birmingham is one of twelve regional offices within the State of Alabama committed to serving the local municipal and county governments within each region by providing coordinated and continued regional planning services. The Commission serves as the staff for the Metropolitan Planning Organization, the group of local elected officials designated by the state as responsible for area-wide transportation planning. The Metropolitan Planning Organization approves an annual work program (Unified Planning Work Program) that includes a task for socioeconomic data and the development of demographic projections.

The Projections Program was developed over twenty years ago within the Transportation Division to produce county and sub-county demographic and socioeconomic variables for the Birmingham Metropolitan Planning Organization for specific use in traffic modeling. The current year estimates and projections are developed for various levels of geography and are used as input to the regional traffic assignment model used for development of the Long Range Transportation Plan and other transportation products.

Transportation Challenges
Challenges to transportation planning, particularly at the regional level, go beyond simple cause and effect solutions in individual congested corridors. Long Range Transportation Planning, at a minimum, must consider:

- Growth rates
- Development patterns
- Socio-economic structure
- Regional travel demand
- Environmental concerns
- Funding availability

Each of these items is interrelated, and is affected by the region’s transportation system.

Growth Challenges
The expected growth within the Birmingham region in terms of population and employment continues to occur at high levels. Housing and population growth in the region’s southern suburbs is continuing to expand exponentially. Housing growth is also increasing rapidly in several of the North, Northeastern, and Southwestern suburban communities. Population is expected to increase from 825,973 people in 2005 to 963,732 people in 2030. This is an increase of seventeen percent (17%).

By the same token, employment in the Birmingham region is also expected to increase over the next 25-years. Between 2005 and 2030, employment is projected to increase from 431,756 jobs to 556,721 jobs, an increase of twenty-nine percent (29%). Unlike housing, employment growth does not appear to be contained to the suburbs, but in fact is occurring in both the urban core as well as the suburbs. The majority of the region’s employment growth is still occurring in the region’s core areas, and is associated with the expansion of the University of Alabama Birmingham and the many medical and healthcare associated facilities located in close proximity, though the retail and service industries will continue to follow housing developments in the suburbs. Figure 2-1 illustrates better where population growth is occurring within the 2-county Birmingham region. Figure 2-2 shows the change in employment for the same region.
Figure 2-1: Population Change 2000 – 2030

BIRMINGHAM METROPOLITAN PLANNING AREA
Projected Population Change by Traffic Analysis Zone
2002 - 2030
Figure 2-2: Employment Change 2000 - 2030
As the region’s housing spreads outward from the core, and the majority of jobs occurs in the core, it is anticipated that there will be an increase in traffic congestion on the region’s interstate and radial arterial roadways. In addition, congestion on suburban roadways is anticipated to increase because these facilities are limited in number and capacity. Many of these facilities still reflect their formerly rural character.

Traditional suburban development patterns themselves contribute to congestion and increases in vehicle miles traveled. Circuitous streets, cul-de-sacs, the lack of connectivity between roadways and communities, and the separation of residential and commercial uses have resulted in an increased reliance on the automobile. The lack of direct bicycle or pedestrian ways from within subdivisions to arterial streets, commercial centers, or other community resources such as bus stops also increase trip lengths beyond what is considered to be a reasonable biking or walking distance. Developments such as suburban office parks are difficult to serve with conventional public transportation and retrofitting existing developed suburban areas so that they better accommodate a variety of transportation modes is costly.

**Socio-Economic Challenges**

**Jobs/Housing Balance** - Lack of balance between jobs and housing within an area can lengthen the average trip distance between home and work. This lack of balance also makes it less likely that a non-motorized mode of travel might be utilized, and that workers will not be able to find housing near their work. A jobs housing balance within an area does not, however, guarantee that people will live and work within the same community, and housing choices are based on a variety of factors including: the number of wage earners in a household; commute distances; commute times, and; housing affordability.

**Elderly and Disabled** - Both the elderly and disabled population within the Birmingham region are increasing. Between 2005 and 2030, the number of persons age 60 and older is expected to increase from 137,920 to 215,200, a change of fifty-six percent (56%). The overall population is expected to increase by seventeen percent (17%). The growth of the elderly and disabled populations will affect transportation agencies for many years to come. Because many elderly households have fewer children than did previous generations, have families that are geographically dispersed, and are living longer healthier lives they are also anticipated to be more mobile. However, the unavailability of family members to aid older individuals will likely mean that there is a greater reliance on conventional public transportation, and formal social service transportation providers.

**Environmental Challenges**

**Air Quality** - Emissions from motor vehicles are major contributors to ozone and fine particulate ($PM_{2.5}$) pollution in the Birmingham region. Ozone and $PM_{2.5}$ are the two pollutants for which the Birmingham region does not meet the National Ambient Air Quality Standards. Technological improvements in fuels and emissions controls have resulted in much cleaner motor vehicles over the last three decades. Without continued technological improvements, expected VMT growth may jeopardize the advances made toward improving air quality in the Birmingham region. Consequently, efforts to slow the growth of travel demand — as well as to improve traditional motor vehicle fuels, promote alternative fuels, improve emissions control technology, and educate the public about driving habits that reduce emissions — need to continue.
Demographic Profile

Geographic Levels
The RPC demographic and socioeconomic estimates and projections are prepared for multiple geographic areas. **Figure 2-3:** Geographic Hierarchy below illustrates the basic hierarchy of geographic levels and the total number of common geographic units for each level. The totals are as defined by the 2000 census on which the estimates and projections are based.

![Figure 2-3: Geographic Hierarchy](image)

Geographic Definitions
**County** - The primary legal division of every state except Alaska and Louisiana. A number of geographic entities are not legally designated as a county, but are recognized by the U.S. Census Bureau as equivalent to a county for data presentation purposes.

**Planning Districts** – Sub-county geographic levels defined by the RPC as aggregated census tract areas in order to easily maintain decennial census data for multi-decade comparison purposes. Jefferson County is divided into twenty-two planning districts while Shelby County is divided into eight. The districts identify similar areas of the county, and the geography does not change each decade as census tract geographies change each census year.

**Census Tracts** - A small, relatively permanent statistical subdivision of a county or statistically equivalent entity, delineated for data presentation purposes by a local group of census data users or the geographic staff of a regional census center in accordance with U.S. Census Bureau guidelines. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time they are established; census tracts generally contain between 1,000 and 8,000 people, with an optimum size of 4,000 people. Census tract boundaries are delineated with the intention of being stable over many decades, so they generally follow relatively permanent visible features. However, they may follow governmental unit boundaries and other invisible features in some instances; the boundary of a state or county (or statistically equivalent entity) is always a census tract boundary.
Traffic Analysis Zones (TAZ’s) - A statistical entity delineated by state and/or local transportation officials for tabulating traffic-related data - especially journey-to-work and place-of-work statistics - from a decennial census. A TAZ usually consists of one or more census blocks, block groups, or census tracts.

In addition, understanding the Birmingham region’s demographics is an important element of the meeting federal guidelines relating to environmental justice. According to the 2000 decennial census, sixty-four percent (64%) of the Birmingham Metropolitan Planning Organization’s population identified themselves as white. The remaining non-white population was comprised of thirty-four percent (34%) African-Americans, two percent (2%) Hispanic origin, one percent (1%) Asian, and; one percent (1%) Native-American or some other race. Minority community concentrations, mostly African-American, are generally centered within the City of Birmingham, the City of Bessemer, and in the communities located along the US 11 and US 78 corridors between the two. Other non-white community concentrations comprised mostly of individuals of Hispanic and Asian origin are located within the Cities of Birmingham, Hoover, and Pelham.

Year 2000 Census data indicates that the poverty rate in the Birmingham MPO service area is thirteen percent (13 %), comparable to both the national and state poverty rates of twelve percent (12%) and sixteen percent (16%) respectively. Persons aged 65 and older comprise thirteen percent (13%) of the MPO region’s total population, and is equal to that for the State of Alabama. Figures 2-4, 2-5, and 2-6 show the distribution on non-white, low-income, and persons age 65 and older within the Birmingham MPO service area. Figure 2-7 illustrates the change in these populations between year 2000 and the 2030 plan horizon.

Year 2030 population projections show that the two county MPO region’s population is estimated to increase by 146,250 persons, up from 817,482 in the LRTP base year of 2002. It can be reasonably expected that the number of non-white, low-income, and persons age 65 and older will also increase. However, data shows that the growth rate for the region’s Hispanic population is increasing faster than the region’s total population growth. Table 2-1 illustrates this growth in comparison to white, African-American and other non-white, population growth for the Birmingham region. In addition, without having conducted a cohort analysis of region’s population in order to determine migration rates (internal and external), birth rates, mortality, etc. accurately predicting the number of individuals age 65 and older that will be living within the Birmingham region is not possible.

Auto Ownership
The information in the following chart gives us an indication of one of the patterns affecting the increase in roadway congestion, auto ownership. The number of household without autos decreased for Alabama from 10.3% to 7.2%. For the nation, the percent of households with no vehicles decreased from 11.5% in 1990 to 9.3% in 2000, so overall we see an increase in auto ownership. Accompanying this trend in increased auto ownership is the national trend in decreased carpooling. Nationally, the percent of workers carpooling to work declined from 13.4% (1990) to 11.2% (2000) of all workers. The same trend was observed in most states. The impact of both trends is seen in the overall in the increase in congestion.
Figure 2-4: Non-White Population Distribution

Source: US Bureau of the Census, 2000 (SF1)

Legend:
- Highways
- Interstate Hwy
- US Highway
- Jefferson and Shelby County Line
- Railroads
- Parks
- Schools
- Hospitals
- Airports
- Churches
- Rivers
- Park Limits

TOTAL MINORITY:
- 11 - 99
- 100 - 999
- 1000 - 2999
- 3000 - 6567

Figure 2-4: Non-White Population Distribution
The Birmingham MPO defines low income as 120% of poverty, as defined by the U.S. Health and Human Services Department in year 2002 as $18,100 for a family of four. Using this methodology, low income is defined as those census tracts with a median household income less than or equal to $21,720.

**LOW INCOME:**

- The Birmingham MPO defines low income as 120% of poverty, as defined by the U.S. Health and Human Services Department in year 2002 as $18,100 for a family of four. Using this methodology, low income is defined as those census tracts with a median household income less than or equal to $21,720.

**Legend:**

- Highways
- Interstate Highway
- U.S. Highway
- Jefferson and Shelby County Line
- Railroads
- Parks
- Schools
- Hospitals
- Airports
- Churches
- Rivers
- Park Limits
- Airport Limits

**Figure 2-5: Low-Income Population Distribution**
Figure 2-6: Population Age 65 and Older
Table 2-1: Population and Racial Estimates and Projections 1990 - 2030

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Population</th>
<th>White</th>
<th>Black or African American</th>
<th>Asian or Pacific Islander</th>
<th>Other</th>
<th>Hispanic Origin</th>
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<tbody>
<tr>
<td>1990</td>
<td>746,578</td>
<td>503,756</td>
<td>234,674</td>
<td>3,751</td>
<td>4,397</td>
<td>3,285</td>
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<td>2000</td>
<td>805,340</td>
<td>509,281</td>
<td>272,823</td>
<td>8,028</td>
<td>15,207</td>
<td>13,340</td>
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<td>2005</td>
<td>825,973</td>
<td>507,143</td>
<td>287,694</td>
<td>10,531</td>
<td>20,605</td>
<td>18,813</td>
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<td>2010</td>
<td>854,848</td>
<td>511,064</td>
<td>304,737</td>
<td>12,903</td>
<td>26,143</td>
<td>24,426</td>
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<td>2015</td>
<td>883,722</td>
<td>514,753</td>
<td>321,775</td>
<td>15,340</td>
<td>31,854</td>
<td>30,195</td>
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<td>2020</td>
<td>910,393</td>
<td>517,088</td>
<td>337,364</td>
<td>17,731</td>
<td>38,210</td>
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<td>937,063</td>
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<td>352,446</td>
<td>20,413</td>
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<td>2030</td>
<td>963,732</td>
<td>518,899</td>
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<td>23,588</td>
<td>54,096</td>
<td>52,683</td>
</tr>
</tbody>
</table>

Source: RPCGB projections and W&P Economics, 2005

Employment
As pointed out previously, employment within the Birmingham MPO planning area is projected to increase by twenty-nine percent (29%), up from 431,756 jobs in 2005 to 556,721 in 2030. While the majority of the region’s new housing development is occurring in suburban areas, employment growth is occurring in both the urban core and suburban communities. The urban core which comprises the Downtown Birmingham, City Center, University of Alabama-Birmingham, Southside, and Lakeview areas represent the largest single concentration of employment in the region. There are currently more than 80,000 daily workers between these areas. Another 17,000 employees are expected work in the urban core by the 2030 plan horizon.
Other key concentrations of employment within the region include:

- The Over-the-Mountain Area - Lakeshore Corridor (Oxmoor, Wildwood, and Brookwood)
- Highway 280 Corridor - (Colonnade, Meadowbrook, and Brook Highland)
- Perimeter Park, and
- Trussville - (Tutweiler Farms Area between Interstate 59 and US 11)

These areas represent locations that had a total employment of 5,000 or more employees by census tract as of 2004. Figure 2-8 identifies these locations within the 2-county planning area and their employment intensity relative to one another and the total number of jobs located in each.

The growth of employment in these areas is beginning to influence travel patterns. The development of new employment and retail centers across the region is also beginning to impact transportation facilities by altering the demand for these facilities use. Changes in the travel market could include increased circumferential and suburb-to-suburb trips. Such changes are already being evidenced in the region’s major employment concentrations. Figure 2-9 shows the existing RPC planning districts, and for the purpose of this document, are used to provide a base of comparison for employment and commuting patterns. Table 2-2 provides and indicator of commuting patterns by looking at each of the Birmingham region’s five (5) major concentrations of employment and the planning districts from which the employees of each of these areas travel.

**Regional Transportation System Characteristics**

The Birmingham metropolitan area’s transportation system has developed in response to the needs of residential expansion, employment growth, and goods movement necessity. Monitoring and evaluating the performance of the transportation system is important to the system fulfilling its role as a key supporting element for the region’s ever expanding residential population and economy, both which contribute to the overall quality of life.

**Highway Transportation**

The highway network is at the core of the Birmingham region’s modern transportation system. The system consists of five different functional types of roadways – freeways, principal arterials, minor arterials, collectors, and local streets.

The Alabama Department of Transportation has jurisdictions over interstate and state routes within the region. Jefferson and Shelby counties are responsible for the majority of highways within their respective boundaries, and may share some of these responsibilities with the State or with local governments that have the technical and financial capabilities to do so.

The majority of the jurisdictions located within the metropolitan planning area are located on, adjacent to, or near one of the region’s many interstate highways. Currently forty percent (40%) of the region’s VMT occur on the interstate/freeway system. Figure 2-10 shows the Birmingham region’s existing transportation system.

**Public Transportation**

The Birmingham-Jefferson County Transit Authority operates regularly-scheduled bus service, the Metro Area Express (MAX), on more than 30 routes within the Cities of Birmingham, Bessemer, Fairfield, Homewood, Hoover, Mt. Brook, Tarrant, and Vestavia Hills. In addition, the Cities of Brighton, Lipscomb, and Midfield is western Jefferson County are also served by MAX.
Figure 2-8: Employment Concentrations

Source: US Bureau of the Census, 2000 (SF1)
### Table 2-2: Regional Employment Concentration Destinations by Employee Origins

<table>
<thead>
<tr>
<th>DISTRICT NAME</th>
<th>DISTRICT NUMBER</th>
<th>CITY CENTER/ SOUTHSIDE AREA</th>
<th>PERCENT OF TOTAL MPO COMMUTERS</th>
<th>HIGHWAY 280 AREA</th>
<th>PERCENT OF TOTAL MPO COMMUTERS</th>
<th>OVER THE MOUNTAIN AREA</th>
<th>PERCENT OF TOTAL MPO COMMUTERS</th>
<th>RIVERCHASE AREA</th>
<th>PERCENT OF TOTAL MPO COMMUTERS</th>
<th>TRUSSVILLE AREA</th>
<th>PERCENT OF TOTAL MPO COMMUTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTRAL AREA</td>
<td>01</td>
<td>170</td>
<td>0.23%</td>
<td>4</td>
<td>0.05%</td>
<td>35</td>
<td>0.18%</td>
<td>29</td>
<td>0.14%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>FIVE POINTS SOUTH</td>
<td>02</td>
<td>2,485</td>
<td>3.30%</td>
<td>60</td>
<td>0.70%</td>
<td>424</td>
<td>2.14%</td>
<td>285</td>
<td>1.37%</td>
<td>15</td>
<td>0.49%</td>
</tr>
<tr>
<td>SOUTH Shed/ AVONDALE/ CRESTWOOD</td>
<td>03</td>
<td>4,835</td>
<td>6.42%</td>
<td>184</td>
<td>2.12%</td>
<td>798</td>
<td>4.04%</td>
<td>526</td>
<td>2.52%</td>
<td>62</td>
<td>2.94%</td>
</tr>
<tr>
<td>EASTLAKE/ WOODLAWN</td>
<td>04</td>
<td>2,844</td>
<td>3.78%</td>
<td>173</td>
<td>2.00%</td>
<td>400</td>
<td>2.02%</td>
<td>245</td>
<td>1.18%</td>
<td>89</td>
<td>2.92%</td>
</tr>
<tr>
<td>TARRANT/ AIRPORT</td>
<td>05</td>
<td>1,239</td>
<td>1.65%</td>
<td>44</td>
<td>0.51%</td>
<td>159</td>
<td>0.80%</td>
<td>135</td>
<td>0.65%</td>
<td>19</td>
<td>0.62%</td>
</tr>
<tr>
<td>NORTH BIRMINGHAM</td>
<td>06</td>
<td>1,565</td>
<td>2.08%</td>
<td>83</td>
<td>0.96%</td>
<td>145</td>
<td>0.73%</td>
<td>201</td>
<td>0.96%</td>
<td>19</td>
<td>0.62%</td>
</tr>
<tr>
<td>PRATT CITY/ ENSLEY</td>
<td>07</td>
<td>4,441</td>
<td>5.90%</td>
<td>206</td>
<td>2.39%</td>
<td>941</td>
<td>4.76%</td>
<td>719</td>
<td>3.45%</td>
<td>79</td>
<td>2.60%</td>
</tr>
<tr>
<td>WEST END/ MIDFIELD</td>
<td>08</td>
<td>4,973</td>
<td>6.61%</td>
<td>231</td>
<td>2.68%</td>
<td>1,528</td>
<td>7.73%</td>
<td>837</td>
<td>4.02%</td>
<td>68</td>
<td>2.23%</td>
</tr>
<tr>
<td>HOMESWOOD</td>
<td>09</td>
<td>3,920</td>
<td>5.21%</td>
<td>279</td>
<td>3.23%</td>
<td>1,610</td>
<td>8.14%</td>
<td>781</td>
<td>3.75%</td>
<td>30</td>
<td>0.99%</td>
</tr>
<tr>
<td>MOUNTAIN ‌BROOK</td>
<td>10</td>
<td>4,985</td>
<td>6.62%</td>
<td>529</td>
<td>6.13%</td>
<td>1,074</td>
<td>5.43%</td>
<td>567</td>
<td>2.72%</td>
<td>24</td>
<td>0.79%</td>
</tr>
<tr>
<td>IRONDALE/ LEEDS</td>
<td>11</td>
<td>1,005</td>
<td>1.34%</td>
<td>184</td>
<td>2.13%</td>
<td>189</td>
<td>0.96%</td>
<td>154</td>
<td>0.74%</td>
<td>115</td>
<td>4.44%</td>
</tr>
<tr>
<td>CENTER POINT/ ROEBLICK</td>
<td>12</td>
<td>7,075</td>
<td>9.40%</td>
<td>519</td>
<td>6.01%</td>
<td>1,274</td>
<td>6.44%</td>
<td>915</td>
<td>4.39%</td>
<td>494</td>
<td>16.23%</td>
</tr>
<tr>
<td>GARDENDALE/ FUTONDALE</td>
<td>13</td>
<td>3,219</td>
<td>4.28%</td>
<td>240</td>
<td>2.78%</td>
<td>738</td>
<td>3.73%</td>
<td>342</td>
<td>1.64%</td>
<td>94</td>
<td>3.09%</td>
</tr>
<tr>
<td>ADAMSVILLE/ GRAYSVILLE</td>
<td>14</td>
<td>2,094</td>
<td>2.78%</td>
<td>154</td>
<td>1.78%</td>
<td>557</td>
<td>2.82%</td>
<td>290</td>
<td>1.39%</td>
<td>22</td>
<td>0.72%</td>
</tr>
<tr>
<td>PLEASANT GROVE/ HUEYTOWN</td>
<td>15</td>
<td>2,704</td>
<td>3.59%</td>
<td>130</td>
<td>1.51%</td>
<td>931</td>
<td>4.71%</td>
<td>675</td>
<td>3.24%</td>
<td>24</td>
<td>0.79%</td>
</tr>
<tr>
<td>FAIRFIELD</td>
<td>16</td>
<td>1,593</td>
<td>2.12%</td>
<td>100</td>
<td>1.16%</td>
<td>228</td>
<td>1.15%</td>
<td>254</td>
<td>1.22%</td>
<td>24</td>
<td>0.79%</td>
</tr>
<tr>
<td>MIESSEMB/ BRIGHTON</td>
<td>17</td>
<td>1,227</td>
<td>1.63%</td>
<td>115</td>
<td>1.33%</td>
<td>333</td>
<td>1.68%</td>
<td>476</td>
<td>2.28%</td>
<td>38</td>
<td>1.25%</td>
</tr>
<tr>
<td>SOUTH BESSEMB/ OXMOOR</td>
<td>18</td>
<td>1,929</td>
<td>2.56%</td>
<td>248</td>
<td>2.87%</td>
<td>514</td>
<td>2.60%</td>
<td>999</td>
<td>4.80%</td>
<td>14</td>
<td>0.46%</td>
</tr>
<tr>
<td>HOOVER/ VESTAVIA</td>
<td>19</td>
<td>7,980</td>
<td>10.60%</td>
<td>1,508</td>
<td>17.47%</td>
<td>3,179</td>
<td>16.08%</td>
<td>4,945</td>
<td>23.74%</td>
<td>84</td>
<td>2.76%</td>
</tr>
<tr>
<td>TRUSSVILLE</td>
<td>20</td>
<td>3,360</td>
<td>4.46%</td>
<td>260</td>
<td>3.01%</td>
<td>810</td>
<td>4.10%</td>
<td>625</td>
<td>3.00%</td>
<td>1,355</td>
<td>44.53%</td>
</tr>
<tr>
<td>HARRISON/ SAYRE</td>
<td>21</td>
<td>2,010</td>
<td>2.67%</td>
<td>109</td>
<td>1.26%</td>
<td>504</td>
<td>2.55%</td>
<td>304</td>
<td>1.46%</td>
<td>140</td>
<td>4.60%</td>
</tr>
<tr>
<td>MULBERRY FORKS/ NORTH JOHNS</td>
<td>22</td>
<td>785</td>
<td>1.04%</td>
<td>25</td>
<td>0.29%</td>
<td>186</td>
<td>0.94%</td>
<td>248</td>
<td>1.19%</td>
<td>35</td>
<td>1.15%</td>
</tr>
<tr>
<td>TOTAL JEFFERSON COUNTY</td>
<td>66,438</td>
<td>88.25%</td>
<td>5,385</td>
<td>62.40%</td>
<td>16,557</td>
<td>21.99%</td>
<td>14,552</td>
<td>69.85%</td>
<td>2,864</td>
<td>94.12%</td>
<td></td>
</tr>
<tr>
<td>NORTHWEST SHELBY</td>
<td>S1</td>
<td>1,190</td>
<td>1.58%</td>
<td>285</td>
<td>3.30%</td>
<td>435</td>
<td>2.20%</td>
<td>925</td>
<td>4.44%</td>
<td>30</td>
<td>0.99%</td>
</tr>
<tr>
<td>NORTHERN SHELBY</td>
<td>S2</td>
<td>1,744</td>
<td>2.32%</td>
<td>610</td>
<td>7.07%</td>
<td>450</td>
<td>2.28%</td>
<td>1,010</td>
<td>4.85%</td>
<td>43</td>
<td>1.41%</td>
</tr>
<tr>
<td>PELHAM/ ALABASTER/ HELINA</td>
<td>S3</td>
<td>1,445</td>
<td>1.92%</td>
<td>955</td>
<td>11.07%</td>
<td>324</td>
<td>1.64%</td>
<td>569</td>
<td>2.73%</td>
<td>18</td>
<td>0.59%</td>
</tr>
<tr>
<td>MONTICELLO</td>
<td>S4</td>
<td>2,605</td>
<td>3.46%</td>
<td>638</td>
<td>7.39%</td>
<td>1,174</td>
<td>5.94%</td>
<td>2,243</td>
<td>10.77%</td>
<td>39</td>
<td>1.28%</td>
</tr>
<tr>
<td>MIDDLE SHELBY</td>
<td>S5</td>
<td>584</td>
<td>0.78%</td>
<td>149</td>
<td>1.73%</td>
<td>319</td>
<td>1.61%</td>
<td>658</td>
<td>3.16%</td>
<td>20</td>
<td>0.66%</td>
</tr>
<tr>
<td>HARRISVILLE/ WILSONVILLE</td>
<td>S6</td>
<td>405</td>
<td>0.54%</td>
<td>124</td>
<td>1.44%</td>
<td>158</td>
<td>0.80%</td>
<td>229</td>
<td>1.10%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>SOUTHERN SHELBY</td>
<td>S7</td>
<td>569</td>
<td>0.76%</td>
<td>284</td>
<td>3.29%</td>
<td>178</td>
<td>0.90%</td>
<td>248</td>
<td>1.19%</td>
<td>19</td>
<td>0.62%</td>
</tr>
<tr>
<td>TOTAL SHELBY COUNTY</td>
<td>8,842</td>
<td>11.75%</td>
<td>3,245</td>
<td>37.60%</td>
<td>3,218</td>
<td>16.27%</td>
<td>6,281</td>
<td>30.15%</td>
<td>179</td>
<td>5.88%</td>
<td></td>
</tr>
<tr>
<td>TOTAL MPO COMMUTERS</td>
<td>75,280</td>
<td>100%</td>
<td>8,630</td>
<td>100%</td>
<td>19,775</td>
<td>38%</td>
<td>20,833</td>
<td>100%</td>
<td>3,043</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
Figure 2-10: Birmingham’s Existing Transportation System
BJCTA also provides the paratransit service VIP with in a quarter mile of their fixed-route service.

**Coordinated Social Service Transportation**
The Central Alabama Coordinated Social Service Transportation provider (CLASTRAN) operates demand responsive services within Jefferson County in addition to the fixed-routes provided by the BJCTA. CLASTRAN services are provided as a function of the region’s Jobs Access Reverse Commute program, and works cooperatively with the Jefferson County Workforce Development Office to assist low-income individuals to reach suburban jobs that are not served by regular fixed-route transit service. In addition to this service, CLASTRAN provide additional capacity to the BJCTA’s VIP service, assisting the BJCTA to meet the requirements of the American’s with Disabilities Act. Other than this, the majority of CLASTRAN service within Jefferson County is outside of the BJCTA service area. Efforts are underway to better coordinate services between CLASTRAN and MAX.

In addition to service provided within Jefferson County, CLASTRAN also operates demand responsive transit service and social service transportation services in Shelby County under contract with the Shelby County Commission. Finally, CLASTRAN operates limited fixed-route transit service, demand responsive transit service, and social service transportation services in Walker and St. Clair counties, both directly adjacent to the MPO planning area. Efforts are underway to expand CLASTRAN service into Blount and Chilton Counties as well.

**Railroad Transportation**
Railroads provide important long-haul connections between shippers and consignees. Several railroads, including Class I, short-haul, and terminal rail companies serve the region. Amtrak (National Railroad Passenger Corporation) provides rail service between Birmingham and the Mississippi and Louisiana Gulf Coasts, as well as service between Birmingham and Atlanta that eventually connects with Washington, D.C. Efforts are underway now to ensure that the Birmingham region is included in the next round of federal high-speed rail corridor studies.

**Bicycle and Pedestrian Transportation**
Bicycling and walking are legally permitted travel modes along all of the region’s roadways with the exception of the interstate highway system where non-motorized travel is expressly prohibited. However, a lack of adequate bicycle and pedestrian facilities discourages bicycling and walking in many communities. In general the region’s overall built environment continues to grow without sufficient provisions for walking and bicycling, while traffic congestion continues to worsen thereby exacerbating the problem.

The importance of good multimodal street design as a means of improving mobility can not be over-emphasized and adequate provisions for all modes should be seriously considered in all projects. To that end, the Birmingham Metropolitan Planning Organization is increasingly working to encourage bicycle and pedestrian facilities in the design of roadway projects. The MPO’s Livable Cities Program offers financial assistance to communities for sidewalk construction. The MPO’s Greenway Program provides funding for trail corridor studies and construction. In addition, the Regional Planning Commission of Greater Birmingham continues to work with local governments to ensure the inclusion of bicycle and pedestrian provisions in comprehensive plans, subdivision regulations, and zoning ordinances.
The mobility of citizens with disabilities is especially restricted given the prevalence of obstructions and travel barriers including a lack of sidewalks, curb ramps, and pedestrian signalization. Such widespread deficiencies need to be addressed not only as a matter of compliance with the Americans with Disabilities Act of 1990 (ADA), but also as a matter of good design that results in a more functional and efficient transportation system.

**Performance Indicators**

Performance Indicators are measures that help to quantify aspects of the transportation system’s operations. Typically, these include measures such as vehicle miles traveled (VMT), vehicle hours of travel (VHT), speed of travel, etc. As described previously, socio-economic data are the basic information needed to understand future implications of congestion, patterns of movement, population and employment growth, etc.

Performance indicators are necessary tools in needs-based plan development because they answer questions like:

- “How do we improve transportation to serve people and commerce?”
- “What are we getting for our transportation investment?”
- “Are the proper transportation alternatives being identified and evaluated?”
- “Are this region’s transportation investments inefficient?”

Performance indicators are also used to keep track of the transportation system’s performance over time. They provide accountability and link strategic planning to resource allocation. Performance indicators, as a package, provide a sense of the extent to which the current and recommended transportation system programs and projects can help to move toward the achievement of goals. Below are a set of performance indicators that have been used to generally evaluate transportation system characteristics. It is important to note, that these indicators are not the same measures that are used to prioritize projects as those used to develop the Birmingham Transportation Improvement Program.

**System Overview**

The Birmingham region is included in an annual study of congestion in metropolitan areas conducted by the Texas Transportation Institute (TTI).\(^1\) Data included in TTI’s report is current up to 2003. According to TTI’s 2005 Urban Mobility Report, the Birmingham region is ranked 49\(^{th}\) in total annual delay among the nation’s 85 largest urbanized areas. Birmingham is ranked 43\(^{rd}\) in annual delay per traveler. Most telling in this data is the major cause of this delay. According to the TTI report, 57% of the delay is due to roadway incidents i.e. non-recurring congestion caused by vehicle crashes and/or other accidents.

Of the region’s Vehicle Miles Traveled (VMT) during the peak travel hours, forty-nine percent (49%) is made under congested conditions, an increase of 3% over the previous year. Forty-nine percent (49%) of the region’s total lane miles are congested, up from 48% in 2002. In order to maintain the current level of congestion (2003), 13 lanes mile of new roadway and 21,000 new transit riders and/or rideshare participants i.e. (carpool, vanpool, bicycle, telework, etc.) would need to be added to the Birmingham region’s transportation system annually. **Table 2-3** illustrates some of the TTI data. **Table 2-4** shows the amount of freeway and principal arterial vehicle miles of travel occurring during the average day and illustrates how Birmingham compares to other metropolitan areas within its peer group (peer groups are determined by population size and land area).

---

\(^1\) 2005 Urban Mobility Report, Texas Transportation Institute, May 2005
### Table 2-3: Transportation System Performance Indicators

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Delay Total (Person Hours)</td>
<td>9,705,000</td>
<td>9,439,000</td>
<td>8,956,000</td>
<td>8,734,000</td>
<td>8,650,000</td>
</tr>
<tr>
<td>Annual Delay per Peak Traveler</td>
<td>27</td>
<td>26</td>
<td>26</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Annual Delay due to Incidents</td>
<td>57%</td>
<td>57%</td>
<td>57%</td>
<td>57%</td>
<td>58%</td>
</tr>
<tr>
<td>Congested Travel (% of Peak VMT)</td>
<td>49%</td>
<td>46%</td>
<td>42%</td>
<td>42%</td>
<td>41%</td>
</tr>
<tr>
<td>Congested System (% of Lane-Mileage)</td>
<td>49%</td>
<td>48%</td>
<td>45%</td>
<td>45%</td>
<td>44%</td>
</tr>
</tbody>
</table>

Source: 2005 Urban Mobility Report, Texas Transportation Institute, May 2005

**Volume to Capacity**

An objective in developing an efficient transportation system is slowing the growth in trip lengths and congestion on the roadway network. VMT and vehicle hours traveled (VHT) are useful measures for estimating progress in achieving this objective. Volume-to-capacity (V/C) ratio is a measure of traffic demand on a facility (expressed as volume) compared to its traffic-carrying capacity. Identifying congestion through the use of daily roadway volume to capacity ratios is useful in assessing congestion deficiencies in the transportation system. The V/C ratio compares the level of traffic on the road against the road’s capacity. A lower V/C ratio indicates less congestion on a segment of roadway than does a higher V/C ratio. For example, a V/C ratio of 0.75 indicates that a traffic facility is operating at 75 percent (75%) of its capacity; a V/C ratio of 1.0 indicates that the facility is operating at full capacity. The closer the V/C ration gets to 1.0, the more congested the roadway segment. VHT represent the average daily total of hours driven by all vehicles on the roadway network.

In evaluating the performance of a roadway, V/C ratios should be considered together with the letter grade system, called Level-of-Service (LOS), which is a subjective measure of user perception of roadway conditions. LOS is a scale from A to F that is easy for technical and lay persons to understand and communicate. LOS is based heavily on speeds and travel time.

LOS A represents the best operating conditions and LOS F represents the worst. The 2001 Highway Capacity Manual provides the following description of LOS criteria:

- LOS A, B, and C – Conditions where traffic can maintain constant, free-flow speeds and move from lane to lane relatively free
- LOS D – Vehicle speeds begin to decline slightly due to increasing traffic flows. Speed and freedom of movement are severely restricted.
- LOS E – Conditions where traffic volumes are at or close to the roadway’s capacity, resulting in serious delays.
- LOS F – Breakdown in vehicular flow. This condition exists when the flow rate exceeds roadway capacity. LOS F describes traffic downstream from a bottleneck or breakdown.

V/C ratios are often linked to LOS in order to more easily communicate this quantitative measure. **Table 2-5** illustrates the LOS criteria established for the Birmingham metropolitan planning area.
Table 2-4: Metropolitan Regions TTI Traffic Congestion Ranking

<table>
<thead>
<tr>
<th>Urban Area</th>
<th>Freeway Daily VMT (000)</th>
<th>Freeway Daily VMT Lane/Mile</th>
<th>Principal Arterial Street Daily VMT (000)</th>
<th>Principal Arterial Street Daily VMT Lane/Mile</th>
<th>Travel Time Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akron OH</td>
<td>5435</td>
<td>435</td>
<td>2305</td>
<td>480</td>
<td>32</td>
</tr>
<tr>
<td>Albany-Schenectady NY</td>
<td>5820</td>
<td>550</td>
<td>3310</td>
<td>570</td>
<td>24</td>
</tr>
<tr>
<td>Albuquerque NM</td>
<td>4285</td>
<td>330</td>
<td>5370</td>
<td>990</td>
<td>45</td>
</tr>
<tr>
<td>Allentown-Bethlehem PA-NJ</td>
<td>4600</td>
<td>395</td>
<td>3330</td>
<td>490</td>
<td>37</td>
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<tr>
<td>Austin TX</td>
<td>9200</td>
<td>585</td>
<td>5240</td>
<td>740</td>
<td>69</td>
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<tr>
<td>Birmingham AL</td>
<td>9020</td>
<td>675</td>
<td>3470</td>
<td>450</td>
<td>49</td>
</tr>
<tr>
<td>Bridgeport-Stamford CT-NY</td>
<td>10000</td>
<td>600</td>
<td>2425</td>
<td>390</td>
<td>70</td>
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<tr>
<td>Charlotte NC-SC</td>
<td>7755</td>
<td>485</td>
<td>3650</td>
<td>515</td>
<td>66</td>
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<tr>
<td>Dayton OH</td>
<td>6870</td>
<td>550</td>
<td>3790</td>
<td>745</td>
<td>35</td>
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<tr>
<td>El Paso TX-NM</td>
<td>4030</td>
<td>280</td>
<td>3710</td>
<td>765</td>
<td>48</td>
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<tr>
<td>Fresno CA</td>
<td>3280</td>
<td>265</td>
<td>2720</td>
<td>435</td>
<td>40</td>
</tr>
<tr>
<td>Grand Rapids MI</td>
<td>4515</td>
<td>370</td>
<td>3710</td>
<td>570</td>
<td>40</td>
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<td>Hartford CT</td>
<td>10425</td>
<td>790</td>
<td>3420</td>
<td>595</td>
<td>39</td>
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<tr>
<td>Honolulu HI</td>
<td>5930</td>
<td>415</td>
<td>1855</td>
<td>265</td>
<td>47</td>
</tr>
<tr>
<td>Jacksonville FL</td>
<td>10275</td>
<td>735</td>
<td>7660</td>
<td>1135</td>
<td>50</td>
</tr>
<tr>
<td>Louisville KY-IN</td>
<td>11500</td>
<td>720</td>
<td>4850</td>
<td>770</td>
<td>59</td>
</tr>
<tr>
<td>Memphis TN-MS-AR</td>
<td>7815</td>
<td>555</td>
<td>7000</td>
<td>1180</td>
<td>53</td>
</tr>
<tr>
<td>Nashville-Davidson on TN</td>
<td>13085</td>
<td>955</td>
<td>6210</td>
<td>950</td>
<td>44</td>
</tr>
<tr>
<td>New Haven CT</td>
<td>7450</td>
<td>520</td>
<td>1765</td>
<td>315</td>
<td>44</td>
</tr>
<tr>
<td>Omaha NE-IA</td>
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<td>300</td>
<td>4375</td>
<td>695</td>
<td>48</td>
</tr>
<tr>
<td>Oxnard-Ventura CA</td>
<td>6700</td>
<td>355</td>
<td>3225</td>
<td>540</td>
<td>55</td>
</tr>
<tr>
<td>Raleigh-Durham NC</td>
<td>8145</td>
<td>610</td>
<td>4475</td>
<td>615</td>
<td>52</td>
</tr>
<tr>
<td>Richmond VA</td>
<td>10830</td>
<td>985</td>
<td>5120</td>
<td>900</td>
<td>29</td>
</tr>
<tr>
<td>Rochester NY</td>
<td>5540</td>
<td>500</td>
<td>1120</td>
<td>195</td>
<td>26</td>
</tr>
<tr>
<td>Salt Lake City UT</td>
<td>8300</td>
<td>530</td>
<td>3285</td>
<td>500</td>
<td>63</td>
</tr>
<tr>
<td>Sarasota-Bradenton FL</td>
<td>825</td>
<td>65</td>
<td>3730</td>
<td>535</td>
<td>61</td>
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<tr>
<td>Springfield MA-CT</td>
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<td>445</td>
<td>2830</td>
<td>530</td>
<td>21</td>
</tr>
<tr>
<td>Toledo OH-MI</td>
<td>4115</td>
<td>330</td>
<td>2540</td>
<td>550</td>
<td>28</td>
</tr>
<tr>
<td>Tucson AZ</td>
<td>3285</td>
<td>245</td>
<td>5715</td>
<td>775</td>
<td>67</td>
</tr>
<tr>
<td>Tulsa OK</td>
<td>7025</td>
<td>700</td>
<td>3375</td>
<td>535</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: 2005 Urban Mobility Report, Texas Transportation Institute, May 2005

Table 2-5: Birmingham LOS Criteria

<table>
<thead>
<tr>
<th>LOS</th>
<th>V/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>&lt; – 0.49</td>
</tr>
<tr>
<td>B</td>
<td>0.50 – 0.74</td>
</tr>
<tr>
<td>C</td>
<td>0.75 – 0.99</td>
</tr>
<tr>
<td>D</td>
<td>1.00 – 1.09</td>
</tr>
<tr>
<td>E</td>
<td>1.10 – 1.24</td>
</tr>
<tr>
<td>F</td>
<td>1.25 – =</td>
</tr>
</tbody>
</table>

Existing Roadway Conditions

Existing traffic conditions (year 2002) in the Birmingham region were determined by comparing traffic volumes to roadway capacities based on functional classification and number of lanes. Figure 2-11 shows year 2002 daily V/C ratios on the Birmingham metropolitan planning area’s roadway network. Figures 2-12 and 2-13 show the expected change in V/C ratios under the no-build and build scenarios. In 2002, 94.2% of non-local roadway miles demonstrated a V/C of less than 1.0,
LOS C or better. A breakdown by corresponding levels of service indicated that about 7.3% percent of these roadway miles were operating at LOS C, 1.7% at LOS D, 1.8% at LOS E, and 2.3% at LOS F.

It must be recognized that the Birmingham Area traffic model is a regional travel demand model. It is intended to show trends and relationships at the macro level and is not intended to be as precise as to show the number of vehicles utilizing a collector roadway at a specific time on a specific day. With this perspective, let us examine some of the system characteristics.

It is important to note, that a roadway’s capacity is a theoretical limit that describes how many vehicles per lane can flow through a segment during a set time-frame. The V/C ratios and the associated levels of service identified within the LRTP have been calculated from the observed model outputs and agreed upon by the Birmingham MPO. Even with an acceptable LOS grade, a V/C ratio may indicate that the same facility is operating at or near full capacity (e.g., 0.95 to 0.99). Conversely, road segments operating at deficient levels of service (e.g., peak-hour LOS E and F) may have an acceptable V/C ratio in cases where the adjoining intersections are not operating efficiently (e.g., cycle lengths on the traffic signals are long or the signal progressions are poor). Consequently, a high V/C ratio does not always imply that a facility has more volume than it can handle yet it is an easily recognizable measure at the regional level.

The 2002 Baseline Transportation System Network is comprised of the existing transportation network, and the projects that have committed funding (E+C) in 2002. That is, the base year for testing the regional travel demand model includes projects that are open to traffic and projects that are committed to funding in 2002. The No-Build (NB) model network year includes demographic and socio-economic data through the year 2030, but does not include any highway improvements beyond 2002.

As can be seen in Table 2-6, the percentage of the MPO area’s roadways experiencing V/C ratios of 1.25 or greater increases significantly between the base year of 2002 and the 2030 LRTP horizon, increasing from 2.3% in 2002 to 14.1% in 2030. This increase, in essence, shows the natural growth in traffic and the impact that this growth will have on the MPO area’s roadways in terms of congestion, and is inclusive of the baseline analysis year capacity increases.

| Table 2-6: Percentage of Miles of Congested Roadways: 2002 Baseline vs. 2030 No-Build Network | Volume/Capacity Ratio |
| --- | --- | --- | --- | --- | --- |
| Model Network Years Evaluated | LOS A & B | LOS C | LOS D | LOS E | LOS F |
| 2002 Baseline | <.75 | .75 - 0.99 | 1.00- 1.09 | 1.10- 1.24 | >1.25 |
| 2030 No-Build | 86.9% | 7.3% | 1.7% | 1.8% | 2.3% |
| 2002 Baseline | 68.3% | 8.9% | 3.6% | 5.1% | 14.1% |

In addition to testing the baseline roadway network against the 2030 no-build network, each of the model network years with the proposed roadway capacity projects expected to be open to traffic prior to the end of the network year was also tested. Table 2-7 illustrates the change between the 2002 base analysis year and the 2030 Build Network plan horizon in terms of the percentage of miles of congested roadways.
Figure 2-11: Base Year Roadway Level of Service
Figure 2-12: 2030 LRTP No-Build Scenario Roadway Level of Service
Figure 2-13: 2030 LRTP Build Scenario Roadway Level of Service
Table 2-7: Percentage of Miles of Congested Roadways
2002 Baseline vs. Build Network

<table>
<thead>
<tr>
<th>Model Network Years Evaluated</th>
<th>LOS A &amp; B</th>
<th>LOS C</th>
<th>LOS D</th>
<th>LOS E</th>
<th>LOS F</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002 Baseline</td>
<td>86.9%</td>
<td>7.3%</td>
<td>1.7%</td>
<td>1.8%</td>
<td>2.3%</td>
</tr>
<tr>
<td>2009 Build Network</td>
<td>84.7%</td>
<td>8.3%</td>
<td>2.4%</td>
<td>1.7%</td>
<td>2.7%</td>
</tr>
<tr>
<td>2015 Build Network</td>
<td>84.5%</td>
<td>7.6%</td>
<td>2.1%</td>
<td>2.4%</td>
<td>3.4%</td>
</tr>
<tr>
<td>2017 Build Network</td>
<td>82.2%</td>
<td>8.2%</td>
<td>2.1%</td>
<td>3.2%</td>
<td>4.3%</td>
</tr>
<tr>
<td>2025 Build Network</td>
<td>80.4%</td>
<td>9.3%</td>
<td>2.1%</td>
<td>2.9%</td>
<td>5.3%</td>
</tr>
<tr>
<td>2030 Build Network</td>
<td>77.6%</td>
<td>9.8%</td>
<td>3.2%</td>
<td>2.8%</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

As can be seen from the information provided in Tables 2-6 and 2-7, the increase in the percentage of miles of congested roadways for the 2030 Build network vs. the 2030 No-Build network is not as great between the base year and 2030 LRTP horizon. The percentage of miles of congested roadways for both the Build network and No-Build network is 4.3% and 11.8% respectively. What this information suggests is that while adding capacity to the area's roadways does not stop congestion, it helps to slow congestion vs. doing nothing at all. This also assumes that growth patterns continue to follow previous trends and that the addition of new facilities and additional capacity captures existing and projected trips and does not induce new development or trips.

**Trip Purpose**

Data is provided by transportation analysis zone, a unit of geography specifically designed for transportation modeling and planning. Existing data are entered into a travel demand model to determine the extent of need for transportation network improvements. Basic socio-economic data are needed for the trip generation module of the travel demand model to determine person trips. Since the model must be validated against present day conditions, the year 2002 was chosen as a base year for which information is available. Trips are generated by three main trip purposes. They are:

- Home-Based Work (HBW)
- Home-Based Other (HBO), and
- Non Home-Based Work (NHBW)

Table 2-8 shows that for the average weekday in the Birmingham region, the following trips are realized by purpose:

<table>
<thead>
<tr>
<th>Trip Purpose</th>
<th>Total Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBW</td>
<td>498,758</td>
</tr>
<tr>
<td>HBO</td>
<td>1,127,589</td>
</tr>
<tr>
<td>NHBW</td>
<td>542,315</td>
</tr>
</tbody>
</table>

Simulated volumes for the year 2002 are used to identify corridors of congestion, some of which show “below acceptable” driving conditions. Performance measures have been developed to analyze transportation system characteristics to show travel demand results.

Table 2-9 displays performance indicators for the 2002 Base Year, the 2030 No-Build scenario, and the 2030 Build scenario. The analysis of the 2030 No-Build against the 2002 Base Year illustrates the changes that would likely occur if no new projects and/or programs are implemented across the 25-year plan horizon. This in turn allows for the comparison of the 2030 Build scenario in order to determine what impacts the proposed changes to the regional
transportation system will have over time. Performance indicators utilized in the analysis include:

- Vehicle Miles Traveled
- Congested Vehicle Miles Traveled
- Transportation System Percentage Congested Vehicle Miles Traveled
- Average Trip Length, and
- Air Quality Emissions

Table 2-9: 2002 Regional AM Peak and 24-Hour Measures

<table>
<thead>
<tr>
<th>Indicator of Transportation Demand</th>
<th>2002 Baseline</th>
<th>2030 No-Build</th>
<th>Change</th>
<th>2030 Build</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vehicle Miles of Travel (VMT)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freeways</td>
<td>10,862,189</td>
<td>18,671,293</td>
<td>71.9%</td>
<td>22,263,807</td>
<td>105.0%</td>
</tr>
<tr>
<td>Arterials</td>
<td>9,780,931</td>
<td>16,055,329</td>
<td>64.1%</td>
<td>14,216,436</td>
<td>45.3%</td>
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<tr>
<td>Collector and Local Roads</td>
<td>6,509,227</td>
<td>12,792,157</td>
<td>96.5%</td>
<td>10,321,101</td>
<td>58.6%</td>
</tr>
<tr>
<td>All Roads</td>
<td>27,150,346</td>
<td>47,518,780</td>
<td>75.0%</td>
<td>46,801,342</td>
<td>72.4%</td>
</tr>
<tr>
<td><strong>Congested VMT (LOS E &amp; F)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freeways</td>
<td>3,325,154</td>
<td>15,526,383</td>
<td>366.9%</td>
<td>8,723,348</td>
<td>162.3%</td>
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<tr>
<td>Arterials</td>
<td>2,382,136</td>
<td>9,164,142</td>
<td>284.7%</td>
<td>5,974,465</td>
<td>150.8%</td>
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<tr>
<td>Collector and Local Roads</td>
<td>464,707</td>
<td>3,848,546</td>
<td>728.2%</td>
<td>1,713,748</td>
<td>268.8%</td>
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<tr>
<td>All Roads</td>
<td>6,171,997</td>
<td>28,539,071</td>
<td>362.4%</td>
<td>16,411,560</td>
<td>165.9%</td>
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<tr>
<td><strong>Percentage of Total Congested VMT (LOS E &amp; F)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freeways</td>
<td>12.30%</td>
<td>32.70%</td>
<td>20.40%</td>
<td>18.60%</td>
<td>6.30%</td>
</tr>
<tr>
<td>Arterials</td>
<td>8.80%</td>
<td>19.30%</td>
<td>10.50%</td>
<td>12.80%</td>
<td>4.00%</td>
</tr>
<tr>
<td>Collector and Local Roads</td>
<td>1.70%</td>
<td>8.10%</td>
<td>6.40%</td>
<td>3.70%</td>
<td>2.00%</td>
</tr>
<tr>
<td>All Roads</td>
<td>22.70%</td>
<td>60.10%</td>
<td>37.40%</td>
<td>35.10%</td>
<td>12.40%</td>
</tr>
<tr>
<td><strong>Average Vehicle Person Trip Length (in minutes)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work (HBW)</td>
<td>16.5</td>
<td>17.6</td>
<td>1.1</td>
<td>17.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Non-Work (Non-HBW)</td>
<td>11.3</td>
<td>11.4</td>
<td>0.1</td>
<td>11.3</td>
<td>0.0</td>
</tr>
<tr>
<td>All Trips</td>
<td>8.3</td>
<td>8.9</td>
<td>0.6</td>
<td>8.8</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>System Speed (mph)</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freeways</td>
<td>59.9</td>
<td>47</td>
<td>-12.9</td>
<td>55.7</td>
<td>-4.2</td>
</tr>
<tr>
<td>Arterials</td>
<td>42.6</td>
<td>32.6</td>
<td>-10</td>
<td>39.5</td>
<td>-3.1</td>
</tr>
<tr>
<td>Collector and Local Roads</td>
<td>8.1</td>
<td>8</td>
<td>-0.1</td>
<td>28</td>
<td>19.9</td>
</tr>
<tr>
<td>System Average Speed</td>
<td>34.7</td>
<td>27.7</td>
<td>-7</td>
<td>33.5</td>
<td>-1.2</td>
</tr>
</tbody>
</table>

Table 2-9 describes each of these performance indicators as used in the 2030 LRTP analysis. Measures are for travel within the 2-county Birmingham metropolitan planning region. Measures were determined for the 2002 Base Year, the 2030 No-Build scenario, and 2030 Build scenario. Additional performance indicators are utilized in various places throughout this document. Their definitions are described later.

Table 2-9 also describes the impacts of inaction and those of proposed changes to the regional transportation network by roadway facility classification in terms of vehicle miles traveled. Each of these performance indicators used in the 2030 LRTP analysis. Measures are for travel within the 2-county Birmingham metropolitan planning region. Measures were determined for the 2002 Base Year, the 2030 No-Build scenario, and 2030 Build scenario.
VMT was calculated for both the base year and the LRTP’s horizon years against 4,894 total lane miles in 2002 and 6,071 total lane-miles in 2030. These roads comprise the total of all lane miles for of classified roadways in the Birmingham metropolitan planning area. Table 2-10 illustrates this more clearly.

Table 2-10: VMT by Functional Classification

<table>
<thead>
<tr>
<th>Functional Classification</th>
<th>Lane Mileage 2002 Baseline VMT</th>
<th>2002 Baseline VMT</th>
<th>2030 VMT</th>
<th>2030 VMT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002 Total Lane Miles</td>
<td>% of Total</td>
<td>2002 Total Lane Miles</td>
<td>% of Total</td>
</tr>
<tr>
<td>Freeways</td>
<td>851</td>
<td>17.4</td>
<td>1,574</td>
<td>25.9</td>
</tr>
<tr>
<td>Arterials</td>
<td>2,046</td>
<td>41.8</td>
<td>2,354</td>
<td>38.8</td>
</tr>
<tr>
<td>Collector and Local Roads</td>
<td>1,997</td>
<td>40.8</td>
<td>2,143</td>
<td>35.3</td>
</tr>
<tr>
<td>All Roads</td>
<td>4,894</td>
<td>100</td>
<td>6,071</td>
<td>100</td>
</tr>
</tbody>
</table>

As shown in Table 2-10, the lane mileage for the region’s intestates and freeways is anticipated to increase by 84% between 2002 and 2030. This increase accounts for capacity improvements on existing facilities. This increase also accounts for the completion of Corridor X and Corridor X1, the proposed Northern Beltline. Overall, there is a 24% increase in the region’s total lane mileage.

The information presented in Table 2-10 tells a story. For starters, the importance of the region’s freeway routes is demonstrated in that they clearly carry a significant proportion of the two-county MPO planning area’s total classified roadway system’s VMT. Between the 2002 base analysis year and the 2030 plan year horizon, VMT occurring on the region’s roadways functionally classified as interstate and freeways is expected to increase by 105% for the build network. Under the no-build network, VMT occurring on these facilities would be expected to increase 71.9%. In addition, the proportion of the region’s total VMT occurring on both intestates and freeways in 2030 is anticipated to be about 47.6%, up 7.6% from 40% in the 2002 base analysis year. These percentages are particularly significant, especially since interstate and freeway routes only comprised 17.4% of the region’s total roadway lane mileage in 2002, and are expected to comprise 25.9% of the total lane mileage by 2030.

VMT occurring on arterial roadways is more balanced in that an estimated 36% of the total regional VMT occurs on roadways functionally classified as arterials which represent 41.8% of the total regional lane mileage. These numbers are anticipated to drop in 2030, with arterial roadways expected to carry 30.4% of the regional VMT and the total arterial lane mileage representing 38.8% of the total regional lane mileage. Presumably, the addition of interstate and freeway capacity will capture a significant percentage of the total VMT occurring on arterial roadways. However, the VMT on arterial roadways is still anticipated to increase 45% by the 2030 plan horizon. The lane mileage for roadways classified as arterials is anticipated to increase by 15% between the 2002 base analysis year and 2030 plan horizon.

Collector and local roads carried 24% of the regional roadway system’s total VMT in the base analysis year, while comprising 40.8% of the region’s total roadway network lane mileage. It is expected that Collector and Local Roads will carry 22% of the regional VMT in 2030 and comprise 35.3% of the region’s total lane mileage. As with arterial roadway, decreases in the proportionate share of VMT occurring on local roadways is likely due to the addition of capacity to the region’s interstate and freeway system. The VMT occurring on collector and local...
roadways, however, is expected to increase 59% by the 2030 plan horizon despite a modest 7% increase in lane mileage for these facility types between 2002 and 2030.

Overall, there will be an additional 24% (1,177) lane miles of roadway in 2030 and VMT will increase 72.4% (19,650,996 miles) from 27,150,346 in 2002 to 46,801,342 in 2030.

**Congestion Management System**

The 2030 LRTP includes an array of projects that support the MPO’s Congestion Management System. The Birmingham MPO has never taken the approach of measuring congestion but has concentrated on relief measures. To that end, the MPO continues to support an invigorated rideshare program through the CommuteSmart Commuter Services program.

The CommuteSmart Commuter Services program began as a demonstration project in 1999. It is now in its fifth year, and is no longer a demonstration program, but a key component of the Birmingham Congestion Management System. The program has grown in popularity and success over the years. During the 2004 reporting period, active participation in the CommuteSmart carpool program resulted in a total annual trip reduction of 65,520, of which 85% was realized during the Ozone Air Quality season. During the same reporting period, a total annual VMT reduction of 628,940 miles was also realized. The vanpool program recorded a total trip reduction of 37,128 and a total VMT reduction of 1.4 million miles during the 2004 reporting period. **Tables 2-11 and 2-12** below illustrate this.

### Table 2-11: 2004 Carpool Program Impacts

<table>
<thead>
<tr>
<th>Measure</th>
<th>Daily Reductions</th>
<th>Annual Reductions *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Trips</td>
<td>252 trips</td>
<td>65,520 trips</td>
</tr>
<tr>
<td>VMT</td>
<td>2,419 miles</td>
<td>628,940 miles</td>
</tr>
<tr>
<td>HC Emissions</td>
<td>3.73 kg</td>
<td>969.8 kg</td>
</tr>
<tr>
<td>NOx Emissions</td>
<td>3.75 kg</td>
<td>975.0 kg</td>
</tr>
</tbody>
</table>

### Table 2-12: 2004 Vanpool Program Impacts

<table>
<thead>
<tr>
<th>Measure</th>
<th>Daily Reductions</th>
<th>Annual Reductions *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Trips</td>
<td>143 trips</td>
<td>37,128 trips</td>
</tr>
<tr>
<td>VMT</td>
<td>5,512 miles</td>
<td>1,433,120 miles</td>
</tr>
<tr>
<td>HC Emissions</td>
<td>6.37 kg</td>
<td>1,656.2 kg</td>
</tr>
<tr>
<td>NOx Emissions</td>
<td>6.41 kg</td>
<td>1,666.6 kg</td>
</tr>
</tbody>
</table>

In addition to the carpool and vanpool programs, the CommuteSmart Commuter Services program has also aided several of the region’s large employers to establish worksite trip reduction programs by providing access to resources such as the federal Commuter Choice tax incentives, as well as providing direct assistance in establishing and/or formalizing parking, telecommute, and alternate work schedule policies. Funding is included for the continuation of ride-sharing and vanpooling promotion activities at current levels.

The CommuteSmart program continues to work in partnership with the transit operator and the local municipalities to utilize all available funding to continue and expand night, weekend and express transit routes.
Summary

Increasing roadway capacity certainly will help to slow congestion in the Birmingham region, more-so than not doing anything at all. However, increasing capacity cannot be the only answer for addressing long-term regional transportation issues, and multimodal solutions are needed. Addressing capacity alone does nothing to reduce vehicle miles traveled on most facilities, and in fact, the percentage increase of VMT is disproportionately more than the percentage increase in lane miles of roadway. This being said, it can be assumed that congestion benefits derived from capacity increases will eventually degrade over time because of the inability to provide adequate capacity to meet demand in a feasible fashion. Consideration to public transportation, travel demand management, and non-motorized travel should occur as transportation facilities are designed and implemented. They should also be taken into account as part of the overall land use planning and development process.

Several implications for addressing transportation issues through land use solutions as part of the overall planning process are also present within the analysis that occurs within this document. For starters, the regional travel demand model provided output that shows that home-based work trips in the 2-county MPO planning area make up only 23% of all trips. Non home-based work trips make up 25% of all trips. Home-based non-work trips, at 52% of all trips, clearly make up the majority of travel within the region. Land use strategies such as locating housing and employment in close proximity to one another might be considered in order to encourage and/or support shorter work trips. Other strategies might also include allowing community scale retail development to locate within or in close proximity to residential developments, or a mix of all three i.e. housing, retail, and employment in order to support shorter trip distances and even encourage non-motorized travel. Finally, land use concepts should clearly integrate transportation investments into the overall strategy for development. Connecting communities and appropriate land uses with multimodal facilities should be a priority of all development strategies.

Finally, the data clearly shows that there is an emphasis on developing and expanding the interstate and arterial roadway network. However, upon looking at the projects in the current 2030 LRTP, one can clearly see that the majority of projects listed are not located on the interstates but instead are on arterial, collector, and local roadways. Projects on these facilities have not progressed toward implementation in a timely fashion, primarily because of issues associated with raising local match monies needed to leverage federal funding. This speaks to another issue that needs to be addressed in more detail at a later time. Never-the-less, the emphasis on expanding interstate capacity and adding new interstate facilities to the network is clearly needed. First, expanding interstate capacity and adding new facilities will bring Birmingham more inline with its peer regions. It will also help to deal with the realities of growth in both population and employment that are occurring within the Birmingham region. Lastly, it will aid in addressing issues associated with the region’s long-term economic vitality, economic expansion, and economic sustainability. Such issues include freight movement through the region to and from major ports and hubs as well as the ability to attract industry.
Chapter 3: Where We Want to Be: Continuing Through the 21st Century

Regional Transportation Principles
In an era of scarce public financial resources, it is essential that public investments in the transportation system yield the greatest possible benefit. The guiding principles, goals, and objectives of the LRTP have been developed to serve as the plan’s fundamental foundation. The Birmingham Metropolitan Planning Organization continues the following principles to guide long range transportation planning priorities, policies, and actions.

The LRTP envisions a metropolitan region that is moving towards being more multimodal, meeting the demands of a 21st Century quality of life, and meeting the region’s needs for moving people and goods in an efficient manner. Towards that end, the LRTP uses as a guide the following principles:

Regional Transportation Goals
The Birmingham Metropolitan Planning Organization approved a set of goals to assist in the development of the 2025 Long Range Transportation Plan adopted in June 2002. The goals are built upon the guiding regional transportation principles. These goals were reaffirmed with the development of the 2030 LRTP adopted in July 2005, and are being reaffirmed again within this iteration of the LRTP.

These goals embody the spirit of the guiding federal transportation legislation – the Transportation Equity Act for the 21st Century (TEA-21), its successor SAFETEA-LU, and the 1990 Clean Air Act Amendments (CAAA). The LRTP also considers the goals of various programmatic and functional plans developed by the Birmingham MPO.

Goal 1: Economic Vitality
The Long Range Transportation Plan shall serve the region’s economic development needs by effectively and efficiently managing existing facilities, and improving the regional transportation system serving interstate and intrastate commerce across and between all modes of transportation.

Goal 2: Safety and Security
The Birmingham Long Range Transportation Plan shall ensuring that projects and programs consider the safety, security and timely movement of persons, goods, and services across and between all modes of transportation for both motorized and non-motorized users.

Goal 3: Accessibility and Mobility
The Birmingham Long Range Transportation Plan shall strive to maintain and improve the region’s quality of life by providing for projects and programs that support adequate access to transportation facilities and services to enhance the regional mobility of people, goods, and services across and between all modes of transportation regardless of geographic location, race, nationality, economic status, or physical disability.
Goal 4: Environmental/Air Quality
The Birmingham Long Range Transportation Plan shall protect, preserves, and enhance the environmental quality of areas directly or indirectly affected by transportation improvements. The Long Range Transportation Plan shall also promote transportation control measures that reduce transportation related emissions in order to meet and maintain national clean air standards.

Goal 5: System Management and Preservation
The Birmingham Long Range Transportation Plan shall provide an efficient and effective transportation system that preserves existing transportation facilities, improves system management and operations, identifies the needs for future growth and development, and meets those needs within adequate estimated federal, state, local and/or private funds.

Comparison of Goals and Federal Planning Factors
Required as part of metropolitan transportation plans nationwide, federal planning factors were taken into consideration by the Birmingham MPO in the development of the regional transportation goals. The LRTP goals were compared with the federal planning factors to ensure all factors were addressed. The results of this comparison are illustrated in Table 3-1 below.

Transportation Policies and Implementation Strategies
In order to realize the goals and move the region closer towards achieving a balanced transportation system, policies and implementation strategies were also formulated by the Birmingham Metropolitan Planning Organization. These policies are used to assist the MPO identify and/or determine MPO programs and projects. They also provide the MPO with guidance for administering programs as well as funding projects and other initiatives. Policies were developed cooperatively between the MPO membership and the MPO staff, and MPO staff identified strategies for each of the policies. The MPO goals, policies, and implementation strategies follow.
<table>
<thead>
<tr>
<th>Factor</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Vitality</td>
<td>Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency. The Long Range Transportation Plan shall serve the region's economic development needs by effectively and efficiently managing existing facilities, and improving the regional transportation system serving interstate and intrastate commerce across and between all modes of transportation.</td>
</tr>
<tr>
<td>Safety and Security</td>
<td>Increase the safety and security of the transportation system for motorized and non-motorized users. The Birmingham Long Range Transportation Plan shall ensuring that projects and programs consider the safety, security and timely movement of persons, goods, and services across and between all modes of transportation for both motorized and non-motorized users.</td>
</tr>
<tr>
<td>Accessibility and Mobility</td>
<td>Increase the accessibility and mobility options available to people and for freight. The Birmingham Long Range Transportation Plan shall strive to maintain and improve the region's quality of life by providing for projects and programs that support adequate access to transportation facilities and services to enhance the regional mobility of people, goods, and services across and between all modes of transportation regardless of geographic location, race, nationality, economic status, or physical disability.</td>
</tr>
<tr>
<td>Environment, Energy Efficiency and Quality of Life</td>
<td>Protect and enhance the environment, promote energy conservation, and improve the quality of life. The Birmingham Long Range Transportation Plan shall protect, preserves, and enhance the environmental quality of areas directly or indirectly affected by transportation improvements. The Long Range Transportation Plan shall also promote transportation control measures that reduce transportation related emissions in order to meet and maintain national clean air standards.</td>
</tr>
<tr>
<td>Transportation System Integration and Connectivity</td>
<td>Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight. The Birmingham Long Range Transportation Plan shall protect and enhance the integration and connectivity of the transportation system across and between modes for people and freight.</td>
</tr>
<tr>
<td>System Management and Operations</td>
<td>Promote efficient system management operations. The Birmingham Long Range Transportation Plan shall provide an efficient and effective transportation system that preserves existing transportation facilities, improves system management and operations, identifies the needs for future growth and development, and meets those needs within adequate estimated federal, state, local and/or private funds.</td>
</tr>
<tr>
<td>System Preservation</td>
<td>Emphasize the preservation of the existing transportation system. The Birmingham Long Range Transportation Plan shall provide an efficient and effective transportation system that preserves existing transportation facilities, improves system management and operations, identifies the needs for future growth and development, and meets those needs within adequate estimated federal, state, local and/or private funds.</td>
</tr>
</tbody>
</table>
GOAL 1 Economic Vitality
The Long Range Transportation Plan shall serve the region’s economic development needs by effectively and efficiently managing existing facilities, and improving the regional transportation system serving interstate and intrastate commerce across and between all modes of transportation.

POLICY The LRTP will provide for the economic vitality of the Birmingham region by supporting programs and projects that reduce travel delays attributable to recurring and incident related congestion.

- Provide support for projects that improve direct roadway connections and/or provide additional routes to the region’s primary and emerging employment centers.
- Lend support for expanded and/or improved transit services to, from, and within the region’s primary and emerging employment activity centers.
- Offer support to resources that help to reduce the overall regional as well as personal travel costs to commuters due to congestion.
- Offer support to programs and projects that specifically improve and/or ease the impediments to over the road freight movement and intermodal connections in a feasible manner.
- Provide support to implement technology, signal improvements, and other ITS related programs and projects that maximize the transportation systems efficiency and minimizes travel delay.
- Encourage programs and projects that provide travel choices and encourages the use of bicycle and pedestrian facilities.
- Identify prioritizing, and programming programs and projects that increase traveler safety on the region’s transportation system and reduce the cost of travel associated with safety concerns.
- Assist programs, projects, and activities that reduce transportation related air pollutants.

GOAL 2 Safety and Security
The Birmingham Long Range Transportation Plan shall ensure that projects and programs consider the safety, security and timely movement of persons, goods, and services across and between all modes of transportation for both motorized and non-motorized users.

POLICY The LRTP will provide for the safety and security of the Birmingham region’s transportation system by supporting programs and projects that increase traveler safety and increase the security of both people and goods.

- Assist transit providers in offering in their patrons safe and secure transit facilities and vehicles.
- Promote safe and efficient movement of freight and goods along the region’s transportation network to include air transportation, over the road transportation, rail transportation, and navigable waterways.
- Provide ongoing support for adequate lighting, signing, monitoring of the transportation network, and providing timely responses to transportation related emergencies.
Promote the development of safe and secure bicycle and pedestrian facilities as part of a balanced transportation system.

Support the construction and/or restoration of sidewalks, greenways, and other pedestrian facilities.

Support projects that reduce

Support projects designed to reduce auto vs. bike/pedestrian accidents and auto vs. auto accidents

Identify and support projects that reduce and/or mitigate the severity of crashes.

Provide for projects designed to reduce fatal accidents.

**GOAL 3 Accessibility and Mobility**

The Birmingham Long Range Transportation Plan shall strive to maintain and improve the region’s quality of life by providing for projects and programs that support adequate access to transportation facilities and services to enhance the regional mobility of people, goods, and services across and between all modes of transportation regardless of geographic location, race, nationality, economic status, or physical disability.

**POLICY**

The LRTP will offer support for increased accessibility to transportation facilities and services as well as provide for the increased mobility of both people and goods within the Birmingham region’s transportation system.

- Support the provision of transportation services for the Birmingham region’s elderly and disabled population.
- Enhance and/or expand existing transit services.
- Increase the transit service area so that it serves as much of the region as possible.
- Offer solutions to improve vehicle travel times in congested corridors.
- Enhance freight movement to, from, through, and within the Birmingham region.
- Improves and/or enhances the Birmingham region’s intermodal management system.
- Encourages public access to real time information regarding facility specific and system-wide transportation conditions.
- Develop an accessible interconnected network of bicycle and pedestrian facilities that connect strategic destination points such as transit stops, places of work, cultural centers, and open space.
- Reduce and/or mitigate railroad and river crossings.
- Improves the safety of motorized and non-motorized travelers entering and exiting the transportation network.

**GOAL 4 Environmental/Air Quality**

The Birmingham Long Range Transportation Plan shall protect, preserves, and enhance the environmental quality of areas directly or indirectly affected by transportation improvements. The Long Range Transportation Plan shall also
promote transportation control measures that reduce transportation related emissions in order to meet and maintain national clean air standards.

**POLICY**
The LRTP will put into place and support multi-modal programs and projects that reduce and/or mitigate transportation related environmental impacts, reduce Vehicle Miles Traveled, reduce Vehicle Hours of Delay, and increase vehicle occupancy.

- Support the protection and enhancement of the region’s environmental quality by encouraging roadway projects that consider and mitigate their overall environmental impacts to the surrounding communities.
- Assist transit providers to reduce transit vehicle emissions and point source emissions.
- Lead efforts to implement transit programs and projects that reduce overall regional congestion and congestion within transportation corridors.
- Assist with programs and projects that reduce freight and goods movement transportation related air quality impacts.
- Provide support to ITS and ITS related projects that help to improve the overall quality of the region’s natural environment.
- Assist with the identification, planning, and installation of bicycle and pedestrian facilities along roadways and off-road corridors.
- Support the development of a sustainable and ecologically sound network of trails and greenways for transportation, recreation, and open space protection.
- Promote transportation safety improvements.
- Aid programs and projects that reduce and/or mitigate transportation related air quality impacts.

**GOAL 5 System Management and Preservation**
The Birmingham Long Range Transportation Plan shall provide an efficient and effective transportation system that preserves existing transportation facilities, improves system management and operations, identifies the needs for future growth and development, and meets those needs within adequate estimated federal, state, local and/or private funds.

**POLICY**
The LRTP will support projects that preserve and maximize the utilization of the existing transportation infrastructure.

- Encourage projects that improve, mitigate, and manage/maintain congestion as measured by V/C ratios.
- Consider projects that have favorable cost/benefit ratio as determined by the MPO’s performance indicators.
- Support projects that have been included in other, adopted planning documents to include regional transportation and/or land use plans, regional and/or local transportation services and programs, local transportation and/or land use plans, and corridor plans.
- Support plans that maintain or replace bridges at or above ALDOT bridge sufficiency ratings.
Consider strategies to maximize the efficiency of transportation facilities for freight and goods movement into, from, through, and within the Birmingham region.

Encourage and support transportation infrastructure and programs designed increased vehicle occupancy/

Facilitate the development of infrastructure to improve travel efficiency for high-occupant vehicles.

Ensure that whenever feasible, provisions will be made for pedestrians and cyclists during the design and construction of all corridor improvements including roadway capacity projects.

Pedestrian Movement Priorities: MPO Livable Cities Sidewalk and Greenway Program

The MPO has approved policies and procedures to guide future investments in sidewalks and greenway facilities. These new policies and procedures establish a cost-effective mechanism for funding present and future demand for non-motorized projects. The Transportation Improvement Program (TIP) includes $1 million per year for the next three years for construction of new sidewalks. Federal funds will cover 80% of the costs associated with right-of-way acquisition, utility relocation, and construction. Sidewalk project sponsors will be responsible for all expenses associated with preliminary engineering.

The TIP also includes $450,000 per year for the next three years for greenway corridor studies and $1 million per year for construction of new greenway facilities. Greenway project sponsors will be responsible for all expenses associated with preliminary engineering. Federal funds will cover 80% of the costs associated with right-of-way acquisition, utility relocation, and construction. Federal funds will also cover 80% of the cost of greenway corridor studies up to $30,000 ($7,500 local match).

The Birmingham MPO will support projects that qualify under two major on and off-road project categories:

Criteria #1
Sidewalks are located directly adjacent to the right-of-way of public roadways. Crosswalks, curb cuts, pedestrian signals, and other minor intersection improvements for pedestrian safety and mobility are also eligible in the sidewalk category. (Note: Bike lanes and paved shoulders are not eligible. Such on-road bicycle facilities can most cost-effectively be included in other future roadway construction/improvement projects where resurfacing and restriping is required. Whenever feasible, additional sidewalk provisions should also be designed and constructed as part of other existing and future corridor improvements and capacity projects.)

Criteria #2
Greenways include off-road facilities for pedestrians and/or cyclists such as shared use pathways (trails) along water bodies, ridgelines, abandoned rail corridors (rail-trails), public utility easements, and other forms of linear open space. Pedestrian links (walkways) separated from roadways are also eligible in the greenway category.

Sidewalk Project Goals and Objectives
In order for a sidewalk project to be eligible for MPO support the project must achieve one or more of the following goals and supporting objectives which are directly reflected in the questions application questions:
Sidewalk Goal 1
Transit access projects include sidewalks, crosswalks, pedestrian signals, or other minor intersection improvements that enhance pedestrian access to public transit. Project termini must be within a ¾-mile route directly connected to a transit route or bus stop. Transit access projects must provide for safer and more accessible connections to transit, thereby increasing ridership and transit system efficiency.

Sidewalk Goal 2
Safe Routes to School (SR2S) projects include sidewalks, crosswalks, pedestrian signals, or other minor intersection improvements that enhance pedestrian access to schools and bus stops. Project termini must be within a ¾-mile route directly connected to a school or bus stop. SR2S projects will also mitigate congestion and safety hazards associated with traffic queues around drop-off and pick-up zones within or directly adjacent to school property. SR2S sidewalk projects can be partly or entirely built along non-functionally classified roadways such as low volume residential streets.

Sidewalk Goal 3
System connectivity projects include sidewalks, crosswalks, pedestrian signals, or other minor intersection improvements that link three or more major destinations, activity centers, area jurisdictions, land uses, and/or existing non-motorized facilities. “Connectivity” is to be construed in a truly regional and multi-modal transportation context.

Sidewalk Goal 4
Public safety projects include sidewalks, crosswalks, pedestrian signals, or other minor intersection improvements that enhance public safety and access where documented pedestrian safety hazards exist. Project sponsors must provide a reasonable level of corridor and/or intersection-specific documentation providing evidence of specific human risk factors. Information must also be provided detailing exactly how the project will enhance public safety by mitigating the existing hazard.

Sidewalk Goal 5
Master plan projects include sidewalks, crosswalks, pedestrian signals, or other minor intersection improvements that are included in an adopted comprehensive plan, corridor improvement plan, downtown revitalization plan and/or other local bicycle/pedestrian master plan. Master plan projects must be consistent with regional transportation priorities and goals established in the MPO’s Long Range Transportation Plan. Project sponsors must demonstrate that sidewalks are required in all future residential, retail, and commercial developments (e.g. PUD guidelines, subdivision regulations and/or zoning ordinance).

Greenway Project Goals and Objectives
In order for a greenway project to be eligible for MPO support the project must achieve one or more of the following goals and supporting objectives:

Greenway Goal 1
Open space protection and access projects include trails and greenways that are within, part of, and directly contribute to the implementation of an open space protection project or other public recreational park facility. For example, a greenway that is designed as an element of a watershed restoration plan or other land and water conservation project qualifies. The level of public access and the degree of environmental benefit should be optimized and balanced. Open space protection projects must be designed to minimize environmental impacts (e.g. trails set back within floodplains, riparian buffers, innovative storm water controls, and other best management practices).
**Greenway Goal 2**
Safe Routes to School (SR2S) projects include trails and greenways that improve the safety and access to and from schools and bus stops. Project termini must be within a ¾-mile route directly connected to a school or bus stop. SR2S projects will also mitigate congestion associated with traffic queues around drop-off and pick-up zones.

**Greenway Goal 3**
System connectivity projects include trails and greenways that link three or more major destinations, activity centers, area jurisdictions, land uses, and/or existing non-motorized facilities. “Connectivity” is to be construed in a truly regional and multi-modal transportation context.

**Greenway Goal 4**
Public safety projects include trails and greenways that will directly mitigate documented hazards to pedestrians and/or cyclists along a nearby roadway, railroad crossing, etc. Project sponsors must provide a reasonable level of area specific documentation providing evidence specific human risk factors. Information must also be provided detailing exactly how the project will enhance public safety as an alternative route that eliminates or reduces exposure to an on-road hazard.

**Greenway Goal 5**
Master plan projects include trails and greenways included in an adopted comprehensive plan, corridor improvement plan, downtown revitalization plan and/or other local bicycle/pedestrian master plan. Master plan projects must be consistent with regional transportation priorities and goals established in the MPO’s Long Range Transportation Plan. Project sponsors must demonstrate that sidewalk and/or greenway connections are a planned priority for future residential, retail, and commercial developments.
Chapter 4: What We Really Need: Transportation System Deficiency Assessment

Introduction
The Birmingham region’s roadway network is in a continuous state of development. Like most regions, the Birmingham areas roadway network, both local and interstate, is developing in response to new growth in previously undeveloped land. Local and county government, for the most part, is responsible for developing and maintaining the local transportation network. There is, however, an over-reliance on the State department of transportation to provide assistance for the development and maintenance of these facilities. By the same token, there is a serious lack of communication between local governments and the Alabama Department of Transportation regarding the desires of local government as they pertain to roadway design, cooperation, and vision. New residential and industrial growth in southwest and north Jefferson County as well as residential growth in both central Shelby and western St. Clair Counties is one of many factors that is driving the demand for a better developed local and arterial roadway network. By doing so, congestion related to the demand for limited capacity on the existing roadway facilities might be alleviated. In addition,

The Land Use - Transportation Connection
The Birmingham Metropolitan Planning Organization is committed to improving travel for all modes within the MPO planning area. To that end, ongoing efforts are being made to better coordinate land use and transportation decisions and investments. Studies have repeatedly shown that the most important factor in various transportation modes is land use mix, development intensity, and urban design. As demonstrated during the development of the Birmingham Regional Transit Alternatives Analysis, the Birmingham area’s long-range transit system development plan, focusing land development in corridors and nodes as well as addressing issues of community design will do more to reduce vehicle miles traveled and enhance the efficiency of the region’s transportation system, particularly increasing the use of transit and non-motorized travel modes, than any capital investment alone.

As discussed in Chapter 3, and will be discussed later in this chapter, walking and biking are also play important roles in reducing VMT and reducing congestions. Well planned communities recognize this and make efforts to incorporate both walking and biking into the overall design of community transportation facilities. Walking and biking, particularly for short trips, helps to reduce VMT. It is also important to remember that that almost any use of transit will involve walking and/or biking to and from transit at both the trip origin and destination.

The willingness to walk and/or bike is related to a few key factors which include, but are not limited to:
- Route Safety
- Connectivity of developments in both origin and destination points, and
- Aesthetics

All of these things contribute to an individual’s decision to walk and/or bike and their comfort in doing so. Appendix F provides additional details and concepts for the design of streets within
the Birmingham region. Appendix E provides additional information about the Safe Routes the School Program.

In terms of the role land use and community design play in the utilization of public transportation, the best way to maximize transit’s access radius – without adding new route miles, is to increase neighborhood connectivity for pedestrians and cyclist and provide other amenities such as shade, secure bicycle parking, clean bus shelters, etc. that make walking and biking safe and desirable travel options.

Parking is also an issue of land use and community design. Well designed developments address where parking is located and how parking is arranged, both factors that can either encourage or undermine walking and the use of public transportation. Good design alternatives place parking at the side or rear of a building, avoiding placing the building in the center of large parking lots, and emphasizing the building’s connection with its surrounding environment by helping to frame the street. In locations where it is feasible, typically in urban areas and town centers and/or squares, on-street parking is usually emphasized. Structured parking, if designed within the context of the community, can also help promote many objectives of pedestrian-friendly community design by helping to minimize the land area consumed by surface parking and allowing a higher density of development.

Within the Birmingham planning area, the Five Points South entertainment district, Downtown, Homewood, and many of the Villages of the City of Mountain Brook exemplify this concept. The densities and mix of uses contained within these areas have demonstrated that there is not only a place for these types of development within the Birmingham area, but that they are acceptable in both density and design by the populace and are in high demand as demonstrated by the rents and/or unit sales prices generated.

**Roadway Network Needs Assessment**

The purpose of the transportation system is to move people and goods efficiently and safely. For the most part, Birmingham’s transportation system accomplishes this purpose, enabling both people and goods to move about efficiently and safely. However, as new development begins in areas that were once rural in character, transitioning them into suburbs of existing cities or adding onto the urbanized area of existing towns, the need for new transportation infrastructure becomes evident. Local communities, on one hand, benefit immensely from new development. New services, new residents, new businesses all equate to increased revenues from which new community amenities might be added and the overall quality of life improved. On the other hand, new development brings with it additional costs in terms of basic service provision i.e. additional police, fire, schools, etc. Often, local government are hard pressed to provide adequate transportation facilities to accommodate this new growth, and if any new facilities are provided at all, they only meet the minimum needs for mobility. In meeting only the minimum mobility needs, the communities’ quality of life is negatively impacted and in some cases even deters additional growth and development.

As discussed previously, and will be discussed later in this chapter, there is an overwhelming need for transportation facilities that accommodate all travel modes and provides increased travel choices. At the heart of the need for adequate transportation facilities is the provision of a comprehensive roadway network. A sufficient roadway network is one that:

- Provides multiple travel paths into and out of communities and/or centers
- Connects communities at multiple scales i.e. locally and regionally
- Accommodates multiple travel modes
- Respects and reflects the context of the areas that they serve
- Maximizes traveler safety by minimizing hazards

Ideally, all of these elements would be addressed in the development of the region’s roadway network, but like most southern urban regions, the Birmingham area is hard pressed to keep pace with its growth.

Rapidly developing communities such as those located in North Jefferson and Shelby Counties are in need of expanded roadway systems that provide sufficient connections and are able to maximize the efficiency of existing facilities. These communities are in need of facilities that provide additional capacity and improve safety while providing to neighboring land uses. Like most regions, the Birmingham area roadway network cannot keep up with the needs of new development nor keep up with the demands placed on the existing facilities.

The functional capacity of roadways and the safety of the traveling public can be compromised when access to adjacent land uses is not effectively managed. These problems tend to arise and become prominent on major and minor arterials. The primary function of these roadways is to maintain traffic throughput at an efficient rate of speed. This function becomes compromised when a significant number of access points are created to adjacent land uses. The action of vehicles slowing down to enter a destination causes a subsequent slow down in the traffic behind each vehicle. Also, each access point has a number of conflict points, or potential collision sites, that increase the safety risk for the traveling public. Reducing or minimizing the number of conflict points increases the likelihood of safe travel. This goal can be achieved by implementing access management.

In 2003, the Transportation Research Board Committee ADA 70 produced an Access Management Manual that provides a comprehensive review of decades of research on the issue. In that manual, access management is defined as “the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway.” A major theme in access management is the transportation and land use cycle (see Figure 4-1). The cycle begins when a new roadway is constructed or improvements are made to an arterial roadway. The roadway provides increased accessibility to the adjacent land or potential development site. The value of that site increases due to the increased accessibility. The manner in which land is developed affects the location and quantity of access points. More traffic is generated as the traveling public visits the new destinations. This increase in traffic also diminishes the function of the roadway as travel speed decreases, congestion increases and safety is compromised due to numerous conflict points. Eventually, roadway improvements are demanded to restore a safe and efficient flow of traffic to the arterial. Unfortunately, at this point the cycle may begin again unless access management is implemented.
A number of implementation methods exist for access management. Such methods include, but are not limited to, statewide regulations and permitting procedures, corridor access management plans and local government driveway ordinances and comprehensive plans that address key elements of access management. The RPC/MPO has worked to address this issue on a number of levels and is supportive of access management efforts at all levels of government. More opportunities exist for the MPO to promote the implementation of access management principles. As demonstrated in this plan, the need for transportation improvements far outweighs funding availability given the limited amount of federal funds and lack of a dedicated local funding source for transportation improvements. This scenario is unlikely to change in the near future. Therefore, preserving the functional integrity of our existing roadways and designing future roadways to function in harmony with neighboring land uses is critical to a well maintained roadway network.

Another aspect of roadway function and design is identifying transportation solutions that consider the social, economic and natural environment, or the context in which a transportation facility is located. The way to accomplish this task is to take a Context Sensitive Solutions approach.

"Context sensitive solutions (CSS) is a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist."

-- Federal Highway Administration (FHWA)

The landmark workshop, “Thinking Beyond the Pavement” held in May 1998 and sponsored by FHWA, AASHTO (American Association of State Highway and Transportation Officials), and Maryland Department of Transportation, coined the phrase Context Sensitive Design (CSD). This workshop discussed the importance of addressing equally safety, mobility and preservation of scenic, esthetic, historic, environmental, and community values into transportation projects. The terms CSD and CSS are used interchangeably, but CSS speaks to all facets of a roadway project, not just the design phase. The CSS stresses the importance of involving a multi-disciplinary group of stakeholders, including citizens, in the project development process of the transportation facility from the very beginning at the project concept stage.

A great deal of opportunity exists locally and statewide to incorporate CSS into the transportation planning process. Training sessions were held in November 2005 at the local and state level that provided an overview on the approach and examples of how to incorporate
that approach into transportation projects. The training session highlighted the public involvement component and the role of stakeholder groups. Public involvement is a vital component of every phase of the project development process, from identification of purpose and need through construction and operations.

CSS can be incorporated into transportation project ranging from two-lane highway widening projects to retrofitting existing arterials to encourage multi-modal transportation use. Through the CSS process, features that enhance the safety of all users of the road can be incorporated into a roadway’s designs. Also through the process, the transportation facilities can actually preserve and enhance a community’s aesthetic and environmental priorities. Community involvement in the identification and selection of a solution to a given transportation problem opens up a great deal of opportunity to produce a facility that not only improves safety and mobility but enhances the community.

Transit Needs Assessment

Introduction

Within the Birmingham Metropolitan Planning Organization service area, transit service is provided by the Birmingham-Jefferson County Transit Authority (BJCTA). BJCTA provides fixed route and demand responsive transit service within the cities of Bessemer, Birmingham, Homewood, Hoover, Mt. Brook, and Vestavia Hills. Service to the cities of Brighton, Lipscomb, and Midfield are also provided, and is paid for by the Jefferson County Commission.

Existing Conditions

Since 2000 the Birmingham-Jefferson County Transit Authority (BJCTA) has significantly increased the level of service provided by MAX bus, as illustrated graphically in Figure 4-2. The National Transit Database (NTD) reports that in 2003, BJCTA offered 3.5 million annual vehicle miles of fixed route transit service and 265,000 annual vehicle hours of service. Ridership for MAX bus service responded accordingly, and jumped to 3.8 million annual passenger trips. This increase represents a significant increase over previously reported ridership. This, however, is still less than half the median levels of transit services provided in Birmingham’s peer cities.

![Figure 4-2: Levels of Service](image)

The Birmingham-Jefferson County Transit Authority provides a total of forty fixed routes. This includes:

- Three (3) DART (Downtown Area Runabout Transit) Routes
- Two (2) neighborhood circulators/shuttles
- One (1) express routes
- Five (5) combination routes
BJCTA also provides two contract routes strictly for Jefferson County employees working at the County Courthouse and University of Alabama Birmingham employees. Both of these routes service remote parking facilities that provide parking for these two employers’ employees.

All totalled, 2.89 million annual vehicle miles of fixed route transit service is provided by the BJCTA. BJCTA also provides 660,000 annual vehicle miles of demand-response services.

In terms of ridership, the NTD reports that 3.63 million annual unlinked (one-way) passenger trips were taken on fixed route MAX bus service and 125,000 annual unlinked passenger trips taken on demand-response services.

Many of the recommendations for MAX bus service that were included in the 2000-2004 Transit Development Program (TDP) were implemented by the BJCTA. Recent data collected for the update of the TDP, the 2005-2010 Transit Development Program and Comprehensive Operational Analysis, indicates that there are several routes that have heavy demand, and as previously described, the increases in MAX service that resulted from the 2000-2004 TDP led to a sharp increase in ridership. Despite this, MAX bus service still suffers from several deficiencies. Included among these are:

- Infrequent bus service as indicated by peak hour headways vs. demand i.e. ridership,
- Inadequate bus service in the evenings and on weekends,
- Lengthy trip times, and
- Unreliable service as indicated by on-time performance and service interruptions

In addition, MAX bus service does not serve the entirety of Jefferson County, nor does it provide service outside of Jefferson County. Because of this, a large portion of the population that might likely use public transportation is unserved. Several of the region’s employment sites and personal services providers are not served by transit, further diminishing access to opportunities and services for transit dependent individuals.

As determined by percentage, BJCTA has 53% of its annual operating costs covered by local sources ($8.1 million of BJCTA’s total funding comes from local sources). However, in comparison to other regions of similar size and character, the amount of total absolute funding provided to the BJCTA by non-federal sources places the Birmingham region near the bottom of the list MAX one of the most underfunded transit systems in the nation. No state funding is provided for transit.

As described previously, much of Jefferson County and the entirety of Shelby County are not served by BJCTA. However, the Central Alabama Specialized Transportation (CLASTRAN), a non-profit organization comprising a regional paratransit consortium for the Birmingham area, provides Section 5310 elderly and disabled transit service and Section 5311 rural transportation for areas within Jefferson County not served by BJCTA’s MAX bus and VIP paratransit service. CLASTRAN also provides Section 5310 and Section 5311 services in Shelby County. CLASTRAN provides Job Access and Reverse Commute transit service for Jefferson County under an agreement the agency has with the county government to help support the county’s workforce development initiative. CLASTRAN also holds agreements with both county and local governments outside of the 2-county MPO service area to provide some limited fixed route transit service, demand responsive service, and paratransit trips. The Birmingham MPO also provides funding for CLASTRAN, and has flexed $3.5 million in STP funds to help support CLASTRAN services.

Transit Development Program
The Birmingham-Jefferson County Transit Authority is currently undertaking an update to the 2000-2004 Transit Development Program. This update, which will cover the years 2005-2015,
will generally address the transit system needs over the course of the next ten years. A detailed evaluation of needs will cover the first five years of the plan, 2005-2010, and provide guidance for the next five years that will be addressed in the next update to the plan to occur in 2010. Recommendations from the 2005-2015 TDP were not available for the development of the 2030 LRTP. However, recommendations from the previous plan that have yet to be implemented and are likely to be carried over into the update include:

- Decentralization of existing transit network routes
- Identification of community and/or neighborhood transit centers, and
- Implementation of suburban express bus routes

**Long-Range Transit Planning**

The Regional Planning Commission of Greater Birmingham is leading efforts in long-range transit planning for the region, and is working in cooperation with the BJCTA, Jefferson and Shelby Counties, and several local governments in order to identify future high-capacity transit service for the entirety of the region. This planning effort includes the identification of transit service types, modes, and routes. In 2004, the RPC completed a regional transit system plan which identified several directional corridors generally following major roadway facilities where high-capacity and/or advanced technology transit services might be placed. These services included both rail and rubber-tire transit modes, and supported the concept of a decentralized transit network which was recommended in the 2000-2004 TDP. In addition, the regional transit system plan called for a greatly expanded local bus service area, and recognized the need for greater service frequency, faster trip times, and support to and by land uses.

Long-range transit planning activities outside of those being undertaken by BJCTA through the TDP and COA include the activities covered under the Federal Transit Administration’s Section 5309 New Starts and Small Starts programs. At present there is an Alternatives Analysis being conducted for the downtown Birmingham area, and is looking at the capability to provide high-capacity transit service along both north-south and east-west transit routes serving the in-town neighborhoods, as well as key employment and activity centers located within the study area. This project, called the In-Town Transit Partnership (ITP), is also completing a Draft Environmental Impact Statement (DEIS) and will be submitting an application to the FTA for entry into the Section 5309 New Starts program. A second Alternatives Analysis to evaluate the I-65 and US 31 corridors for high-capacity transit services is likely to begin in 2006, and will result in yet another project to be submitted to FTA for entry into the Section 5309 New Starts program. Like the ITP project, the I-65/US 31 Alternatives Analysis will also be completing a Draft Environmental Impact Statement.

In order to enter the New Starts program, the sponsoring region must demonstrate the financial and technical capacity to implement, operate, and maintain projects. At present, the Birmingham region has not been able to demonstrate financial capacity. As such, the ITP project is not identified in the list of funded projects within the LRTP. Instead, it will be listed in the visionary element. Upon securing an appropriate commitment for long-term local funding, the LRTP will be amended to reflect the project’s status and moved from the visionary element of the plan. The same holds true for any project that evolves from the analysis that will be conducted for the I-65/US 31 corridors.

Lastly, Jefferson County is known to be pursuing a high-capacity commuter rail transit project outside of the Section 5309 process. Upon identifying and securing a federal funding source for this project and demonstrating a local commitment to funding this project may, at the request of its sponsor, be placed into the LRTP under the appropriate category.
Committed Improvements
At present, there are not commitments for major improvements to the overall transit system. BJCTA has plans to replace transit vehicles that are at the end of their service life as well as vehicles that have been destroyed due to accident and/or malfunction. BJCTA has also committed to install bus shelters in communities, and has completed close to 90% of all scheduled installations.

Finally, plans are being finalized for an expansion of the existing downtown Central Station facility so that it can accommodate both Amtrak interregional rail service, potential commuter rail service, and Greyhound interregional bus service. The City of Birmingham’s City Center Master Plan and their Railroad Reservation Park both identify the Central Station expansion as a key land use element.

Transit System Needs Assessment
For the most part, the BJCTA has implemented the majority of the project improvements identified in the 2000-2004 Transit Development Program. There are, however, several projects and initiatives that remain to be completed. An analysis of the 2000-2004 Transit Development Program by BJCTA staff shows that there are four (4) express bus routes that still need to be implemented. In addition, bus service frequency still needs to be improved in order to reach target headways and there are several circulator routes that still need to be implemented. Finally, there is still the need to implement Sunday service for MAX buses.

The 2000-2004 Transit Development Program also identified the creation of a decentralized transit network as a BJCTA long-term goal. As described in the Transit Development Program, in order to achieve this decentralized transit network, a “nodal” transit system would need to be developed. This nodal system would be comprised of community and/or neighborhood transfer centers where local bus service, cross-town bus service, neighborhood circulator service, and trunk line transit services would all converge and allow passengers to catch more frequent and direct routes to their destination. These centers, as envisioned, might be either stand alone facilities or shared use facilities and include such locations as suburban mall/shopping centers, park and ride lots, and churches.

There is also a need to better coordinate transit services for both existing and potential future transit service providers and across jurisdictional boundaries. The Regional Planning Commission, in cooperation with CLASTRAN, BJCTA, and the Jefferson County Commission is looking to implement a transportation resource center. This resource center would coordinate service delivery of paratransit, elderly, and disabled transit services by enabling trips to be scheduled and dispatched to any of the region’s transit providers in order to achieve maximum efficiency. It would also allow for specialized transit trips to be provided for by any vendor and rectify payment of these trips through a clearinghouse so that all federal, state, local, and grant provided transportation monies might be used to their full potential.

Bicycle and Pedestrian Needs Assessment
Introduction
Bicycling and walking were once viable modes of transportation in many parts of the region. Nationally, they continue to be the preferred alternative for many; however, the current use of bicycling and walking in the metropolitan Birmingham is less than the national average.
According to U.S. Census 2000 data, metropolitan Birmingham ranks 266th out the nation’s 280 MSAs in terms of the percentage of the population that walks to work at 1.21%.²

The Birmingham Area Bicycle, Pedestrian & Greenway Plan proposed a network of on-road bicycle improvements; off-road multi-use trails and sidewalks to provide a pedestrian or bicyclist with connections between various origins and destinations in the region. On-road bicycle improvements can include bicycle lanes, additional paved shoulders, and shared travel lanes. Multi-use trails are paved, linear corridors designed for use by bicyclists and pedestrians.

The sidewalk and multi-use trail projects are identified in the project listing of the Long Range Transportation Plan. Sidewalks are not identified specifically in The Birmingham Area Bicycle, Pedestrian & Greenway Plan; however, as requests to develop individual projects are made by sponsors, they are considered for approval by the Metropolitan Planning Organization (MPO). Once approved by the MPO, the projects are added to the Long Range Transportation Plan and Transportation Improvement Program. Examples of multiple elements of the Long Range Plan leading to project development are the Transit Development Program and the Bicycle and Greenway element. This project identified the need for bike racks on buses and provided funding to help this project be realized. This further supports the MPO’s encouragement of multimodal transportation by strengthening the connection between the use of alternate travel modes and further adding a much needed element of mobility for the area.

Existing Conditions
The Surface Transportation Policy Project (STPP) released the fifth edition of its biannual pedestrian safety report in December of 2004 titled, Mean Streets 2004: How Far Have We Come? Pedestrian Safety 1994-2003. Through comparative analysis of state and metropolitan specific travel and crash data, the report infers a need for significant investments to make the region’s built environment more conducive to bicycle and pedestrian travel. Figure 4-3 presents this information. The following key findings were compiled from Mean Streets 2004 and other relevant transportation data sources:

- According to U.S. Census 2000 data, metropolitan Birmingham ranks 266th out the nation’s 280 MSAs in terms of the percentage of the population that walks to work at 1.21%.³
- The region ranks 271st in terms of the percentage of the population that bikes and/or walks to work (combined = 1.27%), which is lower than any other metropolitan area with a population of 500,000 or more.⁴
- Based on traffic fatality data from 2002 and 2003, the Birmingham MSA has the 6th highest Pedestrian Danger Index (PDI) of 110.0 compared to PDIs from 26 similar sized metro areas having populations of 750,000 to 1,500,000.⁵
- 22 pedestrians were killed in Jefferson and Shelby Counties (19 and 3 respectively) during 2002 and 2003. Pedestrian fatalities in 2002 and 2003 accounted for 11 percent

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⁴ ibid
of all traffic related deaths in Jefferson County and 6.1 percent in Shelby County (10% when aggregated for the two-county region).\(^6\)

- 118 pedestrians were killed in Jefferson and Shelby Counties (107 and 11 respectively) during the ten year period from 1994 through 2003. Pedestrian fatalities accounted for 11.4% of all traffic related deaths in Jefferson County and 4.5 percent in Shelby County (10% when aggregated for the two-county region).\(^7\)

### Relevant Studies

The MPO’s first bicycle and pedestrian plan, the Birmingham Area Bicycle, Pedestrian & Greenway Plan, was developed in 1996. The planning effort was undertaken by a team of consultants under the direction of the Regional Planning Commission (RPC) and in cooperation with Jefferson and Shelby Counties, the City of Birmingham, and an advisory committee. The study area included both urban and rural areas of Jefferson and Shelby Counties.

The 1996 Plan brought significant attention to regional conditions and a host of necessary improvements for bicycling and walking. Extensive network analysis was conducted to identify and quantify a list of proposed on and off-road non-motorized facilities along existing roadways or other right-of-ways such as abandoned railroads and riparian sewer easements. The proposed routes and facilities included bike routes with shared lanes, wide outside lanes, paved shoulders, bike lanes, greenways, rail-trails, sidewalks, intersection improvements, and traffic calming measures. Over 900 on and off-road corridors were inventoried in a needs assessment.

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\(^7\) ibid
database that was mapped in a Geographic Information System (GIS). Routes with the highest statistical need determined by network analysis were identified in a final proposed route plan and were then added to the MPO’s non-motorized element of the 20-year Long Range Transportation Plan. Figure 4-4 illustrates these projects.

**Committed Improvements and Programs**

RPC staff solicited local governments for new bicycle and pedestrian projects eligible for CMAQ funding. Upon receipt and evaluation of the local government submittals, the MPO authorized CMAQ funding for select projects for inclusion in the 3-year Transportation Improvement Program. The present TIP includes fifteen (15) bicycle and pedestrian related projects (e.g. sidewalks and multi-use trails). In addition, over 200 bike racks have been installed at more than 100 locations in 20 jurisdictions throughout the two-county region. CMAQ funds were also used to fund bike racks on all 76 MAX buses to provide intermodal opportunities for cyclists and transit riders.

RPC staff also continues to work closely with area jurisdictions to ensure the vision for a regional bicycle and pedestrian network is developed in a coordinated manner. Likewise, a few high profile projects including 7th Avenue South Bike Lanes in Birmingham, the Shades Creek Greenway in Homewood, Shades Crest Road Sidewalks in Vestavia Hills, and several sections of Mountain Brook’s Walkway system were all build with CMAQ funds programmed by the MPO since the 1996 Plan was drafted. Local governments have also leveraged other federal dollars such as the Land and Water Conservation Fund (LWCF), the Recreational Trail Program (LRTP), and Transportation Enhancement Program (TE). LWCF and LRTP are administered by the Alabama Department of Economic and Community Affairs while the TE funds are administered by ALDOT’s Multimodal Transportation Bureau.
Bicycle & Pedestrian Routes

- LRTP Projects (Blue Labels)
- Visionary Corridors (Red Labels)

Figure 4-4: Birmingham Area Bicycle and Pedestrian Vision
MPO Livable Cities Sidewalk and Greenway Program

The MPO has established a Livable Cities Sidewalk and Greenway Program to assist with the implementation of sidewalks and greenway facilities. This program provides a mechanism for funding existing and future sidewalks and greenway facilities, and utilizes a set of policies and procedures, which were described previously, to guide the review, selection, and prioritization of non-motorized projects. The Transportation Improvement Program (TIP) includes $1 million per year over the three year life of the TIP for construction of new sidewalks, $450,000 per year for greenway corridor studies, and $1 million per year greenway facility construction. Federal funds will cover 80% of the costs associated with right-of-way acquisition, utility relocation, and construction for sidewalks. Federal funds will also cover 80% of the cost of greenway corridor studies up to $30,000 ($7,500 local match), and 80% of the costs associated with right-of-way acquisition, utility relocation, and construction. Sidewalk project sponsors will be responsible for all expenses associated with preliminary engineering. Greenway project sponsors will be responsible for all expenses associated with preliminary engineering.

Bicycle and Pedestrian System Needs Assessment

Regardless of the progress that’s been made since the 1996 plan was adopted by the MPO, relatively speaking the regional transportation system continues to lack sufficient provisions for non-motorized travel. In an effort to update the 1996 plan, between 2003 and 2005 the Regional Planning Commission (RPC) solicited input from a new ad-hoc advisory committee made up of citizens, local government staff, and private sector interests—some of whom served on the previous Advisory Committee formed by the consultant team—all of whom have an interest in making the region more conducive to bicycling and walking. RPC staff also conducted a series of interviews with various stakeholders including real estate development interests, water & sewer officials, other transportation interests, etc.

A large part of this plan update effort involved redefining the region’s vision and goals, while also inventorying a new set of proposed on and off-road routes—several of which overlapped recommended routes in the 1996 plan while others were entirely new corridors. As a result of this regional visioning exercise and qualitative route analysis, a vision, goals, and strategies were drafted along with the subsequent vision map. This information serves as a comprehensive reflection of the bicycle and pedestrian elements supported by the LRTP. A complete copy of the vision statement, goals, and strategies as well as Non-Motorized Transportation Policies and Implementation Strategies can be found in Appendix E along with the Livable Communities Sidewalk and Greenways project criteria application.
Chapter 5: Can We Pay For It: Financial Resources

Introduction

Section 1203 of the Transportation Equity Act for the 21st Century (TEA-21) specifies that MPOs are responsible for preparing a financial plan that demonstrates how the Long Range Transportation Plan can be implemented based on financial constraints. TEA-21 also indicates revenue sources that are reasonably expected throughout the plan, and identifies additional financing strategies for projects and programs. At the heart of this requirement, MPOs are required to answer the question…

“Will the revenues (federal, State, local, and private) identified in the long range transportation plan be adequate to cover the anticipated costs of the projects included in this plan, along with operation and maintenance of the existing system?”

If the projected revenues are sufficient to cover the costs, and the estimates of both revenues and costs are “reasonable”, then the fiscal constraint requirement is satisfied.

The purpose of these fiscal constraint requirements is to ensure that long-range planning of transportation projects is meaningful, based on realistic assumptions regarding the funding of all capital, operating, and maintenance costs associated with the surface transportation system. If plans and programs are developed without regard to realistic funding, they are unreliable. Without fiscal constraint, public confidence in the planning process is also undermined, as is coordination with local governments and others.

TEA-21, which authorized the federal transportation programs, expired in September 2003. The Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) became law on August 10, 2005, replacing TEA-21. However, it continues many of the planning provisions contained in TEA-21, including the requirement for metropolitan regions to develop fiscally responsible long range transportation plans.

This section contains estimates of the anticipated revenues for implementation of the LRTP through the year 2030 for each of the LRTP horizon years. The 2030 Birmingham Long Range Transportation Plan reaffirms that the region’s transportation plan conforms to the National Ambient Air Quality (NAAQ) standards and achieves air quality attainment for Ozone, NOx, and PM 2.5, all of which the Birmingham region is subject.

Revenues are compared to the costs identified in the LRTP for specific project categories. Estimates have also been developed for other cost categories for which specific projects have not been identified in the LRTP. These include such things as operations and maintenance, transportation enhancements, and transportation management activities. The analysis is based upon information supplied by the Alabama Department of Transportation, local governments, and the Birmingham-Jefferson County Transit Authority.

While this analysis used specific cost and revenue information provided by member agencies and governments, it provides only a planning level analysis. Additional detail for both program and project costs is provided in the shorter-range Transportation Improvement Program (TIP) that is developed every two-years. The analysis is subject to the following limitations:
- Financial projections are for a period that covers more than 20 years. During that time substantial changes in travel behavior, local economies, and federal funding priorities are possible.

- Projects utilizing federal funding involve uncertainty due to shifts in federal transportation policy, budgets, deficit reduction plans, and changes to statewide administration procedures and policies.

- Cost estimates are generalized and are based upon information provided by both the project sponsor and the Alabama Department of Transportation which may not be completely accurate. Costs may change upon submission of specific design plans and the start of actual construction.

**Revenue Analysis**

**Federal Funds**

The Birmingham metropolitan region utilizes a variety of federal funding sources to assist with the financing of transportation services and facilities. Following is a description of the primary programs utilized within the Birmingham region.

**Surface Transportation Program Birmingham Attributable**

The Surface Transportation Program provides flexible funding that may be used by States and localities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities. The Surface Transportation Program – Birmingham Attributable (STPBH) funds are formula based and apportioned funds are to be distributed based on the following factors:

- 25% based on total lane miles of Federal-aid highways
- 40% based on vehicle miles traveled on lanes on Federal-aid highways
- 35% based on estimated tax payments attributable to highway users in the States into the Highway Account of the Highway Trust Fund (often referred to as "contributions" to the Highway Account

An approximate total of $317 million in STPBH funds has been programmed in the 2030 Birmingham LRTP. This represents 13% of the plans total programmed funds. Information presented in Table 5-2, shown later in this chapter, represents an effort to balance programs and projects with available funds across the LRTP’s plan horizon, while at the same time maintaining fiscal constraint. In order to do this, a more direct approach for determining available future funds was taken. Because the Birmingham MPO’s membership is particularly aware of the annual funding marks for the STPBH program, their input was obtained to help program available funds in order that the full amount of anticipated STPBH dollars was utilized.

**Surface Transportation Program Non-Urban/any Area**

Seventy-five percent (75%) of projects contained within the 2030 Birmingham LRTP that are funded with STP Non-Urban funds are located on U.S. highways or state routes. This category of funding also covers routes that currently have or are anticipated to have congressional earmarks set aside for improvements in future years. Examples of the types of projects funded with STP Non-Urban funds include:

- CR-52 and SR-261 near Helena,
- CR-17 and US-31 in Hoover, and
- SR-25 in Calera.
Figure 5-1 shows that STP Non-Urban funds comprise 9.4% of the 2030 Birmingham LRTP’s total revenue. Federal earmarks, combined with the plan’s historic share of STP Non-Urban funding are estimated to increase steadily to the plan’s horizon, increasing from 4% of the plan’s total funding between fiscal years 2006 and 2008 to 15.2% between fiscal years 2005 and 2030.

### Birmingham Area Specific Transportation Funding

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<tr>
<td>Surface Transportation Program Non-Urban/Any Area</td>
<td>18%</td>
</tr>
</tbody>
</table>

**Figure 5-1: Long Range Transportation Plan Funding Distribution by Funding Program**

**National Highway System Program**

The National Highway System (NHS) Program funds major roadways, including the interstate system, a large portion of the region’s urban and rural principal arterial roadways, the Strategic Defense Highway Network (STRANET), and the strategic highway connectors. The observed historic annual spending of NHS funds for projects and programs within the Birmingham region provides the basis for this funding program’s fiscal constraint. Analysis of the previous ten years of NHS spending show historic annual spending levels of nearly $6.5 million, and when projected to the 2030 plan horizon totals to nearly $165 million. Over the plan horizon for the 2030 Birmingham LRTP, $153 million in NHS funding totaling 6.3% of the plans total estimated revenue is anticipated to be programmed by the Birmingham MPO. This is well within the historic spending level of this program and can be considered to be reasonably constrained.

**National Highway System Program (Appalachian)**

The Appalachian Development Highway System (APD) funds routes with remaining work deemed eligible for funding as approved by the Appalachian Regional Commission (ARC). APD funding is formula driven, and is based upon the completion cost for each of the segments of the Appalachian Highway System. In Alabama, the APD eligible projects include:

- Corridor X, the future I-22 connecting Birmingham and Memphis, TN
- Corridor X1, the proposed Northern Beltline, extending I-459 from southwestern Jefferson County to I-59 in Northeastern Jefferson County, and
- Corridor V, connecting the cities of Atlanta, GA and Memphis through Huntsville

Historically, Alabama has received nearly $59 million annually for the projects identified previously, and anticipates that during the life of the plan over $1 billion in APD revenues will be
received. The 2030 Birmingham LRTP programs $128 million for Corridor X. Future funding for Corridor X1, the proposed Northern Beltline, is anticipated to be available and sufficient to cover the cost of the entire project based on historic funding. Both projects’ costs are well within the expected APD revenue stream for Alabama, and funding for Corridor X1 will be programmed when funds become available.

**Interstate Maintenance Program**

Interstate Maintenance (IM) Program funds are used to rehabilitate, resurface, and restore the interstate system. These funds may be utilized providing that they do not add any new capacity to the interstate system with one exception: they can be used to provide High-Occupancy Vehicle (HOV) lanes.

The Birmingham MPO has programmed approximately $450 million in IM funds over the life of the 2030 Birmingham LRTP. This is in line with annual spending for IM funded programs and projects. It is also in line with observed historic spending levels for the previous ten years. Historic levels of nearly $17 million per year, when projected to the year 2030, total to almost $427 million.

Total Interstate Maintenance Program funding in the 2030 Birmingham LRTP long range plan exceeds historic funding for IM funded programs and projects by $23 million. However, this overage in programmed funding is only about a five percent (5%) increase in programmed IM funds. The proposed funding levels represent 14% of the annual statewide IM program funding, and covers a two county area that represents 18% of the state’s population and is the state’s hub for east/west and north/south freight movement.

**Congestion Mitigation and Air Quality**

The Congestion Mitigation and Air Quality (CMAQ) Improvement Program is a federally-funded program of surface transportation improvements designed to improve air quality and mitigate congestion. The CMAQ Program was created in 1991 as part of the Intermodal Surface Transportation Efficiency Act (ISTEA). Continuation of the program was authorized by the Transportation Equity Act for the 21st Century (TEA-21) in June 1998 and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in August 2005.

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) have the objective of improving air quality and managing traffic congestion. CMAQ projects and programs within the Birmingham region are innovative in the solutions provided to common mobility problems and are driven by Clean Air Act mandates to attain national ambient air quality standards. Eligible activities under CMAQ include transit system capital expansion and improvements that are projected to realize an increase in ridership; travel demand management strategies and shared ride services; pedestrian and bicycle facilities and promotional activities that encourage bicycle commuting. Programs and projects are funded in air quality non-attainment and maintenance areas for ozone, carbon monoxide (CO), and small particulate matter (PM-10) that reduce transportation-related emissions. Birmingham is a non-attainment area for both ozone and PM-2.5.
Many projects are eligible for CMAQ funding; specific project types are described below.

- **Public Transit Improvements to include:**
  - **Transit System Start-up** – These projects are new rail systems, bus service, or vanpools. Operating expenses for new systems can be reimbursed for up to three years.
  - **Transit Transfer Facilities** – These projects increase the convenience of transferring on transit service.
  - **Transit Facility Improvements** – These projects enhance the existing transit system through adding or improving facilities such as stations.

- **Commuter Parking Lots**
  New or expanded park-n-ride or park-n-ride facilities located in fringe areas and in primary transportation corridors. These park-n-ride lots should serve multiple-occupancy vehicle programs or transit service.

- **Traffic Flow Improvements Programs that Achieve Emission Reductions**
  The CMAQ program finances three types of traffic flow improvements:
  - **Bottleneck Elimination** – These projects remove existing bottlenecks to traffic flow. Under current guidelines, a bottleneck is defined as a point along a roadway that restricts traffic flow. Road segments, even if relatively short, are not eligible. Bottleneck eliminations may be reviewed for eligibility on a case-by-case basis, since CMAQ funds cannot be used to fund "general purpose through lanes."
  - **Intersection Improvements** – These projects ease the flow of traffic through existing intersections without adding capacity. Such projects include addition of left turn bays or traffic signal installation.
  - **Signal Interconnects** – These projects reduce delays through a series of intersections by coordinating the signal phases, thereby reducing emissions.

- **High-occupancy and Shared-Ride Services**
  CMAQ funds may be used to fund all categories of high-occupancy and shared-ride services. Under this provision, the Birmingham region has funded the CommuteSmart Commuter Services program and utilized CMAQ dollars to help finance MAX bus transit service.

- **Transit-ways, Bus Lanes, and High-Occupancy Vehicle Lanes**
  CMAQ funds may be used to restrict certain roads or lanes, or to construct roads or lanes for the exclusive use of passenger buses or HOV

- **Road Surface limitation Programs**
  CMAQ funds may be used to limit portions of or certain sections road surfaces within the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place.

- **Bicycle and Bicycle Parking Projects**
  The CMAQ program finances bicycle facilities that provide secure bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas and reduces
travel by automobiles. Projects that create or increase the availability of secure parking bicycle storage facilities for bicycles and promote the use of bicycles are also eligible.

- **Pedestrian Facility Projects**
  CMAQ finances the planning and construction of pedestrian facilities. These facilities are meant to provide additional individual travel choices, helping to reduce travel by automobile, and thereby eliminating automobile trips. Many recreational facilities do not make good CMAQ project candidates and have been provided with a separate funding source in SAFETEA-LU.

- **Other Projects**
  These projects do not fit into the above categories, but result in emissions reductions that can be estimated and are otherwise eligible for CMAQ funds. Examples include: trip-reduction ordinances; employer-based transportation management plans; employer-sponsored programs to permit flexible work schedules; rideshare incentive programs; programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use; programs to control extended idling of vehicles; low-emission engine and fuel technologies program implementation, including diesel retrofits; the Alabama Partners for Clean Air - Air Quality Alert public information program; advanced truck stop electrification, and; cold-start emissions reductions.

**Transportation Enhancement Program**
The Transportation Enhancement Program projects are funded annually on a competitive basis Statewide. ALDOT requires MPO review of all project applications; and the ALDOT is responsible eligibility determination and project selection. Current legislation set aside 10% of the State's Surface Transportation Funds for enhancement projects. The Long Range Plan has not programmed projects in this category and the Statewide Transportation Improvement Program is typically carried as a Level of Effort until specific projects are identified.

**Safety Program**
The Safety Program projects are funded annually after an objective review by ALDOT personnel. Current legislation set aside 10% of the State's Surface Transportation Funds for safety projects. The Long Range Plan has not programmed projects in this category and the Statewide Transportation Improvement Program typically carries funding for these projects based on a Level of Effort estimate until specific projects are identified.

**High Priority Funds**
This group of funds is dependent upon designated funding from federal transportation bills. At this point the projects in this category of funds are all associated with the proposed Northern Beltline. To date congressional support for this project has been very strong and the project now also eligible for Appalachian Highway Development funding which can realistically be utilized to complete the project.

**Transit Formula Grant Programs**
The transit funding represented includes only the funding available through normal formula fund distribution. Formula grant programs include Section 5393, 5307, 5309, and 5310. Section 5316 (formerly Section 3037) Jobs Access and Reverse Commute is now a formula grant program where it was previously administered competitively and through Congressional discretionary funding. The funding shown for CLASTRAN section 5310 is reflected in the
balances shown for the Congestion Mitigation and Air Quality program. The 5310 funding comes from an MPO directed annual transfer of CMAQ funds from FHWA to FTA.

- **Urbanized Area Formula Funding Program (§ 5307)**
  Section 5307, which is the Federal Transit Administration’s Urbanized Area formula funds, is used to provide for transit capital investments and is a primary source of transit funding in the Birmingham region. Eligible purposes include planning, engineering design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software. All preventive maintenance and some Americans with Disabilities Act complementary paratransit service costs are considered capital costs.

  For urbanized areas with populations of 200,000 and over, funds are apportioned and flow directly to a designated recipient selected locally to apply for and receive Federal funds. Operating assistance is not an eligible expense under the Section 5307 funding program. In urbanized areas with over 200,000 in population, at least one percent of the funding apportioned must be used for transit enhancement activities such as historic preservation, landscaping, public art, pedestrian access, bicycle access, and enhanced access for persons with disabilities.

- **Major Capital Investments in Transit Program (§ 5309)**
  Section 5309, the FTA transit capital investment program, provides capital assistance for three primary activities:
  - New and Replacement Buses and Facilities
  - Modernization of existing rail systems, and
  - New fixed guideway systems (New Starts)

  The Section 5309 grant program may be used to acquire buses for fleet and service expansion, bus maintenance and administrative facilities, transfer facilities, bus malls, transportation centers, intermodal terminals, park-and-ride stations, acquisition of replacement vehicles, bus rebuilds, bus preventive maintenance, passenger amenities such as passenger shelters and bus stop signs, accessory and miscellaneous equipment such as mobile radio units, supervisory vehicles, fare boxes, computers, shop and garage equipment, and costs incurred in arranging innovative financing for eligible projects. Funds are allocated on a discretionary basis.

  Section 5309 grant program funds are also used for capital projects to modernize or improve fixed guideway systems are eligible including purchase and rehabilitation of rolling stock, track, line equipment, structures, signals and communications, power equipment and substations, passenger stations and terminals, security equipment and systems, maintenance facilities and equipment, operational support equipment including computer hardware and software, system extensions, and preventive maintenance.

  Funds are allocated by a statutory formula to urbanized areas with rail systems that have been in operation for at least seven years.
Included in the Section 5309 grant program is the FTA New Starts program. The New Starts program provides funds for construction of new fixed guideway systems or extensions to existing fixed guideway systems. Typical projects can include light rail, rapid rail (heavy rail), commuter rail, monorail, automated fixed guideway system (such as a "people mover"), or a busway/high occupancy vehicle (HOV) facility, or an extension of any of these. Projects become candidates for funding under this program by successfully completing the appropriate steps in the major capital investment planning and project development process.

Major new fixed guideway projects, or extension to existing systems financed with New Starts funds, typically receive these funds through a full funding grant agreement that defines the scope of the project and specifies the total multi-year Federal commitment to the project.

- **Transportation for Elderly Persons and Persons with Disabilities (§ 5310)**
  The Section 5310 provides formula funding to States for the purpose of assisting private nonprofit groups in meeting the transportation needs of the elderly and persons with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. Funds are apportioned based on each State's share of population for these groups of people. Capital projects are eligible for funding. Most funds are used to purchase vehicles, but acquisition of transportation services under contract, lease or other arrangements and state program administration are also eligible expenses.

- **Job Access and Reverse Commute Program (§ 5316)**
  Job Access grants are intended to provide new transit service to assist welfare recipients and other low-income individuals in getting to jobs, training, and child care. Reverse Commute grants are designed to develop transportation services to transport workers residing in urban centers, rural and suburban areas to suburban job sites and other suburban employment opportunities.

  Eligible activities for the Job Access portion of the JARC grants include capital and operating costs of equipment, facilities, and associated capital maintenance items related to providing access to jobs. Also included are the costs of promoting the use of transit by workers with nontraditional work schedules, promoting the use of transit vouchers, and promoting the use of employer-provided transportation including the fare subsidies, parking cash-out, and the federal Commuter Choice benefits. For Reverse Commute grants, the following activities are eligible—operating costs, capital costs and other costs associated with reverse commute by bus, train, carpool, vans or other transit service.

**State Funds**

State revenues are a very important component of the total revenue mix used to fund highway and road project expansion and improvements as well as roadway maintenance.

**Gasoline/Motor Fuel Tax**

Most ALDOT revenue comes from a mix of gasoline excise taxes, motor fuel taxes and petroleum inspection fees and comprises the Department's budget for transportation projects statewide. The gasoline excise tax is the largest source of state funding for roadway projects. Alabama's gas tax is 18 cents per gallon.
State Bridge Replacement Program
The State Bridge Replacement Program, funded by ALDOT, comprises nearly $18 million in projects that have been programmed for the Birmingham area during the 25 year planning horizon. This is in line with the annual spending for projects and programs, and is also in line with historical spending levels for a ten year period prior to this plans baseline. Historic average annual funding levels for the State Bridge Replacement Program for the Birmingham MPO area is about $2.9 million. Projected out over the next 25 years, the Birmingham region can anticipate a total of close to $74 million in potential funding to be spent on bridge replacement projects over the life of the plan.

State Program
This category of funding is in line with the annual spending over the past five years within the Birmingham MPO, annual expenditures for projects funded with state funds averages at around six million per fiscal year. This amount does not include the state’s 3rd Division maintenance budget.

Local Funding
Local funding for specific transportation projects is provided via local governments’ annual budget and/or capital improvements budget. Jefferson County levies a one cent gas tax to be used on roadway projects. Local government projects are typically located within the affected jurisdiction and do not cross jurisdictional boundaries. At this time, the region does not have a dedicated funding source for transportation projects. There are some instances, however, where local funding for regional projects has been provided. Of note, local funding for the Birmingham Regional Alternatives Analysis i.e. the regional transit system plan and Downtown Alternatives Analysis and Draft Environmental Impact Statement a.k.a. the In-Town Transit Partnership (ITP) received funding from multiple jurisdictions. Never-the-less, local governments in the Birmingham MPO plan area utilize locally generated revenues such as sales taxes, franchise fees, business taxes, etc. to assist them in funding for local transportation improvements. These funds typically go directly into the local government general fund and transportation improvements are funded from this overall pot of money. Revenues generated are utilized mostly for local resurfacing, and to a lesser degree, provide match to federal funds for intersection and signal improvements road widening, and routine maintenance.
Revenue and Expenses Forecast

Federal Funding and SAFETEA-LU

Birmingham Metropolitan Planning Organization staff, in consultation with the Alabama Department of Transportation, the Birmingham-Jefferson County Transit Authority, and the Federal Highway Administration estimated the total revenue available to support Birmingham’s transportation system over the life of the 2030 Birmingham LRTP to be $3 billion. This breaks down to approximately $2.4 billion ($2,442,986,257 estimated) in federal funding and $610 million ($610,746,564) in local funds. These funds are anticipated to help fund operations, maintenance, expansion, and enhancement of the region’s transportation system to include roadways, intersections, signal improvements, technology, transit, programs, and non-motorized transportation facilities.

The financial plan for the LRTP required coordinating with state and local officials to ensure all available funding sources were captured. Costing methodologies for capacity projects throughout the 2030 LRTP utilize a range of estimated costs of $1.25 and $1.5 million dollars per lane mile for at grade project costs, and $1.75 to $2.0 million dollars per lane mile for elevated sections. These assumptions, along with other assumptions pertaining to funding availability, funding sources, and funding amounts for the Birmingham MPO plan area were provided to ALDOT and the Federal Highway Administration. The majority of the funding assumptions are based on historic allocations and spending. Transit revenue estimates were developed in consultation with the BJCTA (Birmingham-Jefferson County Transit Authority).

An analysis of the funding provided to the Birmingham metropolitan planning area for a ten year period immediately proceeding the base year of the 2030 LRTP was conducted in order to determine an average level of funding that could be anticipated for the region. This analysis of past trends was then used to assist MPO staff in projecting anticipated revenues for the 25-year planning period. As part of the analysis, each of the federal and state funding sources that had been utilized previously was also evaluated along with an analysis of the projects that had been advanced for funding in both the previous and current TIP to ensure accuracy. Finally, projects contained with the LRTP were evaluated against available funds for each of the LRTP’s funding periods to ensure that adequate funding was available. With the exception of a single funding category during the FY 2009-FY2014 period, all funding categories have adequate funding to cover programmed projects.

The Fiscally Constrained 2030 Birmingham Long Range Transportation Plan was prepared by considering all projects in the existing Long Range Transportation Plan and their costs, their priority, and available existing and expected future funding. A review of funding provided to the region for a ten year period prior to the start of this LRTP was conducted in order to assess the average annual funding amounts. Since the last plan was adopted, the Safe Affordable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was adopted into law, replacing the Transportation Equity Act for the 21st Century (TEA-21) as the federal transportation law guiding America’s transportation future. Under SAFETEA-LU, the State of Alabama stands to gain $232,600,000. The Birmingham region will also benefit under SAFETEA-LU, and 64% of the total project and program dollar amount, approximately $157,794,400, is identified within the legislation. Table 5-1 illustrates the Birmingham area SAFETEA-LU earmarks. Figure 5-1 Illustrates these projects graphically.
# Table 5-1: Birmingham Metropolitan Planning Area SAFETEA-LU Earmarks

Summary of Birmingham Area Earmarks

<table>
<thead>
<tr>
<th>PROJECTS*</th>
<th>TOTAL FUNDING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highway</strong></td>
<td></td>
</tr>
<tr>
<td>Birmingham Northern Beltline</td>
<td>$8,000,000</td>
</tr>
<tr>
<td>County Road 52 and Highway 261 Old Town Helena Bypass</td>
<td>$8,000,000</td>
</tr>
<tr>
<td>I-65 Widening to six lanes from Alabaster to Calera</td>
<td>$6,400,000</td>
</tr>
<tr>
<td>US Hwy. 31 bypass in Calera</td>
<td>$5,440,000</td>
</tr>
<tr>
<td>Valleydale Road Widening from US 31 to I-65/CR 17</td>
<td>$4,720,000</td>
</tr>
<tr>
<td>Sulphur Springs Road bypass from AL 150 to Shades Crest Road</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>American Village Construction of Closed Loop Access Road, Bus Lanes and Parking Facility</td>
<td>$334,400</td>
</tr>
<tr>
<td><strong>Pedestrian Improvements:</strong></td>
<td>$2,900,000</td>
</tr>
<tr>
<td>Northport</td>
<td></td>
</tr>
<tr>
<td>Pell City</td>
<td></td>
</tr>
<tr>
<td>Moody</td>
<td></td>
</tr>
<tr>
<td>Center Point</td>
<td></td>
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<tr>
<td>Gardendale</td>
<td></td>
</tr>
<tr>
<td>Homewood</td>
<td></td>
</tr>
<tr>
<td>Vestavia Hills</td>
<td></td>
</tr>
<tr>
<td>Leeds</td>
<td></td>
</tr>
<tr>
<td>Columbiana</td>
<td></td>
</tr>
<tr>
<td>Morris</td>
<td></td>
</tr>
<tr>
<td><strong>Transit</strong></td>
<td></td>
</tr>
<tr>
<td>I-65 South Bus Rapid Transit - BJCTA</td>
<td>$100,000,000</td>
</tr>
<tr>
<td>UAB Intermodal Facility</td>
<td>$7,000,000</td>
</tr>
<tr>
<td>Injury Control Research Center at UAB</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>UAB Trauma Care System Research and Development</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>City of Birmingham Intermodal Facility, Phase II</td>
<td>$7,000,000</td>
</tr>
<tr>
<td>Birmingham Transit Corridor</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$157,794,400</td>
</tr>
</tbody>
</table>

Changes to federal transportation funding programs under SAFETEA-LU are minimal overall. However, there are some changes to existing funding programs, the addition of new funding programs, and some new planning requirements that will have a definite impact upon the Birmingham region. These changes include:

- **Highway Safety Improvement Program (HSIP)**
  Separately funded for the first time, the highway safety improvement program is established as a core program and is. The Highway Safety Improvement Program offers flexibility to States, allowing them to target funds to their most critical safety needs. Under the SAFETEA-LU legislation, a total of $5.1 billion is provided for 2006-2009.
- **Safe Routes to School**
  This new program will enable and encourage primary and secondary school children to walk and bicycle to school. Both infrastructure-related and behavioral projects will be geared toward providing a safe, appealing environment for walking and biking that will improve the quality of our children’s lives and support national health objectives by reducing traffic, fuel consumption, and air pollution in the vicinity of schools.

- **Surface Transportation Program (STP)**
  SAFETEA-LU expands STP eligibilities to include advanced truck stop electrification systems, high accident/high congestion intersections, and environmental restoration and pollution abatement, control of noxious weeds and aquatic noxious weeds, and establishment of native species. A total of $32.5 billion in STP funds is authorized through 2009. Funds will continue to be distributed among the States based on lane-miles of Federal-aid highways, total vehicle-miles traveled on those Federal-aid highways, and estimated contributions to the Highway Account of the Highway Trust Fund.

- **Transportation Planning**
  SAFETEA-LU continues the metropolitan and statewide transportation planning process. However, it also made changes to the planning process for surface transportation. Some of these changes add flexibility and efficiency, while others add new consultation and environmental planning requirements. Safety and security are identified as separate items to be considered in both metropolitan and statewide planning processes. Consultation requirements for States and MPOs are significantly expanded. Requirements are added for plans to address environmental mitigation, improved performance, multimodal capacity, and enhancement activities; tribal, bicycle, pedestrian, and disabled interests are to be represented.

- **Metropolitan Planning**
  SAFETEA-LU’s policy for the metropolitan planning process promotes consistency between transportation improvements and State and local planned growth and economic development patterns. This change supports more comprehensive transportation planning in which land use, economic development, and environmental factors might all be considered in the transportation planning process. The transportation improvement program (TIP) is to be updated at least every 4 years. The set-aside for Metropolitan Planning is increased to 1.25%.

- **Environmental Streamlining**
  SAFETEA-LU includes a number of changes aimed at streamlining the environmental review process, albeit with additional steps and responsibilities for transportation agencies. A new environmental review process is established for highways, transit, and multimodal projects. A new category of “participating agencies” is added, to allow more state, local, and tribal agencies a formal role and rights in the environmental process.

- **Small Starts Program (§ 3011)**
  SAFETEA-LU provides funding for smaller transit projects whose federal New Starts share is below $75 million. Funded under the federal New Starts program, these projects include streetcar, trolley, or bus rapid transit. Bus Rapid Transit, for the purposes of eligibility for this program is defined as a bus service that has a substantial portion of the project which operates in a separate right-of-way within a defined corridor that is dedicated for public transit use during peak hours, or has other characteristics of...
a fixed guideway system such as transit stations, off-vehicle fare collection, intelligent transportation systems, etc. Commuter rail projects are also eligible as long as they meet the funding cap requirement. Small Starts projects can not total more than $250 million. Simplified procedures and criteria apply to the program.

- **New Starts Program (§ 3011)**
  SAFETEA-LU replaces the current three-level rating system with a five-level rating system – High, Medium High, Medium, Medium-Low, and Low. In addition, economic development and land use are explicitly added to the project justification criteria. A grantee will be allowed to keep a portion of the cost savings when projects are completed under budget. A higher than requested federal share may also be provided for projects which keep cost and ridership estimates within ten percent of the forecasts that were used as the basis for establishing locally preferred alternative.

- **New Freedom Program (§ 3019)**
  The New Freedom program is new under SAFETEA-LU, and provides formula funding for new transportation services and public transportation alternatives beyond those required by ADA to assist persons with disabilities. The New Freedom Program will allocate funding using a formula based on the disabled population in a state, with 60% of the funds allocated to urbanized areas with populations larger than 200,000, 20% to states for use in urbanized areas of less than 200,000, and 20% to states for use in rural areas. The funds would be made available to transit systems and the states. The program contains language mandating coordination of transportation services with other federal human service programs. This holds implications for the Birmingham region and underscores the need for cooperation and coordination between transportation service providers. The labor protection provisions at § 5333 (formerly known as section 13(c)) do not apply to this new program.

- **Job Access and Reverse Commute (JARC) Formula Grants (§ 3018)**
  Under SAFETEA-LU, the JARC program is changed to become a formula program rather than the existing competitive discretionary grants program. The formula is based on ratios involving the number of eligible low-income and welfare recipients in each urbanized area, with 60% of funds going to urban areas with more than 200,000 population 20% for urban areas with less than 200,000 population, and 20% to rural areas. In addition, SAFETEA-LU requires coordination between private, non-profit, and public transportation providers and other federal programs in the JARC program, the New Freedom Program, and the Elderly and Disabled program. This change has huge implications for the Birmingham region's public transportation system as a large decrease is in funding from the JARC program is anticipated. JARC funds are currently used to pay for night and weekend MAX bus service provided by the Birmingham-Jefferson County Transit Authority. Jefferson County, the recipient of past Congressional JARC grant earmarks, provides for the transportation to and from worksites of TANF recipients and other eligible clients participating in the County's workforce development program. Jefferson County utilizes the services of the Central Alabama Specialized Transportation (CLASTRAN) and other private vendors. Under this change, all JARC funding will flow directly through the BJCTA.

FTA is expected to continue its practice of providing maximum flexibility to job access projects designed to meet the needs of individuals who are not effectively served by public transportation.
Figure 5-2 illustrates anticipated transportation funding for the Birmingham metropolitan planning area for the next 25-years. This forecast is based upon an analysis of the previous ten years of funding.
### Table 5-2: Birmingham Metropolitan Area Revenue Forecast

<table>
<thead>
<tr>
<th>Fiscal Years</th>
<th>2006 - 2008</th>
<th>2009 - 2014</th>
<th>2015 - 2024</th>
<th>2025 - 2030</th>
<th>Plan Total</th>
</tr>
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<tbody>
<tr>
<td><strong>Birmingham Attributable Funds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface Transportation Program Birmingham Attributable</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Previous Years Carryover (previous years unobligated funds)</td>
<td>$36,012,967</td>
<td>$2,615,092</td>
<td>$329,857</td>
<td>$2,224,194</td>
<td>$3,078,180,811</td>
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<tr>
<td>Annual Estimated Amount Available for Programming</td>
<td>$33,734,370</td>
<td>$67,468,740</td>
<td>$112,447,900</td>
<td>$67,468,740</td>
<td>$332,001,317</td>
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<tr>
<td>Total Annual Estimated Amount Available for Programming</td>
<td>$69,736,357</td>
<td>$70,083,832</td>
<td>$112,447,904</td>
<td>$69,692,934</td>
<td>$231,876,030</td>
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<td>Federal Funds Obligated or Programmed</td>
<td>$67,121,265</td>
<td>$70,043,538</td>
<td>$112,264,000</td>
<td>$69,486,000</td>
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<td>Balance After Obligations</td>
<td>$2,615,092</td>
<td>$40,294</td>
<td>$2,224,194</td>
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<td>$79,219,201</td>
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<td>Non-Federal Match Required</td>
<td>$16,780,316</td>
<td>$17,510,885</td>
<td>$27,566,000</td>
<td>$17,362,000</td>
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<td>Congestion Mitigation and Air Quality Program</td>
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<td></td>
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<tr>
<td>Previous Years Carryover (previous years unobligated funds)</td>
<td>$12,371,781</td>
<td>$7,483,952</td>
<td>($546,067)</td>
<td>$33,741,123</td>
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<td>Annual Estimated Amount Available for Programming</td>
<td>$27,826,317</td>
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<tr>
<td>Total Annual Estimated Amount Available for Programming</td>
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<td>$92,208,323</td>
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<td>Federal Funds Obligated or Programmed</td>
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<td>$63,682,653</td>
<td>$58,467,200</td>
<td>$35,532,800</td>
<td>$190,396,799</td>
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<tr>
<td>Balance After Obligations</td>
<td>$7,483,952</td>
<td>($546,067)</td>
<td>$33,741,123</td>
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<td>Non-Federal Match Required</td>
<td>$8,178,537</td>
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<td><strong>Statewide Discretionary Funds</strong></td>
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<tr>
<td>Surface Transportation Program Non-Urban/Any Area</td>
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<td>Federal Funds Obligated or Programmed Birmingham MPO</td>
<td>$34,360,000</td>
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<td>National Highway System Program</td>
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<tr>
<td>Federal Funds Obligated or Programmed Birmingham MPO</td>
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<td>Non-Federal Match Required</td>
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<tr>
<td>Federal Funds Obligated or Programmed Birmingham MPO</td>
<td>$92,398,288</td>
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<td>Interstate Maintenance Program</td>
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<tr>
<td>Federal Funds Obligated or Programmed Birmingham MPO</td>
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<td>$90,480,000</td>
<td>$152,400,000</td>
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<td>Non-Federal Match Required</td>
<td>$37,043,390</td>
<td>$14,812,223</td>
<td>$22,620,000</td>
<td>$38,100,000</td>
<td>$112,575,612</td>
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<tr>
<td>State Bridge Replacement Program1</td>
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<tr>
<td>Federal Funds Obligated or Programmed Birmingham MPO</td>
<td>$14,550,859</td>
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<td>$18,880,875</td>
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<td>Non-Federal Match Required</td>
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<td>State Program2</td>
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<td>State Funds Obligated or Programmed Birmingham MPO</td>
<td>$13,547,387</td>
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<td>Transportation Enhancement Program3</td>
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<tr>
<td>Federal Funds Obligated or Programmed Birmingham MPO</td>
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<tr>
<td>Non-Federal Match Required</td>
<td>$53,754</td>
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<td>Safety Projects4</td>
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<td>Federal Funds Obligated or Programmed Birmingham MPO</td>
<td>$22,500</td>
<td>$0</td>
<td>$440,000</td>
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<td>$462,500</td>
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<tr>
<td>Non-Federal Match Required</td>
<td>$5,625</td>
<td>$0</td>
<td>$110,000</td>
<td>$0</td>
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<tr>
<td><strong>Federal Transit Funding and Congressional Earmarks</strong></td>
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<td></td>
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<td></td>
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<tr>
<td>Transit Formula Funding</td>
<td></td>
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<td></td>
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<tr>
<td>Federal Funds Programmed</td>
<td>$29,182,604</td>
<td>$12,490,000</td>
<td>$79,700,000</td>
<td>$0</td>
<td>$197,072,604</td>
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<tr>
<td>High Priority Projects / DEMO Projects</td>
<td>$387,530,416</td>
<td>$49,960,000</td>
<td>$318,800,000</td>
<td>$0</td>
<td>$756,290,416</td>
</tr>
<tr>
<td>Estimated Total Federal Funding All Categories</td>
<td>$871,521,510</td>
<td>$436,341,607</td>
<td>$798,110,887</td>
<td>$356,570,644</td>
<td>$2,462,544,648</td>
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<td>Estimated Total Non-Federal Match Required</td>
<td>$218,880,378</td>
<td>$109,085,402</td>
<td>$22,964,922</td>
<td>$89,142,661</td>
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<tr>
<td>Estimated Average Annual Federal Funding All Categories</td>
<td>$290,507,170</td>
<td>$72,723,601</td>
<td>$79,811,089</td>
<td>$59,428,441</td>
<td>$502,470,301</td>
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<tr>
<td>Estimated Average Annual Non-Federal Funding All Categories</td>
<td>$72,626,793</td>
<td>$18,180,900</td>
<td>$19,952,772</td>
<td>$14,857,110</td>
<td>$125,671,775</td>
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</table>

1 Bridge replacement projects are selected based on bridge sufficiency rating.
2 In addition to capacity projects ALDOT programs $2,500,000 annually for system maintenance or $62,500,000 over the life of the plan.
3 The Transportation Enhancement Program funding is funded annually on a competitive basis statewide. ALDOT requires MPO review of all project applications, and the ALDOT is responsible for determining project selection. 10% of the State’s Surface Transportation Funds must be spent on enhancement projects.
4 Safety Program projects are funded annually. 10% of the State’s Surface Transportation Funds must be spent on safety projects.
The expected expenses for the Birmingham MPO area have been identified for the 25-year planning period. An analysis of Birmingham Long Range Transportation Plan projects that are included in the Alabama DOT’s project database show that there are approximately $3.08 billion in projects programmed in various project categories for the 25-year planning period. Another $1.2 billion in “desired” projects from the LRTP have been identified and placed into the visionary element of the LRTP. As additional funding becomes available, these projects will be moved into the funded portion of the plan and considered as part of the plans required fiscal constraint. **Table 5-3** illustrates this more clearly.

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Plan</th>
<th>Visionary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>$2,497,830,838</td>
<td>$377,541,401</td>
</tr>
<tr>
<td>Signal and Intersection</td>
<td>$43,959,331</td>
<td>$0</td>
</tr>
<tr>
<td>ITS</td>
<td>$50,963,463</td>
<td>$0</td>
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<tr>
<td>Additional Non-Capacity</td>
<td>$160,780,256</td>
<td>$0</td>
</tr>
<tr>
<td>Bicycle/Pedestrian</td>
<td>$84,139,128</td>
<td>$0</td>
</tr>
<tr>
<td>Transit</td>
<td>$239,944,171</td>
<td>$834,500,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,077,617,187</strong></td>
<td><strong>$1,212,341,401</strong></td>
</tr>
</tbody>
</table>

*: Costs for projects identified as Intermodal Access are included in other project categories for accounting purposes. These projects total $83,546,079

Expected expenses are $563,624 below anticipated revenues. As a result, the 2030 Birmingham Long Range Transportation Plan successfully demonstrates its fiscal constraint. In order to meet this constraint, several roadway capacity projects were moved into the visionary section of the plan. These include:

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Map ID</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-459 From I-65 to I-20 East (6 to 8 lanes)</td>
<td>389</td>
<td>$73,750,000</td>
</tr>
<tr>
<td>I-459 From Morgan Rod to I-65 (6 to 8 lanes)</td>
<td>532</td>
<td>$53,750,000</td>
</tr>
<tr>
<td>CR-95 From CR-44 north to CR 52 (2 to 5 lanes)</td>
<td>435</td>
<td>$14,940,000</td>
</tr>
<tr>
<td>I-65 From Green Springs Hwy to 6th Ave. South (6 to 8 lanes)</td>
<td>411</td>
<td>$4,500,000</td>
</tr>
<tr>
<td>Carson Road/13th Street Huffman Rd. to 23rd NW (2 to 4 lanes)</td>
<td>485</td>
<td>$7,950,000</td>
</tr>
</tbody>
</table>

**Sub-Total** $154,890,000

The decision to move these projects was based on such factors as (a) its placement in the LRTP in terms of conformity year, (b) physical constraints, (c) the demonstrated need for the project based on capacity analysis, and (d) total dollar cost of the project.
Because of this shortfall, the MPO moved to identify a project(s) to be moved into the plan’s visionary element, and successfully moved $127,500,000 in capacity projects. In doing this, the expected 25-year expenses for the Birmingham region drop to $2,952,607,187.

Funding Deficiencies
An evaluation of the available and anticipated federal transportation funding for the Birmingham region indicates that the region does indeed have enough federal funding, at least for the roadway network, to cover the full range of projects contained within the LRTP. The LRTP includes funding for roadway system expansion and improvements, transit system expansion and improvements, and transportation safety and security programs. However, like most urban regions around the United States, local funding for transportation infrastructure is scarce. In order to continue to successfully advance projects from the fiscally constrained LRTP to implementation in a consistent fashion, the Birmingham region needs to generate an average of $31.4 million in non-federal funding annually. This could include both state and local funding. Attempting to advance capacity and non-capacity projects which are included in the visionary section of the LRTP would require an additional $10 to $15 million in annual non-federal funding. Finally, in order to realize the complete transit system envisioned in the Regional Transit Improvement Strategy (RTIS) yet another $40 to $60 million in annual non-federal funding is needed. Many of the projects included in the RTIS are identified in the LRTP’s visionary element. In short, the Birmingham region needs anywhere between $70 and $100 million in annual non-federal funding in order to realize the totality of the transportation plans, programs and projects envisioned in the Long Range Transportation Plan.

Because of the lack of adequate local funding to leverage federal funds, programs and projects often languish in both the region’s Long Range Transportation Plan and Transportation Improvement Program. This in turn places additional political pressure on the Metropolitan Planning Organization which is tasked with maintaining a balanced, fiscally constrained LRTP and TIP. It also places pressure upon local government and the State whose responsibility it is to advance the project in a timely manner.

In order that the Birmingham region might begin to advance projects contained in the LRTP, consideration should be given to identifying and securing a dedicated source of regional funding for transportation. In doing so, local dollars can be freed up to address local transportation needs while the development of the regional transportation network might continue. In addition to addressing funding deficiencies for the roadway network, funding is also needed to assist in the expansion of the public transportation system. Many of the public transportation projects envisioned in the Regional Transit Improvement Strategy (see Appendix H), the region’s transit system plan developed from the Birmingham Regional Alternatives Analysis project, are included in the visionary element of the LRTP. Specific projects from this plan are being advanced in the federal planning process, but will not be implemented until such time as an adequate long-term funding source can be determined.

Innovation and creativity will be the keys to securing funding the region’s transportation system. Alabama law does not make this task easy. However, the need for new transportation infrastructure in order to maintain sustained economic growth and development as well as maintaining and improving the overall quality of life far outweigh any impediments provided by law and should compel the region’s leadership to find a solution.

Innovation, along with traditional funding vehicles, will be the ultimate solution to addressing issues of funding for transportation. Such solutions might include:
- Toll facilities i.e. toll roads and HOT lanes
- Flat annual road user and maintenance fee
- Pay as you drive road user fee
- Privately developed, operated, and maintained roads
- Increased gas tax
- Public/private partnerships such as developer provided, public maintained transportation infrastructure

- Regional gas tax
- GARVEE Bonds
- Vehicle advalorem tax increase
- Wheel tax
- Transportation impact fees for new development
- Property tax increase

Future MPO planning activities should include the identification of new and/or innovative funding sources that are adequate to meet the region’s transportation needs. Once identified, the MPO membership should determine which of the identified funding sources are feasible and then move towards setting into motion actions that will help to secure those funds.
Chapter 6: Getting to There from Here:
Birmingham Long Range Transportation Plan

Introduction
For some, the answer to the question “How does the Birmingham region get to where it wants to be” is crystal clear. The difficulty, however, lies in how we make the right choices to get there from where we are currently. Do we continue to develop our transportation system in a fragmented manner i.e. a transit system, a roadway system, a bicycle and pedestrian system, etc.; or do we consider the system as a whole, evaluating our strengths and weaknesses, and begin to create a regional transportation system that is capable of meeting both local and regional needs, providing greater transportation choices, and maintains fiscal responsibility?

The majority of these questions have been answered through numerous studies whose findings are presented throughout this document. This section attempts to harness this information and establish a recommended plan that is fiscally responsible and environmentally sound, specifically meeting federal air quality conformity requirements to which the Birmingham region is subject. This section discusses the performance based approach to comparing and evaluating similar projects, an assessment of projects.

Transportation system improvement projects within the LRTP are grouped into seven categories. The categories are highway capacity projects, signal and intersection projects, intelligent transportation system (ITS) and related projects, bicycle and pedestrian projects, intermodal access projects, other non-capacity projects, and transit projects.

The seven categories of projects and their very detailed information are shown in Chapter 1 of the Birmingham Area 2030 Long Range Transportation Plan. Here you will only see a brief narrative of the categories to familiarize the reader with the project types.

Projects included in the plan update are a result of a review of the existing 2020 Long Range Plan by members of the Metropolitan Planning Organization’s Transportation Citizens Committee, Transportation Technical Committee, MPO Subcommittee, and Regional Planning Commission staff. The projects represent a variety of capacity, intersection, freight, signal and ITS, safety, transit, and bicycle and pedestrian improvements that have been suggested through previous planning efforts, and changes to existing projects requested by project sponsors.

There is an overlap of considerations when categorizing projects among these seven categories. When reviewing the 2030 Birmingham Area Long Range Transportation Plan it is important to recognize these interrelationships. Capacity projects do not appear without consideration of safety issues and intermodal access. Intelligent transportation system projects do function without improvements to arterial signals systems and intersection improvements. A congestion management system does not perform to expectations without intelligent transportation system projects and programs to foster and support single occupancy vehicle alternatives identified among the transit projects. In addition, the projects shown as other non-capacity projects contribute to overall system maintenance and safety.

Performance Based Evaluation: Establishing Priorities
A process was developed to categorize, evaluate, and prioritize project for consideration in the fiscally-constrained Long Range Transportation Plan, based on a combination of technical and policy-based assessments. The process included the following objectives:
To develop a technically and politically defensible Long Range Transportation Plan
To develop a planning process that is objective
To develop a planning process that is consistent with regional and local goals

In addition, the LRTP is setting the stage for the Birmingham region to better distinguish between clearly beneficial and marginal projects

In addition to the objectives listed above, a key objective of the transportation planning process for the Birmingham metropolitan planning area is that the planning goals and related performance indicators be used by the MPO’s various governing committees for the following purposes:

- Evaluation of short-range transportation improvement program (TIP) projects.
- Development of the Long Range Transportation Plan to include highway, transit, intermodal, bridge, and bicycle/pedestrian components.
- Identification and evaluation of the seven local and/or statewide management systems components including traffic congestion, public transportation, intermodal, highway safety, pavement, bridge, and traffic monitoring.

This process has allowed the Birmingham MPO to approach the development of the Long Range Transportation Plan in a consistent fashion and maintain the prioritization process as an on-going activity. A detailed description of the process and the prioritization results can be found in Appendix D: Project Evaluation and Prioritization Methodology report.

**Table 6-1** illustrates the performance indicators that are currently used by the Birmingham MPO to evaluate and prioritize projects within the TIP. **Table 6-1** also identifies some additional measures that might be used to assist with project evaluation and prioritization.
<table>
<thead>
<tr>
<th>Goal</th>
<th>Existing Performance Indicators</th>
<th>Proposed Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal 1: The Long Range Transportation Plan shall serve the region's economic development needs by effectively and efficiently managing existing facilities, and improving the regional transportation system serving interstate and intrastate commerce across and between all modes of transportation.</td>
<td>Employees per square mile within a 2-mile wide corridor of the project&lt;br&gt;Future year percentage change of employees within a 2-mile wide corridor of the project&lt;br&gt;Low income households within a 2-mile wide corridor of the project</td>
<td>Funding mix balance between modes&lt;br&gt;Number of businesses located on transportation facilities</td>
</tr>
<tr>
<td>Goal 2: The Birmingham Long Range Transportation Plan shall ensuring that projects and programs consider the safety, security and timely movement of persons, goods, and services across and between all modes of transportation for both motorized and non-motorized users.</td>
<td>Accident rate per 1,000,000 VMT or entering vehicles/year&lt;br&gt;Accident severity per 1,000 accidents&lt;br&gt;Bike/pedestrian accident rate per 1,000 accidents&lt;br&gt;Lighting projects (yes/no)&lt;br&gt;Presence of bicycle safety provisions (yes/no)&lt;br&gt;New or upgraded guardrail/median barrier (yes/no)</td>
<td>Vehicle Miles Traveled&lt;br&gt;Vehicle Hours Traveled&lt;br&gt;Vehicle Hours Delay&lt;br&gt;Average roadway speeds</td>
</tr>
<tr>
<td>Goal 3: The Birmingham Long Range Transportation Plan shall strive to maintain and improve the region’s quality of life by providing for projects and programs that support adequate access to transportation facilities and services to enhance the regional mobility of people, goods, and services across and between all modes of transportation regardless of geographic location, race, nationality, economic status, or physical disability.</td>
<td>Paratransit accessibility for elderly/disabled (yes/no)&lt;br&gt;Transit service enhancements or expansion (yes/no)&lt;br&gt;Intermodal Management System project (yes/no)&lt;br&gt;Priority level of bicycle/pedestrian facilities&lt;br&gt;Population per square mile within a 2-mile wide corridor of project&lt;br&gt;Railroad or river crossing improvement/mitigation (yes/no)&lt;br&gt;Speed increase per 2,500 vehicle/hour on existing facility</td>
<td>Number of projects that cross jurisdictional boundaries&lt;br&gt;Number of projects that have multiple non-federal &amp; non-state funding sources</td>
</tr>
<tr>
<td>Goal 4: The Birmingham Long Range Transportation Plan shall protect, preserves, and enhance the environmental quality of areas directly or indirectly affected by transportation improvements. The Long Range Transportation Plan shall also promote transportation control measures that reduce transportation related emissions in order to meet and maintain national clean air standards.</td>
<td>Grams/Day Hydro Carbon (HC) reduction&lt;br&gt;Grams/Day Nitrogen Oxide (NOx) reduction&lt;br&gt;Grams/$ per 153 days HC reduction effectiveness&lt;br&gt;Grams/$ per 153 days NOx reduction effectiveness&lt;br&gt;Anticipated environmental documentation typology&lt;br&gt;Minority population within a 2-mile wide corridor of project&lt;br&gt;Annual reduction in vehicle miles traveled (VMT)</td>
<td>EJ community impact analysis</td>
</tr>
<tr>
<td>Goal 5: The Birmingham Long Range Transportation Plan shall provide an efficient and effective transportation system that preserves existing transportation facilities, improves system management and operations, identifies the needs for future growth and development, and meets those needs within adequate estimated federal, state, local and/or private funds.</td>
<td>Existing volume/capacity ratio (V/C)&lt;br&gt;V/C change for project/improvement&lt;br&gt;Benefit/Cost ratio due to improvement&lt;br&gt;Inclusion in one of the following plan documents:&lt;br&gt;  o The Birmingham Area, Bicycle, Pedestrian, and Greenway Plan&lt;br&gt;  o Congestion Management System/IVHS Program Study for Birmingham&lt;br&gt;  o Strategic Regional Multimodal Plan&lt;br&gt;  o Transit Development Program&lt;br&gt;  o Local Comprehensive Plan&lt;br&gt;  o Bridge Sufficiency Rating</td>
<td>Census journey to work statistics&lt;br&gt;Project impact on the existing transportation system&lt;br&gt;Pavement conditions</td>
</tr>
</tbody>
</table>
Environmental Assessment

Although vehicle miles traveled (VMT) are projected to increase over the 25-year plan horizon, vehicle emissions are expected to decrease during the same period. Advances in vehicle emission technology are continuing to improve and the overall output of harmful emissions by motor vehicles is reduced. Based on the analysis of vehicle emissions in comparison to VMT during the plan horizon, the 2030 LRTP is determined to be in conformity based upon the passing of the emissions budget test for each of the required conformity test years. In addition, the plan is determined to be in conformity based on the reductions to NOx for PM 2.5 and Total PM 2.5 relative to the base year. Figures 6-1, 6-2, 6-3 and 6-4 illustrate this more clearly.

This growth in VMT also holds implications for increased energy consumption and threatens the very sustainability of the transportation system. As stated previously in Chapter 2, any congestion relief that is evidenced by increases in roadway capacity will eventually be negated by the growth in VMT. The same is true of any air quality improvements that are witnessed despite improvements in vehicle technology. Future transportation planning activities, programs, and projects should concentrate on providing a balanced transportation system that gives users more choices about how they will travel and pursues strategies to reduce VMT.
Figure 6-2: Vehicle Emissions vs. Emissions Budget by Conformity Year

Figure 6-3: Total PM Reductions by Conformity Year

*: Particulate Matter (PM 2.5) Standard for the whole year, Birmingham Metropolitan Planning area and a portion of Walker County
**: Base year is 2002
Recommended Plan

The forecast growth in both population and employment for the Birmingham region, along with the lessons learned from previous urban expansion and community development patterns, makes the provision of a high quality transportation system imperative. The provision of this system is important not only for the sustained economic vitality of the community, but also for the provision of a superior quality of life for the region’s residents. The recommended 2030 Birmingham Long Range Transportation Plan is based on the seven planning factors laid out in TEA-21, the Region’s articulated Goals and Policies, and tries to reflect to the extent possible at this stage, the core ideas of SAFETEA-LU.

Keeping these elements at the forefront, the 2030 Birmingham LRTP was developed to reduce congestion by providing for the expansion of the region’s transportation system, and at the same time, keeping the region’s air quality at or below the established air quality standards. It recognizes the role of land use and community design in the overall development of a balanced transportation system, as well as recognizing the needs for both public transportation and non-motorized transportation modes. In addition, this plan demonstrates fiscal constraint, showing that the necessary funds are or will be in place to advance the projects contained in the plan within the expected funds available during the 25-year planning period.

As time goes on, the Birmingham region recognizes that a larger share of the available funding will be utilized for the operation and maintenance of the entire transportation system. By the same token, the Birmingham region understands that the region’s transportation system is far from being adequate to respond to the expected growth and provide for a balanced transportation system that provides travel choices and contributes to both the sustainability of the region’s economy and the improved quality of life for its citizens.

The fiscally constrained 2030 Birmingham LRTP can reasonably envision approximately $3.7 billion in expected project costs to be covered by anticipated future funding based on an
analysis of the region’s previous revenues, available Congressional funding, outstanding commitments, and past expenditures. Appendix A, 2030 Recommended Birmingham LRTP, contains a listing of complete projects which represent a $3,729,228,198 investment in transportation program, projects, and service in the two county MPO planning area.
a fixed guideway system such as transit stations, off-vehicle fare collection, intelligent transportation systems, etc. Commuter rail projects are also eligible as long as they meet the funding cap requirement. Small Starts projects can not total more than $250 million. Simplified procedures and criteria apply to the program.

- **New Starts Program (§ 3011)**
  SAFETEA-LU replaces the current three-level rating system with a five-level rating system – High, Medium High, Medium, Medium-Low, and Low. In addition, economic development and land use are explicitly added to the project justification criteria. A grantee will be allowed to keep a portion of the cost savings when projects are completed under budget. A higher than requested federal share may also be provided for projects which keep cost and ridership estimates within ten percent of the forecasts that were used as the basis for establishing locally preferred alternative.

- **New Freedom Program (§ 3019)**
  The New Freedom program is new under SAFETEA-LU, and provides formula funding for new transportation services and public transportation alternatives beyond those required by ADA to assist persons with disabilities. The New Freedom Program will allocate funding using a formula based on the disabled population in a state, with 60% of the funds allocated to urbanized areas with populations larger than 200,000, 20% to states for use in urbanized areas of less than 200,000, and 20% to states for use in rural areas. The funds would be made available to transit systems and the states. The program contains language mandating coordination of transportation services with other federal human service programs. This holds implications for the Birmingham region and underscores the need for cooperation and coordination between transportation service providers. The labor protection provisions at § 5333 (formerly known as section 13(c)) do not apply to this new program.

- **Job Access and Reverse Commute (JARC) Formula Grants (§ 3018)**
  Under SAFETEA-LU, the JARC program is changed to become a formula program rather than the existing competitive discretionary grants program. The formula is based on ratios involving the number of eligible low-income and welfare recipients in each urbanized area, with 60% of funds going to urban areas with more than 200,000 population 20% for urban areas with less than 200,000 population, and 20% to rural areas. In addition, SAFETEA-LU requires coordination between private, non-profit, and public transportation providers and other federal programs in the JARC program, the New Freedom Program, and the Elderly and Disabled program. This change has huge implications for the Birmingham region’s public transportation system as a large decrease is in funding from the JARC program is anticipated. JARC funds are currently used to pay for night and weekend MAX bus service provided by the Birmingham-Jefferson County Transit Authority. Jefferson County, the recipient of past Congressional JARC grant earmarks, provides for the transportation to and from worksites of TANF recipients and other eligible clients participating in the County’s workforce development program. Jefferson County utilizes the services of the Central Alabama Specialized Transportation (CLASTRAN) and other private vendors. Under this change, all JARC funding will flow directly through the BJCTA.

FTA is expected to continue its practice of providing maximum flexibility to job access projects designed to meet the needs of individuals who are not effectively served by public transportation.
Figure 5-2 illustrates anticipated transportation funding for the Birmingham metropolitan planning area for the next 25-years. This forecast is based upon an analysis of the previous ten years of funding.
### Table 5-2: Birmingham Metropolitan Area Revenue Forecast

#### Birmingham Attributable Funds

<table>
<thead>
<tr>
<th>Categories</th>
<th>Fiscal Years 2006 - 2008</th>
<th>Fiscal Years 2009 - 2014</th>
<th>Fiscal Years 2015 - 2024</th>
<th>Fiscal Years 2025 - 2030</th>
<th>Plan Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Transportation Program Birmingham Attributable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Years Carryover (previous years unobligated funds)</td>
<td>$36,001,987</td>
<td>$2,615,092</td>
<td>$40,294</td>
<td>$2,224,194</td>
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<tr>
<td>Annual Estimated Amount Available for Programming</td>
<td>$33,734,370</td>
<td>$67,468,740</td>
<td>$112,447,900</td>
<td>$67,468,740</td>
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</tr>
<tr>
<td>Total Annual Estimated Amount Available for Programming</td>
<td>$69,736,357</td>
<td>$70,083,832</td>
<td>$112,447,900</td>
<td>$69,692,934</td>
<td>$322,001,317</td>
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<tr>
<td>Federal Funds Obligated or Programmed</td>
<td>$67,121,265</td>
<td>$70,043,538</td>
<td>$110,264,000</td>
<td>$69,448,000</td>
<td>$316,876,803</td>
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<tr>
<td>Balance After Obligations</td>
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<td>$40,294</td>
<td>$2,224,194</td>
<td>$244,934</td>
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<tr>
<td>Non-Federal Match Required</td>
<td>$16,780,316</td>
<td>$17,510,885</td>
<td>$27,566,000</td>
<td>$17,362,000</td>
<td>$79,219,201</td>
</tr>
</tbody>
</table>

#### Statewide Discretionary Funds

<table>
<thead>
<tr>
<th>Categories</th>
<th>Fiscal Years 2006 - 2008</th>
<th>Fiscal Years 2009 - 2014</th>
<th>Fiscal Years 2015 - 2024</th>
<th>Fiscal Years 2025 - 2030</th>
<th>Plan Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Transportation Program Non-Urban/Any Area</td>
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<tr>
<td>Federal Funds Obligated or Programmed</td>
<td>$34,360,000</td>
<td>$41,831,334</td>
<td>$99,680,000</td>
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<tr>
<td>Non-Federal Match Required</td>
<td>$8,590,000</td>
<td>$10,457,834</td>
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<td>$57,517,834</td>
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<td>National Highway System Program</td>
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<td>Federal Funds Obligated or Programmed</td>
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<td>$87,725,821</td>
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<td>Non-Federal Match Required</td>
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<td>National Highway System Program (Appalachian)</td>
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<td>$5,531,543</td>
<td>$30,000,000</td>
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<td>$127,929,831</td>
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<td>Non-Federal Match Required</td>
<td>$23,099,572</td>
<td>$1,382,886</td>
<td>$7,500,000</td>
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<td>$31,982,458</td>
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<td>Federal Funds Obligated or Programmed</td>
<td>$148,173,558</td>
<td>$59,248,890</td>
<td>$90,480,000</td>
<td>$152,400,000</td>
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<td>Non-Federal Match Required</td>
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<td>$14,812,223</td>
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<td>Federal Funds Obligated or Programmed</td>
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<td>$0</td>
<td>$0</td>
<td>$18,880,875</td>
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<td>Non-Federal Match Required</td>
<td>$3,637,715</td>
<td>$1,082,504</td>
<td>$0</td>
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<td>$4,720,219</td>
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<td>State Program</td>
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<tr>
<td>State Funds Obligated or Programmed</td>
<td>$13,547,387</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$13,547,387</td>
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</tbody>
</table>

#### Federal Transit Funding and Congressional Earmarks

<table>
<thead>
<tr>
<th>Categories</th>
<th>Fiscal Years 2006 - 2008</th>
<th>Fiscal Years 2009 - 2014</th>
<th>Fiscal Years 2015 - 2024</th>
<th>Fiscal Years 2025 - 2030</th>
<th>Plan Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit Formula Funding</td>
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</tr>
<tr>
<td>Federal Funds Programmed</td>
<td>$29,160,360</td>
<td>$53,987,812</td>
<td>$89,797,680</td>
<td>$44,969,844</td>
<td>$218,117,030</td>
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<tr>
<td>Non-Federal Match Required</td>
<td>$7,290,090</td>
<td>$13,494,955</td>
<td>$22,494,922</td>
<td>$11,247,461</td>
<td>$54,529,426</td>
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<tr>
<td>High Priority Projects / DEMO Projects</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Federal Funds Programmed</td>
<td>$387,530,416</td>
<td>$49,960,000</td>
<td>$318,800,000</td>
<td>$0</td>
<td>$756,290,416</td>
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<tr>
<td>Non-Federal Match Required</td>
<td>$96,882,604</td>
<td>$12,490,000</td>
<td>$79,700,000</td>
<td>$0</td>
<td>$187,072,604</td>
</tr>
<tr>
<td>Estimated Total Federal Funding All Categories</td>
<td>$871,521,510</td>
<td>$436,341,607</td>
<td>$798,110,887</td>
<td>$356,570,644</td>
<td>$2,462,544,648</td>
</tr>
<tr>
<td>Estimated Total Non-Federal Match Required</td>
<td>$217,880,378</td>
<td>$109,085,402</td>
<td>$22,723,801</td>
<td>$89,142,661</td>
<td>$615,836,162</td>
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<tr>
<td>Estimated Average Federal Funding All Categories</td>
<td>$290,507,170</td>
<td>$72,723,601</td>
<td>$79,811,089</td>
<td>$59,428,441</td>
<td>$502,470,301</td>
</tr>
<tr>
<td>Estimated Average Non-Federal Funding All Categories</td>
<td>$72,626,793</td>
<td>$16,180,900</td>
<td>$19,952,772</td>
<td>$14,857,110</td>
<td>$125,671,778</td>
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</tbody>
</table>

1. Bridge replacement projects are selected based on bridge sufficiency rating.
2. In addition to capacity projects ALDOT programs $62,500,000 annually for system maintenance over the life of the plan.
3. The Transportation Enhancement Program funds are funded annually on a competitive basis. ALDOT requires MPO review of all project applications; and the ALDOT is responsible eligibility determination and project selection. 10% of the State's Surface Transportation Funds must be spent on enhancement projects.
4. Safety Program projects are funded annually. 10% of the State's Surface Transportation Funds must be spent on safety projects.
The expected expenses for the Birmingham MPO area have been identified for the 25-year planning period. An analysis of Birmingham Long Range Transportation Plan projects that are included in the Alabama DOT’s project database show that there are approximately $3.08 billion in projects programmed in various project categories for the 25-year planning period. Another $1.2 billion in “desired” projects from the LRTP have been identified and placed into the visionary element of the LRTP. As additional funding becomes available, these projects will be moved into the funded portion of the plan and considered as part of the plans required fiscal constraint. Table 5-3 illustrates this more clearly.

Table 5-3: Estimated Expenses By Project Category

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Plan</th>
<th>Visionary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>$2,497,830,838</td>
<td>$377,541,401</td>
</tr>
<tr>
<td>Signal and Intersection</td>
<td>$43,959,331</td>
<td>$0</td>
</tr>
<tr>
<td>ITS</td>
<td>$50,963,463</td>
<td>$0</td>
</tr>
<tr>
<td>Additional Non-Capacity</td>
<td>$160,780,256</td>
<td>$0</td>
</tr>
<tr>
<td>Bicycle/Pedestrian</td>
<td>$84,139,128</td>
<td>$0</td>
</tr>
<tr>
<td>Transit</td>
<td>$239,944,171</td>
<td>$834,500,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,077,617,187</strong></td>
<td><strong>$1,212,341,401</strong></td>
</tr>
</tbody>
</table>

*: Costs for projects identified as Intermodal Access are included in other project categories for accounting purposes. These projects total $83,546,079

Expected expenses are $563,624 below anticipated revenues. As a result, the 2030 Birmingham Long Range Transportation Plan successfully demonstrates its fiscal constraint. In order to meet this constraint, several roadway capacity projects were moved into the visionary section of the plan. These include:

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Map ID</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-459</td>
<td>389</td>
<td>$73,750,000</td>
</tr>
<tr>
<td>From I-65 to I-20 East (6 to 8 lanes)</td>
<td>389</td>
<td>$73,750,000</td>
</tr>
<tr>
<td>I-459</td>
<td>532</td>
<td>$53,750,000</td>
</tr>
<tr>
<td>From Morgan Rod to I-65 (6 to 8 lanes)</td>
<td>532</td>
<td>$53,750,000</td>
</tr>
<tr>
<td>CR-95</td>
<td>435</td>
<td>$14,940,000</td>
</tr>
<tr>
<td>From CR-44 north to CR 52 (2 to 5 lanes)</td>
<td>435</td>
<td>$14,940,000</td>
</tr>
<tr>
<td>I-65</td>
<td>411</td>
<td>$4,500,000</td>
</tr>
<tr>
<td>From Green Springs Hwy to 6th Ave. South (6 to 8 lanes)</td>
<td>411</td>
<td>$4,500,000</td>
</tr>
<tr>
<td>Carson Road/13th Street Huffman Rd. to 23rd NW (2 to 4 lanes)</td>
<td>485</td>
<td>$7,950,000</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td></td>
<td><strong>$154,890,000</strong></td>
</tr>
</tbody>
</table>

The decision to move these projects was based on such factors as (a) its placement in the LRTP in terms of conformity year, (b) physical constraints, (c) the demonstrated need for the project based on capacity analysis, and (d) total dollar cost of the project.
Because of this shortfall, the MPO moved to identify a project(s) to be moved into the plan’s visionary element, and successfully moved $127,500,000 in capacity projects. In doing this, the expected 25-year expenses for the Birmingham region drop to $2,952,607,187.

**Funding Deficiencies**

An evaluation of the available and anticipated federal transportation funding for the Birmingham region indicates that the region does indeed have enough federal funding, at least for the roadway network, to cover the full range of projects contained within the LRTP. The LRTP includes funding for roadway system expansion and improvements, transit system expansion and improvements, and transportation safety and security programs. However, like most urban regions around the United States, local funding for transportation infrastructure is scarce. In order to continue to successfully advance projects from the fiscally constrained LRTP to implementation in a consistent fashion, the Birmingham region needs to generate an average of $31.4 million in non-federal funding annually. This could include both state and local funding. Attempting to advance capacity and non-capacity projects which are included in the visionary section of the LRTP would require an additional $10 to $15 million in annual non-federal funding. Finally, in order to realize the complete transit system envisioned in the Regional Transit Improvement Strategy (RTIS) yet another $40 to $60 million in annual non-federal funding is needed. Many of the projects included in the RTIS are identified in the LRTP’s visionary element. In short, the Birmingham region needs anywhere between $70 and $100 million in annual non-federal funding in order to realize the totality of the transportation plans, programs and projects envisioned in the Long Range Transportation Plan.

Because of the lack of adequate local funding to leverage federal funds, programs and projects often languish in both the region’s Long Range Transportation Plan and Transportation Improvement Program. This in turn places additional political pressure on the Metropolitan Planning Organization which is tasked with maintaining a balanced, fiscally constrained LRTP and TIP. It also places pressure upon local government and the State whose responsibility it is to advance the project in a timely manner.

In order that the Birmingham region might begin to advance projects contained in the LRTP, consideration should be given to identifying and securing a dedicated source of regional funding for transportation. In doing so, local dollars can be freed up to address local transportation needs while the development of the regional transportation network might continue. In addition to addressing funding deficiencies for the roadway network, funding is also needed to assist in the expansion of the public transportation system. Many of the public transportation projects envisioned in the Regional Transit Improvement Strategy (see Appendix H), the region’s transit system plan developed from the Birmingham Regional Alternatives Analysis project, are included in the visionary element of the LRTP. Specific projects from this plan are being advanced in the federal planning process, but will not be implemented until such time as an adequate long-term funding source can be determined.

Innovation and creativity will be the keys to securing funding the region’s transportation system. Alabama law does not make this task easy. However, the need for new transportation infrastructure in order to maintain sustained economic growth and development as well as maintaining and improving the overall quality of life far outweigh any impediments provided by law and should compel the region’s leadership to find a solution.

Innovation, along with traditional funding vehicles, will be the ultimate solution to addressing issues of funding for transportation. Such solutions might include:
- Toll facilities i.e. toll roads and HOT lanes
- Flat annual road user and maintenance fee
- Pay as you drive road user fee
- Privately developed, operated, and maintained roads
- Increased gas tax
- Public/private partnerships such as developer provided, public maintained transportation infrastructure

Future MPO planning activities should include the identification of new and/or innovative funding sources that are adequate to meet the region’s transportation needs. Once identified, the MPO membership should determine which of the identified funding sources are feasible and then move towards setting into motion actions that will help to secure those funds.