

**TECHNICAL REPORT NO. 5** 

JANUARY 2011

# Development, Evaluation & Selection <sup>of the</sup> 2035 Needs Plan



**Submitted to:** Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area

> **Submitted by:** Renaissance Planning Group



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# INTRODUCTION

This report documents the development, evaluation and selection of the Needs Plan for the Gainesville Urbanized Area's Year 2035 Long Range Transportation Plan (LRTP). The Needs Plan is an important document in the development of an urbanized area's Transportation Plan because it reflects the implications of growth trends and land use/development policies on the transportation network. It also provides a useful vision to guide how the transportation network should evolve over time to best serve the region's mobility and accessibility needs, and serves as the foundation for adoption of a Cost Feasible LRTP that reflects projected funding sources available for transportation projects in the Gainesville Metropolitan Area.

The Year 2035 Needs Plan represents the continuing evolution of the Livable Community Reinvestment Plan, which the Metropolitan Transportation Planning Organization (MTPO) for the Gainesville Urbanized Area first adopted as its LRTP in 2000 for a 2025 planning horizon year and subsequently updated in 2005 for 2030. This 2010 update, with a 2035 horizon, reflects a continued emphasis on multimodal mobility and accessibility, primarily through continued expansion of the area's public transportation system, providing additional street connectivity, and extension of a multi-use trail network known as the Archer Braid.

A combination of public participation in the transportation planning process and various analytical tools helped to guide the development of the Year 2035 Needs Plan. The MTPO engaged the public early and throughout the process through a series of focus group discussions and workshops, as well as use of an interactive web site, livabletransportation.org. Through surveys, marking up maps and responses to facilitated discussions, the public helped shape the projects that were considered for the Needs Plan. A separate report documents those activities. On the technical side, the Alachua Countywide travel demand model provided an analytical basis for projecting and evaluating alternative transportation networks, including testing the effects of "peak oil" (implications of declining worldwide oil production) on travel behavior. An accessibility analysis evaluated land use and transportation network characteristics for consideration in developing the Needs Plan. These methods will be described elsewhere in this report.

A significant driver of the Year 2035 Needs Plan is the vision statement and supporting goals and objectives that were approved by the MTPO in March 2010. The vision statement approved for this LRTP is generally consistent with the direction of transportation planning and development the MTPO has taken over the last decade. It is supported by five goal statements, each having a series of supporting objectives. The vision influenced the development and evaluation of the four transportation network alternatives and, ultimately, the selection of a Year 2035 Needs Plan. The vision statement for the 2035 Livable Community Reinvestment Plan is:

1



The Gainesville Urbanized Area will have a multimodal transportation system that integrates land use and transportation planning and investments to promote community well-being through good and healthy relationships with the region's other communities and natural systems. Specific outcomes will be:

- sustainable, safe, secure, energy efficient and livable land use patterns and complementary context-sensitive transportation networks that provide mobility choices within and between compact, mixed-use, multimodal-supportive development;
- balanced east-west Gainesville Urbanized Area growth to reduce socioeconomic disparity through increased transportation mobility and accessibility;
- transportation infrastructure investments that direct growth to existing infill and redevelopment areas;
- greenbelts to preserve natural and agricultural lands between all municipalities in the Alachua County region through compact land use patterns served by express transit service and park-and-ride facilities, and
- a network of rapid transit facilities connecting regional employment centers in order to enhance the economic competitiveness of the area.

The following goal statements, along with a series of objectives, supported the plan's development.

## Economic Vitality and Community Livability

• Plan and invest to develop and maintain a comprehensive, multimodal transportation network for the Gainesville Urbanized Area that promotes economic vitality, community livability, and increased housing-employment proximity.

## Sustainable Decision-Making and Preservation

• Develop and maintain a sustainable transportation system that supports and preserves the existing transportation network through integrated land use and transportation decision-making that results in compact development patterns, preservation of environmental, cultural and historic areas, reduced demand for oil, and lower greenhouse gas emissions.

## Safety for Mobility and Accessibility

• Develop and maintain a safe transportation system that supports increased mobility and better accessibility for all users and neighbors of transportation facilities and services.



## Security and Resilience

• Develop and maintain a transportation system that secures the ability of the Gainesville Urbanized Area to prevent, respond to, and recover from crime, disaster, and other adverse conditions with resilience.

## **Transportation Network Management and Operations**

• Improve system management, operations, coordination and communication to make sound transportation decisions that reflect wise use of financial resources.





# PLANNING CONTEXT

A number of planning requirements and issues frame the Year 2035 LRTP for the Gainesville Urbanized Area. While federal transportation legislation guides the general content and components of the LRTP process, state and local requirements further define the planning framework, and each metropolitan planning organization (MPO) has the ability to identify analysis and policies that address major community goals for transportation and land use.

# LRTP Planning Factors

The Year 2035 LRTP is required by the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), the current federal transportation legislation, to reflect consideration of the following eight planning areas:

- Support the economic vitality of the region by enabling global competitiveness, productivity and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility of people and for freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operations; and
- Emphasize preservation of the existing transportation system.

# Peak Oil

There is increasing concern about the future of the worldwide oil supply and the effects of a decline in oil production. In February 2007, the United States General Accountability Office released the report, *Crude Oil: Uncertainty about future oil supply makes it important to develop a strategy for addressing a peak and decline in oil production.* The report laid out a sobering assessment of the United States' vulnerability to this geologic phenomena and lack of a national, state or local plan to deal with the economic and social consequences. Further, the Alachua County Energy Conservation Strategies Commission identified planning for peak oil production and decline as a major concern for the County's transportation future and requested that the MTPO incorporate consideration of peak oil scenarios in the Year 2035 LRTP. Specifically, the MTPO chose to review and test peak oil production and decline variables to determine potential future

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transportation and land use scenarios necessary to mitigate local effects and to recommend alternatives to accomplish transportation and land use mitigation strategies. The results of the peak oil analysis are described later in this report, and the recommended strategies are incorporated in the Cost Feasible Plan.

## Growth Management

Two recent state laws - Senate Bill (SB) 360 and House Bill (HB) 697 - that emphasize the integration of land use and multimodal transportation strategies provide a backdrop for a substantial shift in transportation policy. HB 697 (2008) requires that local governments incorporate strategies to reduce greenhouse gas emissions (GHG) in their future land use, housing and transportation elements. The second draft of the proposed rules issued by the State of Florida Department of Community Affairs would currently require that local governments demonstrate through policies and capital projects how they will work toward reducing vehicle miles of travel. SB 360 (2009) provides for changes to development and transportation concurrency requirements, especially for areas designated as "Dense Urban Land Areas" (DULA) as defined in the bill. The City of Gainesville currently qualifies as a DULA and has the opportunity to undertake additional planning efforts that will clarify transportation requirements for new development and provide strategies and funding methods to achieve the community's vision for creating a multimodal transportation network that provide transportation choices and increases access and mobility. Local governments need to work closely with each other, the MTPO, FDOT and other entities to identify funding opportunities, including potential grants, that can help them implement projects identified in both their own Transportation Elements and the Year 2035 Long Range Transportation Plan.



# **GROWTH IN ALACHUA COUNTY**

Alachua County and the City of Gainesville serve as the economic hub of an II-county region, with the University of Florida, Shands Hospital, the Veterans Administration Hospital, the Gainesville Regional Airport, the federal courthouse other important downtown destinations among the employment centers that attract workers and visitors from across the state and the largely rural and suburban surrounding counties. In addition, commercial centers like the Oaks Mall and Butler Plaza located near Interstate 75 interchanges attract people from many of the North Central Florida counties surrounding Gainesville. The presence of the University, in particular, continues to fuel growth in Alachua County through its research and educational activities, as well as the attraction it represents to its many alumni and people who enjoy the benefits of living in a college town community, The large amount of natural lands, springs and waterways surrounding the community also attract residents, tourists and visitors seeking the serenity and beauty of the North Florida environment. In addition, the presence of Interstate 75 provides regional access to Gainesville and Alachua County, fueling a substantial amount of commercial and residential growth around its interchanges and along the state roadways connecting to the interstate.

The environmental context of Alachua County serves as a critically important consideration in the development of the Year 2035 Needs Plan. As shown in Map I, much of Alachua County – particularly the areas surrounding the City of Gainesville on the north, east and south – is environmentally sensitive. This includes officially designated wetlands, creeks and lakes, as well as natural habitat lands purchased by the Alachua County Forever conservation program. In addition, much of the western part of Alachua County consists of aquifer recharge areas to sustain groundwater quality, as well as numerous springs and forested uplands. The environmental context affects the consideration of many types of transportation projects, as well as the location of future growth.







Wetlands

The Florida Natural Areas Inventory Alachua County Forever (ACF) Conservation Lands



Strategic Ecosystems

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As the graph in Figure I shows below, Alachua County is projected to add nearly 70,000 people and 50,000 jobs by the year 2035. This projection is based on the land development capacity and growth areas defined through adopted city and county comprehensive plans, prepared consistent with Florida's Growth Management legislation. This growth is expected to result in about 320,000 people and 190,000 employees in Alachua County in 2035.

## Population and Employment Projections

Maps 2 and 3 illustrate where growth is expected to occur in the County through the year 2035. These projections were developed by the staff of the MTPO in cooperation with City of Gainesville, Alachua County, the University of Florida and other agency staff, reflecting adopted plans with land use, redevelopment and economic development policies guiding the location and intensity of future development.

Working with the local government staff and other agencies, MTPO staff developed allocations of population, dwelling units and jobs for the 560 traffic analysis zones (TAZs) in the Alachua County Travel Demand Model. The population and employment allocation was developed for a 2007 base year for use in validating the countywide travel

model, which served as a foundation for projecting growth in TAZs through the year 2035. The development of these countywide socioeconomic data projections are documented elsewhere in the Year 2035 Livable Community Reinvestment Plan Socio-Economic Report (Base Year 2007; Forecast Year 2035), prepared by MTPO staff.

Maps 2 and 3 present the distribution of projected year 2035 growth in Alachua County for both population and employment. The maps show the anticipated increase in population and jobs between 2007 and 2035, as reflected in the adopted City and County Comprehensive Plans, along with known plans for private development. As indicated in the maps, much of the growth is expected to occur along the I-75 corridor, near the NW 39<sup>th</sup> Avenue, Newberry Road, Archer Road and Williston Road interchanges. There is also substantial growth anticipated along the US 441 corridor in the northern part of the Gainesville Metropolitan Area, and generally along North 39<sup>th</sup> Avenue. These two areas are trending toward attracting a larger share of employment growth, reflecting good regional accessibility via I-75 and access to the Gainesville Regional Airport. There is also considerable population growth occurring in the smaller cities of Alachua County, particularly around Newberry, Alachua and High Springs.



Figure 1: Countywide Growth to 2035





![](_page_13_Figure_0.jpeg)

![](_page_14_Picture_1.jpeg)

# Land Use Plans and Initiatives

At the outset of Year 2035 Long Range Transportation Plan, Alachua County was in the process of completing an Evaluation and Appraisal Report (EAR) for its Comprehensive Plan. The EAR served as a guide for amendments to the County's growth management plan, and identified transportation mobility as a major issue that needed to be addressed, with complementary land use strategies to create compact, mixed use centers that would support public transportation in Alachua County and limit sprawl development patterns. The County subsequently adopted a new Comprehensive Plan in 2010 that includes a Transportation Mobility Element featuring a Bus Rapid Transit (BRT) network that would connect large-scale development activity centers and expand transportation options serving key destinations. Through the transportation concurrency provisions in the Comprehensive Plan, Alachua County has begun securing agreements with several large developments to dedicate right-of-way and provide funding to support the BRT network. The network is planned to connect developments near the I-75 interchanges of Newberry Road and NW 39<sup>th</sup> Avenue, linking with Santa Fe College, the Oaks Mall, Butler Plaza and the University of Florida.

Plan East Gainesville remains a driving vision for development in the Gainesville Urbanized Area. Approved in 2003, the plan has provided a strong foundation for economic development, quality redevelopment and environmental preservation efforts in East Gainesville, a large area in the City of Gainesville and unincorporated Alachua County that generally runs from downtown Gainesville east to Newnan's Lake, and encompassing the area north of Paynes Prairie to the Gainesville Regional Airport. Plan East Gainesville included a transportation, development and land conservation strategy to guide future growth, environmental resource preservation and economic development in the area.

A major transportation emphasis of Plan East Gainesville was a BRT connection linking the University of Florida and downtown to the Gainesville Regional Airport along Waldo Road, as well as a similar BRT connection along Hawthorne Road to the Eastside Activity Center at SE 43<sup>rd</sup> Street. The federal government provided the City of Gainesville with \$400,000 for a BRT feasibility study, which was a priority project in the 2030 LRTP. The City of Gainesville completed the BRT study during the development of the Year 2035 LRTP, and identified a primary BRT corridor that links Santa Fe College in the northwest part of the Gainesville Urbanized Area to Butler Plaza, the University of Florida, downtown Gainesville and the Gainesville Regional Airport. The next step is to obtain funding to complete a Transit Alternatives Analysis that would provide the basis for continued federal participation in the development of a BRT network serving Alachua County and Gainesville. Another outcome of Plan East Gainesville was a more detailed analysis of the Waldo Road corridor by the Florida Community Design Center. This study resulted in recommendations for a multi-way boulevard that would support the planned BRT segment to the airport and provide a parallel local street on the western side of the road for enhanced pedestrian and bicycle

![](_page_15_Picture_1.jpeg)

accessibility to support redevelopment. Other recommendations included bicycle and pedestrian crossing treatments on Waldo Road.

Another important planning effort that was completed since the 2005 adoption of the MTPO's last Long Range Transportation Plan was a Countywide Visioning and Planning process, undertaken by Alachua County in partnership with the County's nine municipalities. While the visioning process focused primarily on building consensus about potential annexation areas surrounding the cities and did not have an emphasis on transportation, it did entail several key recommendations that influenced the development of the Year 2035 LRTP. First, the visioning process called for a greenbelt of undeveloped or lower density land with ample preserved open space running in a semi-circle along the western edge of the Gainesville Urbanized Area. The idea of the greenbelt was to preserve open space and maintain aquifer recharge areas against sprawling development. Second, the vision entailed the concept of greater street connectivity to distribute traffic, and provide express bus service into Gainesville to help minimize the need for major roadway widening projects.

### **Countywide Visioning and Planning** MAP 4

# conceptual land use plan for the urban and extraterritorial reserve areas

![](_page_16_Figure_2.jpeg)

![](_page_16_Figure_3.jpeg)

municipal boundaries strategic ecosystems alachua county forever projects existing conservation

\*Please note that this plan shows existing urban and extraterritorial reserve areas as of May 2005, including proposed boundaries for LaCrosse and Hawthorne as identified through the town hall meeting and visioning process.

#### preserve areas

- · Lands that have been identified as environmentally sensitive
- · Many are either designated as parks, conservation areas or strategic ecosystems • Can be in either private or public ownership
- · Very limited or no development in these areas
- Passive recreational activities can occur here
- · Can provide buffers and greenbelts between urbanized areas

#### rural/agricultural lands

# Promotes use of land for active agricultural activities or limited residential development Encourages residential development that is designed to preserve more open space/agricultural

![](_page_16_Picture_14.jpeg)

- CLIE

![](_page_16_Picture_16.jpeg)

#### · A traditional small town settlement containing limited commercial and civic uses with some surrounding residential The focal point for a rural community, often occurring at a crossroads · Rural cluster development is designed to enhance the unique sense of place and character reflective of the community history

![](_page_16_Picture_18.jpeg)

#### low density development

- Low density residential neighborhoods with small blocks and multiple access points for auto, pedestrian and bicyclists
- · Designed to provide multiple routes to access the neighborhood
- · Can support limited
- neighborhood commercia · Could be sited within
- walking distance of schools, libraries, recreational facilities or
- other civic centers Provision of urban service within these areas
- · Can support lower density uses such as agricultura and open space as appropriate

![](_page_16_Picture_28.jpeg)

- Provides for the concentration of a mixture of higher intensity and density land uses designed to be compact, walkable and accessible by a multi-modal transportation modal transportation system
- Can range in size from neighborhood scale to regional scale
- Likely focused on either retail or employment uses with supporting residential institutional or office

![](_page_16_Picture_32.jpeg)

![](_page_17_Picture_1.jpeg)

# Peak Oil and Land Use-Transportation Accessibility Analysis

## Purpose

Each update of the Gainesville Urbanized Area Long Range Transportation Plan typically introduces something unconventional to the transportation planning process. For the 2035 update of the "Livable Community Reinvestment Plan," as the LRTP has been known since 2000, the unique angle is the incorporation of peak oil scenarios into the alternatives and development of land use and transportation strategies to mitigate those effects.

The federal government's shifting emphasis on energy, sustainability and reduction of greenhouse gases serves as a backdrop for the Year 2035 LRTP. An important consideration is to align the plan with potential funding opportunities coming through the USDOT/HUD/EPA Livable Communities Partnership. At the state level, an important context for this analysis is HB 697, which the Florida Legislature passed in 2008 to reduce energy consumption and lower greenhouse gas emissions. Locally, the Alachua County Energy Conservation Strategies Commission (ECSC)

![](_page_17_Figure_6.jpeg)

addressed issues related to peak oil as part of a comprehensive report aimed at reducing energy consumption and saving money through a variety of methods, including land use and transportation strategies, many of which are reflected in the County's new Comprehensive Plan. The LRTP builds upon that foundation as well as the City of Gainesville's BRT initiative and the University of Florida's 2020 Campus Master Plan, which has a major theme of sustainability.

As shown in Figure 2, the MTPO identified four alternative transportation networks that would be tested to develop the Year 2035 Needs Plan: a Bus Rapid Transit emphasis, a highway emphasis, and a light rail or streetcar emphasis. A fourth hybrid alternative blends the best of those elements for the Needs Plan (details about each of the four alternatives are provided later in this report). In addition, the LRTP was to "review and test peak oil production and decline variables so as to determine potential future transportation and land use scenarios necessary to mitigate local effects of peak oil; and recommend alternatives to accomplish transportation and land use mitigation strategies." A single 2035 land use scenario based on the adopted local government comprehensive plans was used instead of testing land use and transportation scenarios given the recent overhaul of Alachua County's growth management plan around a BRT network.

![](_page_18_Picture_1.jpeg)

![](_page_18_Figure_2.jpeg)

Figure 2: Testing Alternative Networks for the Year 2035 LRTP

According to various sources, peak oil theory states that oil production follows a bell shaped curve when charted on a graph, with the peak of production occurring when about half of the oil has been extracted. Several respected authorities place global peak oil production around 2010; after which oil becomes less available, and more expensive. 'Peak Oil,' as this event has become widely known, potentially represents an historical turning point from an era of growth to an era of contraction unless other suitable sources of fuel can be used at a similar or lower economic cost than fossil fuels. Figure 3 illustrates this declining production of fossil fuels as identified by the International Energy Agency (IEA), which has recently stated that peak oil actually occurred in 2006.

![](_page_18_Figure_5.jpeg)

Figure 3: Projected Fossil Fuel Production

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![](_page_19_Picture_1.jpeg)

The IEA predicts rising demand for oil as global industrialization occurs, particularly in rapidly developing countries like China. This increasing demand, combined with harder to reach oil production sites and declining production levels, has significant environmental and geo-political implications. This confluence of factors is predicted to increase sharply as the world economy rebounds, which could result in chain of events that threatens to dramatically affect how people live, work and reach their destinations. Many activities we now take for granted could become cost prohibitive. The more sober predictions of impacts include dramatic changes in personal mobility as private automobiles become too expensive for the average citizen, with commensurate changes in freight mobility as the economic advantages of production, processing and truck distribution evaporate. Land use impacts likely mean the urban footprint contracts, agricultural production requires increased human labor, and employment is more labor-intensive and focused in centers of economic activity.

While better technology and renewable energy sources are becoming increasingly important, many sources dismiss their ability to prevent major changes to industrial society. Hydroelectricity aside, renewable sources of energy provide only about one percent of world energy production. The US Department of Energy found that a crash program of renewable energy measures would take decades to mitigate the effects of peak oil production decline.

# Accessibility Analysis Methodology

The MTPO's LRTP tested each of the transportation alternative networks under a "peak oil scenario" to guide the plan. An accessibility analysis that examined the availability of various land use and transportation factors supporting use of non-auto travel modes served as a basis for testing peak oil and guiding the development of Year 2035 Needs Plan transportation projects. The accessibility analysis was employed to help the MTPO consider and answer a key question for development of the plan:

Should transportation investments be made to reinforce and support future growth in the core part of the urbanized area where transportation alternatives already exist, or should transportation investments be made to improve accessibility and mobility in the urban periphery or outlying areas, where much of Alachua County's future growth is expected to occur in the future?

To start a dialogue on that question, a GIS-based model was developed by coding all of Alachua County into 10-acre grid cells and then evaluating the land use and transportation network characteristics within  $\frac{1}{2}$  mile of each cell for a range of variables to derive a cumulative cell score that measured its relative accessibility. Natural breaks in the data were used to divide the grid cells into Low, Medium or High accessibility areas. The following table is a summary of the factors used:

![](_page_20_Picture_1.jpeg)

### Table 1: Accessibility Analysis Factors

Transportation Network Factors	Variable	Notes
Street Network Density	Intersections per square mile	Literature indicates lower crash rates and higher mode shares with greater intersection density
Bicycle Facility Availability	Type of facility (on/off road) Speed of road Proximity to walk destinations	Challenge is to recognize different types of users and the presence of a network (grid) of lower speed local streets, not just "bike facilities"
Transit Availability	Cumulative route frequency Hours of service Connections to park-n-ride, BRT	Important to go beyond merely having a route within ¼ mile walk distance; convergence of routes is critical
Land Use Factors		
Walk Destinations	Retail uses Schools Civic uses	Identifying places people would walk to; not necessarily places that are "walkable"
Density	Employees/acre Dwelling units/acre	Thresholds as guides for potential types of transit service
Diversity	Jobs-Housing ratio	A basic indicator of land use mix

Figure 4 provides an illustration of how the accessibility analysis was applied, using the measure of intersection density. The orange square represents one 10-acre grid cell, and the connectivity of the surrounding street network is measured by summarizing the number of intersections within  $\frac{1}{2}$  mile of the grid cell. Each variable was measured individually, and then a cumulative score was developed for all variables as they applied for each grid cell in Alachua County.

![](_page_21_Picture_1.jpeg)

![](_page_21_Figure_2.jpeg)

Figure 4: Accessibility Analysis Methodology: Intersection Density

The accessibility analysis considered existing conditions and future 2035 conditions, with no additional transportation projects and with the Year 2035 Needs Plan. It should be noted that, like all of the Needs Plan alternatives, there was no adjustment to the land use data (population and employment density and mix of use) except for the anticipated growth from 2007 to 2035, consistent with the city and county comprehensive plans.

# Findings / Implications

Maps 5 and 6 reflect the existing conditions and 2035 base condition results of the accessibility analysis. There is little variation in the two maps because transportation conditions do not change; the maps only reflect growth in population and employment. However, as indicated in the third map on Map 7, with consideration of a transit emphasis alternative, the accessibility analysis reveals an expanded area of high and moderately accessible locations as a result of better bus service within certain corridors and areas of Alachua County.

![](_page_22_Figure_0.jpeg)

📕 High 📒 Medium 💻 Low

![](_page_23_Figure_0.jpeg)

🛛 High 📒 Medium 📕 Low

![](_page_24_Figure_0.jpeg)

📕 High 📒 Medium 📕 Low

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![](_page_25_Picture_1.jpeg)

Table 2 summarizes some key findings from the accessibility analysis. It is revealing to note that the trend for growth and development is for the percentage of households in highly accessible locations to decline from 32 percent to 29 percent between 2007 and 2035, indicating that most of the future growth is expected to occur in outlying areas that are relatively poor in terms of transportation accessibility. Of even more significance as an indicator of sprawling development patterns, the percentage of households in areas with low accessibility rises from 27 percent in 2007 to 41 percent in 2035. Employment also rises in low accessibility areas, although by a much smaller percentage.

This analysis indicated that the core area around downtown Gainesville and the University of Florida provided a relatively high level of accessibility. Areas of moderate accessibility generally fall within the city limits, primarily east of I-75, and in the smaller cities outside of the urbanized area. Much of the remainder of Alachua County was classified as having low accessibility, including much of the rapidly growing western areas of the county. While about 55 percent of countywide employment is in highly accessible locations, less than 30 percent of dwelling units are in such areas. In fact, from 2007 to 2035, the percentage of dwelling units in highly accessible locations actually declines by three percent; those in low accessible areas increase almost 15 percent. Clearly, that's not a desirable direction.

The analysis also reveals that strategic investments in public transportation services and other infrastructure can reverse this trend. As indicated in the table, the alternatives focusing on transit expansion – the Bus Rapid Transit network included as part of Alternative I and the BRT plus streetcar network included in Alternative 3 – help to slow the trend of increasingly lower levels of overall countywide accessibility by returning the percentages closer to their 2007 existing condition. Without adjusting future land use patterns for this analysis, the accessibility summary clearly reveals the influence of smart transportation investments, as well as the potential implications on vehicle miles traveled, greenhouse gas emissions and the time spent commuting to work or traveling for other purposes.

![](_page_26_Picture_1.jpeg)

	2007	2035	Alt I	Alt 2	Alt 3
	Existing	Base	BRT	Highway	Streetcar
Employment in Highly Accessible Areas	71,400	97,200	104,200	96,900	101,800
	54%	54%	58%	53%	56%
Dwelling Units in Highly Accessible Areas	35,900	42,000	47,700	40, 900	46,300
	32%	29%	33%	28%	32%
Employment in Low Accessibility Areas	27,300	40,900	37,000	38,100	37,300
	21%	23%	20%	21%	21%
Dwelling Units in Low Accessibility Areas	38,700	59,700	55,000	55,800	55,600
	27%	41%	38%	38%	38%

Table 2: Results of Year 2035 LRTP Accessibility Analysis

The implications for the accessibility analysis relate directly to policy and investment decisions to be made by the MTPO, Alachua County and the City of Gainesville. As described above, should transportation investments go toward improving accessibility in those outlying, high growth areas, or should future growth (as encouraged with targeted transportation investments and supporting land use policies) occur within the high and moderate accessible locations that have the redevelopment and infill development potential to support higher densities? An accessibility matrix illustrates one of the key objectives of the plan, which is to move people and jobs from the upper left hand part of the matrix into the lower right hand area, largely by making transportation investments and adjusting land use policies where needed. These strategies are defined in the adopted Year 2035 LRTP.

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![](_page_27_Picture_1.jpeg)

		Transportation Accessibility			
		Low	Medium	High	
	Low	Area with poor sustainability & accessibility (Improve or leave as it is?)	Area needed to improve land use more intensively	Area needed to improve land use	
Land Use Sustain- ability	Medium	Area needed to improve transportation more intensively	Area needed to improve both land use and transportation	Area with potential (improve land use)	
	High 🔻	Area needed to improve transportation	Area with potential (need to improve transportation)	Area with excellent sustainability & accessibility	

Figure 5: Accessibility Matrix for Planning Strategies

![](_page_28_Picture_1.jpeg)

# **TESTING OF NETWORK ALTERNATIVES**

# Performance Measures

Performance Measures were developed for the Year 2035 LRTP to serve several purposes. First, the Performance Measures provided a starting point to evaluate transportation alternatives in development of the Needs and Cost Feasible Plans that were recommended to the MTPO. Second, the Performance Measures provided guidance on benchmarks and targets that can be used over time to evaluate progress and the outcomes of the Year 2035 LRTP. Finally, the Performance Measures demonstrate adherence to principles and standards as well as links to various federal and state programs.

There is increasing emphasis in the federal government on use of performance measures and benchmarks to measure the outcomes of the metropolitan planning process. This is likely to be a cornerstone of the next federal transportation law, both for states and the nation's MPOs. In addition, the Federal Highway Administration is already requiring a stronger link between the MPO's Long Range Transportation Plan and the Congestion Management Process, which is used as a basis to evaluate transportation conditions and trends, and guide the selection of short-term mobility strategies. This linkage is intended to ensure that short-term mobility strategies fit within the LRTP vision, and also provide feedback to the update of the LRTP on the success (or outcomes) of projects as they are implemented. By establishing benchmarks or performance targets to go along with the vision, goals and objectives, the MTPO has a useful point of reference for the effectiveness of its LRTP and associated strategies implemented by state and local agencies in the urbanized area.

The Performance Measures are based on existing datasets that will generally be available as a result of LRTP development. They are also based on information that other agencies, such as the City, County, and FDOT, are required to collect and update as part of their routine planning requirements. These Performance Measures provide consistency between the requirements of recent growth management legislation (HB 697 in 2008 and SB 360 in 2009) as they relate to city and county comprehensive plans and strategies to reduce greenhouse gas emissions through the development of mobility plans.

The LRTP process provided baseline data that, when updated in future years, will provide an indication of how well the Plan Goals and Objectives are being met. The Performance Measures encompass a wide range of measures and data that provide a comprehensive assessment of the Plan's vision of a sustainable transportation network.

The performance measures and benchmarks, shown in Table 3, are based on two primary approaches to transportation measures: focus on speed (level of service, delay, travel speed) and

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![](_page_29_Picture_1.jpeg)

proximity (quality of service, travel time, access, connectivity). These performance measures enable the MTPO to track progress on meeting these Year 2035 LRTP goals and objectives. They will also be incorporated to guide MTPO annual priorities and work programs, as well as future LRTP updates. Table 4 shows the baseline data for the performance measures for the Base Year 2035 (Existing plus Committed) network and the four alternative networks that were tested during development of the LTRP.

![](_page_29_Figure_3.jpeg)

		LR	TP Go	bals	
Performance Measures	Economic Vitality and Community Livability	Sustainable Decision-Making and Preservation	Safety for Mobility and Accessibility	Security and Resilience	Transportation Network Management and Operations
Vehicle Miles Traveled (total and per capita) (MTPO Model)	Х	Х	Х	Х	
Vehicle Hours Traveled on major corridors (MTPO Model)	Х		Х		Х
Average Delay per road traveler (summarized at county, urbanized area and corridor/travel market scale) (MTPO Model)	х	х			х
Mode share and transit ridership (systemwide, corridor, and route) (RTS) (summarized at urbanized area and corridor travel market scale) (MTPO Model)	х	x		х	
Number and percent of homes within 1/4 mile of a bus stop or 1/2 mile of BRT (LRTP Accessibility Analysis)	х	x		х	
Mobility Index (bus ridership per congested lane mile) (MTPO Congestion Management Process Report)	х	х			х
Benchmarks					
Lane miles of roadways with designated bicycle & pedestrian facilities (MTPO, City, County, FDOT) <i>Benchmark</i> measures for plan outcomes and monitoring Benchmark ONLY	х	х		х	
Percentage of transit vehicles using alternative fuels (non-petroleum based) (RTS) Benchmark Only		х		х	
Number of Alachua County Schools implementing a comprehensive Safe Routes to Schools program (Alachua County Schools) <i>Benchmark</i> Only	х	х	х		

![](_page_30_Picture_1.jpeg)

		LR	TP Go	oals	
Performance Measures	Economic Vitality and Community Livability	Sustainable Decision-Making and Preservation	Safety for Mobility and Accessibility	Security and Resilience	Transportation Network Management and Operations
Number and Percentage of Community Traffic Safety Team roadway concerns resolved annually (CTST) Benchmark Only	х		х	х	
Review and update of the Continuity of Operations Plan on a bi-annual basis (MTPO) <i>Benchmark</i> Only				Х	
MTPO participation in the County Local Mitigation Strategy Work Group (MTPO) Benchmark Only			х	х	
Signal priority and preemption for transit (RTS/City) Benchmark Only	Х				Х

![](_page_30_Picture_4.jpeg)

![](_page_31_Picture_1.jpeg)

### Table 4: Network Alternatives Evaluation Results

	2035 Base (E+C)	Alt I BRT	Alt 2 Highway	Alt 3 Streetcar	Alt 4 Hybrid
Vehicle Miles of Travel (VMT)	11,918,235	,757,75	11,741,714	11,727,968	11,714,159
		-1%	-1%	-2%	-2%
Vehicle Hours of Travel (VHT)	381,467	353,537	340,227	341,681	340,868
		-7%	-11%	-10%	-11%
Congressed Lana Miles	373	226	217	177	166
Congested Lane Miles	17%	10%	9%	8%	8%
Riders per Congested Lane Miles (MTPO Mobility Index)	41.44	61.49	62.14	71.15	82.77
Delay (minutes)	514	400	317	321	348

## Within $\frac{1}{4}$ mile of local bus or $\frac{1}{2}$ mile of premium transit stop:

<b>S</b>	71,112	86,038	83,297	84,375	85,820
Dwelling Units	39%	47%	46%	47%	47%
Employment	123,794	137,345	136,522	136,494	138,216
Employment	85%	94%	93%	93%	94%
Mode of Travel					
Transit	26,936	36,644	36,005	39,225	38,900
Bicycle/Pedestrian	70,048	69,382	69,224	68,909	69,080
Mode Split					
Auto	96.5%	92.5%	92.5%	92.3%	92.3%
Bicycle/Pedestrian	2.1%	4.9%	4.9%	4.9%	4.9%
Transit	1.4%	2.6%	2.6%	2.8%	2.7%

![](_page_32_Picture_1.jpeg)

# Overview and Major Features of the Network Alternatives

Four transportation network alternatives were tested to develop the Year 2035 Needs Plan: a Bus Rapid Transit emphasis, a highway emphasis, a streetcar emphasis, and a fourth hybrid alternative. The four network alternatives provided an opportunity to evaluate how the future transportation network would function under various multimodal scenarios. Based on the results of testing the first three alternatives, a fourth hybrid needs plan alternative, blending the best of the highway, BRT, and streetcar elements, was then developed. These network alternatives were based on the Preliminary Needs Plan identified from an initial evaluation of projected congestion for the Year 2035 Base network of existing plus committed (E+C) transportation facilities. The Preliminary Needs Plan was further refined to identify a Constrained Needs Plan which eliminated facilities which could not be modified due to various policies or environmental features. The Preliminary and Constrained Needs Plans are discussed in more detail in Technical Report 6.

The network alternatives were initially developed using this initial analysis and input received at a public workshop on February 16, 2010. Alternatives I, 2, and 3 were presented to the MTPO's Technical Advisory Committee (TAC) and Citizens Advisory Committee (CAC) on March 3, 2010 and to the Gainesville/Alachua County Bicycle and Pedestrian Advisory Board. Both the TAC and CAC suggested modifications to the network alternatives and recommended them to the MTPO for approval. The three Alternatives were approved for testing and evaluation by the MTPO on March 15, 2010. Network alternatives I, 2, and 3 are described in the following sections. Alternative 4, the hybrid needs network, is described later in this report.

![](_page_33_Picture_1.jpeg)

# Alternative I – Transit/Bus Rapid Transit Emphasis

Alternative network I includes a mix of highway and transit solutions, but primarily considers transit-related modifications. This network alternative includes some highway modifications, but consists primarily of a future Bus Rapid Transit system, new and/or extended regular and express bus routes, bus ways and other transit-related modifications, such as park and ride lots. Key components of Alternative I include:

- A BRT system that provides access to the Santa Fe College area, the airport, Butler Plaza, East Gainesville, Northwood, along Tower Road, Archer Road, and University Avenue.
- Express bus service from Alachua, Archer and Newberry to the BRT system.
- Existing and expanded/new fixed route bus service.
- Park and ride lots to provide connections to premium transit service.
- New roadways and roadway widening projects to provide key connections for BRT and relieve congestion along major corridors.

The Bus Rapid Transit system tested in Alternative I is based on the BRT Feasibility Study and other BRT concepts developed by the City of Gainesville's Regional Transit System (RTS) and Alachua County's adopted Mobility Plan. Express bus, fixed route bus service, and park and ride lots are based on those in the RTS Transit Development Plan completed in August 2009. A complete description of the transit characteristics used is provided later in this report. Map 8 and Table 5 show the transportation facilities evaluated in Alternative I.

![](_page_34_Figure_1.jpeg)

Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area

![](_page_35_Picture_1.jpeg)

## Table 5: Alternative 1 - Transit/Bus Rapid Transit Emphasis List of Projects

Facility/Location	Туре
Transit	
Santa Fe College to Airport (BRT Study w/Extension to Santa Fe)	Bus Rapid Transit
Santa Fe College to Butler Plaza (via Haile Village Center)	Bus Rapid Transit
Jonesville to E. Gainesville	Bus Rapid Transit
Northwood Village to UF via 13th Street	Bus Rapid Transit
Newberry Road to Archer Road (via Tower Road)	Bus Rapid Transit
Alachua to BRT (via US 441)	Express Bus Route
Archer to BRT (via Archer Road)	Express Bus Route
Newberry to BRT (via Newberry Road)	Express Bus Route
Existing RTS Fixed Route Bus	Fixed Route Bus
Planned RTS Fixed Route Bus	Fixed Route Bus
I-75 and Newberry Road (Oaks Mall)	Park & Ride Lot
Newberry Road and Ft. Clarke Road	Park & Ride Lot
Newberry Road and CR 241 (Jonesville)	Park & Ride Lot
Butler Plaza Area	Park & Ride Lot
Archer Road west of I-75 and Archer Road (near SW 52nd Terrace)	Park & Ride Lot
Archer Road and Tower Road (SW 75th Street)	Park & Ride Lot
US 441 and Williston Road	Park & Ride Lot
Eastside Activity Center (SE 43rd Street and SE Hawthorne Road)	Park & Ride Lot
SE Hawthorne Road and SE 24th Street/SE 8th Ave	Park & Ride Lot
NW 34th Street and US 441 (Northwood Village)	Park & Ride Lot
NW 39th Avenue and I-75	Park & Ride Lot
NE 39th Avenue and Waldo Road	Park & Ride Lot
Roadway	
NW 23rd Avenue	Add 2 lanes (2 to 4)
SW 62nd Boulevard	Add 2 lanes (2 to 4)
NW 34th Street (NW 16th Ave to US 441)	Add turn lanes
Hull Road Extension	New 2 lane road


Facility/Location	Туре
NW 122nd Street Extension	New 2 lane road
NW 23rd Avenue Extension	New 2 lane road
Springhills Boulevard	New 2 lane road
SW 38th Terrace Extension	New 2 lane road
SW 40th Boulevard (to SW 47th Avenue*	New 2 lane road
SW 43rd Street	New 2 lane road
SW 45th Boulevard Extension	New 2 lane road
SW 8th Avenue Extension	New 2 lane road
SW 62nd Boulevard Extension	New 4 lane road

\*Note: This project was tested in Alternative I and is now "committed." It has been added to the Existing plus Committed Network.

# Alternative 2 – Highway Emphasis

Alternative network 2 includes a mix of highway and transit solutions, but primarily considers highway-related modifications that expand the grid network of roads. This network alternative includes transit modifications, but consists primarily of new roads or projects that add capacity to existing roads. Key components of Alternative 2 include:

- Express bus service from Alachua, Archer, Hawthorne, Newberry and Waldo to downtown Gainesville.
- Existing and expanded/new fixed route bus service.
- New roadways and roadway widening projects to provide increased capacity to existing and provide greater network connectivity to relieve congestion along major corridors.

Map 9 and Table 6 show the transportation facilities evaluated in Alternative 2.



Express Routes



#### Table 6: Alternative 2 – Highway Emphasis List of Projects

Facility/Location	Туре
Transit	
Alachua to Downtown Gainesville (via US 441 & 6th Street)	Express Bus Route
Archer to Downtown Gainesville (via Archer Road & 13th Street)	Express Bus Route
Newberry to Downtown Gainesville (via Newberry Road)	Express Bus Route
Waldo to Downtown Gainesville (via Waldo Road/US301)	Express Bus Route
Hawthorne to Downtown Gainesville (via Hawthorne Road)	Express Bus Route
Existing RTS Fixed Route Bus	Fixed Route Bus
Planned RTS Fixed Route Bus	Fixed Route Bus
Roadway	
Archer Road (west of I-75 to Archer)	Add 2 lanes (2 to 4)
NE 39th Avenue	Add 2 lanes (2 to 4)
NW 23rd Avenue	Add 2 lanes (2 to 4)
NW 43rd Street	Add 2 lanes (2 to 4)
SE 16th Avenue	Add 2 lanes (2 to 4)
SR 121 (NW 58th Avenue to NW 67th Place)	Add 2 lanes (2 to 4)
SW 20th Avenue (SW 43rd Street to SW 62nd Boulevard)	Add 2 lanes (2 to 4)
SW 62nd Boulevard	Add 2 lanes (2 to 4)
Williston Road (West of I-75 to SW 62nd Avenue)	Add 2 lanes (2 to 4)
NW 34th Street (NW 16th Ave to US 441)	Add turn lanes
SW 20th Avenue	Add turn lanes, bus bays
Hull Road Extension	New 2 lane road
NW 122nd Street Extension	New 2 lane road
NW 23rd Avenue Extension	New 2 lane road
NW 83rd Street Extension	New 2 lane road
Radio Road Extension	New 2 lane road
Springhills Boulevard	New 2 lane road
SW 35th Boulevard Extension	New 2 lane road
SW 38th Terrace Extension	New 2 lane road
SW 40th Boulevard (to SW 47th Avenue)*	New 2 lane road



Facility/Location	Туре
SW 43rd Street	New 2 Jane road
SW 45th Boulevard Extension	New 2 lane road
SW 47th Street Extension (east to SW 40th Place)	New 2 lane road
SW 47th Way Extension (should have been SW 57th Road)	New 2 lane road
SW 8th Avenue Extension	New 2 lane road
SW 62nd Boulevard Extension	New 4 lane road

\*Note: This project was tested in Alternative I and is now "committed." It has been added to the Existing plus Committed Network.

# Alternative 3 – Transit/Streetcar Emphasis

Alternative network 3 includes a mix of highway and transit solutions, but primarily considers transit-related modifications. This network alternative includes some highway modifications, but consists primarily of a future bus rapid transit system, new and/or extended regular and express bus routes, bus ways and other transit-related modifications. In this alternative network, a streetcar system was tested and evaluated.

Key components of Alternative 3 include:

- A BRT system from the Santa Fe College area to the airport, with access to UF/Shands, and running along Archer Road.
- Two streetcar lines connecting downtown Gainesville, UF, and the Butler Plaza area.
- Express bus service from Alachua to downtown Gainesville and from Archer, Hawthorne, Newberry, and Waldo to the BRT system.
- Existing and expanded/new fixed route bus service, including premium service along 39<sup>th</sup> Ave from Santa Fe to the airport.
- New roadway to relieve congestion along major corridors.

The Bus Rapid Transit system tested in Alternative 3 is consistent with the preferred alignment identified in the RTS's BRT Feasibility Study, with the extension of the line from the Oaks Mall area to Santa Fe. Map 10 and Table 7 show the transportation facilities evaluated in Alternative 3.





#### Table 7: Alternative 3 – Transit/Streetcar Emphasis List of Projects

Facility/Location	Туре
Transit	
Santa Fe College to Airport (BRT Study w/Extension to Santa Fe)	Bus Rapid Transit
Downtown/UF	Streetcar
Urban Village/UF	Streetcar
Alachua to Downtown Gainesville (via US 441 & 6th Street)	Express Bus Route
Archer to BRT (via Archer Road)	Express Bus Route
Newberry to BRT (via Newberry Road)	Express Bus Route
Waldo to BRT (via Waldo Road/US301)	Express Bus Route
Hawthorne to BRT (via Hawthorne Road)	Express Bus Route
Existing RTS Fixed Route Bus	Fixed Route Bus
Planned RTS Fixed Route Bus	Fixed Route Bus
Fixed Route Bus from Santa Fe to Airport on NW/NE 39th Ave	Premium Fixed Route (15 minute frequencies)
Roadway	
SW 62nd Boulevard	Add 2 lanes (2 to 4)
Hull Road Extension	New 2 lane road
NW 122nd Street Extension	New 2 lane road
NW 23rd Avenue Extension	New 2 lane road
NW 83rd Street Extension	New 2 lane road
Radio Road Extension	New 2 lane road
Springhills Boulevard	New 2 lane road
SW 35th Boulevard Extension	New 2 lane road
SW 38th Terrace Extension	New 2 lane road
SW 43rd Street	New 2 lane road
SW 45th Boulevard Extension	New 2 lane road
SW 8th Avenue Extension	New 2 lane road
SW 62nd Boulevard Extension	New 4 lane road



# Transit Service Characteristics for Evaluation of Network Alternatives

The three alternative networks approved included alignments for Bus Rapid Transit, streetcar, express bus, and fixed route transit service. While the specific alignments and components included in each network alternative varies, the transit service characteristics for each transit type were consistently applied across the alternatives. In conjunction with staff from Alachua County, City of Gainesville, and the University of Florida, the transit operating characteristics and overriding principles regarding future transit service in the Year 2035 were determined. These characteristics and principles were based on best practices from Federal Transit Administration, existing and planned transit service in the Gainesville/Alachua County area (RTS Transit Development Plan, Alachua County Mobility Plan, BRT Feasibility Study), and input from the public and staff at various meetings/workshops. These transit service characteristics were then coded into the model for the three alternative networks and evaluated to determine the transit ridership and mode share for each alternative. A general description of the transit service characteristics is provided in this section.

### Transit Service Span and Frequency

General service span and frequencies provided by RTS were reviewed, and several adjustments were made to represent the expected service characteristics for future transit in the Gainesville Urbanized Area. Table 8 provides the service span and frequencies for the types of transit service included in the three network alternatives.

Service	Frequency (min.)		Service Span (min. hour		
	Peak	Off-Peak	Weekday	Saturday	Sunday
Streetcar	10	15	17-20	14	10
Bus Rapid Transit	10	15	17-20	14	10
Intercity Express Bus	30	-	3/3 (AM/PM)	-	-
Local Express Bus	20	-	3/3 (AM/PM)	-	-
Local Bus	15	30	8-20	8	7
Local Bus Feeder*	20	40			
Campus Circulators	15	30			
Complimentary Paratransit**	-	-	17-20		

Table 8: RTS Service Span & Frequencies by Service Type

Note: \*feeders to connect to BRT or other premium services at stations, \*\*3/4 mile service area beyond fixed route system



## Bus Rapid Transit

Both Alternatives I and 3 include BRT service. It was determined that BRT would run on a mix of designated transit lanes and mixed traffic lanes, depending on the projected roadway cross-sections. More information about the projected BRT running ways and routes is shown below: <u>Designated lanes</u> would be provided on the following segments:

- 62nd Blvd from SW 20th Avenue to the Oaks Mall
- Archer Road from SW 34th Street to SW 13th Street
- Waldo Road from University Avenue north (except the portion to the airport along NE 39th Avenue)
- In the Butler Plaza area, the BRT will move from SW 20th Avenue to SW 62nd Boulevard once the SW 62nd Boulevard Extension is completed with designated transit lanes.
- Other locations as identified on the Alachua County Mobility Plan Rapid Transit map

#### Mixed traffic

- The Tower Road BRT route will connect with other BRT routes to the north and south and will run in mixed traffic with signal preemption.
- All other BRT segments not listed above would run in mixed traffic.

#### Fares

The fare structure used for modeling purposes is as follows:

- BRT: \$1.50
- Local Express Bus: \$2.00 per trip; all day pass \$5 (includes transfer to fixed route service)
- Regular fixed route: \$1.50
- Streetcar: Free

#### Park and Ride Locations

Proposed Park and Ride Lots were included in Alternative I (Transit/BRT Emphasis) based on the Alachua County Mobility Plan and the RTS Transit Development Plan.

#### Transit Stops

BRT stations were located at Park and Ride Locations as possible. BRT stops are located throughout the route. Express bus stops for each alternative were located at major destinations along each route (and the endpoints). In Alternatives I and 3, express bus routes end in Gainesville where they intersect BRT routes (except the Alachua-Gainesville route in Alternative 3, which continues down 13th Street into downtown). In Alternative 2 (Highway Emphasis), express bus routes end at either the downtown transfer center or the UF transfer center. Streetcar stops in Alternative 3 were identified at logical destinations and activity centers along the routes.



# **EVALUATION AND DEVELOPMENT OF NEEDS PLAN**

The development of the 2035 Needs Plan entailed a combination of technical analysis and public participation to narrow down the range of alternative networks into a recommended plan. Integration of those two elements was key to the process; at various points in the study process, various methods of public engagement helped to shape development and evaluation of alternatives. This included identification of performance measures based on the initial public workshop, a series of focus group discussions with diverse interests, and an online web-based survey of transportation issues; development of network alternatives and safety element recommendations from the 2<sup>nd</sup> public workshop, in which participants marked up maps of problem areas and potential solutions; and identification of potential land use and transportation strategies to mitigate the potential effects of peak oil.

In addition, the project team provided feedback on future growth trends and mobility impacts, potential transportation projects, and results of the alternatives development and testing process to the public through the workshops, materials posted on the project web site, and presentations to community groups, the MTPO's advisory committees and the MTPO board during public forums. Finally, at several points in the planning process, there was engagement with the University of Florida faculty, staff and students on regional transportation issues, needs and opportunities through workshops primarily focused on the Year 2020 Update of the University's Campus Master Plan, which was closely coordinated with the MTPO Year 2035 LRTP, using much of the same data and analysis. Each of those efforts helped to shape and refine the adopted 2035 Needs Plan, as well as the subsequent development of a Cost Feasible plan.



## Results of Alternative Network Evaluation

The countywide travel demand model was employed to test each of the network needs plan alternatives and provide information on changes in travel demand that might result. The first series of tests evaluated Alternatives I, 2 and 3 in comparison with the E+C Network and each other. Following review of those results, a fourth hybrid network alternative was developed that served as the basis for the recommended 2035 Needs Plan, which the MTPO ultimately adopted.



The primary means of evaluating the results of each alternative entailed analysis of volume-tocapacity ratio changes for roadway segments throughout the Gainesville Urbanized Area and Alachua County, and a summary of those findings at the countywide level. The model was also used to assess changes in vehicle miles of travel (VMT) associated with each alternative and changes in transit ridership. The following presents an overview of the findings from this analysis.

Volume-to-capacity results used the daily traffic volume projections in the model based on population and employment growth in comparison with the estimated daily capacity on each roadway segment. The estimated capacity is derived from the number of through travel lanes, the number of traffic signals per mile and whether there is a center turn lane or median. The generalized level of service (LOS) tables, developed by the Florida Department of Transportation and used by the MTPO for analysis of available capacity in the roadway network, were used to assess congestion levels for development of the Year 2035 LRTP. The generalized LOS tables assign a capacity to a given road segment based on its functional classification and the physical characteristics described above. The segment volume-to-capacity ratio (v/c) was used as a basis for evaluating Needs Plan projects. A v/c of 1.0 or above generally indicates a congested condition in which projected volume exceeds available capacity. For purposes of this LRTP, roadways with a .85 to 1.05 v/c were flagged as borderline congested, while roads having a v/c of 1.2 or greater indicate a severe level of congestion. Typically, transit, demand management and operational strategies can resolve congestion levels below a v/c of 1.2, while roadway capacity changes are likely needed to resolve severely congested roadways that are at least 20 percent over available capacity.

The following map series (Maps II through I3) present the results of each network alternative in comparison with the Existing Plus Committed (E+C) network. The E+C network includes those roadway capacity projects built since the model validation year of 2007 and committed for construction funding through the 2009-2014 adopted Transportation Improvement Program (TIP) and the FDOT Five Year Work Program through 2014. As shown in the map series, the differences in congested roadway segments are very subtle, with only minor changes from one alternative to another. This is primarily because the three alternatives did not exhibit dramatic differences between each other in terms of the highway network, and while there were relatively significant differences in the transit networks, the model generally does not substantially reflect those changes in the traffic projections on a segment by segment basis. As will be described later, the roadways with persistent congestion levels are likely to remain so in the future because solutions to resolve the congestion through widening or building parallel roadways are not supported by policy or carry extremely high cost or environmental impacts.



Table 9 presents a summary of the results of testing Alternatives I-3 against the E+C network. Overall, Alternative 3 (streetcar/Bus Rapid Transit) had the greatest effect on VMT, with a two percent reduction in comparison with the E+C network. Conversely, Alternative 2 (highway emphasis) had the greatest effect on vehicle hours of congestion (VHT), which is a measure of delay from congestion, although Alternative 3 is close. Alternative 3 exhibited the fewest congested lane miles and the highest number of transit riders per congested lane mile. Alternatives 2 and 3 have comparable amounts of delay, and both are substantially lower than the E+C network and Alternative I.

	2035 Base (E+C)	Alt I BRT	Alt 2 Highway	Alt 3 Streetcar
Vehicle of Miles of	11,918,235	,757,75	,74 ,7 4	۱۱,727,968
Travel (VMT)		-1%	-1%	-2%
Vehicle Hours of	381,467	353,537	340,227	341,681
Travel (VHT)		-7%	11%	-10%
Congested Lane	373	226	217	l 77
Miles	17%	10%	9%	8%
Riders per Congested Lane Miles	41.44	61.49	62.14	71.15
Delay (minutes)	514	400	317	321

Table 9: Alternative Evaluation Results











Using the Alachua Countywide Travel Model it is possible to estimate the number of bicycle/pedestrian trips and those made using transit. As shown in Table 10, Alternative I showed the greatest increase in fixed route bus ridership, with Alternatives 3 and 4 (hybrid) generating more ridership from the premium forms of transit (streetcar and BRT) because those systems are provided in those alternatives to a greater degree. When combined, Alternative 3 produced the greatest increase in transit ridership over the E+C network, resulting in a 46 percent increase. Bicycle and pedestrian trip-making was generally the same across all alternatives, although slightly lower in comparison with the E+C network because of the amount of additional transit service provided.

The BRT tends to perform well in ridership tests because when compared to auto travel times from west Newberry Road and west Archer Road into the University of Florida, the BRT is able to complete the trip at an 8-10 minute time savings over congested auto speeds.

Transit & Bicycle/Pedestrian (trips)										
	Existing + Committed (E+C)	Alt BR Empl	l T nasis	Alt 2 Highw Empha	2 Yay Isis	Alt : Street	3 car	Al Hy	t 4 brid	
Fixed Route	26,936	34,625		34,822		33,365		32,795		
Premium Transit	-	2,019		1,184		5,861		6,105		
Total Transit	26,936	36,644	36%	36,006	34%	39,226	46%	38,900	44%	
Bike / Pedestrian	70,048	69,382	-1%	69,224	-1%	68,909	-2%	69,080	-1%	

Table 10: 2035 Transit and Bicycle/Pedestrian Mode Share

Maps 14 through 17 show a series of maps that illustrate the results of the BRT and streetcar network analysis for Alternatives I, 3 and 4. The maps identify the areas in the BRT and streetcar network with the highest levels of projected ridership. Alternatives I and 3 show results in terms of ridership between stops, indicating where the most passengers will use the system. While transit ridership along a given route generally follows a bell curve shape in which fewer riders board and alight at either end of the route, the maps give a fairly strong indication of which BRT and streetcar segments are likely to be the most productive. As shown in Map 14, Alternative I has the highest level of ridership connecting into the University of Florida on the NW 13<sup>th</sup> Street/US 441 corridor, SW 62<sup>nd</sup> Boulevard, SW 20<sup>th</sup> Avenue and Archer Road. The Haile Village to SW 91<sup>st</sup> Street segment also performs well. Lower ridership levels are in East Gainesville and the northwest part of the urbanized area. Map 15, showing Alternative 3 ridership between stops,



indicates the ridership potential of the downtown to UF streetcar segment, with moderately high levels of ridership to the west, including the BRT connection to the Oaks Mall.

Map 16 and 17 present similar results for the Alternative 4 hybrid network. The first map shows average ridership between stops, and indicates the streetcar and BRT corridor connecting UF/Butler Plaza to the Oaks Mall via SW 20<sup>th</sup> Avenue and SW 62<sup>nd</sup> Blvd will perform best. Other moderately high performing route segments are shown in lighter green color. The second map shows average ridership by line, and demonstrates the potential of an east-west spine BRT route to effectively connect east and west Gainesville through an intermodal hub at the Shands/VA Hospital area south of the main University of Florida campus. The streetcar line is also reported as having strong ridership. While ridership will vary by segment as people board and alight, the average ridership by line is a strong indicator of the key origins and destinations along a proposed route that will generate higher levels of ridership. Thus, the spine BRT route from Santa Fe College to the Gainesville Regional Airport is the strongest line relative to others in terms of ridership. The streetcar also performs well given the limits on parking and the higher density of development in the core part of the Urbanized Area.





#### **MAP 15**





#### **MAP 16**











# Peak Oil Adjustments and Findings

The peak oil analysis for the network alternatives included adjustments to the countywide travel demand model to estimate how rising fuel prices may affect travel demand. It is expected that more carpooling and ridesharing will take place for essential trips, and people will shift to other modes where practical, particularly for shorter trips, while reducing their non-essential auto trips. Eventually, people may decide to give up one or more cars and move closer to essential services and destinations.

Thus, testing peak oil adjustments to develop the 2035 Needs Plan entailed two primary factors: 1) adjusting automobile ownership, and 2) increasing vehicle operating costs. The accessibility analysis was the basis for the automobile ownership adjustments. In traffic analysis zones (TAZs) rated as High for accessibility, the scenario assumed an increase in 0- and 1-auto households (10 percent and 15 percent, respectively, over the base auto ownership percentages) and a reduction of similar magnitude in 2- and 3+- auto households (10 and 15 percent, respectively) in those same TAZs. This adjustment represents changes in travel habits of residents due to availability of multiple transportation options, jobs, housing, and retail/services. For Medium accessibility, the scenario adjusted these same percentages by three and seven percent (10 percent total). No adjustments were made to TAZs in the Low accessibility areas because of the relative lack of viable travel alternatives.

For vehicle operating costs, the peak oil analysis quadrupled these costs, with the basis of \$2.50 per gallon fuel price to roughly approximate a \$10 per gallon fuel price. While this may be low from a real-world perspective in 2035, this increase was viewed as a reasonable adjustment within the context of the 2007 validated model. The vehicle operating cost adjustments were made countywide, regardless of accessibility rating.

Table 11 below presents the results of the peak oil analysis when applied to each of the alternatives. Overall, the analysis indicates major increases in transit ridership and a large reduction in VMT and VHT as higher fuel prices and lower automobile ownership result in shorter trip lengths and fewer discretionary trips made by automobile. Transit ridership nearly triples under the hybrid Alternative 4, while traffic congestion on the roadway network virtually disappears. If this scenario becomes reality in some form, it lends substantial support to the idea of retrofitting the major roadway corridors in the area to accommodate transit-only lanes and improved facilities for bicycling and walking.



#### Table 11: Peak Oil Finding Results

Peak Oil Finding Results									
	Existing + Committed (E+C)	Alt I BRT Emphasis		Alt 2 Highway Emphasis		Alt 3 Streetcar		Alt 4 Hybrid	
Vehicle Miles of Travel (VMT)	11,918,235	9,829,106	-18%	9,806,616	-18%	9,780,660	-18%	9,836,402	-17%
Vehicle Hours of Travel (VHT)	381,467	257,464	-33%	250,630	-34%	249,365	-35%	252,512	-34%
Roadway Lane Miles	2,206	2,247		2,295		2,281		2,296	
Transit Only Lane Miles	0	105		0		43		116	
Total Lane Miles	2,207	2,352	7%	2,295	4%	2,324	5%	2,412	<b>9</b> %
Congested Lane Miles	373	70	-86%	57	-89%	38	-90%	38	-90%
Percent Congested	17%	3%	-82%	2%	-85%	2%	-90%	2%	-90%
Delay (minutes)	514	210	-59%	145	-72%	146	-72%	153	-70%
Fixed Route	26,936	45,751		45,999		42,972		56,368	
Premium Transit	-	10,944		4,736		18,042		18,728	
Total Transit	26,936	56,695	110%	50,735	88%	61,014	127%	75,096	1 <b>79</b> %
Bike / Pedestrian	70,048	90,275	29%	90,329	29%	89,230	27%	91,842	31%



## Development and Testing of Alternative 4 / Hybrid Needs Network

Based on the results of the evaluation of Alternatives 1, 2, and 3, a fourth hybrid needs network was developed for testing as a potential needs plan.

## Major Features of Alternative 4

A fourth hybrid or recommended needs plan alternative was developed based on evaluation of Alternatives I-3 as well as guidance from the MTPO Committees (TAC and CAC) and the MTPO. Key components of Alternative 4 include:

- A core BRT system that provides access to the Santa Fe College area, the airport, Butler Plaza, East Gainesville, Northwood, along Tower Road, Archer Road, and University Avenue.
- Two streetcar lines connecting downtown Gainesville, UF, and the Butler Plaza area.
- Express bus service from Alachua, Archer, Hawthorne, Newberry and Waldo to the BRT system.
- Existing and expanded/new fixed route bus service, including premium service along 39th Ave from Santa Fe to the airport.
- Park and ride lots to provide connections to premium transit service.
- Multimodal emphasis corridors on University Ave and W 13th Street.
- New roadways and roadway widening projects to provide key connections for BRT and relieve congestion along major corridors, including the widening of Archer Road west of I-75.

Map 18 shows the transportation facilities evaluated in Alternative 4.





Table 12 below presents a comparison of Alternative 4 elements versus the E+C network. As shown in the table, the alternative assumes a much greater level of transit operations than currently exists in the Gainesville area. These changes include regular fixed route bus service expansion as well as the BRT and streetcar networks. In addition, there is 90 additional lane miles of roadways included in this network alternative.

#### Table 12: Comparison of E+C / Alternative 4 Elements

	Increase in Transit Revenue Hours of Service from E+C to Alt 4	Increase in Transit Land Miles from E+C to Alt 4	Increase in Number of Buses from E+C to Alt 4	Increase in Highway Lane Miles from E+C to Alt 4
Fixed Route	1,822	82	144	90
Express Bus	240	53	30	
BRT	1,400	58	24	
Street Car	400	9	4	
Total	3,862	202	187	90



As shown in Table 13 below, Alternative 4 is comparable to or outperforms the other alternatives on most evaluation factors, including reduction of VHT (-11%) and VMT (-2%). Congestion levels decline by more than half, with delay dropping by 32 percent over the E+C network. Transit ridership increases by 44 percent. The table shows the Alternative 4 results when tested with the peak oil factors for comparison purposes. Map 19 shows projected congestion levels for Alternative 4.

Overall, the alternatives testing process demonstrated that there are viable approaches to the Gainesville Urbanized Area's mobility challenges through a combination of roadway, transit and bicycle/pedestrian strategies. Given the employment and educational concentrations at the University of Florida and Santa Fe College, as well as downtown Gainesville, transit is an extremely important part of the equation. The alternatives testing process revealed certain travel markets can support higher levels of transit service, including premium types of service that offer competitive travel times to automobile driving. Some level of congestion will likely always exist in the Gainesville area, unless peak oil conditions dramatically alter the land use and transportation environment and there is no short-term technology substitute. Some roadway capacity modifications will be needed, and these must be complemented with development of a parallel street network and a robust transit network serving all of the County's target growth areas.

Alternative 4 Findings						
	Existing + Committed	Alt 4 I Peal	Hybrid k Oil	Alt 4 Hybrid	d	
Vehicle Miles of Travel (VMT)	11,918,235	9,836,402	9,836,402	,7 4, 59	-2%	
Vehicle Hours of Travel (VHT)	381,467	252,512	252,512	340,868	-11%	
Roadway Lane Miles	2,206	2,296	2,296	2,296		
Transit Only Lane Miles	0	116	116	116		
Total Lane Miles	2,207	2,412	2,412	2,412	<b>9</b> %	
Congested Lane Miles	373	38	38	177	-53%	
Percent Congested	17%	2%	2%	8%	-54%	
Delay (minutes)	514	153	153	348	-32%	
Fixed Route	26,936	56,368	56,368	32,795		
Premium Transit	-	18,728	18,728	6,105		
Total Transit	26,936	75,096	75,096	38,900	44%	
Bike / Pedestrian	70,048	91,842	91,842	69,080	-1%	

Table 13: Alternative 4 Evaluation Results







# 30 Percent Mode Share

The MTPO staff used the Alternative 4 Hybrid Needs Network as the basis for an analysis of potential network modifications to achieve a 30 percent mode share for transit in the Year 2035. The analysis tested a variety of factors in sequence to achieve a 30 percent mode share, including a light rail network, higher parking costs and rising fuel prices. Ultimately, achieving a 30 percent overall mode share would require a combination of extensive transit service and substantially higher prices for fuel and parking.

# 2035 NEEDS PLAN

## Overview

The development of the 2035 Needs Plan reflected a broad level of community dialogue, technical analysis and consideration of adopted local plans and policies. Most importantly, the MTPO's Long Range Transportation Plan provides an opportunity to examine various plans and strategies and put them into a coherent context for the urbanized area as a whole, to help guide the development of a transportation network coordinated with land uses and the integration of various modes. Thus, the 2035 Needs Plan reflects a desired level of mobility and accessibility throughout the Gainesville Urbanized Area that connects established and planned economic and activity centers of the region. The plan also reflects a desire to keep rural and lower density parts of the region in their present form by avoiding certain transportation investments that would encourage development in those areas. In that context, the Needs Plan is a useful tool for

consideration at the state, regional and local levels because it can serve as an effective guide for how transportation and land use should work in concert to support the community and region from a "triple bottom line" sustainability perspective of responsible economic growth, environmental protection and social well-being and equity.

The selection of Needs Plan projects involved close coordination with the MTPO's advisory committees to review and consider the technical merits of individual transportation projects, as



well as their consistency with the approved vision statement, goals and objectives defined earlier in the LRTP planning process. With Alternative 4, a hybrid version of the other three network alternatives, as a starting point, the advisory committees each recommended several refinements to create a preferred Needs Plan that was presented to the MTPO for its endorsement and adoption.

To aid in the development of Needs Plan recommendations, each of the projects was ranked against of set of criteria that were developed consistent with the vision statement, goals and objectives. The criteria, described more fully in Technical Report 6, allotted potential points to each project based on whether it is parallel to an existing or future congested roadway; whether it extends existing transit service to serve areas meeting minimum population and employment density thresholds; whether the project is located in a high, medium or poor accessibility location



in the metropolitan area; whether the project connects two or more collector or arterial roads; and whether the project increases transit service frequency less than 30 minutes or expands operating hours. While it is difficult to come up with a project ranking formula that completely accounts for all important project variables, the MTPO's ranking process reflected a multimodal approach to identifying transportation projects for the Needs Plan. MTPO staff used the ranking to develop its initial set of Needs Plan recommendations for review by the advisory committees.

Public input also served to help select Needs Plan projects. Based on the Needs Plan public workshop in February 2010, feedback on the project web site, and meetings with various community groups, transportation projects that received support from meeting participants were highlighted in discussions with the MTPO and advisory committees. In particular, Archer Road appeared to receive most of the public input. Whether it involved widening the road to four lanes from the Gainesville Urbanized Area to the City of Archer, or ways to more safely accommodate pedestrians, bicyclists and transit riders within the Urbanized Area, the Archer Road corridor was a key community focal point during development of the plan. While other major corridors in the plan, such as Newberry Road, Tower Road, SW 20<sup>th</sup> Avenue and NW 23<sup>rd</sup> Avenue all received some level of public input, Archer Road generated the most conversation, likely because of its importance to serve key economic centers in Alachua County and Gainesville.

Following review and refinement based on input from the advisory committees, the MTPO voted to adopt the 2035 Needs Plan at its June 2010 meeting. Map 20 presents the adopted 2035 Needs Plan. The multimodal plan includes roadway projects that address long-standing traffic congestion issues in the community, as well as freight mobility projects to better connect truck traffic with the Strategic Intermodal System. The plan also includes an extensive set of transit projects that build upon the robust transit network serving the University of Florida and surrounding areas, including a network of Bus Rapid Transit service projects and a streetcar network that would link downtown Gainesville with the University and Butler Plaza. Finally, the Needs Plan includes Trails and other bicycle/pedestrian projects that reflect adopted plans and established priorities defined by the MTPO's Bicycle/Pedestrian Advisory Board, including the Archer Braid network of facilities that connects western parts of the Urbanized Area across I-75 and into the University area.

The 2035 Needs Plan is an integrated plan that recognizes the adopted Comprehensive Plans on the part of the City and County, and reflects other community planning initiatives for environmental preservation, targeted economic growth and social well-being and equity, as reflected by the availability of transportation options and strategies to overcome barriers to mobility and accessibility in the transportation network. Another aspect of the integrated nature of the Needs Plan is the development of the roadway network to support plans for Bus Rapid Transit. For BRT to be an effective transportation alternative, it needs competitive travel times to travel by automobile. Thus, a central part of the roadway needs plan is to provide the roadway connections, particularly in unincorporated Alachua County in the western part of the Urbanized



Area, to ensure that BRT can efficiently and effectively serve planned land development projects and connect people with logical educational, employment and retail shopping destinations elsewhere in the County and City of Gainesville.







The 2035 Needs Plan does not solve all the congestion problems that are projected by 2035. Rather, the Needs Plan is primarily a strategic mobility plan targeting improvements that create additional travel choices for people, with only a selected number of roadway capacity projects to address congestion problems. This approach reflects the constrained nature of many congested roadways in the Gainesville area, such as Millhopper Road, Archer Road, SW 34<sup>th</sup> Street and Newberry Road, which for various reasons are not planned for widening due to environmental, physical or policy reasons. The plan also focuses on more street connectivity to provide other route options that parallel congested roads or provide shorter travel paths to enable travelers to reach their destinations while avoiding congested road segments.

Map 21 shows congested roadways with the 2035 Needs Plan. As shown in the map, chronically congested roadways such as portions of Newberry Road, West 34th Street, US 441, SW 16th Avenue, NW 8<sup>th</sup> Avenue and Archer Road will likely continue some level of congested operating conditions into the future. With the exception of NW 8<sup>th</sup> Avenue in the core part of the Gainesville Urbanized Area where a strong grid street network exists, each of these roadways includes a higher level of transit service as part of the needs plan, including various Bus Rapid Transit network segments. In addition, as shown on the map, the adopted Needs Plan indicates that much of the projected 2035 congestion with the Existing Plus Committed network (assuming only projects included through 2014 per the adopted Transportation Improvement Program and FDOT Work Program) will be effectively resolved. In particular, the widening and extension of NW 23<sup>rd</sup> Avenue helps congestion levels on both Newberry Road and NW 39<sup>th</sup> Avenue. Other projects, such as capacity improvements to NW 34<sup>th</sup> Street and SW 20<sup>th</sup> Avenue to add turn lanes, do not entail adding to the number of through travel lanes but still help to improve both access and mobility, while also reducing safety problems that often occur on two-lane roads where leftturning vehicles must wait for gaps in on-coming traffic to turn, thus backing up all cars in the queue behind them.

The following sections describe the specific elements of the 2035 Needs Plan, including a discussion on the relative merits of various projects for transit, roadways and multi-use trails.





## Transit

Transit is a key element of the 2035 Needs Plan, as much of the roadway network in the Gainesville Urbanized Area is constrained to the existing number of lanes, and Alachua County's recently adopted Comprehensive Plan enables development to contribute toward a Bus Rapid Transit network as a means of achieving concurrency for traffic impacts.

Table 14 provides a summary of the Transit Needs Plan project types, and Map 22 presents a map of the Transit Needs Plan projects.

The adopted Needs Plan for transit outlines a vision for transportation in which a spine Bus Rapid Transit line provides a high capacity east-west connection through the core of Urbanized Area, linking newer commercial, health care and educational centers in the I-75 corridor on the west with the University of Florida and the Shands/VA medical complex, downtown Gainesville and the Gainesville Regional Airport to the east. With end points generally at Santa Fe College and the airport, the spine route converges on the Shands/VA complex, which is the major employment center in the county and is located immediately south of the core part of the University of Florida campus. A new Multimodal Regional Transportation Center is envisioned in this area – potentially at the triangle where Archer Road and SW 16<sup>th</sup> Avenue split – to serve as a connecting point for the regional spine BRT route and a combination of local bus service and shuttle feeder routes, as well as bicycle and pedestrian connections.

Other BRT lines are included in the Needs Plan to feed into the spine route linking Santa Fe College with the airport. These feeder routes would provide connections from the Haile Village Center and along Archer Road to the Butler Plaza commercial center, along US 441 at NW 34<sup>th</sup> Street into downtown, and from the Eastside Activity Center along SE Hawthorne Road into downtown.

For the BRT network, it is important to note that there are several new roadway projects included in the plan that exist primarily to provide running ways for the BRT. One of these – the southern extension of NW 83<sup>rd</sup> Street with an overpass at I-75 – is an example of how new street connections are needed to provide more direct transit access between origins and destinations to improve transit travel time and overcome barriers to mobility.



#### Table 14: Year 2035 Transit Needs Plan Components

Year 2035 Needs Plan: Transit							
Element	Vision	Goal Area	Objectives				
Bus Rapid Transit	Multimodal transportation system: network of rapid transit facilities	Economic vitality/ community livability	Improve viability of alternatives to SOV				
Streetcar	Integrated land use/transportation: context-sensitive transportation	Economic vitality/ community livability	Improve access to public places and centers of activity				
Regional express bus service	Multimodal transportation system/regional: preserve greenbelts	Economic vitality/ community livability	Expand reach of regional transit system				
Fixed route bus	Multimodal transportation system: increased east-west mobility/accessibility	Sustainable decision- making/preservation	Increase accessibility for all residents and visitors				
Intermodal centers / park & ride	Integrated land use/transportation: multimodal-supportive	Sustainable decision- making/ preservation	Create multimodal access hubs				
RTS maintenance facility and bus replacements	Multimodal transportation system: investments to direct growth to infill/redevelopment areas	Transportation network management/ Sustainable decision- making/preservation	Prioritize preservation / maintenance; phase in new vehicle fleets to maximize energy efficiency				




In the core part of the area, a streetcar is planned to link downtown Gainesville with the University of Florida and the Butler Plaza/urban village area located immediately west of the main campus. The streetcar would potentially operate along West University Avenue or SW 2<sup>nd</sup> Avenue, connecting through the main UF campus to Shands Hospital, and then continue west along Museum and Hull Roads across SW 34<sup>th</sup> Street into the Butler Plaza area. An exact alignment would be determined from a future feasibility study.

In addition, the Needs Plan includes a network of commuter/express bus routes linking the outlying municipalities of Archer, Newberry, High Springs, Alachua, Waldo and Hawthorne into Gainesville. The plan envisions these express routes operating primarily during the AM and PM peak periods, and connecting with the BRT lines at a park-and-ride lot/intermodal facility. The specific characteristics of these transfer points would need to be refined in a more detailed plan, but the intent is to facilitate transfers between modes and types of service, and provide supporting infrastructure (e.g., shelters, kiosks, etc.). In some cases, park-and-ride could be a component, but in others, such as at the airport, that might not make the most sense.

Other features of the Transit Needs Plan include the expansion of local bus service to improved service frequency levels on existing routes and new service on major corridors, such as NW/NE 53<sup>rd</sup> Avenue and NW 43<sup>rd</sup> Street.

An essential element of this transit vision is the need for a new RTS maintenance facility. As a reflection of the system's rapid growth over the last decade, it has become a challenge to make sure the capital facilities are in place to support the expanded level of bus operations. The Federal Transit Administration has put the City of Gainesville on notice that further bus service expansion cannot occur without a comparable upgrade in the maintenance facilities necessary to support a safe and efficient operating environment. The only new buses that can operate in revenue service are replacements for aging buses in the fleet. Thus, the RTS bus network is essentially in a holding pattern at existing service levels, regardless of additional funding for new buses and drivers, without significant expansion of its maintenance capacity.

Table 15 presents a list of the individual Transit Needs Plan projects shown on Map 22.



# Table 15: Year 2035 Transit Needs Plan Projects

Facility/Location	From/To	Туре	Length
Santa Fe to Airport (via Oaks Mall, Archer Road, Downtown)		Bus Rapid Transit (Dedicated Lane)	16.3
Santa Fe to Newberry Road (NW 83rd St, NW 76th Blvd)		Bus Rapid Transit (Dedicated Lane)	3.7
Newberry Road (NW 76th Blvd to NW 62nd Blvd		Bus Rapid Transit (Dedicated Lane)	0.9
NW 62nd Blvd / SW 37th Blvd (Newberry Rd to Archer Rd)		Bus Rapid Transit (Dedicated Lane)	3.9
Archer Rd (SW 37th Blvd to US 441)		Bus Rapid Transit (Dedicated Lane)	2.3
Depot Ave / Waldo Rd (US 441 to Airport)		Bus Rapid Transit (Dedicated Lane)	5.5
Haile Village Center to Butler Plaza Intermodal Center		Bus Rapid Transit (Dedicated Lane)	6.5
Jonesville to Butler Plaza Intermodal Center (via Oaks Mall)		Bus Rapid Transit (Dedicated Lane)	14.2
Northwood Village to UF/ 2nd Ave S (via 13th Street)		Bus Rapid Transit (Dedicated Lane)	5.3
Eastside Activity Center (@ SE 43rd St) to Downtown RTS Transfer Center		Bus Rapid Transit (Dedicated Lane)	
Downtown/UF		Streetcar	5.4
Urban Village/UF		Streetcar	7.1
High Springs to US 441/Northwood Village Intermodal Center		Express Bus Route	13.2
Archer to Butler Plaza Intermodal Center (via Archer Road)		Express Bus Route	7.2
Newberry to Newberry Road Intermodal Center (via Newberry Road)		Express Bus Route	6.8
Waldo to Airport Area Intermodal Center (via Waldo Road/US301)		Express Bus Route	10.2
Hawthorne to Eastside Intermodal Center (via Hawthorne Road)		Express Bus Route	12.2
Existing RTS Fixed Route Bus (increased frequency)		Fixed Route Bus	5 Routes
Planned RTS Fixed Route Bus (new fixed route service)		Fixed Route Bus	6 Routes
Fixed Route Bus from Santa Fe to Airport on NW/NE 39th Ave		Fixed Route Bus	
I-75 and Newberry Road (Oaks Mall)		Park & Ride Lot	

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Facility/Location	From/To	Туре	Length
Newberry Road and Ft. Clarke Road		Park & Ride Lot	
US 441 and Williston Road		Park & Ride Lot	
SE Hawthorne Road and SE 24th Street/SE 8th Ave		Park & Ride Lot	
Newberry Road and CR 241 (Jonesville)		Intermodal Center/Park & Ride Lot	
Butler Plaza Area		Intermodal Center/Park & Ride Lot	
Archer Road and Tower Road (SW 75th Street)		Intermodal Center/Park & Ride Lot	
Eastside Activity Center (SE 43rd Street and SE Hawthorne Road)		Intermodal Center/Park & Ride Lot	
NW 34th Street and US 441 (Northwood Village)		Intermodal Center/Park & Ride Lot	
NW 39th Avenue and I-75 (Springhills Area)		Intermodal Center/Park & Ride Lot	
NE 39th Avenue and Waldo Road (Airport Area)		Intermodal Center/Park & Ride Lot	
Downtown Intermodal Center (RTS Transfer Center)		Intermodal Center/Park & Ride Lot	
RTS Maintenance Facility		Transit Maintenance Facility	
Multimodal Regional Transportation Center (Archer Rd/SW 16th Ave)		Multimodal Regional Transit Center	
Bus Replacement Program			



# Roadway

The Roadway Needs Plan for the Gainesville Urbanized Area is relatively modest in scope, focusing on key connectivity strategies, enhanced mobility for trucks, targeting critical segments for "complete street" treatments to enhance mobility and accessibility for all users, and operational strategies to reduce delays and increase safety. These projects reflect an assessment of constrained roadways and opportunities to create parallel street networks to better distribute traffic and provide travel alternatives.

Table 16 provides a summary of the Roadway Needs Plan project types, and Map 23 presents the 2035 Roadway Needs Plan for the Urbanized Area.

The main capacity-adding features of the Roadway Needs Plan entails widening SW 62<sup>nd</sup> Boulevard between the Oaks Mall area (Newberry Road) and SW 20th Avenue, and constructing a new fourlane extension of the road south into the Butler Plaza commercial development, where it would connect to Archer Road using existing the street network. This new four-lane segment would include two additional center lanes exclusively for the planned Bus Rapid Transit spine route. The connection provides an alternative route to avoid congested SW 20<sup>th</sup> Avenue and Newberry Road, and provides a key link between higher density residential and employment/shopping areas. Another major capacity project is the widening of Archer Road (SR 24) from the Archer City limits to approximately SW 75<sup>th</sup> Street, only a portion of which is inside the Gainesville Urbanized Area. This roadway is exceeding current level of service thresholds, and also experiences safety problems due to the position of the sun during morning and evening commute periods. In addition, the Needs Plan identifies widening a portion of NW 23<sup>rd</sup> Avenue to improve east-west mobility in the vicinity of Santa Fe College, providing parallel capacity to congested and constrained segments of NW 39<sup>th</sup> Avenue and Newberry Road. Finally, there are shorter segments of added capacity on Williston Road at the approach to I-75, SR 121 (NW 34<sup>th</sup> Street) at US 441, a segment of NE 39<sup>th</sup> Avenue, and SE 16<sup>th</sup> Avenue, between Main Street and Williston Road. This latter project is needed to bring SE 16<sup>th</sup> Avenue up to standard for potential designation as SR 24 in the future, and to facilitate truck movement around downtown Gainesville to Strategic Intermodal System highways, such as Williston Road (SR 331) and SE Hawthorne Road (SR 20). This may eventually enable more pedestrian- and transit-oriented roadway modifications to Archer Road, although that is not currently planned.

Three other important projects support improved traffic operations and better accommodation of transit: adding center turn lanes on NW 34<sup>th</sup> Street, the addition of a center turn lane with enhanced mid-block transit stops on SW 20<sup>th</sup> Avenue, and the reconstruction of SW 75<sup>th</sup> Street (Tower Road) to enhance operations with a series of intersection modifications. Each of these projects represents context-sensitive mobility solutions to roadways that, for different reasons, experience significant levels of congestion during the AM and PM peak periods.



#### Table 16: Year 2035 Roadway Needs Plan Components

Year 2035 Needs Plan: Roadway			
Element	Vision	Goals	Objectives
New Roadways	Integrated land use/transportation: complementary context- sensitive transportation networks	Sustainable decision- making/preservation	Improve interconnectivity of streets
Widening	Integrated land use/transportation: complementary context- sensitive transportation networks	Transportation network management and operations	Increase safety and disperse traffic across multiple roadways with parallel network
Multimodal Emphasis Corridors	Multimodal transportation system: investments to direct growth to infill/redevelopment areas	Sustainable decision- making/preservation	Improve energy efficiency/GHG emissions by promoting sustainable street designs
Reconstruction / Turning Lane / Multi-way Blvd	Integrated land use/transportation: complementary context- sensitive transportation networks	Transportation network management and operations	Improve operational efficiency based on balance of needs in corridor
Interchange Modification	Multimodal transportation system: safe and secure	Economic vitality/ community livability	Preserve intended function of the SIS for intercity travel and freight movement





# Multimodal Emphasis Corridors

Another aspect of the Roadway Needs Plan is the identification of segments of University Avenue and West 13<sup>th</sup> Street (US 441) as multimodal emphasis corridors. The segments run from West 34<sup>th</sup> Street to Waldo Road and NW 31<sup>st</sup> Avenue to SW 16<sup>th</sup> Avenue, respectively. These two corridors function as the main connections into the heart of the Gainesville Urbanized Area, and their adjacent land uses include a relatively dense and diverse mix of institutional, residential and commercial land use destinations that promote walking, cycling and use of transit. As state roadways, they also function as important corridors for automobile and truck traffic, so the key is to find a good balance among modes so that both mobility and accessibility work effectively in tandem for all the users of these two roadways.

Due to their unique geographic location, constrained right-of-way and the need for a high level of accessibility, the Multimodal Emphasis Corridors identified in the Plan are places where design treatments shall be considered to provide additional safety for non-motorized transportation users or to achieve an appropriate balance among competing needs of all users of these roadways. The Multimodal Emphasis Corridors are candidates for design elements that may include signage, pavement markings, medians, facility modifications or additions (including narrower or fewer lanes, wider sidewalks and bike lanes), operational strategies, curb extensions and other measures to enhance multimodal mobility and accessibility. The specific strategies for these corridors will be determined in consultation with the Florida Department of Transportation, City of Gainesville, Alachua County and the public in the future. Potential strategies to be applied to these corridors may entail the following treatments:

# Roadway

- Roadway reconstruction to reduce long-term maintenance liabilities
- Improved operational and traffic flow through intersections and roundabouts that both slow traffic and facilitate its flow
- Reduce lane widths as appropriate to enable better non-auto infrastructure
- Roadway modifications that support multi-occupant vehicle use
- Roadway-related (functional efficiency/safety) improvements
- Signal coordination optimization based on current traffic flow patterns

# Pedestrian

- Complete segments of missing sidewalks to provide direct and continuous connections between destinations and to transit
- Making sidewalks wider where appropriate to improve pedestrian comfort and access
- Adding enhanced pedestrian crossings at strategic locations
- Installation of pedestrian signals and crossing countdown heads



# Bicycle

- Complete missing bicycle paths and bicycle lanes to provide direct and continuous connections
- Provide enhanced and more visible bicycle parking
- Provide bicycle route signage

# Transit

- Construct enhancements at key transit stops to include, at a minimum, transit signs and pavement platforms; at higher demand transit stops, provide shelters, benches and trash receptacles
- Operational system efficiency such as ITS/ up-to-the-minute technology, bus bypass lanes, bus signal prioritization

At this time, these projects do not include lane reductions. Future study would need to justify such potential treatments by demonstrating adequate capacity for mobility on parallel streets as well as the ability to maintain safe and efficient traffic operations.

# Strategic Intermodal System

Florida's Strategic Intermodal System (SIS) of highways connects urban areas and economic hubs such as seaports, airports and rail intermodal facilities. In the Gainesville Urbanized Area, the SIS includes SR 26 (Newberry Road), Interstate 75, SR 331 (Williston Road) and SR 20 (Hawthorme Road). Of these roadways, both SR 26 and I-75 currently experience recurring congestion, and by 2035 the level of congestion is expected to worsen. The other SIS roadways generally operate at an acceptable level of service, and are expected to continue operating in that acceptable condition through 2035.

While the Year 2035 Needs Plan does not entail further widening of either SR 26 or I-75 through the Gainesville Urbanized Area, there are substantial mobility improvements planned for these roadways. First, Newberry Road, portions of which are already at six lanes, is viewed as a primary transit corridor into the University of Florida. A major BRT spine route is planned for a portion of this corridor, along with a feeder BRT line from Jonesville into the Oaks Mall area. Both would be supported by an express bus route from outlying Newberry to connect with the BRT and local fixed route bus network at a park-and-ride location in the vicinity of Fort Clarke Boulevard and at the Oaks Mall. The specific park-and-ride lot location will likely be determined through development mitigation and more detailed analysis.

Second, the Florida Department of Transportation has identified several interchange modifications for I-75 in the Gainesville area as an outcome of the I-75 Master Plan. Each of the four interchanges in the Gainesville Urbanized Area – at NW 39<sup>th</sup> Avenue, Newberry Road, Archer



Road and Williston Road – are in need of additional capacity to safely accommodate future ramp volumes and avoid queues backing up into the mainline lanes on the interstate.

Table 17 presents a summary of the Roadway Needs Plan projects.

#### From/To Facility/Location Length Туре Airport Access Road Waldo Rd to Airport New 2 lane road 0.5 Archer Road West of I-75 to Archer (city limits) Add 2 lanes (2 to 4) 7.0 Hull Road Extension SW 34th St to SW 43rd St Ext New 2 lane road 1.1 New 2 lane road 1.0 Radio Road Extension SW 34th St. to Hull Rd Extension NW 83rd St Ext to NW 115th St New 2 lane road 2.3 Springhills Boulevard Reconstruct (2 lane Tower Road SW 8th Avenue to Archer Road 3.2 upgrade) Multimodal University Avenue NW 34th St to Waldo Rd 3.7 Emphasis Waldo Road Multiway Boulevard University Avenue to NE 39th Street New 2 lane road 2.6 West of I-75 to SW 62nd Ave 0.8 Williston Road Add 2 lanes (2 to 4) Gainesville Regional Airport to NE 27th NE 39th Avenue (SR 222) Add 2 lanes (2 to 4) 1.7 Ave NW 122nd Street Extension New 2 lane road 2.2 NW 46th Ave to Newbery Rd NW 23rd Avenue NW 55th St to NW 98th St Add 2 lanes (2 to 4) 2.7 NW 23rd Avenue Extension NW 98th St to NW 143rd St (CR 241) New 2 lane road 3.1 NW 34th Street NW 16th Ave to US 441 Add turn lanes 3.7 NW 34th Street/SR121 NW 58th Ave to NW 67th Place Add 2 lanes (2 to 4) 0.7 NW 76th Boulevard Extension NW 76th Blvd to Ft Clarke New 2 lane road 0.6 NW 83rd Street Extension NW 39th St to Millhopper Rd New 2 lane road 1.5 Multimodal NW/SW 13th Street SW 16th Ave to NW 23rd Ave 2.6 Emphasis Reconstruct (2 lane 0.7 SE 4th Ave Depot Ave to Williston Rd upgrade) 0.6 SE 16th Avenue Main St to Williston Rd Add 2 lanes (2 to 4) SW 8th Avenue Extension SW 122nd St to SW 143rd (CR 241) New 2 lane road 1.4 SW 20th Avenue SW 34th Ave to SW 43rd St Add turn lanes 1.0

#### Table 17: Year 2035 Roadway Needs Plan Projects

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Facility/Location	From/To	Туре	Length
SW 20th Avenue	SW 43rd St to SW 62nd Blvd	Add 2 lanes (2 to 4)	0.6
SW 23rd Terrace Extension to University of Florida campus	Hull Rd to Archer Rd	New 2 lane road	0.3
SW 45th Street	Archer Rd to I-75	New 2 lane road	0.6
SW 47th Street Extension	SW 47th St to SW 40th Place	New 2 lane road	0.45
SW 57th Road	SW 75th Street to SW 63rd Boulevard	New 2 lane road	2.24
SW 62nd Boulevard*	Newberry Rd to SW 20th Ave	Add 2 lanes (2 to 4)	1.7
SW 62nd Boulevard Extension*	SW 20th Ave to Windmeadows Blvd	New 4 lane road	1.0
SW 63rd/SW 67th Ave	SW 24th Ave to Archer Road	New 2 lane road	1.9
I-75 @ SR 222/39th Avenue		SIS Interchange Modification	
I-75 @ SR 24/Archer Road		SIS Interchange Modification	
I-75 @ SR 26/Newberry Road		SIS Interchange Modification	
I-75 @ SR 331/Williston Road		SIS Interchange Modification	





# Bicycle and Pedestrian Needs

The Gainesville Urbanized Area has long enjoyed a reputation as one of the most supportive communities for bicycling and walking, with an extensive network of sidewalks, bike lanes and shared use paths, such as the Waldo Road Trail, the Depot Avenue Trail and Gainesville – Hawthorne Rail Trail, which was recently extended into the downtown area to connect with the new 6<sup>th</sup> Street Trail. However, there is certainly more room for improvement, particularly in the western part of the Urbanized Area, which lacks the same caliber of off-road shared use paths as exists east of the University of Florida. Heavy traffic volumes, higher speed roads and a limited number of crossing points at I-75 make it even more important to consider additional on- and off-road non-motorized transportation facilities.

The Long Range Transportation Plan focuses on major bicycle/pedestrian facilities, such as off-road trails and places where enhanced roadway crossings should occur, rather than completing sidewalk gaps or modifying existing facilities. There are other elements of the metropolitan transportation planning process, including the Congestion Management Process, the work of the Bicycle/Pedestrian Advisory Board, and identifying where and how to spend Enhancement funds, that better lend themselves to more specific and detailed facility treatments, as well as various programs and policies that encourage walking and cycling.

Table 18 provides a summary of the Bicycle and Pedestrian Needs Plan project types.

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Year 2035 Needs Plan: Bicycle/Pedestrian			
Element	Vision	Goals	Objectives
Safety Strategies	Integrated land use/transportation: complementary context-sensitive transportation networks	Safety for mobility and accessibility	Increase safety for vulnerable road users
Braids Network	Multimodal transportation system: sustainable, energy efficient, livable land use/transportation	Economic vitality/ community livability	Improve bicycle/pedestrian accessibility
Regional Trails	Integrated land use/transportation: complementary context-sensitive transportation networks	Sustainable decision- making/preservation	Enhance connectivity; support creation of greenbelt



As shown in Map 24, the 2035 Bicycle and Pedestrian Needs Plan includes a network of multi-use urban trails (also called shared use paths) to improve connectivity, mobility and access between higher density residential areas and the commercial, educational and employment centers in the I-75 corridor and at the University of Florida. Of these trails, the Archer Braid has been identified by the MTPO's Bicycle/Pedestrian Advisory Board as a top priority. Consisting of 16 off-road trail segments or components, the Archer Braid weaves between the University of Florida, future development in the Butler Plaza area and the SW 91<sup>st</sup> Street/Tower Road corridor, with grade separated crossings of SW 34<sup>th</sup> Street and I-75. Other needed bicycle and pedestrian projects include bicycle lanes on West 13<sup>th</sup> Street (US 441) from NW 23<sup>rd</sup> Avenue to Archer Road, and bike lanes/paved shoulder on SW 122<sup>nd</sup> Street, NW 91<sup>st</sup> Street and Newberry Road. Other projects are scattered through the Urbanized Area. Table 19 presents a summary of the Bicycle and Pedestrian Needs Plan projects.







### Table 19: Bicycle and Pedestrian Needs Plan Projects

Braid	Segment/Description
	University of Florida Cross Campus Greenway Trail
	SW 34th Street Grade Separated Crossing <sup>3</sup>
	Hull Road Parking Area to SW 34th Street
	SW 38th Terrace (north of SW 20th Avenue to Hull Road Parking Area)
	Butler Plaza Planned Development
	Interstate 75 Grade Separated Crossing <sup>3</sup>
	Tower Road east to Interstate 75
	Tower Road north of Haile Boulevard
ARCHER	Tower Road south of Haile Boulevard
	Enhance pedestrian crossing between Shands Hospital and Cancer Center
	Waldo Road Bicycle/Pedestrian Overpass at or near NE 8th Avenue
	SW 91st Street from Archer Road to Haile/SW 46th Boulevard
	Haile/SW 46th Boulevard from SW 91st Street to Tower Road <sup>1</sup>
	SW 41st Place from Tower Road to SW 63rd Boulevard
	Archer Braid Trail from SW 41st Place to SW 45th Street Bridge
	SW 45th Street Bridge from SW 45th Street to SW 42nd Street
ALACHUA	US 441 Bike Lanes (NW 23rd A venue to Archer Road)
UNIVERSITY	Enhance bike trail crossing at E. University/Waldo/Williston Road Intersection
HAWTHORNE	(Bicycle/pedestrian trail has been completed)
BIVENS	SW 23rd Street Trail from Archer Road to SW 23rd Terrace
WESTSIDE	Enhance pedestrian crossing at SW 34th Street and Archer Road
	Bike Lanes on NW 34th Street between NW 23rd A venue and SW 2nd A venue
MILLHOPPER	Bike Lanes & Sidewalks as part of NW 23rd Avenue 4-laning from NW 55th Street to NW 98 <sup>th</sup> Street
	NW 83rd Street from NW 23rd Avenue to NW 39th Avenue
GLEN SPRINGS	Enhance pedestrian crossing at US 441 and NW 23rd Avenue



Braid	Segment/Description
	Bike Lane/Shoulder on E. University A venue from NE 15th Street to State Road 26
	Bike lane/Shoulder on Kincaid Road from SE 22nd A venue to Hawthorne Road
	Bike Lane/Shoulder on Newberry Road from NW 115th Street to Tower Road/SW 75th Street
	Bike Lane/Shoulder on NW 16 <sup>th</sup> /23rd Avenue from NW 43rd Street to NW 13th Street
	Bike Lane/Shoulder on NW 98th Street from Newberry Road to NW 23rd Avenue
	Bike Lane/Shoulder on SW 122nd Street from Archer Road to Diamond Sports Complex
	Multi-Use Path on Archer Road from SW 75th Terrace to SW 45th Street
	Multi-Use Path on Archer Road from State Road 45 to SW 91st Street
	Multi-Use Path on Downtown East Central Trail from Depot Avenue Rail/Trail to NE 39th Avenue
	Multi-Use Path on Fort Clarke Boulevard from Newberry Road to NW 23rd Avenue
	Multi-Use Path on NE 27th Avenue from NE 39th Boulevard to NE 55th Boulevard
	Multi-Use Path on NW 23 <sup>rd</sup> /32nd Avenue from NW 143rd Street to NW 98th Street
	Multi-Use Path on NW 39th Avenue from NW 143rd Street to Interstate 75
PROJECTS	Multi-Use Path on NW 83rd Street from NW 39th Avenue to Millhopper Road
A BRAID)	Multi-Use Path on NW 98th Street from NW 23rd Avenue to NW 98th Street
	Multi-Use Path on SE 15th Street from SE 32nd Place to SE 22nd Avenue
	Multi-Use Path on SE 41st Avenue/27th Street from SE 15th Street to Hawthorne Road
	Multi-Use Path on SE 43rd Street from Hawthorne Road to E University Avenue
	Multi-Use Path on SW 8th Avenue from SW 143rd Street to SW 24th Avenue
	Multi-Use Path on SW 20th/24th Avenue from SW 91st Street to SW 34th Street
	Multi-Use Path on SW 45th Street from Archer Road to SW 45th Street Bridge
	Multi-Use Path on SW 62nd Avenue/Williston Road from Archer Road to Interstate 75
	Multi-Use Path on SW 91st Street from SW 46th Boulevard to Newberry Road
	Multi-Use Path on Sweetwater Preserve from Williston Road to SE 15th Street
	Multi-Use Path on Tower Road/SW 75th Street from SW 41st Place to SW 8th Avenue
	Multi-Use Path on Tower Road/SW 75th Street from SW 57th Avenue to Archer Road
	Multi-Use Path on W 122nd Street from Diamond Sports Complex to NW 39th Avenue
	Multi-Use Path on W 143rd Street from SW 8th Avenue to NW 44th Avenue

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Braid	Segment/Description
	Sidewalk on SW 35th Place from SW 23rd Terrace to SW 34th Street
	Proposed 1-75 Crossing from NW 115th Terrace to NW 83rd St
	Trail corridor on east side of Interstate 75 from Newberry Road north to Millhopper Road

#### Notes

I The Archer Braid from SW 91<sup>st</sup> Street to Tower Road is a committed project.

2 The Archer Braid from SW 24<sup>th</sup> Avenue to SW 20<sup>th</sup> Avenue is constructed.

3 Grade-separated crossing size and cost to be determined by Renaissance Planning Group.





# SUMMARY

The development of the Year 2035 Needs Plan entailed a combination of technical and policy analysis, and substantive input from the public and the MTPO's advisory committees. The Needs Plan represents a strategy of improving both mobility and accessibility to key existing and emerging future destinations by increasing the number of viable travel choices, particularly within congested and constrained corridors such as Newberry Road, SW 20<sup>th</sup> Avenue and Archer Road. The plan includes actions that strengthen mobility within highly and moderately accessible parts of the Gainesville Urbanized Area, while also identifying projects like express bus service and park and ride lots that increase accessibility to areas that lack adequate transportation alternatives. Where feasible and appropriate in the context of local government policies, the plan identifies selected road capacity modifications to improve traffic flow and to provide alternative routes parallel to congested or constrained roads. The planned road network modifications include strategies to expand transit service through development of Bus Rapid Transit service, support freight mobility via improved access to the Strategic Intermodal System, and provide bicycle and pedestrian network connectivity to better link trip origins and destinations through both on-road and off-road facilities.

In addition to measures of mobility and accessibility, the Year 2035 Needs Plan reflects key considerations for the development of the transportation network, including safety, sustainability, environmental preservation and socio-cultural effects, freight mobility, and security. The Needs Plan recognized the importance of the Strategic Intermodal System for regional connectivity and emergency evacuation, and identified roadway modifications to improve safety for all users of the transportation system. Ultimately, the adopted Needs Plan is expected to reduce the growth in vehicle miles of travel and lower vehicle hours of travel in comparison with the Existing Plus Committed network in 2035. The plan improves accessibility for households and employees in the Gainesville Urbanized Area, and reduces the amount of congested lane miles. While some level of congestion is persistent in the Gainesville area and will not be fully resolved with the Needs Plan, those corridors are planned to see substantial improvements in transit service that will offer highly competitive travel times compared to automobile travel in the future.

The Needs Plan provided a strong foundation for the development of priority projects for consideration in the Year 2035 Cost Feasible Plan using available local, state and federal funding. Capital and operating costs were developed for all Needs Plan projects for development of the Cost Feasible Plan. Additionally, each project in the Year 2035 Needs Plan underwent a screening evaluation for environmental and socio-cultural impacts through Florida's Efficient Transportation Decision Making (ETDM) process. These steps are described elsewhere in the plan.