CONNECTION
MILTON'S COMPREHENSIVE TRANSPORTATION PLAN

HOME OF "THE BEST QUALITY OF LIFE IN GEORGIA"
MILTON
ESTABLISHED 2006

CITY OF MILTON

COMPREHENSIVE TRANSPORTATION PLAN

EXISTING CONDITIONS AND NEEDS ASSESSMENT REPORT

June 2016

Acknowledgements

City Government

Mayor Joe Lockwood

Councilwoman Karen Thurman, District 1/Post 1

Mayor Pro Tem Matt Kunz, District 2/Post 2

Councilman William C. "Bill" Lusk, P.E., District 2/Post 1

Councilman Burt Hewitt, District 1/Post 2

Councilman Joe Longoria, District 3/Post 1

Councilman Rick Mohrig, District 3/Post 2

City Staff

Steven Krokoff, City Manager

Carter Lucas, P.E., Assistant City Manager/Public Works Director

Sara Leaders, P.E., LSIT, Transportation Engineer

Other City of Milton Staff

Consultant Team

Kimley»Horn

SYCAMORE Consulting, Inc.

Contents

Appendix

1.0 INTRODUCTION

The City of Milton is in the process of updating its Comprehensive Transportation Plan (CTP) that will benefit citizens and visitors over the next 25 years. Since completion of the 2009 CTP, Milton has experienced continued growth, which has impacted the overall transportation system — including vehicular, bicycle, pedestrian, and transit. This current update will serve as a way to prepare for future anticipated growth across all modes of transportation and help the City of Milton's elected officials and staff make crucial transportation decisions.

This document is an interim deliverable that has been prepared to assist in the development of the transportation plan. This document will focus primarily on the existing transportation system and the needs identified within the transportation system. This will be done by concentrating on the following areas:

- Vision and Goals
- Public Involvement
- Diagnostic Review Since the Previous 2009 City of Milton CTP
- Previous Transportation Plans
- Land Use and Market Analysis
- Transportation Inventory and Needs Assessment

2.0 VISION AND GOALS

Prior to undertaking a CTP, a vision and a set of goals to reach that vision should be developed. This ensures that the plan's development is reflective of Milton's unique characteristics and growth aspirations.

2.1 Vision

In 2015, the City of Milton completed its *2016 – 2020 Strategic Plan*, which outlines a "strategic road map and focus on projects to move Milton into the future." This plan set the tone for how Milton anticipates to grow in relation to infrastructure, civic engagement, conservation, the economy, and other areas of life that effect Milton residents. Given this plan's strong vision for Milton's future, it also serves as the vision for the 2016 Milton CTP update. The vision can be seen in the figure below.

MILTON IS A PREMIERE CITY WHERE WE STRIVE TO:

- Promote a high quality of life
- Create a strong sense of community and place
- Respect our heritage while guiding our future
- Be the best place to call home

2.2 Goals and Objectives

With a vision for the future of Milton's transportation system firmly established, goals were needed to achieve success. Goals from the 2009 CTP were used as a baseline then edited by staff and members of the public to reflect current thoughts and perspectives. These goals are outlined below.

CTP GOALS

1. Improve transportation network system level performance (level of service) with particular emphasis on the impacts of commuter traffic and safety.
2. Maintain and improve mobility and system performance through roadway improvements and alternative transportation improvements with specific consideration of transit investments appropriate to the community vision and multi-use paths and roadside improvements serving cyclists, pedestrians, equestrian users, and those with disabilities, including wheelchair access.
3. Protect and improve the environment recognizing its contribution to community economic vitality and quality of life.
4. Coordinate transportation investments with land use policies ensuring the creation of a "sense of place" as well as barrier-free connectivity to community assets such as schools, parks, and recreation areas.
5. Leverage regional cooperation and regional solutions to transportation issues, including coordination with surrounding jurisdictions, while maintaining the singularly unique character of the City of Milton.

3.0 PUBLIC INVOLVEMENT

Public involvement is an important part of the planning process as it allows direct interaction with citizens, elected officials, and other key stakeholders. This chapter documents public involvement strategies and activities that have occurred, are currently underway, or planned for the 2016 Milton CTP update.

3.1 Project Management Team

The Project Management Team (PMT) serves as a sounding board for the overall CTP planning process to ensure that the plan's outcomes are consistent with the aforementioned Vision and Goals. The PMT is comprised of key staff and decision-makers from the City of Milton, the Georgia Department of Transportation, and the Atlanta Regional Commission. Identified members of the PMT are shown below in the table below.

First Name	Last Name	Organization/Affiliation	Title/Role
Carter	Lucas	City of Milton	Public Works Director/ Assistant City Manager
Sara	Leaders	City of Milton	Transportation Engineer/Planner
Angela	Thompson	City of Milton	Communications Manager
Kathleen	Field	City of Milton	Community Development Director
Robert	Edgar	City of Milton	Fire Chief
Steven	Krokoff	City of Milton	Police Chief
Sarah	LaDart	City of Milton	Economic Development Manager
Chris	Woods	GDOT District Seven	Traffic Engineer
Patrick	Bradshaw	Atlanta Regional Commission	Fulton County Representative

3.2 Community Events

Community events are a great way to seek citizen feedback by providing the option to engage in the planning process at a social setting they have already planned to attend. In total there are four community events planned for the CTP, two of which have happened and two that are being planned for the Recommendations phase of the process. The events are outlined in the table below.

Event Name	Date	Event Location	Information (to be) Provided
Milton High School vs. Alpharetta High School Football Game	August 28, 2015	Milton High School	Visioning Board, CTP Informational Cards
Cambridge High School vs. Forsyth Central High School Football Game	October 30, 2015	Cambridge High School	Visioning Board, CTP Informational Cards, MetroQuest Survey
Public Meeting #2 Bell Memorial Park outreach	April 2016	Bell Memorial Park	Project Recommendations, MetroQuest Survey
Milton Hometown Jubilee	May 2016	Historic Downtown Crabapple	Project Recommendations, MetroQuest Survey

3.3 Public Meetings

Public meetings offer a more traditional venue for educating, informing, and hearing from the public. Two public meetings were planned for the 2016 Milton CTP update — one was completed in November 2015 and another is planned for Spring 2016. More information on public meetings is outlined below:

- Public Meeting #1, November 18th, 2015: This meeting was held at the Milton Public Library from 5:30 to 7:30 PM. The meeting aimed to garner feedback from citizens on existing and future transportation infrastructure needs. Agenda items included a brief presentation highlighting what had been completed since the 2009 CTP, an overview of existing transportation infrastructure and potential needs, and an assessment of land use and market conditions. Next, breakout groups with attendees focused on existing and future transportation needs related to roadways, transit, bicycle, and pedestrian infrastructure. Attendees also had the option to take a MetroQuest survey to further express their opinions.

- Public Meeting #2, Spring 2016: This public meeting is anticipated to take place at Bell Memorial Park. Although planned to be an open house format, it will have a few

scheduled presentation times for those who would like to hear a short, formal presentation. The meeting will focus on specific project recommendations and gauge feedback from citizens regarding these recommendations as well as funding, transportation policy, and other relevant transportation topics. Attendees will have the option to take a MetroQuest survey.

3.4 Focus Groups

Even with a range of public outreach efforts completed and planned, it is important to focus on key groups within the community to ensure that diverse feedback is received. Given Milton's community characteristics, the PMT chose the following three focus groups for further outreach — bicyclists, pedestrians, and one inclusionary group (comprised of persons with disability(s), the elderly, environmental advocates, and others). The table below summarizes these focus group discussions. Summaries of the meetings are also provided in the Appendix.

Focus Group	Date	Location	Key Findings
Inclusionary	January 13, 2016	Milton City Hall	• Need better pedestrian and transit access to key destinations such as the library, grocery stores, parks, and the Crabapple area. • Need better sidewalk access to MARTA bus routes; Need ADA-accessible buses; Need more MARTA bus routes • Safer crossings in Crabapple area and near schools • Uber is another transportation option available in Milton
Bicyclists	February 4, 2016	Crabapple	• Need more education for drivers and bicyclists to improve overall interaction and safety • Existing gravel roads are utilized and should be considered in the future for improvement • More bicycle friendly infrastructure is needed (improved shoulders, signage, roundabouts, bicycle lanes, road diets, traffic calming, etc.)
Pedestrians	February 27, 2016	Deerfield	• Need better pedestrian safety and access throughout the Deerfield and Crabapple areas. • Utilize Cogburn Road for additional pedestrian facilities. • Need to fill sidewalk gaps along key corridors and near schools.

3.5 Web Outreach and Social Media

Online interaction is an efficient and popular means of communicating CTP news and updates. A website was created for the CTP (www.connectmilton.com) and is used to provide opportunities for participation and other information on the plan. The website advertises three primary ways to give feedback:

- Taking the MetroQuest online survey (with a Survey Monkey option for those with accessibility needs)
- Providing contact information and/or comments (through email, Facebook, Twitter, and Instagram)
- Attending public outreach events and organized meetings

Additionally, the CTP team works with Milton staff periodically throughout the planning process (i.e., public meetings) to develop information email blasts and YouTube videos that provide high-level content and key findings.

3.6 MetroQuest Survey

A MetroQuest survey was conducted between October 28th, 2015 and February 8th, 2016 to gauge public opinion on transportation issues on a variety of topics. This survey assessed transportation priorities for residents, asked them survey questions related to their top four priorities, and allowed residents to utilize an on-line mapping tool to communicate their transportation needs. Overall, 2,100 people viewed the survey and out of this number, 1,297 people provided feedback. Out of the 36,291 people estimated to live in Milton (2015 estimate), this represents 3.6% of the population – which is an extremely high level of feedback.

The survey results showed that vehicular travel and walking/biking were the highest-rated transportation-related priorities, as residents believe that transportation has worsened in the last five years in both the City of Milton and the Atlanta region. To residents, more reliable travel and connections to activity centers and employment are the most important factors in guaranteeing an adequate transportation system.

Multimodal transportation options are also important to the residents of Milton, according to the survey. Sidewalks and trails are the most used alternative mode and nearly three-quarters of the survey respondents are much more likely to use these modes with facility expansion and improvements. Most respondents infrequently use transit services; however, a majority of them favor more bus routes and a MARTA rail extension for Milton. Along with these modes, respondents believe that Milton can be more economically viable with improved and new roadways, more walkable communities, slower speeds through neighborhoods using more

speed limit enforcement and traffic calming, and easier access to the many amenities available in the community. Additionally, nearly three-quarters of respondents believe that roadways benefit the most from safety improvements such as constructing roundabouts, new signals, and turning lanes.

The online mapping tool showed many key locations that residents want transportation improvements. These locations were included in the development of projects to be considered in the recommendation phase of this project. It is during this phase that a second MetroQuest survey will be released to gain additional public input.

3.7 City Council Engagement

Engaging the Milton City Council is crucial since they represent the broader Milton community and are the key decision-makers responsible for eventual adoption of the plan. The CTP team provides updates to the City Council at key milestones throughout the project. City Council updates that have occurred and/or planned are shown in the table below.

Date	Session Type	Key Findings
October 19, 2015	Council Meeting	Diagnostic Review Since Previous Plan, CTP Process/Schedule, Community Engagement
March 21, 2016	Work Session or Council Meeting	Existing Conditions and Needs Assessment, MetroQuest Survey 1 Results, Community Engagement
Summer 2016	Work Session or Council Meeting	Recommendations, MetroQuest Survey 2 Results, Community Engagement
Summer 2016	Work Session or Council Meeting	Adoption

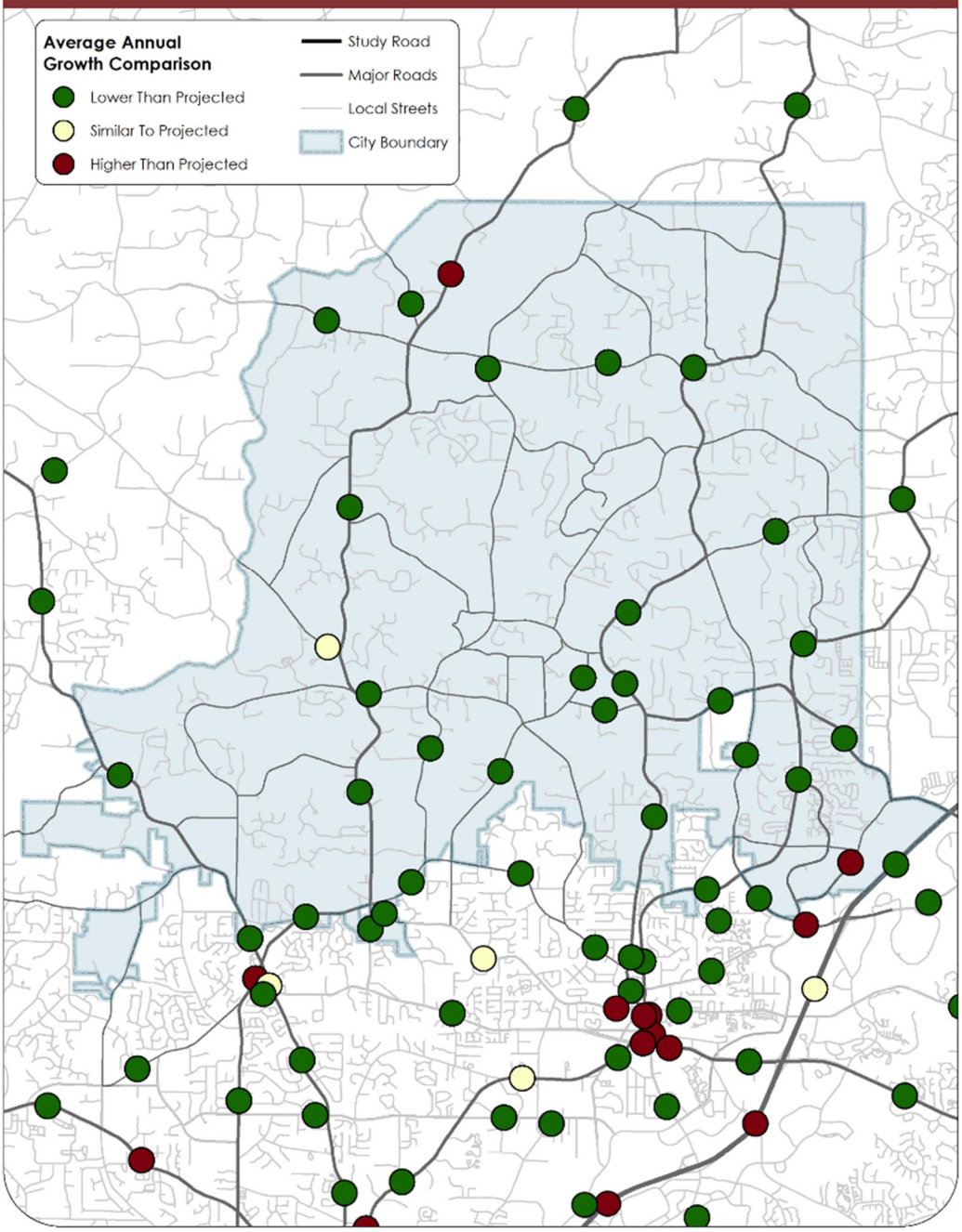
4.0 DIAGNOSTIC REVIEW

At the beginning of any planning process, it is important to evaluate past efforts and assess what recommendations have been implemented. Therefore, a diagnostic review of the 2009 CTP and the City's implementation progress was conducted.

4.1 Traffic Growth Comparison

As part of the 2009 CTP, the Atlanta Regional Commission's travel demand model was used to forecast vehicular traffic growth through the year 2030. This traffic growth included new population and employment expected throughout metropolitan Atlanta over a 20-year period. Annually, traffic was projected to increase on roadways in and around Milton from 0% to more than 4% per year. In comparison, the average annual traffic growth was less than projected throughout most of the City of Milton.

COMPARISON OF OBSERVED TRAFFIC TO MODEL-PROJECTED TRAFFIC (2010-2014)



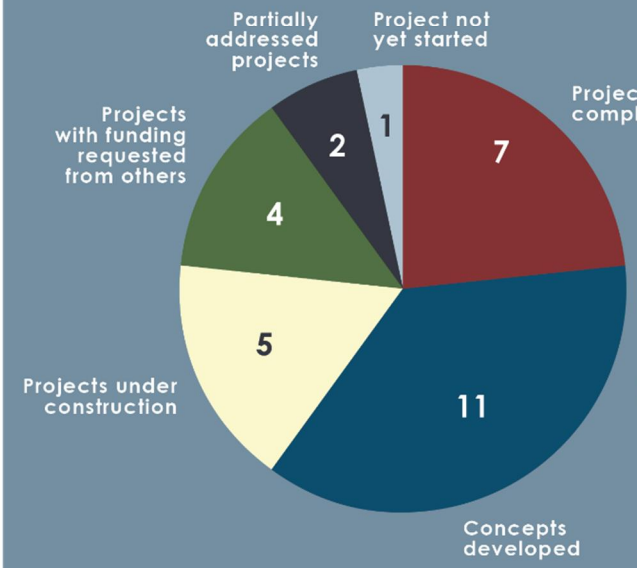
4.2 Projects Implemented Since the Last Plan

Milton has had many infrastructure successes since the completion of the 2009 CTP.

A LOOK AT INFRASTRUCTURE SUCCESS

Milton's accomplishments since the 2009 Comprehensive Transportation Plan

INTERSECTION IMPROVEMENTS



A total of 30 intersection projects were recommended in the 2009 CTP. Of those projects, 12 are completed or are under construction and another 17 have initial concept work and funding requests underway.

POLICY IMPLEMENTATION

Milton recently approved an Impact Fee program that was studied for viability in the 2009 CTP. Other policy implementations include requiring bike racks in all new non-residential developments, using flexible street design standards, and incorporating traffic calming measures throughout the City.

BICYCLE/PEDESTRIAN PROJECTS

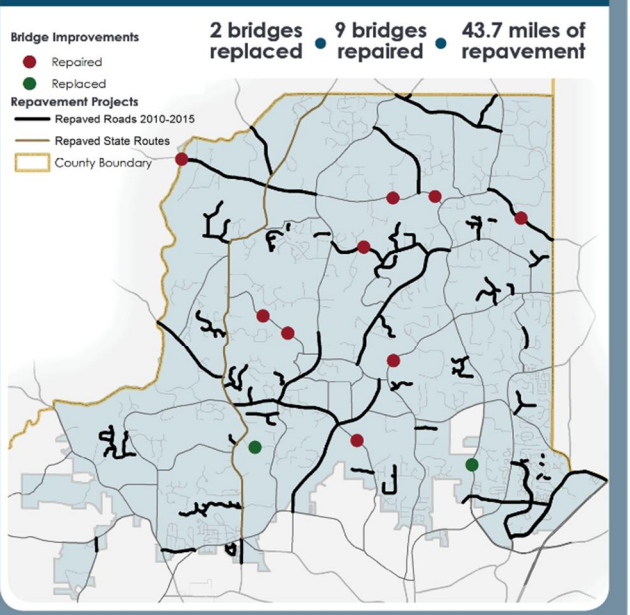
In the last 5 years, the City has added 1.7 miles of multi-use paths, 13.4 miles of sidewalks, and 0.6 miles of bike lanes as well as pedestrian improvements at 9 intersections and 11.8 miles of paved/bikeable shoulders.

CORRIDOR PROJECTS

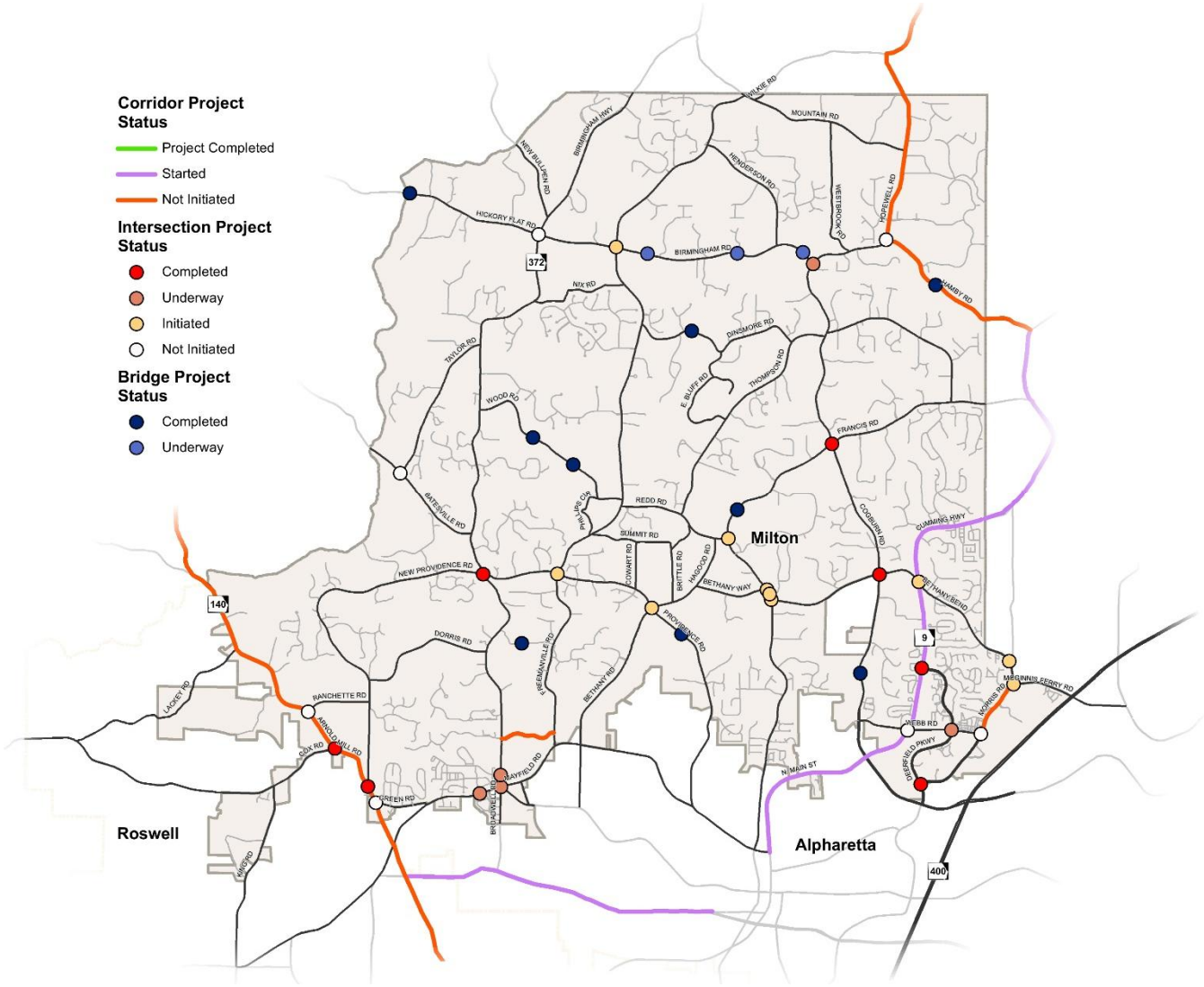
SR 9 serves as an vital alternative to GA 400 along Milton's outer limits. Widening design for SR 9 (led by GDOT) began in 2013 and is programmed for right-of-way acquisition in 2019 and construction in 2022.

ROAD/BRIDGE MAINTENANCE

2 bridges replaced • 9 bridges repaired • 43.7 miles of repavement



The City of Milton has made substantial progress in completing transportation projects recommended in the previous CTP. Progress is being made on many intersection, bridge, and corridor projects. Corridor projects tend to be long-term projects that require a large investment so there are many corridor projects that have not yet begun. The projects that have not been completed will be reexamined in the Recommendation phase of this project.



5.0 PREVIOUS TRANSPORTATION PLANS

Understanding previous planning efforts is important to any planning process. It provides for a more cohesive understanding of vision, goals, recommendations, and other significant characteristics. This section documents key findings from previous transportation plans.

Plans Reviewed

- 2009 Milton Comprehensive Transportation Plan
- 2010 North Fulton Comprehensive Transportation Plan
- McGinnis Ferry Interchange Justification Report

5.1 Previous Plans' Key Findings

Below are key findings from previous transportation plans reviewed for this CTP's update.

- The 2009 Milton CTP recommended 30 intersections for improvement, of which six were roundabouts.
- Corridors identified and recommended for improvement in the 2009 Milton CTP included SR 9 (Cumming Hwy.), SR 140 (Arnold Mill Road), Morris Road, Hamby Road, Hopewell Road, and School Drive.
- High crash intersections (greater than 100, from 2006 – 2008) identified in the 2009 Milton CTP were Birmingham Hwy./New Providence Road and SR 9 (Cumming Hwy.)/Bethany Bend.
- Managing roadway speeds and adding widened shoulders or bicycle lanes are key strategies in the 2009 Milton CTP for improving mobility and safety for bicyclists.
- Milton's employment is predicted to effectively double from 17,000 jobs in 2010 to 34,000 jobs in 2030.
- The proposed interchange at SR 400 and McGinnis Ferry Road is expected to increase traffic along McGinnis Ferry Road between Bethany Bend and SR 400 from 11,500 vehicles per day (vpd) in 2011 to approximately 24,300 vpd in 2020 and 26,500 vpd in 2040.
- The Crabapple Crossroads and SR 9/Windward Parkway/Deerfield Parkway areas are two major commercial centers within Milton anticipated to see further growth.
    - Outside of these areas, Milton's future land use is predominately focused on preserving rural character.
- The 2010 North Fulton CTP recommended that a major bicycle/pedestrian connection be made from SR 9 to the existing Alpharetta Big Creek Greenway and proposed Forsyth County Big Creek Trail.
- SR 140 (Arnold Mill Road) and SR 9 (Cumming Hwy.) are important arterials that provide regional access to and through Milton from Cherokee County and Forsyth County.
- Milton lacks significant paratransit coverage due to minimal MARTA fixed route coverage throughout the City.

6.0 LAND USE AND MARKET ANALYSIS

To better understand existing and potential traffic demand and travel destinations, the Milton Comprehensive Transportation Plan includes a review of area demographics, land use patterns, and market trends. A more detailed version of this Land Use and Market Analysis can be found in Appendix C.

6.1 Demographics & Economy

6.1.1 Demographic Profile

A demographic profile for residents within the City of Milton, including age, ethnicity, and education levels are included in the appendix of this document. As a benchmark, these measures have been compared to Fulton County and the larger Atlanta MSA. This section highlights several key facts and trends. Data in the following section references the year 2000. Although the City of Milton was not incorporated until 2006, the 2000 data uses the current city limit boundaries.

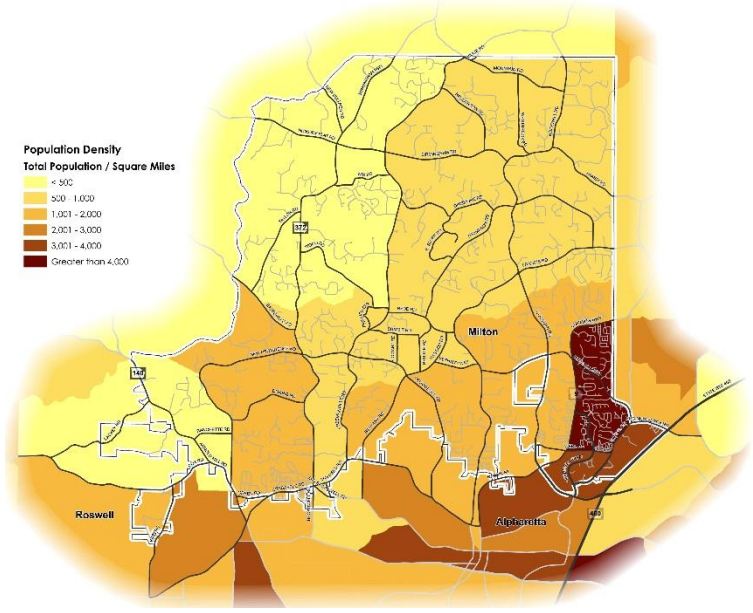
6.1.1.1 Population Trends

Population in the City of Milton has more than doubled since 2000, reaching over 36,000 estimated residents in 2015. The City captured nearly 12% of the total population growth in Fulton County between 2000 and 2015, increasing its total county share from 2.2% in 2000 to 3.7% in 2015. This is demonstrated in the table below.

				2000-2015 Δ		
GEOGRAHPY	2000	2010	2015	#	%	CAGR
City of Milton	17,968	32,661	36,291	18,323	102.0%	4.8%
Fulton County	816,006	920,581	969,375	153,369	18.8%	1.2%
Altanta MSA	4,263,438	5,286,728	5,527,230	1,263,792	29.6%	1.7%
MILTON % of COUNTY	2.2%	3.5%	3.7%	11.9%		
MILTON % of MSA	0.4%	0.6%	0.7%	1.4%		

Source: ESRI; US Census; Kimley-Horn

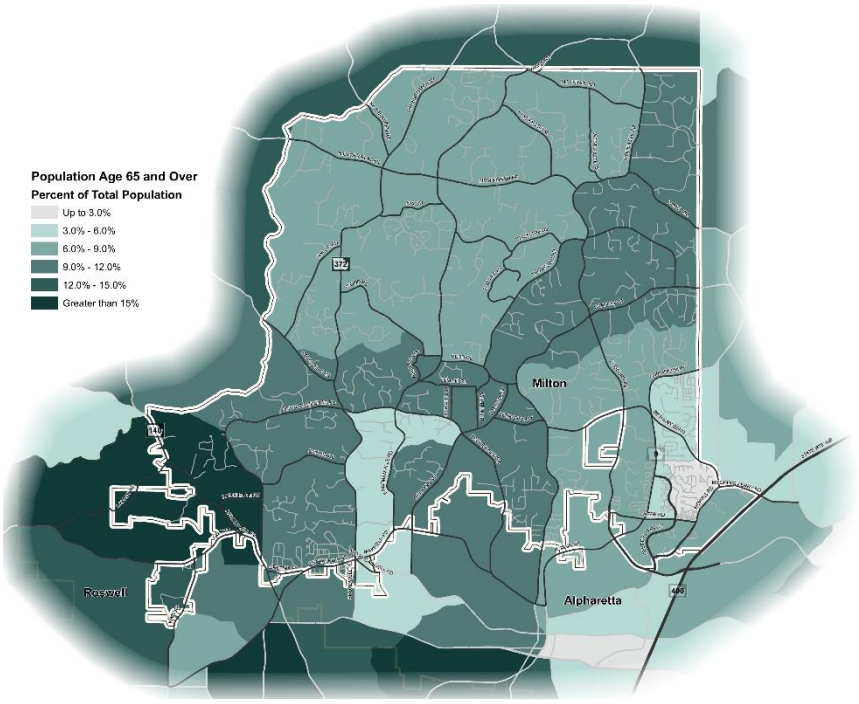
The larger 29-county Atlanta-Sandy Springs-Marietta Metropolitan Statistical Area (MSA) grew by nearly 30% over the last 15 years, reaching over 5.5 million residents. It should be noted that



Fulton County comprised only 12.1% of the regional growth, demonstrating strong growth in other suburban counties outside the central core.

Within the City of Milton, residents aged 55 to 64 experienced the strongest growth over the last five years, comprising nearly one half of the total increase. The younger segment of Millennials, the 15 to 24 age cohort, increased by 1,601 residents over the last five years. It is likely that many of these individuals are still living with their parents. Losses were recorded in older Millennials, between 25 and 34, as well as residents between 35 and 44. This could be a reflection of these residents seeking more affordable housing prices elsewhere in the region or locations closer to employment.

The maps above and below illustrate population density and the percentage of residents over age 65.



Although nationally Baby Boomers and Millennials make up the largest age cohorts, the City of Milton has comparatively higher shares of Generation X (aged 45 to 54). This represents

population at the prime of their earning potential, typically driving demand for single-family residential product. This group is also an important generator of retail demand. The slightly higher share of children less than 14 years of age is reflective of family households led by Generation X. Approximately 46.5% of the households in Milton are defined as family, compared to 38.2% for the Atlanta MSA. This breakdown of age, by cohort, between 2000 and 2015 can be seen below.

			2000-2015 Δ	
COHORT	2010	2015	#	%
0-14	8,296	7,948	-348	-4.2%
15-24	3,625	5,226	1,601	44.1%
25-34	3,625	3,339	-287	-7.9%
35-44	5,846	5,008	-838	-14.3%
45-54	6,206	6,895	690	11.1%
55-64	3,037	4,645	1,608	52.9%
65-74	1,274	2,141	867	68.1%
75-84	588	798	211	35.8%
85+	163	290	127	77.8%
TOTAL	32,661	36,291	3,630	11.1%

Source: ESRI; US Census; Kimley-Horn

6.1.1.2 Household Trends

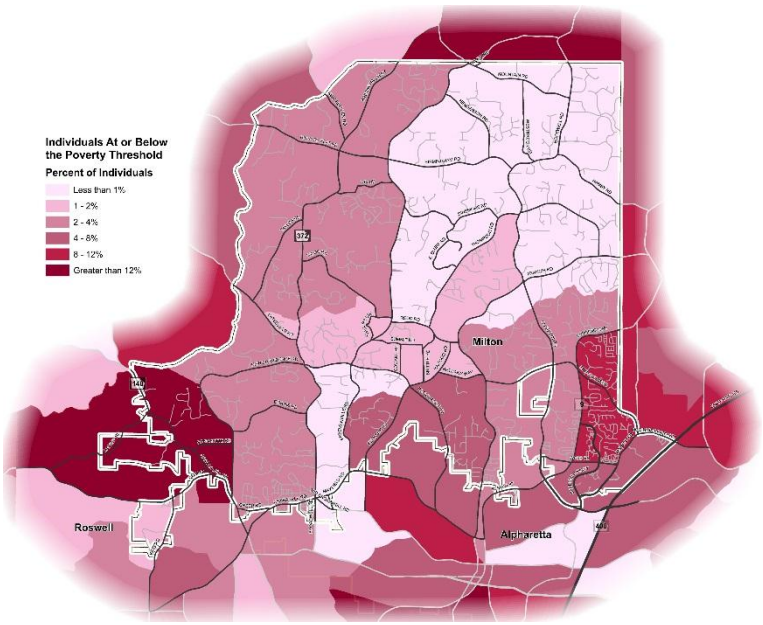
Households in the City of Milton have increased by 92.8%, from 6,670 in 2000 to nearly 13,000 in 2015. The increase in households in Milton comprised 8.0% and 1.3% of growth in Fulton County and the Atlanta MSA, respectively. This can be seen in the table below.

				2000-2015 Δ		
GEOGRAPHY	2000	2010	2015	#	%	CAGR
City of Milton	6,670	11,659	12,859	6,189	92.8%	4.5%
Fulton County	321,242	376,377	398,398	77,156	24.0%	1.4%
Altanta MSA	1,559,712	1,943,885	2,033,479	473,767	30.4%	1.8%
MILTON % OF COUNTY	2.1%	3.1%	3.2%	8.0%		
MILTON % MSA	0.4%	0.6%	0.6%	1.3%		

Source: ESRI; US Census; Kimley-Horn

It is important to note that the growth in households was less than the increase in population over the same time period, indicating an increase in overall household size. Nationally, household size has been declining, largely due to growth in the Millennial and Baby Boomer generation segments. The average household size in Milton has increased from 2.69 in 2010 to 2.80 in 2015, a trend that is projected to continue.

In 2015, the estimated median household income in the City of Milton was nearly $115,000, more than double that of Fulton County and the Atlanta MSA. According to the Environmental Systems Research Institute (ESRI), Milton's median household income is expected to continue to increase, reaching nearly $130,000 annually by 2020. This compares to a median household income of $54,780 in Fulton County and $56,889 for Atlanta as a whole. This is not to suggest that the City of Milton is comprised of only upper income households. The map to the left illustrates the percent of residents below the poverty threshold.



6.1.2 Economic Profile

This section provides an overview of employment trends for the Atlanta MSA, Fulton County, and, more specifically, for the City of Milton. Trends indicate shifts in employment sectors that could impact transportation needs in the future.

6.1.2.1 Fulton County

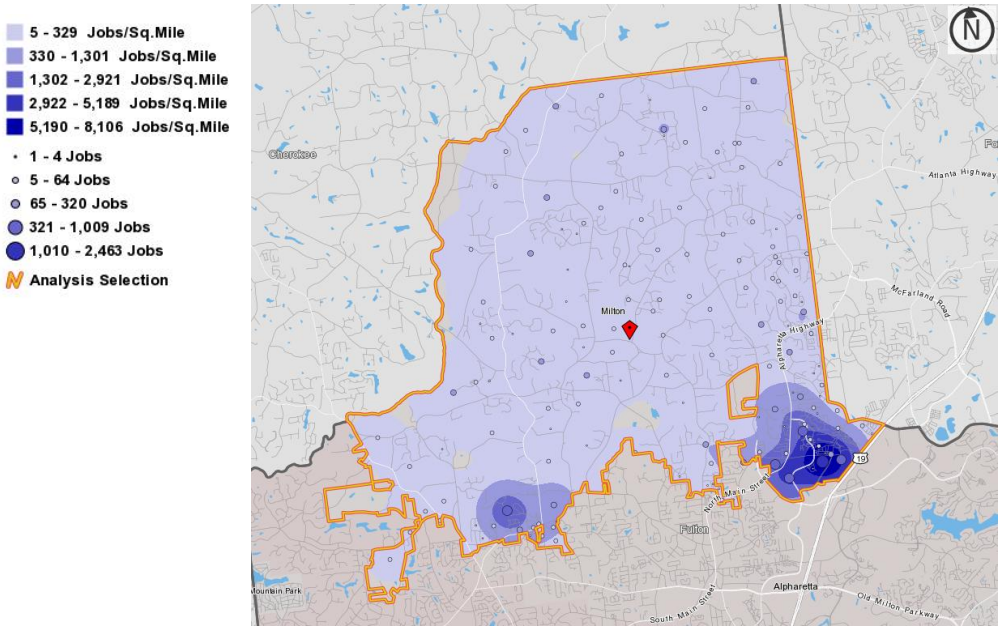
The 764,952 jobs in Fulton County in 2014 made up 32.8% of the total employment in the Atlanta MSA. Containing the majority of the City of Atlanta, Fulton County is the economic hub of the region, adding nearly 38,000 jobs in the last 10 years. Professional Services is the largest sector in Fulton County, with the 177,682 jobs in this industry making up nearly one-quarter of the total county employment in 2014. The largest growth sectors in Fulton County between 2004 and 2014 include:

- Professional Services (+30,131)
- Healthcare (+16,189)
- Leisure and Hospitality (+12,478)
- Education (+3,244)
- Public Administration (+2,924)

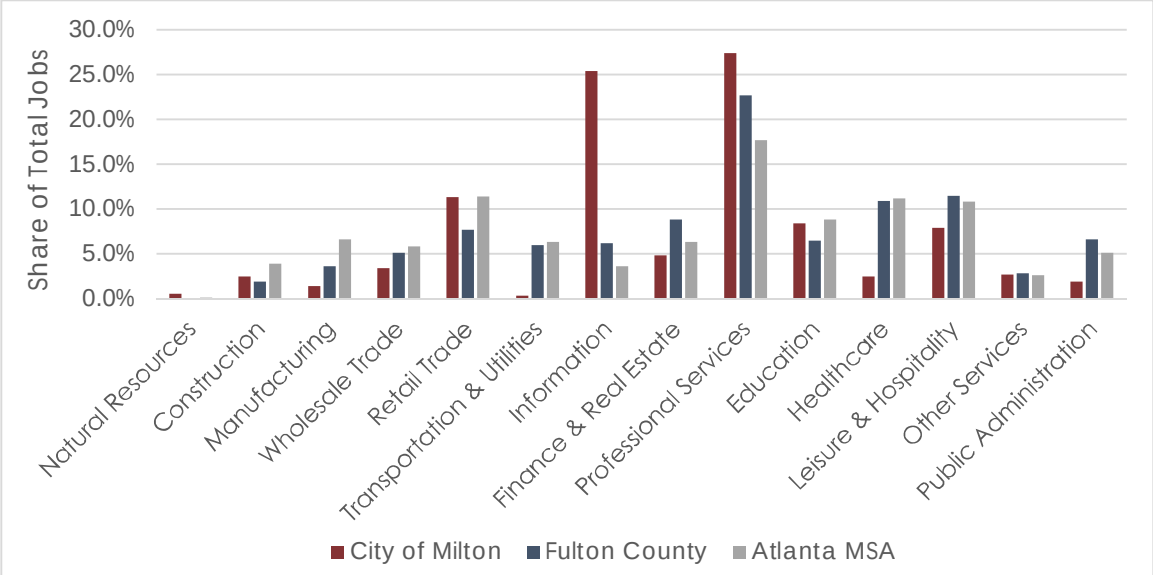
Fulton County comprises nearly one-third of the total employment in the Atlanta MSA. By sector, Fulton County has a notable higher share of Professional Services and Finance and Insurance jobs driven by concentrations in and near downtown Atlanta.

6.1.2.2 City of Milton

Employment data for the City of Milton was provided by US Census' Longitudinal Employer dataset. The most recent employment data provided is from 2013. There were nearly 10,000 jobs located in the City of Milton in 2013, heavily concentrated in the Deerfield area with proximity to GA 400. Jobs in this area of Milton are heavily focused in the Professional Services and Information sectors. A secondary concentration is focused in the Crabapple area of Milton, hosting primarily local jobs in the Retail Services sector. These employment concentration areas are demonstrated in the figure below.



Employment in Milton increased by 33.1% between 2004 and 2013, with the strongest growth in the Professional Services, Information, and Retail Trade sectors. Over 25% of the total jobs in Milton are in the Information sector, driven by major employers including AT&T and Verizon Wireless. The City of Milton also has a higher share of total employment for Professional Services than Fulton County and the Atlanta MSA. This can be seen below in the graph on the following page.



As shown in the graphic below, approximately 9,000 people commute into the City of Milton on a daily basis for employment, while nearly 15,000 residents commute to work outside. An estimated 765 people live and work in the City.

A review of in- and out-commuting trends demonstrates that the number of people living in Milton and commuting to jobs outside the City have more than doubled in the last 10 years. Non-residents commuting into Milton for jobs have increased at a more modest pace. Residents that also work in Milton nearly doubled from 390 people in 2004 to 765 people in 2013.

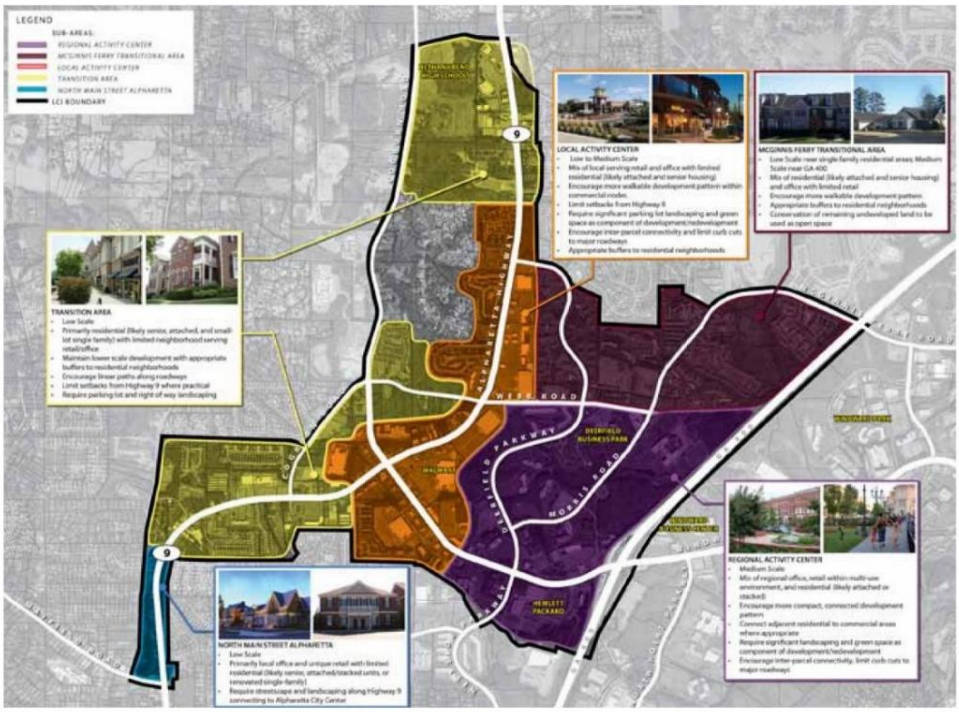
6.2 Land Use

The City of Milton was incorporated in November 2006. Since then, a series of community-based planning efforts have been undertaken to help maintain the area's character and guide future land use and development. The City of Milton 2030 Comprehensive Plan, adopted in 2011, is the foundation of all of the City's planning documents and studies. The Comprehensive Plan includes the Future Land Use Map, Future Development Map, and Character Areas Map. The Comprehensive Plan seeks to concentrate commercial development within the City of Milton in three activity centers:

- Hwy. 9 Corridor/Deerfield Area
- Crabapple Crossroads
- Birmingham Crossroads

To promote greater definition, coordinated decision-making, and a stronger sense of place, the City of Milton has conducted a series of small area plans and developed additional codes and design/development requirements within these focus areas.

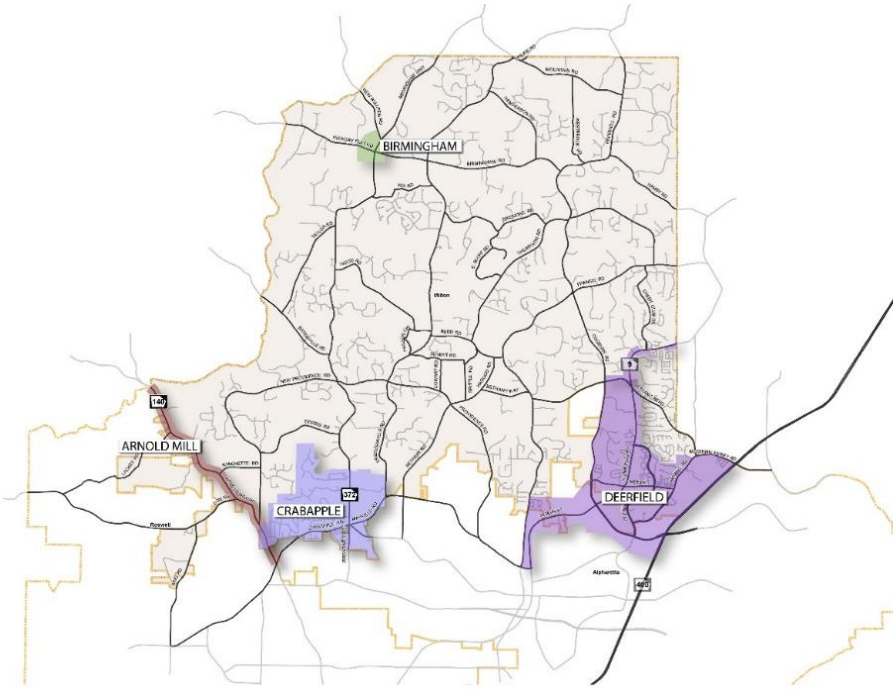
In 2012, the City of Milton completed Livable Centers Initiative (LCI) Studies for the Hwy. 9/ GA 400 area (shown in the figure below) and the Crabapple area. The Deerfield LCI identifies five sub areas and provides a framework for future development character and transportation improvements. The Crabapple LCI proposes a conceptual Master Plan to create a "village center" that would accommodate new development while maintaining the area's rural character. Following the Master Plans, the City of Milton adopted Form-Based Code and a Transfer of Development Rights ordinance for both the Deerfield and Crabapple activity centers. A form-based code is a zoning ordinance that regulates development to ensure architecture and character are consistent with community's vision. The Transfer of Development Rights program encourages development in suitable areas while protecting valuable rural land, farmland, habitat, and environmentally sensitive land.



The following sections provide additional details regarding the City's activity centers and future development vision based on the master plans and updated codes and regulations as

much of the City's current and future traffic demand will occur within from and between these areas. The section also provides an overview of regional developments that may generate additional traffic demand to and through the City of Milton.

The City of Milton has identified several nodes where commercial, office, and retail developments exist today and have potential to expand over the next two decades. The figure below illustrates the four areas of concentration: Deerfield Activity Center at GA 400 and Windward Parkway, Crabapple Activity Center at the crossroads of Georgia Highways 140 and 372, the Arnold Mill Corridor, and Birmingham Crossroads in northern Milton. Deerfield and Crabapple are Milton's two largest activity centers.



6.2.1 Deerfield

The Deerfield activity center is characterized by both regional and local development and is the City's highest intensity character area. Deerfield is home to the City's largest concentration of office buildings, many of which are occupied by Verizon Wireless. Most local activities, including retail goods and services are located along Windward Parkway and Hwy. 9.

Five sub areas were identified in the Deerfield/Hwy. 9 Master Plan. These areas include a regional activity center near GA 400 where the City's highest intensity uses may be accommodated, a local activity center along Hwy. 9 allowing for a mix of uses, a McGinnis Ferry transitional area, residential transitional areas between Hwy. 9 and Milton's established residential areas, and a North Main Street District on the south end of the Hwy. 9 corridor in neighboring Alpharetta. The LCI Plan outlines preferred development characteristics that became the foundation for a new form-based code and transfer of development rights ordinance for the Deerfield/Hwy. 9 area. The LCI identified priority transportation projects

including widening roadways, intersections, restriping, local bus connections and bicycle/pedestrian improvements.

6.2.2 Crabapple

While Deerfield is the regional activity center in Milton, Crabapple is characterized as the small-scale, village center. Crabapple consists of a collection of local retail goods, services and restaurants. The Crabapple LCI Plan provided a detailed concept plan to guide the character of future development within the district, including a new City Hall. The Master Plan also identified priority transportation, parking, pedestrian, signage, and open space projects.

Most of the City's future development is intended to occur within the Deerfield and Crabapple areas to conserve rural central and northern Milton.

In addition, the City adopted a form-based code and transfer of development rights ordinance for the Crabapple area. Most of the City's future development is intended to occur within the Deerfield and Crabapple areas to preserve the rural nature of central and northern Milton.

6.2.3 Birmingham Crossroads

Birmingham Crossroads is identified in the 2030 Comprehensive Plan as the northern commercial node for the City. Birmingham Crossroads is planned to accommodate a rural mixed-use village with neighborhood goods and services. The crossroads will maintain its low intensity development character.

6.2.4 Arnold Mill Corridor

The Arnold Mill Corridor is a heavily traveled roadway between Alpharetta and Cherokee County. The Atlanta Regional Commission's (ARC) Community Development Division led a visioning study for the Arnold Mill Corridor in 2014 resulting in recommendations related to land use, transportation, and recreation. The land use vision recognizes development pressure along Arnold Mill and recommends identifying one to two small development nodes to prevent sprawl and maintain the area's character.

6.3 Current Market Conditions

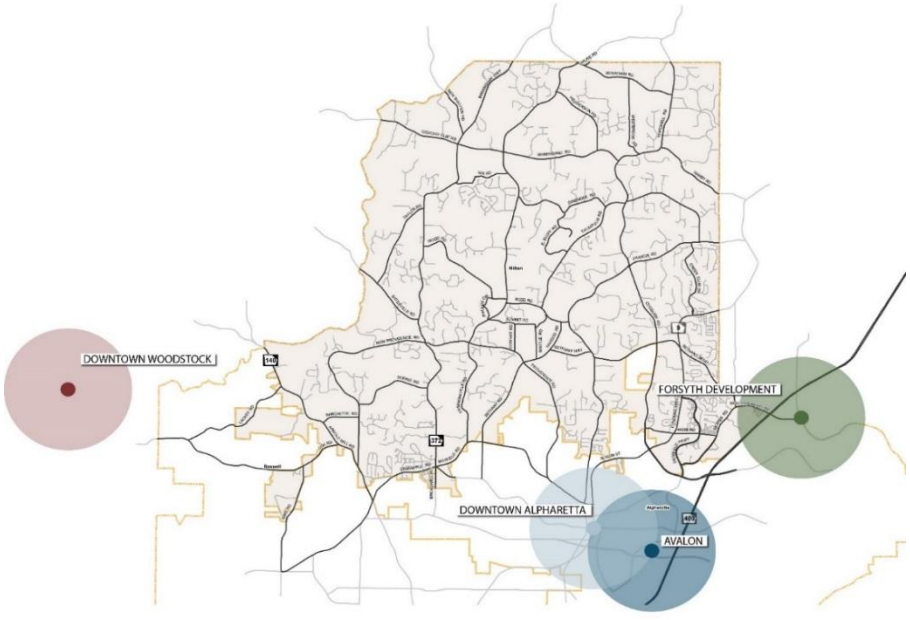
6.3.1 Competitive Regional Developments

Four significant commercial developments have the potential to impact the real estate market and, therefore, transportation patterns in and around the City of Milton.

The figure below illustrates the location of the following areas:

- Downtown Woodstock, located west of Milton, is becoming more popular as a local and regional destination. Significant traffic is generated in the south and western portions of Milton due to the limited options for east-west connectivity in the area.
- Downtown Alpharetta, south of Milton, is currently experiencing significant new development, including the City's $29 million mixed-use city center — a 25-acre city center project that includes a new Fulton County library, a five-acre public park, a town square, a new Alpharetta City Hall, and a 450-space parking deck. The first phase Alpharetta City Hall has been completed. Additional commercial and residential development is anticipated to begin in 2016.
- Avalon, south of Milton at Westside Parkway and Old Milton Parkway, is a $600 million mixed-use development that is quickly becoming a regional attraction and traffic generator. Plans for Phase 1 of the 86-acre site include 500,000 square feet of retail, a movie theater, 105,000 square feet of office space, 101 single-family detached residences, and 250 apartments. A second phase is expected to open in 2016, including additional retail and office space, multi-family residences, and a hotel/conference center.

- Forsyth County's land use policies are fostering a regional mixed-use center on Ronald Reagan Blvd. just east of GA 400 and the City of Milton. Future development is projected to include a mall, corporate office space, restaurants, hotel, and residential dwelling units. This development, as well as potential construction of an interchange on GA 400 at McGinnis Ferry has the potential to impact traffic patterns in Milton, particularly near the Deerfield Parkway and Bethany Bend areas.

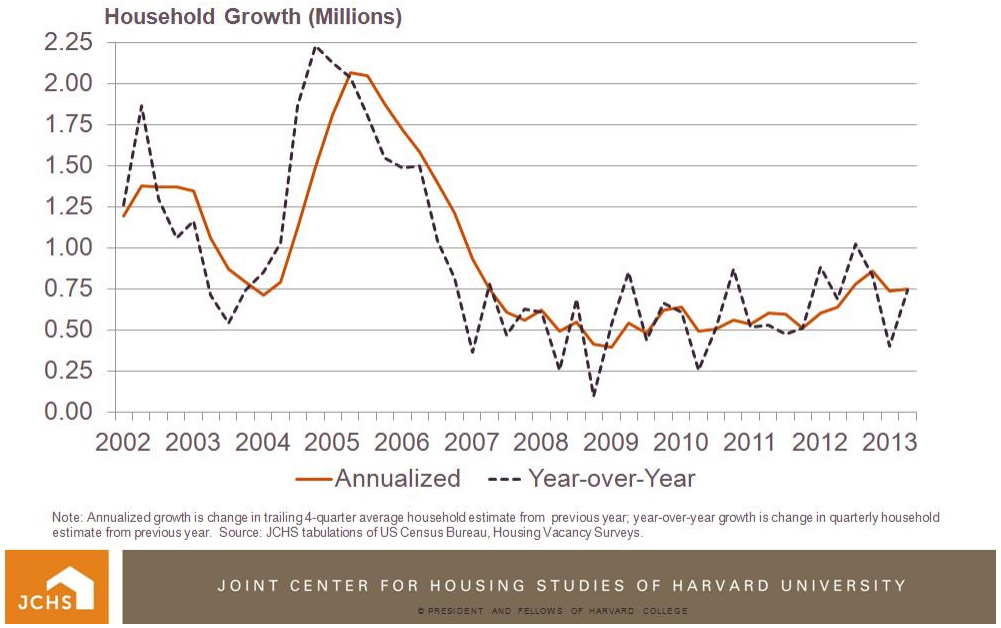


6.3.2 Macro-Level Market Considerations

The Atlanta region, defined as the 29-county MSA, is in the midst of recovery following the economic recession from 2007 to 2009. The Atlanta MSA has grown by over 240,000 people since 2010, approaching a total population of nearly 5.6 million in 2015. As a region, the strongest growth was experienced in Fulton, Gwinnett, Cobb, DeKalb, and Forsyth counties, comprising more than three-quarters of the total increase.

Although growth in the Atlanta MSA has slowed from the rapid pace recorded between 2000 and 2010, it is still one of the fastest growing areas in the U.S. Some of the macro-level demographic shifts impacting the region include:

- Rise of the Millennials. Born roughly between 1980 and 2000, Millennials have overtaken the Baby Boomers as the largest generation. This shift will shape the form of development for years to come, as only a portion of this generation has moved out of their childhood homes. Impacts will come particularly in regards to housing, employment, and transportation choices.
- Aging Baby Boomers. Although Millennials are now the largest cohort, Baby Boomers still comprise nearly 22% of the total national population. Some in this cohort are still working, driving spending potential. This cohort is also driving demand for a maintenance-free lifestyle close to family, friends, shopping, dining, church, and cultural or recreational amenities.
- Stabilization of Household Formation. Household formation was highest nationally and in the Atlanta region between 2004 and 2006, before falling during the 2007-2009 recession. The drop in household formation was partially impacted by young adults living at home longer or relying on roommates. Since 2010, household formation has stabilized, but it is unlikely to reach the same pre-recession measures (see figure below).



- Decline in Home-ownership Rate. Challenges with obtaining financing, coupled with shifting preferences of Millennials and Baby Boomers, have caused a notable decline in the rate of home-ownership. In fact, the current national home-ownership rate is the lowest since 1967. The share of renter-occupied housing units in the Atlanta MSA increased by 3.3%, from 30.3% in 2010 to 33.6% in 2015. Milton, on the contrary, has experienced a decline of renter-occupied housing units in the last five years.
- Smaller Household Sizes. Nationally, the average household size has gradually declined, impacted by the large Millennial and Baby Boomer generations. Single-person household in the region have experienced strong growth since 2000 and could overtake two-person households as the most common size by 2020. This impacts the demand for a variety of housing types, including single-family detached, townhouses, and multi-family units. Attracted by the high quality of life for families, including high-performing schools, Milton has experienced an increase in household size during the same time period.

6.3.3 Local Market Conditions

This section provides high-level market considerations for the City of Milton, including the potential impact of the competitive regional developments highlighted above. Future development, driven by market demand, will impact transportation patterns in and around the City of Milton.

6.3.3.1 Residential

The dominant land use in the City of Milton is single-family, detached residential. The City, which more than doubled in population between 2000 and 2015, has emerged as an attractive place to live. Contrary to national trends, average household sizes have increased in Milton indicating the continued attractiveness for families. This will continue to drive demand for low- to moderate-density single-family residential units in the future.

However, it should be noted that the Millennial and Baby Boomer cohorts in Milton have experienced some of the fastest population increases in the last 15 years. These segments of the population will create demand for a variety of housing types, including single-family detached, townhouses, and multi-family units. Nearly one-half of the population is over age 45, and could seek to downsize as children move out and form separate households.

Higher density residential development would likely gravitate to the Deerfield and Crabapple areas. True multi-family development, including both condominiums and apartments, would be most attracted to the Deerfield area offering proximity to GA 400, jobs, and shopping.

6.3.3.2 Retail

Regional retail opportunities in northern Fulton County and southern Forsyth County will be heavily impacted by the Avalon development and the planned mall, corporate office space, restaurants, hotel, and residential dwelling units at Ronald Reagan Boulevard and GA 400. Given proximity to Milton, these developments are likely to attract a large share of the regional retail demand in the area.

In the short-term, the Deerfield and Crabapple areas will remain an attractive location for smaller scale, neighborhood-focused retail serving residents and employees. As Milton continues to grow, additional opportunities for neighborhood-serving retail could be accommodated in the Birmingham Crossroads area or in key nodes along the Arnold Mill Corridor.

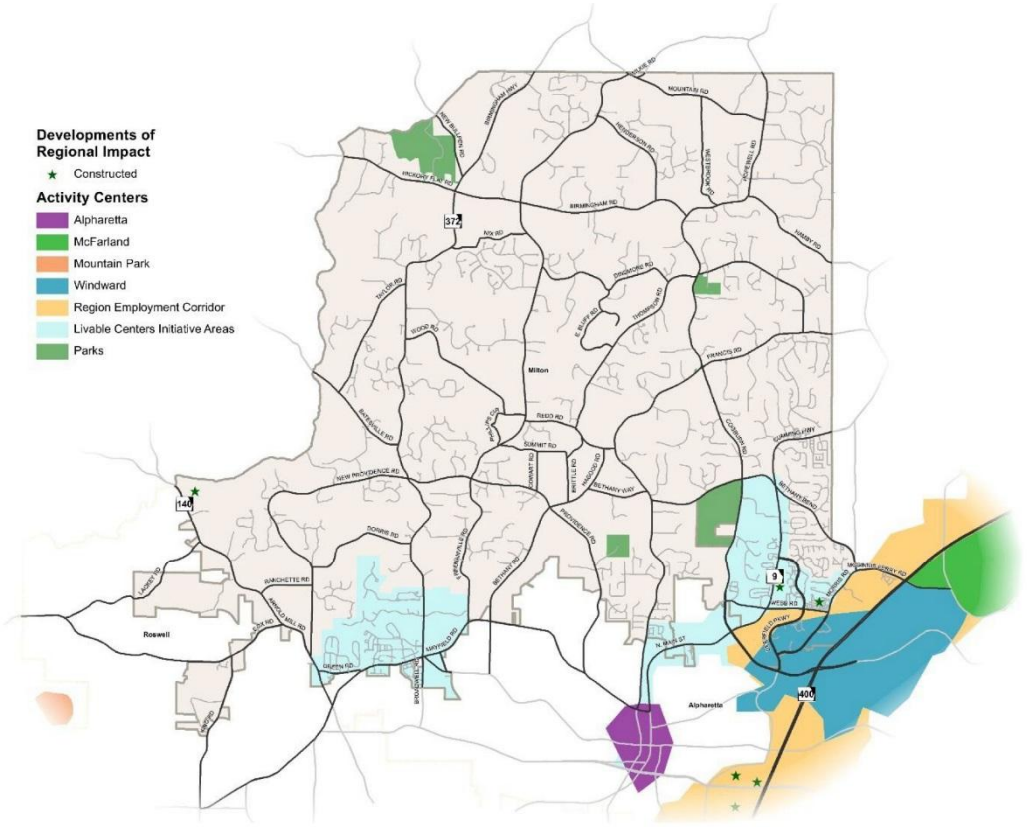
6.3.3.3 Employment

Given the area's proximity to GA 400 and potential for clustering near other existing employment sectors, Deerfield will be the primary location for new office space development. Demand for small-scale professional office space could also be generated in Crabapple.

7.0 TRANSPORTATION INVENTORY

7.1 Places Connected by Transportation

Transportation facilities and mobility patterns can substantially impact the way land uses develop and where major destinations are located. As stated, the Deerfield and Crabapple Livable Centers Initiatives are two major development areas located in the City of Milton. Multi-modal improvements within and adjacent to these areas will aid in connecting residents and attracting future development. While Milton has developed more recently and remains largely rural, there are many areas and locations that could benefit substantially from multi-modal improvements to the transportation system.



3 Developments of Regional Impact (DRI)

2 Livable Centers Initiatives (LCI)

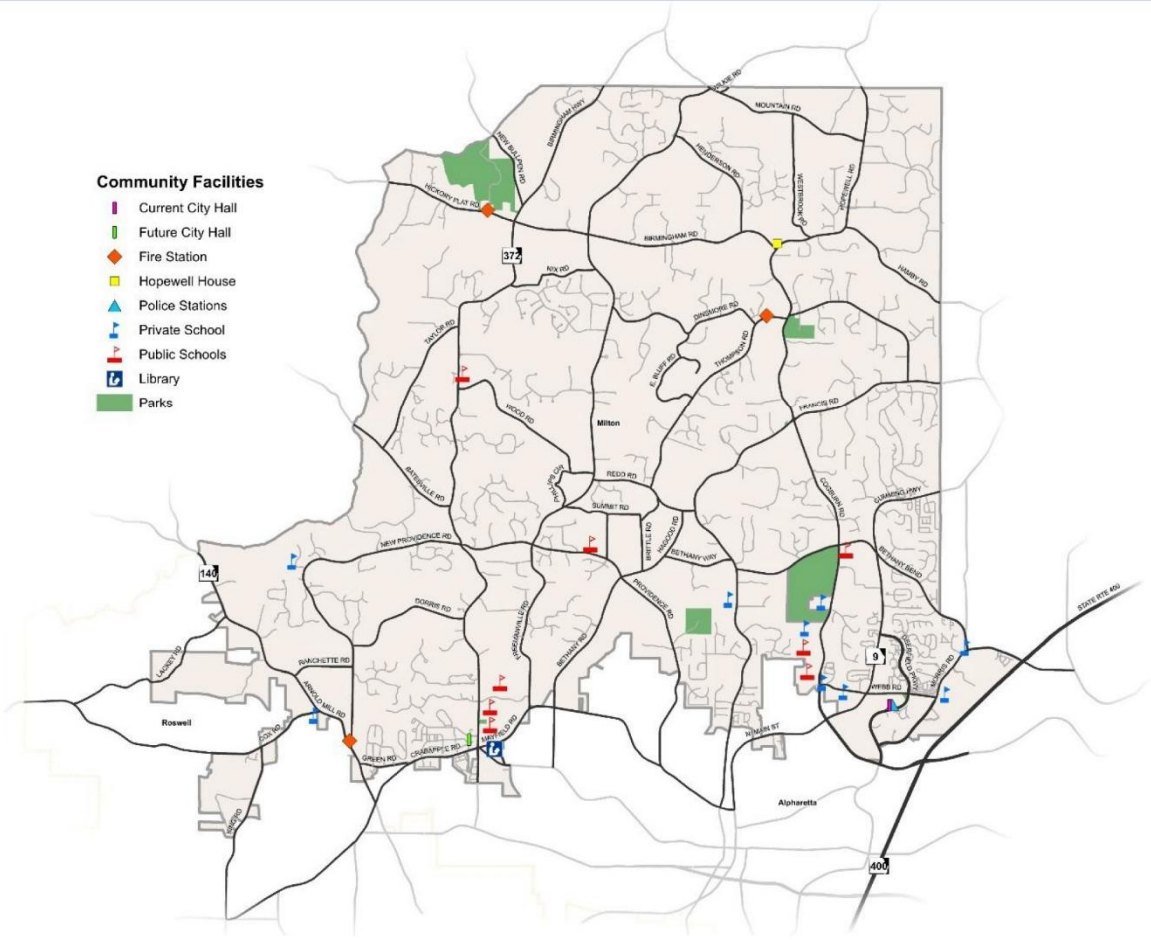
Connected to the SR 400 Regional Employment Corridor and the Downtown Alpharetta and Windward Activity Centers

The City includes three completed Developments of Regional Impact (DRIs), which are substantial development projects worthy of regional attention, two Livable Centers Initiative (LCI) study areas, and is a part of the SR 400 Regional Employment Corridor, which has

experienced much recent growth, and the Windward Activity Center. Additionally, there are other activity centers nearby.

Community facilities in the City will benefit from substantial multi-modal improvements to the transportation system in the future. Such benefits include, but are not limited to, children being able to walk and bike to school, seniors being able to walk and take transit to the senior community facility, and more access to parks, the library, and City Hall. These multi-modal improvements create more possibilities to travel to local destinations without a single occupancy vehicle.

3 Parks • 8 Public Schools • 8 Private Schools • 3 Fire Stations
1 Senior Community Facility • 1 Library • 1 Police Station



*Alpharetta North Park, located at Bethany Bend and Cogburn Road, is owned and operated by the City of Alpharetta; however, it is surrounded by the City of Milton. Other community facilities are Freedom Park, Broadwell Pavilion, and Bethwell Community Center.

7.2 Vehicular Inventory

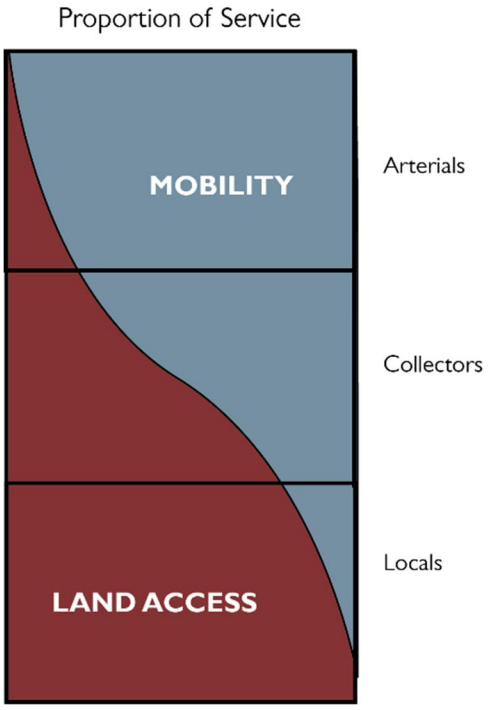
7.2.1 Study Network

Approximately 247 miles of roadway exist in the City of Milton. The study network used in the transportation plan is a subset of the overall roadway system and includes all roadways that are a collector or higher on the GDOT functional classification system (described in more detail below) for a total of 93 miles of roadway. The majority of inventory and mapping occurred on the selected study network; however, some data was available to map and analyze additional facilities. Additional roadway mileage was inventoried outside of Milton for continuity.

- 93 miles of Study Network within Milton
- 154 miles of Local Roads (not included in the Study Network)
- 247 miles of Total Roadway within Milton

7.2.2 Functional Classification

Functional classifications are defined by the Federal Highway Administration (FHWA) and used by policy makers, planners, engineers, and citizens to designate the characteristics and purposes of the roadways in a system. The functional classification system categorizes streets along a general hierarchy that accounts for the inverse relationship between access and mobility, and how that relates to distinguishing between arterials and local roads. Roadways that are higher speed and higher volume typically provide less access while roadways that are lower volume and lower speed can more comfortably accommodate greater access.



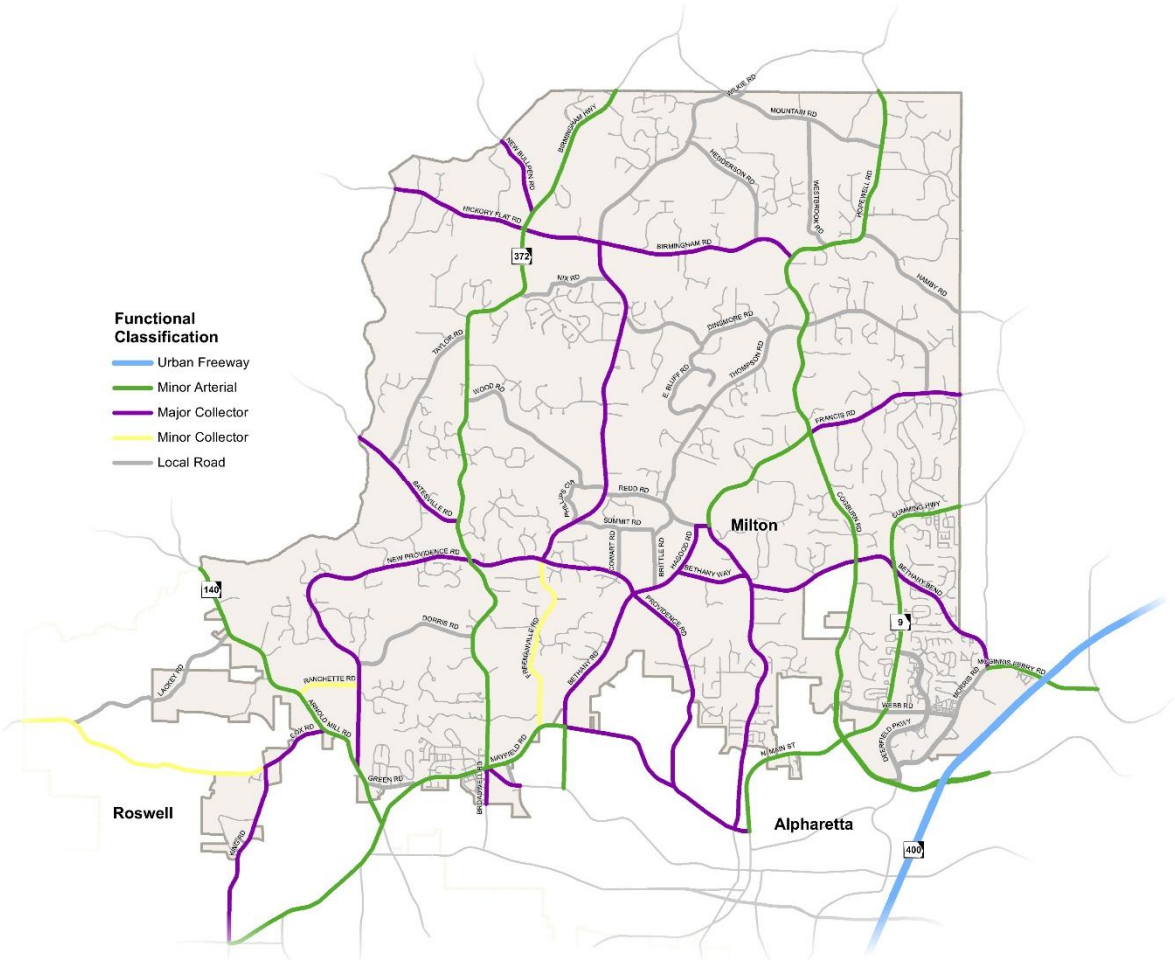
Source: http://www.fhwa.dot.gov/planning/processes/statewide/related/functional classification/fc02.cfm

The following functional classifications are characterized by GDOT:

- Interstates are designed and constructed for long distance travel. These roads have the highest design speeds and the most limited access to facilitate high mobility.
- Other Freeways are similar to interstates, having controlled access and limited at-grade crossings. They may have fewer lanes than interstates, but the directional travel lanes are usually divided by a physical barrier.
- Other Principal Arterials provide service to urban and rural areas, generally radiating outward from a city center to serve the surrounding region. Unlike interstates, principal arterials can often be accessed directly by adjacent businesses.
- Minor Arterials connect smaller geographic areas within a larger urban arterial network and are often used to carry local bus routes.
- Major Collectors are used by residents to access the arterial network from their places of origin. An example of a major collector would be the longer roads in a given residential neighborhood.
- Minor Collectors are similar to major collectors, but generally shorter in length and with fewer lanes.
- Local Roads provide direct access to property for the very beginning and the very end of a trip. Local roads have low design speeds and often prevent through traffic.

Functional Classification	Total Miles
Urban Freeway	2 (bi-directional)
Minor Arterials	25
Major Collectors	28
Minor Collectors	3
Local Roads	33

As stated previously, the GDOT functional classification system was used to identify the study network for this study. From the list above, there are no interstates or other principal arterials located within the study area. Aside from local roads, minor arterials and major collectors make up the most road miles in Milton.

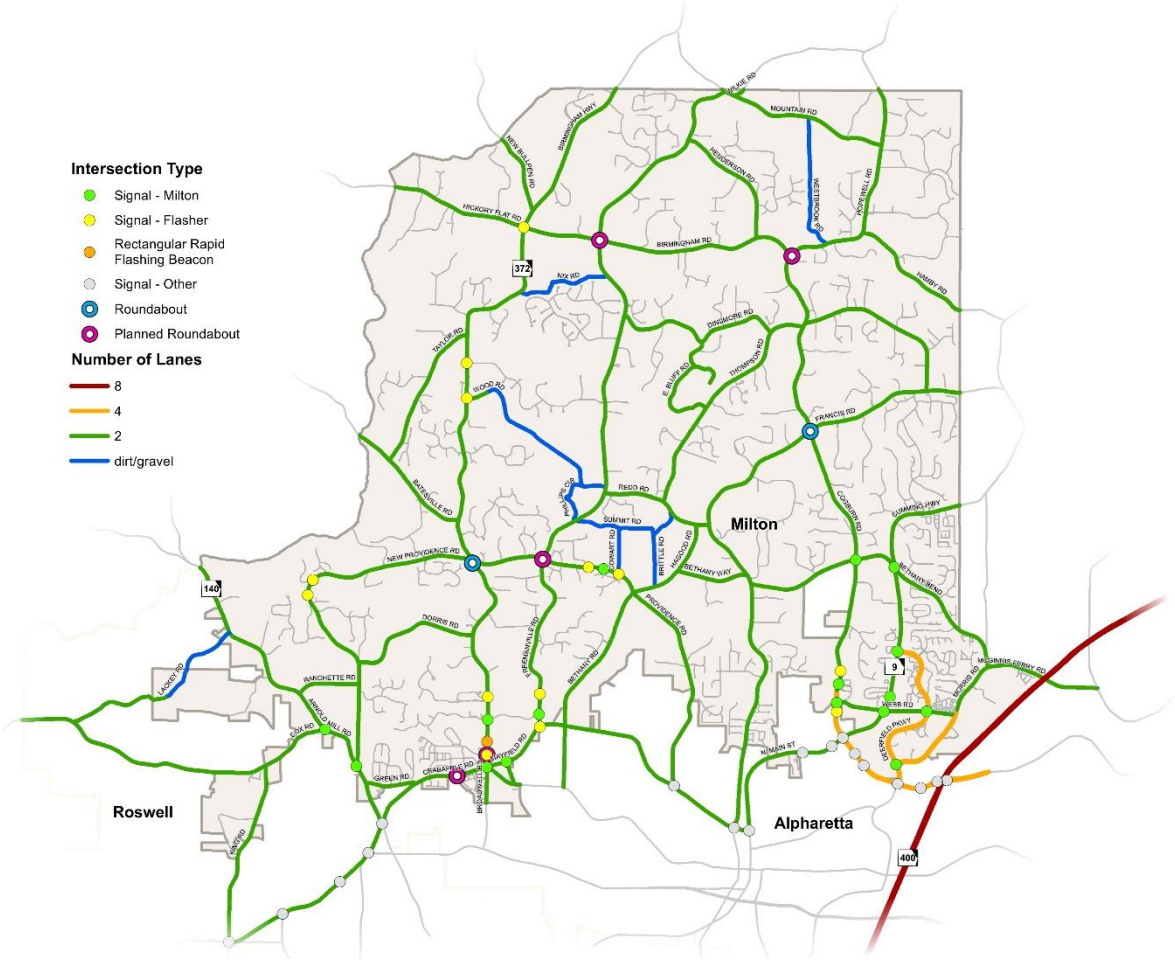


7.2.3 Roadway Laneage and Intersection Control

Number of lanes is a primary characteristic used to determine a roadway's capacity. The majority of roads in Milton and in the study network are two-lane roadways. The table presents the number of miles for the different number of travel lanes throughout the study network.

There are 16 traffic signals located within the City of Milton as well as 13 flashing signals. The flashing signals are operated as pedestrian-only signals, flashing beacons, and School Zone Flashers. Additionally, there are two roundabouts currently in operation with five more planned. Some of these roundabouts are solutions to geometrically-skewed, stop-controlled intersections.

Number of Lanes	Total Miles
8	2 (bi-directional)
4	7
2	78
Dirt/Gravel	5

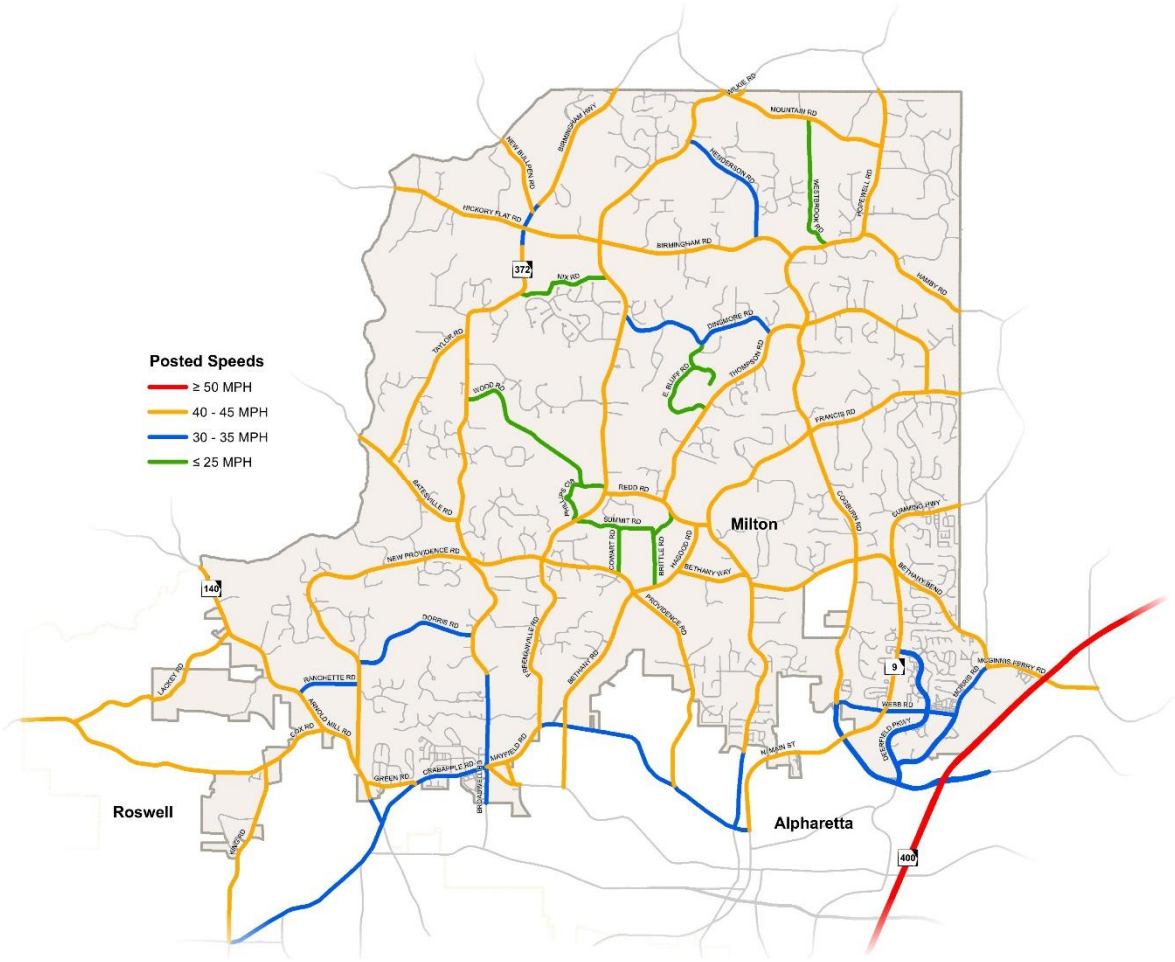


- 16 Traffic Signals and 12 Traffic Signal Flashers
- 2 Existing Roundabouts
- 5 Additional Planned Roundabouts

7.2.4 Posted Speeds

Posted speed limits were collected along each of the roadways within the Milton study network. Posted speed limits exist in 5-mph increments between 25 mph and 65 mph. A road's posted speed limit typically falls within a range that is based on function, area type, and specific conditions.

Most of the study network has posted speeds of 40-45 mph. SR 400 is signed for 65 mph through the study area. The arterials and collectors through the Deerfield area, and Crabapple Road through the Crabapple area are signed for 30-35 mph. Crabapple Road continues into Alpharetta at Arnold Mill Road as Hardscrabble Road. The dirt and gravel roads in the center of the city are signed for 25 mph and less due to the travel surface and the smaller cross-section widths.

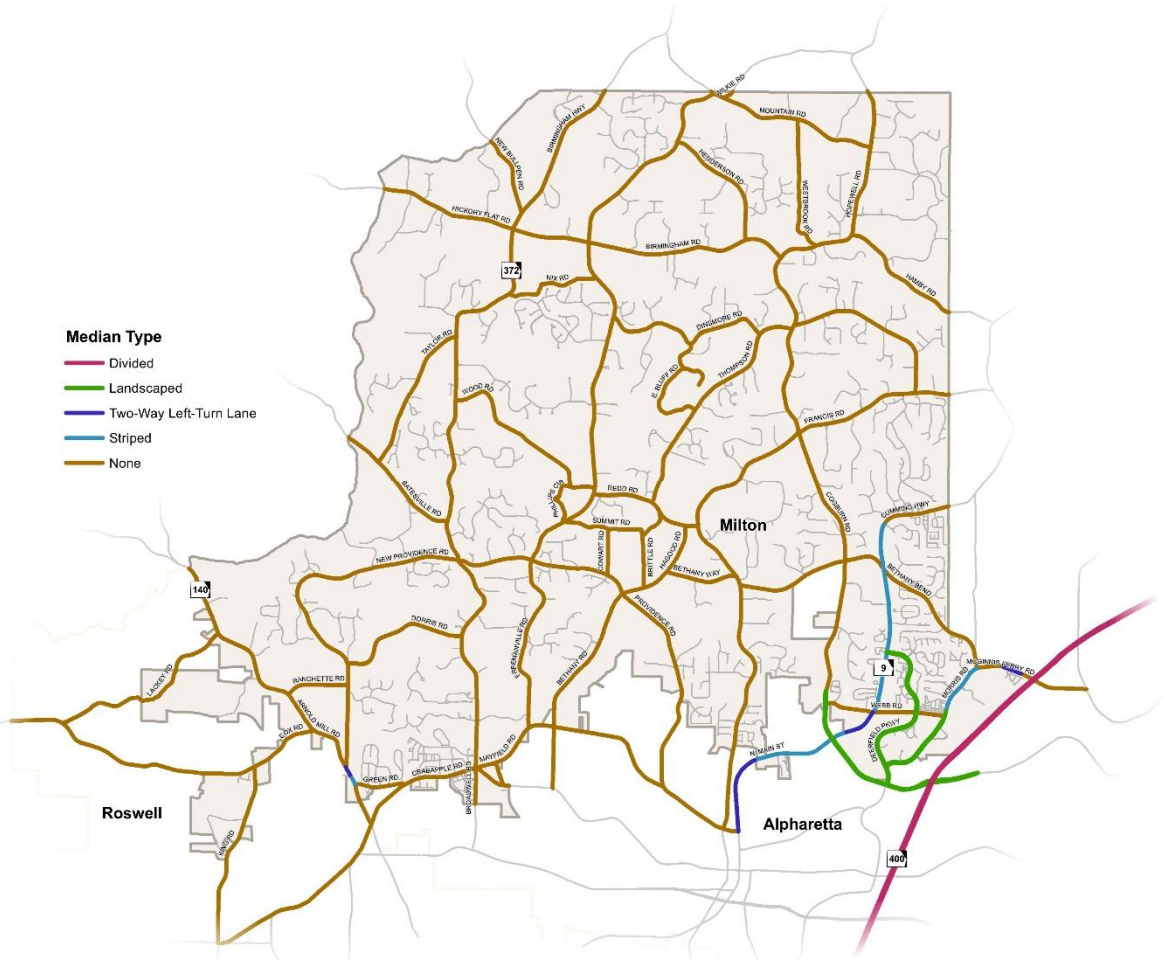


* The speed limit along Mayfield Road from SR 372 to Freemanville Road was lowered to 35 mph in May 2016.

7.2.5 Medians

Different types of medians can provide varying levels of access management. Landscaped or concrete medians are non-traversable in nature and allow the driver to turn left only at designated locations. When medians break and signals are well-spaced, these types of medians have an ability to reduce turning conflicts and improve traffic flow. Two-way left-turn lanes (TWLTL) provide a separate lane for left-turning traffic, which allows the through movements to continue efficiently. When a roadway lacks a median treatment, vehicles are able to turn at any roadway or driveway, which reduces travel speeds and increases the number of vehicle conflicts, thus reducing safety and efficiency.

Most areas of Milton do not have median treatments, as most roads along the study network are typical two-lane residential roads. The more-developed Deerfield area near SR 400 has different types of median treatments throughout. Windward Parkway from east of SR 400 to Cogburn Road has a landscaped median. Deerfield Parkway and Morris Road from Deerfield Parkway to Webb Road also have landscaped medians. SR 9 through the Deerfield area and Morris Road/McGinnis Ferry Road have varying areas of striped and TWLTL medians.

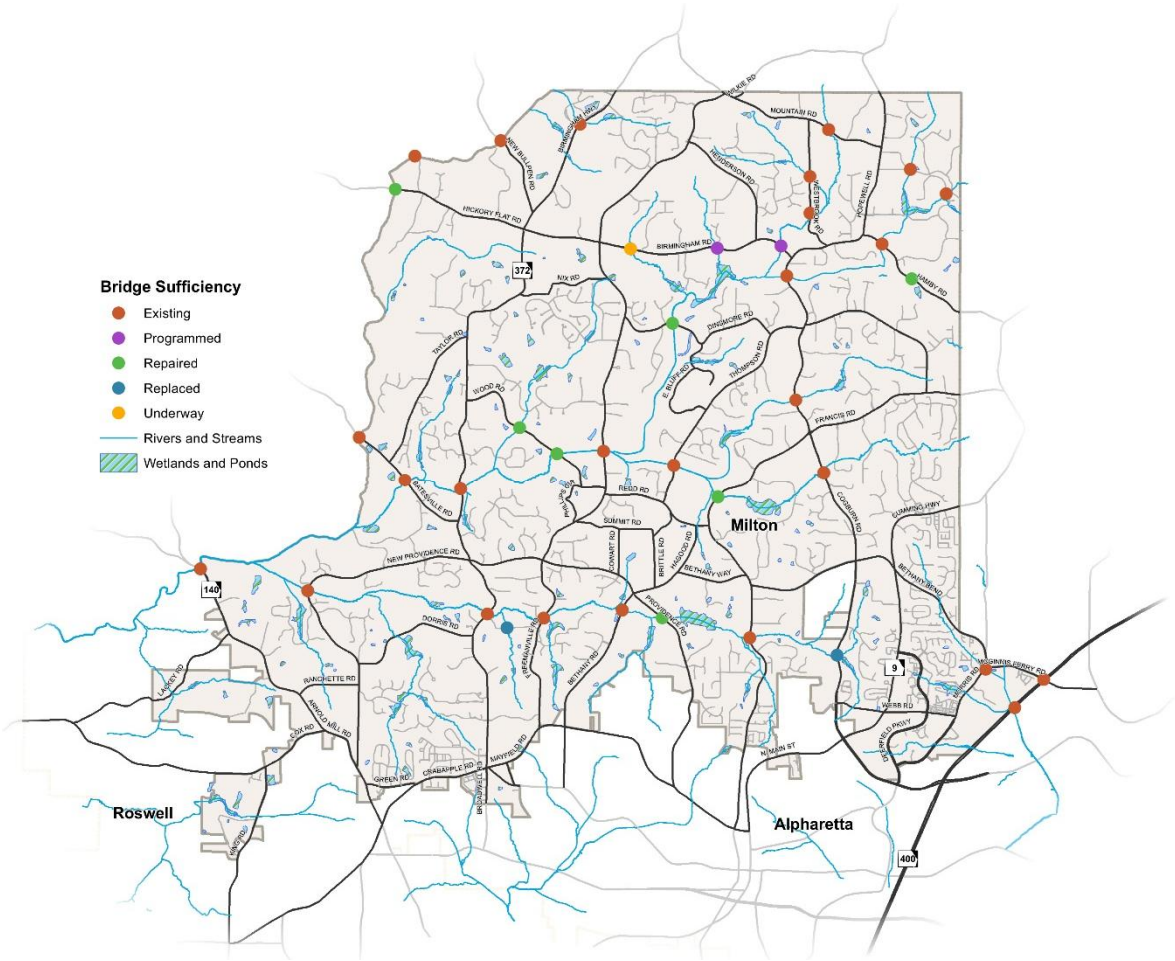


7.2.6 Bridges

The City of Milton has made substantial progress in reducing the number of deficient bridges since the last CTP. Two bridges have been replaced and seven have been repaired. Additionally, the Birmingham Road Bridge over a tributary to Chicken Creek, east of Freemanville Road, is currently being repaired.

Bridges are inspected by GDOT for sufficiency every two years, as required by the Federal Highway Administration. These reviews have shown that 16 of the 25 bridges that have had no recent activity are functionally obsolete. It is likely that these bridges will become priority in the future for repair or replacement, if they are not already programmed.

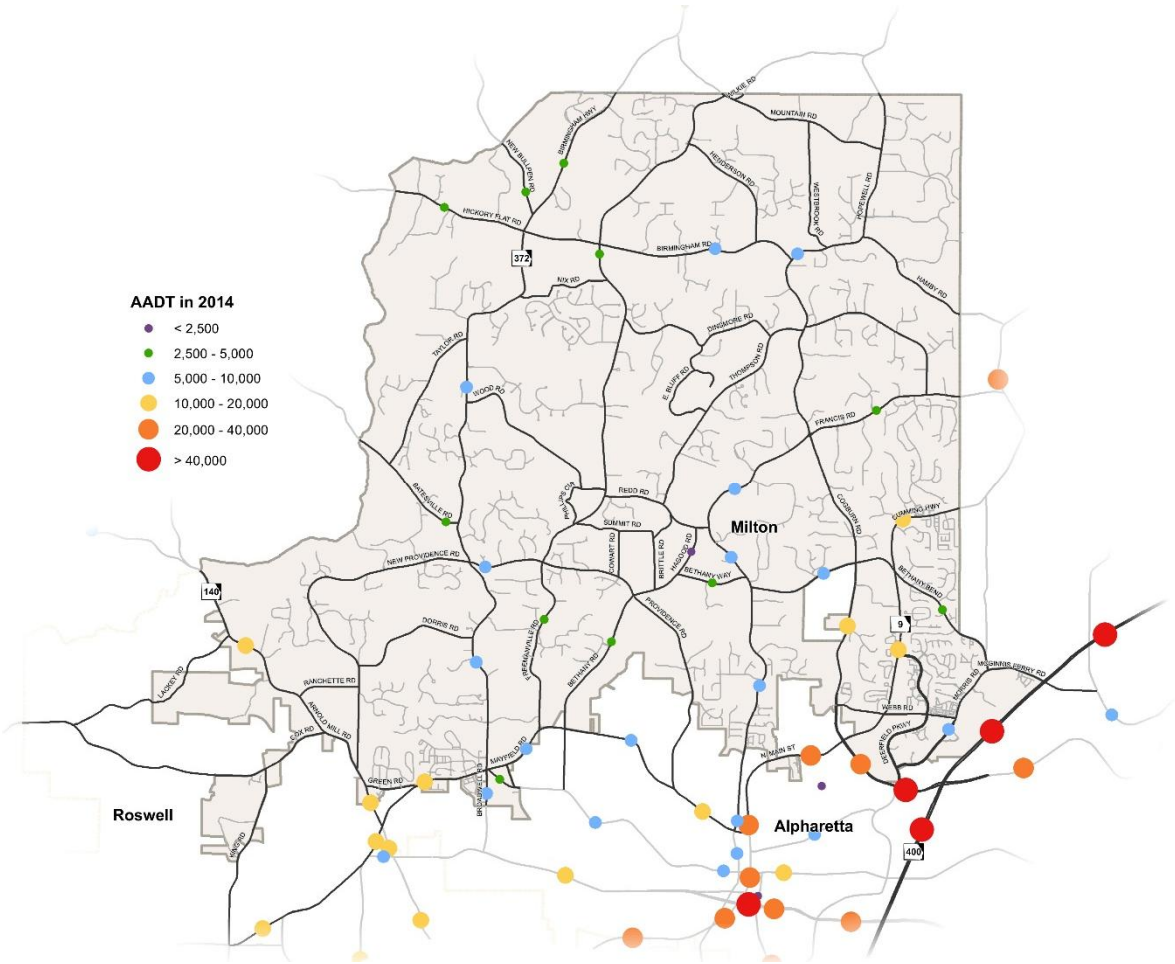
Bridge Sufficiency	Total
Existing	25
Programmed	3
Repaired	7
Replaced	2
Underway	1



7.2.7 Annual Average Daily Traffic (AADT)

Average annual daily traffic (AADT) volumes for 2014 were obtained from the Georgia Department of Transportation. The Diagnostics Report, shown in Section 4, shows the comparison in the average annual percentage growth in AADT volumes from 2010 to 2014 and the average annual percentage growth projected by the travel demand model. A majority of the traffic volumes have not experienced the growth that was projected in the previous CTP. In the map below, the larger the circle, the higher the volume of traffic at that section of the roadway.

As expected, the highest traffic volumes are found in the Deerfield area near SR 400 and toward the denser development in Alpharetta. Deerfield is one of two areas in Milton that also experienced higher growth in traffic volumes than was projected by the travel demand model. The other area was along SR 372, north of Birmingham Hwy..



7.2.8 Travel Demand Model Analysis

7.2.8.1 Model Calibration

The latest version of the Atlanta Regional Commission's (ARC) PLAN 2040 model was used for travel demand analysis. Given the regional scope of the model, localized calibration was performed for the studied roads within the Milton CTP study area. The 2015 model network's average weekday volume was calibrated to the latest annual average daily traffic (AADT) counts available from GDOT for the year 2014, as seen in the previous section. While there is a year discrepancy between the estimated model data and the observed traffic count data, this calibration represents a best case scenario using the latest data.

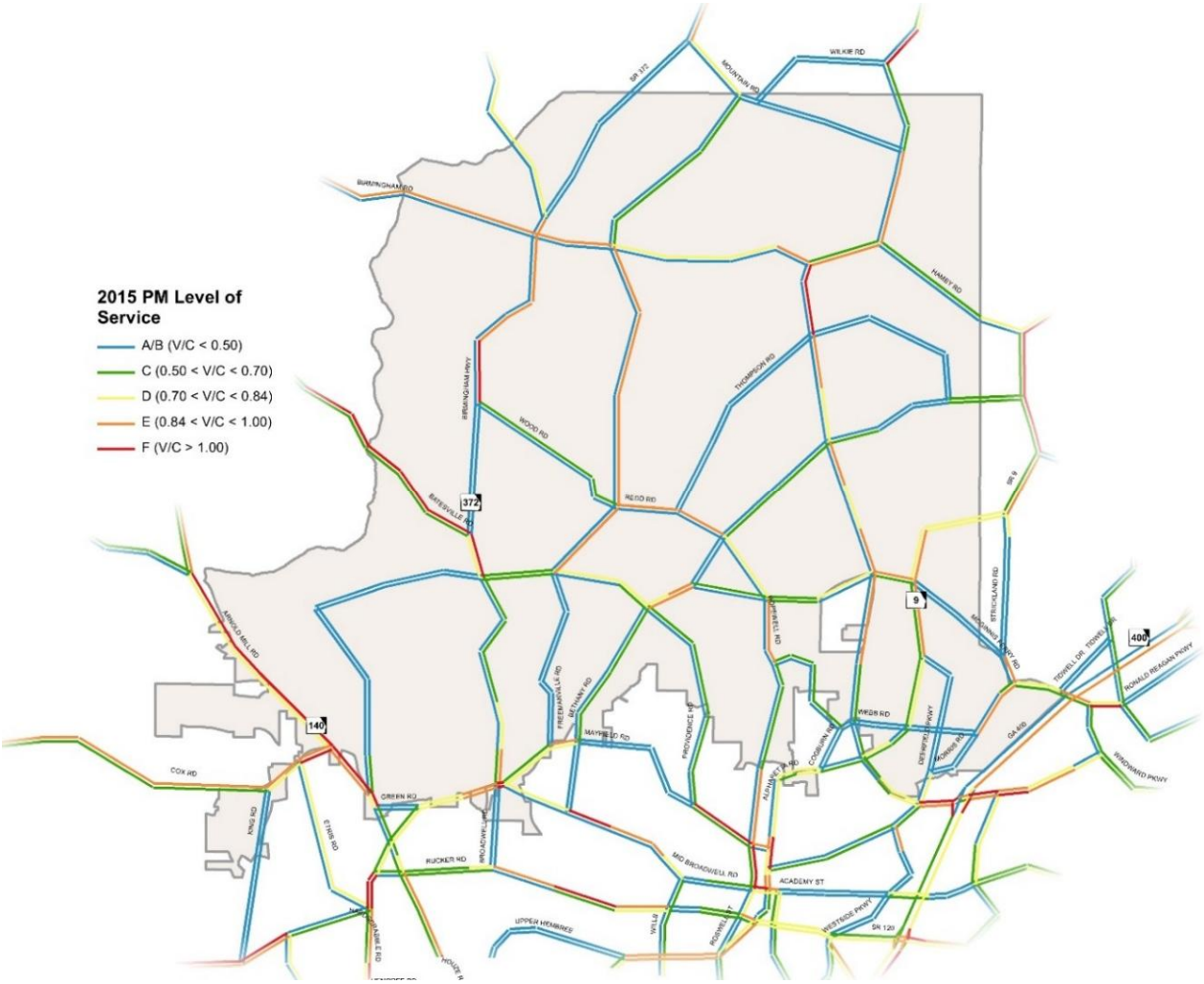
For calibration, most of the changes focused on the model network with one additional change to the traffic analysis zones (TAZ) and associated socio-economic data. The majority of model network changes involved modifications to speed, link length, centroid connector locations, and facility type.

Model volumes were calibrated to thresholds established by the Federal Highway Administration (FHWA). These thresholds are stratified based upon Functional Classification and targeted AADT ranges.

7.2.8.2 2015 PM Level-of-Service

Shown on the next page is the existing 2015 Level-of-Service in the PM peak period (3-7 PM) along the roadways within the study network of Milton. Roadways considered to be operating at a poor Level-of-Service (LOS) (LOS E or LOS F) are shown in orange or red, respectively. It is important to note two things about the travel demand model maps. One, the map shows the peak four hours, so travel in the peak hour may be even worse than the aggregate four hours. Second, the LOS depicted on this map represents the volume to capacity ratio along a link only. If the volume on the roadway exceeds the capacity (V/C > 1.0), the link is considered to be an LOS F. While also a contributing factor to congestion levels, delay associated with poorly operating intersections is not represented in this analysis. It is possible, therefore, for a road or corridor to operate at a lower LOS than shown in the map if the intersections are not operating at full efficiency along the corridor.

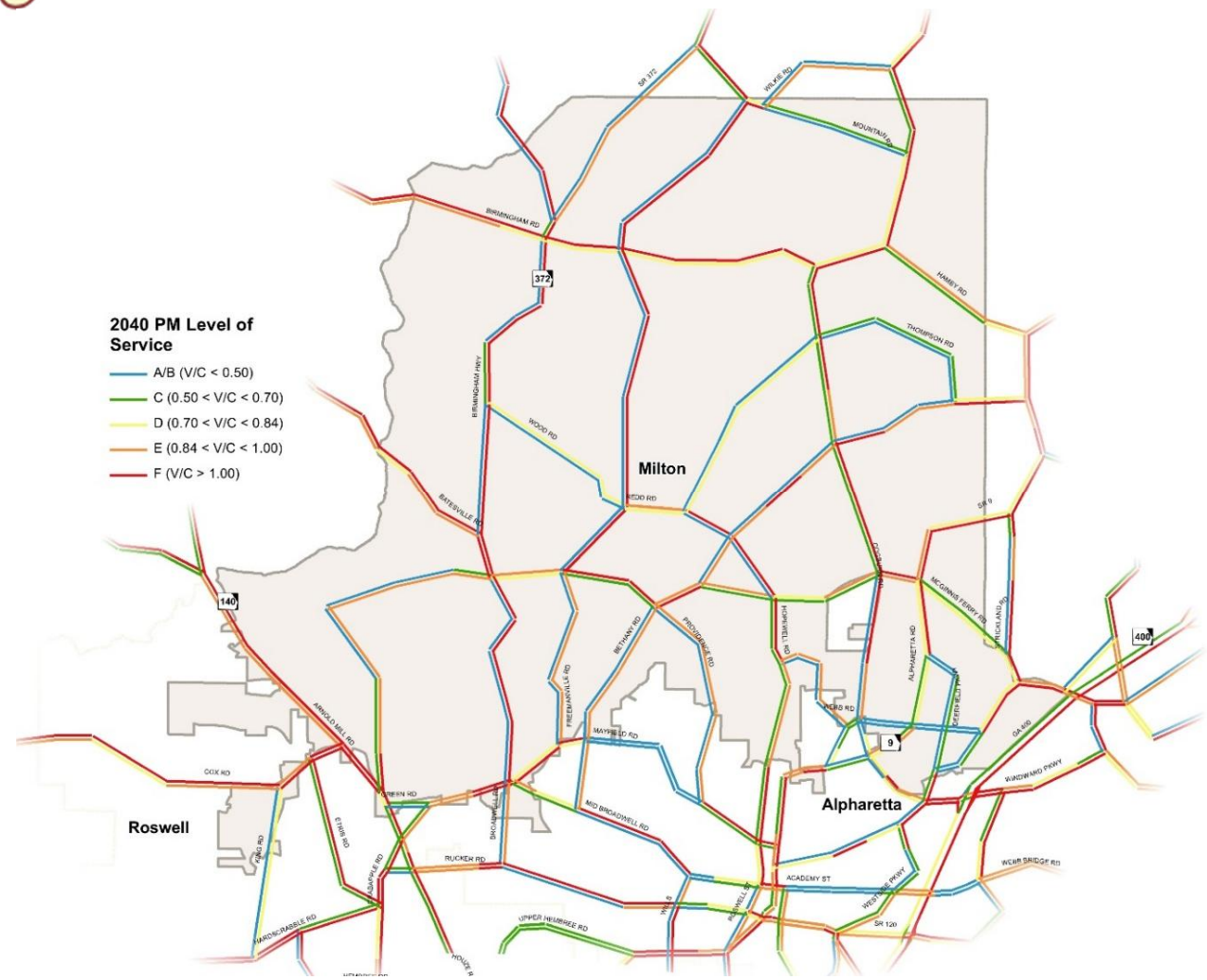
It is not surprising that much of SR 400 operates at LOS E or F during the PM peak period. Numerous other arterial and collector facilities operate at substandard Levels-of-Service as well including Arnold Mill Road, Batesville Road, Windward Parkway, and Cogburn Road, among others.



7.2.8.3 2040 PM Level-of-Service

In addition to studying the 2015 Existing Levels-of-Service in the travel demand model, future conditions were modeled to understand how congestion likely will increase. The 2040 No-Build Travel Demand Model assumes the current roadway and transit network from 2015 (no additional infrastructure improvements) with the population and employment projections for 2040. This model provides an understanding of what vehicular congestion may look like if people and jobs continue to move to the region and no additional infrastructure improvements are made. The model shows that the vast majority of major roadways show as LOS E or F in 25 years, an extreme degradation in operations from the existing conditions. Improvements along key roadways will be needed to maintain the current quality of service.

The direction of travel shows typical PM travel to and from the major regional employment centers to the south. The northbound and westbound directions of flow along major roadways experience LOS E or F conditions during the PM peak. Key corridors projected to experience substandard travel conditions in 2040 include Arnold Mill Road, Birmingham Road, Cogburn Road, Francis Road, SR 9, SR 372, SR 400, and Windward Parkway, among others.



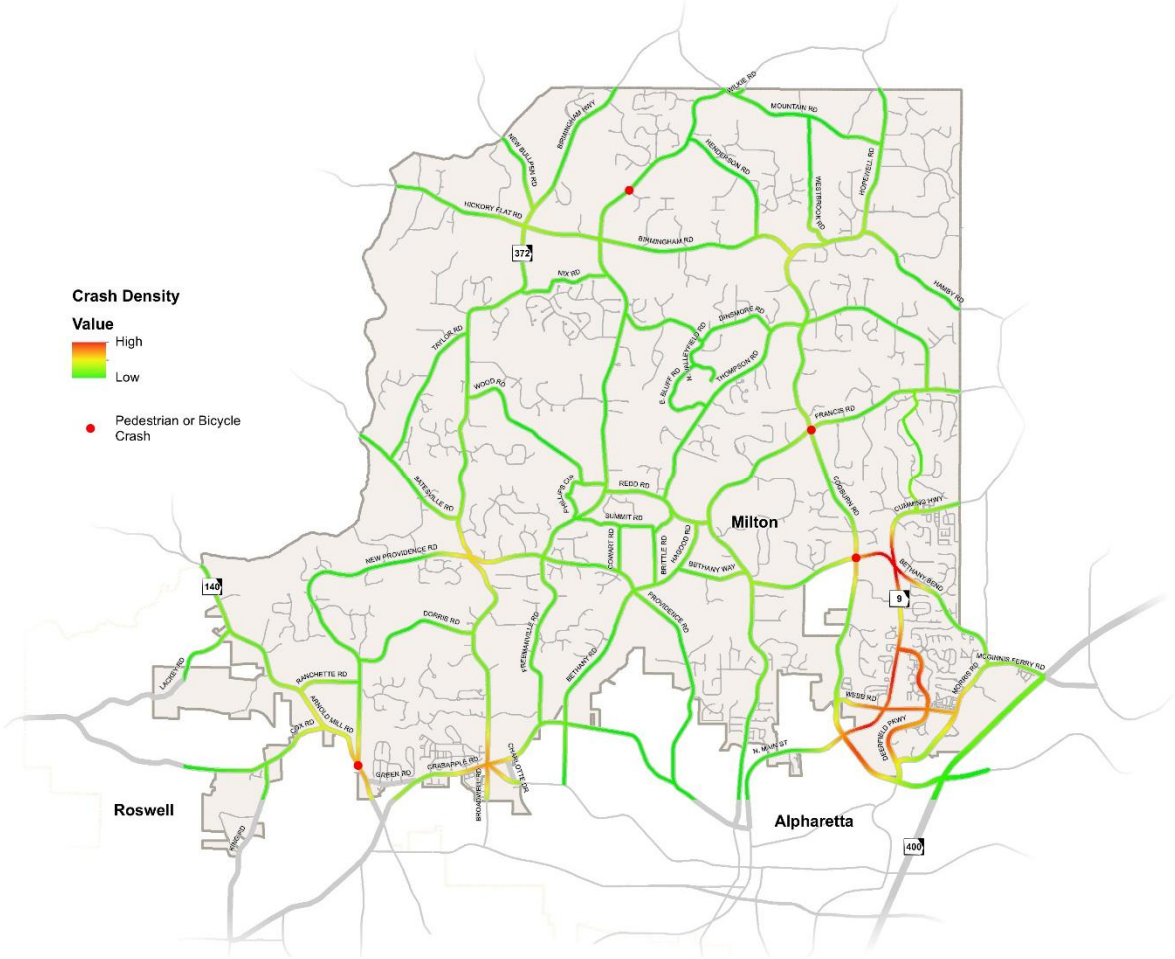
7.2.10 Crash History

Examining crash history and traffic patterns can suggest locations that could benefit from traffic safety improvements. Vehicular crashes can be costly when considering medical care, emergency services, victim work loss, employer cost, traffic delay, property damage, and a reduction in the quality of life due to longer travel times.

The City of Milton has made substantial improvements at intersections around the City where previous high crash frequencies were occurring. Many of the planned roundabout projects seek to improve road safety while also improving traffic flow. Many intersection and corridor improvements have been made; however, there are still locations experiencing a high frequency of crashes. Crash data for this study was collected from January 2012 to August 2015. According to GDOT and City of Milton data, from January 2012 to August 2015, there were 1,871 crashes along the study network, including 388 injuries in 305 separate crashes. Along the study network, two fatalities occurred due to two separate crashes.

Intersection	Number of Crashes	Intersection	Number of Crashes
SR 9 at Bethany Bend	108	Bethany Bend at Cogburn Road	25
SR 372 at Providence Road	64	Hopewell Road at Hamby Road	25
SR 9 at Deerfield Parkway	53	Morris Road at Webb Road	22
Deerfield Parkway at Webb Road	49	SR 372 at Birmingham Road	19
Birmingham Road at Hopewell Road	39	Hopewell Road at Cogburn Road	17
SR 372 at Mayfield Road	32	SR 140 at Ranchette Road	17
SR 9 at Webb Road	31	SR 9 at Marrywood Drive	16
SR 140 at New Providence Road	30	Birmingham Road at Freemanville Road	15
SR 140 at Cox Road	29	Freemanville Road at Redd Road	15
SR 140 at Green Road	26	SR 9 at Windward Village	15

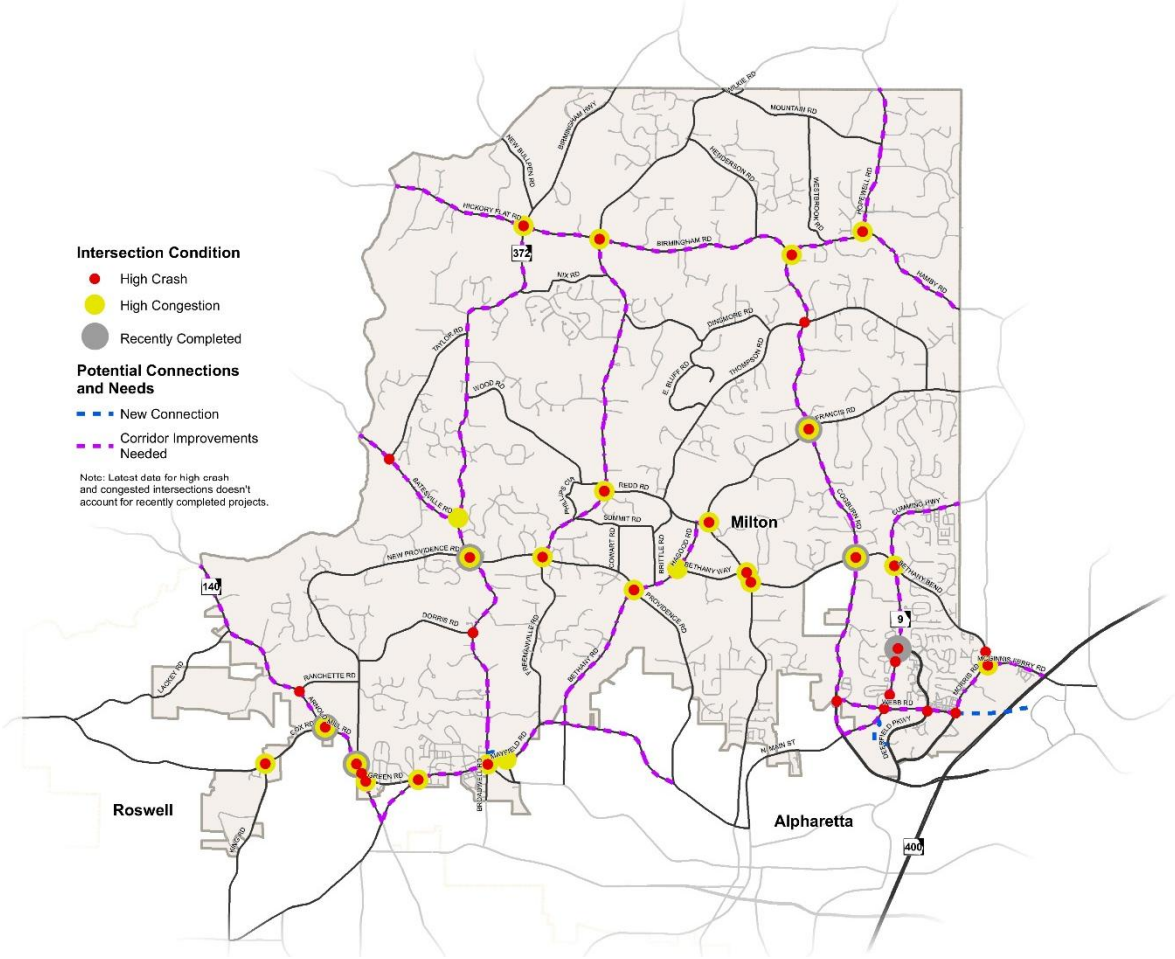
Based on City of Milton data, the intersections that experienced 15 or more crashes are shown above. Many of the intersections are located along state routes and higher speed corridors. There were 108 crashes at the intersection of SR 9 at Bethany Bend, nearly double the amount of crashes than any other intersection. There were 64 crashes at the intersection of SR 372 at Providence Road; however, this intersection recently became a roundabout and likely experiences less crashes than previously recorded.



7.2.11 Vehicular Needs

Like many areas in the Atlanta metropolitan area, the City of Milton is expected to experience increased levels of congestion along several of its primary and secondary roadways by the year 2040. Additionally, Milton has numerous intersections that may have safety concerns and will experience more congestion in the future. As stated, the ARC travel demand model was used to estimate travel conditions and to better understand future levels of congestions. Additionally, crash data was obtained from GDOT and local sources between January 2012 and August 2015.

Using 2040 travel demand model results, an understanding of future corridor improvement needs were assessed. This was done by looking at corridors with a worsening level of service (LOS F) that connected key destinations and activity centers within Milton and adjacent areas. Many of the roadways within the core of Milton may benefit from turn lanes at key intersections or driveways and the flattening of roadway curves. New potential connections were also identified within the Deerfield area due to focused congestion in southeastern Milton near SR 9 (Cumming Hwy.), Windward Parkway, Deerfield Parkway, and SR 400.



Potential new connection projects include:

- SR 9 (Cumming Highway) and Deerfield Parkway connection, potentially providing a new connection between SR 9 and Deerfield Parkway between Webb Road and Windward Parkway.
- Webb Road Extension, potentially extending Webb Road to the east, over SR 400, connecting near Alderman Drive in Alpharetta.
- Crabapple Northwest Connection, extending Crabapple Chase Drive, McFarlin Lane, and Branyan Trail to connect SR 372 Crabapple Road at Crabapple Chase Drive to SR 372 Birmingham Highway at McFarlin Lane
- Crabapple Northeast Connection, extending Charlotte Drive from Mayfield Road to SR 372 Birmingham Highway at McFarlin Lane

Intersections with high levels of congestion and crash frequency were also identified. Intersections with higher levels of congestion were identified by assessing link level LOS from 2040 PM model results. Intersections that had two or more approaches with either an LOS E or F were classified as intersections with high levels of congestion by 2040. Additionally, high crash

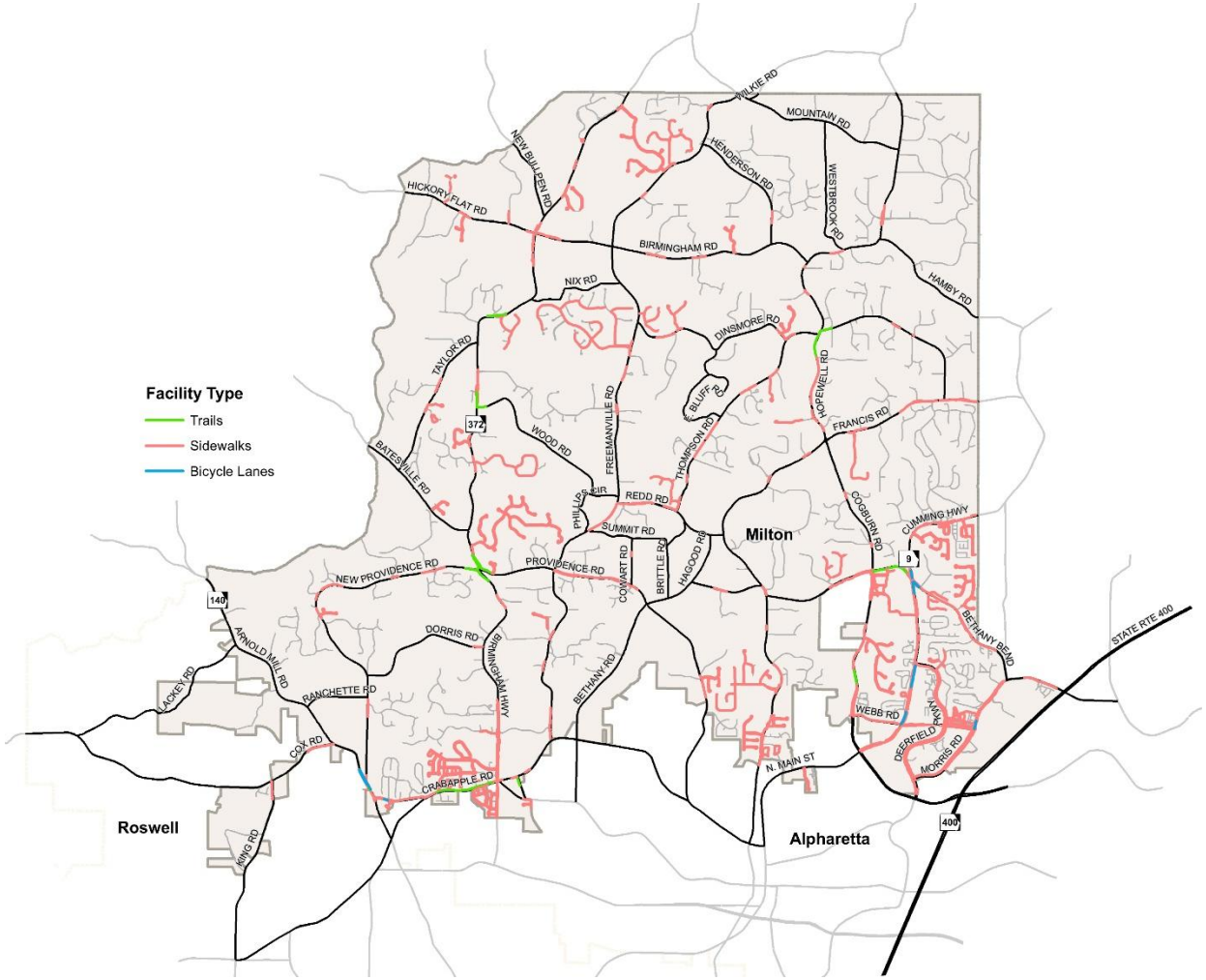
intersections were those identified with more than 10 crashes in the data sets provided from GDOT and local sources.

The areas of vehicular needs will be considered when determining possible projects during the recommendations phase of this plan. These needs will be vetted against projects that are currently under design or construction so as not to duplicate existing efforts.

7.3 Pedestrian & Bicycle Inventory

7.3.1 Existing Infrastructure

The pedestrian and bicycle modes are also important transportation modes for the future of Milton. Investments in these networks have been more recent and have mostly occurred where new development has taken place with deliberate additional investment within the two LCI areas of Deerfield and Crabapple. Short trail and bicycle facility segments have been completed along Arnold Mill Road, Bethany Bend, Crabapple Road, SR 372, and around the new roundabout at New Providence Road and SR 372.



7.3.2 Crash History

The City of Milton has made substantial improvements in pedestrian and bicycle safety at intersections around the City where previous high crash frequencies were occurring. Many intersection and corridor improvements have been made; however, there are still locations where pedestrian and bicycle crashes have occurred. Crash data for this study was collected between January 2012 and August 2015.

During the study period, there were four traffic incidences that involved a pedestrian or bicycle. These locations include: Cogburn Road at Bethany Bend Road, Cogburn Road at Francis Road, Arnold Mill Road at New Providence Road, and Freemanville Road near Dartmouth Road. There may be opportunity to make safety enhancements to mitigate future incidents at these locations and others.

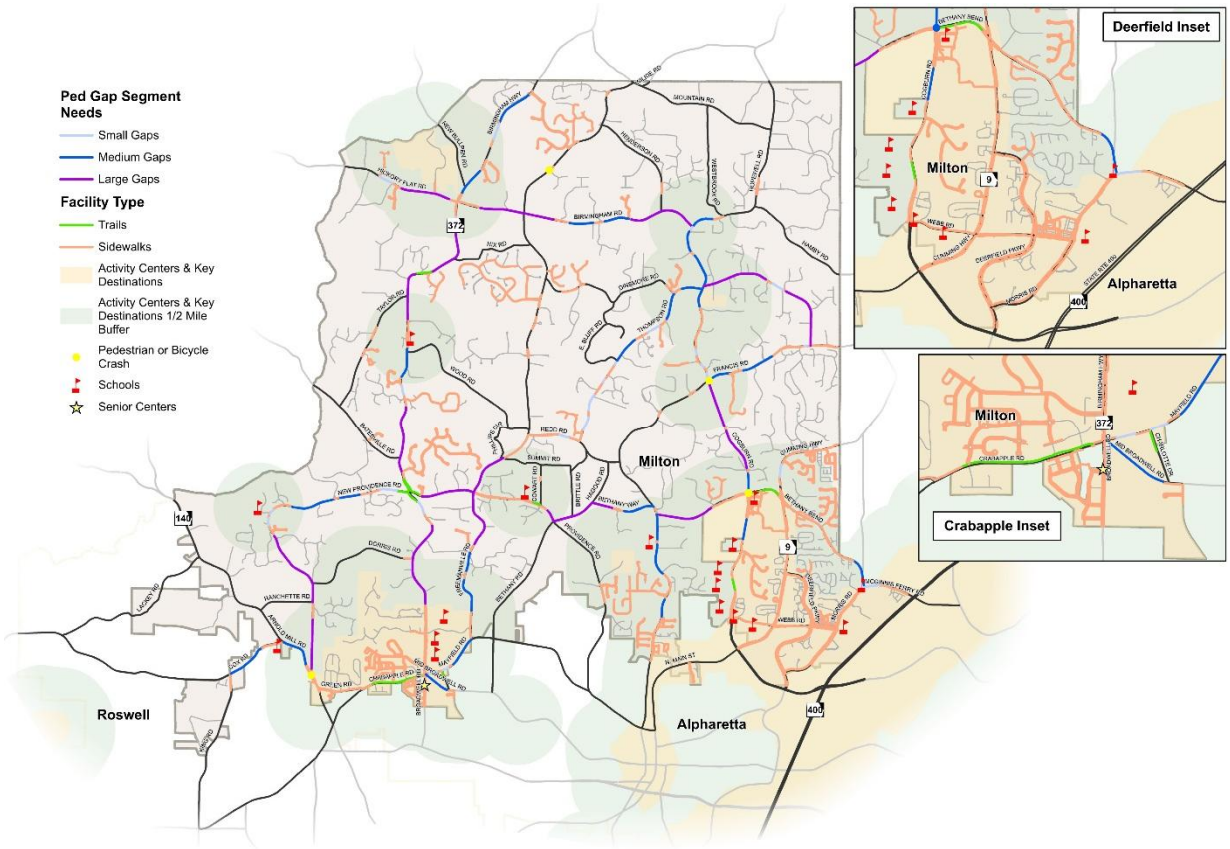
7.3.3 Pedestrian Needs

Milton has an expansive pedestrian network with many sidewalks and some trails. However, pedestrian needs are present throughout the study area due to gaps in sidewalk connectivity and the need to connect activity centers, community facilities, schools, and other key destinations.

To understand areas of greatest pedestrian need, key activity centers and destinations were identified within the study as these are some areas where pedestrian connectivity is valuable. These areas included schools, civic centers, parks, regional employment areas, Livable Community Initiatives (LCIs), and regionally significant activity centers. A half mile radial buffer, used to represent an approximate walkability zone, was created around each of the activity locations. Sidewalks and trails exist along roadways within the buffers, but they can be fragmented, creating gaps in pedestrian connectivity. Gaps within the buffers and connecting between the buffers were identified and classified into the following three categories:

- Small gaps – 30 to 1,000 feet
- Medium gaps – 1,000 to 2,500 feet
- Large gaps – 2,500 feet to 5,200 feet

The small gaps may be easiest to fill and will create a stronger pedestrian network. The larger the gap, the more challenging it may be to provide a contiguous network. Pedestrian needs within the study area are identified below. Areas with pedestrian needs will be considered when determining possible projects during the Recommendations phase of this plan.



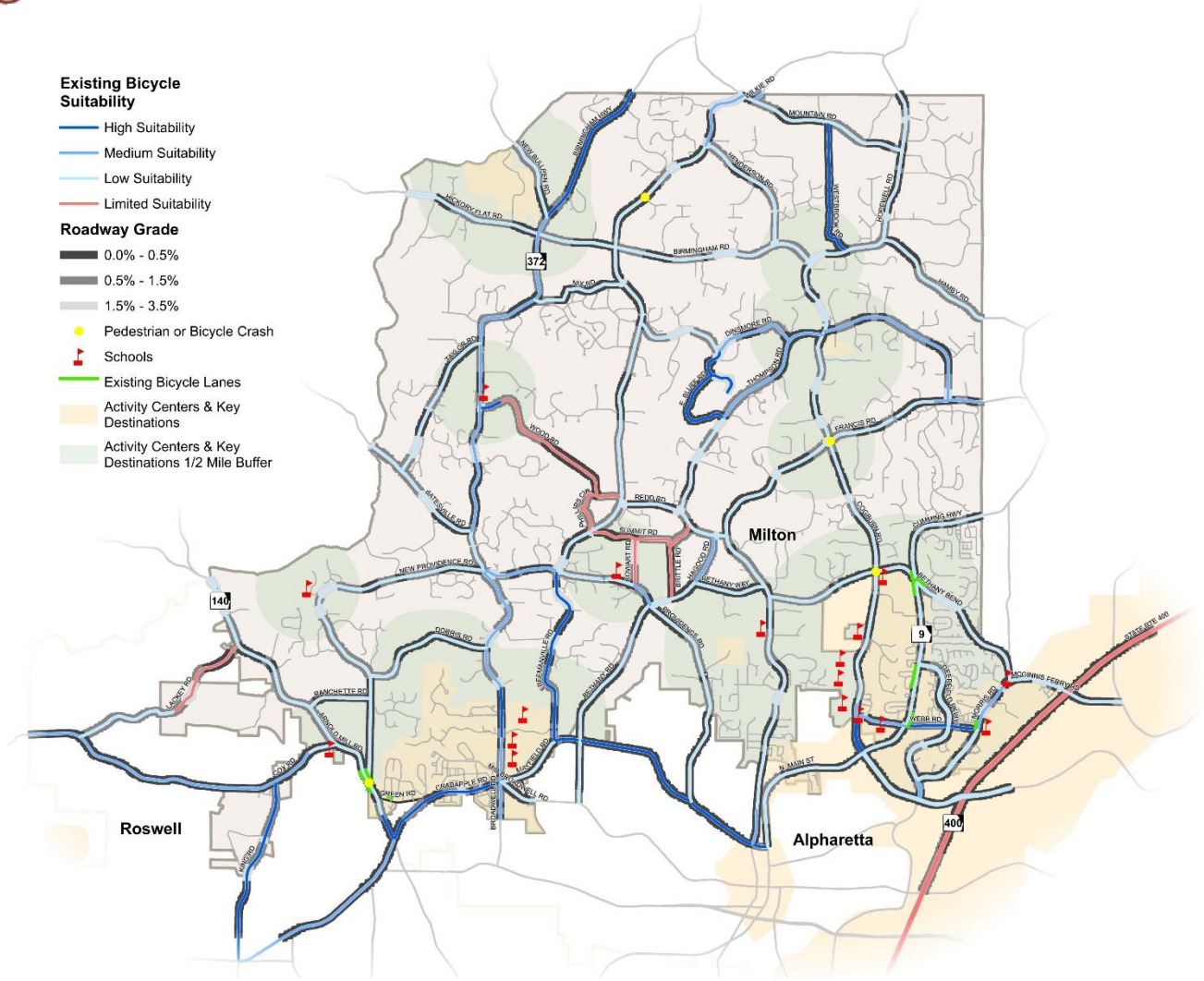
7.3.4 Bicycle Suitability and Needs

7.3.4.1 Bicycle Suitability

To identify bicycle needs within the Milton study area, existing bicycling suitability needed to be understood. A bicycle suitability methodology was created using a hybrid of the 2010 Highway Capacity Manual's (HCM) Bicycle Level of Service (LOS) approach and a qualitative assessment of existing conditions. The developed methodology uses key parameters from the 2010 HCM methodology such as speed or roadway traffic volume. Within these parameters, a stratification of data and scoring was developed that is unique to Milton's transportation system. The scoring matrix is shown below.

Bicycle LOS Category	Data Stratification and Scoring					Max Score
Volume (vehicles per day)	0 - 2,300	2,301 - 6,000	6,001 - 9,800	9,801 - 13,500	13,501 - 31,000	4
Score	4	3	2	1	0	
Total Thru Lanes	<= 2 lanes	> 2 lanes				1
Score	1	0				
Outside Lane Width	>= 12 feet	11 feet to < 12 feet	10 feet to < 11 feet	< 10 feet		3
Score	3	2	1	0		
Posted Speed	0 - 25 mph	30 - 40 mph	45 mph	50+ mph		3
Score	3	2	1	0		
Truck Route	Yes	No				2
Score	0	2				
					Highest Potential Score	13

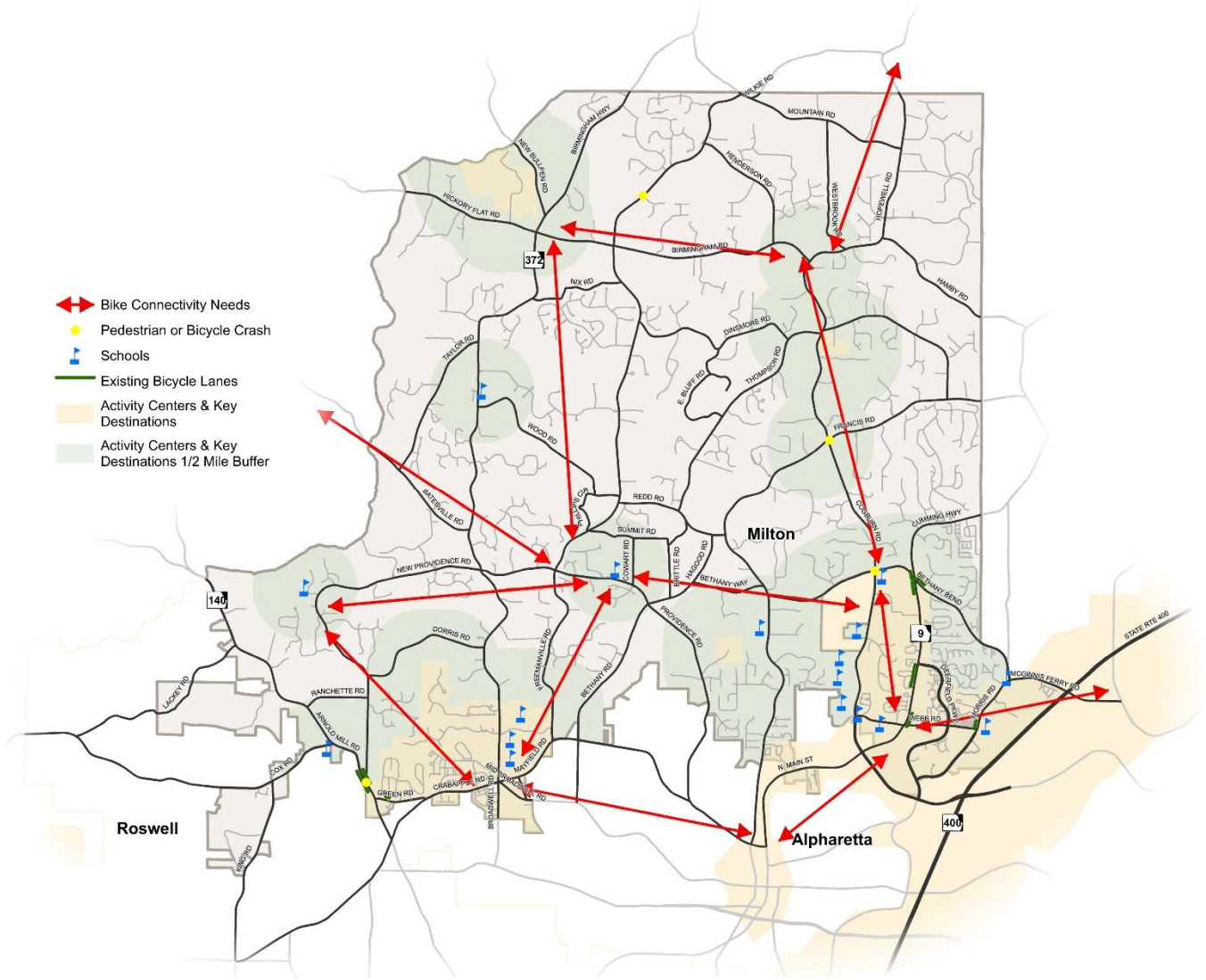
After examining all roadways within the study network, a score of low (score = 6 to 8), medium (score = 9), and high (score = 10 to 13) suitability was created using logical breakpoints within the data set. A map of Milton's roadway's bicycle suitability, along with key activity centers, employment areas, schools, roadway grade (slope), bicycle/pedestrian crashes, and existing bicycle infrastructure is displayed below.



When looking at combinations of roadway grade and bike suitability, some interesting patterns are present. Areas where suitability is high (dark blue) and grade is relatively flat (black) indicate generally favorable conditions for average bicyclists. However, when examining areas with low suitability (light blue) and areas with higher roadway grades (light gray), bicycle suitability is at its lowest. It should be noted that roadways with limited suitability options should be considered in the future. These roadways typically are gravel and unpaved which could eventually be paved or be used by certain types of bicyclists (i.e., mountain bicycles). Additionally, the area adjacent to SR 400's right-of-way (ROW) could be used for a future greenway or pathway system — similar to what is being developed by PATH 400 in Buckhead, Atlanta, GA.

7.3.4.2 Bicycle Needs

With an understanding of bicycle suitability, bicycle needs become more apparent. Bicycling needs in Milton are focused on using the existing transportation system to connect key destinations, including Crabapple Crossroads, the SR 9/Deerfield Parkway area, Birmingham Crossroads, schools, civic buildings, parks, and employment centers. In addition to locations within Milton, it is important to connect to surrounding cities and counties such as Alpharetta, Forsyth County, and Cherokee County.



7.4 Transit

7.4.1 History

Transit service in Metro Atlanta has existed as far back as the 1860s with the Atlanta Street Railway. While modest in size, the railway — along with other private entities — ran private streetcar, trolley bus, and bus systems in Atlanta until the creation of Metropolitan Atlanta Rapid Transit Authority (MARTA).

In the 1950s, planners and officials began to develop momentum for creating a public transportation system in the Atlanta region as whole. In the 1960s, a Metropolitan Atlanta Transit Study Commission report recommended a 66-mile, five-county rail system with feeder bus operation and park-and-ride facilities. By 1965, legislation authorizing a referendum on MARTA was passed by the state and subsequently approved in four counties and the City of Atlanta, creating MARTA. However, in 1972 voters in Gwinnett and Cobb counties voted against a sales tax increase to fund MARTA, and thus were left out of the system. (Even to this day, the lack of sales tax revenue from the two counties has limited MARTA's ability to provide service on a regional basis).

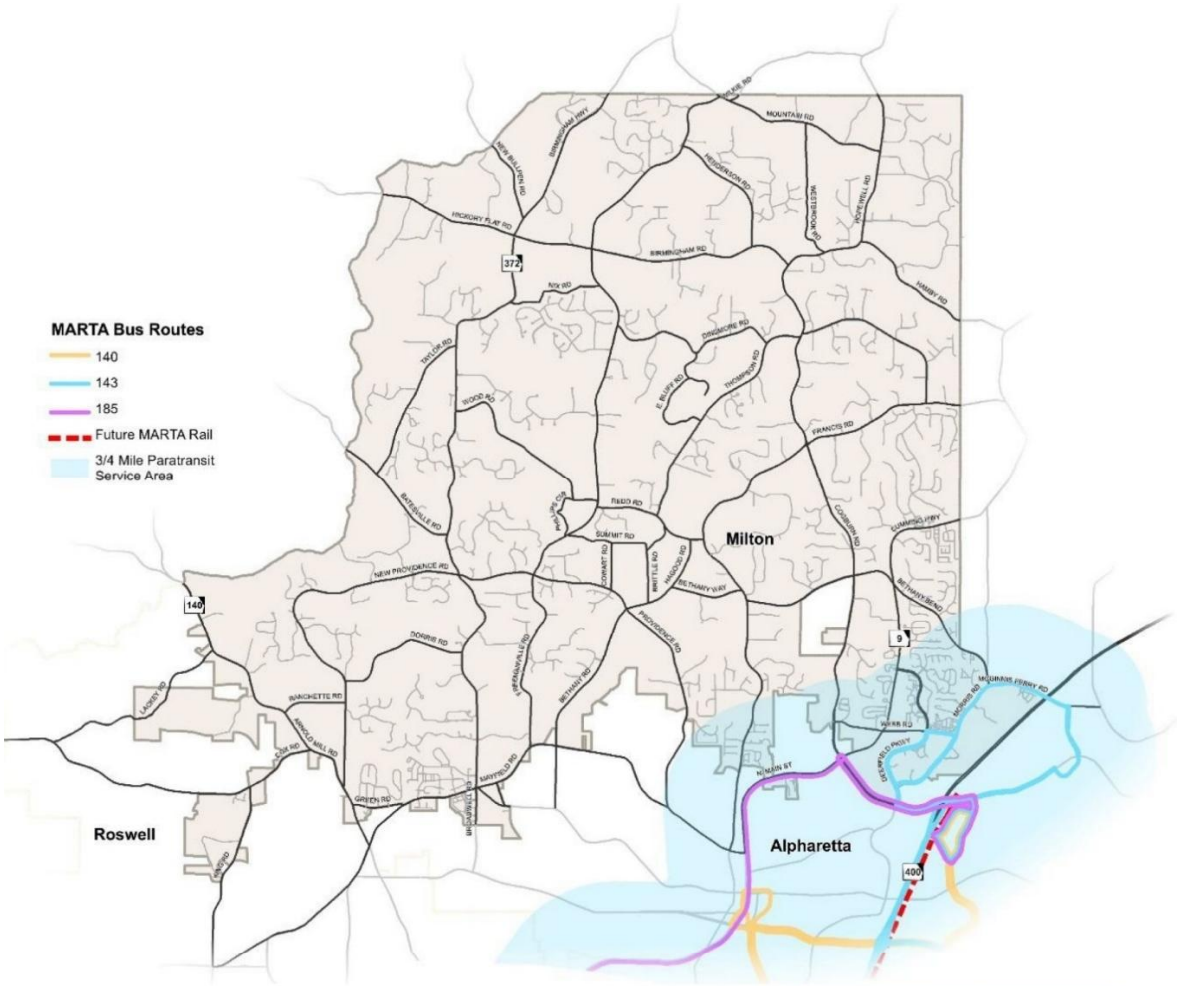
Through the 1970s, MARTA received grants of more than $800 million from the federal government for planning, design, land acquisition, and construction of a rapid rail system. On June 30, 1979 MARTA's first train, the East Line, began operating in DeKalb County between Avondale and Georgia State Station.

The 1980s saw continued growth in the MARTA rail system with the construction of nine more miles of track and many more stations. As a result, rail ridership increased by 29% by the mid-1980s. By 1990, frequency of rail service also increased to achieve eight-minute headways throughout the system. Service to the airport and northward to Chamblee also began. The expansion continued through the 1990s with service extending beyond the I-285 perimeter with major projects including the seven-mile North Line — a line segment that spanned the three funding jurisdictions of City of Atlanta, Fulton County, and DeKalb County.

In the late 1990s, MARTA began to focus more on transit's link to community development as an alternative to highway congestion with involvement in the Lindbergh Transit-Oriented Development (TOD) — the largest multi-use development of its kind in the U.S. at the time. During the same time period, the Cobb County Transit (CCT) agency was founded to provide local bus service in Cobb County. Transit expansion continued into 2000 when Gwinnett County Transit (GCT) was formed to offer local bus service in Gwinnett and express bus service connecting Gwinnett County with Lindbergh, Midtown, and Downtown Atlanta.

7.4.2 Existing Conditions

The City of Milton is serviced by MARTA Bus Route 143 and Route 185 in the southeast area of the City in Deerfield. These routes experience similar levels of average ridership at over 200 boardings per day. Route 140 also runs near Milton, servicing Alpharetta and Windward Parkway, east of SR 400. There was a route change during the CTP process that expanded service along Deerfield Road and SR 9. MARTA Mobility paratransit service is available within the ADA designated service area within a ¾ mile buffer of MARTA fixed bus routes. This service provides special lift-equipment vans on a curb-to-curb, shared ride basis.



Bus Route	Milton Boardings/Day
Route 143	230
Route 185	212
Total	***442***

1 penny of every dollar spent in Milton helps to fund MARTA

7.4.3 Connect 400

The Georgia 400 Corridor Transit Initiative was undertaken by MARTA to identify transit alternatives along the SR 400 corridor. The study corridor extends approximately 12 miles from the existing northern extent of the MARTA Red Line at North Springs Station to Windward Parkway in Alpharetta.

In March 2015, the MARTA Board of Directors adopted a Heavy Rail Transit (HRT) alternative as the Locally Preferred Alternative (LPA) for the study corridor, along with additional Bus Rapid Transit (BRT) alternatives. The HRT and two BRT alternatives are currently being evaluated in the federal Draft Environmental Impact Study (DEIS) process.

The Connect 400 project, if funded and constructed, has the potential of greatly expanding transit service for the City of Milton and could substantially impact the landscape and demand of the Deerfield area adjacent to SR 400.

7.4.4 Transit Needs

Public transportation within Milton is currently focused in the southeastern portion of the City, and future transit needs are anticipated to stay focused in this area. This area is also where the greatest levels of population density occur, which is a strong indicator of transit propensity. The highest levels of captive ridership in the City, and where incomes are the lowest, also exist in the southeastern quadrant of Milton. Transit expansion into the northern quadrants of the City would be unlikely due to lower densities, and therefore lower transit propensity. Because of the demographic and density factors, a transit needs area was identified within southeastern Milton. This was done by assessing roads within the area that have potential for future bus service. These roads include:

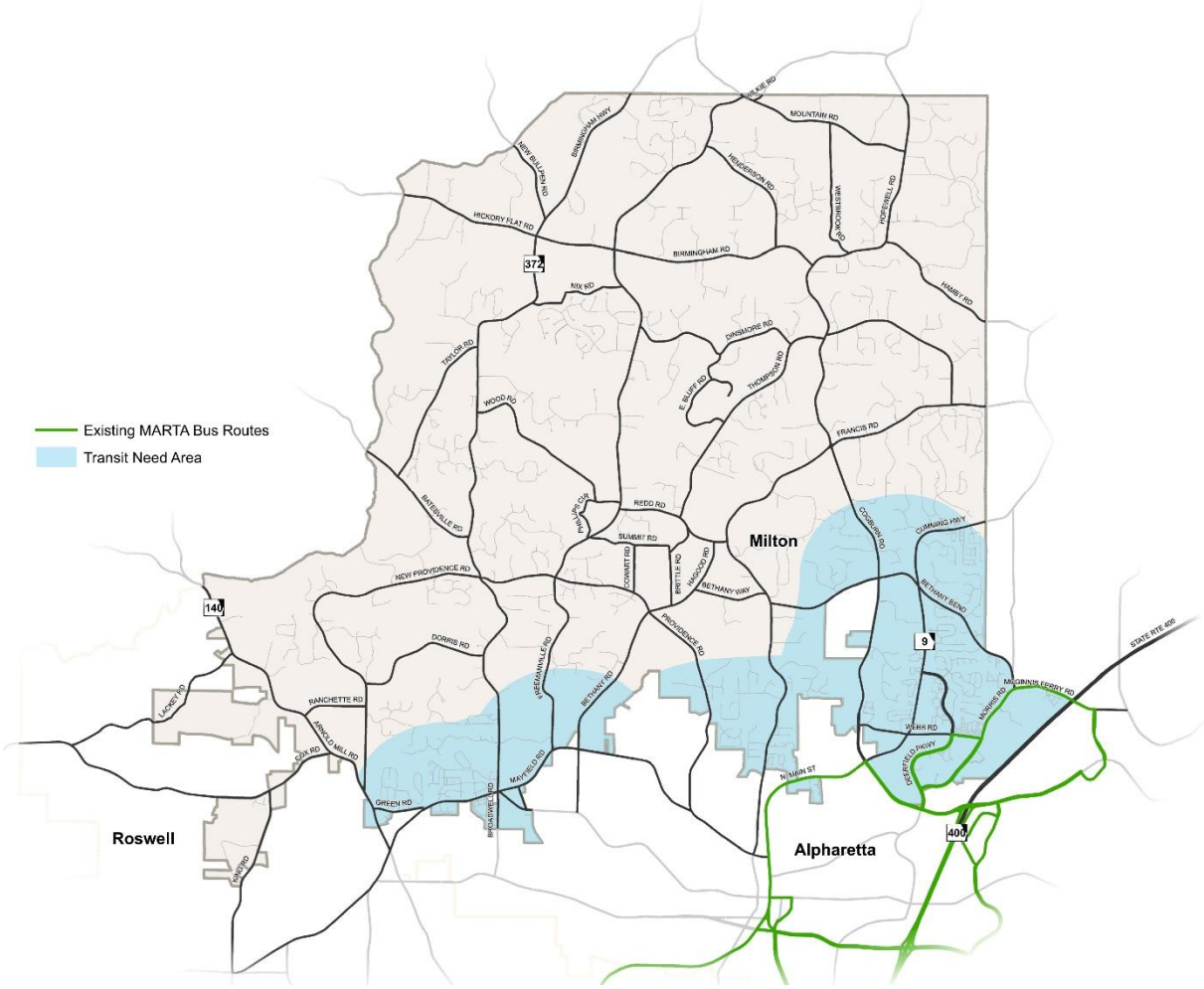
- Crabapple Road
- Broadwell Road
- Hagood Road
- Mayfield Road
- Bethany Road
- Providence Road
- Bethany Way
- Hopewell Road
- Bethany Bend
- Cogburn Road
- Windward Parkway
- SR 9 (Cumming Hwy.)
- Deerfield Parkway
- Webb Road
- Morris Road

From these roads, a contiguous area using a ¾ mile radial buffer was created to represent a transit needs area. A ¾ mile distance was used due to its significance for paratransit service (also referred to as on-demand or on-call service). A ¾ mile distance from bus routes is the maximum service distance used by other transit agencies in the Atlanta metropolitan region.

Future transit services need to be coordinated with the Metropolitan Area Rapid Transit Authority (MARTA) and the Georgia Regional Transportation Authority (GRTA). Current limitations on expanding bus service are primarily due to the locations of MARTA bus maintenance facilities — with the closest being Brady Garage, approximately 30 miles away in

Atlanta. If more coverage and additional routes are desired, a bus maintenance facility would be needed in northern Fulton County.

Areas of transit needs will be considered when determining possible projects during the recommendations phase of this plan.



8.0 EXISTING NEEDS CONCLUSION

The City of Milton has a robust and changing transportation system. Even though the future will bring change, Milton has a strong desire to preserve its heritage and unique rural character. Striking a balance between meeting future transportation demands and preserving Milton's distinctive quality of life will require focused transportation recommendations, initiatives, and policies.

Prior to developing transportation related recommendations, an understanding of Milton's existing transportation system and needs was necessary. This report has documented where Milton has been, where they currently are, and what needs are present regarding its overall transportation system. This document has done this by providing in depth discussions in the following areas:

- Vision and Goals
- Public Involvement
- Diagnostic Review Since the Previous 2009 City of Milton CTP
- Previous Transportation Plans
- Land Use and Market Analysis
- Transportation Inventory and Needs Assessment

Following the completion of this report, a multimodal list of potential projects will be compiled. These projects will be subjected to an evaluation process that considers both quantitative and qualitative factors. In addition to the project evaluation process, public involvement in Spring 2016 will help determine a final list of recommendations. This study is anticipated to be completed in Summer 2016.

Appendix

- Appendix A: Public Meeting/Focus Group Notes
- Appendix B: MetroQuest Survey Results
- Appendix C: Full Comprehensive Market Analysis

Appendix A: Public Meeting/Focus Group Notes

City of Milton Comprehensive Transportation Plan Update
Public Workshop #1
Wednesday, November 18, 2015
5:30 – 7:30 PM
Milton Public Library

Format

The meeting began with a brief Open House period which allowed attendees to review project display boards, data, and other information collected to date for the purpose of the CTP update. Sara Leaders from the City of Milton welcomed meeting attendees and led the consultant team through introductions. The consultant team led by Project Manager Cristina Pastore and Eric Bosman followed with a presentation that outlined the purpose of the Comprehensive Transportation Plan, existing conditions, national market considerations, public involvement, and the project schedule. A video of the presentation can be viewed here - https://youtu.be/Bhtr8-moYpo.

After the presentation, meeting attendees were invited to provide input on transportation in three areas: roadways/intersection control, transit, and bike/pedestrian. The input received during these discussions is summarized below.

Roadway & Intersection Control [congested areas, possible road diets, unsafe intersections/corridors, access management needs, new connections needed, signals needing retiming, turn lanes needed]

Table 1 Facilitators: Robert Binder, Cody Zanni

- Traffic from McGinnis Ferry interchange
- Educate people on driving in roundabout
- Birmingham Road traffic from Cherokee
- Batesville Road and Birmingham Hwy. intersection congested needs turn lane, traffic light, or roundabout
- Arnold Mill Road congested
- Bethany Road needs traffic calming measures (speed bumps, street trees, etc.)
- Bethany Way/Hopewell Road/Bethany Bend needs reconfiguring, a lot of wrecks
- Hopewell Road/Redd Road very congested
- Birmingham Crossroads needs traffic signal with turn lanes or roundabout
- Birmingham Road needs traffic calming measures
- Bethany Bend to Cogburn Road right turn lane needed
- Cogburn Road/Hopewell Road congested
- Bicycle lanes not enough right now
- Rucker Road – widen

Table 2 Facilitators: Mark Eatman, Jen Price

- Concerns at Crabapple (5 point intersection):
  - Need left turn lane on Mayfield Road going to Broadwell Road
  - Drivers make illegal left turns from Mayfield Road onto Old Broadwell Road
  - Could a countdown timer be used to aid vehicular traffic at intersections?
  - How the proposed roundabouts will function:
    - Many kids cross here – is this safe?
    - Drivers need education regarding how to use them
    - There are three roundabouts planned for a short span of space. How will they coordinate?
  - Speed limits are an issue and create dangerous environment when combined with heavy traffic and pedestrians
  - Inconsistent speed limits in Crabapple (goes from 35 mph to 45 mph to 35 mph throughout)
- Police presence needed throughout Milton to control speeds
- New downtown Milton/City Hall should be 25 mph throughout

Transit [where do you live, go to work/school, and what other destinations do you use; where may transit connections be needed]

Table 1 Facilitators: Robert Binder, Cody Zanni

- MARTA terminal north of Windward Parkway because of Forsyth traffic; don't congest Windward Parkway
- North Point Parkway MARTA station
- Milton Park & Ride in Deerfield
- MARTA bus needed to connect Crabapple to Downtown Alpharetta

Table 2 Facilitators: Mark Eatman, Jen Price

- The MARTA Park & Ride lot at Windward Parkway is great
- Paratransit would be a good alternative for transit dependent population
- Need to better coordinate private transit like Uber and Lyft as it can be used for 'last mile' connectivity

Bike/Pedestrian [bike/walk destinations, high priority bicycle routes, unsafe roadways for cycling, gaps in sidewalk that are important to fill, unsafe/challenging crossings, bike lane/shoulder/off-road trail preferences for cycling]

Table 1 Facilitators: Robert Binder, Cody Zanni

- Find out where LA Fitness cyclist routes are and add bike lanes
- Find out where Roswell Bikes routes are and add bike lanes
- Find out where Alpharetta Bikes routes are and add bike lanes
- Power lines for bike lanes
- Cogburn Road sidewalks are priority
- Thompson Road to Hagood Road to Bethany Road bike trail
- Trails between schools and parks

Table 2 Facilitators: Mark Eatman, Jen Price

- Pedestrian concerns:
  - There needs to be a buffer between existing sidewalks and street
  - Across Milton there are disconnected sidewalks – lead to nowhere
  - Crabapple area was not built with pedestrians in mind
  - Need sidewalks to connect pedestrians to Bell Park
  - Implement Milton's form based code at Crabapple; it will improve walkability
  - Need better pedestrian access to Friendship Park and Bell Park
- Cyclist concerns:
  - Need wider bike lanes (approx. 2 – 2.5 feet)
  - Enforce passing laws (the 3-foot requirement)
  - Enforce cyclist rules by citing riders who do ride two abreast
  - Crabapple/Mayfield area is dangerous for cyclists and is usually avoided by riders
  - Deerfield area is dangerous for cyclists and is usually avoided by riders
  - Need "Share the Road" signage on Freemanville/Birmingham Hwy.
  - Need wider shoulder for cyclists on Freemanville/Birmingham Hwy.
  - Throughout Milton, shoulders are not uniform/consistent
  - "No Passing" signage throughout Milton would be beneficial

The meeting concluded with a quick discussion of next steps, an invitation to complete the MetroQuest survey on site via the iPads, and a reminder for attendees to sign up for Focus Groups that will meet beginning in 2016.

Milton Comprehensive Transportation Plan Update
Inclusionary Focus Group
Wednesday, January 13, 2016
5:30 PM, Milton City Hall, Large Conference Room

Attendees
Dudley Arnold, Milton Disability Awareness Committee
Olga Espinola, Milton Disability Awareness Committee
Sudie Gordon, City of Milton
James Keating, Milton Disability Awareness Committee
Paul Schiell, Milton Disability Awareness Committee
Tass Welch, Milton Disability Awareness Committee
Nancilee Wolfe, Milton Disability Awareness Committee

Project Team Attendees
Jen Price, Sycamore Consulting, Inc.
Sara Leaders, City of Milton
Robert Binder, Kimley-Horn and Associates, Inc.
Carter Lucas, City of Milton

Summary

Sara Leaders, City of Milton Transportation Engineer, provided a welcome to the attendees and described the purpose of the Focus Group. She thanked the attendees for coming and turned the session over to Robert Binder of Kimley-Horn and Associates, Inc. who began with a brief overview of the CTP process and the importance of the Focus Group sessions in identifying issues that cannot be revealed without community input.

The group engaged in a discussion about transportation issues and challenges. A summary of the points raised by topic is included below.

<u>What's Working Well</u>

- The signal timing at the Deerfield Parkway and Morris Rd traffic light is very well set.
- On Windward Parkway at Deerfield Parkway, the sensors work well at night.
- Survey was not accessible to visually challenged – it was fixed very quickly – thank you for addressing that and listening
- On Hwy 9 near Big Lots, putting in middle turn lanes – has made a tremendous difference.

Challenges

- Next light at Webb Rd and Deerfield Parkway is not well timed. The sensors do not work. It is a very short light.
- The roundabout is wonderful (near Cambridge HS) but traffic seems to have caught up with it. We do experience traffic issues in the evenings. Can the road we could be eventually widened to a 4 lane to accommodate traffic?
- In south Milton (near Hopewell Middle School), it is great to have all of the schools concentrated in one area, however, the speed limit changes several times. Is there a way to make it 25 mph during certain times of day to keep the speeds consistent?
- Is there a plan to expand the public transit system?
- Traffic at the light at Bethany Bend and Hopewell Rd is very bad. I sat at that light for 19 minutes because of the congestion.
    - This section is one of the highest volume roads in the City
    - City has looked at improvements that include a combination of solutions to alleviate the traffic here.
- The City could use more new signals that change to flashing during low volume times.
- Regarding widening roads to 4 lanes, every time you widen a road it fills up fast. It is not a long term solution, and usually creates more problems. It also makes it harder for pedestrians to cross, no matter your mobility. People who may need more time will not be able to cross. We have to make considerations for a broader spectrum other than just for those who drive.
- Going to a doctor's appointment using paratransit can take a full day. There are issues with paratransit not being thorough and not knowing when people may need to be picked up/dropped off.
- Crossing safely at Webb Rd near Target is a challenge for the visually impaired.
- It would help if MARTA came out farther maybe all the way to Bethany Bend so that you could get to where the Publix is.
- The new library is inaccessible. There is no public transit that goes there, so transit dependent residents cannot get there.
- Need to ensure that new development considers including amenities for mobility constrained residents in their plans.

What are key destinations that need connecting or improved connections?

- Library
- I need to be able to access the grocery store (across Webb Rd). It is not safe for me to cross to get there.

- As Crabapple develops that should be a key destination for MARTA to have service.

Transit Issues

- I have MARTA near me but the sidewalks stop and that is a problem.
- MARTA stops in places without sidewalks is a common problem. If MARTA is extended, there is other development that needs to occur along with it – sidewalks, proper setbacks, ways for non-sighted to be able to find the bus stop, etc.
- MARTA does not run all of the time. A second route would be helpful (from Bethany Bend to Hwy 9).
- Cannot get to Cambridge High School by MARTA. It may be the only school not on a MARTA route.
- During the times when I can't drive myself I would not consider using MARTA. The height of the steps have done damage to my knees, so I have to wait on people who can drive me.

Crabapple Roundabouts

- In the Crabapple area, there will be two new roundabouts constructed. My concern is the safety of the many kids who walk from school to the commercial area.
- There needs to be a plan to ensure that road is safe to cross, not just for people in chairs, but to get kids across the street. This may be more of a speed issue.
- Distracted drivers are not paying attention.
- The thought is that something similar to what is in front of Milton HS with stamped concrete would be a good solution here. It promotes a safe crossing and will slow traffic down.
- Festivals are also in that area and brings lots of traffic.

Crossings/Intersection Challenges

- The skewed intersection at Bethany Bend across Hwy 9 is at such an angle that the intersection is very big and wide. The crosswalk there follows the long angle of the road however that means that people crossing are in the intersection for a long time. Maybe the City could make the crossing more direct/straight across; even without re-aligning the road this would be a good fix. Pedestrians should be in the intersection the shortest amount of time possible.
- Pedestrian refuge islands are built to give pedestrians a break in between crossing a large/big intersection. It is easy to miss these if you are blind. Traffic needs to be stopped all the way across intersections. Those turning right on red or distracted drivers are a danger. Is it possible to make this an option (stopping traffic) when a pedestrian is in the intersection and pushes a button?

- Suburban design does not work well and has to be retrofitted to deal with intersection issues.
- When crossing intersections, I thought I was going to be mowed down trying to get to the pedestrian refuge area. I do not walk where I have to cross intersections. I have changed my whole life based on my mobility.
- There are a lot of kids that walk/bike from Cambridge High School to Starbucks and then to Target. There need to be safer crossing options for them.
- School kids cross at Bethany Bend and Hwy 9 all of the time. We do not want there to be someone hit.
- Consider benches along the way (with the widening of Hwy 9). This area will grow and people will walk more.
- There are a few pocket parks in this area, but would love to see more. The parks that we have are difficult to access. Bell Memorial Park is totally inaccessible.

Barriers to transit/MARTA Expansion

- Milton feels like a driver friendly/pedestrian unfriendly community. MARTA having more routes would be a great benefit.
- If you offer more bike/pedestrian options, people will use them.
- Expansion of MARTA depends on traffic flow, where stops are and if there are places to establish stops.
- My son uses Uber. Are there other transportation options that we have not talked about or considered?
    - Uber is accessible here
- Would our infrastructure need to change to accommodate advances in technology such as driverless cars? Should we be planning into the future?

Other Concerns

- Milton Library – seems like a tremendous amount of traffic near there in the afternoon. Will roundabouts help? The traffic lights are not synced well. Charlotte Dr. and Mayfield Road both back up.
- Is there still a plan to extend Charlotte Dr? Is that still in the works?
    - Yes, this is still a concept for improvement.
- It is expensive but what about the idea of pedestrian bridges? Can that be looked at in the long term for some of these roads?
    - The City is considering that with the proposed widening on Hwy 9 at Bethany Bend. We are looking at creating an underpass/underground crossing at that location.

Milton Comprehensive Transportation Plan Update
Cyclists Focus Group
Thursday, February 4, 2016
Olde Blind Dog Pub

Organizations Represented
Bike Alpharetta
Bike Roswell!
Cambridge High School
Endurance House
Georgia High School Cycling League
Katalyst Athletics
Kind Bikes
Olde Blind Dog Cycling Club
Stand & Hammer
Traxxion Dynamics

Project Team Attendees
Jen Price, Sycamore Consulting, Inc.
Sara Leaders, City of Milton
Cristina Pastore, Kimley-Horn and Associates, Inc.
Carter Lucas, City of Milton

Summary

The session began with a welcome by a member of the Olde Blind Dog Cycling Club. He thanked the City of Milton for coming out to listen to what cyclists had to say regarding safety and bike facilities in the city. Leader Sara Leaders, City of Milton Transportation Engineer, thanked the group for coming and described the purpose of the Comprehensive Transportation Plan and the Focus Group. She then turned the session over to Cristina Pastore of Kimley-Horn and Associates, Inc. who began with a brief overview of the CTP process and the importance of the Focus Group sessions in identifying needs regarding commuting and recreational cycling. She explained the importance of understanding where the City's priorities can be channeled, especially in light of limited resources.

The Focus Group began with an open discussion followed by an opportunity to allow cyclists to provide input via a series of maps. Input is summarized below.

C: There are some general things that can be implemented on a limited budget before spending funds on expensive projects like dedicated lanes. These things include:

- Public awareness – implement a signage program along roads making the state 3-foot passing law a public awareness issue.
- Educate drivers – that would make many of our problems go away as cyclists. The 3-foot passing law is a global standard that gives cyclists room to pass. This distance gives the cyclist and the driver room for error. Cars accelerate to pass us at an unnecessary rate of speed. On some roads, the group can maintain the speed limit. The faster the car goes, the greater the wind behind the car – that is enough to push the cyclist off the road. Educating drivers would increase the safety of cyclists.

C: We hope that bike routes will one day be connected. The network is off to a good start.

C: As a way of life, cycling will continue to grow as a mode of transportation. The USA is the only place where biking is not a common mode of transportation used. Educating motorists now will be a benefit in the future.

C: We need cooperation from local authorities.

C: There are different types of motorists that make it dangerous for cyclists:

- Motorists that don't believe cyclists should be on the road – they think it's against the law for us to be on the road. Need to make the public aware that we are legally allowed to share the road with the motorist.
- Motorists that will not pass us is the worst kind of driver. Keeps all the cars behind that car from passing too, so drivers become aggravated/angry and there are then more motorists angry – horn blowing, cutting in, etc. These motorists will not cross the double yellow line to pass us. We need to let them know that it is not against the law to pass us.
- Motorists that pass at high speeds.
- Motorists that go into the oncoming lane unnecessarily.

C: This cycling group rides in a safe fashion – not in a string. We ride as a tight pack, 2 abreast (this is legal in GA). It gives motorists a shorter length to pass.

C: Bike Alpharetta educates its own cyclists. There are things that we should not be doing as a group, as well.

C: Bike Roswell uses a ride leader who is responsible for the group during that ride – keeping everyone safe during the ride, helping riders change flats, etc.

Q: How much does a bike lane cost vs an extended shoulder?

A: I am not sure if there is a set amount; it depends on right of way, the cost of extending the slope, etc. It's difficult to define this generally. During road reconstructions, the city is trying to give a little more lane space for motorist as well as a safety shoulder lane (about 18 in) for cyclists. There are a number of roads that will be

upgraded to this new standard. Other impacts include increased impervious surface, runoff, etc.

Q: How do we go about cleaning safety shoulders?

A: The City does not have a street sweeping program. We would have to contract that service out.

C: Bike GA has an estimate per mile cost for bike signage, striping, etc. It is about $250 per sign.

Q: How much does an awareness campaign cost per mile? Is there a number/standard?

A: There is not a standard, but not very many signs are needed. May depend on terrain (hilly versus flat terrain).

C: Cars expect cyclists to ride on the right of the white line. Drivers expect us to ride on the shoulder. This is not legally a part of the roadway.

C: The "Share the Road" signage does not give a clear definition of who is sharing what. Delaware has moved to a new sign that says "bikes may use full lane". This takes the ambiguity away and educates drivers. It is a simple and cost efficient solution.

C: In Florida, they are also using new signage – look to them and other progressive states as an example of what we can do in Milton.

C: We have inherited infrastructure that is awful. Anything we can do incrementally would be great.

C: In Alpharetta, a citizen's advocacy group was formed by the city. Bike Roswell is active in the governmental process in their city and the mayor has an advisory committee there too.

C: Regarding connectivity from Roswell to Alpharetta to Milton – there is a route that incorporates all of the communities. If the experience for drivers and cyclists is the same (consistent) that would be great.

C: Road diets offer a simpler, easier to follow road for motorists by redistributing existing cross sections. If we can do that, it would be great.

C: In downtown Alpharetta, the traffic calming – narrowing down lanes to slow traffic down – works sometimes and at other times, it does not.

C: Cyclists avoid Birmingham Road and use Freemanville Road, instead. There are other streets/roads that we could use but they are just not safe for cyclists at this time.

C: There are people afraid to go on road bikes at all in Milton. We try to go on other streets and to use the gravel roads. There's nothing that connects these roads and we can't get more mileage in with those roads. We don't have options in Milton. That would be great for cyclists that may be more afraid or less experienced.

C: In Roswell about 15 yrs ago, you would have never wanted to be on the road on a bike. Now, it's different. The culture has changed. Motorists are used to it. If you want safety, you have to be on your bike on the road.

C: It would be great if the City could work to connect neighborhoods in Milton with bike and pedestrian pathways between neighborhoods. This would get riders off of the major roads. Some riders would rather use those routes, but they're all dead end roads that do not connect.

C: We need to be sure that routes are at least 10 – 15 miles to accommodate the distance that someone who is not a cyclist can ride (10 mph) and the distance that experienced cyclists can cover (15 mph). Cyclists generally ride about 2 hours a few days per week. As a point of reference, the Alpharetta greenway is 18 miles.

Q: We've talked about changing existing infrastructure. What can you do about having developers add bike lanes in front of their developments?

A: Trail and bike paths that are installed now follow a trail master plan for the City. There is a lot of discussion about that now.

C: The Comprehensive Plan is very detailed and plays to exactly what we as cyclists want. It's up to us to be sure that some of these improvements happen – we need to attend council meetings and be involved.

C: There are specific crosswalk triggers/buttons that would be conducive to cyclists and would keep us from having to clip out/dismount at crossings.

Q: How can we have influence/impact this process?

A: That's one of the reasons why we're here tonight. The info that we gathered here and through other channels will feed into the final plan. The process is wrapping up in June. The City of Milton, as a part of North Fulton will be engaged in another process. Recommendations from this plan will feed into that.

C: I've been here 25 years and have been riding for 18. Milton has grown in population and traffic. I'm glad that you came to get our input. There are at least a thousand riders that hit Milton daily. There is that much activity here. Tonight, this is a small group.

C: I travel Birmingham Road and like the roundabouts – as a driver and cyclist, we need roundabouts. They are safer.

Q: Are there more easements in places that have sewer vs septic?

A: The amount of space set aside for easements does not necessarily have anything to do with sewer versus septic systems.

Q: Is there a mechanism to report roadway issues (potholes, etc.)?

A: Yes, on the City's website. Through Sunday, you can put this feedback in with your survey response.

C: The GA Athletic Cycling League is a group that focuses on middle and high school cyclists. If we can put the infrastructure in place to allow these kids to ride safely, everyone wins in the process. We need to look ahead in planning.

C: The new library is surrounded by neighborhoods but there is no way to get there unless you drive.

Milton Comprehensive Transportation Plan Update
Pedestrian Focus Group
Saturday, February 27, 2016
Milton Mayor's Run – Jog for a Cause

Project Team Attendees
Mark Eatman, Kimley-Horn & Associates
Sara Leaders, City of Milton
Carter Lucas, City of Milton
Jen Price, Sycamore Consulting, Inc.

Summary

The format of the focus group was kiosk-style and included an informational table at the annual Milton Mayor's Run – Jog for a Cause at Freedom Park. Materials at the kiosk included a board displaying the City's existing sidewalks, trails and bike paths. Identical maps were available on the table. Postcard sized handouts were available which included information about the purpose of the CTP update, the public involvement schedule and how to stay connected to the process. Race-goers who stopped by the kiosk were asked to mark up and supply comments on table maps regarding places where sidewalk improvements were needed; where trail connections should be considered; and where crosswalk challenges exist, among other things.

Approximately 40 people stopped by the kiosk and provided input. Nine people asked to be added to the project email list.

Appendix B: MetroQuest Survey Results

1.0 MetroQuest Survey Results

A MetroQuest survey was conducted between October 28th, 2015 and February 8th, 2016 to gauge public opinion on transportation issues on a variety of topics. This survey assessed transportation priorities for residents, asked them survey questions related to their top four priorities, and allowed residents to utilize an on-line mapping tool to communicate their transportation needs. Overall, 2,100 people attempted to take the survey and out of this number, 1,297 people provided feedback. Out of the 36,291 people estimated to live in Milton (2015 estimate), this represents 3.6% of the population – which is a very high level of feedback for a community of this size.

1.1 Priority Ranking

One important aspect of this survey was to understand transportation related priorities for Milton residents. Survey respondents had the chance to rank the following priorities:

- Transportation Safety
- Neighborhoods
- Vehicular Travel
- Walking/Biking
- Economic Vitality
- Roadway Repair
- Transit Services
- Connectivity

It should be noted that each survey respondent received a randomized ordering of priorities as to prevent bias. In order to normalize the rankings based on the number of responses for each category, the scores were weighted. For a ranking of 1, the priority received a score of 4, for a ranking of 2, the priority received a score of 3, and so on. The results of this ranking on demonstrated in the table below:

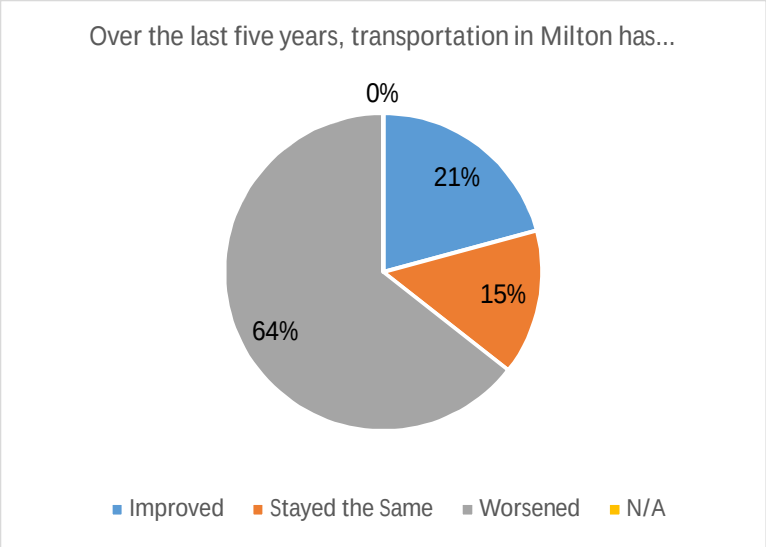
Priority	Rank	Times Ranked No. 1	Weighted Score
Vehicular Travel	1	566	3,278
Walking/Biking	2	189	1,825
Connectivity	3	99	1,717
Transportation Safety	4	130	2.60
Roadway Repair	5	102	1,561
Neighborhoods	6	70	832
Economic Vitality	7	44	819
Transit Services	8	50	463

1.2 Survey Questions

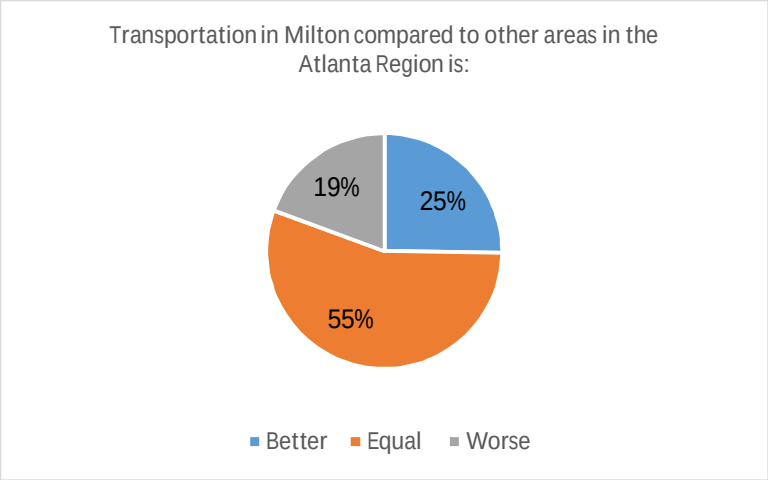
Each survey respondent was asked two introductory survey question and questions associated with their top four transportation priorities (two questions per priority). The results of these survey questions are demonstrated on the following pages.

1.2.1 Introduction Questions

Over the last five years, transportation in Milton has...		
Response	Count	Percentage
Improved	245	21%
Stayed the Same	174	15%
Worsened	759	64%
N/A	0	0%

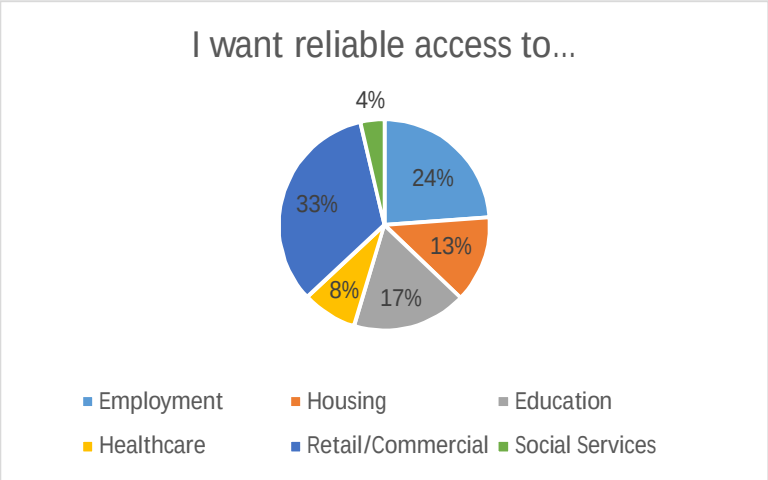


Transportation in Milton compared to other areas in the Atlanta Region is:		
Response	Count	Percentage
Better	294	25%
Equal	644	55%
Worse	226	19%



1.2.2 Connectivity Questions

I want reliable access to...		
Response	Count	Percentage
Employment	318	24%
Housing	177	13%
Education	233	17%
Healthcare	112	8%
Retail/Commercial/Activity Centers	443	33%
Social Services	49	4%

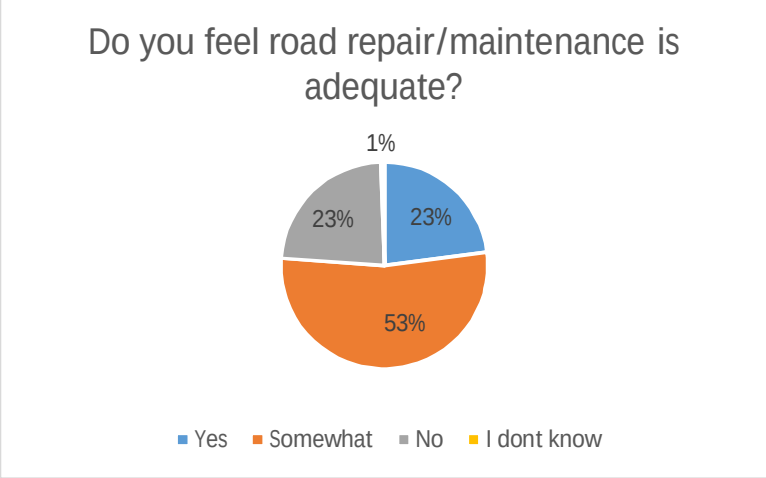


An additional free response question asked "how would you increase connectivity within Milton?" A detailed list of responses were too numerous to be included in this summary. However, common themes from responses received are shown below.

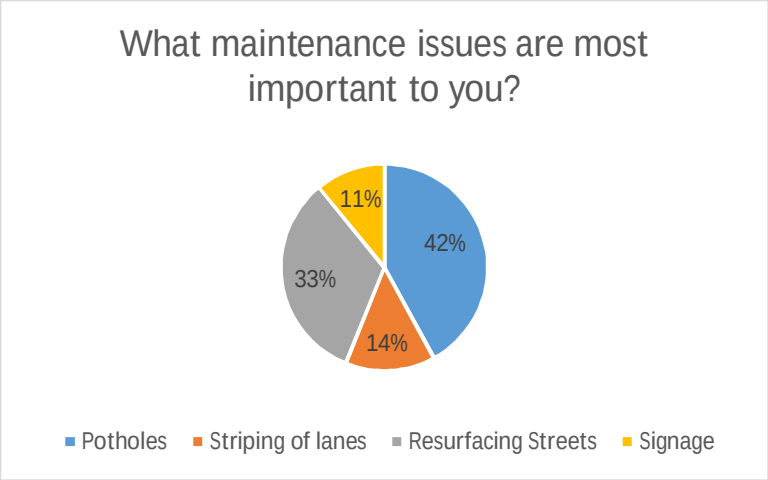
- More pedestrian and bicycle accommodations are needed throughout Milton
- Widen roadways where appropriate (i.e. SR 9)
- Improving traffic signal timing and replacing traffic stop signs with signals and roundabouts
- New roadway connections, especially those that would provide east-west connectivity
- Improved bus service and extending MARTA rail to Windward Parkway
- Coordination with surrounding Counties and Cities.

1.2.3 Roadway Repair Questions

Do you feel road repair/maintenance is adequate?		
Response	Count	Percentage
Yes	124	23%
Somewhat	287	53%
No	126	23%
I don't know	3	1%

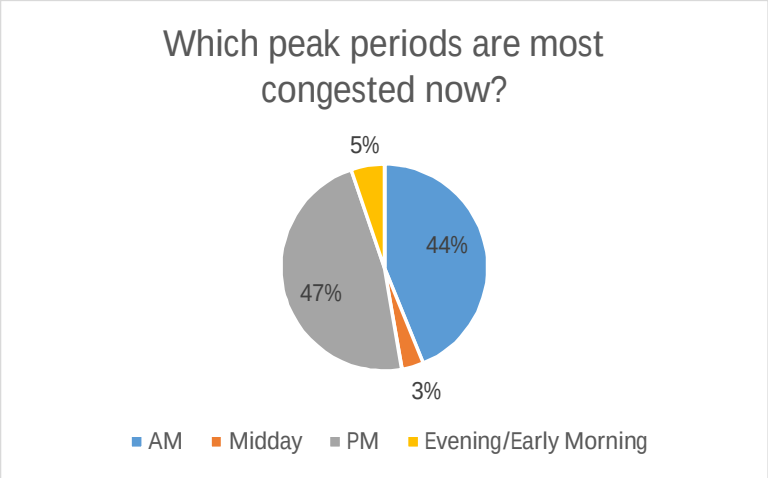


What maintenance issues are most important to you?		
Response	Count	Percentage
Potholes	447	42%
Striping of lanes	149	14%
Resurfacing Streets	351	33%
Signage	116	11%


What maintenance issues are most important to you?
11%
42%
33%
14%
Potholes
Striping of lanes
Resurfacing Streets
Signage

1.2.4 Vehicular Travel Questions

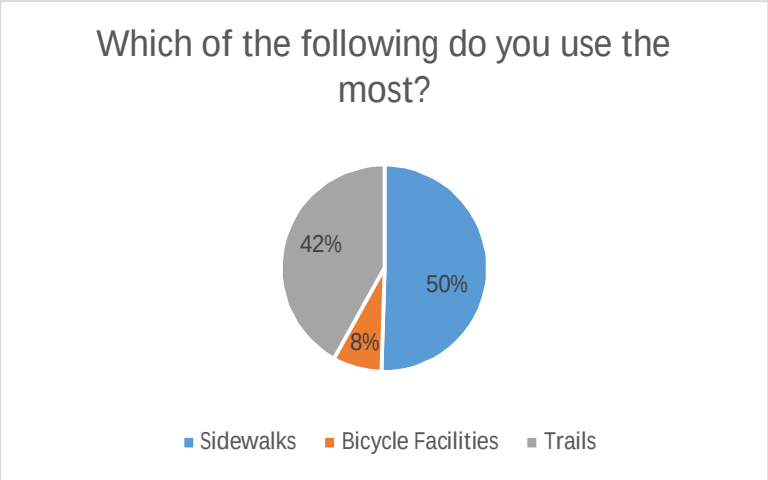
Which peak periods are most congested now?		
Response	Count	Percentage
AM (7AM – 9 AM)	674	44%
Midday (9AM – 4PM)	53	3%
PM (4PM – 7PM)	730	47%
Evening/Early Morning (7PM – 7AM)	80	5%



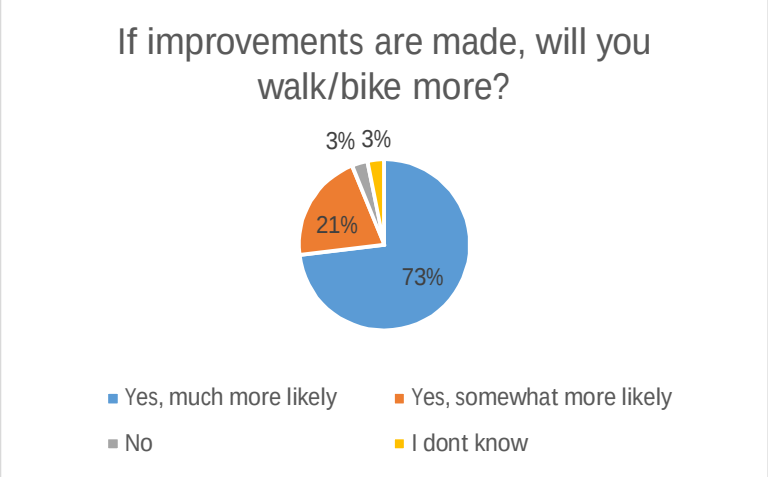
Your average travel time to/from work (minutes) is:
42.8 minutes

1.2.5 Walking/Biking Questions

Which of the following do you use the most?		
Response	Count	Percentage
Sidewalks	308	50%
Bicycle Facilities	47	8%
Greenways/Multi-use Trails	256	42%

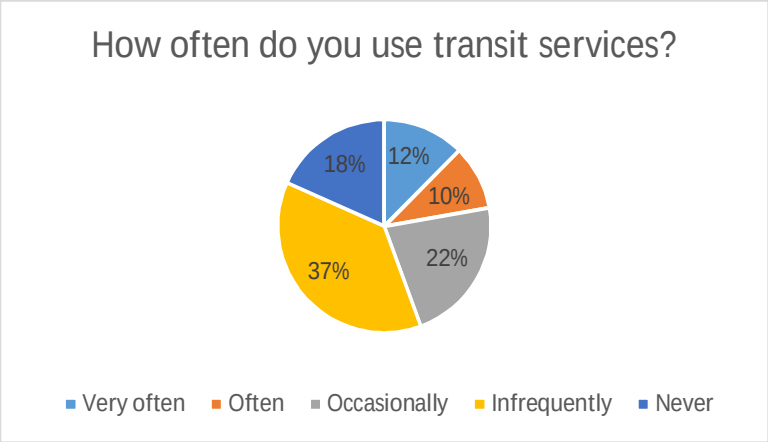


If improvements are made, will you walk/bike more?		
Response	Count	Percentage
Yes, much more likely	466	73%
Yes, somewhat more likely	132	21%
No	19	3%
I don't know	20	3%

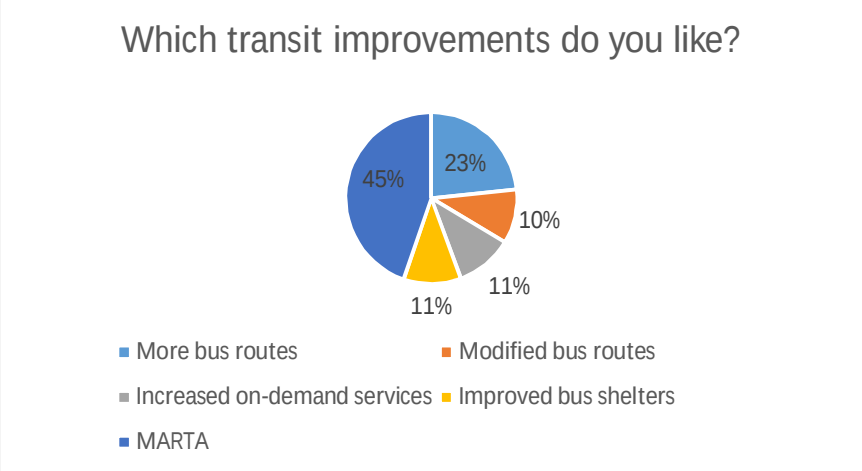


1.2.6 Transit Service Questions

How often do you use transit services?		
Response	Count	Percentage
Very often (4 – 5 days a week)	19	12%
Often (1 – 2 days a week)	15	10%
Occasionally (1 – 2 times a month)	34	22%
Infrequently (1 – 2 times a year)	57	37%
Never	28	18%

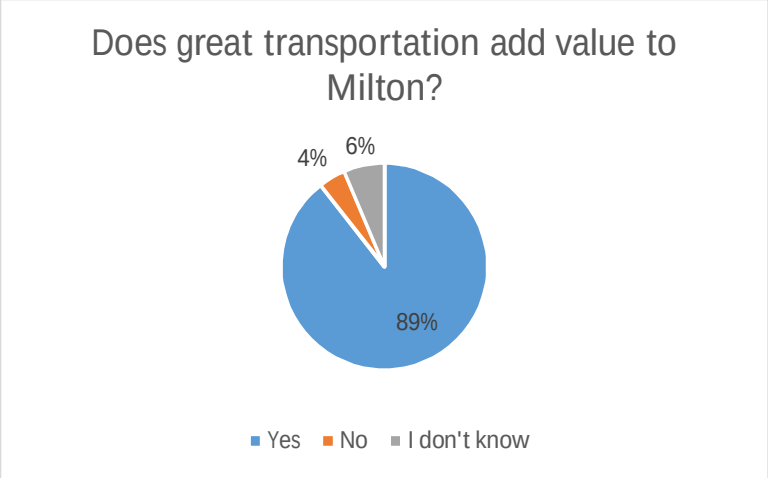


Which transit improvements do you like?		
Response	Count	Percentage
More bus routes	71	23%
Modified bus routes	31	10%
Increased on-demand (paratransit) services	33	11%
Improved bus shelters/stop amenities	33	11%
MARTA rail extension	136	45%

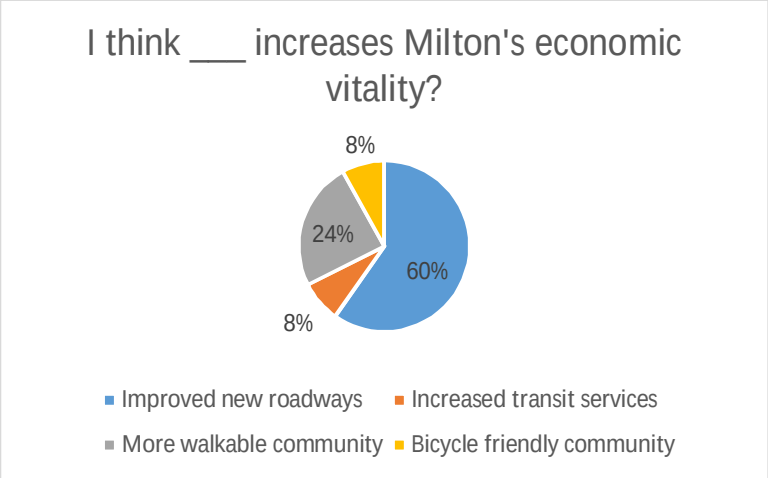


1.2.7 Economic Vitality Questions

Does great transportation add value to Milton?		
Response	Count	Percentage
Yes	322	89%
No	15	4%
I don't know	23	6%

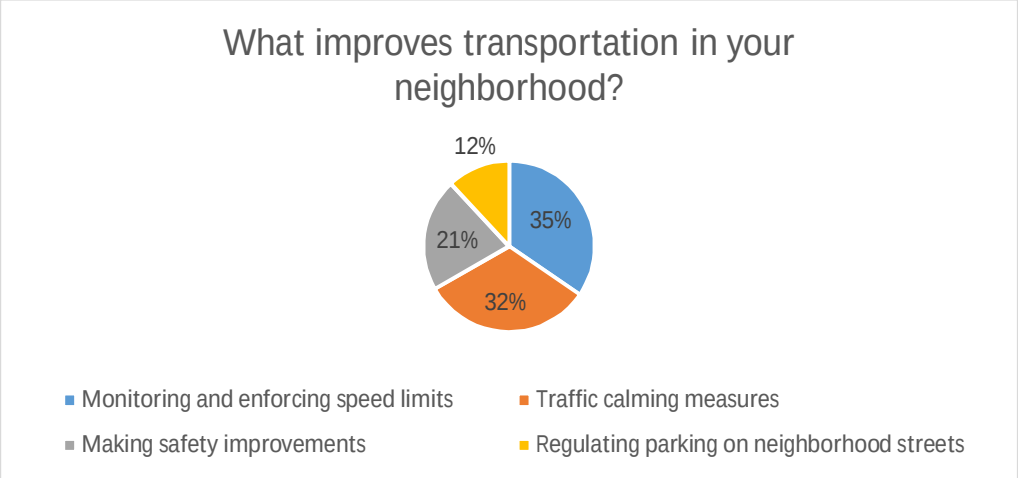


I think ___ increases Milton's economic vitality?		
Response	Count	Percentage
Improved/new roadways	221	60%
Increased transit services	29	8%
More walkable community	90	24%
More bicycle-friendly community	30	8%

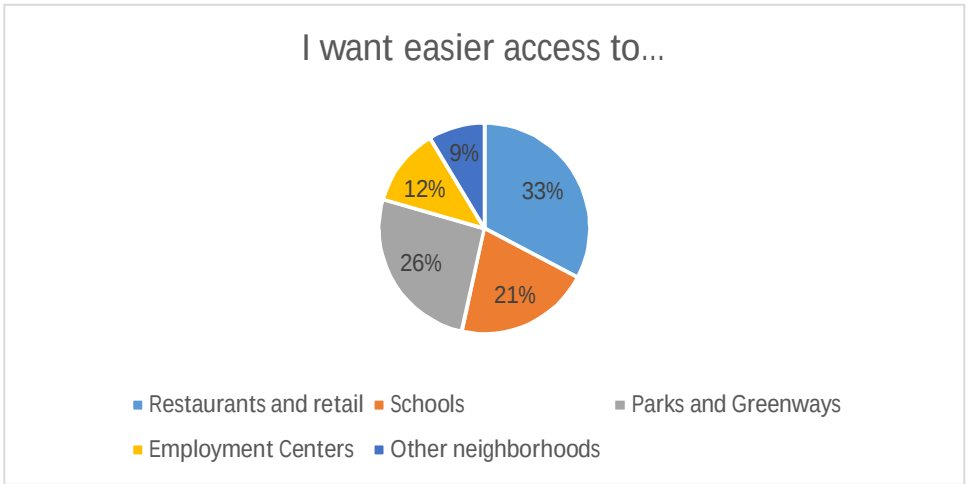


1.2.8 Neighborhood Questions

What improves transportation in your neighborhood?		
Response	Count	Percentage
Monitoring and enforcing speed limits	87	35%
Traffic calming measures	81	32%
Making safety improvements (e.g. signage, lighting, etc.)	54	21%
Regulating parking on neighborhood streets	30	12%

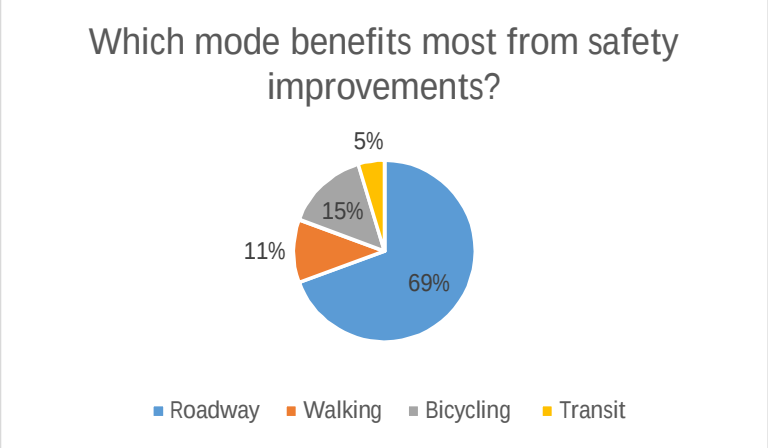


I want easier access to...		
Response	Count	Percentage
Restaurants and retail	175	33%
Schools, universities, and libraries	111	21%
Parks and greenways	139	26%
Employment centers	64	12%
Other neighborhoods	46	9%

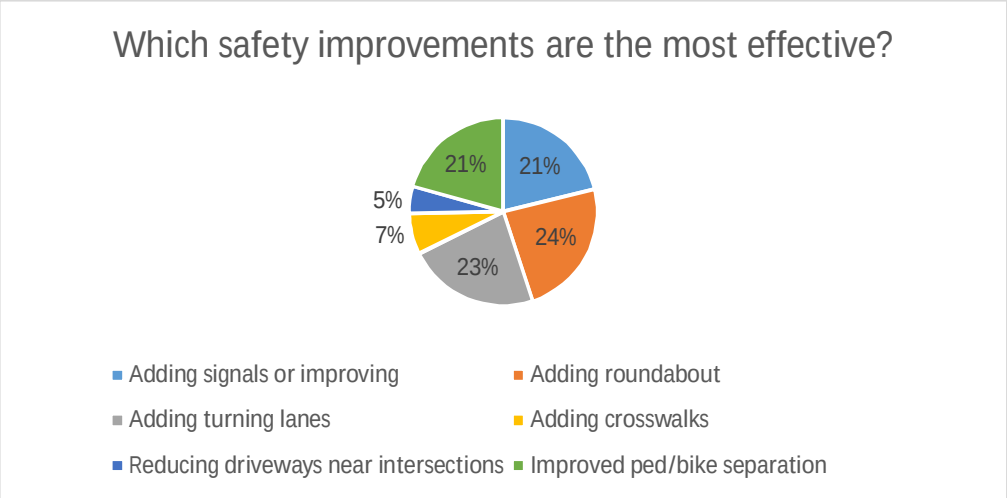


1.2.9 Transportation Safety Questions

Which mode benefits most from safety improvements?		
Response	Count	Percentage
Roadway	358	69%
Walking	58	11%
Bicycling	76	15%
Transit	24	5%

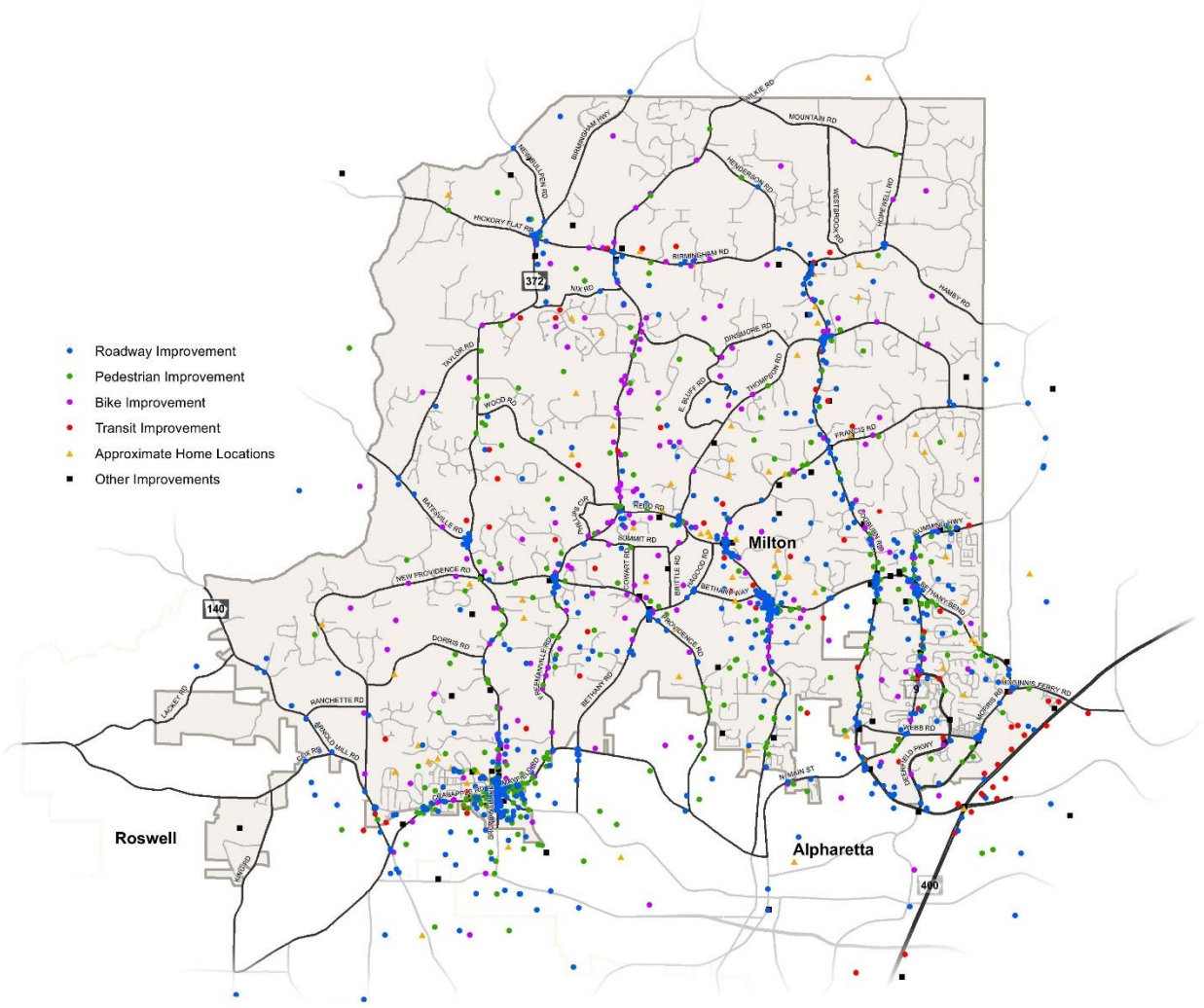


Which safety improvements are the most effective?		
Response	Count	Percentage
Adding signals or improving signal timing	336	21%
Adding roundabouts	378	24%
Adding turning lanes	361	23%
Adding crosswalks	113	7%
Reducing driveways near intersections	73	5%
Improved ped./bike separation	328	21%



1.3 MetroQuest Mapped Responses

MetroQuest's online mapping tool allowed survey respondents to directly pinpoint recommendations, improvements, concerns, and other information. The map below demonstrates the high level of feedback through their use of this tool. The full list of user responses will be used later in the Recommendations phase.



Appendix C: Full Comprehensive Market Analysis

1.0 Comprehensive Market Analysis

To better understand existing and potential traffic demand and travel destinations the Milton Comprehensive Transportation Plan includes a review of area demographics, land use patterns, and market trends.

1.1 Demographic Profile

A demographic profile for residents within the City of Milton, including age, ethnicity, and education levels are included in the appendix of this document. As a benchmark, these measures have been compared to Fulton County and the larger Atlanta MSA. This section highlights several key facts and trends. Data in the following section references the year 2000, and although the City of Milton was not incorporated until 2006, the 2000 data uses the current city limit boundaries.

1.1.1 Population Trends

Population in the City of Milton has more than doubled since 2000, reaching over 36,000 estimated residents in 2015. The City captured nearly 12% of the total population growth in Fulton County between 2000 and 2015, increasing its total county share from 2.2% in 2000 to 3.7% in 2015. This is demonstrated in Table 1 below.

Table 1. Comparison of Population Trends, 2000-2015

				2000-2015 Δ		
GEOGRAHPY	2000	2010	2015	#	%	CAGR
City of Milton	17,968	32,661	36,291	18,323	102.0%	4.8%
Fulton County	816,006	920,581	969,375	153,369	18.8%	1.2%
Altanta MSA	4,263,438	5,286,728	5,527,230	1,263,792	29.6%	1.7%
MILTON % of COUNTY	2.2%	3.5%	3.7%	11.9%		
MILTON % of MSA	0.4%	0.6%	0.7%	1.4%		

Source: ESRI; US Census; Kimley-Horn

With nearly 970,000 estimated residents in 2015, Fulton is the most populous county in Georgia, including portions of the City of Atlanta's urban footprint. Fulton County has grown by over 153,000 residents since 2000.

Atlanta MSA	
Barrow County	Gwinnett County
Bartow County	Haralson County
Butts County	Heard County
Carroll County	Henry County
Cherokee County	Jasper County
Clayton County	Lamar County
Cobb County	Meriwether County
Coweta County	Morgan County
Dawson County	Newton County
DeKalb County	Paulding County
Douglas County	Pickens County
Fayette County	Pike County
Forsyth County	Rockdale County
Fulton County	Spalding County
	Walton County

The larger 29-county Atlanta-Sandy Springs-Marietta Metropolitan Statistical Area (MSA) grew by nearly 30% over the last 15 years, reaching over 5.5 million residents. It should be noted that Fulton County comprised only 12.1% of the regional growth, demonstrating strong growth in other suburban counties outside the central core.

Within the City of Milton, residents aged 55 to 64 experienced the strongest growth over the last five years, comprising nearly one half of the total increase. The younger segment of Millennials, the 15 to 24 age cohort, increased by 1,601 residents over the last five years. It is likely that many of these individuals are still living with their parents. Losses were recorded in older Millennials, between 25 and 34, as well as residents between 35 and 44. This could be a reflection of these residents seeking more affordable housing prices elsewhere in the region to locations closer to employment.

Figures 1 and 2 illustrate population density and the percentage of residents over age 65. Table 2 shows population by age cohort for Milton.

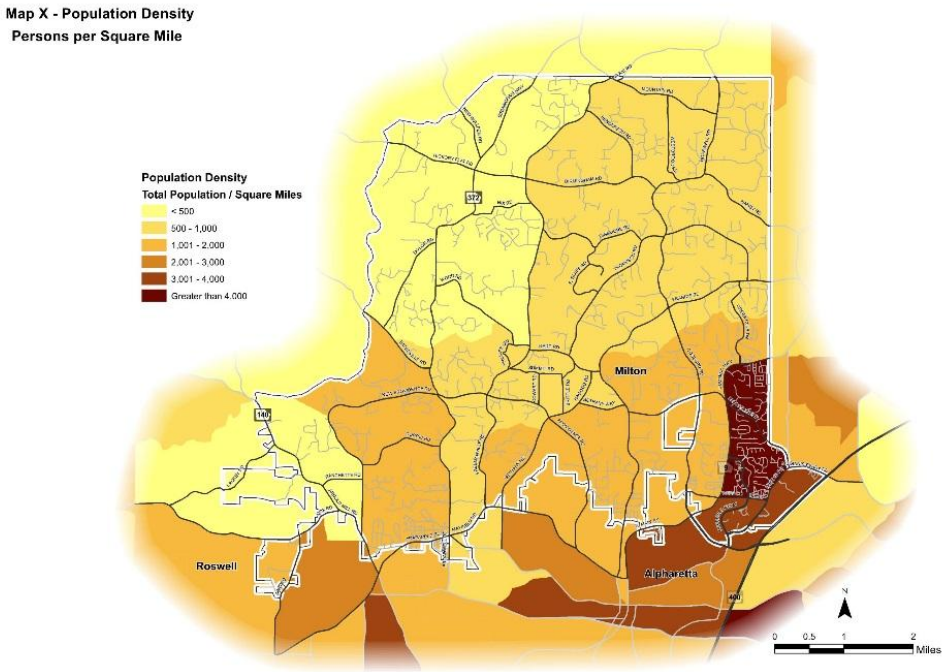


Figure 1. Population Density

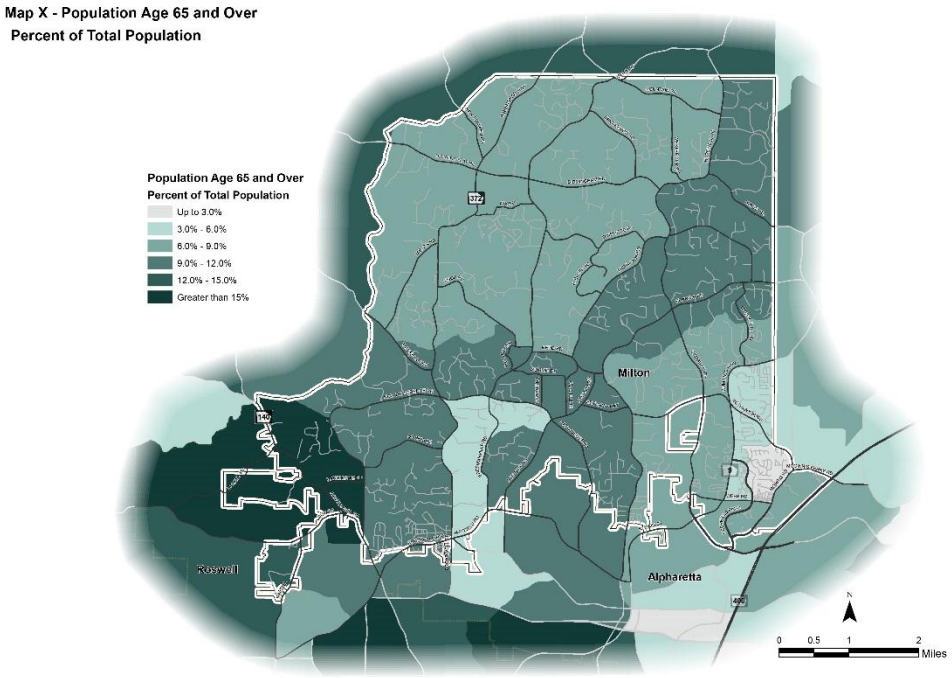


Figure 2. Population Age 65 and Over

Table 2. Population by Age Cohort, City of Milton, 2010-2015

			2000-2015 Δ	
COHORT	2010	2015	#	%
0-14	8,296	7,948	-348	-4.2%
15-24	3,625	5,226	1,601	44.1%
25-34	3,625	3,339	-287	-7.9%
35-44	5,846	5,008	-838	-14.3%
45-54	6,206	6,895	690	11.1%
55-64	3,037	4,645	1,608	52.9%
65-74	1,274	2,141	867	68.1%
75-84	588	798	211	35.8%
85+	163	290	127	77.8%
TOTAL	32,661	36,291	3,630	11.1%

Source: ESRI; US Census; Kimley-Horn

Although nationally, Baby Boomers and Millennials make up the largest age cohorts, the City of Milton has comparatively higher shares of Generation X (aged 45 to 54). This represents population at the prime of their earning potential, typically driving demand for single-family residential product. This group is also an important generator of retail demand. The slightly higher share of children less than 14 years of age is reflective of family households led by

Generation X. Approximately 46.5% of the households in Milton are defined as family, compared to 38.2% for the Atlanta MSA. Figure 3 shows population by cohort comparisons between Milton and the Atlanta metropolitan region.

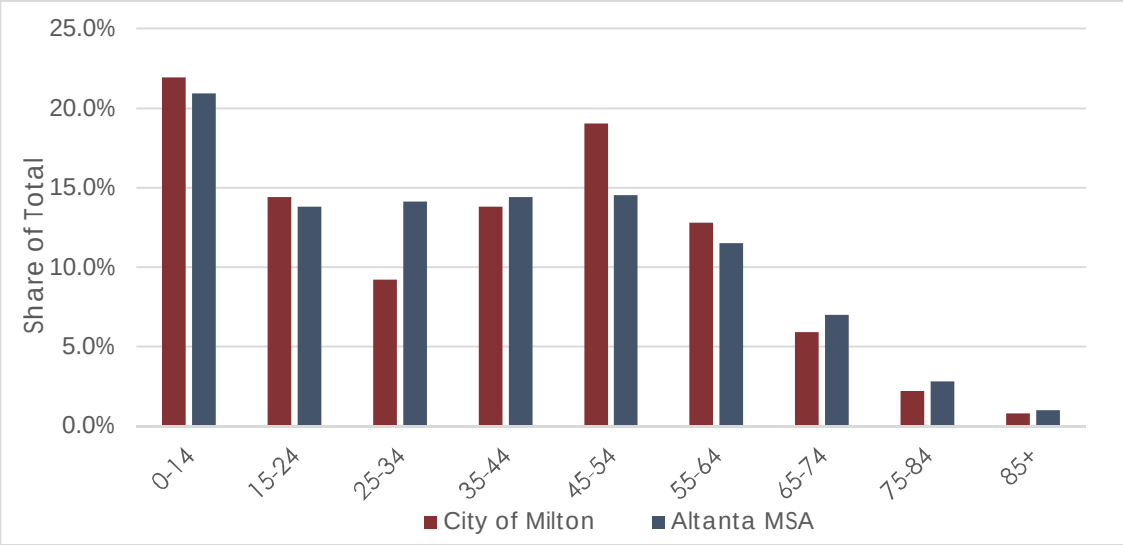


Figure 3. Comparison of Shares of Population by Age Cohort, 2015

More than three-quarters of the total City of Milton population identifies as white, demonstrating minimal change in the last five years. Comparatively, Milton's share of residents identifying as white is notably higher than 53.5% for the Atlanta MSA. Residents identifying as having Hispanic Origin (of any race) comprise 5.7% of the population, lower than 10.7% for the larger region. Figure 4 demonstrates the ethnic diversity in Milton in 2015.

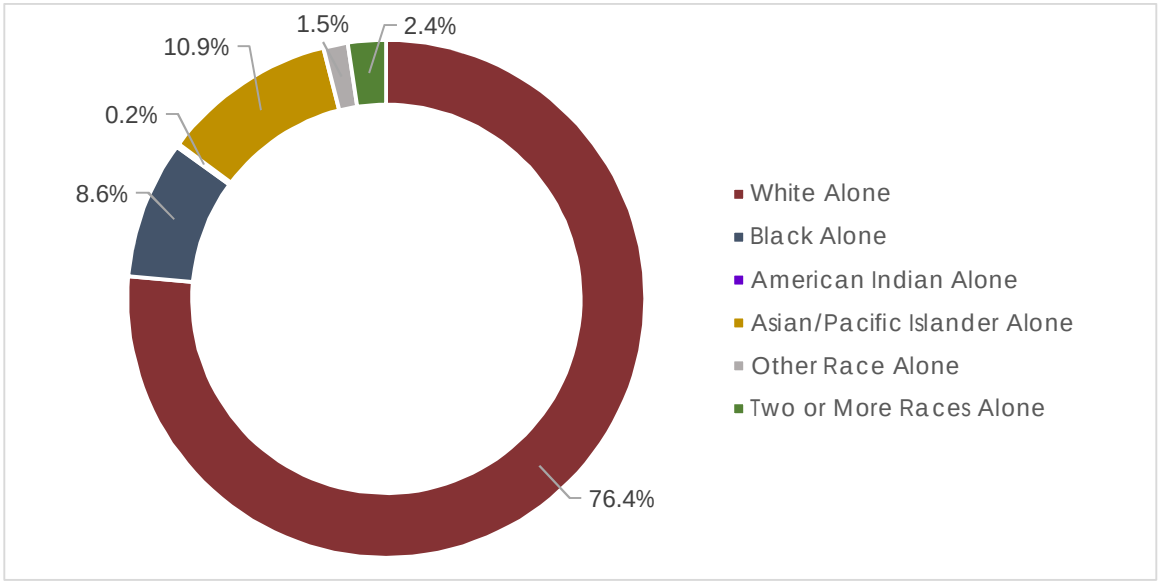


Figure 4. Ethnic Diversity, City of Milton, 2015

Residents in the City of Milton are highly educated with approximately 65% of the total population over age 25 holding at least a Bachelor's Degree. This measure is significantly higher than 35.6% for the larger Atlanta MSA. This comparison of educational attainment can be seen in Figure 5.

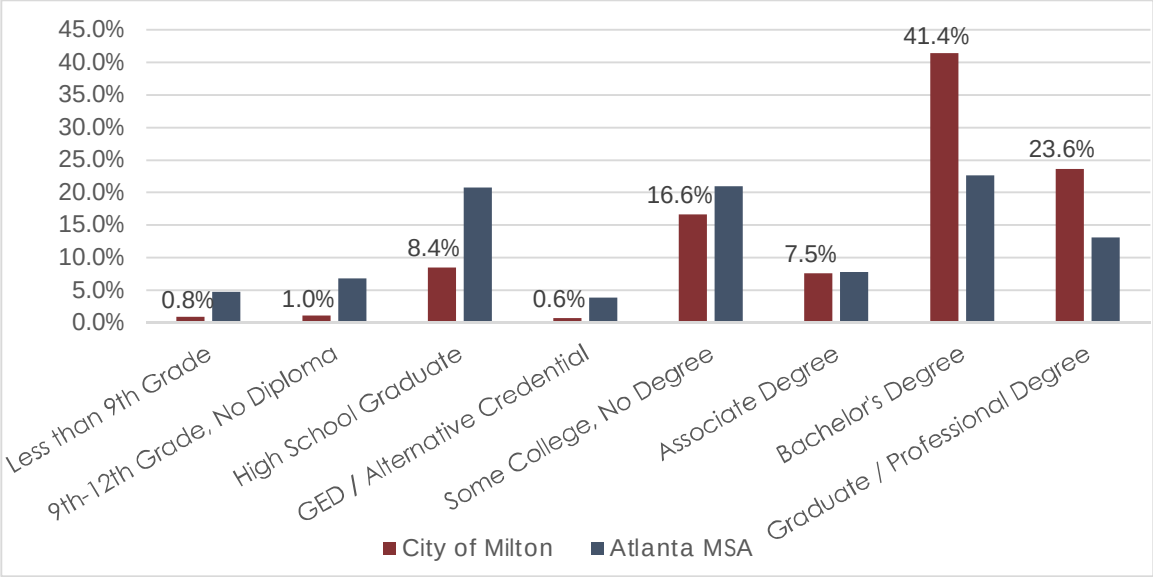


Figure 5. Comparison of Educational Attainment, 2015

1.1.2 Household Trends

Households in the City of Milton have increased by 92.8%, from 6,670 in 2000 to nearly 13,000 in 2015. The increase in households in Milton comprised 8.0% and 1.3% of growth in Fulton County and the Atlanta MSA, respectively. This can be seen in Table 3 below.

Table 3. Comparison of Household Trends, 2000-2015

				2000-2015 Δ		
GEOGRAPHY	2000	2010	2015	#	%	CAGR
City of Milton	6,670	11,659	12,859	6,189	92.8%	4.5%
Fulton County	321,242	376,377	398,398	77,156	24.0%	1.4%
Altanta MSA	1,559,712	1,943,885	2,033,479	473,767	30.4%	1.8%
MILTON % OF COUNTY	2.1%	3.1%	3.2%	8.0%		
MILTON % MSA	0.4%	0.6%	0.6%	1.3%		

Source: ESRI; US Census; Kimley-Horn

It is important to note that the growth in households was less than the increase in population over the same time period, indicating an increase in overall household size. Nationally, household size has been declining, largely due to growth in the Millennial and Baby Boomer generation segments. The average household size in Milton has increased from 2.69 in 2010 to 2.80 in 2015, a trend that is projected to continue.

Approximately 28.6% of Milton households contain two persons, followed by 20.7% with four. The comparatively higher share of four-person households than the surrounding Atlanta MSA is reflective of the higher share of families within the City. A comparison of household size between Milton and the Atlanta metropolitan area is demonstrated in Figure 6.

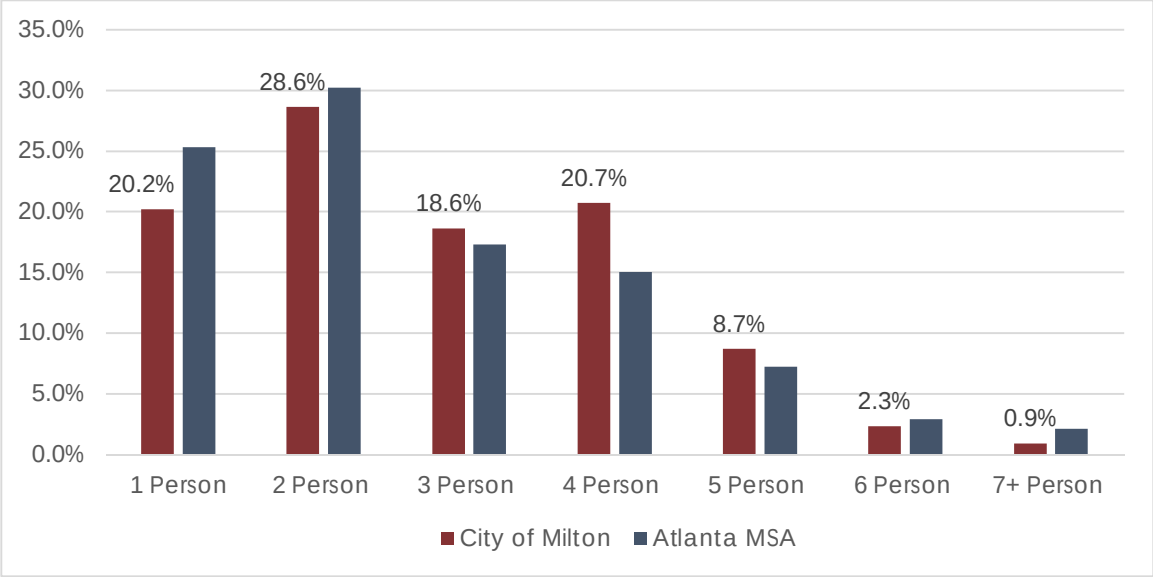


Figure 6. Comparison of Households by Size, 2010

In 2015, the estimated median household income in the City of Milton was nearly $115,000, more than double that of Fulton County and the Atlanta MSA. According to the Environmental Systems Research Institute (ESRI), Milton's median household income is expected to continue to increase, reaching nearly $130,000 annually by 2020. This compares to a median household income of $54,780 in Fulton County and $56,889 for Atlanta as a whole. This is not to suggest that the City of Milton is comprised of only upper income households. Figure 7 illustrates the percent of residents below the poverty threshold.

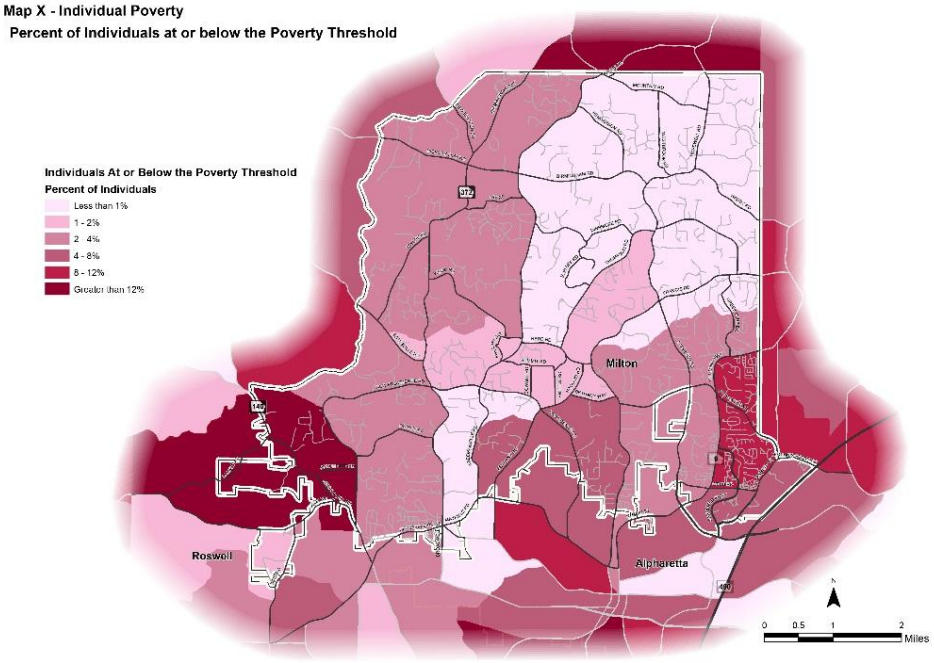


Figure 7. Percent of Individuals below the Poverty Threshold

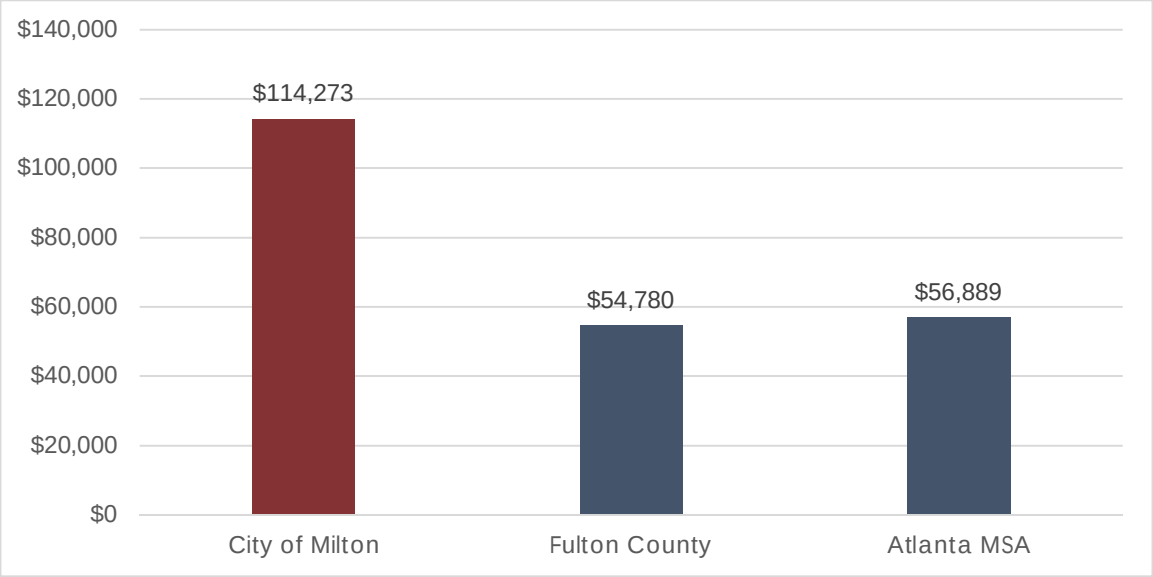


Figure 8. Comparison of Median Household Income, 2015

With a median household income nearing $115,000 annually, it is no surprise that the City of Milton has notably higher shares of households earning over $100,000 than the larger Atlanta MSA. Conversely, Milton has lower shares of all households earning less than $100,000, especially those with the lowest annual incomes (less than $50,000). Median household income and household income, by cohort, comparisons can be seen in Figures 8 and 9.

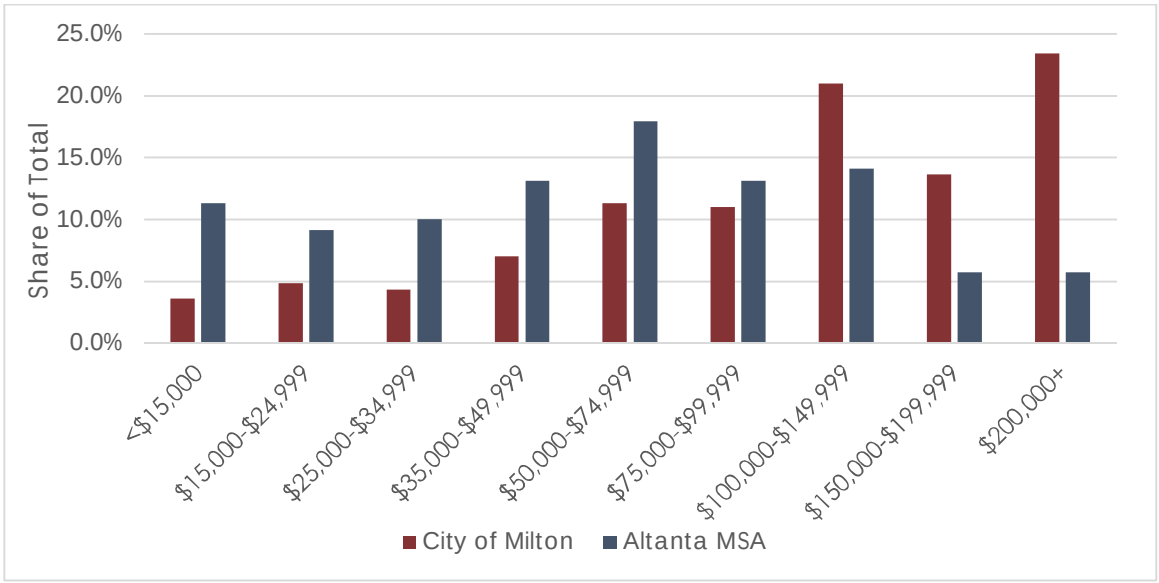


Figure 9. Comparison of Households by Income Cohort, 2015

1.2 Economic Profile

This section provides an overview of employment trends for the Atlanta MSA, Fulton County, and more specifically for the City of Milton. Trends indicate shifts in employment sectors that could impact transportation needs in the future.

1.2.1 Atlanta MSA

The 29-county Atlanta MSA had over 2.3 million jobs in 2014, an increase of 7.1% from 2004. The gain was primarily attributable to growth in the Healthcare and Professional Services sectors. With over 261,000 jobs, the Retail Trade sector is the largest industry, representing 11.2% of the total employment in the region. Other key employment sectors include Healthcare and Leisure and Hospitality. The following sectors had the largest absolute gains in the last 10 years:

- Healthcare (+62,906)
- Professional Services (+61,999)
- Leisure and Hospitality (+43,157)
- Education (+21,233)
- Retail Trade (+15,201)

Of the 14 reported sectors, six demonstrated declines since 2004, the most notable being in Manufacturing and Construction. Losses in these sectors are consistent with national and state-wide trends following the 2007-2009 Recession. Although losses were notable between 2004 and 2009, declines in Construction have slowed in the last five years following the return of development. The Manufacturing sector has rebounded, experiencing an increase in jobs since 2009. These trends can be seen in Table 4 below.

Table 4. Annualized Employment Trends by Sector, Atlanta MSA, 2004-2014

				2004-2014 Δ		
INDUSTRY CLASSIFICATION	2004	2009	2014	#	%	CAGR
Natural Resources	3,890	3,003	2,974	-916	-23.5%	-2.6%
Construction	122,657	97,017	96,531	-26,126	-21.3%	-2.4%
Manufacturing	177,507	145,348	150,746	-26,761	-15.1%	-1.6%
Wholesale Trade	139,630	128,904	134,741	-4,889	-3.5%	-0.4%
Retail Trade	246,103	244,919	261,304	15,201	6.2%	0.6%
Transportation & Utilities	138,735	139,468	146,892	8,157	5.9%	0.6%
Information	92,605	79,523	85,869	-6,736	-7.3%	-0.8%
Finance & Real Estate	146,432	138,247	145,813	-619	-0.4%	0.0%
Professional Services	358,217	352,467	420,216	61,999	17.3%	1.6%
Education	178,732	208,741	199,965	21,233	11.9%	1.1%
Healthcare	194,344	221,734	257,250	62,906	32.4%	2.8%
Leisure & Hospitality	211,412	221,969	254,569	43,157	20.4%	1.9%
Other Services	58,872	56,902	60,693	1,821	3.1%	0.3%
Public Administration	108,471	120,571	114,696	6,225	5.7%	0.6%
TOTAL	2,177,607	2,158,813	2,332,259	154,652	7.1%	0.7%

Source: Georgia Department of Labor, QCEW, Kimley-Horn

1.2.2 Fulton County

The 764,952 jobs in Fulton County in 2014, made up 32.8% of the total employment in the Atlanta MSA. Containing the majority of the City of Atlanta, Fulton County is the economic hub of the region, adding nearly 38,000 jobs in the last 10 years. Professional Services is the largest sector in Fulton County, with the 177,682 jobs in this industry making up nearly one-quarter of the total county employment in 2014. The largest growth sectors in Fulton County between 2004 and 2014 include:

- Professional Services (+30,131)
- Healthcare (+16,189)
- Leisure and Hospitality (+12,478)
- Education (+3,244)
- Public Administration (+2,924)

These employment trends for Fulton county and comparisons between Milton and Fulton County can be seen below in Table 5 and Figure 10, respectively.

Table 5. Annualized Employment Trends by Sector, Fulton County, 2004-2014

				2004-2014 Δ		
INDUSTRY CLASSIFICATION	2004	2009	2014	#	%	CAGR
Natural Resources	196	254	306	110	56.1%	4.6%
Construction	20,918	16,970	16,056	-4,862	-23.2%	-2.6%
Manufacturing	35,331	27,328	25,504	-9,827	-27.8%	-3.2%
Wholesale Trade	42,288	38,456	39,150	-3,138	-7.4%	-0.8%
Retail Trade	56,453	52,962	58,045	1,592	2.8%	0.3%
Transportation & Utilities	58,322	46,554	46,887	-11,435	-19.6%	-2.2%
Information	48,990	46,300	47,568	-1,422	-2.9%	-0.3%
Finance & Real Estate	67,137	66,763	66,784	-353	-0.5%	-0.1%
Professional Services	147,551	140,734	177,682	30,131	20.4%	1.9%
Education	44,630	48,806	47,874	3,244	7.3%	0.7%
Healthcare	64,455	67,754	80,644	16,189	25.1%	2.3%
Leisure & Hospitality	75,289	77,193	87,767	12,478	16.6%	1.5%
Other Services	19,888	20,088	21,901	2,013	10.1%	1.0%
Public Administration	45,860	49,233	48,784	2,924	6.4%	0.6%
TOTAL	727,308	699,395	764,952	37,644	5.2%	0.5%

Source: Georgia Department of Labor, QCEW, Kimley-Horn

Fulton County comprises nearly one-third of the total employment in the Atlanta MSA. By sector, Fulton County has a notable higher share of Professional Services and Finance and Insurance jobs driven by concentrations in and near downtown Atlanta.

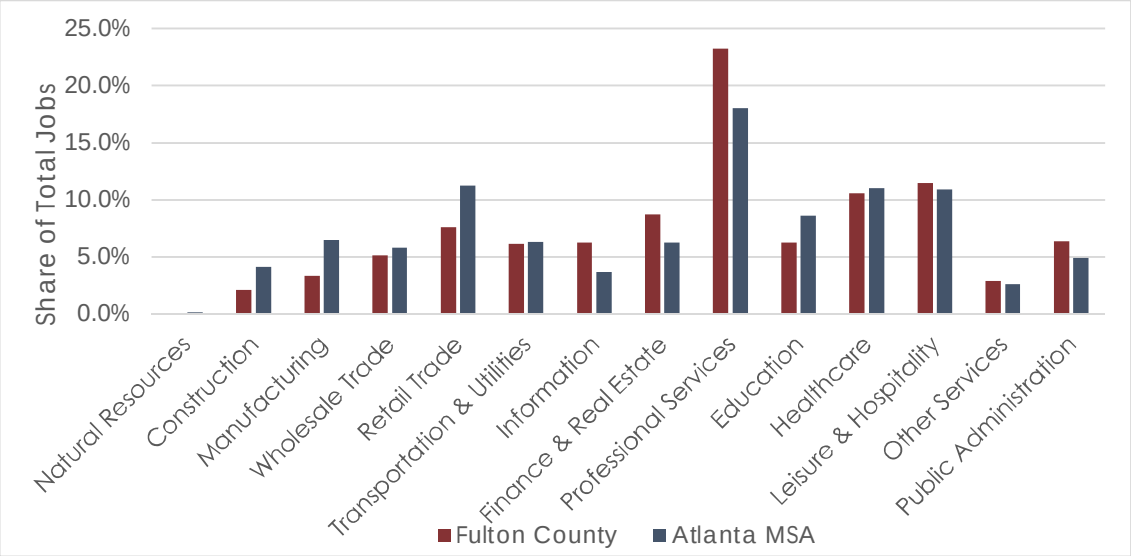


Figure 10. Comparison of Share of Employment by Sector, 2014

1.2.3 City of Milton

Employment data for the City of Milton was provided by U.S. Census' Longitudinal Employer dataset. The most recent employment data provided is from 2013. There were nearly 10,000 jobs located in the City of Milton in 2013, heavily concentrated in the Deerfield area, with proximity to GA 400. Jobs in this area of Milton are heavily focused in the Professional Services and Information sectors. A secondary concentration is focused on the Crabapple area of Milton, hosting primarily local jobs in the Retail Services sector (shown in Figure 11).

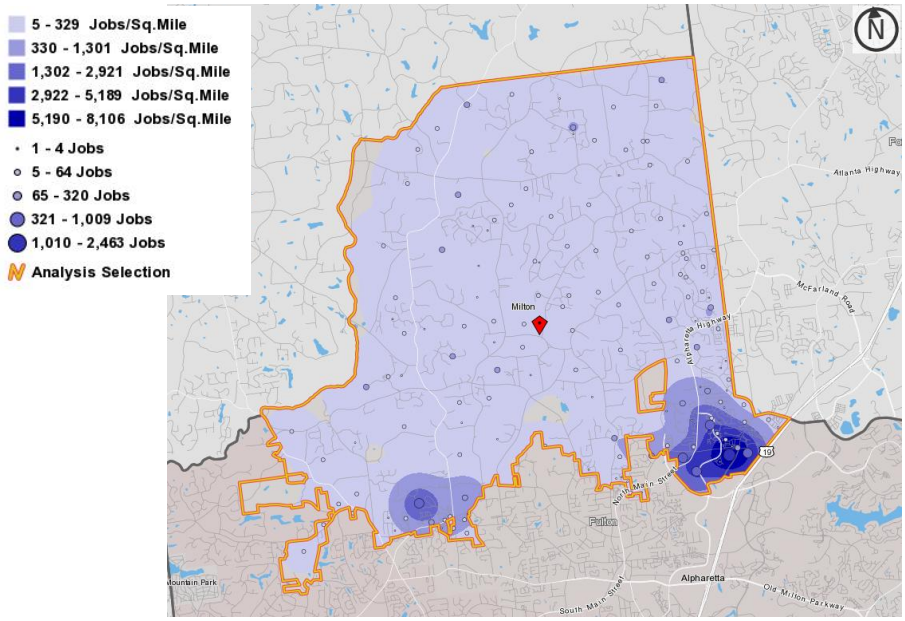


Figure 11. Employment Concentrations, City of Milton, 2013

Employment in Milton increased by 33.1% between 2004 and 2013, with the strongest growth in the Professional Services, Information, and Retail Trade sectors. Over 25% of the total jobs in Milton are in the Information sector, driven by major employers including AT&T and ACS Wireless companies. The City of Milton also has a higher share of total employment for Professional Services than Fulton County and the Atlanta MSA. Employment comparisons by sector between Milton and Fulton County can be seen below in Figure 12.

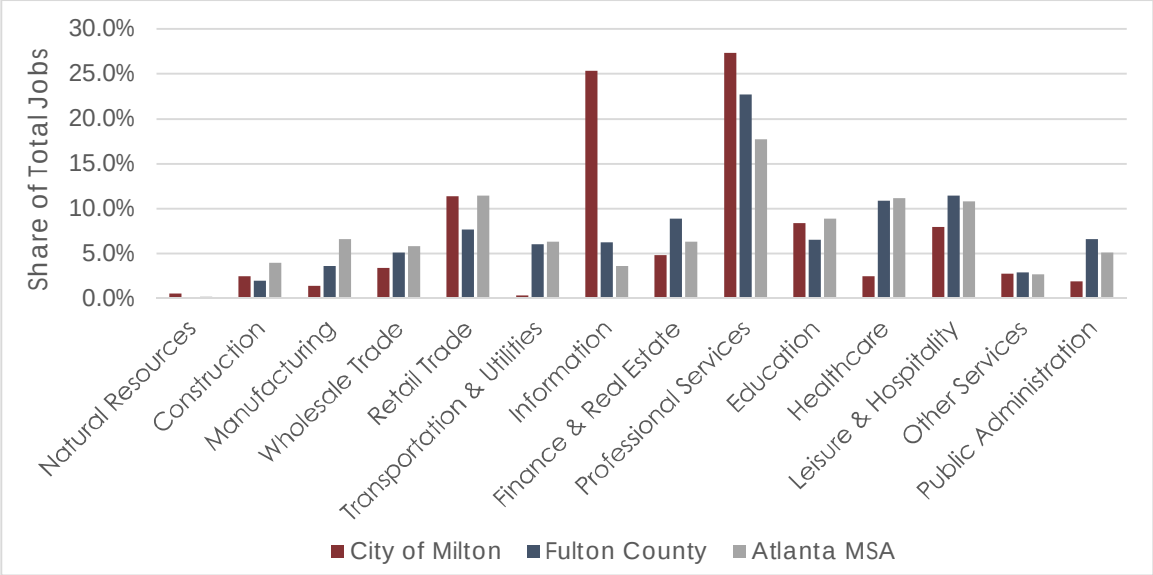


Figure 12. Comparison of Share of Employment by Sector, 2013

As shown in the graphic below, approximately 9,000 people commute into the City of Milton on a daily basis for employment, while nearly 15,000 residents commute to work outside. An estimated 765 people live and work in the County. This is demonstrated below in Figure 13.

Figure 13. Commuting Patterns, City of Milton, 2013

A review of in- and out-commuting trends demonstrates that the number of people living in Milton and commuting to jobs outside the City have more than doubled in the last 10 years. Non-residents commuting into Milton for jobs have increased at a more modest pace. Residents of Milton that also work in Milton nearly doubled from 390 people in 2004 to 765 people in 2013.

1.3 Macro-Level Market Considerations

The Atlanta region, defined as the 29-county MSA, is in the midst of recovery following the economic recession from 2007-2009. The Atlanta MSA has grown by over 240,000 people since 2010, approaching a total population of nearly 5.6 million in 2015. As a region, the strongest growth was experienced in Fulton, Gwinnett, Cobb, DeKalb, and Forsyth counties, comprising more than three-quarters of the total increase.

Although growth in the Atlanta MSA has slowed from the rapid pace recorded between 2000 and 2010, it is still one of the fastest growing areas in the United States. Based on 2014 U.S. Census estimates, the Atlanta MSA is the ninth largest region in the United States, and remains in the top ten for absolute population increase.

Some of the macro-level demographic shifts impacting the region include:

- Rise of the Millennials. Born roughly between 1980 and 2000, Millennials have overtaken the Baby Boomers as the largest generation. This shift will shape the form of development for years to come, as only a portion of this generation has moved out of their childhood homes. Impacts will come particularly in regards to housing, employment, and transportation choices. Atlanta was within the top 30 regions of the United States with the fastest increase in Millennials. While some will seek to live in an urban location, rising housing prices will present opportunities for other well-connected areas of Fulton County. This will be especially relevant for places like Deerfield and Milton within Milton that have access to jobs and high quality of life measures.
- Aging Baby Boomers. Although Millennials are now the largest cohort, Baby Boomers still comprise nearly 22% of the total national population. Some in this cohort are still working, driving spending potential. This cohort is driving demand for a maintenance-free lifestyle close to family, friends, shopping, dining, church, and cultural or recreational amenities. While the vast majority of this cohort still prefer homeownership, some will seek higher density options, largely due to continued national issues related to financing and liability for condominium construction. A wide array of housing options, including a continuum of care facilities, will be in demand to accommodate this group in the future.
- Stabilization of Household Formation. Household formation was highest nationally and in the Atlanta region between 2004 and 2006, before falling during the 2007-2009 Recession. The drop in household formation was partially impacted by young adults living at home longer or relying on roommates. Since 2010, household formation has stabilized, but it is unlikely to reach the same pre-Recession measures. This can be seen below in Figure 14

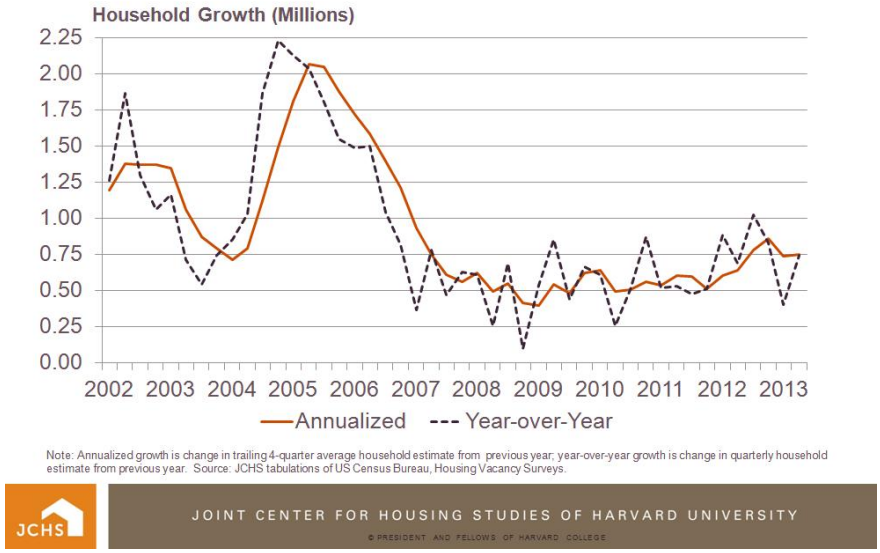


Figure 14. National Household Formation, 2002-2013

- Decline in Home-ownership Rate. Challenges with obtaining financing, coupled with shifting preferences of Millennials and Baby Boomers, have caused a notable decline in the rate of home-ownership. In fact, the current national homeownership rate the lowest since 1967. The share of renter-occupied housing units in the Atlanta MSA increased by 3.3%, from 30.3% in 2010 to 33.6% in 2015. Milton, on the contrary, has experienced a decline of renter-occupied housing units in the last five years. Much of the renter decline in Milton is likely due to the reconversion of single-family properties from renter- to owner-occupied following recovery in the residential market.
- Smaller Household Sizes. Nationally, the average household size has gradually declined, impacted by the large Millennial and Baby Boomer generations. Single-person household in the region have experienced strong growth since 2000, and could overtake two-person households as the most common size by 2020. This impacts the demand for a variety of housing types, including single-family detached, townhouses, and multi-family units. Attracted by the high quality of life for families, including high-performing schools, Milton has experienced an increase in household size during the same time period.

1.4 Local Market Conditions

This section provides high-level market considerations for the City of Milton, including the potential impact of the competitive regional developments highlighted above. Future development, driven by market demand, will impact transportation patterns in and around the City of Milton.

1.4.1 Residential

The dominate land use in the City of Milton is single-family, detached residential. The City, which more than doubled in population between 2000 and 2015, has emerged as an attractive place to live. Contrary to national trends, average household sizes have increased in Milton indicating the continued attractiveness for families. This will continue to drive demand for low- to moderate-density single-family residential units in the future.

However, it should be noted that the Millennial and Baby Boomer cohorts in Milton have experienced some of the fastest population increases in the last 15 years. These segments of the population will create demand for a variety of housing types, including single-family detached, townhouses, and multi-family units. Nearly one-half of the population is over age 45, and could seek to downsize as children move out and form a separate household.

Higher density residential development would likely gravitate to the Deerfield and Crabapple areas of Milton. True multi-family development, including both condominiums and apartments, would be most attracted to the Deerfield area offering proximity to GA 400, jobs, and shopping.

1.4.2 Retail

Regional retail opportunities in northern Fulton County and southern Forsyth County will be heavily impacted by the Avalon development and the planned mall, corporate office space, restaurants, hotel, and residential dwelling units at Ronald Reagan Boulevard and GA 400. Given proximity to Milton, these developments are likely to attract a large share of the regional retail demand in the area.

In the short-term, the Deerfield and Crabapple areas will remain an attractive location for smaller scale, neighborhood focused retail serving residents and employees. As Milton continues to grow, additional opportunities for neighborhood-serving retail could be accommodated in the Birmingham Crossroads area or in key nodes along the Arnold Mill Corridor.

1.4.3 Employment

Given the area's proximity to GA 400 and potential for clustering near other existing employment sectors, Deerfield will be the primary location for new office space development. Demand for small-scale professional office space could also be generated in Crabapple.