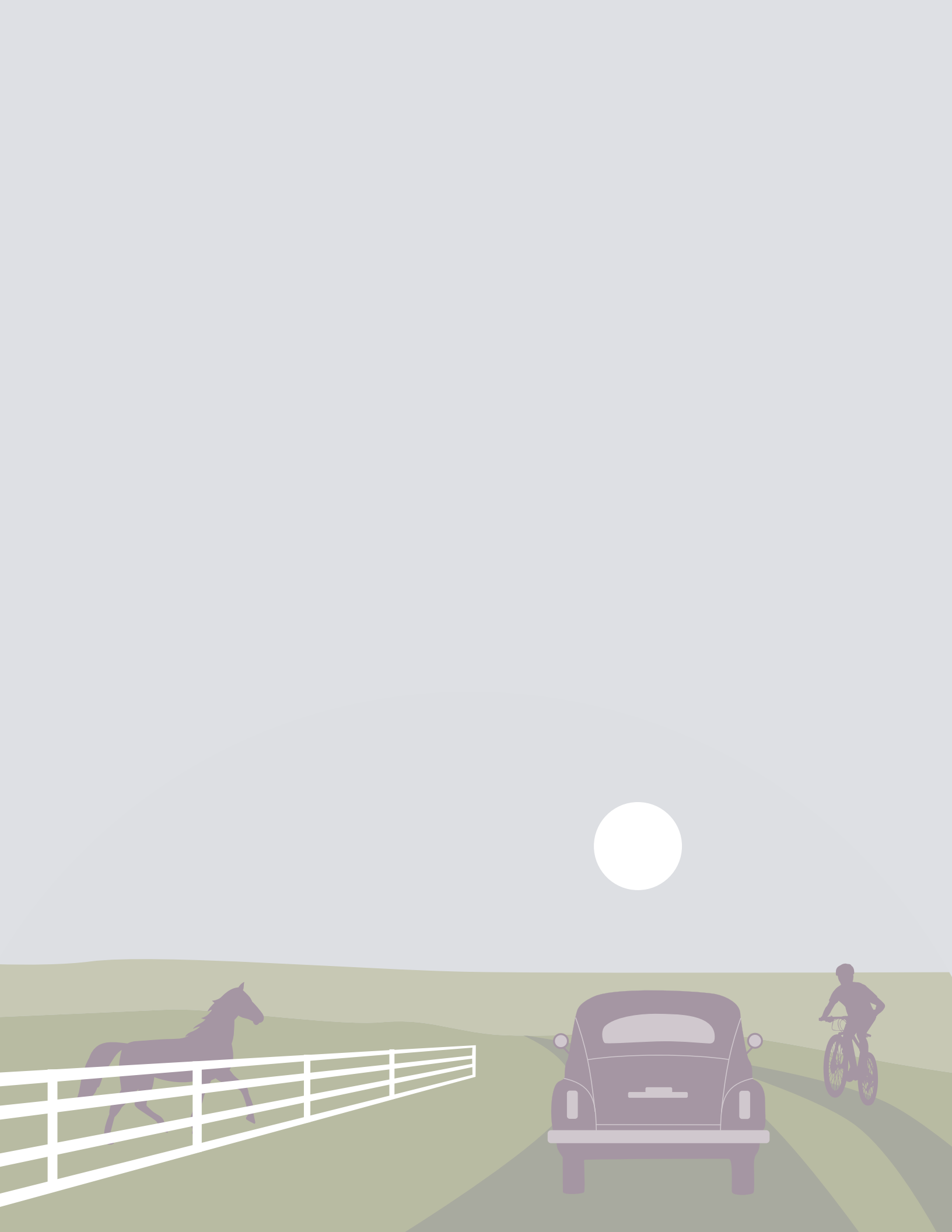
RECOMMENDATIONS REPORT

COMPREHENSIVE TRANSPORTATION PLAN

CITY OF MILTON | 2023



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INTRODUCTION

Purpose of the Plan

The 2023 Milton Comprehensive Transportation Plan (CTP) aims to assess the City of Milton's existing and future long-range transportation needs and help guide infrastructure investments to ensure a great quality of life for its residents. An update to its 2016 CTP, the plan identifies transportation priorities, establishes a relationship between local and regional expectations, and seeks to align the City with its 2021-2025 Strategic Action Plan and the 2040 Comprehensive Plan. The updated plan also enables the City to determine the progress made since the last CTP and develop a future framework for sustainable growth. For a more in-depth analysis of Milton's existing conditions and needs assessment, see Appendix A.

2021-2025 Strategic Action Plan

Mission

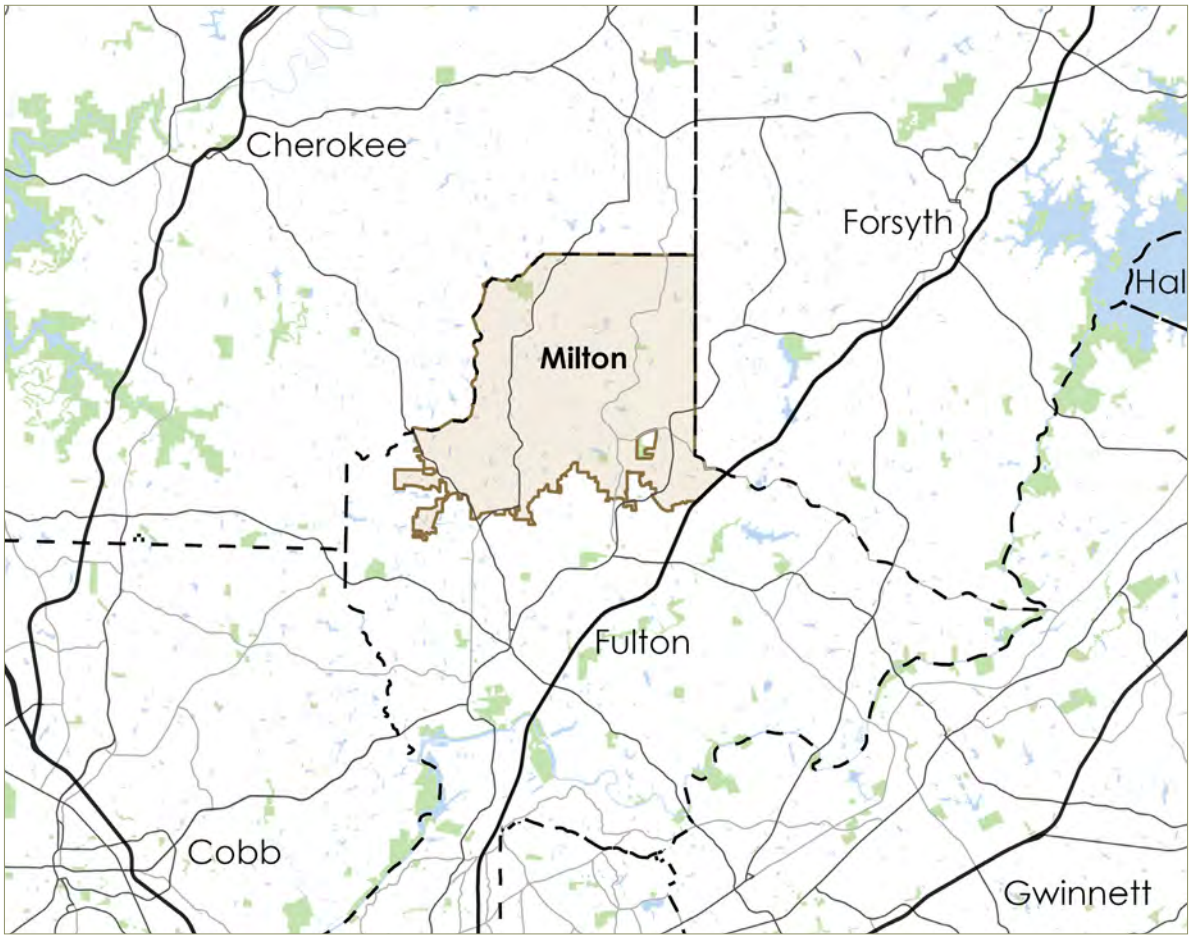
"We take pride in our responsibility to protect and improve the high quality of life for those we serve."

Vision

Milton will be a city recognized for its exceptionally high quality of life, strong sense of place and community, and dedication to preserving our rural heritage.

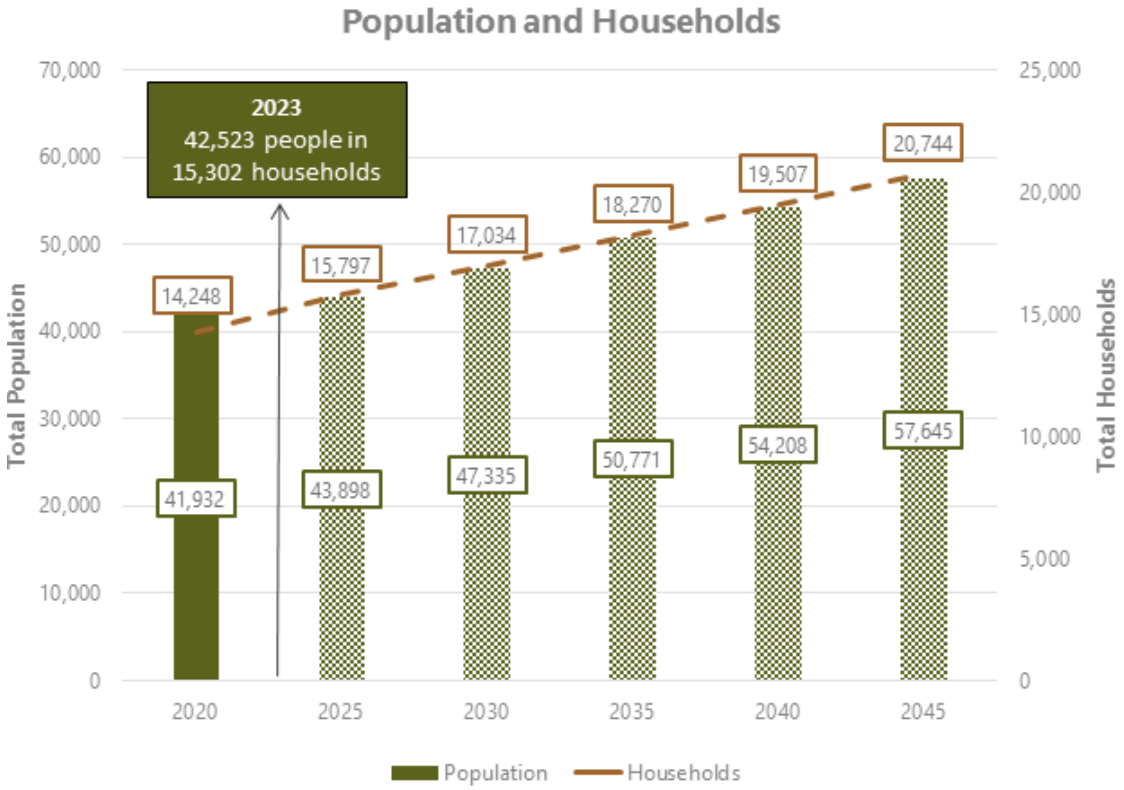
Study Area Characteristics

The City of Milton is located within Fulton County. The City borders Forsyth and Cherokee Counties on its northern side and the cities of Alpharetta and Roswell on its southern side. As part of the planning process, it is important to understand the current conditions of the City. This section will provide a high level summary of the population demographics, economic conditions, and transportation trends of Milton.



Demographics of the City

A demographic profile for residents within the City of Milton was developed to better understand the makeup and needs of the area including age, race/ethnicity, income, and zero vehicle households. Demographics of a city impacts its travel demand as people have differing transportation patterns and needs. Understanding the characteristics of Milton's population provides insight into why certain travel demand patterns are occurring. Milton has approximately 42,500 people in 15,300 household as of 2023. Based on historical trends and conversations with the City, Milton is expected to grow by 35% by 2045. The year-over-year population trends are shown in the graph below.



Minority

33%
identify as a minority

16%
identify as Asian Americans

10%
identify as Black Americans

7%
identify as Hispanic/Latino

Age

28.2%
below 18 years

7.9%
above 65 years

Zero-Vehicle Households

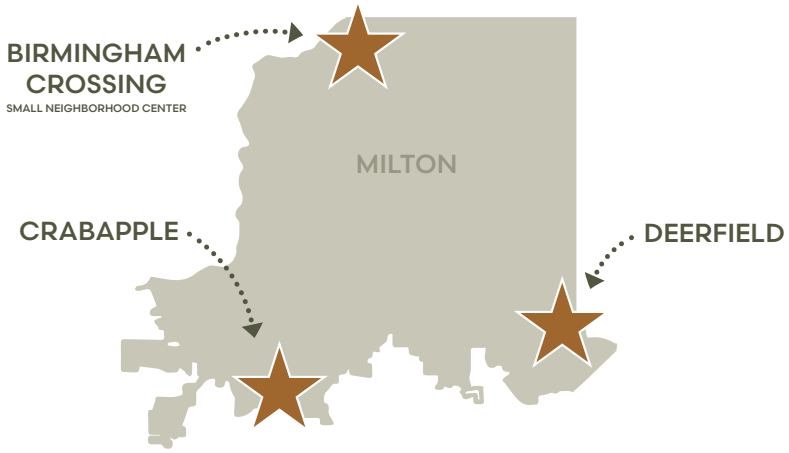
1.4%
of the population

Median Household Income

$136,000

Land Use in Milton

Changes in land use can alter traffic patterns as areas become more or less traveled. Understanding existing land use in the City can help align recommendations to support growth.



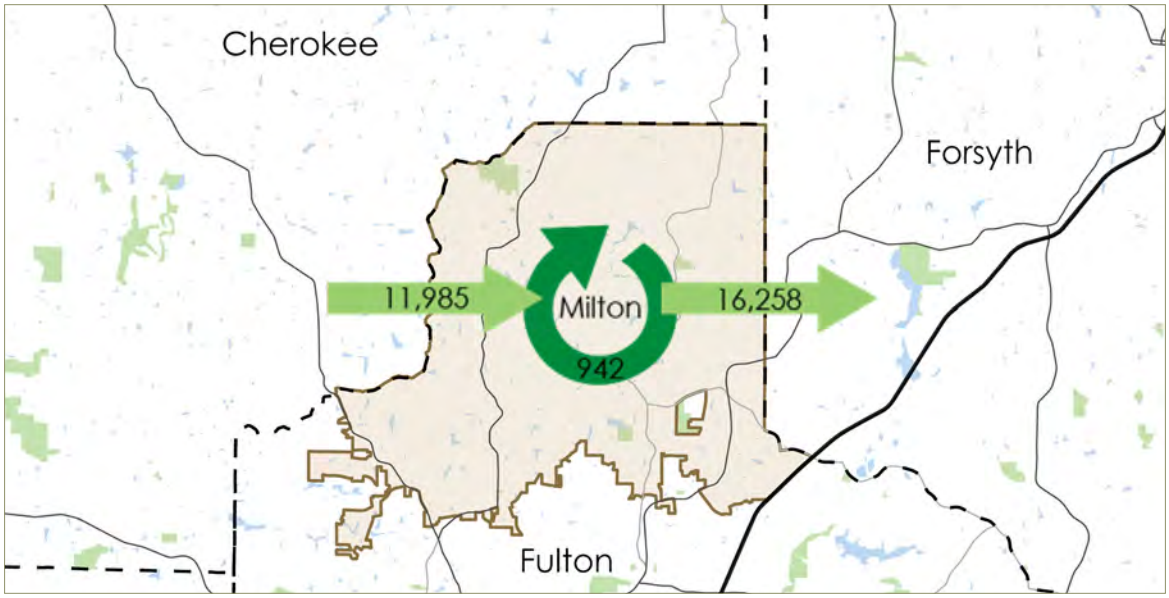
There is a neighborhood commercial area in the northwest corner of the City, called Birmingham Crossing. This area has more non-residential activity than its surroundings, however it is smaller than the activity cores in the south. Development in the southern part of the City has been prioritized, with Crabapple and Deerfield activity cores having the highest densities and most commercial land use. Crabapple is Milton's newest commercial core, surrounding City Hall, and has a strong mix of uses. It has created a "downtown" character for the City. Deerfield is a more established commercial core with access to SR 400. Current population density is highest in Deerfield compared to the rest of the City. This area is one of the few places in the City with multifamily residential and office development and typically provides more affordable housing options and walkability compared to other parts of Milton.

In addition to increased development around the Crabapple and Deerfield cores, there has been growth in the surrounding cities of Alpharetta and Roswell. This has contributed to an increase in travel to and from the southern portion of the City. The following transportation section in this report outlines some of the traffic impacts this outside growth as had on Milton's infrastructure.

Employment Trends

Within Milton, there are 11,613 total primary jobs, with the highest concentration and highest paying jobs located in Deerfield. About 66% of high paying jobs in the study area fall in the Information Technology and Professional/Technology Services industries.

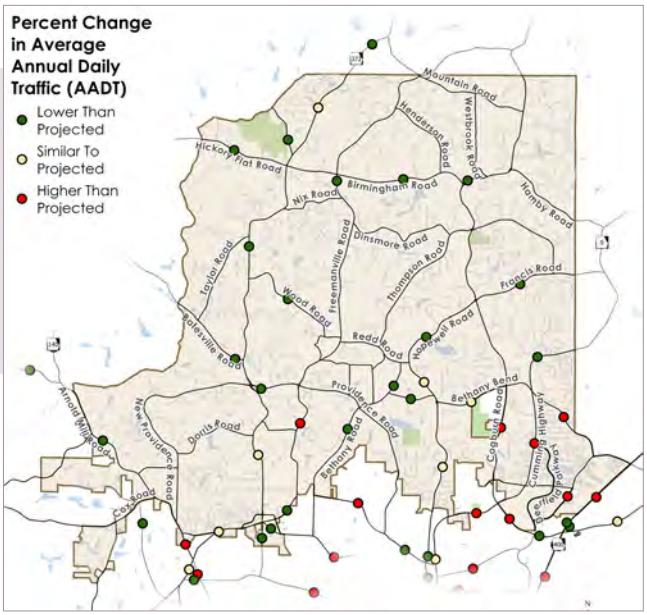
Using Longitudinal Employer-Household Dynamics data, approximately 12,000 people commute in to Milton to for work, while about 16,000 leave the City. Approximately 1,000 people live and work within Milton City limits. Note that this data used 2020 US Census data, and 2023 work travel patterns might differ due to COVID-19 effects.

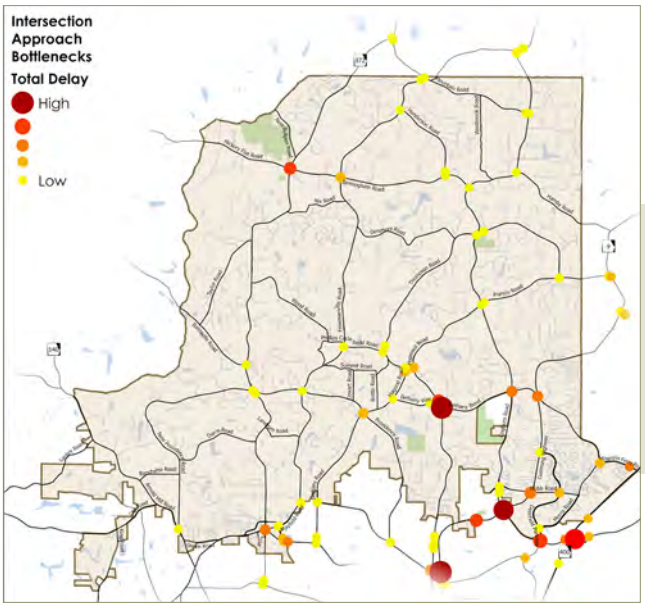


Existing Transportation Patterns

Understanding existing transportation trends provides insight into future transportation needs and guides recommendations in this Plan. Transportation analysis included numerous data sources including Average Annual Daily Traffic (AADT), bottlenecks/delay, and crashes.

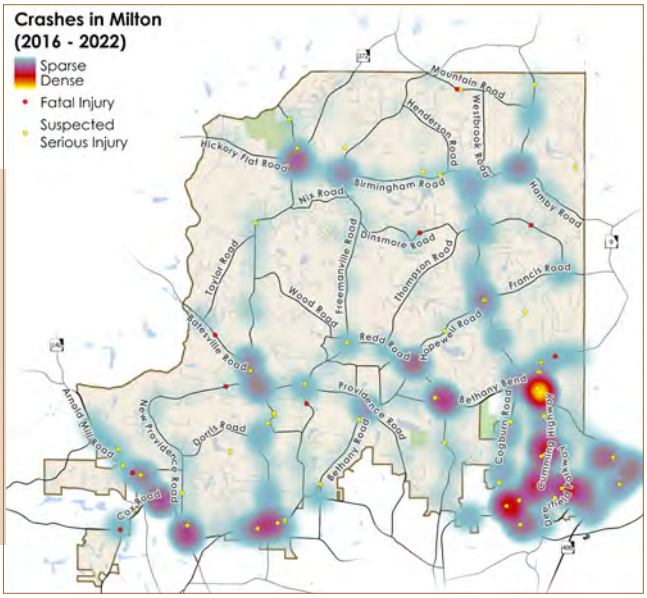
Actual traffic volumes in 2021 compared to volumes predicted by Atlanta Regional Commission's (ARC) travel demand model show that North Milton has remained low volume, with actual demand being less than what was predicted. Deerfield and Crabapple areas, along with corridors that extend into Alpharetta and Roswell were higher than the model predicted, indicating a greater than expected increase in transportation demand.





Similarly, intersection bottlenecks, or delay, were more prominent in the southeastern part of Milton. With easy access to the highway, and continued Deerfield growth, it is likely that congestion will continue here if no infrastructure or operational changes are made. Areas further away from the highway and surrounding cities show less delay at intersections.

In addition to congestion as a measure of transportation trends, it is critical to understand the frequency and locations of crashes within Milton. High crash rates can indicate the need for infrastructure or operational changes to increase driver safety, visibility, and awareness. Crash severity can also be an indication of high risk areas. Crashes across modes of transportation, including bicycles and pedestrians were analyzed during the existing conditions and needs assessment phase of this Plan.



PLAN GOALS AND PROCESS

Project Goals

Leveraging multiple previous City plans, including the 2016 CTP plan, the 2021- 2025 Strategic Action Plan, and the 2040 Comprehensive Plan, the City has developed six goals to guide this CTP. These goals provide a framework and help establish priorities for transportation infrastructure projects and policies in the future.

Reduce Congestion Along Key Corridors

Enhancing traffic flow along roadways primarily by adding travel lanes

Improve Traffic Operations at Intersections

Adding turn lanes, signals, or roundabouts to reduce delays at intersections

Increase Safety for All Users

Providing transportation infrastructure that prioritizes the well-being of all users

Balance Mobility with Consideration for Community Character

Making transportation improvements that fit the character of Milton

Embrace Financial Stewardship

Exercising responsible decision-making to ensure a sustainable transportation network

Enhance Infrastructure to Support Pedestrians, Cyclists, Equestrians, and Transit Users

Creating dedicated infrastructure such as sidewalks, trails, and wider shoulders

Community Engagement

Community engagement is an important part of developing a successful transportation plan. It provides qualitative, detailed insight into Milton's current conditions and transportation issues that are people are facing. As part of this outreach, the planning team hosted four focus groups and a public meeting, and participated in community events including the Milton farmers market, a Cambridge High School football game, and Crabapple Fest.

Planning Process

Beginning in March 2023, the planning process for the CTP lasted approximately 10 months. During this, the planning team assessed the existing conditions of roadway, bicycle, pedestrian, and transit modes. Additionally, other relevant components that help shape Milton's culture and character, such as demographics, land uses, economic climate, and previous plans and studies, were reviewed.

After inventorying these critical transportation features and other components, the planning team worked with City staff, various stakeholders, and the public (in-person workshops, online surveys, and community events) to identify transportation needs through the next 10-15 years. A series of transportation projects were identified to address these needs. The projects were then prioritized on various factors, culminating in a prioritized list of recommended projects and policies. These project recommendations, along with relevant transportation policies, constitute the 2023 City of Milton Comprehensive Transportation Plan. The development of the CTP was divided into three (3) key components: stakeholder and public engagement, assessment of current and future needs, and recommendations. The existing conditions, needs assessment, and overall schedule is shown in the diagram below.

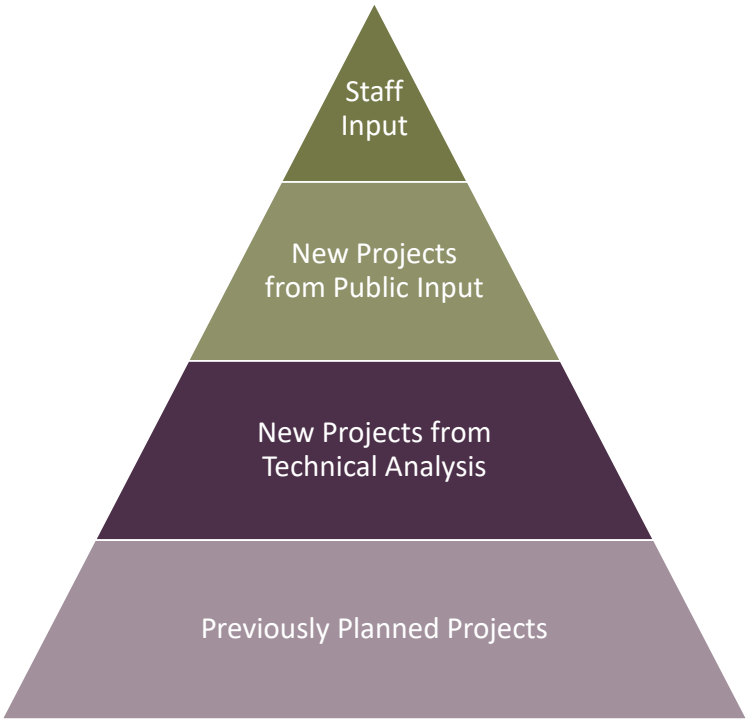
ACTIVITY	Mar 23	Apr 23	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24
Task 0: Project Management											
Task 1: Development of Vision, Goals, and Objectives											
Task 2: Stakeholder and Public Involvement Plan and Activities											
Stakeholder and Public Involvement Plan											
Stakeholder Interviews/Focus Groups											
Public Engagement (Community Intercepts and Public Meetings)											
Online Survey											
Continued Online Presence											
Elected Official Meetings											
Public Comment and Adoption by Mayor/City Council											
Task 3: Inventory of Existing Conditions											
Task 4: Assessment of Current and Future Needs											
Task 5: Recommendations											

Deliverable
Focus Group Meeting
Public Meeting
Pop-up Event
Elected Leadership Meeting

PROJECT DEVELOPMENT AND EVALUATION

Introduction

Approximately 150 projects were evaluated for this Comprehensive Transportation Plan. To start, past plans and studies were reviewed to determine the progress of previously recommended projects. Current transportation infrastructure and relevant characteristics of the City were benchmarked, providing insight into Milton's existing transportation conditions and helping identify current needs. After identifying projects from the technical analysis, the planning team reviewed feedback from the public for additional projects. Discussions with City staff provided additional insight into Milton's current transportation needs and helped organize and prioritize projects. All of these sources helped develop the list of projects for possible evaluation.

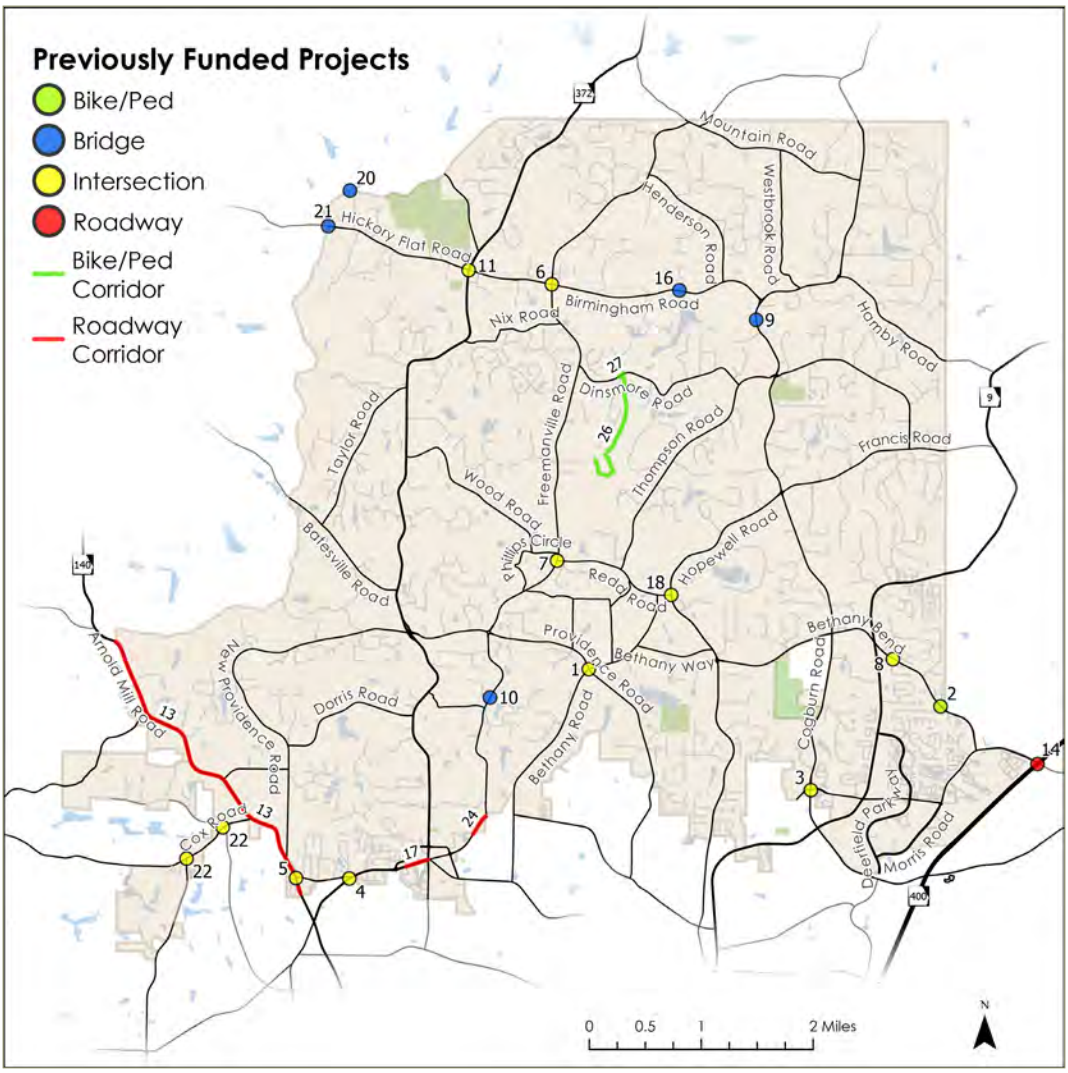


Project Sources

The plans reviewed included the 2040 Comprehensive Plan, 2022 City of Milton Local Road Safety Plan, the 2022 Crabapple Area Personal Transportation Vehicle (PTV) Plan, the 2021 - 2025 Strategic Plan, the 2020 Milton Community Trail Prioritization Plan, the 2017 Milton Trails Blueprint, and the 2016 Milton Comprehensive Transportation Plan. Additionally, the planning team reviewed the 2010 and 2017 North Fulton County Comprehensive Transportation Plans.

Previously Funded Projects

From the review of previous plans, there are some projects that have already obtained funding or are currently in progress. Because these projects already have designated money or are constructed, the City of Milton does not need to allocate funds to it as part of this Comprehensive Transportation Plan. These projects are included for reference although they were not evaluated during the prioritization process.



Project ID	Name	Project Category
1	Bethany Road at Providence Road Roundabout	Intersection
2	Bethany Bend at Serenade Ct Mid-block Crossing	Bike/Ped
3	Webb Road at Cogburn Road Left Turn Lanes	Intersection
4	SR 372 at Green Road Temporary Signals	Intersection
5	SR 140 at Green Road Traffic Signal	Intersection
6	Freemanville Road at Birmingham Road Roundabout	Intersection
7	Freemanville Road at Redd Road Turn Lanes	Intersection
8	Bethany Creek Roundabout	Intersection
9	Hopewell Road Bridge Replacement	Bridge
10	Freemanville Road Bridge Replacement	Bridge
11	Birmingham Crossroads	Intersection

Project ID	Name	Project Category
13	SR 140 Widening from Arnold Mill Road to Rucker Road	Roadway
14	McGinnis Ferry at SR 400 Diamond Interchange	Roadway
15	Old Milton at Morris Road Lane Improvements	Bridge
16	Birmingham Middle Bridge Replacement	Bridge
17	Crabapple Road Streetscape	Roadway
18	Hopewell at Redd Rd Traffic Signals and Turn Lanes	Intersection
20	Clarity Road Bridge	Bridge
21	Hickory Flat Bridge	Bridge
22	Cox Road Intersections	Intersection
24	Mayfield Road Improvements	Roadway
26	Milton City Park and Preserve Phase 2 Trail	Bike/Ped
27	Milton City Park and Preserve Phase 3 Trail	Bike/Ped

Evaluation Categories and Criteria

All projects were coded in a Geographic Information System (GIS), allowing each to be evaluated by its attributes and physical location. Each project was given a modal classification which determined the criteria the project would be evaluated against.

Modal Classifications

Modal classifications were defined by the type of infrastructure the project impacted. The different categories included roadway corridors, intersections, and bike/pedestrian infrastructure. Within these categories, similar types of projects were evaluated against each other. Each project fell within one of the following subcategories.

Roadway Corridors

- Capacity: includes road widening and new roadway connections
- Operations: includes improved operations along corridors and multimodal infrastructure

Intersections

- Intersections: includes any intersection improvement

Bike/Pedestrian Infrastructure

- Sidewalk: includes improvements or additional sidewalk projects or crosswalk enhancements
- Multi-use Trail: includes projects enhancing walking, biking, and equestrian modes; wider than a sidewalk to accommodate multiple modes

3 Roadway Capacity Projects

22 Roadway Operations Projects

17 Intersection Projects

23 Sidewalk Projects

37 Multi-use Trail Projects

Evaluation Criteria

All projects were evaluated on criteria related to the transportation goals. Projects were evaluated and compared to others with the same modal classification. The metrics and their relationship to Milton's transportation goals are shown below.

Transportation Goals	Evaluation Criteria
Reduce Congestion Along Key Corridors	Total delay from Regional Integrated Transportation Information System (RITIS) data
Improve Traffic Operations at Intersections	
Enhance Infrastructure to Support Multi-modal Travel	Involves bike/ped improvements and overlaps with existing/programmed active transportation
	Within 1/4 mile of a transit stop
	Along/near popular Strava route
	Within 1/2 mile of parks, libraries, community centers, activity centers, and K-12 schools
Increase Safety for All Users	Overall Equivalent Property Damage Only (ePDO) score
	Highest Atlanta Regional Commission (ARC) bike and pedestrian risk score along the corridor or at the intersection
Balance Mobility with Consideration for Community Character	Within 300 feet of an area the public indicated a need
Embrace Financial Stewardship	Staff identified project compatibility
	Involves partnership with at least one other agency or organization

Evaluation metrics were organized by modal category with every project in the group being scored out of a possible 100 points. Some metrics were weighted more heavily than others depending on the modal category. For example, the ARC bicycle/pedestrian risk score was weighted more heavily for a trail project than a roadway project.

After evaluation, projects were ordered from highest to lowest scoring within its modal classification. The highest scoring projects in each classification were advanced for consideration and prioritization by City staff within the context of available funding.

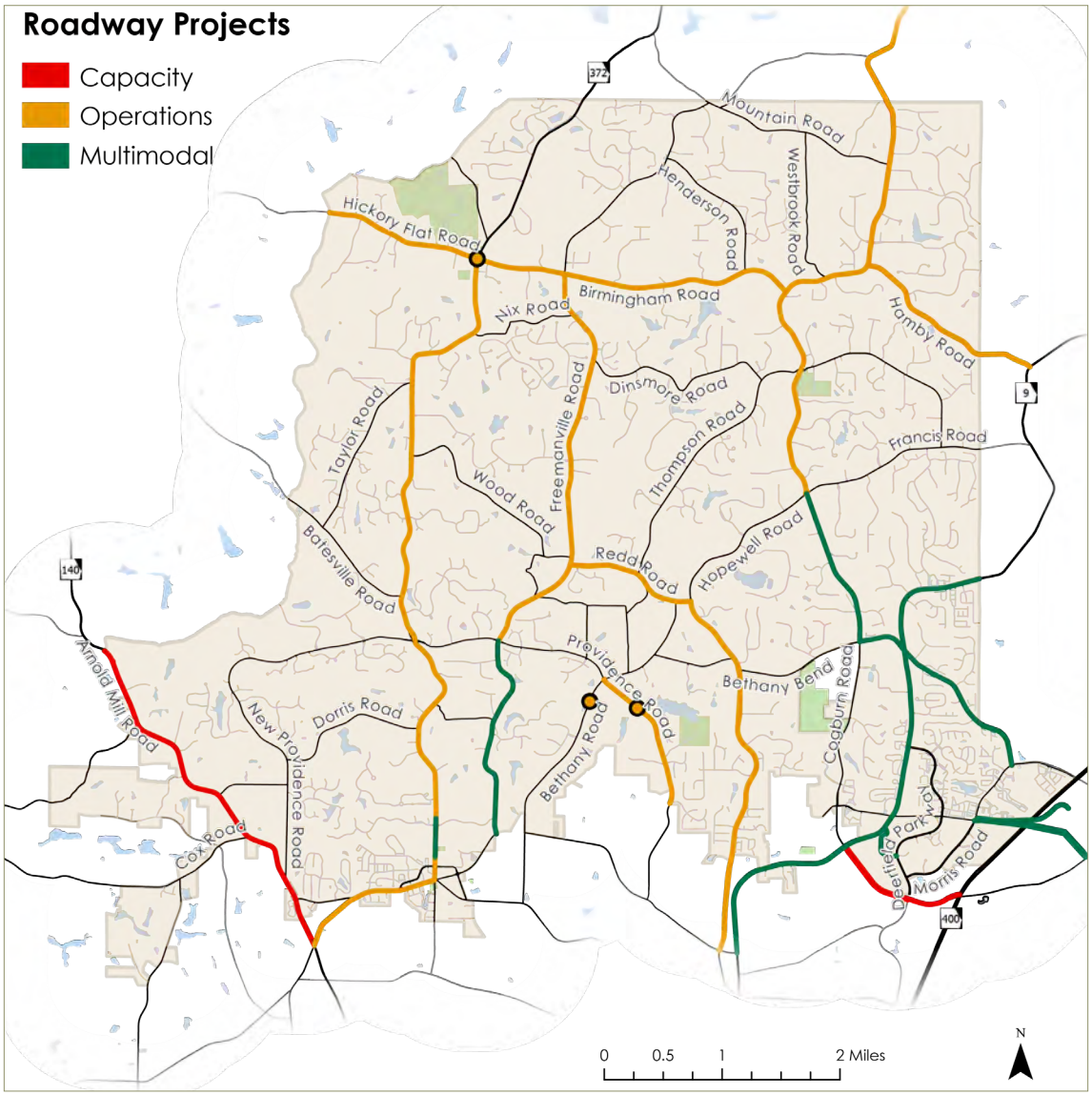
Once reviewed by the City, a streamlined list of projects were brought to the public for evaluation. This was conducted through an online survey and community engagement at Crabapple Fest.

Large and Small Scale Vehicular Assessment

In addition to reviewing previously funded projects, seven intersections and three roadways corridors were identified and evaluated for operational and safety improvements. These study locations are also included as projects the Milton CTP and helped to program, prioritize, and implement transportation improvements. See Appendix B for detailed results of this analysis.

Roadway Corridors

The map below shows both capacity and operations projects that were evaluated during this Comprehensive Transportation Plan. Metrics for roadway projects were evaluated with differing levels of priority. The most important criteria was the RITIS delay score and staff identified compatibility of a project, whereas the lowest priority criteria was bike/pedestrian improvements that overlap with existing multimodal features.



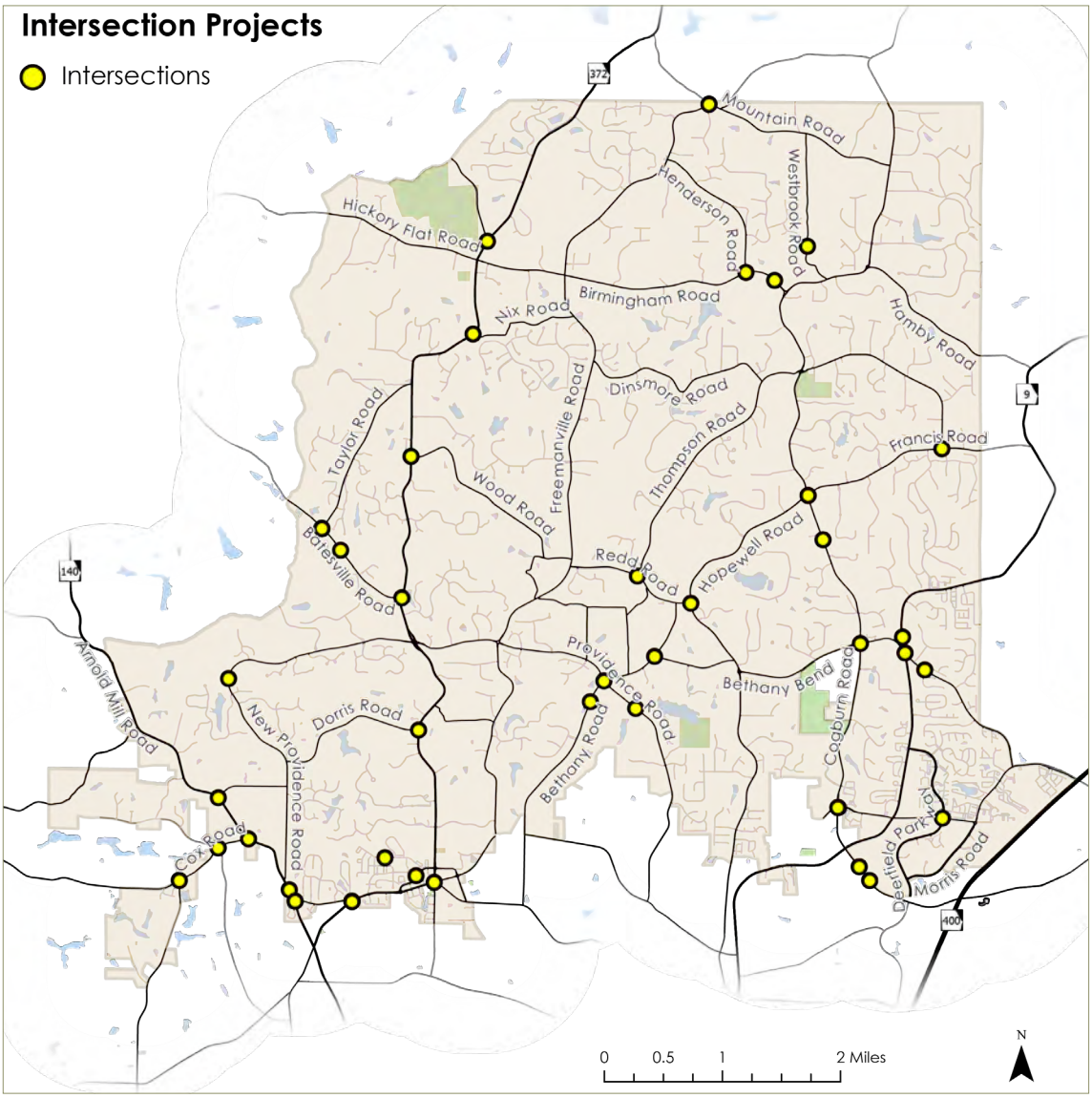
Highest Priority

- RITIS Score
- Staff identified project compatibility
- Project involves partnership with another agency / organization
- ePDO score
- Within 1/2 mile of parks, libraries, and other activity centers
- ARC bicycle/pedestrian risk score
- Within 300' of an area of public need
- Along a Strava route
- Involves bike/ped improvements and overlaps with existing multimodal infrastructure
- Nearby a transit stop

Lowest Priority

Intersections

The map below shows intersection projects that were evaluated during this Comprehensive Transportation Plan. Metrics for intersection project criteria prioritized RITIS delay score and ePDO scores, with lower prioritization of the projects location being near a publicly identified need.



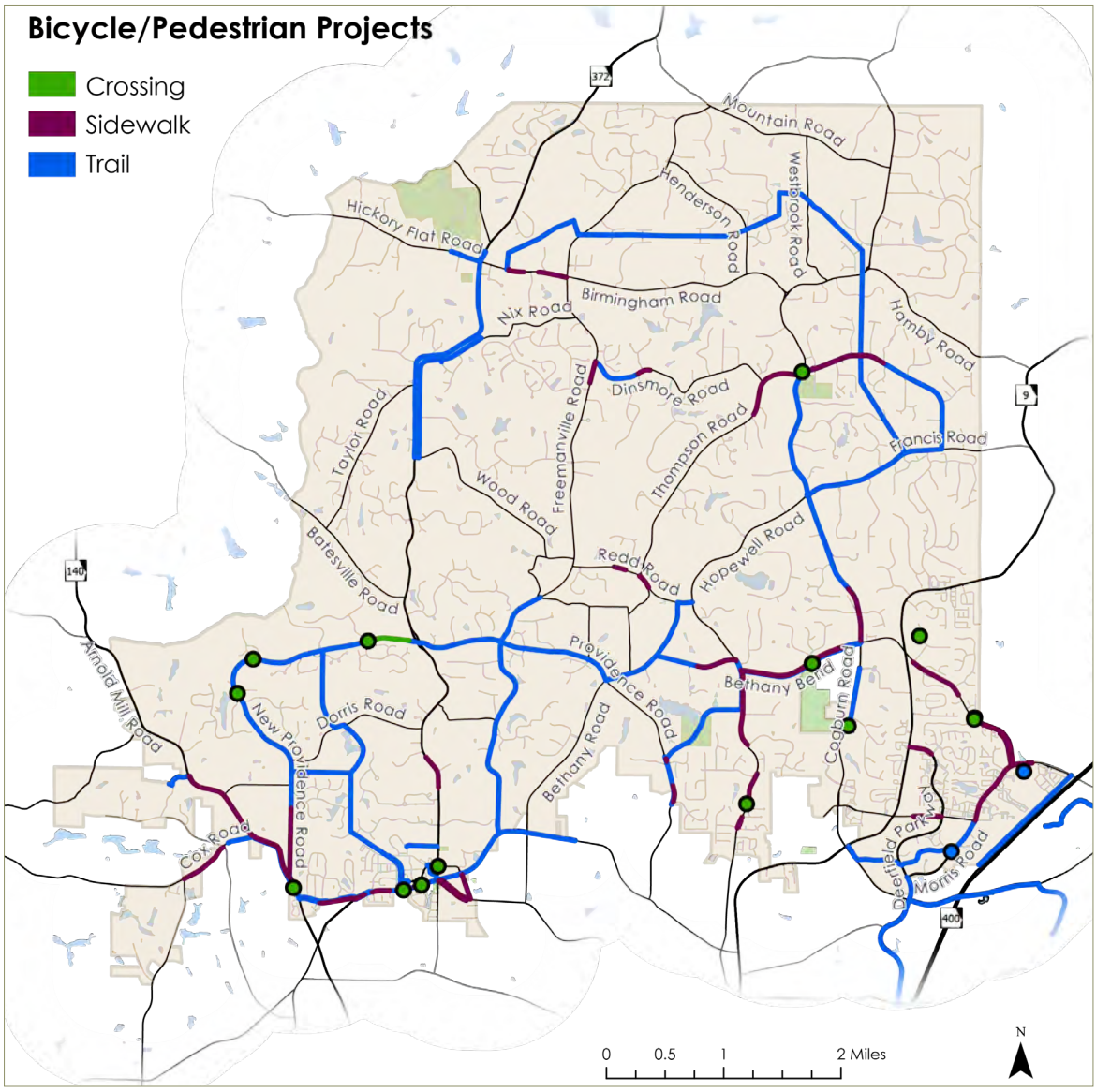
Highest Priority

Lowest Priority

- RITIS Score
- ePDO score
- Staff identified project compatibility
- Project involves partnership with another agency /organization
- Within 1/2 mile of parks, libraries, and other activity centers
- ARC bicycle/pedestrian risk score
- Within 300' of an area of public need

Bicycle/Pedestrian Infrastructure

The map below shows both sidewalk and multi-use trail projects that were evaluated during this Comprehensive Transportation Plan. The highest priority evaluation criteria for bicycle/pedestrian infrastructure includes bike/ped improvements that overlap with existing multimodal infrastructure and the lowest priority criteria was distance from a transit stop (while proximity to transit is important for bicycle/pedestrian infrastructure, there is very limited transit in the City.)



Highest Priority

Lowest Priority

- Involves bike/ped improvements and overlaps with existing multimodal infrastructure
- Within 1/2 mile of parks, libraries, and other activity centers
- ARC bicycle/pedestrian risk score
- ePDO score
- Staff identified project compatibility
- Project involves partnership with another agency / organization
- Within 300' of an area of public need
- Along a Strava route
- Nearby a transit stop

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FUNDING

Introduction

Given the many transportation needs within Milton, not all of the projects identified will be able to be implemented. Projects with the highest prioritization are likely to receive funding but those with a lower priority will need to be considered and reevaluated in future plans. The following section details the assumed funding mechanisms for Milton's transportation projects.

Transportation Funding and Level Structure

The City of Milton uses a Transportation Special Purpose Local Option Sales Tax (TSPLOST) to fund transportation infrastructure. SPLOSTs are popular among local Georgia governments as a vehicle for raising funds dedicated to infrastructure and facilities construction and improvements. In 2015, the Georgia Legislature passed House Bill 170 that enabled Fulton County to pursue this special purpose funding opportunity. While future TSPLOST iterations are not guaranteed, they serve as a framework for planning and prioritizing projects in the next five to twenty years

Funding is broken into three levels based on the certainty of receiving financing.

Level 1

The current TSPLOST II program is projected to earn $36 million within its five-year existence. Since this number is based on sales in Milton, the planning team accounted for scenarios where less than expected revenue is earned and more than expected revenue is earned. Within this level, there are two tiers.

- Tier 1 funding is $30.6 million, which is 85% of the expected TSPLOST revenue. Projects selected for Tier 1 funding are the highest priority and should be implemented even if sales tax revenue is less than expected.
- Tier 2 funding is $5.4 million, which when combined with Tier 1, equals 100% of anticipated TSPLOST funding. Tier 2 projects are those that should be implemented if Milton receives all of the TSPLOST money expected.

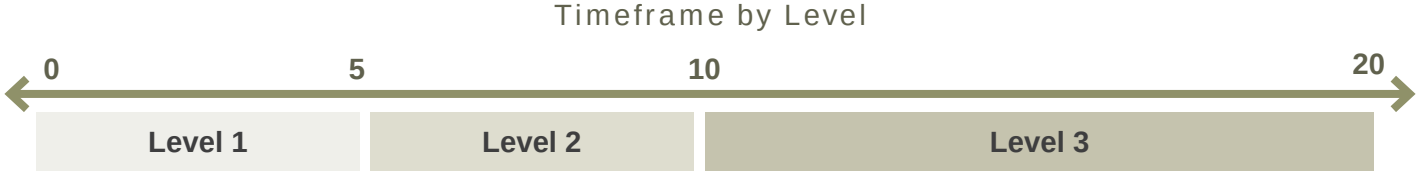
Level 2

Level 2 projects represent projects that could be completed if another TSPLOST was passed on the next ballot. These projects would be initiated in the next 6 - 10 years. The total funding projected for Level 2 projects is $38 million. This was estimated using a conservative assumption in the growth of the tax base. Level 2 is divided into Tier 3 ($5.4 million)and Remaining ($32.6 million).

- Tier 3 projects are the highest priority in Level 2 and represent projects that could be funded by the current TSPLOST II if more revenue than expected is received through current sales tax. Depending on the current TSPLOST funds, these projects could be funded within the first 5 years.
- Remaining projects are those that will be funded with the following TSPLOST if it gets passed on the next ballot.

Level 3

Level 3 funding is an estimate of TSPLOST funding in the next 11 - 20 years, if the tax continues to be passed. Level 3 funding totals to $80 million over 10 years, which was projected based on another slight increase in Milton's tax base.



Funding Set-Asides

In addition to specific projects prioritized by the City, TSPLOST funding is also used for general transportation infrastructure maintenance and improvements. These "set-asides" are not specific to a particular project, but instead are use on an "as-needed" basis over the next 20 years. These set asides include:

- Bridges
- Guardrail Improvements
- Pavement Conditions
- Sidewalk Gaps
- Planning/Quick Response
- Local Road Safety Plan Implementation

		Revenue	Timeframe/ Portion
Level 1		$36,000,000	5 years
	Tier 1	$30,600,000	85% (85%)
	Tier 2	$5,400,000	15% (100%)
Level 2		$38,000,000	5 years
	Tier 3	$5,400,000	15% (115%)
	Remaining	$32,600,000	
Level 3		$80,000,000	10 years

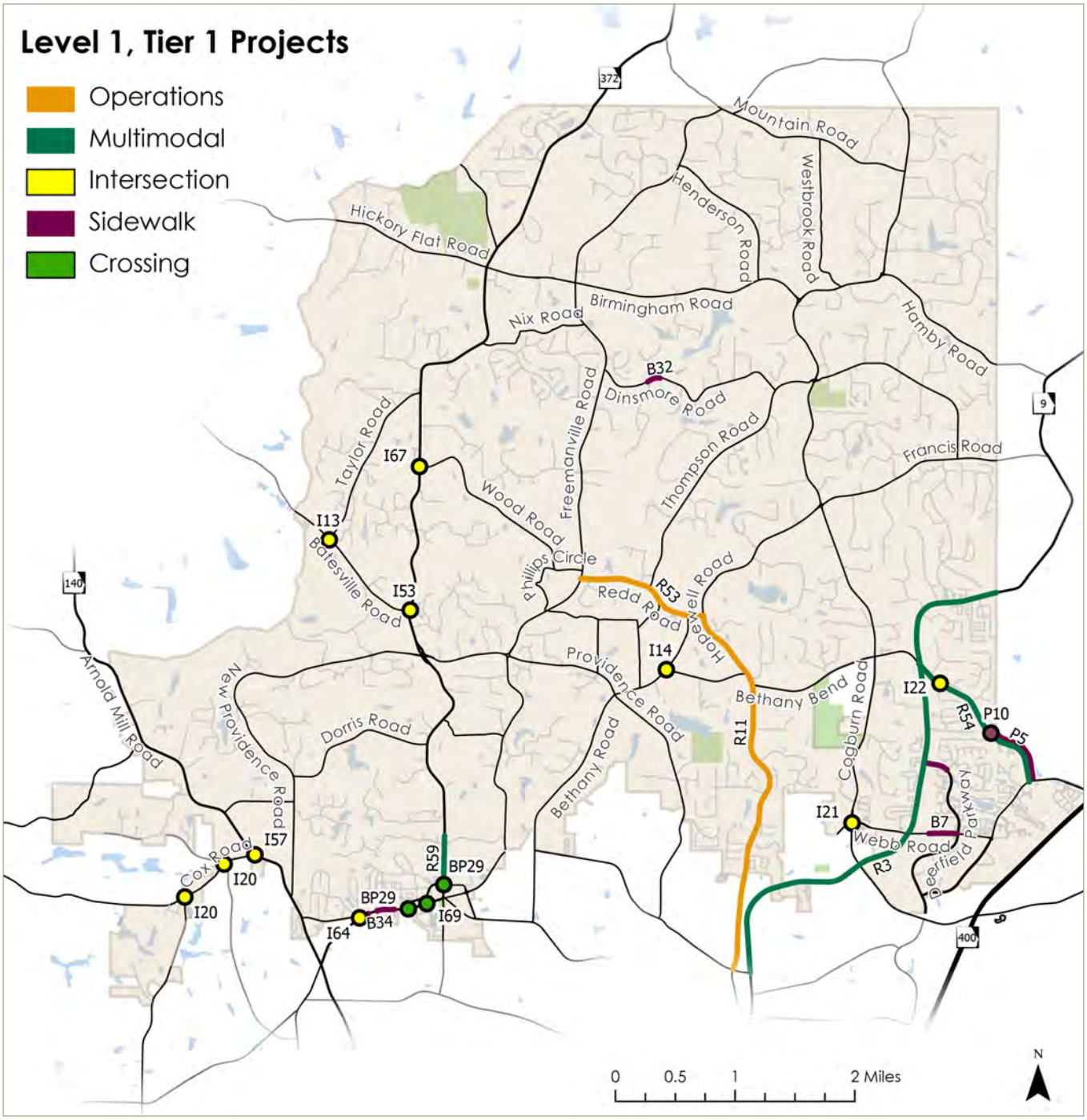
Each level has a specific amount allocated to the categories above. Funding set-asides were determined first, and the remaining projected revenues were made available for new capital investments. Based on this apportionment, there is less funding for specific projects within each TSPLOST revenue projection.

Level	Level 1			Level 2			Level 3
Tier	Total	Tier 1	Tier 2	Total	Tier 3	Remaining	Total
Revenue	$36,000,000	$30,600,000	$5,400,000	$38,000,000	$5,400,000	$32,600,000	$80,000,000
Funding for Set-Asides							
Technology and Signal Upgrades	$500,000	$500,000	$-	$500,000	$-	$500,000	$-
Local Road Safety Plan Implementation	$-	$-	$-	$2,000,000	$-	$2,000,000	$5,000,000
Planning/Quick Response	$800,000	$280,000	$520,000	$500,000	$-	$500,000	$1,000,000
Sidewalk Gaps	$500,000	$500,000	$-	$2,000,000	$-	$2,000,000	$3,000,000
Pavement	$7,000,000	$7,000,000	$-	$7,500,000	$-	$7,500,000	$16,000,000
Guardrail Improvements	$700,000	$700,000	$-	$750,000	$-	$750,000	$1,500,000
Bridges	$5,000,000	$5,000,000	$-	$5,000,000	$-	$5,000,000	$10,000,000
Other	$645,000	$645,000	$-	$700,000	$-	$700,000	$1,500,000
Total Set-Asides	$15,145,000	$14,625,000	$520,000	$18,950,000	$-	$18,950,000	$38,000,000
Remaining for Projects	**$20,855,000**	**$15,975,000**	**$4,880,000**	**$19,050,000**	**$5,400,000**	**$13,650,000**	**$42,000,000**

PROJECT RECOMMENDATIONS

Level 1, Tier 1

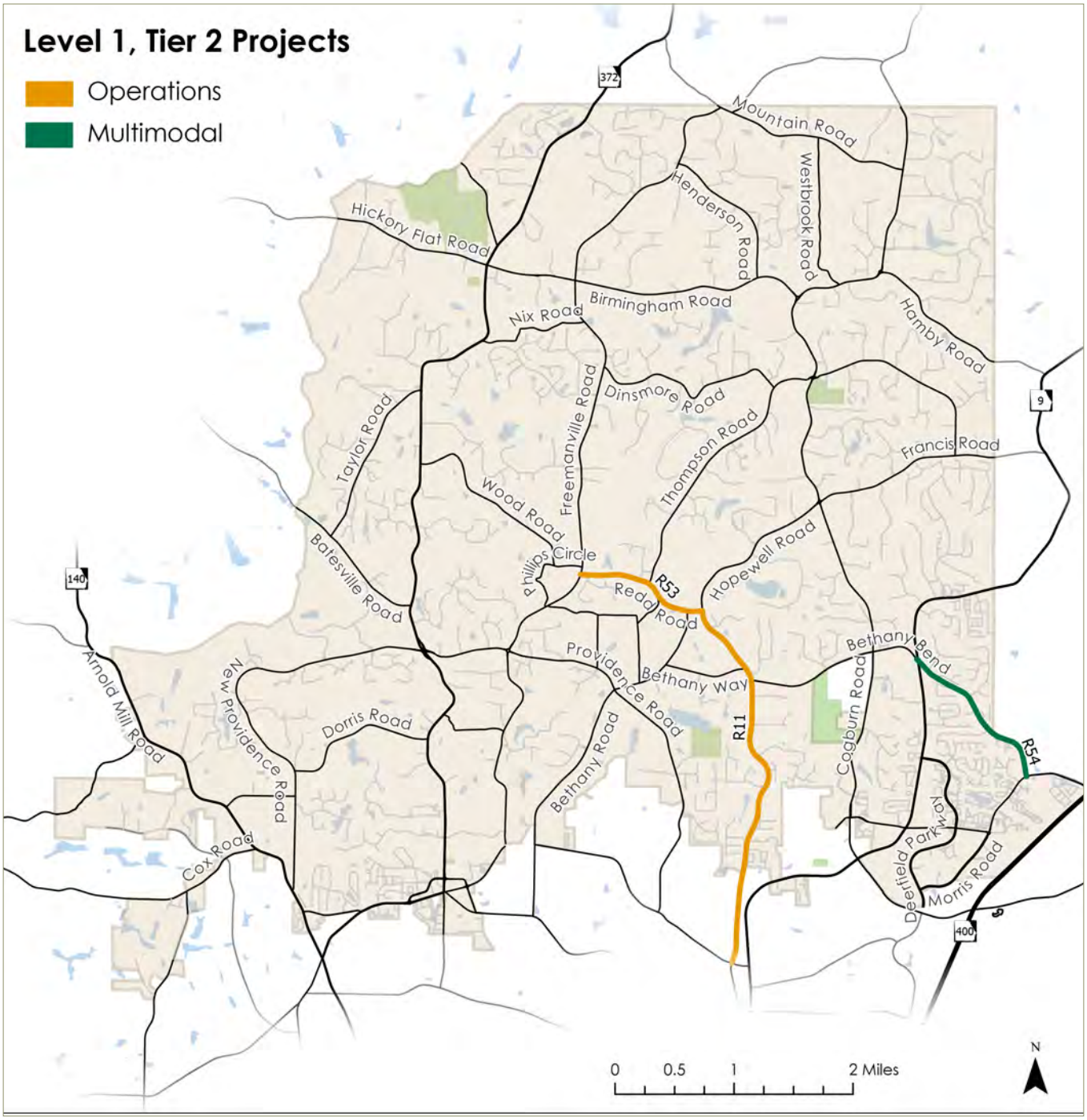
As discussed in the Funding section, Level 1, Tier 1 projects are the highest priority projects and should be implemented using current TSPLOST II funding. There are 19 Tier 1 projects, including five sidewalk projects, two crossing projects, nine intersection projects, one operations project, and two multimodal projects.



ID	Name	Description	Cost to Milton
BP29	SR 372 Ped Crossing RRFBs	Rectangular Rapid Flashing Beacon (RRFB) at roundabouts along SR 372 and Heritage Walk	$221,000
I69	Crosswalk - SR 372/Crabapple Road Streetscape	Crosswalk on SR 372 between Itaska Walk and Lacoma Trace	$400,000
B32	Sidewalk - Dinsmore Road	Sidewalk along the south side of Dinsmore Road between the entrances to MCPP	$300,000
B34	Sidewalk - Crabapple Road	Sidewalk along Crabapple Road from Green Road to the cleared development lot; sidewalk along south side of Crabapple Road from Parkview Drive to Arbor North Drive	$500,000
B7	Deerfield Parkway Sidewalk	Sidewalk along Deerfield Parkway from Webb Road to SR 9; Sidewalk on the north side of Webb Road from Target to Deerfield Parkway and on the east side of Hopewell Road from Atkinson Drive to Hopewell Place Drive; TSPLOST II project TS2-2317	$524,154
P10	Bethany Bend Sidewalk	Crosswalk and sidewalks on Bethany Bend at Serenade Court	$200,000
P5	Fill in Bethany Bend sidewalk gaps	Sidewalk gap filling on the south side of Bethany Bend, east of SR 9	$1,222,000
I13	Taylor Road/Batesville Road Intersection Improvements	Improvement to the Taylor Road/Batesville Road Intersection	$348,000
I14	Haygood Road/Bethany Way Intersection Improvements	Improvements to the Haygood Road/Bethany Way Intersection	$348,000
I20	Cox Road Intersections Improvements	Intersection improvements at Cox Road with Etris Road and King Road	$4,094,688
I21	Webb Road/Cogburn Road Intersection Improvements	Intersection improvements at Webb Road and Cogburn Road	$300,000
I22	Bethany Bend Mini Roundabout	Mini roundabout at Bethany Bend and Bethany Creek Drive	$550,000
I53	Batesville Road and SR 372	Intersection improvements at Batesville Road and SR 372	$529,600
I57	Cox Road and Arnold Mill Road Intersection Improvements	Intersection improvements at Cox Road and Arnold Mill Road	$556,700
I64	Greene Road and Crabapple Road	Signal or roundabout improvement at Greene Road and Crabapple Road	$59,150
I67	Wood Road at SR 372 Intersection Improvements	Intersection improvements at Wood Road and SR 372	$35,600
R3	SR 9 Streetscape Enhancements	Streetscape enhancements along SR 9 (North Main Street/ Cumming Highway)	$2,000,000
R59	SR 372 School Stacking Lane	Northbound right turn lane extension approaching School Drive and southbound left turn lane extension to remove queuing from SR 372 mainline; includes multiuse trails on both sides of the road	$1,786,108
R11	Hopewell Road Corridor Improvements	Concept and preliminary design of operational and/or safety improvements with traffic calming measures along Hopewell Road from Mayfield Road to Redd Road	$800,000
R53	Redd Road Corridor Improvements	Concept and preliminary design of operational improvements along Redd Road from Freemanville Road to Hopewell Road. Includes sidewalk and crosswalk improvements	$400,000
R54	Bethany Bend Corridor Improvements	Concept and preliminary design of operational and/or safety improvements with traffic calming measures along Bethany Bend from East of SR 9 to Morris Road	$800,000

Level 1, Tier 2

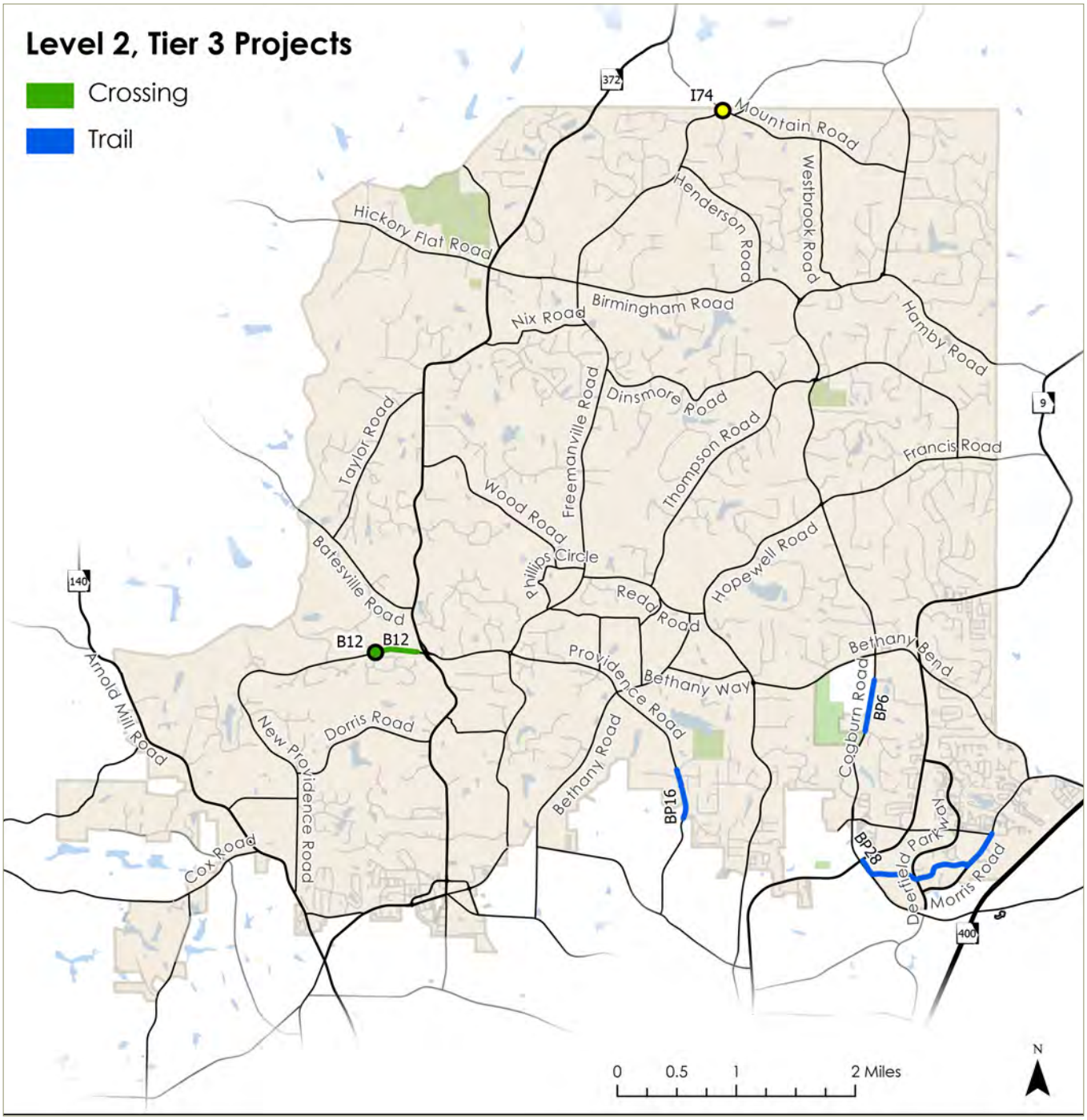
Level 1, Tier 2 projects are projects that should be implemented if revenue from TSPLOST is equal to what was estimated. However, if TSPLOST funding is less than expected, these projects can be reevaluated for future plans. There are three projects as part of Level 1, Tier 2. This includes two sidewalk projects and one operations project. All Tier 2 projects are along Redd Road between Freemanville Road and Hopewell Road.



ID	Name	Description	Cost to Milton
R11	Hopewell Road Corridor Improvements	Right of way acquisition for operational and/or safety improvements with traffic calming measures along Hopewell Road from Mayfield Road to Redd Road	$2,000,000
R53	Redd Road Corridor Improvements	Right of way acquisition for operational improvements along Redd Road from Freemanville Road to Hopewell Road. Includes sidewalk and crosswalk improvements	$1,000,000
R54	Bethany Bend Corridor Improvements	Right of way acquisition for operational and/or safety improvements with traffic calming measures along Bethany Bend from East of SR 9 to Morris Road	$1,880,000

Level 2, Tier 3

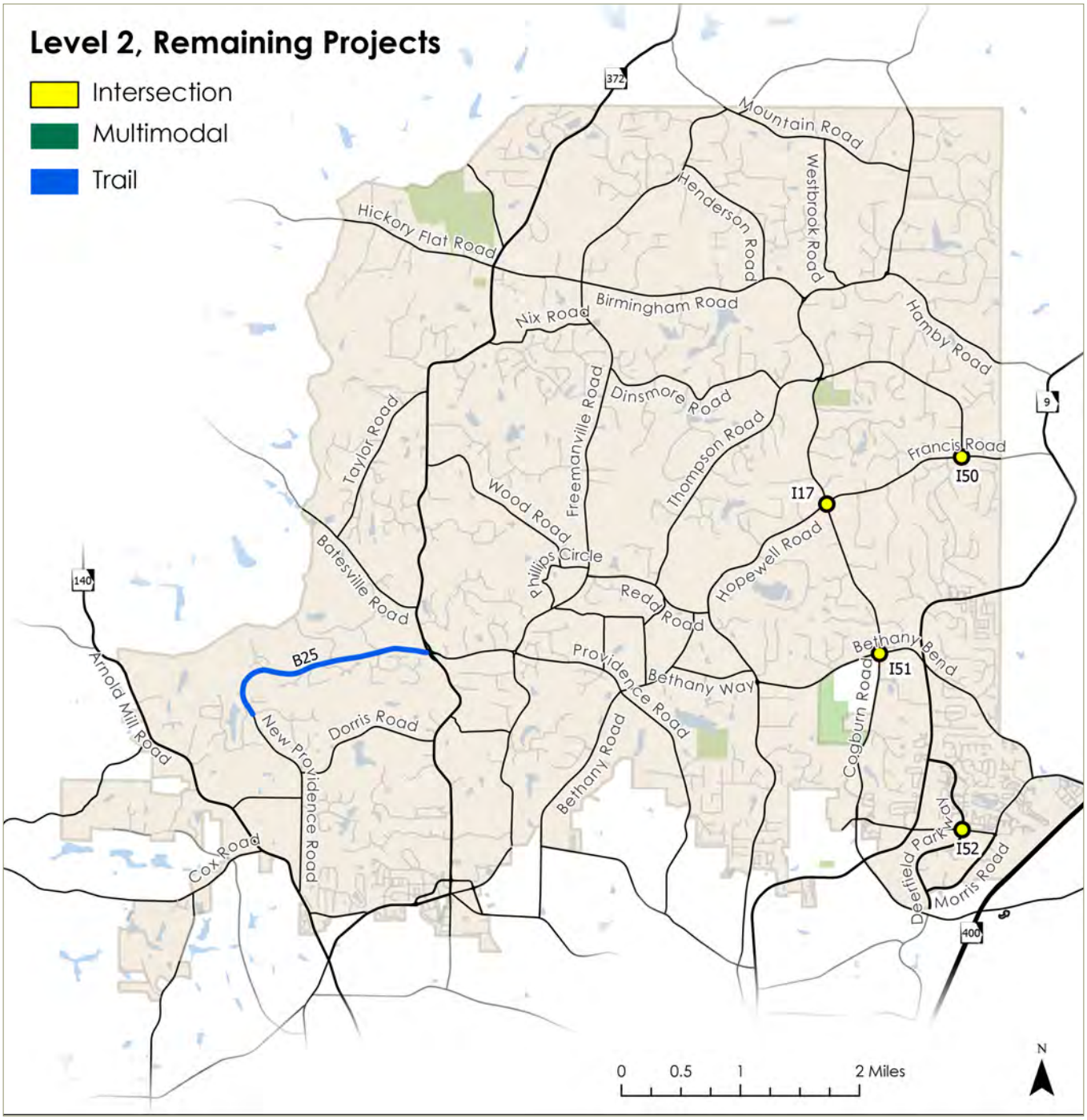
Level 2, Tier 3 projects are those that should be prioritized if more than the expected $36 million in TSPLOST II revenue is generated. If not, these projects should be a high priority for the following TSPLOST if passed in five years. This includes three multi-use trail projects, one crossing project, and one intersection project. The crossing project, B12, also has a sidewalk component near the intersection.



ID	Name	Description	Cost to Milton
B12	New Providence Road crosswalk at Atlanta National Drive	Mini roundabout at New Providence Road and Atlanta National Drive; includes sidewalk along the north side of New Providence Road from roundabout to SR 372	$800,000
BP16	Providence Road	Trail on Providence Road from Providence Park to Alpharetta City Limits (southern section)	$500,000
BP28	Big Creek Greenway Connection along Creek	Big Creek Greenway Connection along the creek and connecting to Morris Road to Webb Road	$2,412,000
BP6	Cambridge Sidewalk	Trail along Cogburn Road from Hermitage Drive to Cambridge High School	$500,000
I74	Mountain Road/ Freemanville Road Intersection	Intersection improvement at Mountain Road and Freemanville Road	$1,500,000

Level 2, Remaining

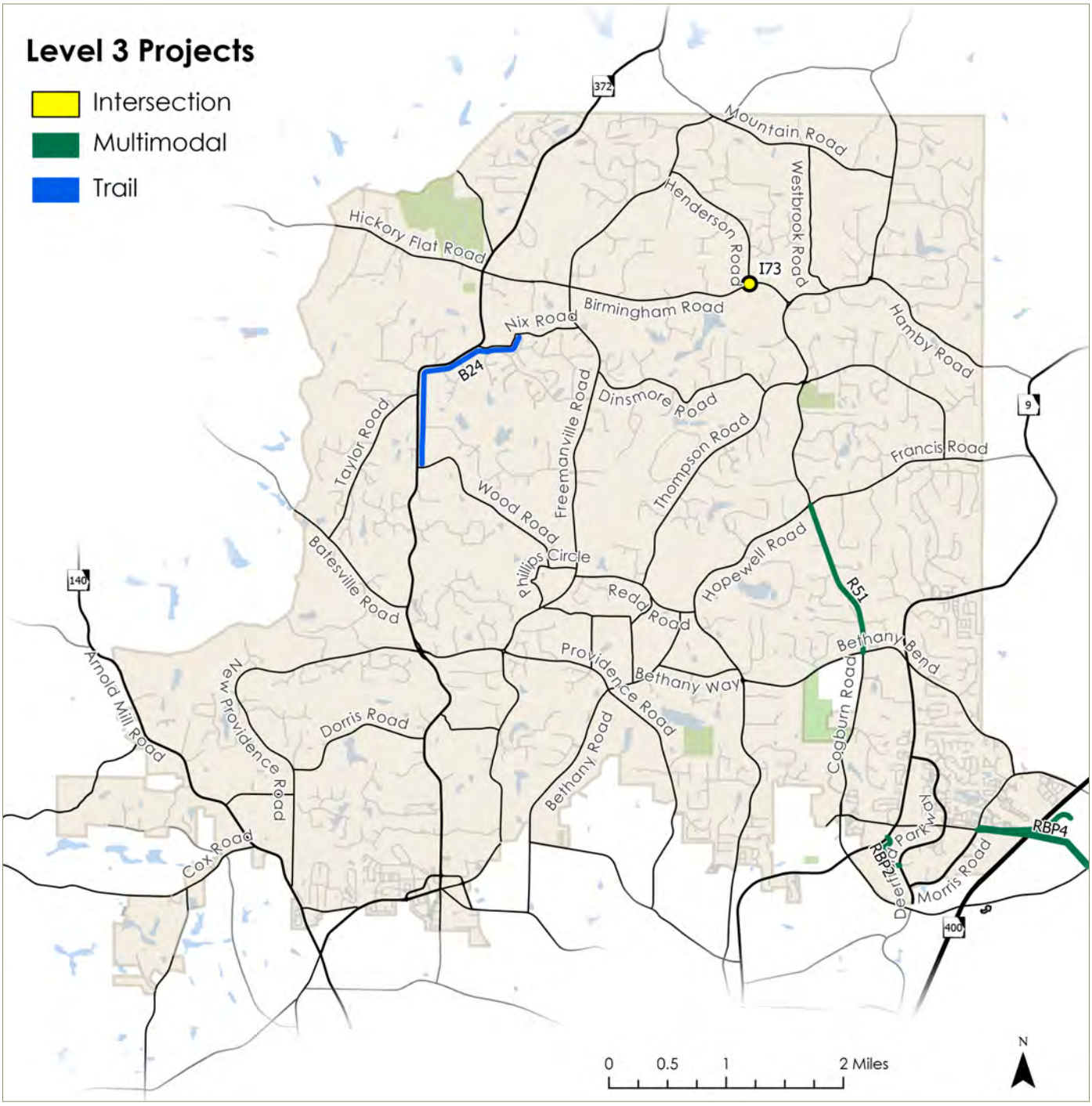
Level 2, Remaining projects are those that should be prioritized during the following TSPLOST, if passed. This includes four intersection projects, one multi-use trail, and one multimodal project.



ID	Name	Description	Cost to Milton
B25	New Providence Road Trail	Trail along the south side of New Providence Road from Atlanta National Drive to Providence Plantation Drive; Bridge replacement over Cooper Sandy Creek funded with separate bridge set asides	$2,000,000
I17	Hopewell Road/ Francis Road/ Cogburn Road Intersection Improvements	Channelized northbound right turn at the Hopewell Road/ Francis Road/Cogburn Road intersection	$514,000
I50	Thompson Road at Francis Road	Intersection improvements at Thompson Road and Francis Road	$2,660,000
I51	Cogburn Road at Bethany Bend, New Intersection	New intersection at Cogburn Road and Bethany Bend	$922,200
I52	Webb Road and Deerfield Parkway	Intersection improvements at Webb Road and Deerfield Parkway	$2,871,400

Level 3

Level 3 projects are those can be implemented in the next 11 - 20 years if TSPLOSTs continue to be passed. This includes one intersection and three multimodal roadway projects.



ID	Name	Description	Cost to Milton
B24	Bike path along SR 372	Bike path along SR 372 via permanent easement of private property	$5,674,000
I73	Henderson/Birmingham Intersection	Safety study and improvements along Cogburn Road North from Bethany Bend to Hopewell Road	$2,112,000
R51	Cogburn Road Safety Study II	New roadway connection and sidewalks on Cumming Highway-Deerfield Connector from SR 9 to Deerfield Parkway; includes bicycle lane	$11,162,000
RBP2	Highway-Deerfield Connector	New roadway and sidewalk connection on Webb Road extension beginning at Morris Road; includes bicycle lanes; possible connection to the Big Creek Greenway	$3,661,000
RBP4	Webb Road Overpass roadway project with multi-use trail	New intersection at Cogburn Road and Bethany Bend	$16,200,000

POLICY RECOMMENDATIONS

Context Sensitive Transportation

Milton, Georgia, a city characterized by its serene and rural ambiance, faces a unique challenge in an ever-evolving urban landscape. Nestled in the northern outskirts of the Atlanta metropolitan area, this idyllic community takes pride in its vast open spaces, lush landscapes, and a prevailing rural charm that has endeared it to residents and visitors alike. However, as the southern portion of the City experiences gradual densification and urbanization, a delicate balance must be struck to maintain the essence of Milton's rural character while accommodating growth and development. Accommodating growth will help diversify the City's tax base and provide amenities that residents desire This complex task is undertaken through the lens of public policy, which encompasses various facets, including land use, transportation, and sewer systems.

To optimize land use and transportation in Milton, it is valuable to tailor policies to the specific characteristics of the City's regions. In the suburban/urban-style core in the southern part of the City, policies can encourage pedestrian-friendly infrastructure, mixed-use zoning, and efficient public transportation options to alleviate traffic congestion and encourage sustainable development. In areas with higher population density, traditional signal-controlled intersections may be more appropriate, as they can efficiently manage the increased traffic volume and provide controlled access to businesses and residences.

In contrast, for the more rural areas, where the preservation of a rustic environment is a priority, policies can promote low-density development, the protection of green spaces, and the implementation of appropriate transportation methods, such as roundabouts. Roundabouts can efficiently manage traffic, enhance safety, and reduce the need for frequent stops, all while preserving the scenic charm of the rural surroundings.

Effective coordination between land use and transportation planning is crucial for the successful implementation of these policies, ensuring a balanced approach that respects both suburban and rural elements within the City. By employing traditional signal-controlled intersections in densely populated areas and roundabouts in rural regions, Milton can strike a harmonious balance between urban and rural development, meeting the needs of its diverse population while maintaining its unique character.

The Milton 2040 Comprehensive Plan marks a roadmap for the City's future, guiding its growth and development while preserving the unique character and sense of place that define the community. This plan outlines many key policy objectives, including the three most relevant to the topic at hand:

Community Sensitivity: The plan places an emphasis on encouraging development that respects the overall character and ambiance of Milton. By promoting development that harmonizes with the community's distinct identity, the City aims to maintain its unique sense of place.

Mixed-Use and Human-Centered Development: To enhance livability, the plan encourages the creation of mixed-use developments, designed with human-scale in mind, which are less dependent on automobiles. These areas prioritize pedestrian, bicycle, and wheelchair-friendly infrastructure. This approach fosters vibrant neighborhoods and a strong sense of community.

Strategic Development: Milton's 2040 Comprehensive Plan encourages new development to be strategically located near existing transportation and infrastructure resources. This strategy safeguards environmentally sensitive areas, agricultural lands, and preserves valuable historic, archaeological, or cultural resources from encroachment, ensuring that the City's heritage and natural beauty remain intact.

As Milton moves forward, these three objectives play a role in shaping the City's future, striking a balance between growth and preservation, and nurturing a community that is sustainable and reflective of its distinctive character and heritage.

Transit

Transit in Milton is a component of the City's transportation network, although it is not heavily relied upon compared to personal vehicles. Public transit options are available, primarily in the form of bus services in the Deerfield area, but they do not have the same extensive reach and ridership as in other parts of the metro Atlanta region or the MARTA system. An opportunity exists for Milton to further explore expanded transit investments as a part of a future North Fulton Comprehensive Transportation Plan update with its surrounding cities, but a few ongoing initiatives are worth discussion in the Milton CTP report.

One of the main transit projects currently in planning in and around Milton is the 400 BRT Initiative. The 2040 Comprehensive Plan provides a vision for this project:

> ***"MARTA is currently planning for future high capacity investments in the service area in coordination with GDOT. These investments would provide high capacity, high speed transit network in the region. This is being done through the proposed SR 400 Express Lanes project being administered through GDOT. The 16-mile section of SR 400 from North Springs MARTA Station to McGinnis Ferry Road at the Forsyth County line will add two separate optional express lanes and one separated lane in each direction from McGinnis Ferry Road to McFarland Parkway. In addition, the state's first [express lane] Bus Rapid Transit (BRT) is expected to run along the express lanes."***

As it currently exists, Windward Parkway is a multi-lane roadway designed to move cars more than people, and GA 400 serves as a barrier for retail and amenities on either side of it. The Windward Park and Ride will become the Terminal Station with Bus Rapid Transit connections to North Springs station. A focus of the LCI Plan is to build out the Windward Corridor and to generally increase access across busy and congested corridors. Connecting Windward Station to Milton through bike and pedestrian access and trail connections is included in the LCI Plan. An award for the express lanes is expected in early 2024 with construction to begin by the end of 2024.

Expansion of MARTA's microtransit services presents an opportunity for Milton to connect the more rural parts of the City with transit opportunities. This development holds potential for enhancing rural accessibility, addressing the mobility needs of residents in less densely populated areas, particularly those who do not have access to their own vehicle. Microtransit's customized, on-demand services may be able to bridge the transportation gap in rural Milton, offering residents a reliable mode of transit that aligns with their schedules.

By providing cost-efficient, data-driven solutions, microtransit ensures that resources are allocated efficiently, benefiting rural regions without the need for large buses that may be underutilized or costly infrastructure. Effective planning and coordination between MARTA, local authorities, and the community will ensure that these rural areas are able to explore the advantages of improved transit connectivity.

VRU

The FHWA defines a vulnerable road user (VRU) as a non-motorist with a fatality analysis reporting system (FARS) person attribute code for pedestrian, bicyclist, other cyclist, and person on personal conveyance. A VRU may include people walking, biking, or rolling. A VRU includes a highway worker on foot in a work zone and does not include a motorcyclist.

VRU laws are designed to prioritize the safety of pedestrians, cyclists, and other non-motorized road users over motor vehicles. These laws recognize the vulnerability of individuals who are not protected by the structure of a car and provide enhanced penalties for drivers whose actions result in harm to VRUs. The primary intent of these laws is to raise awareness about the importance of road safety and to hold drivers accountable for their actions, especially in situations where VRUs are involved. By prioritizing human life over cars, VRU laws aim to encourage responsible driving and reduce the risk to vulnerable road users, fostering a safer and more inclusive transportation environment.

The Infrastructure Investment and Jobs Act indicates that all US states are required to develop a VRU Safety Assessment as part of their Highway Safety Improvement Program. In Georgia, the state has taken steps to improve the safety of vulnerable road users, particularly cyclists, by implementing Georgia O.C.G.A. § 40-6-56. This law mandates that motorists must pass bicyclists with a minimum distance of three feet, and any violation is considered a misdemeanor punishable by fines of up to $250. However, local governments in Georgia have the authority to enhance these laws to further protect cyclists and promote safer practices.

Dunwoody, Georgia, has set an example for local governments by implementing Article VII, which focuses on protecting vulnerable road users and enforcing safe passing distances. This law expands the definition of a vulnerable road user to include work zone workers, pedestrians, persons leading an animal, and persons operating a non-motorized vehicle on a public right-of-way, crosswalk, or shoulder of the roadway. Under this law, fines for violations have been increased from $250 to $1,000. Additionally, this legislation offers safeguards against harassment for vulnerable road users.

Drawing upon the legal framework provided by Article VII, Sections 30-186 and 30-187, which pertain to the protection of vulnerable road users and the enforcement of safe passing distances, the City of Milton should consider implementing policies that align with the measures introduced by other local governments. We recommend the following policy initiatives:

Public Awareness Campaigns: A comprehensive public awareness campaign should be launched to educate both motorists and vulnerable road users about the laws, rights, and responsibilities outlined in Article VII, emphasizing the importance of maintaining safe distances and yielding the right-of-way to vulnerable road users. Various communication channels, including social media, educational materials, and public service announcements, can be leveraged to disseminate this essential information.

Localized Safety Initiatives: Prioritize localized safety measures in areas with significant vulnerable road user presence, such as school zones and popular cycling routes. These initiatives may encompass improved signage, road markings, and stricter speed limit enforcement to promote safer practices.

Infrastructure Enhancements: Invest in infrastructure improvements to enhance road safety for vulnerable road users. Consider measures such as wider shoulders, dedicated bicycle lanes, the installation of pedestrian crosswalks, and improved lighting in areas with heightened pedestrian and bicycle traffic.

Enforcement and Compliance: Collaborate with local law enforcement agencies to ensure the consistent enforcement of laws aimed at protecting vulnerable road users. Conducting regular traffic enforcement operations targeting safe passing distances and related violations will serve as a deterrent against unsafe behavior.

Data Collection and Analysis: Establish a robust system for collecting and analyzing data on incidents involving vulnerable road users. Such data can aid in identifying trouble spots and tailoring safety initiatives for the specific needs of Milton's community.

In line with the Dunwoody model, the adoption of these policy recommendations is expected to contribute to enhanced road safety for vulnerable road users, including pedestrians, cyclists, and others. This approach underscores the shared responsibility of all road users in Milton and mirrors the commitment to fostering a safer, more inclusive, and sustainable transportation network within the City.

Bicycle Network

Milton's cycling community has two facets: a large on-road cycling community that gathers in large groups for recreational rides throughout the week as well as a growing population of more casual users who are exploring riding their bike both for recreation as well as transportation. Serving both of these groups may look slightly different because their needs and desires for infrastructure may differ, but both are under consideration in this policy section.

A first step was to compare the existing code in Milton with peer cities emphasizing bike usage: Roswell and Decatur. Upon comparing Milton's code with that of the peer cities, several areas for potential policy changes and improvements were noted.

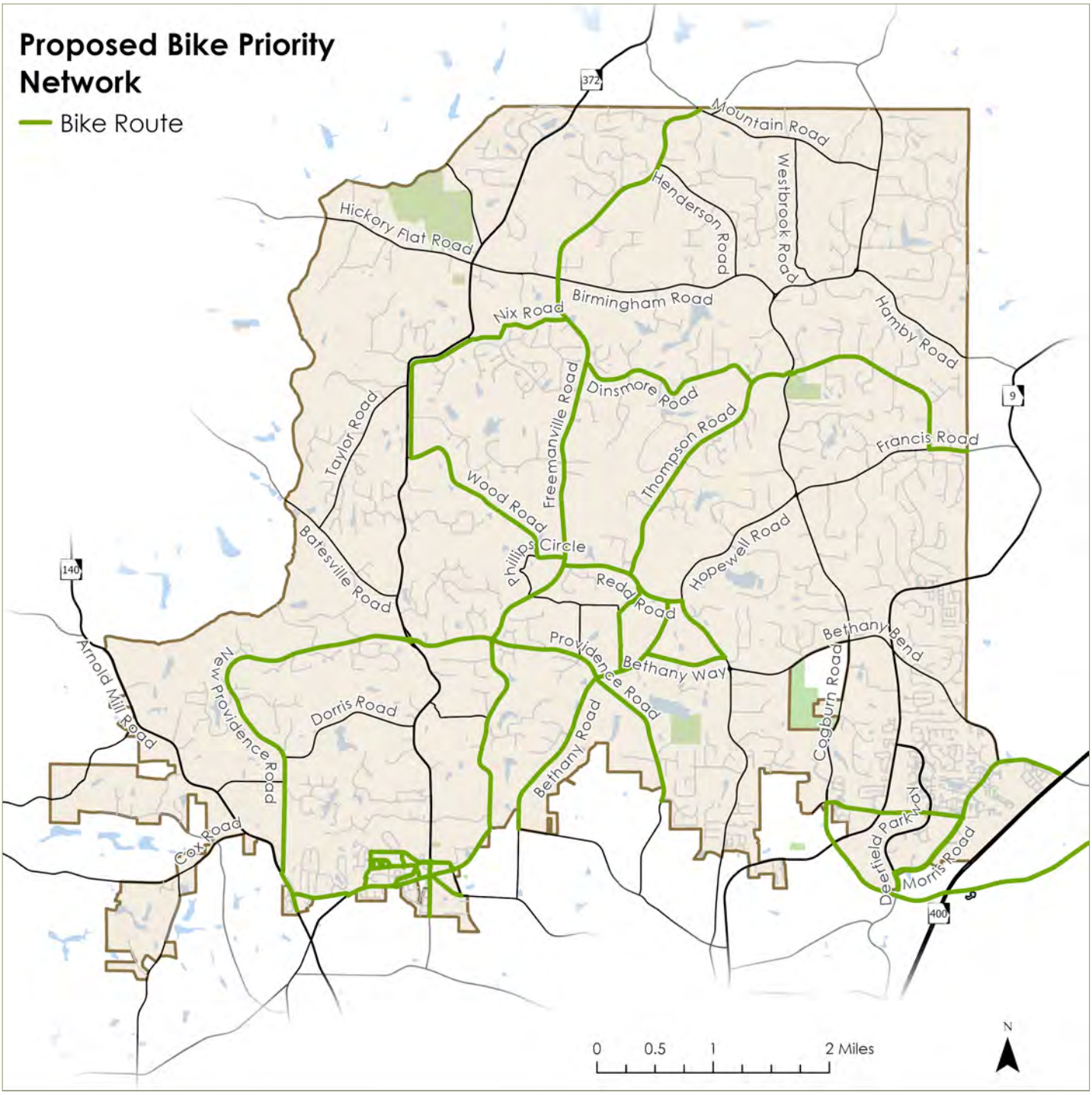
Milton's code emphasizes bicycle facilities but does not explicitly mention equestrian trails.	To enhance multimodal transportation and outdoor recreation, it may be beneficial to consider incorporating equestrian trails into the code or separate regulations.
Milton's code lacks specific minimum bike accommodations and any lane width requirements.	Defining minimum bike accommodation widths for different road types could enhance safety for cyclists.
While Roswell has an explicit "Three Feet for Safety Act," Milton's code lacks similar language mandating a safe passing distance for motor vehicles overtaking bicycles.	Implementing such language would bolster cyclist safety. Georgia has an existing state law that addresses this issue, but passing a code to reinforce this law will help increase cyclist safety and modify driver behavior.
Decatur's code addresses improper use of bicycle lanes, including motor vehicle driving and parking.	Milton could adopt similar language to define the proper use of bicycle accommodations and when motor vehicle access is permissible.
The codes from other jurisdictions prescribe specific fines and penalties for violations, while Milton's code references general code sections.	Milton may consider introducing more explicit penalties for violations related to bicycle facilities and vulnerable road users. Moreover, enhancing the code to emphasize coordination with regional networks will encourage connectivity for bicycle and equestrian trails and bike lanes.

By implementing these policy changes and improvements, Milton can further its commitment to multimodal transportation, cyclist safety, and comprehensive regulations for bicycle and equestrian facilities. These changes will help create a safer and more accessible environment for vulnerable road users while promoting active and sustainable transportation options.

To implement these policy changes effectively, Milton can adopt a multifaceted approach that encompasses both public education and infrastructure development. Public education initiatives would benefit the effort to raise awareness and promote safe practices among all road users. This approach could include comprehensive campaigns, educational programs, and community engagement efforts to inform motorists, cyclists, and pedestrians about the new regulations, the importance of safe passing distances, the proper use of bicycle lanes, and general road safety.

In parallel, infrastructure development forms the other half of this strategy. Enhancing roadways with wider shoulders for on-road usage, multiuse or equestrian trails for casual riders, and safe crossing zones not only ensures compliance with the new regulations but also provides tangible safety benefits. As the roads undergo repaving considerations, there is an opportunity to evaluate the network for lane narrowing, which can contribute to effective traffic calming measures. Expanding shoulders to accommodate bicycle travel can also be integrated into the repaving strategy. Moreover, implementing visual lane narrowing through striping, rather than resorting to rumble strips on the outside lane lines, can maintain a safe and pleasant road experience for all users while promoting traffic flow management and bicycle accessibility. Milton can invest in infrastructure improvements that facilitate the coexistence of different road users, thereby reducing potential conflicts and enhancing the overall safety and accessibility of its transportation network. The map below shows the suggested bike network paths as developed from the 2016 CTP, stakeholder and public input, and popular Strava Routes.

This combined approach, integrating public education with infrastructure enhancements, will create a multidimensional solution that promotes safety and encourages active and sustainable modes of transportation in Milton. It addresses the regulatory and practical aspects of accommodating vulnerable road users, fostering a more inclusive and safer environment for everyone.


Proposed Bike Priority Network
Bike Route
372
Mountain Road
Henderson Road
Westbrook Road
Hickory Flat Road
Birmingham Road
Nix Road
Hamby Road
9
Dinsmore Road
Freemanville Road
Taylor Road
Thompson Road
Francis Road
Wood Road
Batesville Road
Phillips Circle
Hopewell Road
Redd Road
140
Providence Road
Bethany Way
Bethany Bend
Arnold Mill Road
New Providence Road
Dorris Road
Bethany Road
Cogburn Road
Deerfield Parkway
Morris Road
Cox Road
400
0
0.5
1
2 Miles
N

Lighting

Lighting is an important factor in considering the safety of pedestrians and other active commuters. Milton's existing code does not mention lighting specifically for intersections and crosswalks but does mention pedestrian lighting requirements. Changing the code to require adequate lighting at each crosswalk will be helpful in building a more safe and well-rounded pedestrian experience. FDOT provides helpful information for lighting standards and appropriate elements.

Roundabouts have become defining features of Milton's road network but not all roundabouts or approaches include crosswalks, and notably, roundabout lighting primarily serves crosswalks. The approach to addressing this issue should be project-specific and evaluated on a case-by-case basis. Each roundabout project should undergo comprehensive assessments considering the distinct characteristics of the location, expected traffic patterns, and potential implications for vulnerable road users. The need for further investigation is recognized, considering not only the technical aspects of lighting and crosswalk installation but also the cultural and aesthetic considerations. Milton's commitment to sustainable development and a unique sense of place can be upheld through thoughtful, project-specific decisions that promote safety, reflect the city's heritage, and address the concerns of the public we serve.

Tailoring lighting standards to the specific requirements of Milton, while upholding key principles of safety, energy efficiency, and aesthetics, involves a comprehensive process. Firstly, a thorough assessment of local needs is essential, taking into account factors such as population density, traffic flow, and the presence of sensitive areas like parks and residential neighborhoods. Light levels should be adjusted to meet the unique requirements of different areas within Milton, with considerations for commercial zones, high-traffic areas, and residential neighborhoods. The choice of lighting fixtures, such as energy-efficient and shielded LED options, plays a crucial role in ensuring the new standards meet local needs. Modifying zoning regulations to support these standards in implementing dark sky compliance to minimize light pollution is also important. Community engagement, including public input and pilot programs, helps gather feedback and assess effectiveness. Enforcement mechanisms and regular reviews to stay up-to-date with evolving technology and needs complete the process. This tailored approach ensures that Milton's lighting standards are both functional and in harmony with its distinctive character.

Sidewalks

Milton's existing sidewalk code serves as a foundation for pedestrian infrastructure within the City. However, recognizing the evolving needs and preferences of the community, the Trails Advisory Committee is taking the lead in proposing changes for connections to activity nodes by sidewalk and trails . As Milton continues to grow and develop, there is a demand for more comprehensive and accessible pedestrian pathways. The proposed ordinance and map changes aim to address issues related to sidewalk connectivity, safety, and ensuring sidewalks are constructed in areas that maximize their utility. With the Trails Advisory Committee leading this initiative, the community should expect well-informed, community-driven changes that align with Milton's vision for meaningful and more widespread access to destinations . Here are some suggestions for consideration:

Contextual Approach:	Recognize the differences between urban/suburban and rural contexts in Milton. Tailor sidewalk improvements in the more developed areas, where there's higher population density and urban characteristics, to meet the specific needs of those areas.
Identify Key Connections:	Prioritize the identification and establishment of essential connections, such as those leading to schools and parks, which are important for the safety and accessibility of pedestrians, particularly students and families. Also, consider connections to activity centers, commercial districts, and other community resources to ensure sidewalks serve a broader community.
Activity Center Enhancement:	Focus on building out sidewalks within activity centers like Crabapple and Deerfield. These areas are often bustling with commerce and community activities, making them prime candidates for improved pedestrian infrastructure.
Gap Filling:	Identify and prioritize gap areas within the sidewalk network. Filling in missing links will create a more seamless and interconnected pedestrian network throughout Milton, improving safety and encouraging more people to use sidewalks for various purposes.
Multi-Modal Considerations:	Consider multi-modal options, such as bike lanes,l equestrian usage, or shared-use paths, where applicable. This can provide greater accessibility and safety for various modes of active transportation.
Safety Enhancements:	Implement safety features, such as crosswalks, pedestrian signals, and traffic-calming measures, to enhance the safety and appeal of sidewalks, particularly in areas with higher pedestrian traffic.
Accessibility and ADA Compliance:	Ensure that all sidewalk improvements are compliant with the Americans with Disabilities Act (ADA) standards, making them accessible to everyone, including individuals with disabilities.
Community Engagement:	Involve the community in the decision-making process. Seek input from residents, local businesses, and relevant stakeholders to ensure that sidewalk improvements align with their needs and preferences.
Maintenance Considerations:	Develop a plan for ongoing sidewalk maintenance to ensure that the newly built or improved sidewalks remain safe and functional over time.

By addressing these suggestions, the Trails Committee can contribute to creating a more walkable and inclusive community in Milton that caters to the unique needs and contexts of its residents.

Personal Transportation Vehicle

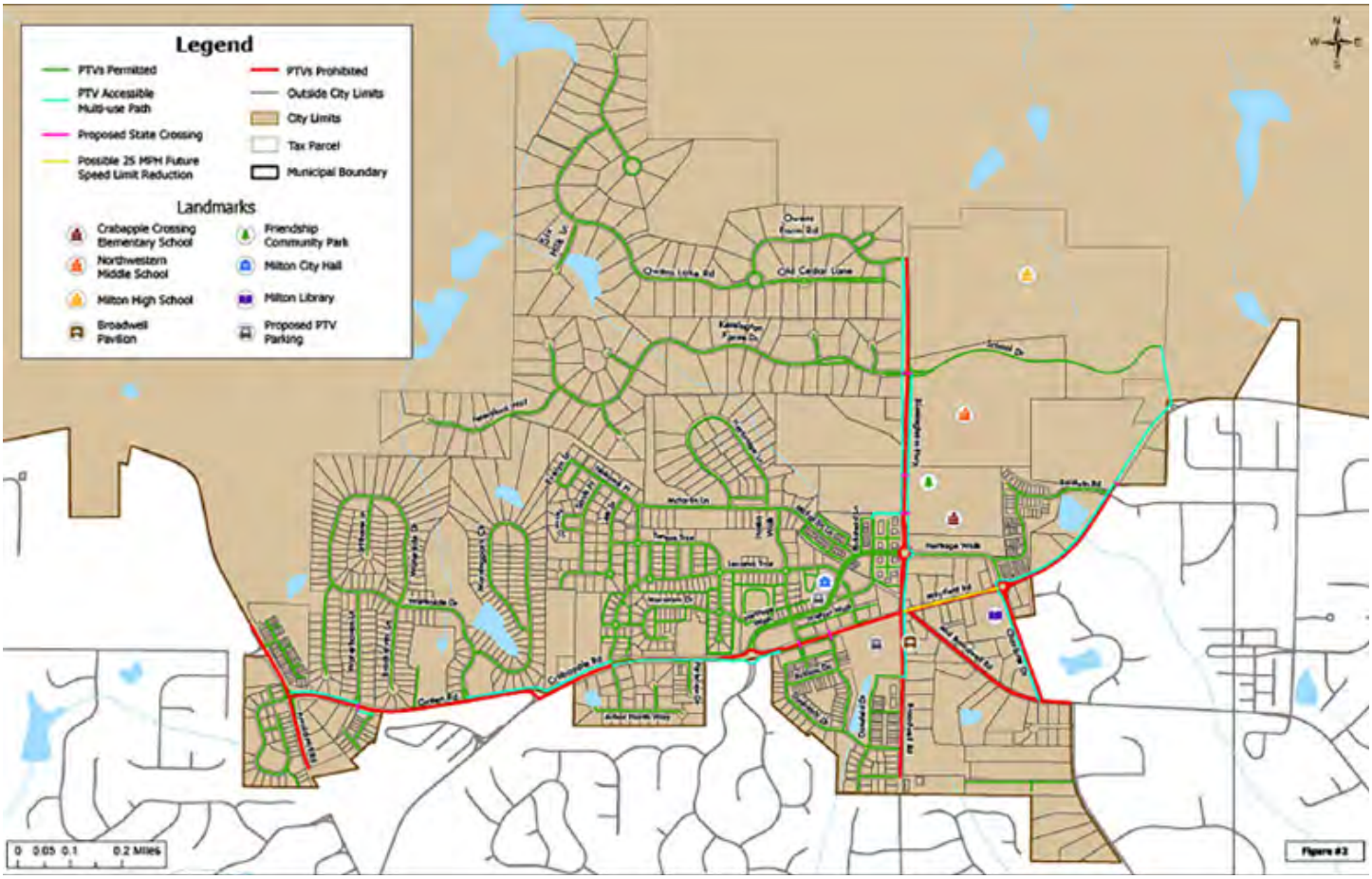


Image of On-Street PTV Plan, Provided by Crabapple PTV Plan

Milton's existing PTV (Personal Transportation Vehicle) Ordinance is a pivotal component of the City's transportation framework, governing the use of various personal mobility devices. To expand the applicability of the ordinance and connect neighborhoods to activity areas , the City created a PTV Plan for the Crabapple Form-Based Code Area.

To enhance the effectiveness of this PTV Plan and ordinance and ensure safe and lawful PTV operation, it is recommended that Milton invest in clear signage and wayfinding solutions. These signs should be strategically placed in areas where PTVs are commonly used, providing essential information about rules and regulations. The success of this approach can be observed in Roswell, particularly along Hardscrabble Road, where informative signage and wayfinding have effectively guided PTV operators and drivers alike, contributing to a safer and more efficient use of these vehicles on the road. By implementing similar signage and wayfinding in Milton, the City can not only streamline PTV operation but also promote safer cohabitation with other forms of transportation.

Image of PTV road sign, Provided by City of Dalton,
https://www.daltonga.gov/police/page/ptvs-ok-dalton-not-everywhere-dalton

SMART Transportation

SMART transportation, which stands for Sustainable, Multimodal, Accessible, Resilient, and Technologically Advanced transportation, can greatly benefit Milton by addressing the City's transportation challenges in a holistic manner. The following includes some ideas around how SMART transportation principles can be applied to Milton:

S Sustainable	SMART transportation in Milton involves embracing sustainable practices, such as promoting walking, cycling, and the use of electric vehicles. The City can invest in infrastructure and policies that reduce carbon emissions and promote eco-friendly modes of transportation.
M Multimodal	Milton can create a balanced and interconnected transportation network that accommodates various modes of travel. This includes mixed use trails, efficient public transportation, and accessible roadways that serve the needs of both urban and rural areas within the City.
A Accessible	Transportation should be accessible to all residents. Milton can improve accessibility by investing in ADA-compliant infrastructure, coordinating with MARTA to enhance public transit for those with mobility challenges, and creating transportation options that cater to all members of the community.
R Resilient	Milton can prepare for potential challenges, such as extreme weather events and changing transportation trends, by building a resilient transportation system. This may involve enhancing infrastructure durability, improving drainage systems, and ensuring that transportation systems can adapt to future needs.
T Technologically Advanced	Embracing technological advancements, like smart traffic management systems and electric vehicle charging infrastructure, can enhance transportation efficiency and reduce environmental impacts in Milton. Implementing SMART transportation solutions can also improve overall traffic flow and reduce congestion.

By applying these SMART transportation principles, Milton can develop a transportation system that is more sustainable, accessible, and resilient, catering to the evolving needs of the community while considering the environmental impact of transportation decisions.

Emergency Vehicle Preemption

In the interconnected emergency response network of Johns Creek, Roswell, and Alpharetta, mutual aid agreements facilitate seamless assistance to residents across jurisdictional boundaries. To further enhance the efficiency of emergency vehicle response in Milton, joining this mutual aid agreement and implementing Emergency Vehicle Preemption (EVP) systems can be pivotal. EVP technology provides a "green carpet" for emergency vehicles, allowing them to navigate through traffic with reduced hindrance, ensuring rapid response to emergencies.

For Milton, the evaluation of the mutual aid agreement with Alpharetta is a significant step. By identifying congested intersections and traffic bottlenecks, Milton can strategically deploy EVP technology at key locations, minimizing response time delays. Additionally, maintain thorough documentation in the City's databases and cabinets. This documentation should outline the specifics of EVP system installations, ensuring that any future signal re-timing efforts consider and preserve the preemption element. This proactive approach

guarantees that EVP technology remains a reliable tool for emergency services and is not inadvertently compromised during routine signal maintenance.

Incorporating EVP technology in the mutual aid agreement framework, coupled with strategic evaluation and robust documentation, will collectively enable emergency responders to focus entirely on their critical mission – providing immediate assistance to those in need, regardless of jurisdictional boundaries. This approach underscores the commitment of these municipalities to prioritizing the safety and well-being of their residents.

CONCLUSION AND NEXT STEPS

Five - Year Action Plan

The Five-Year Action Plan provides steps that can guide City of Milton staff and elected leadership through the implementation of recommendations in this Plan. The action plan should be revisited and revised periodically, as projects and policies are advanced and as construction costs are better known. Projects in Tier I and II TSPLOST lists should be advanced for design if not yet started. Projects with the design stage completed should be advanced for right-of-way acquisition.

For some projects, the City has the opportunity to partner with neighboring organizations or agencies. These opportunities are also shown in the following table.

5-Year Action Item	Description	Partner
General Recommendations		
2023 CTP	Adopt the 2023 CTP	
TSPLOSTs	Continue to promote the TSPLOST program, its revenue impacts to the City, and its previous years' success to inform Milton citizens of the TSPLOST impact to transportation.	Fulton County
Project Implementation Monitoring Program	Develop or continue a Project Implementation Monitoring Program to track its projects, progress, and funding.	
Policy Recommendations		
Microtransit expansion	Identify areas where microtransit is most needed, focusing on increasing rural connectivity and addressing the mobility needs of residents who do not have access to their own vehicles.	MARTA
Vulnerable Road User Awareness Campaigns	Develop a comprehensive public awareness campaign to educate motorist and vulnerable road users about laws, rights, and responsibilities of those in and outside of vehicles.	
Lighting Code Updates	Update code to require adequate lighting at each crosswalk in the City and modify zoning codes to require tailoring lighting solutions for infrastructure.	
Sidewalk Code Updates	Update Milton's sidewalk standards to meet the community's needs and ensure safety along pedestrian infrastructure.	Trails Advisory Committee
PTV Signage	Invest in clear signage and wayfinding guidelines for PTVs in areas where PTVs are commonly used.	
Emergency Vehicle Preemption (EVP) Partnership	Partner with Alpharetta to provide assistance to residents across jurisdictional boundaries. Work to deploy EVP technology at key locations, minimizing response time delays, and document changes in signal timing.	Alpharetta
Milton Bicycle Priority Network Policy Improvements	Update code language and other relevant policies to protect cyclists and provide guidance for multimodal infrastructure.	
Bicycle Priority Network Implementation	Evaluate the bicycle priority network for corridors that should be resurfaced, expanded, or restriped. For each corridor, determine what the appropriate measures are.	

Vulnerable Road User Infrastructure Improvements	Allocate funding for enhanced infrastructure that will improve safety for VRUs.	
Vulnerable Road User Safety Initiatives	Determine areas of high VRU presence and implement enhanced safety measures for the specific location.	
VRU Data Collection	Establish a robust system for collecting and analyzing data on incidents involving vulnerable road users.	
Program Recommendations		
Pavement, Bridge, and Guardrail Maintenance	Continue to allocate funds for bridge replacement/maintenance, guardrail improvements, pavement maintenance, and signal/technology upgrades.	
Roadway paving and reconstruction	Continue to allocate funding for roadway and pavement improvements.	
Local Road Safety Plan Implementation	Allocate funding to implement action items detailed in the Local Road Safety Plan.	
Active Transportation Recommendations		
Level 1 sidewalk and crosswalk gaps - design	For sidewalk projects from Tier I and II that have not yet been designed, initiate design.	
Level 1 sidewalk and crosswalk gaps - right of way acquisition	For sidewalk projects from Tier I and II that have been designed but for which right-of-way has not yet been acquired, initiate acquisition.	
Level 1 sidewalk and crosswalk gaps - construction	Initiate construction for Level 1 projects as funding becomes available.	
Intersection and Roadway Recommendations		
Level 1 intersection improvements	For intersection projects from Tier I and II, initiate the next stage of the project (design, right-of-way acquisition, construction).	Various (Roswell, Alpharetta)
Level 1 roadway operations improvements	For roadway operations projects from Tier I and II, initiate the next stage of the project (design, right-of-way acquisition, construction).	
Level 1 multimodal roadway improvements	For roadway operations projects from Tier I, initiate the next stage of the project (design, right-of-way acquisition, construction).	

Next Steps for Milton

As Milton continues to develop and its needs and priorities are changing, there is an opportunity for the City to provide transportation infrastructure that meets residents' current and future needs. This Comprehensive Transportation Plan can help City staff and elected officials prioritize projects and policies and offers considerations for potential partnerships at the local and regional level.

COMPREHENSIVE TRANSPORTATION PLAN

CITY OF MILTON | 2023

Appendix A

COMPREHENSIVE TRANSPORTATION PLAN

CITY OF MILTON | 2023

Existing Conditions and Needs Assessment Report

October 2023

Introduction

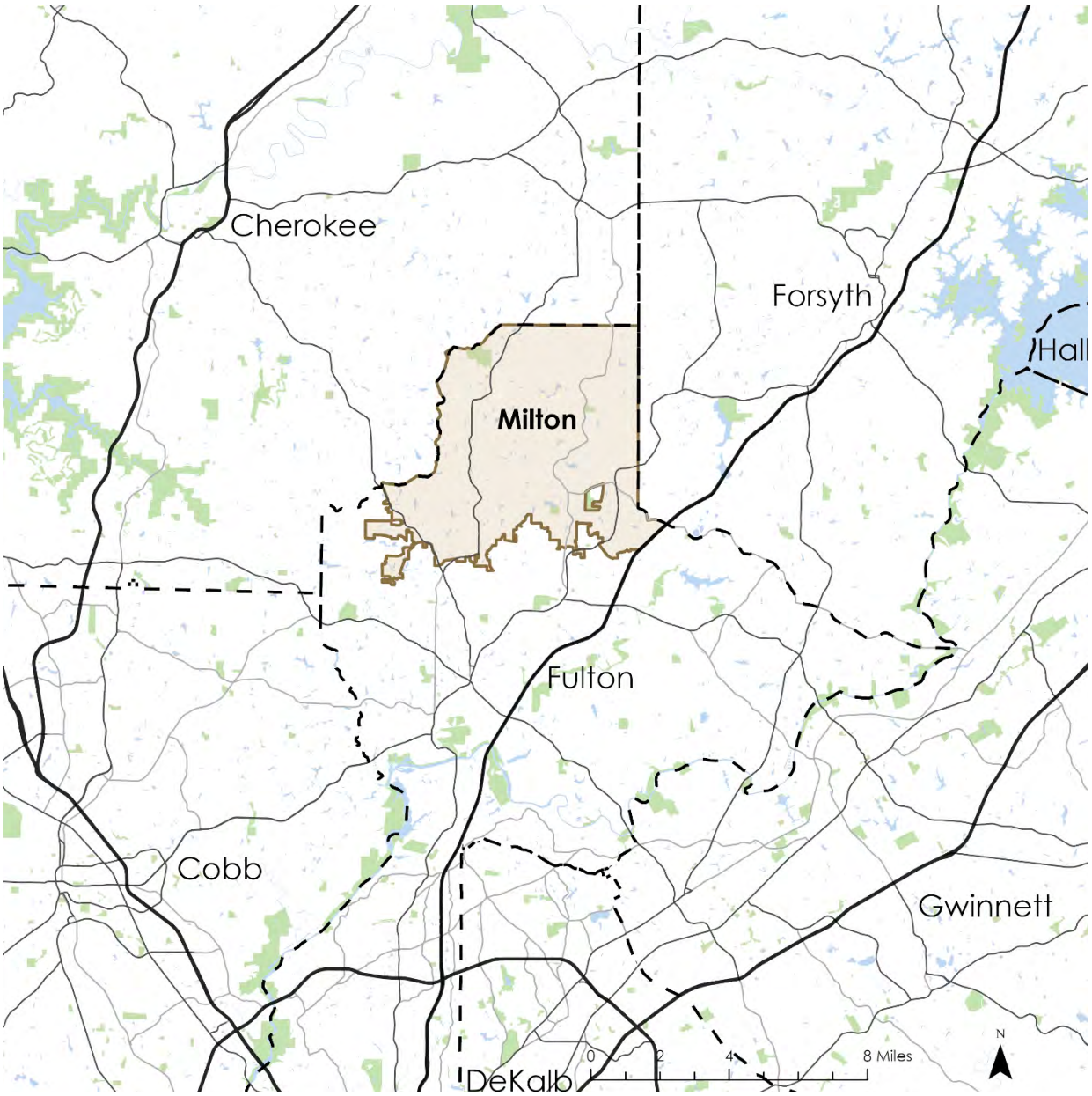
The City of Milton is updating its Comprehensive Transportation Plan (CTP) that will help guide its mobility-related projects and priorities for the next 25 years. Since the 2016 CTP, Milton has experienced some growth, impacting the overall transportation system and needs across all modes of transportation – vehicular, bicycle, pedestrian, and transit. Cities surrounding Milton have also grown, causing further transportation network impacts. This 2023 CTP will serve as an update to anticipate and prepare for Milton's future needs and to help guide City staff and elected officials when making transportation decisions.

This document, the Existing Conditions and Needs Assessment Report, is an interim deliverable that focuses on the current state of Milton's transportation system as well as current and future needs. The document includes the following components:

- **Plan Goals**: Determining the guiding principles behind the development of the plan
- **Phase 1 Public Engagement**: Review of activities accomplished and results of feedback
- **Diagnostic Review**: Reviewing traffic patterns and projects from the 2016 CTP compared to current day
- **Community Overview**: Understanding the people and populations that make up the City of Milton
- **Land Use and Market Overview**: Understanding zoning, neighborhoods, and employment in the City of Milton
- **Transportation System**: Understanding the roadway network, safety, congestion, active transportation, and transit in the City of Milton
- **Next Steps**: Review of upcoming activities during the Recommendations Phase

Study Area

The City of Milton is located within Fulton County. The City borders Forsyth and Cherokee Counties on its northern side and the Cities of Alpharetta and Roswell on its southern side.



Review of Relevant Plans

Understanding previous planning efforts is important to provide a more cohesive idea of the City's unique characteristics as well as vision, goals, and recommendations. This section documents key findings from previous plans including:

- City of Milton 2040 Comprehensive Plan
- City of Milton 2021-2025 Strategic Plan
- City of Milton 2016 Comprehensive Transportation Plan
- North Fulton 2017 Comprehensive Transportation Plan
- City of Milton Local Road Safety Plan
- City of Milton Trail Blueprint and Community Trail Prioritization Plan
- City of Milton Crabapple Area Personal Transportation Vehicle (PTV) Plan

Some key takeaways stand out from the review:

- Enhancing strategic commercial areas while maintaining Milton's rural characteristics is a common theme among plans.
- Cogburn/Hopewell Road, SR 372/Batesville Road, SR 140, and SR 400 all have significant congestion and scored at a LOS E or F.
- Hopewell Road, Birmingham Highway, and Freemanville Road all ranked highest for safety concerns, specifically related to vehicle speeds and distracted driving.
- Milton wants to provide safer multimodal connections around activity centers and regional destinations.
- Sidewalk infrastructure is primarily located in the Crabapple area and connects residential areas to community centers and commercial areas.
- Personal Transportation Vehicles (PTVs) are used throughout the City, and there are efforts to expand multi-use paths and safe road networks for these types of vehicles.

Plan Goals

To ensure a CTP's development properly reflects Milton's unique character and growth aspirations, a set of goals is necessary. The goals detailed below were developed based on previous CTPs, the City's strategic plan, and other relevant Milton plans.

1. Reduce Congestion Along Key Corridors
    a. Develop and implement a plan to reduce congestion, specifically relating to corridors with "red lines," indicating heavy traffic on mapping software, while also considering the context of the Milton community.
    b. Improve stakeholder's satisfaction with Milton's transportation system through routine community engagement.

2. Improve Traffic Operations at Intersections
    a. Ensure intersections' levels of service do not decrease below Level D within the next five years, when possible.
    b. Prioritize projects that increase intersection efficiency.

3. Enhance Infrastructure to Support Multimodal Travel
    a. Develop bicycle and pedestrian facilities within and around the Crabapple and Deerfield areas.
    b. Implement infrastructure that improves safety and connectivity for walking, biking, and horse-riding throughout the City.
    c. Improve infrastructure for transit users relating to routes, stops, and first- and last- mile connectivity.

4. Increase Safety for All Users
    a. Raise awareness about potential vehicle speed, distracted driving, and wildlife -related crashes.
    b. Educate the community about rules of the road when interacting with non-motorized modes of transportation and prioritize protected infrastructure for these users.
    c. Identify engineering countermeasures to reduce intersection crashes and improve roadway/shoulder conditions.

5. Balance Mobility with Consideration for Community Character
    a. Determine strategies to increase mobility and connectivity while also considering Milton's unique characteristics and context of individual neighborhoods.
    b. Collaborate with state, regional, and surrounding partners to create a cohesive and thoughtful transportation network.

6. Embrace Financial Stewardship
    a. Sufficiently maintain the existing transportation system to extend its useful life and long-term viability.
    b. Identify and prioritize projects that can leverage local resources to obtain additional funding from the state, federal level, or other entities.

Phase 1: Public Engagement

The initial phase of public involvement in the City of Milton's Comprehensive Transportation Plan update commenced with the launching of an interactive website and a strategic social media campaign across various platforms to raise awareness about the initiative. Simultaneously, the project team initiated the development of a public survey using Social PinPoint, designed to elicit valuable insights from Milton's residents regarding their transportation and mobility needs.

Throughout the first round of public engagement, this online survey remained a central tool, along with dynamic focus group discussions and an interactive pop-up event hosted at the Milton Farmer's Market. Importantly, prior to engaging the public directly, City staff played a pivotal role by providing valuable input and serving as a sounding board for the project management and consultant teams.

This comprehensive public engagement process allowed the team to identify the community's transportation priorities and pinpoint current and future transportation needs, forming the foundation for recommendations regarding projects and policies within the CTP.

Project Specific Emails

To stay up to date on the Milton CTP process, Round 1 participants in all outreach activities were given the opportunity to provide their email address to the CTP team at public intercepts, community events, and via the project website, https://www.miltonga.gov/CTP. Participants were encouraged to email additional questions, comments, and/or concerns regarding the planning process to Milton's Transportation Engineer Robert Dell-Ross, robert.dell-ross@miltonga.gov.

Focus Groups

Four focus group meetings were conducted as a part of the first round of public engagement. Focus group meetings were used to understand the specific needs relative to some targeted topics or focused groups of individuals within the City and encouraged open communication about needs each group identified.

The team conducted these meetings virtually over a series of two weeks and focused on engaging audiences in four specific target groups: residents of the Crabapple neighborhood, residents of the Deerfield neighborhood, pedestrians and cyclists, and HOA leaders. The project team asked a series of questions tailored towards each respective group and created a virtual board to organize participants responses and conversations. These discussions helped the team ensure that the Plan would have representation from each of these targeted groups.

Pop-Up Event

The first round of public engagement leveraged a pop-up event in an effort to meet people where they are. This public intercept took place on August 12, 2023, at the Milton Farmers' Market in Crabapple. This event allowed for the team to engage directly with the public and establish a presence in the community while simultaneously spreading information about the Plan and promoting the online survey. At the event, the team asked the public to rank the Plan goals and priorities, allocate funding in a budgeting activity, and identify transportation needs on a map, corresponding with the questions in the online survey.

Online Survey

For individuals unable to attend a pop-up event or partake in a focus group, the Milton CTP online survey was accessible between August 11, 2023, and September 6, 2023. This survey used an online engagement platform called Social PinPoint, which allowed the project team to offer activities like goal priority ranking, budget funding allocation, and a mapping tool.

The online survey offered participants the opportunity to engage in activities similar to those presented during the public engagement session at the farmer's market, but with the flexibility of choosing when and where to participate. Online surveys possess the advantage of extending the outreach of a public engagement initiative, as they are generally available to participants over a more extended period compared to a single meeting or community event. In total, the survey collected 364 map comments and 424 survey participants.

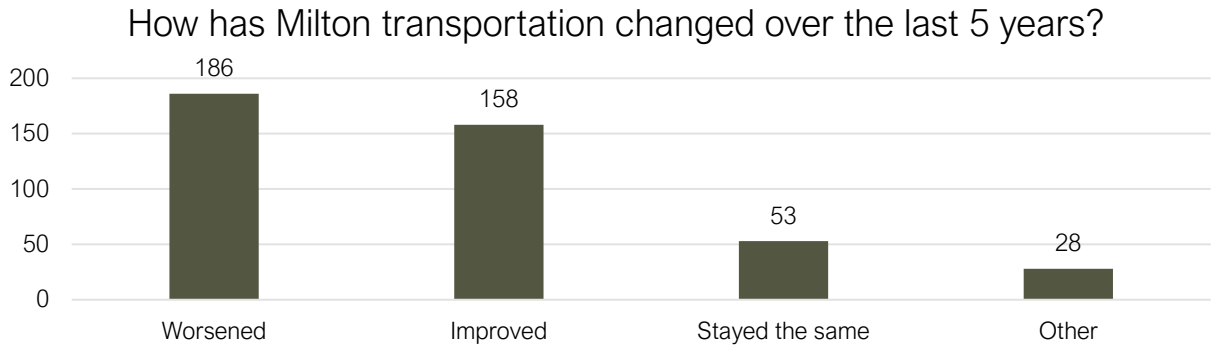
Round 1 Survey Results

The Milton CTP Public Involvement Round 1 overall results combine input received from the online survey, community events, and focus group meetings. In total, the Milton CTP Public Involvement Round 1 efforts engaged nearly 500 people who provided input on the City's existing and future transportation needs for roadway, transit, and bike/ped modes.

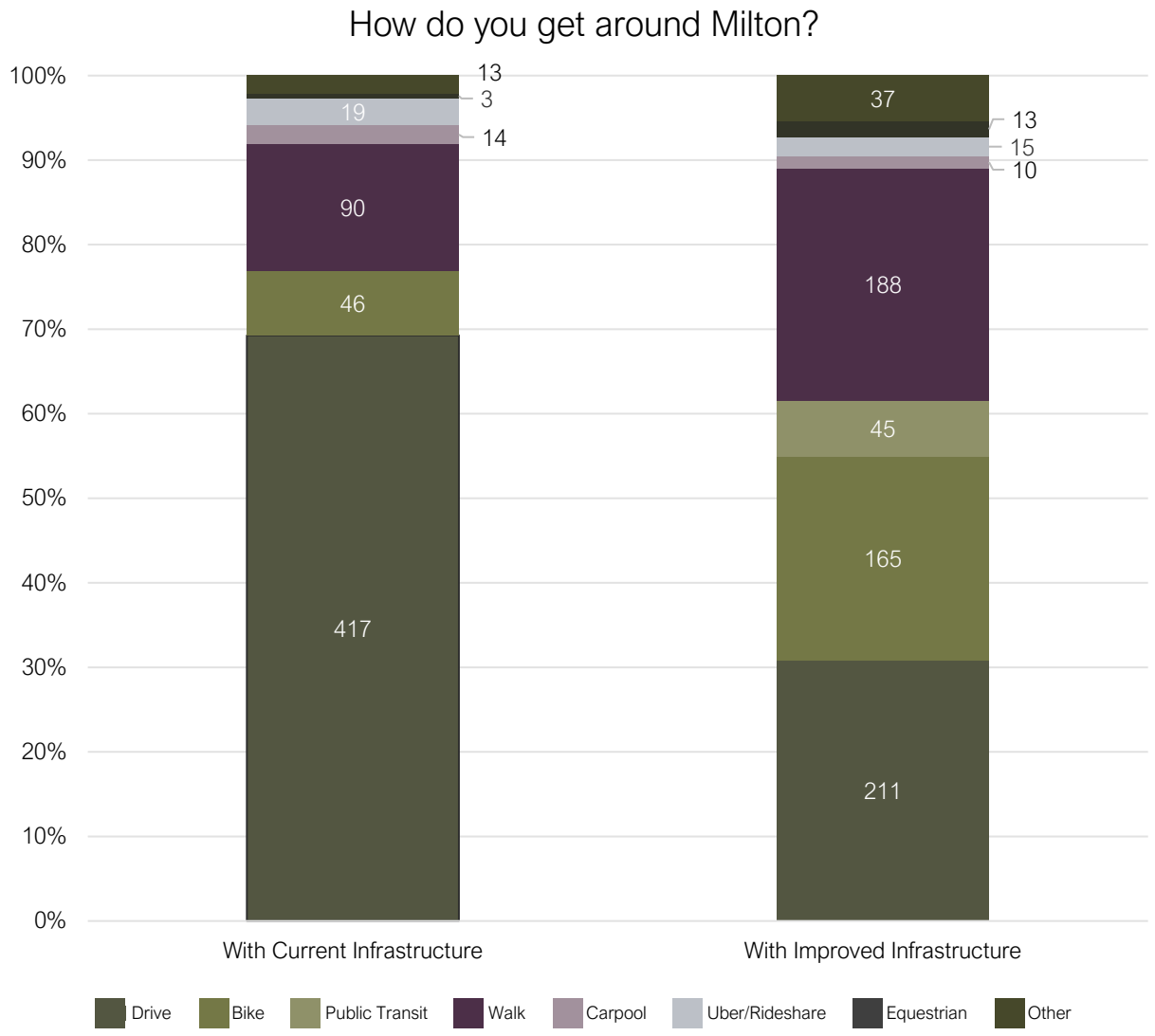
In addition to the quantitative data that can be analyzed from the funding allocation and priority ranking activities, participants provided qualitative and anecdotal input to the project team. This input provides additional information that may not be gleaned from technical analyses alone. For example, the input provided from the mapping activities supported the Milton CTP team with identifying areas of focus to develop transportation project recommendations intended to address those issues.

Introduction

The survey began by asking participants about their views on transportation in Milton. Many respondents (186) feel that Milton's transportation system has worsened over the past 5 years. When asked why users chose their respective response, a large number of the 'worsened' responses discussed increased traffic congestion throughout the City. On the positive side, 158 respondents believe that transportation has improved, indicating potential efforts to address previous issues or investments in transportation upgrades. However, it's worth noting that a sizable number (53) believe that transportation has remained the same, which might reflect a perception of stability or a lack of noticeable changes.



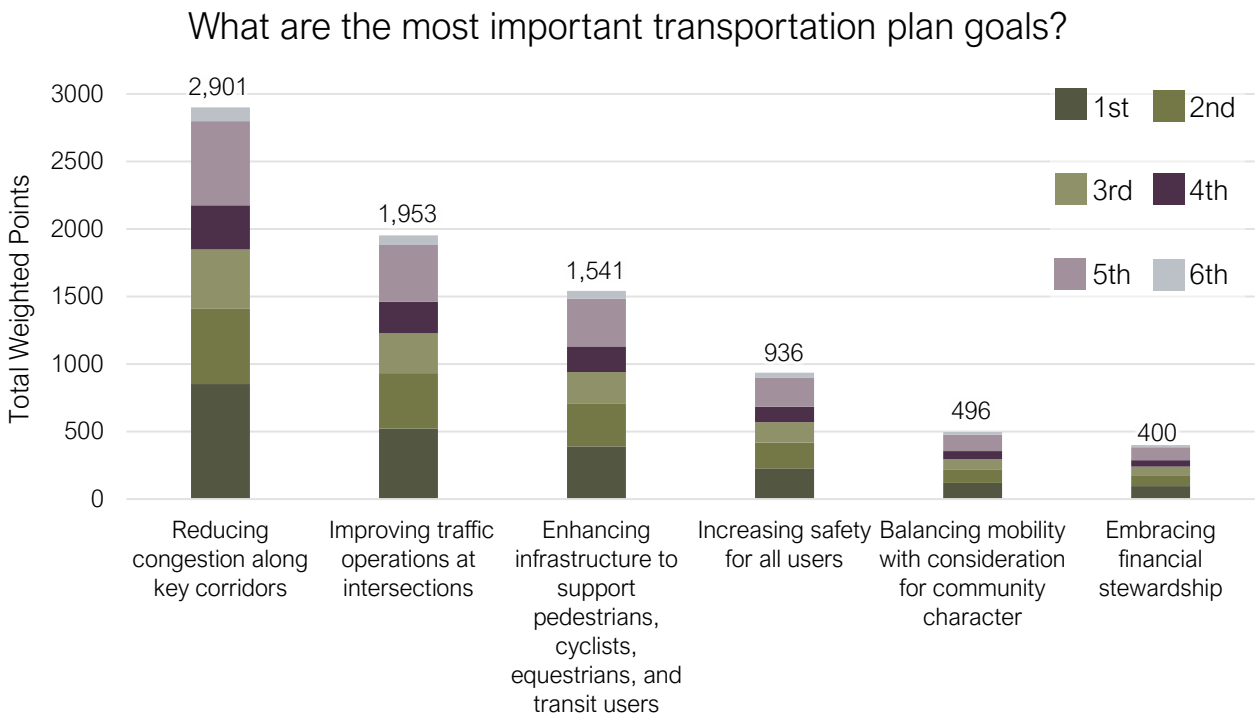
Users were then asked about their current and future transportation preferences. The majority (69%) of users' main mode of transportation was driving, followed by walking (15%). Users' preferred mode of transportation was driving (31%), closely followed by walking (27%) and biking (24%).



The transportation plan goals that users were asked to prioritize in both the pop-up event and survey are as follows:

- **Reduce congestion along key corridors**: enhancing traffic flow along roadways primarily by adding travel lanes
- **Improve traffic operations at intersections**: adding turn lanes, signals, or roundabouts to reduce delays at intersections
- **Increase safety for all users**: providing transportation infrastructure that prioritizes the well-being of all users
- **Enhance infrastructure to support pedestrians, cyclists, equestrians and transit users**: creating dedicated infrastructure such as sidewalks, trails, and wider shoulders
- **Balance mobility with consideration for community character**: making transportation improvements that fit the character of Milton
- **Embrace financial stewardship**: exercising responsible decision-making to ensure a sustainable transportation network

For the plan goal priority ranking, scores were weighted where the most important goals were given the greatest number of points, and the totals were then summed. Reducing congestion along key corridors received the highest number of responses and the highest total score. The data suggests that reducing congestion, improving traffic operations, and enhancing infrastructure to support various transportation modes are the top priorities for respondents when it comes to transportation planning. Safety and community character considerations are also important but receive relatively fewer responses. Financial stewardship appears to be a lower priority based on the provided data.



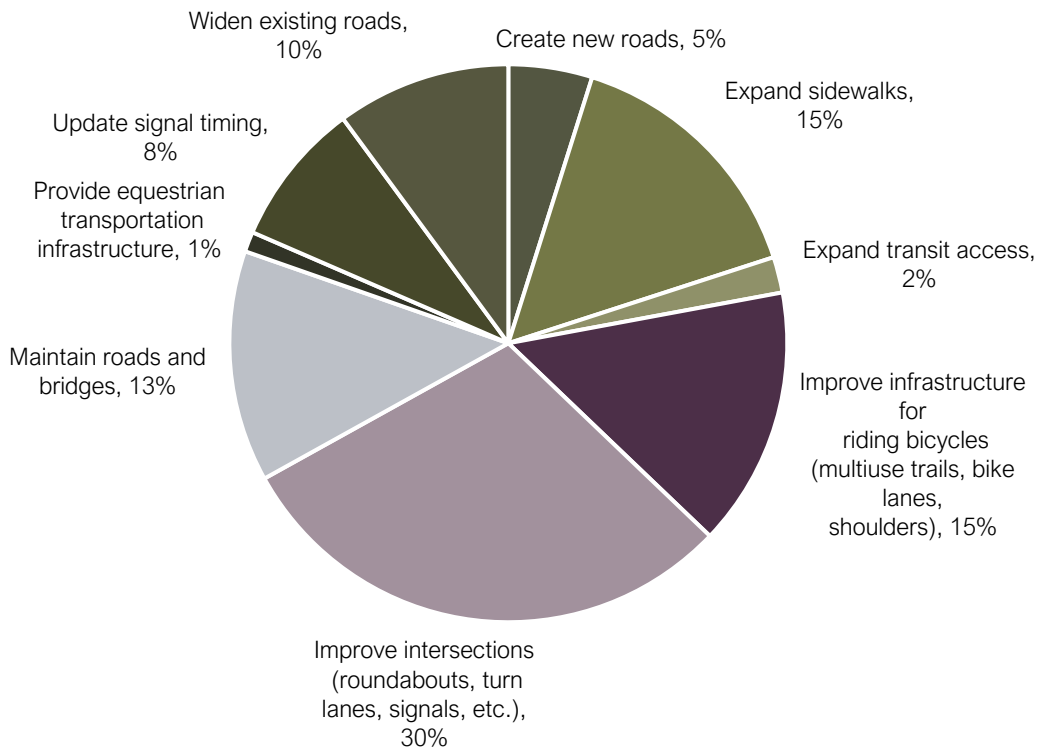
Budget Overview

For the budget activity, users were asked to allocate $100 worth of funding among the following categories.

- **Widen existing roads**: roadway widening to add travel lanes along existing key routes may enhance traffic flow and reduce congestion
- **Create new roads**: New road connections may enhance traffic flow by providing more choices or relieving capacity issues on key corridors and shortening the distance people need to travel.
- **Improve intersections**: Signal timing is used to improve mobility and safety, and coordinated signals along roadway corridors can increase system efficiency
- **Expand sidewalks**: adding new sidewalks to fill in gaps and create better connectivity to destinations in the City
- **Improve infrastructure for biking**: developing better biking infrastructure may involve wider shoulders and separate multi-use paths
- **Expand transit service**: transit service expansions or improvements may result in more efficient and more direct public transportation options throughout the City and region
- **Provide equestrian infrastructure**: support equestrians by developing facilities and trails for recreation and transportation opportunities

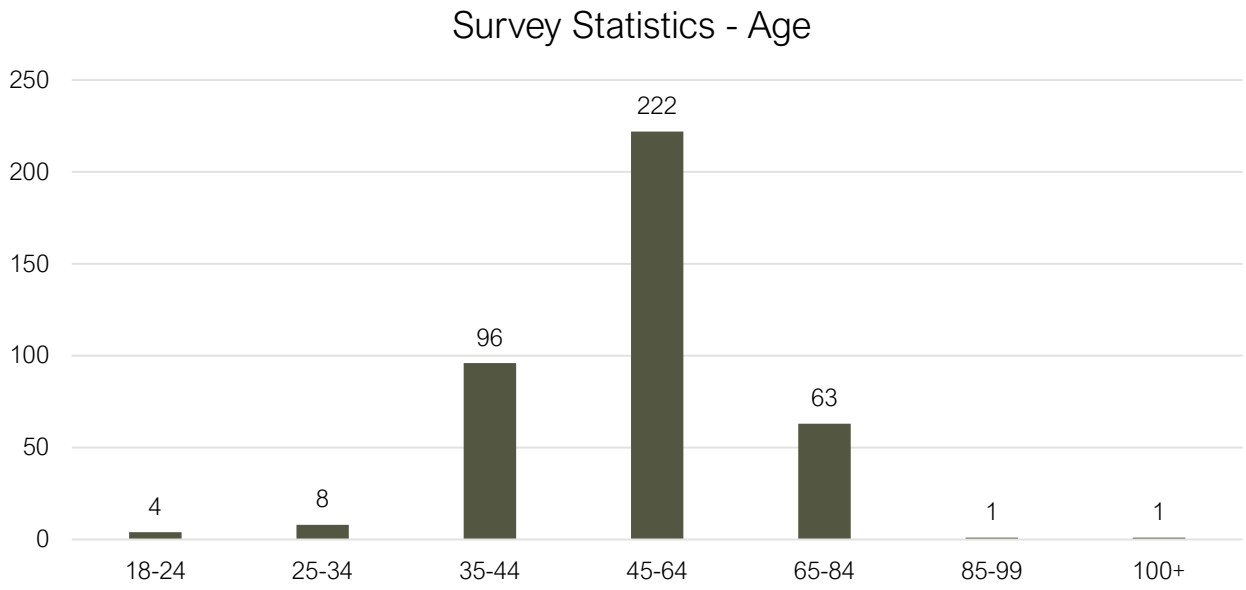
The highest amount of money allocated in the budgeting activity was towards improving intersections (30%), and providing equestrian infrastructure was the lowest (1%).

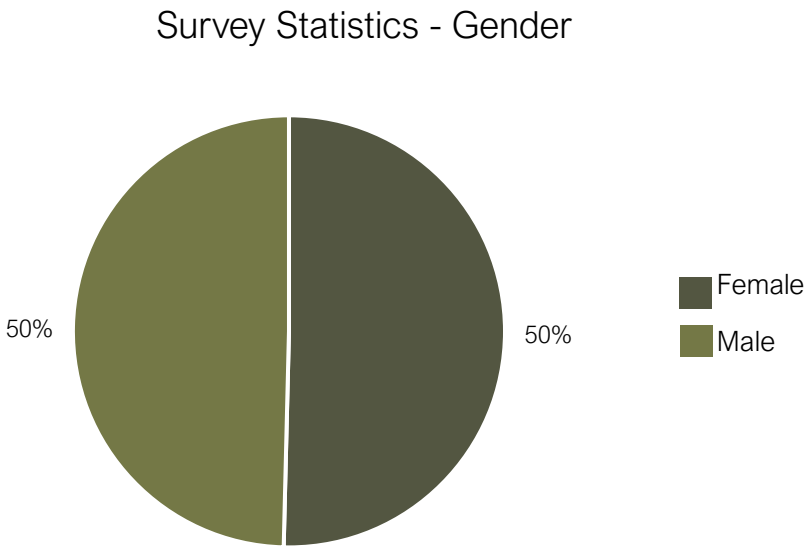
Percent of Money Allocated to Transportation Improvements

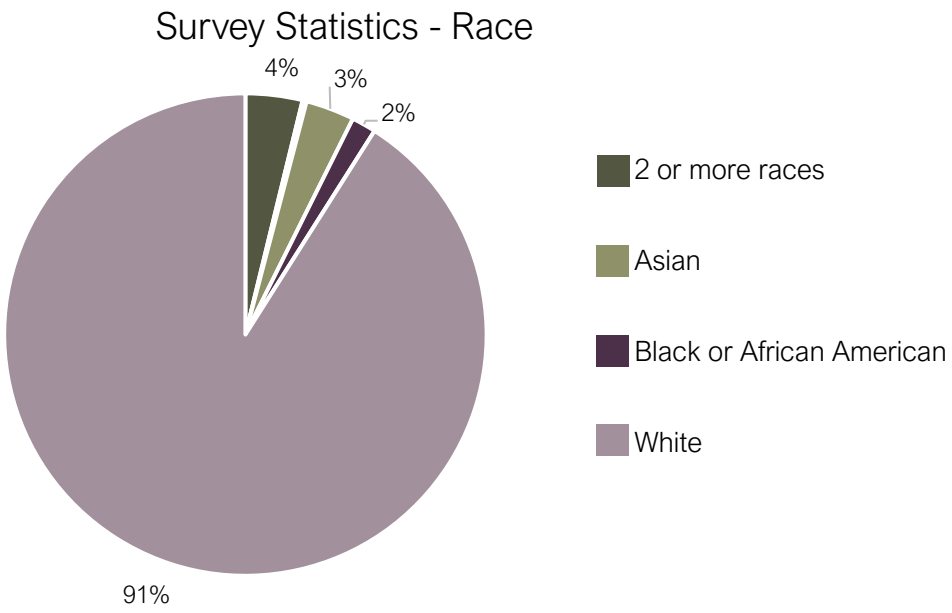


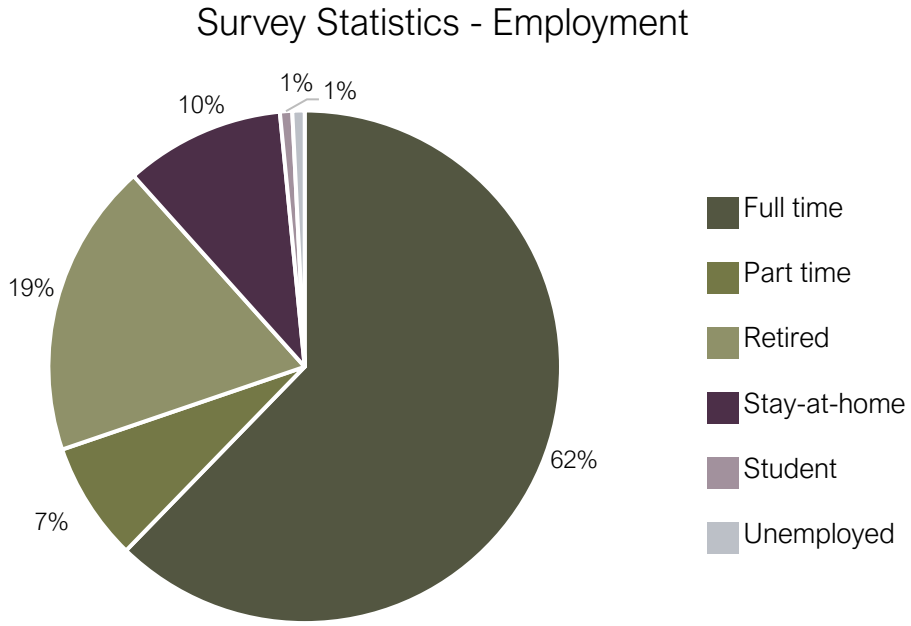
Conclusion

The survey concluded by asking users some demographic information. The majority (222) of responses were from individuals between the ages of 45-64. There was equal participation from men and women and 91% of survey respondents were white and worked full time.






Survey Statistics - Race
4%
3%
2%
91%
2 or more races
Asian
Black or African American
White

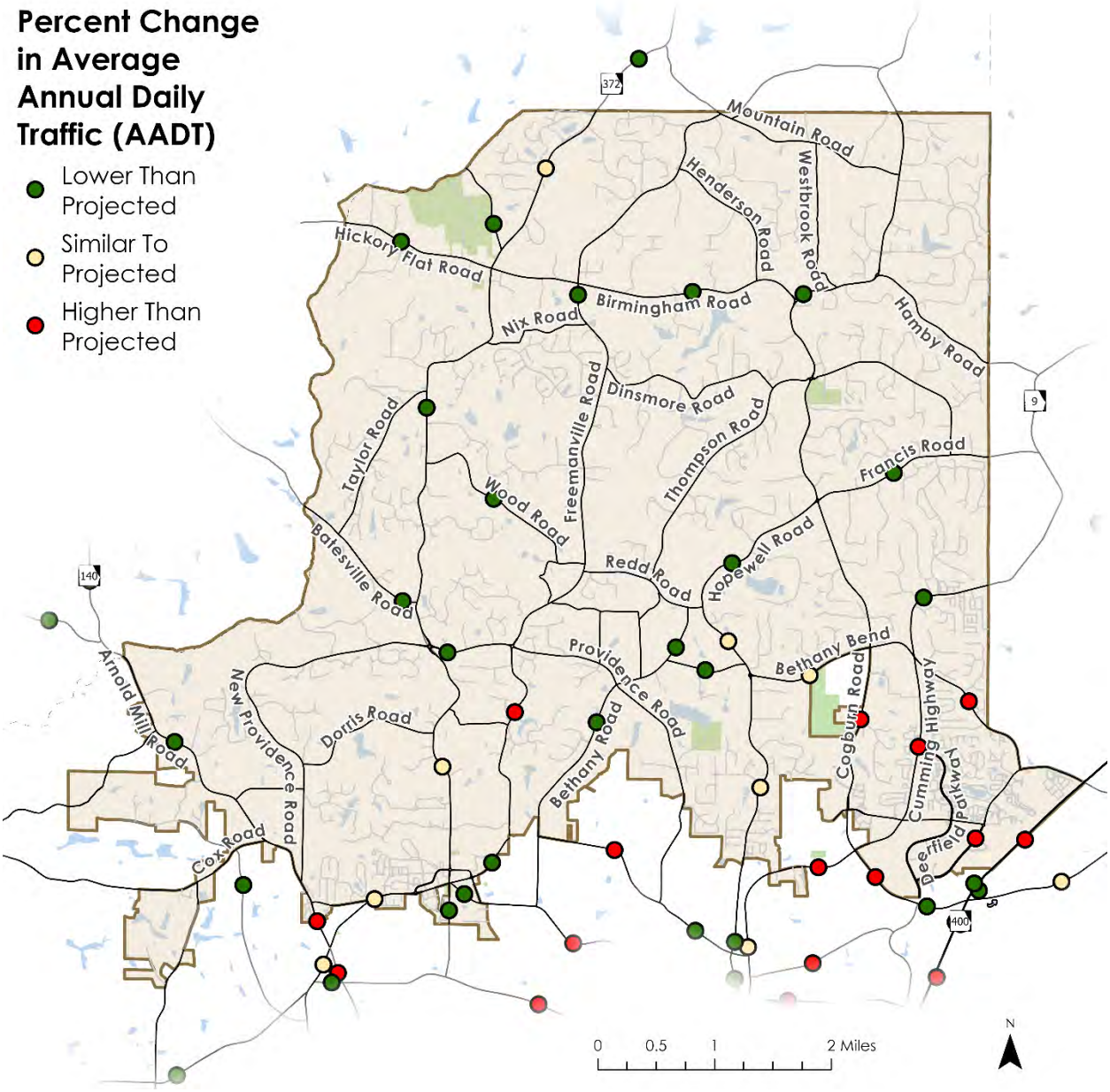

Survey Statistics - Employment
1%
1%
10%
19%
62%
7%
Full time
Part time
Retired
Stay-at-home
Student
Unemployed

Diagnostic Review

As part of the planning process, it is important to understand the current conditions of the City. Two assessments were completed as part of the diagnostic review including a comparison of actual traffic growth to projected growth from the 2016 plan as well as a catalog of implementation status for all projects listed in the 2016 plan.

Traffic Growth Comparison

As part of the 2016 CTP, a refined version of the Atlanta Regional Commission's travel demand model (specifically for use within Milton) was used to predict vehicular traffic volumes in 2040. The model predicts and accounts for expected growth throughout metropolitan Atlanta including within the City of Milton. These values were interpolated and compared to Annual Average Daily Traffic (AADT) counts from 2021 to determine how the projected volume compares with observed volume.

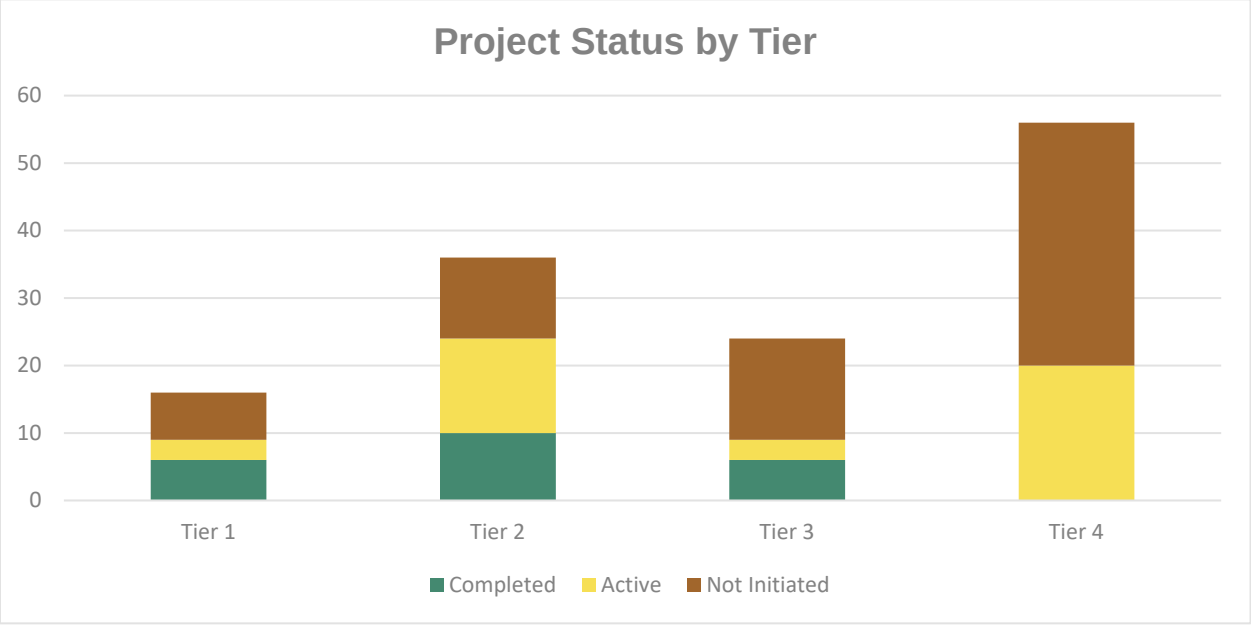


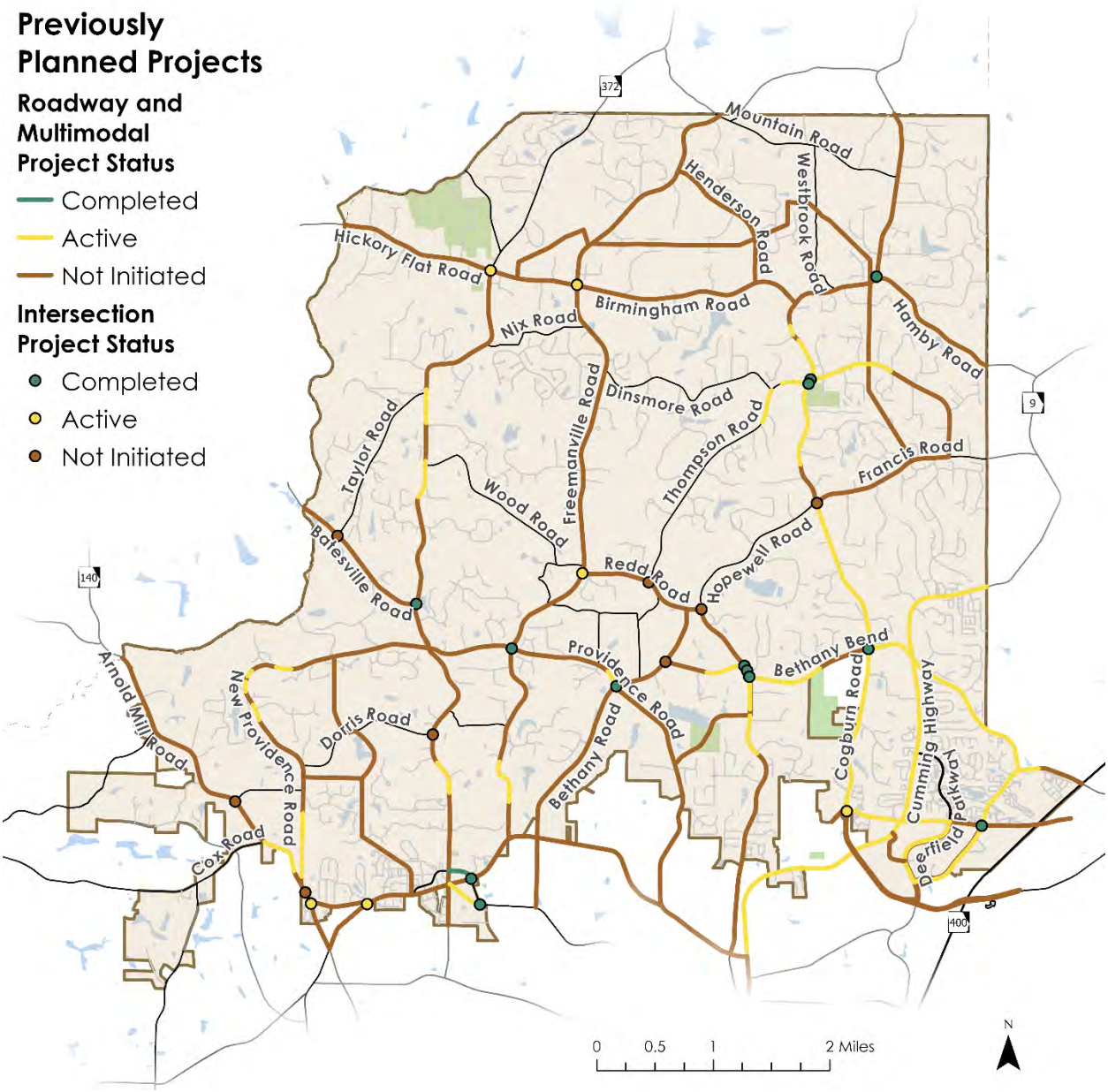
Most of the traffic in Milton was lower than projected by ARC's model. However, in the southeast corner, closer to Alpharetta and SR 400, traffic was higher. Specifically, the traffic along Cogburn Road, close to SR 400, was over 50% more than what was expected. Traffic along Bethany Bend, SR 9/Cumming HIghway, Deerfield Parkway, and Morris Road was more than predicted as well, ranging from approximately 20% to 50% more. Milton has allowed more development in the southeast corner which could correlate to the increased traffic volumes in the area.

Implemented Projects Since the 2016 CTP

The table below breaks down the completion status of projects in each tier from the 2016 CTP. The Tier 1 and Tier 2 projects also include GDOT Tier 1 and Tier 2 projects. The first two project tiers have a higher percentage of completed or active projects compared to projects in the lower two tiers, showing the City of Milton's commitment to the priorities identified in the previous CTP. The majority of completed and active projects are intersection and multimodal projects, including 13 completed intersection projects and 1 completed multimodal project along Heritage Walk.

Level	Number of Projects by Status			Total Projects	Percent Completed or Active
	Completed	Active	Not Initiated		
Tier 1	6	3	7	16	56%
Tier 2	10	14	12	36	67%
Tier 3	6	3	15	24	38%
Tier 4	0	20	36	56	36%
Total	22	40	70	132	47%



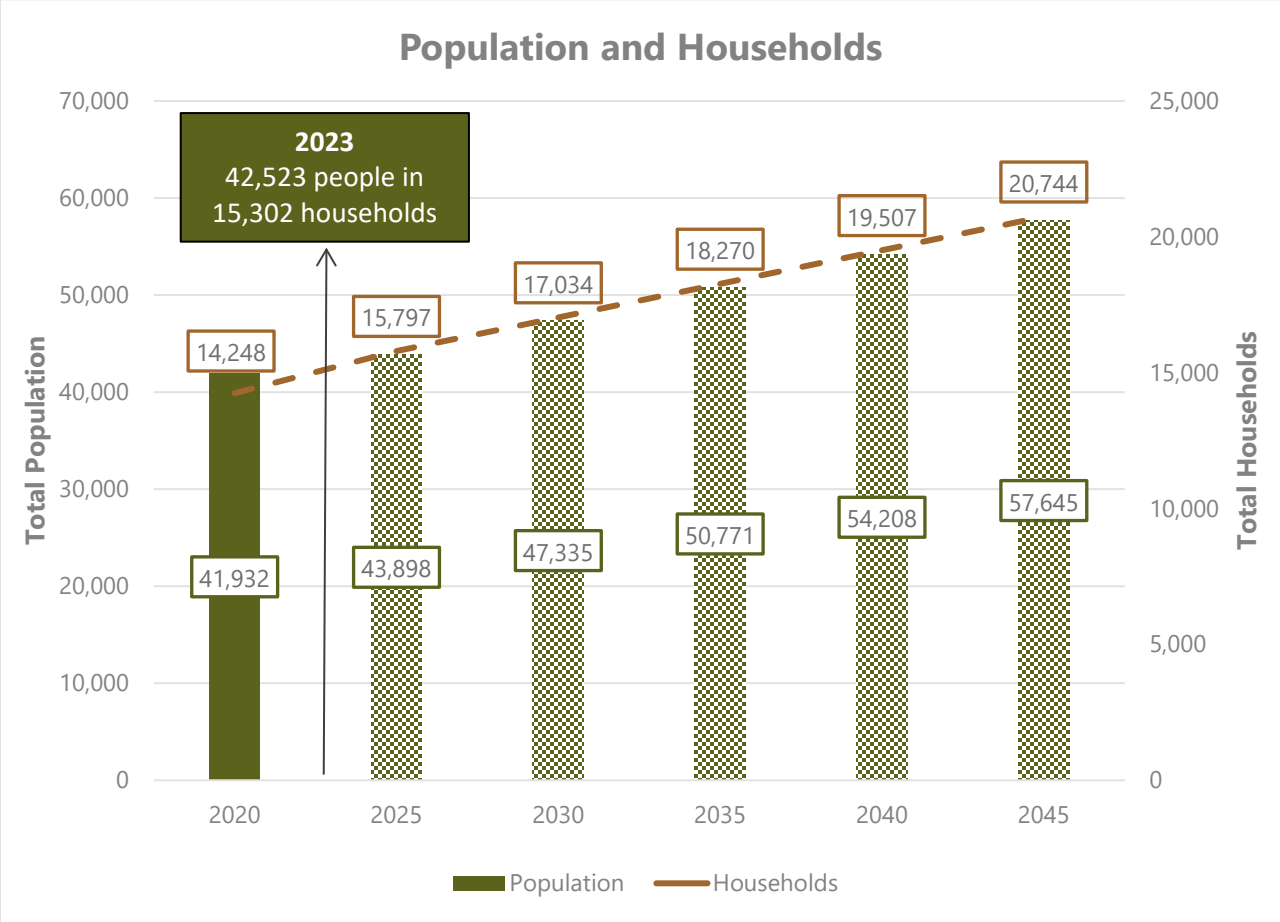

Previously Planned Projects
Roadway and Multimodal Project Status
Completed
Active
Not Initiated
Intersection Project Status
Completed
Active
Not Initiated
Mountain Road
Henderson Road
Westbrook Road
Hickory Flat Road
Birmingham Road
Nix Road
Hamby Road
Dinsmore Road
Freemanville Road
Thompson Road
Taylor Road
Wood Road
Francis Road
Batesville Road
Redd Road
Hopewell Road
Providence Road
Bethany Bend
Arnold Mill Road
New Providence Road
Dorris Road
Bethany Road
Cogburn Road
Cumming Highway
Deerfield Parkway
Cox Road
372
9
140
400
0
0.5
1
2 Miles
N

Community Overview

In order to understand transportation needs, it is important to understand the community of people that reside within an area. This section focuses on the historic and projected population levels within Milton, a City committed to responsible, managed growth and preserving rural character in addition to the demographics of the residents according to the most recent available data.

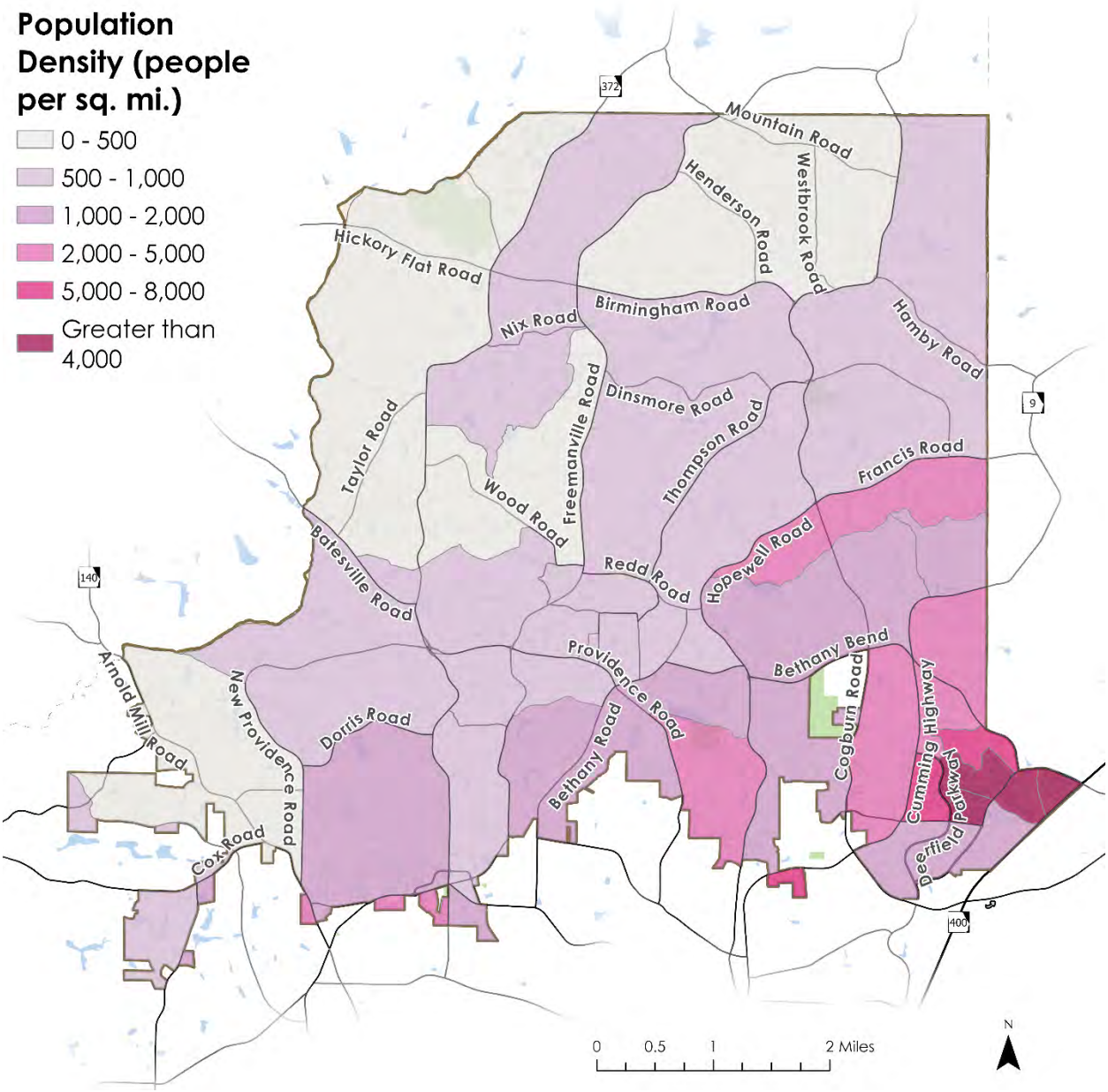
Population Characteristics

As of July 2023, the estimated population of the City of Milton was 42,523 in 15,302 households. This is an increase in population by 9% since 2020 and a 47% since 2010. Based on historical trends and conversations with the City, it is estimated that by 2045, there will a total of approximately 58,000 individuals in 21,000 households.



Source: US Census Bureau

Current population density is highest close to SR 400. This area, known as Deerfield, is one of the few places in the City with multifamily residential development. It is typically a more affordable housing option and provides more walkability than other parts of Milton. It also has convenient access to SR 400 providing connectivity to other parts of the region. These characteristics may be leading to increased population density in the southeast corner of Milton. Further northwest in the City, population density is much lower. This illustrates a more rural community as the distance to Atlanta, downtown Milton, and SR 400 increases.


Population Density (people per sq. mi.)
0 - 500
500 - 1,000
1,000 - 2,000
2,000 - 5,000
5,000 - 8,000
Greater than 4,000
372
Mountain Road
Henderson Road
Westbrook Road
Hickory Flat Road
Birmingham Road
Nix Road
Hamby Road
9
Taylor Road
Freemanville Road
Dinsmore Road
Thompson Road
Francis Road
Wood Road
Batesville Road
Redd Road
Hopewell Road
140
Providence Road
Bethany Bend
Arnold Mill Road
New Providence Road
Dorris Road
Bethany Road
Cogburn Road
Cumming Highway
Deerfield Parkway
Cox Road
400
0 0.5 1 2 Miles
N

Demographics

A demographic profile for residents within the City of Milton was developed to better understand the makeup and needs of the area including age, race/ethnicity, income, and zero vehicle households.

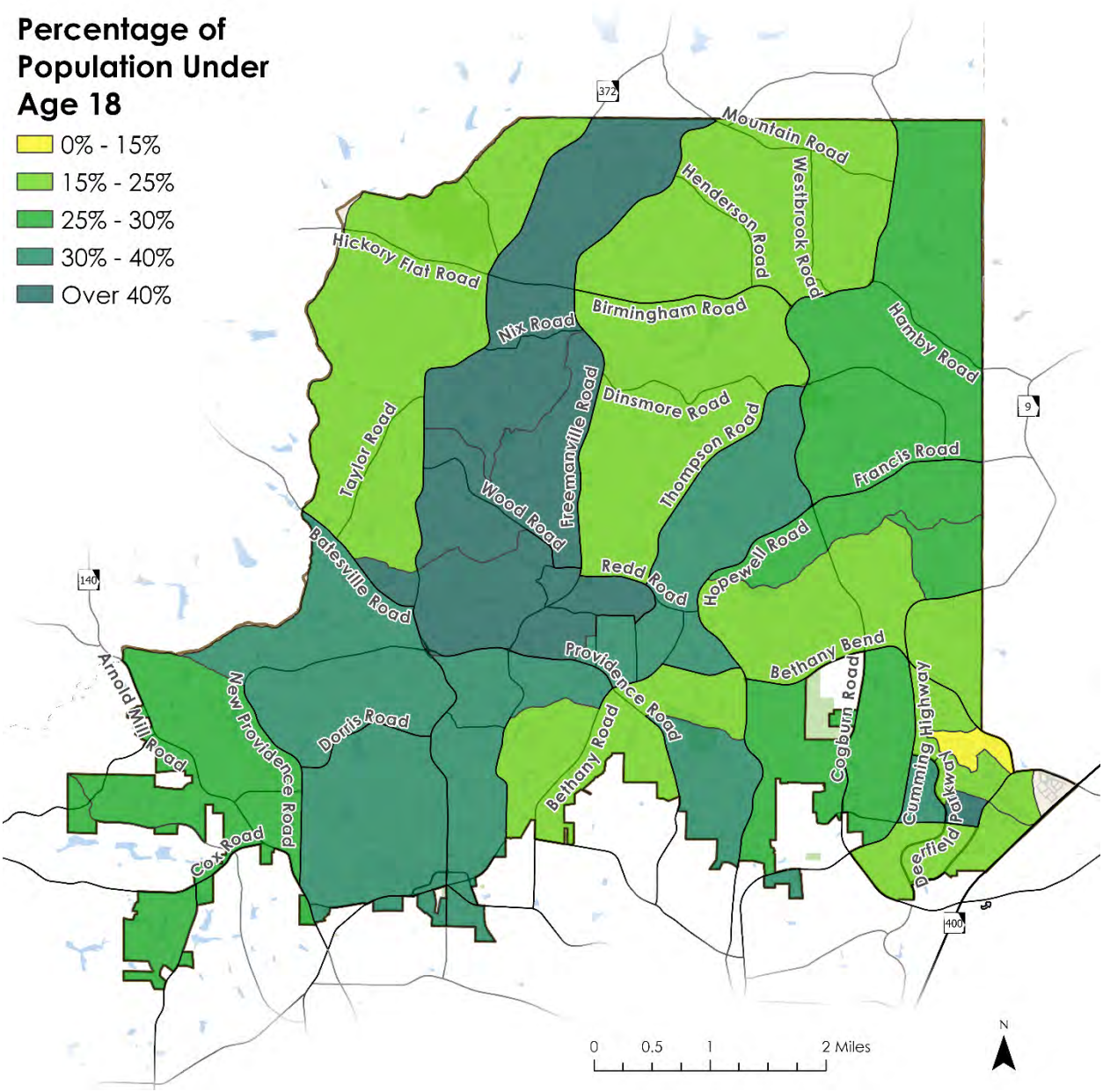
Population Age

The following table shows the breakdown of the population by age group.

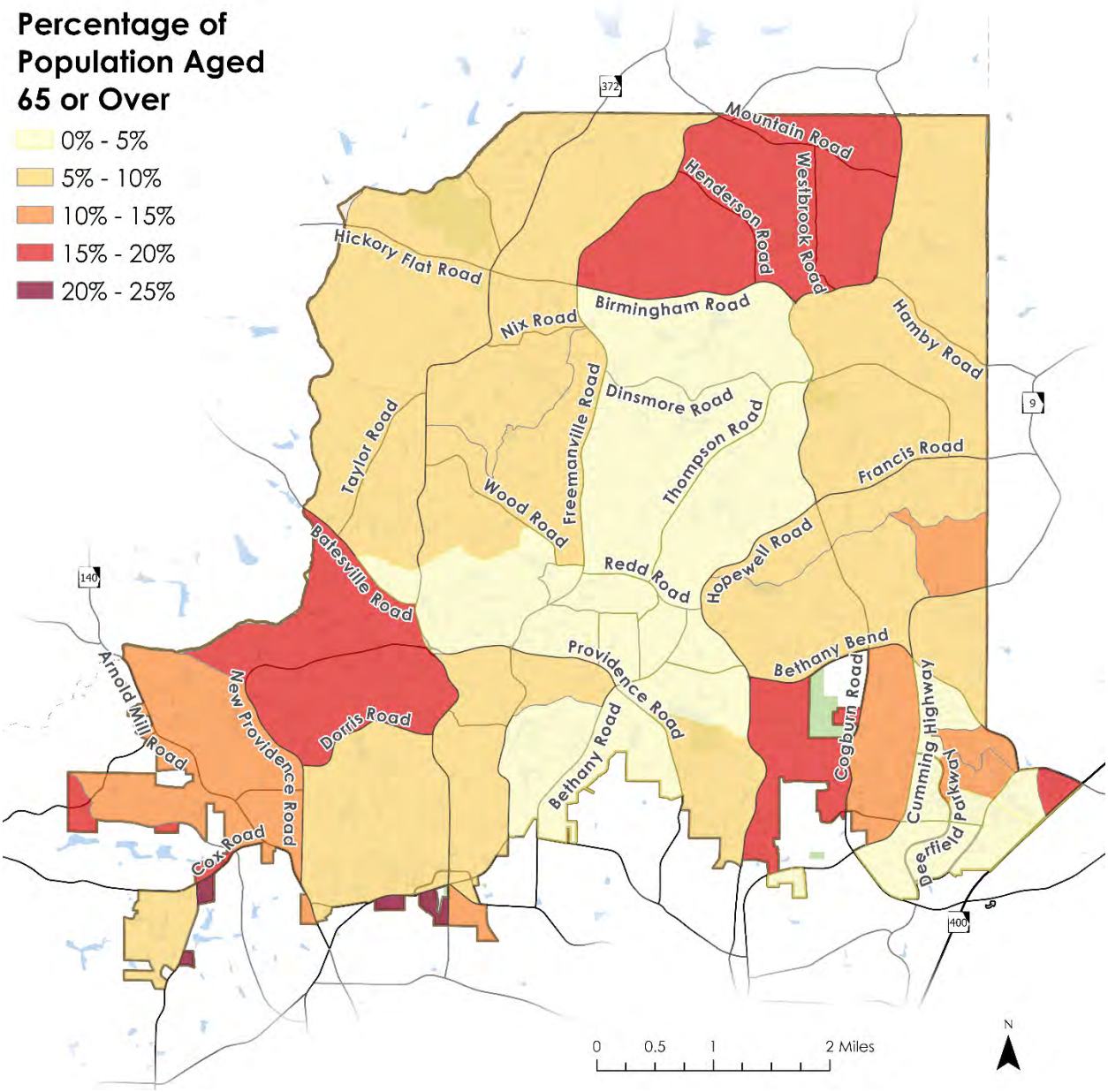
Age Range	2016 Population (*Percent of Total Population*)	2021 Population (*Percent of Total Population*)
Population below 5 years	2,426 (*6.2%)*	2,736 (*6.4%*)
Population below 18 years	11,660 (*29.7%*)	11,960 (*28.2%*)
Population at or over 65 years	3,451 (*8.8%*)	3,337 (*7.9%*)

Source: US Census Bureau

Since 2016, the number of residents below 18 has increased by about 300 people. There is a high concentration of residents under age 18 between SR 372 and Freemanville Road and around the Crabapple and Deerfield areas. Notably, there are multiple public schools in these locations. Additionally, the Crabapple and Deerfield areas contain much of Milton's multi-family housing.

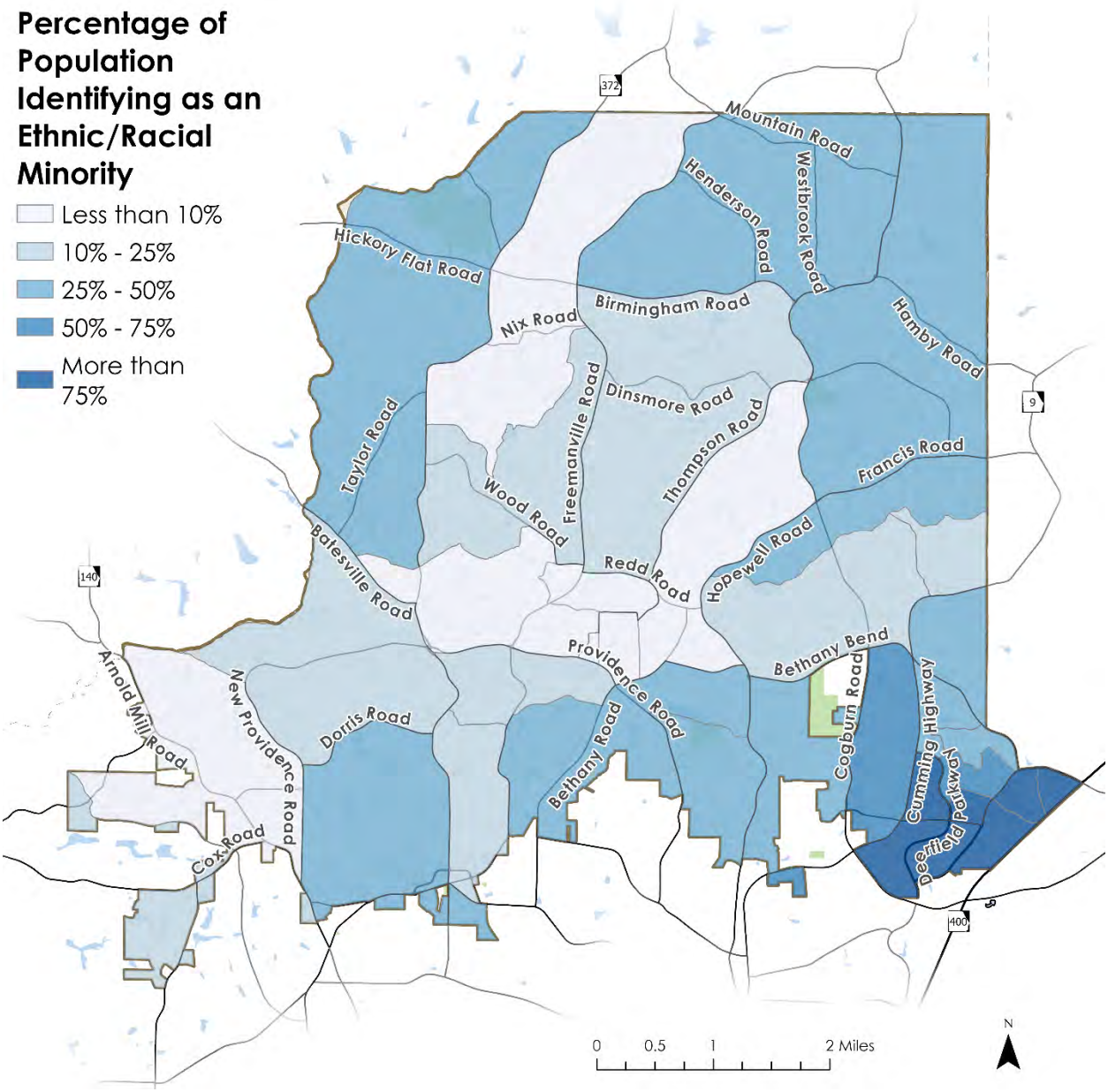

Percentage of Population Under Age 18
0% - 15%
15% - 25%
25% - 30%
30% - 40%
Over 40%
372
Mountain Road
Henderson Road
Westbrook Road
Hickory Flat Road
Nix Road
Birmingham Road
Hamby Road
Taylor Road
Freemanville Road
Dinsmore Road
Thompson Road
9
Francis Road
Wood Road
Batesville Road
Redd Road
Hopewell Road
140
Providence Road
Bethany Bend
Arnold Mill Road
New Providence Road
Dorris Road
Bethany Road
Cogburn Road
Cumming Highway
Deerfield Parkway
Cox Road
400
0
0.5
1
2 Miles
N

Similarly, the population of people at or above 65 has increased by about 550 residents. The highest percentage of population over 65 is around the Crabapple area, north of Birmingham Road, east of Hopewell Road, and northwest of Dorris Road.



Ethnicity and Race Characteristics

The highest percentage of ethnic/racial minorities is located in the southeast corner of the City, close to SR 400. The rest of the City's minority percentage varies throughout different communities. As a whole, minority populations comprise about 25% of the City's population. Asian Americans are the largest minority group in Milton at approximately 15% of the population, with Black Americans having the next largest share of the population at about 9%. Milton's Asian population is primarily concentrated in the southeast of the City near SR 400, with the northeast and south-central parts of the City also housing substantial amounts of the Asian population. Milton's Black population is also mainly located near SR 400, though the northeast, central and southwest parts of the City also have pockets of Black residents.



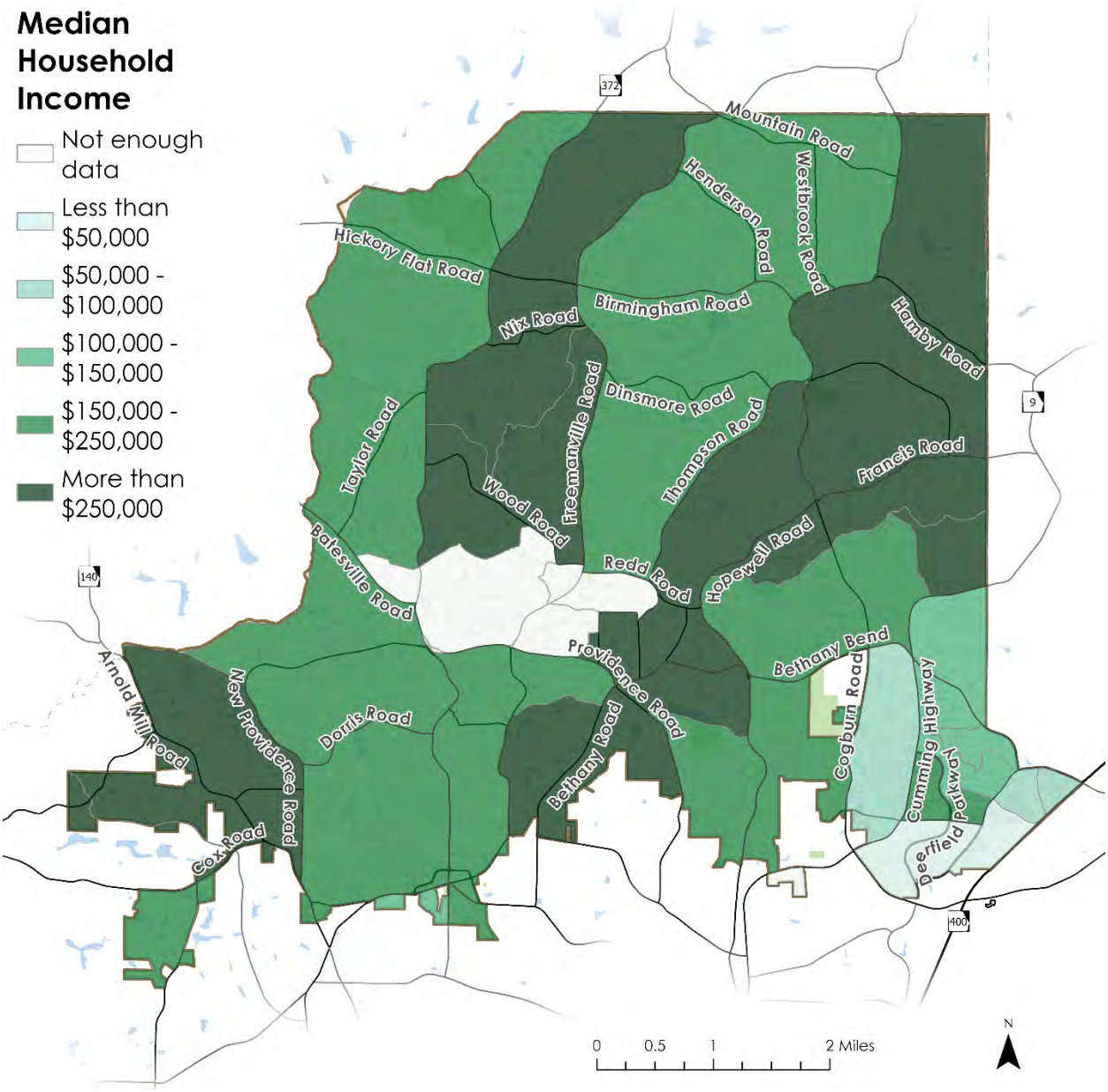
Economic Characteristics

In 2021, the median household income in Milton was$169,000, which is 30% higher than Milton's median income in 2015. Additionally, the Atlanta Metro Area had a median household income of $89,000 in 2021 and Fulton County's was $105,000. Milton's 2021 median household income was approximately 90% and 61% greater than the Atlanta Metro Area and Fulton County, respectively.

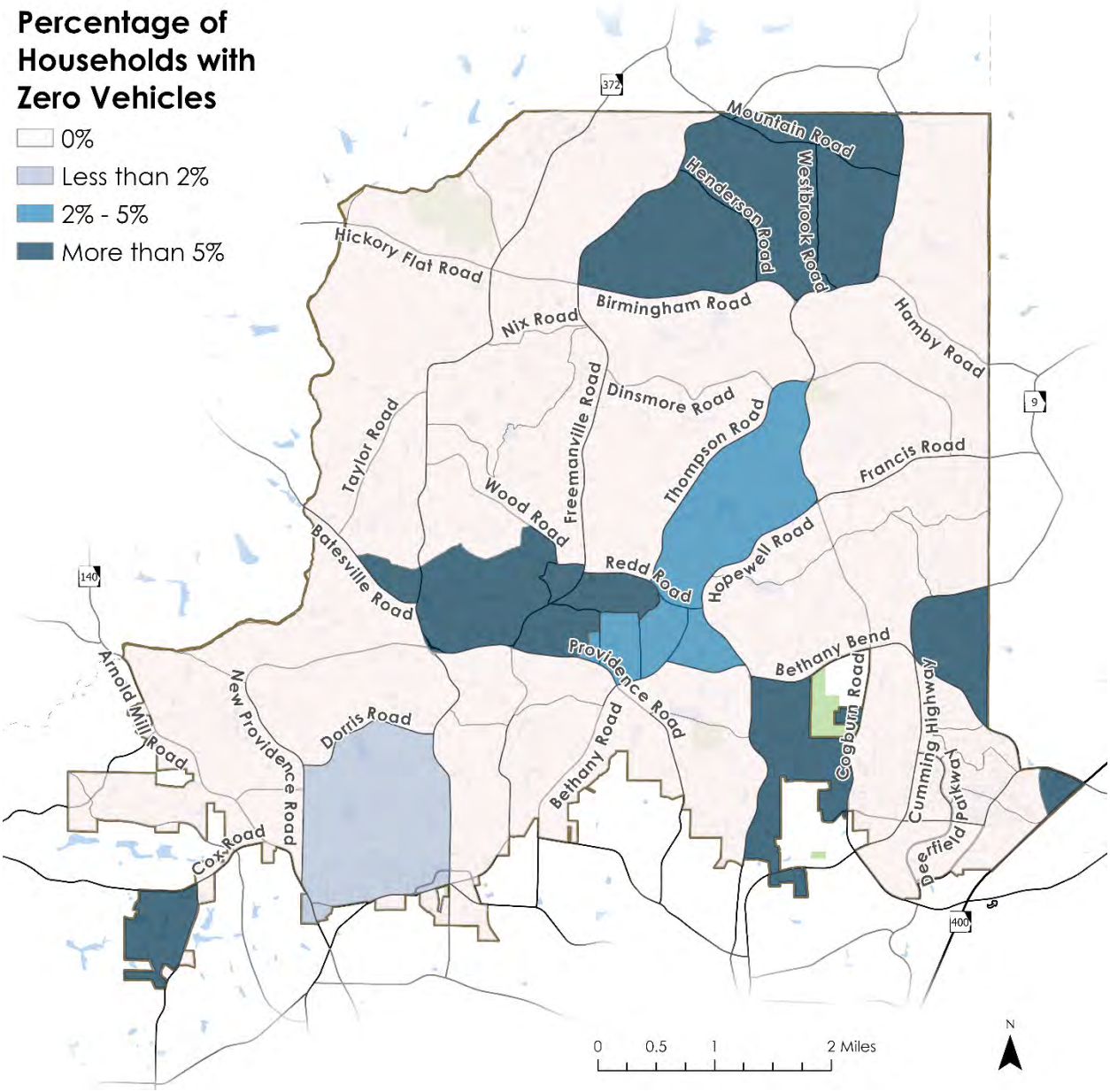
	2015	2021	Percent Increase
City of Milton	$130,000	$169,000	30%
Atlanta Metro Area	$67,000	$89,000	33%
Fulton County	$77,000	$105,000	36%

Source: American Community Survey 5-Year Estimates

The majority of the City has a median household income at or above $100,000. The southeast corner, closest to SR 400 has the lowest income compared to the rest of the City.



Additionally, the percentage of zero vehicle households are highest in the north region of the City between Birmingham Road and Freemanville Road, the center of the City, and to the west of the Deerfield area.

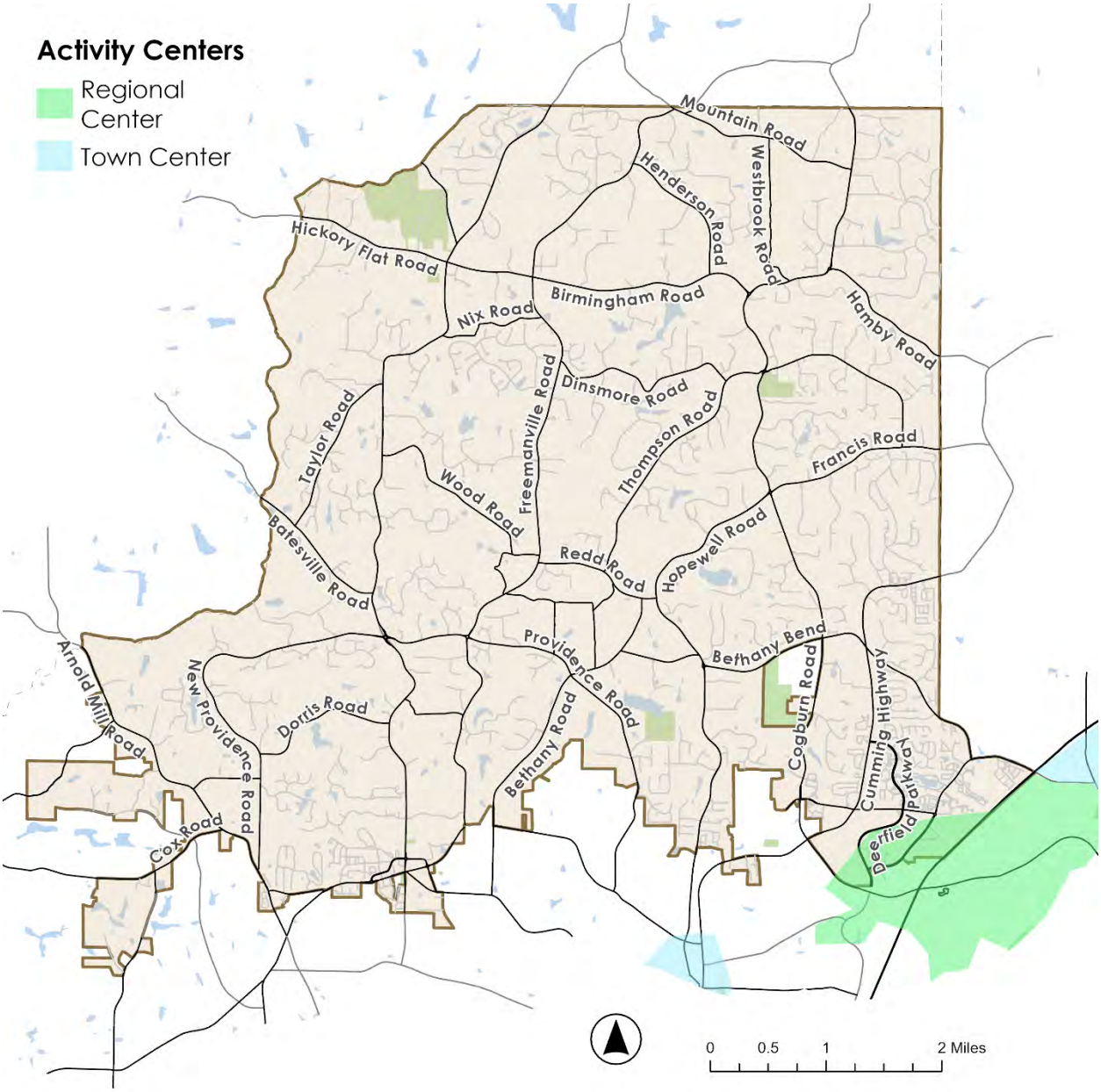


The percentage of zero vehicle households seems to correlate more closely with the population at or over 65 and less closely to poverty levels. The areas in the north part of Milton and west of the Deerfield area also have the highest percentage of population at or over 65. As noted in the **Transit** section later in this document, many of the areas with greater than 5% of zero vehicle household fall outside of the existing MARTA Mobility zones. This reduces mobility for households without cars.

Current and Future Land Use

Activity Centers

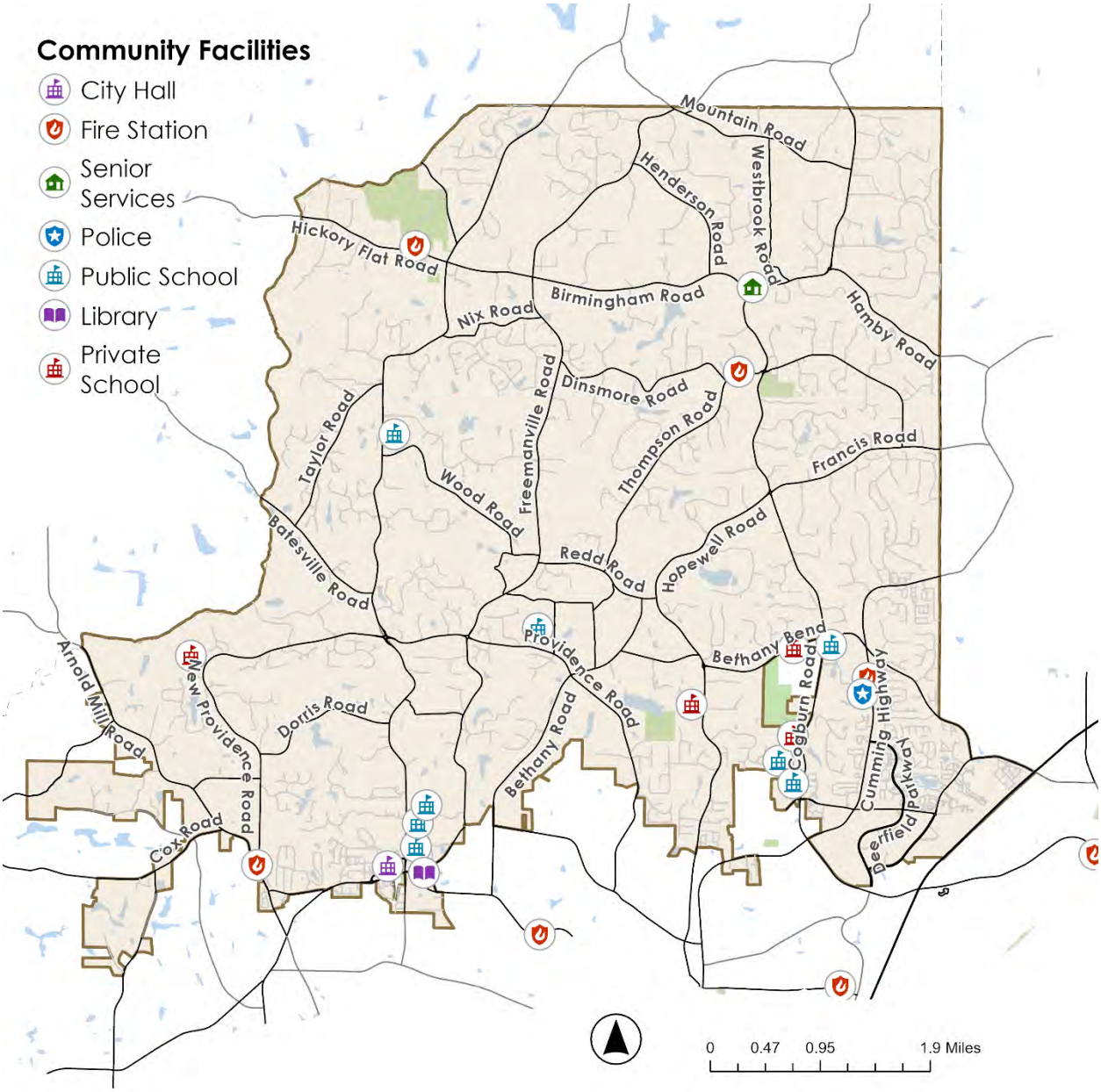
The City of Milton was incorporated in 2006. To maintain the area's character and guide future development, the City of Milton 2030 Comprehensive Plan was developed. Milton itself has one activity center that falls partially within its City limits according to ARC's data (Deerfield). There are additional Alpharetta regional centers and town centers that are near to the City of Milton. The increase in traffic in the southeast corner of the City reflects demand to visit these activity centers.



Community Facilities

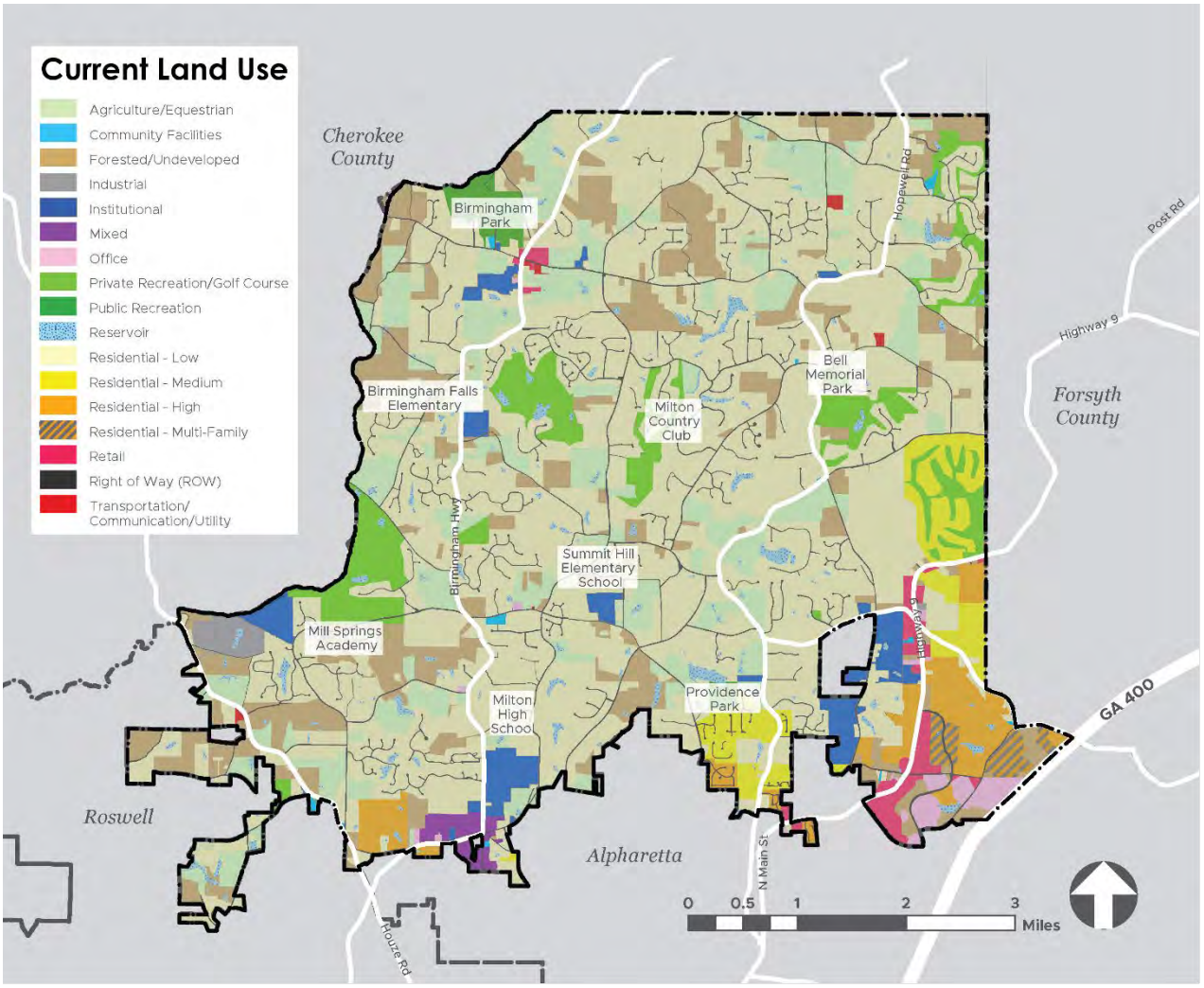
Within the City of Milton, there multiple community facilities. This includes public and private schools, a library, a senior center, fire stations, a police station, and City Hall. Providing multi-modal connections to these community facilities will substantially improve the community. For example, safe pedestrian pathways allow children to walk and bike to school, seniors to walk and take transit to the senior community facility, improved access to parks, the library, and City Hall. Multi-modal improvements create a more equitable City that reduces peoples' reliance on single occupancy vehicles.

1	Senior Services Facility	3	Fire Stations
4	Private Schools	1	Police Station
8	Public Schools	1	Library



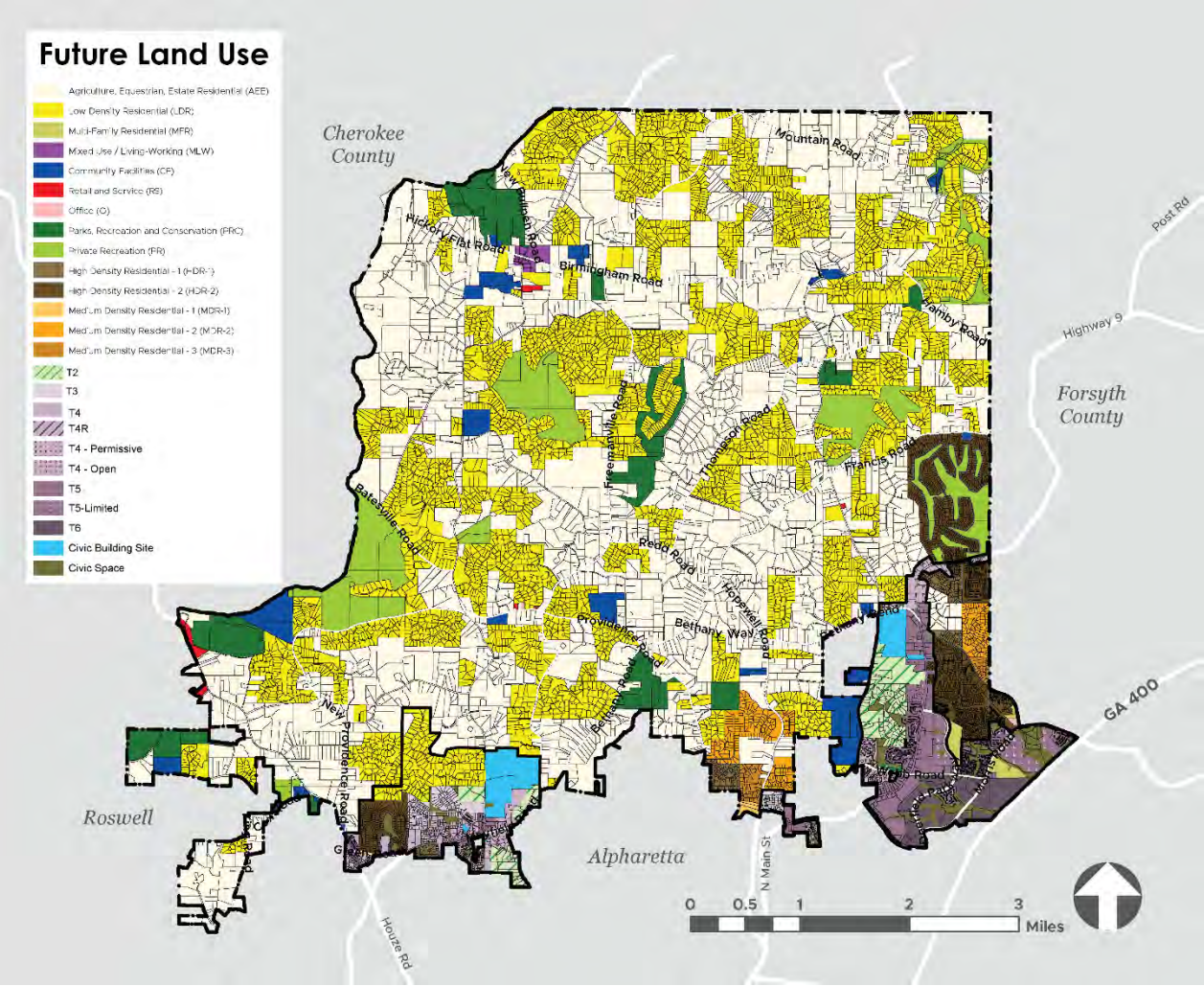
Current and Future Land Use

The following section outlines the current and future land use in Milton. All information was sourced from the Land Use subsection of the Existing Conditions chapter in the Milton 2040 Comprehensive Plan.



Source: Milton 2040 Comprehensive Plan, page 47.

Most of the land area in the City limits is currently designated as agriculture / equestrian or low-density residential. Most of the institutional, commercial, and mixed-use land is located near the southern side of the City, adjacent to the Cities of Roswell and Alpharetta and Forsyth County in Crabapple and Deerfield/Highway 9. A significant amount of land is also used for recreation spaces - either public or private - and forested/undeveloped land.



Source: Milton 2040 Comprehensive Plan, pg 49.

The Future Land Use map visually shows that the City's policy for land use and development matches the vision of preserving rural character and natural resources. This is represented by the higher-density development focused in key nodes, like Crabapple and Deerfield/Highway 9, and designating most other land as agriculture/equestrian/estate residential or low-density residential.

Market Conditions

The following section outlines the market conditions in Milton. All information was sourced from the Market Study subsection of the Existing Conditions chapter in the Milton 2040 Comprehensive Plan.

Milton Cores

Milton has three main cores that represent areas with higher densities of commercial, mixed use, and residential development.

Crabapple

- Milton's newest commercial core that includes a strong mix of uses
- Has seen the most development surrounding City Hall, creating Downtown character

Deerfield

- Heavily commercial core with highway access and corridor orientation
- More dated rental and for-sale housing options

Birmingham Crossroads

- Northern-most core with limited commercial and majority residential
- Birmingham Crossing retail center serves local residential uses

Source: Milton 2040 Comprehensive Plan, pg 53.

Employment

Work Destinations & Commuting Patterns

Of Milton residents that make over $40,000 and commute to work, 35% commute to areas of North Fulton County including Milton, Alpharetta, and Roswell. The rest of employment is scattered through out the metro Atlanta region where job cores are located. Future growth in the North Fulton job cores will create a significant demand driver for the City of Milton.

Job Distances

Currently, most high paying jobs where employees earn over $40,000 are concentrated primarily in North Fulton, as well as edge communities such as Cumberland, Perimeter Center, and Downtown Atlanta. The Atlanta metro has 1.2 million high paying jobs with 26% located 15 miles from Milton, averaging a low commute time of 28.7 minutes. Professional services such as health care, trade, and finance industries make up 82% of all jobs within 30 miles of Milton, including cores in Downtown Atlanta and the Perimeter area.

Home Destinations of Local Workers

Of workers who earn over $40,000 annually, approximately, 6% live in the City of Milton, 29% live in Fulton County, and 40% live in the surrounding North Atlanta counties of Gwinnett, Forsyth, and Cobb. Overall, workers come from across Metro Atlanta, primarily in nearby north Atlanta counties. Over 70% of City of Milton workers who earn over $40,000 annually live within 24 miles of work with a significant portion living within 10 miles. Few residents both live and work within the City of Milton.

Employment Density

There are 11,613 total primary jobs within Milton, with the highest concentration and highest paying jobs located in Deerfield. About 66% of high paying jobs in the study area fall in the information and professional services industry sectors.

Summary of Forecasted Demand by Product Type 2020-2025

Land Use Type	Demand 2020-2025	Estimated Pricing	Best Type / Conditions
Single-Family Homes	Up to 30-40 single family homes per year	$600,000-$2,000,000	Have 2-3 side or rear entry garages; low land value; market depth declining as prices increase above $800K
Townhomes	Up to 40-60 units per year	$350,000-$600,000	Ranging from mid-market (1,600SF) to luxury (2,800SF); high land value; strong market depth; Offer elevator options
Rental Apartments (Conventional)	Up to 200 units every 4-5 years	$1.75-$2.00 /SF	1.5 parking space per unit or 1 parking space per bed; Strong opportunity for existing mixed-use environment; provide for missing middle
Rental Apartments (55+)	Up to 200 units in one 55+ community	$2.20 /SF	1 parking space per unit or 0.8 parking space per bed; good for empty nesters looking for low maintenance homes
Senior Housing (IL / AI)	One combined independent/assisted facility up to 90 beds	$4,000+ monthly depending on level of care	0.75 parking units per bed; aging demographic will provide support for additional facilities

Source: Milton 2040 Comprehensive Plan, pg 58.

For-Sale Demand

New Detached Sales by Price Point

Since 2015 Milton has seen a steady increase in new homes priced over $1 million. However, sales decreased from 2018 and 2019 across all price points, likely due to availability of residential lots. While Milton has seen an increase in high priced homes, there has been a decrease in new homes priced less than $500,000 resulting in a steadily increasing median home price for new homes in City.

Multifamily

The North Fulton and Forsyth County combined market has held a strong multifamily market since 2012. While the North Fulton Market has been an established multifamily market for decades, Forsyth County recently became more competitive with the delivery of Halcyon. The combined area has seen consistent demand as a desirable location with Metro Atlanta.

Rent growth has seen a steady increase from around $1.06/SF in 2006 to nearly $1.40/SF in 2020. This equated to a 30% increase during this time frame. As more communities are delivered in desirable portions of the market, rents are likely to increase.

Summary of Forecasted Demand by Product Type 2020-2025

Land Use Type	Demand 2020-2025	Estimated Pricing	Best Type / Conditions
Retail /Service	Up to 140,000 SF (boutique, food & beverage, and population servicing retail)	$25-40 / SF NNN	5/1000 SF of parking for retail; 10/1000 SF of parking for everything else; leverage attraction of Crabapple, new retail for rooftop growth in northern portion of city
Conventional Office	Up to 105,000 SF (medical, banking, investment, and small local firms)	$25-35 Full Service	Office demand is limited and population serving medical tenant based; opportunity to attract firms will increase as employment base strengthens
Lodging	Unlikely to support additional facility through 2025	NA	COVID-19 has caused significant disruption and it's unlikely to see market return to levels demanding new facilities beyond current construction until beyond 2025

Source: Milton 2040 Comprehensive Plan, pg 62

Retail

North Fulton Retail

The North Fulton retail submarket remains one of the strongest in Metro Atlanta with nearly 18.5 million square feet of retail space. This strong retail environment has largely been due to increased population growth and some of the highest incomes in the Metro Atlanta. To date, the largest retail projects in the submarket have been Avalon and the Alpharetta City Center. These projects have brought mixed use environments where households can live, work, and play.

The submarket has performed well since 2013 with vacancy under 9% and a year to date average of 8.3%. This due toa loss of tenants from North Point Mall and the Studio Movie Grill. Market deliveries have heavily been centered on the Avalon development since 2014. Outside of Avalon, market deliveries have occurred mostly in retail cores in Roswell and Alpharetta. Rental rates have fluctuated with vacancy and ranged from $14.66-$20.20 with an average rent of $18.62 in 2020.

Milton Retail

Retail in Milton can be found in four cores including Crabapple, Birmingham Village, Bethany Village, and the Deerfield Core. Birmingham Village and Bethany Village offer grocery-anchored shopping centers with a small amount of surrounding retail. The Deerfield Core is the largest in the City and offers a Super Target and multiple national retailers. Crabapple has recently become the City's downtown with a walkable environment and multiple local retailers.

The retail market has performed fairly well with vacancy rates under 7.3% since 2006 and most recently at 2.1%. Market deliveries have been limited since 2008 when over 500,000 SF was delivered with the Super Target at Deerfield. Rental rates have fluctuated over the years but remain strong at $23.21 year to date. While the retail market fundamentals remain strong, the impact of COVID-19 remains somewhat unknown and there is potential for increased vacancy and reduced rents.

Office

North Fulton Office

The North Fulton market which includes the cities of Roswell, Alpharetta, Johns Creek, Milton, and Forsyth County has remained one of the largest office markets in Metro Atlanta with over 30 million SF. This places North Fulton ahead of Buckhead, Midtown, and on par with Central Perimeter and Downtown Atlanta. Additionally, North Fulton is home to some of the most highly educated suburbs in Atlanta, providing employers access to highly-qualified workers.

The North Fulton market is also cheaper than many of these markets, although vacancy has increased in recent years with some tenant downsizings and move outs. However, there have been several promising additions to the market in recent years such as Toyota Motor Credit (57,000 SF) and TransUnion (24,000 SF). Notable successful developments in North Fulton that exhibit more mixed-use, walkable environments include Avalon in Alpharetta and Halcyon in Forsyth County.

Milton Office

The City of Milton has been a quiet office market since it was incorporated into a city in 2006. This was heavily caused by its rural character, small population, and limited access from major thoroughfares. The majority of existing office buildings within the City's boundary were delivered before 2006 and list an Alpharetta address. Since 2006 under 100,000 square feet has been delivered within the City limits.

Today there is approximately 1.5 million square feet of office space within the City boundary and all within the three main cores: Crabapple, Deerfield, and Birmingham Village. Deerfield is the largest with the majority of buildings delivering before the City was incorporated.

The market has experienced limited deliveries since 2006 and often under 30,000 SF each. The vacancy has fluctuated greatly going from a high of 21% in 2007 to a low of 4% in 2014. In 2019 vacancy hovered around 11% with 2020 seeing nearly 17%. The last several years have seen negative absorption as several tenants have left the Deerfield market.

Moving forward, bringing a large amount of new Class A product into the market will remain a challenge outside of established locations. Additionally, there has been increased competition in North Fulton at developments such as Avalon and Halcyon.

Hospitality

Local Markets

Although the Milton hospitality market has not been immune to the impacts of COVID-19, it remains extremely strong with high average daily rates and occupancy levels. The local market is heavily influenced by business travelers and the activity they generate along SR 400, account for 50% to 70% of demand. Additionally, there are over 15 wedding venues in the Roswell/Alpharetta area.

Occupancy

Overall Milton, Roswell, and Alpharetta hotels are driven by business travelers during week days along the SR 400 corridor. Bookings Friday-Saturday are primarily from group and event business, particularly weddings during the spring and summer months.

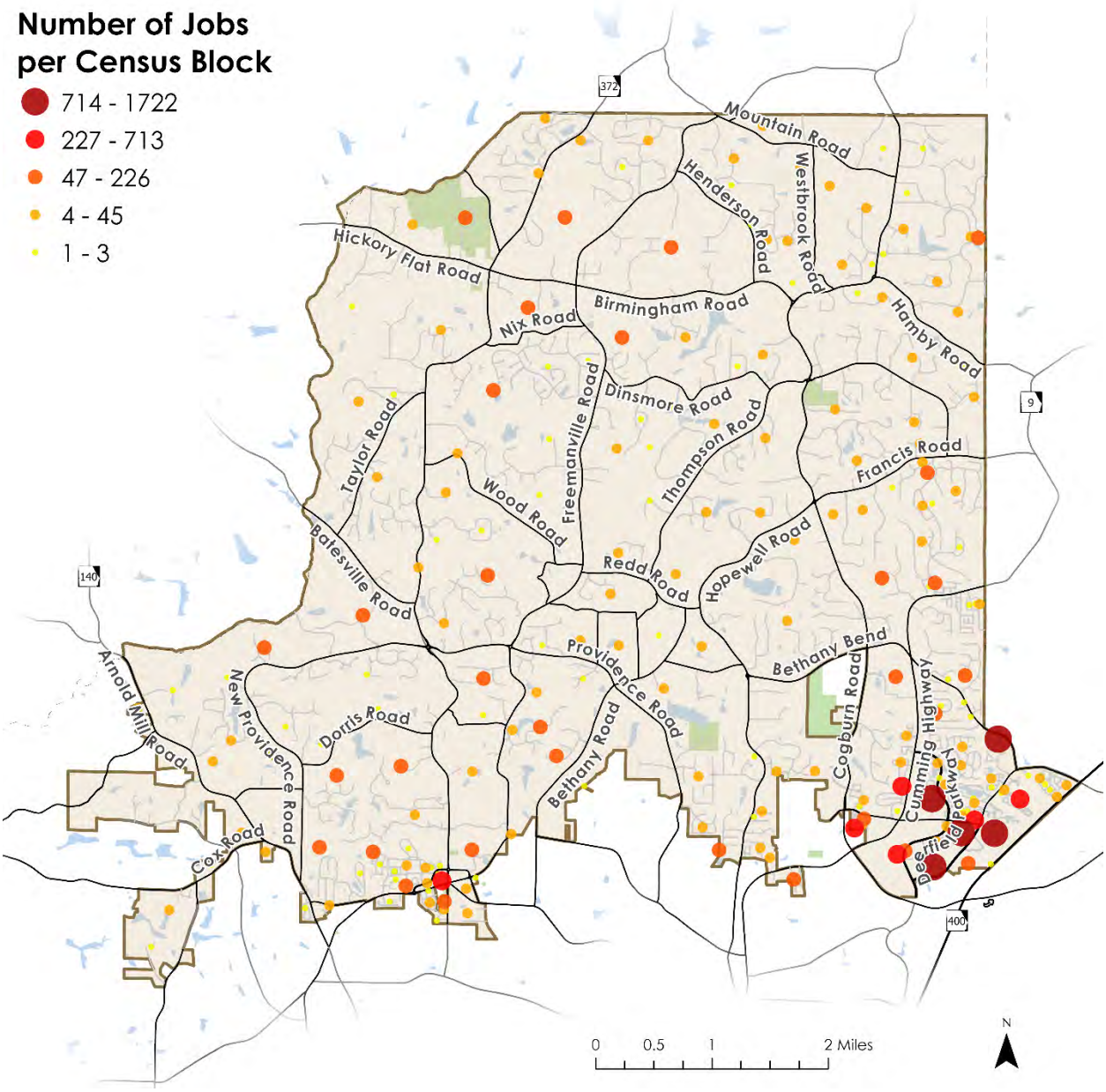
Over 45% of the rooms are found in Upper Upscale Class spaces with no current luxury product. These properties are mostly new, having been built since 2011 and with only 10% overall completed before 2000.

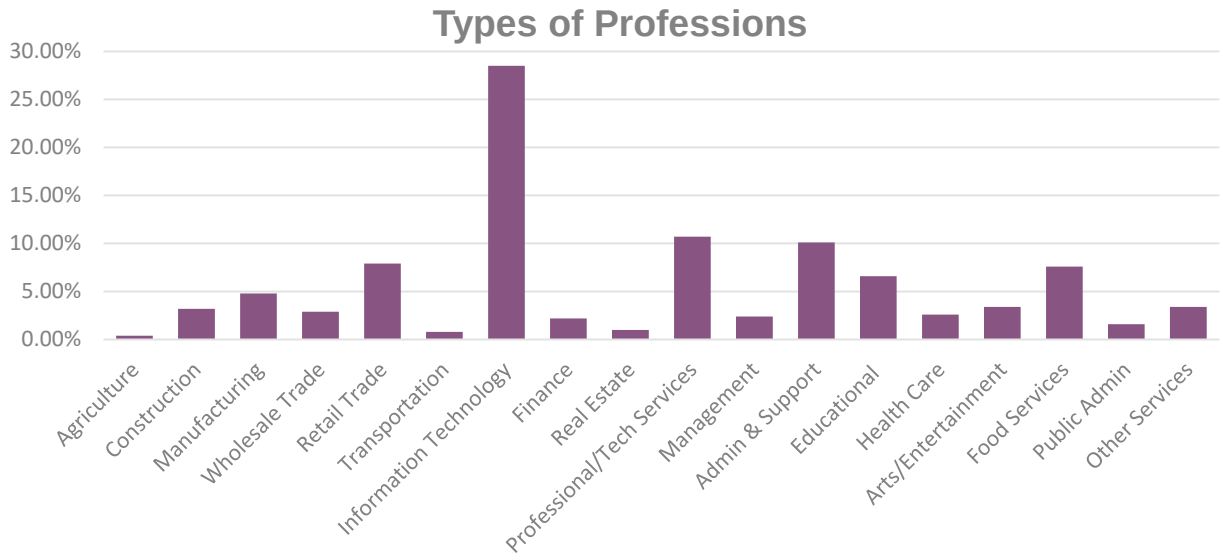
Hotel Pipeline

There is a relatively strong hotel pipeline in the Milton/Roswell/Alpharetta market with just over 900 rooms planned and proposed in the next five years.

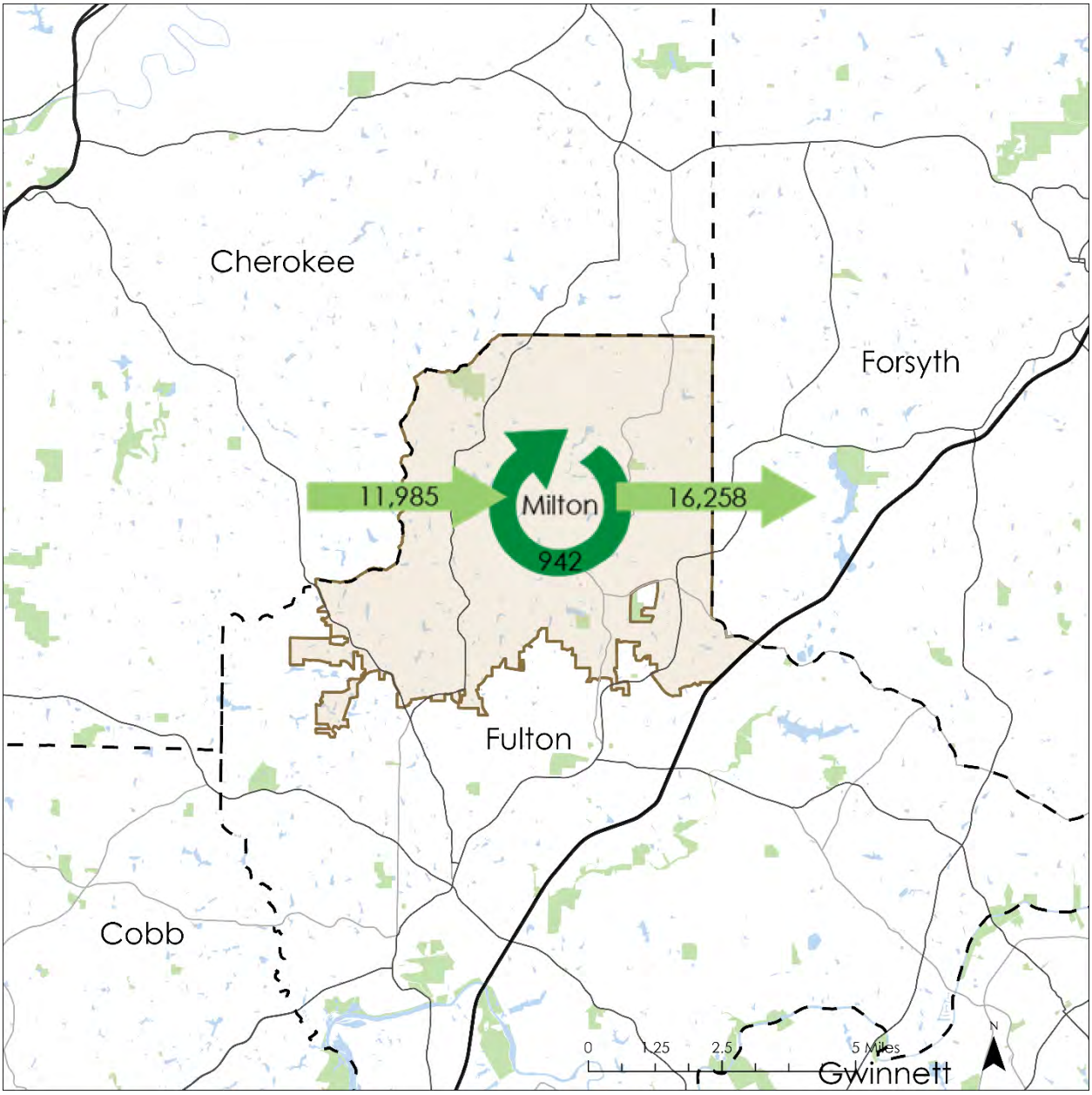
Employment Characteristics

The most recent, unimpacted data US Census' Longitudinal Employer dataset is from 2019. The following graphic was provided by the US Census and indicates that the highest job density is closest to SR 400, in the Deerfield area, followed by the Crabapple area in Milton. Approximately 28% of the total jobs are in Information, driven by AT&T and Verizon. The next most common professions are Professional and Tech Services at 11%, Administration & Support at 10%, and Retail Trade at 8%.





As shown in the Inflow-Outflow figure, approximately 12,000 people commute into Milton for work, while about 16,000 leave the City. Approximately 1,000 people live and work within Milton City limits. Since 2016, the amount of people commuting into and out of Milton has risen 10% on both sides, and the number of people living and working within the City has increased by almost 25%. Note, the map was developed by the U.S. Census using LEHD 2020 information and may not reflect commuting trends in 2023. Travel patterns in 2023 may differ following the effects that the COVID-19 pandemic left on remote work policies by employers.


Cherokee
Forsyth
11,985
Milton
16,258
942
Fulton
Cobb
Gwinnett
0
1.25
2.5
5 Miles
N

Transportation System

The location, type, and quality of transportation facilities can significantly impact the way communities develop and how people choose to travel. The following section outlines Milton's transportation network including roadways, bicycle/pedestrian facilities, and transit system access.

Roadway Network

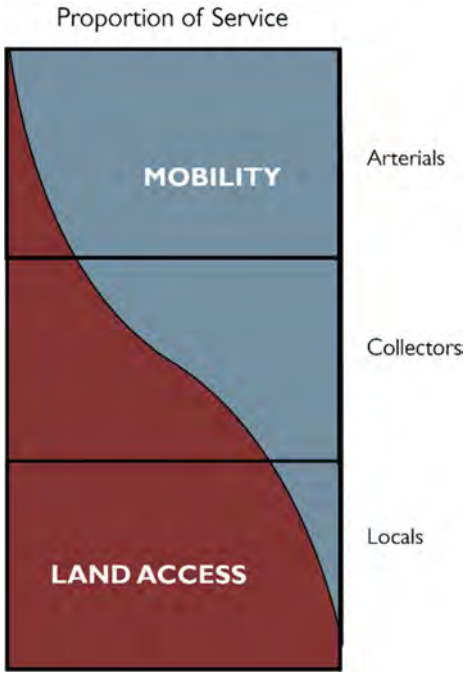
Study Network

In the City of Milton, there are approximately 196 miles of public roadway. This transportation plan includes a study network comprised of roadways within the City classified as collectors or higher per GDOT's functional classification system: a total of 73 miles of study network.

Functional Classification

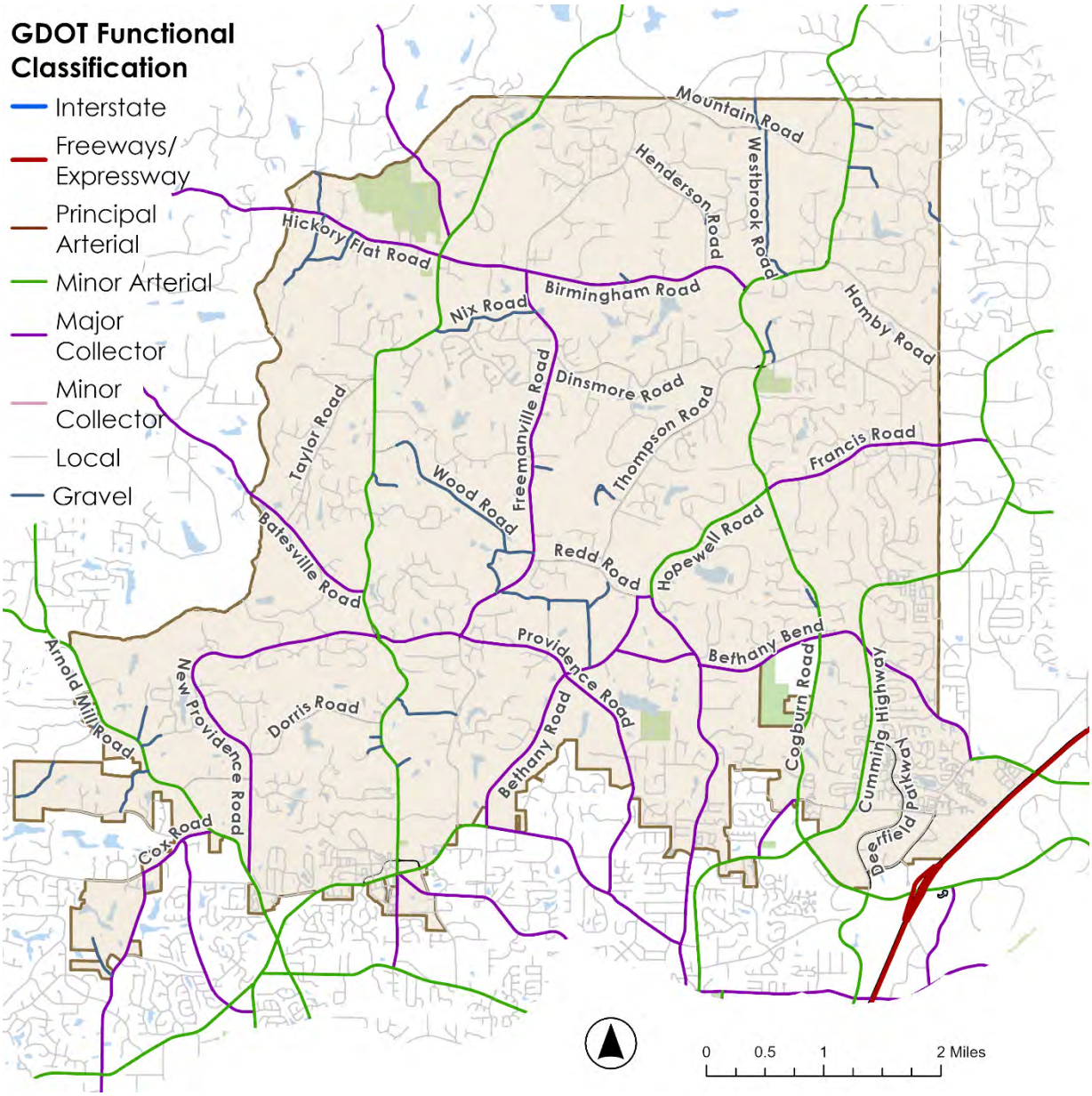
Functional classifications are defined by the Federal Highway Administration (FHWA) and used by policy makers, planners, engineers, and citizens to designate the characteristics and purposes of the roadways in a system. The functional classification system categorizes streets along a general hierarchy 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. 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.
- 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.
- 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.



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

The City of Milton provided functional classifications that were used to develop the study network. As shown, there are no interstates within the study area. There is one Freeway/Expressway, which is SR 400. Aside from local roads, there is a majority of minor and major arterial roads.

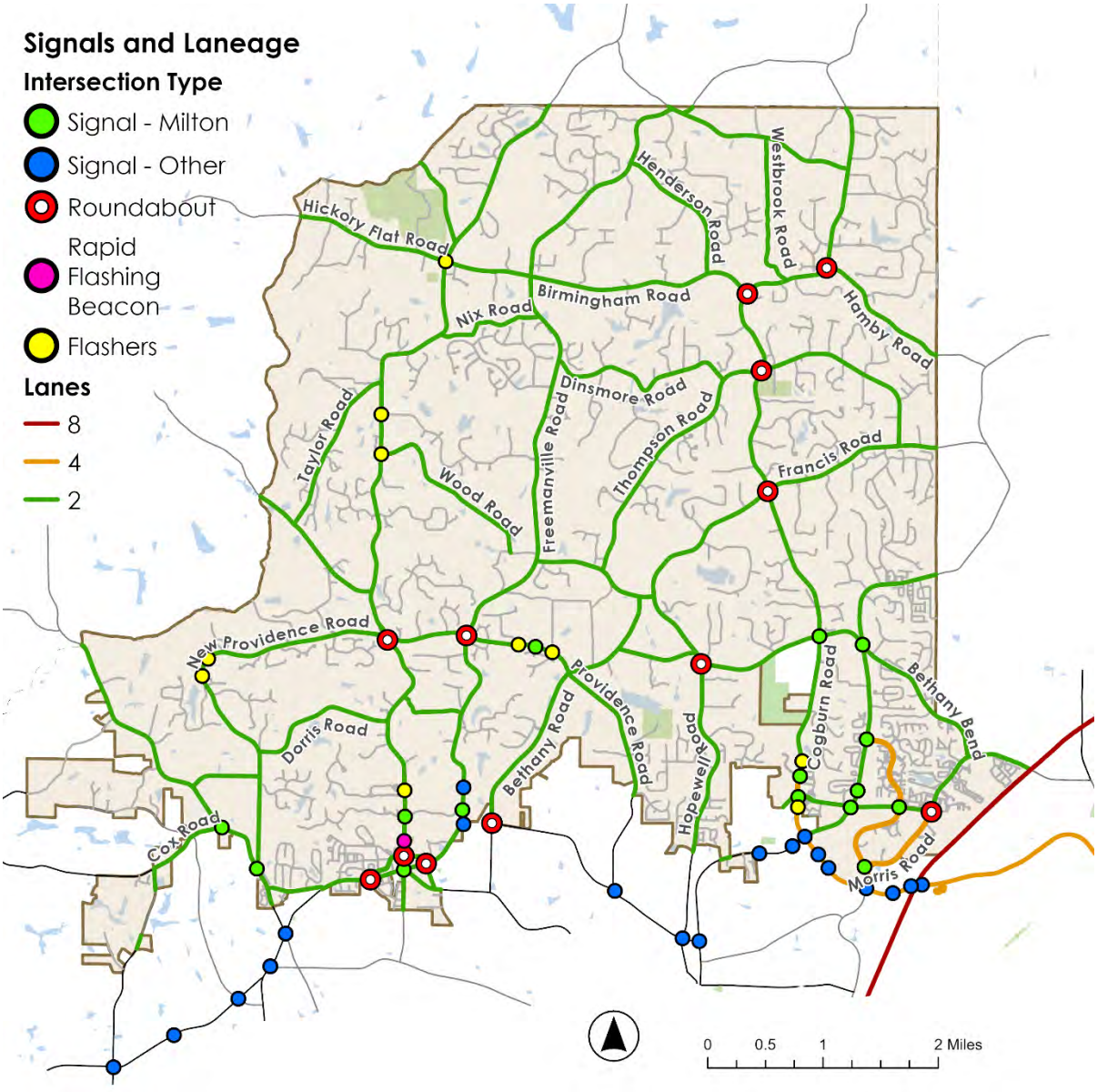

GDOT Functional Classification
Interstate
Freeways/ Expressway
Principal Arterial
Minor Arterial
Major Collector
Minor Collector
Local
Gravel
Mountain Road
Henderson Road
Westbrook Road
Hickory Flat Road
Birmingham Road
Nix Road
Hamby Road
Dinsmore Road
Thompson Road
Taylor Road
Freemanville Road
Wood Road
Francis Road
Batesville Road
Redd Road
Hopewell Road
Providence Road
Bethany Bend
Arnold Mill Road
New Providence Road
Dorris Road
Bethany Road
Cogburn Road
Cumming Highway
Deerfield Parkway
Cox Road
0
0.5
1
2 Miles

Roadway Laneage and Intersection Control

The number of lanes is a primary characteristic used to determine a roadway's capacity. In the study area, the majority of the roads are two lanes.

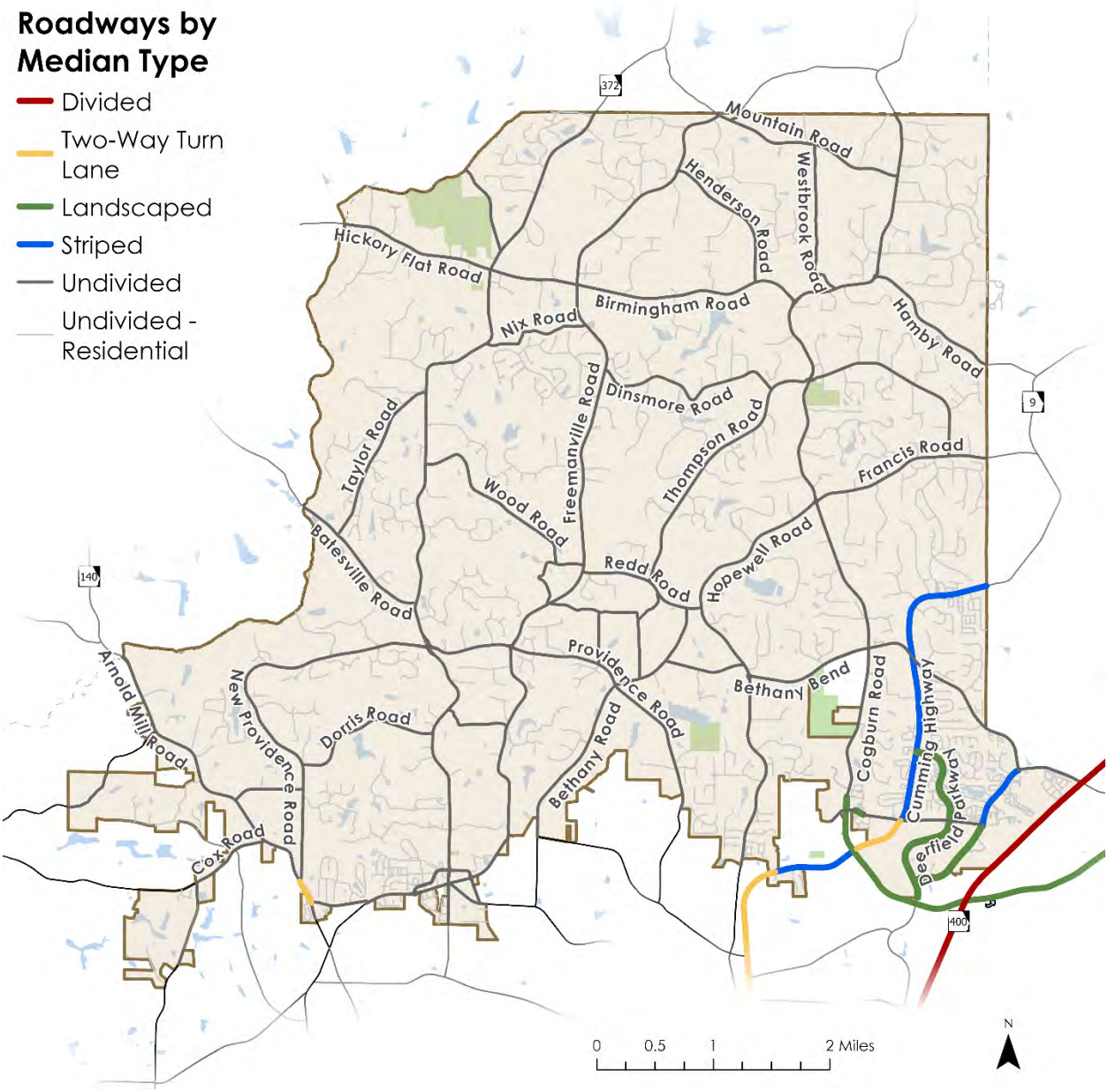
There are 15 traffic signals and 10 flashing signals. Flashing signals include pedestrian-only signals, flashing beacons, and school zone flashers.

The City of Milton has 12 existing roundabouts. Roundabouts are beneficial intersection controls because they can improve safety, enhance traffic efficiency, and improve aesthetics. Roundabouts encourage lower speeds and reduce conflict points for both vehicles and pedestrians. These intersections typically have reduced congestion through simpler geometry and smoother traffic flow. Roundabouts also offer landscaping opportunities, contributing to the overall appeal of the City. Since 2016, Milton has constructed 10 new roundabouts, some of which were recommendations from the previous CTP. This includes a roundabout at Mayfield Road/Charlotte Drive, Hopewell Road/Hamby Road, Freemanville Road/Providence Road.



Medians

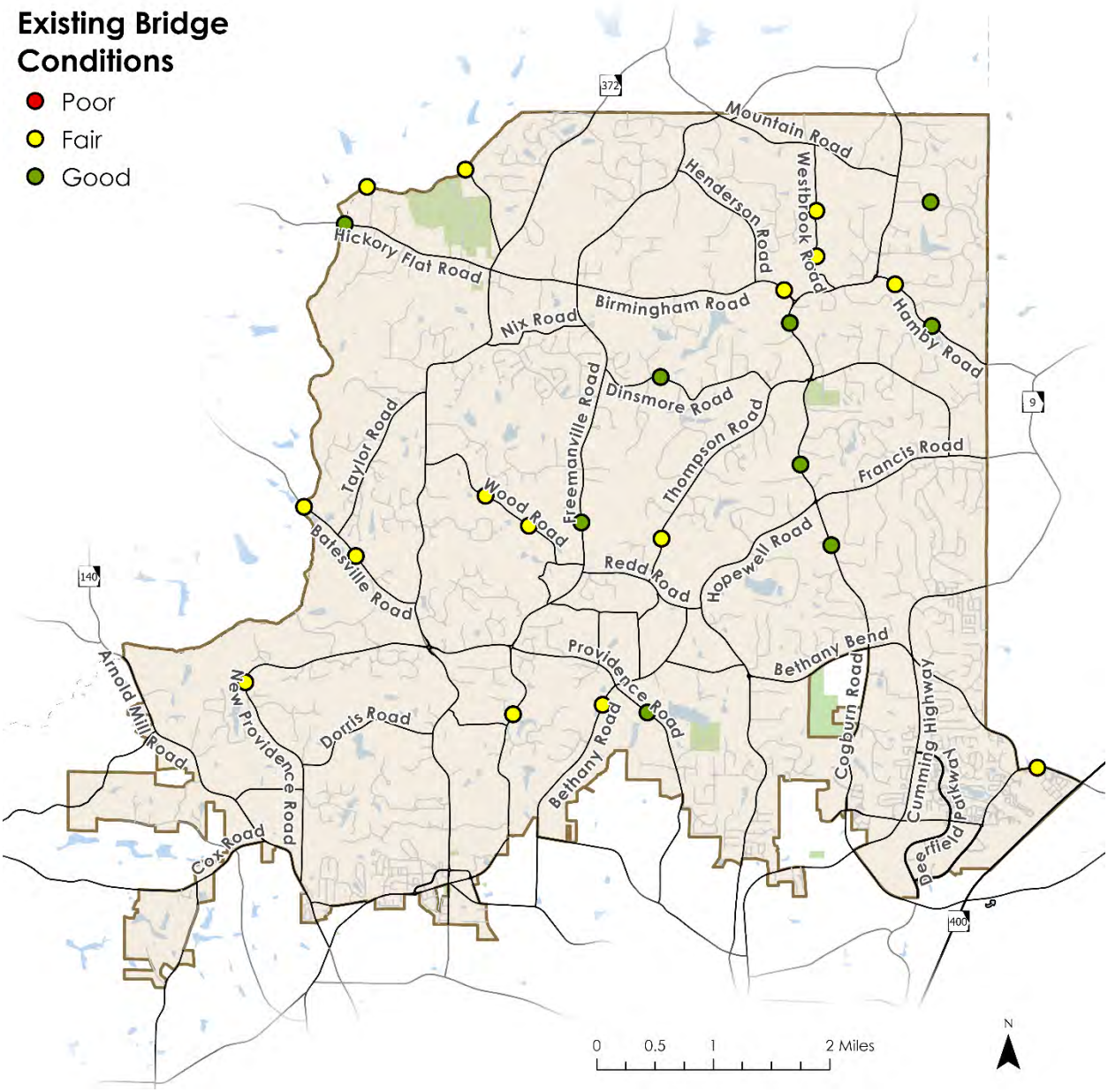
Medians are important to reduce turning conflicts and improve traffic flow. Different types of medians can provide varying levels of access management. Landscaped or concrete medians are non-traversable in nature and force the driver to turn left only at designated locations. This type of median can provide pedestrian refuge points when crossing streets, improving safety. Two-way left-turn lanes (TWLTL) provide a separate lane for left-turning traffic, which allows the through movements to continue efficiently. Roads with high speeds and/or heavy traffic with are typically good candidates for medians. 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 roadways do not have median treatments in Milton because the majority of the roads within the study network are two-way residential roads. These roads do not have the vehicular volumes that would prompt a median treatment. The roads with median treatments include SR 9/Cumming HIghway, Morris Road, Deerfield Parkway, Cogburn Road, and SR 400. SR 9/Cumming HIghway has both two way turn lanes and striping, depending on the segment of corridor and SR 400 has a completely divided median treatment. These roads have high traffic volumes and speeds that encourage median treatments. Morris Road, Deerfield Parkway, and Cogburn Road are in commercial areas with high-volume driveways turning onto these roads. These three roads use landscaping as median treatments.

Bridges

Bridge conditions were also evaluated based on four criteria in the inspection process: condition of the bridge deck, condition of the superstructure, construction of the substructure, and condition of the culvert structure. Each item is assessed on a score from one to seven. The overall bridge score is equal to the lowest assessed score from these inspection item. Structures where the lowest score is seven are assessed to be in “Good” condition while structures where the lowest item score is a five or six are assessed to be in “Fair” condition. Structures where any of the four items score a four or below are graded as being in “Poor” condition. Milton has no “poor” condition bridges.



Pavement Condition

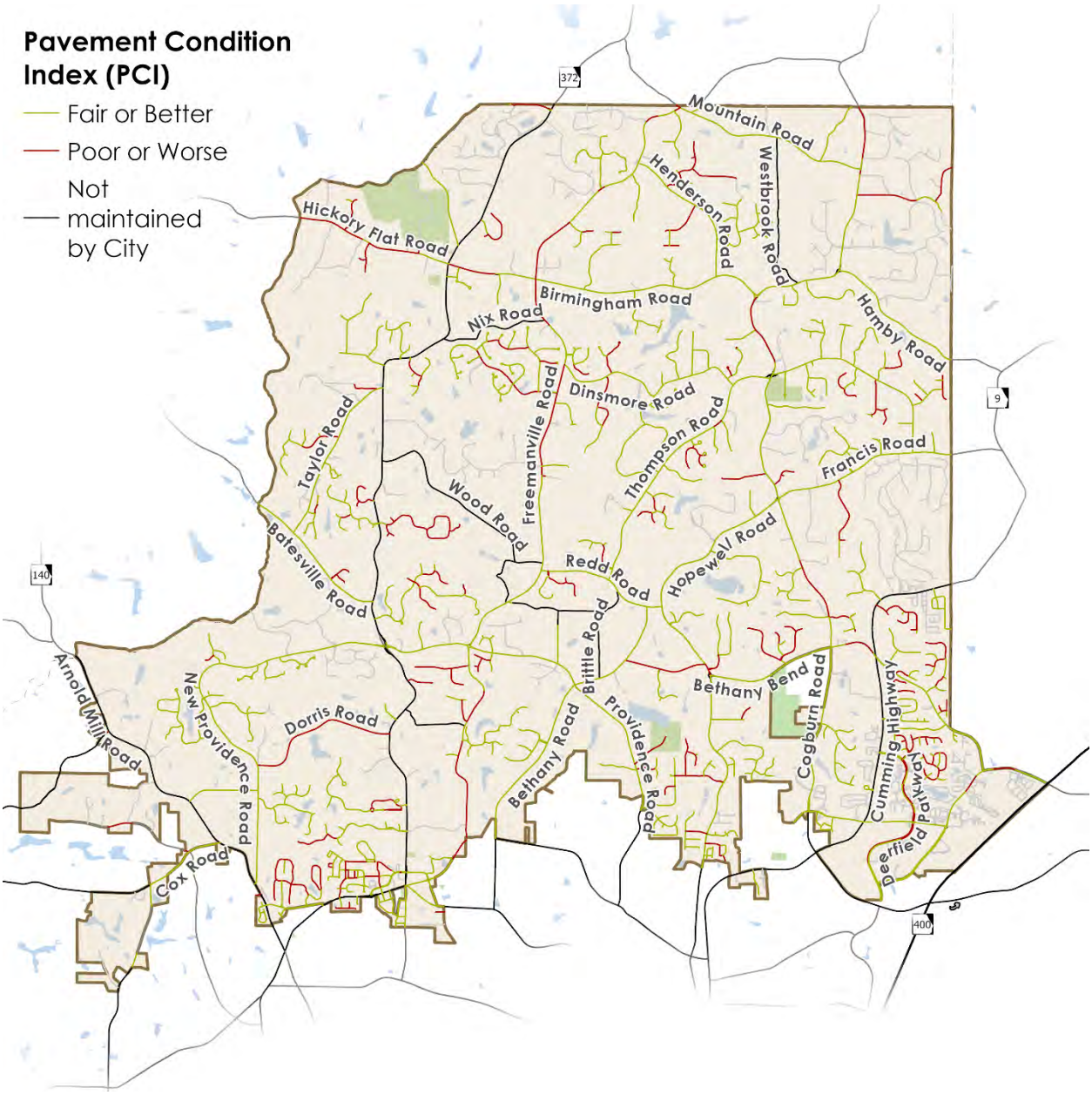
The City of Milton maintains pavement for approximately 173 centerline miles of road. According to the FHWA, maintaining a pavement inventory and having a program to regularly monitor and repair pavements yields improved safety, performance, flexibility, and cost savings. The City assesses pavement condition using the ASTM D6433 *Standard Practice for Roads and Parking Lots Pavement Condition Index (PCI) Surveys* methodology. The PCI score is determined through both technical analysis and qualitative observation, with 0 being the worst pavement condition and 100 being the best. Different PCI scores require different treatments. Pavement maintenance is an ongoing program for the City and a focus of the Public Works Department.

PCI Score Definitions

Raw PCI Score	PCI Category
85 – 100	Good
70 – 85	Satisfactory
55 – 70	Fair
40 – 55	Poor
25 – 40	Very Poor
10 – 25	Serious
0 – 10	Failed

Approximately 76.2% of the City's roadway centerline miles are in fair or better condition, which means that less than a quarter of the roads maintained by the City are in poor or worse condition. About 43% of the City's roadway centerline miles are in good condition, while no City-maintained pavement is in failed condition. The table below summarizes pavement conditions in the City.

PCI Category	City-Maintained Roadway Centerline Miles	Percentage of Total
Good	54.7	42.9%
Satisfactory	41.1	23.8%
Fair	35.7	20.7%
Poor	34.6	20.0%
Very Poor	6.5	3.8%
Serious	0.03	<0.1%
Failed	0	0%


Pavement Condition Index (PCI)
Fair or Better
Poor or Worse
Not maintained by City
372
Mountain Road
Henderson Road
Westbrook Road
Hickory Flat Road
Birmingham Road
Nix Road
Hamby Road
9
Dinsmore Road
Thompson Road
Francis Road
Taylor Road
Freemanville Road
Wood Road
Batesville Road
Redd Road
Hopewell Road
140
Brittle Road
Bethany Bend
Cogburn Road
Cumming Highway
Arnold Mill Road
New Providence Road
Dorris Road
Providence Road
Bethany Road
Deerfield Parkway
Cox Road
400

Truck Routes

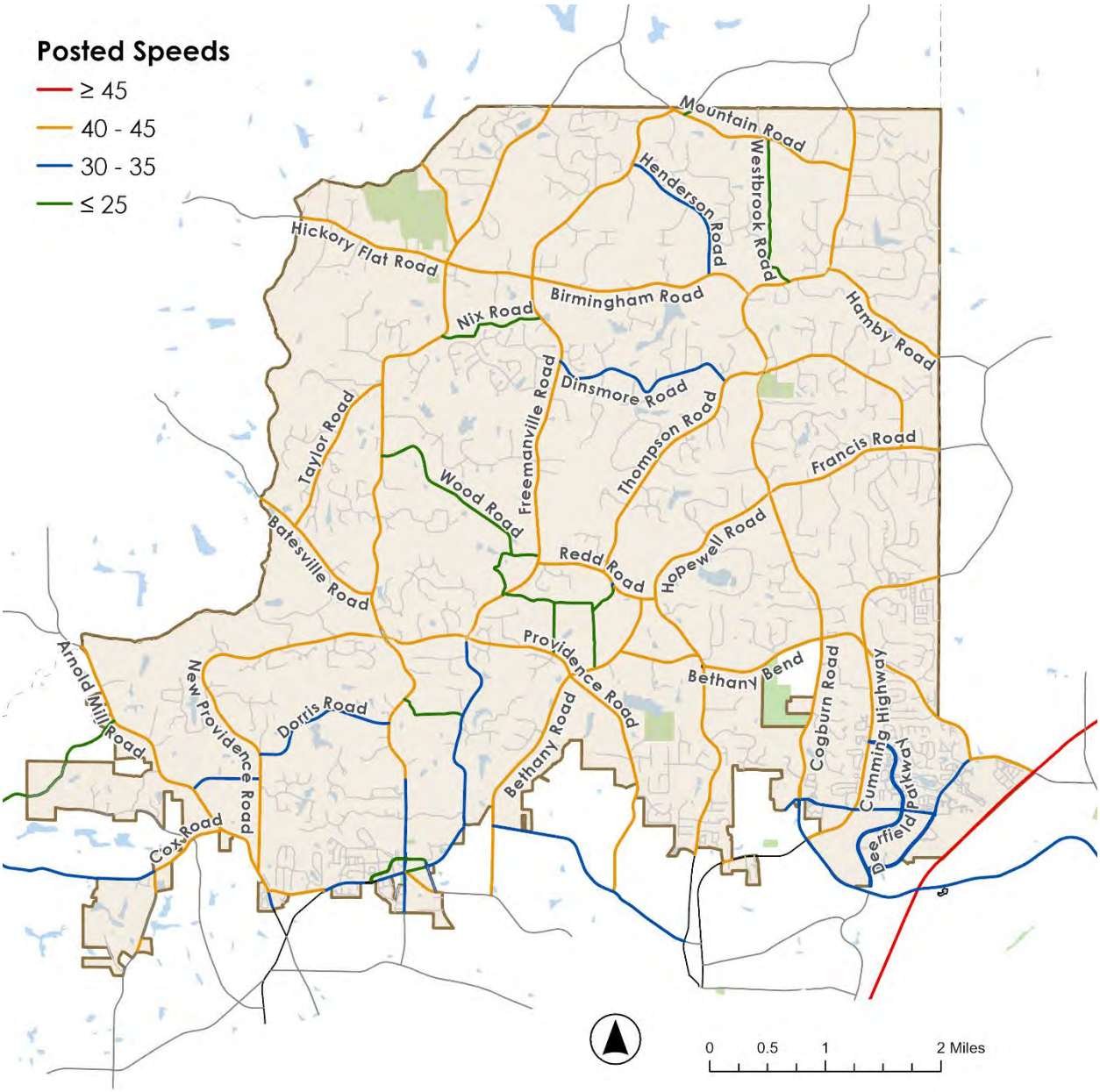
The truck routes in Milton follow along the state routes, including SR 140, SR 372, and SR 9. Additionally, there are truck routes in the southeast corner, closer to SR 400. In this context, trucks are defined as a vehicle with gross weight above 36,000 pounds or over 30 feet in length. Trucks are prohibited from driving on public roads not shown on the map below unless their origin or destination is not located on a truck route, in which case they should use the most direct route available between the hours of 7 AM and 7 PM.[1]

[1] City of Milton Code of Ordinances, https://library.municode.com/ga/milton/codes/code_of_ordinances?nodeId=THCOTH_CH56TRVE_ARTIVTRRO

Posted Speeds

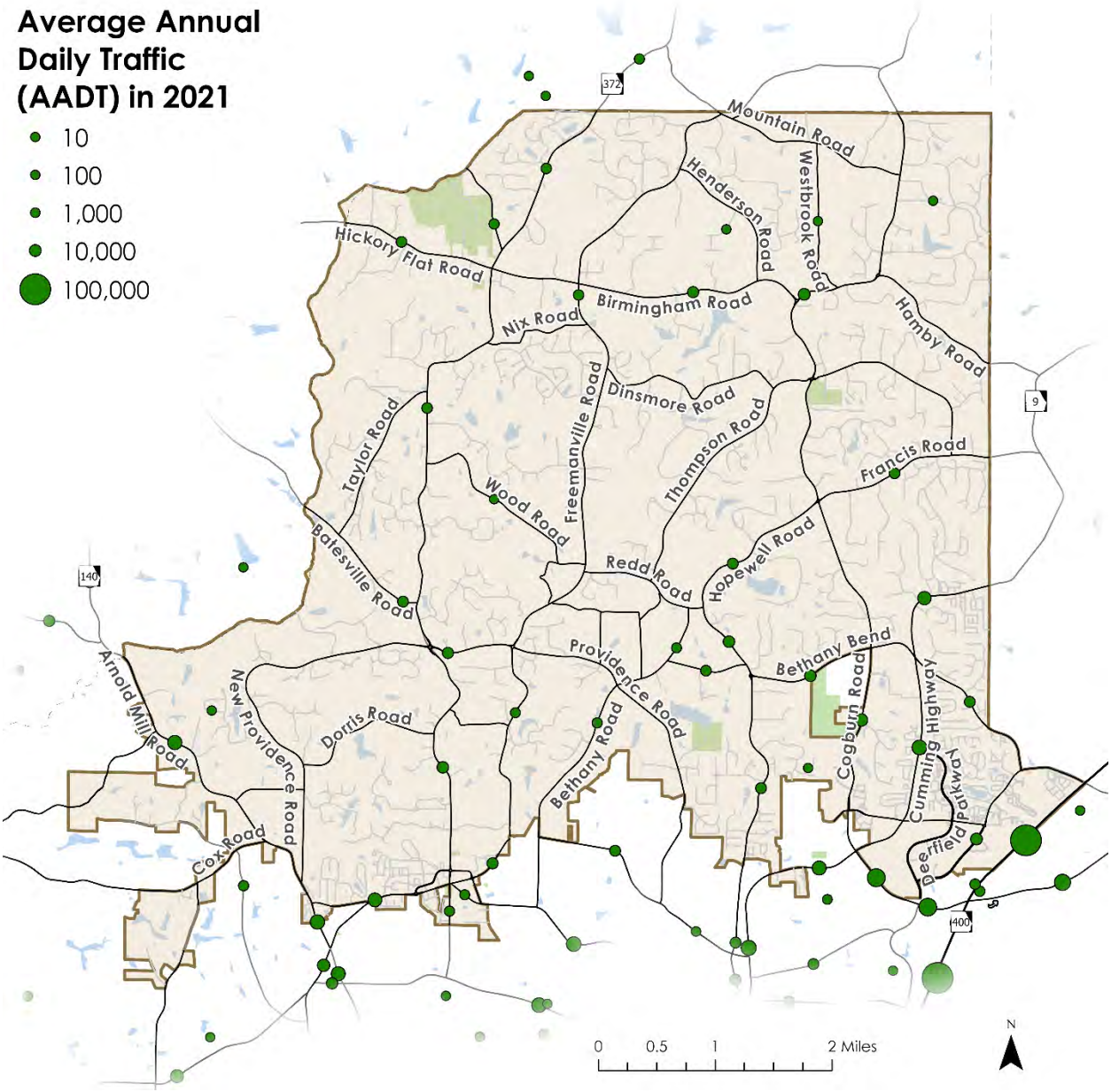
Along the study network, posted speed limits were collected and analyzed. Posted speed limits exist in 5-mile increments and are typically dependent on a roads function, surrounding area, and specific conditions. Currently, the City does not have authority to change speed limits along roadways and must contact the state for review and approval of a speed limit change.

Within Milton, speed limits range from 25 mph to 55 mph. SR 400 is the only roadway above 45 mph, at 55 mph through the study area. Much of the network has a posted speed of 45 mph. Surrounding the Crabapple area, most of the network is signed for 30 – 35 mph due to increased development and business surrounding the roads. Dirt and gravel roads are typically signed as 25 mph or lower due to a rougher travel surface and small lane widths.



AADT

Average annual daily traffic (AADT) volumes for 2021 were obtained from the Georgia Department of Transportation. The **Traffic Growth Comparison** section shows the comparison in the average annual percentage growth in AADT volumes from 2015 to 2021 and the average annual percentage growth projected by the travel demand model. From that analysis, Milton has not seen as much growth as expected from the travel demand model, except for within the southeast corner. The map below shows the AADT in 2021 with larger circles indicating more traffic. Similar to the map in the **Traffic Growth Comparison** section, traffic is highly concentrated within the southeast corner close to SR 400, the Deerfield area, and denser development in Alpharetta.

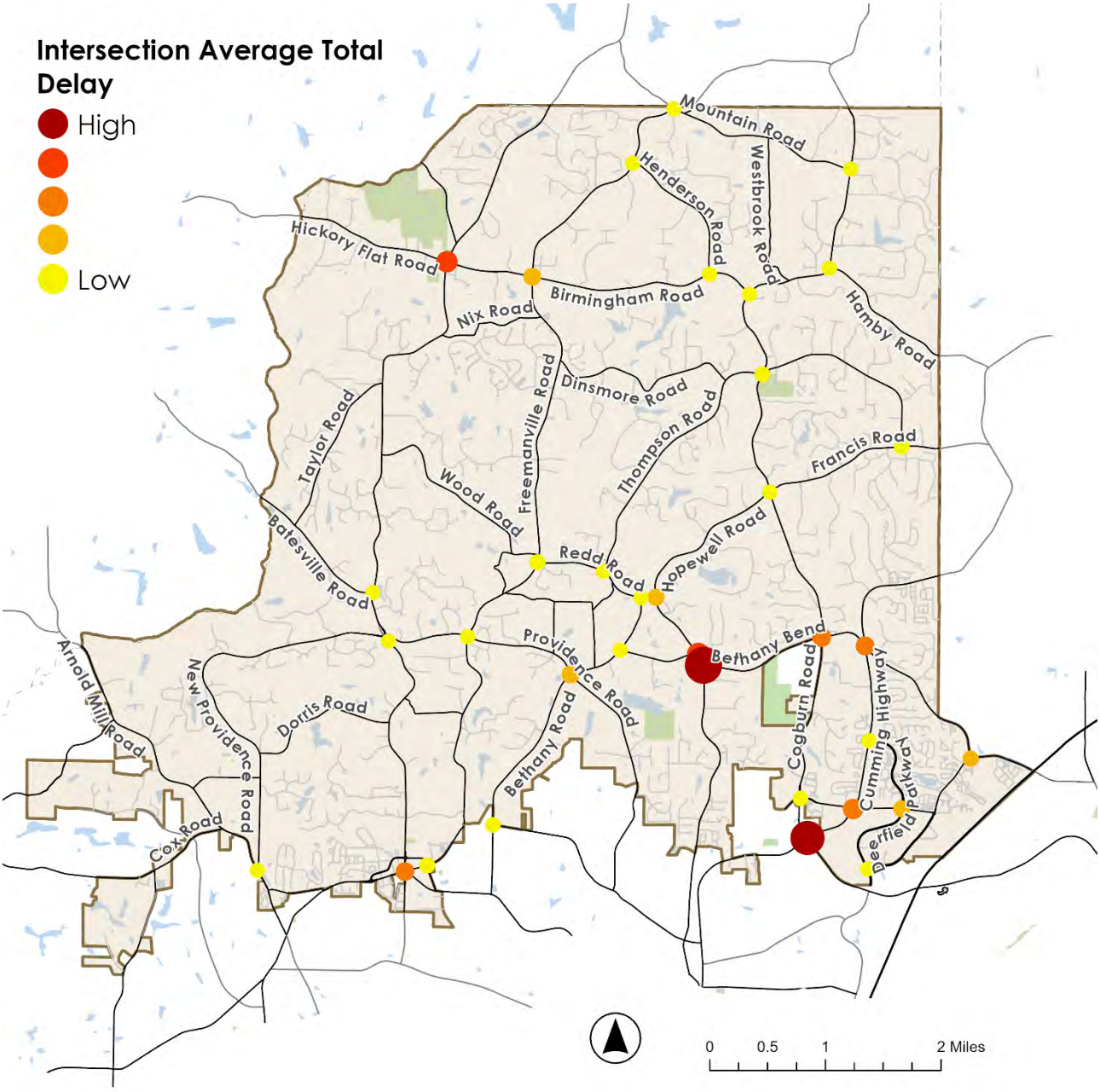


Intersection Bottlenecks

Intersection data was pulled from the Regional Integrated Transportation Information System (RITIS) to determine where the largest delays were. Consistent with Milton's rural characteristics, total delay is very small throughout the whole City except for the Deerfield area close to SR 400. As stated previously, there are approximately 16,000 people commuting outside of Milton every day for work, along with activity centers outside of the City boundaries that are proximate to the southeast corner of Milton. The heightened demand and proximity to SR 400 leads to more congested intersections surrounding the freeway.

Outside of the area near SR 400, delays were present along Bethany Bend. The bottleneck data shown in the map is from October 2022. At that time, the intersection of Bethany Bend and Hopewell Road was offset with three intersections in quick succession. This may have contributed to the extremely high delay at Bethany Bend and Hopewell Road, as well as the moderate congestion at Bethany Bend's intersections with Cogburn Road and SR 9. However, since October 2022, a roundabout has been constructed. Current observations at this roundabout indicate bottlenecks seem lower than before.

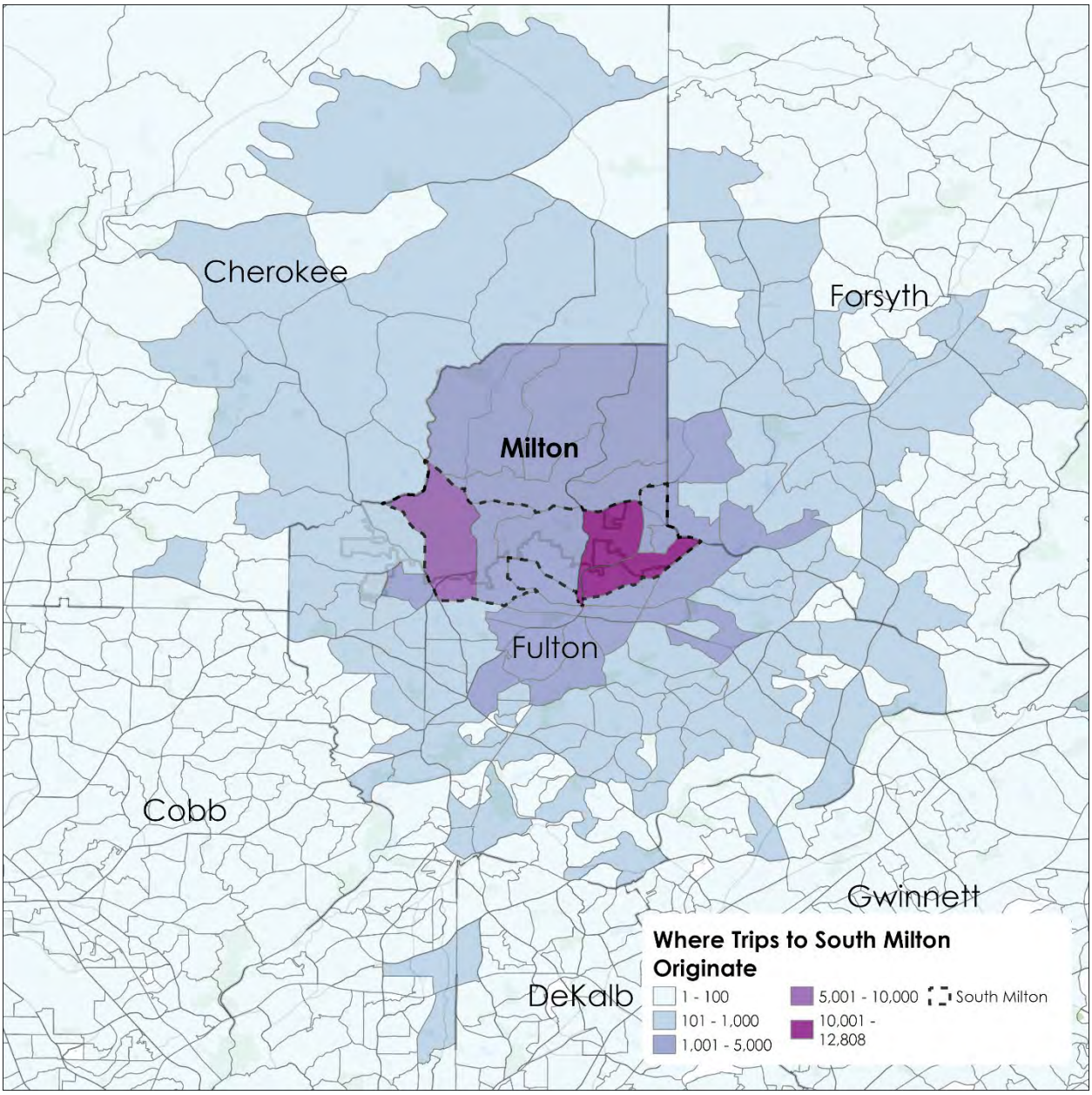
An interchange on SR 400 at McGinnis Ferry Road, currently in construction, could bring increased traffic volume to Bethany Bend, which may negatively impact congestion along the road. Increased congestion is also present at Birmingham Crossroads, a neighborhood retail location.

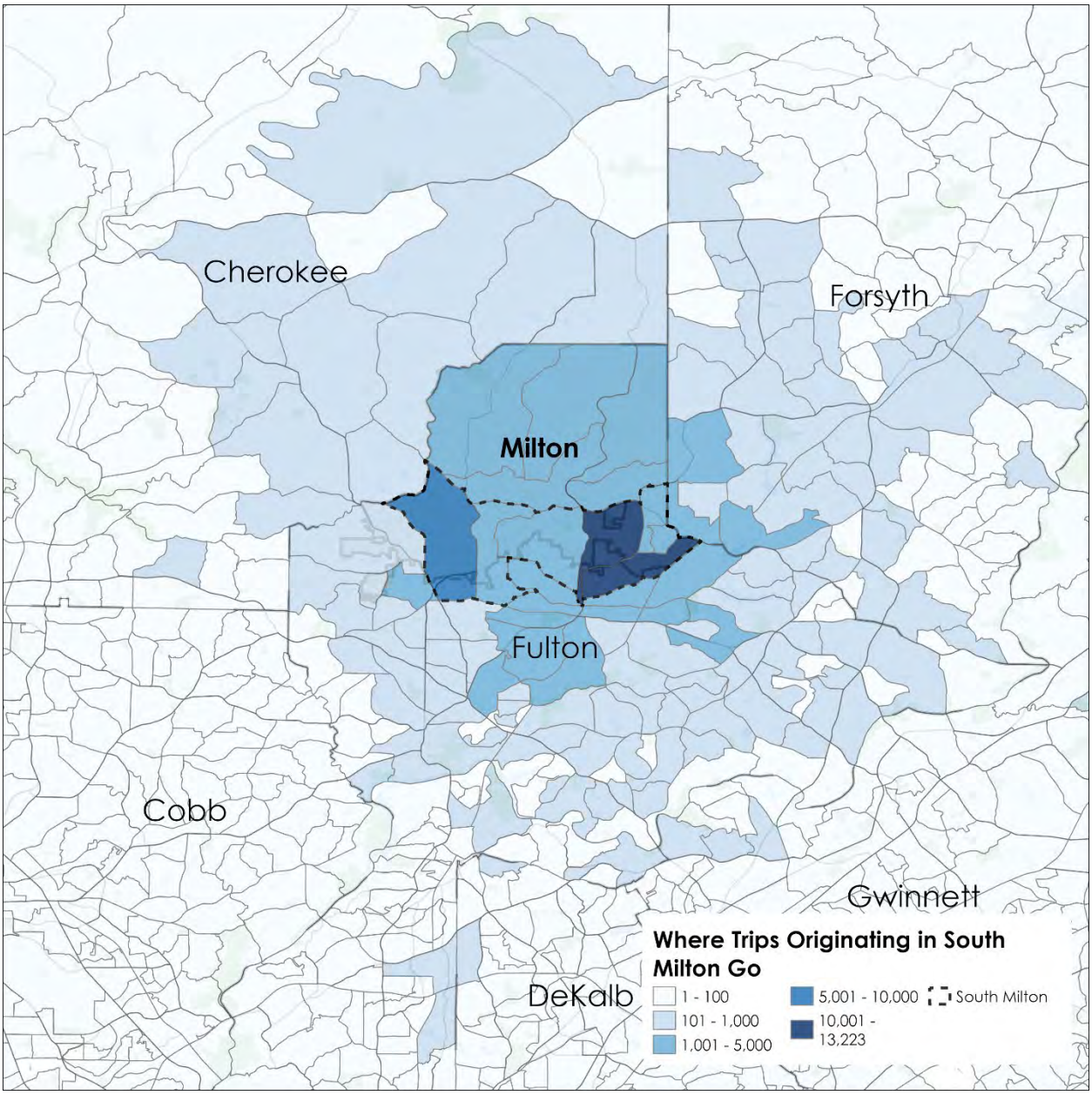

Intersection Average Total Delay
High
Low
Mountain Road
Henderson Road
Westbrook Road
Hickory Flat Road
Birmingham Road
Nix Road
Hamby Road
Dinsmore Road
Taylor Road
Freemanville Road
Thompson Road
Francis Road
Wood Road
Batesville Road
Redd Road
Hopewell Road
Providence Road
Bethany Bend
Arnold Mill Road
New Providence Road
Dorris Road
Bethany Road
Cogburn Road
Cumming Highway
Deerfield Parkway
Cox Road
0
0.5
1
2 Miles

Origin-Destination Travel Trends

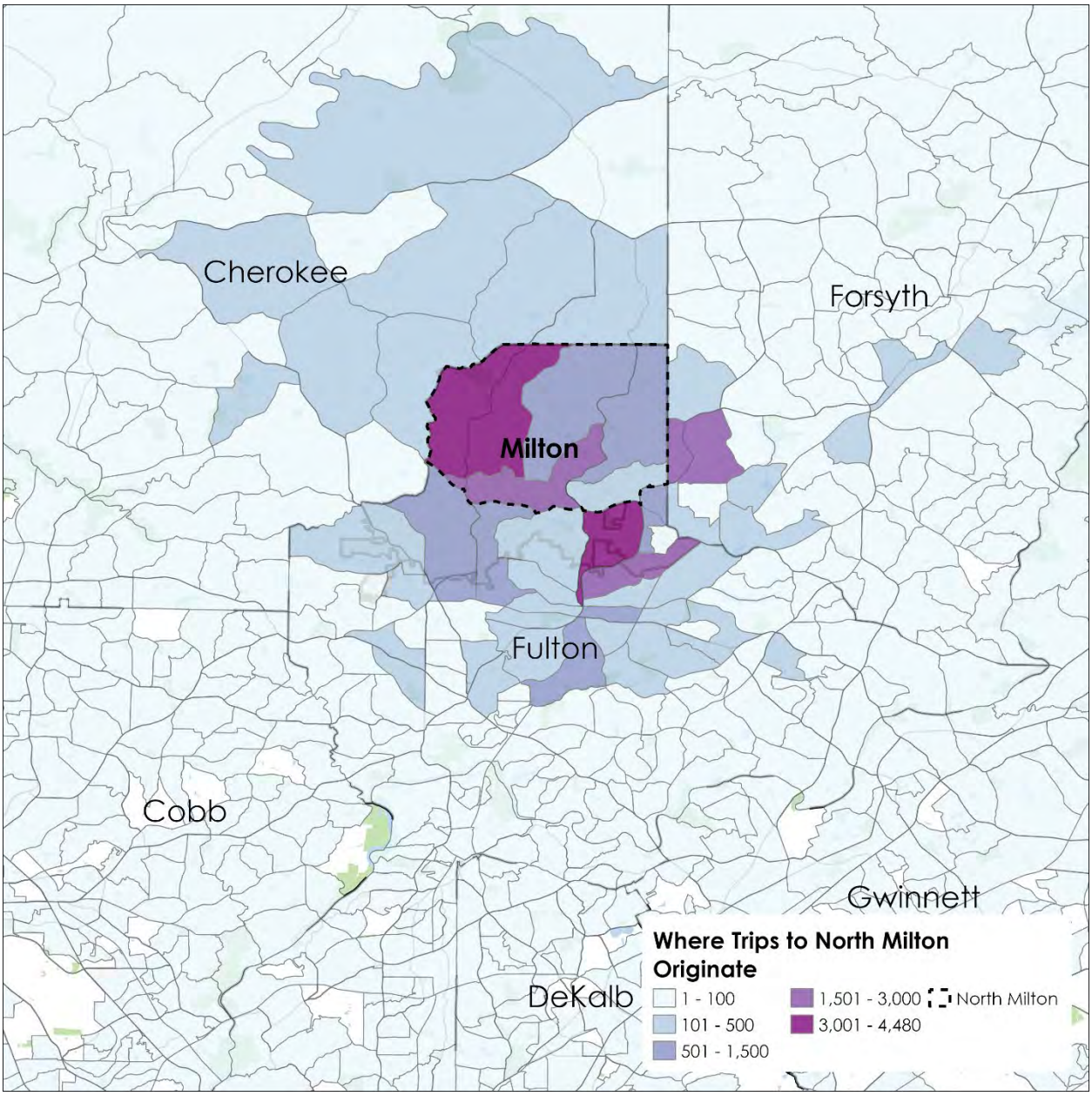
Origin-destination data was pulled from Replica to determine where trips to Milton originate and where trips from Milton go. Replica (https://www.replicahq.com) is a platform that uses disaggregated trip and demographic data to create a transportation model that can provide detailed information on travel patterns. With Replica, origin-destination data was pulled for trips that either begin or end in Milton during a typical Thursday in Fall 2022. For data collection, Milton was divided into the north and south to capture differences in travel patterns between the two sections of the City. The resulting analysis provides key insights into popular origins and destinations for trips to and from Milton.

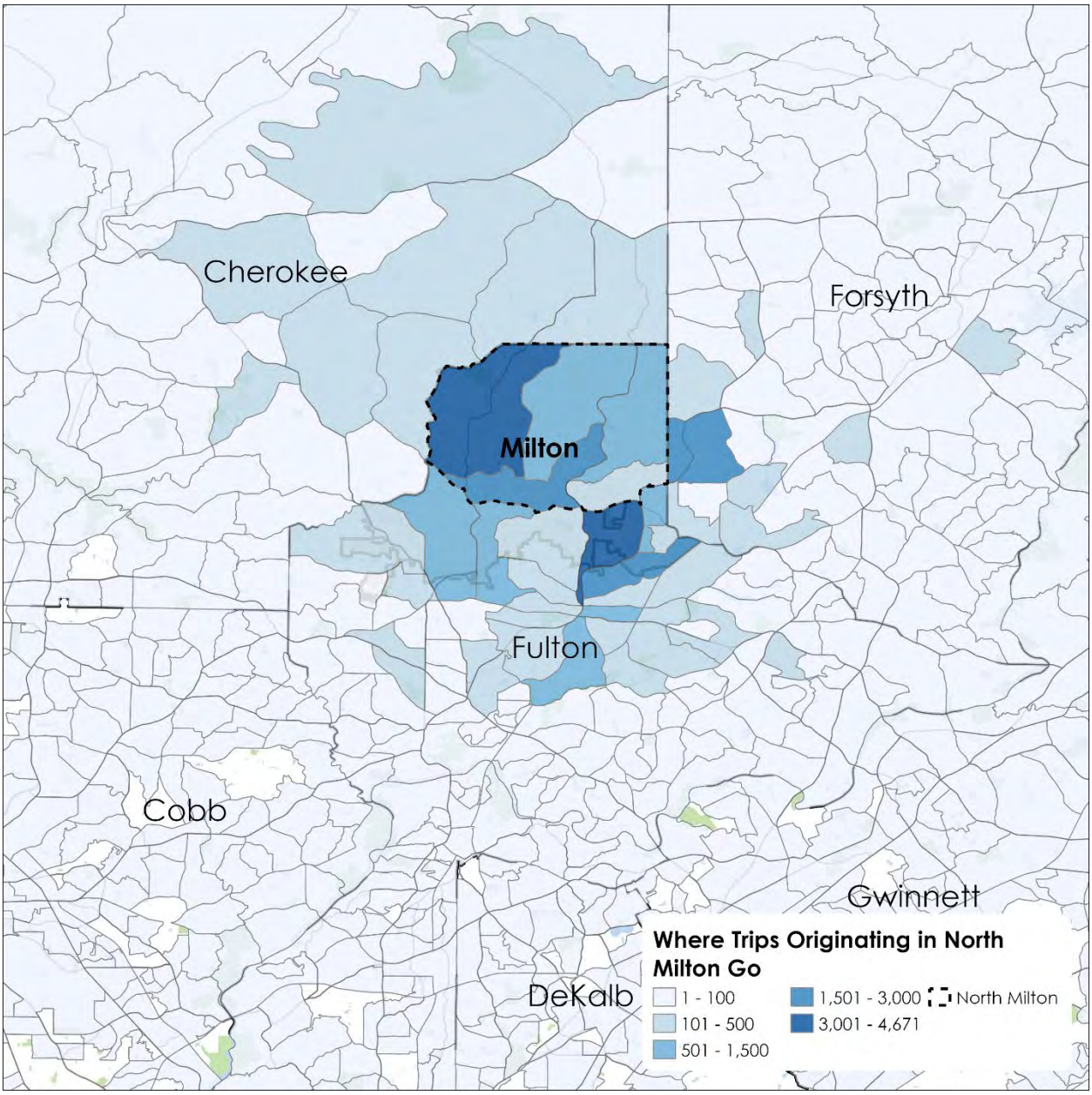
Interestingly, locations that are popular origin locations are also popular destinations for both south and north Milton. Most often, trips in south Milton start and end in the same area. In particular, trip origins and destinations are highly concentrated in the southeast of the City, near SR 400 and Deerfield, as well as the southwest of the City, near Crabapple.


Cherokee
Forsyth
Milton
Fulton
Cobb
Gwinnett
DeKalb
Where Trips to South Milton Originate
1 - 100
101 - 1,000
1,001 - 5,000
5,001 - 10,000
10,001 - 12,808
South Milton


Cherokee
Forsyth
Milton
Fulton
Cobb
Gwinnett
DeKalb
Where Trips Originating in South Milton Go
1 - 100
101 - 1,000
1,001 - 5,000
5,001 - 10,000
10,001 - 13,223
South Milton

Substantial amounts of trips also come from and go to north Milton, parts of North Fulton County, and parts of west Forsyth County. Trips in north Milton tend to have similar patterns to south Milton, though their origins and destinations are less spread. Most trips to north Milton also start in north Milton, but a significant number of trips also come from and go to southeast Milton near SR 400, west Forsyth County, and parts of North Fulton County.



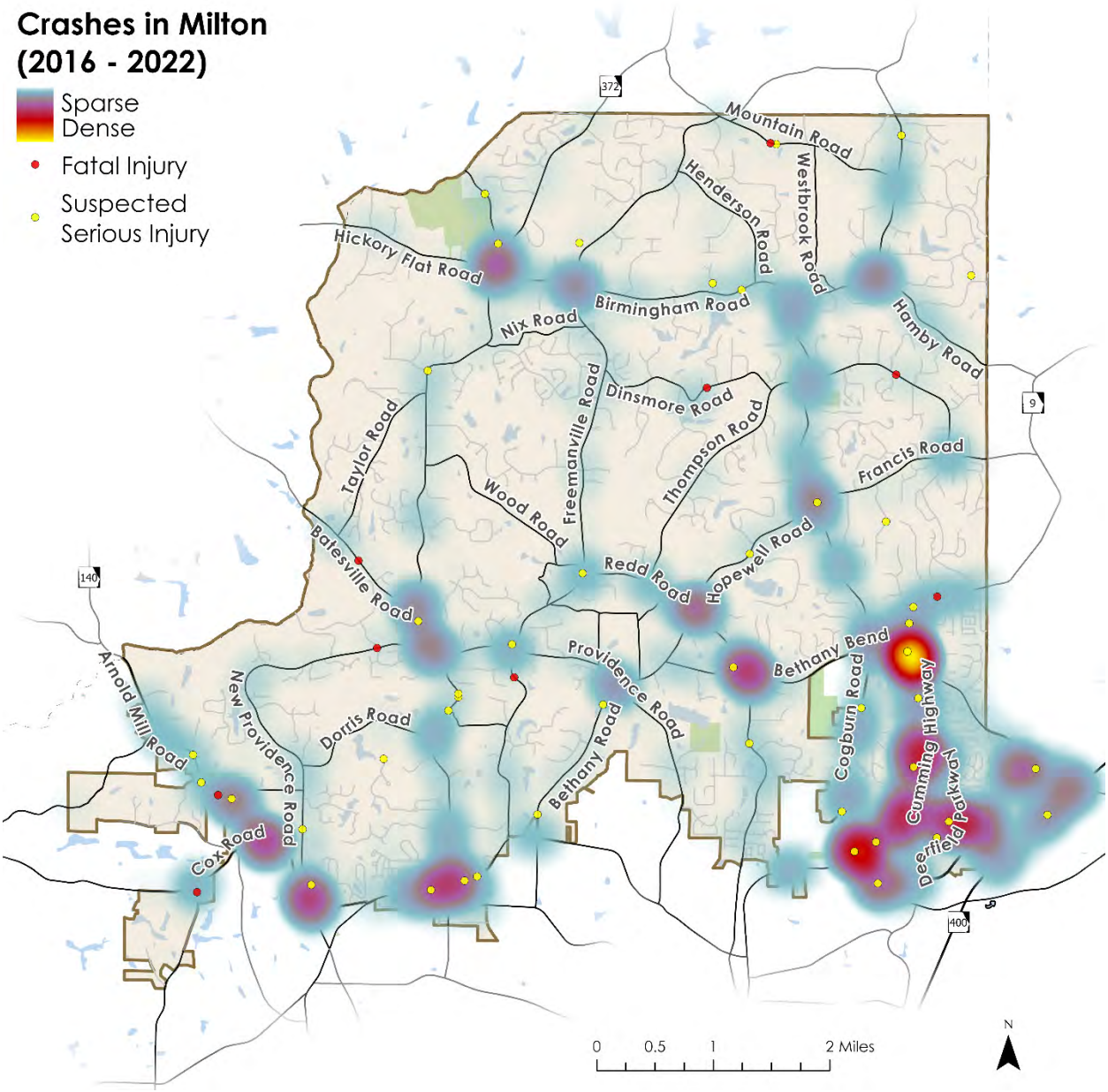

Cherokee
Forsyth
Milton
Fulton
Cobb
Gwinnett
DeKalb
Where Trips Originating in North Milton Go
1 - 100
101 - 500
501 - 1,500
1,501 - 3,000
3,001 - 4,671
North Milton

Crash Analysis/Density

Historical crashes for the 7-year period, 2016 to 2022, were obtained from GDOT's Numetric database. On average there were 535 crashes per year within the City. The vast majority of crashes are low severity, property damage only crashes. The most comment incident type was rear-end crashes (42%) followed by angle crashes (26%) and 'not a collision with a motor vehicle' (23%). The top three corridors with significant crashes are SR 9, SR 140, and Birmingham Hwy (SR 372). Higher severity crashes tend to occur along these corridors and at intersecting streets throughout the City.

The location with the highest concentration of crashes is the intersection of Bethany Bend and SR 9. There is extreme skew at this intersection, which may be a major contributor to the high frequency of crashes. A future planned interchange of SR 400 at McGinnis Ferry Road could lead to increased traffic at this intersection from motorists travelling west across Milton, which has the potential to exacerbate the safety concerns at this intersection. As part of GDOT's State Route 9 Improvement Project, there is a planned improvement to convert the highly skewed intersection into two offset intersections. This improvement is intended to address the safety issues stemming from the existing skew.

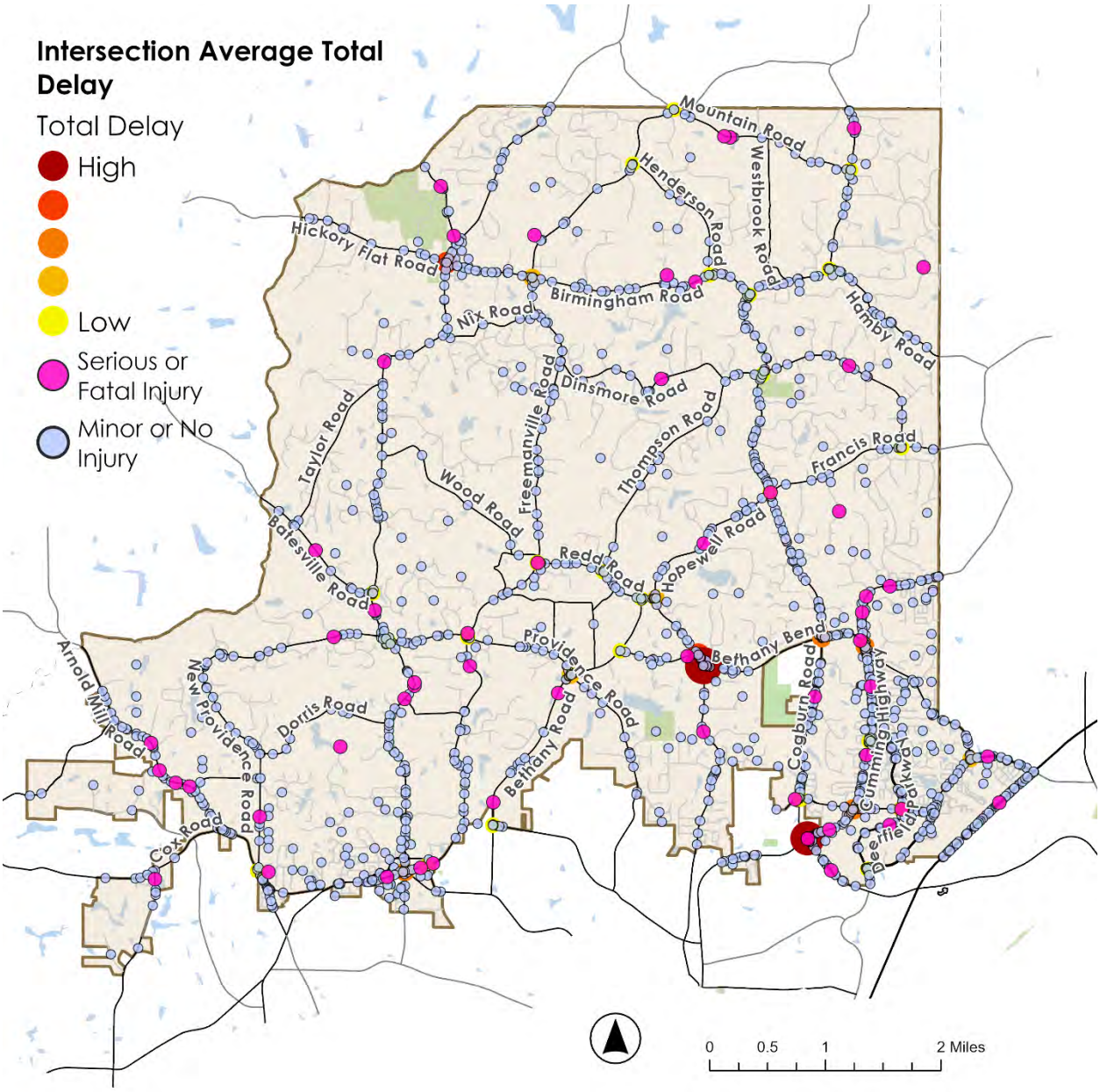
Of note, there is a high concentration of crashes along SR 400 and at intersections that border surrounding cities. These crashes are outside of Milton's jurisdiction but provide context for Milton's transportation network.



Overall Operational Deficiencies

Crash density and intersection delay were overlayed to determine intersections with high delay and crash risk. Most intersections with high levels of delay also had elevated crash numbers, however not every crash intersection location had high levels of delay. The crashes at intersections with high delay were mostly property damage or minor injury crashes.

The locations of highest delays and crashes are the intersections of Bethany Bend at Hopewell Road, Cogburn Road at SR 9, and Cogburn Road at Deerfield Parkway. Bethany Bend at Hopewell Road and Cogburn Road at SR 9 both had at least one serious or fatal injury crash. A future planned interchange on SR 400 at McGinnis Ferry Road could bring increased traffic volume to Bethany Bend, which could cause increased delay times and safety risks at the Bethany Bend and Hopewell Road intersection.


Intersection Average Total Delay
Total Delay
High
Low
Serious or Fatal Injury
Minor or No Injury
Mountain Road
Henderson Road
Westbrook Road
Hickory Flat Road
Birmingham Road
Nix Road
Hampy Road
Dinsmore Road
Freemanville Road
Thompson Road
Taylor Road
Wood Road
Francis Road
Batesville Road
Redd Road
Hopewell Road
Bethany Bend
Providence Road
Arnold Mill Road
New Providence Road
Dorris Road
Bethany Road
Cogburn Road
Cumming Highway
Cox Road
Deerfield Parkway
0
0.5
1
2 Miles

Smaller and Larger Scale Vehicular Assessment

Ten intersections and corridors were further evaluated as part of the needs assessment. These locations, listed below, were selected based on initial high level analysis and discussions between staff and consultants.

Intersections

1. Cogburn road at Bethany Bend
2. Deerfield Parkway at Webb Road
3. New Bullpen Road at SR 372 (Birmingham Highway)
4. Thompson Road at Francis Road
5. Thompson Road at Redd Road
6. Batesville Road at SR 372 (Birmingham Highway)
7. Batesville Road at Taylor Road

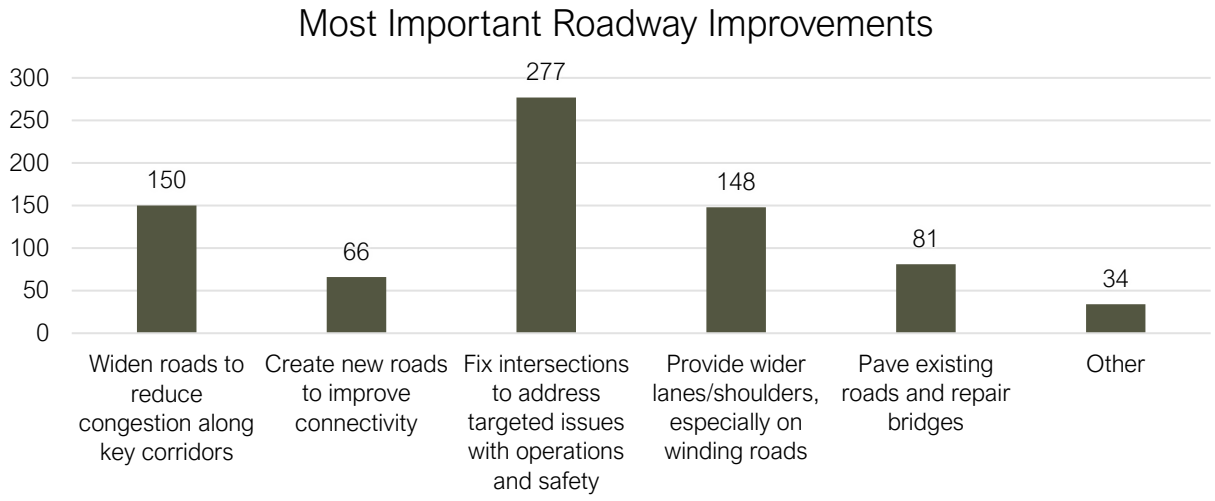
Corridors

1. Cogburn road from Bethany Bend to Hopewell Road
2. Providence Road from City limits to Bethany Road
3. Bethany Bend from East of SR 9 to Morris Road/McGinnis Ferry Road

For the detailed analysis for each of the locations, please see the Appendix.

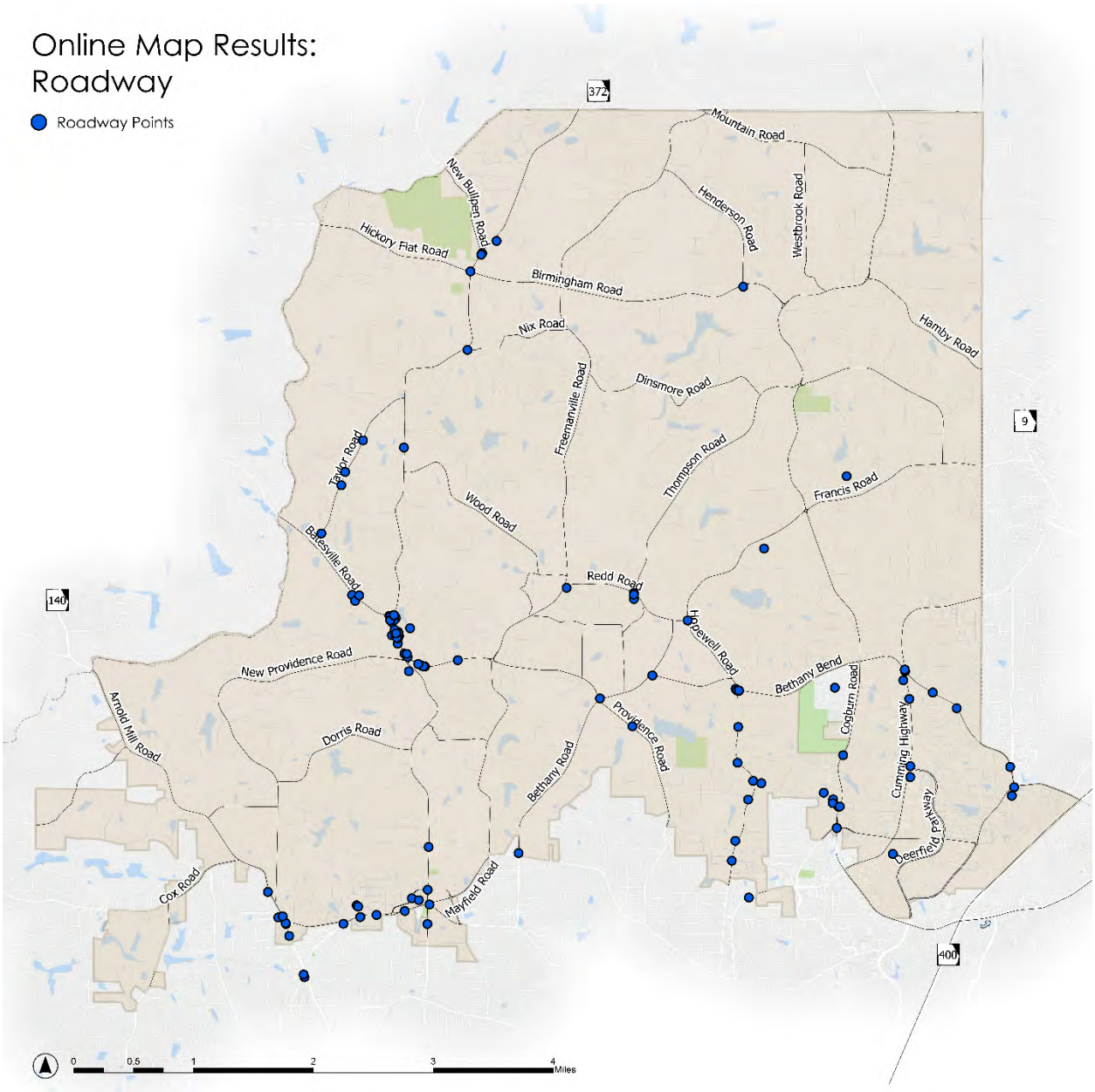
Public Input Needs Assessment

When survey users were asked about the most important roadway improvements, improving traffic operations at intersections got the highest number of votes, which can help inform what kind of roadway improvements should be prioritized.



Mapping Activity Section

After the main survey questions, survey respondents were directed towards and interactive mapping tool. This allowed for users to leave comments relating to roadway needs, public transit needs, biking needs, and pedestrian needs. The points where people left comments are shown below. The unfortunate recent event including a severe crash at SR 372 and Batesville Road likely resulted in the high level of attention paid to that location on the map. There were also many comments left in the Crabapple area and along Hopewell Road.

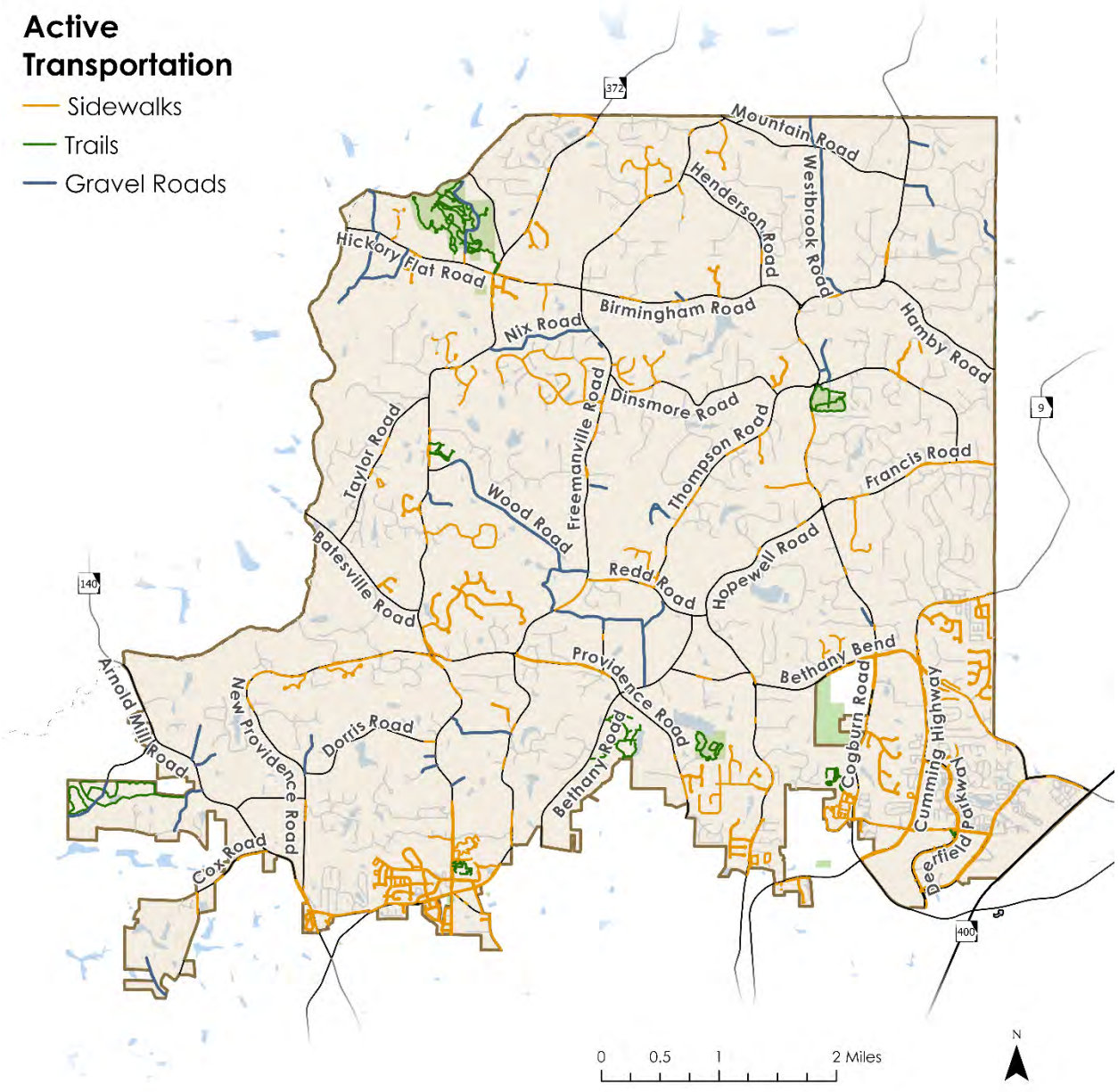

Online Map Results:
Roadway
Roadway Points
372
Mountain Road
New Bullpen Road
Henderson Road
Westbrook Road
Hickory Flat Road
Birmingham Road
Nix Road
Hamby Road
Dinsmore Road
Freemanville Road
9
Taylor Road
Thompson Road
Francis Road
Wood Road
Batesville Road
Redd Road
140
Hopewell Road
New Providence Road
Bethany Bend
Cogburn Road
Arnold Mill Road
Dorris Road
Providence Road
Cumming Highway
Bethany Road
Deerfield Parkway
Cox Road
Mayfield Road
400
0
0.5
1
2
3
4
Miles

Bicycle and Pedestrian Network

Bicycle and pedestrian connectivity are important aspects of developing equitably accessible communities, especially in areas with higher rates of zero vehicle households. Also, Milton residents have indicated a desire to be able to walk/bike or take other micromobility vehicles like golf carts to more locations throughout the City.

Existing Inventory

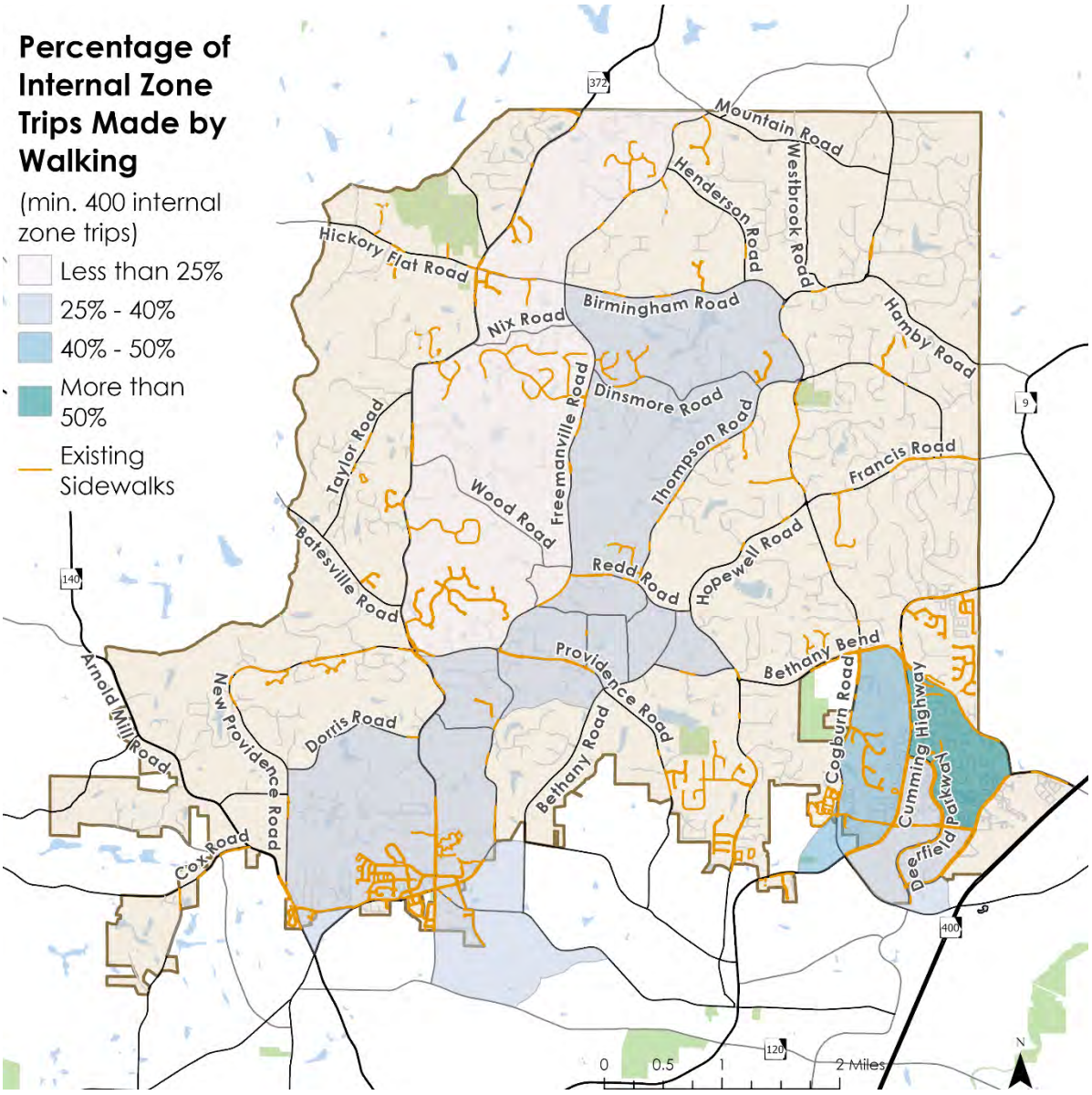
Investment in micromobility methods of transportation has been recent and specific to the Deerfield and Crabapple areas. Additionally, there have infrastructure investments into certain residential areas, such as south of Wood Road and east of SR 9/Cumming HIghway. The trail network is clustered within Birmingham Park, north of Hickory Flat Road, and close to Lackey Road and Bethany Road as outlined in the City of Milton Trail Blueprint and Community Trail Prioritization Plan. These trails are used mostly for recreation as opposed to connectivity.



Analysis of Internal Zone Trips Made by Walking in Milton

The map showcases the proportion of "internal zone" trips made by walking in Milton. Internal zone trips represent journeys that originate and end within the same Traffic Analysis Zone (TAZ), often indicating walkable distances particularly within smaller zones. The map focuses on TAZs with more than 400 internal trips to avoid misleading walkability assessments caused by a lack of attractive destinations in certain TAZs.

The map reveals a surprising finding regarding the walking patterns in Deerfield and Crabapple. Despite having notably lesser quality sidewalk infrastructure and connectivity compared to Crabapple, Deerfield displays a higher percentage of internal walking trips. This observation may be attributed to several factors:



- **Concentration of Destinations:** Deerfield likely boasts a higher concentration of destinations within its TAZ boundaries, motivating residents to opt for walking for short trips over other transportation modes.
- **TAZ Size:** Larger TAZs in Crabapple might result in dispersed distribution of destinations, discouraging walkability even in areas with existing sidewalks.
- **Sidewalk Connectivity:** Areas north of downtown Crabapple lack sidewalk connectivity, making pedestrian movement less convenient and potentially reducing the preference for walking.

To address these insights, the following recommendations can be made:

- **Sidewalk Expansion in Deerfield:** Given the higher percentage of internal walking trips in Deerfield, there is a need for sidewalk expansion and improvement. This will support and promote pedestrian mobility, encouraging more residents to choose walking for short trips, and reducing reliance on motorized vehicles.
- **Enhancing Walkability in Crabapple:** To increase the share of internal walking trips in Crabapple, a focus on improving walkability in the northern portion of the subarea could be beneficial. Exploring the feasibility of establishing trail connections and enhancing sidewalk connectivity between neighborhoods can encourage walking within the TAZs, if desired by the local community.

The map analysis offers valuable insights into walking patterns within Milton. It highlights the significance of infrastructure and destination availability in influencing transportation choices. Implementing the suggested measures may foster a more pedestrian-friendly and sustainable community.

Walkability Analysis of Deerfield, Crabapple, and North Milton

The map overlays quarter- and half-mile walksheds from activity centers/community facilities, existing sidewalks, and identified sidewalk gaps in Deerfield, Crabapple, and North Milton. Roadways shown with yellow highlight indicate gaps either within those walksheds or along corridors that could provide better connectivity to commercial districts.

Deerfield:

Deerfield, despite promoting walking with its commercial attractions, lacks sufficient infrastructure to fully support pedestrian mobility. The identified sidewalk gaps concentrate in areas that could extend walksheds and connect commercial zones. Recommendations include prioritizing sidewalk extensions in commercial areas and establishing residential connectivity.

Crabapple:

Crabapple generally exhibits good sidewalk connectivity, with fewer gaps identified. Improvements can focus on connecting neighborhoods outside the main area to the existing sidewalk network, enhancing overall pedestrian accessibility.

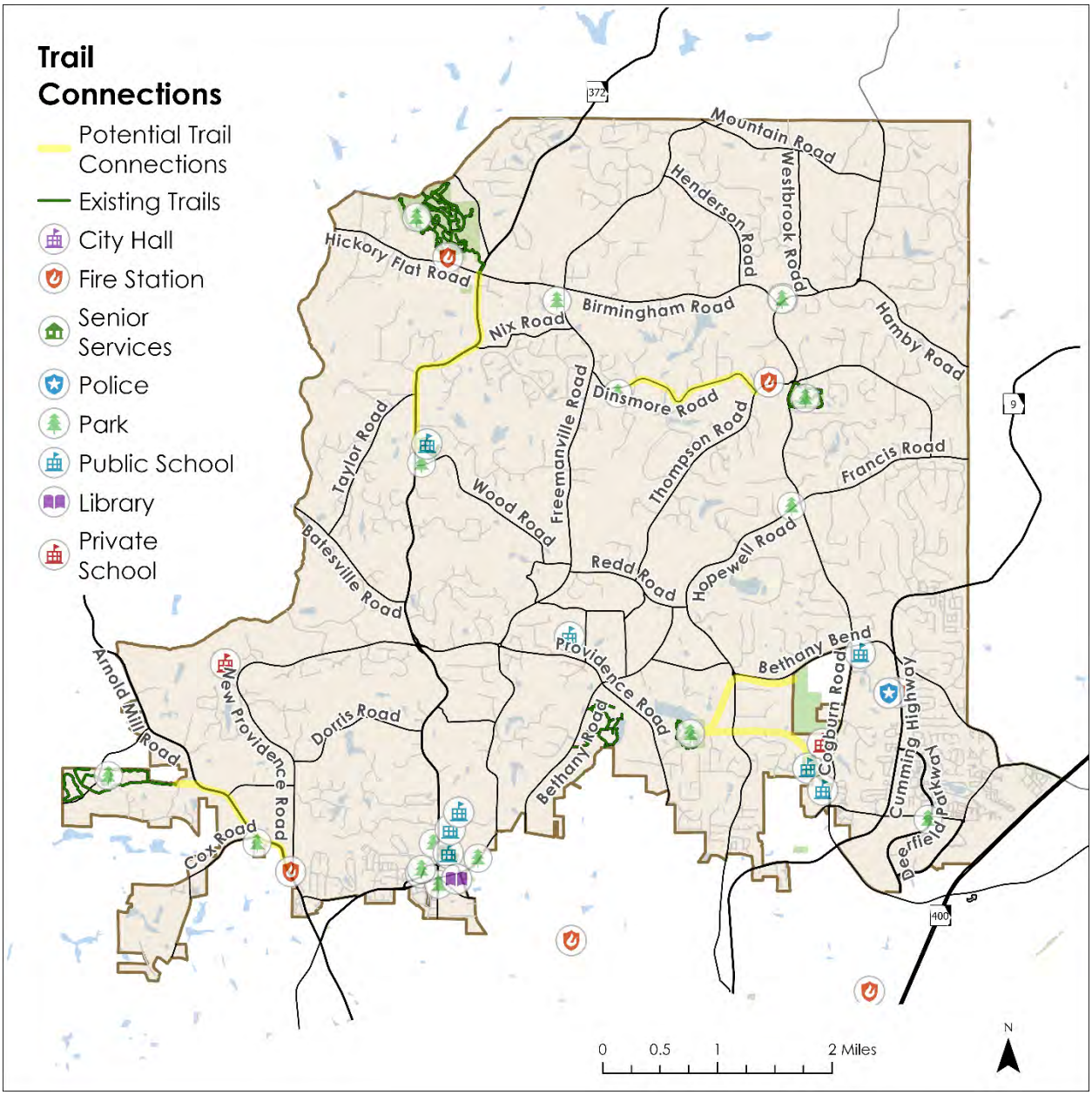
North Milton:

In North Milton, sidewalk gaps primarily surround existing parks and activity centers. Sidewalks on Freemanville and Dinsmore Road fill gaps between greenspaces and the new Milton City Park and Preserve (MCPP). Additionally, sidewalks near Birmingham Crossing connect more neighborhoods on Birmingham Highway to Birmingham Park. Recommendations involve prioritizing sidewalks around parks and greenspaces, as well as enhancing neighborhood-park connectivity.

The analysis underscores the need for improved sidewalk infrastructure in targeted locations to promote walking as a sustainable transportation mode. Addressing the identified gaps will enhance pedestrian mobility, encourage active lifestyles, and create more vibrant and connected communities.

Trail Connectivity Analysis in Deerfield, Crabapple, and North Milton

The presented map overlays community facilities, including parks, existing trails, and potential new trail connections in Deerfield, Crabapple, and North Milton.



Deerfield:

In Deerfield, the map indicates potential new trail connections between parks and other parks or schools. The strategic location of Providence Park makes it well-suited for facilitating connections to other park and school locations in the area. By establishing new trail links, residents can enjoy seamless access to recreational facilities, promoting outdoor activities and active lifestyles.

Crabapple:

Lackey Road Preserve already has a planned trail connection onto Arnold Mill Road, indicating the community's commitment to enhancing trail connectivity. Extending this connection further to reach Crabapple might be a logical extension, fostering stronger links between the two areas. Improved trail connections between parks and schools in Crabapple will provide residents with more opportunities for outdoor recreation and alternative transportation options.

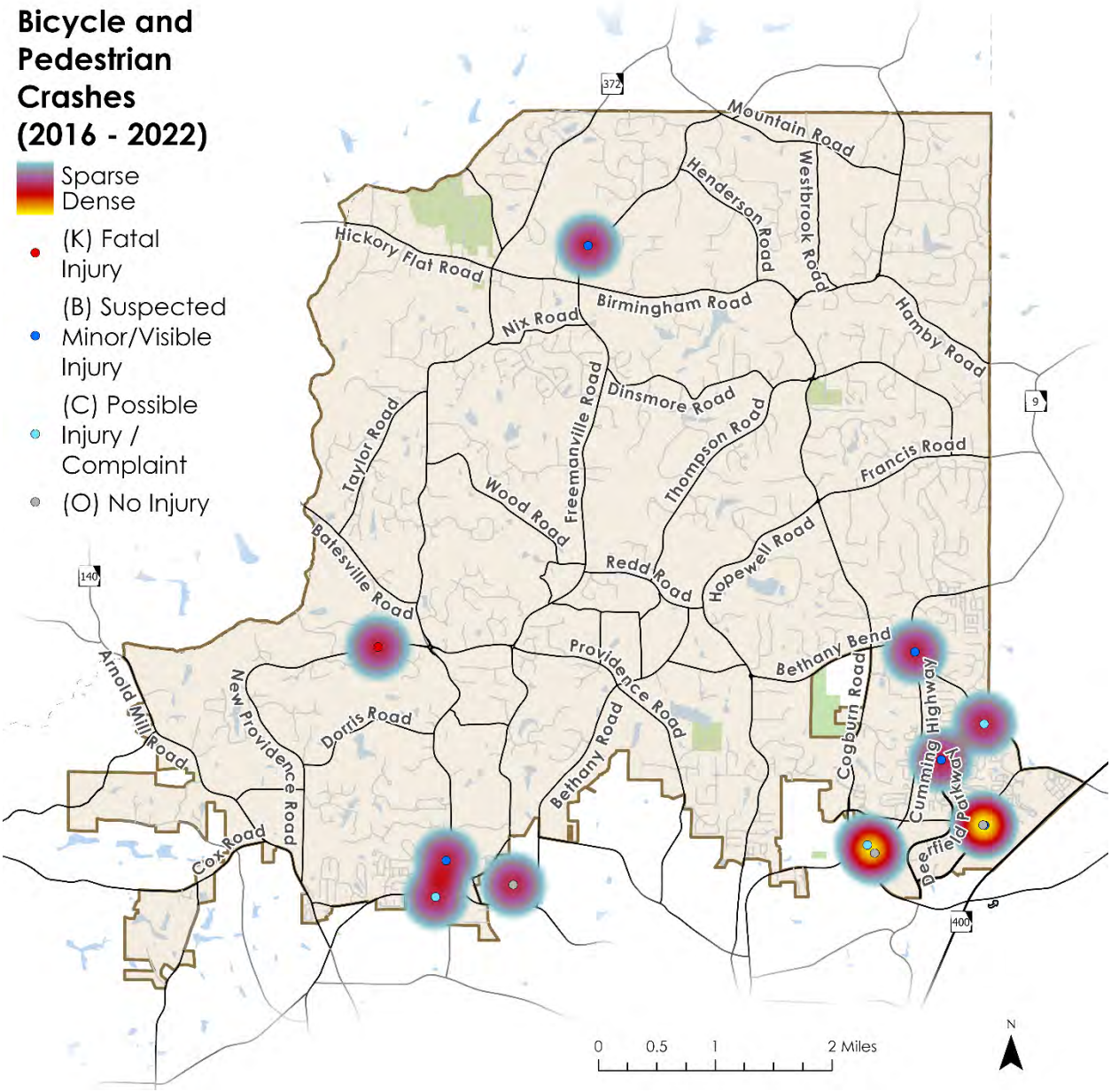
North Milton:

The new Milton City Park and Preserve (MCPP) offers promising opportunities for trail connections to nearby parks and greenspaces. By strategically designing new trails, residents can benefit from increased accessibility to multiple recreational areas, encouraging more outdoor activities and community engagement.

The trail connectivity analysis emphasizes the importance of establishing new trail connections between parks and other community facilities. Creating pedestrian-friendly connections will not only promote recreational activities but also encourage sustainable transportation alternatives. As these connections are developed, residents in Deerfield, Crabapple, and North Milton will enjoy enhanced access to recreational opportunities, helping to foster a stronger sense of community.

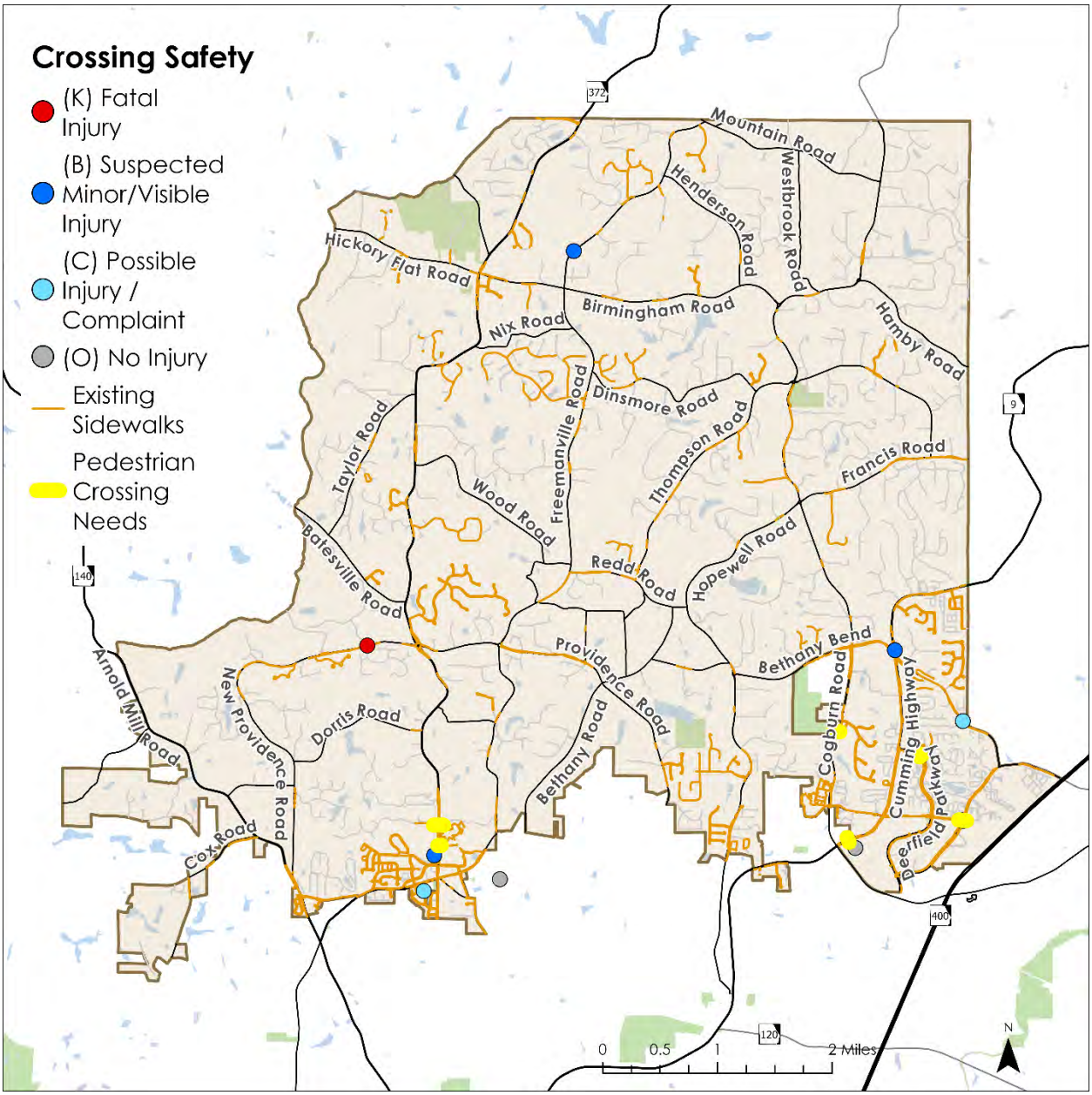
Crash Analysis

Crashes which involve a pedestrian or bicycle were reviewed for the 7-year period, 2016 to 2022. On average there are less than two crashes per year within the City. Typically the crashes were minor injury; however, there was one pedestrian fatality. Pedestrian crashes typically occur within a crosswalk when a vehicle fails to yield. Bicycle crashes typically occur when a vehicle does not maintain a safe passing distance.



Pedestrian Safety Analysis in Crabapple and Deerfield

The presented map overlays existing sidewalks, all pedestrian/bike crashes that occurred from 2016 to 2022, and potential locations for new pedestrian crossings or pedestrian crossing safety studies in Crabapple and Deerfield. These two areas witness significant pedestrian activity, and thus, pedestrian safety is tremendously important.



Pedestrian Crossings Near Schools:

Several potential pedestrian crossings have been identified near schools, where children may need to cross roads to get to school. In intersections that already have crossing infrastructure, potential projects may involve safety studies to assess and implement additional safety measures to protect students and other pedestrians.

Crossings with History of Crashes:

Certain crossing points, like Webb Road at Morris Road, have experienced crashes in the past. Although the crash locations might be covered by the need symbol, it is important to consider these locations for pedestrian safety improvements to reduce the likelihood of future crashes.

Crossings Near Parks and Shopping Areas:

Other crossings have been identified near locations where people frequently need to cross roads to access parks or shopping areas. By improving safety measures in these areas, we can encourage more people to walk and use alternative transportation options, reducing the reliance on motorized vehicles.

State Route 9 (SR 9) Project:

The crossing on SR 9 has been noted as part of the Georgia Department of Transportation (GDOT) SR 9 project. Although it might be considered as part of the ongoing project, documenting it as a need emphasizes its importance in enhancing pedestrian safety in the area.

By analyzing the data and identifying potential pedestrian crossing points, safety studies, and improvements, we can prioritize initiatives to enhance pedestrian safety throughout the City, and particularly in Crabapple and Deerfield. Addressing the safety concerns in these highly frequented areas will create safer and more pedestrian-friendly neighborhoods, encouraging active transportation and fostering a sense of community well-being.

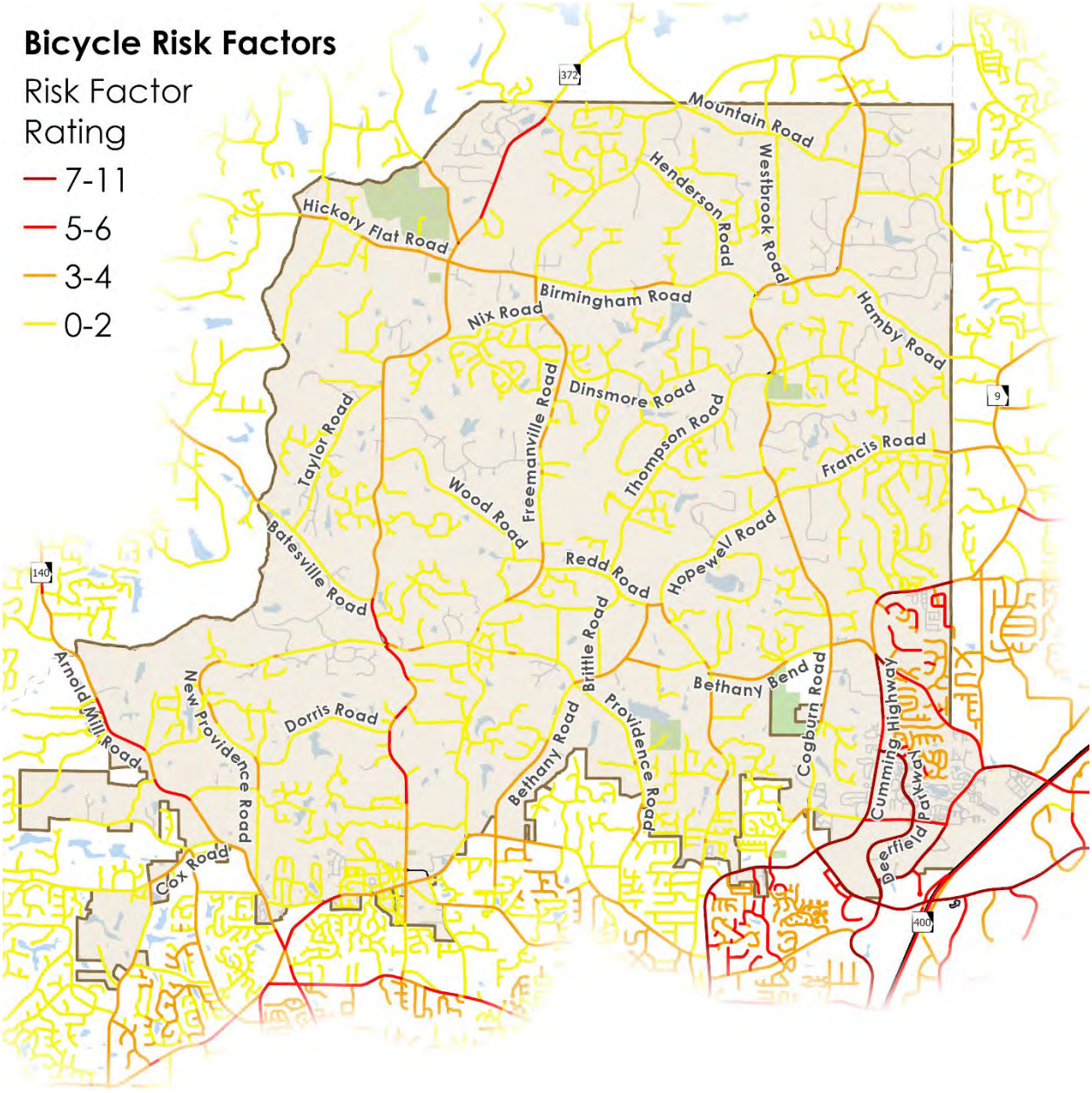
Bicycle and Pedestrian Risk Factors

As part of ARC's regional safety strategy, the organization evaluates bicycle and pedestrian risk factors of roads within the greater Atlanta region. Such risk factors include:

Roadway/ Surrounding Land Use Characteristics	Heightened Risk Factor
Number of lanes	Four or more
Ownership	GDOT Owned
AADT	Greater than 9,000
Posted Speed Limit	Greater than 40 MPH
Functional Classification	Minor Arterial/Other Principal Arterial
Proximity to transit stops	Bus Stop withing 100 Feet
Proximity to frequent transit	High Frequency Bus within ¾ Mile
Adjacent land use patterns	In a High Intensity Development Area Not Adjacent to High/Medium Intensity Development In an Urban Area
Population Density	High Population Density (Top 20%) High Proportion of Non-White Population (Top 20%)
Household Income	Low Median Household Income (Lowest 20%)
Environmental Justice score of area	Seven or more

All factors are weighted equally and summed for a total bicycle risk factor and pedestrian risk factor.

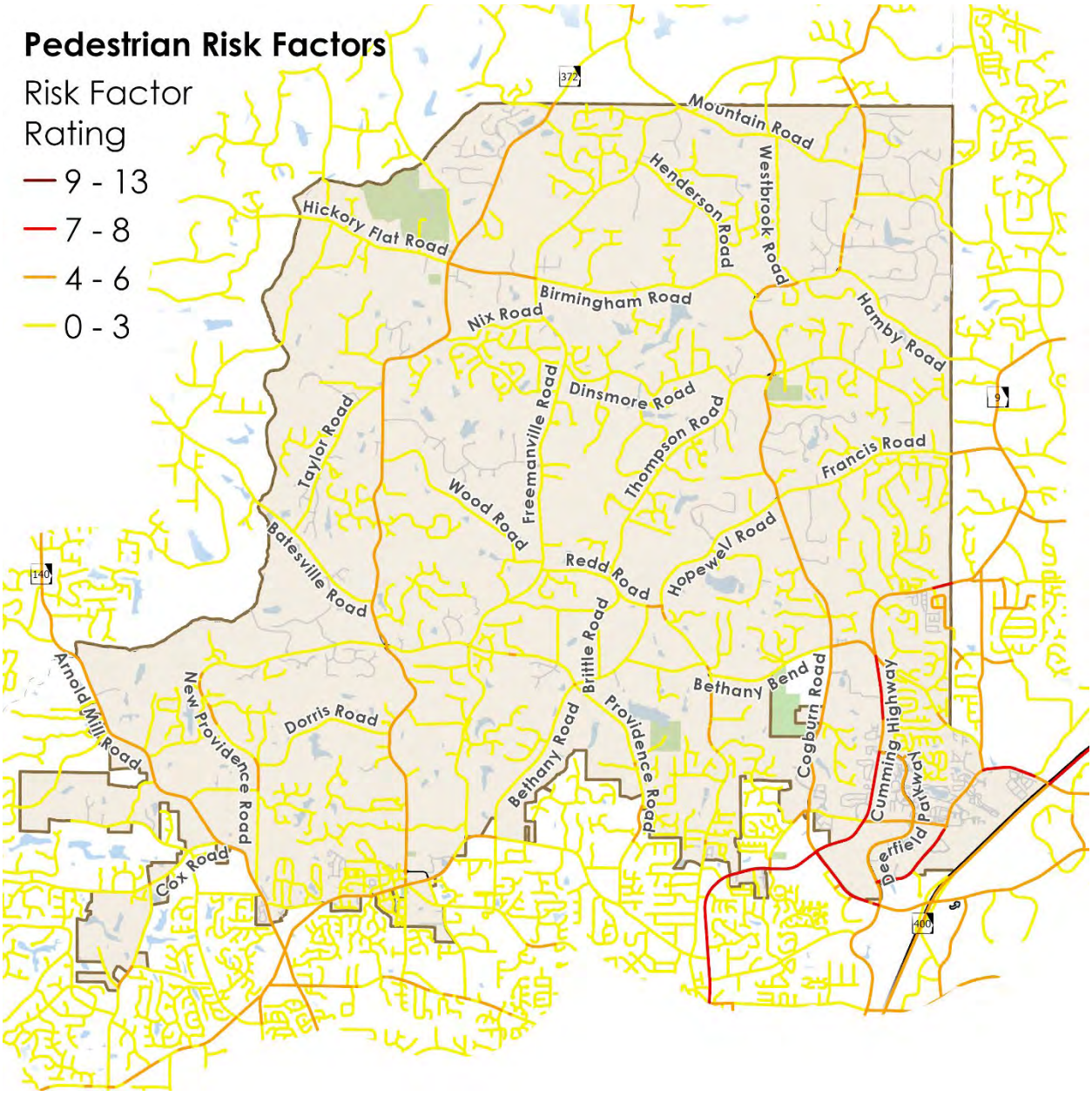
Bicycle Risk Factors



The map above indicates that the majority of roads within Milton have a low bicycle risk factor rating (0 – 2). The roads around the Deerfield area have higher bicycle risk factors compared to the rest of the City. Increased infrastructure or safety measures should be considered to protect in order to provide bicycle connectivity in this area.

The minor arterial roads that offer connectivity throughout the City tend to have higher bicycle risk factors due to high scores from the number of lanes, AADT, posted speed limit, and functional classification. This includes Cogburn Road, Arnold Mill Road, SR 372, and SR 9/Cumming HIghway. If the City seeks to provide increased bicycle connectivity along key transportation corridors, increased bicycle infrastructure should be considered.

Pedestrian Risk Factors

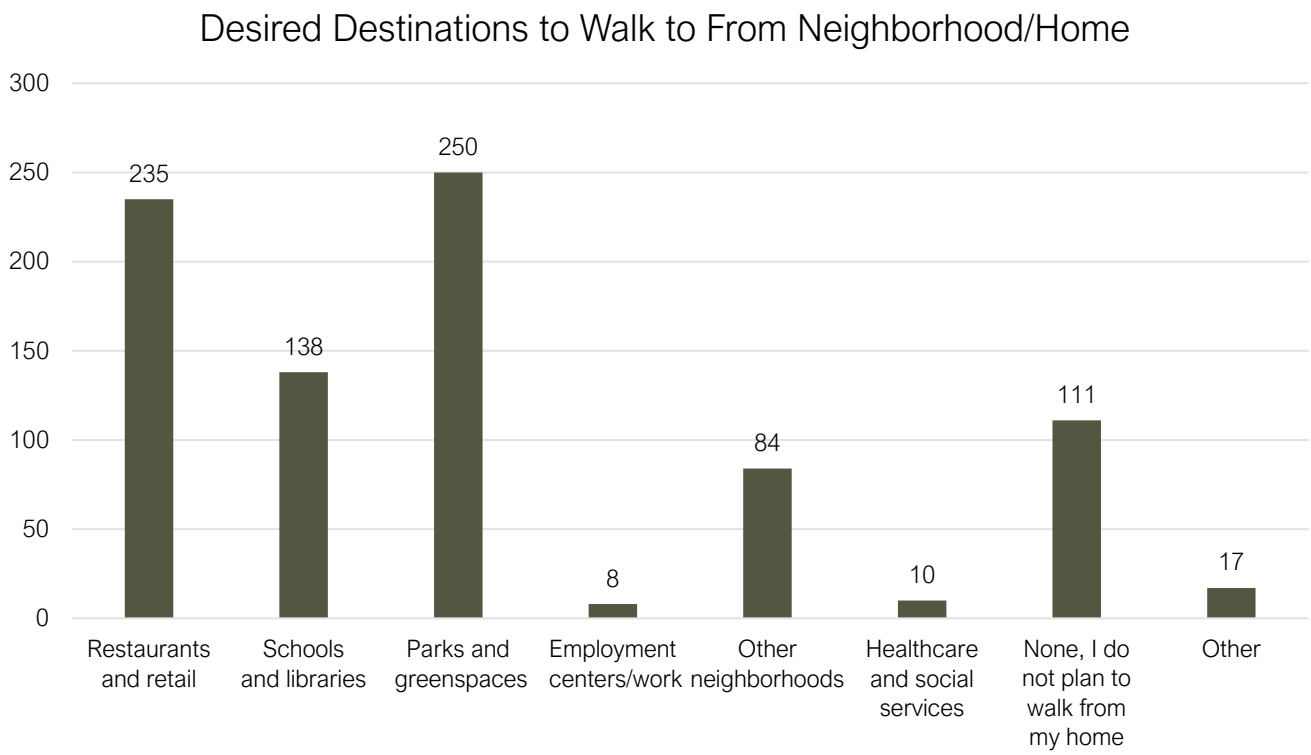


Similar to the bicycle risk factor map, the majority of roads in Milton have low pedestrian risk factors (0 – 3). Minor arterials such as Arnold Mill Road, SR 372, Cogburn Road, and Deerfield Parkway have slightly higher risk factor ratings (4 – 6) also due to higher scores from the number of lanes, AADT, posted speed limit, and functional classification.

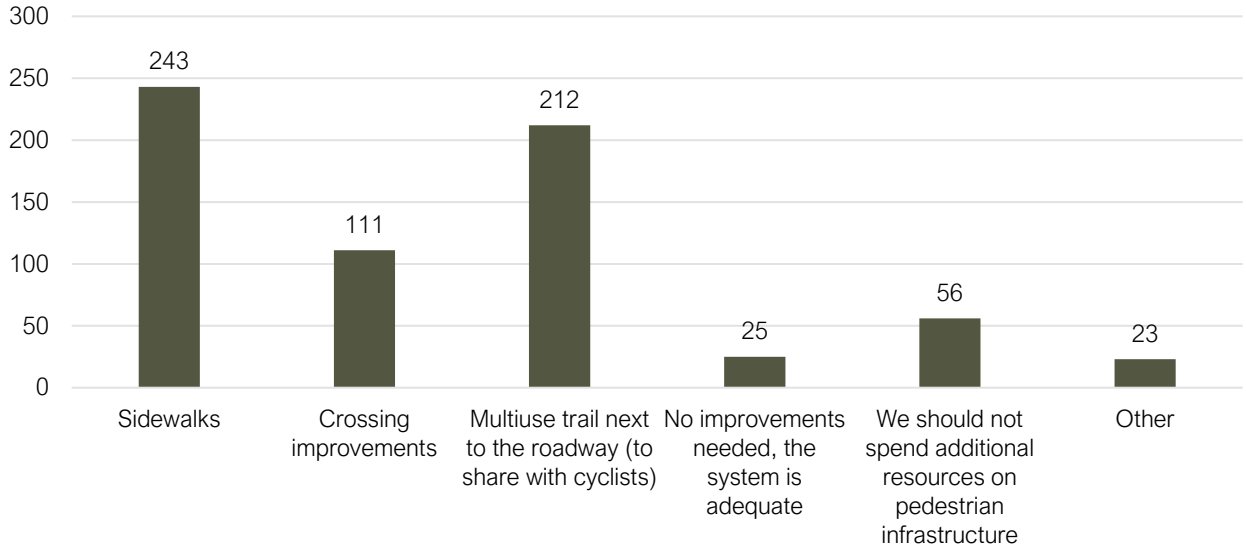
SR 9/Cumming HIghway south of Bethany Bend has an approximate pedestrian risk factor of 8. It's high rating is because the road is GDOT owned, the corridor is in an urban, high intensity development area, has a speed limit of over 40 mph, and an AADT of over 9,000.

Public Input Needs Assessment

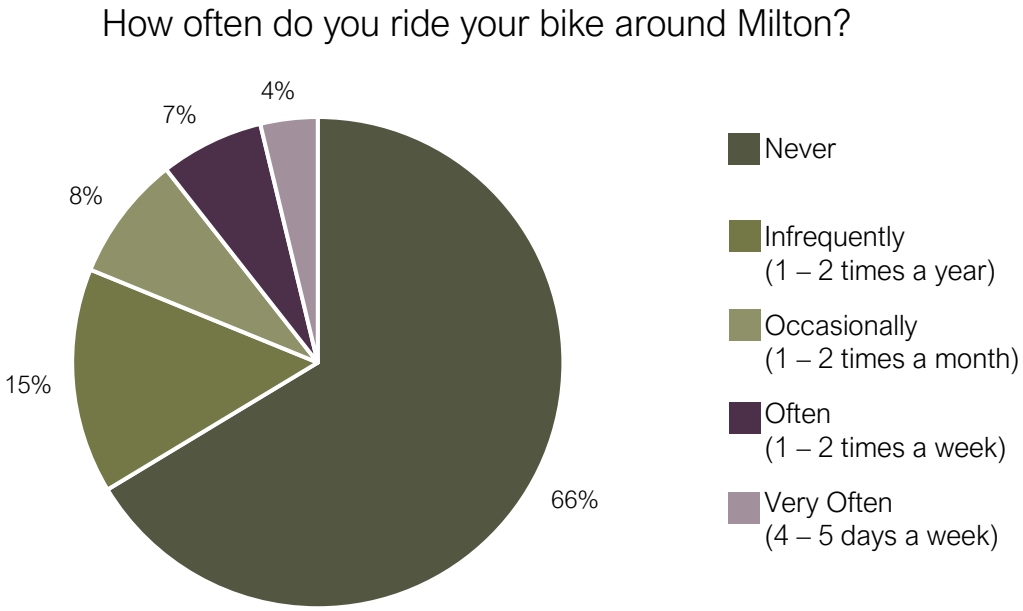
When users were asked to pick top destinations, they would like to walk from their neighborhood or home, the majority (250) chose parks and greenspace closely followed by restaurants and retail (235).



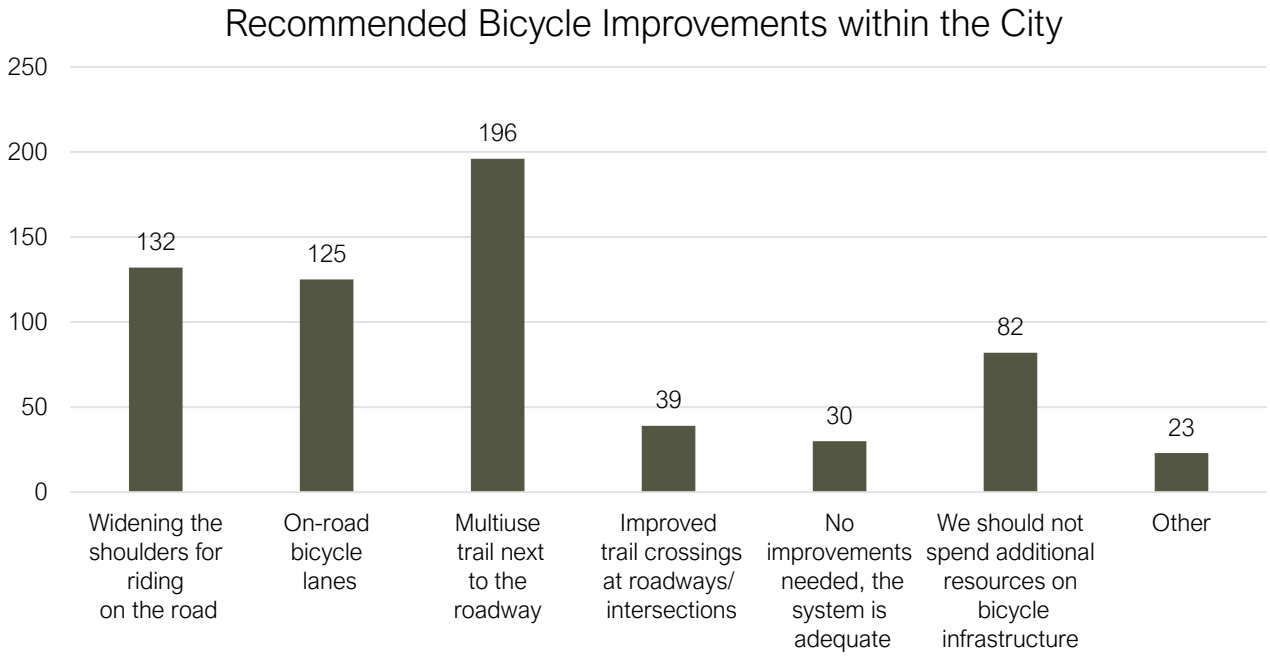
The pedestrian improvements that users recommend the most are sidewalks (243) and multiuse trails next to the roadway (212). Crossing improvements were also a noted request.



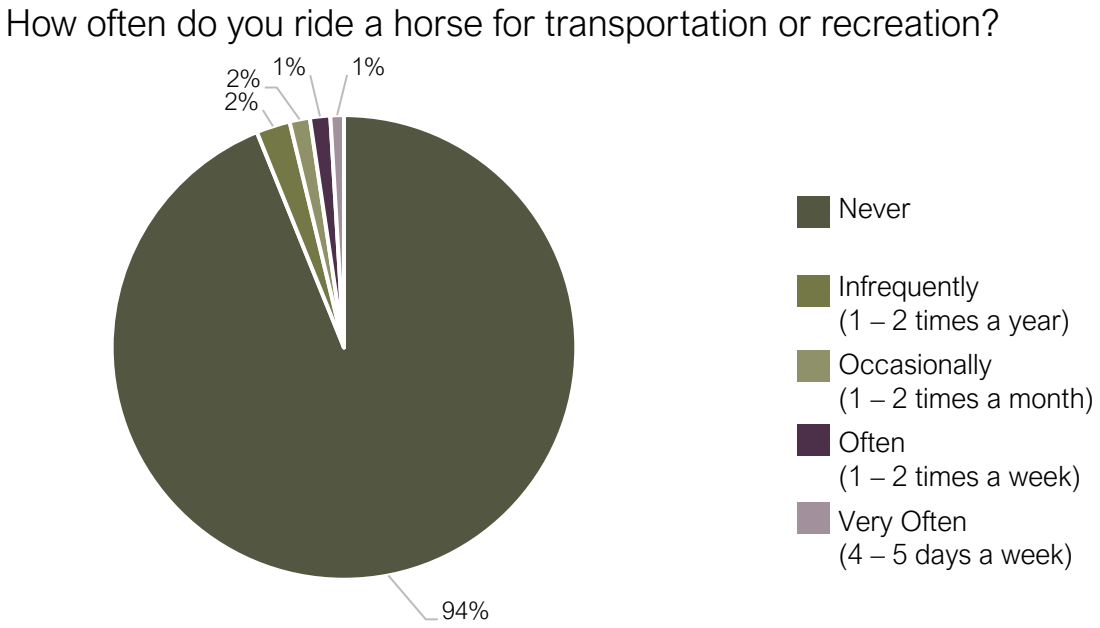
Users were then asked how frequently they rode their bike around Milton. Though 66% of users indicated that they never rode their bike, 15% indicated that they rode 1-2 times a year, 8% rode 1-2 times a month, 7% rode 1-2 times a week, and 4% rode their bike 4-5 days a week.



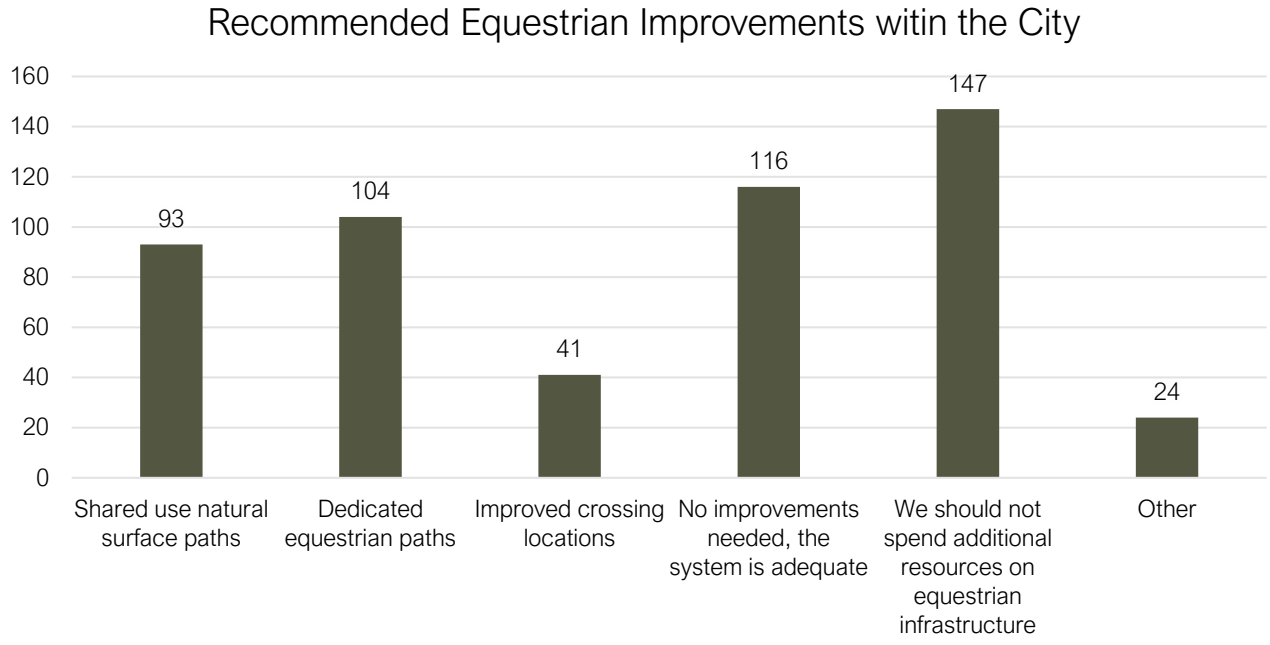
The most voted for bicycle improvement recommendation was for a multiuse trail next to the roadway with 196 responses. This improvement was followed by 132 responses for widening shoulders for riding on the road and 125 responses for on-road bicycle lanes.



When respondents were asked about how often they rode horses for transportation or recreation, 94% indicated that they never rode and the other 6% of users indicating that they rode between 1-2 times a year and 4-5 days a week.

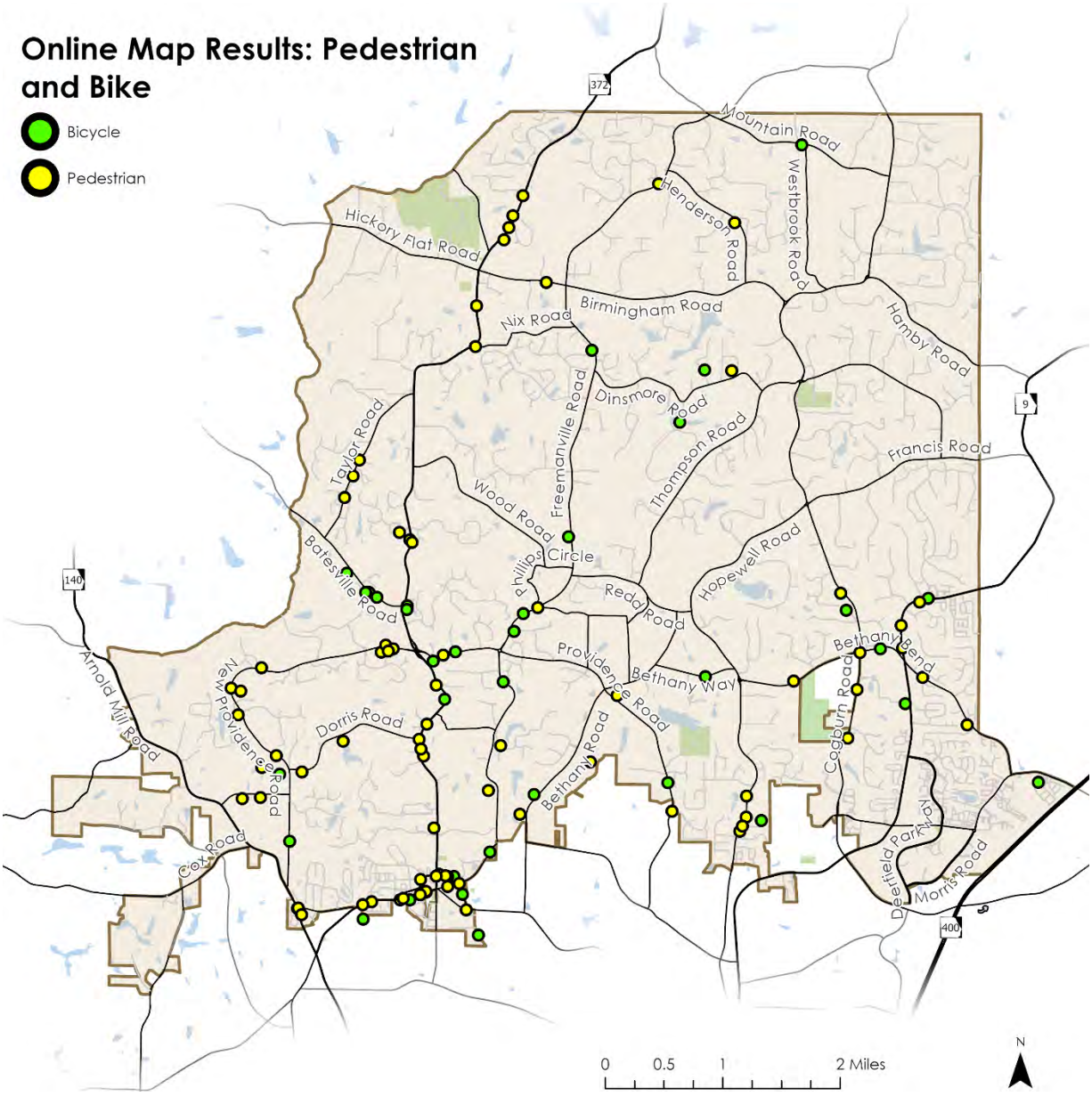


Residents were then asked what equestrian improvements were needed within the City. The majority of responses (147) stated that the City should not spend additional resources on equestrian infrastructure. This was followed by 116 users choosing the response that stated that no improvements were needed and that the system was adequate. This correlates with the large number of users who do not participate in equestrian activities. Still, a significant number of users (104) indicated that dedicated equestrian paths are a recommended equestrian improvement.



Mapping Activity Section

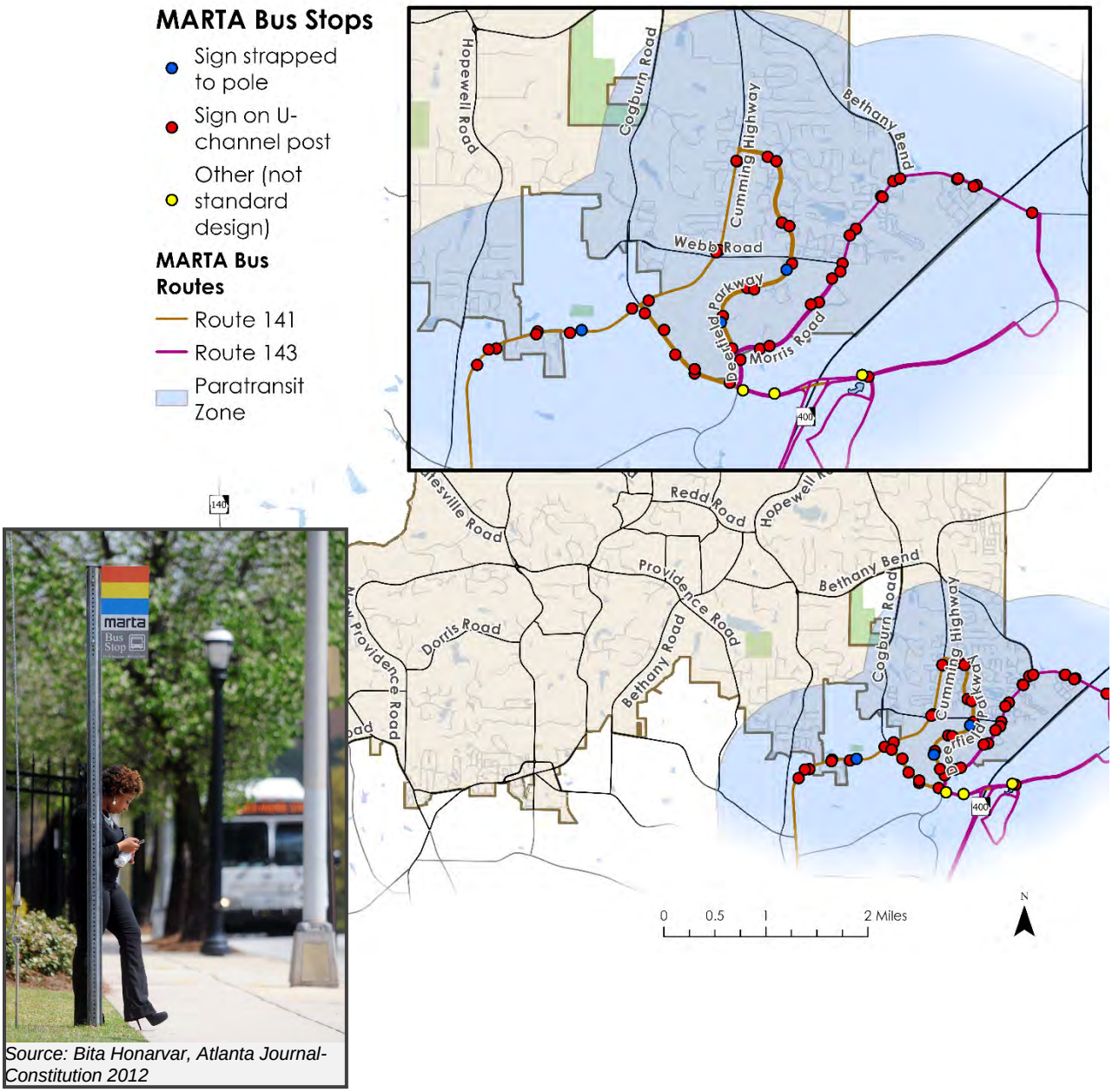
After the main survey questions, survey respondents were directed towards an interactive mapping tool. The points where people left comments regarding bicycle and pedestrian topics are shown below. Biking points were scattered throughout south and central Milton and there was a cluster of comments along Batesville Road. The pedestrian option had the most comments. The largest cluster of points was in the Crabapple area.



Transit

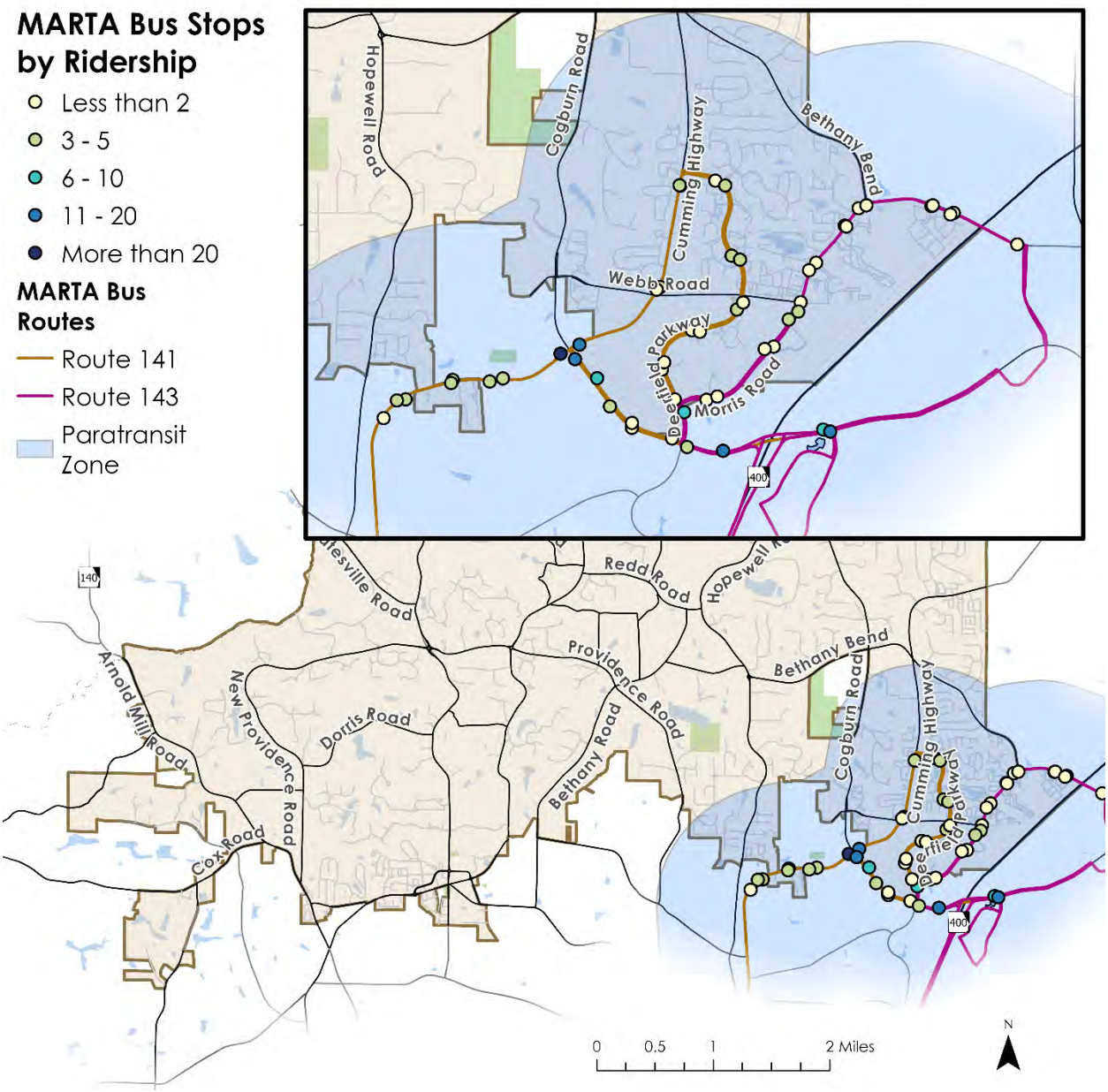
Existing Service

The City of Milton is served by two Metropolitan Atlanta Rapid Transit Authority (MARTA) bus routes. All stops in the City are clustered around SR 400 in the Deerfield area. This corresponds to areas of the Milton with lower income levels and higher minority population percentages. Most of the bus stops in this area are a sign on a u-channel post, as shown in the picture. The area shaded in blue represents the paratransit zone (MARTA Mobility) that operates within three-quarters of a mile of the fixed route service in the area.

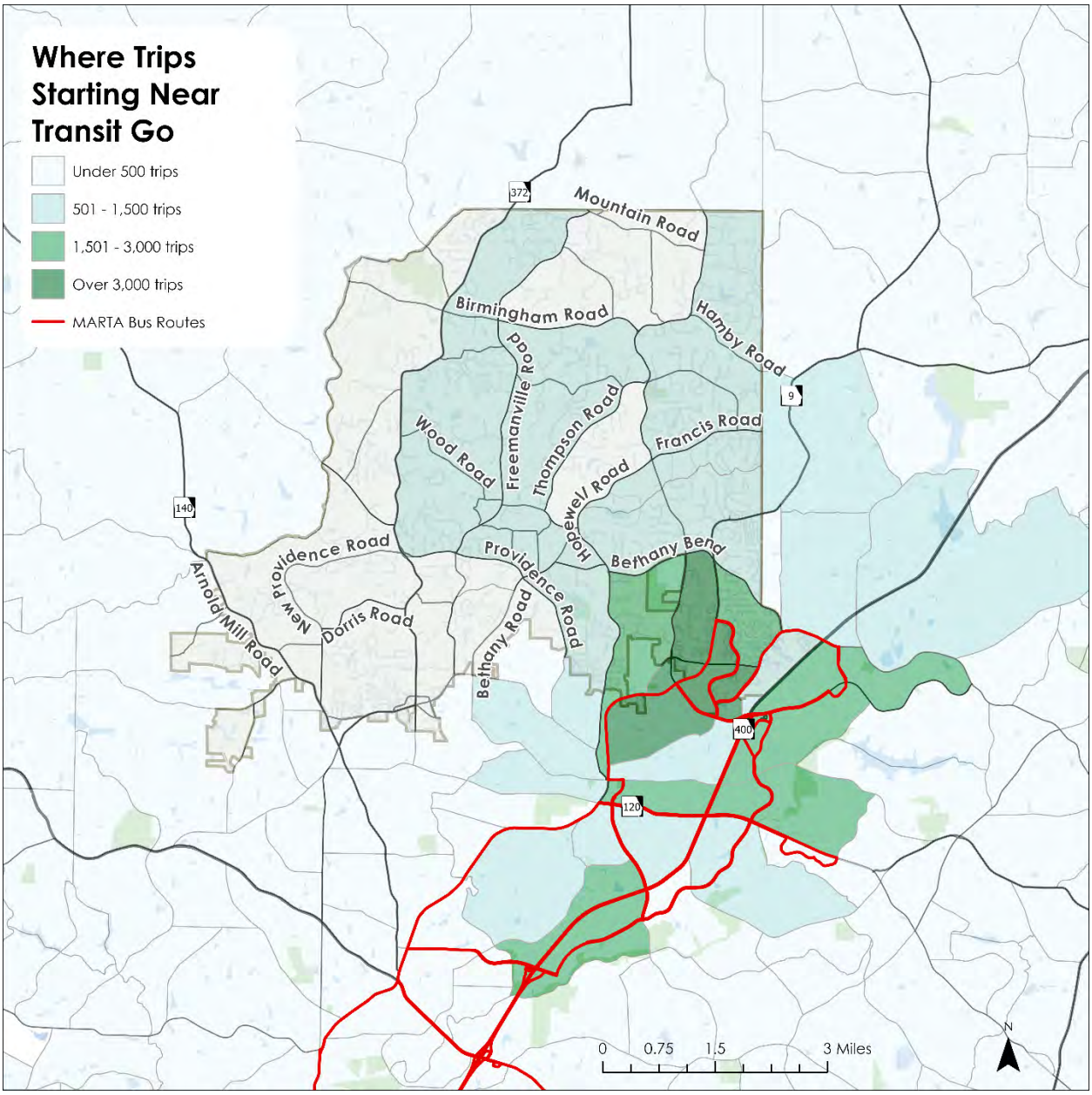


Source: Bita Honarvar, Atlanta Journal-Constitution 2012

Ridership in Milton is relatively low with only 1 stop along SR 9/Cumming HIghway and Cogburn Road servicing more than 20 people. This intersection has the highest ridership of all the stops in the area.



Currently, MARTA is analyzing its bus routes for increased optimization. The results of this study could impact service in Milton by potentially reducing stops, headways, or eliminating routes. However, there are opportunities with this analysis to increase microtransit to demographics that are frequently using MARTA services.



Transit Service Analysis in Milton

This map overlays the destinations of trips starting near transit service areas in Milton with existing transit routes. The analysis reveals that, for the most part, trips that end in Alpharetta and other parts of Fulton County are well served by existing transit routes. However, there are some notable gaps:

Lack of Service West of North Park:

One gap in transit service is the lack of coverage in the area west of North Park. This region is not adequately served by existing transit routes, which could limit residents' accessibility to essential destinations and opportunities for public transportation. Addressing this gap could significantly improve transportation options for residents in this area.

Need for More Paratransit in the North Part of the City:

The analysis suggests a potential need for more paratransit services in the northern part of the City where there is a larger proportion of individuals over the age of 65 (including some overlap with zero vehicle households). Paratransit services are essential for providing transportation options to individuals with mobility challenges and disabilities. Enhancing paratransit services, or including other new on-demand transit like microtransit, can ensure equitable access to public transportation for more residents.

Low Popularity of Deerfield as a Destination:

Surprisingly, the analysis indicates that Deerfield is not a more popular destination for Deerfield residents. This observation might be reflective of the unique characteristics and distinct nature of Deerfield compared to the rest of the City. The disparity in the travel patterns could be influenced by the different lifestyles and available amenities in Deerfield, affecting residents' preferences for destinations within and outside the neighborhood.

To address these findings, the following recommendations are suggested:

Expand Transit Service to West of North Park:

Prioritize the expansion of transit service to the area west of North Park to improve transportation options and accessibility for residents in this region.

Enhance Paratransit Services:

Invest in improving and expanding paratransit services, particularly in the northern part of the City, to ensure that all residents have equal access to public transportation.

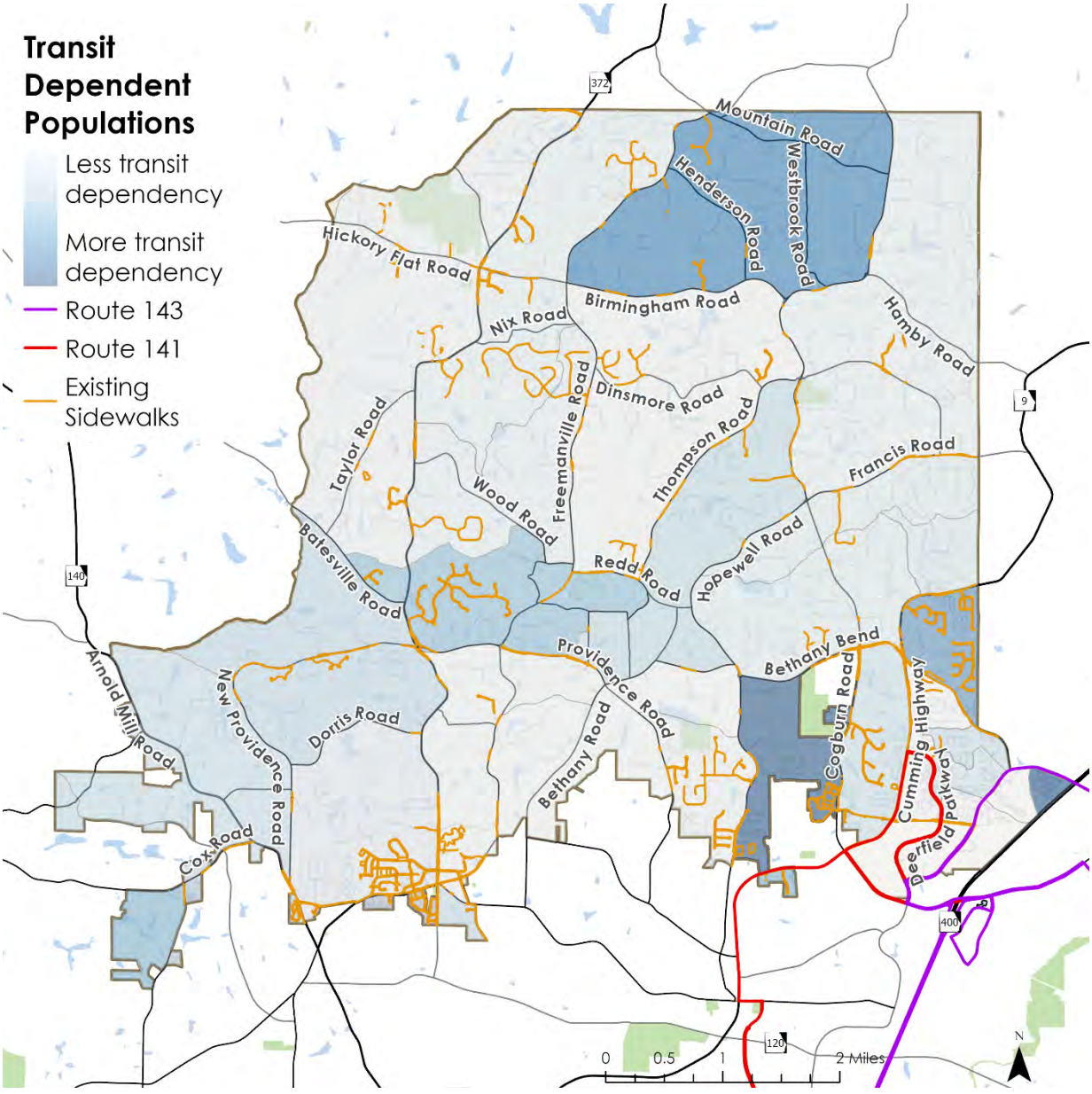
Study Deerfield Travel Patterns:

Conduct a study of travel patterns in Deerfield to understand the factors influencing residents' destination choices. This information can help tailor transportation services and infrastructure to meet the specific needs of the Deerfield community.

By addressing these gaps and implementing targeted improvements, Milton, in partnership with MARTA, can enhance transit service, promote sustainable transportation options, and increase equitable access to public transportation for all residents across the City.

Transit and Sidewalk Analysis for Transit-Dependent Populations in Milton

This map overlays existing transit routes, sidewalks, and the locations of potentially transit-dependent populations in Milton. While not intended to be all-inclusive, transit-dependent populations in this context refers to individuals with low-income, zero-vehicle ownership, and those over 65 years old.



Underserved Area West of North Park:

The analysis indicates that the area west of North Park is currently underserved by the existing transit network. This poses a challenge for transit-dependent populations in this area, as they may have limited access to public transportation options. Addressing this gap is helpful in improving equitable transportation access for all residents in Milton.

Over 65 Population Concentration in the North:

The area near Henderson and Mountain Roads is home to a larger portion of the over 65 population. While it may not necessitate regular bus service, it highlights the potential need for paratransit or human services transportation to cater to the specific mobility requirements of an aging demographic. Focusing on targeted transportation solutions for this community can enhance their mobility and independence.

Crabapple as an Unmet Need for Transit Service:

Interestingly, the analysis indicates that Crabapple does not currently show a strong need for transit service. While it might change with future development and increased attractiveness as a destination, the current data suggests that expanding transit service to Crabapple might not be a high priority at this time.

To address the transportation needs of transit-dependent populations in Milton, the following recommendations could be considered by MARTA and the City of Milton:

Expand Transit Service to Underserved Areas:

Prioritize the expansion of transit service to areas, particularly the region west of North Park, where more transit-dependent populations may have limited access to public transportation.

Focus on Paratransit and Human Services Transportation:

Given the concentration of the over 65 population near Henderson and Mountain Roads, consider enhancing paratransit or human services transportation to cater to the specific mobility requirements of this demographic.

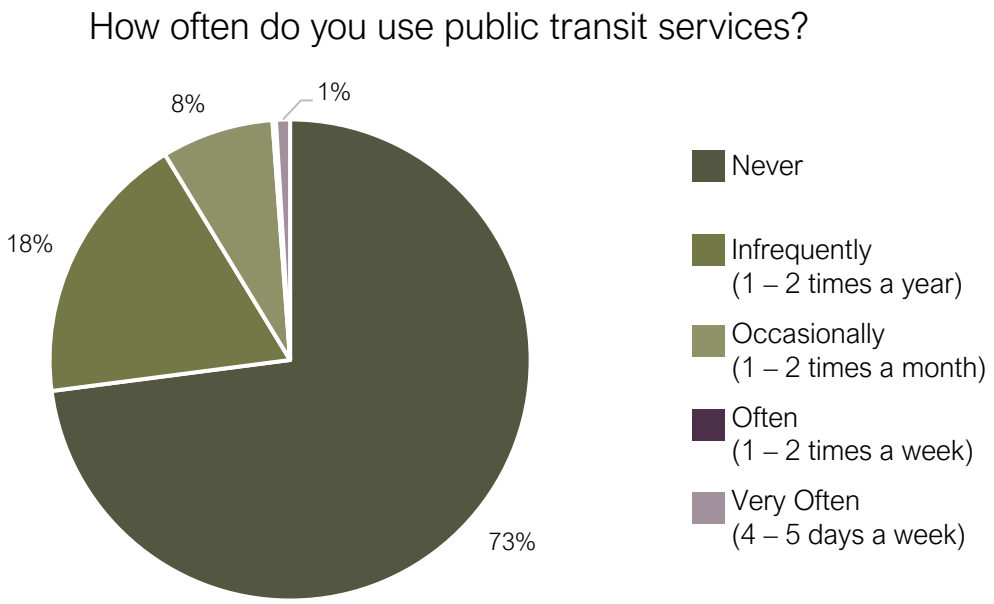
Monitor Changes in Demand:

Monitor changes in population, development, and destination attractiveness to reassess the need for transit service in areas like Crabapple. Future development and changing travel patterns might warrant revisiting transit service expansion in these locations.

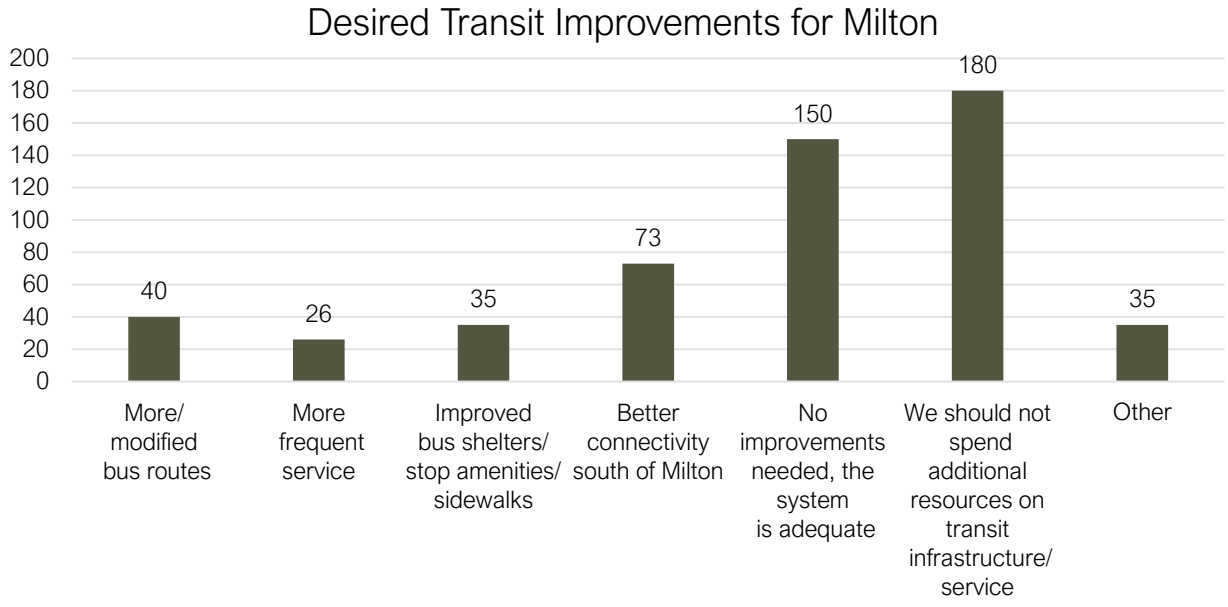
By addressing the specific transportation needs of more transit-dependent populations and focusing on equitable access to transportation services, Milton can work with MARTA to improve the overall mobility and quality of life for its residents.

Public Input Needs Assessment

The survey then transitions to asking users about transit. 73% of respondents indicated that they never rode public transit and 18% indicating that they rode transit 1-2 times a year.



Respondents were then asked about their desired transit improvements for Milton. The largest number of responses (180) chose the option that stated that Milton should not spend additional resources on transit infrastructure and service. The next largest number of responses (150) chose the option that stated that no improvements were needed, and the system was adequate. A small number indicated that modified bus routes, more frequent service, and improved shelters and amenities would be desired as well as better connectivity south of Milton.



Mapping Activity Section

After the main survey questions, survey respondents were directed towards and interactive mapping tool. The points where people left comments related to transit are shown below. There were few (4) public transit comments.

Next Steps

Understanding the needs of the City of Milton will help to guide project selection and prioritization. Evaluation criteria for projects will reflect the goals of the City and ensure that the culture of Milton is maintained in its future infrastructure projects. The needs outlined in this document will help develop a framework for project prioritization.

COMPREHENSIVE TRANSPORTATION PLAN

CITY OF MILTON | 2023

Appendix B

COMPREHENSIVE TRANSPORTATION PLAN

CITY OF MILTON | 2023

Large-Scale and Small-Scale Vehicular Assessment

Introduction

The Milton CTP included an evaluation of the following seven intersections and three roadway corridors to identify operational and safety improvements:

- Intersection 1: Cogburn at Bethany Bend (signalized)
- Intersection 2: Deerfield Parkway at Webb Road (signalized)
- Intersection 3: SR 372 (Birmingham Highway) at New Bullpen Road (two-way stop controlled [TWSC])
- Intersection 4: Thompson Road at Francis Road (TWSC)
- Intersection 5: Redd Road at Thompson Road (TWSC)
- Intersection 6: SR 372 (Birmingham Highway) at Batesville Road (TWSC)
- Intersection 7: Batesville Road at Taylor Road (TWSC)
- Corridor 1: Cogburn Road from Bethany Bend to Hopewell Road/Francis Road
- Corridor 2: Providence Road from City Limit to Bethany Road
- Corridor 3: Bethany Bend from East of SR 9 to Morris Road/McGinnis Ferry Road

Data Gathering

Turning movement counts (TMC) were obtained for the seven study intersections during a typical weekday (Tuesday, Wednesday, or Thursday) and during the AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak periods. Bi-directional average daily traffic (ADT) volumes with speed measurements (48-hour) were obtained along the three study corridors during typical weekdays. The collected traffic data is included in **Attachment A**. The City of Milton provided timing/phasing information for the two signalized intersections. These are included in **Attachment B**.

Historical crash data was obtained from GDOT's AASHTOWare Safety (formerly Numetric) from 2016 to 2022. Crash records for a seven-year period were summarized using the KABCO scale. The KABCO scale corresponds to the severity of the crash per the incident report and is explained as K = fatal injury; A = suspected serious injury; B = suspected minor/visible injury; C = possible injury/complaint; O = no injury/property damage only. The crash data for each study location is included in **Attachment C**.

Study Methodology

The study methodology for evaluating the seven intersections and three roadway corridors consisted of the following:

- Gathered, reviewed, and tabulated historical crash data.
- Calculated an areawide growth rate to estimate future traffic volumes using historical GDOT TADA! Counts and historical population growth (included in **Attachment D**).
- Conducted capacity analyses for the seven study intersections under the existing year 2023, the no build year 2038, and build year 2038 conditions during the AM and PM peak hours. Detailed capacity analysis result reports are included in **Attachment E**. Synchro was used for stop-controlled and signalized intersections and Sidra was used for roundabouts. The Florida Department of Transportation's (FDOT) 2023 Multimodal Quality Level of Service (LOS) Handbook was used for the roadway segments.
- Conducted field reviews and online desktop reviews. Field review notes are included in **Attachment F**.
- Identified potential short-term and mid/long-term operational and safety improvements.
- Conducted a meeting with City staff on Monday, October 16, 2023, to review the findings and recommendations.

Intersection 1: Cogburn Road at Bethany Bend

Existing Conditions

Cogburn Road is a north-south two-lane minor arterial City roadway with a posted speed limit of 40 mph. Bethany Bend is an east-west two-lane major collector City roadway with a posted speed limit of 45 mph. The subject intersection is signalized, comprises a designated school zone for Cambridge High School, and has a school zone speed limit of 35 mph. Each approach has dedicated turn lanes. The CTP project list includes project I51 at this intersection.

Kimley»Horn

COGBURN ROAD AT BETHANY BEND
PROJECT LOCATION MAP

The intersection has the following lane configuration:

- Northbound Cogburn Road: one dedicated left-turn lane, one through lane, and one dedicated right-turn lane
- Southbound Cogburn Road: one dedicated left-turn lane, one through lane, and one dedicated right-turn lane
- Eastbound Bethany Bend: one dedicated left-turn lane, one through lane, and one dedicated right-turn channelized lane
- Westbound Bethany Bend: one dedicated left-turn lane, one through lane, and one dedicated right-turn channelized lane

A site visit was conducted on Wednesday, September 13, 2023, during the PM peak period to observe the intersection and identify potential operational and safety improvements.

Active Transportation Infrastructure and Observations

- Sidewalks are provided along both sides of Bethany Bend and Cogburn Road.
- Each leg of the intersection is equipped with a high-emphasis crosswalk. The crosswalk pavement markings are slightly worn.
- Pedestrian signals are provided for each crosswalk. However, one of the push button signs is weathered and illegible, and the countdown display is not functional for two of the approaches.
- Students were observed leaving the school during school egress. Many students were observed crossing Bethany Bend, west of the intersection mid-block.

Roadway Infrastructure and Traffic Observations

- Retroreflective backplates are provided for the traffic signals.
- Sight distance may be challenging for the northbound and southbound left-turn approach to the intersection due to the vertical grade.
- The northbound approach experienced the most demand and had the longest queue.

Safety Analysis

The following table provides a summary of crashes by type and severity. The following is a summary of notable observations for the crash data analysis:

- Most (68%) of crashes were rear end.
- Seven out of 16 (or 44%) of left angle and angle crashes involved a southbound vehicle at fault. This may be due to the challenge with sight distance for the southbound left-turn approach.
- There were no reported bicycle or pedestrian crashes.
- One head-on fatal crash occurred on 02/09/2021 at 1:58 PM involving an eastbound vehicle turning left that failed to yield to a westbound vehicle.

Cogburn Road at Bethany Bend Crash Data (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Rear End	0	0	0	11	46	57	68%
Left Angle	0	0	2	5	3	10	12%
Angle	0	0	3	0	3	6	7%
Head On	1	0	1	1	0	3	6%
Sideswipe – Same	0	0	0	0	5	5	4%
Not Collision w/Motor Vehicle	0	0	0	0	1	1	1%
Right Angle	0	0	0	0	1	1	1%
Sideswipe - Opposite	0	0	0	0	1	1	1%
Total	1	0	6	17	60	84	100%

Capacity Analysis

Capacity analysis was performed using Synchro during the AM and PM peak hours under the existing year 2023, no build year 2038, and build year 2038 conditions. A growth rate of 1.5% was applied to estimate future volumes.

The intersection operates with an acceptable level of service (LOS) under the existing and no build years during the AM and PM peak hours, as summarized in the following table. The proposed improvements for the build scenario include improving channelized right-turn lane geometry, traffic signal equipment upgrades, and increasing storage lanes for dedicated right- and left-turn lanes.

Cogburn Road at Bethany Bend Capacity Analysis						
Approach	**Existing 2023**		**No Build 2038**		**Build 2038 (Geometry Improvements)**	
	AM Peak Hour LOS (Delay)	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
Overall	**C (30.9)**	**C (27.6)**	**D (48.4)**	**D (41.2)**	**D (46.5)**	**D (36.5)**
NB	C (28.5)	C (27.7)	C (33.2)	D (48.8)	C (33.6)	D (41.5)
SB	C (30.4)	B (19.2)	D (54.9)	C (23.7)	E (63.3)	C (27.5)
EB	C (34.4)	C (28.2)	D (49.1)	D (35.8)	D (35.4)	C (33.0)
WB	C (30.1)	C (31.6)	D (49.8)	D (46.9)	D (42.7)	D (38.8)

Summary of Proposed Improvements

Short-Term and Low-Cost Improvements

- Replace a pedestrian signal sign.
- Diagnose and resolve the issue with pedestrian signal countdown equipment.
- Evaluate and develop time of day (TOD) signal timing and phasing plans to accommodate school-related traffic during peak periods.
- Evaluate and develop TOD pedestrian signal timing and phasing programming to allow for a pedestrian scramble at the intersection during school-related periods.
- Install advance traffic control signage (W3-3) for the westbound approach.

Mid- and Long-Term Improvements

- A mid-block crossing for Bethany Bend, approximately 0.5 miles west of Cogburn Road, is included as a project (I7) in the CTP.
- An additional mid-block crossing project for Bethany Bend is recommended near Evelyn Drive, 600 feet east of Cogburn Road.
- Improve channelized right turn lane geometry.
- Install Flashing Yellow Arrow (FYA) for all approaches to allow for lagging-left-turn signal phasing and enable leading pedestrian interval (LPI) during the peak AM and PM periods to coincide with school ingress and egress.
- Increase storage length for the southbound left-turn, westbound left-turn, and eastbound right-turn lanes. Recommend doubling the existing storage and maintaining the same taper length.

Intersection 2: Deerfield Parkway at Webb Road

Existing Conditions

Deerfield Parkway is a north-south four-lane local City roadway with a posted speed limit of 35 mph. Webb Road is an east-west two-lane local City roadway posted a speed limit of 35 mph. Adjacent to the intersection are residential homes, offices, and a City park – Freedom Park. The intersection has traffic signal control and pedestrian accommodations including crosswalks and sidewalks. The CTP project list includes the project I52 at this intersection.

Kimley»Horn

DEERFIELD PARKWAY AT WEBB ROAD
PROJECT LOCATION MAP

The intersection has the following lane configuration:

- Northbound Deerfield Parkway: one left-turn lane, one through lane, and one shared through/right-turn lane
- Southbound Deerfield Parkway: one left-turn lane, one through lane, and one shared through/right-turn lane
- Eastbound Webb Road: one left-turn lane, one through lane, and one right-turn lane
- Westbound Webb Road: one left-turn lane and one shared through/right-turn lane

A site visit was conducted to observe the intersection and identify any potential improvement opportunities:

- There is a shared-use path along the west side of Deerfield Parkway, which begins south of the intersection.
- The two signal heads are not aligned with the center of the westbound through lane along Webb Road. It is recommended to align the signal heads.
- The Deerfield Parkway northbound and southbound left-turn signal phasing includes both a protected-only phase and a permitted phase. The Webb Road left-turn movements are only a permitted phase.
- The raised median along Deerfield Parkway is wide, resulting in the left-turn vehicle being separated from the opposing through lanes, and creating a large intersection.
- There is a MARTA bus stop on the northbound approach to the intersection with only a signpost; however, there is no landing pad or sidewalk connection to the sidewalk along Deerfield Parkway.

Safety Analysis

The following table provides a summary of crashes by type and severity.

Deerfield Parkway at Webb Road Crash Data (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Angle	0	1	6	15	28	50	62%
Rear End	0	0	2	4	19	25	31%
Sideswipe - Same	0	0	0	0	4	4	5%
Not Collision w/Motor Vehicle	0	0	0	0	2	2	2%
Head-On	0	0	0	0	0	0	0%
Sideswipe - Opposite	0	0	0	0	0	0	0%
Total	0	1	8	19	53	81	100%

The records indicate a total of 81 crashes occurred within the 7-year period. Notably, 62% of the crashes were angle collisions mainly due to vehicles failing to yield to on-coming traffic. Of the angle crashes, 11 crashes involved a southbound left-turn vehicle and a northbound through vehicle. Of the angle crashes, 7 crashes involved the northbound left-turn vehicle and a southbound through vehicle. The one serious injury collision was an ‘angle (other)’ crash, where the driver at fault ran a red light and collided with two other vehicles.

Capacity Analysis

Capacity analysis was performed for the existing year 2023, no build year 2038, and build year 2038 conditions. A growth rate of 1.5% was applied to estimate future volumes. The following table summarizes the results of the capacity analysis.

The intersection operates with acceptable LOS under the existing and no build conditions during the AM and PM peak hours. A multilane roundabout was identified as a potential safety improvement option for the build conditions. The capacity results are presented in the following table. A multilane roundabout was identified as a potential safety improvement option due to the high number of angle collisions at the intersection. The roundabout would consist of two approach lanes along Deerfield Parkway and one approach lane along Webb Road. The roundabout is expected to provide acceptable operations and be able to accommodate future year traffic volumes.

Deerfield Parkway at Webb Road Capacity Analysis						
Approach	Existing 2023		No Build 2038		Build Alt 1 2038 (Roundabout)	
	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Overall	**B (12)**	**B (16)**	**B (14)**	**B (20)**	**A (7)**	**B (14)**
NB	B (10)	B (15)	B (11)	B (16)	A (5)	B (13)
SB	B (11)	B (14)	B (13)	B (14)	A (7)	A (8)
EB	B (13)	B (16)	B (15)	C (22)	A (9)	B (11)
WB	B (14)	B (19)	B (17)	C (35)	A (6)	D (27)

Summary of Proposed Improvements

A separate project the City is currently designing is the Big Creek Greenway and connections. This project will add a shared pedestrian and bicycle facility along Webb Road, crossing Deerfield Parkway. It is recommended to coordinate any intersection improvements with this project.

Short-Term and Low-Cost Improvements

- GDOT left-turn phasing guidelines were reviewed to determine if installing a protected-only left-turn signal phase would reduce angle crashes. Since there were five or more correctable left-turn angle crashes for the southbound left-turn approach in a two-year period, the guidelines recommend installing a protected-only left-turn phase for this approach.
- Additionally, based on seven northbound left-turn angle crashes over a seven-year period, a protected-only left-turn phase for this approach is an option.
- Add flashing yellow arrow left-turn signals for the eastbound and westbound approaches.
- Adding retroreflective backplates on the signal heads and flashing yellow arrow left-turn signals is recommended.

Mid- and Long-Term Improvements

- An alternative option would be to install a modern roundabout to replace the traffic signal. The roundabout would address the angle crash history and provide acceptable traffic operations.
- To improve visibility for both left-turn movements, one option is to reconstruct the median such that the left-turn lane is aligned closer to the opposing through lanes. This may allow for maintaining the traffic signal protected-only phase and a permitted phase for the left-turn lane.

Intersection 3: SR 372 (Birmingham Highway) at New Bullpen Road

Existing Conditions

SR 372 (Birmingham Highway) is an east-west two-lane minor arterial GDOT roadway with a posted speed limit of 45 mph. New Bullpen Road is a north-south two-lane major collector City roadway with a posted speed limit of 40 mph. The T-intersection is stop-controlled for the southeast-bound approach along New Bullpen Road. No dedicated turn lanes are provided. The CTP project list includes the project I61 at this intersection.

A site visit was conducted on Wednesday, September 13, 2023, during the PM peak period to observe the intersection and identify potential roadway operational, geometric, and safety improvements.

- Active Transportation Infrastructure and Observations
  - No bike/ped infrastructure is provided and no bike/ped activity was observed.
  - Foliage is overgrown along the north side of SR 372 (Birmingham Highway), west of the intersection, potentially limiting vehicular visibility and limiting pedestrian activity.
- Roadway Infrastructure and Traffic Observations
  - Eastbound traffic along SR 372 (Birmingham Highway) was the heaviest.
  - Southbound turning vehicles from New Bullpen Road experience limited sight distance.
  - There is existing warning signage (W1-7) for the southbound approach with retroreflective object markers.

- The edge lines and center line pavement markings are worn along New Bullpen Road west of the intersection. However, the STOP bar and pavement markings at the intersection and along SR 372 (Birmingham Highway) are in good condition.
- There is rutting at the northwest and northeast corners of the intersection.
- SR 372 (Birmingham Highway) was recently repaved and has centerline and edge rumble strips.
- There is limited intersection street lighting.

Safety Analysis

The following table provides a summary of crashes by type and severity. The following is a summary of notable observations for the crash data analysis:

- Six of the nine (or 67%) left turn and angle crashes occurred with an eastbound vehicle at fault conflicting with a westbound through vehicle (SR 372 is EB/WB, New Bullpen Road is SB). The remaining 33% occurred with a southbound vehicle at fault.
- Three crashes involved a reaction to an object or animal.

SR 372 (Birmingham Highway) at New Bullpen Road Crash Data (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Rear End	0	0	0	1	7	8	31%
Left Angle	0	0	2	1	5	8	31%
Not Collision w/Motor Vehicle	0	0	0	1	2	3	12%
Sideswipe - Opposite	0	0	0	0	3	3	12%
Sideswipe – Same	0	0	0	0	1	1	4%
Angle	0	0	0	1	0	1	4%
Right Angle	0	0	0	0	1	1	4%
Head On	0	0	0	0	1	1	4%
Total	0	0	2	4	20	26	100%

Capacity Analysis

Capacity analysis was performed using Synchro during the AM and PM peak hours under the existing year 2023, no build year 2038, and build year 2038 conditions. A growth rate of 1.0% was applied to estimate future volumes.

The proposed improvements for the build scenario include realigning New Bullpen Road closer to 90 degrees, a dedicated southbound right-turn lane, and a dedicated eastbound left-turn lane.

Birmingham Highway (SR 372) at New Bullpen Road Capacity Analysis						
Approach	**Existing 2023**		**No Build 2038**		**Build 2038 (Geometry Improvements)**	
	AM Peak Hour LOS (Delay)	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
SB	C (23.8)	B (11.7)	E (46.6)	B (13.0)	D (29.8)	B (12.3)
EBL	A (8.2)	A (9.3)	A (8.5)	B (10.0)	A (8.5)	B (10.0)

The intersection was also evaluated for a single-lane roundabout and the Sidra results indicate the intersection meets LOS during the AM and PM peak hours under future build conditions.

Birmingham Highway (SR 372) at New Bullpen Road Roundabout LOS table			
Intersection	**Approach**	**Build 2038**	
		AM	**PM**
Birmingham Highway (SR 372) at New Bullpen Road	**Overall**	**A (5.7)**	**A (6.2)**
	WBT	A (3.9)	A (7.0)
	WBR	A (4.4)	A (7.5)
	WB	A (3.9)	A (7.1)
	SBL	C (15.3)	B (13.0)
	SBR	A (7.0)	A (4.7)
	SB	A (7.5)	A (4.8)
	EBL	A (8.9)	A (8.7)
	EBT	A (3.5)	A (3.3)
	EB	A (4.9)	A (6.2)

Summary of Proposed Improvements

Short-Term and Low-Cost Improvements

- Install retroreflective sheeting on signposts approaching the stop.
- Install flashing LED stop signs.
- Trim vegetation.
- Evaluate intersection street lighting.
- Install mountable intersection corner truck aprons where rutting is occurring.

Mid- and Long-Term Improvements

- Realign New Bullpen Road with SR 372 (Birmingham Highway) closer to 90 degrees to mitigate sight distance challenges.
- Add a dedicated southbound right-turn lane to New Bullpen Road and a dedicated eastbound left-turn lane to SR 372 (Birmingham Highway).
- A signal warrant analysis was conducted, and the results indicate a signal is not warranted at the intersection.
- Or install a single-lane roundabout.

Intersection 4: Thompson Road at Francis Road

Existing Conditions

Francis Road is an east-west two-lane major collector City roadway with a posted speed limit of 40 mph. Thompson Road is a north-south two-lane local City roadway with a posted speed limit of 45 mph. The T-intersection is stop-controlled for the southbound approach along Thompson Road. No dedicated turn lanes are provided. The CTP project list includes the project I50 at this intersection.

A site visit was conducted on Wednesday, September 13, 2023, during the PM peak period to observe the intersection and identify potential roadway operational, geometric, and safety improvements.

- Active Transportation Infrastructure and Observations
  - A sidewalk is provided along the south side of Francis Road.
  - No pedestrian or bicycle activity was observed.
- Roadway Infrastructure and Traffic Observations
  - There is existing warning signage (W1-7) for the southbound approach, and a guardrail is provided along the south side of Francis Road.
  - Stop sign ahead warning sign exists on one side of the road.
  - Sight distance is slightly limited for southbound turning vehicles.
  - Overall traffic volume was low.
  - The southeast corner of the intersection is damaged with rutting by turning vehicles.

Safety Analysis

The following table provides a summary of crashes by type and severity. The following is a summary of notable observations for the crash data analysis:

- Ten out of 21 (or 48%) of all crashes were left-turn or angle crashes.
- Six out of 10 (or 60%) of the left-turn and angle crashes occurred with a southbound vehicle at fault.
- Nine out of 21 (or 43%) of all crashes occurred during non-daylight conditions.

Thompson Road at Francis Road Crash Data (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Left Angle	0	0	2	1	6	9	43%
Rear End	0	0	0	1	7	8	38%
Not Collision w/Motor Vehicle	0	0	0	0	3	3	14%
Angle	0	0	0	0	1	1	5%
Total	0	0	2	2	17	21	100%

Capacity Analysis

Capacity analysis was performed for the existing year 2023, no build year 2038, and build year 2038 conditions. A growth rate of 1.5% was applied to estimate future volumes. The following tables summarize the results of the capacity analysis.

Thompson Road at Francis Road Capacity Analysis						
Approach	**Existing 2023**		**No Build 2038**		**Build 2038 (Roundabout)**	
	AM Peak Hour LOS (Delay)	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
SB	D (26.7)	C (21.2)	F (89.0)	E (39.7)	Meets LOS[1]	Meets LOS[1]
EBL	A (8.0)	A (8.5)	A (8.2)	A (9.0)		

Note: [1]See Subsequent Roundabout LOS table

Thompson Road at Francis Road Roundabout LOS table			
Intersection	**Approach**	**Build 2038**	
		AM	**PM**
Thompson Road at Francis Road	**Overall**	**A (8.0)**	**A (6.4)**
	WBT	A (4.6)	A (4.9)
	WBR	A (4.6)	A (4.8)
	WB	A (4.6)	A (4.9)
	SBL	B (13.2)	B (13.1)
	SBR	A (8.0)	A (7.8)
	SB	B (12.1)	B (12.1)
	EBL	B (11.9)	B (10.8)
	EBT	A (7.0)	A (5.9)
	EB	A (7.3)	A (6.4)

Summary of Proposed Improvements

Short-Term and Low-Cost Improvements

- Install retroreflective sheeting on signposts.
- Install flashing LED stop signs.
- Evaluate intersection street lighting.

Mid- and Long-Term Improvements

- Install a single-lane roundabout at the intersection. The roundabout would address the angle crash history and would provide acceptable traffic operations.

Intersection 5: Redd Road at Thompson Road

Existing Conditions

Redd Road is an east-west two-lane local City roadway with a posted speed limit of 45 mph – curve warning speed limit signage indicates 35 mph. Thompson Road is a north-south two-lane local City roadway with a posted speed limit of 45 mph. The T-intersection is stop-controlled for the southbound approach along Thompson Road. No dedicated turn lanes are provided. The CTP project list includes the project I58 at this intersection.

Kimley»Horn

THOMPSON ROAD AT REDD ROAD
PROJECT LOCATION MAP

A site visit was conducted on Wednesday, September 13, 2023, during the PM peak period to observe the intersection and identify potential roadway operational, geometric, and safety improvements.

- Active Transportation Infrastructure and Observations
  - Sidewalks are provided along the north side of Redd Road (west of the intersection) and along the west side of Thompson Road (north of the intersection).
  - A sidewalk ramp is provided with no detectable warning surface. It is recommended to install a detectable warning surface pad or remove the sidewalk ramp.
- Roadway Infrastructure and Traffic Observations
  - Sight distance is limited for the southbound approach (looking left).

- Eastbound left-turning vehicles were observed yielding to southbound left-turning vehicles.
- No T-intersection warning signage (W1-7) is provided for the southbound approach.
- Intersection street lighting is provided.

Safety Analysis

The following table provides a summary of crashes by type and severity. The following is a summary of notable observations for the crash data analysis:

- Seven out of 15 (or 47%) of all crashes were single-vehicle crashes.
  - Two involved a deer.
  - Three involved a southbound vehicle.
  - Three involved a westbound vehicle.
- There were four left-turn and angle crashes at the intersection, of which three (or 75%) occurred with an eastbound vehicle at fault.
- Seven out of 15 (or 47%) of crashes occurred during non-daylight conditions.

Thompson Road at Redd Road Crash Data (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Not Collision w/ Motor Vehicle	0	0	3	0	4	7	47%
Left Angle	0	0	0	1	1	2	13%
Rear End	0	0	0	1	1	2	13%
Angle	0	0	1	1	0	2	13%
Head On	0	0	1	0	0	1	4%
Right Angle	0	0	0	1	0	1	4%
Total	0	0	5	4	6	15	100%

Capacity Analysis

Capacity analysis was performed for the existing year 2023, no build year 2038, and build year 2038 conditions. A growth rate of 1.5% was applied to estimate future volumes. The following tables summarize the results of the capacity analysis.

Thompson Road at Redd Road Capacity Analysis							
Approach		**Existing 2023**		**No Build 2038**		**Build 2038 (Geometry Improvements)**	
		AM Peak Hour LOS (Delay)	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
SB	SBL	E (45.5)	C (20.8)	F (227.4)	E (36.4)	F (218.1)	E (40.0)
	SBR					B (10.2)	C (15.3)
EBL		A (7.9)	A (9.2)	A (8.2)	B (10.1)	A (8.2)	B (10.1)

The intersection was also evaluated for a single-lane roundabout and the Sidra results indicate the intersection meets LOS during the AM and PM peak hours under future build conditions. The capacity analysis results indicate a single-lane roundabout performs better compared to adding a dedicated right-turn lane for the southbound approach under future conditions.

Thompson Road at Redd Road Roundabout LOS Table			
Intersection	**Approach**	**Build 2038**	
		AM	**PM**
Thompson Road at Francis Road	**Overall**	**A (9.7)**	**A (5.4)**
	WBT	A (4.1)	A (4.6)
	WBR	A (5.0)	A (5.5)
	WB	A (4.3)	A (4.8)
	SBL	B (11.0)	B (13.5)
	SBR	A (6.0)	A (8.5)
	SB	B (10.0)	B (11.0)
	EBL	C (17.0)	A (9.7)
	EBT	B (10.9)	A (3.8)
	EB	B (11.5)	A (5.1)

Summary of Proposed Improvements

Short-Term and Low-Cost Improvements

- Install a detectable warning surface pad or remove the existing sidewalk ramp.
- Install warning signage (W1-7) with retroreflective object markers for the southbound approach.
- Install retroreflective sheeting on signposts.
- Install flashing LED stop signs.
- Evaluate intersection street lighting.
- Conduct clearing and grubbing for the northeast quadrant to improve visibility.

Mid- and Long-Term Improvements

- Install guardrail along the south side of Redd Road.
- Geometric improvements for the intersection could consist of installing a single-lane roundabout or installing a dedicated right-turn lane for the southbound approach.

Intersection 6 – SR 372 (Birmingham Highway) at Batesville Road

Existing Conditions

SR 372 (Birmingham Highway) provides travel in the north-south direction and is a two-lane street with a posted speed limit of 45 mph. Batesville Road forms the western leg of the T-intersection, provides travel in the east-west direction, and is a two-lane street with a posted speed limit of 45 mph. Adjacent to the intersection are residential homes and fields. The intersection has side-street stop control with no pedestrian accommodations. The CTP project list includes the project I53 at this intersection.

Kimley»Horn

BATESVILLE ROAD AT SR 372
PROJECT LOCATION MAP

The intersection has the following lane configuration:

- Northbound SR 372 (Birmingham Highway): one left-turn lane and one through lane
- Southbound SR 372 (Birmingham Highway): one shared through/right-turn lane
- Eastbound Batesville Road: one shared left-turn/right-turn lane

A site visit was conducted to observe the intersection and identify any potential improvement opportunities:

- There are intersection approach advance warning signs (W3-1) present on SR 372 (Birmingham Highway).
- There is non-reflective signage on the far side of the Batesville Road approach indicating the street ends and directing traffic.

- The southbound SR 372 (Birmingham Highway) approach has a vertical uphill grade, which limits intersection sight distance for drivers looking north from Batesville Road.
- There is a large tree in the southwest corner of the intersection, which is in the roadway 'clear zone' and may limit sight visibility for drivers looking south from Batesville Road.
- There is no lighting currently at the intersection.

Based on the intersection counts collected, the number of left turns from Batesville Road to northbound SR 372 (Birmingham Highway) was zero during the AM peak hour and seven during the PM peak hour. Based on the intersection counts collected at the nearby intersection of Batesville Road at Taylor Road, it appears drivers choose to make a left turn at Taylor Road to travel to destinations to the north.

Safety Analysis

The following table provides a summary of crashes by type and severity. The records indicate a total of 36 crashes occurred within the 7-year period: 25 property damage only, 7 possible injury, 4 visible injury, 0 serious injury, and no fatalities. Notably, 16 (or 44%) of the crashes were angle collisions mainly due to vehicles making a northbound left turn and failing to yield to on-coming traffic. Eight out of the 16 left turn/angle collisions occurred after the installation of a dedicated northbound left-turn lane in 2019.

SR 372 at Batesville Road Crash Data (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Angle	0	0	4	3	9	16	44%
Rear End	0	0	0	1	11	12	33%
Not Collision w/Motor Veh	0	0	0	0	4	4	11%
Head-On	0	0	0	2	0	2	6%
Sideswipe - Same	0	0	0	1	0	1	3%
Sideswipe - Opposite	0	0	0	0	1	1	3%
Total	0	0	4	7	25	36	100%

Capacity Analysis

Capacity analysis was performed for the existing year 2023, no build year 2038, and build year 2038 conditions. The following table summarizes the results of the capacity analysis.

SR 372 at Batesville Road Capacity Analysis						
Approach	**Existing 2023**		**No Build 2038**		**Build Alt 1 (Roundabout) 2038**	
	AM Peak Hour LOS (Delay)	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
Overall	**N/A**	**N/A**	**N/A**	**N/A**	**C (19)**	**A (8)**
NB	N/A	N/A	N/A	N/A	A (5)	A (10)
SB	N/A	N/A	N/A	N/A	A (8)	B (12)
EB – Batesville Road	F (117)	F (107)	F (>300)	F (>300)	E (41)	A (7)

The Batesville Road westbound approach at the intersection is currently operating with long average vehicle delay (a low level of service F during the AM and PM peak hours). Most vehicles make a right turn onto SR 372 (Birmingham Highway) southbound.

A multilane roundabout was identified as a potential safety improvement option for the build conditions. The capacity results are presented in the previous table. A multilane roundabout was identified as a potential safety improvement option due to the angle collisions at the intersection. The roundabout would consist of two approach lanes along SR 372 (Birmingham Highway) and one approach lane along Batesville Road. The roundabout is expected to provide acceptable operations and be able to accommodate future year traffic volumes.

Proposed Improvements

Short-Term and Low-Cost Improvements

- Install 'STOP AHEAD' pavement markings.
- Install a flashing LED stop sign.
- Install one luminaire light to provide lighting at the intersection and replacement of the signage on the far side of the Batesville Road approach. The new signage would be retroreflective and include object marker signs for the end of the road.
- It is recommended to remove the large tree in the southwest corner of the intersection to improve driver visibility.

Mid- and Long-Term Improvements

The recommendation is to conduct a separate traffic study in partnership with GDOT that includes adjacent intersections along SR 372 to determine the preferred alternative at the intersection. One potential long-term improvement was identified:

- Construct a multilane roundabout with two approach lanes along SR 372 and one approach lane along Batesville Road. This would facilitate Triple Crown residents with more access options for ingress/egress.

Intersection 7 – Batesville Road at Taylor Road

Existing Conditions

Batesville Road provides travel in the east-west direction and is a two-lane street with a posted speed limit of 45 mph. Taylor Road forms the northern leg of the T-intersection, provides travel in the north-south direction, and is a two-lane street with a posted speed limit of 45 mph. Adjacent to the intersection are mainly residential homes, with a small industrial warehouse on the south side of the intersection. The intersection has side-street stop control with no pedestrian accommodations. The CTP project list includes the project I59 at this intersection.

Kimley»Horn

BATESVILLE ROAD AT TAYLOR ROAD
PROJECT LOCATION MAP

The intersection has the following lane configuration:

- Southbound Taylor Road: one shared left-turn/right-turn lane
- Eastbound Batesville Road: one shared left-turn/through lane
- Westbound Batesville Road: one shared through/right-turn lane

A site visit was conducted to observe the intersection and identify any potential improvement opportunities:

- There are intersection approach advance warning signs (W3-1) present on Taylor Road (both sides of the street).
- There are dual-indicated stop signs (on both sides of the street).

- There is signage on the far side of the Taylor Road approach indicating the street ends and directing traffic, including a stop sign.
- There are intersection approach advance warning signs (W3-1) on Batesville Road.
- The eastbound Batesville approach has a vertical crest hill, which limits intersection sight distance for drivers looking to the west from Taylor Road.
- There is no lighting currently at the intersection.

Safety Analysis

The following table provides a summary of crashes by type and severity. The records indicate a total of 10 crashes occurred within the 7-year period: 5 property damage only, 3 possible injury, 2 visible injury, no serious injury, and no fatalities. Notably, 60% of the crashes were not a collision with motor vehicle crashes, due to drivers having difficulty reacting to the stop sign on Taylor Road.

Batesville Road at Taylor Road Crash Data (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Angle	0	0	0	1	1	2	20%
Head-On	0	0	0	0	0	0	0%
Rear End	0	0	1	0	1	2	20%
Sideswipe - Same	0	0	0	0	0	0	0%
Sideswipe - Opposite	0	0	0	0	0	0	0%
Not Collision w/Motor Veh	0	0	1	2	3	6	60%
Total	0	0	2	3	5	10	100%

Capacity Analysis

Capacity analysis was performed for the existing year 2023 and no build year 2038. Due to the acceptable LOS in future years and lower severity crash history, no additional turn lane improvements were identified for this intersection. The following table summarizes the results of the capacity analysis.

Batesville Rd at Taylor Rd Capacity Analysis				
Approach	**Existing 2023**		**No Build 2038**	
	AM Peak Hour LOS (Delay)	**PM Peak Hour LOS (Delay)**	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
SB – Taylor Road	C (19)	C (17)	D (29)	C (24)

Proposed Improvements

Short-Term and Low-Cost Improvements

- Install flashing LED stop signs.
- Install ‘STOP AHEAD’ pavement markings prior to the hill crest on the Taylor Road approach.
- Install rumble strips on the Taylor Road approach.
- Install one luminaire light to provide lighting at the intersection (to aid drivers' awareness of the intersection) and replace the signage on the far side of the Taylor Road approach. The new signage would be retroreflective and include object marker signs for the end of the road.
- Add the intersecting street name to the advanced intersection signs along Batesville Road.
- Add a ‘HILL BLOCKS VIEW’ (W7-6) advance warning sign on the southbound Batesville Road approach to the intersection.

Mid- and Long-Term Improvements

- To address the limited sight distance for drivers looking to the west from Taylor Road, a potential project is to rebuild (lower) the Batesville Road vertical crest hill.
- Another option to consider is providing a center receiving lane along Batesville Road to allow left-turning vehicles from Taylor Road to accelerate safely before merging with traffic.

Additionally, an all-way stop control intersection was considered. The traffic volumes and crash history were compared with the MUTCD all-way stop warrants; however, the current conditions do not support the installation of all-way stop control.

Corridor 1: Cogburn Road from Bethany Bend to Hopewell Road/Francis Road

Existing Conditions

Cogburn Road between Bethany Bend and Hopewell Road/Francis Road is a two-lane undivided minor arterial City roadway with a posted speed limit of 40 mph and a school zone speed limit of 35 mph. The land uses within the study limits are mostly single-family residential. Cambridge High School and an animal clinic are at the corridor's southern end. There is an existing sidewalk along both sides of Cogburn Road from Bethany Bend to approximately 1,200 feet to the north. The CTP project list includes project R51 for this corridor. The following is a summary of the intersections along the study limits (from south to north):

- Cogburn Road at Bethany Bend (signalized)
- Cogburn Road at Devonshire Farms Way/Oakstone Glen (offset TWSC)
- Cogburn Road at Wyndham Farms Drive (TWSC)
- Cogburn Road at Cogburn Lane (TWSC)
- Cogburn Road at Hopewell Road/Francis Road (roundabout)

Kimley»Horn

COGBURN ROAD FROM BETHANY BEND TO HOPEWELL/FRANCIS
PROJECT LOCATION MAP

A site visit was conducted on Wednesday, September 13, 2023, during the PM peak period to observe the corridor and identify potential operational and safety improvements:

- Active Transportation Infrastructure and Observations
    - No pedestrian or bicycle activity was observed.

    - There is an existing sidewalk along both sides of Cogburn Road from Bethany Bend to approximately 1,200 feet to the north.
- Roadway Infrastructure and Traffic Observations
    - Observed northbound vehicles queuing approaching the roundabout.
    - There is a vertical low point at the creek approximately 2,000 feet south of the roundabout, potentially causing speeding.
    - All large residential side streets have dedicated right-turn lanes except Devonshire Farms Way in the southbound direction. There are no dedicated left-turn lanes.

Safety Analysis

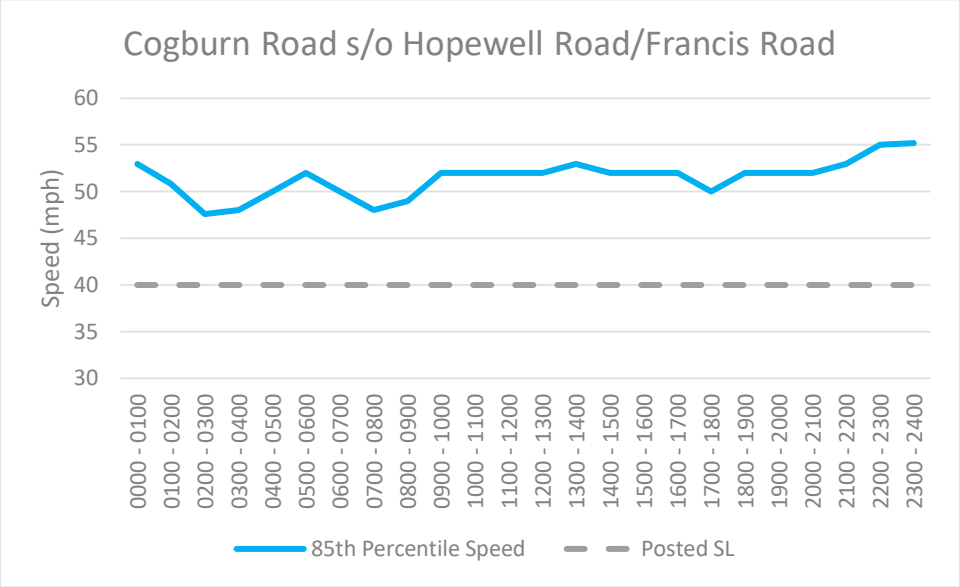
The following table provides a summary of crashes by type and severity. The following is a summary of notable observations for the crash data analysis:

- Approximately 22 rear ends occurred near the roundabout.
- There were 34 single-vehicle crashes (i.e., not collision with a motor vehicle) and most occurred at the following locations:
    - Five crashes occurred at Cogburn Road at Devonshire Farms Way/Oakstone Glen; eight crashes occurred at Wyndham Farms Drive; and 13 crashes occurred at the roundabout intersection of Cobgurn Road at Hopewell Road/Francis Road, of which eight indicated the driver lost control or was driving too fast for conditions.
    - Seven crashes involved a driver's reaction to a deer.
- There were no reported bicycle or pedestrian crashes.
- One head-on fatal (KABCO type K) crash occurred at the intersection of Bethany Bend at Cogburn Road on 02/09/2021 at 1:58 PM involving an eastbound vehicle turning left that failed to yield to a westbound vehicle.

Cogburn Road from Bethany Bend to Hopewell/Francis Road (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Rear End	0	0	1	20	85	106	58%
Not Collision w/Motor Vehicle	0	1	5	6	22	34	18%
Angle	0	0	3	1	9	13	7%
Left Angle	0	0	3	5	4	12	7%
Sideswipe - Same	0	0	0	0	8	8	4%
Sideswipe - Opposite	0	0	0	0	5	5	3%
Head On	1	0	1	1	0	3	2%
Right Angle	0	0	0	0	3	3	2%
Total	1	1	13	33	136	184	100%

Capacity Analysis

Traffic volume and speed data were collected for 48 hours at Cogburn Road, south of Hopewell Road/Francis Road. The ADT was 12,190 and the 85th percentile speed was 52 mph.



Capacity analysis was performed for the existing year 2023, no build year 2038, and build year 2038 conditions using FDOT's QLOS tables.

Corridor Volume to Capacity (v/c) Ratio					
Road Name	From	To	v/c Ratio		
			Existing 2023	No Build 2038	Build 2038
Cogburn Road	Bethany Bend	Hopewell Road/Francis Road	0.806	1.01	0.806

Summary of Proposed Improvements

Short-Term and Low-Cost Improvements

- Repave and restripe pavement markings including narrower lane widths.
- Install electronic speed feedback signs.
- Install centerline rumble strips.
- Install low-cost traffic calming measures approaching the roundabout at Hopewell/Francis Road:
    - Transverse rumble strips (low noise) or optical speed bar pavement markings
    - Signage and pavement marking enhancements
    - Intersection lighting improvements

Mid- and Long-Term Improvements

- Install dedicated left-turn lanes for the residential side streets (e.g., Devonshire Farms Way and Wyndham Farms Drive).
- Install a side path for multimodal connectivity.
- Install wider paved shoulders.
- Continue monitoring for roadway widening.

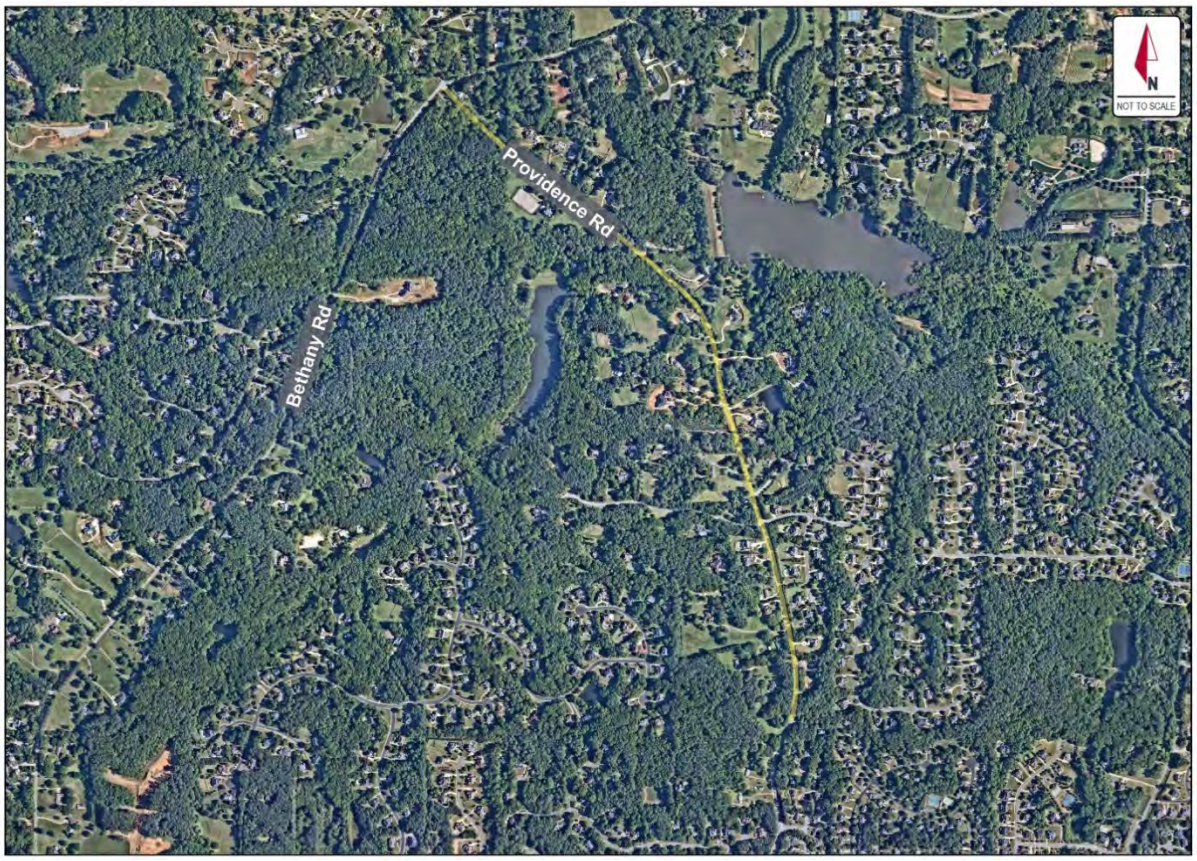
Corridor 2: Providence Road from City Limit to Bethany Road

Existing Conditions

Providence Road is a two-lane undivided major collector City roadway with a posted speed limit of 45 mph between the Milton City limit and Bethany Road. However, the City is in the process of reducing the posted speed limit on Providence Road to 40 mph. There are a few existing sections of sidewalks along the study corridor. The study corridor is an important part of the active transportation network as it is included in the CTP's Bicycle Routes map. The CTP project list includes project B31 for this corridor.

The following is a summary of the intersections along the study limits (from south to north):

- Providence Road at Providence Oaks Street (TWSC)
- Providence Road at Providence Farms Lane/Evergrace Drive (TWSC)
- Providence Road at Providence Park Drive (TWSC)
- Providence Road at Bethany Road (all-way stop controlled [AWSC])



Kimley»Horn

PROVIDENCE ROAD FROM CITY LIMIT TO BETHANY ROAD
PROJECT LOCATION MAP

A site visit was conducted on Wednesday, September 13, 2023, during the PM peak period to observe the corridor and identify potential operational and safety improvements:

- Active Transportation Infrastructure and Observations

    - A bicyclist was observed riding in the southbound direction. Vehicles went around the person.
    - A detectable warning surface is not provided for available sidewalk ramps and crosswalks (e.g., Evergrace Drive).
- Roadway Infrastructure and Traffic Observations
    - Moderate queues were observed at the intersection of Bethany Road at Providence Road (AWSC).
    - There are electronic speed feedback sign units installed, but they do not seem operational.
    - Sight distance may be limited by foliage turning from side streets (e.g., Providence Farms Lane) onto Providence Road.
    - No STOP bar pavement marking is provided for some of the side streets (Providence Park Drive).

Safety Analysis

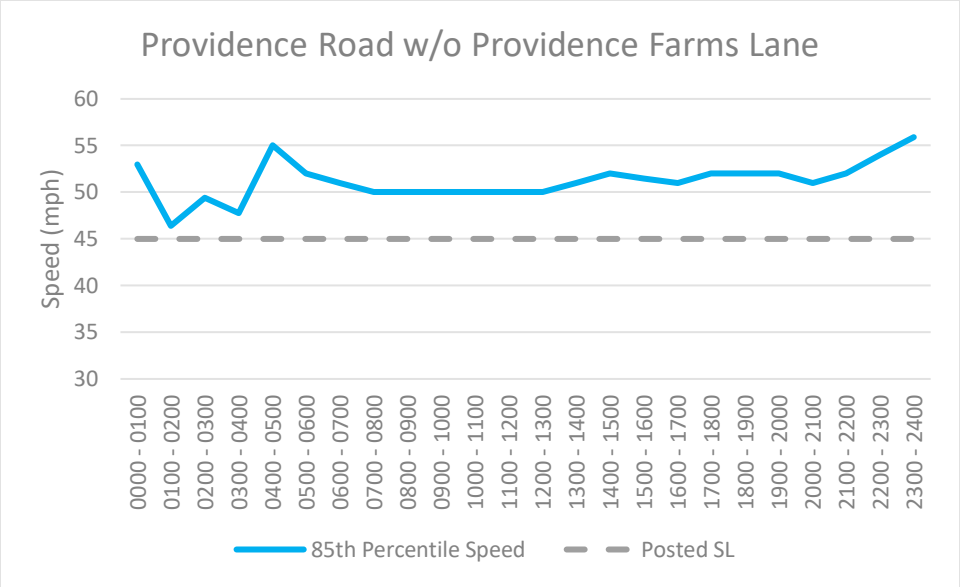
The following table provides a summary of crashes by type and severity. The following is a summary of notable observations for the crash data analysis:

- Ten of the 17 single-vehicle crashes occurred at the intersection of Bethany Road at Providence Road (AWSC).
- All 15 reported angle crashes occurred at the intersection of Bethany Road at Providence Road (AWSC).
- There were 24 non-daylight crashes of which 17 occurred at the intersection of Bethany Road at Providence Road (AWSC).
- There were six deer crashes.

Providence Road from City Limits to Bethany Road (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Not Collision w/Motor Vehicle	0	0	1	2	14	17	35%
Angle	0	0	2	2	11	15	31%
Rear End	0	0	1	3	10	14	29%
Left Angle	0	0	0	0	1	1	2%
Sideswipe - Same	0	0	0	1	0	1	2%
Total	0	0	4	8	36	48	100%

Capacity Analysis

Traffic volume and speed data were collected for 48 hours at Providence Road, west of Providence Farms Lane. The ADT was 4,192 and the 85th percentile speed was 51 mph.



Capacity analysis was performed for the existing year 2023, no build year 2038, and build year 2038 conditions using FDOT's QLOS tables.

Corridor Volume to Capacity (v/c) Ratio					
Road Name	From	To	v/c Ratio		
			Existing 2023	No Build 2038	Build 2038
Providence Road	City Limits	Bethany Road	0.277	0.347	0.277

Summary of Proposed Improvements

Short-Term and Low-Cost Improvements

- The City is working on installing a roundabout at the intersection of Bethany Road at Providence Road.
- Install traffic calming treatments such as:
  - Horizontal displacement devices (e.g., medianette).
  - Repair the existing electronic speed feedback signs.
- Install curve warning signs.

Mid- and Long-Term Improvements

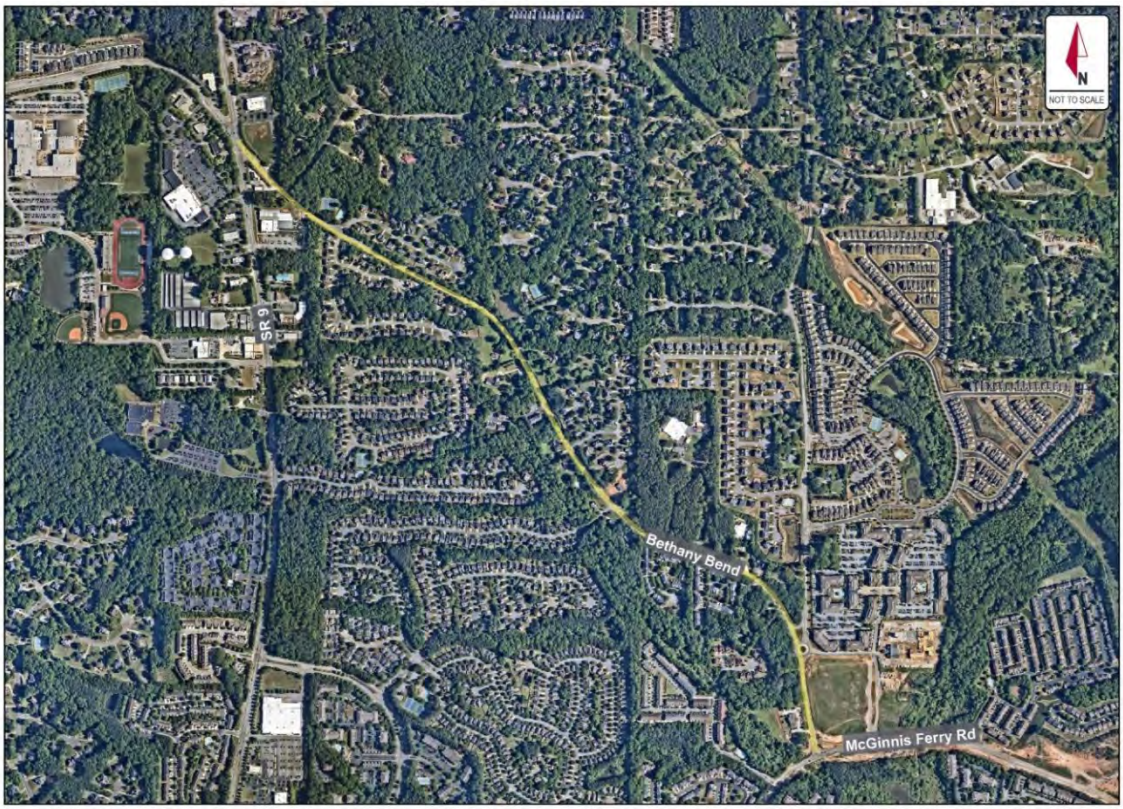
- Include bicycle treatments such as a side path or wider shoulders.
- Install dedicated turn lanes for residential side streets including a southbound right-turn lane for Providence Farms Lane, a southbound left-turn lane for Evergrace Drive, and a southbound left-turn lane for Providence Oaks Street.

Corridor 3: Bethany Bend from East of SR 9 to Morris Road/McGinnis Ferry Road

Existing Conditions

Bethany Bend between east of SR 9 and Morris Road/McGinnis Ferry Road is a two-lane undivided major collector City roadway with a posted speed limit of 40 mph. The land uses within the study limits include schools (Milton Montessori), multifamily residential, single-family residential, and retail. There is an existing sidewalk along most of the corridor (except between the Strickland Road roundabout and Spring View Drive). The City has a multimodal vision for this corridor. The CTP project list includes project R54 for this corridor. The following is a summary of the intersections along the study limits (from south to north):

- Bethany Bend at Morris Road/McGinnis Ferry Road (signalized)
- Bethany Bend at Strickland Road (roundabout)
- Bethany Bend at Spring View Drive (TWSC)
- Bethany Bend at Galecrest Drive (TWSC)
- Bethany Bend at Serenade Court (TWSC)
- Bethany Bend at Sunvalley Drive (TWSC)
- Bethany Bend at Deer Valley Drive (TWSC)
- Bethany Bend at Belleterre Drive (TWSC)
- Bethany Bend at Bethany Creek Drive (TWSC)
- Bethany Bend at Oak Meade Trace (TWSC)



Kimley»Horn

BETHANY ROAD FROM EAST OF SR 9 TO MORRIS
PROJECT LOCATION MAP

A site visit was conducted on Wednesday, September 13, 2023, during the PM peak period to observe the corridor and identify potential operational and safety improvements:

- Active Transportation Infrastructure and Observations
    - Crosswalks and sidewalk ramps with detectable warning surface are provided at most side streets.
    - Pedestrians were observed using the sidewalks.
- Roadway Infrastructure and Traffic Observations
    - Congestion was minor.
    - The traffic signal equipment for the intersection of Bethany Bend at SR 9 can be seen by multiple approach movements and could cause confusion for drivers.
    - Moderate horizontal curves exist.

Safety Analysis

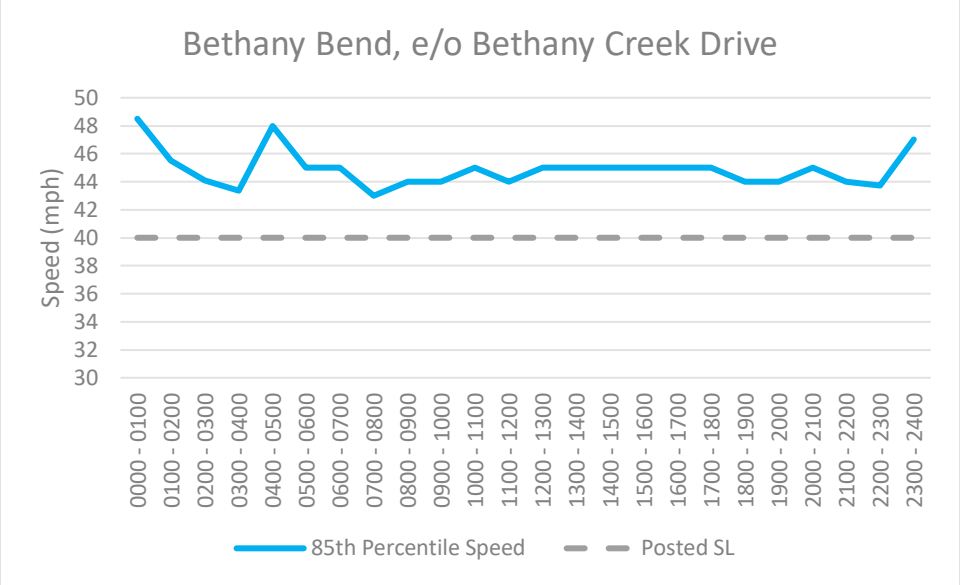
The following table provides a summary of crashes by type and severity. The following is a summary of notable observations for the crash data analysis:

- There was one pedestrian crash at Serenade Court involving a pedestrian in the roadway running after a runaway dog.
- Approximately 28 of the 36 (or 78%) left-turn and angle crashes occurred at Bethany Bend at Morris/McGinnis Ferry Road. Note, a traffic signal was installed in 2018 and most (22) of the left-turn and angle crashes occurred after 2018.
- Approximately 40% of crashes occurred during non-daylight conditions.
    - Nineteen occurred at the intersection of Bethany Bend at Morris/McGinnis Ferry Road.
- Ten of the 23 (or 43%) single-vehicle crashes occurred near the roundabout.
    - Six occurred during non-daylight conditions.
    - Four mentioned in the narrative that the vehicle struck the curb and lost control.

Bethany Bend from East of SR 9 to Morris/McGinnis Ferry Road (2016-2022)							
Crash Type	**K**	**A**	**B**	**C**	**O**	**Total**	**Percentage**
Left Angle	0	0	3	7	16	26	29%
Not Collision w/Motor Vehicle	0	0	6	3	14	23	25%
Rear End	0	0	1	1	20	22	24%
Angle	0	0	0	2	8	10	11%
Head On	0	0	2	1	1	4	4%
Sideswipe – Opposite	0	0	0	0	3	3	3%
Sideswipe – Same	0	0	0	1	1	2	2%
Right Angle	0	0	0	0	1	1	1%
Total	0	0	12	15	64	91	100%

Capacity Analysis

Traffic volume and speed data were collected for 48 hours at Bethany Bend, east of Serenade Court, and at Bethany Bend, east of Bethany Creek Drive. The ADTs were 6,171 and 6,408 respectively. The 85th percentile speeds were 45 mph.



Capacity analysis was performed for the existing year 2023, no build year 2038, and build year 2038 conditions using FDOT's QLOS tables.

Corridor Volume to Capacity (v/c) Ratio					
Road Name	From	To	v/c Ratio		
			Existing 2023	No Build 2038	Build 2038
Bethany Bend	East of SR 9	Morris Road/McGinnis Ferry Road	0.331	0.414	0.414

Summary of Proposed Improvements

Short-Term and Low-Cost Improvements

- Install edge line and/or centerline treatment.
- Install electronic speed feedback signs.
- Install low-cost traffic calming measures approaching the roundabout intersection of Bethany Bend at Strickland Road:
    - Transverse rumble strips (low noise) or optical speed bar pavement markings
    - Signage and pavement markings
    - Intersection lighting improvements

Mid- and Long-Term Improvements

- Incorporate additional intersection and street lighting.
- Narrow lane widths, as feasible.
- Monitor side street intersections for additional dedicated turn lane improvements.

- Evaluate for pedestrian mid-block crossing opportunities beyond the ones included in TSPLOST II projects:
    - I22: Mini roundabout at Bethany Bend and Bethany Creek Drive
    - P10: Crosswalk and sidewalks on Bethany Bend at Serenade Court
- Install side a path along the south side of Bethany Bend.
- Conduct a study to evaluate the installation of a multilane roundabout at the intersection of Morris Road/McGinnis Ferry Road at Bethany Bend.

Conclusion and Next Steps

This large-scale and small-scale vehicular assessment evaluated seven intersections and three roadway corridors in the City of Milton to identify operational and safety improvements. The study methodology involved crash and traffic data gathering, traffic capacity analysis, crash data analysis, field observations, and the development of short- and mid/long-term improvements in coordination with City staff. The 10 study locations are also included as projects in the Milton CTP. This document will serve as an aid to program, prioritize, and implement transportation improvements at these locations to further advance mobility and safety for all road users in Milton.