FAYETTE

TRANSPORTATION PLAN

Assessment of Current & Future Needs Report

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1. Introduction & Background

The Atlanta Regional Commission (ARC) created the Comprehensive Transportation Plan (CTP) program to encourage counties and their municipalities to develop joint long-range transportation plans. ARC uses CTPs as the foundation of the wider regional vision for transportation investment in the Atlanta region. This CTP, known as the FAYETTE TRANSPORTATION PLAN, is funded with financial support from ARC and will be used to make funding and implementation decisions in the county for the next five years and beyond. Transportation projects identified during this planning process will be eligible for inclusion in the Regional Transportation Plan (RTP) and may be considered for federal and state funding. The Inventory of Existing Conditions Report details the condition of transportation facilities in the Fayette County, City of Brooks, City of Fayetteville, City of Peachtree City, City of Woolsey and Town of Tyrone.

This plan incorporates and builds upon the previous 2010 CTP. Unimplemented recommendations from that plan were reevaluated under current situations to ensure validity. A unique part of this planning process is a deep dive into a countywide bicycle, pedestrian, and golf cart path network. This network is known as the Master Path Plan (MPP).

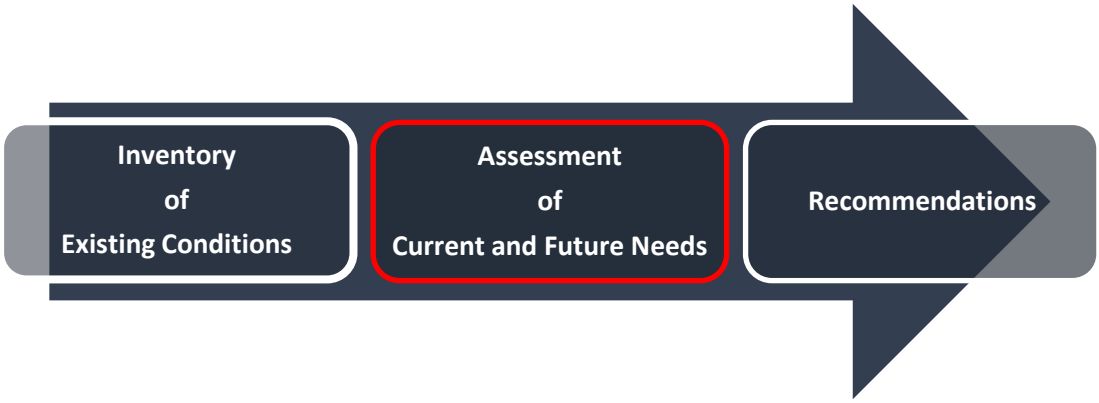
1.1. Plan Overview

The Fayette Transportation Plan follows a three-step technical documentation process (**Figure 1**):

- The first step is an INVENTORY of the present-day makeup and condition of the transportation network in and around Fayette County. This includes factors that influence transportation such as demographics, employment, land use, and development.
- The second step is an ASSESSMENT of transportation needs both today and through the year 2040. Needs are identified using technical methods such as travel demand modeling as well as input from community and stakeholders.
- The third step is the development of policy and project RECOMMENDATIONS designed to address the issues identified in step two.

This document is the second step in the planning process: the Assessment of Current and Future Needs Report (also known as the Needs Assessment).

Figure 1: The Planning Process



2. Population & Employment Growth

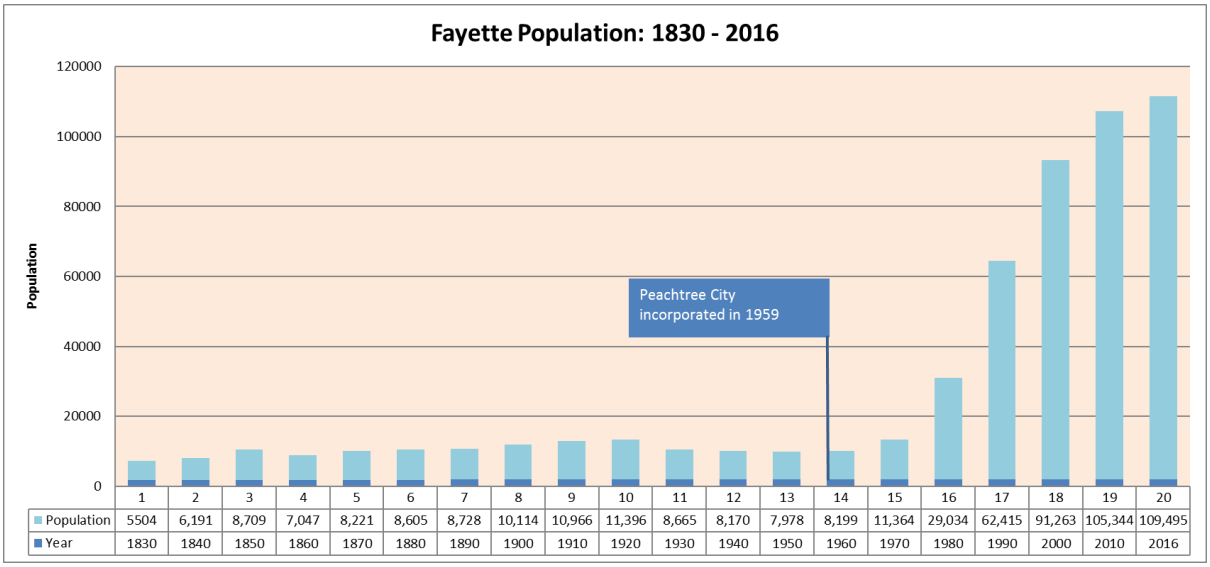
This section contains population and employment estimates for Fayette County in 2016 and projections for 2040. Understanding population and employment trends are essential for understanding future transportation needs. A detailed demographic and employment assessment is available in the Inventory of Existing Conditions Report. This section will summarize those assessments and analyze future year projections.

2.1. Population Growth

Akin to Metro Atlanta, Fayette County has undergone significant population growth. Population gradually increased and decreased from 1830-1960. After Peachtree City incorporated in 1959, countywide population embarked on a steady increase, with its largest increases between 1970-2000. The growth trend is expected to continue through the year 2040.

Figure 2 shows the total population from 1830 to 2016 based on the latest estimates from the American Community Survey (ACS). The 2016 population of Fayette County was 109,495, according to the US Bureau of the Census American Community Survey (ACS).

Figure 2: Fayette County Historic Population



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Population	5504	6,191	8,709	7,047	8,221	8,605	8,728	10,114	10,966	11,396	8,665	8,170	7,978	8,199	11,364	29,034	62,415	91,263	105,344	109,495
Year	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2016

Source: US Census, ACS

2.2. Travel Demand Model Projections

Projections from the ARC Travel Demand Model show the county growing to almost 142,000 people in the next 23 years (**Table 1**). This increase in population will create heavier demands on the transportation network. More people will bring more cars and larger usage of the roadway network.

Table 1: Projected Population Growth

Year	Population Projection	Total Change 2017 - 2040	Percent Change 2017 - 2040	Annual Growth Rate
2017	109,991	-	-	-
2040	141,583	31,592	28.72%	1.10%

Source: ARC Travel Demand Model

Population density from the travel demand model for the years 2017 and 2040 are shown in **Figures 3 and 4** respectively. Based on the population projections from the ARC Travel Demand Model: Areas of population density are clustered around the cities (Fayetteville, Peachtree City, and Tyrone) and the unincorporated areas immediately surrounding them. The population densities are based on Traffic Analysis Zones (TAZ). TAZs are the fundamental geographic unit for inventorying demographic data and land use within the study area; in this case Fayette County[1].

[1] https://www.fhwa.dot.gov/planning/tmip/publications/other_reports/technical_synthesis_report/page01.cfm - January, 2019

2.2.1. Fayette County Comprehensive Plan Projections

Fayette County adopted a new Comprehensive Plan in 2017. This plan included a population projection based on the ARC population projections. The data indicated that Fayette County's population will increase from 110,975 in 2015 to 143,255 in 2040. This represents a 29 percent increase of 32,280 persons. The Comprehensive Plan population projections were slightly higher than the ARC Travel Demand Model projections. However, due to the small overall difference the traffic implications are the same.

2.3.Employment Growth

An important aspect of determining transportation needs for the county is employment centers and access to jobs. In 2015, approximately 74.6 percent of the people who lived in Fayette County were employed outside of the county, while 25.4 percent of people who lived in Fayette worked in the county. For similar information on surrounding counties, review **Table 2** below.

Figure 3: 2017 Population Density by TAZ

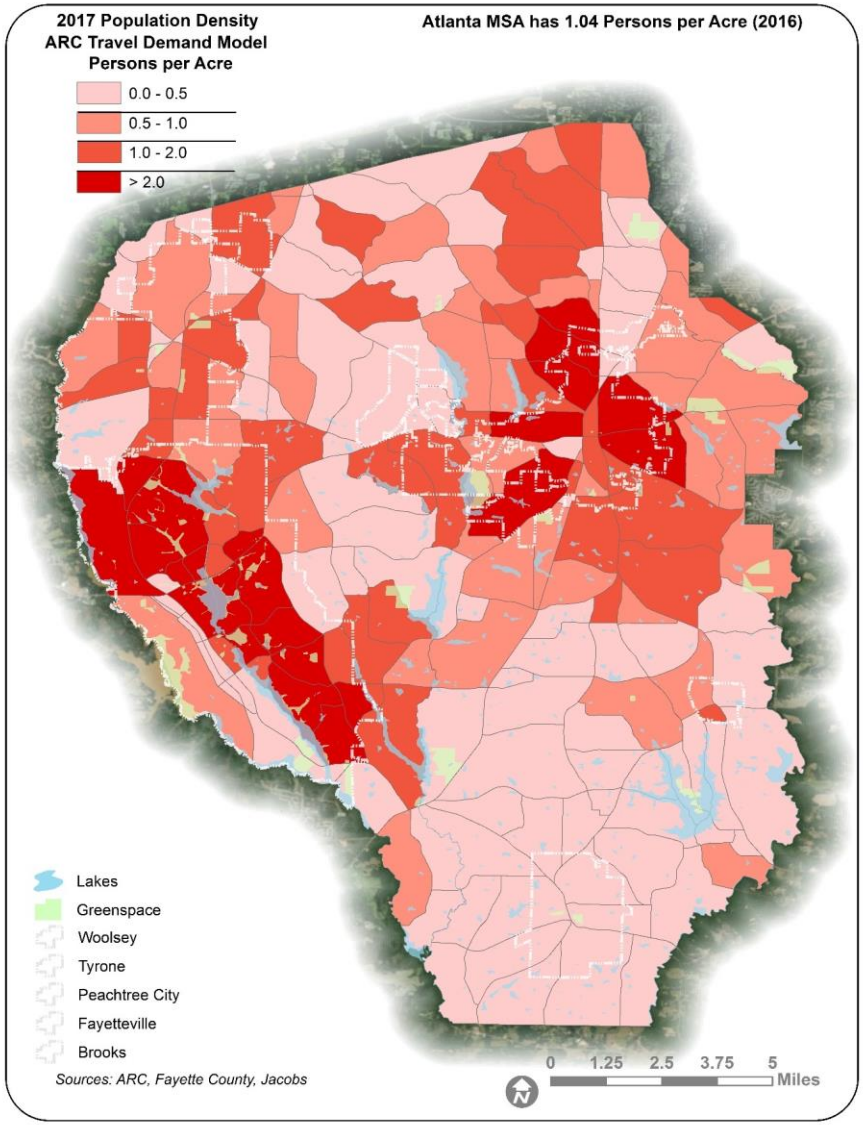


Figure 4: 2040 Population Density by TAZ

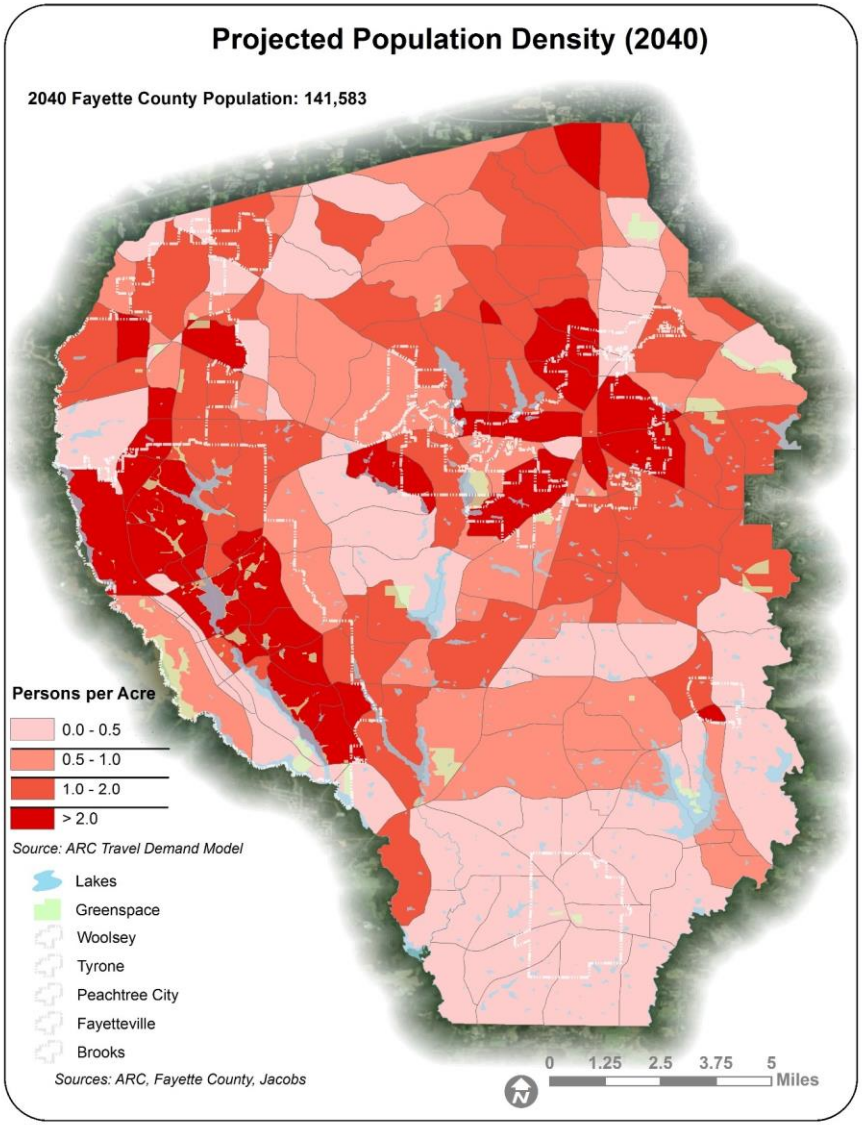


Table 2: In-Area Labor Force Efficiency (All Jobs)

County	Living in County	Living in County but Employed Outside County	Living and Employed in County
Clayton	108,243	77.30%	22.70%
Coweta	59,351	71.80%	28.20%
Fulton	424,478	45.90%	54.10%
Henry	92,272	78.00%	22.00%
Spalding	25,956	71.60%	28.40%

Source: U.S. Census Bureau, Center for Economic Studies

The major employment areas in Fayette County are located in Peachtree City and Fayetteville. in Peachtree City, employment is concentrated at the intersection of SR 74 and SR 54, and along south SR 74 (abutting the industrial land uses). In Fayetteville, the major employment areas radiate outward from the intersection of SR 85 and SR 54, and are more densely located north and south along SR 85 from that intersection. With substantial commuting patterns into northern counties, and traffic congestion along SR 74, centrally located commuter-supportive transportation investments could mitigate future traffic congestion.

Table 3: Projected Employment Growth

Year	Employment Projection	Total Change 2017 - 2040	Percent Change 2017 - 2040	Annual Growth Rate
2017	56,060	-	-	-
2040	76,005	19,945	35.57%	1.33%

Source: ARC Travel Demand Model

Fayette County employment is projected to grow through the year 2040. Depicted in **Table 3**, employment is projected to increase by nearly 36 percent. Employment density for 2017 and 2040 by TAZ is shown in **Figures 5 and 6**. An increase in employment opportunities attracts Fayette County residents to work within the county, while also attracting workers from outside the county. Projected population and employment growth are similar in annual growth rate (1.10 percent, and 1.33 percent, respectively). Access to major employment sectors will be essential to supporting this growth. As mentioned above, the major employment centers are along SR 74. This trend supports the need for transportation choices that are a viable alternative to single occupant vehicular travel on SR 74 to maintain or improve mobility to and around these employment centers. The high number of commuters using SR 74 to access jobs in other parts of the region also supports the need to relieve travel along this corridor. Existing employment radiates outward from the intersection of SR 85 and SR 54. Employment is projected to increase in density at this intersection and in the areas mentioned above. Future modifications to the intersection and local transportation network could alleviate traffic congestion in the area.

Figure 5: 2017 Employment Density by TAZ

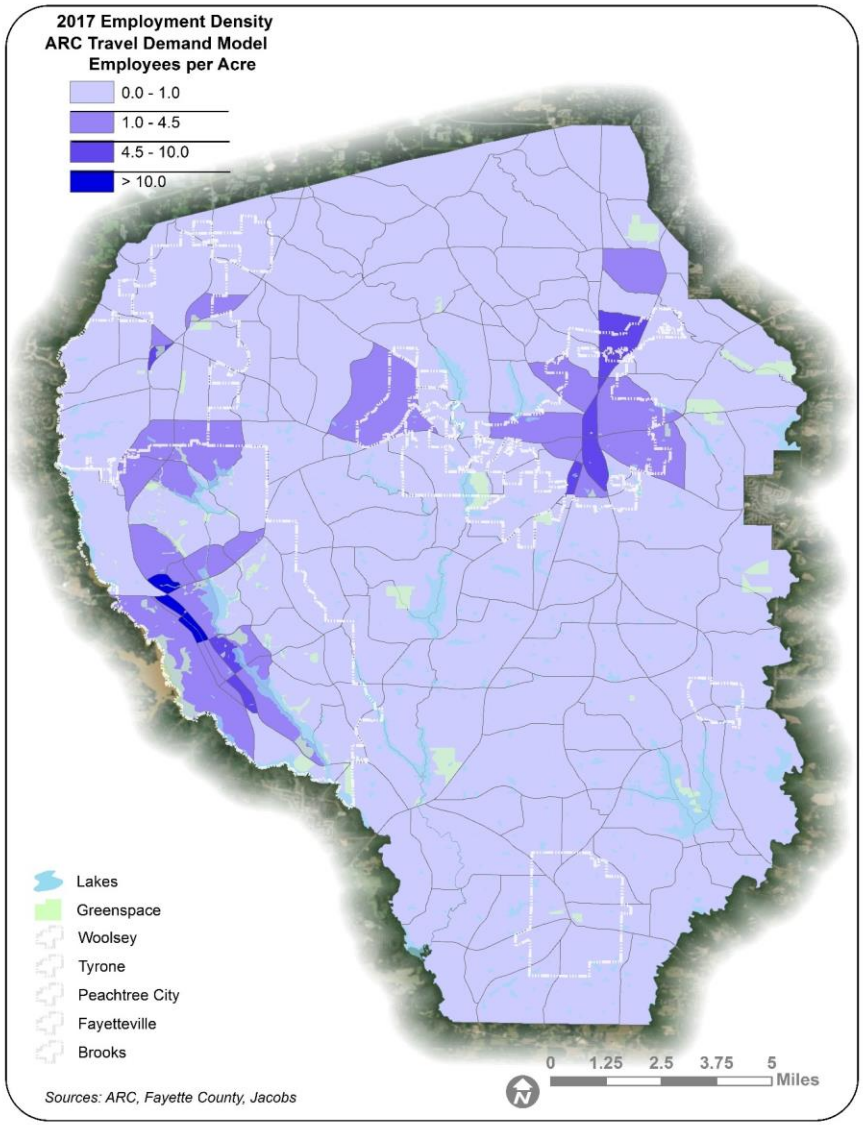
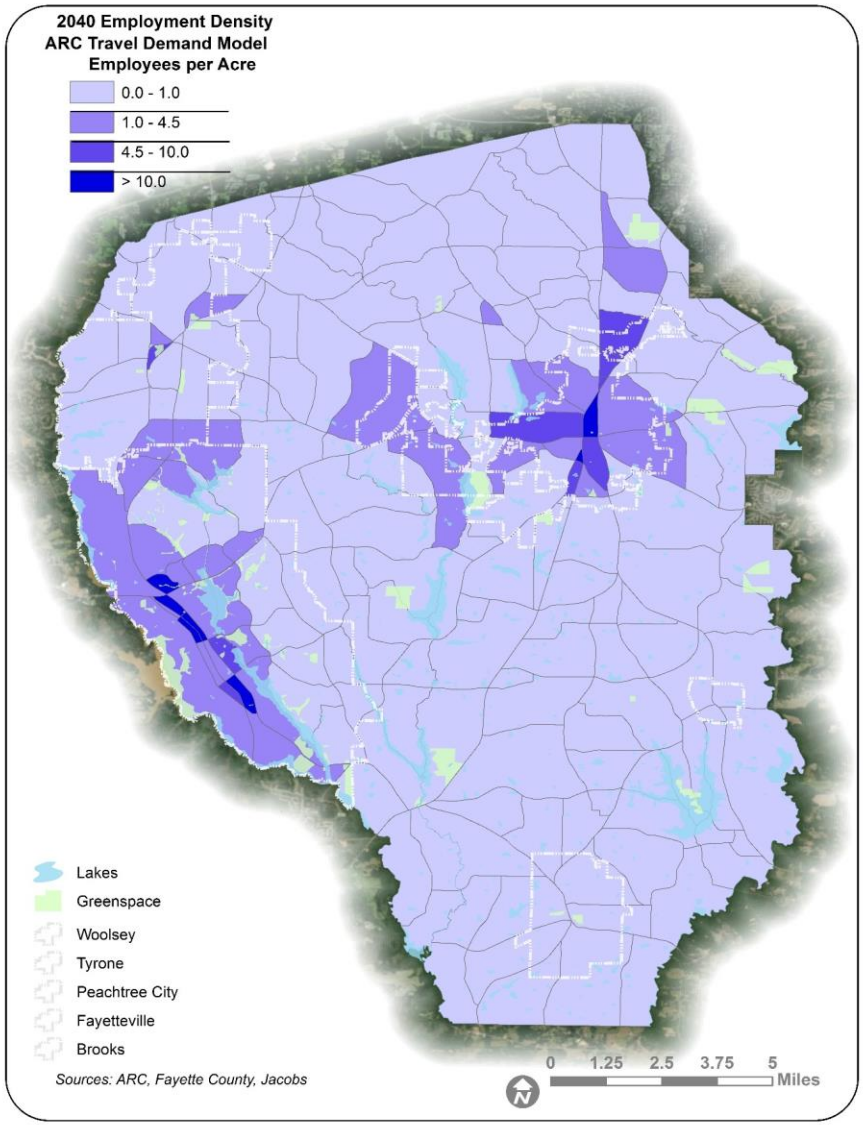


Figure 6: 2040 Employment Density by TAZ



2.4. Key Findings

Based on the **POPULATION** projections from the ARC Travel Demand Model areas of population growth include:

- Tyrone
- Central and North Fayetteville; surrounding outer limits of Fayetteville
- North Fayette County
- Between Goza Road and Rising Star Road

Based on the **EMPLOYMENT** projections used for the ARC Travel Demand Model:

- Fayette County will remain largely a bedroom community with the majority of residents commuting outside of the county for employment
- Population and employment will grow at a similar pace through the year 2040
- Commutes to Hartsfield–Jackson Atlanta International Airport will remain important
- Employment growth within the county will be heaviest in the existing employment centers along SR 74, at SR 85 and SR 54, and along SR 85 in Fayetteville
- New employment nodes will appear south of the hospital on SR 54
- Major Roads that could be negatively impacted by population and employment growth include:
    - SR 74, SR 54, and SR 85

3. Future Land Use & Development Needs

The future land use plans for the five municipalities and Fayette County were analyzed to ensure transportation infrastructure keeps pace with planned developments. These land use plans were also consulted to identify need areas for specific types of transportation investments, including bicycle and pedestrian, roadway, transit and freight improvements. In addition, these plans were assessed to determine where improvements are needed to further the land use vision for the county. Land use and transportation planning can often occur in separate processes. Through this analysis, steps were taken to ensure coordination between these two efforts.

The information presented in this assessment will be used in later phases of the planning process to determine if transportation projects are consistent with the land use plans and policies of local jurisdictions. This analysis will also be used to prioritize transportation projects. These future land use related transportation needs are shown in **Figure 7**. In addition to future land use related transportation needs, this section also focuses on the transportation needs resulting from major planned developments within the county.

3.1. Major Planned Developments

Major developments have the potential to significantly impact the county's transportation system, both locally and county-wide. In light of this, an assessment of major planned developments was conducted to pro-actively identify potential needs in these areas. Two major developments are currently planned in various stages of development. These include the partially constructed Pinewoods Studios and surrounding developments and the planned Founders District. Both of these developments are centered on film studios and are mapped in **Figure 7**.

3.1.1. Pinewoods Studio and Forest

Pinewoods Studios is currently the largest studio complex in the United States, outside of Los Angeles. The site is approximately 700 acres and features 18 sound studios ranging in size from 15,000 to 40,000 square feet.

An adjacent 234-acre mixed-use development, Pinewood Forest, is currently under construction on the eastern side of Veterans Parkway. Pinewood Forest will include approximately 500 homes of various types and styles. The residential component will include a mix of single-family homes, micro-cottages, multi-family flats, townhomes, and some tree homes. The development will include a commercial center, a 95-room boutique hotel with restaurant and bar, and 118 acres of greenspace. The style of Pinewood Forest is Traditional Neighborhood Development (TND), which features densely clustered homes on small lots. Pinewood Studio & Forest are located in the City of Fayetteville, which has sewerage capacity and ability to service small lot developments. This is a major departure in the types of density typically found throughout Fayette County, which is known for large lot single-family subdivisions at a minimum of one acre lots.

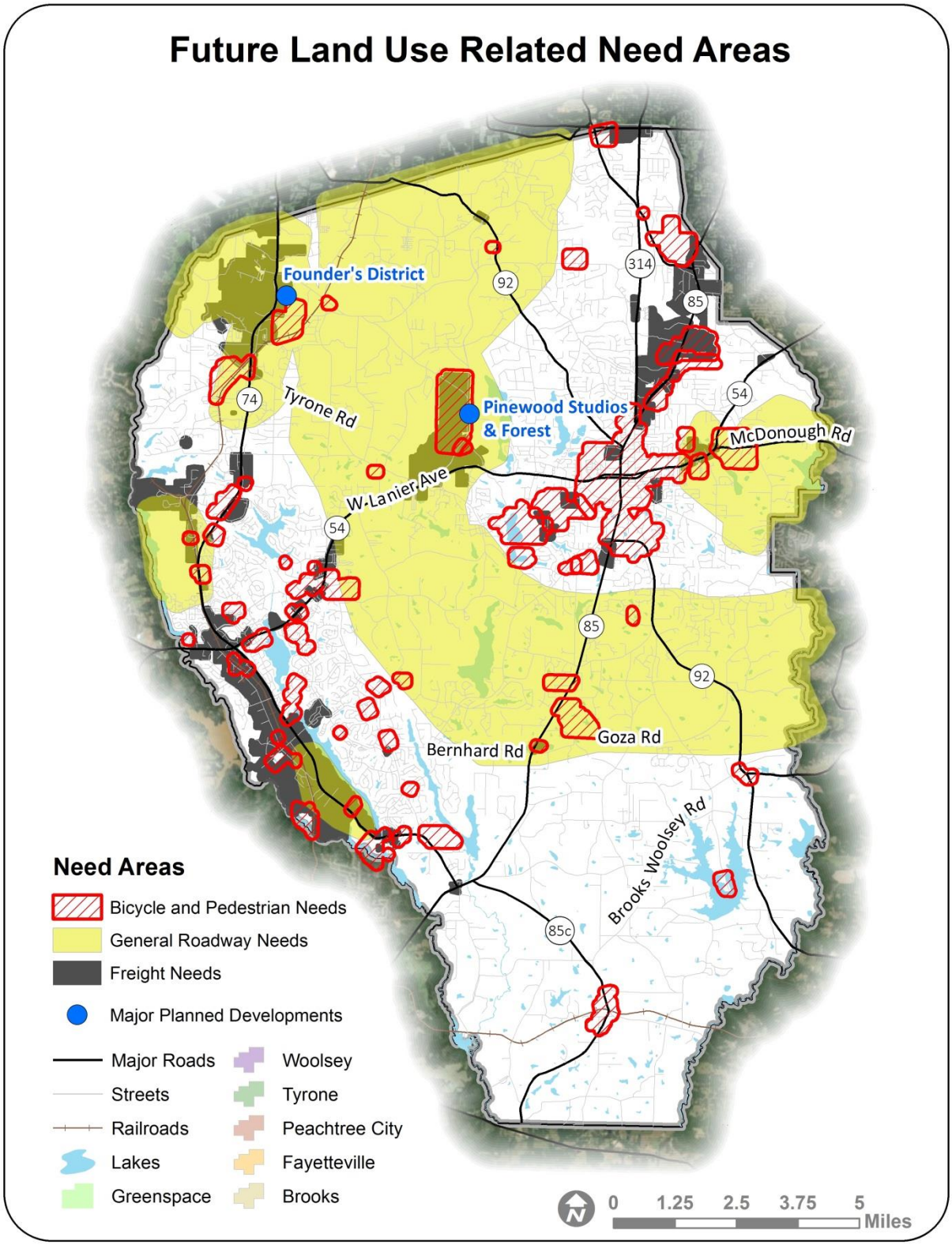
Pinewood Studios and surrounding development is projected to generate 23,850 net daily trips after applying mixed-use and pass-by trip reductions according to the DRI submittal. The DRI submittal identifies 24 intersection improvements to existing and proposed intersections to reduce the traffic impacts on the surrounding transportation network.

3.1.2. Founders District

The proposed Founders District encompasses Founders Studios and the adjacent mixed-use development, Founders Square. It is located on SR 74, in Tyrone, between Jenkins Road and Sandy Creek Road. The project was approved by the Tyrone Town Council in January 2018. Founders Studios is anticipated to include five sound studios at approximately 92,500 SF each (462,000 SF total).

The mixed-use component of the development is planned to include 76,500 sq. ft. of office space, 183,000 sq. ft. of retail, 35,000 sq. ft. of restaurant space, 121 townhome residences, 80 hotel rooms and a cinema. The proposal includes multiple driveways along SR 74 (Joel Cowan Parkway), one driveway on Jenkins Roads and another on Sandy Creek Road. Once completed, the development is expected to generate 13,976 vehicle trips per day (785 during the AM peak period and 991 during the PM peak period). Full build-out was initially anticipated by 2022 but as of May 2019 this phase has not begun.

Figure 7: Future Land Use Related Need Areas



3.2. Future Land Use Needs

This section focuses on transportation needs identified through an analysis of future land use policy in the county. The adopted future land use plans of Fayette County, Fayetteville, Tyrone, Peachtree City, Brooks, and Woolsey were consulted to identify specific need areas. These need areas include bicycle and pedestrian, transit, freight, and general roadway needs. These areas are shown in **Figure 7.**

3.2.1. Bicycle and Pedestrian Needs

Bicycle and pedestrian improvements are particularly needed in areas of the county where compact mixed-use development is planned. Improvements may be needed to promote active transportation (walking, biking) in these areas to fully realize the benefits of mixed-use development. This type of development has the potential for automobile trip reduction through the co-location of a variety of land uses. Compact mix-use developments are found in locations designated as Walkable Mixed-Use in Fayetteville, Town Center District in Fayetteville, Town Center District in Tyrone, Town Center in Woolsey, and Main Street in Brooks.

Areas planned for community facilities should also be priority areas for pedestrian and bicycle improvements. This includes areas with schools, libraries and government facilities. These locations are designated as Public-Institutional in Fayetteville, Community Service in Peachtree City, and Public Institutional in Unincorporated Fayette County.

Locations planned as future park space should also be prioritized for pedestrian and bicycle facilities. This includes areas designated as Parks in Tyrone, Community Service in Peachtree City, Parks and Recreation in Unincorporated Fayette County and Parks-Conservation-Open Space in Fayetteville.

These areas should accommodate travel by foot and bicycle through the provision of a robust network of sidewalks and multi-use trails. They should be high priority areas for bicycle and pedestrian improvements to serve and facilitate the future land use vision in these areas. Additional analysis on pedestrian needs relating to existing land uses are presented within **Figure 7.**

3.2.2. General Roadway Needs

General roadway needs are found in areas where significant growth is planned. A comparison of existing and planned future land uses was conducted to identify areas where roadway improvements may be needed to keep pace with planned development. This may include roadway widenings, upgrades, intersection improvements, operational improvements, and new roadways. The areas discussed are mapped in **Figure 7.**

Growth areas include The Wilksmoor and Industrial Villages of Peachtree City. These areas are anticipated to add additional single-family residential and industrial development, respectively. Additional areas of growth are northeast unincorporated Fayette County and northern Tyrone. These areas are anticipated to add single-family residential development and the large-scale mixed-use Founders DRI District. Fayetteville is predominantly developed so major land use change is only anticipated in the Pinewoods Studios area. Due to the magnitude of this development roadway improvements are anticipated to adequately serve it.

Within the unincorporated county, residential growth areas are anticipated in a wide swath between Fayetteville and Peachtree City in central Fayette County through to the Spalding County border. Another large area of growth is projected in the McDonough Road area east of Fayetteville. No major growth is anticipated in either Brooks or Woolsey.

3.2.3. Freight Needs

Areas planned for land uses that generate a significant amount of freight traffic have been identified as freight need areas. These are primarily areas planned for large-scale industrial and commercial development. This includes the Commercial Corridor, Production and Employment, and Highway 74 Community Gateway designation in Tyrone. It also includes the Industrial and Commercial designations in Peachtree City. In Fayetteville, these areas include the Suburban Commercial, Walkable Mixed-Use, Business Park, and Industrial designation. Within the unincorporated county these designations include Light Industrial, Heavy Industrial, Business Technology Park, Commercial, General Business and Limited Commercial One. No major freight needs have been identified in Brooks or Woolsey.

Freight needs are found in areas planned for large-scale industrial or commercial development. This includes the SR 74 corridor in Tyrone, SR 85 corridor in northeast Fayette, the Pinewoods Studios area, and the Dividend Drive/SR 74 corridor in Peachtree City. Planning for heavy truck traffic in these areas should be anticipated. This includes establishing designated truck routes and discouraging truck traffic on local roads. Roadways in these areas should be designed with wide lanes (12 ft.), large turning radii, adequate sight and stopping distances, wide-diameter roundabouts, and acceleration/deceleration lanes.

3.2.4. Transit Needs

The county currently lacks significant transit service and through the public involvement process it was determined there is limited public support for transit expansion at this time. With the recent enactment of the Atlanta-region Transit Link Authority (the ATL), a pathway to transit expansion in the county has been established, should Fayette County residents choose to 'opt-in' via public referendum. If public support changes and transit service expands to Fayette County in the future, an examination of future land use related transit needs should be carried out. This should include areas planned for high-intensity transit-supportive land uses that would serve as major trip destinations, particularly employment centers.

3.3. Key Findings

The key takeaways from the assessment of future land use and development needs are as follows:

- Two major developments are planned in the county that will have significant impacts on the local and county-wide transportation system. These include the Founders District and Pinewoods Studios. A series of intersection improvements are needed in these areas to effectively serve these developments.

- Bicycle and pedestrian facilities are particularly needed in areas planned for dense mixed-use development, community facilities, and parks. These areas are dispersed throughout the county,

with clusters in downtown Fayetteville and Peachtree City. To facilitate the adopted land use vision of local jurisdictions, a bicycle and pedestrian network should be developed in these areas.

- General roadway needs are found in areas planned for new development and major land use change. These areas include a wide swath of the county between Peachtree City and Fayetteville, northern Tyrone, the McDonough Road area, and Wilksmoor and Industrial Villages in Peachtree City. This may include new location roadways, widenings, road upgrades, intersection improvements, and operational improvements.

- Freight needs are found in areas planned for large-scale industrial or commercial development. This includes the SR 74 corridor in Tyrone, SR 85 corridor in northeast Fayette, the Pinewoods Studios area, and the Dividend Drive/SR 74 corridor in Peachtree City. Planning for heavy truck traffic in these areas should be anticipated. This includes establishing designated truck routes and discouraging truck traffic on local roads. Roadways in these areas should be designed with wide lanes (12 ft.), large turning radii, adequate sight and stopping distances, wide-diameter roundabouts, and acceleration/deceleration lanes.

- There is currently limited transit service in Fayette County and little public support for transit expansion at this time. An examination of future land use related transit need areas should be conducted in the future if public support for transit changes and significant investments into transit options are considered.

4. Access Management

Access management is a system of roadway design that limits and consolidates access to local development in an effort to preserve the flow of traffic along a corridor in relation to safety, capacity, and speed. Common access management techniques include limiting curb cuts, consolidating the driveways of adjacent businesses, inter-parcel access between neighboring developments, frontage or backage roads, and raised center medians. This section includes a review of Fayette County's access management regulations and an assessment of access management needs.

4.1. Review of Existing Regulations

Fayette County's zoning code was reviewed to assess the current regulatory framework pertaining to access management. The County has a robust framework in place to ensure access management through a variety of zoning techniques. These include general roadway access regulations, inter-parcel access and overlay districts.

A general Transportation Corridor Overlay Zone (Sec. 110-173) has been applied to state routes in the county. The purpose of this overlay district is "to promote and maintain orderly development and an efficient traffic flow on highway corridors." Access management requirements are prominently featured in the regulations.

Other overlay districts have been established for specific state route locations. These include SR 54 West, SR 85 North, SR 138, SR 314 North and SR 74 North. The SR 74 North Overlay District requires access roads and internal roadways for developments on the west side of SR 74. It limits access to SR 74 to one right in/right out curb cut. Additional curb cuts are not permitted for new lots created in conjunction with site development. Developments along the east side of SR 74 are required to construct a parallel service drive approximately 400 feet east of SR 74.

Section 104-55 of the zoning code, entitled Driveway and Encroachment Control, establishes access management regulations for all county roads. It requires inter-parcel access and stub streets between adjacent nonresidential properties. Shared driveways are encouraged for nonresidential lots, but not required. The County defers to GDOT's Regulations for Driveway and Encroachment Control manual for curb cut allowances and placement. The rules and requirements contained within the GDOT document apply to county roads and streets unless a regulation is in conflict or superseded by another zoning regulation. On county roads and streets, the county engineering department acts as the implementing body in lieu of the state department of transportation.

4.2. Assessment of Access Management Needs

A thorough review of potential access management needs was conducted and no major needs have been identified on state routes in the county. Access management has not been recognized as a noteworthy issue in the county by members of the public, community stakeholders, or project management team members. The exception is the SR 74 corridor. Access management strategies were a major piece of the SR 74 corridor study.

Commercial corridors are typically the locations most in need of access management regulations. The existing and planned commercial corridors in Fayette County (SR 74, SR 54, SR 314 and SR 85) are all found on state routes. GDOT manages access on these corridors and currently has effective regulations in place through their Regulations for Driveway and Encroachment Control manual and driveway permit process. Many of these roadways also have more stringent local regulations in place.

4.2.1. Veterans Parkway

Veterans Parkway is a major north-south corridor west of Fayetteville recently built by Fayette County. The road is intended to act as a western bypass of the congestion in downtown Fayetteville. As of the writing of this report, relatively little land development has occurred along the corridor with the notable exception of Pinewood Studios and Pinewood Forest. An access management overlay could be implemented now before development comes to preserve vehicular mobility. Access management tools such as shared driveways and interparcel access are easier to implement during development rather than post construction.

4.2.2. East Fayetteville Bypass

The East Fayetteville Bypass is a project currently under development by Fayette County. This project is intended to provide north-south mobility bypassing congestion in downtown Fayetteville. Similar to Veterans Parkway, when this road is built it will benefit from an access management ordinance that will

preserve vehicular mobility.

4.3. Key Findings

Key takeaways from the assessment of access management needs are as follows:

- Veterans Parkway & the East Fayetteville Bypass will benefit from an access management overlay district to preserve vehicular mobility
- SR 74 in Tyrone and Peachtree City has been identified for access management improvements
- Existing and planned commercial corridors in the county are all located on state routes with effective access management regulations in place through GDOT and local zoning codes. As a result, no other needs have been identified in these areas outside of the SR 74 corridor

5. Roadway Needs

The assessment of roadway improvement needs involves three primary areas: the Existing + Committed (E+C) model run, a select link analysis, and a safety analysis, where Committed are those projects that the county has already committed to completing.

The E+C model run examines the performance of the existing transportation network in conjunction with transportation improvements expected to be completed by 2040 (based upon existing programmed funding). Population and employment projections for the 2040 horizon year were incorporated into the E+C model run. The results of the E+C model run form the primary basis for determining roadway capacity needs in year 2040.

The select link analysis helps enhance an understanding of travel patterns within Fayette County and to/from adjacent counties. Specifically, the analysis allows examination of trip origins and destinations utilizing particular roadway segments. The information gained from the select analysis in addition to the results of the E+C model analysis helps to inform the development of proposed transportation improvements to mitigate future potential deficiencies.

Finally, a detailed safety analysis has been completed for input into the development of potential transportation projects. Building upon the crash analysis included within the Existing Conditions Report, crash rates have been evaluated through the needs assessment and are summarized in this document. The crash rate analysis enables the identification of roadway segments and intersections where the relative instances of crashes are higher than average.

5.1. Year 2040 Existing + Committed (E+C) Project Run Network

Based on the Atlanta Regional Commission's (ARC) 2040 Regional Transportation Plan (RTP) (designated *The Atlanta Region's Plan*) project list, the projects listed in **Table 4** have been included in the E+C network, along with the programmed Network year that each project is forecast to be open to traffic. **Figures 8 and 9** compare the number of lanes in the 2017 and 2040 E+C networks. The network year is a conservative approximation of completion date.

Table 4: Projects included in the 2040 Existing + Committed Network

Project Number	Name	Project Type	Network Year
FA-236	East Fayetteville Bypass	New Roadway	2020
CL-015	SR 85 from SR 279 to Clayton County	Widening from 4 to 6 lanes	2030
FA-085	SR 85 from SR 92 to Grady Avenue	Widening from 2 to 4 lanes	2030
CL-101	SR 920 McDonough Road Widening	Widening from 2 to 4 lanes	2030

One major project included in the 2040 E+C list is the East Fayetteville Bypass, which would be a new two-lane road extending from SR 54 near Corinth Road, south through McDonough Road, terminating at Countyline Road. This project improves north-south connectivity east of downtown Fayetteville, one of the major bottlenecks in the county.

The E+C network includes two widenings of SR 85 in Fayette County. One is in south Fayetteville from SR 92 to Grady Avenue from two to four lanes. Another is primarily a widening from four to six lanes in Clayton County but also extending to SR 279 in north Fayette County. The other widening included in the E+C network is that of McDonough Road from SR 54 into Clayton County to Tara Boulevard.

5.1.1. Congestion Assessment

Figures 10 and 11 show the afternoon peak period level of service (LOS) in the 2017 base year and 2040 E+C, respectively. LOS provides information about the traffic conditions in the AM and PM Peak Periods. The LOS scale ranges from “A”, unrestricted flow, to “F”, heavy congestion. The afternoon peak has been chosen for the needs assessment because congestion is generally worse in the afternoon than the morning peak.

Congestion was analyzed for three portions of the roadway network: 1) at committed project locations, 2) on state routes, and 3) on non-state route arterials and collectors. **Tables 5, 6, and 7** list the committed project roadway segments, state routes, and non-state arterial and collector routes, respectively, along with their predominant worst LOS in 2017 and 2040 E+C. In 2017 there were no roadways at LOS F and only isolated segments at LOS E. In the 2040 E+C, instances of LOS F appear, and LOS E conditions spread to more roadway segments across the county. The following table presents a summary of the roadway congestion for the E+C projects in the 2017 base year and 2040 E+C.

The 2040 E+C model indicates that the East Fayetteville Bypass (once complete) is projected to operate as LOS E, indicating this additional north-south connectivity would provide needed capacity serving a strong demand. The planned two lanes of the bypass might not be sufficient to meet demand and provide adequate level of service. The northern widening of SR 85 from SR 279 to Clayton County improves LOS from C in 2017 to A/B in 2040. The southern widening of SR 85 from SR 92 to Grady Avenue maintains LOS C in the future. Similarly, the McDonough Road widening ensures a LOS D in 2040.

Table 5: Roadway Congestion of Committed Project Locations

Project Number	Name	Project Type	2017 LOS	2040 E+C LOS
FA-236	East Fayetteville Bypass	New Roadway	N/A	E
CL-015	SR 85 from SR 279 to Clayton County	Widening from 4 to 6 lanes	C	A/B
FA-085	SR 85 from SR 92 to Grady Avenue	Widening from 2 to 4 lanes	C	C
CL-101	SR 920 McDonough Road Widening	Widening from 2 to 4 lanes	D	D

Beyond the committed project locations, **Table 6** indicates that several portions of state routes have lower LOS in 2040 than 2017, indicating worsening levels of congestion. North of Fayetteville, SR 85 southbound worsens from LOS C to LOS E, particularly approaching New Hope Road. South of Fayetteville to the SR 85 connector, SR 85 changes from LOS A/B to LOS C. Beyond the SR 85 connector and into Coweta County, SR 85 worsens from LOS C/E to LOS F. The SR 85 connector from SR 85 to Brooks changes from LOS A/B to LOS C.

SR 74 southbound in Tyrone operated at LOS C 2017 but worsens to LOS D in 2040. In Peachtree City, the model shows SR 74 changing from LOS A/B to LOS C between 2017 and 2040. SR 54 in Fayetteville drops from a LOS C to LOS D. Additionally, SR 54 between Fayetteville and Peachtree City worsens from LOS A/B to LOS C. From SR 74 into Coweta County, SR 54 worsens from LOS E to LOS F. SR 279 northwest of SR 314 worsens from LOS D to LOS E. Near Veterans Parkway, SR 92 also drops from LOS D to LOS E. Finally, SR 85/92 in downtown Fayetteville changes from LOS to LOS E.

Table 6: Changes in Congestion of State Routes

Roadway	Location	2017 LOS	2040 E+C LOS
SR 85	North of Fayetteville	C	**E**
SR 85	From Fayetteville to SR 85c	A/B	C
SR 85	From SR 85c into Coweta County	C/E	**F**
SR 85 Connector	From Brooks Woolsey Rd to SR 85	A/B	C
SR 74	Tyrone	C	**D**
SR 74	Peachtree City	A/B	C
SR 54	Fayetteville	C	**D**
SR 54	Between Fayetteville and Peachtree City	A/B	C
SR 54	From SR 74 into Coweta County	**E**	**F**
SR 279	From Fulton County to SR 314	**D**	**E**
SR 92	Near Veterans Parkway	**D**	**E**
SR 85/92	Downtown Fayetteville	**D**	**E**

As for non-state routes (see **Table 7**), with the completion of the East Fayetteville Bypass, demand will increase on Corinth Road as a continuation of a northeastern bypass around Fayetteville. Westbridge Road is also projected to carry heavy volumes, decreasing from LOS D to LOS E. The model results also indicate that the two non-State Route connections with Coweta County will also become more congested, with Palmetto Road decreasing from LOS D to LOS E and Rockaway Road decreasing from LOS A/B to LOS D. Demand will also increase near Woolsey, with Hampton Road congestion projected to worsen from LOS A/B to LOS C.

Table 7: Changes in Congestion of Non-State Routes

Roadway	Location	2017 LOS	2040 E+C LOS
Corinth Rd	From SR 85 to SR 54	C	**D**
Westbridge Rd	From Fulton County to SR 92	**D**	**E**
Palmetto Rd	From SR 74/Tyrone Rd into Coweta County	**D**	**E**
Rockaway Rd	SR 74 to Coweta County	A/B	**D**
Hampton Rd	From Brooks Woolsey Rd to Clayton County	A/B	C

5.1.2. Key Findings

- The need for additional connections with Coweta County is evident by model results showing future worsening congestion along SR 54, SR 85, Palmetto Road and Rockaway Road.
- East Fayetteville Bypass between SR 54 and County Line Road and County Line Road to South Jeff Davis Drive: Two lanes might not be sufficient for this corridor to meet future 2040 demand.
- Corinth Road from SR 85 to SR 54: With the completion of the East Fayetteville Bypass, demand is projected to increase on Corinth Road as a continuation of a northeastern bypass around Fayetteville.
- The downtown Fayetteville bottleneck is projected to worsen from LOS D to LOS E on SR 85/92 and from LOS C to D on SR 54.

Figure 8: Number of Lanes (2017)

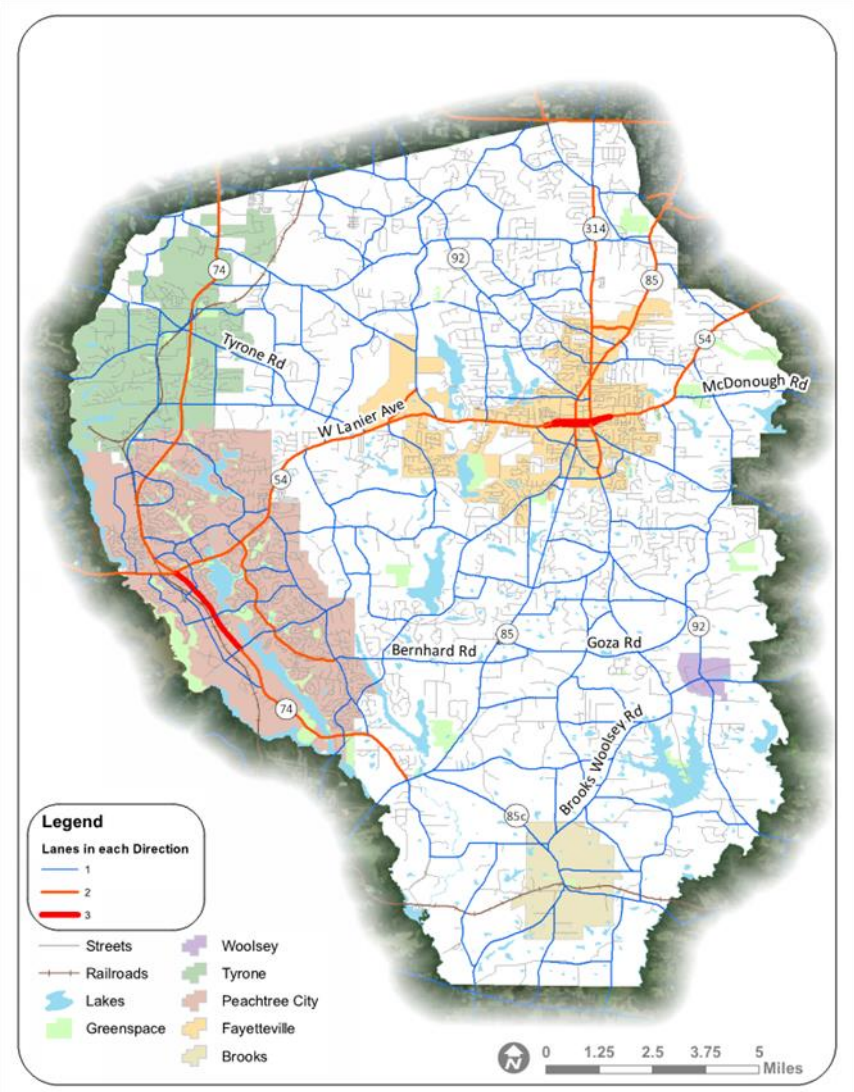


Figure 9: Number of Lanes (2040 E+C)

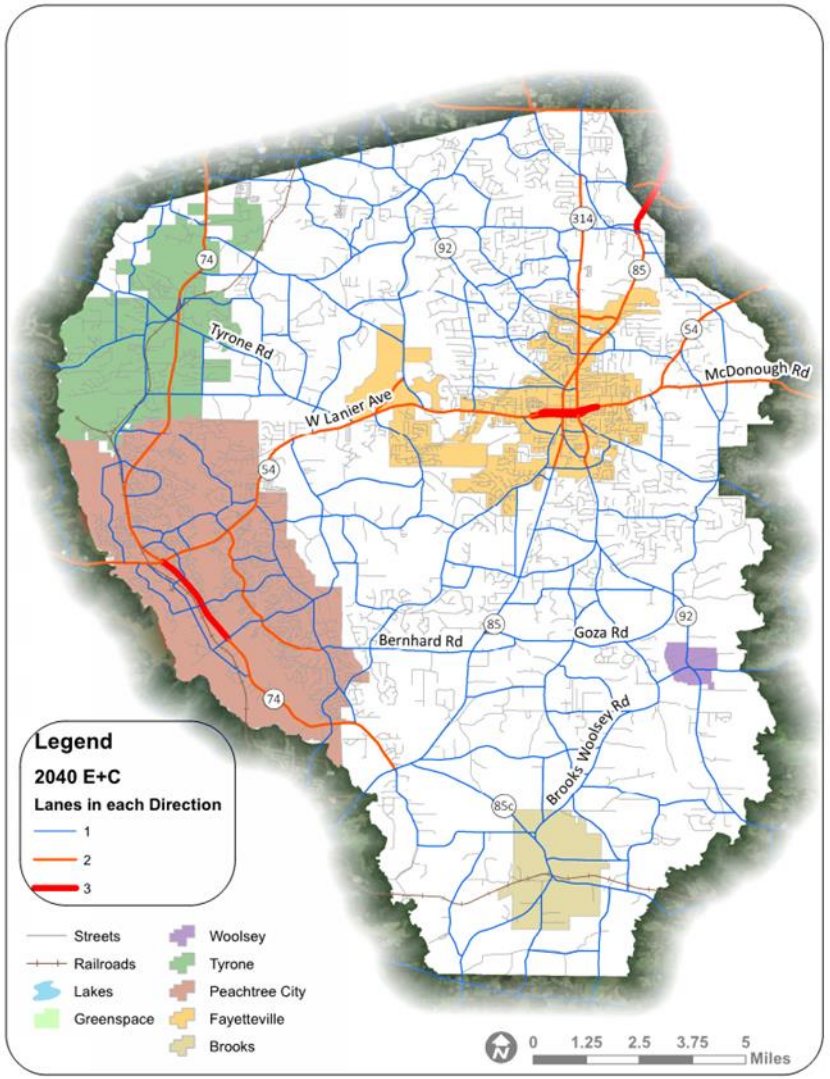


Figure 10: Afternoon Peak Period Congestion (2017)

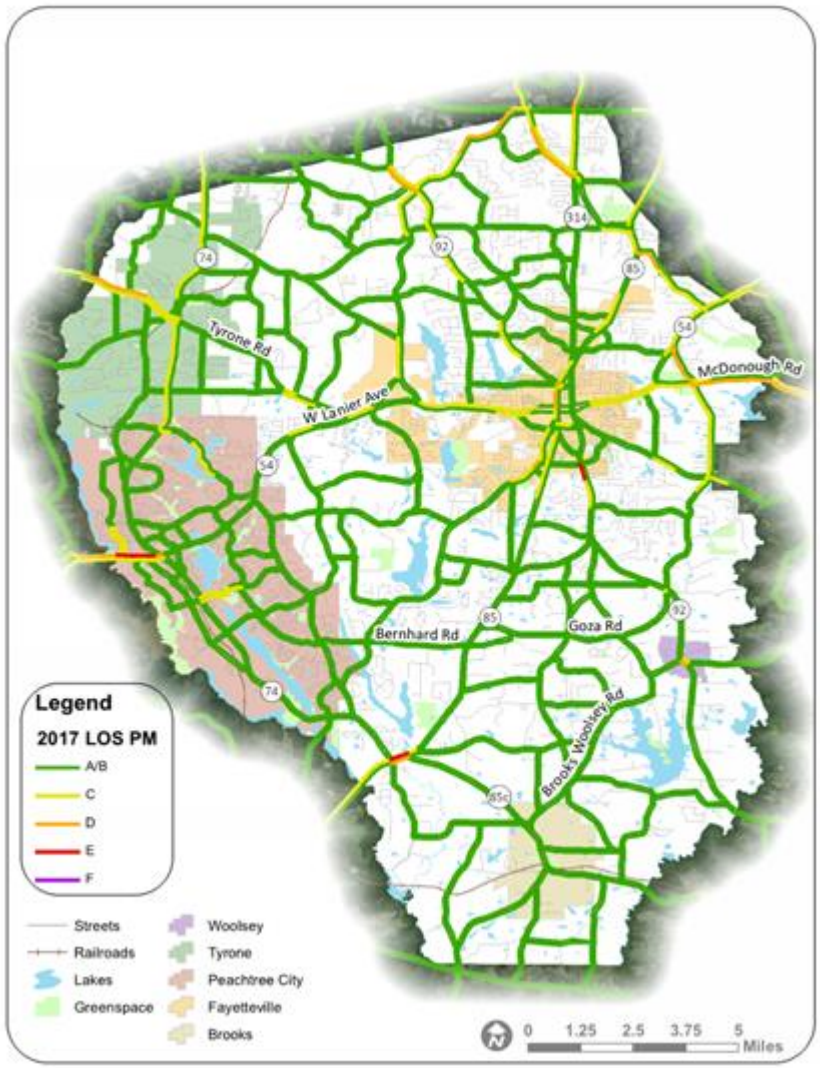
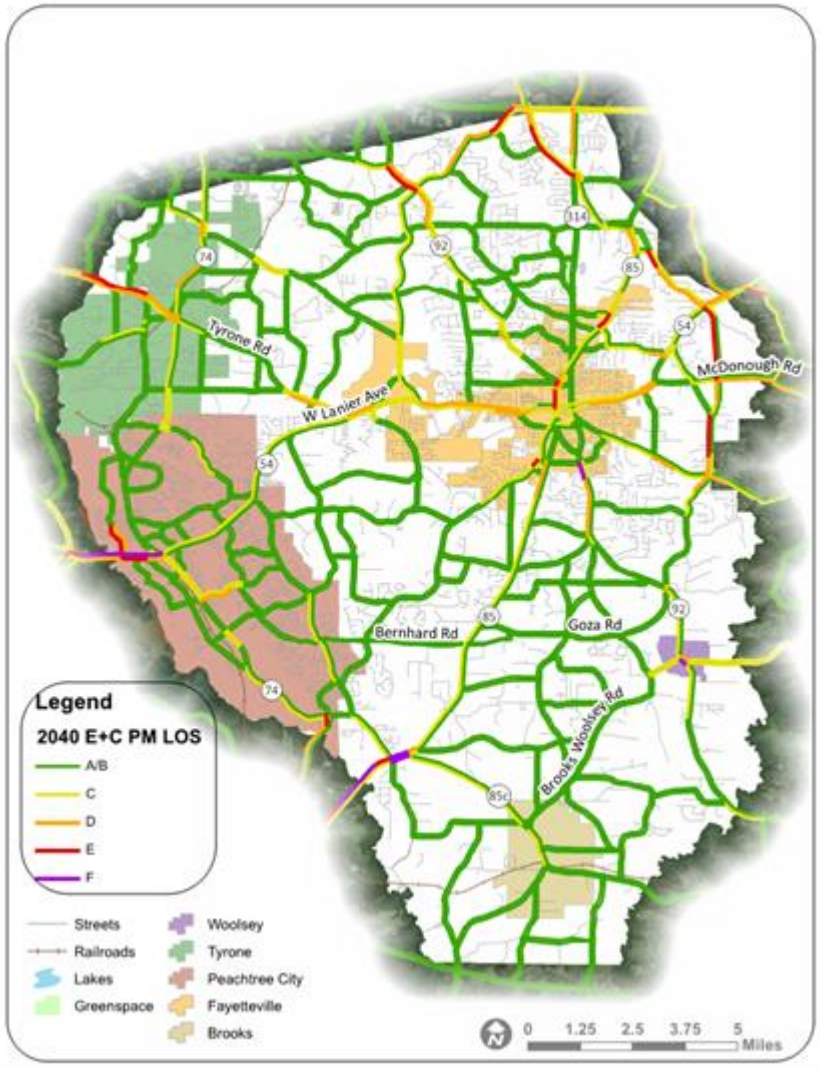


Figure 11: Afternoon Peak Period Congestion (2040 E+C)



5.2. Select Link Analysis

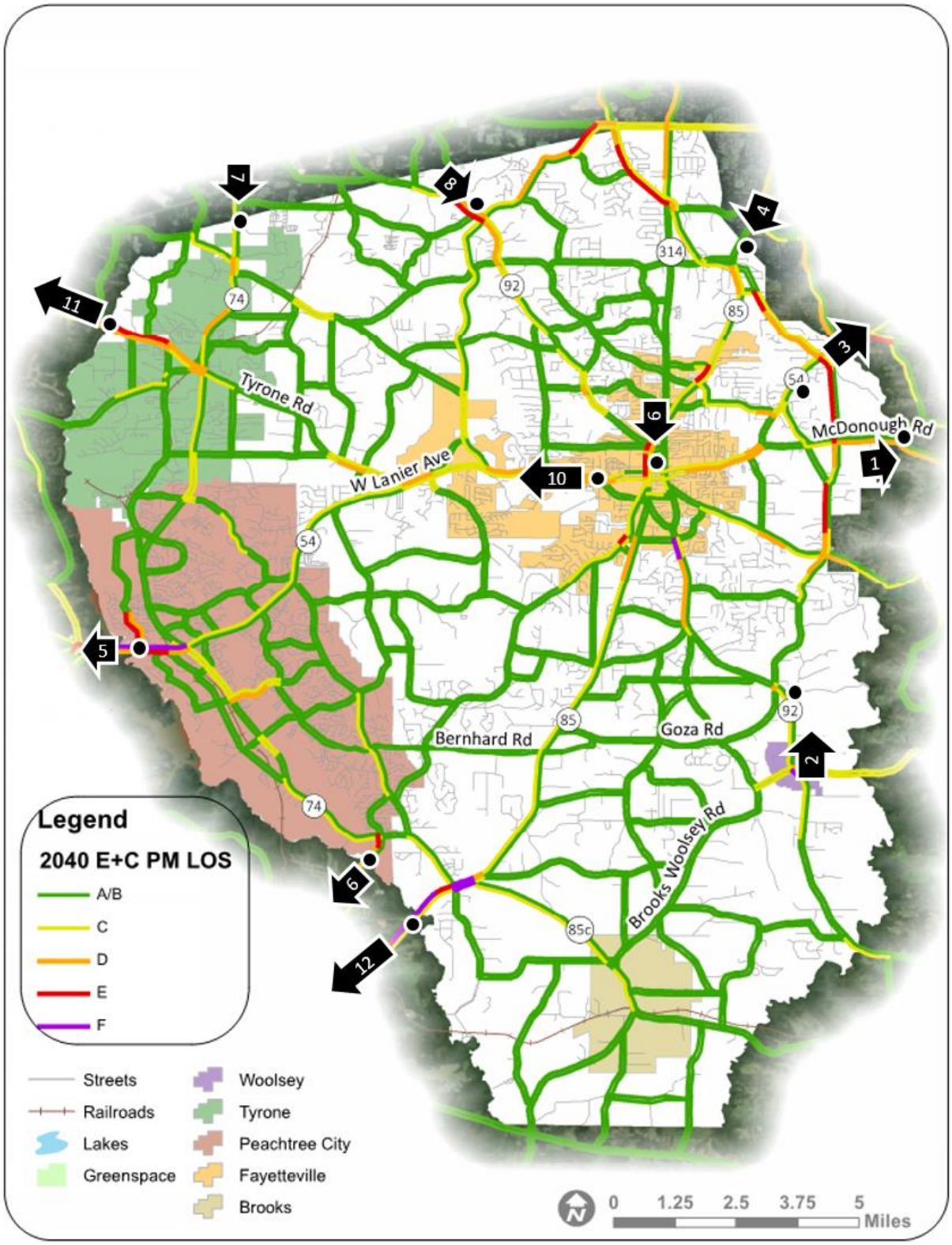
Using the travel demand model, 12 select links were analyzed in the 2017 base year afternoon peak period. For a given road segment (the "select link"), select link analysis provides an understanding of origins and destinations. The base year was used to better understand existing travel patterns. As the morning peak period often mirrors the afternoon peak, a single peak period was used for simplicity. The afternoon was chosen because it is typically the most congested peak period.

The link locations were identified due to their importance as either a primary local or regional connector. The analyses can inform travel related to proposed transportation projects such as the 2040 E+C projects including the East Fayetteville Bypass, McDonough Road widening, and additional connectivity with Coweta County to the west. The locations and associated projects are listed in **Table 8** and illustrated in **Figure 12**. See **Appendix A** for maps reflecting the results of the select link analysis.

Table 8: Select Link Locations for 2017 PM Peak Period

No	Associated Project	Roadway	Location	Direction
1	McDonough Rd Widening	McDonough Road	Eastern County Line	**EB**
2	East Fayetteville Bypass	SR 92	South of Goza Road	**NB**
3	East Fayetteville Bypass	SR 54	North of McElroy Road	**NB**
4	SR 85 widening from Clayton	SR 85	North of Corinth Road	**SB**
5	Connection with Coweta	SR 54	Western County Line	**WB**
6	To Senoia and Southern Coweta	Rockaway Road	Western County Line	**SB**
7	SR 74 from Atlanta	SR 74	Northern county Line	**SB**
8	SR 92/Veterans	SR 92	North of Rivers Road	**SB**
9	Downtown Fayetteville	SR 92/85/Glynn Street	North of SR 54/ Lanier Avenue	**SB**
10	Downtown Fayetteville	SR 54	West of Grady Avenue	**WB**
11	Connection with Coweta	Palmetto /Tyrone Road	Western County Line	**WB**
12	Connection with Coweta	SR 85	Western County Line	**SB**

Figure 12: Select Link Analysis Locations



5.2.1. Location 1: McDonough Road at the Eastern County Line

Much of the traffic on McDonough Road eastbound heading into Clayton County at the Fayette County boundary originates along SR 54 west of Fayetteville. Some traffic is collected on northeast Fayetteville via McElroy Road. Other minor flows contributing to the SR 54 stream are from the northwest on SR 92, Sandy Creek Road, and Tyrone Road and from the south on County Line Road and Redwine Road. There are many trips originating throughout Fayette County, including Peachtree City. Some origins even extend as far as Coweta County and South Fulton County, with some trips originating from I-85 and points south. Destinations of trips traversing McDonough Road at the county boundary are dispersed throughout Clayton, Henry, and Spalding Counties. Heavily used routes include Jonesboro Road and SR 81.

5.2.2. Location 2: East Fayetteville Bypass: SR 92 South of Goza Road

The East Fayetteville Bypass is intended to enable north-south movements in eastern Fayette County without having to traverse downtown Fayetteville. Two select links were chosen to analyze northern and southern areas relevant to the bypass. This southern link on SR 92 south of Goza Road shows an afternoon peak northbound split fairly evenly between Inman Road / County Line Road and SR 92. This indicates that a large volume of trips making this movement would benefit from an improved East Fayetteville Bypass to get to destinations in northeast Fayette County and northern Clayton County from southern Fayette and Spalding Counties.

5.2.3. Location 3: East Fayetteville Bypass: SR 54 North of McElroy Road

The other key component of the East Fayetteville Bypass is travel along SR 54 north of McElroy Road. Northbound in the afternoon peak, SR 54 draws trips from both County Line Road from the south and SR 54 through Fayetteville. Destinations for these trips include SR 54 to Jonesboro and beyond to I-75. Another predominant movement of trips through this select link is Corinth Road to SR 279. These existing trips would likely utilize the East Fayetteville Bypass to make this north-south movement and would also likely benefit from improvements to the Corinth Road/SR 279 corridor.

5.2.4. Location 4: SR 85 North of Corinth Road

A committed project is the widening of SR 85 from SR 279 to Riverdale from four to six lanes, predominantly in Clayton County. SR 85 is currently a four-lane section within Fayette County south to downtown Fayetteville. The select link analysis reveals a slight dispersion to the west along Kenwood Road and to the southeast on Corinth Road. The majority of the existing trips continue on SR 85 distributing to various zones along the way, with moderate flows continuing on to Redwine Road and SR 85 into south Fayette County.

5.2.5. Location 5: Connection with Coweta (SR 54)

Adjacent to one of the major bottlenecks in the county (SR 54 at SR 74), the connection of SR 54 with Coweta County serves a critical commuting flow between the counties. The select link figure shows the link drawing trips from a broad swath of SR 54 from Fayetteville, and SR 74 from both the south and north. Destinations of trips disperse throughout Coweta County in a variety of directions, as well.

5.2.6. Location 6: To Senoia and Southern Coweta (Rockaway Rd)

Based upon the select link analysis, fewer trips currently utilize Rockaway Road to Senoia than use the SR 54 connection with Coweta County. Those that do are destined for a targeted cluster of zones near Senoia. The analysis also indicates that existing trips are drawn primarily from SR 74 from Peachtree City, as well as a few other locations from the north.

5.2.7. Location 7: SR 74 from Atlanta

Based upon the select link analysis, SR 74 is a primary commute route used for Fayette County residents commuting from Atlanta. The analysis indicates that trips destined from Fulton County distributes trips to Tyrone and Peachtree City. Routes to other destinations include Sandy Creek Road, Tyrone Road, and North Peachtree Parkway.

5.2.8. Location 8: SR 92/Veterans Parkway

The August 2018 completed connection of Veterans Parkway with SR 92, which is assumed in the base year model, is analyzed through a southbound select link on SR 92 just north of Veterans Parkway. The majority of trips continue down SR 92 to Fayetteville and beyond, with a significant portion utilizing Veterans Parkway to eastern Peachtree City. Trips are drawn from both SR 92 from the vicinity of I-85 and Peters Road.

5.2.9. Location 9: Downtown Fayetteville (SR 92/85/ Glynn St)

Downtown Fayetteville is one of the county's major bottlenecks. Select link analysis reveals that all roads lead to Fayetteville and that alternative routes are needed. SR 92/85 Glynn Street southbound draws trips from SR 92, SR 314, and SR 85. Trips proceed both east and west on SR 54, to South Jeff Davis Driveto the southeast, to Redwine Road to the southwest, and to SR 85 and SR 92 to the south.

5.2.10. Location 10: Downtown Fayetteville (SR 54)

Another dimension of the downtown Fayetteville bottleneck is the need for east-west travel. Westbound trips just west of Fayetteville on SR 54 are drawn primarily from SR 54 from Clayton County, as well as SR 85 from the north and McDonough Road from the east. Many trips continue on SR 54 into Coweta County, while some split off to the northwest on Tyrone Road and Sandy Creek Road. A fair portion of the trips on Tyrone Road continue onto I-85 southbound.

5.2.11. Location 11: Connection with Coweta (Palmetto Rd)

Another major connection with Coweta County is Palmetto Road/Tyrone Road, which draws trips from SR 54 from the east and to I-85. Palmetto Road at the Coweta County boundary also draws a similar number of trips from SR 74 from the south.

5.2.12. Location 12: Connection with Coweta (SR 85)

SR 85 at the Coweta County boundary is another major connection with Coweta County and is also projected to operate with a low LOS in the future. Trips are drawn primarily from Fayetteville and points north on SR 85. Trips also take SR 74 from the north and Rising Start Road / Brooks Woolsey Road from the east. Most trips are destined for south Coweta County.

5.2.13. Key Findings

- Analysis of SR 92 and SR 54 support the need for the East Fayetteville Bypass project.
- In the afternoon peak period, traffic on SR 85 disperses throughout Fayette County. This highlights the importance of SR 85 as a regional connection for the entire county.
- More connections with Coweta County are needed.
- Alternative routes needed around downtown Fayetteville
    - Trips through SR 85 in downtown Fayetteville proceed to all parts of Fayette County and into Clayton, Coweta, and Henry Counties, as well the following state routes; SR 85, SR 54, and SR 92.
- Additional routes are needed, including east-west routes, to serve long-distance, cross-county travel. This need will become more intense in the future as population grows.

5.3. Safety

This section analyzes automobile safety. Crash data collected from GDOT for the Inventory of Existing Conditions Report was run through additional analysis for better understanding of safety risks throughout Fayette County. The Existing Conditions analysis reported absolute crash numbers. This Needs Assessment Report looks at crash rates as well.

5.3.1. Crash Rates Methodology

Crashes often occur at intersections, which by nature are where multiple movements converge and conflict. In addition, crashes can occur along roadway segments. In either case, needs may exist where improvements can be made to enhance safety. The number of crashes over the recent three (3) year period (2015-2017) was gathered from G.E.A.R.S. (the Georgia Electronic Accident Reporting System)[2] and used in conjunction with traffic volumes to calculate intersection and roadway segment crash rates. Base year 2017 travel demand model total volumes were used as the volume data source. Where applicable, GDOT Traffic Analysis and Data Application (TADA)[3] traffic counts were used to verify or correct the order of magnitude of volumes. Crashes within 150 feet of roadway center lines or intersections were considered associated with each roadway segment or intersection. Volumes within such buffers were calculated to represent the average daily volume entering each intersection or traversing through each roadway segment. Intersections were defined as locations where travel demand model links intersected. As the crashes were screened, some additional high crash intersections were defined. Roadway segments were then defined to envelope all remaining crashes, which could have occurred at intersections with minor streets and driveways. Crashes at defined intersections were excluded from roadway segment crash rates to avoid double counting.

[2] https://www.gearsportal.com/Pages/Public/Home.aspx
[3] https://gdottrafficdata.drakewell.com/publicmultinodemap.asp

The crash rate formulas for intersection crash rate (crashes per MEV-Million Entering Vehicles), r_i, and segment crash rate (crashes per MVMT-Million Vehicles Miles Traveled), r_s, are:

$$r_i = \frac{A \times 10^6}{365 \times T \times V}$$

$$r_s = \frac{A \times 10^6}{365 \times T \times V \times L}$$

Where,

A = number of reported crashes
T = time period of the analysis (3 years)
V = average daily traffic (entering intersection)
L = length of segment in miles

Table 9 and 10 list intersections and segments, respectively, that have crash rates higher than the 2015 statewide average of 3.26 crashes per million vehicle miles traveled (VMT)[4]. These intersections and segments are also mapped in **Figure 13** and **Figure 14**.

Table 9: Intersections with High Crash Rates (ranked by crash rate)

Location	Crash Rate	Daily Entering Volume	Crashes	Injuries	Fatalities
Aberdeen Pkwy at Commerce Drive	7.47	1,345	11	4	-
SR 314 at Pavilion Parkway	6.03	10,000	66	21	-
SR 314 at SR 85	5.40	31,273	185	32	-
SR 85/92 at SR 54/Lanier Avenue	4.54	49,265	245	47	-
SR 92 at Sam Helens Parkway	4.34	17,675	84	31	-
SR 314 at Kenwood Road	4.14	20,967	95	48	-
SR 85 & Whitewater High School / Sara Harp Minter Elementary School	3.94	8,350	36	19	-
SR 54 at McElroy Road	3.59	11,444	45	21	-
SR 74 at SR 54	3.50	60,053	230	39	-
Goza Rd at Antioch Road	3.39	7,276	27	31	1
Sandy Creek Rd at Eastin Road	3.39	5,126	19	13	-
SR 314 at New Hope Road	3.35	14,731	54	14	-

Source: Team analysis of GEARS crash data

[4] https://www.gahighwaysafety.org/research/ga-crashes/injuries/fatalities/ Accessed July 2018

Table 10: Roadway Segments with High Crash Rates (ranked by crash rate)

2015-2017 Crash Statistics					
Location	**Crash Rate**	**Average Daily Volume**	**Crashes**	**Injuries**	**Fatalities**
Banks Road between SR 314 & Ellis Road	9.78	4,478	35	9	-
Grady Avenue / Bradley Dr from SR 54 to Jimmie Mayfield Boulevard	6.31	4,634	53	13	-
Crosstown Blvd from Dividend Dr to Robinson Rd	5.94	3,461	54	8	-
Banks Road between Ellis Road and SR 54	5.78	7,050	54	26	-
Huddleston Road	5.33	4,321	19	12	-
Jenkins Road	5.32	2,097	14	4	-
Grant Road	4.96	393	5	-	-
Walt Banks Road	4.88	5,270	14	2	-
Morgan Mill Road	4.71	495	6	6	-
Longview Road	3.95	1,032	7	3	-
Wisdom Road	3.83	4,047	12	2	-
White Road from SR 92 to SR 314	3.82	2,929	20	5	-
South Jeff Davis Drive from County Line Road / Inman Road to Jimmie Mayfield Blvd	3.79	6,930	88	28	-
SR 85/92 from SR 54 to Ramah Road	3.68	25,200	131	35	-
Holly Grove Road	3.50	4,703	19	4	-
Milam Road / Rivers Road from county line to SR 92	3.48	1,772	24	9	1
SR 85/92 from SR 54 to SR 314	3.44	36,900	157	43	-
Hood Ave/Kathi Avenue	3.33	1,868	14	19	1
Flat Creek Road	3.28	3,105	16	3	-

Source: **Team analysis of GEARS crash data**

Figure 13: Intersections with High Crash Rates

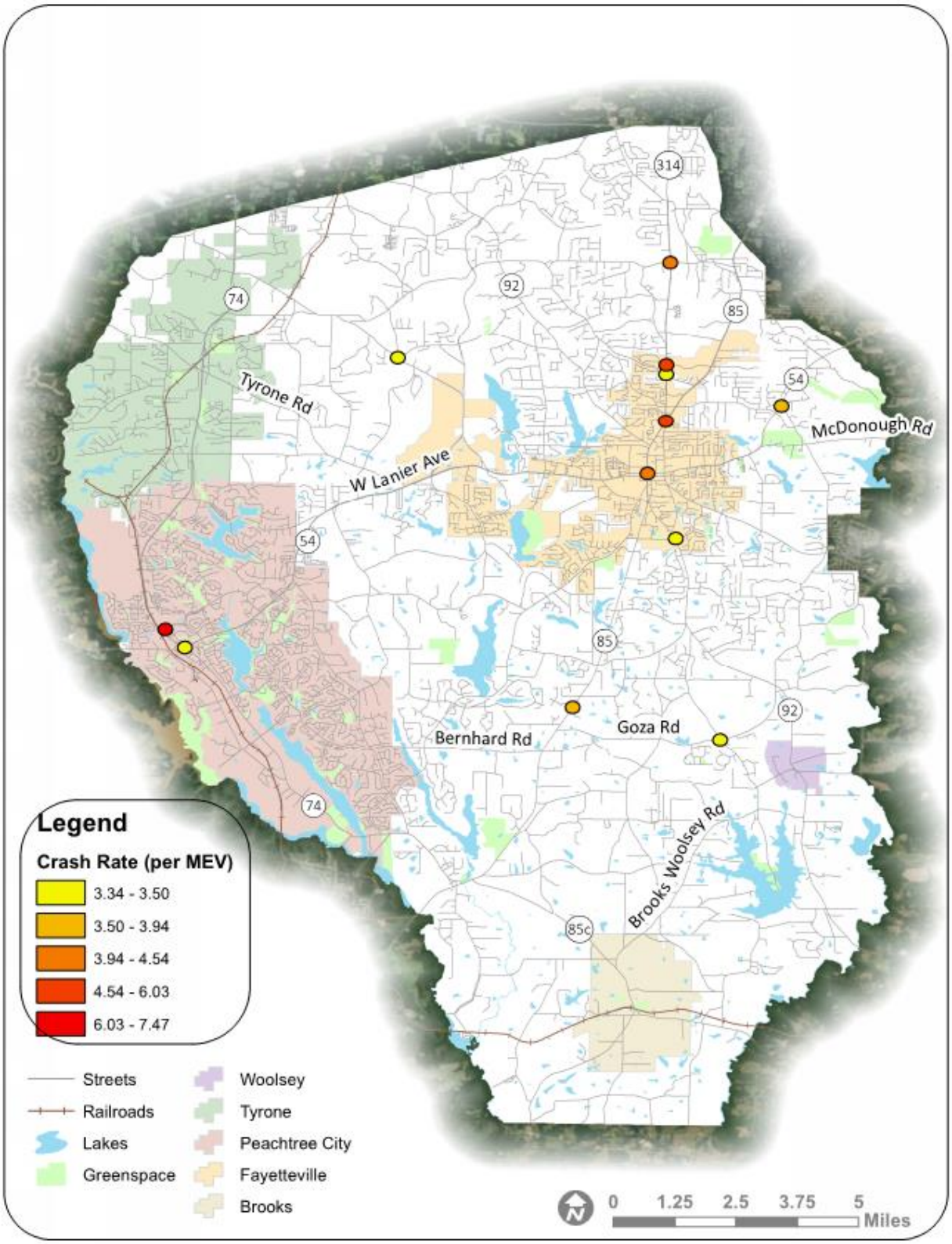
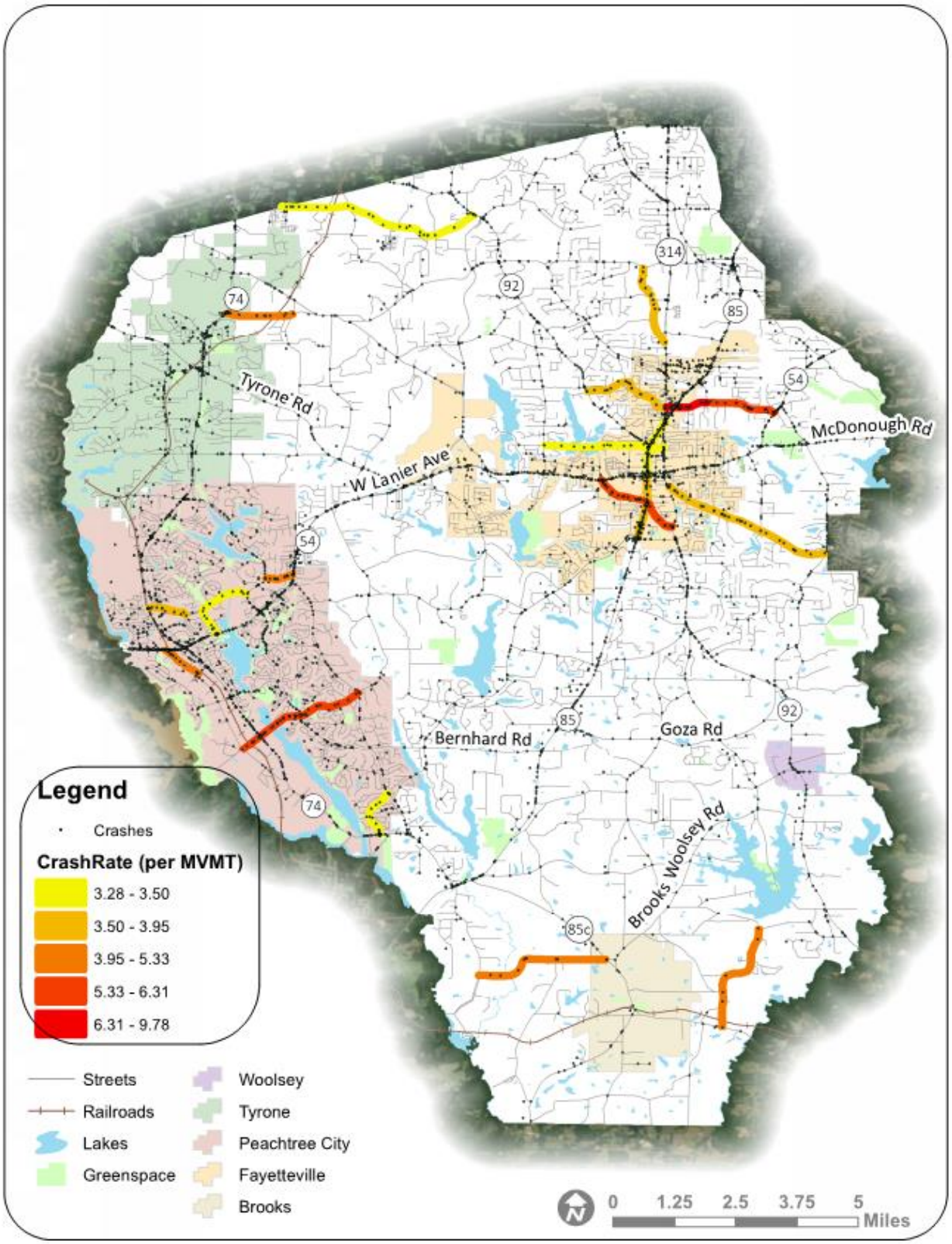


Figure 14: Roadway Segments with High Crash Rates



5.3.2. Intersection Safety Needs

Intersections with high crash rates are listed in **Table 9** and shown in **Figure 13**. The intersection with the highest crash rate in the county is Aberdeen Parkway at Commerce Drive in Peachtree City. This is a low volume, unsignalized divided intersection near businesses, offices, and a school. Based upon field review and engineering judgment, potential safety issues at this side street stop-controlled intersection include sight distance, geometry, and driver expectancy. Unlike the nearby intersection of Commerce Drive and Westpark Drive, which is a four-way stop, traffic to and from SR 74 on Aberdeen Parkway does not stop at the intersection with Commerce Drive. Through and left-turning vehicles on Commerce Drive need to enter the intersection area for a secondary stop in the median before proceeding all the way through the intersection. Vegetation along Aberdeen Parkway obstruct clear sight distance for drivers on Commerce Drive.

Partly because of their high entering volumes, several major intersections appear on the list of high crash rate locations. These include SR 74 @ SR 54, SR 85/92 at SR 54, and SR 314 @ SR 85. The sharp skew of the SR 314 @ SR 85 intersection likely is associated with side-swipe crashes for drivers driving north and south onto SR 85.

Goza Road at Antioch Road is the intersection of two rural moderate speed roads that was until recently two-way stop controlled. The lack of stop control on Antioch Road likely was associated with high instances of crashes in the 2015-2017 timeframe.

One of the high crash rate intersections is located near schools: SR 85 and Whitewater High School / Sara Harp Minter Elementary School.

5.3.3. Roadway Segment Safety Needs

Segments with the highest crash rates are listed in **Table 10** and shown in **Figure 14**. Observations from select segments are described below.

Banks Road between SR 314 and Ellis Road

Approximately 63% of all crashes along Banks Road between SR 314 and Ellis Road occurred at entrances to Banks Station Plaza, on the south side of Banks Road. Most crashes occur at the west entrance to this plaza approximately 240 feet east of SR 85. These entrances are located at un-signalized and un-divided sections of Banks Road which experience low traffic volume. Side impacts are highly likely to occur with the existing geometric layout. Although fewer crashes were reported at the east entrance of Banks Station Plaza, sight distance is a concern for patrons making right hand turns heading east on Banks Road.

Grady Avenue / Bradley Drive from SR 54 to Jimmie Mayfield Boulevard

Of all crashes occurring along this segment, most occur on Grady Avenue between SR 54 and Beauregard Boulevard. Grady Avenue is a two-lane road that serves industrial and commercial traffic from Bradford Square, in addition to Spring Hill Elementary School, Fayette Middle School, and

residential uses. The segment also serves as an alternate connection from SR 54 around downtown Fayetteville to the south, via SR 85 and SR 92.

Potential improvements include improving the skew of the Bradford Square intersection with Grady Avenue and offsetting the intersection farther from the Fayette Middle School entrance. In addition, adding left-turn lanes to the roadway could improve safety and operations. A new connection between SR and 1st Manassas Mile would potentially reroute trucks heading for the land fill off Grady Ave.

TDK/Crosstown Blvd from Dividend Drive to Robinson Road

Crashes on this segment are concentrated on Crosstown Boulevard between SR 74 and South Peachtree Parkway. Driveways to Braelinn Village Shopping Center account for 30% of all crashes within this segment. Two of three major entrances to Braelinn Village Shopping Center are unsignalized two-way stop-controlled intersections, aligning with Crosstown Court. Through movements across Crosstown Drive require traversing five (5) travel lanes and navigating six (6) conflict points.

Jenkins Road

Despite the relatively low crash count, Jenkins Road appears on the list of high crash rate locations given relatively low average daily volume. Jenkins Road serves Robert J. Burch Elementary School and Sandy Creek High School. Similar to the SR 85 and Whitewater High School/ Sara Harp Minter Elementary School intersection, the prevalence of new drivers from Sandy Creek High School is most likely the explanation for the high segmental crash rate in this area.

5.3.4. Key Findings

In general, safety improvements should be focused on:

- Ensuring adequate sight distance through redesign and/or vegetation management
- Making geometric improvements, including reducing skew
- Consistently designing intersections to comply with driver expectancy and reducing exceptions (e.g., “Cross traffic does not stop”)
- Redesigning major bottlenecks (e.g., SR 74 @ SR 54, SR 85/92 at SR 54, and SR 314 @ SR 85)
- Applying traffic calming and potential signal warrant analysis at locations with high crash rates (e.g. near schools or intersections with heavy shopping center volumes)
- Ensuring adequate intersection spacing and applying access management to reduce conflicts at commercial driveways near major signalized intersections

5.4. Truck Routes

Freight is an integral component of the metro Atlanta economy. A safe and efficient truck route network facilitates the movement of goods, as well as commuters and other transportation network users. This section addresses needs pertaining to the Fayette County truck route network.

5.4.1. Existing Routes

Figure 15 displays the existing truck routes and prohibited truck routes. Current County code identifies four corridors as no-truck routes: Brogdon Road, Buckeye Road, Gingercake Road, and Jenkins Road. Trucks cannot be prohibited on state routes making them default truck routes within the county.

With the building of Pinewood Studios, and the increase in development in that area of the county, designating new east-west and north-south truck routes, with upgrades to those roads, could mitigate future congestion in the area. Currently, the major north-south thoroughfares are SR 74 and SR 85. SR 54 is the only east-west corridor that traverses the entire county.

5.4.2. Truck Counts/Percentages

To assess the freight needs of Fayette County, the existing truck route network was analyzed with truck traffic counts from Geocounts Traffic Counts, via GDOT[5]. **Figure 16** depicts the existing truck route network as well as the traffic counts. The roadways with the most truck traffic are SR 74, north of the intersection of SR 74 and SR 54, and on SR 54 from Coweta County to SR 85. Given that many trucks travel from Interstate 85 to the retail and industrial land uses in Peachtree City, and east and west across the county, there are high volumes of truck traffic along these two corridors.

[5] http://geocounts.com/gdot/

Figure 15: Existing Fayette County Truck Routes

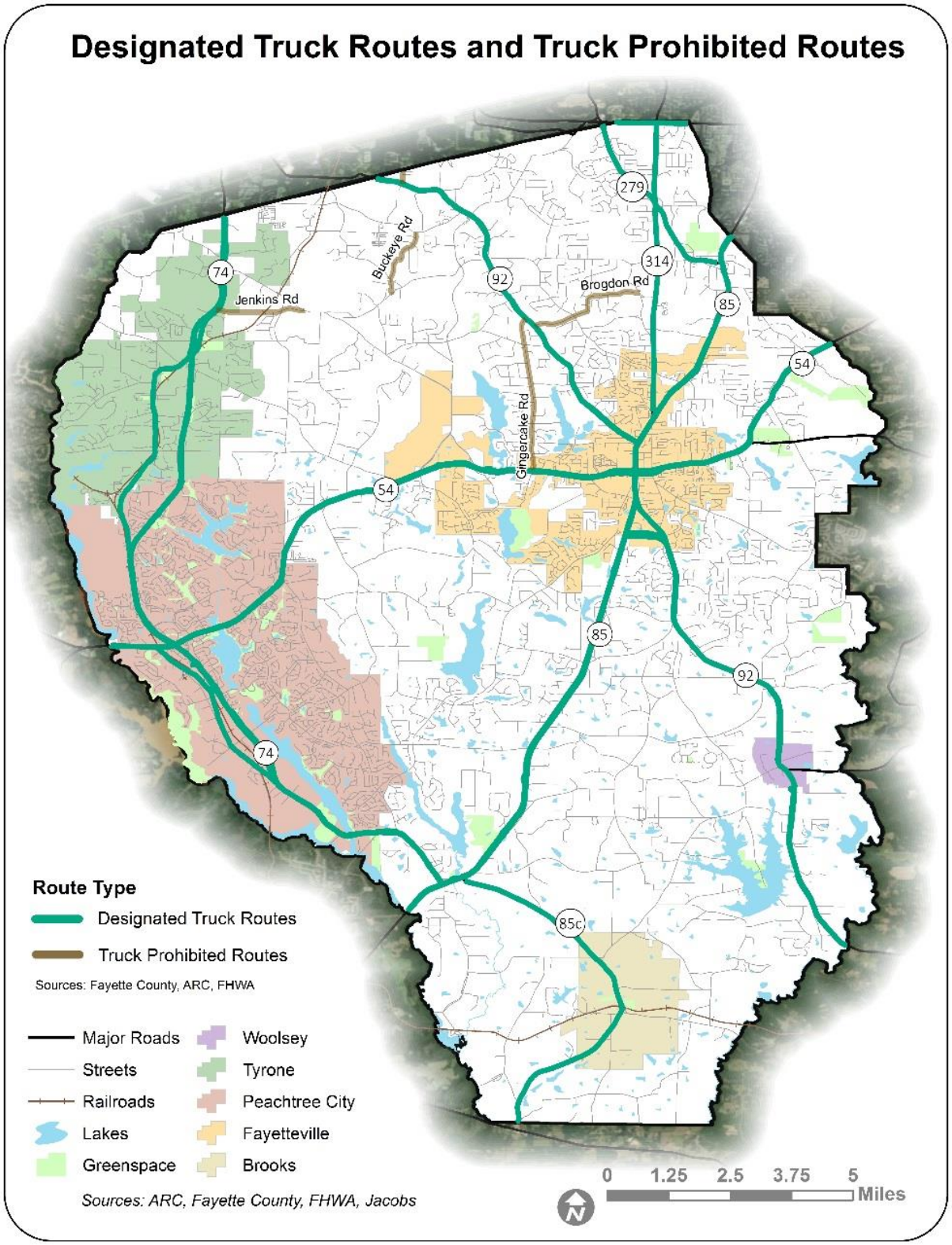
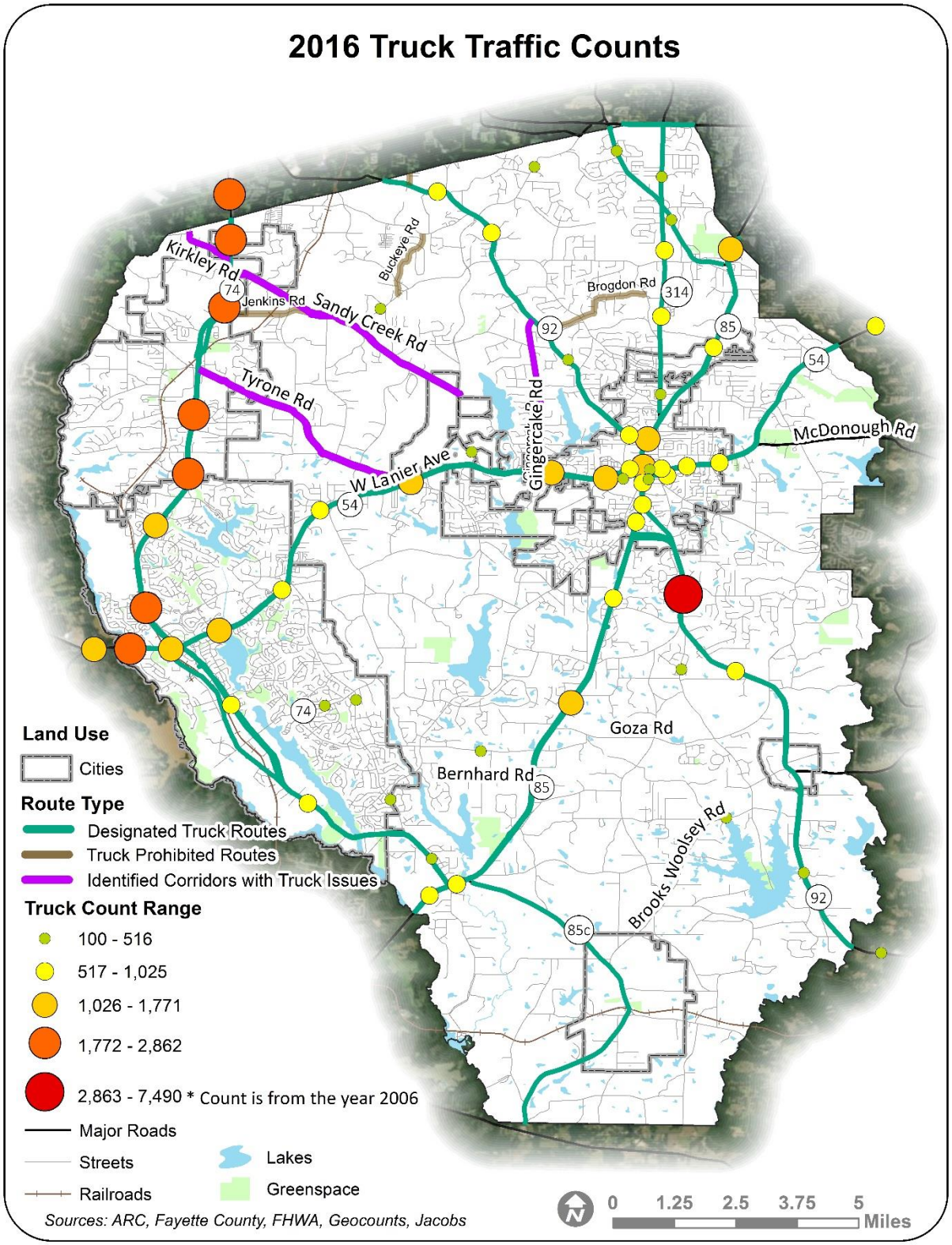


Figure 16: Fayette County Truck Traffic Counts



5.4.3. Truck Route Gaps and Assessment

This section provides an assessment of the current Fayette County truck network and whether it is adequate to properly accommodate freight movement.

Freight Generating Land Uses

Figure 17 displays identified freight generating land uses. These land uses include warehousing, manufacturing, commercial, and mining/quarries. Such land uses are likely to produce higher numbers of truck trips. They are mostly concentrated along state routes with the exception of the Martin Marietta-Tyrone Quarry located in southern Tyrone just west of SR 74. This indicates that the state routes are generally adequate for providing both long distance mobility and last mile access to the freight generating land uses. Crabapple Lane/Rockwood Road in Tyrone could be identified as a connector freight route for better access to the quarry.

Access to I-85 via Sandy Creek Road and Tyrone Road

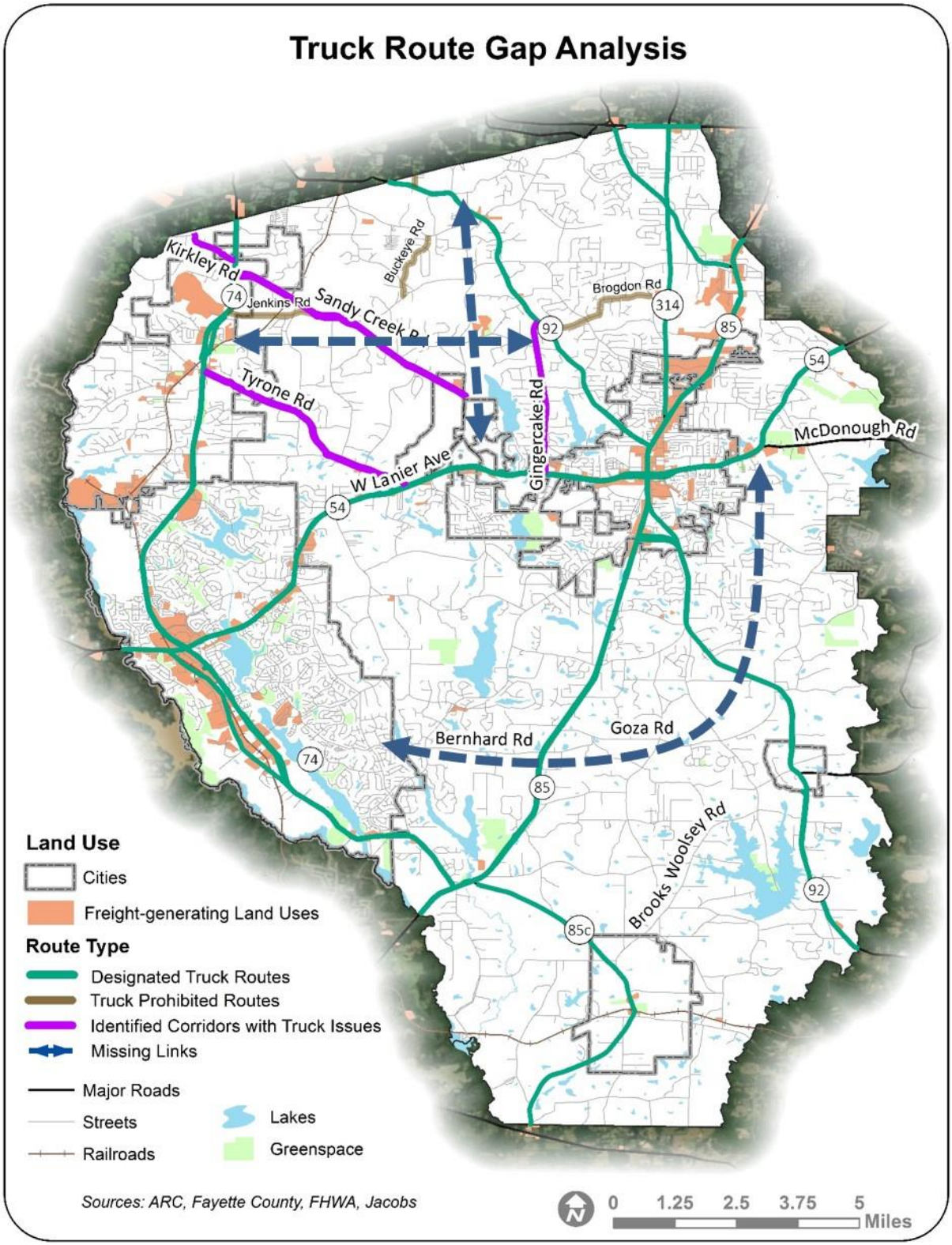
Truck count data shown in **Figure 16** indicate that trucks travel heavily along SR 74 and moderately so along SR 54. SR 74 provides access to I-85, the Fairburn intermodal yard, and warehousing/distribution centers along Oakley Industrial Blvd. Community feedback from public meetings indicates that trucks utilize both Sandy Creek Road and Tyrone Road as an east-west connection between SR 74 and Fayetteville. This route is more direct than continuing south along SR 74 to access SR 54 to travel east. Given that trucks will choose the most direct routes to make deliveries, these movements can be expected to continue.

One or both of these roadways could be possible new truck route candidates (**Figure 17**). With upgrades, these two roadways, as well as Veterans Parkway, could expand the Fayette County Truck Route Network, facilitating truck travel throughout the county. Fayette County has scoping studies planned for both corridors that will investigate these issues and provide recommendations.

East-West Connectivity South of SR 54

Gap analysis of the truck route network indicates a missing east-west truck corridor south of SR 54 (**Figure 17**). This gap is not a pressing need because of limited freight generating land use in central and southern Fayette County. As the county continues to develop and congestion grows on SR 54 trucks may seek an alternative route around downtown Fayetteville. The Bernhard-Goza-Inman-County Line corridor may warrant addition as a truck route in the future – especially when the East Fayetteville Bypass project is completed.

Figure 17: Fayette County Truck Gap Analysis



5.4.4. Truck Route Ordinance

Current Fayette County policy, is to prohibit trucks on specific roads (usually based upon community requests). It would be more comprehensive to implement a blanket prohibition of through truck movements on all county roads with the exception of officially designated truck routes. These designated truck routes in combination with the state route system would encourage trucks to only use designated truck routes.

Wayfinding signage could be implemented in order to guide truck traffic along the designated truck roadways. Another key aspect of facilitating the preferred truck travel movements is to communicate and coordinate with law enforcement about the truck route policy and its enforcement.

Candidates Truck Routes

Candidate roads that could be designated truck routes include: Bernhard-Goza corridor, Crabapple Lane, Sandy Creek Road, Tyrone Road, and Veterans Parkway.

5.4.5. Route Design Parameters

While highway functional classification and associated characteristics can help predict truck usage, generally, intended use and vehicle design will guide attributes that may influence commercial operator usage. Roadway access to and from industrial and freight-generating land uses is fundamental to ensure reliability of goods movement in the metro Atlanta region. While interstate improvements facilitate movement across and within the region, 'truck-favorable' roadways and road characteristics can induce truck travel. Key elements to 'truck-favorable' roadways are:

- Improvements at key intersections
- Limiting driveway access
- Minimal on-street parking
- Underground utilities or utilities located within landscape width
- Maintaining adequate bridge widths
- Adequate median and lane width
- Horizontal alignment (linear versus multiple curves)
- Number of lanes (capacity)
- Widening shoulders to accommodate trucks
- Adding guardrails and barriers
- Wayfinding usage for designated truck routes

Truck mobility standards must be weighed against the overall character of the area. The design for vehicle movements can preserve a balance between the thoroughfare's function and the needs of the communities that the thoroughfares serve.

5.4.6. Key Findings

Based on the Georgia Department of Transportation year 2016 truck traffic counts the roadways with the highest truck traffic counts are in the northern half of the county. They include:

- SR 74
- SR 54
- SR 85

Designating new east-west and north-south truck routes throughout the county could mitigate future congestion in the county. Possible new truck route candidates include:

- Bernhard Road-Goza-Inman-County Line-East Fayetteville Bypass Corridor
- Crabapple Lane
- Sandy Creek Road
- Tyrone Road
- Veterans Parkway

Designing new truck routes and standards must be weighed against the overall character of the area and how best these roadways can function given the activities and needs of the communities the thoroughfares serve.

6. Active & Alternative Transportation Needs

Active transportation encompasses modes of travel that require human energy, primarily walking and bicycling. This term draws the connection between healthy, active living and our transportation system and choices. The benefits of active transportation are numerous and include reduced roadway congestion, travel-time savings, improved health outcomes, and increased recreational opportunities.

For this analysis, the needs of golf cart users were also considered.

Master Path Plan

An outcome of this planning process includes the identification of a Master Path Plan (MPP). Peachtree City is known throughout the country as an innovative planned community with an ingrained path network. The intent of the Master Path Plan is to identify ways to expand the path network throughout the county. The MPP will connect population centers, schools, parks, commercial land use, and other recreational opportunities. The MPP will accommodate pedestrians, bicyclists, and golf cart users.

Origins, Destinations, and Needs

An extensive amount of analysis has been conducted to identify needs relating to the expansion and improvement of the path network in Fayette County. This involved a variety of data sources including population projections, a walking propensity analysis, field counts and surveys, Strava bicycle data and public/stakeholder input.

6.1. Population and Downtown Activity Centers

An important goal of the Master Path Plan is to develop a path network that links all of the major

population centers within the county. Linking major activity centers is also a major goal of the plan. Population centers and major activity centers have been mapped in **Figure 18** to illustrate where path connections are needed. General connection locations have been identified to demonstrate where potential links are desirable. This will be used to develop specific trail alignments as the path network is refined.

Population centers were identified by examining existing and projected residential densities in 2017 and 2040. Population centers are areas with densities greater than two persons per acre in 2040, which represents the typical densities of suburban subdivisions. Major activity centers were identified through a variety of sources including the ARC, Developments of Regional Impact (DRIs), commercial centers and employment centers.

6.2. Walking Propensity Analysis

A walking propensity analysis was conducted to identify priority areas for pedestrian facility improvements. This involved an assessment of four factors that contribute to the need for pedestrian facilities. This includes school and park zones, pedestrian crashes, intersection density, and existing land uses. Using spatial analysis tools in ArcGIS these elements were weighted and layered to generate a walking propensity score for every location within the county. These factors were weighted according to their relative importance. These weights are presented in **Table 11** below. The final output from this analysis is displayed in **Figure 19,** with key findings provided in **Section 5.2.5.**

Table 11: Walking Propensity Analysis Factors and Weighting

Factor	Weight
Existing Land Use	30%
School and Park Zones	30%
Intersection Density	30%
Pedestrian Crashes	10%

Source: Jacobs

6.2.1. Existing Land Uses

Land use patterns are an important factor in assessing pedestrian demand. Commercial uses, high-density residential, parks, schools, and libraries have a greater potential to generate pedestrian trips than lower-density residential, agriculture, or industrial land uses. Values between 1 and 10 were assigned to various land use categories to reflect their relative tendency to attract and produce pedestrian trips. **Table 12** below details the point values assigned to each land use category used in the analysis.

Figure 18: Population and Activity Center Path Connectivity Needs

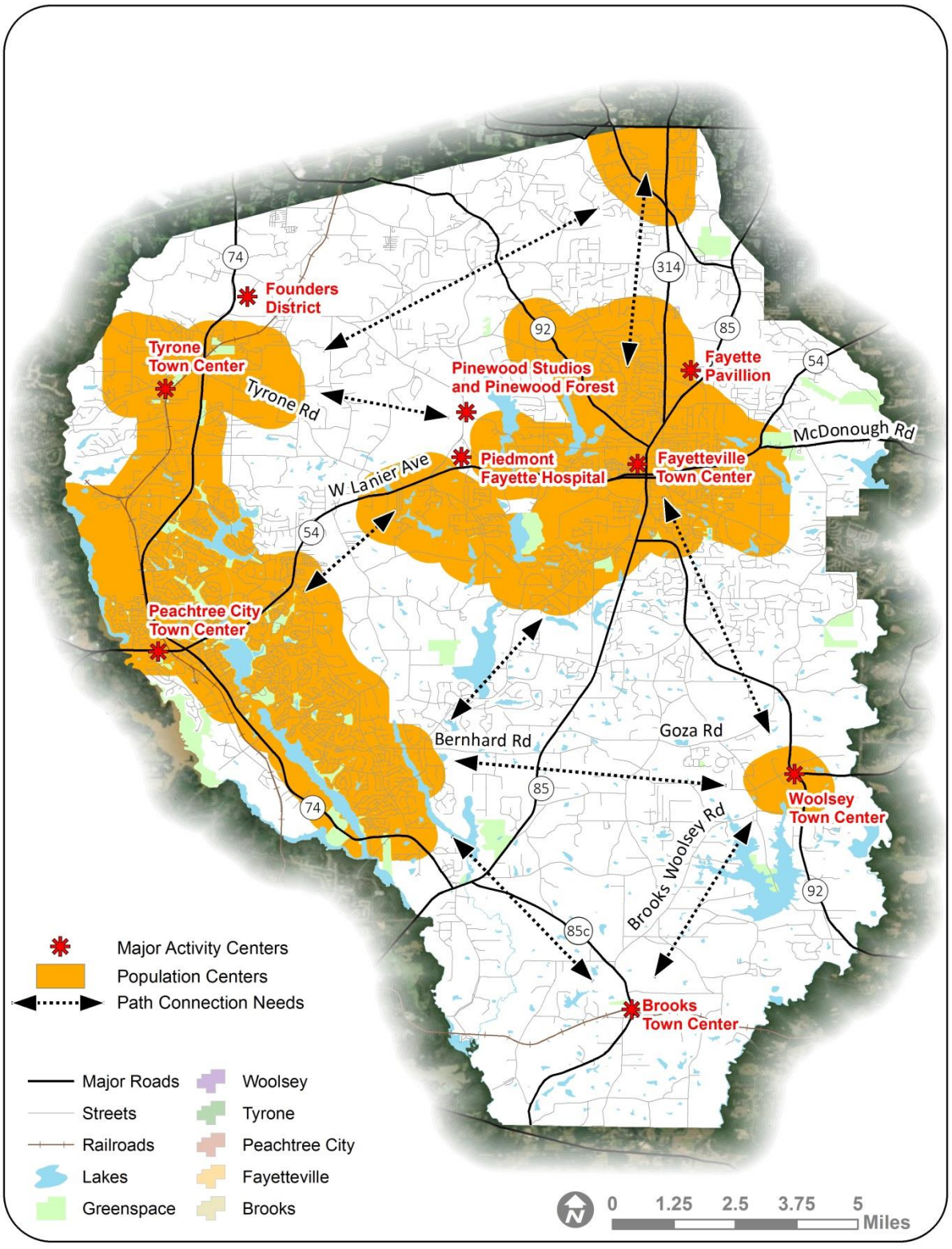


Table 12: Pedestrian Demand Values for Existing Land Uses

Land Use	Scoring Value
Commercial	10
Residential High-Density	10
Residential Multi-Family	10
Parks	10
Park Lands	10
Church	8
Institutional Extensive	8
Institutional Intensive	8
Residential Medium-Density	5
Residential Low-Density	5
Industrial-Commercial	4
Residential Mobile	5
Industrial	3
Golf Courses	3
Cemeteries	3
Transportation, Communications, Utilities	1
Agriculture	1
Forest	1
Reservoirs	1
Wetlands	1
Quarries	1
Transitional	1
Limited Access	1
Landfills	1
Airport	1
Construction	1
Rivers	1
Urban Other (Undeveloped)	1

Source: Jacobs

6.2.2. School and Park Zones

In addition to the school and park uses captured in the land use analysis, an additional element was included which represents comfortable walking distances to schools and parks. This is reflected as a half-mile buffer around schools, parks, and greenway entrances. This was included to prioritize areas around schools and park/greenway entrances, where missing sidewalk connections are a critical need. Since many younger students lack personal access to vehicular transportation pedestrian facilities are vital in these areas. Pedestrian connections to parks and greenways are also an important community need which encourages active transportation, physical activity, and healthy recreational opportunities.

6.2.3. Pedestrian Crashes

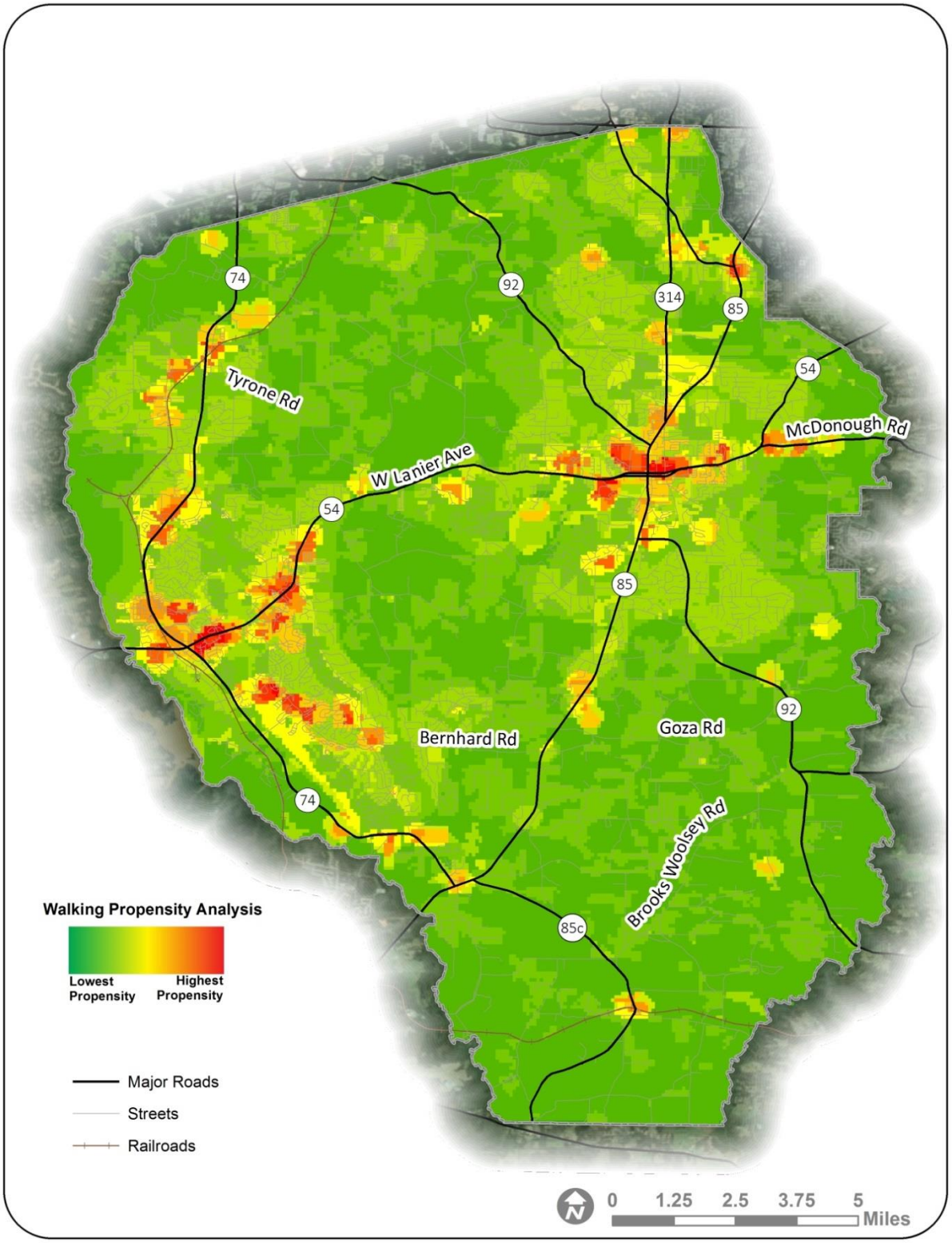
Locations where pedestrian crashes occur may be important areas for new pedestrian facilities. These areas may have a critical need for pedestrian facilities or safety enhancements. These areas also highlight where individuals are walking within the county. To incorporate these areas in the analysis a quarter-mile buffer around each pedestrian crash location was used. Due to the relatively low number and isolated nature of pedestrian crashes in the county this layer was given a weight of 10 percent, compared to 30 percent for the other three factors in ArcGIS.

6.2.4. Intersection Density

A series of studies have consistently shown that one the strongest predictors of pedestrian activity is intersection density[6]. Intersection density is a measure of how closely roadways are grouped together and relative block size. Areas with high levels of intersection density are more conducive to pedestrian travel as they provide more connection opportunities, shorter blocks and more direct routes for those on foot. Four-leg intersections were weighted more highly than three or two leg intersections within the model, as these intersections offer the greatest connectivity. This weighting helps to avoid over-scoring of suburban-style neighborhoods that may rely on cul-de-sacs and loops and therefore, are not highly walkable. Areas with high intersection density in the county include downtown Fayetteville and Peachtree City.

[6] McCormack and Shiell: In search of causality: a systematic review of the relationship between the built environment and physical activity among adults. *International Journal of Behavioral Nutrition and Physical Activity* 2011 8:125.

Figure 19: Walking Propensity Analysis



6.2.5. Walking Propensity - Key Findings

Key takeaways from the walking propensity scoring are as follows:

- Areas with high walking propensity can be found dispersed throughout the county, but they are primarily clustered in Peachtree City and Fayetteville. This reflects the presence of high intersection density and pedestrian generating land uses in these areas.
- The presence of school and park locations can be seen as contributing to pockets of pedestrian demand in many locations. This is particularly evident at school clusters, such as Starr's Mill High School, McIntosh High School and Whitewater High School.
- The highest walking propensity scores are found in downtown Fayetteville, surrounding Peachtree City City Hall, Braelinn Village Shopping Center, Luther Glass Park, McIntosh Trail Recreation Center, and Fayette Middle School.
- High walking propensity areas will serve as priority need areas for pedestrian improvements. These areas will be examined for missing pedestrian infrastructure and the county-wide propensity scoring will be used to develop prioritization scores for pedestrian projects.

6.3. Survey Counts

In November of 2017, the project team and community volunteers, conducted field counts and intercept surveys of bicyclists, pedestrians and golf cart users at a variety of locations throughout the county. Fourteen locations were chosen by the project management team as being major hot spots for walking, biking and golf cart use (locations shown in **Figure 20**). This included schools, shopping centers, parks, path locations and other activity centers. These counts were conducted in accordance with the methodology of the National Bicycle and Pedestrian Documentation Project (NBPDP). This permitted the counts to be used to extrapolate estimates for annual totals of pedestrians and bicyclists in these locations. The methodology factored in time of day, time of week, time of year, and weather conditions to develop these estimates.

The annual count estimates were used to identify priority areas for bicycle, pedestrian and path improvements, based upon the highest anticipated demand. The top five bicycle locations in the county were all located in Peachtree City: Battery Way Park, Peachtree City Library/City Hall/Picnic Park, Hip Pocket Road, The Avenue, and Starr's Mill High School. A three-mile buffer was established around these locations to identify any missing bike facilities or path connections. Three miles was selected to represent a comfortable biking distance, which takes approximately 15 minutes at an average pace.

The top five highest pedestrian locations in the county are Battery Way Park, Fayetteville Town Center (at the intersection of SR 85 and SR 54), Peachtree City Library/City Hall, McCurry Park, and Shamrock Park. A quarter-mile buffer was established around these locations to identify any missing pedestrian or path connections to these locations. A quarter-mile is considered comfortable walking distance, which takes approximately 5-7 minutes at an average pace.

The large number of golf cart users recorded at count stations demonstrates that this is a major mode of transportation within the county. Golf cart users were the most common user type at count stations in

Peachtree City and Tyrone, outnumbering bicyclists and pedestrians combined by a factor of near 2 to 1. The locations with the most golf cart users were parks, high schools, and shopping centers. This included Peachtree City Library/City Hall/Picnic Park, Battery Way Park, The Avenue, and Starr's Mill High School. A large number of shopping trips and high school commutes completed via golf cart were logged. Golf cart transportation is a significant factor in Peachtree City's transportation system and has the potential to reduce future traffic congestion throughout Fayette County, particularly if the path network is expanded and links more origins and destinations throughout the county.

In addition to user counts, intercept surveys were also conducted in the field to better understand why and how people use the path system. The top three trip purposes of path users included health-exercise (48 percent), shopping-errands (23 percent), and social-leisure-dining (14 percent). Respondents traveled via golf cart to the survey location more than any other mode and over a third traveled to the location more than 20 times per month via golf cart. The top three characteristics of the trail system that users appreciated the most includes access to nature (38 percent), convenience (34 percent), and separation from cars (32 percent).

The intercept survey also polled users on needed path improvements. The most commonly heard needs included enhanced safety and security (29 percent), improved maintenance – filling potholes and cleanup (27 percent), and more connectivity/larger path network (25 percent). Other needs included wider paths (17 percent) and golf cart driver education (17 percent). Other needs that were heard less frequently include safer crossings (10 percent), better wayfinding (8 percent), and more bicycle/golf cart parking and charging stations (4 percent).

6.3.1. Survey Counts - Key Findings

Key takeaways from the survey counts include the following:

The top three **TRIP PURPOSES** of path users:

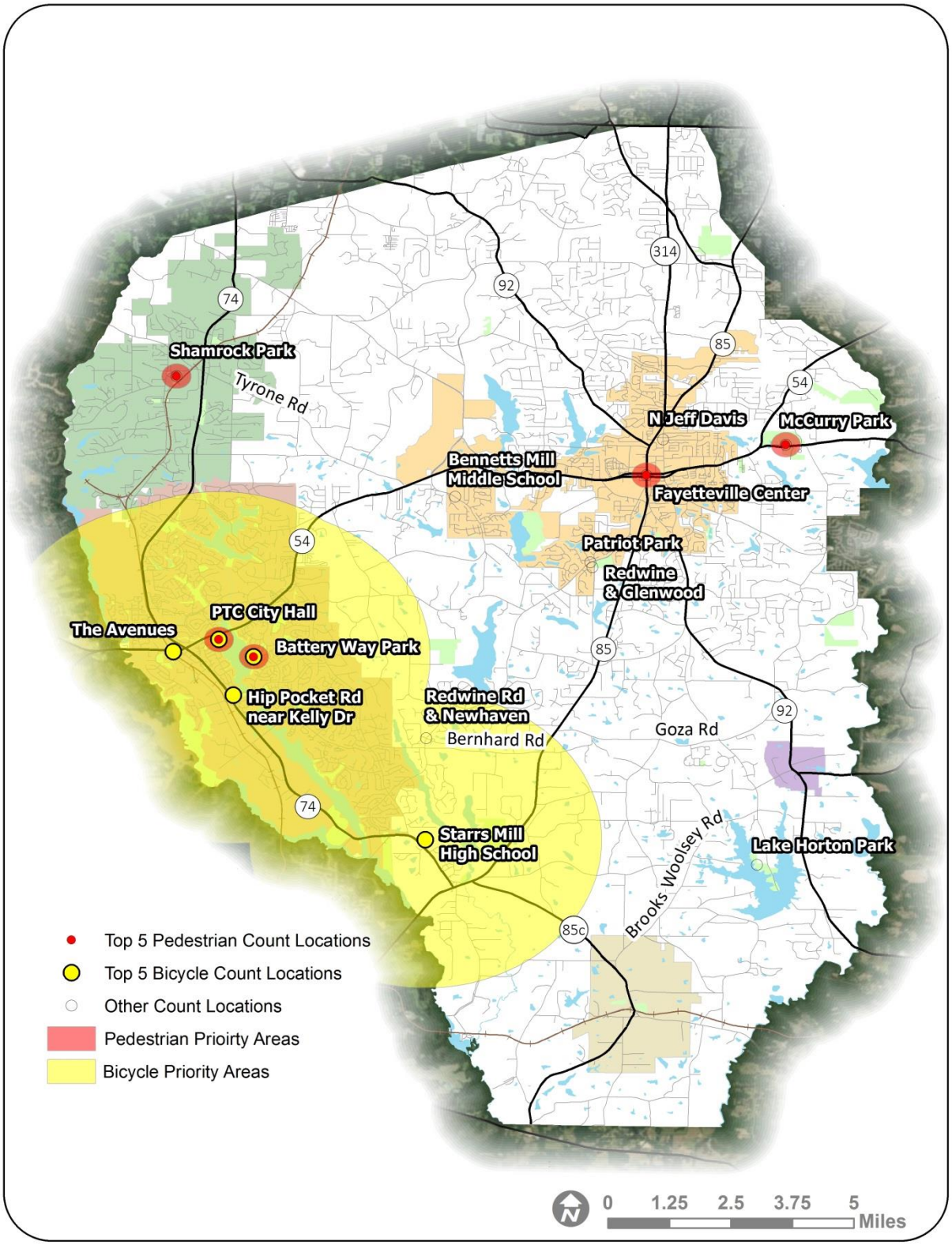
1. Health-exercise (48 percent),
2. Shopping-errands (23 percent)
3. Social-leisure-dining (14 percent)

The top three **CHARACTERISTICS OF THE TRAIL SYSTEM THAT USERS APPRECIATED** the most:

1. Access to nature (38 percent)
2. Convenience (34 percent)
3. Separation from cars (32 percent)

Golf cart users were the most common user type at count stations in Peachtree City, outnumbering bicyclists and pedestrians combined by a factor of nearly 2 to 1.

Figure 20: Survey Counts



6.4. Strava

Bicycle usage data was collected from Strava users to help identify the most frequently used bicycle routes in the county. Strava is a mobile fitness app that many bicyclists utilize to track their rides. This data source provides information on the total number of bicycle trips, unique cyclists, and bicycle commutes. The data reflects an annual count for trips conducted between April 2017 and April 2018.

The most frequently used bicycle corridors in the county are highlighted in **Figure 21**. Many of these roads are found in more rural areas of the county with low traffic volumes. They are found primarily in the central and southern portions of the county, with some found in northwest Fayette County. Roadways popular with the recreational cyclists are mainly less-trafficked with limited intersection control and dely. Examples include Goza Road, Bernhard Road, Brooks-Woolsey Road, Old Greenville Road, Ebenezer Church Road, and Lees Lake Road.

While routes discussed are heavily frequented by cyclists, adding bicycle lanes is often not desired by recreational riders. Bike lanes in these locations will tend to fill with debris and become dangerous for cyclists on road bikes. On-road cyclists are generally more fearless and do not need or require bike lanes to feel comfortable on the road. More appropriate bicycle needs and treatments in these areas include maintaining good pavement conditions, debris-free paved shoulders and the signing of bicycle routes with ‘Share the Road’ or ‘May Use Full Lane’ signage.

In addition to rural roadways, the path system in Peachtree City also shows a high level of bicycle use. This is particularly evident along the Hip Pocket Road loop around Lake Peachtree and the path that parallels Shadowood Creek. Several suburban roadways in Peachtree City are also highlighted as major bicycle corridors, including; Windgate Road, Robinson Road, and McIntosh Trail. All feature parallel multi-use paths in certain locations, which are likely used by cyclists of various skill and comfort levels. The multi-use trails are not continuous, however. Connecting existing trails is an identified need to provide a continuous comfortable facility for users of heavily biked corridors.

The Strava data divides total bicycle trips into commute trips and recreational trips. Commute trips are assumed by long dwell times at starting and stopping points. The majority of trips in the county are classified as recreational in nature (89 percent versus 11 percent for commute trips). Commute trips are displayed in **Figure 22**. The bicycle commute data indicates a pattern of commuting to employment centers in Tyrone and Peachtree City.

Major commute corridors are shown in red and orange and include Goza Road, Bernhardt Road, Redwine/Robinson Road, Ebenezer Church Road, Ebenezer Road, Tyrone Road, and Brooks-Woolsey Road. Commute corridors may be appropriate for sidepath and bicycle lane treatments to provide options for ‘interested but concerned’ bicyclists who may not feel comfortable riding directly in the travel lane. At the very minimum-commute corridors should feature wide paved shoulders and good signage alerting drivers to the presence of cyclists.

It is important to note that while Strava data is very helpful in identifying needs, it has limitations in that it only reflects the travel patterns of app users who have activated the recording device. It is not representative of overall bicycle trips within the county, as it tends to skew towards the recreational

rider and more serious cyclists. This data source is just one input used to identify bicycle needs within the county and reflects just one piece of the total puzzle. Additional analysis of bicycle needs is presented in **Section 5.8**.

6.4.1. Strava - Key Findings

Key takeaways from the Strava data analysis are as follows:

Top bike corridors for Strava users are concentrated in rural areas of the county with low traffic volumes in central and southern Fayette. They include:

- Goza Road
- Bernhard Road
- Brooks-Woolsey Road
- Old Greenville Road
- Ebenezer Church Road
- Lees Lake Road

Adding bicycle lanes is often not desired by recreational riders. Bike lanes in these locations often fill with debris and become dangerous for cyclists on road bikes. More appropriate bicycle needs and treatments in these areas include maintaining good pavement conditions, debris-free paved shoulders and the signing of bicycle routes with ‘Share the Road’ or ‘May Use Full Lane’ signage. In addition, adding "Share the Road" signs and providing extra pavement to allow motorists to give three feet when passing is desirable.

Figure 21: Total Bicycle Counts (Strava 2017 – 2018)

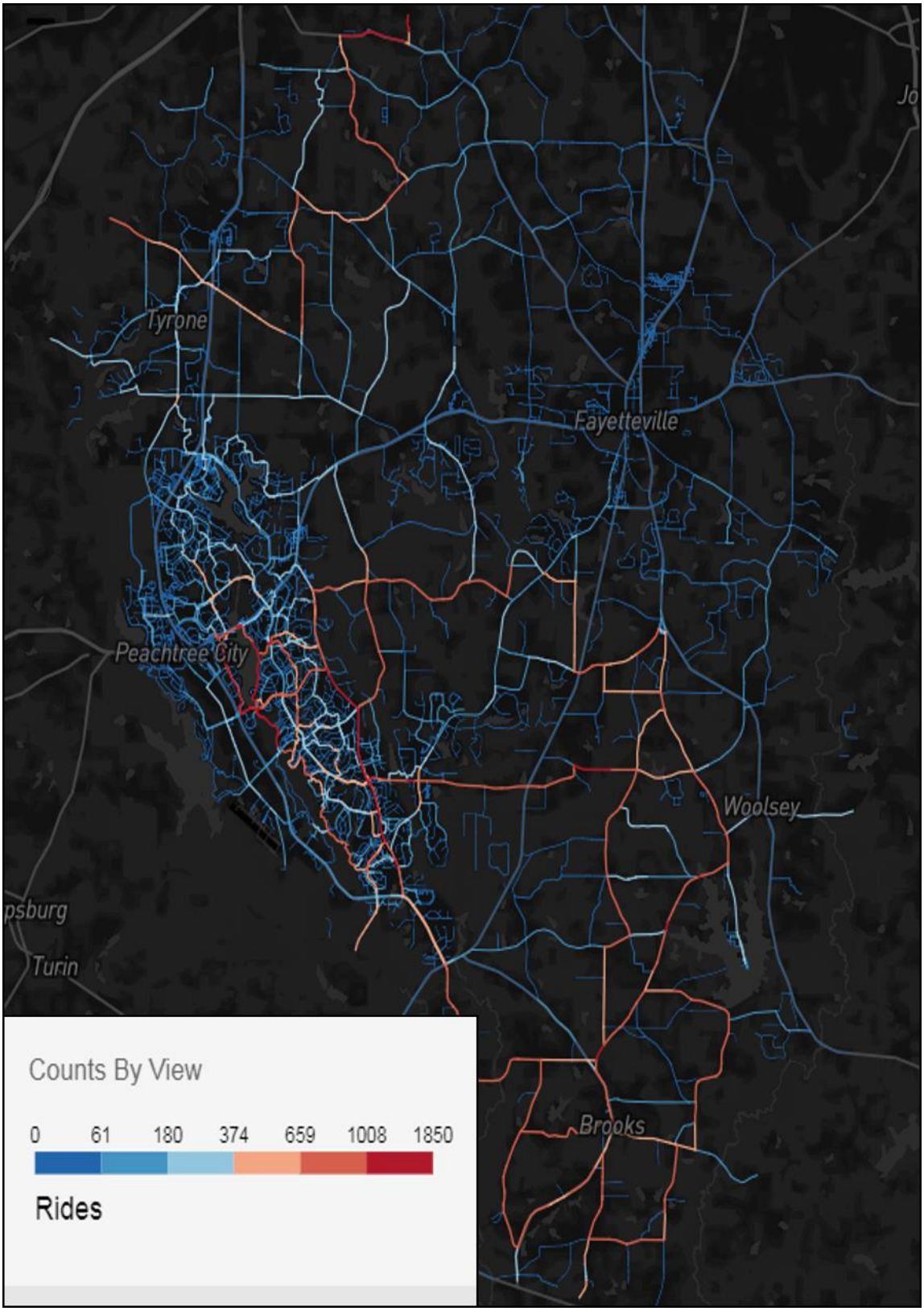
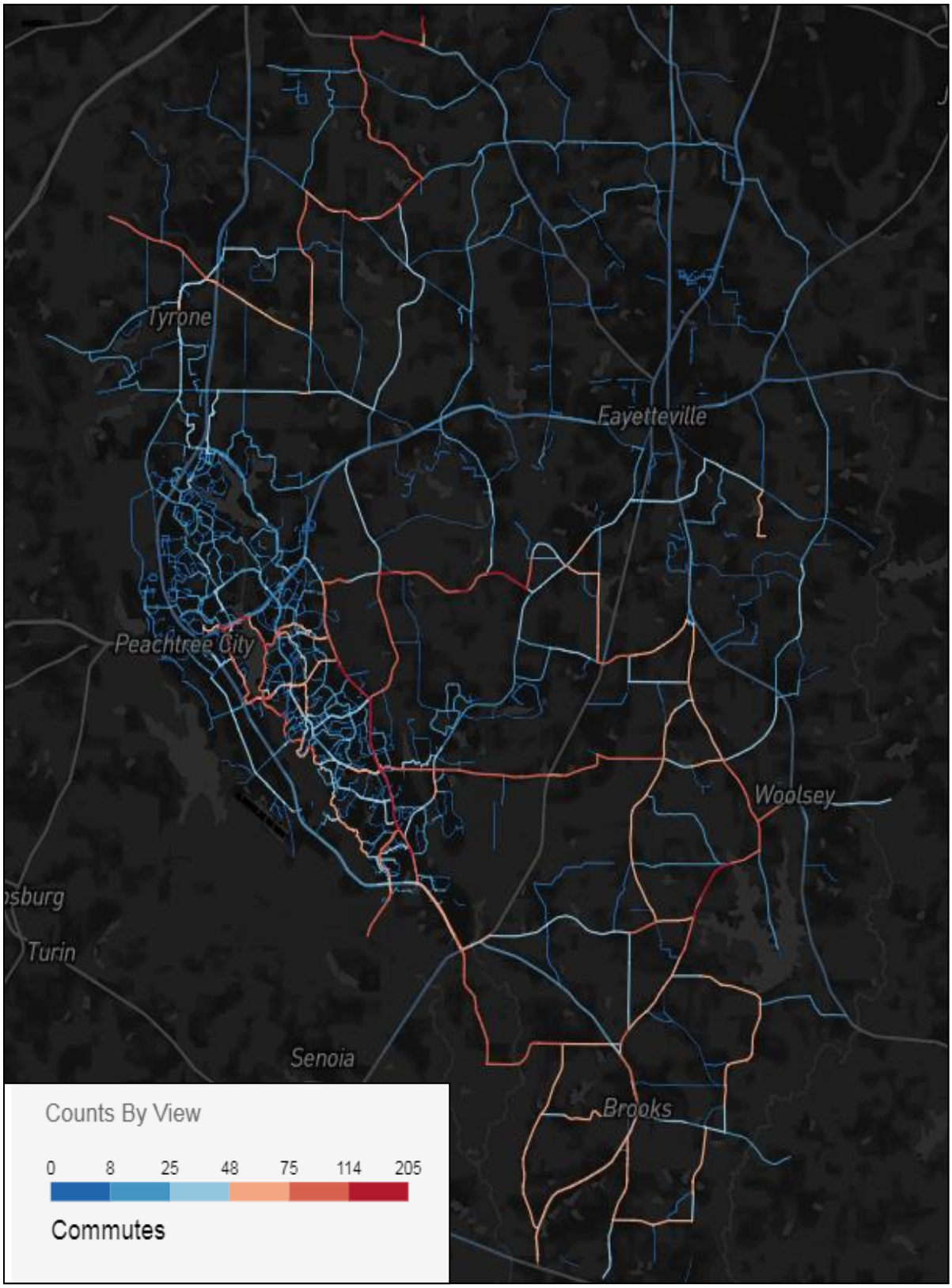


Figure 22: Bicycle Commute Trips (Strava 2017-2018)



6.5. Public Involvement (Public Meetings, Stakeholder Committee, & Survey)

A significant number of bicycle and pedestrian and golf cart user needs have been identified through the public meetings and survey.

Comments from the public are listed below. They include:

- Path Connection to from the woodlands to Fayetteville
- Need path from South Jeff Davis Drive at Emerald Lake Drive to Fayetteville City Limits
- More sidewalks, bike paths, cart paths and in Fayetteville
- New Hope and SR 314 intersection project- FTP-306
- Multi-use paths on SR 314 into the City of Fayetteville
- Southfork subdivision (sidewalks are broken, not maintained)
- Connect paths between Tyrone and Peachtree City
- Swanson Road/Tyrone City Area sidewalks or multi-use trails to connect Publix to the Tyrone city limits.
- Create a park and ride pick up at Kedron/Tyrone
- Need a sidewalk between Mask Tire and South Jeff Davis Drive
- Piedmont Hospital pedestrian bridge to shopping center across SR 54
- Sidewalks or paths from Stevens Entry to SR 54 (Sprouts, Starbucks, Your Pie) Golf carts on roadways.
- SR 92 sidewalks connecting to Kingswood/other subdivisions off SR 92
- New Hope Road needs multi-use paths
- Kelly at McIntosh is troublesome the four-way stop; education is needed.
- Old Senoia Road (better golf cart paths through downtown)
- Tyrone at Farr to Handley (would like to have to golf cart path)
- Annelise Drive needs a golf cart path
- More bike routes along SR 92
- SR 92/Jimmy Mayfield more golf carts/sidewalks and bike facilities are needed in this area.
- Farr Road multi-use trail from Peachtree City to Tyrone (Farr Road paths)
- Need additional sidewalk on New Hope Road to/from SR 314 from subdivisions to Pavilion, and along SR 314 for residents to access the Pavilion.
- SR 85 to 54 along Banks Road
- Banks Road (Multi-use trail)
- All parks and schools should be connected via multi-use paths.
- SR 85 to SR 54 along Banks Road
- Bradley, Glynn
- South Jeff Davis Drive/Jimmie Mayfield Boulevard westside from Lanier Avenue to the Senior Center
- Hwy 85 South of Fayetteville
- Sidewalks from school to school in Tyrone

- Highway 85 South of Fayetteville finish east side of the roadway where is runs into Downtown Fayetteville.
- Sidewalk Gap Jimmy Mayfield northside of SR 92 east of Ingles to almost Jimmy Mayfield
- Kingswood Way to Jimmy Mayfield (westside of SR 92)
- Need path connection to American Walk
- Cart crossing at SR 54 on east side of Peachtree City (near Publix)
- Between Stoney Brook and Smokrise
- Continuation of sidewalk on both sides of Highway 314 from South Jeff Davis to the Pavilion.
- Golf cart path needed for Justice Center, Senior Center and Kroger
- Highway 279 – Sidewalk needed down SR 279
- Sidewalk needed on North Fayette Drive
- North Fayette Elementary
- Rail to Trail – Railbank conversion of inactive trail.
- Brooks abandoned rail line – rail to trail
- SR 74 to Sandy Creek Veterans Parkway
- Hwy 279 to Hwy 138 needs sidewalks for ped safety
- South Jeff Davis, Jeff Davis – limit number
- South Jeff Davis sidewalks and multi-use path
- Lakeside on Redwine, need connection to the Ridge Nature Center
- Multiple comments to extend the trail along Redwine

Pedestrian Needs

- I am a resident of Fayetteville. The city could use sidewalks along Gingercake and Hood Avenue.
- Lester Road (SR 85 and SR 54) unsafe for pedestrians to cross poor lighting
- Golf cart/pedestrian crossings on Peachtree Parkway between Robinson Road and Redwine.
- Improved pedestrian crosswalks in downtown Fayetteville are needed.
- Pedestrian crossing is needed in the Jeff Davis Road and Highway 54 area.
- Ped light out at Banks Road and Glynn Street
- Dangerous intersection SR 54 from Lee Street.
- Would love a wide sidewalk along Gingercake Road, to intersect with the existing sidewalk at Gingercake and Hwy 54.
- Evander Holyfield Highway
- Westbridge Road
- SR 54 between PTC and downtown
- Georgia Avenue
- The bridge over whitewater creek is a danger with so many folks trying to walk over it View Starr's Mill.
- Braelinn Road and Peachtree Parkway, Robinson Road, Highway 54 and Tiger Trail, Highway 85 between FC Courthouse and Georgia Avenue, McIntosh Trail.
- Hood Avenue

- Gingercake, Redwine Road
- Goza Road
- Lester Road
- SR 54 and Old Norton Road
- Gingercake Road to intersect with the existing sidewalk at Gingercake and Highway 54
- South Jeff Davis Drive
- Fayetteville
- Banks Road
- SR 85 south from Summit Point heading into town and down the SR 92 connector

Bike Facilities

- SR 74 and Rockaway Road – 2 lane road to Senoia is popular for bikers. Limited shoulder space.
- Bike path connection from Hood Road to Pinewood Forest
- North Fayetteville needs more bike paths.
- Tyrone Road at Farr to Handley Road
- Need bike lanes along the perimeter of Pinewood Studios.
- SR 92/ Jimmy Mayfield - sidewalks and trails are needed.
- Riding bicycles on Bernhard Road
- Tyrone Palmetto - great need to ride to the Hills – Gaza/Antioch/Old Greenville Road
- SR 74 to SR 54 on Tyrone Road – Multi-purpose Trail
- Ebenezer is not safe for biking
- Tyrone Road – Bike Trails are Needed
- Tyrone Road and Farr Road
- Senoia Road at Tyrone – The path ends at Senoia Road at Ellison continue on to Goodwill
- Tyrone and Flat Creek Trail – Bike riding is dangerous

6.6. Master Path Plan Workshop

In March of 2018 a workshop was held with Stakeholder Committee members focusing on the Master Path Plan and the development of a county-wide network. A path planning exercise was conducted simultaneously in five separate break-out groups. Participants represented a diverse cross-section of community interests. This included bike advocacy groups, business leaders, local governments, clergy, neighborhood associations, engaged citizens and avid recreational cyclists. This exercise was also conducted with members of the Project Management Team to gather input from each local municipality. Input was collected on the desired locations for a variety of bicycle, pedestrian, and golf cart facilities, including sidepaths, greenway trails, shoulder bikeways, signed shared roadway, and sidewalks.

- **Sidepaths** – Bi-directional multi-use path located immediately adjacent and parallel to a roadway. Sidepaths can offer a high-quality experience for golf cart users, bicyclists, and pedestrians where traffic speeds and/or volumes are too high to share the roadway.

- **Greenways –** These are bi-directional multi-use paths that have their own independent right-of-way. They are often found in natural settings. They can follow streams and rivers, converted railways, or other natural features.
- **Shoulder Bikeways –** Typically found in less dense areas, shoulder bikeways are paved roadways with striped shoulders wide enough for bicycle travel.
- **Signed Shared Roadway –** Where available asphalt width is limited, but demand for bicycling is present, signing roadways with "Bike Route" signage can increase dirver awareness of the possible presence of bicyclists.

Feedback on major destinations that should be connected through the path system was also gathered. There was considerable overlap in the desired locations for facilities between the six groups. Some of the same connection destinations were also identified. Common desires included a sidepath connection between Peachtree City and Fayetteville along Redwine Road, a sidepath on SR 54, bicycle facilities on Bernhard Road/Goza Road and Brooks Woolsey Road. Common connection destinations include a regional trail connection in southern Peachtree City and connections to the Starr's Mill school cluster.

A composite map of the input received from the six groups has been developed and is displayed in **Figure 23**. This reflects stakeholder-identified needs and will be used as a starting point in the development of the Master Path Plan network. A combination of community guidance (stakeholder and public), technical analysis and a feasibility assessment will be used to ultimately develop the final network. It is important to note that **Figure 23** only represents a preliminary step in the needs identification phase of the path planning process. The final path network is likely to vary significantly from this image, as a process of technical analysis, feasibility and vetting is applied.

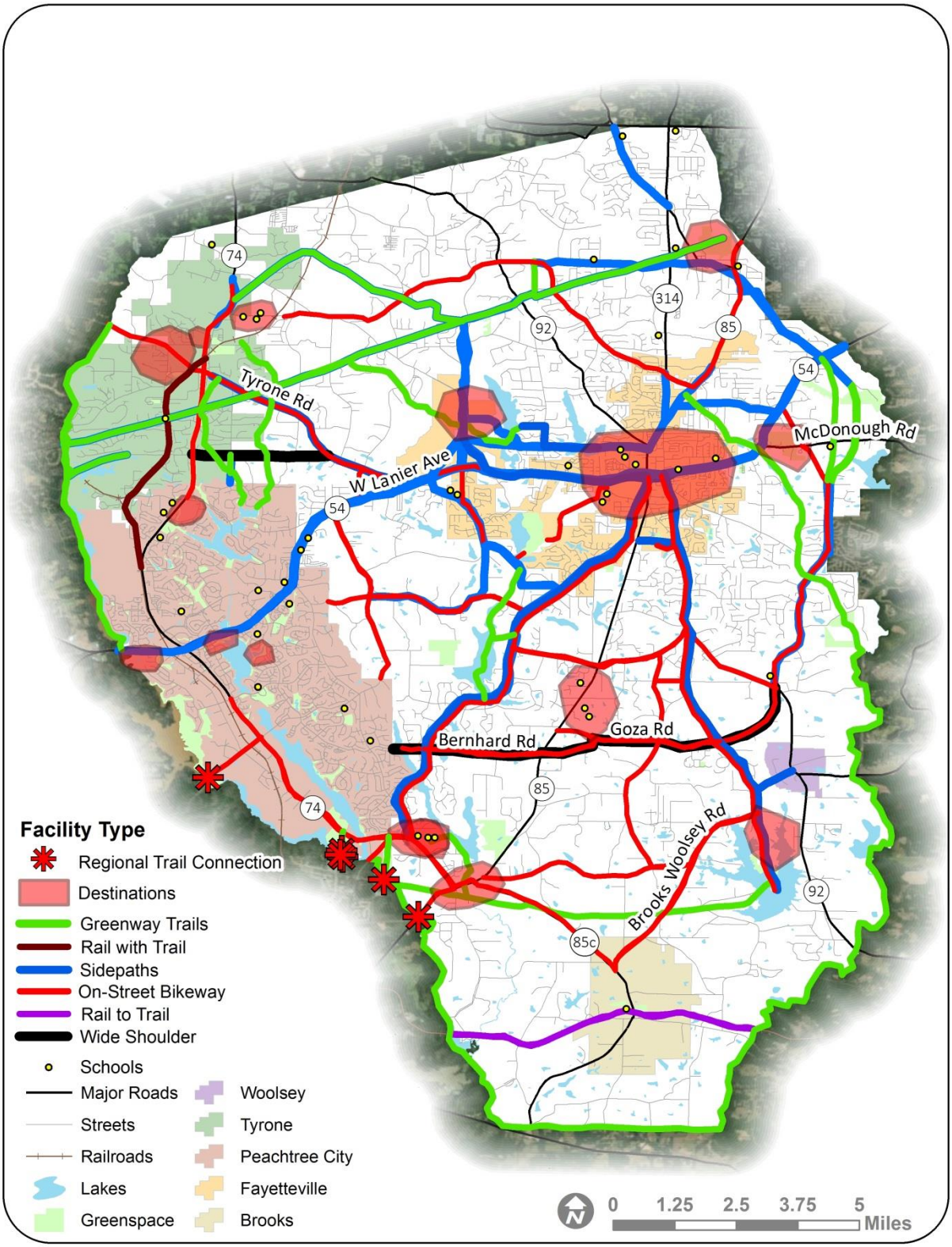
6.6.1. Master Path Plan Workshop – Key Findings

Key takeaways from publicly-identified pedestrian, bicycle, and golf cart needs include:

- There was a high degree of consistency between Stakeholder Committee members on the **DESIRED LOCATIONS FOR SYSTEM EXPANSION** of the path network. This includes sidepaths on Redwine Road, SR 54, and bike facilities along Bernhard/Goza Road and Brooks-Woolsey Road.

- **COMMON DESTINATIONS** to connect include the Starr's Mill school cluster and a regional trail connection in southern Peachtree City. Input from the Stakeholder Committee will be used as a starting point in the development of the Master Path Plan network.

Figure 23: Stakeholder Identified Path Needs



6.7. Path Intersection Assessment

An assessment of at-grade intersection and mid- block crossing assessments was conducted as part of the Master Path Plan. Findings of the assessments will be used by the project team to inform recommendations focused on improving the safety, comfort, and predictability of crossings for all users of Fayette County's transportation system including people walking, bicycling, using golf carts, and driving.

The complete assessment memo is included in **Appendix B**. This section includes a summary of common themes and key takeaways of the assessment. They include the following:

- **Inconsistent Signage and Markings** - Both signage and pavement markings are applied somewhat inconsistently. Signage and markings oriented toward vehicles, such as path crossing signage and advance warning signage, is more consistent than signage and markings oriented toward path users. The biggest inconsistency we observed was the use of stop bars and path-user scale stop signs at some locations but not others. There did not appear to be a pattern in terms of when these treatments were applied.
- **User Confusion -** It is not always clear which signs apply to which path user(s). For example, path-user scale stop signs intended for golf cart users and bicyclists may imply that pedestrians must stop and yield to automobiles, which is not consistent with Georgia law.
- **Who has the Right of Way?** - The use of golf cart warning signage at most path crossings is somewhat misleading to drivers, since people walking and bicycling are also frequent users of the path. Because legally drivers must stop for pedestrians in crosswalks per Georgia law, warning signage that only features golf carts may muddy this important distinction.
- **4-way Stop Safety** - Some observed interactions, particularly at 4-way stop-controlled intersections with path crossings directly adjacent to the roadway crossing (as opposed to set-back from the roadway crossing) revealed confusion about who had right-of-way. We observed one near miss between a golf cart user and an automobile driver attempting to negotiate the intersection, with the question of who should proceed first.
- **Path users with disabilities** — including people who rely on wheelchairs or other wheeled mobility aids and people who have visual or hearing impairment — will have serious difficulties navigating at-grade crossings. Very few path crossings include ADA-compliant curb ramps or tactile warning strips with truncated domes.
- **Setbacks** – Path crossings that are setback from the intersection are common features that are situated away from intersections and appear to help reduce conflicts with automobiles by allowing drivers to interact with path users independently of other automobiles in advance of roadway intersections (similar to modern roundabout design with setback pedestrian crossings). However, the setback distances were inconsistent, and in some cases the crossings were not clearly marked.
- **Intersection Design** - Channelized right turn lanes and large curb radii are common features of multi-lane intersections where paths cross the roadway. These features promote high-speed automobile turning movements, which increase the risk of serious injuries and fatalities for path system users.

- **Wayfinding** - Particularly because the path system is extensive and complex, wayfinding signage is very limited. The wayfinding signage that does exist is also inconsistent and lacks a common brand.
- **Bridges** - Overcrossings were generally spacious and well-designed, with what appeared to be ADA-compliant approach grades.
- **Tunnels** - While some undercrossings were wide, many undercrossings were too narrow for two golf carts to pass each other, creating a sense of unease and the potential for collisions between golf carts and other path users. Narrower widths will also tend to keep speeds down through tunnels.

6.8. Bicycle Comfort Analysis

To assess bicycle needs within the county, a bicyclist comfort analysis was conducted that incorporated roadway volumes and speeds. It is common for a wide variety of factors to be included in a bicyclist comfort analysis, but the two most commonly used are traffic volumes and traffic speeds. These two factors are critical to bicyclist comfort, safety and the willingness to bicycle.

Roadway segments throughout the county were scored based upon speeds and volumes. The scoring thresholds are shown in **Table 13** below. A variety of sources including the London Cycling Design Standards, Ohio Department of Transportation (ODOT) Bicycle and Pedestrian Design Guide (2011), and the National Association of City Transportation Officials (NACTO) were consulted to develop these scoring thresholds. These thresholds are frequently used to determine the most appropriate bicycle facility for a given roadway based upon comfort level.

Table 13: Bicycle Level of Comfort Analysis Scoring

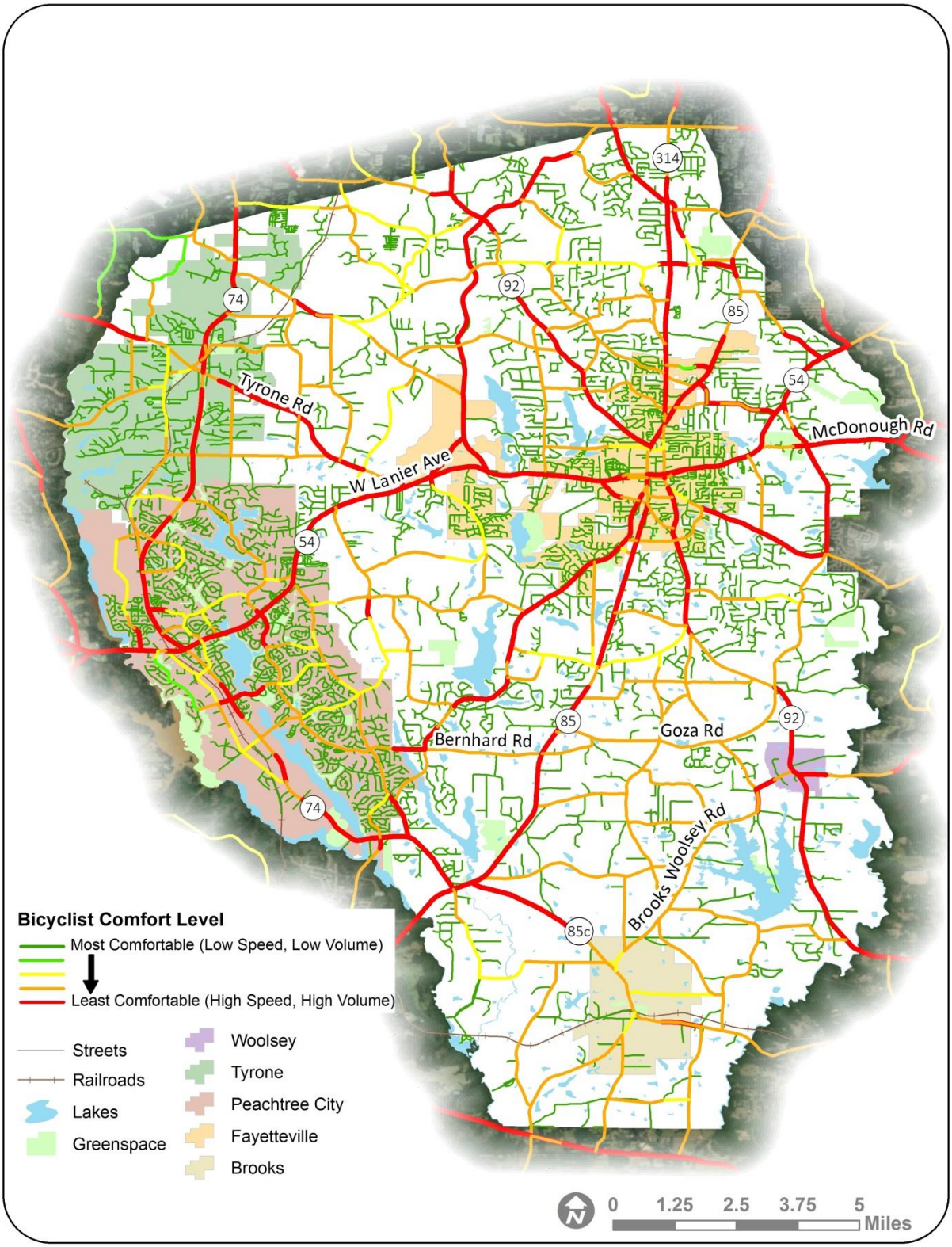
Volume	Score	Speed	Score
<3,000 ADT	**1**	**<25 mph**	**1**
3,001-10,000 ADT	**2**	**30-40 mph**	**2**
>10,001 ADT	**3**	**>45 mph**	**3**

Speed and volume scores were totaled to reflect an overall comfort level. A score of '2' indicates a roadway that is comfortable for everyone and a '6' is tolerated only by the 'strong and fearless' rider. The results of the comfort analysis are shown in **Figure 24**.

6.8.1. Bicycle Comfort Analysis – Key Takeaways

- All state routes in the county have the worst comfort rating. Although these corridors are the main cross-county transportation linkages, they form a barrier to bicycle travel.
    - This indicates a need for bicycle accommodations along state routes in strategic locations.
- The most popular bicycle routes identified in the Strava analysis generally correspond with a good to moderate comfort rating.
- Large county parks such as Kenwood Park and McCurry Park are surrounded by roads with poor comfort ratings.
    - Bicycle accommodations may be required to enhance access to parks.

Figure 24: Bicycle Comfort Index



7. Transit Needs

There are no carpool, vanpool, or transit options in Fayette County. During the second round of Public Meetings, the public indicated overwhelmingly that traditional transit solutions such as local bus, commuter rail, bus rapid transit, light rail, and heavy rail were not a top choice for Fayette County. To the contrary, more human services transit options were supported in great majority, as well as express bus options. **Figure 26** indicates the response the public gave as to what transit technologies are preferred in Fayette County.

7.1. Fayette Senior Services

Fayette County does not directly offer any dial-a-ride or paratransit service. These services are offered by Fayette Senior Services (FSS). Fayette Senior Services is a non-profit, 501 (c)(3). FSS offers flexible transportation in Fayette County for disabled and older adults. The transportation programs are open to Fayette County residents age 60 and older, as well as disabled adults age 18 to 59 who cannot drive by no fault of their own. There are no fixed routes. The service is demand response service only, which is advance scheduled curb-to-curb rides. Public feedback indicates that this service could be expanded, including longer hours of operation.

7.2. GRTA Xpress

The GRTA Xpress service is a regional commuter coach operated by the Georgia Regional Transportation Authority (GRTA) that draws ridership from 44 counties. As it has no routes in Fayette County, expanding service into Fayette County could mitigate traffic congestion. **Figure 25** depicts current GRTA Xpress routes in the region. The closest park and ride lots are located to the north in Union City, and to the north east in the City of Riverdale, and at the Southern Regional Hospital. There is also a park and ride lot located in Newnan, approximately 7.7 miles due west of the intersection of SR 74 and SR 54 in Peachtree City Currently, all of these lots are located too far for great utilization by residents of Fayette County. A new Park and Ride Lot will be built on SR 74 in Fairburn south of I-85 which may accommodate some Fayette residents.

Express bus service was the second most popular transit technology among the community at the public meetings that were held. **Figure 26** shows that Human Services Transit and Express Bus were the most preferred transit options for Fayette County. If express bus service were to be provided in Fayette County, apt locations for park and ride lots would be in Peachtree City and Tyrone, in areas along SR 74, which conducts the most commuter traffic.

Figure 25: GRTA Xpress Bus Routes

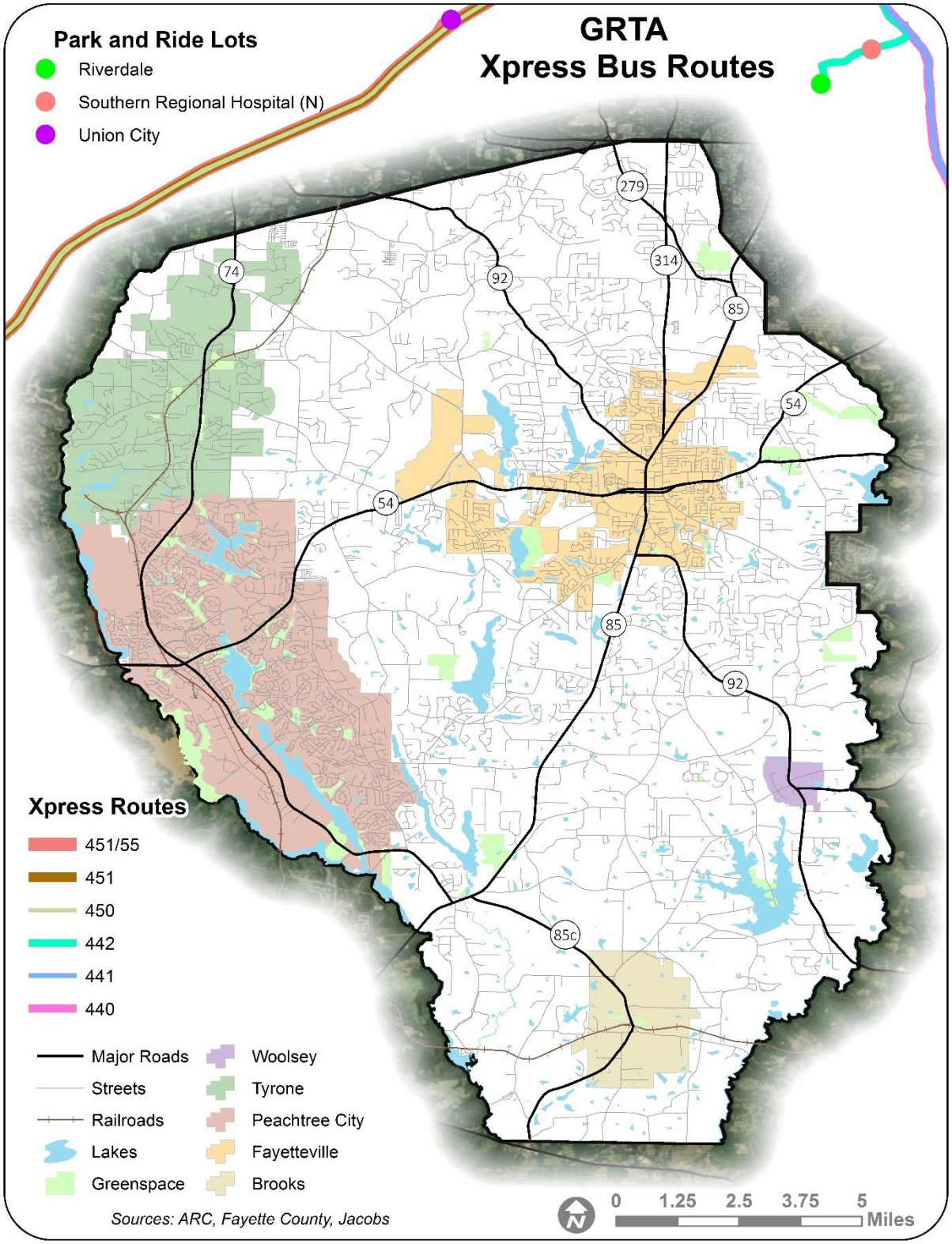
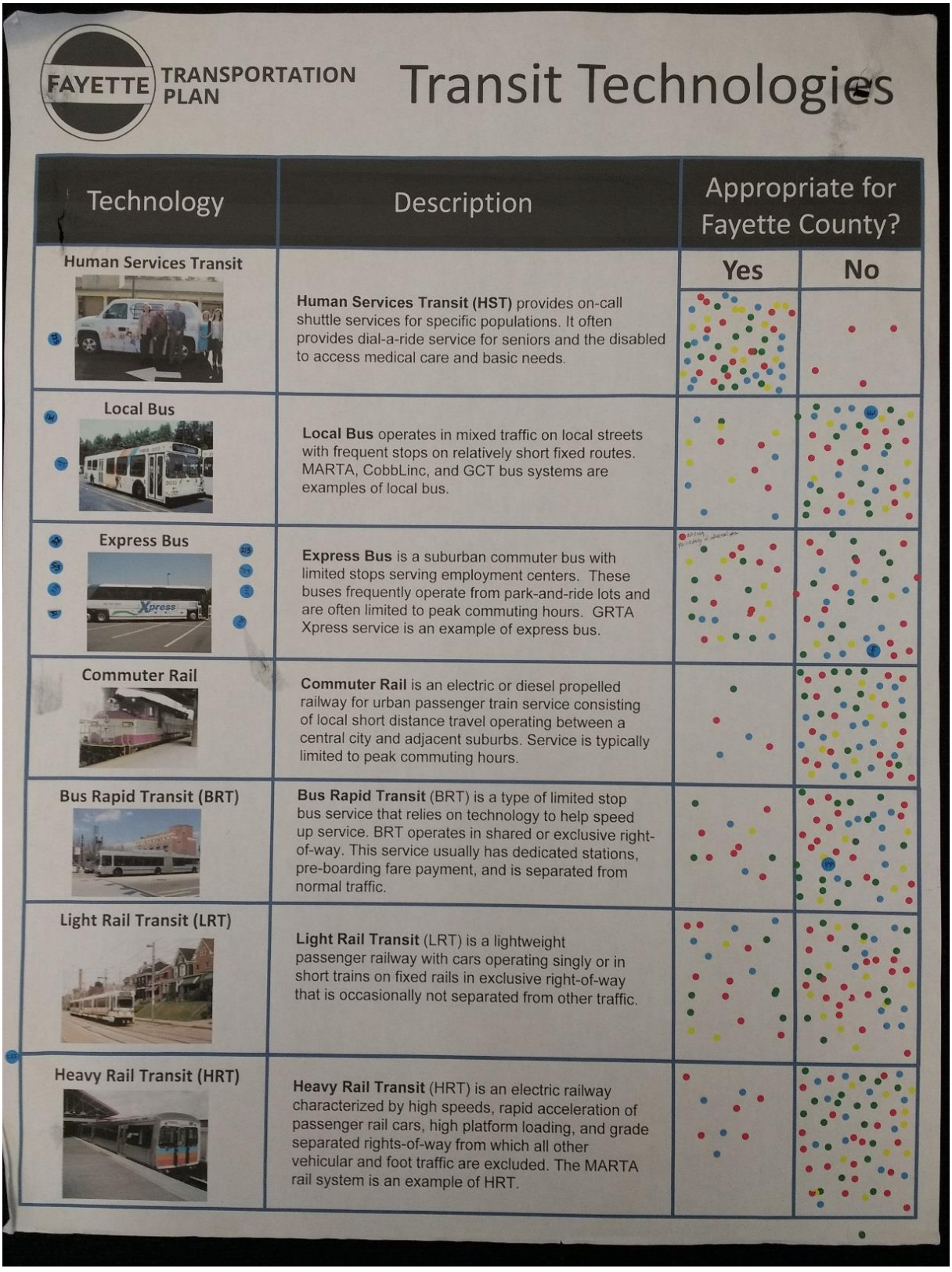


Figure 26: Fayette County Transit Technologies



7.3. Via

On-demand transportation is a burgeoning field of transportation technology that entails using an app to hail a ride. There are many different ways to utilize mobility apps in the transit space. On option is Via. This is an on-demand vanpool sharing service that enables riders to hail a commuter van from their smartphone. The company works with the jurisdiction it operates within to design and operate a service tailored to the needs of the locale. Operating hours and service area are set depending on the jurisdiction.

7.3.1. How Via Works

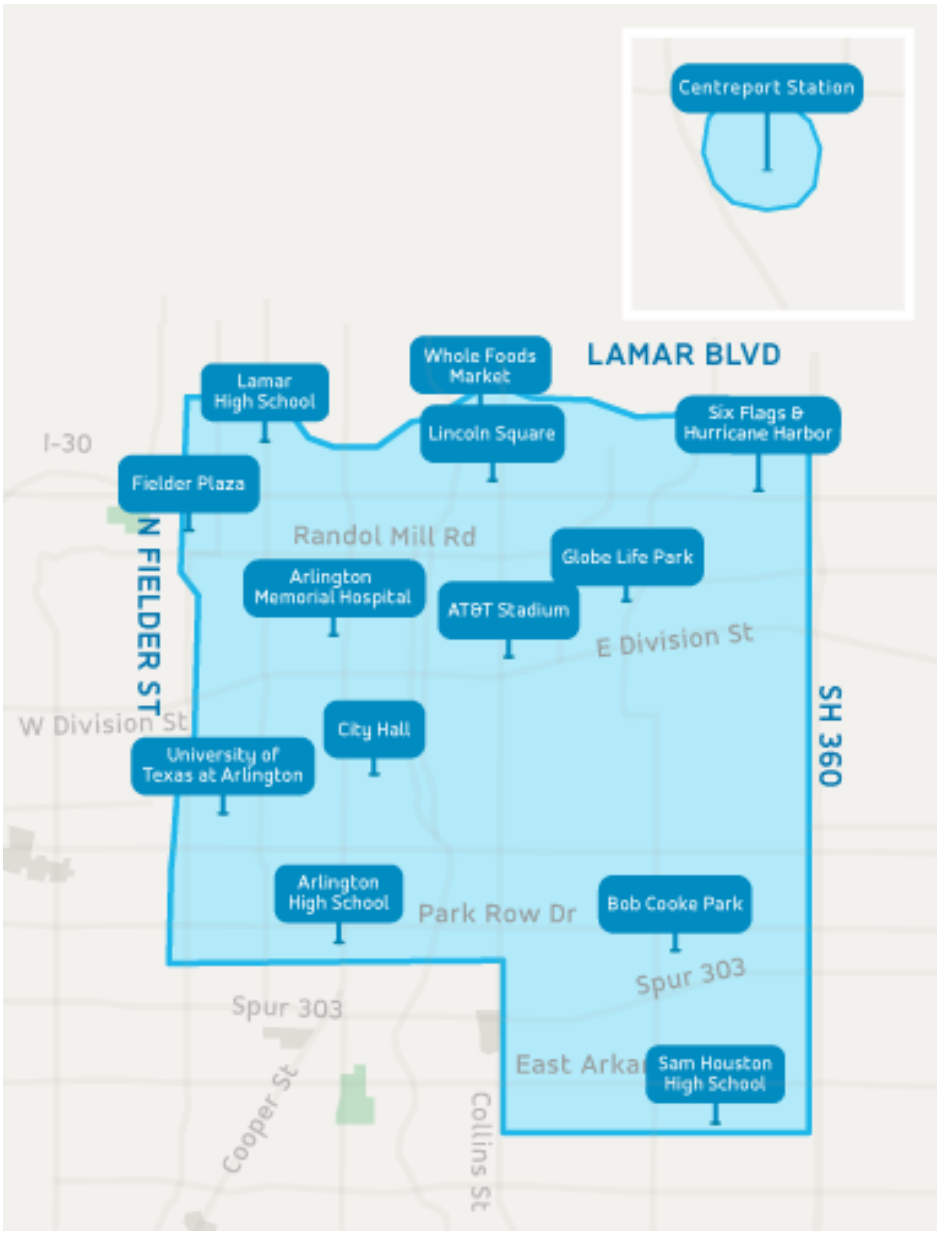
For a rider to ride Via, using an Android or an iPhone, the rider downloads the Via app in the Google Play Store, or the App Store, respectively (a rider can also call Via directly to book a ride). Within the app, the rider indicates a pickup location, and then drop-off location. The app then searches through all of the available seats within Via's vehicle fleet, then sends the rider information on the closest driver to their location with an ETA (Estimated Time of Arrival) of pickup (typically within a few minutes). The nearby pickup point is always within a block or two of where the rider is currently located. While waiting on the van, the app sends GPS information of the driver's location en route to the rider, as well as automated text messages as the driver is two minutes away and on arrival. There is real-time customer support as well. Depending on demand in the given area, there may be other riders in the vehicle or to be picked up en route after the rider boards.

7.3.2. Implementation and Examples

Trading public transportation for subsidized private van service is an effective alternative to Fayette County buying, building, operating, and maintaining its own fleet. An example that is currently operating is in Arlington, Texas. The Via program replaced a fleet of charter buses that Arlington had been operating for four years (Metro Arlington Xpress, or MAX, commuter bus service). An agreement with the City of Arlington allows Via to operate ten commuter vans, primarily in the city's downtown area. The fares are $3 per ride, and $10 for weekly passes with direct subsidies from the city. The city contributes about one third of the project costs, totaling $322,500, and the Federal Transit Administration contributes the remaining cost. Service is available Monday-Friday from 6AM to 9PM, and Saturday from 9AM to 9PM. The operating zone can be seen in **Figure 27**, which includes Downtown Arlington, UTA, the Entertainment District, and the Centreport TRE Station. Via also offered similar services in a pilot program for the City of Austin, Texas. Partnering with Austin's Capital Metro Transportation Authority, the vanpool service operated from 7AM to 7PM on weekdays, and 10AM to 10PM on Saturdays in specific neighborhoods, using a special app called Pickup that Capital Metro and Via created together. This on-year pilot project ran through June 2, 2018.

Other alternatives include Summit, New Jersey using the rideshare app Uber to offer transportation to and from the local train station, and Altamonte Springs, Florida completely replacing public transportation with subsidized Uber rides. Offering these services could potentially be attractive to younger residents and other residents as it provides transportation solutions without the infrastructure and costs associated with traditional public transportation.

Figure 27: Via Arlington, Texas Operation Zone



Source: Via

7.3.3. Key Takeaways

The public indicated overwhelmingly that traditional transit solutions such as local bus, commuter rail, bus rapid transit, light rail, and heavy rail were not ideal for Fayette County. The following transit options were supported by the public:

- Human services transit options
- Express Bus options

Fayette Senior Services Transportation provides a transit option to elderly and disabled populations of Fayette County. The service is demand response service only, which is advance scheduled curb-to-curb rides. Public feedback indicates that this service could be expanded throughout the community. Possible methods of expansion include:

- Investing in a larger fleet of vehicles and more drivers
- Expanding hours of operation

The GRTA Xpress service is a regional commuter coach operated by the Georgia Regional Transportation Authority (GRTA) that draws ridership from 44 counties. It has no routes in Fayette County. The closest park and ride lots are located in:

- Union City
- City of Riverdale
- Southern Regional Hospital
- City of Newnan

The new Xpress Park and Ride lot on SR 74 in Fairburn may attract riders from Fayette County. If not, Xpress service could be further expanded into Fayette County. Possible park and ride locations include along the SR 74 corridor where the most commuter traffic exists.

- Tyrone
- Peachtree City

On-demand transportation is a burgeoning field of transportation technology that entails using an app to hail a ride. New on-demand transportation technologies to consider implementing in Fayette County include:

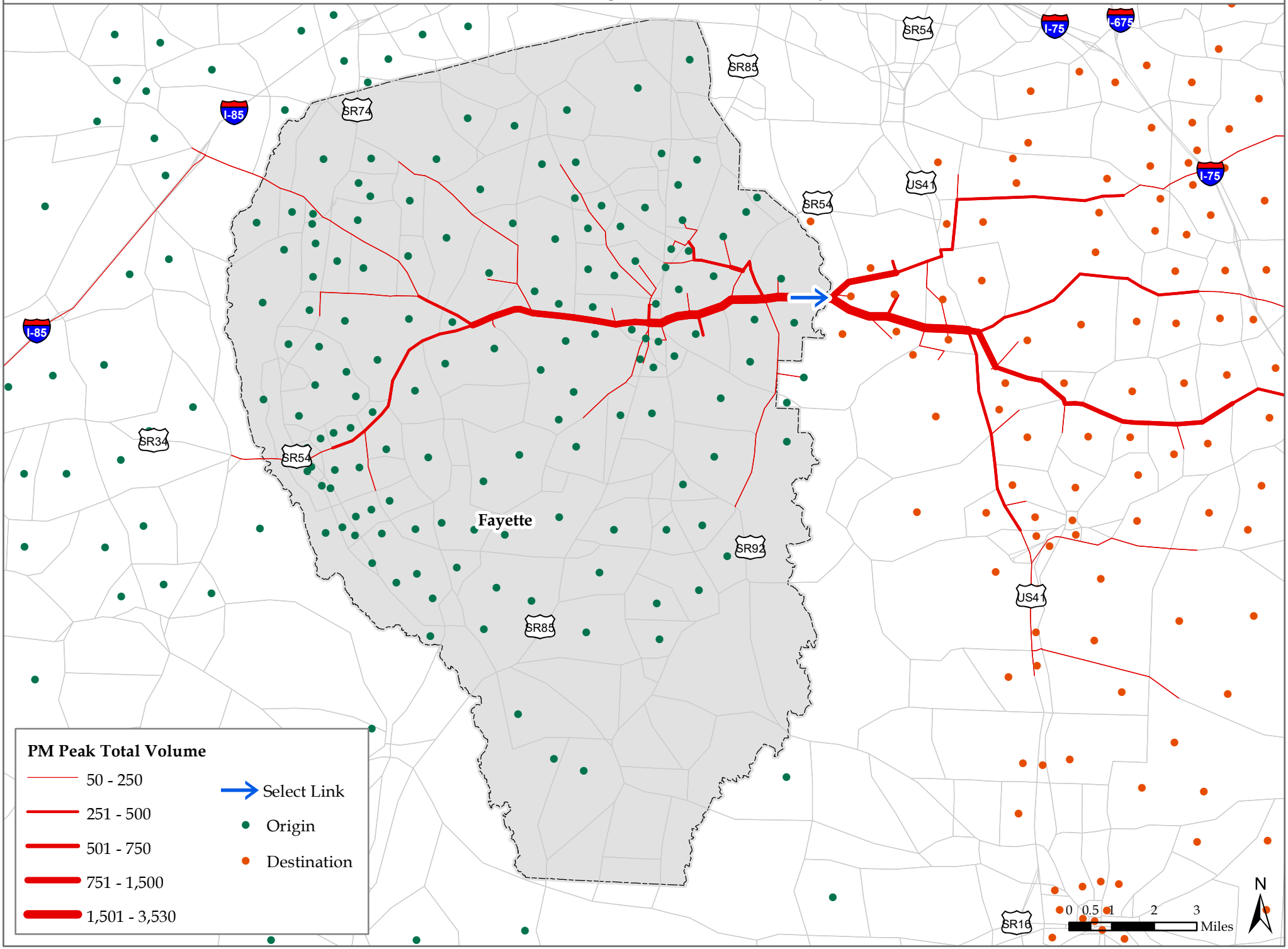
- Via
- Uber
- Lyft

8. Next Steps

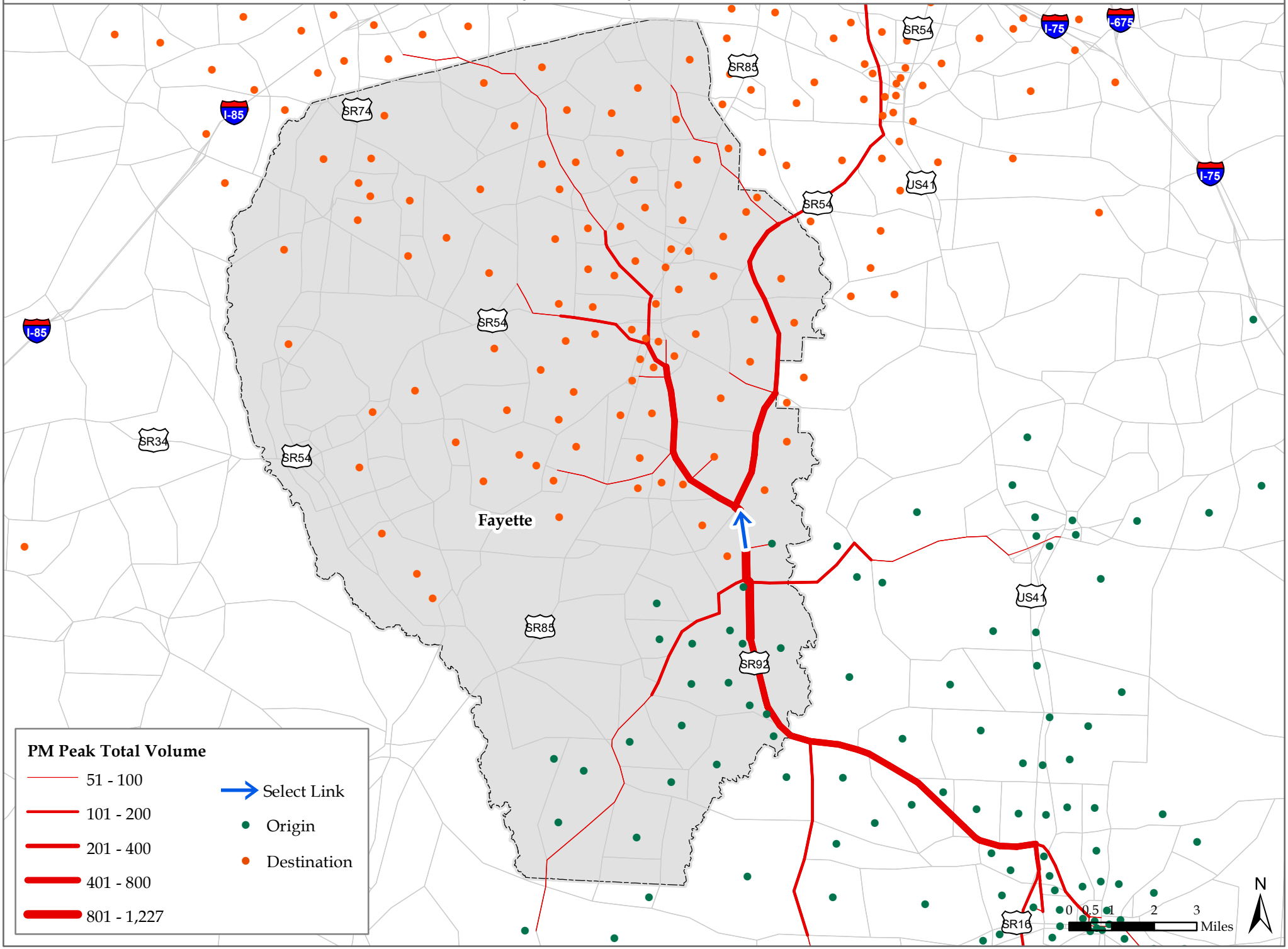
The next phase of the planning process, the Recommendations Report, will propose infrastructure projects and policies to address the needs identified in this document.

Appendix A – Select Link Analysis Locations

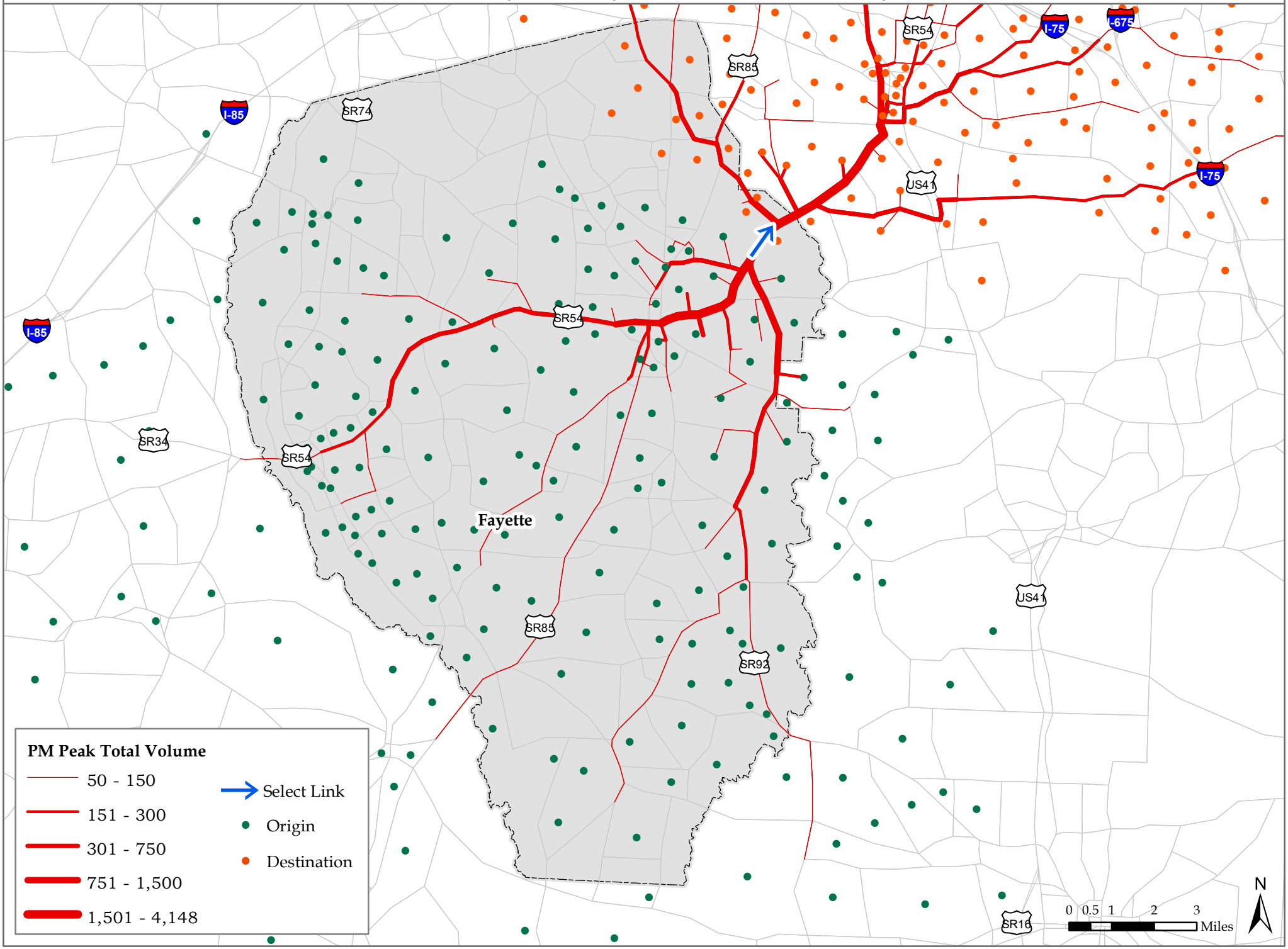
Location 1: McDonough Rd at Eastern County Line



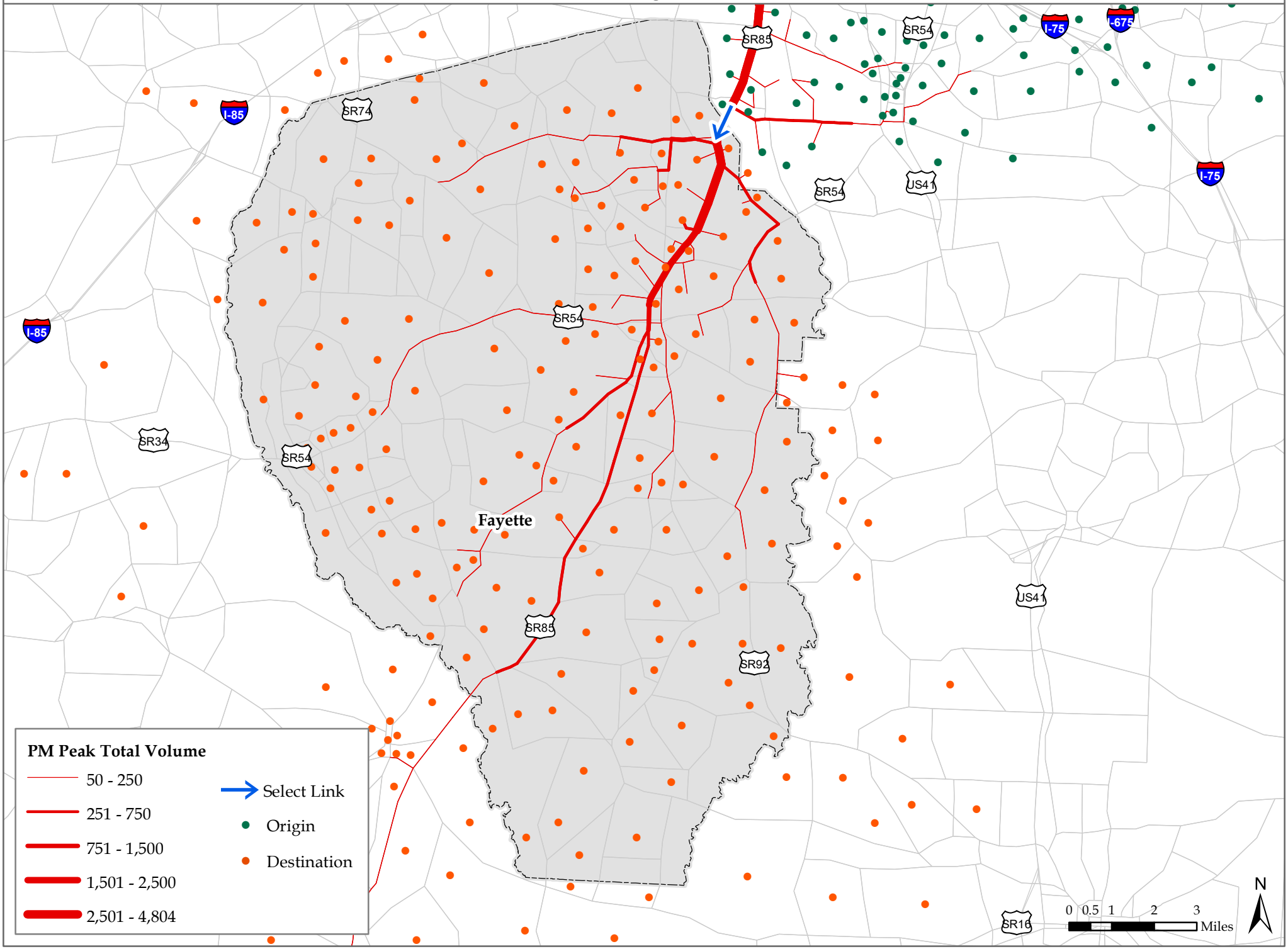
Location 2: East Fayetteville Bypass: SR 92 South of Goza Road



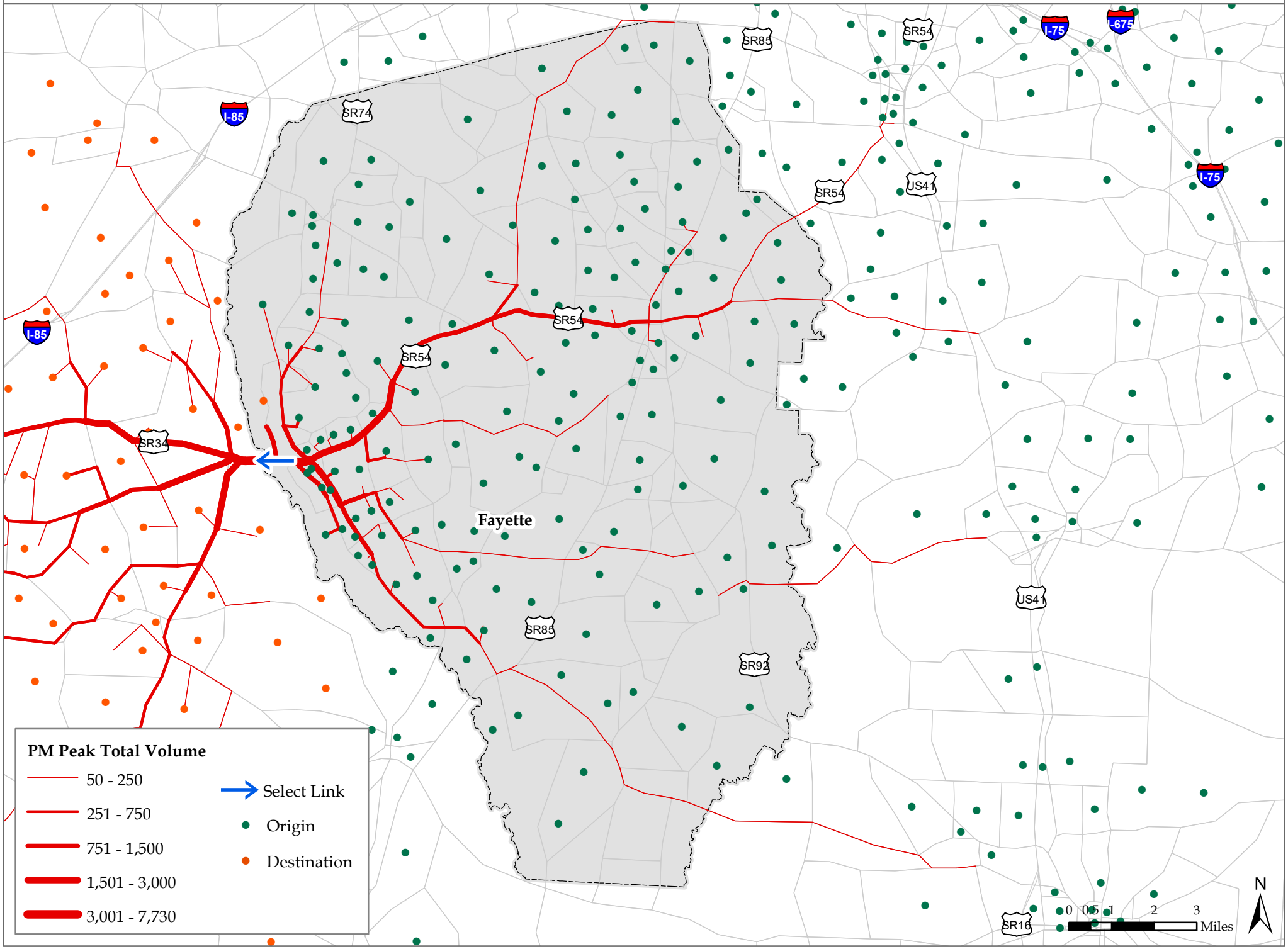
Location 3: East Fayetteville Bypass: SR 54 North of McElroy Road



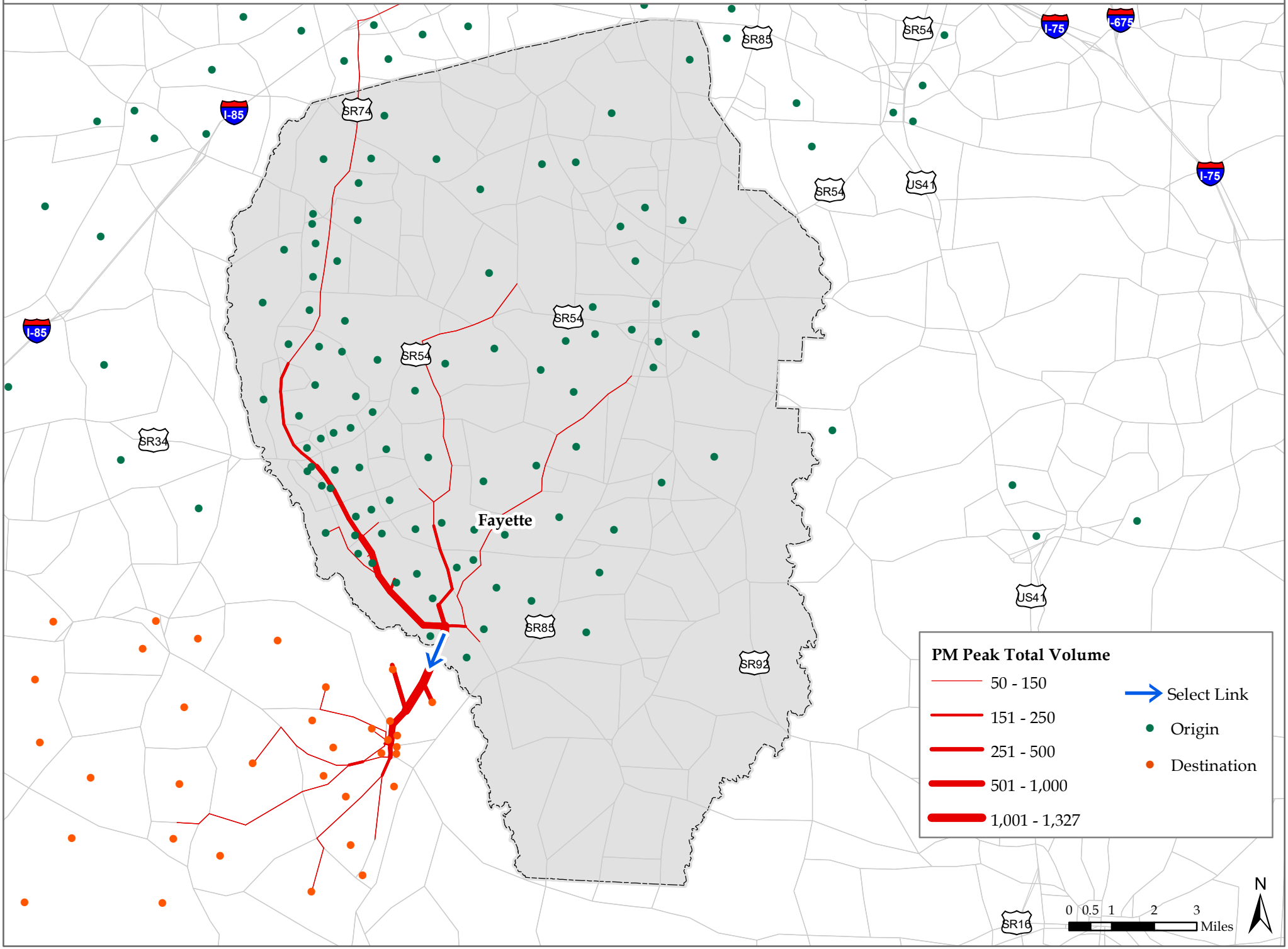
Location 4: SR 85 Widening North of Corinth Road



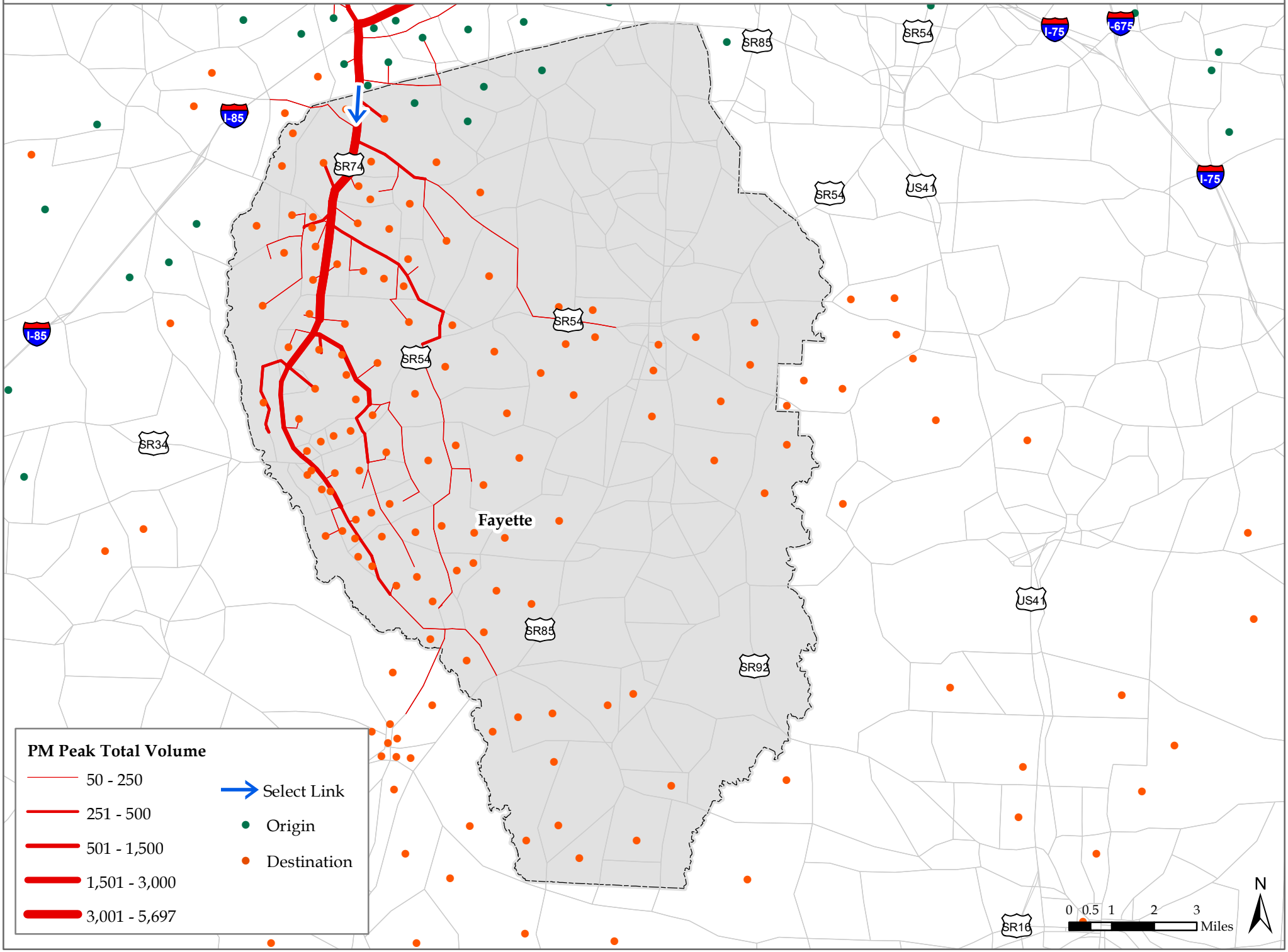
Location 5: SR 54 Connection with Coweta (SR 54)



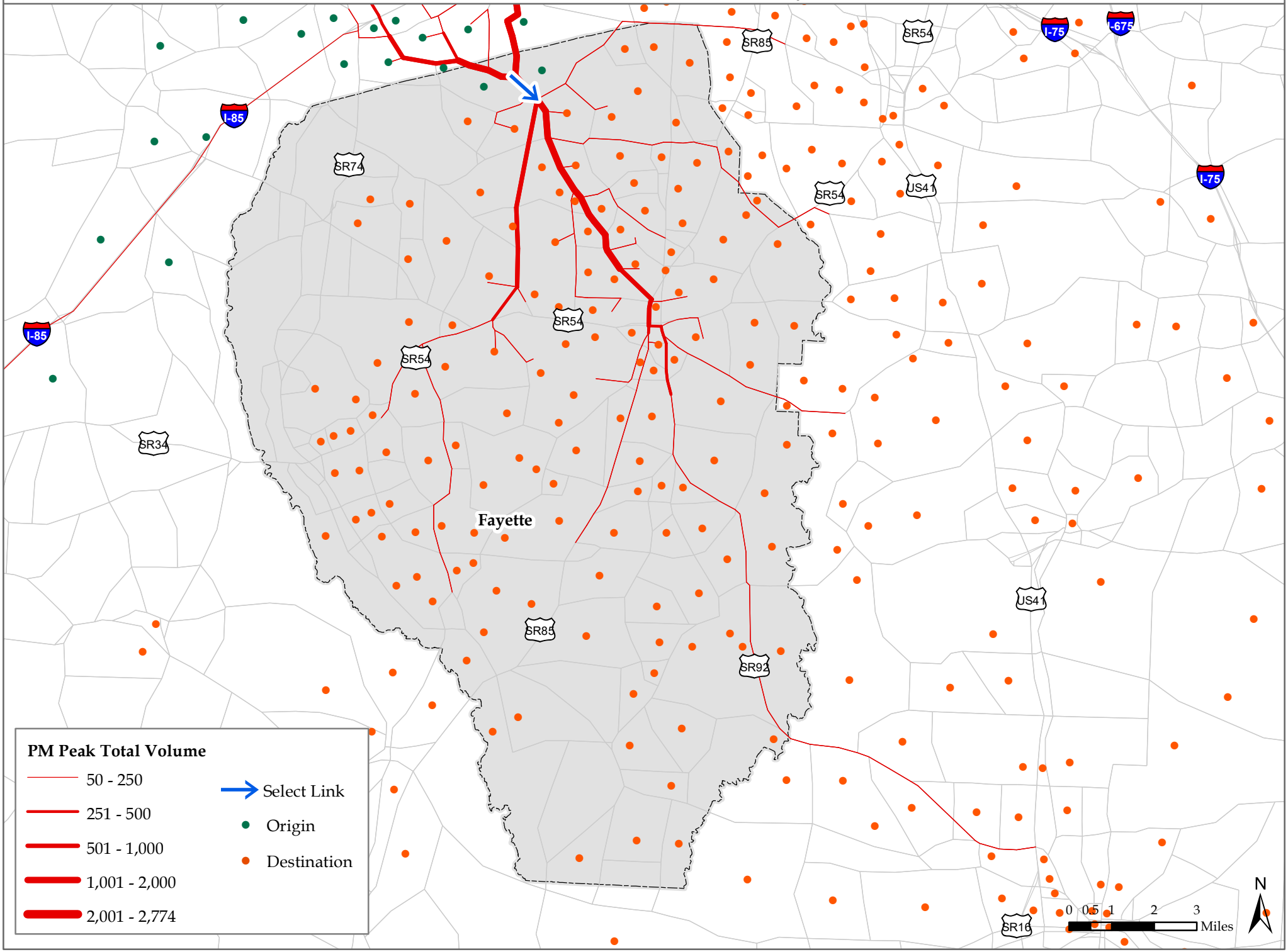
Location 6:To Senoia and Southern Coweta (Rockaway Rd)



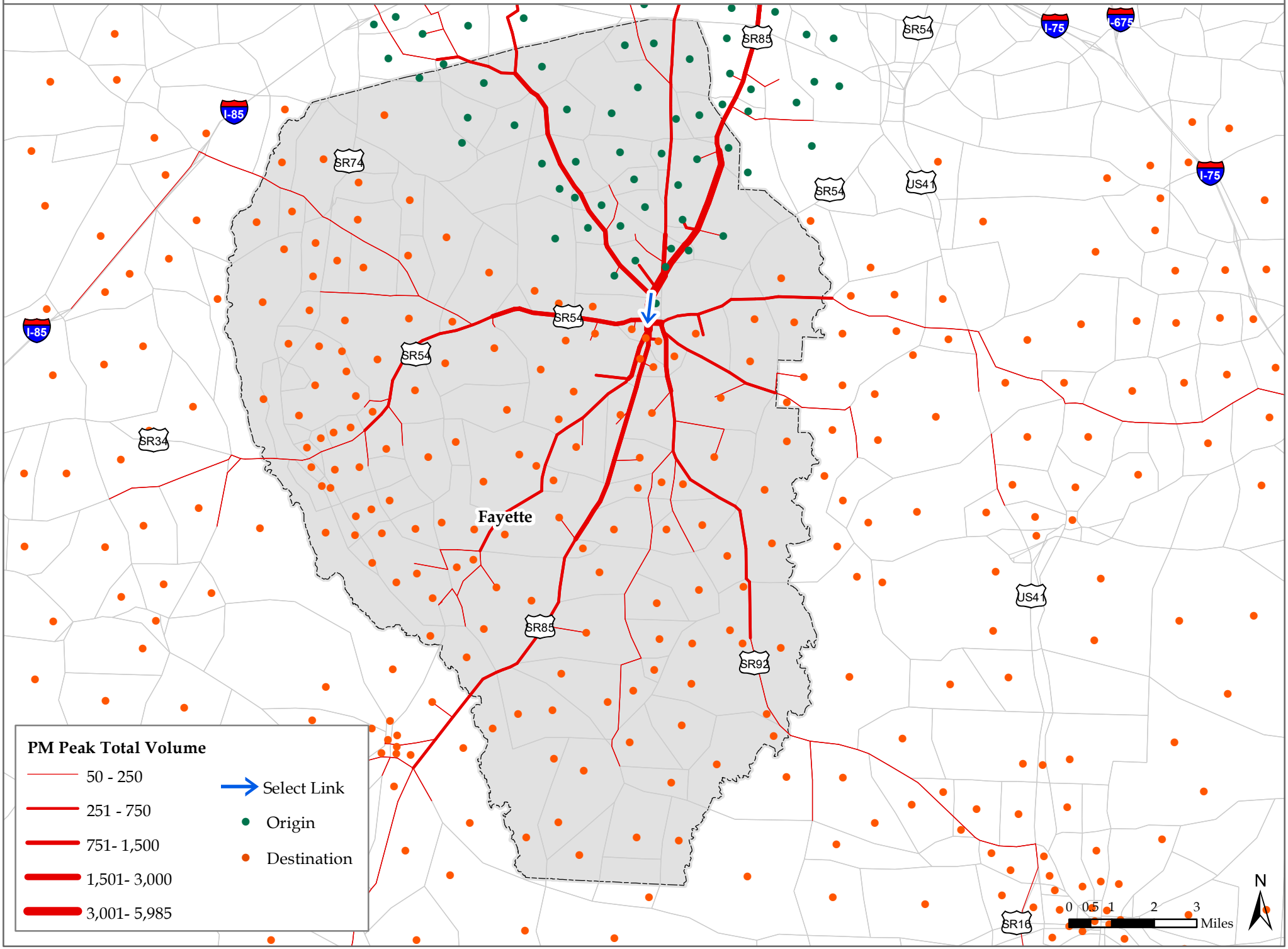
Location 7: SR 74 from Atlanta



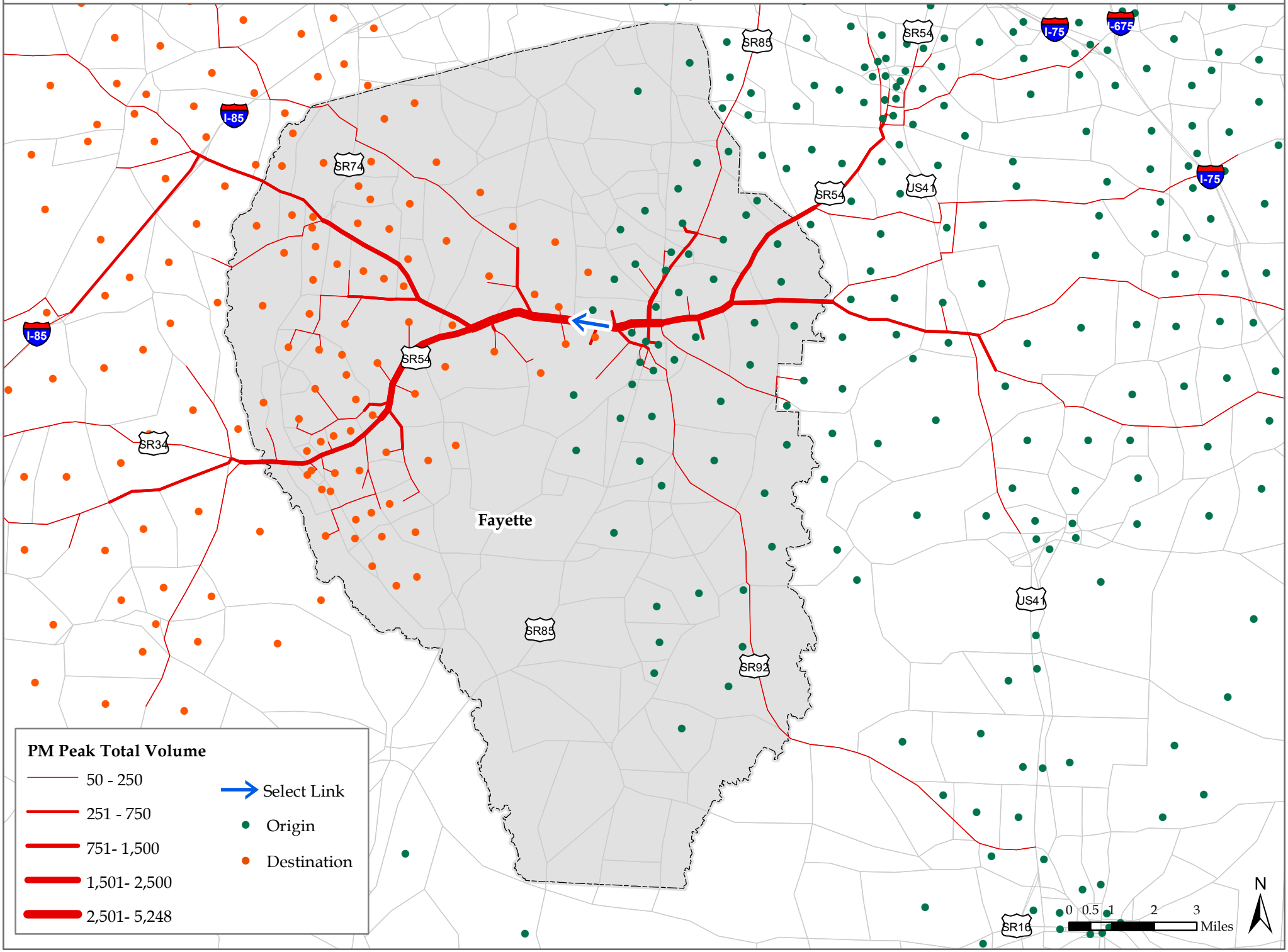
Location 8: SR 92/Veterans Parkway



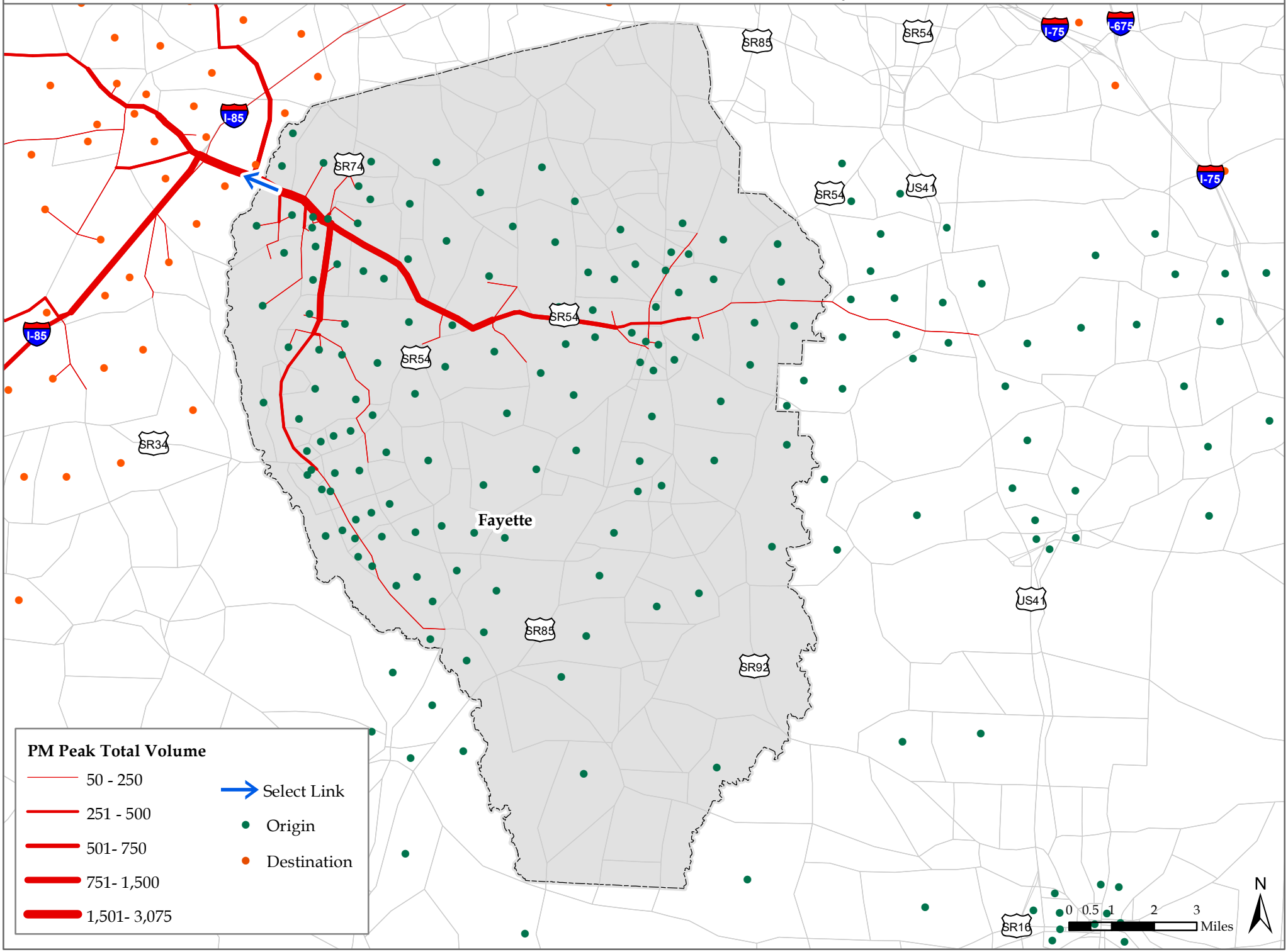
Location 9: Downtown Fayetteville(SR 92/SR 85/Glynn St)



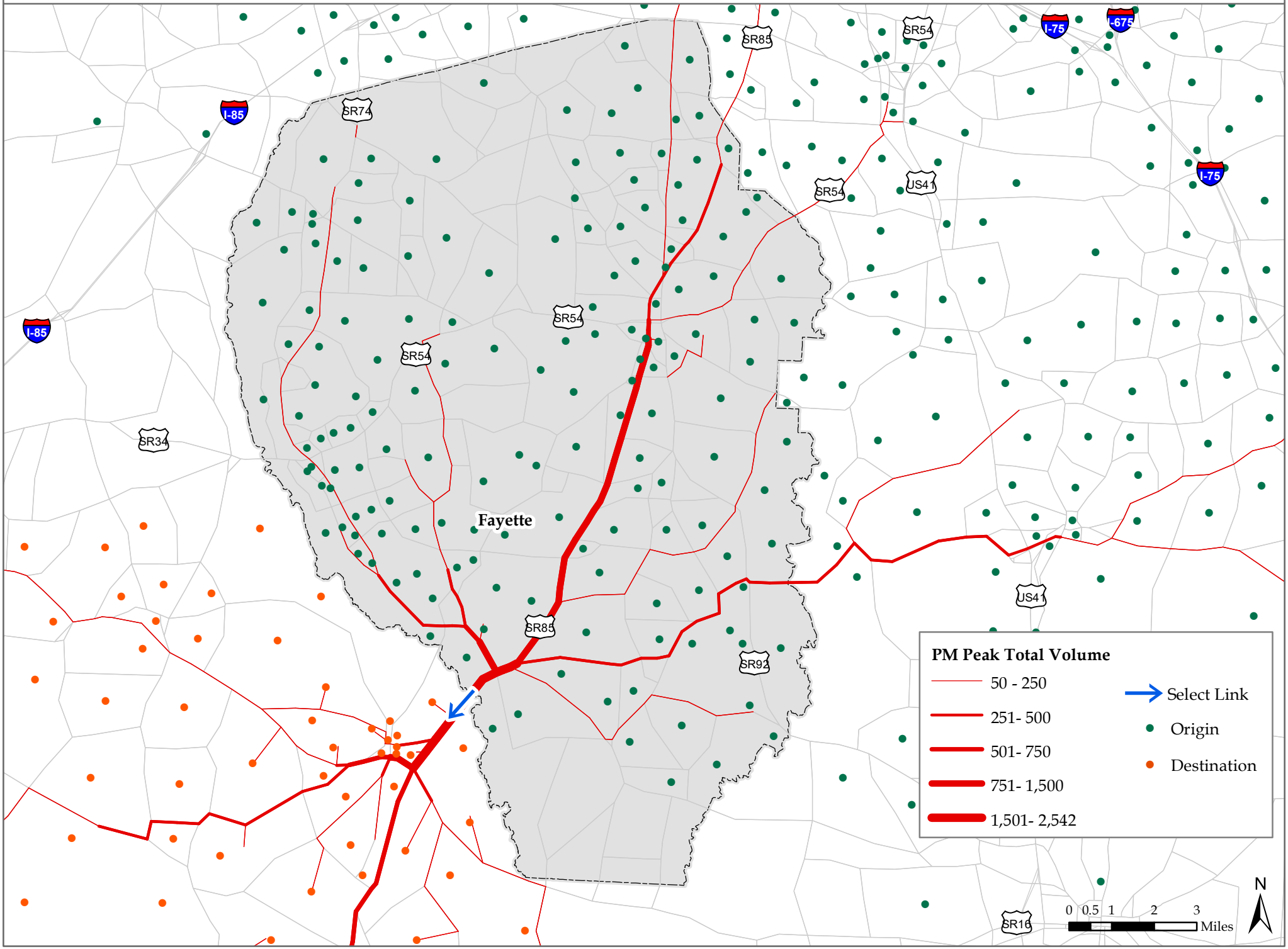
Location 10: Downtown Fayetteville (SR 54)



Location 11: Conecction with Coweta (Palmetto Rd/Tyrone Rd)



Location 12: Connection with Coweta (SR 85)



Appendix B – Intersection Assessment Memo

84 Peachtree
Street NW
Suite 600A
Atlanta, GA 30303
941.234.3287

MEMORANDUM

To: Michael Kray, Jacobs
From: Collin Chesston, Kat Maines, & Britt Storck; Alta Planning + Design
Date: June 13, 2018
Re: Fayette County Master Path Plan: Intersection Assessments

Purpose

This memo documents the process and findings associated with at-grade intersection and mid-block crossing assessments conducted by Alta Planning + Design (Alta) as part of the Master Path Plan for Fayette County. Findings of the assessments will be used by the project team to inform recommendations focused on improving the safety, comfort, and predictability of crossings for all users of Fayette County's transportation system including people walking, bicycling, using golf carts, and driving.

Process

To assist with identifying and prioritizing field visits, Alta created a crossing typology. The logic behind the use of a crossing typology was that it would allow the project team to assess a limited number of multimodal crossings that are representative of the wide range of challenges and opportunities associated with different crossing conditions throughout the county. Variables considered in the creation of typology categories included posted speed limits, the number of standard vehicle lanes, traffic volumes, type of traffic control device(s), land use context, and the presence and type of facilities for people walking, bicycling, and/or using golf carts.

The crossing typology used for selection of intersections to assess contains the following categories:

- Intersections of 2 major streets
- Intersections of a minor street with a major street
- Intersections of 2 minor streets
- Midblock path/pedestrian crossings
- Roundabouts

In the typology, "major streets" are defined as collector and arterial roadways with at least 4 lanes and posted speeds of 35 mph and above, and "minor streets are defined as 2-3 lane (or no centerline) local streets with posted speeds of 30 mph and below.

The crossing typology was used to select 11 individual intersections and midblock crossings. Table 1 on the following page provides the locations of each intersection assessed, the crossing typology category assigned, and other relevant characteristics.

Alta staff conducted in-person assessments at each location. At each location, we documented conditions with photographs and noted details associated with existing signage, pavement markings, curb ramps, intersection geometry, and signalization (if applicable). Alta staff also observed path and roadway system user behavior, including compliance with traffic control devices, travel speeds, and communication/negotiation between people using the path and roadway systems.

Summary of Findings

Path systems designed to accommodate golf carts in addition to pedestrians and bicyclists are relatively uncommon. Alta is not aware of any national-level resource that provides design guidance on this unique facility type generally, nor specifically with regard to at-grade roadway crossings of such paths. Our assessment of path crossings in Fayette County, therefore, is based on our observations and experiences of driving a golf cart as new users of the system, in addition to our knowledge of conventional shared-use path crossing design.

The path system — particularly in Peachtree City — provides access to a wide variety of destinations and functions as a secondary transportation and recreation network that is largely independent from the roadway network. Connecting residents to schools, parks, workplaces, and commercial destinations via the path system would not be possible without multiple roadway crossings.

Table 1: Intersections Assessed with Relevant Characteristics

TYPOLOGY CATEGORY	CROSSING LOCATION	TRAFFIC CONTROL	FACILITY	LAND USE CONTEXT	JURISDICTION	NOTES
Intersections of 2 major streets	GA 54/W Lanier Ave & GA 85/ Glynn St	Traffic Signal	Sidewalks	Fayetteville Town Center	Fayetteville	Leading pedestrian interval, decorative brick pavers inside white parallel bar crosswalk, pedestrian countdown timers on some but not all approaches
	GA 54/Col M Jackson Medal of Honor Hwy & Planterra Way	Traffic Signal	Multi-use Path	Suburban Strip Commercial	Peachtree City	Intersection is currently under construction: installing raised pedestrian crossing islands at channelized turn lanes, high-visibility crosswalks
Intersections of a minor street with a major street	N Peachtree Pkwy & World Dr	Traffic Signal	Multi-use Path	Suburban Strip Commercial	Peachtree City	High visibility crosswalks, center median with integrated pedestrian refuge island, golf cart warning signage (MUTCD W11-11)
	S Peachtree Pkwy & McIntosh Trl	4-Way Stop	Multi-use Path	Suburban Residential	Peachtree City	High-visibility crosswalks, older version of School Crossing Assembly (MUTCD S1-1) at western and northern approaches; no warning signage at southern or eastern approaches
	S Peachtree Pkwy & Braelinn Rd	Marked Crosswalk, Golf Cart Crossing Warning Signage	Multi-use Path	Suburban Residential	Peachtree City	High-visibility crosswalks, advanced warning signage along S Peachtree Pkwy at northwestern approach (before turn), golf cart warning signage (MUTCD W11-11 with W16-7P) for NE-bound drivers on Braelinn Rd
Intersections of 2 minor streets	Georgian Park Rd & Regents Park Rd	Custom "PATH CROSSING" marker	Multi-use Path	Suburban Strip Commercial	Peachtree City	No marked crosswalks, "PATH CROSSING" marker on eastern approach
	Redwine Rd & S Peachtree Pkwy	4-Way Stop	Multi-use Paths	Rural Residential	Unincorporated Fayette County	High-visibility crosswalks, Pedestrian-scale stop signs at each path approach
	Dividend Dr & Kelly Dr	4-Way Stop	Multi-use Path, Bike Lane	Light Industrial	Peachtree City	Faded high-visibility crosswalk, bike lane intersection crossing markings, MUTCD R3-17 signage along Dividend Dr
Midblock path/ pedestrian crossings	Cameron Trail - Midblock between Kirton Turn/Lattice Gate and Chestnut Field	Marked Crosswalk, Golf Cart Crossing Warning Signage	Multi-use Path	Suburban Residential	Peachtree City	High-visibility crosswalk, golf cart warning signage (MUTCD W11-11 with W16-7P), advanced warning signage
	Rockaway Rd - Midblock about 400' SW of Meade Field Dr	Pedestrian Hybrid Beacon (aka HAWK)	Multi-use Path	Suburban Residential	Peachtree City	High-visibility crosswalk, MUTCD W11-11 with W16-7P supplemental plaque, advanced warning signage, setback stop bar with "STOP HERE ON RED" and "STATE LAW - STOP FOR PEDESTRIANS" signage
Roundabout	Beauregard Blvd & Grady Ave	Yield signs and markings	Sidewalk/ Multi-use Path	Suburban Residential	Fayetteville	Setback pedestrian crossings, high-visibility crosswalks, and pedestrian warning signage (MUTCD W11-2 with W16-7P supplemental plaque)

Some of these crossings are accomplished via overcrossings or undercrossings, but the majority of path crossings occur at-grade using conventional traffic control devices (signs, pavement markings, and traffic signals) found in the Manual of Uniform Traffic Control Devices (MUTCD).

Given that the path system uses few custom signs, markings, or other design features that specifically respond to the fact that golf carts are the primary user, the system overall functions surprisingly well from the perspective of a new user. Path crossings accommodate a diverse and unconventional mix of users with a variety of operating envelopes, operating speeds, and legal requirements.

While traffic control devices clearly play an important role in the perceived comfort and safety of the system, driver behavior is also an important factor. Our experience was that **drivers were generally attentive and courteous,** particularly at stop-controlled and uncontrolled path crossings where we (and other observed path users) did not technically have the right-of-way.

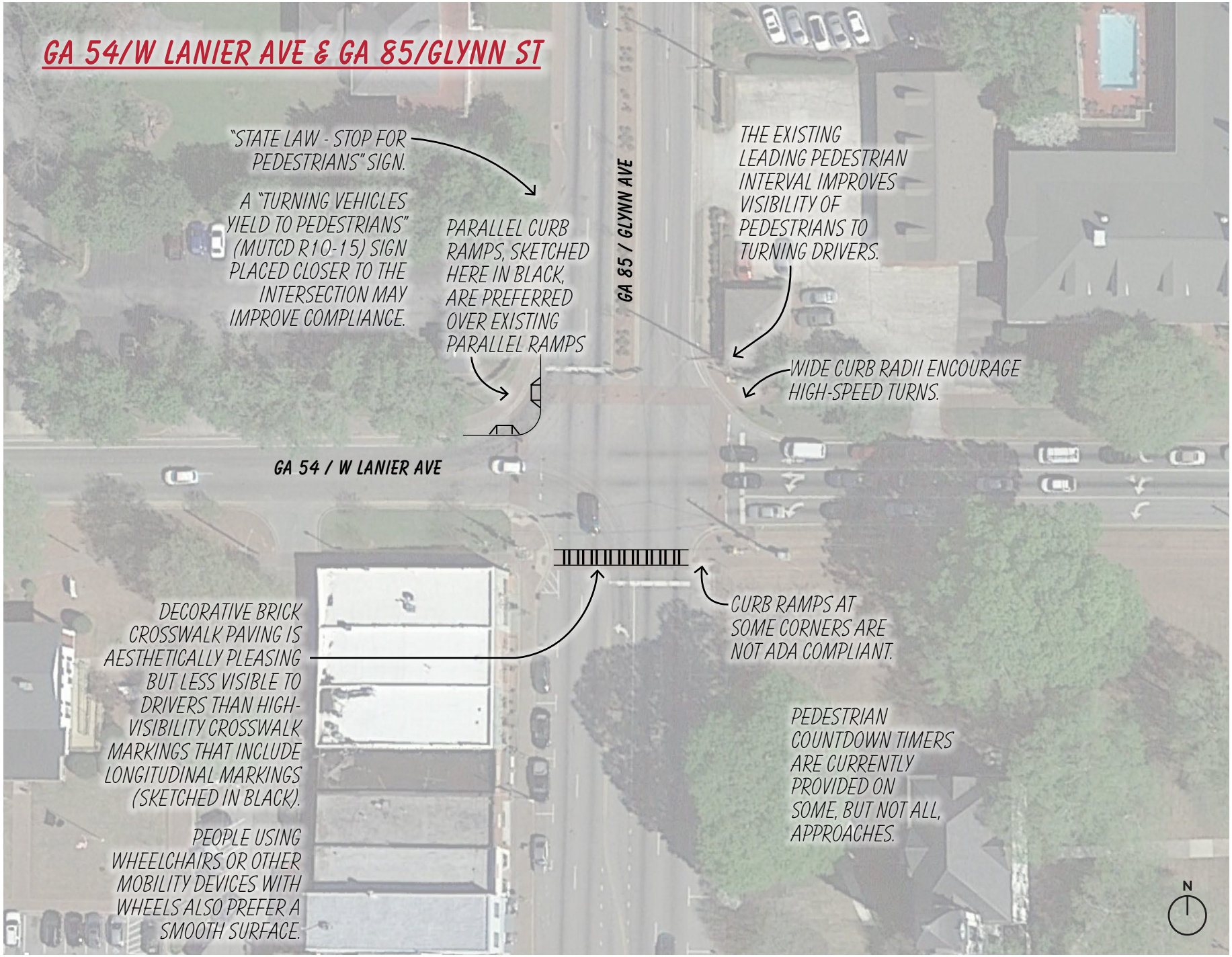
Common Themes

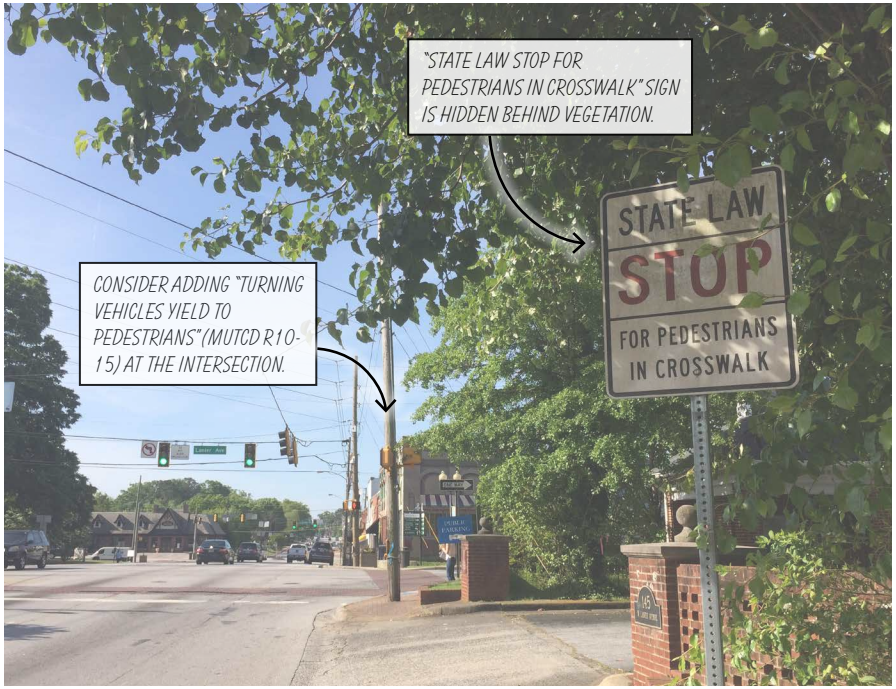
The following bullets describe common themes and key takeaways of our assessment:

- **Both signage and pavement markings are applied somewhat inconsistently.** Signage and markings oriented toward vehicles, such as path crossing signage and advance warning signage, is more consistent than signage and markings oriented toward path users. The biggest inconsistency we observed was the use of stop bars and path-user scale stop signs at some locations but not others. There did not appear to be a pattern in terms of when these treatments were applied.
- It is not always **clear which signs apply to which path user(s).** For example, path-user scale stop signs intended for golf cart users and bicyclists may imply that pedestrians must stop and yield to automobiles, which is not consistent with Georgia law.
- The **use of golf cart warning signage at most path crossings is somewhat misleading to drivers, since people walking and bicycling are also frequent users of the path.** Because legally drivers must stop for pedestrians in crosswalks per Georgia law, warning signage that only features golf carts may muddy this important distinction.
- Some observed interactions, particularly at 4-way stop-controlled intersections with path crossings directly adjacent to the roadway crossing (as opposed to set-back from the roadway crossing) revealed **confusion about who had right-of-way**. **We observed one near miss** between a golf cart user and an automobile driver attempting to negotiate who should proceed first.
- **Path users with disabilities** — including people who rely on wheelchairs or other wheeled mobility aids and people who have visual or hearing impairment — **will have serious difficulties navigating at-grade crossings. Very few path crossings include ADA-compliant curb ramps or tactile warning strips with truncated domes.**
- **Setback path crossings** are common features, and appeared to **help reduce conflicts with automobiles by allowing drivers to interact with path users independently of other automobiles in advance of roadway intersections** (similar to modern roundabout design with setback pedestrian crossings). However, the setback distances were inconsistent, and in some cases the crossings were not clearly marked.
- **Channelized right turn lanes and large curb radii** are common features of multi-lane intersections where paths cross the roadway. These features **promote high-speed turning movements, which increase risk of serious injuries and fatalities for path system users.**
- Particularly because the path system is extensive and complex, **wayfinding signage is very limited.** The wayfinding signage that does exist is also inconsistent and lacks a common brand.
- **Overcrossings were generally spacious and well-designed**, with what appeared to be ADA-compliant approach grades.
- While some undercrossings were wide, **many undercrossings were too narrow for two golf carts to pass each other, creating a sense of unease and the potential for collisions between golf carts and other path users.**

The pages that follow provide detailed assessments of the signage, markings, and other design features of each of the 11 intersections visited by Alta staff.

GA 54/W LANIER AVE & GA 85/GLYNN ST



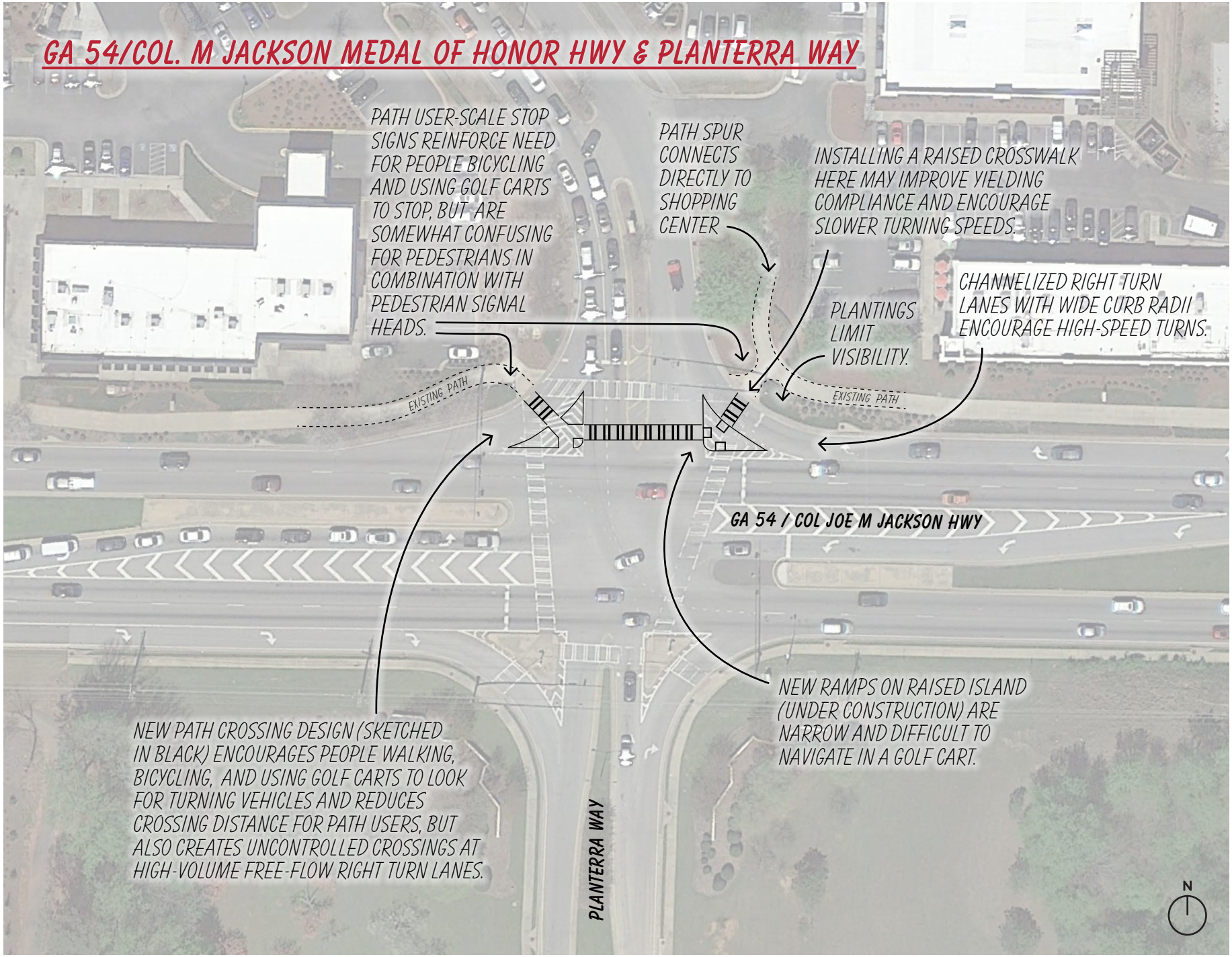

"STATE LAW STOP FOR PEDESTRIANS IN CROSSWALK" SIGN IS HIDDEN BEHIND VEGETATION.
CONSIDER ADDING "TURNING VEHICLES YIELD TO PEDESTRIANS" (MUTCD R10-15) AT THE INTERSECTION.
STATE LAW
STOP
FOR PEDESTRIANS IN CROSSWALK


WIDE CURB RADII ENCOURAGE HIGH-SPEED TURNS.

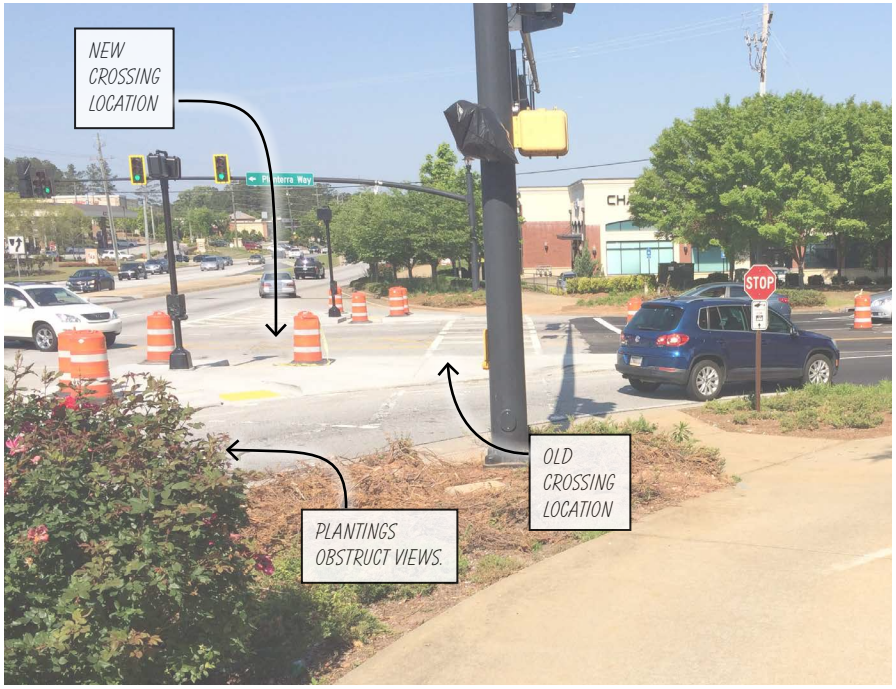

THE EXISTING LEADING PEDESTRIAN INTERVAL GIVES PEOPLE WALKING A HEAD START, AND IMPROVES VISIBILITY OF PEDESTRIANS TO TURNING DRIVERS.
85
92
54
N Glynn St

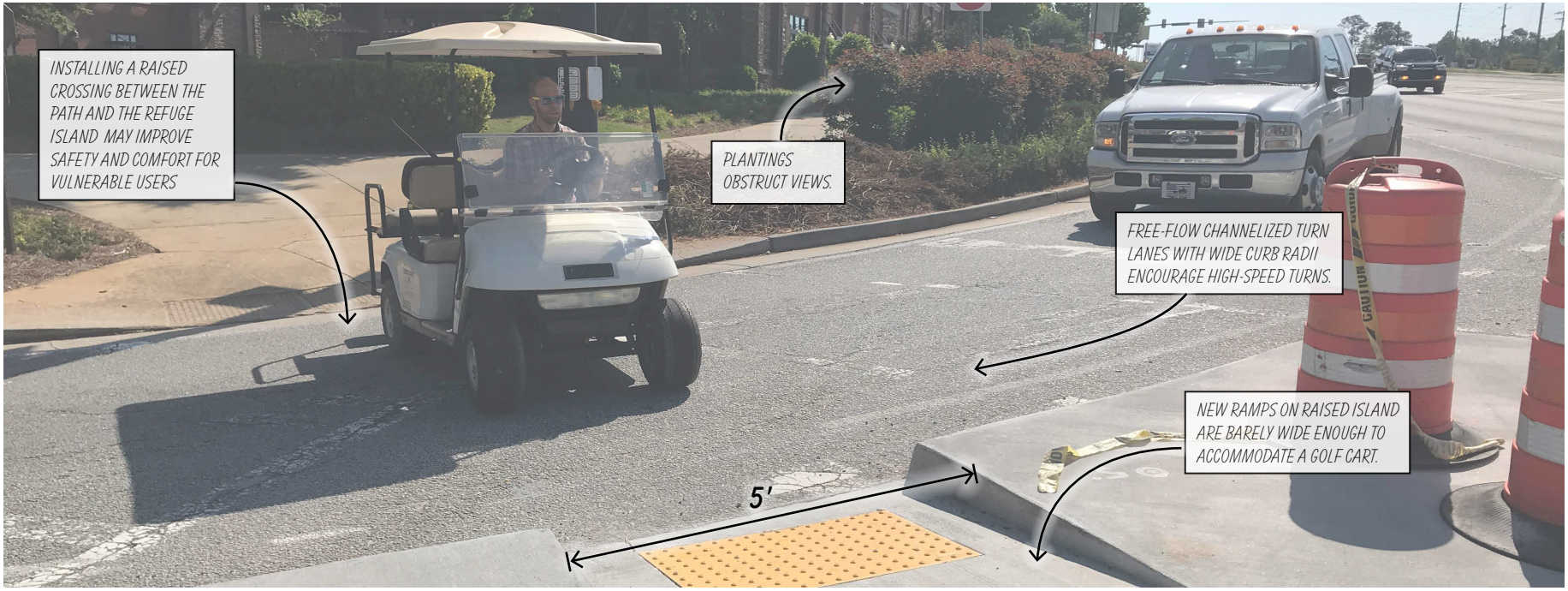

DECORATIVE BRICK PAVING IS LESS VISIBLE TO DRIVERS THAN HIGH-VISIBILITY CROSSWALK MARKINGS THAT INCLUDE LONGITUDINAL STRIPES.
PEOPLE USING WHEELCHAIRS OR OTHER MOBILITY DEVICES WITH WHEELS ALSO PREFER A SMOOTH SURFACE.
CURB RAMP IS NOT ADA-COMPLIANT.

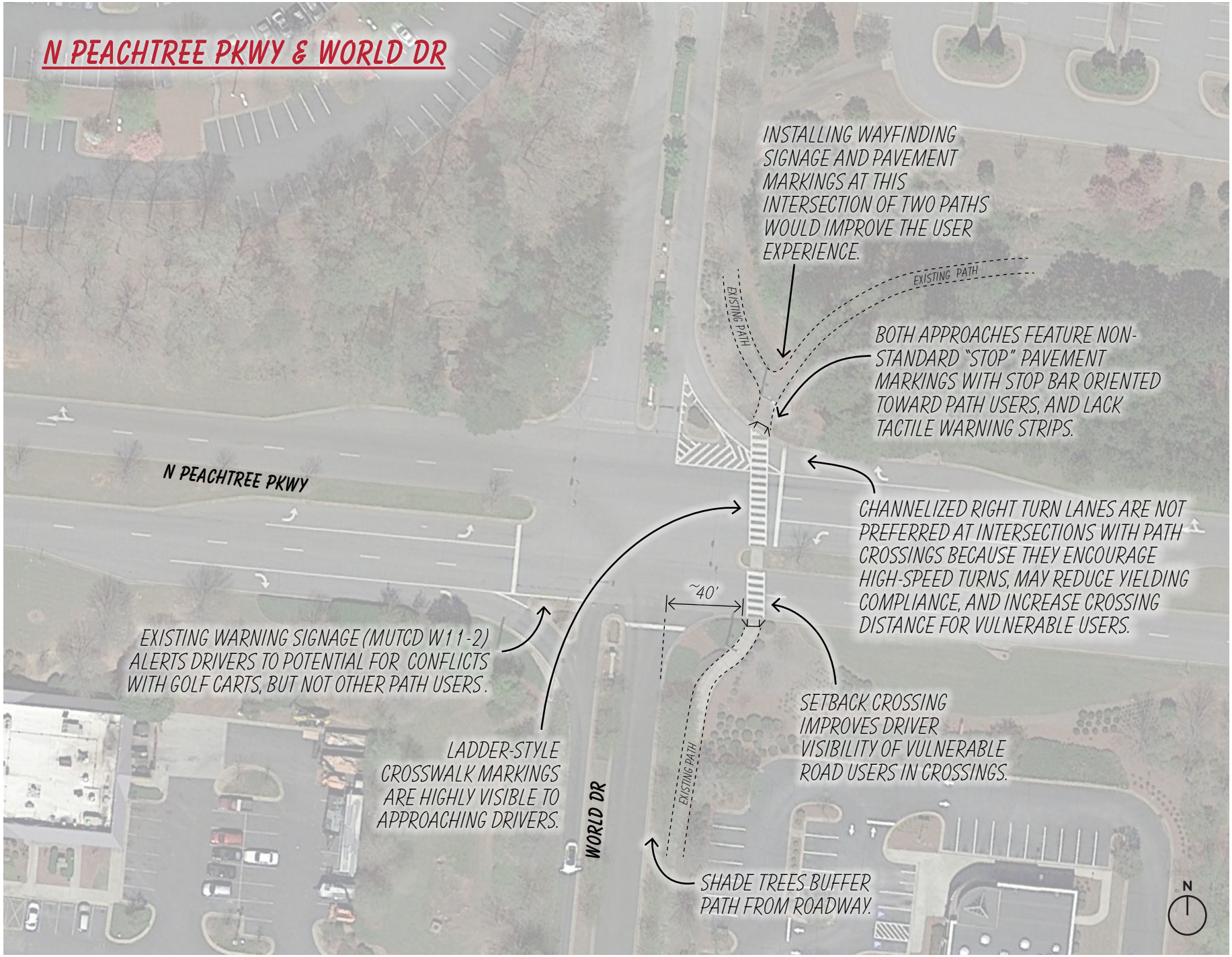
GA 54/COL. M JACKSON MEDAL OF HONOR HWY & PLANTERRA WAY



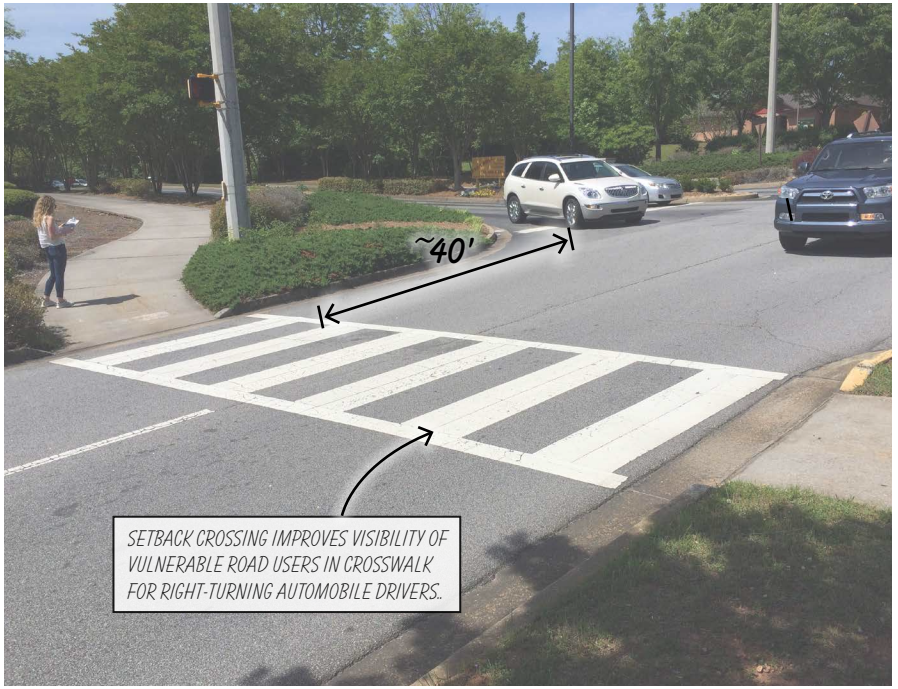

PATH-USER SCALE STOP SIGNS REINFORCE NEED FOR PEOPLE BICYCLING AND USING GOLF CARTS TO STOP, BUT ARE SOMEWHAT CONFUSING FOR PEDESTRIANS IN COMBINATION WITH PEDESTRIAN SIGNAL HEADS.
STOP
PUSH BUTTON FOR
CUSTOM PLAQUE WITH GOLF CART ICON HELPS CLARIFY THAT GOLF CART USERS SHOULD USE THE PEDESTRIAN SIGNAL.
IT MAY ALSO BE HELPFUL TO CLARIFY THAT THE SMALL STOP SIGN DOES NOT APPLY TO PEDESTRIANS.

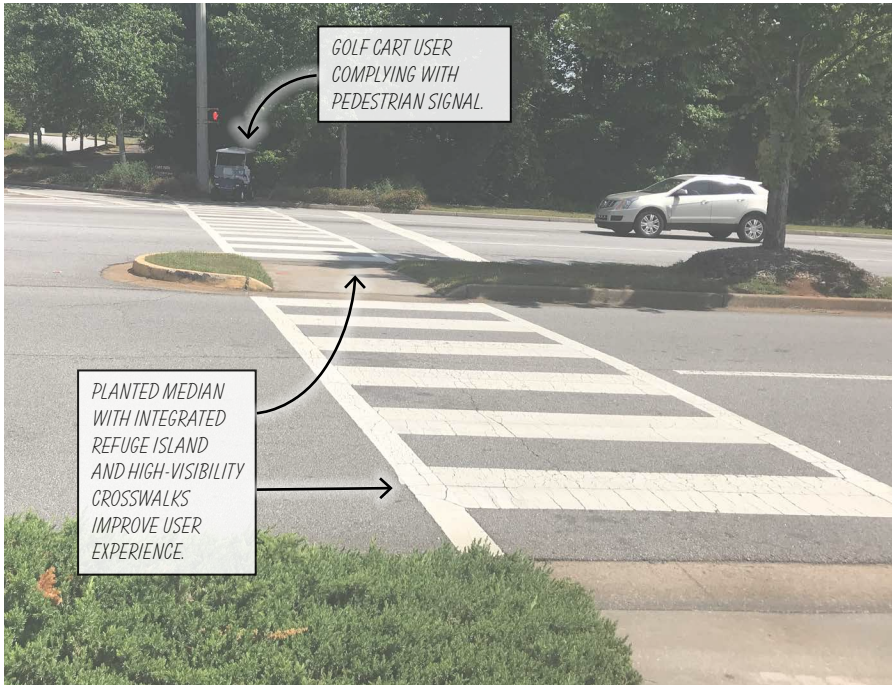

NEW CROSSING LOCATION
OLD CROSSING LOCATION
PLANTINGS OBSTRUCT VIEWS.
STOP


INSTALLING A RAISED CROSSING BETWEEN THE PATH AND THE REFUGE ISLAND MAY IMPROVE SAFETY AND COMFORT FOR VULNERABLE USERS
PLANTINGS OBSTRUCT VIEWS.
FREE-FLOW CHANNELIZED TURN LANES WITH WIDE CURB RADII ENCOURAGE HIGH-SPEED TURNS.
NEW RAMPS ON RAISED ISLAND ARE BARELY WIDE ENOUGH TO ACCOMMODATE A GOLF CART.
5'


N PEACHTREE PKWY & WORLD DR
INSTALLING WAYFINDING SIGNAGE AND PAVEMENT MARKINGS AT THIS INTERSECTION OF TWO PATHS WOULD IMPROVE THE USER EXPERIENCE.
EXISTING PATH
EXISTING PATH
BOTH APPROACHES FEATURE NON-STANDARD "STOP" PAVEMENT MARKINGS WITH STOP BAR ORIENTED TOWARD PATH USERS, AND LACK TACTILE WARNING STRIPS.
N PEACHTREE PKWY
CHANNELIZED RIGHT TURN LANES ARE NOT PREFERRED AT INTERSECTIONS WITH PATH CROSSINGS BECAUSE THEY ENCOURAGE HIGH-SPEED TURNS, MAY REDUCE YIELDING COMPLIANCE, AND INCREASE CROSSING DISTANCE FOR VULNERABLE USERS.
~40'
EXISTING WARNING SIGNAGE (MUTCD W11-2) ALERTS DRIVERS TO POTENTIAL FOR CONFLICTS WITH GOLF CARTS, BUT NOT OTHER PATH USERS.
SETBACK CROSSING IMPROVES DRIVER VISIBILITY OF VULNERABLE ROAD USERS IN CROSSINGS.
LADDER-STYLE CROSSWALK MARKINGS ARE HIGHLY VISIBLE TO APPROACHING DRIVERS.
WORLD DR
EXISTING PATH
SHADE TREES BUFFER PATH FROM ROADWAY.
N

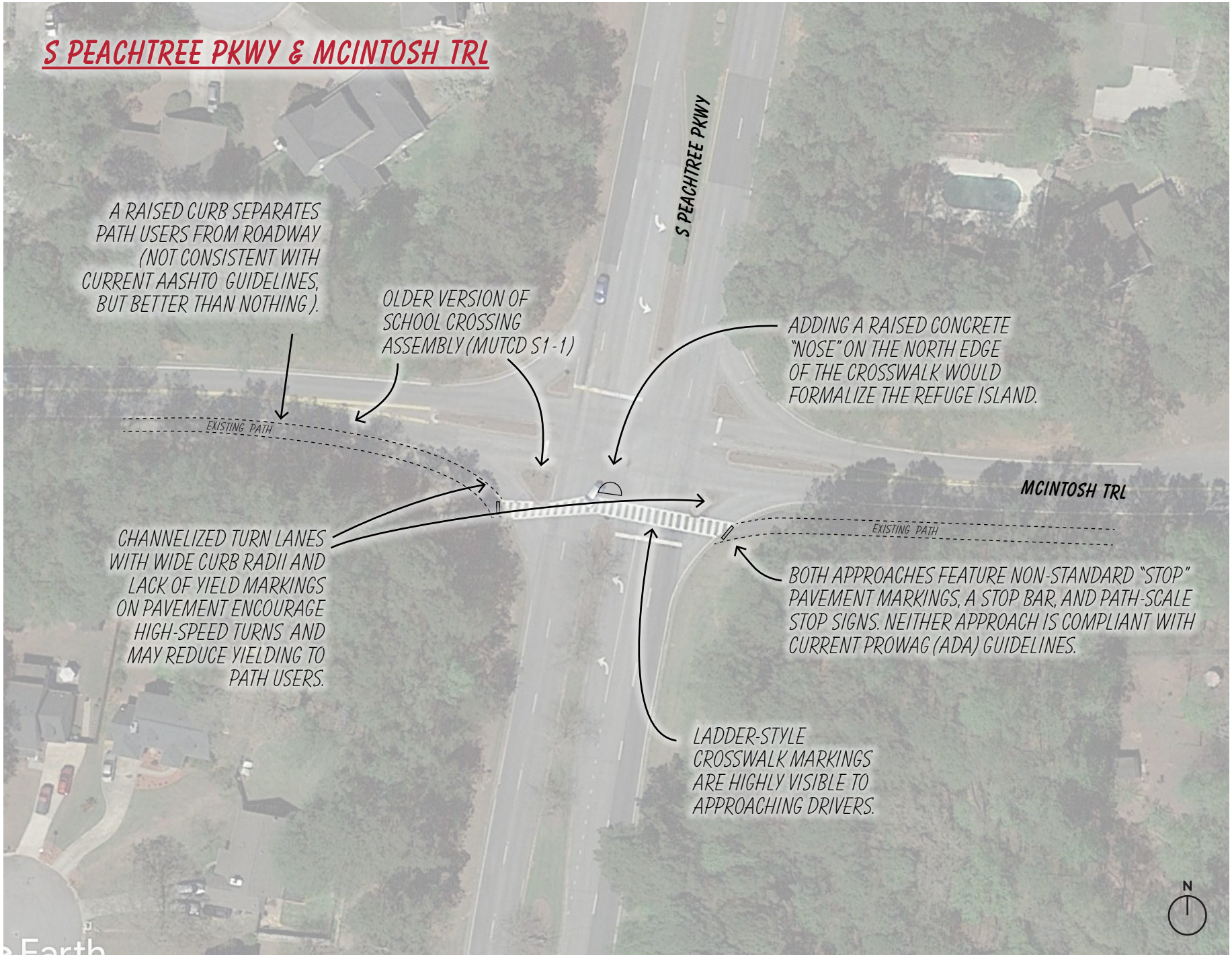

"STOP" PAVEMENT MARKINGS AND STOP BAR FOR PATH USERS MAY BE CONFUSING FOR PEDESTRIANS AT SIGNALIZED INTERSECTIONS BECAUSE THEY MAY CONTRADICT THE "WALK" PHASE OF PROVIDED PEDESTRIAN SIGNAL HEADS.
NO PAVEMENT MARKINGS OR WAYFINDING AT THIS PATH INTERSECTION.

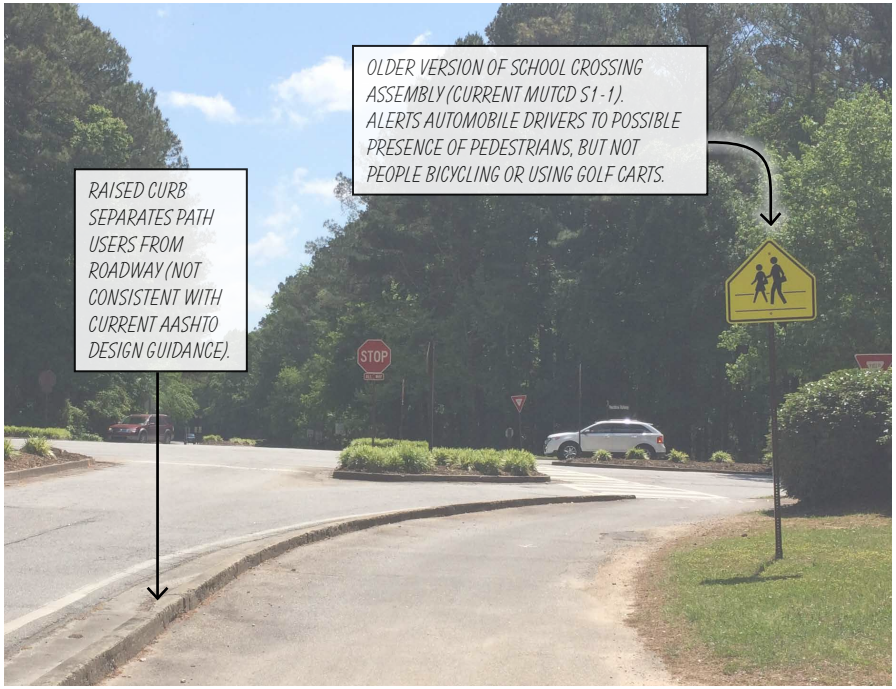

~40'
SETBACK CROSSING IMPROVES VISIBILITY OF VULNERABLE ROAD USERS IN CROSSWALK FOR RIGHT-TURNING AUTOMOBILE DRIVERS..

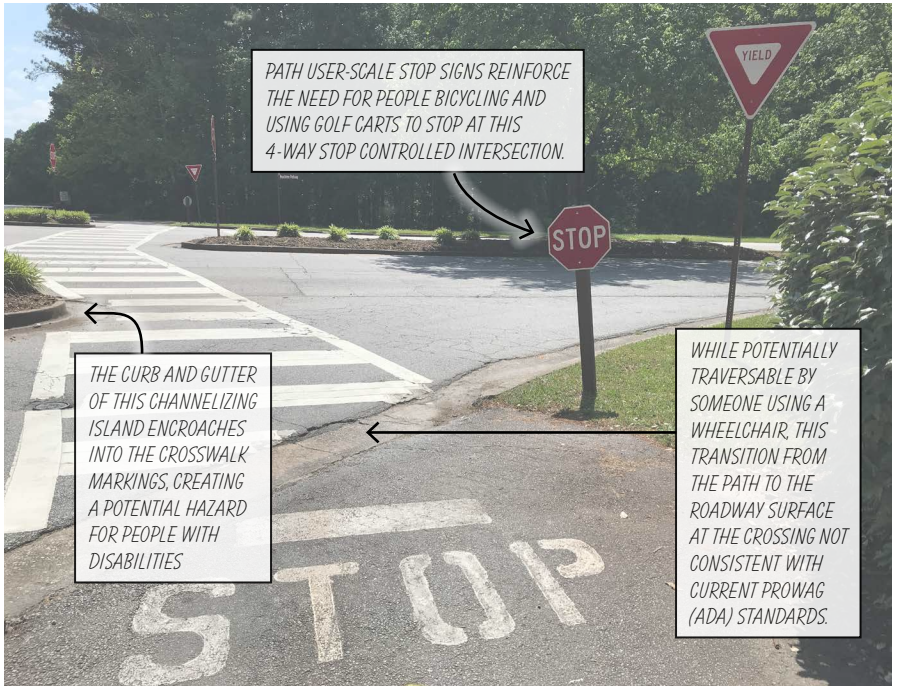

GOLF CART USER COMPLYING WITH PEDESTRIAN SIGNAL.
PLANTED MEDIAN WITH INTEGRATED REFUGE ISLAND AND HIGH-VISIBILITY CROSSWALKS IMPROVE USER EXPERIENCE.


World Dr
CROSSWALK
GOLF CART WARNING SIGNAGE (MUTCD W11-11) ALERTS AUTOMOBILE DRIVERS TO EXPECT THE MOST COMMON PATH USER IN THE COUNTY, BUT NOT TO PEOPLE WALKING OR BICYCLING.

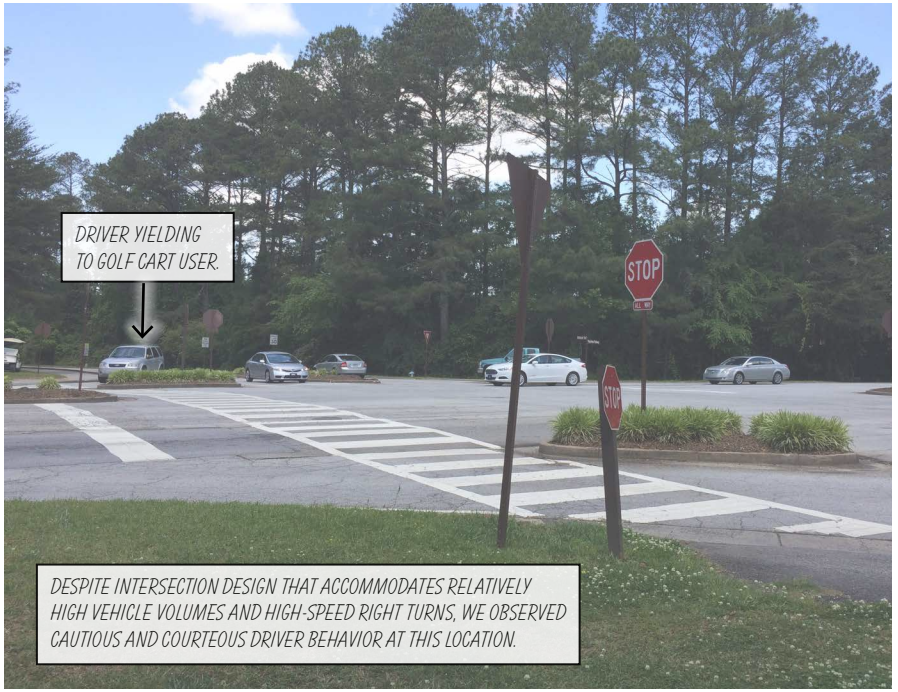
S PEACHTREE PKWY & MCINTOSH TRL



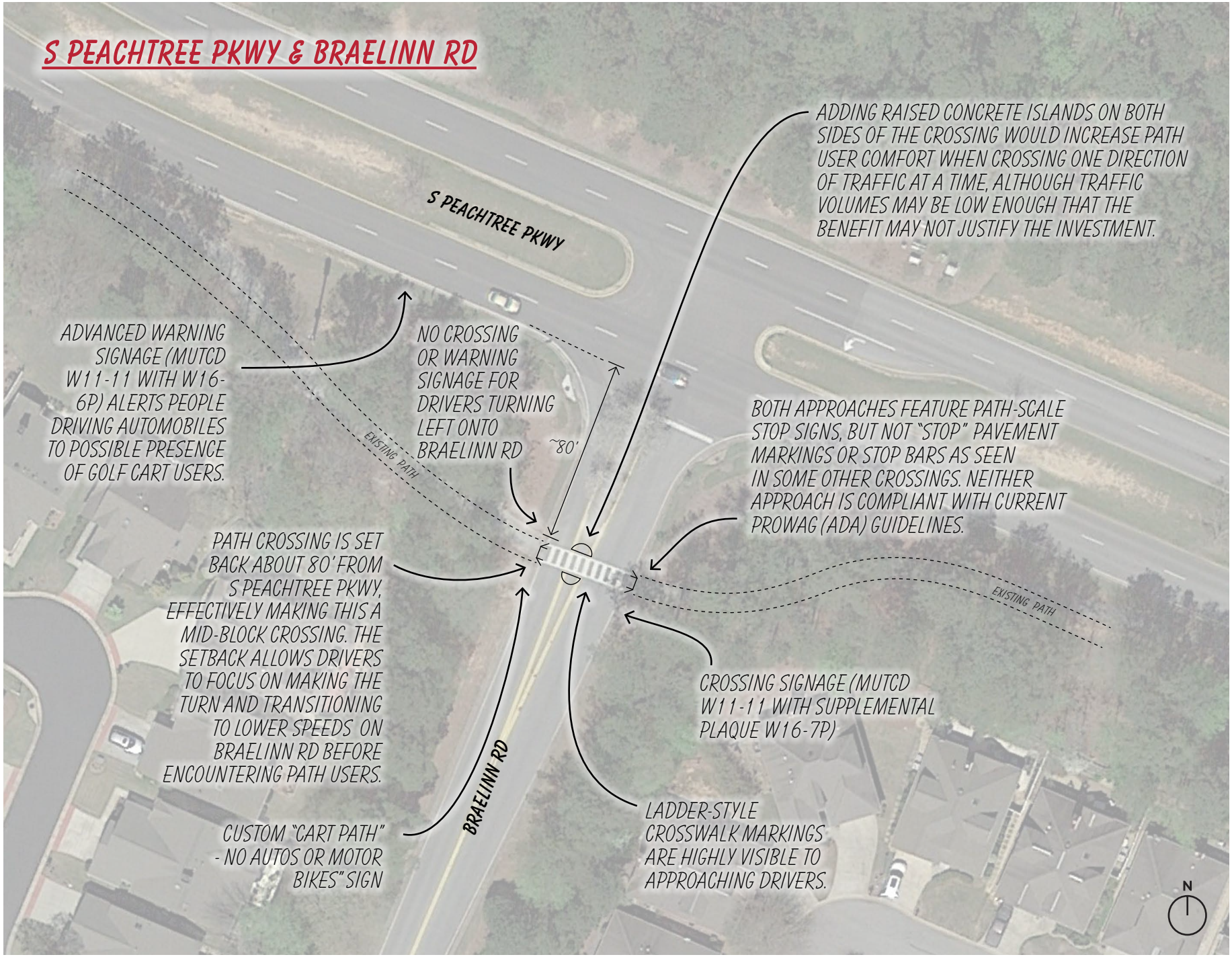

OLDER VERSION OF SCHOOL CROSSING ASSEMBLY (CURRENT MUTCD S1-1). ALERTS AUTOMOBILE DRIVERS TO POSSIBLE PRESENCE OF PEDESTRIANS, BUT NOT PEOPLE BICYCLING OR USING GOLF CARTS.
RAISED CURB SEPARATES PATH USERS FROM ROADWAY (NOT CONSISTENT WITH CURRENT AASHTO DESIGN GUIDANCE).
STOP


PATH USER-SCALE STOP SIGNS REINFORCE THE NEED FOR PEOPLE BICYCLING AND USING GOLF CARTS TO STOP AT THIS 4-WAY STOP CONTROLLED INTERSECTION.
YIELD
STOP
THE CURB AND GUTTER OF THIS CHANNELIZING ISLAND ENCROACHES INTO THE CROSSWALK MARKINGS, CREATING A POTENTIAL HAZARD FOR PEOPLE WITH DISABILITIES
WHILE POTENTIALLY TRAVERSABLE BY SOMEONE USING A WHEELCHAIR, THIS TRANSITION FROM THE PATH TO THE ROADWAY SURFACE AT THE CROSSING NOT CONSISTENT WITH CURRENT PROWAG (ADA) STANDARDS.
STOP


ADDING A RAISED CONCRETE "NOSE" HERE COULD IMPROVE PATH USER COMFORT BY PROVIDING A SENSE OF PROTECTION FROM AUTOMOBILES.
PLANTED MEDIAN HELPS CONFIDENT PATH USERS TO CROSS ONE DIRECTION OF TRAFFIC AT A TIME, ALTHOUGH THE DESIGN DOES NOT MAKE IT CLEAR THAT THIS BEHAVIOR IS ENCOURAGED.
STOP


DRIVER YIELDING TO GOLF CART USER.
STOP
DESPITE INTERSECTION DESIGN THAT ACCOMMODATES RELATIVELY HIGH VEHICLE VOLUMES AND HIGH-SPEED RIGHT TURNS, WE OBSERVED CAUTIOUS AND COURTEOUS DRIVER BEHAVIOR AT THIS LOCATION.

S PEACHTREE PKWY & BRAELINN RD

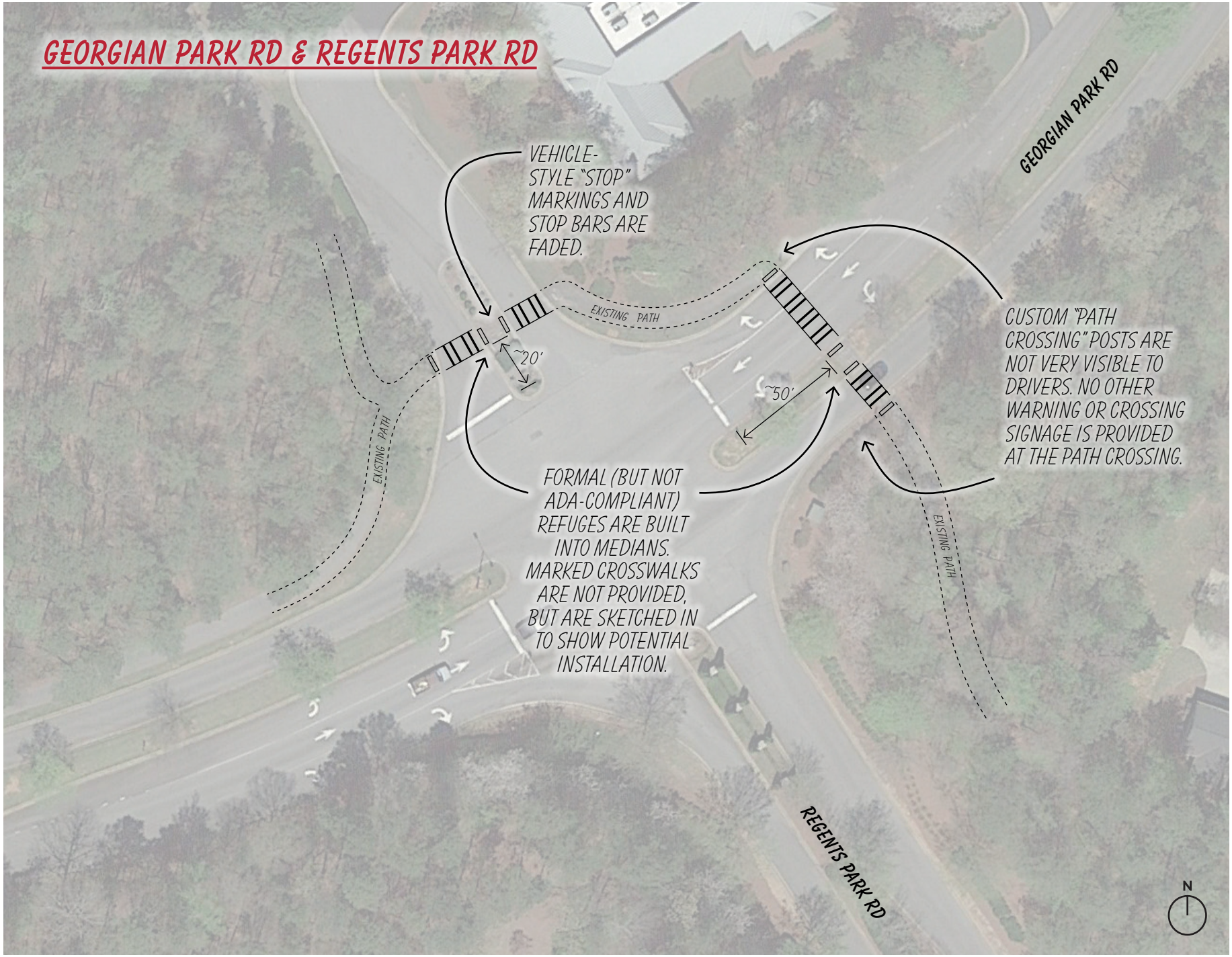



ADVANCED WARNING SIGNAGE (MUTCD W11-11 WITH SUPPLEMENTAL PLAQUE W16-6P) ALERTS TURNING VEHICLES TO EXPECT GOLF CART USERS, BUT DOES NOT WARN DRIVERS OF THE POTENTIAL TO ENCOUNTER PEOPLE WALKING AND BICYCLING.

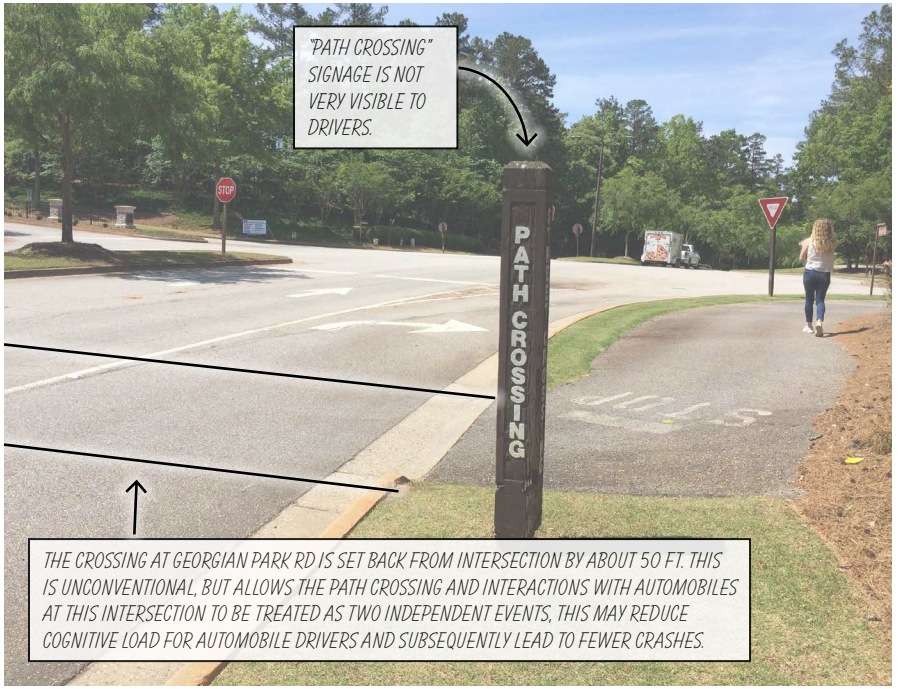

PATH USER-SCALE STOP SIGNS REINFORCE THE NEED FOR PEOPLE BICYCLING AND USING GOLF CARTS TO STOP AT AN UNCONTROLLED CROSSING.
STOP
CROSSING APPROACH GRADES ARE STEEP - WOULD BE VERY DIFFICULT TO TRAVERSE IN A WHEELCHAIR.


MATERIALS AND DESIGN OF CUSTOM REGULATORY SIGNAGE REFLECTS LOCAL CHARACTER, ALTHOUGH "CART PATH" DOES NOT FULLY REFLECT THE RANGE OF PERMITTED USERS, WHICH INCLUDE PEDESTRIANS AND BICYCLISTS.
CART PATH
NO AUTOS OR MOTOR BIKES

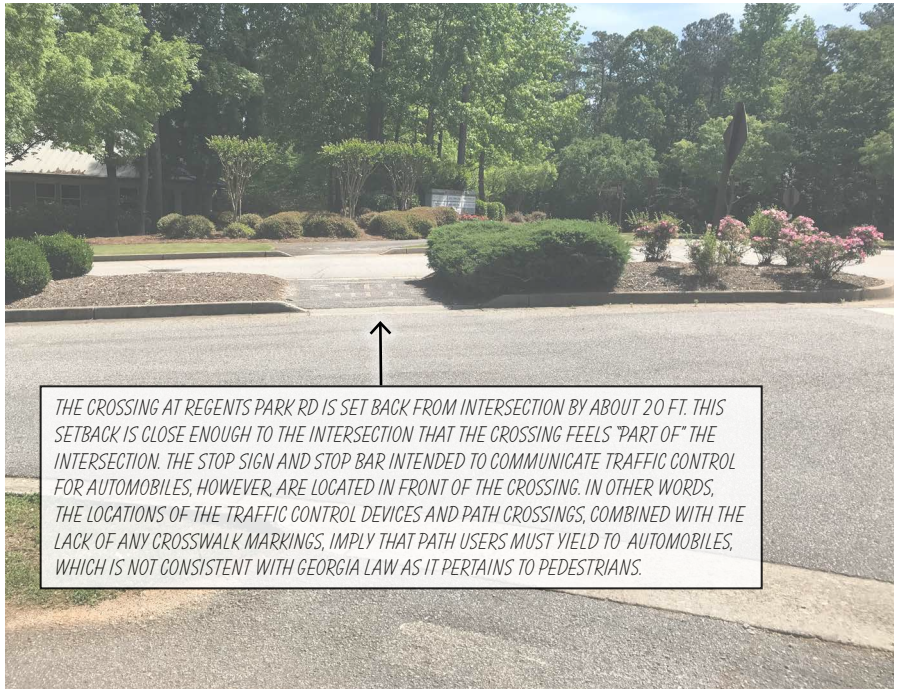

FORMALIZING A REFUGE ISLAND HERE WOULD IMPROVE PATH USER COMFORT.
WARNING SIGNAGE (MUTCD W11-11 WITH SUPPLEMENTAL PLAQUE W16-7P).
CUSTOM SIGNAGE THAT INCLUDES ALL POTENTIAL PATH USERS - PEDESTRIANS, BICYCLISTS, AND GOLF CARTS - MAY IMPROVE CLARITY. "TRAIL CROSSING" (MUTCD W11-15A) IS ANOTHER POTENTIAL OPTION.
STOP


GEORGIAN PARK RD & REGENTS PARK RD
VEHICLE-STYLE "STOP" MARKINGS AND STOP BARS ARE FADED.
GEORGIAN PARK RD
EXISTING PATH
~20'
~50'
CUSTOM "PATH CROSSING" POSTS ARE NOT VERY VISIBLE TO DRIVERS. NO OTHER WARNING OR CROSSING SIGNAGE IS PROVIDED AT THE PATH CROSSING.
EXISTING PATH
FORMAL (BUT NOT ADA-COMPLIANT) REFUGES ARE BUILT INTO MEDIANS. MARKED CROSSWALKS ARE NOT PROVIDED, BUT ARE SKETCHED IN TO SHOW POTENTIAL INSTALLATION.
EXISTING PATH
REGENTS PARK RD
N

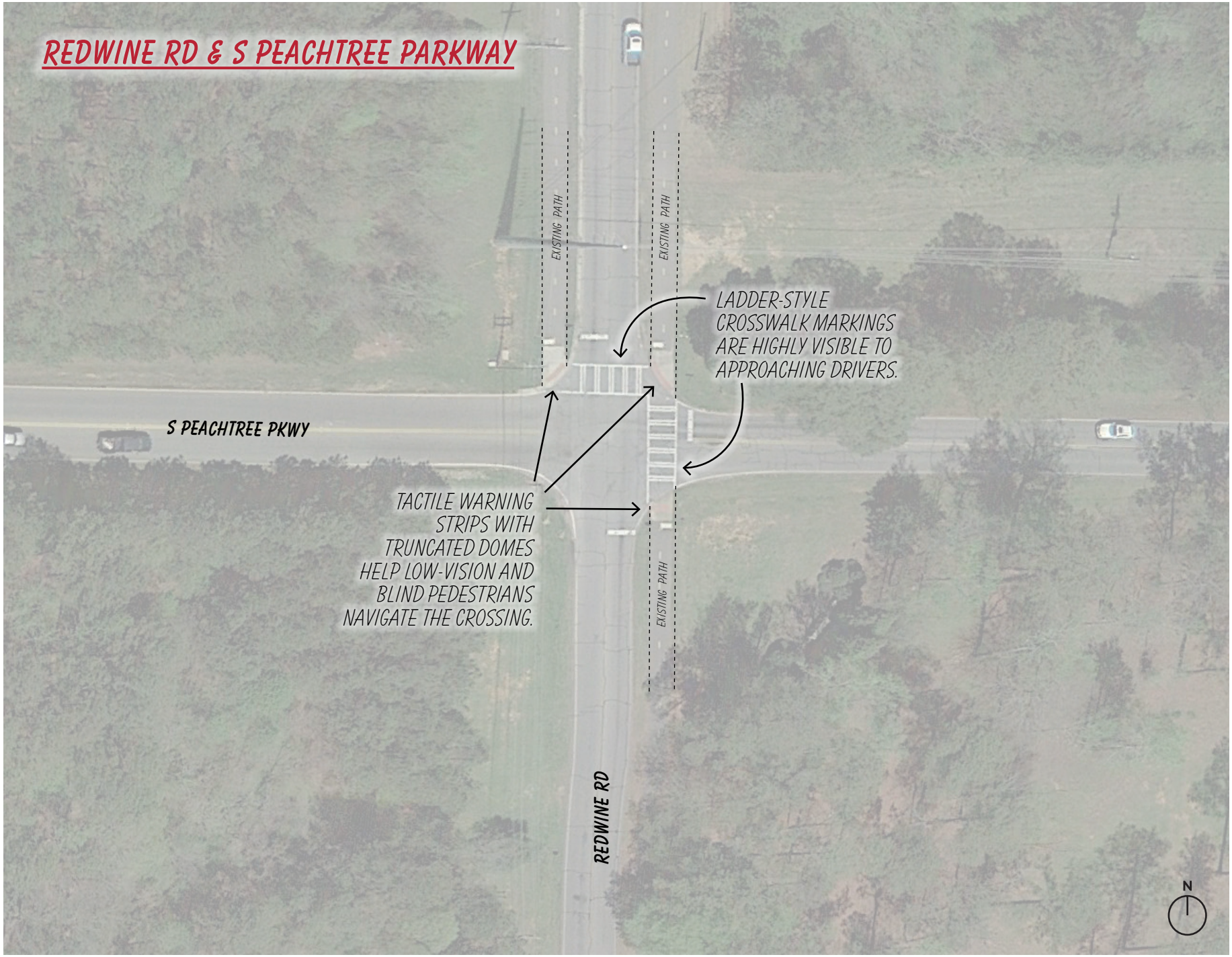

"STOP" PAVEMENT MARKINGS AND STOP BARS IN MEDIAN REFUGE ARE NON-STANDARD, BUT COMMUNICATE EXPECTATIONS TO USERS WITHOUT VISION IMPAIRMENTS RELATIVELY EFFECTIVELY.


"PATH CROSSING" SIGNAGE IS NOT VERY VISIBLE TO DRIVERS.
PATH CROSSING
THE CROSSING AT GEORGIAN PARK RD IS SET BACK FROM INTERSECTION BY ABOUT 50 FT. THIS IS UNCONVENTIONAL, BUT ALLOWS THE PATH CROSSING AND INTERACTIONS WITH AUTOMOBILES AT THIS INTERSECTION TO BE TREATED AS TWO INDEPENDENT EVENTS, THIS MAY REDUCE COGNITIVE LOAD FOR AUTOMOBILE DRIVERS AND SUBSEQUENTLY LEAD TO FEWER CRASHES.


"STREET CROSSING" POST. IT SAYS "PATH CROSSING" ON THE SIDE OF THE POST FACING APPROACHING VEHICLES, BUT IS NOT VERY VISIBLE TO DRIVERS.
PATH USER-SCALE STOP SIGNS REINFORCE THE NEED FOR PEOPLE BICYCLING AND USING GOLF CARTS TO STOP HERE.
STOP


THE CROSSING AT REGENTS PARK RD IS SET BACK FROM INTERSECTION BY ABOUT 20 FT. THIS SETBACK IS CLOSE ENOUGH TO THE INTERSECTION THAT THE CROSSING FEELS "PART OF" THE INTERSECTION. THE STOP SIGN AND STOP BAR INTENDED TO COMMUNICATE TRAFFIC CONTROL FOR AUTOMOBILES, HOWEVER, ARE LOCATED IN FRONT OF THE CROSSING. IN OTHER WORDS, THE LOCATIONS OF THE TRAFFIC CONTROL DEVICES AND PATH CROSSINGS, COMBINED WITH THE LACK OF ANY CROSSWALK MARKINGS, IMPLY THAT PATH USERS MUST YIELD TO AUTOMOBILES, WHICH IS NOT CONSISTENT WITH GEORGIA LAW AS IT PERTAINS TO PEDESTRIANS.

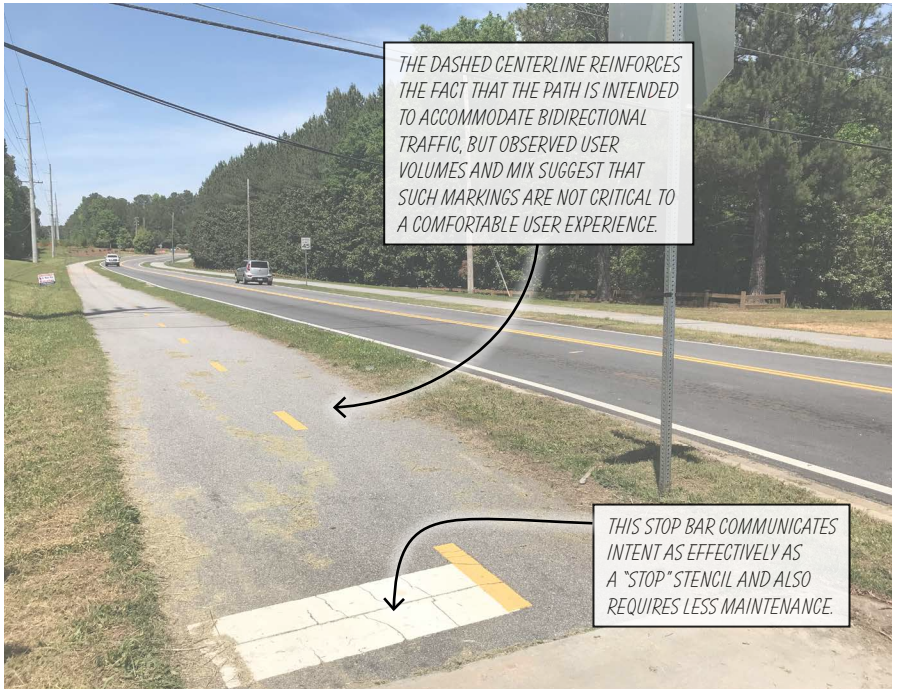
REDWINE RD & S PEACHTREE PARKWAY



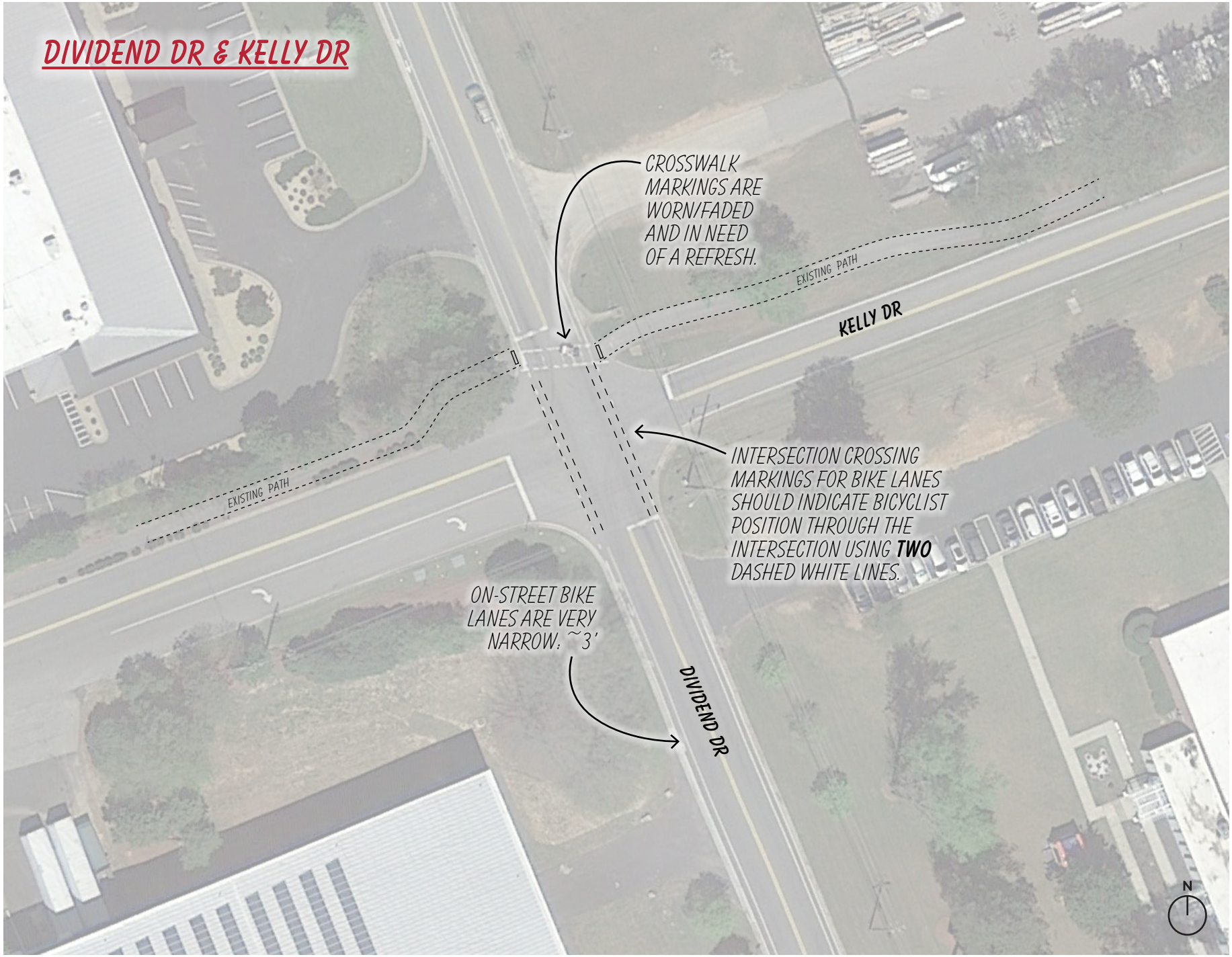

PATH USER-SCALE STOP SIGNS MAY NOT BE NEEDED WHERE THE PATH IS DIRECTLY ADJACENT TO AN AUTOMOBILE-ORIENTED STOP SIGN.
STOP
STOP

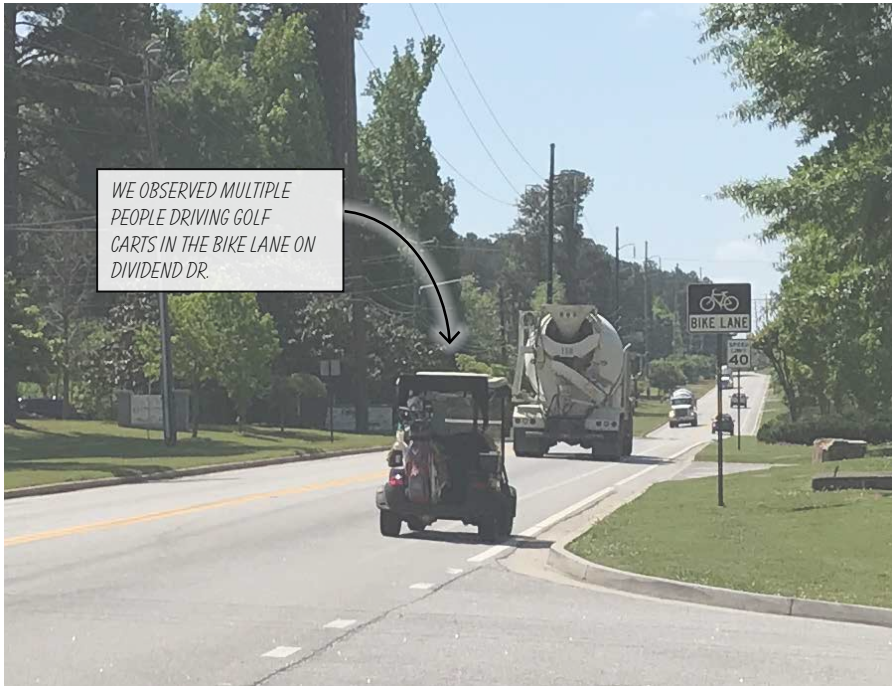

TACTILE WARNING STRIPS WITH TRUNCATED DOMES ARE A CRITICAL FEATURE FOR LOW-VISION/BLIND PEDESTRIANS.

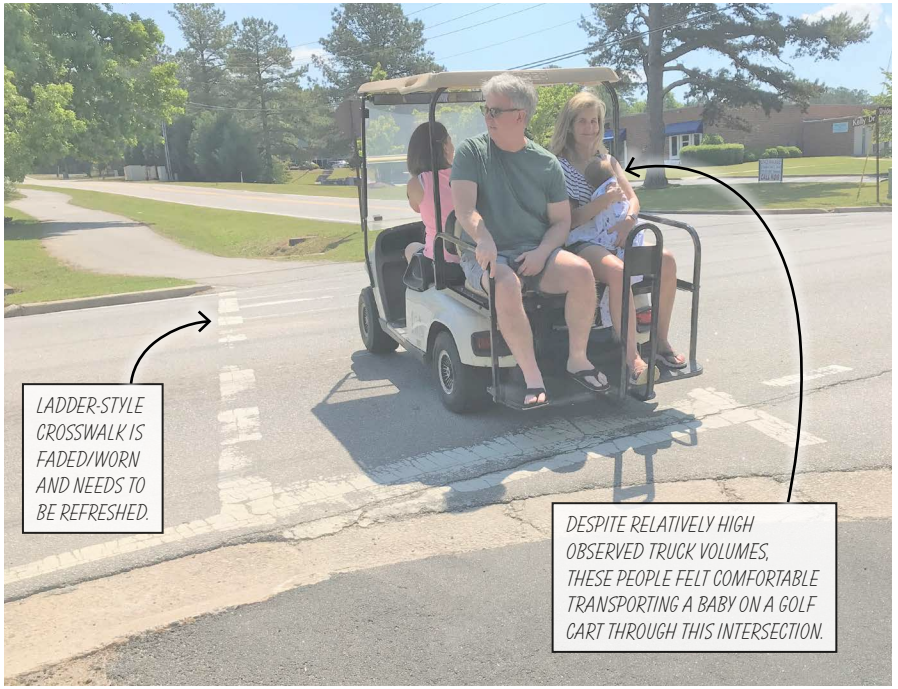

WHERE PATH CROSSINGS ARE NOT SET BACK FROM THE INTERSECTION OF TWO STREETS, DECISION-MAKING AND COMMUNICATION BETWEEN DRIVERS OF AUTOMOBILES AND GOLF CARTS IS MORE COMPLEX. WE OBSERVED A NEAR-MISS BETWEEN THIS GOLF CART USER AND AN AUTOMOBILE, WHICH APPEARED TO US TO BE A RESULT OF CONFUSION OVER WHO HAD THE RIGHT-OF-WAY.
STOP

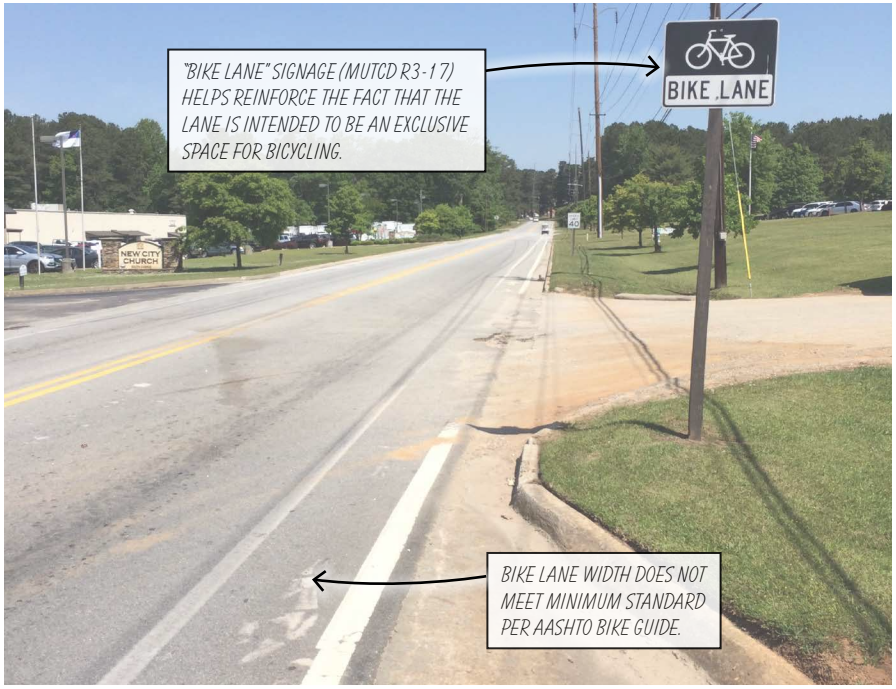

THE DASHED CENTERLINE REINFORCES THE FACT THAT THE PATH IS INTENDED TO ACCOMMODATE BIDIRECTIONAL TRAFFIC, BUT OBSERVED USER VOLUMES AND MIX SUGGEST THAT SUCH MARKINGS ARE NOT CRITICAL TO A COMFORTABLE USER EXPERIENCE.
THIS STOP BAR COMMUNICATES INTENT AS EFFECTIVELY AS A "STOP" STENCIL AND ALSO REQUIRES LESS MAINTENANCE.

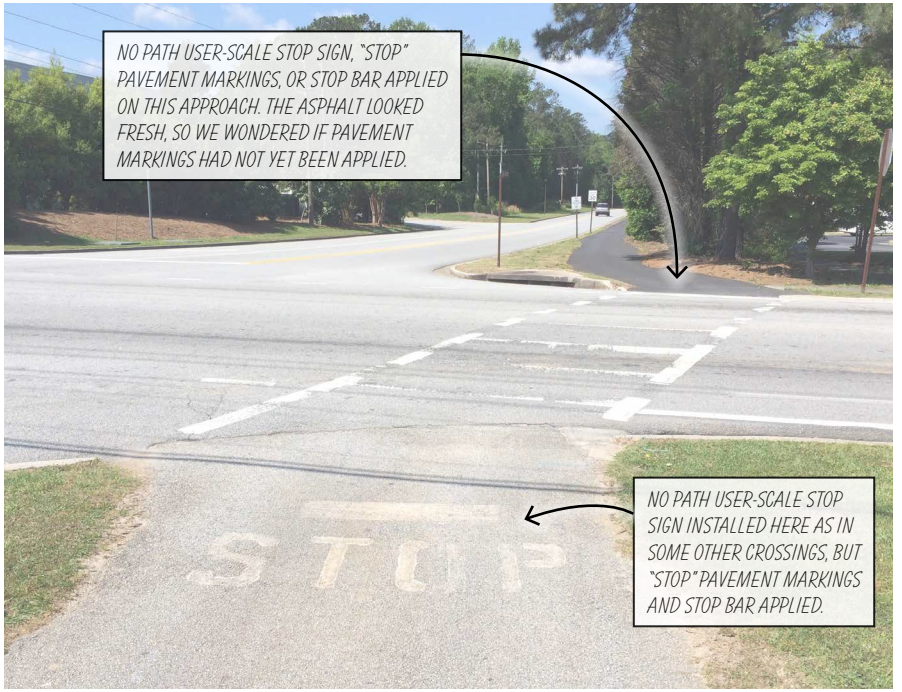
DIVIDEND DR & KELLY DR



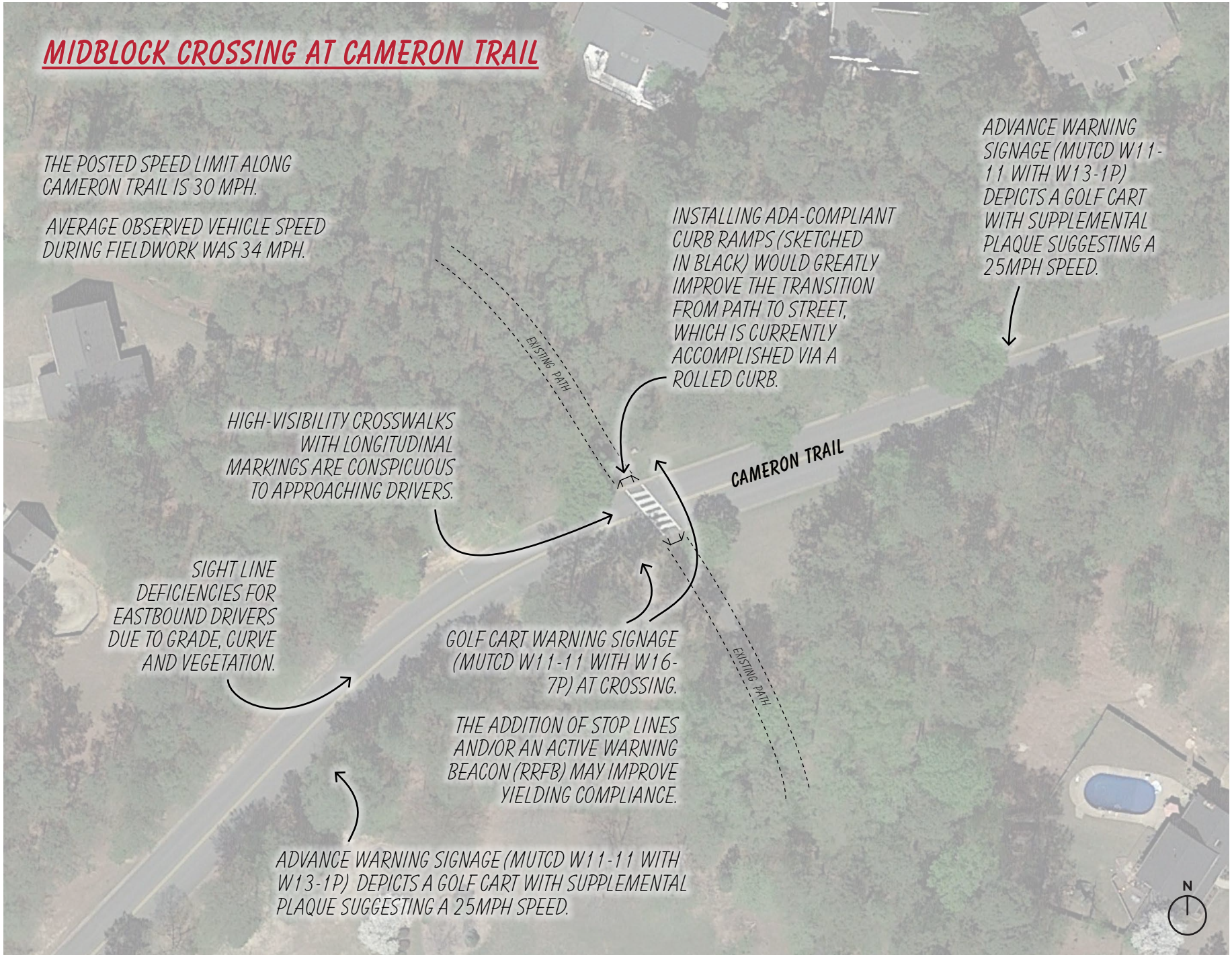

WE OBSERVED MULTIPLE PEOPLE DRIVING GOLF CARTS IN THE BIKE LANE ON DIVIDEND DR.
BIKE LANE
40


LADDER-STYLE CROSSWALK IS FADED/WORN AND NEEDS TO BE REFRESHED.
DESPITE RELATIVELY HIGH OBSERVED TRUCK VOLUMES, THESE PEOPLE FELT COMFORTABLE TRANSPORTING A BABY ON A GOLF CART THROUGH THIS INTERSECTION.

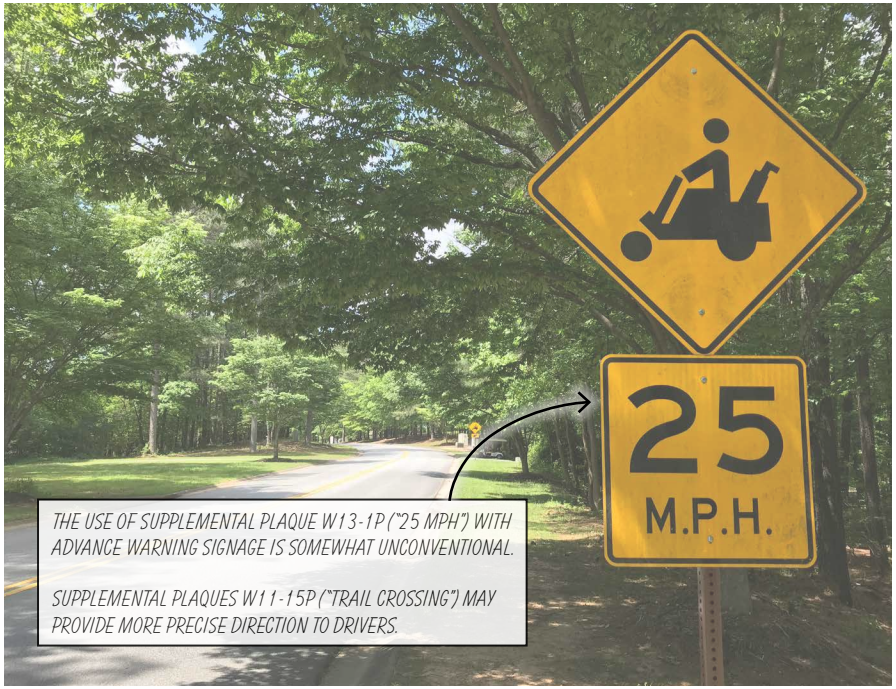

"BIKE LANE" SIGNAGE (MUTCD R3-17) HELPS REINFORCE THE FACT THAT THE LANE IS INTENDED TO BE AN EXCLUSIVE SPACE FOR BICYCLING.
BIKE LANE
BIKE LANE WIDTH DOES NOT MEET MINIMUM STANDARD PER AASHTO BIKE GUIDE.

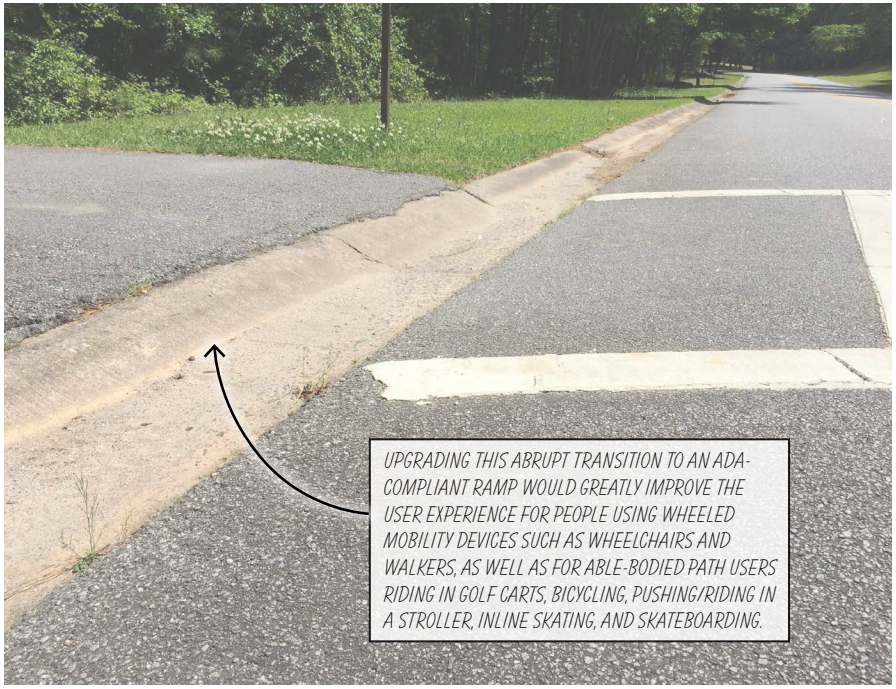

NO PATH USER-SCALE STOP SIGN, "STOP" PAVEMENT MARKINGS, OR STOP BAR APPLIED ON THIS APPROACH. THE ASPHALT LOOKED FRESH, SO WE WONDERED IF PAVEMENT MARKINGS HAD NOT YET BEEN APPLIED.
NO PATH USER-SCALE STOP SIGN INSTALLED HERE AS IN SOME OTHER CROSSINGS, BUT "STOP" PAVEMENT MARKINGS AND STOP BAR APPLIED.

MIDBLOCK CROSSING AT CAMERON TRAIL



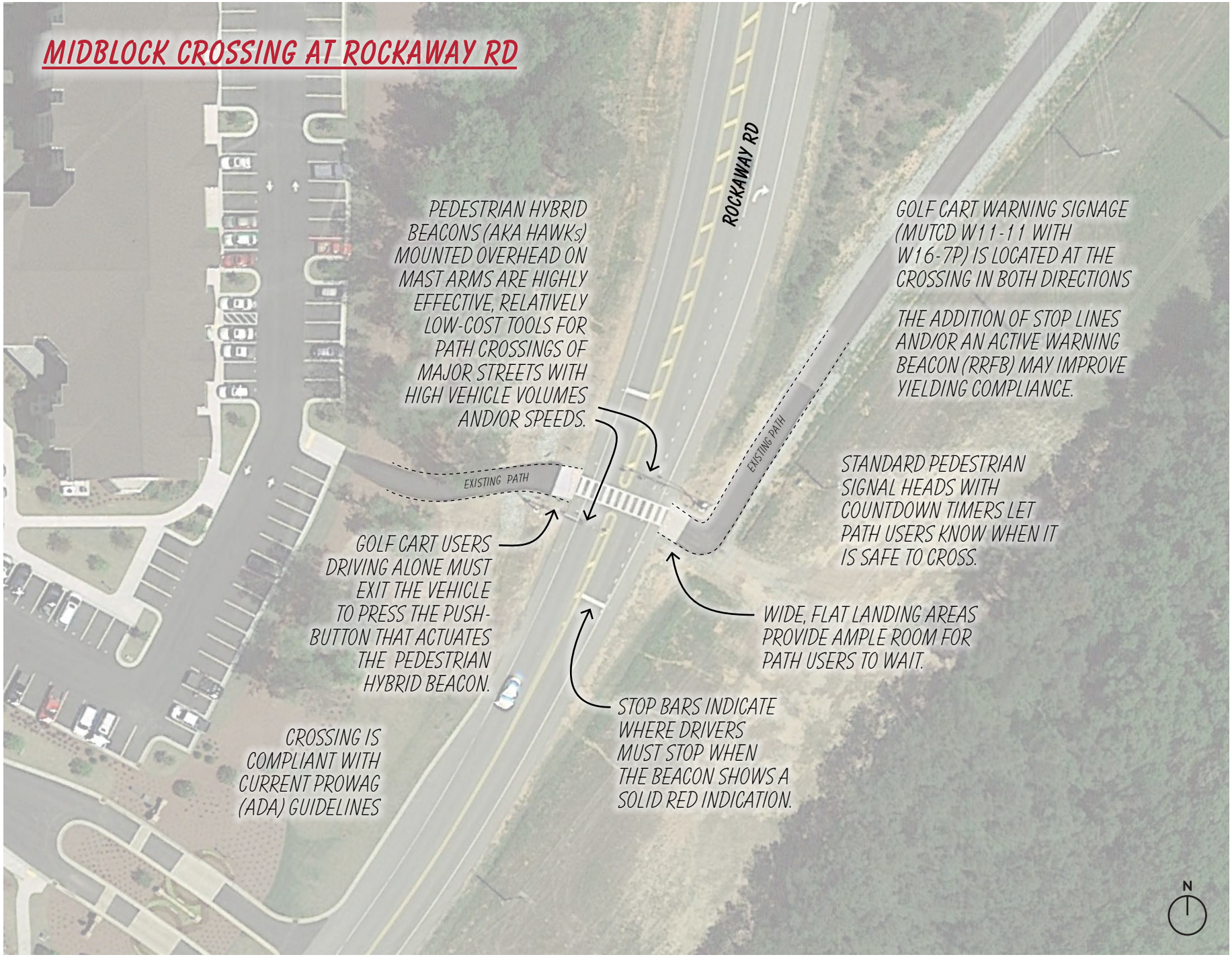

THE ADDITION OF AN ACTIVE WARNING BEACON (RRFB) TO EXISTING CROSSING SIGNAGE IS LIKELY TO IMPROVE YIELDING COMPLIANCE.
ADDING STOP LINES IN ADVANCE OF THE CROSSWALK REINFORCES DRIVERS' OBLIGATION TO STOP FOR PEDESTRIANS IN THE CROSSWALK.

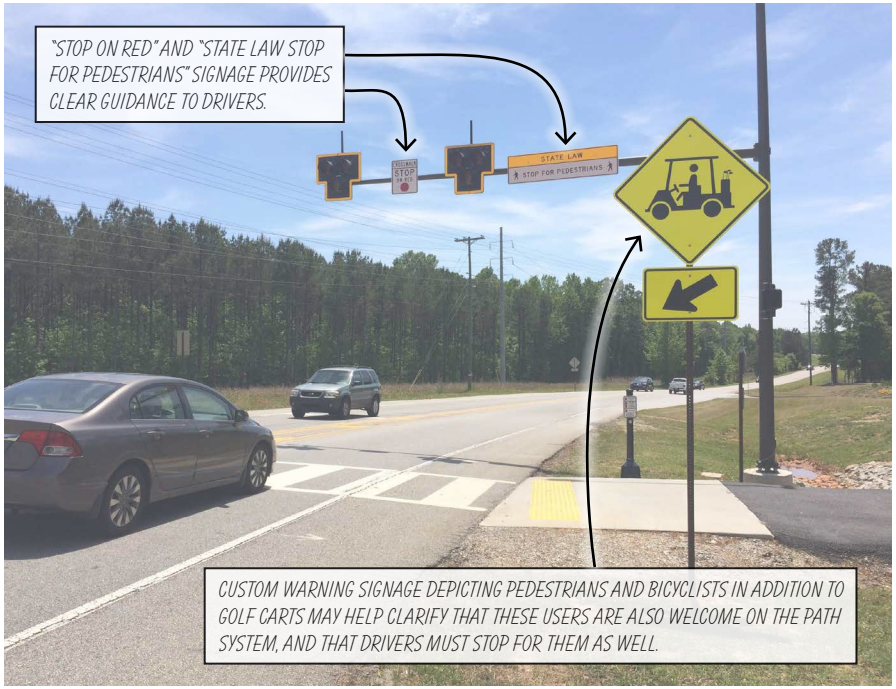

25
M.P.H.
THE USE OF SUPPLEMENTAL PLAQUE W13-1P ("25 MPH") WITH ADVANCE WARNING SIGNAGE IS SOMEWHAT UNCONVENTIONAL.
SUPPLEMENTAL PLAQUES W11-15P ("TRAIL CROSSING") MAY PROVIDE MORE PRECISE DIRECTION TO DRIVERS.


UPGRADING THIS ABRUPT TRANSITION TO AN ADA-COMPLIANT RAMP WOULD GREATLY IMPROVE THE USER EXPERIENCE FOR PEOPLE USING WHEELED MOBILITY DEVICES SUCH AS WHEELCHAIRS AND WALKERS, AS WELL AS FOR ABLE-BODIED PATH USERS RIDING IN GOLF CARTS, BICYCLING, PUSHING/RIDING IN A STROLLER, INLINE SKATING, AND SKATEBOARDING.


AVERAGE VEHICLE APPROACH SPEED ON CAMERON TRAIL WAS 34 MPH, WHICH IS FAST ENOUGH TO CONSIDER SUPPLEMENTING CROSSING SIGNAGE WITH AN ACTIVE WARNING BEACON.

MIDBLOCK CROSSING AT ROCKAWAY RD

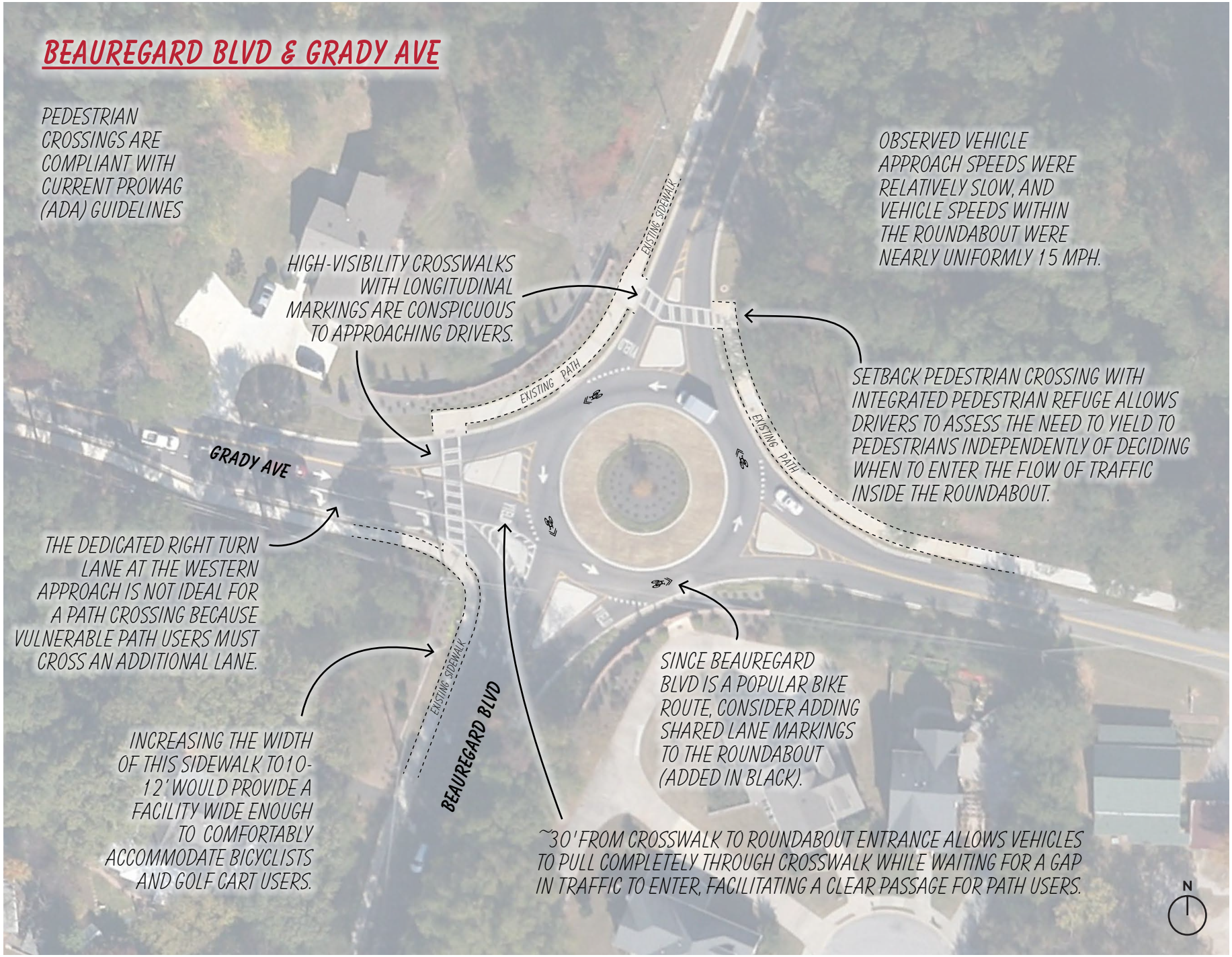



"STOP ON RED" AND "STATE LAW STOP FOR PEDESTRIANS" SIGNAGE PROVIDES CLEAR GUIDANCE TO DRIVERS.
STATE LAW
STOP FOR PEDESTRIANS
CUSTOM WARNING SIGNAGE DEPICTING PEDESTRIANS AND BICYCLISTS IN ADDITION TO GOLF CARTS MAY HELP CLARIFY THAT THESE USERS ARE ALSO WELCOME ON THE PATH SYSTEM, AND THAT DRIVERS MUST STOP FOR THEM AS WELL.

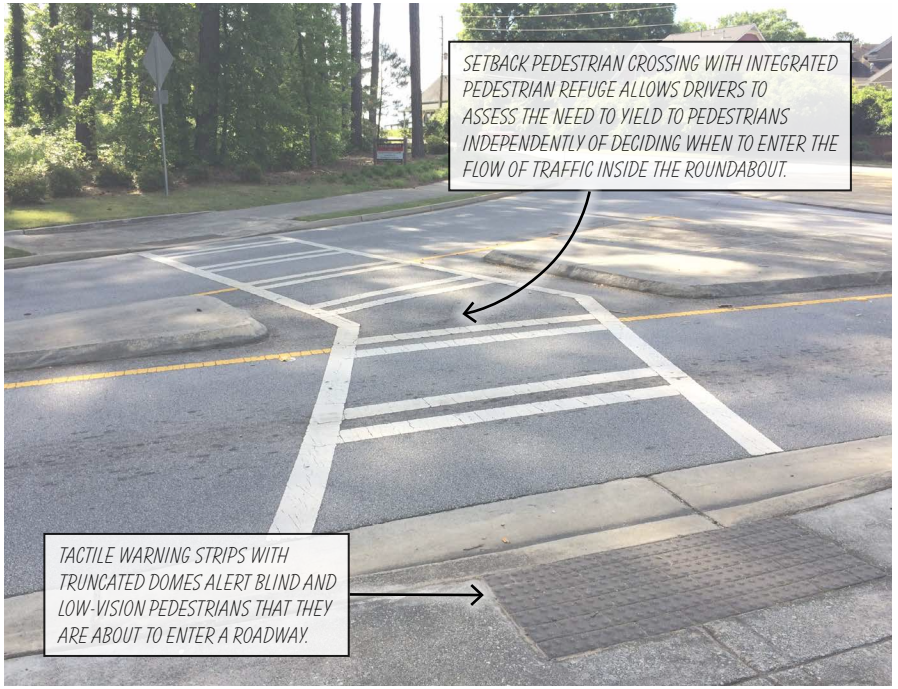

STANDARD PEDESTRIAN SIGNAL HEADS WITH COUNTDOWN TIMERS LET PATH USERS KNOW WHEN IT IS SAFE TO CROSS.


PATH USER-SCALE STOP SIGN REINFORCES GOLF CART USERS' AND BICYCLISTS' OBLIGATION TO STOP.
STOP
PUSH BUTTON
FOR
CUSTOM INSTRUCTIONAL SIGNAGE PROVIDES GUIDANCE FOR GOLF CART USERS. WHILE THE SIGNAL HEAD DISPLAYS A PEDESTRIAN DURING THE WALK PHASE - NOT A GOLF CART - THE SIGN FEELS INTUITIVE NONETHELESS.

BEAUREGARD BLVD & GRADY AVE




THE DEDICATED RIGHT TURN LANE AT THE WESTERN APPROACH IS NOT IDEAL FOR A PATH CROSSING BECAUSE VULNERABLE PATH USERS MUST CROSS AN ADDITIONAL LANE.


SETBACK PEDESTRIAN CROSSING WITH INTEGRATED PEDESTRIAN REFUGE ALLOWS DRIVERS TO ASSESS THE NEED TO YIELD TO PEDESTRIANS INDEPENDENTLY OF DECIDING WHEN TO ENTER THE FLOW OF TRAFFIC INSIDE THE ROUNDABOUT.
TACTILE WARNING STRIPS WITH TRUNCATED DOMES ALERT BLIND AND LOW-VISION PEDESTRIANS THAT THEY ARE ABOUT TO ENTER A ROADWAY.


OBSERVED VEHICLE APPROACH SPEEDS WERE RELATIVELY SLOW, AND VEHICLE SPEEDS WITHIN THE ROUNDABOUT WERE NEARLY UNIFORMLY 15 MPH.


JUST OUT OF VIEW OF THIS PHOTO, THE SIDEWALK WIDENS TO AN 8' ASPHALT PATH ALONG REDWINE RD.

Signage and Markings: Other Locations

The following series of images documents observed variation in path signage, markings, and other features of at-grade path crossings throughout Fayette County.

The photographs in this section were taken at locations other than the 11 intersections identified using the intersection typology and documented in the previous section.

The purpose of including these images is to document the diversity of observed treatments. In each image, the relevant signage, pavement marking, or design feature is highlighted through the use of a semi-transparent mask.


CAUTION
CART
CROSSING


STOP


NO CROSSWALK MARKINGS


STOP
SCHOOL CROSSING - YELLOW PARALLEL BARS WITH CONCRETE SURFACE


PATHWAY
NARROW WHITE LADDER-STYLE CROSSWALK WITH "PATHWAY" MARKINGS


NARROW, WIDELY SPACED ZEBRA-STYLE CROSSWALK

MIDBLOCK CROSSING ALIGNED WITH CENTER OF TRAVEL LANE ON APPROACHING STREET

MIDBLOCK CROSSING WITH LADDER-STYLE CROSSWALK

LADDER-STYLE CROSSWALK WITH REFUGE ISLAND

LADDER-STYLE CROSSWALK WITHOUT REFUGE ISLAND

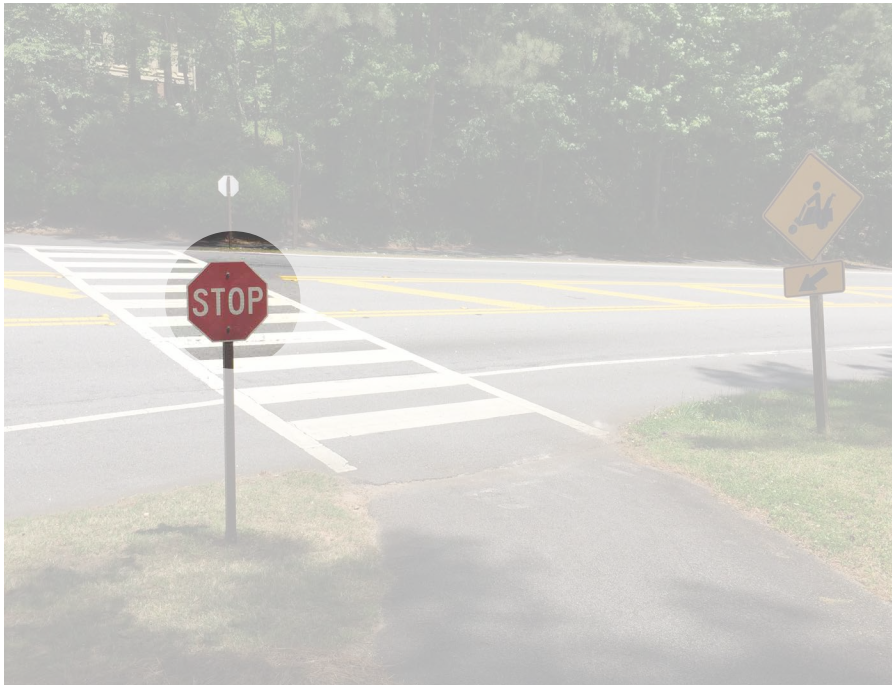

PIANO KEY-STYLE CROSSWALK


LADDER-STYLE CROSSWALK


DECORATIVE BRICK PAVERS WITH CONCRETE BANDS


RAISED CROSSING WITH DECORATIVE BRICK PAVERS


XING
PATH


STOP


STOP


STOP
AHEAD


STOP
STOP


STOP


ONLY
PATH ONLY
STOP


PROHIBITED

Undercrossings & Overcrossings

The following series of images documents examples of existing undercrossing and overcrossing designs throughout Fayette County.

The photographs in this section were taken at locations other than the 11 intersections identified using the intersection typology and documented in the previous section.

The purpose of including these images is to document the diversity of existing undercrossing and overcrossing designs in the County.