COBB COUNTY GREENWAYS & TRAILS MASTER PLAN

FINAL DRAFT PLAN - MAY 2018

ACKNOWLEDGMENTS

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National Park Service
Sierra Club
River Line Historic Area/Mableton Improvement Coalition
Trust for Public Land

And the many individual residents and community members who participated in meetings, events, online survey and mapping activities, and comments.

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This is the FINAL DRAFT Plan presented to the Board of Commissioners for adoption in June 2018.

COBB COUNTY GREENWAYS & TRAILS MASTER PLAN

FINAL DRAFT PLAN - MAY 2018

"Cobb County... Expect the Best!"

Cobb County Department of Transportation
1890 County Services Pkwy, Marietta, GA 30008
www.CobbCounty.org

CONTENTS

Executive Summary

1.	**Introduction & Background**	**1-1**
	Framework	1-8
2.	**Planning Process**	**2-1**
	Public & Stakeholder Engagement	2-9
3.	**Community Context**	**3-1**
	Cobb County Overview	3-3
	Inventory of Existing Facilities	3-26
	Challenges & Opportunities	3-40
4.	**Design Guidance**	**4-1**
	Best Practices	4-3
	Facility Types & Classification	4-11
	Crossings & Intersections	4-26
	Trail Signage	4-41
5.	**Recommendations**	**5-1**
	2020 and Beyond: Recommendations	5-7
	Priority Greenways & Trails	5-13
	Future Network Development	5-32
6.	**Implementation Strategy**	**6-1**
	Strategic Approach to Implementation	6-3
	Potential Partnerships	6-19
	Financial Resources	6-23
	Permitting	6-29
	Land Acquisition & Development Coordination	6-33
	Operations & Maintenance	6-41
	Topics for Further Study	6-43

Appendices

LIST OF FIGURES

1-1. Factors Considered During the Planning Process 1-9
1-2. Complete Streets Are for Everyone and Every Mode 1-18
2-1. Interactive Online Map to Capture Community Suggestions 2-10
2-2. Sample of Results from Online Community Survey 2-12
2-3. Survey Respondents Mapped by Zip Code 2-13
3-1. Population Density 3-6
3-2. Job Density 3-6
3-3. Activity Centers 3-6
3-4. Equitable Target Areas 3-7
3-5. Access to Transportation 3-8
3-6. Walk to Work 3-9
3-7. Bike to Work 3-9
3-8. Walk and Bike Propensity 3-12
3-9. Walk Score 3-12
3-10. Impervious Surfaces 3-13
3-11. Chattahoochee River National Recreation Area Trails 3-16
3-12. Trails at Kennesaw Mountain National Battlefield Park 3-17
3-13. Allatoona Creek Park Trails 3-18
3-14. Park Connectivity 3-20
3-15. Safe Routes to School Partner Schools 3-24
3-16. Existing, Under Construction, and Programmed Trails 3-27
3-17. Trails of Regional Significance 3-30
3-18. Bike Share and Trailheads 3-31
3-19. On-Street Bike Network 3-33
3-20. Trails Anticipated for Completion by 2020 3-36
3-21. Gaps and Regional Connectivity 3-44
4-1. Greenway Trail 4-14
4-2. Sidepath Trail 4-16
4-3. Neighborhood Connector Trail 4-18
4-4. Various Types of Greenway Connectors 4-20
4-5. Unpaved Recreational Trails 4-22
4-6. Equestrian Dimensions 4-24
4-7. Elevated Crossing 4-28
4-8. Underpass Crossing 4-30
4-9. Rectangular Rapid-Flashing Beacon 4-32
4-10. Pedestrian Hybrid Beacon 4-32
4-11. Full Traffic Signal 4-32
4-12. Preferred Option: Median Refuge Island 4-34
4-13. Alternative 1: Raised Crossing 4-34
4-14. Alternative 2: Marked Crossing and Signage 4-34
4-15. Adjacent Crossing 4-35
4-16. Separated Crossing 4-35
4-17. Deceleration Lane with Adjacent Crossing 4-35
4-18. Ninety Degree Trail-at-Trail Crossing 4-36
4-19. “Trail Traffic Circle” 4-36
4-20. Channelized Right Turn Lane 4-38
4-21. Channelized Right Turn Lane - Overhead View 4-38

LIST OF FIGURES *(CONTINUED)*

4-22. Alternative to Bollards at Crossing Points 4-40
4-23. Bollards at Access Points 4-40
4-24. Clearance Requirements for Shared Use Paths 4-42
4-25. Examples of Bicycle & Pedestrian Regulatory and Warning Signs ... 4-44
4-26. Suggested Trailhead Signage Placement Diagram 4-45
4-27. Combining Local & Regional Trail Brands in Wayfinding Signage ... 4-48
5-1. Tiered Greenway Trails 5-11
5-2. Tiered Sidepath Trails 5-12
5-3. Priority Greenways & Trails 5-13
5-4. Proposed Greenway & Trails 5-31
5-5. Acworth Recommendations 5-33
5-6. Austell Recommendations 5-34
5-7. Kennesaw Recommendations 5-35
5-8. Marietta Recommendations 5-36
5-9. Powder Springs Recommendations 5-37
5-10. Smyrna Recommendations 5-38
5-11. Cumberland CID Recommendations 5-39
5-12. Gateway Marietta CID Recommendations 5-40
5-13. Town Center CID Recommendations 5-41
5-14. Proposed Trailheads 5-49
6-1. Interconnected Biking and Walking Network 6-4
6-2. Conceptual Travel Shed 6-8
6-3. Countywide Focus Areas 6-10
6-4. Risks of Pedestrian Death When Struck by Vehicles 6-13
6-5. Neighborhood Connectors Provide More efficient Routes 6-40

LIST OF TABLES

3-1. Walk Score Categories 3-12
3-2. Health Indicators for Cobb County, 2005 and 2010-2013 3-21
4-1. Suggested Widths and Clearance for a Standard, Single-Track Horse Trail 4-24
4-2. Trail Driveway Setback Guidance 4-35
5-1. New Proposed Non-Priority Greenways and Trails 5-47
6-1. Planning Level Trail Construction Cost Estimates by Project Type ... 6-26
6-2. Short-Term Action Steps 6-53
6-3. Mid- to Long- Term Action Steps 6-54

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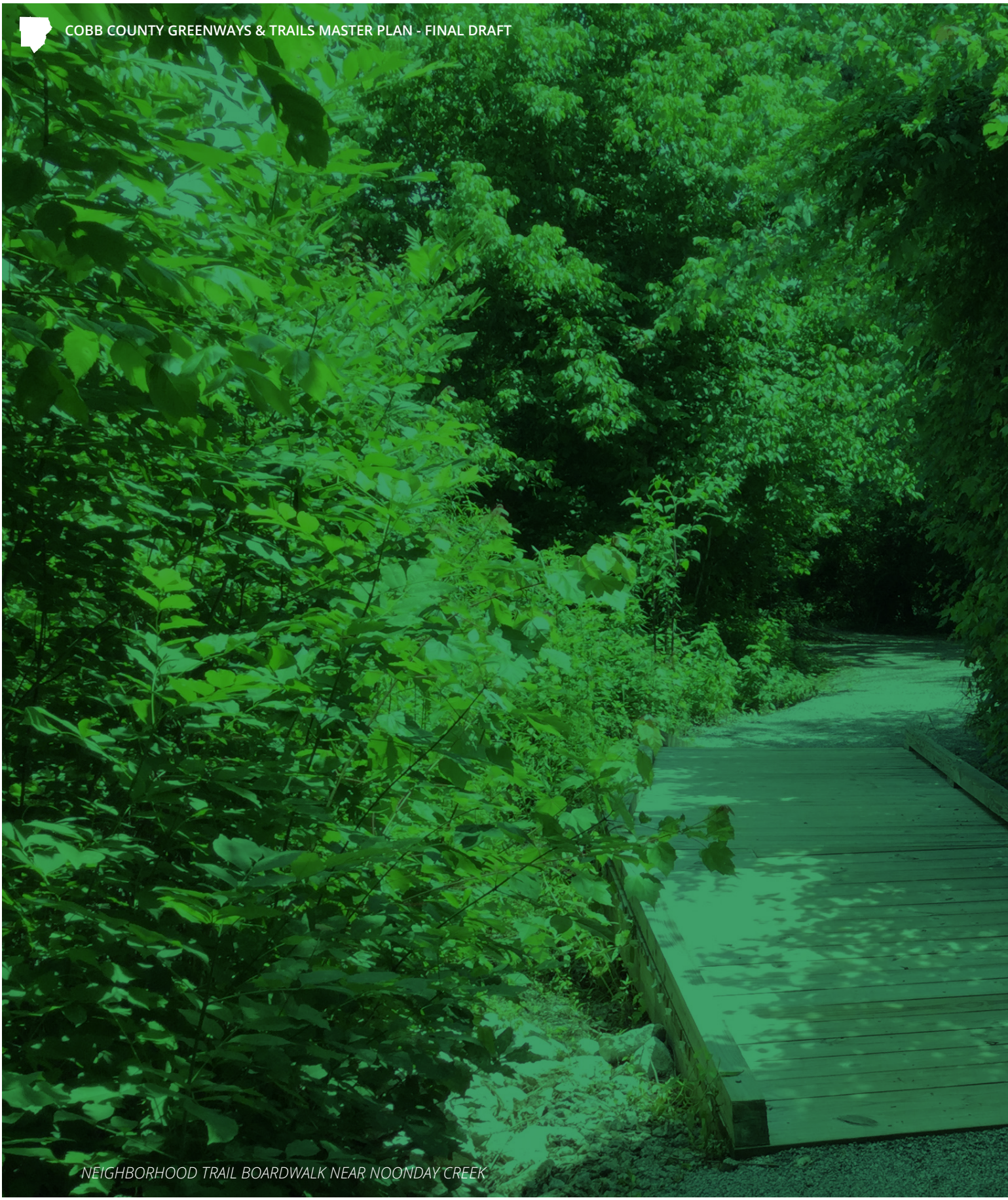


NEIGHBORHOOD TRAIL BOARDWALK NEAR NOONDAY CREEK

1 INTRODUCTION & BACKGROUND

PURPOSE, APPROACH, GOALS AND OBJECTIVES

This chapter provides an introduction to the *Greenways and Trails Master Plan,* summarizing the reasons for undertaking this effort, the *Plan's* overarching framework, goals, objectives, and principles developed to guide the planning process and outcomes.

GAINING MOMENTUM

AN INVESTMENT IN COMMUNITY

Greenways and trails are investments in community, in transportation, in economic development, and in health. Seeking to create opportunities for physical and social activity, to expand travel options, and to foster economic development, Cobb County set out to create its first-ever *Greenways and Trails Master Plan*. Recognizing the myriad benefits of greenways and trails, the County sought to establish a framework for future investment in the countywide trail network. Beyond identifying potential locations for future trails, Cobb County wanted the plan to spell out an intentional and cohesive approach to prioritizing trail connections and allocating funding for new projects.

With over 84 miles of existing multi-use greenway trails and sidepath trails, Cobb County has an extensive active transportation network that provides opportunities for people to make trips to parks, shopping, offices, and schools, as well as for recreation and exercise. Yet, most people continue to drive, even for short trips, and many are not aware of greenways and trails in their communities. Furthermore, while functional from a transportation perspective, the typical design and configuration of many trails leaves something to be desired in terms of user comfort and experience, and therefore does not likely attract as many users as it could.

There has been, and continues to be, strong interest in greenways and trails throughout the Metro Atlanta region and within Cobb County, despite a history of development patterns and transportation investments that have favored automobile transportation. In the past ten years, more than 50 miles of new greenways and trails have been constructed throughout Cobb County. As of December 2017, nearly two miles of trails were actively under construction, with another 29 miles of trails in the design and feasibility study stage.

Bike lanes offer healthier transportation options and opportunities for recreation

Good design encourages more walking, helping pedestrians feel safer

This momentum is driven in part by changing patterns and preferences in terms of how people get around and a strong desire for people to live and work in walkable, bike-friendly communities. It is also driven by a recognition of the positive impacts and benefits trails can have on residents, visitors, and communities:

- Research shows that trails encourage physical activity among inactive residents and greater physical activity for those who are already active.
- A study by the University of Massachusetts found that **every $1 million spent on multi-use trails yields nine jobs**[1] and AARP estimates that building bike infrastructure creates an average of 11.4 jobs for every $1 million spent, compared to only 7.8 jobs per $1 million spent on road-only projects.[2]
- Bike facilities and trails are good for business: by 2013, bicycle tourism in Outer Banks, NC had generated $60 million in economic activity on a $6.7 million investment, and the $63-million-Indianapolis Cultural Trail contributed $864 million to the local economy in the first year after it was completed.[3]
- The National Association of Realtors® (NAR) and National Association of Home Builders have found that **walking and biking trails are the top amenity desired by home-buyers.**[4]
- The 2015 National Community and Transportation Preference Survey, conducted by NAR®, found that **Americans prefer walkable communities more now than they have in the past**: in fact, 79% of respondents value being within easy walking distance of places.[5]
- The American Heart Association estimates that **every $1 spent on trails could save nearly $3 in medical expenses.**[6]
- Greenways and trails contribute significantly to economic, social, and physical health and well-being, as part of the broader outdoor recreation market. According to the Outdoor Industry Association, Georgia residents are more likely to participate in trail or road running than the average American, and outdoor recreation in the state generates $27.3 billion in consumer spending and supports 238,000 direct jobs.[7]

The Silver Comet Trail traverses fairly remote areas, providing important access to nature and greenspace

Fix-it stations near businesses and offices make biking to shop, dine, or work more convenient

GREENWAY & TRAIL BENEFITS

Alternative to automobile transportation to parks, schools, jobs, business districts, community facilities, and other destinations

Improve health and quality of life

Source for recreation and physical activity

Increase property value

Protect and preserve the natural environment

Many households across Cobb County rely on walking and biking as low-cost options for getting around, while others choose to bike or walk to improve or maintain health and wellness. Increasingly, employers and real estate developers recognize the appeal of walkable and bikeable areas to employees and residents and acknowledge that active transportation options help attract and retain employers, residents, and visitors alike.

Walking and biking can serve as forms of transportation on their own or can be used in combination with other forms of transportation for faster connections. Walking and biking are also relatively inexpensive ways to improve health and fitness and can be a way to experience nature and wildlife. Throughout the region and across Cobb County, communities have built trail segments that provide access to key destinations, expand opportunities for recreation and fitness, and that have provided places for people of all ages and abilities to be physically and socially active. However, some segments of trail are not yet fully connected, leaving gaps between trails, and some important destinations and areas of Cobb County are not yet served by trails.

The *Greenways and Trails Master Plan* provides a framework and strategy for connecting existing segments of trail, for connecting key places, and providing alternative options for people to get where they want to go. By linking individual greenway and trail segments and expanding the reach of trails, Cobb County will be able to create a true countywide network that feeds into the regional system.

PROVIDING A ROADMAP

PLAN PURPOSE

The *Plan* serves as a roadmap for Cobb County, providing guidance for building upon and expanding the existing network to make greenways and trails more accessible to everyone and to encourage more people to bike and walk. Key purposes of the plan include:

- Establish a vision and goals to guide future development of greenways and trails in Cobb County
- Document the existing state of greenways and trails in Cobb County
- Identify opportunities and challenges associated with expanding the greenway and trail network
- Promote decision-making and trail development grounded in guiding principles and best practices
- Establish a tiered list of potential future projects to improve the greenway and trail network
- Provide guidance on potential future partnerships, funding strategies, and operations and maintenance of greenways and trails
- Identify priority trail corridors and projects on which to focus resources for near-term expansion of the existing greenway and trail network

The *Plan* is a countywide document intended to guide the planning and development of new trails and greenways to enhance active transportation connectivity. It is not a detailed design and engineering study of individual trails, but a documentation of guidance and best practices designed to improve countywide connectivity, enhance access to key destinations, provide opportunities for physical and social activity, and give people greater choice in how they get around. The *Plan* also helps inform future decisions about greenway and trail projects by providing guidance on design and strategies for implementation and offering recommendations on prioritization of future trail projects.

Furthermore, the *Plan*, through its publication and the planning process, helps communicate to residents, visitors, and other stakeholders about the existing greenway and trail network, helping increase usage and promote community engagement. This *Plan* and associated trail maps will periodically be updated to reflect current and ongoing projects within the County.

What are Greenways and Trails?

Both are linear pathways or corridors that provide travel options for recreational, social, health and exercise, and transportation purposes. They can be paved or unpaved and are designed to accommodate a variety of users, generally including pedestrians and cyclists. Some trails follow roadways while others are located in more natural settings, such as along a creek or through open space.

Greenway trails are generally in more natural settings, through less developed open spaces, and some help protect water quality and wildlife corridors. Other trails may be more transportation-oriented and follow roadway corridors, providing access to key destinations and other transportation options.

Why are we investing in greenways and trails?

To make it easier and more convenient for people to choose to bike and walk for travel and recreation. A more bike- and walk-friendly Cobb County will have myriad benefits ranging from improved health and economy to reduced congestion and positive impacts on the environment and equity.

How are we going to get more people biking and walking?

By focusing on improving connectivity, making short trips possible on foot or bike, improving access to places people want to go, creating trails and greenways that are destinations, making it easier to bike and walk to get to or from transit, and by designing greenways and trails that are safe and comfortable for all users.

What will this look like in the future?

Cobb County will have a safe, well-connected network of greenways and trails that provides access to destinations, choices in how people get around, contributes to a sense of place and community, is an economic driver, and that is used by a range of people.

FRAMEWORK

APPROACH TO THE GREENWAYS AND TRAILS MASTER PLAN

This section outlines the overarching framework and approach to Cobb County's Greenways and Trails Master Plan. It provides guiding principles, a vision, goals and objectives, and an approach that Cobb County can take to get more people biking and walking.

Cobb County has an extensive network of trails that provides opportunities for recreation and travel, and that connects people to parks, shopping, offices, and schools. This *Plan* provides a roadmap for the County – examining what is already built, what is currently underway, and where to go from here. It identifies priority corridors for new greenways and trails and provides recommendations for building upon and improving the existing network to make trails more convenient and accessible to everyone.

Successful trail systems are multi-faceted and take into consideration not only the physical characteristics of the greenways and trails themselves, but also the user experience, the types of people who use the facilities, and how they relate to one another. This plan addresses each of those components, and as well as less direct considerations in creating a successful system, such as health and safety, economic activity, and branding, as articulated in the guiding principles listed below and in Chapter 5.

The primary focus of this *Plan* is on creating and enhancing connectivity - between destinations, counties, cities, business districts. It will connect Lakes Acworth and Allatoona to Kennesaw Mountain and the Chattahoochee River.

The *Plan* provides a cohesive and strategic set of priorities for expanding and improving the network of greenways and trails throughout Cobb County in the short-term and into the future. It does so by first identifying priority projects on which to concentrate over the next five to ten years. Beyond that, the *Plan* provides a framework for decision-making about longer-term projects, guidance and consideration for design of facilities, maintenance, policy priorities, and complementary projects.

As the first-ever *Greenways and Trails Master Plan* for Cobb County, this study considers and builds upon the many plans and studies adopted and approved previously. The vision, goals, and objectives articulated on the following pages are derived in part from previous planning efforts, considering the types of goals and objectives set for increasing active transportation, such as bicycling and walking, and establishing connectivity.

GUIDING PRINCIPLES

POSITIVE IMPACT FOR ALL

The strategic approach of the *Greenways and Trails Master Plan* is to encourage investment in projects and initiatives that will have a significant positive impact on creating connectivity and enabling more people to bike and walk for short daily trips as well as to get to work, transit, and/or to key destinations. This, in turn, will have a positive impact on health and well-being, the transportation network, economic competitiveness, and the overall quality and sense of place and community in Cobb County. By following the approach laid out in the three questions on the previous page and following the guiding principles at right, Cobb County can develop a strategy for investing in high quality greenways and trails that will get more people biking and walking while simultaneously improving community health, economic competitiveness, and providing choices in how people get around.

To achieve this overall objective, this plan is guided by several key principles:

- **Safety and Security**
- **Accessibility**
- **Economic Competitiveness**
- **Connectivity and Access to Destinations**
- **Comfort and Design for Everyone**
- **Equity**
- **Environmental Sustainability**
- **Prioritization/Opportunistic Implementation**

Guiding principles are discussed further in Chapter 5.

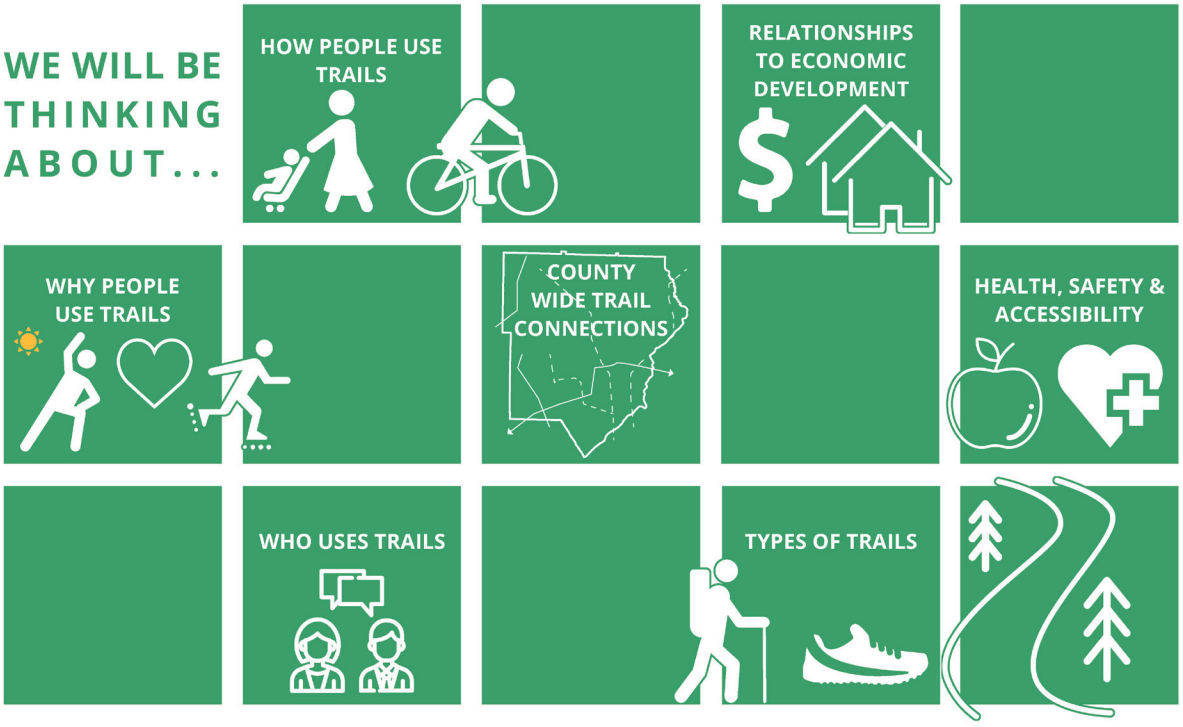


FIG. 1-1 FACTORS CONSIDERED DURING THE PLANNING PROCESS

COBB COUNTY VISION FOR GREENWAYS AND TRAILS

"Cobb County is a leader among Metro Atlanta counties in providing a safe, well-connected network of greenways and trails for active transportation to improve accessibility, economic competitiveness, and health for residents and visitors."

A FAMILY PARTICIPATES IN AN ACTIVITY AT THE GREENWAYS AND TRAILS PLAN BOOTH AT MABLETON DAY

PLAN GOALS & OBJECTIVES

IMPROVE CONNECTIVITY

IMPROVE MOBILITY AND ACCESSIBILITY

ENSURE COMFORT AND SAFETY

SUPPORT AND DRIVE ECONOMIC DEVELOPMENT

PROTECT AND ENHANCE THE NATURAL ENVIRONMENT

FOSTER HEALTHY BEHAVIOR

INCREASE AWARENESS OF GREENWAYS AND TRAILS

MAINTAIN A STATE OF GOOD REPAIR

GOALS & OBJECTIVES

CHARTING A PATH TOWARD THE VISION OF A SAFE, WELL-CONNECTED NETWORK

IMPROVE CONNECTIVITY

Implementing the *Plan* will establish a cohesive network that links existing trails and provides connections to communities and destinations throughout Cobb County.

- Provide connections to each of the six cities and three community improvement districts (CIDs) within Cobb County, as well as to regional attractions, such as Lakes Acworth and Allatoona, Kennesaw Mountain National Battlefield Park, the Chattahoochee River National Recreation Area, and the Chattahoochee River itself.
- Maintain and enhance connections to regional trails, including those that provide access to regional attractions in adjacent communities.
- Fill gaps in the existing trail network, including in areas currently underserved by active transportation opportunities.
- Provide trail connections that allow residents and visitors to walk or bike to work, shopping, school, transportation facilities (transit stops, park and ride), and other key destinations.

IMPROVE MOBILITY AND ACCESSIBILITY

Implementing the *Plan* will provide options for people of all ages and abilities who bike and walk for any reason as part of their daily life, and will increase access to public transportation where possible, providing people with choices in how they get around.

- Ensure a variety of users including pedestrians, joggers, bicyclists, skaters, wheelchair users, and other non-motorized recreational users and commuters are able to access the greenway and trail system.
- Create opportunities for biking and walking in every part of the County with a focus on underserved areas. Expand the trail network in ways that make it more convenient and normal for people to bike and walk for day-to-day activities more frequently.
- Encourage direct connections between offices, retail centers, community facilities, and neighborhoods where appropriate to make it easier for people to use trails and greenways without getting in a car.
- Incorporate signage and design elements that clearly communicate where trails are located, how to get to them, and that provide safe and accessible connections.

ENSURE COMFORT AND SAFETY

Implementing the *Plan* will contribute to a safer and more comfortable system for all greenway and trail users through design, infrastructure improvements, signage, and education.

- Reduce potential conflicts between vehicles and trail users.
- Ensure the greenway and trail network is easy to navigate.
- Implement safety improvements where greenways and trails meet with roadways.
- Provide a combination of facilities that are appropriate for users of all levels and abilities, from elite athletes to young children and older adults.
- Create a comfortable environment for all users through the use of landscape, canopy trees, wayfinding signage, places to rest, vegetative buffers, and other comfort amenities.

GOALS & OBJECTIVES

CONTINUED

SUPPORT AND DRIVE ECONOMIC DEVELOPMENT

Implementing the *Plan* will produce facilities that make Cobb County a place where people want to spend time and money, sustaining and enhancing it as an attractive place for businesses, residents, and visitors. Currently throughout Metro Atlanta, the most walkable and bikeable places are also economic drivers.

- Provide access to visitor and tourist destinations such as Kennesaw Mountain National Battlefield Park, SunTrust Park, Cobb Energy Performing Arts Centre, the Chattahoochee River National Recreation Area, and others.
- Provide connections to and support the integration of biking and walking into activity centers, such as business districts, employment centers, downtowns, entertainment districts, and cultural landmarks or sites.
- Design and construct trails that may become destinations in their own right and attractors for residents and visitors.
- Work with businesses, Chambers of Commerce, CIDs, and economic development professionals to ensure the greenway and trail system serves as a catalyst for attracting and retaining business and economic development.
- Encourage "trail oriented development" that draws attention to greenways and trails as important components of great places with safe opportunities to bike and walk.
- Promote key trails as destinations for visitors.

PROTECT AND ENHANCE THE NATURAL ENVIRONMENT

Implementing the *Plan* will promote a well-designed greenway and trail network that simultaneously provides access to nature and environmental assets and improves environmental and ecological conditions. Landscapes that pose a challenge to conventional development, such as flood plains and steep topography, are often great opportunities for public open space, landscaping, and trails as well as cutting-edge infrastructure such as innovative stormwater management systems or other green practices.

- Provide access to natural resources such as Lake Acworth, Lake Allatoona, the Chattahoochee River, Kennesaw Mountain, and the numerous streams and creeks across the County.
- Design and construct low impact trails that avoid environmentally sensitive areas while providing residents and visitors controlled access to natural areas, for passive or active recreation, as appropriate.
- Foster environmental awareness and stewardship through educational materials and signage, especially at trailheads.
- Identify opportunities for trails to improve conditions of the Etowah and Chattahoochee Watersheds and their streams through the use of green infrastructure to reduce stormwater runoff and the removal of invasive species.

FOSTER HEALTHY BEHAVIOR

Implementing the *Plan* will provide safe opportunities for residents and visitors to engage in physical activity for recreational and transportation purposes, with the goal of enhancing overall public health. Well planned trail and greenway systems are often cited as key opportunities for improved health conditions for residents.

- Create more opportunities for people to bike or walk for short trips.
- Expand opportunities for people to bike or walk to trails and greenways, rather than drive.
- Provide opportunities for residents and visitors throughout the County to have easy access to facilities where they can mobilize for health and exercise purposes.
- Provide viable commute options and connect trail systems to local and regional transit opportunities to help reduce overall reliance on vehicles and contribute to improved local and regional air quality and reduced vehicle congestion.

INCREASE AWARENESS OF GREENWAYS AND TRAILS

Implementing the *Plan* will increase awareness of greenways and trails among residents and visitors to Cobb County by helping people understand where trails are located and how to get to them. While many people are aware of the regionally significant trails within the County, there is a vast network of lesser-known trails.

- Work with local partners to develop and implement a marketing campaign that includes maps, brochures, and educational materials to promote Cobb County's greenways and trails.
- Implement programs and activities that encourage use of greenways and trails, such as group rides, exercise classes, pop-up events, and art programs.
- Encourage the use of branded wayfinding signs and mile markers along trails and greenways to help users navigate the system and understand how various trails are linked.

MAINTAIN A STATE OF GOOD REPAIR

Implementing the *Plan* will ensure that trails and greenways remain in a state of good repair by following guidelines for and identifying potential sources of funding for regular maintenance. Maintenance and upkeep of greenways and trails are key to their longevity and sustaining the value of the County's investment in these facilities. Well maintained public trails can help reduce issues of liability, vandalism, litter, and other unwanted behavior by activating streets and placing eyes on the community. Promoting their continued use, in turn helps to deter criminal activity.

- Increase investment in ongoing repair and maintenance of trails and greenways.
- Establish partnerships with public and private entities to improve maintenance.
- Leverage private development to assist with construction and ongoing maintenance of trails alongside new development projects.
- Establish maintenance protocol and standard intergovernmental or partnership agreements to guide ongoing maintenance responsibilities.
- Consider community involvement programs and partnerships such as "Adopt a Trail" programs to assist with maintenance and upkeep.

THE VALUE OF TRAILS

The following are **potential metrics** that could be tracked in order to gauge the value of trails to the Cobb County community and to track progress toward established goals. Specific, measurable targets could be set for a concrete time frame (e.g., by 2040) for each of the potential metrics:

- *Trail Usage*
- *Frequency of Use*
- *Ratio of Trails to Residents*
- *Trail Access Points*
- *Trail Programs*
- *Proximity to Transit*
- *Service to Lower Income Communities*
- *Job Access*
- *Value of New Investment*
- *Proximity to Trails and/or Parks*
- *Walkable Access to Trails*
- *Amounts of Physical Activity*
- *Air Quality*
- *Water Quality*

The Atlanta Regional Commission (ARC) will use the following measures to evaluate progress on regional trails. Similar metrics could be tracked for Cobb County:

- *Number of trail miles constructed per year*
- *Funding allocated to trails in the TIP per year*
- *Trail scoping studies completed per year*
- *Percentage of identified gaps undergoing scoping studies*
- *Trail use per month*
- *Percentage of people that live within a five-minute walk or bike ride of a trail*
- *Percentage of people that work within a five-minute walk or bike ride of a trail*

POTENTIAL METRICS

TRAIL USE AND EXTENT OF NETWORK

- **Trail Usage** – Number of people who use trails (measure by survey)
- **Frequency of Usage** – Percentage increase in how often people report using trails (measure by survey) or number of visits to a specific facility during a period of time
- **Ratio of Trails to Residents** – Ratio of trail miles per resident in Cobb County
- **Trail Access Points** – Number or percentage increase in number of trailheads
- **Trail Programming** – Number of organized events that take place on the trail system each year

CURRENTLY, 45% OF SURVEY RESPONDENTS REPORT USING TRAILS AT LEAST A FEW TIMES EACH WEEK AND 32% REPORT USING TRAILS A FEW TIMES PER MONTH

TRANSPORTATION ACCESS

- **Proximity to Transit** - Percentage increase in miles of existing, under construction, and programmed trails within one mile of CobbLinc bus stops

- **Service to Lower Income Communities** - Percentage increase in miles of existing, under construction, and programmed trails within or connected to communities with incomes under 80% area median income (AMI)

PUBLIC HEALTH

- **Trail/Park Access** - Percentage of population living within a half-mile of a trail corridor

- **Walking Access** – Percentage of the population within a half-mile walk to a public park of trail (this should follow known walkable routes, not simply a half-mile buffer)

- **Physical Activity** – Percentage of residents or users engaged in various levels of physical activity (could be measured countywide via a survey or at specific facilities)

ECONOMIC DEVELOPMENT

- **Job Access** – Percentage of jobs within a one-mile-radius of existing trails

- **New Investment** – Monetary value of new businesses, development, etc. within a one-mile-radius of existing trails

ENVIRONMENTAL

- **Air Quality** - Tons of carbon sequestered by trees/vegetation planted along trails

- **Water Quality** - Gallons of stormwater filtered by trees and other vegetation planted along trails

RELATIONSHIP TO OTHER PLANNING INITIATIVES

SUMMARY OF KEY PLANS

Planning is done at multiple levels and scales, for a variety of purposes. It is important to understand how a countywide master plan relates to other plans and studies, and where applicable, to strive for consistency and alignment of policies and recommendations. This section briefly describes related plans and studies, and how they affect or are affected by this planning effort.

ATLANTA REGIONAL COMMISSION – *WALK.BIKE.THRIVE!*

The Atlanta Regional Commission's (ARC's) regional biking and walking plan, *Walk.Bike.Thrive!* seeks to "increase active transportation within the Atlanta region and reduce the risks and barriers that currently inhibit walking and bicycling."[8] The plan is a framework intended to guide ARC's decision-making and to describe how local jurisdictions and regional partners can develop high-quality, low-stress walking and biking networks, supporting policies, and programs. As one of ten counties in the Metro Atlanta Region, Cobb County is at the forefront of efforts to increase active transportation and reduce barriers to biking and walking and to develop a high-quality, low-stress network. As such, this plan takes cues and guidance from the regional and local framework set forth in *Walk.Bike.Thrive!* and goals and strategies in this *Plan* are in line with those of *Walk.Bike.Thrive!*, albeit at a different scale.

COBB COUNTY P.A.R.K.S. COMPREHENSIVE MASTER PLAN

The most recent Cobb County Parks Recreation and Cultural Affairs (P.A.R.K.S.) *Comprehensive Master Plan* was updated at the same time as the *Greenways and Trails Master Plan*. It addresses overall department wide planning, budget, and priorities and largely focuses on park properties and facilities themselves. With regard to trails, the P.A.R.K.S. department is responsible for those within P.A.R.K.S. property, while the *Greenways and Trails Master Plan* focuses on trails outside of P.A.R.K.S. property, such as along creeks, utility corridors, and roadways. The *Greenways and Trails Master Plan* has coordinated closely with P.A.R.K.S. efforts to ensure that recommendations are consistent and to identify opportunities for connectivity between the two systems.

COBB COUNTY 2040 COMPREHENSIVE PLAN UPDATE

Cobb County recently updated its Comprehensive Plan - a long-range, community designed strategy to continue to make the County an attractive place to invest, conduct business, and raise a family. The previous plan covered the period from 2007 to 2030. The updated plan extends the outlook to 2040. The *2040 Comprehensive Plan Update* will help Cobb County manage expected population and employment growth and coordinate major investments in Public Safety, Transportation, Community Facilities, and other important elements. The *Greenways and Trails Master Plan* is in keeping with overall transportation goals from the Comprehensive Plan and may be incorporated into future updates.

2040 GEORGIA DOT STATEWIDE PLAN

The *Greenways and Trails Master Plan* has been developed in accordance with the policies set out in the 2040 Georgia DOT *Statewide Strategic Transportation Plan.* The Statewide Plan supports bicycle and pedestrian accommodations along state highways when applicable. GDOT's Complete Streets Policy, adopted in 2012 and incorporated into the Statewide Plan, "aims to incorporate pedestrians, bicyclists, and transit users/vehicles into transportation infrastructure projects."

GEORGIA OFFICIAL BICYCLE MAP

Last updated in 2010, GDOT's Official Bicycle Map is published as an "aid for transportation, recreational, and touring cycling." It indicates traffic levels on state roadways, shows State Bicycle Routes, and roads with minimum four-foot shoulders

> ***"Cobb County will implement the Complete Streets concept by considering safe access for all users, to include motorists, bicyclists, pedestrians, and transit users, including individuals with physical disabilities and senior citizens, in the planning, design, construction, and operation of streets within its jurisdiction."***
>
> *- Cobb County Complete Streets Policy, 2009*

to help cyclists choose roads that meet their level of comfort and experience. The *Greenways and Trails Master Plan* takes into consideration the location of State Bicycle Routes, four-foot shoulders, and general traffic levels in considering connections between greenways, trails, and on-street biking facilities to create a cohesive biking and walking network.

COBB COUNTY COMPLETE STREETS POLICY

In 2009, in recognition of the fact that some roadways where walking and bicycling are common lack the appropriate infrastructure to make these forms of transportation safe and comfortable, the County adopted a **Complete Streets Policy**. The policy is in keeping with recommendations of the Atlanta Regional Commission's *Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan* (the regional biking and walking plan at the time), which called for incorporating routine accommodation and Complete Streets into planning, design, and construction of all future roadways, among other policies and practices. The purpose of the Cobb County Complete Streets Policy is:

"To assure that new roadway construction and existing roadway improvement projects on County roadways include consideration for adequate infrastructure, where appropriate and feasible, for bicyclists, pedestrians, users of public transit of all ages and abilities, and the physically disabled."

The *Greenways and Trails Master Plan* takes the Complete Streets Policy to the next level by spelling out specific strategies and actions to design and construct infrastructure that provide safe, comfortable options for all users.

FIG. 1-2 COMPLETE STREETS ARE FOR EVERYONE AND EVERY MODE

A FAMILY LOOKS AT A MAP OF POTENTIAL TRAILS AT TASTE OF EAST COBB

2 PLANNING PROCESS

OVERVIEW OF PLANNING AND COMMUNITY ENGAGEMENT ACTIVITIES

The *Greenways and Trails Master Plan* serves as a framework for planning and development of trail facilities in Cobb County. To develop this framework, the project team conducted research, engaged community members and stakeholders, and performed assessments, analysis, and field work. This chapter summarizes key components of the overall planning process.

PROCESS IN BRIEF

PHASE 1

INVENTORY & DATA COLLECTION

Phase I included data collection and an inventory of the existing trails and greenways network and data about Cobb County and the communities and people within the County.

- Review of previous plans and studies
- Review and confirm inventory of existing greenways and trails and ongoing or upcoming projects
- Collection of Geographic Information Systems (GIS) data
- Stakeholder outreach
- Public engagement events, launch of website and survey

PHASE 2

ASSESSMENT & FINDINGS

Following the initial data collection and confirmation of the status of existing, ongoing, and proposed trail projects, the team began to assess the results of initial community engagement and stakeholder feedback. It was also important to take a closer look at some potential future trail projects to understand opportunities and challenges posed by these proposed trails.

- Field visit to look at existing greenway and trails as well as potential future trail locations
- Establish vision and goals
- Review of national best practices
- Assess indicators, demographic data and countywide patterns
- Develop framework to guide plan recommendations
- Intercept surveys and stakeholder meetings

PHASE 3

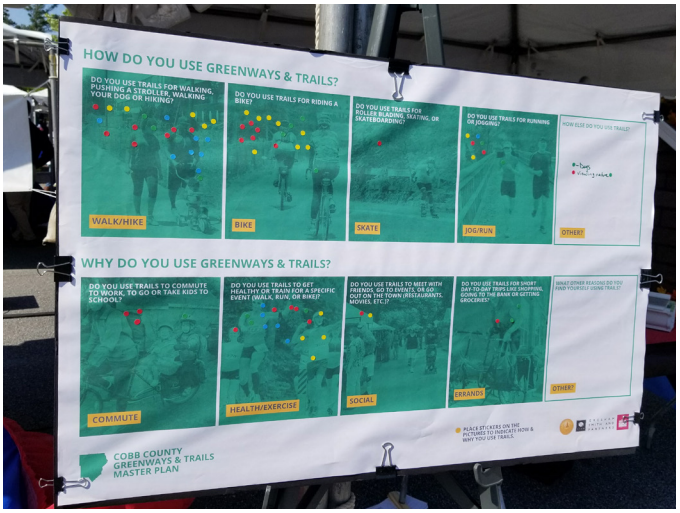
RECOMMENDATIONS & IMPLEMENTATION

Recommendations and implementation studies were developed using findings from previous phases of the plan. Work during this phase focused on identifying future trail projects, policy and other recommendations, as well as assembling guidance on trail design, operations and maintenance, and potential sources of funding and project partnerships.

- Develop criteria to use in project prioritization
- Phasing and scoring of potential future projects
- Confirmation of local priorities
- Development of preliminary and final recommendations, including priority projects
- Operations and maintenance guidance
- Design guidance

The following pages detail the components of the planning process and summarize the take-aways from key activities.

FIELD WORK AND OBSERVATION OF EXISTING CONDITIONS



STAKEHOLDER ENGAGEMENT

CONFIRMATION OF LOCAL PRIORITIES

REVIEW OF PRIOR PLANS AND STUDIES

SUMMARY OF FINDINGS

Although this is the first time the County has undertaken a master plan for its trails and greenways, there have been numerous trail planning initiatives by the Atlanta Regional Commission (ARC), the County, cities, Community Improvement Districts (CIDs), and non-profit and advocacy groups. One of the first tasks of the *Greenways and Trails Master Plan* was a comprehensive review of more than 25 previously completed planning studies related to greenways, trails, and connectivity within and surrounding Cobb County. These plans represent years of planning and public input providing important context to the development of the this plan. In addition to this review was close coordination with the County's P.A.R.K.S. Comprehensive Master Plan, which is currently in process.

The following plan types reviewed cover a broad scope of planning applications that impact or connect to Cobb County:

Regional Connectivity Plans:
These plans, run by regional advocacy groups and regional planning organizations, apply to multiple jurisdictions, counties and the like. Regional Connectivity Plans are all about creating comprehensive regional trail/connectivity systems that prioritize a comprehensive approach across political boundaries.

Comprehensive System Plans:
This plan type consists of planning projects that look at a system-wide approach to bike, pedestrian and trail connectivity throughout an entire county, city or other jurisdiction. These plans typically make broad recommendations focused on prioritization of facility improvements, design standards and other systems-based improvements.

Alignment Specific Plans:
These plans are more detailed in nature and focus on one specific trail/facility. Alignment/Location specific plans often provide detailed spatial recommendations like trail widths, intersection design and other details in addition to actual alignment recommendations and often come with budget estimates and timelines for implementation.

Facility Guideline Plans:
Facility Guideline Plans work to set standards for dimensions, materials, signage and other trail and connectivity features to ensure quality and consistency.

Goals and Policy Recommendations from Related Planning Efforts:
Many plan documents, including LCI plans, City and County Comprehensive Plans etc. are prepared with goals and recommendations related to trail/greenway plans. These recommendations may be broad and simply promote open spaces and connectivity, or may include detailed goals and policy recommendations such as promoting transportation alternatives.

Review of each planning document has revealed a pattern of decision-making based on a strong foundation of community input, upon which this *Plan* will build. From these documents, clear priorities have been identified from residents, stakeholders and experts from across Cobb County and the region, that establish the importance of greenways and trails to their respective communities and the region.

These plans highlight the importance of trails and greenways to overall community strategies for improving health, safety, economic opportunity and environmental conditions, which are imperative issues for the future success of Cobb County.

COBB COUNTY PLANS

CHATTAHOOCHEE RIVER TRAIL FEASIBILITY STUDY

COBB COUNTY BICYCLE & PEDESTRIAN IMPROVEMENT PLAN

COBB COUNTY COMPREHENSIVE PLAN

COBB COUNTY MAPPING OUR FUTURE

COBB GREENWAY

PLANS FROM JURISDICTIONS WITHIN COBB COUNTY

COBB IN MOTION COMPREHENSIVE TRANSPORTATION PLAN UPDATE

NICKAJACK CREEK GREENWAY FEASIBILITY STUDY

CITY OF ACWORTH TRAIL MAP

CITY OF AUSTELL COMPREHENSIVE PLAN UPDATE 2017

KENNESAW TRAIL MAP

CITY OF MARIETTA TRAIL MAP

CITY OF POWDER SPRINGS TRAIL MAP

CITY OF POWDER SPRINGS LCI UPDATE

CITY OF SMYRNA TRAIL MAP

CUMBERLAND CID BICYCLE CONNECTIVITY IMPLEMENTATION PLAN

NEIGHBORING JURISDICTION PLANS

MARIETTA GATEWAY CID

TOWN CENTER CID MASTER PLAN UPDATE

TOWN CENTER CID DESIGN GUIDELINES

CHEROKEE COUNTY COMPREHENSIVE TRANSPORTATION PLAN UPDATE

ROSWELL TRAILS MAP AND RIVER PARKS MASTER PLAN

REGIONAL PLANS

SANDY SPRINGS BICYCLE, PEDESTRIAN AND TRAIL IMPLEMENTATION PLAN

WALK. BIKE. THRIVE! ARC

ENVISIONING A REGIONAL TRAIL NETWORK ARC

BIKE THE HOOCH

VISION 53 - CHATTAHOOCHEE NOW

PLANNING INDICATORS

TRAIL CONNECTIVITY
- *Gaps in local trails*
- *Regional connectivity*

LAND USE
- *High density residential areas*
- *Commercial nodes*
- *Walkable districts*

CULTURAL & ENVIRONMENTAL AMENITIES
- *Cultural points of interest*
- *Open space areas*

KEY INSTITUTIONS
- *Schools*
- *Universities, colleges and trade schools*
- *Civic centers*

EQUITABLE MOBILITY
- *Vehicle ownership*
- *Household income and poverty level*
- *Major workforce centers*
- *Public transit service*

LANDSCAPE SENSITIVITY
- *Steep slopes*
- *Flood-prone areas*
- *Key habitats*
- *Highly impervious areas*

PUBLIC HEALTH
- *Walkable access to open spaces*
- *Proximity to bicycle facilities*

EXISTING CONDITIONS

REVIEW OF DATA AND PLANNING INDICATORS

The project team identified a series of "indicators" to assess existing conditions, and to identify issues and opportunities for the expansion of the trail network. The intent behind the use of indicators was to identify overall patterns across the County, indicating places where biking and walking are more prevalent and areas in need of more or better biking and walking facilities, as well as places where greenways and trails may or may not be appropriate. These indicators were developed through the strategic overlay of multiple data layers in Geographic Information Systems (GIS) format and observations based on the data and maps. Key findings from the indicators include:

- Most existing trails are located west of I-75 in the Cumberland and Town Center areas, as well as Marietta, Powder Springs, and Vinings/Smyrna. Portions of unincorporated South Cobb are served by the Silver Comet Trail. There are few trails in East Cobb, West Cobb, and south of the Silver Comet Trail in South Cobb.

- Jobs are generally concentrated along interstate corridors and in city centers such as Marietta. Areas with the highest employment densities are generally well-served by existing, programmed, and proposed trails. In large part, this is due to the investments in trail planning, as seen in Cumberland, Town Center, and central Marietta. There are also hubs of employment in unincorporated areas such as East Cobb, Vinings, and northeast of Austell that are somewhat served either by existing trails or programmed and proposed trails.

- Not all universities, colleges and trade schools are served by existing trails, but many of these are located along proposed and programmed trail alignments. There is a need to provide better trail connections to post-secondary schools in Marietta and Smyrna near I-75, east of Austell, and in East Cobb.

- Cobb County has over 130 public and private elementary, middle and high schools. Because these are interspersed across the entire county, there are numerous schools that are not well-served by the existing trail network. Even among the 18 schools that have partnered with the Safe Routes to School program, only five are located within roughly a mile of an existing trail outside of a park.

- Within the county, commercial nodes are generally located along interstate, state routes, and major arterials, as well as city centers. Some of these commercial areas are not well-served by trails – these include Veterans Memorial Hwy (US 278/ US 78/SR 8), the Canton Rd corridor and Cobb Pkwy (US 41/SR 3) west of the Town Center area.

- Parks and open spaces in the county are well-served by trails; there are opportunities, however, to improve these connections. While the national parks and US Army Corp of Engineers property (Allatoona Creek Park) have direct trail connections, there is a need to create better trail connections to smaller neighborhood parks, particularly in East Cobb and West Cobb.

- The county's extensive creek system presents a tremendous opportunity to develop scenic trails across the county. Because of much of the county is built-out, one of the primary challenges will be coordinating with private property owners, particularly where creeks adjoin residential properties.

The full series of indicator maps are included in Appendix B.

FIELD VISITS

In addition to the maps analysis, the project team conducted field visits to observe the existing trail network and how it is used, identify deficiencies and gaps, and note opportunities to connect key destinations within Cobb County. Due to the size of the County, the project team visited select locations that represent the variety of trail and community types present throughout the County. These included the Cumberland CID/SunTrust Park area, sidepaths and trails in Smyrna, Kennesaw, and Marietta, the Noonday Creek Trail in north Cobb, and the areas around Kennesaw State University (KSU), KSU Marietta, and Life University. Separately, the team also visited potential trail locations in Austell, along Allatoona Creek, and in East Cobb, between Lower Roswell Rd and the Chattahoochee River.

During the field visits, the team observed a number of opportunities for better trail connectivity, particularly for access to natural and recreational areas, commercial corridors, city centers, and schools. Several challenges were also noted, including limited right-of-way; hazardous road crossings; high traffic volumes; and potentially challenging coordination with private property owners.

Observations made during field visits helped inform recommendations and identification of priorities. The potential alignments investigated during the initial field visit showed different degrees of suitability; they did not, however, become priority projects. Because the potential trails investigated during the field visit warrant further study, they have been recommended as longer-term projects. Subsequent field visits helped to verify information about potential priority projects.

PUBLIC & STAKEHOLDER ENGAGEMENT

SUMMARY OF OUTREACH EVENTS AND ACTIVITIES

Public and stakeholder engagement played an integral role in the development of the Greenways and Trails Master Plan. This section summarizes activities and mechanisms used to get input and inform the planning process and recommendations.

The County's existing trail map in large part reflects the priorities of individual cities and communities within the County. To that end, it was critical to engage with stakeholders to identify priority trail projects and examine how to create better connectivity on a countywide basis. There is strong interest in trails and trail planning among Cobb County residents. Many people are already active on the County's 80+ miles of trails, some on a daily or weekly basis. In developing a *Greenways and Trails Master Plan*, the County worked to ensure that these users, as well as other residents, had a variety of ways to provide feedback.

Early in the planning process, the project team spoke with staff and leaders in each City and CID to identify ongoing planning initiatives, trail priorities, and other projects underway that may have a bearing on trails for the community. These initial discussions helped the project team to understand the status of ongoing projects and to update the overall countywide trail map. They also helped to identify trail priorities, including both previously proposed alignments and new trail concepts.

The project team also met with representatives of Cobb Travel and Tourism, who spearheaded a "Greenway Group" initiative several years ago, intended to convene various entities – County, Cities, and CIDs – to think about how to create a cohesive network of trails that provides access to important destinations and opportunity zones, as a way to connect more people with attractions and trails. The vision for the group was, "to create a sense of connectivity through developing a network of multi-use trails, greenspace and public art to connect our many neighborhoods directly to each other, from Acworth to the Cumberland Area." Furthermore, the group sought to develop ideas for branding and marketing the County's network of trails and greenways. The ideas set forth and the group convened for this project were considered as part of the *Greenways and Trails Master Plan* and Cobb Travel and Tourism will continue to play a role in promoting trails and greenways and convening stakeholders.

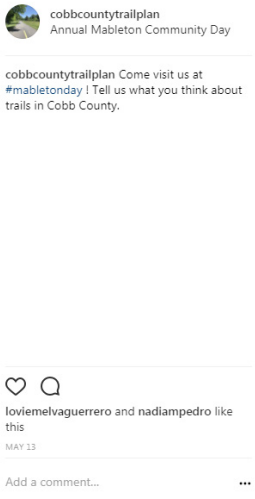
ONLINE ENGAGEMENT

WEBSITE AND SOCIAL MEDIA

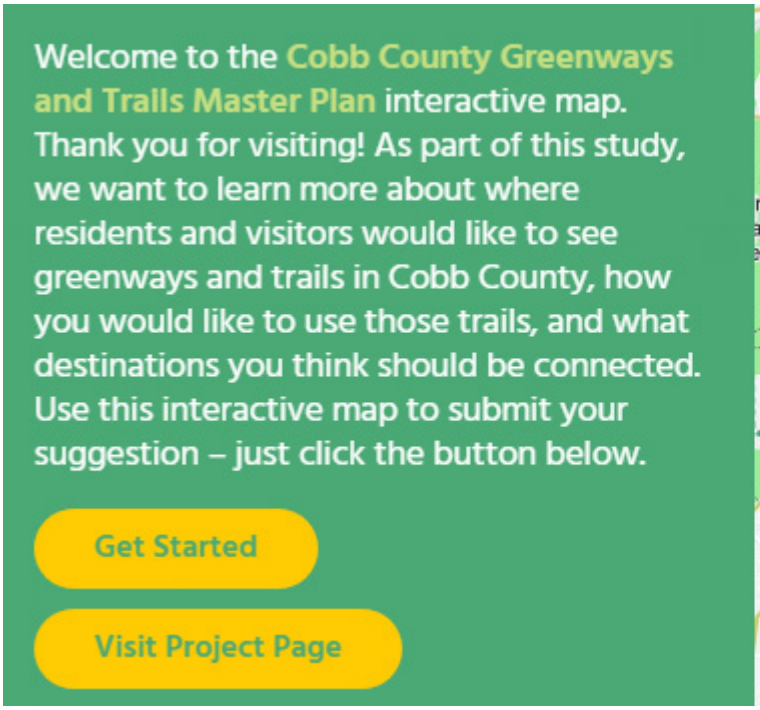
The study's website (www.cobbtrailplan.com) provides an overview of the planning process, upcoming events, project deliverables, and features an interactive map where users can draw desired trail alignments and note areas that should be connected by trails.

As of December 31, 2017, **1,446 individual users** had visited the site during **2,034 sessions**. Approximately **71%** of all users represented **new visitors** to the website. The interactive map was the most popular page on the site, with about 46% of site visitors clicking on the map page. Collectively, community members suggested more than **300 miles of additional trails and neighborhood bikeways**.

There were a variety of other online avenues to interact with the project team, including email (info@CobbTrailPlan.com), via Instagram (@CobbCountyTrailPlan) as shown at left, and through a contact form on the project website.



1,446
INDIVIDUAL WEBSITE VISITORS



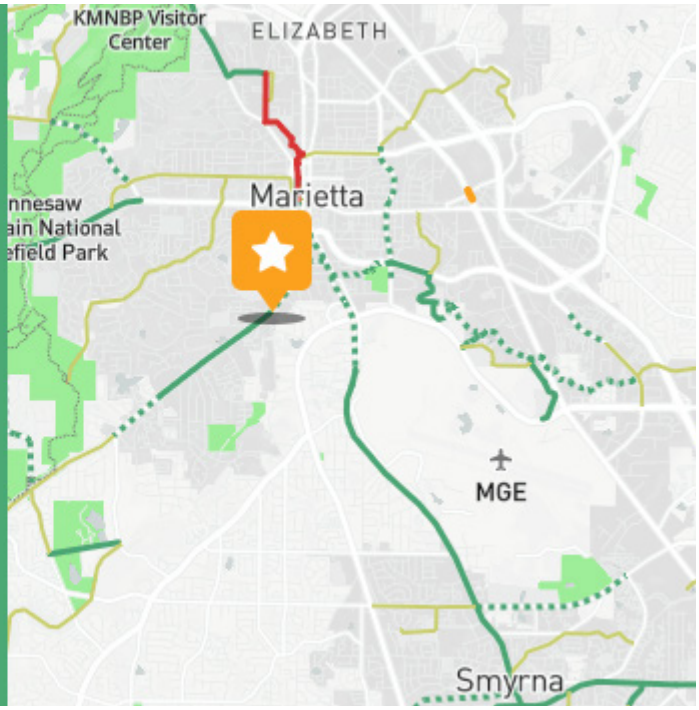


FIG. 2-1 INTERACTIVE ONLINE MAP TO CAPTURE COMMUNITY SUGGESTIONS

SURVEY RESULTS

INTERCEPT SURVEYS

Over a period of several weeks during the spring of 2017, the project team conducted brief in-person interviews called "intercept surveys" to capture needs of trail users and to understand what types of amenities and improvements they would like to see in the future. The team selected seven different locations on or near prominent trails in Cobb County, including trailheads, parks, parking lots, or entrances to trails, such as the Silver Comet Trail, Noonday Creek Trail and, East Cobb Park. Interviewers approached people arriving, leaving, resting, or actively using trails. By varying the time and day of the surveys, a wide range of trail users provided valuable input to the *Greenways and Trails Master Plan*. In total, **126 people participated in the intercept surveys**.

Key findings include:

- **The majority of people surveyed are using the trails for health and exercise purposes (74%), followed by social and leisure activities (14%) and the scenic qualities (10%) of the location.**
- **A little over half of all people surveyed (52%) use trails once a week or less, but nine percent use trails 20 or more times in a given month.**
- **People choose to use particular trails most often due to proximity and accessibility to their home or work.**
- **The overwhelming priorities are for more trails and for trails that accommodate both bicycles and pedestrians.**

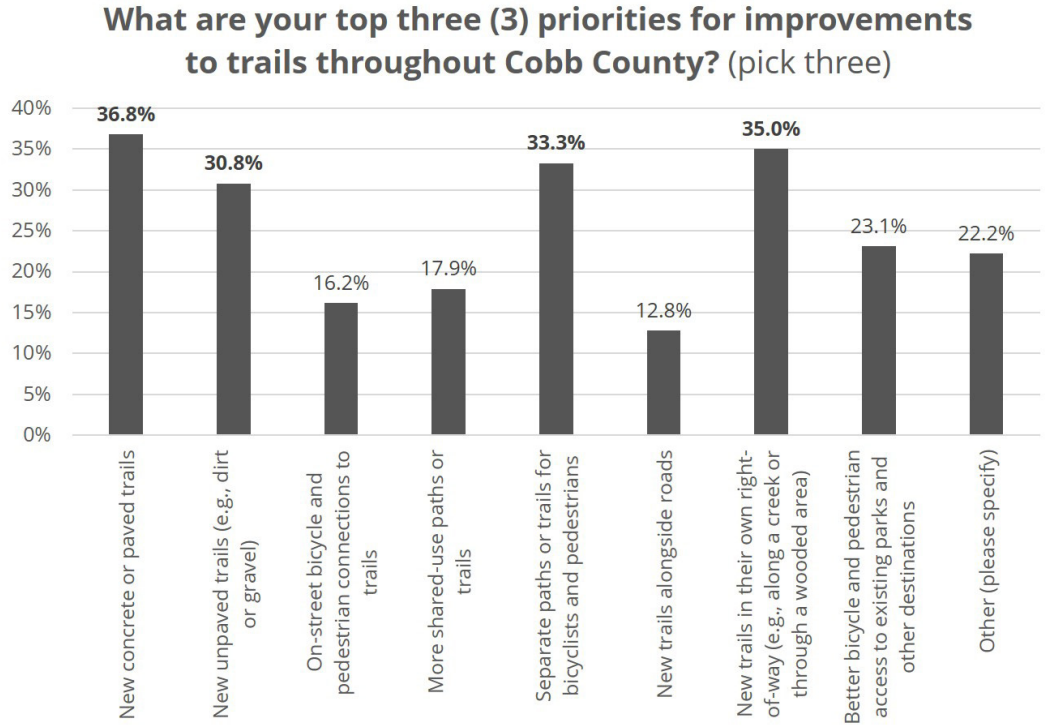
ONLINE SURVEYS

The project also sought to collect data on and gain a better understanding of trail usage patterns and preferences, barriers to usage, and the types of improvements people would like to see in the future through an online survey. To encourage participation in the survey, announcements were sent out through the Cobb County countywide newsletter, via email directly to the project contact database, and by individual groups and organizations within Cobb County, including, but not limited to the City of Smyrna, City of Austell, and the City of Powder Springs. Flyers were also handed out at community events and through local organizations. In total, **more than 260 people took the online survey.**

Key findings include:

- **The overwhelming majority of respondents typically use trails for recreation/leisure (90%), health/ exercise (85%), and to experience nature and wildlife (67%). Only 6% of participants responded that they use trails to travel to work or school.**
- **The majority of respondents (65%) travel to trails by car. Twenty-six percent reach trails by walking, and nine percent travel to trails on bike.**
- **The most popular trails in Cobb County include the Silver Comet Trail, Chattahoochee River NRA Trails, and Kennesaw Mountain National Battlefield Park Trails.**

Summaries of intercept and online survey results are located in Appendix C.



Other Responses

- Slow bikes down
- More restrooms
- More parking at the beginning of trails
- On-street protected bike lanes at bridges
- Wider trails/paths (x3)
- Education/signage for trail users
- Benches
- Shaded trails
- More secluded
- Connected systems
- Art or sights
- Connection from East Cobb to Cumberland
- Trail along Nickajack Creek near Whitefield Academy
- Over or under passes at intersections

FIG. 2-2 SAMPLE OF RESULTS FROM ONLINE COMMUNITY SURVEY

KEY ONLINE SURVEY THEMES

Part of the public engagement and outreach approach for the Cobb County *Greenways and Trails Master Plan* was to collect data broadly through an online survey. This survey asked pointed questions about how trails are used, barriers to trail/greenway use, preferences for trail facilities, and how these facilities and the system could be improved in the future.

Survey Demographics

The survey was taken by people from all over Cobb County as illustrated in Figure 2-3. Respondents were evenly distributed in age from 25 to 54 years old, but included people from 18 to 65+. Roughly one-third (34%) of respondents have children in the household, while 86% do not have anyone over 65 years of age in their home. Men and women participated nearly equally in the survey. More than two-thirds (68%) of respondents report annual household income over $75,000 while just 4% report income under $35,000. More than 80% of respondents live in households with two or more cars. Six participants reported living outside of Cobb County.

SURVEY RESPONSES

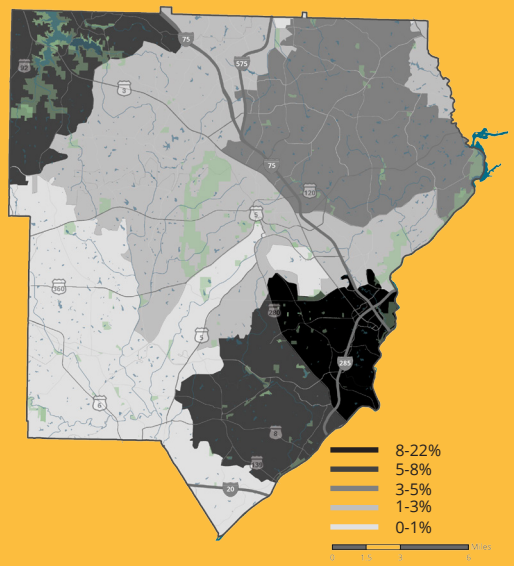


FIG. 2-3 SURVEY RESPONDENTS MAPPED BY ZIP CODE

95% of Respondents Use Trails and Greenways

While the use varies from weekly to annually, Cobb County residents use and value these facilities with 75% of respondents using the facilities weekly or monthly.

< 1% of Respondents Use Trails to Commute to School

More can be done to encourage safe routes to school, including providing more access to schools through greenways and trails.

65% of Respondents Arrive to Trails by Car

A constant talking point among survey takers was the desire to not have to “drive to ride.” Most respondents agreed that better connectivity to trails is a priority and will allow trails to rely less on parking.

95% of Respondents Primarily Travel by Car Day-to-Day

Trails and greenways represent an important transportation alternative that can positively impact congestion, health and air-quality.

71% Cited Access and Connectivity as a Barrier

A lack of connectivity to neighborhoods, commercial centers and other key destinations could be reducing the potential benefits of these systems.

72% of Respondents Support More Trails and Greenways

There is strong support for new greenways and trails across a broad spectrum of the population, indicating that these facilities should be a priority for Cobb County.

55% of Respondents Want More Shade/Trees Along Trails

Creating places/environments that are comfortable given the local climate should be a priority. Trees can also provide many other environmental and economic benefits.

46% of Respondents Want More Seating Along Trails

Places to stop rest or take in a view are important for creating safe and welcoming environments for trail users. Amount of seating is a key indicator of successful public spaces which includes linear public space.

70% of Respondents Want Restrooms at or Along Trails

While restrooms are not appropriate for all trail segments, they can be vital for attracting broad ranges of users especially along stretches that are popular for long recreational walks/bike rides.

COMMUNITY EVENTS

TRAILS & FOOD FESTIVALS - A NATURAL MATCH

In an effort to reach a broad spectrum of current and potential trail users, the project team participated in four community food-related festivals at various locations throughout the County. Food festivals, as it turns out, are great venues for people who like to hike and bike - during these **four events**, the project team talked with **more than 440 people** representing a range of backgrounds and communities.

Activities were designed to inform people about the plan; gather input about needs and opportunities for trails; and drive people to the project website to submit comments, take the online survey, and make suggestions using the interactive map. At each event, the project team had a table with multiple activities to engage visitors:

- Two large maps, one at the county level and the other at the community scale, showed existing trails as well as planned and programmed trail projects. Participants marked which planned or proposed trails they supported and drew new suggested trail alignments.
- On a large poster, participants used stickers to indicate how they like to use trails and their primary reason for using trails. Overall, 47% of participants walk, hike, push strollers, or walk dogs on trails. The majority (68%) use trails to get healthy or train for running, walking, or biking events.
- Tablets were also available for taking the online survey and using the interactive map for any visitors who wished to share their ideas right away.
- Copies of a project overview/fact sheet and project business cards were available for participants to take home and distribute to friends, family, or neighbors to encourage visiting the website and taking the survey.

RESIDENTS MARK WHERE THEY WOULD LIKE TO SEE NEW TRAILS DURING THE SMOKE ON THE LAKE BBQ FESTIVAL IN ACWORTH

APRIL '17 TASTE OF MARIETTA
MAY '17 TASTE OF EAST COBB
MAY '17 SMOKE ON THE LAKE FESTIVAL
MAY '17 MABLETON DAY

PROJECT TEAM MEMBERS TALK WITH ATTENDEES AT TASTE OF EAST COBB IN MAY 2017

JULY '17 EAST COBB LIBRARY
JULY '17 COBB COUNTY DOT
JULY '17 COVENANT PRESBYTERIAN CHURCH
AUGUST '17 CITY OF AUSTELL THREADMILL COMPLEX

LIVELY DISCUSSION ABOUT POTENTIAL TRAIL LOCATIONS AT EAST COBB LIBRARY

CITIZEN STAKEHOLDER MEETINGS

COMMUNITY MAPPING AND GROUP DISCUSSION

The Cobb County *Greenways and Trails Master Plan* project team facilitated four meetings for interested citizens and stakeholders throughout July and August 2017. Several locations throughout the county were selected to ensure that a variety of people could participate. In total, **57 people attended the four meetings**.

The meetings consisted of a brief presentation by the project team followed by break-out sessions during which attendees drew on maps of existing, planned, programmed, and proposed trails, and offered suggestions and comments. Specifically, the project team invited suggestions for trail access points, activity centers that should be connected to trails, places where people would like to see new trails, and general comments. Following the break-out sessions, individuals and small groups reported back to the entire group the key points from their discussion. Attendees also had the opportunity to submit written comments on a questionnaire.

In large part, these meetings revealed strong interest in new greenways and trails, particularly for recreational and socializing purposes. Access to parks, schools, and areas currently lacking trails were of particular interest to attendees. Better neighborhood connectivity was also an important topic. In some cases, neighborhood connections may be better facilitated by on-street bikeways rather than greenways or trails, and these suggestions can be revisited as part of future plans and studies. Suggested trail locations were mapped along with those submitted online and during community events.

A full summary of key discussion points and suggestions from the citizen stakeholder meetings are presented in Appendix C.

MAPPING COMMUNITY PRIORITIES AT COBB COUNTY DOT IN JULY 2017

STAKEHOLDER WORK SESSION

ENGAGING CITIES, CIDS AND OTHER GROUPS

On July 18, 2017, the project team conducted a stakeholder work session for representatives of the six Cities, CIDs, and other key organizations within Cobb County to provide an overview of the study and solicit input about expanding Cobb County's trail network. Attendees included representatives of the following communities and organizations:

- City of Acworth
- City of Austell
- City of Marietta
- City of Powder Springs
- City of Smyrna
- Cobb County PARKS Department
- Cobb Travel and Tourism
- Connect the Comet / River Line Historic Area, Inc.
- Cumberland CID
- Kennesaw State University
- Marietta Visitors Bureau
- National Park Service
- The Trust for Public Land
- Town Center CID

Attendees provided feedback on important considerations for trail planning, amenities that should be included on trails, and programming and activities that would draw the community to trails, among other topics.

The team gave an overview presentation that briefly discussed the purpose of the project, summarized key findings from the process to-date, provided an update on ongoing trail projects, and highlighted best practices with regard to branding, signage, programming and other ways to leverage a trail system.

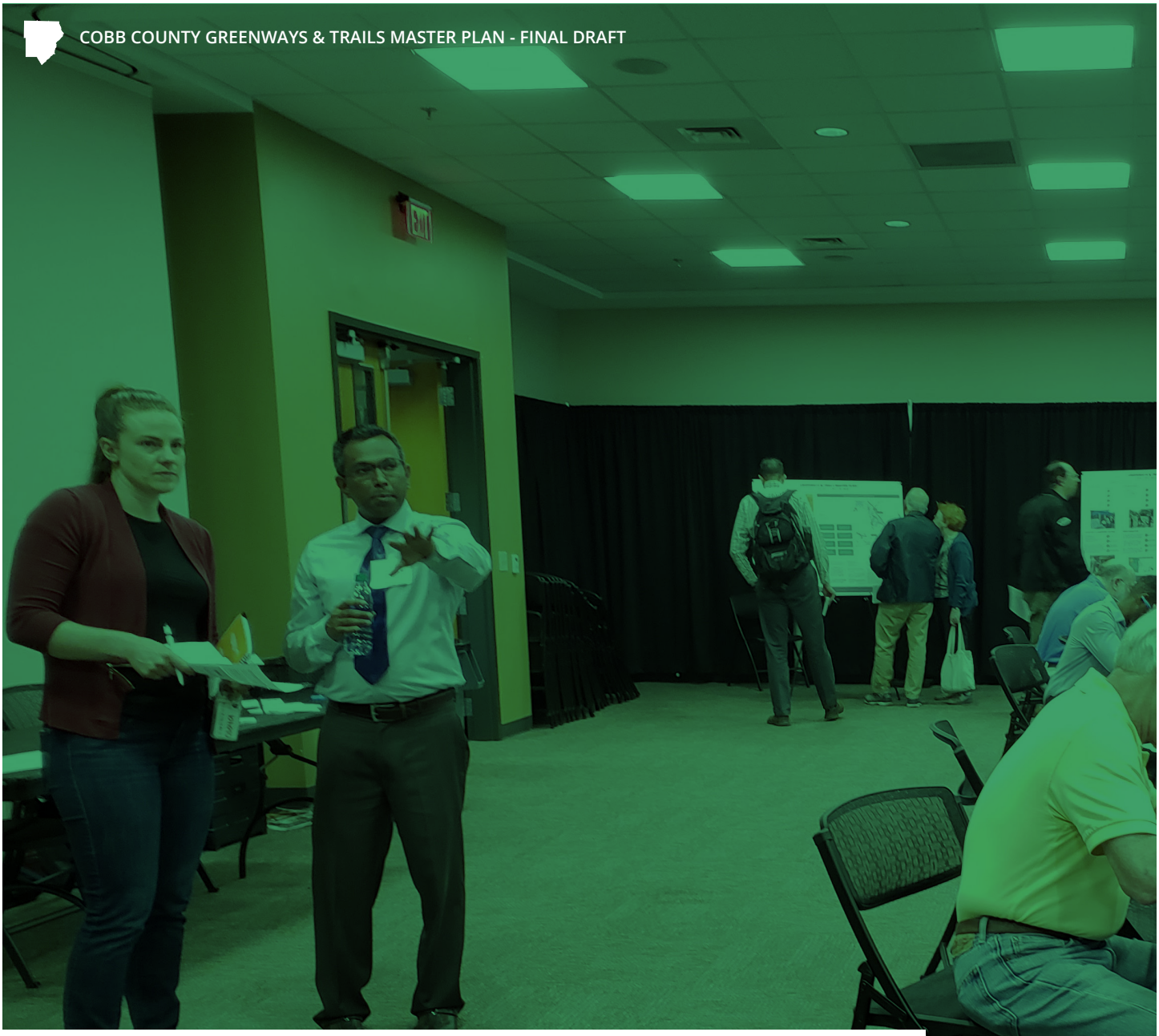
Key discussion points among the group included the importance of branding and wayfinding for trails; ideas for programming, such as workplace walking or biking challenges; activities at trailheads and along trails; preferred trail types; the desire for more trail oriented development; and the need for continued coordination between the County, Cities, and adjacent communities.

A full summary of the stakeholder work session is presented in Appendix C.

PRESENTATIONS AND GROUP DISCUSSION WERE PART OF THE WORK SESSION WITH THE CITIES AND CIDS.

THERE IS A STRONG DESIRE FOR PROGRAMMING AND ACTIVITIES AMONG CORE STAKEHOLDERS

GROUP DISCUSSION DURING THE STAKEHOLDER WORK SESSION



AMONG PRIORITY PROJECTS, ATTENDEES EXPRESSED STRONGEST INTEREST IN THE SILVER COMET CONNECTOR, ALLATOONA CREEK GREENWAY, AND THE NOONDAY CREEK TRAIL

A PROJECT TEAM MEMBER EXPLAINS HOW THE OPEN HOUSE IS ORGANIZED TO AN ATTENDEE

PUBLIC OPEN HOUSE

PRESENTING DRAFT RECOMMENDATIONS

On April 10, 2018, Cobb County Department of Transportation (DOT) hosted a Public Open House at the Cobb County Civic Center. Over three dozen individuals attended, representing a range of neighborhoods and communities across the County. The purpose of the Open House was to provide background on the *Master Plan* and solicit feedback on the draft recommendations. In a series of displays, attendees had the opportunity to: learn about the planning process, community engagement activities, different types of trail facilities, and potential strategies to implement trails; review recommendations for priority projects and other proposed trails; and provide feedback on which trail projects were most important to them.

Several mechanisms were available for attendees to provide feedback. Members of the project team, including the Cobb County DOT Planning Division Manager, were on-hand to discuss the *Plan*, answer questions, and collect feedback. The proposed greenways and trails network was shown at a countywide scale as well as by Commission District, allowing individuals to take a closer look at the proposed trails within the context of their communities. Each attendee was given three sticker dots to use to indicate which of the proposed trails they would most like to see implemented in the future. Sticky notes were provided to further explain their preferences as needed. Comment cards were also available to provide additional feedback.

The overall response to the recommendations was positive; community members are eager to see more greenways and trails built throughout the County. Among the priority projects, the greatest interest was expressed for the **Silver Comet Connector**, **Allatoona Creek Greenway,** and **Noonday Creek Trail**.

Attendees expressed a range of preferences for other proposed future greenway and trail projects; in each District, those with the most "votes" included:

- **Allatoona Creek Greenway** (D1-Northwest Cobb)
- **Akers Drive Trail** and **Hyde Farm-Johnson Ferry Trail** (D2-Northeast Cobb)
- **Noonday Creek Trail** and **Polk Street Trail** (D3-North-Central Cobb)
- **Nickajack Creek Greenway** and **Austell-Powder Springs Road Trail** (D4-South Cobb)

Among the comments received, several overarching desires were expressed:

- Greater trail connectivity to the Chattahoochee River and units of the CRNRA, and with Fulton County
- More trail connections between schools and parks
- More trails between Austell and Powder Springs
- Online route- or trip-planning maps and services for wayfinding on greenways and trails, and maps showing the location of bus stops in proximity to trails
- Be explicit that greenways and trails are multi-use facilities, appropriate for both cyclists and pedestrians
- Enhance the aesthetics and user experience of trails, particularly those that parallel major roads, with improvements such as vegetation, seating, signs, and public art
- More complementary on-street bike facilities as designated bikeways to align with and connect to trails

A full summary of the public open house activities and feedback are located in Appendix C.

BIKE RIDERS ON THE NOONDAY CREEK TRAIL

3 COMMUNITY CONTEXT

OVERVIEW OF EXISTING CONDITIONS

This chapter contains an overview of existing data and conditions throughout Cobb County. Data and information gathered as part of the data collection and analysis phase of the project provides context in which to understand and assess the current and future trail network. Findings from the community context assessment help inform identification of priority projects, development of recommendations, and implementation of future projects. For additional details, refer to the Community Context Technical Memorandum in Appendix B.

COBB COUNTY OVERVIEW

SETTING & DEMOGRAPHICS

Cobb County, Georgia is part of the ten-county Atlanta Region and is situated northwest of Atlanta, along the Chattahoochee River. It comprises 345 square miles and its terrain is characterized by gentle slopes, ridges, and valleys. Two lakes, Allatoona and Acworth, along with several smaller ponds and man-made lakes, numerous creeks and streams, and dozens of parks offer recreational opportunities across the County. Several small mountains, including Blackjack, Kennesaw, Little Kennesaw, Lost, Pine, and Sweat, provide scenic views as well as recreational opportunities. The presence of National Park Service properties – Kennesaw Mountain National Battlefield Park and Chattahoochee River National Recreation Area – are tremendous assets and well-utilized by residents and visitors alike. These natural and scenic qualities coupled with the County's location in Metro Atlanta make it a desirable place to live, work, shop, visit, and play.

Cobb County is currently home to 748,150 persons, according to 2016 estimates by the US Census Bureau. The county has grown by approximately 23% from the year 2000 (607,751 persons) and almost nine percent from 2010 (688,078 persons), making it one of the fastest growing counties in metro Atlanta and the state of Georgia. Population projections from the Atlanta Regional Commission (ARC) indicate that the County will continue to grow at a rapid pace, reaching 885,062 persons by 2040, an increase of roughly 21%.

In Cobb County, population is most densely concentrated along interstates (I-75 and I-285) and in and near city centers including Marietta, Smyrna, and Kennesaw. Portions of unincorporated Cobb County, including Vinings, East Cobb, and South Cobb near I-20, have areas of higher density. Generally, unincorporated West Cobb is less densely populated.

While the existing trail network serves a substantial portion of these population centers, Figure 3-1 shows that there are some population centers without good access to trails, particularly in the northeast and west parts of the County. This includes portions of Kennesaw and Marietta, and unincorporated East and South Cobb. Based on an analysis conducted in December 2017 (using data from the 2011-2015 American Community Survey), approximately 277,340 people, or roughly 39% of the Cobb County population, lives within approximately one mile of an existing, programmed, or under construction trail.

Cobb County by the Numbers

Mobility

1.2%

Commuters who walk to work

0.1%

Commuters who bike to work

1.3%

Commuters who commute by transit

2.2%

Workers 16 and over who have no vehicle available

Proximity

77%

Jobs within 1 mile of an existing, under construction, or programmed trail

39%

People who live within 1 mile of an existing, under construction, or programmed trail

85%

Parks accessible within 1 mile of an existing, under construction, or programmed trail

53%

Households with no vehicle available that are within 1 mile of an existing, under construction, or programmed trail

Includes Cobb County multi-use trails and trails in National Parks. Source: Atlanta Regional Commission, U.S. Census Bureau's American Community Survey 2011-2015 5-year Estimates, 2015 Employment data, and project team calculations, as of December 2017.

ACCESS TO JOBS

ARC estimates that in 2015, there were roughly 399,486 jobs in Cobb County. This represents a 10% increase over 2010 jobs. The agency projects that Cobb will continue to expand the number of jobs available and will be home to 535,185 jobs by 2040, a roughly 34% increase over 2015. According to an analysis of 2015 Census-tract-level data, there were 313,362 jobs in Cobb County and approximately 77% of them are within one mile of an existing, under construction, or programmed trail. For the most part, the areas with the highest concentration of jobs are well-served by the existing trail network, as shown in Figure 3-2.

High-job areas such as Cumberland and Town Center have good access to trails. Areas such as central Marietta and the area around Dobbins Air Reserve Base, Kennesaw State University - Marietta, and Life University are somewhat less well-served but do have access to trails and greenways, with more on the way. Areas such as portions of Acworth, Kennesaw, northeast Marietta, and the southern part of Smyrna have moderate concentrations of jobs but are less well-served by trails. This means that many workers throughout the County have access to trails, although their location and connectivity, or lack thereof, may not be conducive to commuting via trails and greenways.

ACTIVITY CENTERS

Understanding points of interest and the location of activity centers relative to residential areas, commercial areas, and other potential destinations is essential in planning for trails and greenways. There are dozens of activity centers such as commercial districts and corridors, significant parks and recreational facilities, mixed-use districts, and performance venues and attractions throughout the County, including but not limited to:

- Chattahoochee River National Recreation Area
- Cobb Energy Performing Arts Centre
- Cobb Galleria Centre
- Cumberland Mall
- Kennesaw Mountain National Battlefield Park
- Kennesaw State University
- Six Flags Over Georgia
- SunTrust Park and the Battery
- Town Center at Cobb

These places tend to be clustered primarily, but not exclusively, along major roadways. Often, activity centers are good representatives of the types of places where people want to get to and from, serving as potential origin and destination points that should be connected by high quality walking and biking facilities. While people mainly travel to such locations by car, there is growing interest in being able to bike and walk, particularly for shorter distance trips.

Key activity centers, shown in Figure 3-3, were identified using data from ARC on Livable Centers Initiatives – studies that focus on creating vibrant walkable communities – along with municipal downtowns, significant regional centers, commercial and mixed-use land uses, and key recreational facilities or sites. Activity centers are present in nearly all parts of the County and are somewhat well-served by the existing trail network; however, there is room to better connect these centers via the greenway and trail network in the future.

These areas provide ample opportunity to draw people into the biking and walking network through the use of good design and creating seamless connections between parking lots, buildings, and sidewalks.

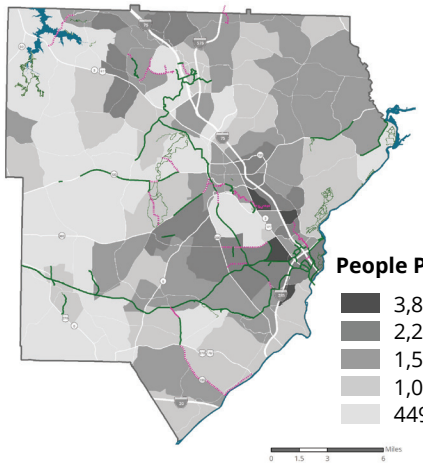


FIG. 3-1 POPULATION DENSITY

Approximately 277,340 people, or roughly 39% of the Cobb County population, lives within one mile of an existing, programmed, or under construction trail.

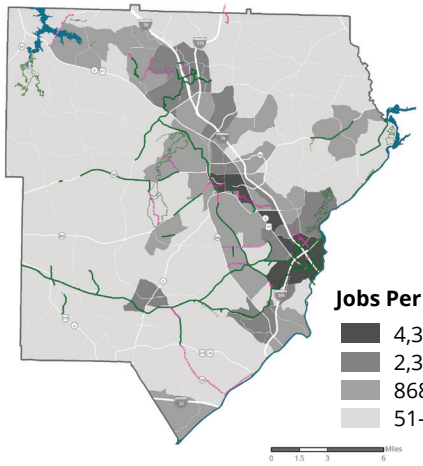


FIG. 3-2 JOB DENSITY

Approximately 241,260 jobs, or roughly 77% of jobs in Cobb County are within one mile of an existing, under construction, or programmed trail.

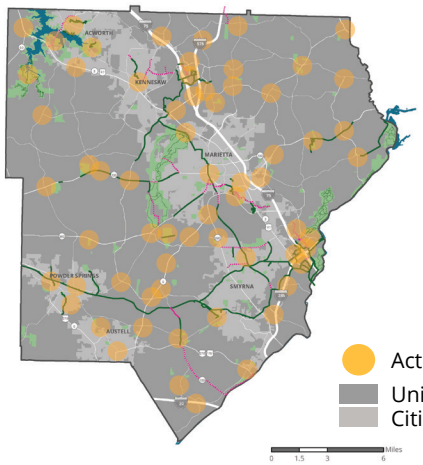


FIG. 3-3 ACTIVITY CENTERS

Activity centers are present in nearly all parts of the County and are somewhat well-served by the existing trail network; however, there is room to better connect these centers via the greenway and trail network in the future.

EQUITABLE TARGET AREAS

ARC's Equitable Target Area (ETA) Index is a tool to help measure impacts of programs and investments on historically disadvantaged and underserved communities, focused on areas characterized by high levels of people and households with income below the poverty level and high proportions of non-white people. The index can inform project prioritization, resource allocation, and decision-making, helping guide decisions about where investments might be warranted and where there may be opportunities to create more equitable communities.

While median household income in Cobb County ($65,873 according to the 2015 American Community Survey) is among the highest in the state, there are disparities within the County: approximately 12% of all people and 17% of all children under age 18 live below the poverty level.

ETA scores are derived from regional data on poverty and distribution of non-white population taken from the U.S. Census Bureau's 2008-2012 American Community Survey and are shown in Figure 3-4. The ETA is a composite index of Census-tract-level data and is grouped into four categories:

- Very High (1)
- High (2)
- Medium (3)
- Non-ETA (4)

In Cobb County, areas classified as high or very high ETAs – those with high concentrations of non-white people and people earning below poverty levels – are generally not well-served by trails. In particular, the ETA areas just north and south of I-20 have almost no access to existing trails; however, Cobb County recently secured funding to design an construct sidewalk and a multi-use trail along Mableton Pkwy (SR 139) between the Chattahoochee River and Factory Shoals Rd, skirting the eastern edge of this moderate ETA area. Similarly, the ETAs just east of the I-75 corridor near Delk Rd and S. Cobb Dr are also not well-served by trails at this time. It should be noted that this area contains Dobbins Air Reserve Base and is therefore not a high-population area, although Kennesaw State University's Marietta Campus is just to the north, also in an ETA. Additional investment in active transportation in these areas would help improve conditions for these historically disadvantaged populations.

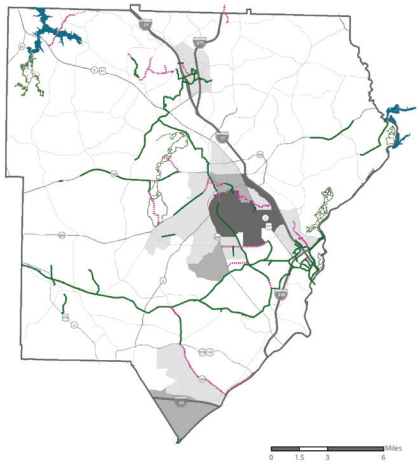


FIG. 3-4 EQUITABLE TARGET AREAS

In Cobb County, areas classified as high or very high ETAs – those with high concentrations of non-white people and those earning below poverty levels – are generally not well-served by trails. In particular, the high and moderate ETA areas just north and south of I-20 have no access to trails.

ACCESS TO TRANSPORTATION

Cobb County is served by an extensive roadway network comprised of two major interstates (I-75, I-575, and I-285), numerous US and state routes, and thousands of miles of collector and local roadways. While a vast majority of households have access to personal vehicles, approximately 10,000 households (3.5% of all households) do not.

Cobb County is served by three public transportation services: CobbLinc, the Metropolitan Atlanta Rapid Transit Authority (MARTA), and the Georgia Regional Transportation Authority (GRTA) Xpress service. CobbLinc is county-operated and provides local and express transit service via 13 local and express routes. Three flex routes provide on-demand service from three collection points (two in Powder Springs and one in Austell). MARTA provides local bus service between the Cumberland Transfer Center and Midtown MARTA Station, and between Six Flags over Georgia and the Hamilton E. Holmes MARTA Station. GRTA Xpress provides commuter bus service three routes that operate during the peak periods. There are three routes between Acworth and Downtown Atlanta, Town Center Perimeter Center, and Woodstock/Town Center and Midtown Atlanta.

Despite the provision of multiple transit routes, access is limited primarily to the I-75 and Cobb Pkwy corridors, including Cumberland, Kennesaw, and portions of Marietta, Smyrna, Austell, and south Cobb. There is no transit service in East Cobb or north of Powders Springs in West Cobb. There is also a gap in transit service in Vinings adjacent to the Fulton County line.

The existing trail network is relatively well-aligned with CobbLinc, providing opportunities for people to walk or bike to or from bus stops as part of their daily trips. As of December 2017, there are roughly 73 miles of existing, programmed, or under construction trails that can be accessed within a half-mile of a CobbLinc bus stop and roughly 159 miles of existing, programmed, or under construction trails that can be reached within three miles of a CobbLinc bus stop. Of the roughly 40 trailheads currently in Cobb County, more than half (21 trailheads) are within a half-mile of a CobbLinc Stop, providing access to 37 existing trails.

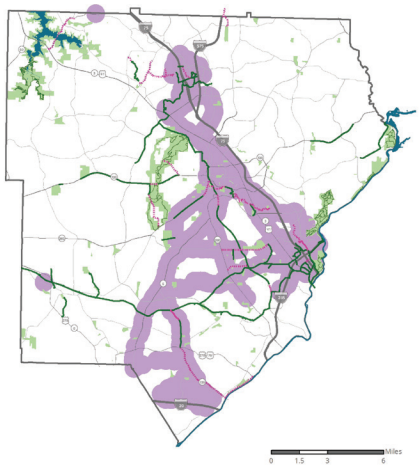


FIG. 3-5 ACCESS TO TRANSPORTATION

Within half-mile of CobbLinc service*

- **33,700 jobs**
- **9,300 workers**
- **17,600 residents**
- **7,400 households**
- **73 miles of existing, under construction & programmed trails**

Half-Mile Buffer Around Bus Stops
Existing Trail
Under Construction Trail
Programmed Trail

**Source: Atlanta Regional Commission, http://neighborhoodnexus.org/maps-and-data/profiles/county-profiles/cobb-county-profile/#transportation, and project team calculations*

ACTIVE COMMUTING

BIKING AND WALKING TO WORK

Cobb County, like most of the Atlanta region, is highly auto-dependent. The majority of commuters (age 16 and older) travel to work by driving alone or riding in a carpool. Nearly 80% of workers drive alone to work and the percentage of workers who commute on foot or bike is low. Cyclists comprise just a portion of the 1.8% of Cobb County workers who travel by means other than driving, carpooling, walking, or using public transportation. Figure 3-7 shows the percent of workers who commute on bike across the County. Within Cobb County, the highest incidences of workers commuting by bike are in Acworth (2.2%) and in southwest Austell (3%). There are also concentrations of cycling commuters in the Cumberland area and Marietta (both 1.6%).[1] There are also some bike commuters in northeast Cobb, around Canton Rd, Blackwell Rd, and Piedmont Rd. As shown in Figure 3-6, few workers throughout the County walk to work. In fact, just over 1% of workers in Cobb County report walking to work, and this remains largely unchanged over the past five years. The greatest incidence of people walking to work is in Marietta, where it is estimated that 10.6% of workers commute by foot. Higher incidences of people commuting by foot are also found in north and south of Marietta and in Kennesaw west of I-75.

The more Cobb County and other communities throughout the region can provide options for people making short trips, the better for all. Nearly everyone is a pedestrian at some point, whether walking for exercise, going to meet friends, getting off of a bike, or getting out of a car. Communities and residents benefit from increased choice, especially among modes that improve health while reducing the burden on area roadways and the environment.

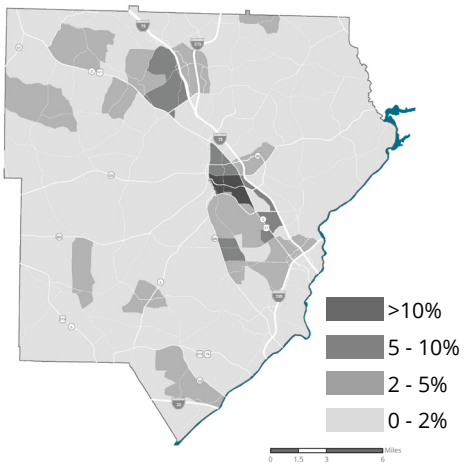


FIG. 3-6 WALK TO WORK

Just over 1% of workers in Cobb County report walking to work, and this remains largely unchanged over the past five years. The greatest incidence of people walking to work is in Marietta, where it is estimated that 10.6% of workers commute by foot.

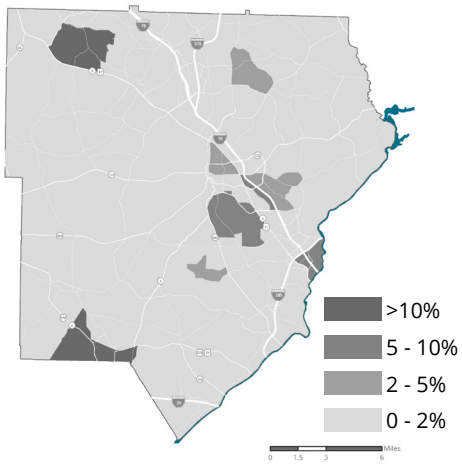


FIG. 3-7 BIKE TO WORK

Fewer than 2% of workers commute via bicycle in Cobb County. The highest concentrations of commute cyclists live in Acworth, southwest Cobb, Marietta, and parts of Cumberland.

MODES OF COMMUTING

Commute cyclists in Louisville, KY

Safe pedestrian facilities make a big difference in encouraging people to walk.

Trailside amenities provide resting places for longer trips or shade on a hot day

Trails near homes and destinations like grocery stores make walking and biking more viable options

WALKABILITY AND BIKEABILITY

COUNTYWIDE PATTERNS

Walking and biking, whether for transportation or recreational purposes, should be safe, enjoyable, and convenient. Although data is somewhat limited, national, regional, and local sources indicate that biking and walking are on the rise across the country and throughout the region. Despite the increase in biking and walking, these modes still make up a relatively small proportion of total trips – just 5% in the Atlanta Metro region, and fewer in Cobb County. These trips are not evenly distributed, given land use and development patterns, and it should be noted that some areas are more conducive to walking than others. It should also be noted that while walking and biking comprise a small proportion of total trips, they account for a higher proportion of injury and fatality roadway crashes.

As more people are biking and walking, the State of Georgia and other places are unfortunately experiencing higher numbers of serious crashes involving people on foot and on bike. Good design and engineering of greenway and trail projects can go a long way toward creating safer environments for pedestrians and cyclists.

In *Walk. Bike. Thrive!*, ARC assessed walking and propensity for the region, based on population, employment and retail density, and proximity to trails, parks, schools, and transit service. Within Cobb County, the highest walking and biking propensity is centered around the Cumberland area, particularly east of I-75 and north of I-285. There are also pockets of high propensity in Marietta, the Town Center area, and Smyrna/ Vinings. West Cobb has several pockets of low walking and biking propensity.

Walk Score, produced by an independent organization of the same name, is a tool that scores the pedestrian-friendliness of areas based on measures such as population density, block length, and intersection data, and proximity to nearby amenities. Among downtown areas in Cobb County, Marietta received the highest score (81), indicating it is very walkable. Downtown Kennesaw and Smyrna each scored 61, or somewhat walkable, and the remaining downtown areas are classified as car-dependent. The County's major university, Kennesaw State University, was scored as car-dependent on both of its two campuses in Kennesaw and Marietta. The County's two primary malls, Town Center at Cobb and Cumberland Mall, also fall within the car-dependent category, though Cumberland Mall area is on the cusp of the "somewhat walkable" classification. Most notably, the lowest scores are seen in West Cobb, where almost all errands require a car.

ARC identified high-risk areas for biking and walking crashes by Census tract in *Walk. Bike. Thrive!* There are several tracts in Cobb County with moderate-to-high risk of bicycle crashes, around Windy Hill Rd and Austell Rd, near the south end of Barrett Pkwy, and in the Mableton area. Moderate and high-risk walking areas are more widespread and encompass portions of Marietta south of SR 120/Roswell Rd, parts of Mableton, and the southwest and northwest corners of the County. While safety is important in all areas of the County, these areas in particular should be targeted for safety improvements, as part of future greenway and trail projects.

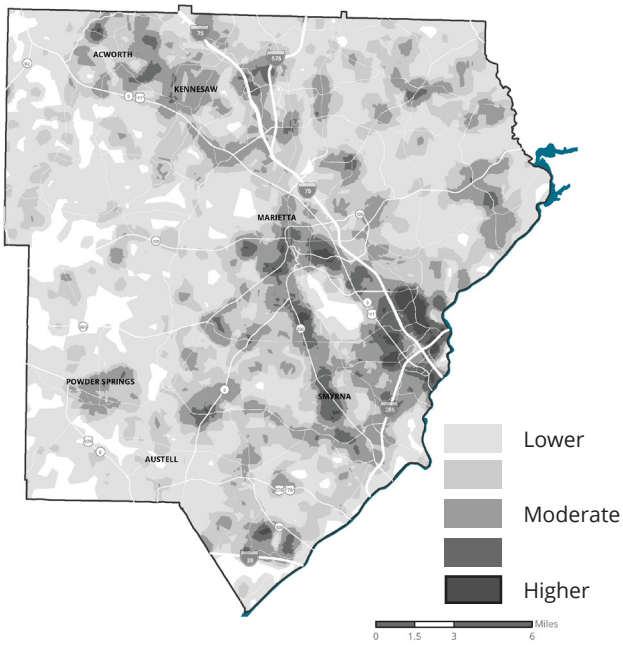


FIG. 3-8 WALK & BIKE PROPENSITY
SOURCE: ATLANTA REGIONAL COMMISSION, WALK.BIKE. THRIVE! (2016), PART 1

Within Cobb County, the highest walking and biking propensity is centered around the Cumberland area, particularly north of I-75 and east of I-285.

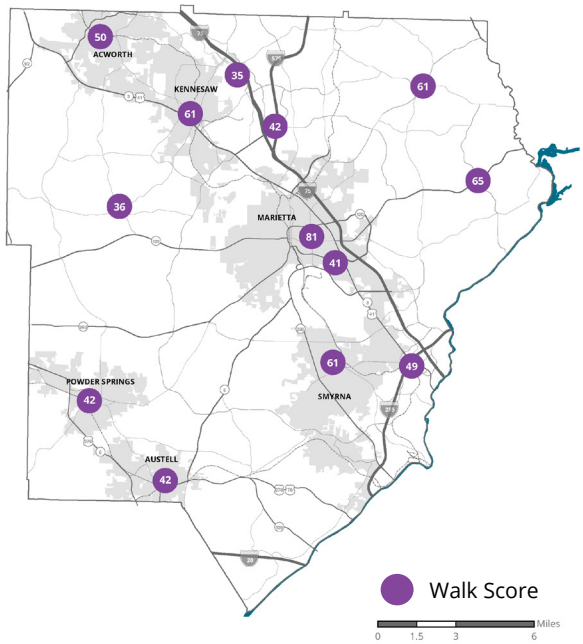


FIG. 3-9 WALK SCORE

Among downtown areas in Cobb County, Marietta received the highest Walk Score (81), indicating it is very walkable. Downtown Kennesaw, commercial areas in East Cobb, and Smyrna all scored in the low 60s, or somewhat walkable, and the remaining downtown areas are classified as car-dependent.

TABLE 3-1 WALK SCORE CATEGORIES

Walk Score	Description
90-100	Walkers Paradise *Daily errands do not require a car*
70-89	Very Walkable *Most errands can be done without a car*
50-69	Somewhat Walkable *Some errands can be done without a car*
25-49	Somewhat Car-Dependent *Most errands require a car*
0-24	Car-Dependent *Almost all errands require a car*

SENSITIVE AREAS

NATURAL FEATURES AND IMPERVIOUS SURFACES

Cobb County is approximately 345 square miles in area, including roughly four square miles of water and 3,200 miles of stream channels. It is bisected by the Kennesaw Mountain ridgeline, which runs roughly northeast to southwest. Water north of the ridgeline flows into the streams of the Etowah River Watershed, while water south of the ridgeline flows into streams of the Chattahoochee River Watershed.

Due to the presence of the Chattahoochee River and its many tributaries, Cobb County has extensive wetlands. These are primarily concentrated along the Chattahoochee River, Ward Creek, and Sweetwater Creek. Cobb County does not allow land disturbing activity within delineated wetlands except when in compliance with permits issues by the U.S. Army Corps of Engineers; recreational uses are, however, acceptable uses of wetlands.

Due to the extensive coverage of creeks and streams, floodplains are present throughout the County. Areas near the Chattahoochee River and Sweetwater Creek are particularly susceptible to flooding. The County closely regulates development in floodplains and adjacent areas and requires permits for any improvement or development, including grading and filling within an area of Special Flood Hazard.

Cobb County's Stormwater Management program has been actively acquiring floodplain land along major waterways to help preserve water quality and wildlife habitat, and to provide residents and visitors with opportunities for recreation in areas protected from commercial development. The County has set minimum 50-foot buffers for all streams; buffer requirements vary depending on the contributing drainage area. Floodplain areas present key opportunities for recreationally-oriented trails across the County.

Cobb County has approximately 3,400 miles of roadway, excluding private roads and interstate highways, 2,400 of which are maintained by the County. In addition, there are more than 60.96 square miles of impervious surfaces, such as driveways, structures, sidewalk, and parking lots throughout the County. Large portions of the county are relatively developed and built out. Development patterns tend to follow major roadway corridors, as shown in the map of highly impervious areas in Figure 3-10. These are areas where trails may be more difficult to site due to the close proximity of driveways, intersections, and other features that may not be conducive to trails and greenways. However, clusters of impervious surface and development do not preclude the building of trails, particularly sidepaths. It just makes it more important that the user experience is considered during the design process to ensure comfort and safety.

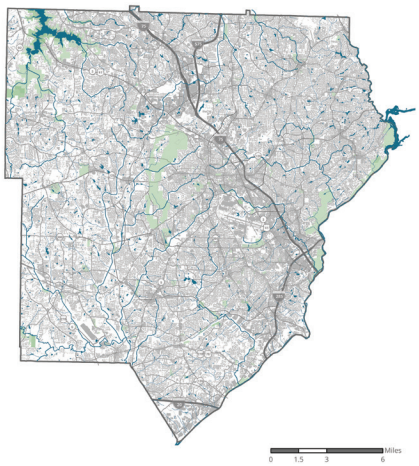
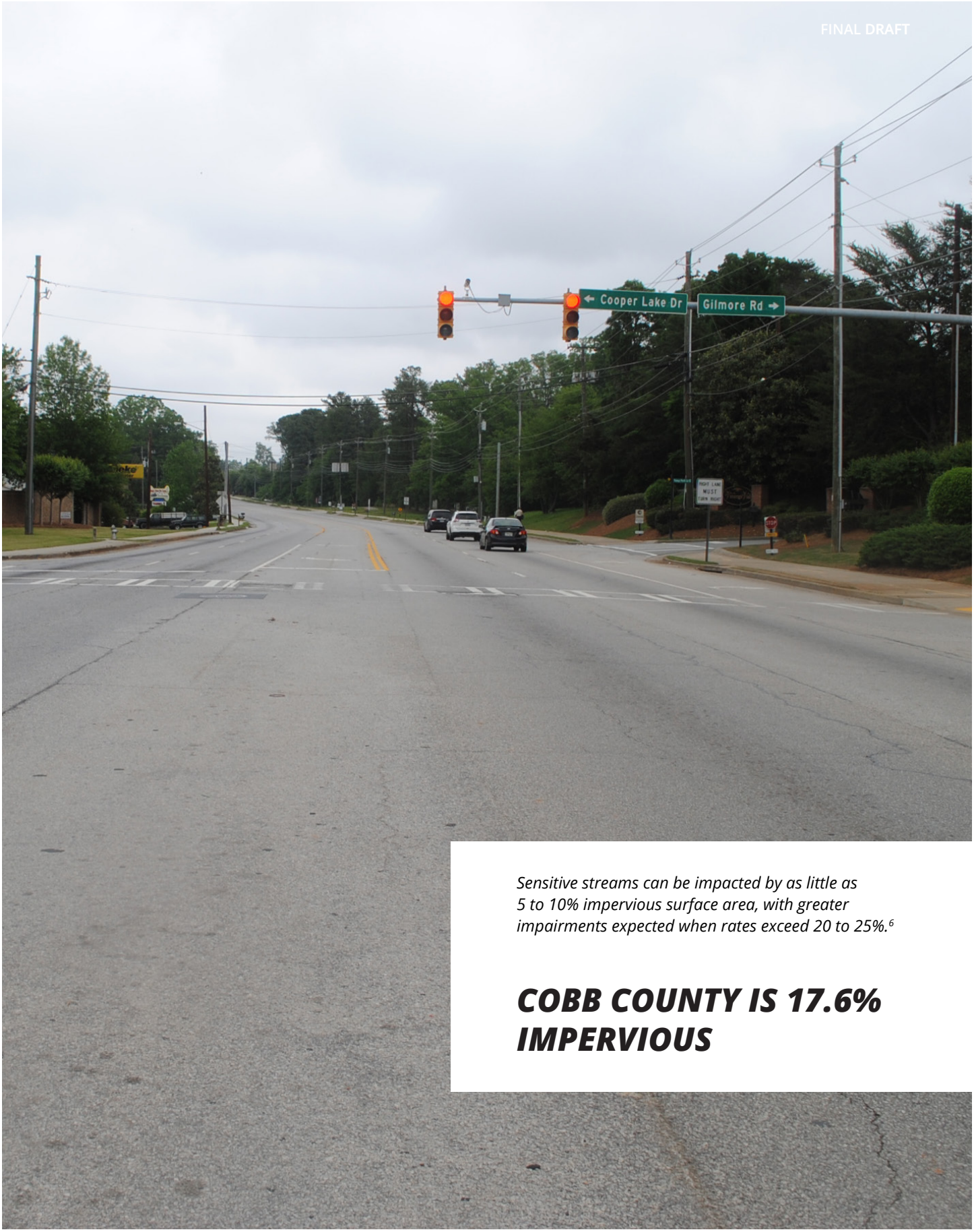


FIG. 3-10 IMPERVIOUS SURFACES

Impervious surfaces raise ambient temperatures and dramatically impact stormwater management and water quality. There are more than 60 square miles of impervious surfaces, such as driveways, structures, sidewalk, and parking lots, throughout Cobb County.



Sensitive streams can be impacted by as little as 5 to 10% impervious surface area, with greater impairments expected when rates exceed 20 to 25%.[6]

COBB COUNTY IS 17.6% IMPERVIOUS

PARK CONNECTIVITY & ACCESS

PARKS OVERVIEW

Cobb County's P.A.R.K.S. Department manages 82 individual properties with a total land area of approximately 5,632 acres, including Allatoona Creek Park, the Army Corps property in the northwest corner of the County. Currently, 61 of the 82 parcels are developed. According to the P.A.R.K.S. *Comprehensive Master Plan*, considering all forms of open spaces, Cobb County currently has a surplus of open space (based on the ratio of acres to population) compared to national standards; however, not all open spaces can be developed as park facilities. Considering only County and City parks, there is a deficit of nearly 219 acres, a trend which, the plan projects, will continue in the future without additional acquisitions.

Within County-managed park properties, there are more than 47 miles of unpaved or natural surface trails and nearly two miles of paved trails. The P.A.R.K.S. Department is also responsible for management of the Silver Comet and Noonday Creek Trails, accounting for 20 additional miles of paved trail. For details about park facilities in Cobb County, refer to the P.A.R.K.S. *Comprehensive Master Plan.*

Cobb County is fortunate to also have two major federal parklands: Kennesaw Mountain National Battlefield Park and the Chattahoochee River National Recreation Area (CRNRA). Figures 3-11 and 3-12 illustrate trails within these parks. Both areas have significant and popular hiking trails and CRNRA has some biking trails as well. Both parks are among the most popular hiking destinations in the County. Throughout the planning process, community members repeatedly indicated these locations are where they hike or bike most often.

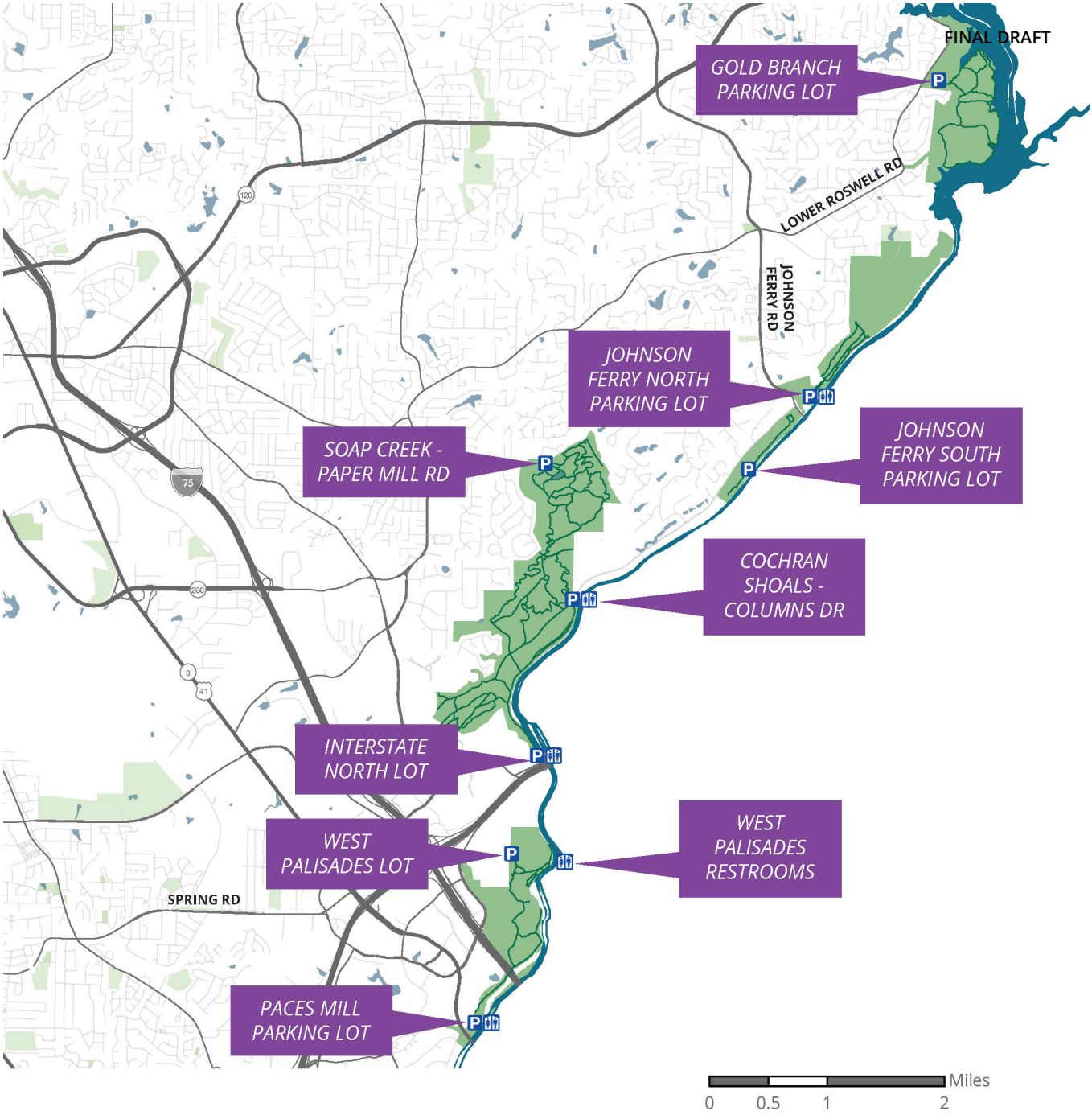


FIG. 3-11 CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA TRAILS

CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA

There are four Chattahoochee River National Recreation Area park units in Cobb County. Collectively, they host more than 35 miles of trails for use by a combination of biking and hiking, or hiking only:

- West Palisades - four miles of hiking-only and hiking/biking trails.
- Cochran Shoals - more than 18 miles of hiking-only and hiking/biking trails.
- Johnson Ferry (North and South) - over eight miles of hiking trails.
- Gold Branch - nearly five miles of hiking trails.

These units are immensely popular and parking is limited. Often, parking lots are full at peak times, especially on weekends.

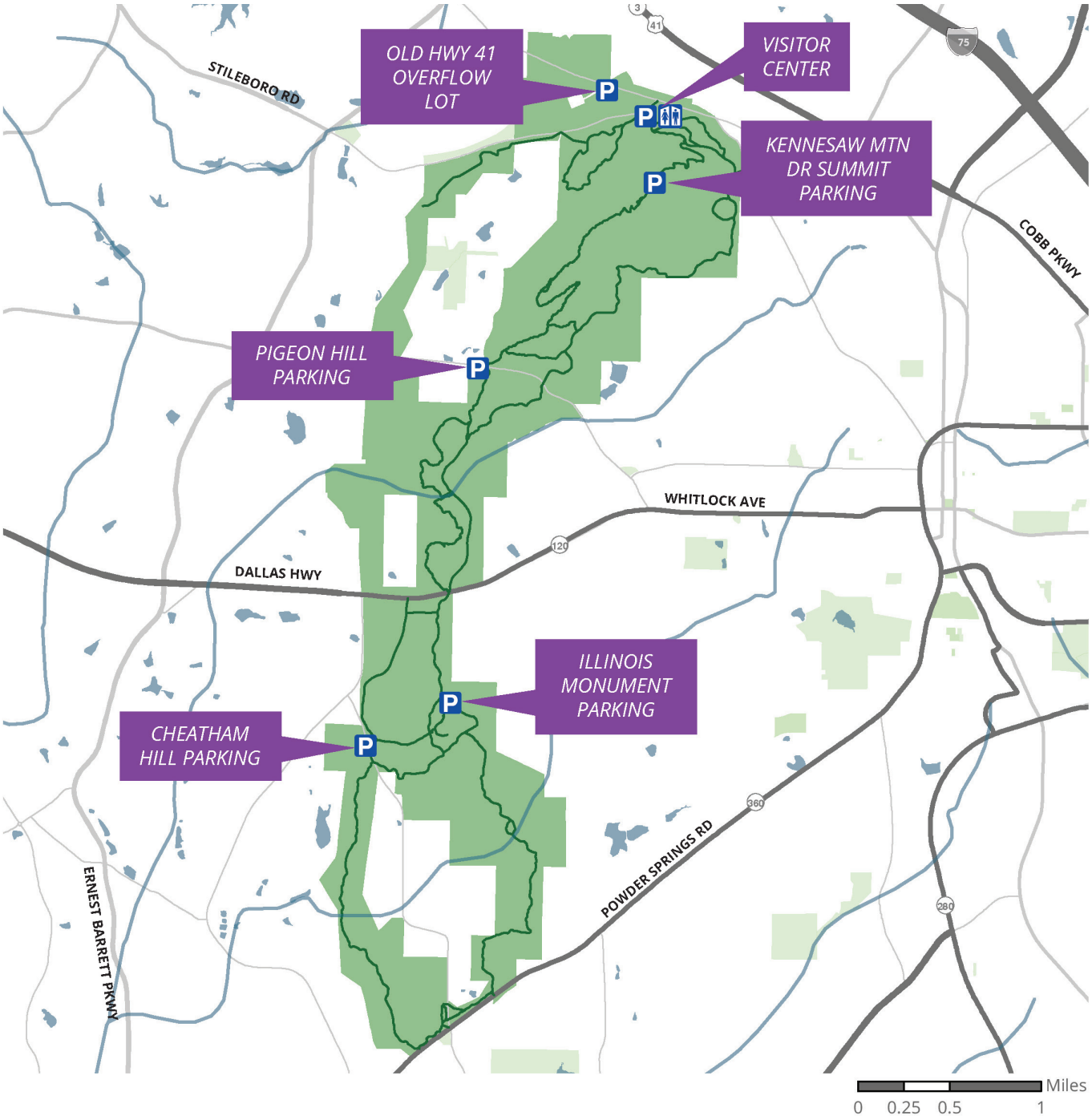


FIG. 3-12 TRAILS AT KENNESAW MOUNTAIN NATIONAL BATTLEFIELD PARK

KENNESAW MOUNTAIN NATIONAL BATTLEFIELD PARK

Kennesaw Mountain National Battlefield Park has more than 22 miles of unpaved trails for hiking and jogging. These trails provide access to historic sites throughout the battlefield, including the Georgia Monument, US Army Monument, Eaton House, New Salem Church, and Kolb Farmhouse.

Several trailheads provide access from areas surrounding the park. Despite numerous parking lots, they are often full, especially on weekends and holidays. The parking lot at the summit of the mountain is only open to personal vehicles on weekdays. More people might be more likely to use these already popular trails if they did not have to drive to get to them. Increasing non-motorized access to Kennesaw Mountain would be a tremendous benefit to the community.

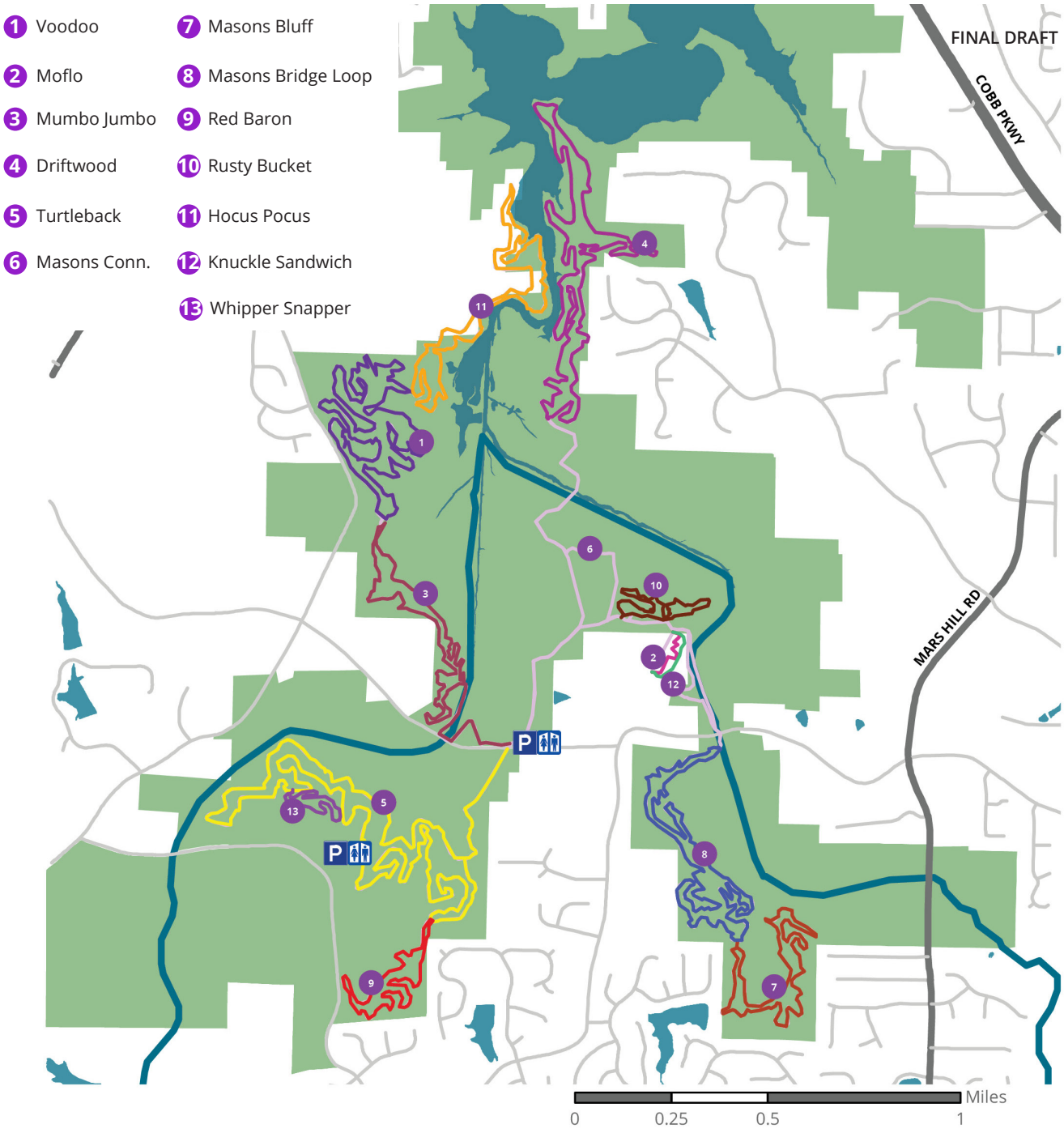
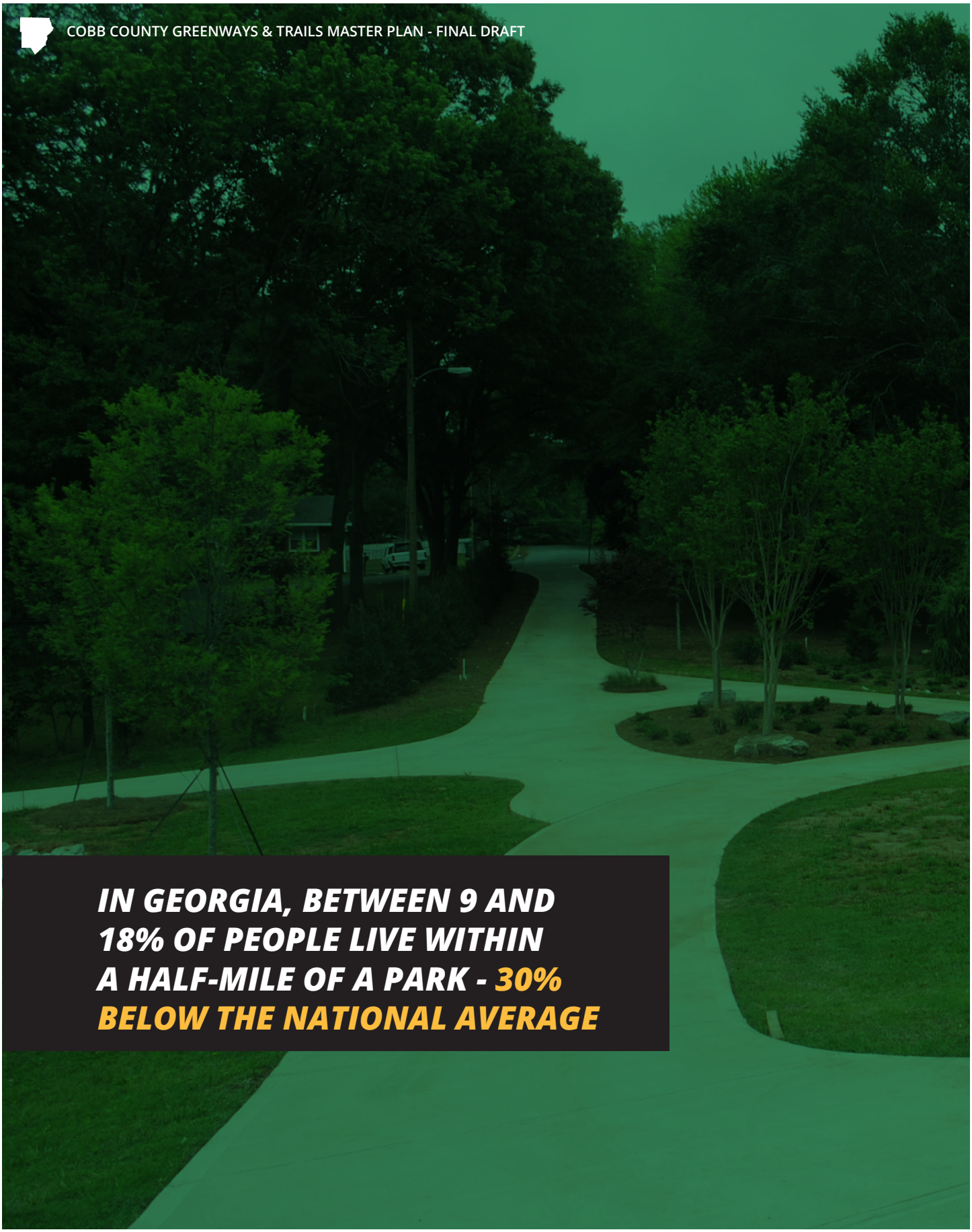


FIG. 3-13 ALLATOONA CREEK PARK TRAILS

ALLATOONA CREEK PARK

In addition to the federal parklands, Cobb County is home to a large tract of land in the northwest portion of the County, often referred to as the Corps Property. Officially called Allatoona Creek Park, the park is comprised of 1,450 acres of land leased by Cobb County from the US Army Corps of Engineers and several hundred acres of County-owned property.

Allatoona Creek Park is home to a network of more than 25 miles of trails suitable for walking, jogging, and mountain biking. These trails were built by Cobb County and are maintained in partnership with SORBA West Georgia. The park is open to the public for use except during hunting season, in November and December.


IN GEORGIA, BETWEEN 9 AND 18% OF PEOPLE LIVE WITHIN A HALF-MILE OF A PARK - 30% BELOW THE NATIONAL AVERAGE

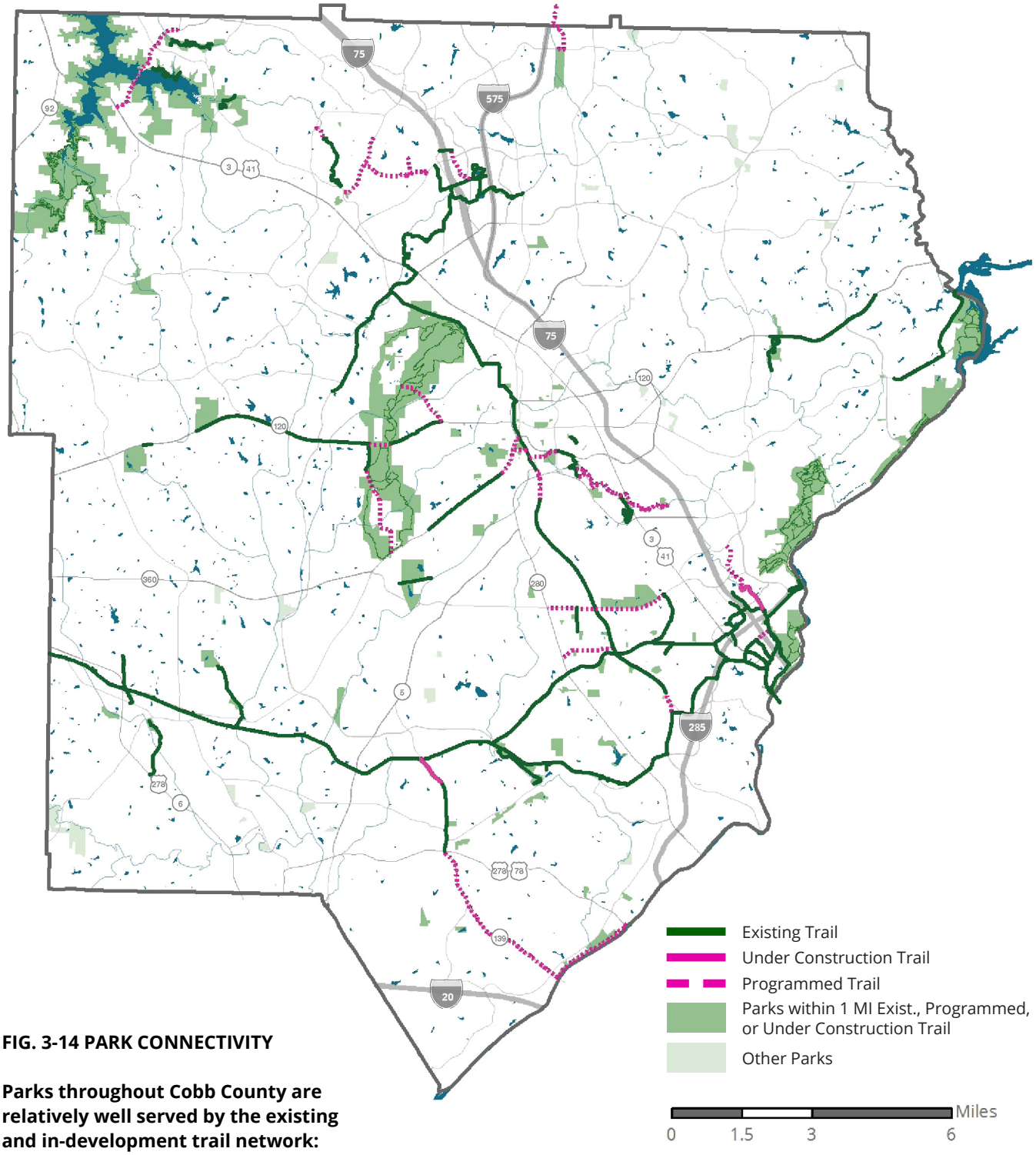


FIG. 3-14 PARK CONNECTIVITY

Parks throughout Cobb County are relatively well served by the existing and in-development trail network: roughly 85% of parks are within one mile of an existing, programmed, or under construction trail.

PUBLIC HEALTH

MENTAL & PHYSICAL HEALTH

Only about half of American adults and less than one-third of youth get the recommended amount of physical activity. One out of every two American adults lives with a chronic disease, like heart disease, diabetes, or cancer.[2] Many chronic diseases such as obesity, heart disease, and others have been linked to a lack of physical activity. According to the Centers for Disease Control and Prevention (CDC), these diseases and other conditions account for over $1 billion in annual health care costs.[3]

Cobb County fares better than the state as a whole on a number of measures of public health. Over the past five years, obesity rates in Cobb County have been consistently lower than the statewide average, as has the rate of diagnosed diabetes among the whole population, and the rate of leisure-time physical inactivity. Although rates of diabetes and obesity have risen from 2005, data from the CDC show more people are getting physical activity now than they did in 2005. There have also been some improvements in these three health indicators for Cobb County since 2010, as shown in Table 3-2.

In a recent survey, Cobb and Douglas Public Health found that 58% of Cobb County adults report being either overweight or obese. This is likely due to lack of physical activity and poor nutritional habits. Heart and vascular disease, which can be attributed in large part to inactivity and poor nutrition, is the leading cause of death in the county, mirroring the trend in the state and nationwide.

To combat these and other illnesses, the Cobb Department of Public Health has identified access to physical activity as a major focus area. In 2015 the U.S. Surgeon General issues a "Call to Action on Walking" in recognition of the importance of physical activity for all people. It calls on Americans to be more physically active by incorporating more walking in their daily lives and creating more walkable communities and places. In keeping with broader national trends, the University of Georgia (UGA) Cooperative Extension established Walk Georgia (www.walkgeorgia.org), a free, online program that allows participants to track physical activity and encourages people to move more. An average of just 22 minutes of physical activity per day can significantly reduce the risk of heart disease and diabetes.[4]

Physical activity, particularly in an outdoor setting, has been shown to have positive impacts on mental health as well as disease prevention. Numerous studies have documented improvements in psychological well-being as a result of increased physical activity, and outdoor activity even more-so than indoor activity.[5]

Increasing opportunities for safe, outdoor physical activity - whether strolling with friends, training for races, or walking to nearby destinations for daily errands - will no doubt have a positive impact on community and public health, both mental and physical,

TABLE 3-2 HEALTH INDICATORS FOR COBB COUNTY, 2005 AND 2010-2013

CDC County Health Statistics	2005	2010	2011	2012	2013
Diagnosed Diabetes	7.2%	8.8%	8.9%	8.9%	8.5%
Obesity	21.8%	23.4%	22.3%	22.4%	22.9%
Leisure-Time/Physical Inactivity	19.9%	20.1%	19.4%	18.3%	18.3%

Source: Centers for Disease Control and Prevention County Health Statistics, https://www.cdc.gov/diabetes/data/county.html

EXPANDING GREENWAYS AND TRAILS CAN INCREASE OPPORTUNITY FOR PHYSICAL ACTIVITY, HELPING OFFSET AND REDUCE RISK OF CHRONIC DISEASES AND OTHER HEALTH ISSUES

EDUCATIONAL INSTITUTIONS

SCHOOLS, COLLEGES, & UNIVERSITIES

The Cobb County School District (CCSD) is the second largest school system in Georgia and the 23rd largest in the nation. It serves more than 112,000 students at 112 schools. District facilities include 67 elementary schools, 25 middle schools, 16 high schools, one charter school, one special education center, one adult education center, and one performance learning center.

These schools and centers are located throughout the County and are somewhat well-served by the existing greenway and trail network. In total, 91 miles of existing, programmed, or under construction trails can be accessed within a half-mile of K-12 schools and 46 schools are within a half-mile of an existing, programmed, or under construction trail. Several trails provide nearly direct access to schools: 23 public and private K-12 schools are located within 1,000 feet of a trail.

SAFE ROUTES TO SCHOOLS

Out of the 112 total public schools in Cobb County, only 18 are partners in the national Safe Routes to School program. Being a partner in the program indicates the school is making progress towards implementing Safe Routes to School programs and schools agree to accomplish specific goals during each year based upon the partner levels – bronze, silver, or gold. Partner schools also officially partner with the Safe Routes to School Resource Center by completing a profile and appointing a school champion.

Partner schools are encouraged to prepare travel plans documenting existing conditions around the school and identifying recommendations for improvements to walking routes to and from the school. Of the 18 partner schools, only one (shown in bold) has completed a travel plan:

- Addison Elementary (1)
- Baker Elementary (2)
- Bells Ferry Elementary (3)
- Cheatham Hill Elementary (4)
- Daniell Elementary (5)
- East Side Elementary (6)
- Floyd Middle (7)
- Garrison Mill Elementary (8)
- Hightower Trail Middle (9)
- Kincaid Elementary (10)
- Lovinggood Middle (11)
- Mount Bethel Elementary (12)
- **Mountain View Elementary (13)**
- Murdock Elementary (14)
- Powder Springs Elementary (15)
- Shallowford Falls Elementary (16)
- Sope Creek Elementary (17)
- Still Elementary (18)

COLLEGES AND UNIVERSITIES

Cobb County is also home to several colleges and universities. The most well-known is Kennesaw State University (KSU), which has its main campus in Kennesaw and another campus in Marietta. The school has more than 35,000 students and offers more than 150 degrees. The university's alumni network has over 100,000 members.

Other college campuses in Cobb County include Life University, Strayer University, Gwinnett College, Chattahoochee Technical College, Fortis College – Smyrna, and Lincoln College of Technology – Marietta. These schools collectively enroll more than 15,000 students. According to estimates from the American Community Survey for 2011-2015, there are more than 56,000 students enrolled in college or graduate school who call Cobb County home.

There are a number of trails – both existing and proposed – in and around the two main campus areas in Kennesaw and Marietta. KSU is an active partner in development of walking and biking facilities on and around their campuses.

ONLY 1 SCHOOL OUT OF 112 HAS COMPLETED A SAFE ROUTES TO SCHOOL PLAN

Source: Cobb County School District, http://cobbcast.cobbk12.org/wp-content/uploads/2017/07/IMG_6539.jpg

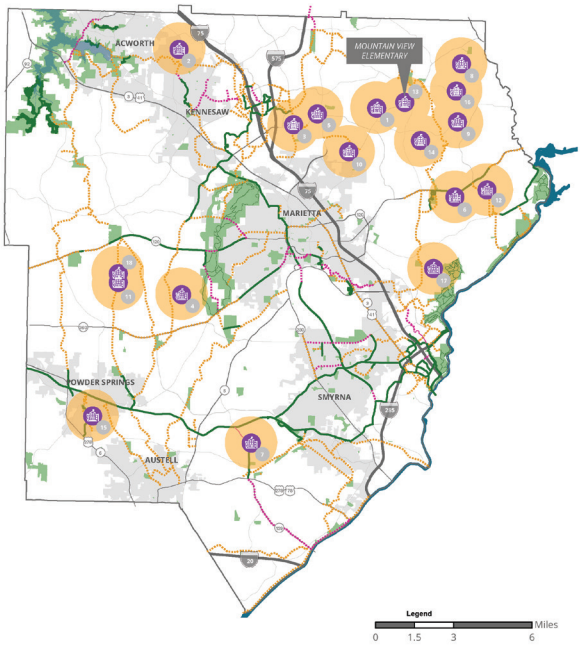


FIG. 3-15 SAFE ROUTES TO SCHOOL PARTNER SCHOOLS

Only 18 of 112 Cobb County Schools are Partners with the Safe Routes to Schools Program. Only one, Mountain View Elementary School, has implemented a Safe Routes Travel Plan.

- Existing Trail
- Under Construction Trail
- Programmed Trail
- Proposed Trail
- SRTS Partner School
- 1 MI Buffer (Approx. Walking Distance)

THE NOONDAY CREEK TRAIL IS A POPULAR SEGMENT OF THE COBB COUNTY TRAIL NETWORK

INVENTORY OF EXISTING FACILITIES

OVERVIEW

This section provides an inventory of the existing greenway and trail network, including descriptions of regionally significant trails, ongoing trail projects, trailheads, and bike share stations. It also summarizes opportunities and challenges associated with expansion of and improvements to the greenway and trail network. Existing conditions, context, and other findings informed the development of guiding principles, recommendations, and the identification of priority projects for future implementation.

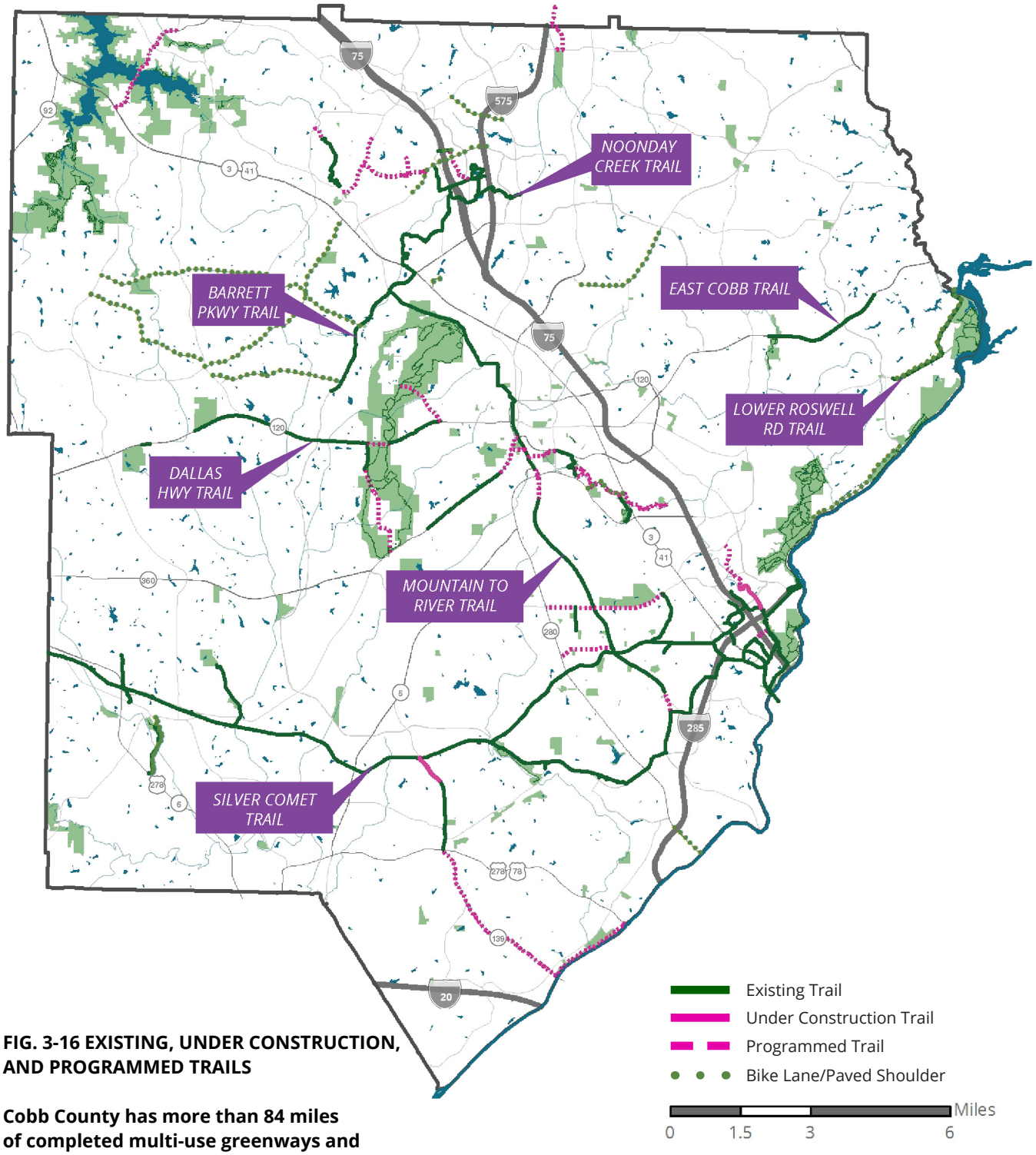


FIG. 3-16 EXISTING, UNDER CONSTRUCTION, AND PROGRAMMED TRAILS

Cobb County has more than 84 miles of completed multi-use greenways and trails along 47 corridors outside of park properties.

GREENWAY & TRAIL NETWORK

EXISTING, UNDER CONSTRUCTION, & PROGRAMMED TRAILS

Collectively, Cobb County is home to more than 180 miles of multi-use trails, including those inside and outside of park properties. Compared to surrounding counties, Cobb has a relatively high total mileage of trails outside parks. According to the 2014 Metro Atlanta Bicycle Facility Inventory prepared by ARC, Cobb has more trails than Gwinnett, DeKalb, and Paulding Counties, but fewer than Cherokee.

As of December 2017, there are more than 84 miles of existing multi-use trails throughout Cobb County, along 47 corridors outside of park properties. These include greenways in their own right-of-way, such as the Noonday Creek Trail and Silver Comet Trail, as well as sidepath trails alongside roadways, like the Mountain to River Trail or Concord Road Trail. Figure 3-16 shows trails that are existing (built and in use), under construction, and programmed, meaning funding has been identified for design and/or construction. A table of existing trails is provided in Appendix D.

Existing trails follow two primary spines: the Mountain to River Trail which travels from Kennesaw Mountain to the Chattahoochee River in the Cumberland area, along Atlanta Rd; and the Silver Comet Trail from the Alabama state line to East-West Connector, where it then connects into Cumberland and eventually, is proposed to cross over the river into Fulton County. The Noonday Creek Trail is connected to the Mountain to River Trail at the north end, connecting Kennesaw Mountain to Town Center and KSU, and will eventually continue north into Cherokee County.

There are also two fairly interconnected networks of greenways and trails in the Cumberland CID and in the Town Center CID. In Cumberland, key trails include the Bob Callan Trail, segments on Cumberland Blvd, Circle 75 Pkwy, Interstate N Pkwy, and Akers Mill Rd. Trails throughout Town Center CID mainly link to Noonday Creek, and include facilities on Big Shanty Rd, the KSU Walking Trail, and Town Point Pkwy.

Other important segments of existing greenways and trails in Cobb County include, but are not limited to:

- **Concord Rd Trail** between Silver Comet Trail and Atlanta Rd
- **Dallas Hwy/Whitlock Ave Trail** between Burnt Hickory Rd on the east to Cheatham Hill Dr and from John Ward Rd to the vicinity of Oregon Park
- **East Cobb Trail** on Roswell Rd from Shady Hill Rd to East Cobb Park
- **Kennesaw Trail System** parallel to Moon Station Rd from Main St to Winchester Forest Park
- **Lower Roswell Rd Trail** from Davidson Rd to the County line at Willeo Rd
- **Barrett Pkwy Trail** (sometimes referred to as West Cobb Trail) along the east side of Barrett Pkwy from Old Hwy 41 to just south of Burnt Hickory Rd

There are more than 25 miles of unpaved hiking and mountain biking trails in Allatoona Creek Park in northwest Cobb County, over 50 of miles of trails in the national parks, and dozens of miles of trails within County and City parks as described earlier in this chapter. The *Greenways and Trails Master Plan* is focused primarily on trails outside of park properties, although it does consider park trails with regard to opportunities for connectivity and enhanced access.

REGIONAL CONNECTIVITY

REGIONALLY SIGNIFICANT TRAILS

In 2016, as part of the development of regional biking and walking plan, ARC designated certain trails as "Trails of Regional Significance." In Cobb County, these include the Silver Comet Trail; the NW Corridor Trail, which includes the entire Noonday Creek Trail network and the Mountain to River Trail, comprised of several segments of existing, programmed, and proposed trail; connections across the Chattahoochee River to the Atlanta BeltLine; and the Lower Roswell Road Trail, which will soon connect across county lines to link up with the Big Creek Greenway system.

SILVER COMET TRAIL

The Silver Comet Trail is perhaps the most well-known of all trails in Cobb County. Popular especially among cyclists, the trail is on the bed of a former rail line that was abandoned in 1989. Completed in 2008, the trail runs 61.5 miles through Cobb, Paulding, and Polk Counties in Georgia, and connects to the 33-mile Chief Ladiga Trail at the Georgia-Alabama line, which extends to Anniston, Alabama. The Silver Comet Trail currently begins at the Mavell Rd trailhead in Smyrna and ends at the state line, near Cedartown and the Esom Hill trailhead. Plans have been proposed to extend the trail eastward to the Chattahoochee River and into the City of Atlanta, where it would eventually link to the BeltLine. The Silver Comet Trail is open to non-motorized traffic and is accessible to wheelchairs.

NOONDAY CREEK TAIL

The Noonday Creek Trail is a seven-mile trail between Kennesaw Mountain and Bells Ferry Rd in the Town Center area, constructed to be accessible for a variety of recreational users, including cyclists, walkers, and joggers. It begins at Kennesaw Mountain, on Old Hwy 41, where mile marker 0 is located, and ends at the Bells Ferry Rd trailhead, at mile marker 6.78. The trail project was a partnership between Town Center CID, Cobb County, GDOT, and National Park Service (NPS). Opened in September of 2014, the trail has been a tremendous asset to the surrounding community and has spurred new development and amenities in the area. These include the addition of the Zagster Town Center Bike Share Program, launched in 2015, and the construction of a new trailhead at 2995 Bells Ferry Rd. The trailhead was recently updated and now includes lighting, restrooms, drinking fountains, and shade trees, as well as a 60-space parking lot, seating, and a Zagster docking station. Three parks are also in development along the trail.

MOUNTAIN TO RIVER TRAIL

More than 15 years in the making, the Mountain to River Trail stretches from Kennesaw Mountain through Marietta Square and down Atlanta Rd to the Cumberland area and the Chattahoochee River. With just one small ¾-mile gap in unincorporated Cobb County left to fill, the trail will connect pedestrians and cyclists from the mountain to the river, linking separated trail systems throughout the County. Travelers are currently able to begin their journey on the Noonday Creek Trail and travel south to Kennesaw Mountain and into Marietta Square. South of the gap on West Atlanta St, travelers can connect from Dobbins Air Reserve Base into Cumberland, Cobb County's most active business and entertainment district, and to the Chattahoochee River National Recreation Area.

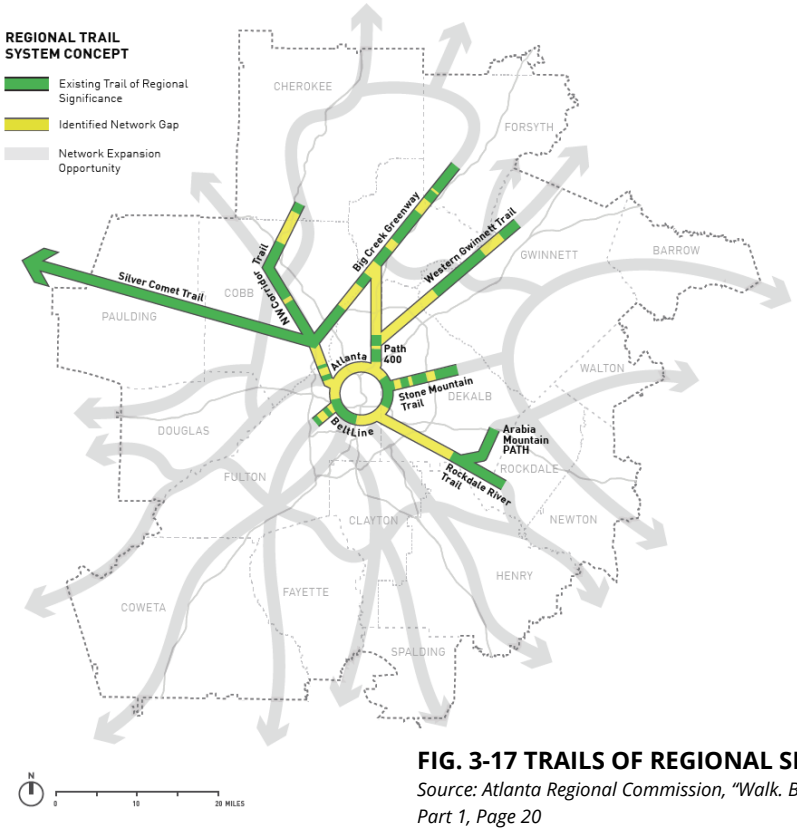


FIG. 3-17 TRAILS OF REGIONAL SIGNIFICANCE
Source: Atlanta Regional Commission, "Walk. Bike. Thrive!" (2016), Part 1, Page 20

TRAILHEADS & BIKE SHARE

INCREASING TRAIL ACCESS

Trailheads are generally formal points of entry to a greenway or trail. These frequently are provided at the beginning or end of trails, but they can also be mid-point locations where access is possible and desired. The purpose of trailheads is to give the public access to greenways and trails. Trailheads can be both formal and informal, depending on the surrounding context and setting. Because of the nature of sidepath trails, located alongside roadways, there are often multiple informal access points that are not designated trailheads. Formal trailheads often provide public facilities, such as parking, drinking fountains, seating, trail signage, and sometimes restrooms.

Throughout Cobb County there are at least 38 existing trailheads or access points, with many more informal access points at parks and along sidepath trails. The majority of these trailheads provide parking, and just over half have restrooms. Six trailheads are walk-up only. Several trailheads serve multiple purposes, functioning as parks or playgrounds as well as trail access points. In addition, trailheads have been proposed as part of plans and projects for other jurisdictions. Additional details are available in the Community Context Technical Memo in Appendix B.

In the past few years, the City of Smyrna and the Town Center CID have partnered with Zagster to launch bike share programs. Bike share is a membership-based program in which people use a mobile phone application (app) to rent bikes by the hour or day (there are options for using text message as well for individuals without smartphones). Prices vary by program, but in both Town Center and Smyrna, the first hour is free. Bikes must be returned to a docking station within the system from which it was rented, meaning riders are currently not able to rent a bike at Town Center and return it to Smyrna, or vice-versa.

There are three bike share stations in the Town Center area, and five in Smyrna. All existing bike share stations are located directly on trails, several of which are at designated trailheads, both encouraging use of the trails and increasing use of bike share bicycles. Each of the programs draws thousands of users each year.

The Zagster program in Town Center consistently has among the highest number of users at a given station (Bells Ferry Trailhead) of all Zagster stations. As of December 2017, the program has 8,600 active members who have collectively taken 22,000 rides. Of the three Town Center stations, the Bells Ferry Trailhead on the Noonday Creek Trail is by far the most well-used; 56% of trips start at this location.

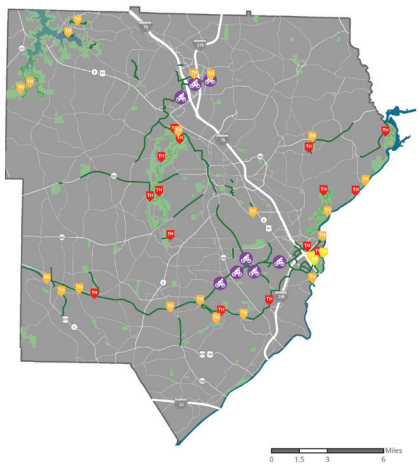


FIG. 3-18 BIKE SHARE & TRAILHEADS

There are nearly 40 trailheads and designated trail access points throughout Cobb County along with two bike share programs offering eight docking stations and more than 40 bikes.

TH Walk-Up Trailhead
TH Parking & Restrooms
TH Restrooms Only
Bikeshare Station
Existing Trail

TWO ZAGSTER PROGRAMS IN COBB COUNTY OFFER 8 STATIONS AND MORE THAN 40 BIKES

ZAGSTER BIKESHARE STATION IN SMYRNA

COMPLEMENTARY FACILITIES

ON-STREET BIKE FACILITIES

Cobb County has several miles of existing on-street bicycle facilities, including dedicated bike lanes, paved shoulders, and shared roadways. Existing on-street bike lanes are present on some roads in the Town Center area, such as Chastain Rd, the Skip Spann Connector, and a portion of Barrett Lakes Blvd. In Powder Springs, there are bike lanes on Lewis Rd and Murray Ave. Bike lanes are also present on Columns Dr between the Johnson Ferry and Cochran Shoals units of the Chattahoochee River National Recreation Area, and on Lower Roswell Rd, among other locations. Paved shoulders suitable for biking are found on roads such as Stilesboro Rd, portions of North Marietta Pkwy, and others.

The Cobb County *Bicycle and Pedestrian Improvement Plan* (BPIP), completed in 2010, included recommendations for additional on-street bike facilities, including re-striping for bike lanes (no new construction, only placement of pavement markings and spot improvements), the addition or widening of paved shoulders, and detailed corridor studies. At the time of the BPIP, several segments of bike lane and paved shoulder were under construction. Since the time of that plan, some new on-street facilities have been implemented, although there are many more opportunities for improvements to be made to the on-street network, in order to complement the off-street network of greenways and sidepaths.

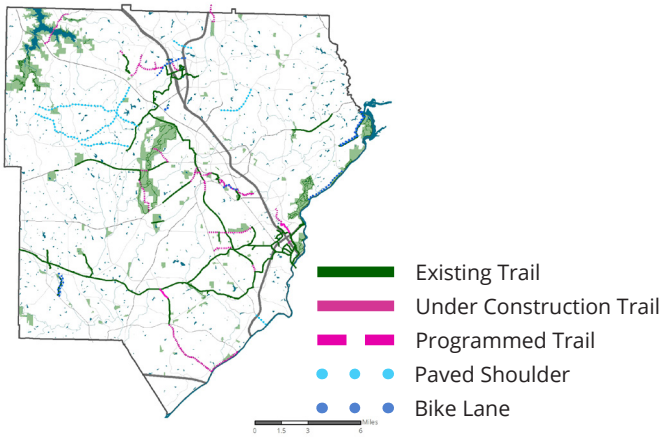
This *Greenways and Trails Master Plan* offers some recommendations for identifying additional on-street facilities, like neighborhood bikeways, that can complement the greenway and trail network (see Chapter 5 and 6). A detailed inventory of existing on-street bicycle facilities is needed in order to better understand how the on-street network interacts with the greenway and trail network, in order to paint a full picture of the biking network throughout Cobb County.

BIKE RACKS

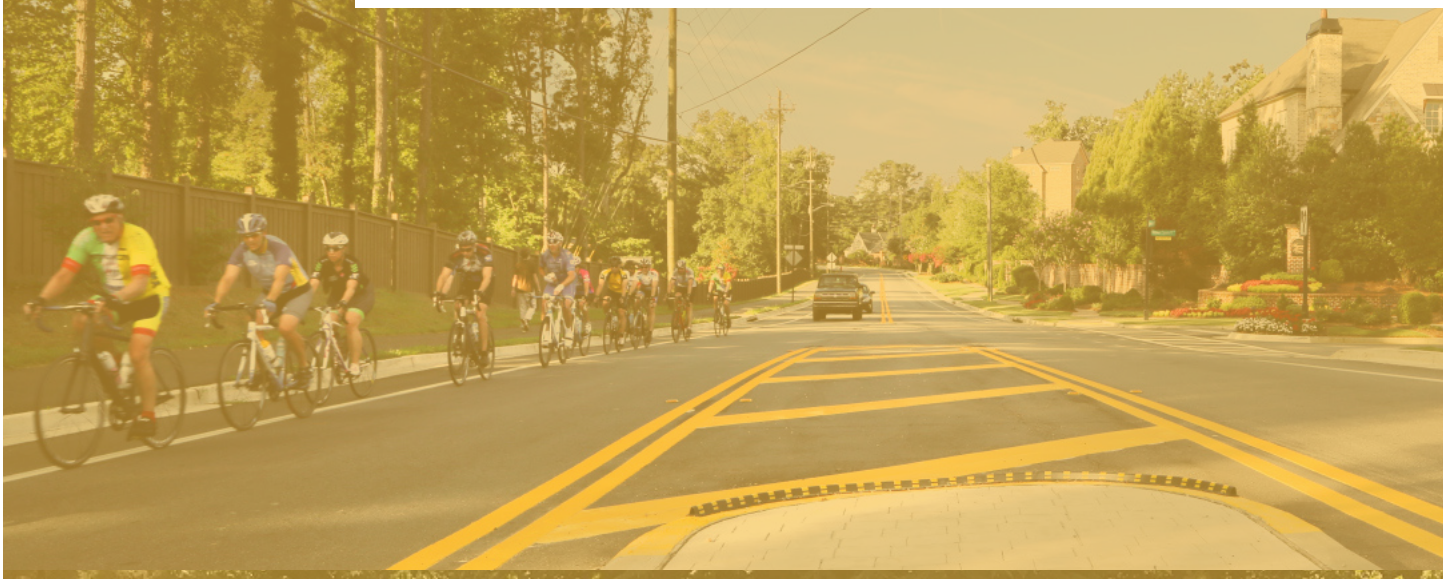
Cobb County's Sustainable Practices Policy, adopted in February, 2009, is designed to facilitate good stewardship of County assets and enhance long-term energy conservation and environmental sustainability. The policy's Sustainable Building Standards includes provisions for Bicycle Friendly Facilities (Section I. E.), which states that all new community facilities shall have bicycle racks available for public and employee use and that lockers and shower facilities should be considered for new facilities where appropriate. While community facilities are to be defined by the County Manager, examples of these types of facilities include: libraries, parks, recreation centers, community and aquatic centers, and transit park-and-ride lots.

All Cobb County P.A.R.K.S. facilities have at least one bike rack, each of which can generally accommodate up to seven bicycles. Each CobbLinc bus can accommodate up to two bicycles at a time. In addition, public facilities such as administrative offices and court buildings, park-and-ride lots, and libraries also have bike racks.

FIG. 3-19 ON-STREET BIKE NETWORK
Cobb County is working to expand its system of on-street biking facilities, including bike lanes, paved shoulders, and shared roadways to complement greenways and trails.



ON-STREET BICYCLE FACILITIES ARE IMPORTANT COMPLEMENTS TO A SUCCESSFUL GREENWAY AND TRAIL NETWORK



GROUP RIDES OFTEN TAKE ADVANTAGE OF BIKE LANES, LIKE THOSE ON LOWER ROSWELL RD (ABOVE) WHILE SOME CYCLISTS PREFER RIDING WHEREVER THEY FEEL COMFORTABLE (HERE ON WHITLOCK AVE, NEAR KENNESAW MOUNTAIN)

THE FUTURE TRAIL NETWORK

PROJECTS LIKELY COMPLETED BY 2020

For the purposes of inventory and planning, Cobb County tracks and categorizes trails and greenways by their status in the planning, design, and construction process. This helps with identifying areas of need or gaps and to prioritize projects or target investment where needed. For the purposes of this plan, trail status is defined as follows:

- **Existing trails** are built and in use.
- **Under construction trails** are in the process of being built.
- **Programmed trails** are those for which funding has been identified, either for design or construction.
- **Proposed trails** are those that have been identified or recommended in this or previously approved plans or studies, but for which no funding has yet been identified (these are discussed in more detail in the Recommendations chapter of this report).

Currently, 29 miles of trails are programmed, two miles are under construction, and there are more than 207 miles of proposed trails. Generally speaking, trails tend to parallel major roadway or rail corridors or are concentrated in business districts and town center areas. There are few trails in East Cobb, northwest Cobb, west Cobb between Dallas Highway and the Silver Comet Trail, and south of the Silver Comet Trail. There are several gaps in the existing trail network where no project has yet been programmed.

Cobb County and the six cities and three CIDs within the County are continuously working to expand and enhance the existing greenway and trail network. In Georgia, many counties use the Special Purpose Local Option Sales Tax, or SPLOST, to fund capital projects for parks, schools, roads, and other public facilities. This is Cobb County's primary source of funding for most DOT projects, including sidewalks, bikeways, greenways, and trails. Several greenway and trail projects were approved as part of the 2016 SPLOST, which was a one percent local sales tax that provided funding to reduce traffic congestion, replace and repair bridges, and a host of other initiatives. The 2016 SPLOST, approved on November 4, 2014, is collecting taxes from January 1, 2016 through December 31, 2021. Of the total estimated $750,000,000 in sales tax collection, roughly $287.3 million will go toward transportation projects, including $35 million for pedestrian improvements, such as sidewalks and multi-use trails.

As this *Plan* is being developed, several greenway and trail projects are underway and nearing completion. It is largely anticipated that these projects will be complete by the time the current SPLOST expires at the end of 2021 and the County can then begin focusing on the next round of trail projects. Figure 3-20 shows what the likely trail network might look like by the end of 2020, if most of the projects currently under construction and programmed are completed. Additional descriptions about key projects are provided below. (For details about future recommendations, see Chapter 5 of this plan.)

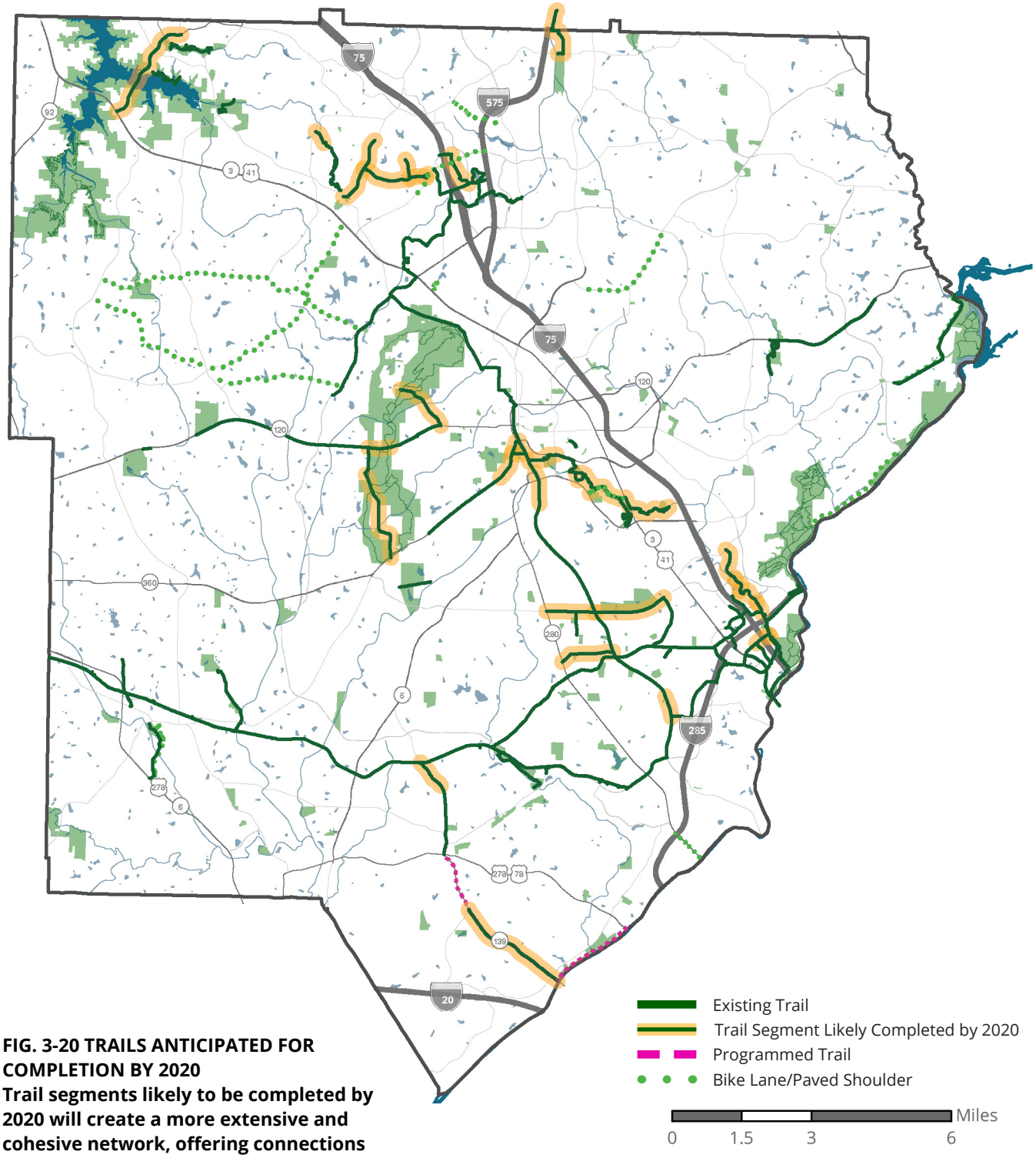


FIG. 3-20 TRAILS ANTICIPATED FOR COMPLETION BY 2020
Trail segments likely to be completed by 2020 will create a more extensive and cohesive network, offering connections from Kennesaw to Cumberland, Paulding County to Fulton County, and more connected trails in between.

COBB COUNTY PROJECT HIGHLIGHTS

KENNESAW MOUNTAIN AREA TRAILS

In 2017, Cobb County received $4 million in Federal Land Access Program (FLAP) funds, along with $1.6 million from the National Park Service, and $1.2 million from GDOT to design and construct trails in and around Kennesaw Mountain National Battlefield Park. The 3.2 miles of new trails will complement the nearly 20 miles of hiking, running, walking, and horseback trails already in the park. The project is being done in cooperation with NPS, GDOT, and the City of Marietta and will consist of design and construction of three segments of trail on Burnt Hickory Rd, Whitlock Ave, and Cheatham Hill Rd:

WHITLOCK AVE TRAIL

The Whitlock Ave Trail will be an eight to 10 foot-wide multi-use sidepath trail on the south side of Whitlock Ave between Cheatham Hill Rd and John Ward Rd, a distance of roughly half-mile. The sidepath trail would be separated from the roadway by a two foot-wide grass strip, curb, and gutter. The project would connect to sidewalks outside KMNBP, improving access to the park. The estimated cost for this project is $1.75 million.

CHEATHAM HILL RD TRAIL

The Cheatham Hill Rd Trail will be an eight to 10 foot multi-use sidepath trail on the east side of Cheatham Hill Rd, between Powder Spring Rd and John Ward Rd. The 1.7-mile trail will be separated from the roadway by a grass strip, curb, and gutter and will taper to a five-foot-wide sidewalk where it connects with the existing sidewalk on John Ward Rd, outside of the limits of the project. The estimated cost for this project is $8.16 million.

BURNT HICKORY RD TRAIL

The Burnt Hickory Rd Trail will be an eight to 10 foot multi-use sidepath on the west side of Burnt Hickory Rd between Whitlock Ave and Old Mountain Rd. The one-mile trail would connect with existing sidewalk on Whitlock Ave and would be separated from the roadway by a grass strip, curb, and gutter. The project will also relocate the existing pedestrian crossing from New Salem Church/ Camp Brumby Trail to a place further west on Burnt Hickory Rd to improve visibility and safety. The estimated cost for this project is $3.86 million.

THERE IS A NEED FOR A TRAIL ALONG WHITLOCK AVE AS SEEN IN THE DESIRE LINE PARALLEL TO THE ROAD

FLOYD ROAD TRAIL

Construction is underway on a 10 foot-wide trail on the west side of Floyd Rd, between Hicks Rd, where the existing sidepath trail ends, and the Silver Comet Trailhead (near Bates Rd). The **Floyd Rd Trail** is slated for completion by the end of 2017.

MABLETON PARKWAY TRAIL

In 2017, Cobb County was awarded nearly $4 million in federal funding from ARC to design and construct improvements on Mableton Pkwy from Factory Shoals Rd to the Chattahoochee River. The 2.4-mile **Mableton Pkwy Trail** will include a 10 foot-wide shared-use sidepath trail on the west side of Mableton Pkwy and a five-foot-wide sidewalk on the east side of the road. The project is a critical link to the Chattahoochee River.

MOUNTAIN TO RIVER TRAIL

The City of Marietta has just finished work on its section of the 13.5 mile-long **Mountain to River Trail**, having just installed bridges over North and South Marietta Pkwy in 2017. This section nearly completes a gap that will connect Kennesaw Mountain to the Chattahoochee River in the Cumberland area through a network of trails along Kennesaw Ave, through Downtown Marietta, Atlanta Rd, Spring Rd, Cumberland Blvd, and Cobb Pkwy. There is just a small portion of the Mountain to River Trail left to finish in unincorporated Cobb County, just south of the City of Marietta, along West Atlanta St. In 2017, the county was awarded for $1.7 million from ARC to finish this roughly ¾-mile segment.

CONSTRUCTION ON MOUNTAIN TO RIVER TRAIL

REGIONAL CONNECTOR PROJECTS

NOONDAY CREEK TRAIL

The **Noonday Creek Trail** project would construct a 10-foot-wide shared use path extension for a length of roughly two miles, from Noonday Creek Park at Shallowford Rd in northern Cobb County north into Cherokee County, where it would link up with the existing Woodstock Noonday Creek Trail at SR 92 in Woodstock.

This project is currently in the planning and scoping stages. A Limited Scope Concept Report was approved in December 2017. The report sought to identify potential alternative alignments given the physical constraints along the corridor, such as the proximity of I-575, private property, wastewater treatment facilities, floodplains, and utility corridors. The purpose of the report is to provide pre-engineering documentation that can help secure funding and the necessary property easements and/or acquisitions to finalize design engineering and advance to construction. The preferred trail alignment crosses Shallowford Rd at-grade with a rectangular rapid flashing beacon, then runs along the eastern side of the Noonday Creek Water Reclamation Facility, west towards Noonday Creek, and then north, generally along the creek – crossing under the SR 92 bridge – and tying in to the existing Woodstock Noonday Creek Trail.

The trail itself would consist of a two mile-long 10 foot-wide concrete path buffered by a three foot-wide shoulder on either side. The estimated cost of the project is $3,403,318. The City of Woodstock was awarded more than $2.5 million in federal funds through the Transportation Improvement Program.

ROSWELL RIVERWALK AND WILLEO RD BRIDGE REPLACEMENT

In July 2017, the City of Roswell approved a transportation enhancement agreement to construct the fifth and final phase of the **Roswell Riverwalk**, from the Chattahoochee Nature Center to the Cobb County line, at the south end of Willeo Park. This project is complemented by a joint project between Cobb County and the City of Roswell to replace the bridge on Willeo Rd over Willeo Creek, just north of the Timber Ridge Rd/ Lower Roswell Rd/Willeo Rd roundabout. The current bridge has no sidewalks or capacity for bikes, although it is a critical link between existing and under construction trail facilities. It is anticipated that construction will begin within the next 18 months or so.

With this connection, walkers, joggers, and cyclists will have access to the full Roswell Riverwalk system and the Big Creek Greenway, which spans 13.5 miles through Roswell, Alpharetta, and Forsyth County. From Roswell's Don White Memorial Park and GA 400 underpass, it is a short two-mile trek to Roswell's Big Creek Park, where the Big Creek Greenway begins. A conceptual greenway has been proposed to connect the Riverwalk Trail to Big Creek Park.

PROCTOR CREEK GREENWAY

The **Proctor Creek Greenway** is a seven mile-long trail envisioned to connect the Atlanta BeltLine to the Chattahoochee River. The PATH Foundation, Emerald Corridor Foundation, Atlanta BeltLine, Inc., and the City of Atlanta are partnering to create this system totaling 50 acres of linear park and 400 acres of public greenspace adjacent to the creek. The trails will begin at Maddox and Proctor Park and connect through West Side and Grove Parks, linking multiple schools along the way to the Chattahoochee River. Construction recently began on Phase I of the Greenway, between the Bankhead MARTA station and the Grove Park neighborhood in west Atlanta. The project features trail segments and green infrastructure to improve water quality and the health of the creek. The trail is envisioned to end at the Chattahoochee River, just south of I-285, where a proposed pedestrian bridge would link the Cobb County and Atlanta trail systems.

CHALLENGES & OPPORTUNITIES

A PATH TOWARD IMPROVEMENT

The existing greenway and trail system presents many opportunities and challenges for expansion and improvement. There are limitations to the development of greenways and trails in Cobb County in terms of the topography, driveways and roadway crossings, right-of-way and land acquisition, and private development. However, there are also a number of opportunities to expand the network and leverage existing assets through the use of existing infrastructure, by focusing on strategic connections to existing facilities, tying into roadway projects, seeking connectivity across jurisdictional boundaries, and taking advantage of publicly owned land. This section briefly discusses some of these challenges and opportunities and how they help frame an overall approach to implementing improvements that meet the ultimate goal of getting more people biking and walking.

CHALLENGES

OVERCOMING OBSTACLES

Cobb County has significant ridges and hills associated with land formations related to the Chattahoochee and Etowah River watersheds and their tributaries, Allatoona Lake, Kennesaw Mountain, and other geologic features. While engineering work can be done to properly grade surfaces to accommodate trails and greenways, this comes at a cost and is not doable in all situations. For example, in areas close to the Chattahoochee River, many roadways are characterized by steep hills not suitable to average runners or cyclists.

Roadway and driveway crossings are another potential challenge. The dominant trail type in Cobb County is currently a sidepath trail alongside roadways. While these do serve many functions and enhance access to important destinations, they also present potential challenges in terms of ensuring safety and comfort for users when crossing driveways and intersections. Driveway and intersection crossings tend to be more frequent on sidepath trails than on other types of trails, given the nature of sidepaths adjacent to roadways. Pedestrian countdown crossing signals, proper striping, and other features can improve safety at such locations. Chapter 4 of this plan document provides additional guidance on design of crossings. Retrofitting existing roadways may prove difficult, but relatively minor changes to the design as part of routine projects can be achieved incrementally.

Other challenges to greenway and trail projects revolve around the available right-of-way in a given corridor and the need to acquire right-of-way or easements. Projects that require acquisition of rights-of-way or property are more complex than those that do not and in cases where federal funding is used, federal guidelines must be followed. In cases where projects are funded locally or through the State of Georgia, but the project is not on a state highway system, the local agency may use its own acquisition policies and procedures, often speeding up the process. Many greenway and trail projects can fit largely within public rights-of-way, but in some situations, there may be a need to acquire land or easements to complete trails and provide good connectivity to existing development.

Coordination with ongoing and future private development is also an important component of planning greenway and trail projects. New development can be both an opportunity and an obstacle to a greenway or trail project. In some cases there may be opportunities to have portions of trails constructed as part of new projects, in lieu of a standard sidewalk, for example. In other cases, it may be more appropriate to work out an arrangement for dedication of land or an easement. Easements allow landowners to convey to another entity, such as the County, the rights to use land for public purposes, such as a trail, and maintain it without giving up ownership of the land itself. Easements are useful tools, particularly for riparian or greenway trails. Additional discussion of easements and other land acquisition tools is provided in Chapter 6.

COORDINATION WITH ONGOING AND FUTURE PRIVATE DEVELOPMENT IS AN IMPORTANT COMPONENT OF PLANNING AND IMPLEMENTING GREENWAY AND TRAIL PROJECTS

BARRIERS LIKE RETAINING WALLS AND THE PLACEMENT OF UTILITY INFRASTRUCTURE CAN HINDER DESIGN OF GREENWAYS AND TRAILS - THIS SIDEPATH TRAIL PROVIDES LITTLE SEPARATION BETWEEN USERS AND THE ROADWAY

OPPORTUNITIES

LEVERAGING EXISTING ASSETS

Within the existing landscape and context of Cobb County as it is today, there are many opportunities for expanding and growing the greenway and trail network by taking advantage of existing infrastructure and natural features, and by targeting investment to opportunistic projects and logical connections to existing or future facilities.

One of the most intuitive opportunities for expansion of the greenway and trail network is to look at places where there are gaps between existing or programmed facilities. Figure 3-21 shows the network of existing trails along with trails currently under construction, programmed (funded for design or construction) trails, and proposed trails. Between these segments, there are several gaps, highlighted in yellow, where opportunities are available to create a more connected network and provide trails that can accommodate longer rides and get people to more destinations. As shown in the map, trails have been proposed to fill most of the gaps, so while there may not be a strategic need to identify new projects to fill gaps, it will be important to prioritize at least some of these locations for implementation in the future.

Another strategic opportunity to expand the trail network lies in places where trails can provide regional connectivity and stretch across County boundaries to connect with other communities. Of these, several correspond to locations where future trails are proposed or planned, such as near South Atlanta Rd where a connection could be made via the Silver Comet Connector project to trails that link to the Atlanta BeltLine and near Roswell Rd, where a connection could be made into Roswell, improving access to the Chattahoochee Nature Center and Roswell Riverwalk.

Another obvious opportunity exists in the form of recreational facilities and parks. As mentioned previously, Cobb County currently manages roughly 5,632 acres of parkland. These are logical places for new trails and greenways, extending their reach into the community and making existing facilities more accessible to a wider audience of potential users. Connecting parks and existing facilities to schools and other daily destinations is another key opportunity that should be a strategic focus in the future.

Publicly owned land can streamline the process of building a trail by precluding the need for easements or property acquisition. Cobb County has been strategically acquiring property throughout the County and there are a number of parcels that represent good opportunities for expansion of existing trails or suitable locations for new greenways. Many such publicly owned parcels contain or are adjacent to stream corridors, utility easements, and some floodplains, all of which can be suitable environments for greenway trails, especially considering that they are often restricted in terms of development.

There are also opportunities within the built environment to make strategic investments in new trails and greenways in places where they are likely to serve more users and get more people walking and biking. Following transit corridors, bikeways, and providing access to transit stops are all ways to make the network more accessible and reach a broader user base. Cobb County's transit system already provides opportunities for multimodal trips by providing bike racks on all transit vehicles and by virtue of the sidewalk and trails that are within close proximity of the transfer centers at Marietta and Cumberland. Targeting trail projects within close proximity of bus stops and high transit-use areas can encourage use of both systems – trails and transit.

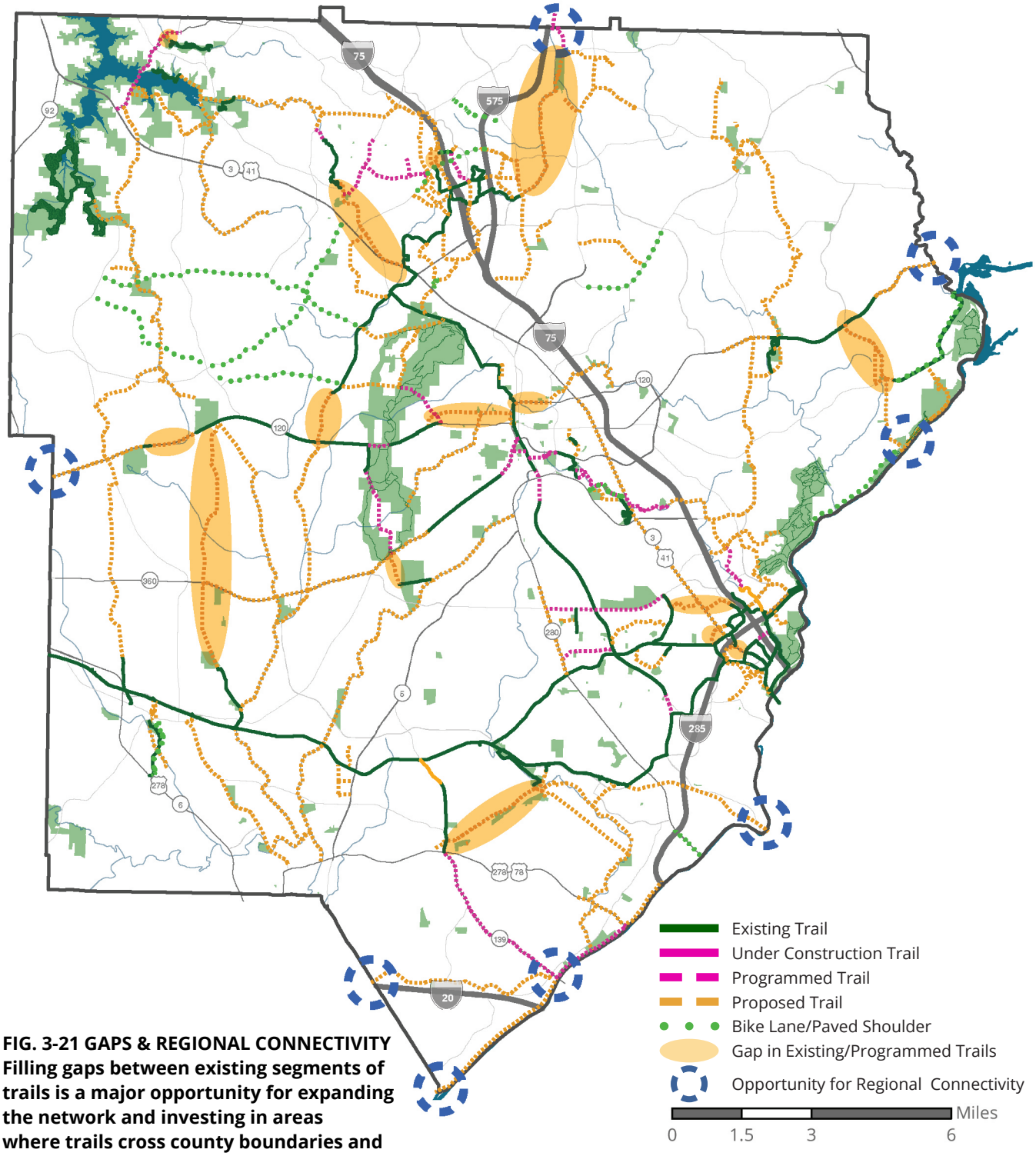


FIG. 3-21 GAPS & REGIONAL CONNECTIVITY
Filling gaps between existing segments of trails is a major opportunity for expanding the network and investing in areas where trails cross county boundaries and enhance regional connectivity, attracting more users.

THE INDIANAPOLIS CULTURAL TRAIL IS A PREMIER TRAIL FACILITY

4 DESIGN GUIDANCE

BEST PRACTICES AND RECOMMENDATIONS FOR FACILITY DESIGN

Successful trail systems have several common characteristics. The most successful systems embrace a multi-faceted approach that addresses not only physical characteristics and design of trails and greenways, but also considers the people who use them, where they want to go, and how to communicate the way to get there.

This chapter summarizes best practices with regard to design and policy for greenways and trails and using those best practices, offers guidance for Cobb County on the design of greenway and trail facilities as well as intersection and crossing treatments, and greenway and trail signage.

BEST PRACTICES

OVERVIEW

This section summarizes best practices and guidance from national, state, and regional sources.

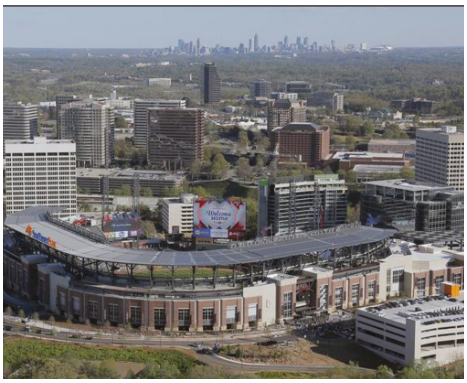
Convenience, comfort, safety, and accessibility are prerequisite features of vibrant greenway and trail networks. Making people feel safe requires adequate width to allow passing as needed and proper surface material to accommodate a variety of modes of travel. Trail systems should make users of all ages and abilities feel comfortable and welcome. It is essential that beyond concrete or asphalt, a trail include wayfinding, seating, shade, and lighting as appropriate, to encourage and attract users. Ideally, a trail system should provide a variety of experiences that efficiently and conveniently connect residents and visitors to neighborhoods, commercial centers, schools, parks, and other destinations, and provides access to nature and wildlife. Not all of these destinations must be served by the same trails, so long as there is a variety throughout the overall network.

Beyond the trails themselves, successful networks make use of partnerships between local and regional government, local community groups, advocacy organizations, and other partners to assist with outreach, marketing, programming, and maintenance. Partnerships are important for marketing trails and hosting programs to attract and increase users. While trails can be immensely popular, simply installing a wide, paved surface is not necessarily enough to attract people to use it – creating a welcoming experience and organizing events or activities to raise awareness is also important.

Lastly, it is crucial that greenways and trails are complimented by an on-street network that considers pedestrians' and bicyclists' abilities and infrastructure that is appropriate for the roadway context. Identifying low-stress connections can be difficult in suburban communities given potentially challenging land uses, development patterns, lack of connectivity, and major thoroughfares that divide and isolate neighborhoods. However, a suburban context does not preclude a community from developing an inviting and comfortable pedestrian and bicycle network to complement the existing and future greenway and trail system; the selection of appropriate choices must balance ability levels and context. This *Plan* recommends a combination of new facility types to improve connectivity and get more people biking and walking.

PROVIDE A VARIETY OF EXPERIENCES

TAKE PEOPLE WHERE THEY WANT TO GO



ELEMENTS OF A SUCCESSFUL TRAIL NETWORK

- GOOD DESIGN
- TAKE PEOPLE WHERE THEY WANT TO GO
- VARIETY OF EXPERIENCES FOR ALL AGES & ABILITIES
- SAFE & COMFORTABLE
- RANGE OF TRAIL TYPES FOR ALL USERS
- SUPPORTIVE AMENITIES
- BRANDING & MARKETING
- WAYFINDING & ART
- CONSISTENT, LEGIBLE SIGNAGE
- TRAIL ORIENTED DEVELOPMENT
- USER FRIENDLY MAPS ACTIVITIES & PROGRAMMING
- COMMUNITY PARTNERSHIPS

USER PREFERENCES

Successful trail systems attract a diverse set of users with varied trip purposes. Greenways and trails should be designed to accommodate all users – from the solo skater headed to work, to friends pushing strollers while chatting, to groups of recreational bicyclists out for a ride. Each trip mode and purpose has inherent design considerations based on expected speed, travel, user behavior, and user preferences. For example, people walking or rolling in wheelchairs may require supporting facilities at more frequent intervals along a trail compared to people on bikes who cover greater ground in less time. The following describes general trip purposes and a range of preferences for people making these types of trips:

CASUAL SOCIALIZING

- Wider trails that allow users to walk or ride side by side, or that could accommodate a double stroller
- Supporting facilities like restrooms, water fountains, wayfinding, benches, trash cans, public art, shade trees, and bike parking
- Safe, convenient crossings that minimize delay and out-of-direction travel

COMMUTING/UTILITARIAN TRIPS

- Wider trails that allow for comfortable passing
- Supporting facilities like lighting, secure bike parking, and fix-it stations
- Safe, convenient crossings that minimize delay and out-of-direction travel

EXERCISING AND FITNESS

- Wider trails that allow for comfortable passing
- Supporting facilities like restrooms, water fountains, wayfinding, shade trees, trash cans, and public art
- Longer, contiguous segments of trails

OUTDOOR/NATURAL RECREATION

- Context-sensitive hiking and biking trails in natural settings with varied terrain
- Supporting facilities like restrooms, water fountains, and wayfinding
- Longer, contiguous segments of trails

THE MOST SUCCESSFUL TRAILS SERVE MANY NEEDS, INCLUDING SOCIAL ACTIVITY, UTILITARIAN TRIPS, AND EXERCISE.

NATIONAL GUIDELINES

SUMMARY OF KEY RESOURCES

Transportation design standards and best practices are evolving quickly in the US. As cities and regions compete for economic growth, transportation professionals and decision-makers are increasingly looking for innovative ways to meet the multi-modal transportation needs of communities today and the future. Below is a summary of current references for the design of greenway and trail facilities. The summary is not exhaustive and is meant to highlight important reference documents and resources used in practice. In all cases, engineering judgment is recommended to ensure that the application makes sense for the context of each treatment, given the many complexities of streets, trails, and greenways.

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

The Federal Highway Administration's (FHWA) MUTCD defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. The MUTCD is the primary source for guidance on lane striping requirements, signal warrants, and recommended signage and pavement markings. The 2009 edition is the most current version, and includes guidance on bike lanes, shared lane markings, and signage related to walking and biking. FHWA also maintains a webpage specifically dedicated to providing official interpretations of which innovative bicycle facilities are allowable, subject to the agency's experimentation process, and disallowed according to the MUTCD.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) GUIDES

The AASHTO Guide for the Development of Bicycle Facilities, updated in June 2012, provides guidance on dimensions, use, and layout of specific bicycle facilities. The standards and guidelines presented by AASHTO provide basic information, such as minimum sidewalk widths, bicycle lane dimensions, detailed striping requirements and recommended signage and pavement markings. The forthcoming 5th edition of the AASHTO Guide will build on existing guidance and include designs for new and emerging bikeway design treatments.

Offering similar guidance for pedestrian design, the 2004 AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities provides comprehensive guidance on planning and designing for people on foot.

AMERICANS WITH DISABILITIES ACT (ADA)

Meeting the requirements of the Americans with Disabilities Act (ADA) is an important part of any bicycle and pedestrian facility project. The United States Access Board's proposed Public Rights-of-Way Accessibility Guidelines (PROWAG) and the 2010 ADA Standards for Accessible Design (2010 Standards) contain standards and guidance for the construction of accessible facilities. This includes requirements for sidewalk curb ramps, slope requirements, and pedestrian railings along stairs.

NATIONAL ASSOCIATION OF CITY TRANSPORTATION OFFICIALS (NACTO)

The NACTO Urban Bikeway Design Guide (2012) and the Urban Street Design Guide (2013) are nationally recognized urban street and bicycle-specific design guidelines, and offer excellent guidance on the current state of the practice designs. The intent of the guides is to offer substantive guidance for cities seeking to improve transportation in places where competing demands for the use of the right of way present unique challenges.

While different from engineering standards, many NACTO guides are supported by the FHWA when used in conjunction with standard engineering manuals and the MUTCD. FHWA expressed support for the Urban Street Design Guide in 2014 and endorsed the Bikeway

Design Guide in 2013. All NACTO Guide treatments are in use internationally and in many cities around the US.

SMALL TOWN AND RURAL MULTIMODAL NETWORKS

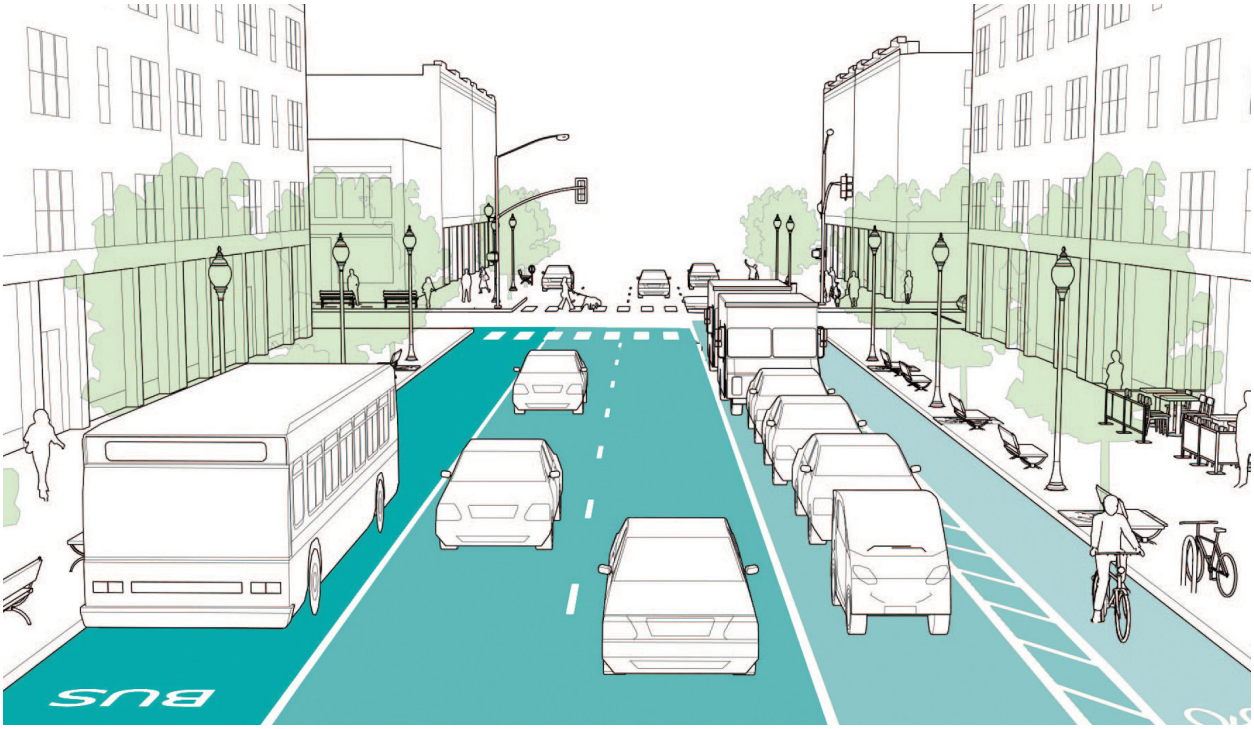
The FHWA's Small Town and Rural Multimodal Networks guide (2016) is a design resource and idea book for small towns and rural communities. It is intended to provide a bridge between existing guidance on bicycle and pedestrian design – often focused on urban places – and rural practice. The guide seeks to encourage innovation and showcases case studies of implementation in peer communities.

SEPARATED BIKE LANE PLANNING AND DESIGN GUIDE

The FHWA's Separated Bike Lane Planning and Design Guide (2015) outlines planning considerations for separated bike lanes (also sometimes called "cycle tracks" or "protected bike lanes") and provides a menu of design options covering typical one and two-way scenarios. It highlights different options for providing separation, while also documenting mid-block design considerations for driveways, transit stops, accessible parking, and loading zones. It provides detailed intersection design information covering topics such as turning movement operations, signalization, signage, and on-road markings. Case studies highlight best practices and lessons learned throughout the document.

MEMORANDUM ON BICYCLE AND PEDESTRIAN FACILITY DESIGN FLEXIBILITY

The FHWA Memorandum on Bicycle and Pedestrian Facility Design Flexibility (2013) expresses the FHWA's support for a flexible approach to bicycle and pedestrian facility design. The memo endorses the use of AASHTO's bicycle and pedestrian facility design guidelines in addition to the NACTO Urban Bikeway Design Guide and the Institute of Transportation Engineers' (ITE) Designing Walkable Urban Thoroughfares: A Context Sensitive Approach.



Source: NACTO Urban Street Design Guide, https://nacto.org/publication/urban-street-design-guide/street-design-elements/lane-width/

STATE & LOCAL GUIDELINES

SUMMARY OF KEY RESOURCES

GEORGIA DEPARTMENT OF TRANSPORTATION PEDESTRIAN & STREETSCAPE GUIDE

The Georgia Department of Transportation's (GDOT) Pedestrian and Streetscape Guide, currently being updated from the 2003 publication, includes a literature review on current best practices and research, provides content for the local and state level, and provides guidance on the design of accessible pedestrian facilities. The document also includes a crossing treatment matrix that considers appropriate treatments based on a variety of extensively research criteria like number of lanes, posted and observed speeds, and roadway geometry.

GDOT DESIGN POLICY MANUAL

GDOT's Design Policy Manual serves as the primary resource for design guidelines and standards adopted by GDOT on all modes of transportation. The manual is updated regularly and lives on the GDOT website. The most recent version, at the time of this writing, is from 2017. It is intended to present both recommended and required design criteria, including accommodations for bicycles and pedestrians. The document encourages a balance of roadway users and local context. Criteria is based on FHWA and AASHTO standards.

ARC'S STRATEGIC REGIONAL THOROUGHFARE PLAN

Although development and facility design are handled at the local level, ARC has developed a resource for local governments on design for active transportation on regional thoroughfares. As part of the 2011 Strategic Regional Thoroughfare Plan, ARC developed Management and Design Guidelines for the Regional Thoroughfare Network, which includes considerations for bicycle corridors (Section 3.4) and "Tool Kits" on Designing for Bicycles and Designing for Pedestrians on Regional Thoroughfares. These guides may be good resources for some corridors.

WALK. BIKE. THRIVE!

In addition, ARC's *Walk. Bike. Thrive!* (2016) provides a toolkit to help local communities become more walk- and bike-friendly. The plan includes guidance on design elements and other criteria that will help projects qualify for funding from the agency

LOCAL GUIDELINES

Trails that are developed within local municipalities or CIDs will need to conform to design guidelines specific to those districts, where they exist. Zoning, development, and land use are controlled at the local level and individual regulations should be consulted for projects within incorporated cities.

While not municipal governments, many CIDs have developed their own design guidelines to shape and inform development within their districts. Examples of recent plans and guidelines include the 2016 Town Center CID Design Guidelines and the 2016 Cumberland CID Bicycle Connectivity Implementation Plan, which summarizes existing design standards and identifies a number of bikeway recommendations, including trail crossing treatments and signage guidance.

Additionally, 15 Livable Centers Initiatives (LCI) studies have been conducted for areas in Cobb County since 2001 (most have also completed subsequent updates to the initial studies). These studies identify land use and transportation improvements for communities and business districts that often include facility design recommendations and build on local character.

WHERE AND HOW TRAILS CROSS ROADWAYS ARE IMPORTANT DESIGN CONSIDERATIONS

FACILITY TYPES & CLASSIFICATION

OVERVIEW

This section provides design guidance for several greenway and trail types. The purpose of classifying greenway and trail types is to both inform user choices as well as decision-making about design and implementation, based upon user characteristics and surrounding context, demand, cost, accessibility, and limitations.

Cobb County's current greenway and trail system provides a variety of user experiences via several different types of trails. Its system includes both paved and unpaved trails, some that have boardwalk, some that are along roadways, and others that follow creeks or streams. This *Plan* recommends a classification system that acknowledges the physical settings of trails as well as their connectivity functions and purposes. The classification system also intends to address plan goals for improving connectivity, increasing access to destinations and activity centers, and expanding transportation and recreation options.

Within the realm of greenways and trails, distinctions are often drawn between trails alongside roadways, often called sidepaths, and trails within their own right-of-way; however, there are many other ways to think about and classify trails and greenways, such as the surface type (paved or unpaved), the user type (hikers, cyclists, or both), or the physical setting of the trail (urban area, natural area or greenspace). The following pages offer a set of recommended greenway and trail classifications with design guidance for each typology. These classifications provide a useful way of thinking about the various types of facilities and connections that can be used to create a cohesive, connected network, linking greenways and trails to bike lanes, sidewalks, and other active transportation facilities.

Trail categorization can be used for existing and proposed trails, and help establish which types of trails are appropriate or suitable for a particular corridor. Trail categories account for a range of factors, including usability, experience, safety, and providing comfort options where accessibility is still necessary but resources or priority levels may not be high. Identifying key destinations and neighborhood connections will help determine where adequate and inadequate conditions exist for trails' respective user types. Designated trails may vary in width based upon their context and adjacencies. For instance, if a trail adjoins a stream, is along steep topography, or near a rail corridor, width may need to be adjusted to accommodate these features and allow the system to function. The corridor width may also vary based upon the amount of existing development, the existence of significant sensitive environmental areas, and patterns of property ownership.

Cobb County's current typical multi-use trail cross-section is an eight to 12-foot two-way concrete paved trail, generally located alongside a roadway. These typically have a three-foot buffer or median between the trail and the road curb or edge, although in many cases, the buffer is two feet wide or less. In order to make cyclists and pedestrians feel safer and more comfortable, and therefore increase trail usage, it is recommended to expand the buffer between the roadway and trail wherever possible.

To develop a comprehensive and interconnected trail network, Cobb County should also work to preserve greenway corridors, provide adequate land for trails where appropriate, and balance privacy and connectivity to adjacent land uses. Cobb County should also make reasonable attempts to protect the various greenway corridors by encouraging preservation and/or trail-oriented development, where appropriate based upon location and context, through local and county policy. Such policy may include limitations on development, dedications of land for greenways, restrictions on driveways and curb-cuts, and the use of easements for planned and proposed trails.

For all Cobb County trail types, a consistent fit and finish should be established for trail amenities such as lighting (where appropriate), seating, bicycle parking, landscape, wayfinding signage, and other site furnishings to enhance experience and encourage use. An established "look" for Cobb County trails will also enhance the trail system brand and identity. The fit and finish package should be developed as a standalone guide. It should include information about materials, colors, and placement of amenities that are compatible with other county facilities. Ideally, the fit and finish guide provides more detailed guidance that can be used by developers, county staff, neighboring jurisdictions, and trail consultants as the County's system is implemented.

THE MORE SEPARATION PROVIDED BETWEEN A TRAIL AND A ROADWAY, THE SAFER USERS WILL FEEL

GREENWAY TRAILS

DESCRIPTION & GUIDANCE

Greenway Trails are recreationally focused trails that fall outside the roadway network in a more natural setting. The trails themselves are bi-directional paths for all non-motorized user types. Greenway Trails may cross roadways, but do not typically follow roadway routes for more than a short distance. Greenway Trails are paved, typically off-street paths between ten and 14 feet wide. Sometimes utilizing right-of-way or public park space, they are accessible paths for a variety of active transportation and recreational activities.

Greenway Trails can sometimes provide easier and faster access for pedestrians and bicyclists compared to the on-road network because they can take more direct routes through certain types of lands, but are primarily beneficial for comfort and safety reasons. Because Greenway Trail users are not typically traveling adjacent to a roadway, there are generally fewer potential conflicts between vehicles and trail users, creating a safer environment. Where roadway crossings do occur, they should focus on trail user visibility, minimizing the length of crossing distance, and increasing motorists' awareness of Greenway Trail users.

Greenway Trails represent the highest order of comfort and safety in the trail classes and are often preferred over sidepath configurations given the opportunity to reconnect with the natural environment and reduced interaction with motor vehicles.

A good example of a Greenway Trail in Cobb County is the **Noonday Creek Trail** in the Town Center area, as shown on the following page.

USER TYPES

- Balance of commuter and recreational use with high volumes
- Pedestrians, bicyclists, dog walkers, runners, strollers, skaters, wheelchair and Segway users

POTENTIAL CONFLICTS

- High user volumes
- Wide range of multiple user types with sometimes high speed differentials
- Inadequate width on some existing Greenway Trails
- Environmental constraints (e.g. streams, property ownership)

GUIDANCE

- Standard width: 12 feet minimum (up to 16 feet in areas with projected high use volumes to minimize user conflict)
- Lighting may be installed as necessitated by use and location
- Wayfinding, regulatory, and etiquette signage is critical to minimize the impacts of high user volumes, bicycle speeds, inappropriate uses, and multiple uses and activities
- Prioritized amenities include restrooms, water fountains, waste receptacles, seating, art, and lighting
- Surface tread material: concrete or asphalt
- Yellow dashed centerlines can indicate direction of travel and remind users that the path is intended for multiple modes
- Maintain vegetation and landscaping to provide a buffer on both sides of the trail to enhance safety, visibility and comfort for the user

It is also recommended to document and log any problems and identify trends or problem spots for mitigating user conflict.

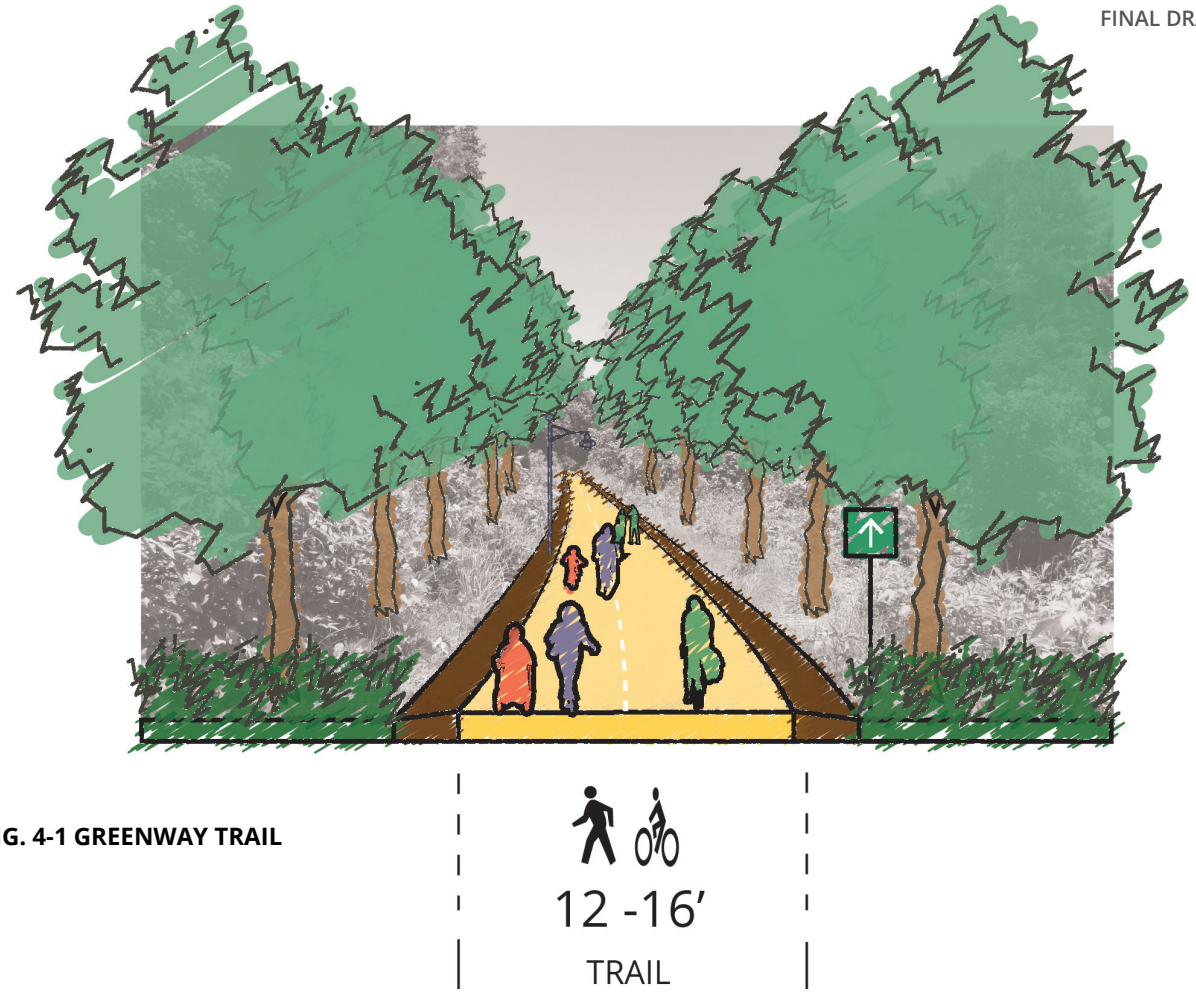


FIG. 4-1 GREENWAY TRAIL

SIDEPATH TRAILS

DESCRIPTION & GUIDANCE

Sidepath Trails are primarily transportation focused trails that run adjacent or parallel to the roadway and are often within the roadway right-of-way. They aim to create specific connections between residential, commercial, and interest areas, such as schools or parks. Sidepath Trails provide access to adjacent land uses, since they use the existing roadway network. These corridors typically connect to Greenway Trails and collect users from adjacent trails and on-road bicycle and pedestrian facilities.

Sidepath Trails should be 12 to 14 feet wide with a minimum five-foot buffer between the sidepath and the curb, according to the AASHTO *Guide for the Development of Bicycle Facilities 4th Ed.* Sidepath Trails offer a more comfortable experience than conventional bicycle lanes because they are behind the curb, and they tend to be more comfortable than sidewalks because they are wider and have a larger buffer. Among trail typologies, Sidepath Trails offer fewer safety and comfort benefits compared to off-road trails, but can offer many safety, comfort and access improvements over a corridor with minimal biking or walking infrastructure.

Examples of Sidepath Trails in Cobb County include portions of the Mountain to River Trail, **Concord Road Trail** (see following page), and East Cobb Trail on Roswell Rd.

USER TYPES

- Balance of commuter and recreational use with moderate to high volumes
- Pedestrians, bicyclists, dog walkers, runners, strollers, skaters, and wheelchair and Segway users

POTENTIAL CONFLICTS

- Frequent conflict points at roadway intersections and driveways
- Speed differential between trail users and roadway users – sidepaths are sometimes located along roads with posted speed limits of 40 MPH or more, posing potential comfort and safety risks, especially at crossings
- High volumes of roadway users
- Lack of protection from adjacent roadway
- Multiple trail user types with potentially high speed differentials
- Best practices conflict with typical roadway design standards – for example, depending on posted or design speed, trees may not be allowed in the clear zone, thereby potentially reducing user comfort levels and limiting the potential for success of the sidepath

GUIDANCE

- Located within roadway rights-of-way
- Standard width: 12 feet (up to 14 feet in areas with projected high use volumes); five feet minimum buffer between sidepath and roadway
- Vegetation in the buffer between the sidepath and roadway can provide environmental benefits for urban heat island effects and stormwater collection and filtration; positive economic impacts on adjacent properties; beautification; and increased comfort and perception of safety for users
- Lighting may be installed at intersections as needed by use and location, including at intersections with other trails
- Wayfinding, regulatory, and etiquette signage is recommended to guide mix of uses and encourage trip planning
- Prioritized amenities include: water fountains, waste receptacles, seating, and art at periodic locations where collector trails or on-street facilities extend distances (recommended at over one mile)
- Surface tread material may be concrete or asphalt depending on existing conditions
- Consistent alignment, surface grading, crossing markings, and space allocation are important at intersection points and driveway crossings
- Intersections should be signalized, ideally for all users

FIG. 4-2 SIDEPATH TRAIL

NEIGHBORHOOD CONNECTOR TRAILS

DESCRIPTION & GUIDANCE

In some cases, short segments of sidewalk fill gaps between greenway or trail segments, especially in residential areas; however, where appropriate and feasible, it is preferable to construct Neighborhood Connector Trails that can also accommodate bicyclists, as well as pedestrians.

Neighborhood Connector Trails are relatively short segments of trail or greenway that create links between otherwise disjointed parts of the low-stress walking and biking network. A Neighborhood Connector Trail may extend, for example, from a Sidepath Trail into an adjacent retail center or between otherwise disconnected neighborhood streets to extend the low-stress walking and biking network. Their primary purpose is to enhance connectivity and recreation by creating shortcuts that reduce the need for pedestrians and cyclists to travel out of their way or use high-stress roadways.

Neighborhood Connector Trails are shorter segments that provide a high level of access to targeted destinations, such as residential areas, parks, retail, employment, transit service, and entertainment destinations where there is no existing connection in the road network. They often resemble sidewalks but are wider and intended for multiple uses. They tend to pass directly through or adjacent to residential areas in order to improve access to nearby amenities. Surface materials vary based upon the specific setting and context.

Examples of Neighborhood Connector Trails in Cobb County include the connector between East Cobb Park and Robinson Road, the Dillard Street Silver Comet Connector, and the **Whispering Lake Trail** in Kennesaw, shown on the following page, which weaves its way between parks, neighborhoods, and other destinations.

USER TYPES

- Primarily recreational use with moderate volumes by local residents
- Some transportation use, particularly in areas near destinations like schools, grocery stores, or community facilities
- Pedestrians, bicyclists (depending on trail surface), dog walkers, runners, strollers, wheelchair users (depending on surface)

POTENTIAL CONFLICTS

- Trail intersection conflicts
- Entrances to parking lots or neighborhood streets

GUIDANCE

- Corridor widths should allow for sufficient buffering (vegetative or fencing) between adjacent properties
- Provide connections to adjacent land uses, existing or planned sidewalks, and bicycle facilities
- Connections are sometimes made between lots in subdivisions where appropriate and where easements allow
- Width: 12 feet preferred, 10 feet minimum,* 14 feet in highly specific locations where space, environmental conditions, and DOT judgment allows
- Surface tread material: concrete, asphalt, granite fines, or bare earth depending on existing conditions, projected volume of use, and location in floodplain
- Prioritized amenities include waste receptacles and public art
- Proper wayfinding signage, consistent with other trail signage, for the connecting use with orientation or directional signage for visitors who may not be as familiar with the area

**AASHTO's 2018 update is anticipated to include a 12-foot minimum width for multi-use trails.*

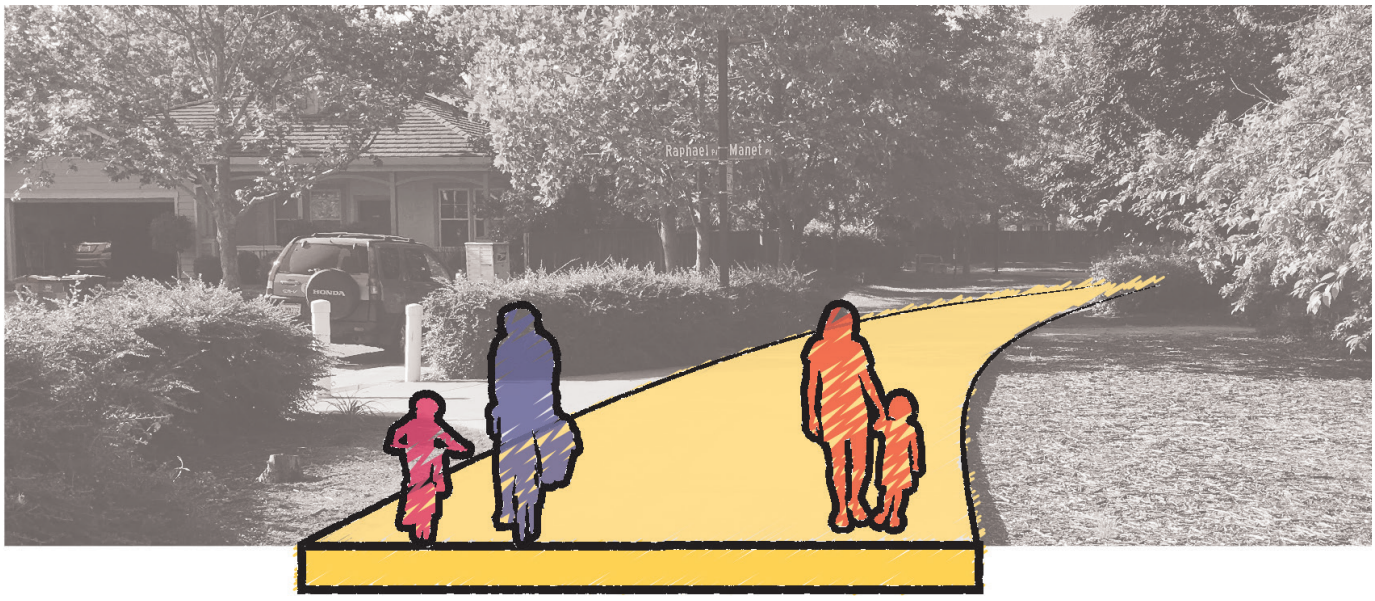


FIG. 4-3 NEIGHBORHOOD CONNECTOR TRAIL

GREENWAY CONNECTORS

DESCRIPTION & GUIDANCE

Greenway Connectors are on-street bikeways, ideally accompanied by parallel sidewalk for pedestrians, that are considered part of the trail network. They serve to connect greenway or trail access points, so they are considered part of the trails system even though they are not necessarily in a dedicated right-of-way.

Greenway Connectors may be in the form of shared paved shoulders, shared lanes, or dedicated bike lanes, and are more transportation-oriented in character. They function to connect users to the larger greenway trail system, with few recreational amenities provided.

In some cases where a sidewalk already exists and provides a direct link to a greenway or trail, it may be considered a form of Greenway Connector; however, to truly be considered part of the trail network, a facility should be bike-able. Bicycles are generally not permitted on sidewalks, except in the case of children. Sidewalks are not to be considered a substitute for sidepaths or greenways because they are not designed as multi-use paths. Because they serve to close gaps between otherwise separated trail types, their design should focus on maintaining a continuity of the trail experience and as high a level of comfort, safety and access as possible.

An example of a Greenway Connector in Cobb County is **Columns Drive** between the Johnson Ferry South and Cochran Shoals CRNRA park units, shown on the following page.

USER TYPES

- Pedestrians, bicyclists, runners, wheelchair users

POTENTIAL CONFLICTS

- Roadway intersection/crossing conflicts
- Driveway access management (within roadway rights-of-way)
- Motorist and bicyclist/pedestrian conflicts
- Restricted right-of-way widths

GUIDANCE

- Factor in the distance between destinations, adjacent land use, and population density along roadways when designating active transportation facilities as part of the trail network
- Provide connections to adjacent land uses, existing or planned sidewalks, and bicycle facilities
- Roadway speed, traffic volumes, number of lanes, qualitative knowledge, connectivity, and access to destinations should be considered when querying and identifying potential facilities for Greenway Connectors.
- Bikeway width: six feet preferred, five feet minimum without a buffer
- Few recreational amenities are provided, except in the case of unique settings/ situations
- Wayfinding, regulatory, and etiquette signage is recommended to encourage trip planning and reduce motorist and greenway trail user conflicts
- Where short segments of existing sidewalk provide direct connections to Greenway Trails or Sidepath Trails, provide wayfinding signage indicating the sidewalk is part of the trail network
- Sidewalks should not be substitutes for Sidepath Trails or Greenway Trails, except in limited applications that provide direct connections and/or where sidewalks already exists.

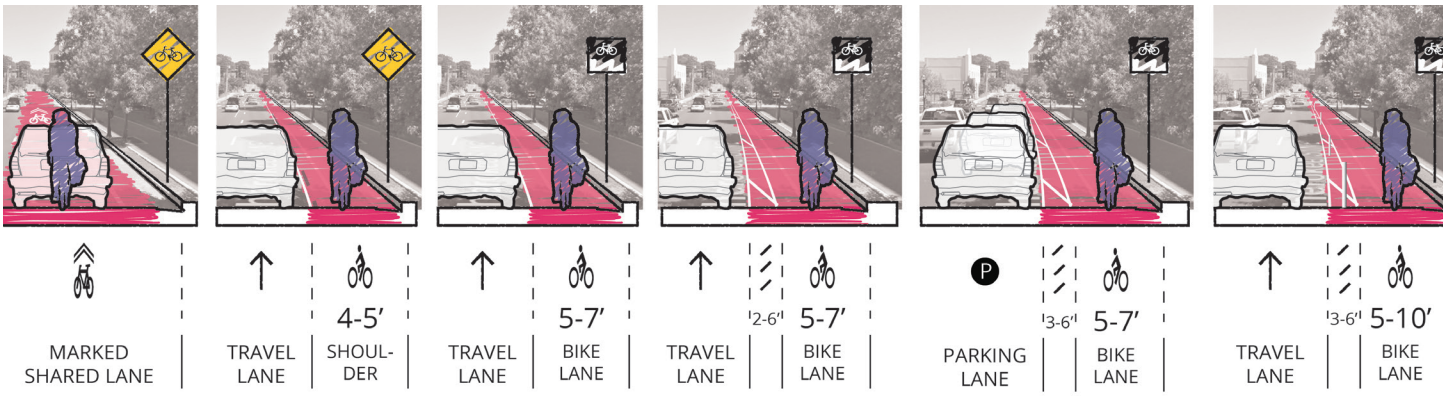


FIG. 4-4 VARIOUS TYPES OF GREENWAY CONNECTORS

COLUMNS DRIVE IS A GREENWAY CONNECTOR, LINKING TRAILS AT JOHNSON FERRY NORTH AND COCHRAN SHOALS CRNRA UNITS

UNPAVED RECREATIONAL TRAILS

DESCRIPTION & GUIDANCE

Unpaved recreational trail systems are divided into "single track" trails, which are 18 to 24-inch-wide treads and necessary to access rough, steep terrain or require a limited footprint, and "road width" or "double track" trails – which may use former utility easements that are adapted for use as trails. Generally speaking, most unpaved trail systems are intended for multiple uses. With the exception of mountain bike skills courses which are exclusive to their users, unpaved recreational trails are designed and constructed to accommodate both bicyclists and pedestrians, and some also accommodate horseback riding. However, not all unpaved recreational trails are open to bicyclists. Unpaved recreational trails occasionally link to other trail types, but for the most part they are recreational and considered to be their own destination.

Examples of unpaved recreational trails in Cobb County include trails in the Chattahoochee River National Recreation Area, Kennesaw Mountain National Battlefield Park, and Allatoona Creek Park. One of the **Sope Creek Trails** is shown on the following page.

USER TYPES

- Mountain bicyclists, hikers, trail runners

POTENTIAL CONFLICTS

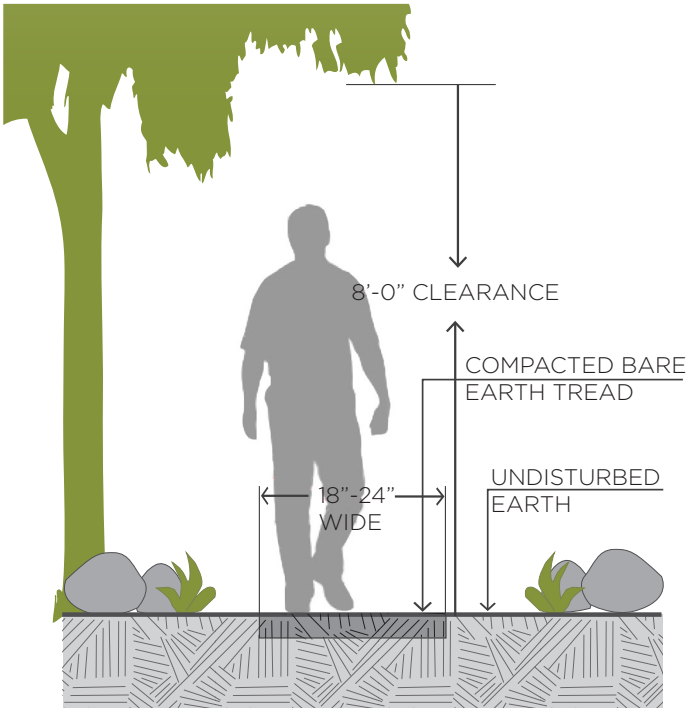
- Biker/hiker conflicts
- Natural resource impacts
- Erosion/drainage issues

GUIDANCE

- Follow natural contours. Trails lie on the land in three ways: along the fall-line, along the contour, or on flat ground. Only the contour trail on the side-slope easily sheds water and is thus sustainable. It is also less steep, and more functional for a broad range of users.
- A trail's gradient (percent slope) should not be any greater than half the grade of the side slopes (called the half rule). This will allow water to sheet across the trail and continue down the outslope. This is especially important along gentle slopes.
- An average trail grade of 10% or less will be most sustainable on most soils and for most users. Typical maximum grades should be determined early in the planning process. They may vary from 15 to 25% and are site specific, depending upon factors such as soil, rainfall, grade reversals, and user characteristics.
- The trail tread should be outsloped (sloped away from the hillside) at three to four percent. This will allow water that comes on to the trail to flow off downhill and not be channeled down the trail.
- If feasible, use full bench (not half bench) trail construction on steep side slopes. The outside tread is much less likely to fail or be worn away. Partial bench trails are typically feasible only on slopes of 20 percent or less.
- Avoid fall lines (the shortest route down a hill), as this is the same path that water flows. Trails on fall lines strip the trail of soil, exposing roots, creating gullies, and scarring the environment.
- Avoid flat areas. Flat terrain may seem like easy trail construction; however, if a trail is not located on a slope, there is the potential for the trail to become a collection basin for water. The trail tread must always be slightly higher than the ground on at least one side of it so that water can drain properly.
- Consider a directional-by-day policy to limit conflict and reduce tread wear patterns.
- Post wayfinding signage on trails with complex courses. Include rules and regulations such as discouraging users to ride wet trails.

Note: For more information on sustainable unpaved trail construction, visit the International Mountain Bicycling Association (IMBA) website: https://www.imba.com/resources/trail-building/designing-and-building-sustainable-trails

FIG. 4-5 UNPAVED RECREATIONAL TRAILS



UNPAVED TRAIL IN THE SOPE CREEK UNIT OF THE CRNRA

EQUESTRIAN TRAILS

DESIGN NEEDS

On trails that permit equestrian uses, riders on their mounts are the heaviest, widest and tallest potential user type. Mounts include horses, mules and donkeys, which all vary in size. Size depends on breed and age. Trail stock usually weigh between 800 and 1,500 pounds, and a well-conditioned horse or mule can carry up to 20% of their body weight.

Trails reserved exclusively for equestrians are also called “bridle trails”, “bridle paths”, or “bridleways”. The needs of equestrian trail users are unique due to the natural flight instinct of horses when startled.

In Cobb County, equestrian trails occur in remote or rural parts of the county. Riders in these settings are typically concerned with visibility, potential conflict with other users, and natural hazards. Where equestrian trails may occur in more urban settings, a shared trail will likely be necessary since single use trail opportunities are limited in the county. Shared-use equestrian trails can serve both pedestrians and equestrians, as they both travel easily on unpaved surfaces and move at relatively slow speeds. However, equestrians and bicyclists are not typically compatible on the same tread. For instance, quiet, fast-moving cyclists can startle a horse. In areas where trail user conflicts seem likely, efforts should be made to physically separate non-compatible user groups.

Riders may recreate individually or in groups for pleasure, exercise or challenge. While some equestrians prefer wide, gentle trails, others seek a technically challenging route.

USER TYPES

- All ages
- Leisure and professional riders
- Organized groups
- Range of abilities including novices and people with disabilities

POTENTIAL CONFLICTS

- Equestrian/biker conflicts, in some cases
- Erosion/drainage issues

GUIDANCE

- Horizontal clearance will vary based on the setting. Trails should provide enough space so that a horse feels at ease.
- Horses prefer to travel away from walls or barriers that they cannot see through or over and are most comfortable traveling in the tread that other stock have traveled. USDA/FHWA suggested widths for a standard single-track horse trails are shown on the following page.
- A horse on a single-track requires a minimum of 1.5 feet of tread width with two feet horizontal clear width on each side to accommodate horse and rider. Horses will often travel eighteen inches from a trail edge or tread surface. Single-track treads vary from 1.5 feet in wild areas to eight feet in urban areas.
- Many double-tracked equestrian trails are designed to be five to six feet wide with a two foot clear or shy distance on each side of the tread. A double-track tread allows equestrians to ride side by side while also providing a comfortable passing distance. This is a common configuration for moderately developed trails in rural settings. In developed areas, double-track treads are often eight to twelve feet wide.

TABLE 4-1. SUGGESTED WIDTHS AND CLEARANCE FOR A STANDARD, SINGLE-TRACK HORSE TRAIL

Trail Element	Low Development	Medium Development	High Development
Tread Width	1.5 - 2 ft	3 - 6 ft	8 - 10 ft
Clearing Width *(horizontal)*	5.5 - 8 ft *(Tread + 2-3 ft each side)*	9 - 12 ft *(Tread + 3 ft each side)*	14 - 18 ft *(Tread + 3 ft each side)*
Vertical Clearance	10 ft	10 - 12 ft	10 - 12 ft

Source: USDA/FHWA Equestrian Design Guidebook for Trails, Trailheads, and Campgrounds

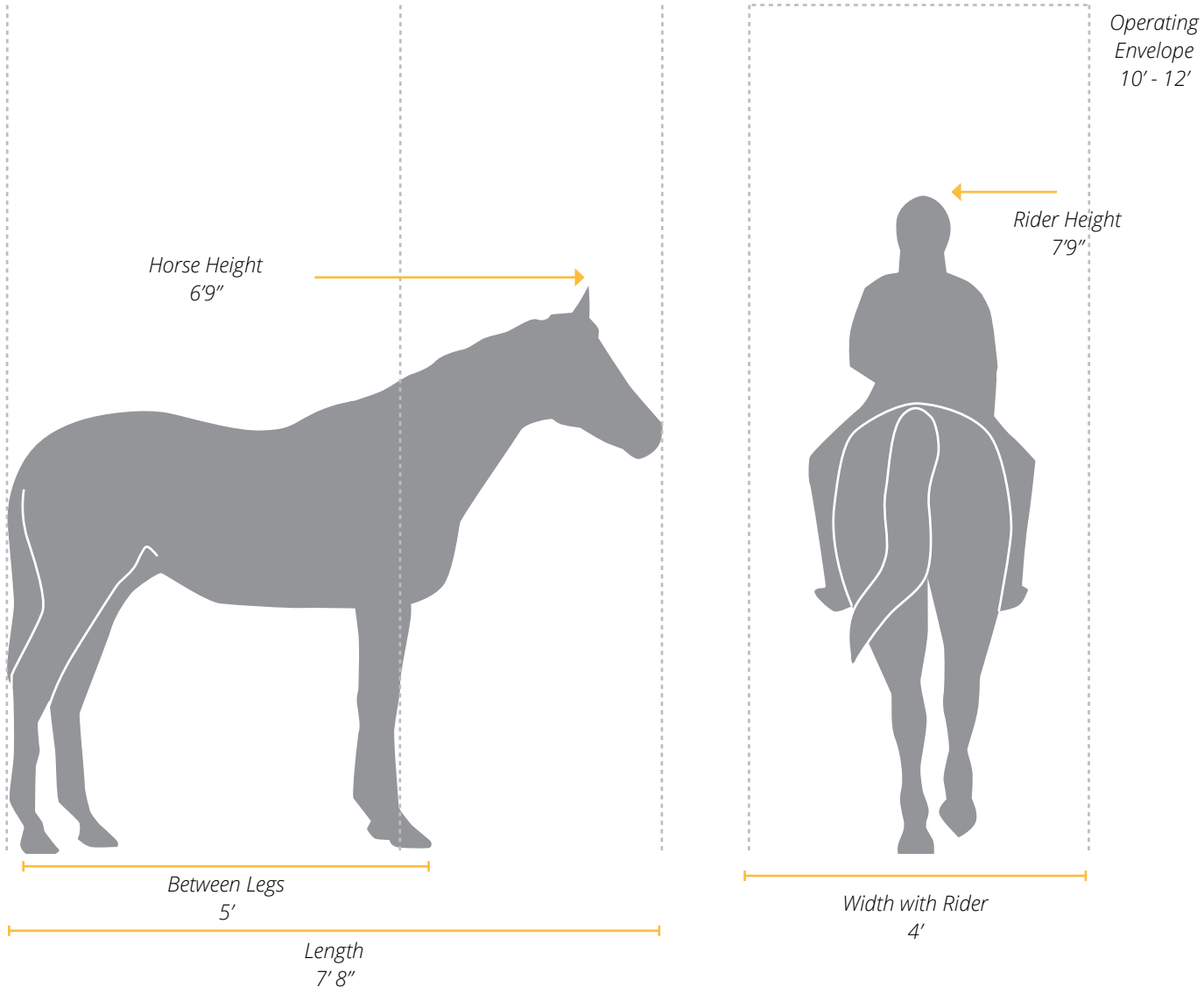


FIG. 4-6 EQUESTRIAN DIMENSIONS

OTHER TYPES OF TRAILS

PARK TRAILS

As described in Chapter 3, County and City parks are home to dozens of miles of trails. Trails within parks are generally designed to the specific local context of individual parks. As a plan of the Cobb County Department of Transportation, this plan is focused on trails outside of park properties. The County's Trail Planning map does illustrate the location of some park trails, especially where connections are provided to trails outside of parks properties. For guidance on park trail siting and design, consult the Cobb County P.A.R.K.S. Department *Comprehensive Master Plan Update*.

DIRTways

In an effort to increase access to recreation and expand the trail network in a quick and cost-effective manner, some communities have launched the practice of building rough, unpaved temporary trails while waiting for paved greenways and trails to be planned and built. Mecklenburg County, North Carolina uses land already set aside for paved greenway extensions to create natural surface trails, adding miles of trails more quickly and at lower cost. Called "DIRTways," the corridors are unpaved, rugged temporary trails located on Mecklenburg County greenway property.

Because it takes several years for a paved Greenway to be developed, DIRTways give citizens an opportunity to enjoy the undeveloped greenway property in the meantime. Users can expect a less manicured experience, such as mud puddles, tall grass, small creek jumping, and activities that may not be suitable on paved trails. DIRTways do not provide parking areas and are only accessible by foot. This practice is recommended in areas where it may take time to plan and design trails where land has already been acquired. For additional information about this recommendation, see Chapter 5.

Source: Charlotte Observer, http://www.charlotteobserver.com/news/local/community/lake-norman-mooresville/article57728328.html

CROSSINGS & INTERSECTIONS

SUMMARY AND GUIDANCE

The design and treatment of intersections where trails meet roadways is an important component of the overall greenway and trail network. Intersections can be challenging to navigate and may be some of the places trail users are most vulnerable. Vulnerability of bicyclists and pedestrians ought to be considered when designing facilities where non-motorized and motorized users interact. This section provides guidance on the design of various types of crossings and intersections with suggestions rooted in best practice.

ELEVATED CROSSINGS

DESCRIPTION & GUIDANCE

Grade-separated crossings provide critical non-motorized system links by joining areas separated by barriers such as deep ravines, waterways, or major transportation corridors. Safety should be the primary consideration in the design of such crossings. Specific design and construction specifications will vary for each elevated crossing and can be determined only after all site-specific criteria are known.

Trail overpasses can be very costly; as such, they should be targeted to the areas of greatest need. There are often opportunities to retrofit greenway and trail structures to existing roadway bridges, such as by cantilevering the trail onto the bridge, or attaching the trail to the substructure of the bridge, which may help reduce costs compared to constructing an entirely new bridge.

A 'signature' bridge should be considered in areas of high visibility, such as over major roadways. While often more expensive, a more artistic overpass will draw attention to the trail network, and could serve as a regional landmark.

Crisscrossed by a vast system of creeks and streams and major roadways, including interstate highways like I-75, I-285, and I-575, Cobb County has numerous bridges. Several such bridges already provide bicycle and pedestrian access. The Skip Spann Connector, trail bridge over South Marietta Pkwy, and pedestrian bridge at SunTrust Park are examples of signature bridges constructed with features specifically for bicyclists and pedestrians. As the future trail network is built out, it is likely additional trail overpasses will be needed to facilitate expanded connectivity.

GUIDANCE:

- 10 feet minimum clear width, 14 feet preferred. A separate five-foot pedestrian area may be provided for facilities with high anticipated use.
- 10 feet minimum vertical clearance on overpass decking. Vertical clearance from bridge cords to roadway will vary based on roadway type.
- Overpass decking should include centerline striping.
- Americans with Disabilities Act Accessibility Guidelines (ADAAG) strictly limit ramp slopes to five percent (1:20) with landings at 400 foot intervals, or 8.33% (1:12) with landings every 30 feet.
- Railings, fences, and barriers on shared-use greenways and trails must be of uniform height. AASHTO recommends a minimum height of 42 inches on stand-alone structures. Refer to local or state jurisdiction for guardrail specifications.
- Vertical woven wire curved fencing can be installed to protect both users and motorists below. Refer to local specifications for material and vertical height requirements.
- Always consult a structural engineer before completing bridge design plans, before making alterations or additions to an existing bridge, and prior to installing a new overpass.
- When bridging GDOT-owned roadways, air rights and other encroachment approvals will be required.

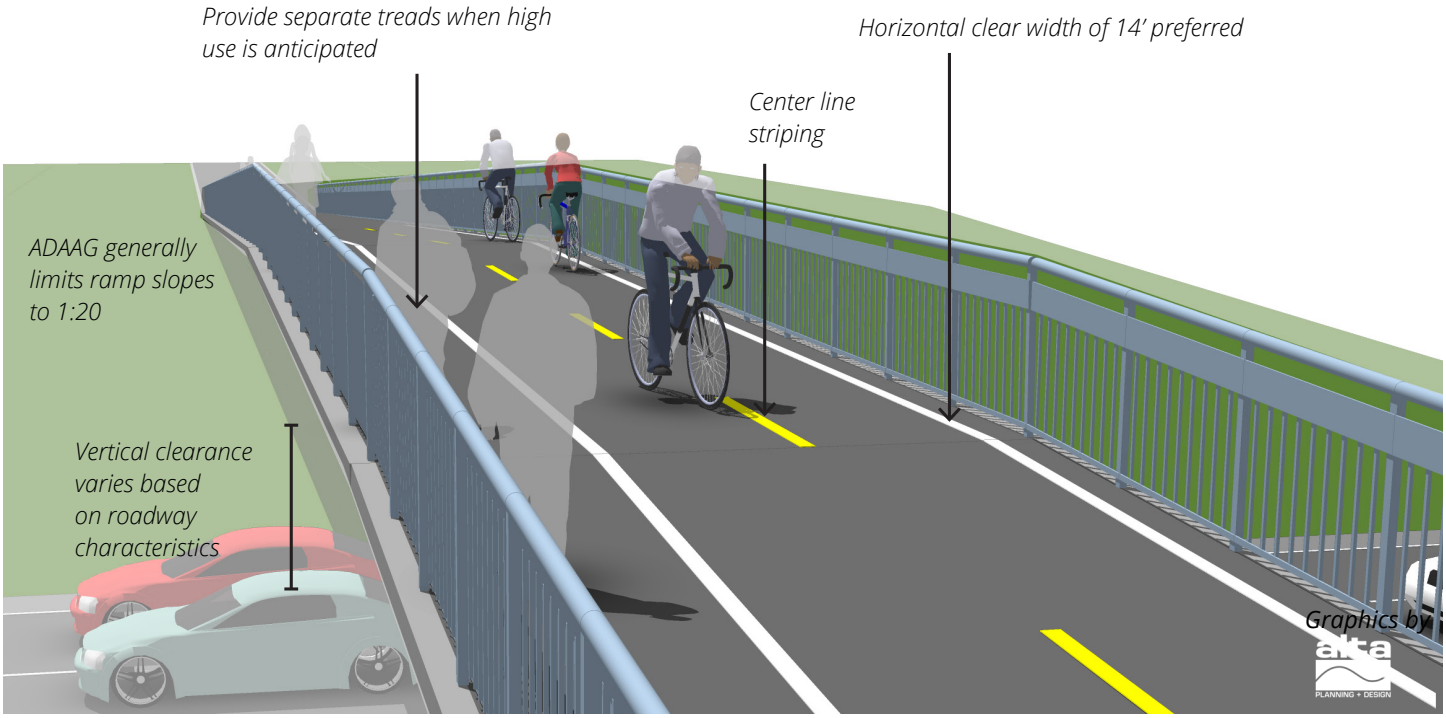


FIG. 4-7 ELEVATED CROSSING

SIGNATURE BRIDGE NEARING COMPLETION ALONG MOUNTAIN TO RIVER TRAIL OVER SOUTH MARIETTA PARKWAY

UNDERPASSES

DESCRIPTION & GUIDANCE

Like elevated crossings, underpasses, or tunnels, provide options for greenways and trails to cross roadways without at-grade crossings. An underpass may be a good option where a greenway or trail follows a previously graded alignment like a rail corridor that has existing tunnels, or where the trail grade is significantly lower than the roadway.

Safety is a major concern with underpasses. Shared use path users may be temporarily out of sight from public view and may experience poor visibility themselves. Poorly maintained underpasses can create unsafe feeling conditions, discouraging use. To mitigate safety concerns, an underpass should be designed to be spacious, well-lit, and completely visible for its entire length from end to end.[1] Tunnels should be designed to allow maximum natural light and with wide openings to be more inviting to pedestrians and bicyclists. Longer underpasses should be equipped with emergency call boxes.

Examples of trail or greenway underpasses can be seen along sections of the Noonday Creek Trail, where it passes beneath busy roads and highways and along the Atlanta BeltLine, which follows a former rail corridor. There are locations in Cobb County where proposed and priority trails, such as the Silver Comet Connector and the Allatoona Creek Greenway will need to pass beneath existing roadway bridges. The photo at right shows one such location along the future Silver Comet Connector Trail.

GUIDANCE:

- Underpasses should have a minimum width of 14 feet, with greater widths preferred for tunnel lengths over 60 feet. As an exception, in constrained conditions, underpass width may be reduced to 10 feet minimum.
- Underpasses should have minimum 10 feet vertical clearance. A balanced ratio of 1.5:1 width to height is desired.
- Underpasses should include lighting for personal security and safety.
- Underpasses should not have blind curves.
- Access by emergency, patrol, and maintenance vehicles should be considered during design.
- Bridges along creeks or waterways may require special consideration due to the presence of floodplains and the need for enhanced treatments.
- **Typical application:** There are no minimum roadway characteristics for considering grade separation. Depending upon the type of facility or the desired user group, grade separation may be considered in many types of projects.

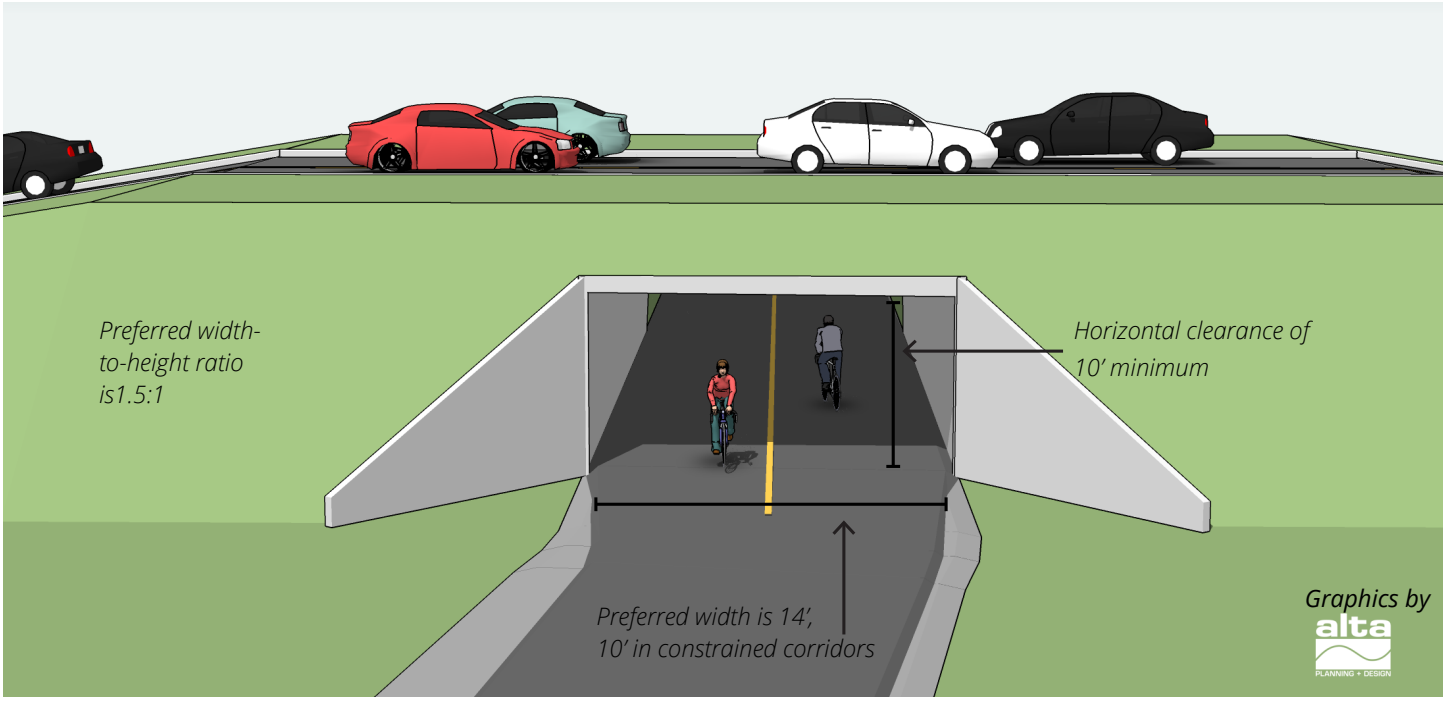


FIG. 4-8 UNDERPASS CROSSING

SIGNALIZED CROSSINGS

DESCRIPTION & GUIDANCE

Signalized crossings provide the most protection for users through the use of flashing beacons or red-signal indication to stop conflicting motor vehicle traffic. Signals can come in the form of rectangular rapid-flashing beacons, pedestrian hybrid beacons, or full traffic signals. Each signal should be paired with high-visibility crosswalk markings. Engineering judgment and the context of the location should be taken into account when choosing the appropriate allowable setback. Pedestrians are particularly sensitive to having to travel out of their way and undesired mid-block crossings may become prevalent if the distance is too great.

RECTANGULAR RAPID-FLASHING BEACON

- Rectangular Rapid-Flashing Beacons (RRFB) are "pedestrian-actuated conspicuity enhancements" intended to facilitate safe crossing at unsignalized intersections or mid-block marked crosswalks.[2] The FHWA gave interim approval (IA-21) and guidance for use of RRFBs in March 2018. They are used to supplement standard pedestrian, school, or trail crossing warning signs mounted on posts along the road or suspended overhead above travel lanes.
- RRFBs have been shown to increase motor vehicle yielding compliance at crossings of multi-lane or high-volume roadways.
- **Typical application:** Use RRFBs at high-volume shared-use path crossings.

PEDESTRIAN HYBRID BEACON

- A Pedestrian Hybrid Beacon (PHB), also called a HAWK Beacon, consists of a signal-head with two red lenses over a single yellow lens on the major street, and pedestrian signal heads for the shared-use path. A PHB is distinct from pre-timed traffic signals because it turns off when not in use and is only activated when needed.
- **Typical application:** Use PHBs at high-volume shared-use path crossings where there are also high vehicle volumes.

The FHWA *PHB Guide* states, "If a traffic control signal is not justified or warrants are not met through an engineering study...[Agencies must pursue solutions], such as PHBs, to improve safety for pedestrians and motorists" (p.11).

FULL TRAFFIC SIGNAL

- Full traffic signals provide the most protection for path users by stopping conflicting vehicular traffic with red-signal indication.
- Several signal phasing strategies may be used to improve trail user safety:
  - **Leading Pedestrian Intervals (LPI) -** Pedestrian WALK signal is displayed two to four seconds before the vehicular green indication to allow pedestrians time to establish a presence in the intersection before vehicles start turning (also referred to as Pedestrian Lead Time).
  - **Exclusive pedestrian walk phase -** WALK signals are provided without green indications for any conflicting vehicle movements.
  - **Protected-only Left Turn Signal Phase-** Protected left turn phases eliminate the left-hook crash risk. Permitted-only or Protected/ Permitted left turn phasing should not be allowed at crossings of high-priority bicycle and pedestrian routes.
  - **Protected-only Right Turn Signal Phase-** Protected right turn phases eliminate the right-hook crash risk.
  - **No Turn on Red-** right turns may be prohibited during the red vehicle indication in high pedestrian traffic locations.
- **Typical application**: Trail crossings within approximately 400 feet of an existing signalized intersection with crosswalks are typically diverted to the signalized intersection to avoid traffic operation problems when located so close to an existing signal.
- Full traffic signal installations must meet MUTCD warrants.

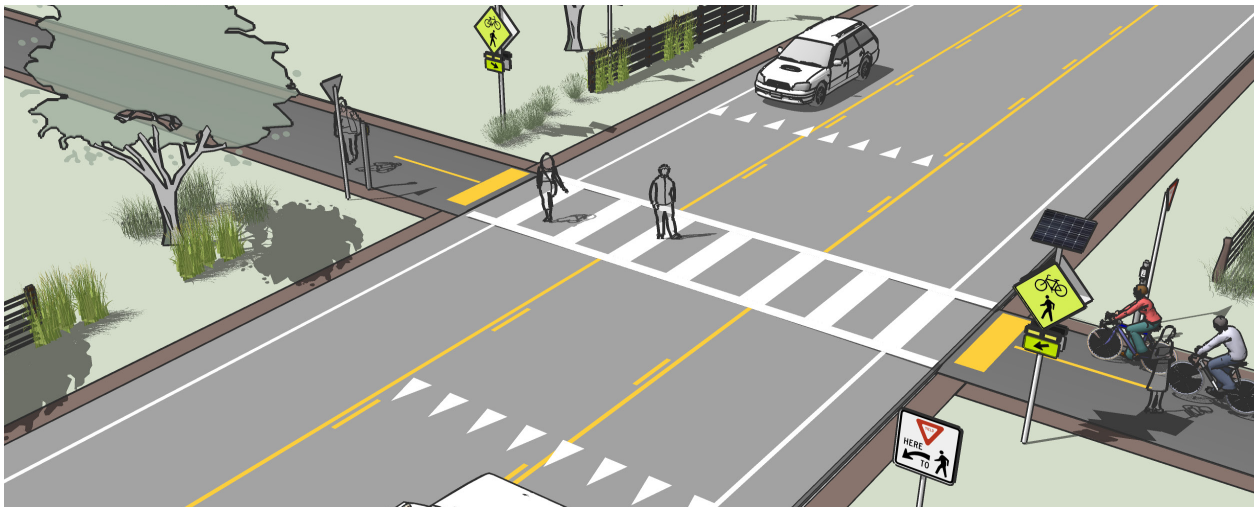


FIG. 4-9 RECTANGULAR RAPID-FLASHING BEACON

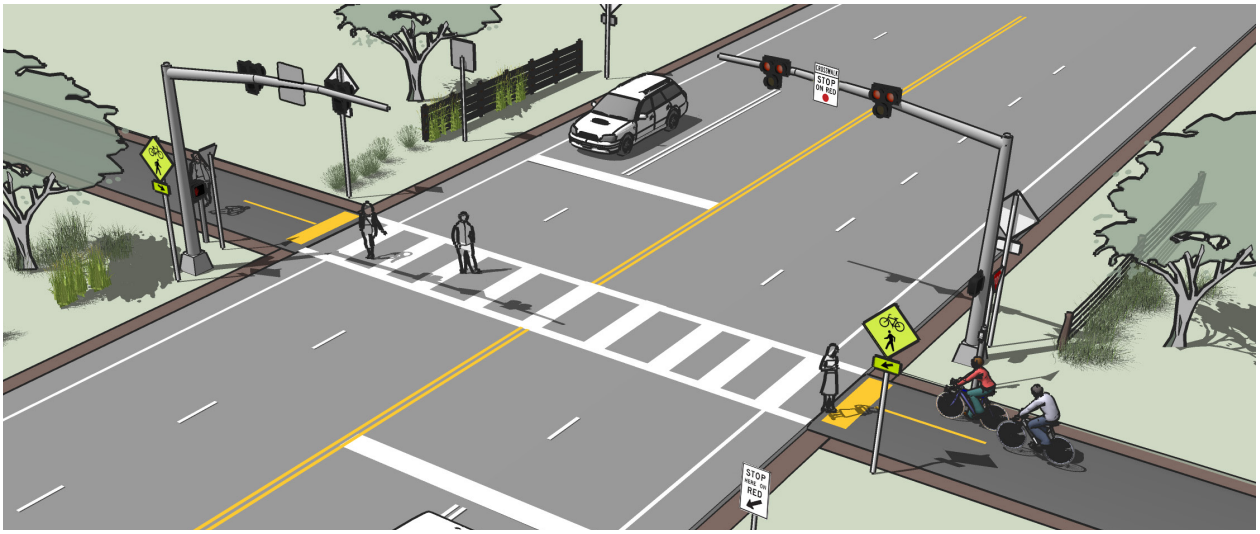


FIG. 4-10 PEDESTRIAN HYBRID BEACON

FIG. 4-11 FULL TRAFFIC SIGNAL

UNSIGNALIZED CROSSINGS

DESCRIPTION & GUIDANCE

Where a trail intersects a road more than 400 feet from an existing traffic signal, mid-block crossings can give users a dedicated, legal crossing without requiring them to travel or divert to an existing signal. Engineering judgment and the context of the location should be taken into account when choosing the appropriate allowable setback. Pedestrians are particularly sensitive to out of direction travel and undesired mid-block crossing may become prevalent if the distance is too great. Crosswalk markings must be used to establish a legal crosswalk.

The preferred treatment for a marked crossing without a signal consists of a median refuge island, high-visibility crosswalk markings, and signage and other markings to slow or stop traffic. High-visibility crosswalk markings and signage alone, or a speed table with crosswalk markings are alternatives for right-of-way constrained contexts. Advance warning, bicycle/pedestrian crossing, and/or trail crossing signs should be used in accordance with MUTCD guidelines (see Chapter 9B).

The approach to designing crossings at mid-block locations depends on an evaluation of vehicular traffic, line of sight, trail traffic, use patterns, vehicle speed, road type, road width, and other safety issues such as proximity to major attractions.

Preferred and alternative crossing configurations are described at right and illustrated in Figures 4-12 through 4-14 on the following page.

PREFERRED OPTION: MEDIAN REFUGE ISLAND CROSSING

- Median refuge islands are located at the midpoint of a marked crossing and help improve path user safety by allowing pedestrians to cross one direction of traffic at a time. Refuge islands minimize pedestrian exposure by shortening crossing distance and increasing the number of available gaps for crossing.
- **Typical application**: Any roadway with a left turn center lane or median that is at least eight feet wide, or where wide traffic lanes and/or shoulders can be narrowed to provide at least eight feet of space for the island.

ALTERNATIVE 1: RAISED CROSSING

- Raised crosswalks combine a marked crosswalk with raised speed-table geometry to increase yielding rates and clarify road user priority with geometric design.
- Speed tables are typically 22 feet long in the direction of travel with six-foot ramps on either end and a ten-foot flat section in between.
- **Typical application:** Local and collector streets or main roads through small communities.

ALTERNATIVE 2: MARKED CROSSING AND SIGNAGE

- The simplest marked crossing type uses high-visibility crosswalk markings with crossing warning signs.
- **Typical application**: Where shared-use paths intersect with collector or minor arterial streets.

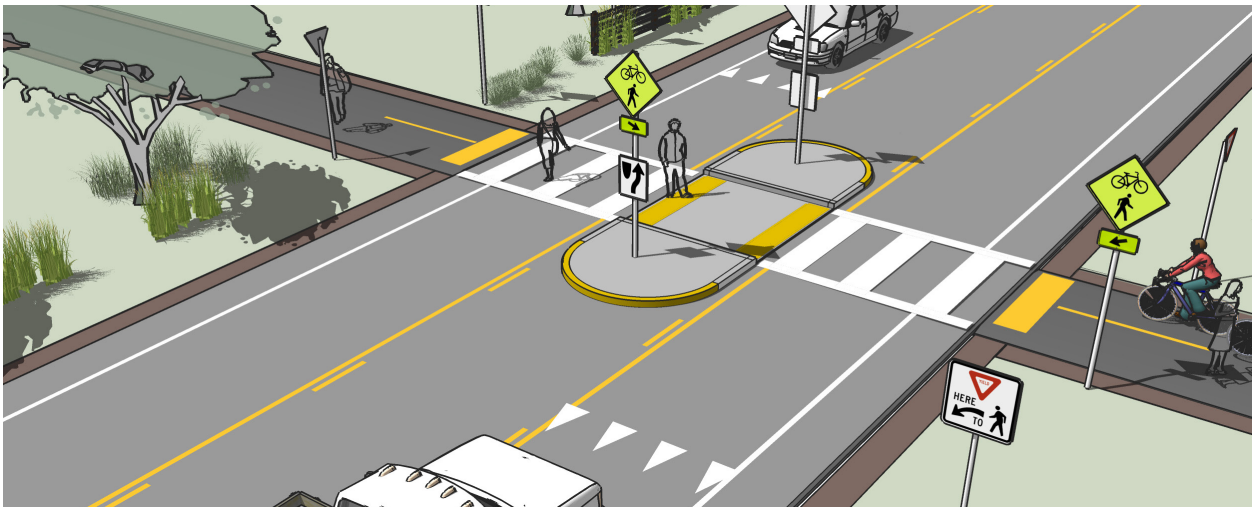


FIG. 4-12 PREFERRED OPTION: MEDIAN REFUGE ISLAND CROSSING

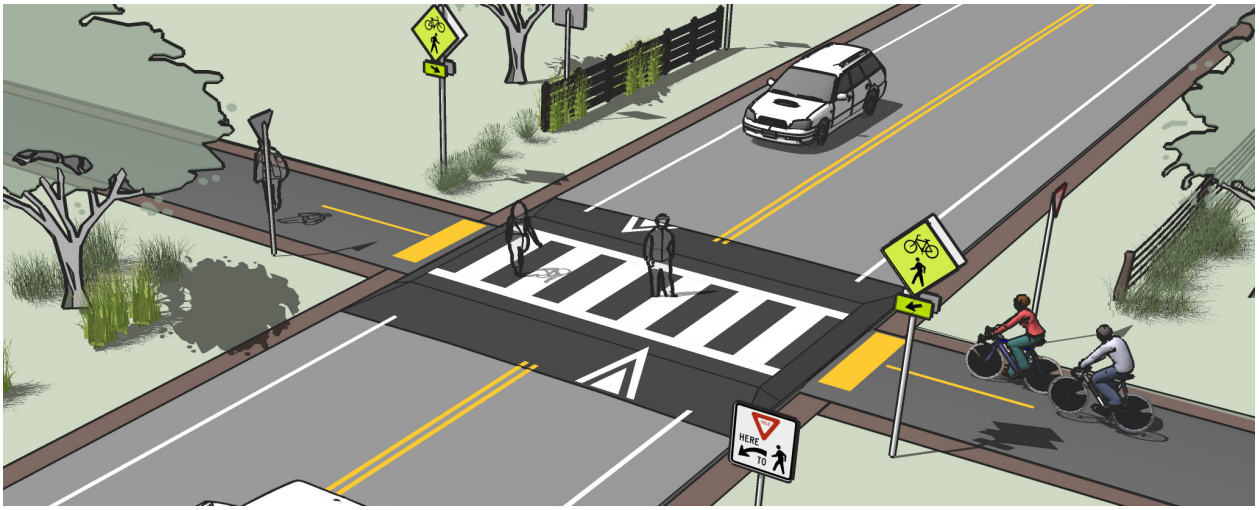


FIG. 4-13 ALTERNATIVE 1: RAISED CROSSING

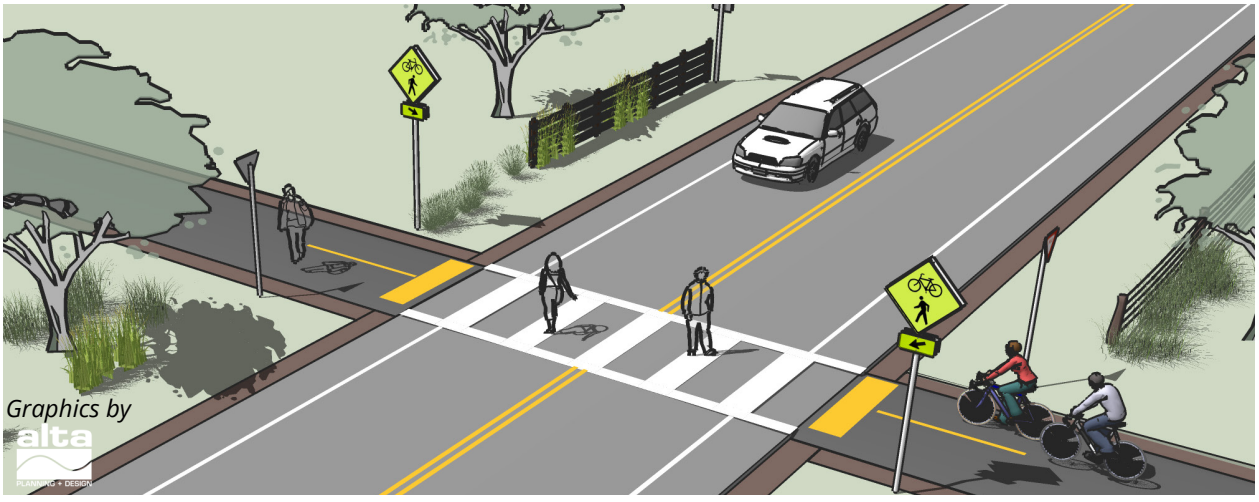


FIG. 4-14 ALTERNATIVE 2: MARKED CROSSING AND SIGNAGE

DRIVEWAY CROSSINGS

DESCRIPTION & GUIDANCE

Driveway crossings are typically in areas where vehicles are entering/exiting businesses, offices, and residences from a roadway parallel to the trail. Crossings should be designed to promote awareness of the presences of pedestrians and bicyclists, lower vehicular speeds, and facilitate proper yielding of motorists to bicyclists and pedestrians.

GUIDANCE:

- The sidepath should be given the same priority as the parallel roadway at all uncontrolled crossings. Geometric design should support this by providing clear sight triangles for all approaches.
- Figures 4-15 through 4-17 and table 4-2 provide guidance for minimum trail setback based on roadway context.
- Maintain a level surface for the sidepath through the crossing, potentially as a type of raised crosswalk.
- Crossing design should emphasize visibility of users and clarity of expected yielding behavior. Crossings may be STOP or YIELD controlled depending on sight lines and bicycle and motor vehicle volumes and speeds.
- "Turning Vehicles Yield to Pedestrians" sign is recommended in advance of turns across sidepaths to remind motorists to yield to path users and the combination "Bike and Ped Crossing" sign may be used in advance of crossings.

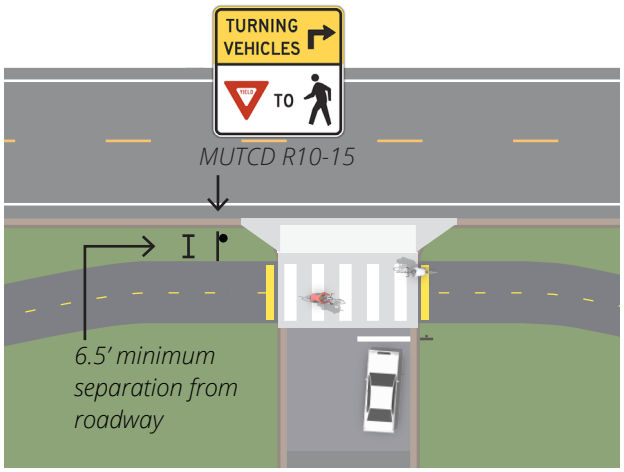


FIG. 4-15 ADJACENT CROSSING

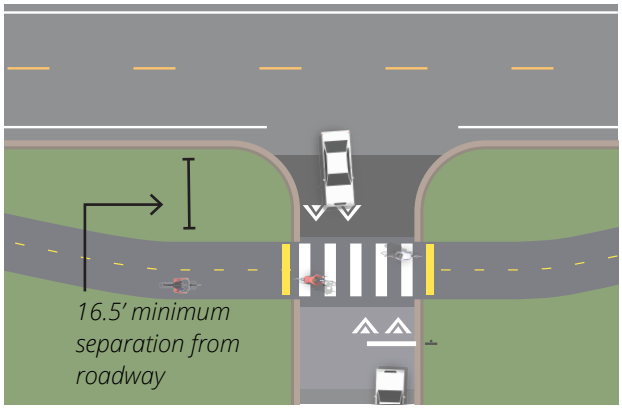


FIG. 4-16 SEPARATED CROSSING

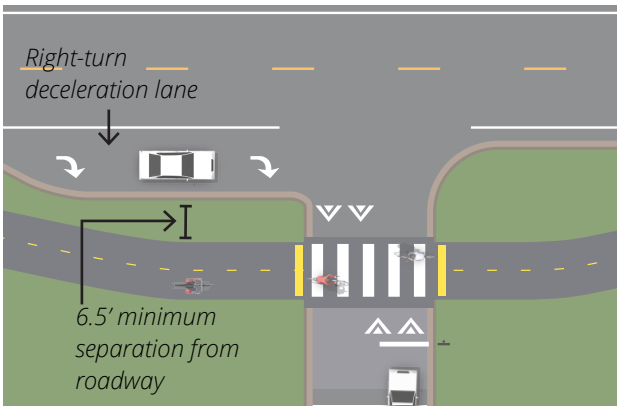


FIG. 4-17 DECELERATION LANE WITH ADJACENT CROSSING

Graphics by

TABLE 4-2. TRAIL DRIVEWAY SETBACK GUIDANCE

	≤ 35 MPH		≥ 40 MPH
Roadway Context	***Constrained or limited sightlines***	***Wide right-of-way***	
1. Adjacent Crossing *(6.5 ft setback)*	Y	EJ	EJ
2. Separated Crossing *(16.5 ft setback)*	EJ	Y	EJ
3. Deceleration Lane with Adjacent Crossing *(6.5 ft setback)*	X	EJ	Y

Y = Desirable; EJ = Engineering Judgment Needed; X = Not Recommended

TRAIL-AT-TRAIL CROSSINGS

DESCRIPTION & GUIDANCE

There are several design approaches for locations where two trails intersect. The primary focus should be to make users aware that they are approaching an intersection and of the potential for encountering different user types from multiple directions. This can be achieved through a combination of trail design and engineering to create unobstructed sight lines as well as regulatory and wayfinding signage.

GUIDANCE:

- Trails should be aligned to intersect at 90-degree angles when possible.
- Sight lines should be clear for all users.
- Consider off-setting the trail intersection and creating two three-way intersections rather than one four-way intersection.
- A traffic circle (Figure 4-19) may be a viable design option to slow speeds and clarify expected operation.
- Include directional signage at intersections.
- If a traffic circle design is used, consider the use of landscaping with low growing (no more than 24 inches high) and minimally spreading native shrubs and groundcover that require little maintenance and provide clear sight lines.
- Other material can be used within traffic circles such as boulders and public art to discourage shortcut paths through the central island as long as clear sight lines under 36 inches are maintained.

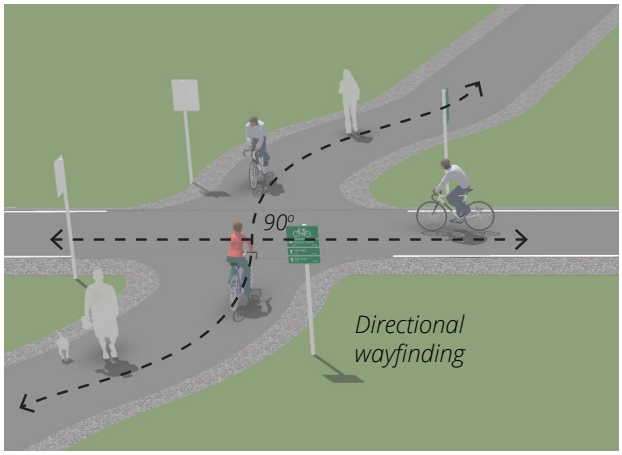


FIG. 4-18 NINETY DEGREE TRAIL-AT-TRAIL CROSSING

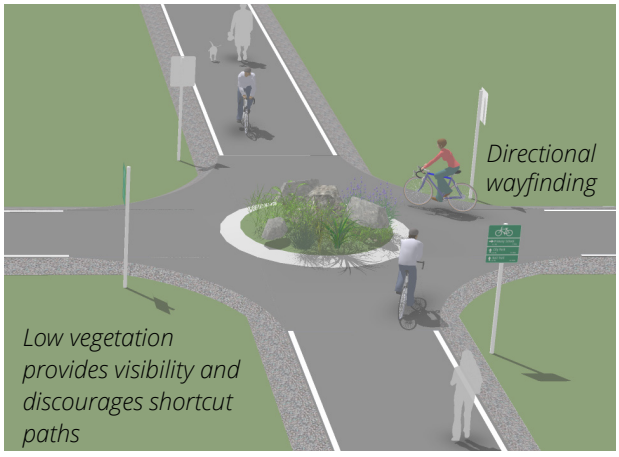


FIG. 4-19 "TRAIL TRAFFIC CIRCLE"

Graphics by

CHANNELIZED RIGHT TURN LANES

DESCRIPTION & GUIDANCE

In some intersections of arterials streets, design vehicle requirements or intersection angles may result in wide turning radii at corners. Configuring the intersection as a channelized (or free-right) turn lane with a raised refuge island can improve conditions for pedestrians trying to cross the street.

To improve safety and comfort for pedestrians, measures to slow traffic at the pedestrian crossing are recommended such as provision of a raised crosswalk, signalized pedestrian walk phase, high visibility crosswalk, and/or pedestrian crossing signage. Corner aprons may be used where larger turn radius is required based on volume of large vehicles. Figures 4-20 and 4-21 on the following page illustrate possible configurations of trail crossings at channelized right turn lanes.

Pavement markings and signage in a channelized right turn lane depend upon the type of vehicle control. Providing a "Stop" control on the channelized right turn lane may provide more crossing opportunities than "Yield" control. Signage and pavement markings should follow MUTCD specifications.

Similar treatments may be used at some highway off-ramps that cross sidepaths, as they share many characteristics.

DESIGN GUIDANCE

- Channelized right-turn lanes should be no wider than 14 feet to encourage slower speeds. Consider narrowing wider lanes with striping.
- Design speed through turn lane should be 14-18 MPH.
- Maximum turn radius of 30 to 35 feet
- Crossing may be raised or at intermediate level, as opposed to street level, at locations where additional speed management is necessary, or where there are especially high pedestrian and bicyclist volumes.
- The preferred angle of intersection between the channelized turn lane and the roadway being joined is no more than 15 degrees to allow for simultaneous visibility of pedestrians and potential roadway gaps.
- Install standard pedestrian crossing assembly signs and "Turning Vehicles Yield (or Stop) to Pedestrians" signs as appropriate per the MUTCD.
- The use of warning signs and pavement markings such as the combination bicycle and pedestrian crossing and accompanying "TRAIL X-ING" plaque may be used where both bicyclists and pedestrians might be crossing an uncontrolled location.
- **Typical application:** Where design vehicle requirement or intersection angles result in wide turning radii at corners.

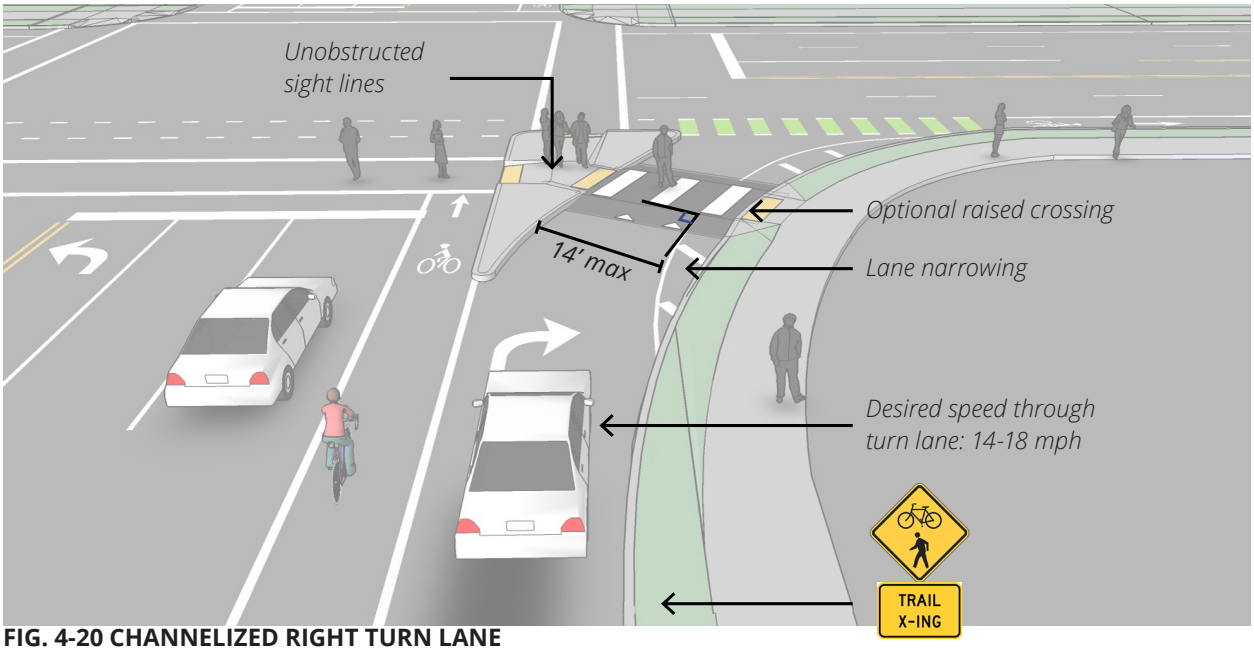


FIG. 4-20 CHANNELIZED RIGHT TURN LANE

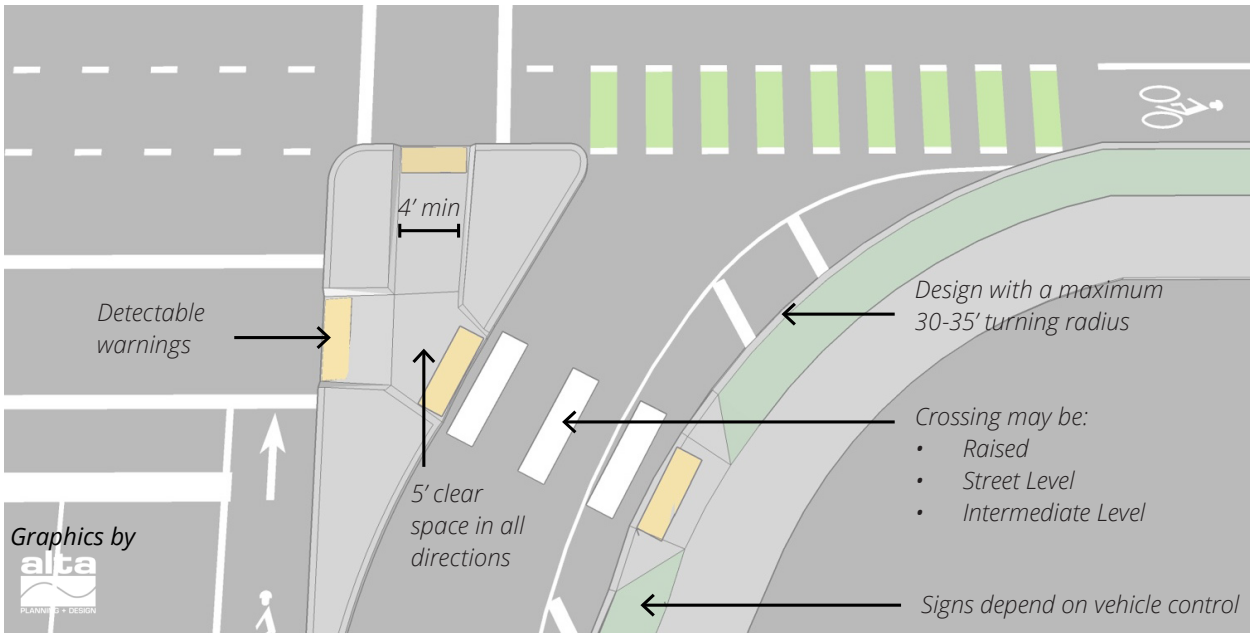


FIG. 4-21 CHANNELIZED RIGHT TURN LANE - OVERHEAD VIEW

BOLLARDS & ALTERNATIVES

DESCRIPTION & GUIDANCE

The routine use of bollards and other similar barriers to restrict motor vehicle traffic is not recommended.[3] Bollards are often ineffective at preventing undesired motor vehicle access to shared use paths, and create obstacles to legitimate trail users. Alternative design strategies use signage, landscaping and curb cut design to reduce the likelihood of motor vehicle access.

Bollards should never be a default treatment, and should not be used unless there is a documented history of intrusion by unauthorized cars, trucks, or other unauthorized vehicles. Even properly installed bollards constitute a serious and potentially fatal safety hazard to trail users.

BOLLARD ALTERNATIVE GUIDANCE

- "No Motor Vehicles" signage (MUTCD R5-3) may be used to reinforce regulatory access rules.
- Design path entries to not be mistaken for vehicle access point, and to make intentional motor vehicle access difficult
- Vertical curb cuts may be used to discourage motor vehicle access.
- At intersections, split the path tread into two sections separated by low landscaping. Each tread should be seven feet wide to allow for side-by-side riding, while appearing too narrow for motor vehicle access.
- Emergency vehicles can still enter by straddling the landscaping median.
- Consider targeted surveillance and enforcement at specific intrusion locations.
- Planting should be low and/or ground cover to permit emergency vehicles access.
- **Typical application:** At the entrance to shared-use paths, or at roadway crossings, where motor vehicle use is prohibited and should be discouraged. Where bollards or other vertical barriers in the pathway can be justified despite their risks and access issues, refer to the guidance on Bollards in the AASHTO Guide for the Development of Bicycle Facilities (2012) Section 5.3.5.

BOLLARD GUIDANCE

- Bollards must be easily visible, especially in low light conditions. The MUTCD requires retro-reflectorization of any obstruction in the traveled way of a shared-use path (Section 9C.03). This includes posts along the edge of a path.
- Must not restrict access for people with disabilities
- Should have sufficient sight distance to allow users to adjust speed.
- Should permit passage, without dismounting, for adult tricycles, bicycles towing trailers, and tandem bicycles. All users legally permitted to use the facility should be accommodated.
- Must be at least 3.2 feet tall and should be placed at least 20 feet from the intersection. This will allow trail users to cross the intersection before negotiating the barrier posts.
- MUTCD Figure 9C-2 defines a diamond-shaped marking that should be used around bollards or other obstructions.
- Should be designed to be knocked-down, removable, or hinged to permit entrance by emergency and service vehicles. A knocked-down bollard must be reinstalled or removed immediately to avoid additional safety hazards.
- One bollard is generally sufficient to indicate that a path is not open to motorized vehicles. The post should be placed in the center of the trail tread. Where more than one post is necessary, an odd number is preferred, as two bollards would direct opposing path users to the center. Five feet minimum spacing between bollards is recommended to permit passage of bicycle trailers, adult tricycles, and wheelchairs.[4]
- **Typical application:** Bollards should only be used under specific circumstances, properly placed, marked and designed to be as safe and conspicuous as possible when there is a demonstrated danger of people mistaking the trail for a roadway and there isn't a feasible alternative design.

FIG. 4-22 ALTERNATIVE TO BOLLARDS AT ACCESS POINTS

FIG. 4-23 BOLLARDS AT ACCESS POINTS

TRAIL SIGNAGE

SUMMARY & GUIDANCE

Signage is a critical and sometimes overlooked element of a successful greenway and trail system. Signs help users not only recognize trails through branding, but also navigate the network, plan trips, and access nearby destinations. Trail signage also helps to establish trail use etiquette, helping create a more comfortable experience for all users. This section provides guidance on various types of trail signs.

Effective signs are critical to providing trail users with positive experiences and making them want to come back again. Consistent signs are among the most effective ways to establish the identity of a trail and increase public awareness of a trail. Multiple types of signs are typically employed throughout a greenway and trail system, including regulatory, wayfinding, and etiquette signs. Off-road signs differ from on-road signs in that they are not intended specifically for vehicular visibility, but rather are directed towards pedestrians and cyclists, in general. Each type has a different purpose and it is important to keep in mind the intended audience of signs during the design process.

Objectives of a comprehensive trail sign system should include the following:

- Communicate the presence of the trail, attracting users
- Educate users about the trail and surrounding environment
- Communicate user and trail location, direction of travel, and reassure users that they are in the right location
- Guide trail usage to create a safe, comfortable experience

In general, symbols, fonts, color schemes, and stylistic elements from a trail's signage should be applied to published maps for the same system, for consistency and ease of navigation. Simple, easy-to-understand symbols should be used to avoid confusion.

NATIONAL SIGNAGE STANDARDS

The Manual on Uniform Traffic Control Devices (MUTCD) defines the standards used by road managers nationwide to install and maintain traffic control devices. This includes sign design specifications related to size, type and placement. It is considered a best practice to use MUTCD standards for the design and placement of off-road signs. Local jurisdictions may have additional requirements. During each phase of a given project, design professionals should coordinate with the local jurisdiction to determine if there are any additional approval processes and procedures to take into account for the project. Signage should seek to balance jurisdictional regulations and local design guidelines or preferences.

When placing destination names on signs, the use of abbreviations should be kept to a minimum whenever possible. When insufficient space is available for full wording, MUTCD approved abbreviations may be used (see MUTCD Section 1A.15, Table 1A-1).

All on-road signs must be retroreflective or illuminated to show the same shape and similar color by both day and night. The requirements for sign illumination shall not be considered to be satisfied by street or highway lighting.

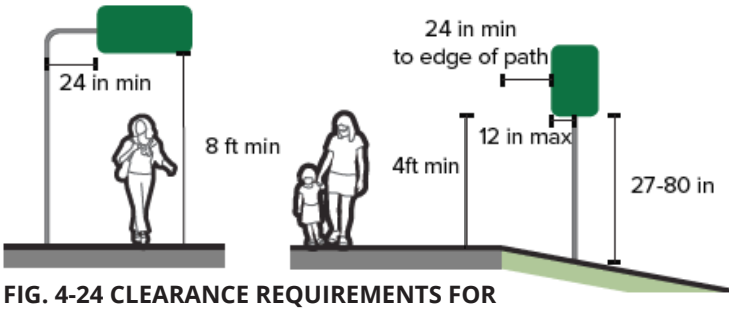


FIG. 4-24 CLEARANCE REQUIREMENTS FOR SHARED USE PATHS

The lettering for names of places, streets, and highways on conventional road guide signs shall be a combination of lower-case letters with initial upper-case letters. All other word legends on conventional road guide signs shall be in upper-case letters and follow MUTCD guidance for size.

PLACEMENT

Placement is key to effective signage. Signs must be within a viewer's sight line without inhibiting the flow of all user movements. MUTCD, AASHTO, and the ADA provide guidance regarding placement of on- and off-road signs.

GUIDANCE

- All on-road signs must be placed in accordance with Section 2A.16 of the MUTCD.
- All overhead signs over a shared-use path must have a clearance of eight feet and be a minimum of 24 inches from edge of path to the post.[5]
- All signs along a shared use path must be two feet from edge of path to sign edge and be a minimum of four feet from the top of sign to the top of path.[6]
- Signs for bicycle facilities and shared-use paths should follow guidance and sizes provided in MUTCD Table 9B-1 for "Bicycle Facility Sign and Plaque Minimum Sizes." The layouts shall be as shown in the "Standard Highway Signs and Markings" book.

SIGNAGE TYPES

ROADWAY SIGNAGE

Use and placement of all roadway regulatory, warning, guide, and other signs should be MUTCD-compliant. The MUTCD contains standards, guidance, and options for signing to communicate regulations, warnings, and guidance for road users. Specifically, Chapter 2B provides guidance about regulatory signs, including for pedestrians, and Chapter 9B provides guidance about bicycle signs.

Standard regulatory and warning signs should be used at appropriate locations in advance of the intersection or crossing locations. Examples of some such signs are shown in Figure 4-25. The combined bicycle and pedestrian crossing sign with supplemental "Trail X-ing" plaque may be used as appropriate for trail and sidepath crossing locations. Other regulatory signs and plaques for bicycle facilities, such as "Bike Lane," "Bike may use full lane," and "Begin right turn lane yield to bikes" may also be used as appropriate. Signs should be located based upon speed limit, as provided for in the MUTCD.

ETIQUETTE SIGNAGE

To help guide usage of trails and create a safe and comfortable environment, etiquette signage may be placed at trailheads on kiosk signage and in printed material for public distribution. Below is a partial list of suggested points that may be included in etiquette signage. Not all information will apply to all trail types or uses, and this information should only be posted as necessary in appropriate locations, such as entry points to a trail.

- Respect private property.
- Respect other visitors and their experience.
- Use caution when using headphones. You may not be able to hear warnings.
- Keep your dog under control at all times.
- Share the trail. Keep right except to pass. Warn people when you are planning to pass.
- Bicyclists yield to pedestrians.
- Be friendly and courteous.
- Stay on the trail.

MUTCD R10-15

MUTCD W11-15

MUTCD R1-5

MUTCD R1-5b

FIG. 4-25 EXAMPLES OF BICYCLE AND PEDESTRIAN REGULATORY AND WARNING SIGNS

TRAIL SIGNAGE FOR A SEGMENT OF THE KENNESAW TRAIL SYSTEM

TRAILHEAD SIGNAGE

Care should be taken to be mindful of arrival sequencing for all modes of transportation. Sign placement should be useful, visible, and used strategically to avoid unnecessary clutter. The context and setting of the trailhead are also important. More signage is appropriate at major trailheads than at minor ones. For smaller neighborhood connector-style trails, a simple entrance marker symbol may be sufficient.

GATEWAY MARKER

Gateway Markers should be used as a simple totem, used at larger Gateway or Trailhead sites, announcing the presence of the trail. The marker should be placed in a prominent and central location, ideally within view of the trail entrance.

KIOSK

Kiosks should be placed at Gateway sites to serve as system-wide education tools, trip planning devices, regulatory information centers, and interpretive signs. Maps should include the entire trail network and indicate where the user is located within the system. Use of the single or double panel kiosk is at the discretion of the designer. Considerations should be taken to provide ample circulation around the kiosk and nearby seating.

VEHICULAR ENTRY SIGN

Intended as a primary trail identification sign for Gateways and Trailheads with parking, vehicular entry signs should be within clear view of vehicles traveling along the roadway with a plan to manage or clear surrounding vegetation to provide visibility. When possible, place this sign outside of the right-of-way.

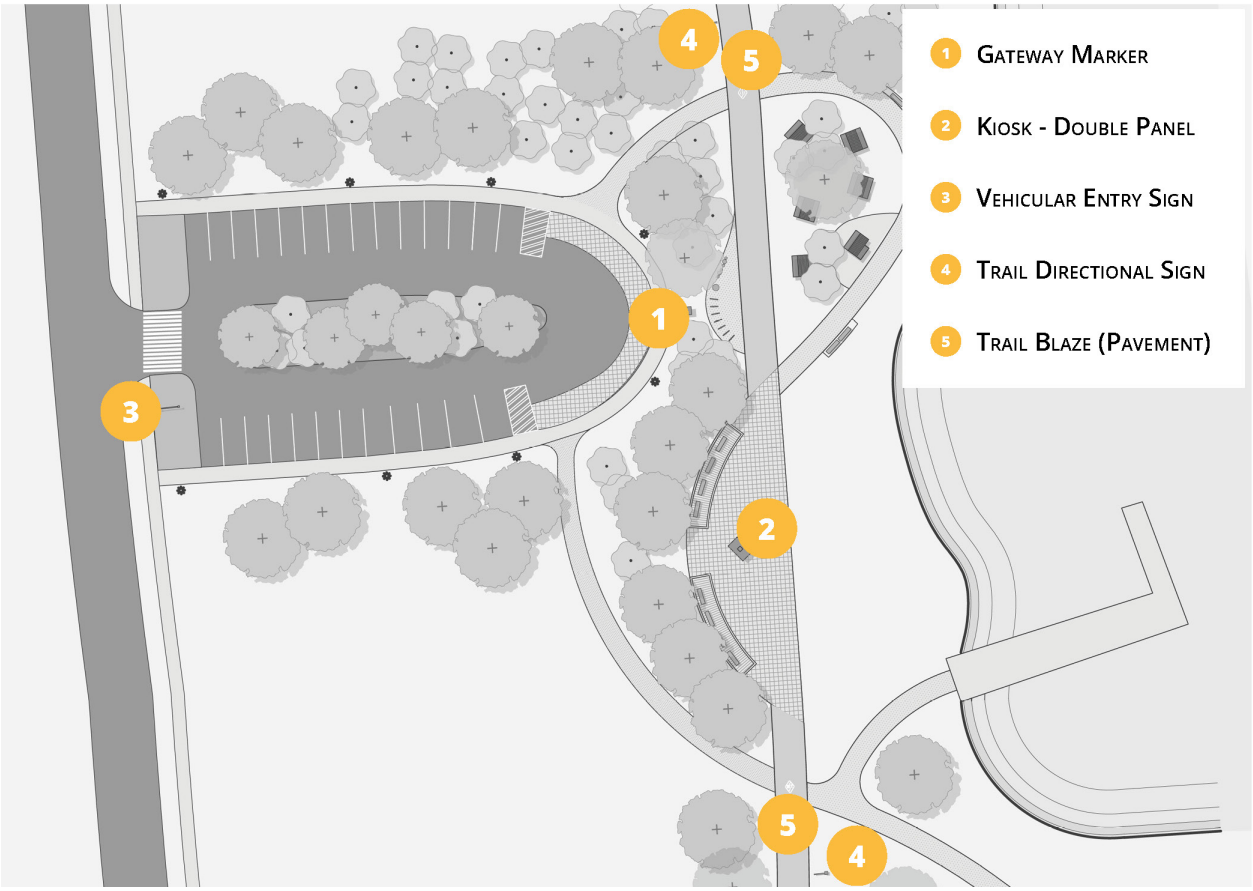


FIG. 4-26 SUGGESTED TRAILHEAD SIGNAGE PLACEMENT DIAGRAM

DIRECTIONAL SIGN

Directional signs serve as both navigation and encouragement programming devices. These signs are placed within communities to direct intended users to the trail system. These signs build awareness of the system by creating a presence for the greenway outside of the system. Directional signs may also be attached to posts of existing signs as well as to community light posts.

TRAIL BLAZE

Trail blazes are used to identify a given trail to users along its length to keep them oriented and certain of their location. Pavement blazes are markings that reinforce user confidence and awareness of the identity of the trail along its length. Tread markings can be a variety of materials, including thermoplastic, paint, and vinyl decals, each with a variety of life span. Whichever product is chosen, they should be installed by a specialized contractor and per product specifications. Tread markings are best used in areas where directions are not needed but confirmation that users are still on the trail is still needed.

INTERPRETIVE SIGN

Interpretive displays provide greenway and trail users with information about the path, wildlife, vegetation, history and the significance of elements along the corridor. They may be combined with public art and sculpture. Interpretive displays are typically installed at Gateways, Trailheads, vistas, or notable points along the trail. Interpretive signs primarily serve an informational or educational function. They should be clear, easy to understand, and engaging. Local historians or experts should be consulted when preparing content. Signs should also be weather-proof or protected from the elements and secured to the ground.

MINOR TRAILHEAD ON THE ATLANTA BELTLINE EASTSIDE TRAIL MAKES USE OF SEATING, SIGNAGE, AND PUBLIC ART

WAYFINDING SIGNAGE

A wayfinding system consists of comprehensive signage and pavement markings to safely guide users to destinations along preferred routes. Signs throughout the network should, at a minimum, indicate to users the direction of travel, the locations of destinations and the travel time/distance to those destinations. Other sign purposes include education about natural features and cultural landmarks. Sign messages should be considered in the context of the sign placement for safety and convenience. Signs should avoid directing users to destinations which they cannot access safely. For this reason, signs might need to be phased in or revised along sections of trails with proposed connection facilities.

Trail wayfinding signs should communicate the name of the trail or system, distance to nearby destinations, and if space permits, tell people how long it will take to get there. The image at right is an example from Portland, OR. Wayfinding signs along the trail should be of pedestrian scale and oriented to trail users, whereas wayfinding signs along roads are generally of a more vehicular scale and directed at motorists. Sign clutter can confuse users and should be avoided. Trail signs should not repeat messages that already appear on existing vehicular or bicycle signs. Sign clutter can sometimes be reduced by grouping signs on the same supports. See Section 2A.16 of the MUTCD for more information.

Trails should be marked at regular intervals with distance or mile markers, which show the distance or mileage at that point from one end of the trail. Mile marker signs are simple distance markers and may include an official symbol for the trail and often, no other route markers are needed; however, directional, regulatory, and cautionary signs should all be used along trails, depending upon location and context.

Components of a successful wayfinding system include standards for logos, color, typography, and symbols. All of these elements should provide consistency across a range of sign types, including trailhead identification signs, trail markers, mile markers, pedestrian directional signs, regulatory signs, confidence markers, interpretive signs, and information kiosks.

Consistency in signage should ideally be throughout the entire county-wide system; however, it is understood that individual branding already exists for some individual trails. Figure 4-27 provides an example of one way to blend and integrate state, regional, and local brands in signage. For future signage along Cobb County trails in unincorporated areas, a county-specific trail logo and wayfinding system should be developed and implemented as priority trails are constructed. Where future signage is needed along county-wide corridors that cross jurisdictional boundaries, partner logos should appear on the county-wide signage package. Inclusion of city or CID logos also aids in user orientation and unites the trail as a regional transportation and recreation facility.

Cobb County may choose to develop a cohesive signage family that local governments can use if they cannot invest in their own signage system. For communities that already have their own creative identity, the county can include a “blaze” or “rider” that can be added to the local signs. This accomplishes the simultaneous goals of preserving the unique identity and branding of the local trails while identifying them a component of the county-wide system. An example of how to blend regional and local signage is provided on the following page. The package showcases the individual trail, while also communicating that it is part of the local and regional brands.

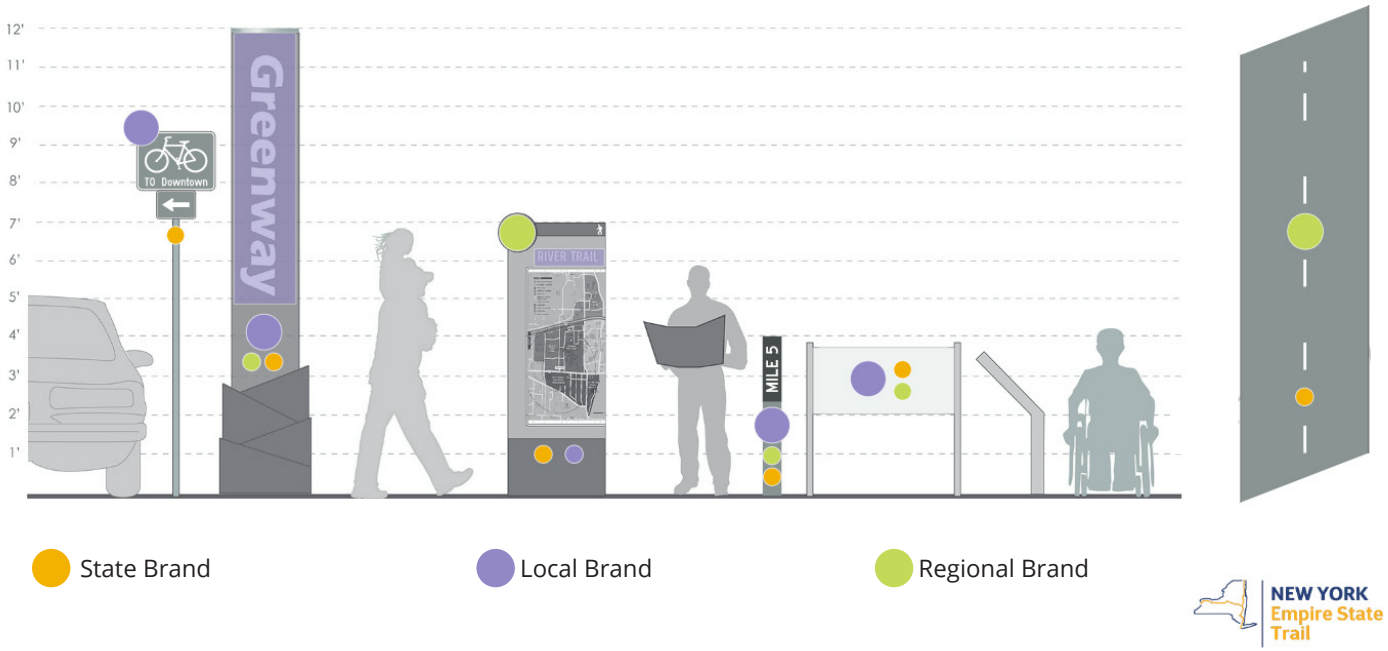
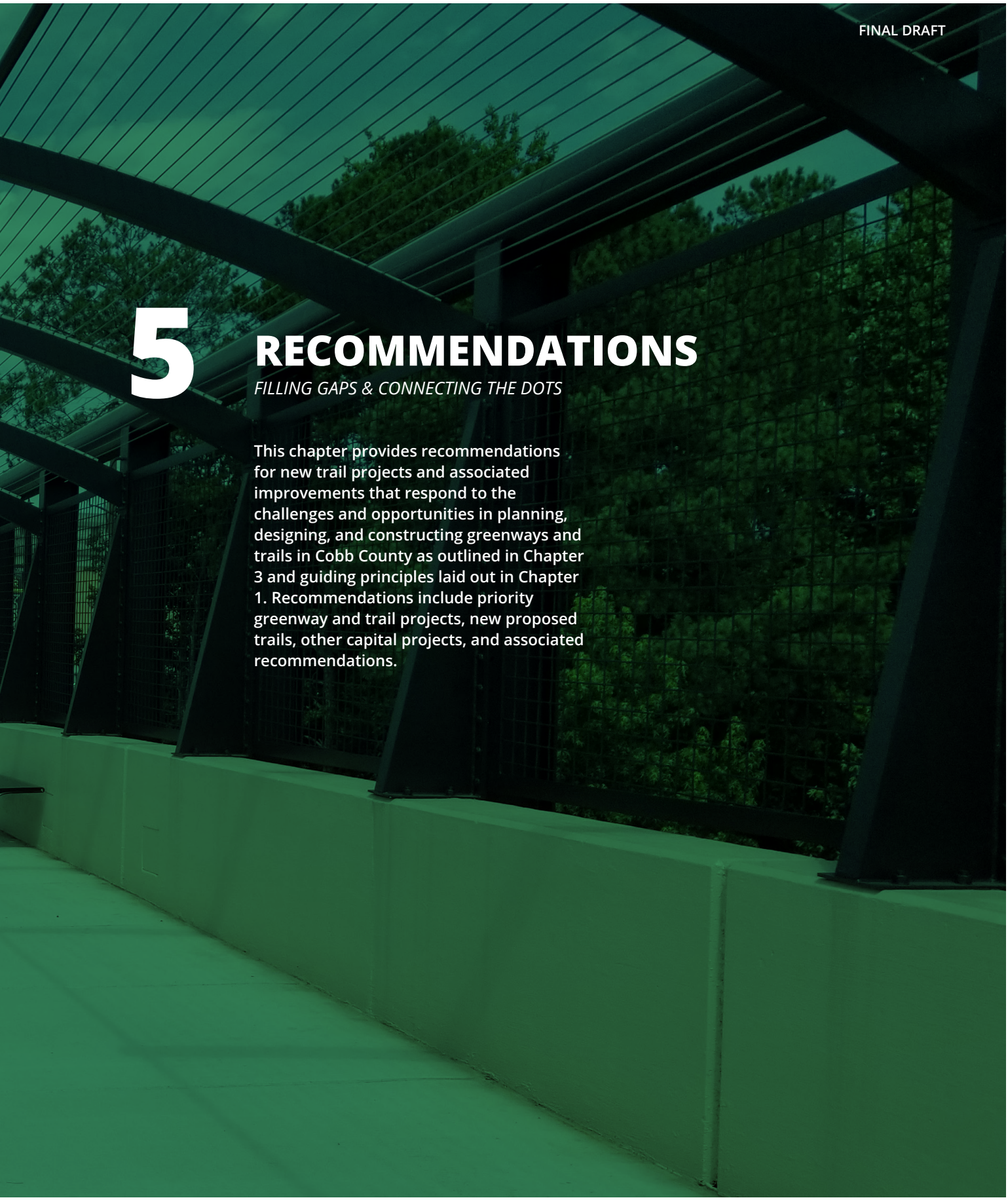


FIG. 4-27 COMBINING LOCAL & REGIONAL TRAIL BRANDS IN WAYFINDING SIGNAGE
Source: Alta Planning + Design

THE AWARD-WINNING SKIP SPANN CONNECTOR IS A GOOD EXAMPLE OF A MULTI-MODAL FACILITY



5 RECOMMENDATIONS

FILLING GAPS & CONNECTING THE DOTS

This chapter provides recommendations for new trail projects and associated improvements that respond to the challenges and opportunities in planning, designing, and constructing greenways and trails in Cobb County as outlined in Chapter 3 and guiding principles laid out in Chapter 1. Recommendations include priority greenway and trail projects, new proposed trails, other capital projects, and associated recommendations.

GUIDING PRINCIPLES

- SAFETY AND SECURITY
- ACCESSIBILITY
- ECONOMIC COMPETITIVENESS
- CONNECTIVITY AND ACCESS TO DESTINATIONS
- COMFORT AND DESIGN FOR EVERYONE
- EQUITY
- ENVIRONMENTAL SUSTAINABILITY
- PRIORITIZATION/OPPORTUNISTIC IMPLEMENTATION

Building upon the elements of a successful trail network, understanding of trail user types, and design guidance, several guiding principles were developed to establish an approach to trail and greenways design and implementation that mirrors the key qualities of successful walking and bicycling networks established ARC's *Walk. Bike. Thrive!* report as well as previously approved Cobb County plans and studies.

SAFETY AND SECURITY

Cobb County should be an active community where bicycling and walking are safe, healthy, fun, and part of everyday recreation and transportation options.

A network of interconnected active transportation facilities that considers personal safety and accessibility in its design will attract and sustain activity. Cobb County supports the tenets of Vision Zero – a policy-driven and action-based response to reducing preventable traffic deaths by valuing human life over mobility, sharing responsibility between providers and regulators, mitigating roadway designs that are inhospitable to users, especially the most vulnerable, and coordinating change between providers, regulators, and users. Safety improvements focused on crash hot-spot areas, particularly those that have high incidents of fatalities and serious injuries, are likely to have the greatest impact.

Crime Prevention Through Environmental Design (CPTED) is a proactive crime fighting technique in which the proper design and effective use of the built environment can lead to a reduction in the fear of and incidents of crime and an improvement in quality of life. In contrast to the approach of addressing crime concerns by implementing visually affronting security or target

hardening measures such as locks, hard barriers, security gates, security patrols, etc., CPTED promotes high quality and visually pleasing solutions as first responses that aim to enhance the legitimate use of space. CPTED can be applied without interfering with the normal use of spaces. It is easy to apply and can be economical to implement, especially if done during early planning and design stages of a project.

The Principles of CPTED are:

- Natural Surveillance
- Natural Access Control
- Territorial Reinforcement
- Maintenance

ACCESSIBILITY

At the core of accessibility is inclusivity. An active transportation system needs to meet the mobility needs of all users, including senior citizens, children, people in wheelchairs and people with visual or hearing impairments.

Adhering to the design guidelines established by the Americans with Disabilities Act (ADA) and removing barriers will ensure universal access. Additionally, Cobb County can encourage walking and bicycling on their trails by focusing on creating network connections for short trips that allow residents and visitors to access work, transit, and daily needs. This approach closes gaps in the network, considers travel sheds – distances most people are willing to travel on foot and by bike – and leverages existing walkway, bicycle, and trail facilities. Establishing first- and last-mile connections to transit, especially in areas where access to a personal vehicle is limited, will also increase access.

ECONOMIC COMPETITIVENESS

A comprehensive trail network will not only boost personal health, but economic health too. A well-connected trail network in Cobb County will link people to jobs, shops, restaurants, historic sites, and parks; create a strong sense of place for local residents; and attract tourists from the Atlanta Region and beyond.

The Chattahoochee River, Kennesaw Mountain, and communities from Acworth to Marietta to Austell will be seamlessly connected, providing residents and visitors fun and healthy ways to enjoy the cultural amenities and natural landscapes of Cobb County. This attractive force will be felt in the tourism industry and real estate market on multiple levels: it will draw in visitors, increase property values, connect people without access to personal vehicles to places of economic opportunity and cultural destinations, and attract people looking to buy homes or open new businesses.

CONNECTIVITY AND ACCESS TO DESTINATIONS

An interconnected network of trails will enable people to get where they want to go. Pairing Cobb's local trail network with inviting public spaces, sidewalks, and all ages and abilities on-street bikeways will increase convenience and enhance direct connections.

Short trail segments, or neighborhood connector trails that prioritize key destinations like schools, parks, town centers and commercial cores, and grocery stores will have the greatest impact. It is also important

to provide connections to, from, and between:

- Major parks and recreation sites like Kennesaw Mountain, the Chattahoochee River National Recreation Area, and Allatoona Creek Park, as well as Lakes Acworth and Allatoona
- Colleges like Kennesaw State University, Life University, Gwinnett College, and Chattahoochee Technical College
- Cities and towns like Acworth, Austell, Kennesaw, Marietta, Powder Springs, Smyrna, and the Cumberland, Town Center, and Gateway Marietta CIDs
- Regional trail networks like the Silver Comet and NW Corridor Trail that will facilitate long-distance travel, opening the door to regional travel by bike

COMFORT AND DESIGN FOR EVERYONE

Comfort directly encourages or hinders a person's decision to walk, roll, or ride a bike. Recognizing this, Cobb County aims to design trails that consider users well-being, as well as to identify and improve current areas of discomfort.

Providing adequate trail widths, considering microclimates, accounting for adjacent roadways and intersection conflict points, wayfinding signage, and supporting trail amenities all add to a person's sense of comfort and ensure that trails can be used by everyone. Trail design and placemaking that suit the local context also contribute to an increased level of comfort. Cobb County can ensure its trails are welcoming environments by implementing best practices of Crime Prevention Through Environmental Design (CPTED) that influence the built environment (see above) and by adhering to the design standards set forth in Chapter 4 of this plan document.

EQUITY

Cobb County strives to develop an equitable multi-modal transportation network by providing access and connectivity for all residents and visitors.

Development of an equitable greenway and trail system that serves all residents and visitors is a priority for Cobb County. This includes connections in disadvantaged areas, such as with a high proportion of households with no vehicle or one vehicles. Equitable Target Areas, as defined by the Atlanta Regional Commission, are areas that warrant special attention for recreation and active transportation improvements.

ENVIRONMENTAL SUSTAINABILITY

Greenways and trails are prime opportunities to contribute positively to environmental health. Cobb County seeks opportunities to improve environmental conditions through siting, design, and increased use of greenways and trails.

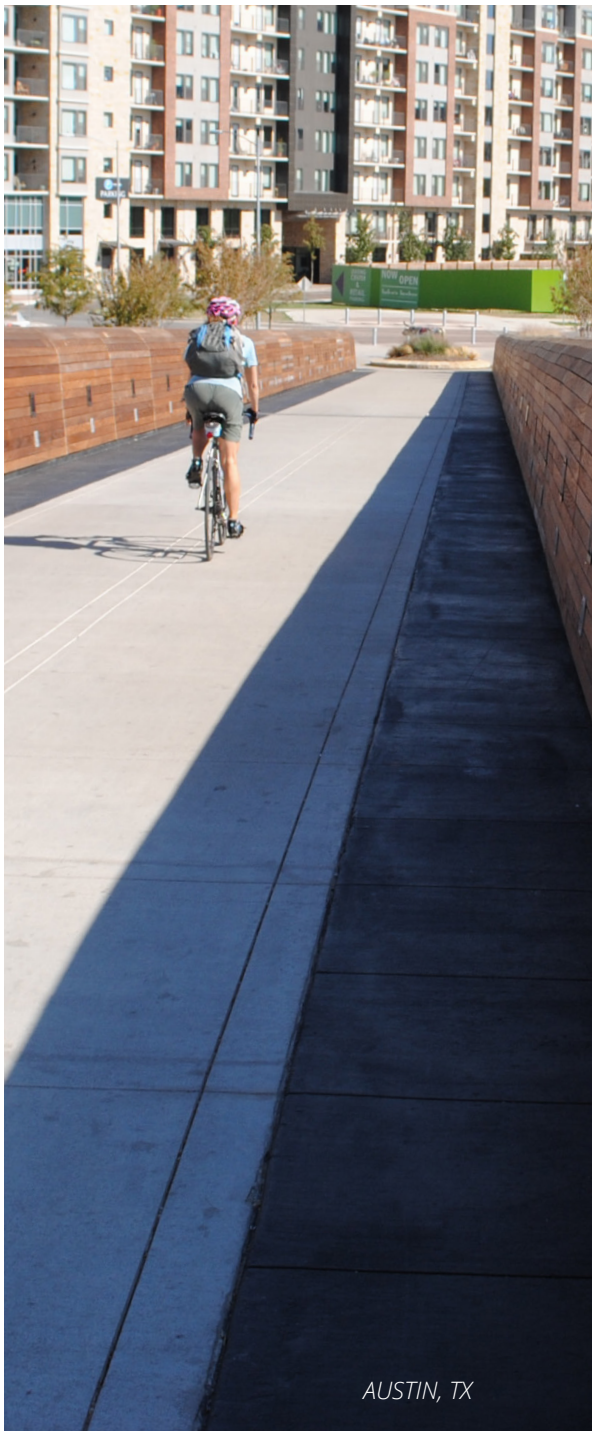
Cobb County can seize opportunities to improve environmental health through development of a greenway and trail network that respects the natural environment through the use of sustainable practices and materials. Greenways and trails are great opportunities to promote natural stormwater filtration and groundwater recharge, increase tree coverage, and reduce impervious surfaces. Plus, providing options for biking and walking can help reduce CO_2 emissions and fuel consumption.

SEIZE OPPORTUNITIES TO BUILD TRAIL SEGMENTS IN CONJUNCTION WITH OTHER PROJECTS

PRIORITIZATION/OPPORTUNISTIC IMPLEMENTATION

Expansion of any trail network happens incrementally over time. Cobb County can establish a framework for prioritizing future investments in the greenway and trail network based upon the criteria used to identify Countywide focus areas and priority projects in this Plan, while also taking advantage of opportunities to construct trail segments in conjunction with other projects as they arise.

While it is helpful to prioritize potential projects and investments based upon needs, funding availability and other factors, it is also important to be able to leverage other projects and seize unanticipated opportunities. Prioritization criteria for greenways and trails may include things like: closes network gaps, connects to regional trails, connects to high concentrations of potential users, and connects to key destination(s). However, the results of a prioritization exercise should not preclude opportunistic implementation of a trail if it can be built outside of its scheduled phasing. Coordinating with resurfacing and re-engineering projects that are already programmed through Cobb County, its Department of Transportation, or partner agencies or jurisdictions can greatly reduce costs.



AUSTIN, TX

2020 AND BEYOND: RECOMMENDATIONS

PROPOSED TRAILS

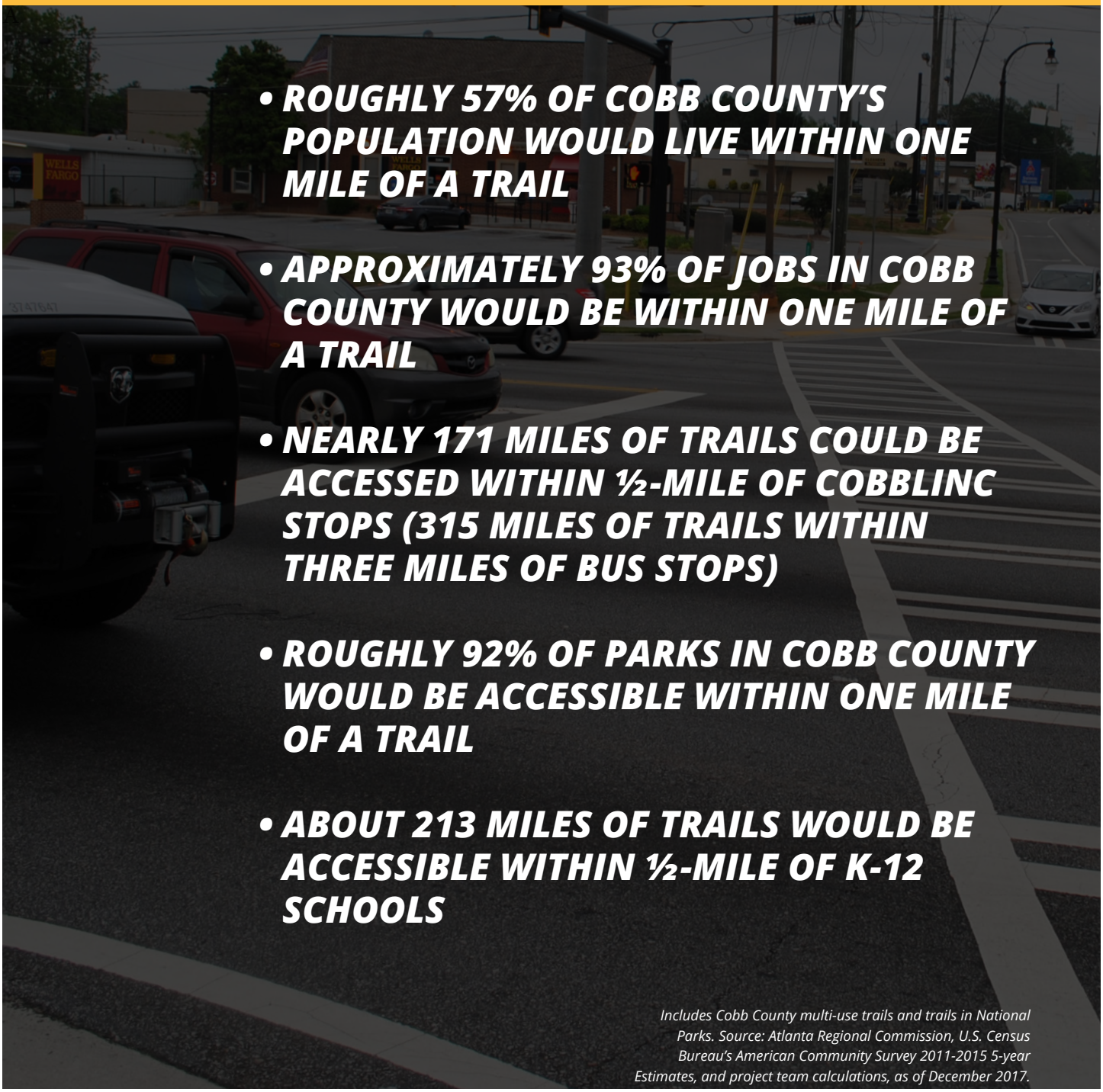
With guiding principles, design guidance, and best practices as a background, the Greenways and Trails Master Plan provides recommendations for new greenway and trail projects, including eight priority projects, other proposed trails, and complementary non-capital projects. This section describes a scoring exercise used to evaluate proposed trail projects in order to help guide future decisions about project implementation. It also highlights the eight priority greenway and trail projects, briefly describes new proposed trails directly identified through this planning process, and summarizes associated capital improvement projects and other recommendations.

Chapter 6 – Implementation Strategy provides overarching guidance to assist with future decision-making about which projects to implement as well as policy and programmatic considerations to support new biking and walking infrastructure.

Hundreds of miles of greenways and trails have been proposed through various plans and studies over the past several years. These projects represent hopes and aspirations of creating a vast interconnected network; however, it is unlikely that all of these proposed trails will be built in the near future. Over time, it will be necessary to revisit and refine proposed trail projects based upon needs and priorities at the time. As discussed elsewhere in this *Plan*, there are plentiful opportunities to improve upon and expand the greenway and trail network in Cobb County. With the current round of SPLOST-funded greenway and trail projects already significantly underway, the focus of this *Plan* is to identify the next set of logical, strategic investments – those projects that will be the County's focus over the next five to ten years.

These recommendations will result in a more interconnected network across Cobb County, in which biking and walking can be a greater part of everyday life for residents and visitors. Other recommendations are intended to support and complement investments in infrastructure and facilities, enhancing connectivity, giving people more choice in how they get around, and encouraging biking and walking as convenient, viable modes of travel.

DATA SHOWS THAT IF ALL OF THE 207 MILES OF PROPOSED TRAILS WERE TO BE BUILT:



- *ROUGHLY 57% OF COBB COUNTY'S POPULATION WOULD LIVE WITHIN ONE MILE OF A TRAIL*
- *APPROXIMATELY 93% OF JOBS IN COBB COUNTY WOULD BE WITHIN ONE MILE OF A TRAIL*
- *NEARLY 171 MILES OF TRAILS COULD BE ACCESSED WITHIN ½-MILE OF COBBLINC STOPS (315 MILES OF TRAILS WITHIN THREE MILES OF BUS STOPS)*
- *ROUGHLY 92% OF PARKS IN COBB COUNTY WOULD BE ACCESSIBLE WITHIN ONE MILE OF A TRAIL*
- *ABOUT 213 MILES OF TRAILS WOULD BE ACCESSIBLE WITHIN ½-MILE OF K-12 SCHOOLS*

Includes Cobb County multi-use trails and trails in National Parks. Source: Atlanta Regional Commission, U.S. Census Bureau's American Community Survey 2011-2015 5-year Estimates, and project team calculations, as of December 2017.

IMPLEMENTATION GUIDANCE

SCORING PROPOSED PROJECTS

Throughout the course of the development of the *Greenways and Trails Master Plan*, the project team received **more than 180 suggestions** for locations of new trails from citizens and community members. In addition, there are more than **205 miles of trails that have been proposed** as part of previous plans or studies, approved by the County, Cities, and/or CIDs. Although this *Plan* emphasizes the priority projects to be pursued over the next five to ten years, beginning with the next SPLOST, it is also a framework for long-term coordination and development of future trail projects.

To that end, this *Plan* groups proposed trails into tiers in an effort to help guide future decisions about longer-term implementation. The results of this grouping do not specify a particular order of project implementation and are not meant to preclude development of trail projects as opportunities arise. In many cases, it may make sense to take advantage of opportunities to implement projects in conjunction with new development or roadway projects. The implementation order may vary based upon available funding, future land acquisition, and development projects. For example, a lower tier project may be able to be built in conjunction with redevelopment projects or roadway design projects, helping reduce overall costs. It is important to remain flexible, and as opportunities arise, to consider proposed trails and determine at the time whether to advance those projects on a case-by-case basis.

Scoring of proposed trails is based on the methodology summarized on the following pages. Criteria were developed collaboratively by the project team in consultation with County staff, based upon criteria used in similar planning efforts, and in consideration of regional and countywide strategies and priorities.

INITIAL ASSESSMENT OF COMMUNITY SUGGESTIONS

The first round of assessment was intended to narrow the list of community-provided suggestions. In total, community members and stakeholders suggested **more than 330 miles** of trails. To determine which community suggestions would be considered for scoring and possible inclusion as new "proposed" trails in the *Plan*, the project team conducted an initial screening, based upon potential connectivity, overall length, and proximity to schools and parks. The team also screened for locations that would be better candidates for on-street bike facilities, such as shared streets or neighborhood bikeways. This resulted in a set of **66 community-suggested greenways or trails** that were considered as part of the proposed project scoring process. All citizen suggestions have been preserved in Geographic Information Systems (GIS) data, maps, and in written format so that they can be referred to and revisited in the future. (Maps of all community suggestions are provided in Appendix C).

SCORING OF PROPOSED TRAILS

The scoring exercise was designed to produce a composite score of all trails that have been proposed in previously approved plans and studies (which have been shown as "proposed" trails on the Cobb County Trail Map) along with the identified subset of community suggestions, and new projects identified through this planning process. The purpose of the scoring exercise is to inform decisions about future project selection and implementation; the results are not intended as an automatic vetting or expression of support for individual projects.

In keeping with the overall framework and strategies recommended by ARC in the regional walking and biking plan, *Walk.Bike. Thrive!,* the scoring criteria emphasized regional connectivity; opportunities for trails to

become destinations and generate economic activity; linkages and connectivity to trails of Countywide significance (spine trails); their ability to close gaps in the existing network; and proximity to public transportation. They also reflected criteria used by Cobb County for prioritization of sidewalk projects and factors identified by ARC that yield good investments in active transportation, such as propensity for biking and walking and location in equitable target areas.

Scoring criteria used in this *Plan* built and expanded upon these criteria to consider stated plan goals, such as potential for attracting visitors (a measure of economic development potential), improving connectivity by linking to other trail segments, and factors such as proximity to schools and parks, roadway conditions, and more. The criteria were grouped into three categories, reflecting important components of the viability of greenway and trail projects:

1) Demand
2) Connectivity
3) Project Readiness

Within these three categories, a total of 18 criteria were used to evaluate potential trail projects. Scores were assigned for each criterion based upon quantitative and qualitative data. Criteria were weighted somewhat, differentiating between greenway trails and sidepath trails, to account for factors that would affect viability and project readiness for a trail alongside roadways versus those in a more natural setting, such as roadway conditions and environmental considerations. For additional details on this process, see Appendix D.

Proposed trails were grouped into several tiers that reflect how well projects meet the criteria listed above. Generally speaking, higher tier projects meet more of the above criteria, whereas lower tier projects meet fewer of these criteria.

Demand:
1. Proximity to Schools
2. Proximity to Parks
3. Proximity to Transit
4. Serving Areas of Low Auto Ownership
5. Proximity to Activity Centers
6. Proximity to Recreation Centers / Community Facilities
7. Potential to Become Destination in its Own Right
8. Serving Equitable Target Areas
9. Serving Areas of High Biking and Walking Propensity

Connectivity:
10. Connects to or is Part of Major Spine Trail
11. Potential for Regional Connection
12. Completes a Gap in the Trail Network
13. Feeder to Existing or Programmed Trail

Project Readiness:
14. Multi-Agency Collaboration
15. Availability of Public Lands
16. Roadway Environment / Potential Barriers
17. Environmental Permitting
18. Community Value

Figures 5-1 and 5-2 show the results of proposed project scoring for greenway trails and sidepath trails. These tiers are not binding and should not necessarily discourage or preclude the implementation of any of the trails, should interest and opportunities arise. The scoring can be used as part of a decision-making process that will also take into consideration other factors such as available resources. It is fully anticipated that in the future, as the *Greenways and Trails Master Plan* is updated, the tiers and priorities will shift according to change in Countywide priorities, available resources, and the context of the physical environment around proposed trail corridors. A list of all proposed trails is provided in Appendix D.

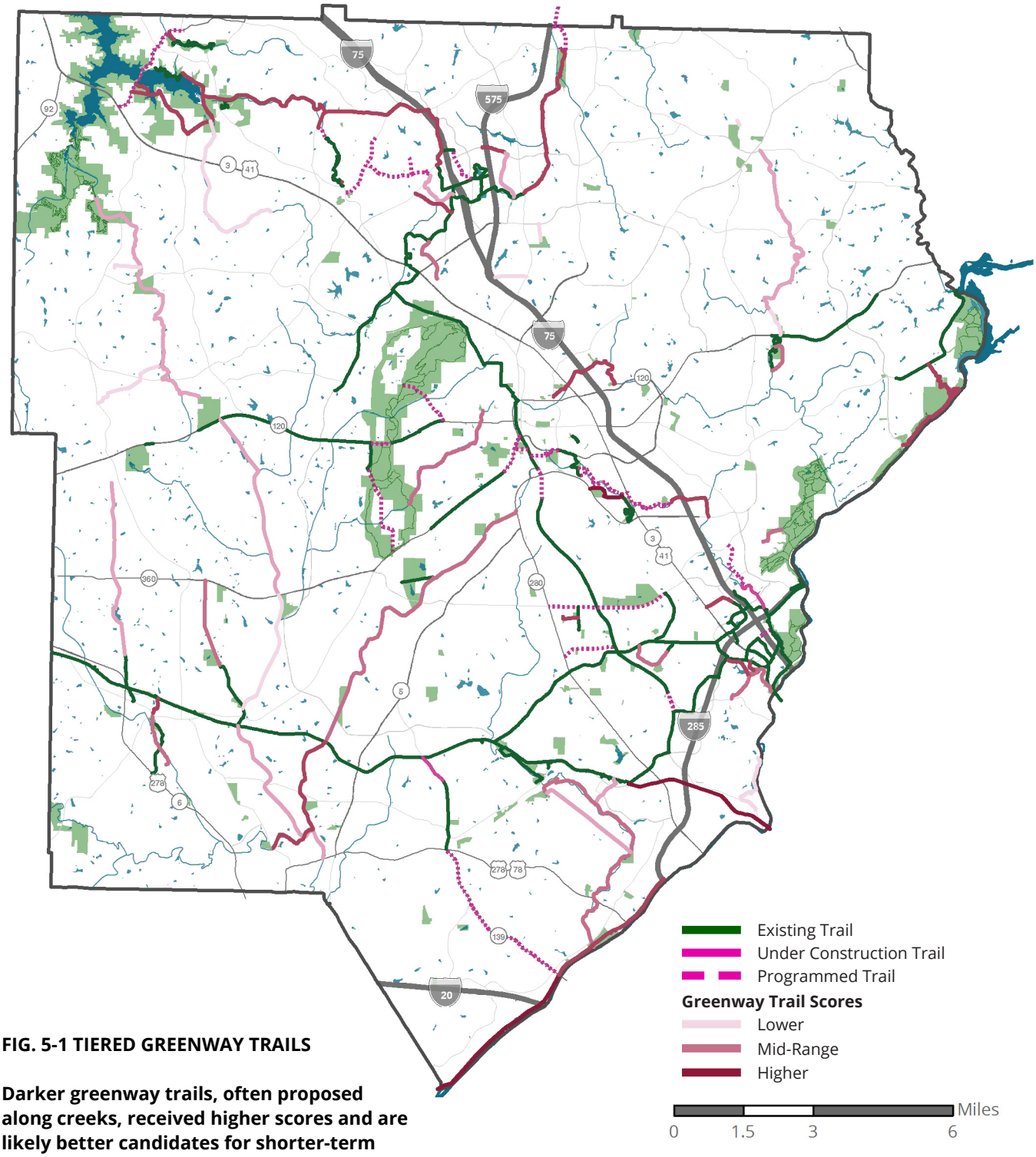


FIG. 5-1 TIERED GREENWAY TRAILS

Darker greenway trails, often proposed along creeks, received higher scores and are likely better candidates for shorter-term implementation than lighter greenway trails, which did not score as well.

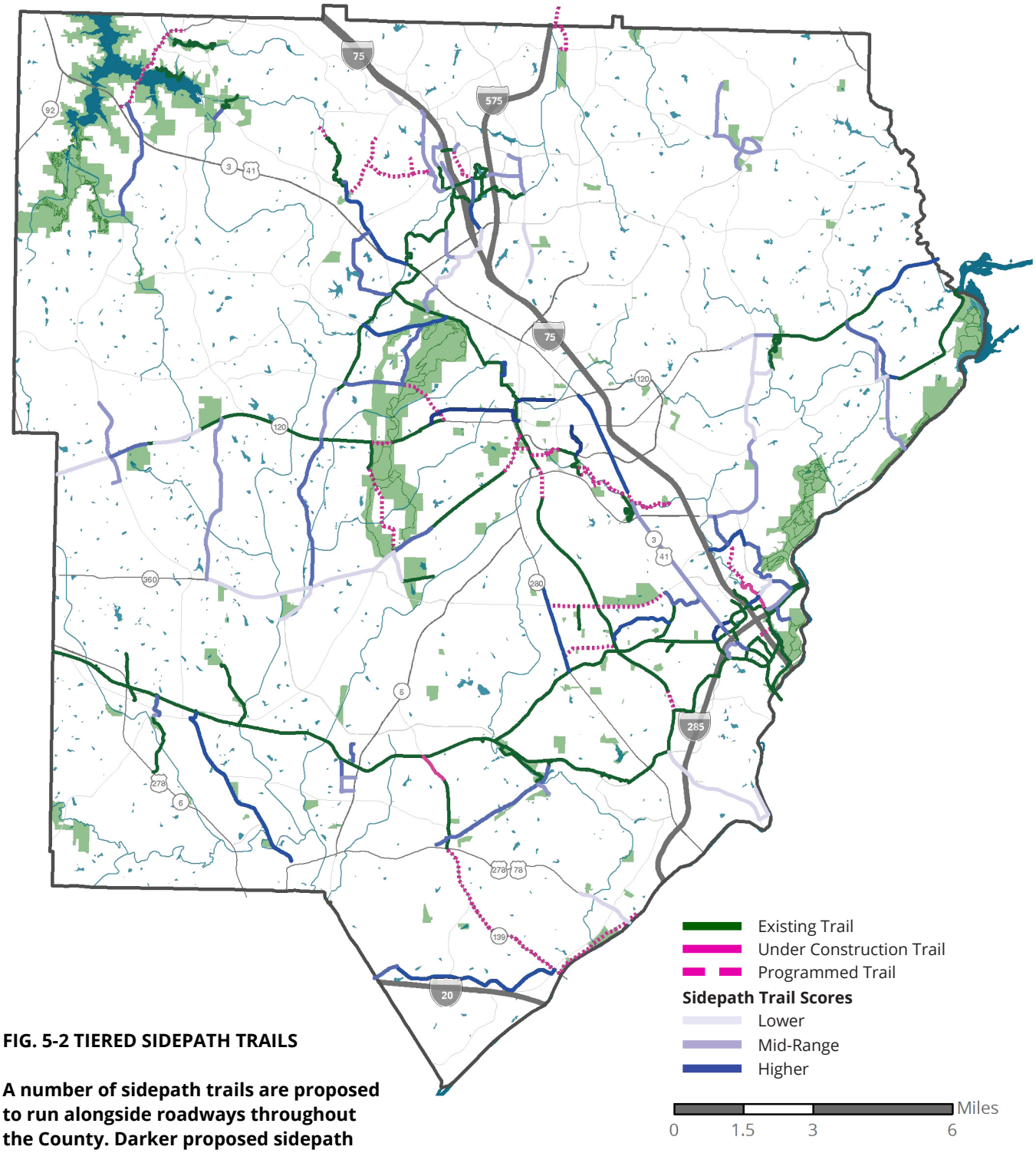


FIG. 5-2 TIERED SIDEPATH TRAILS

A number of sidepath trails are proposed to run alongside roadways throughout the County. Darker proposed sidepath trails received higher scores and are likely better candidates for shorter-term implementation than lighter ones.

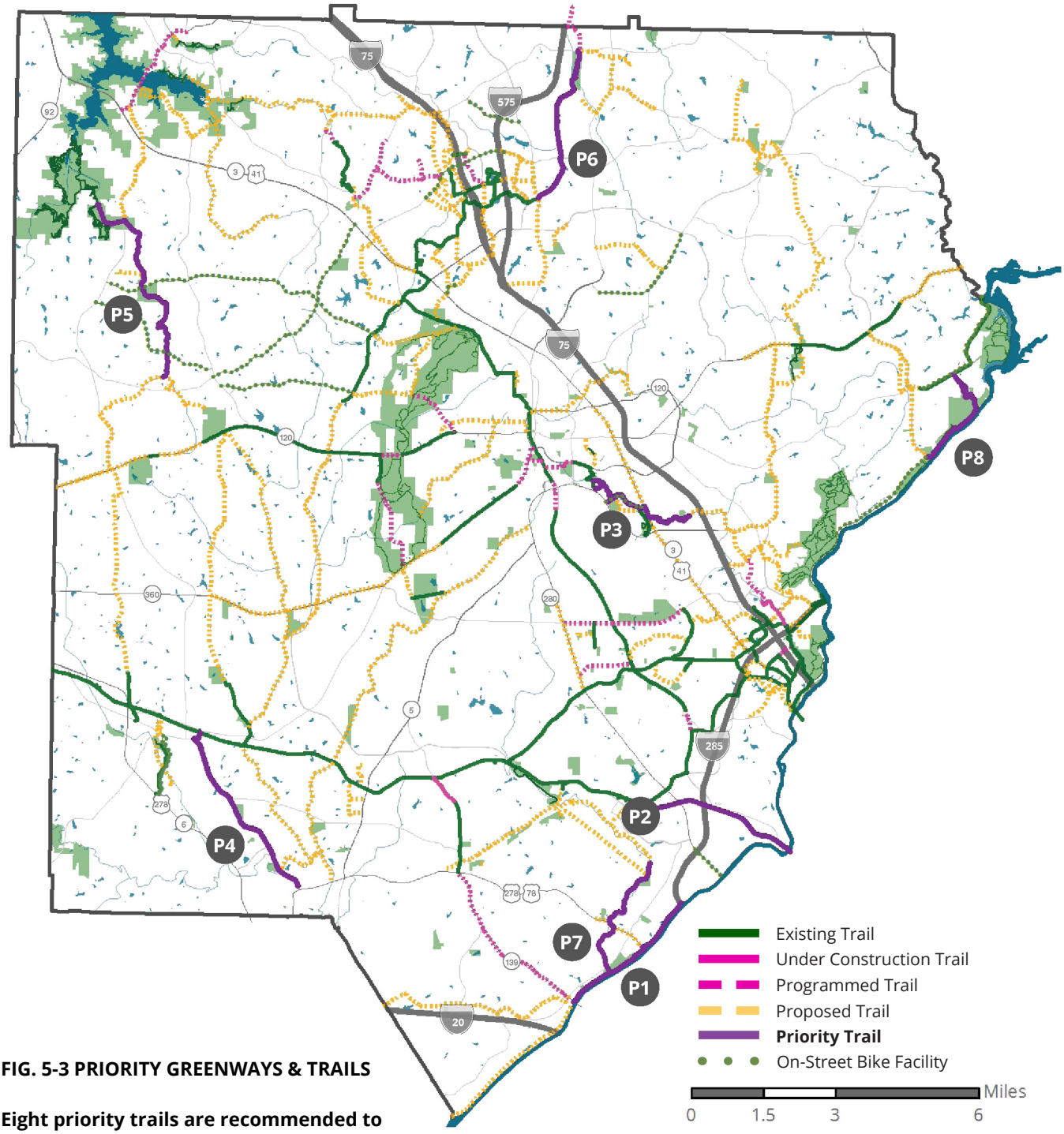


FIG. 5-3 PRIORITY GREENWAYS & TRAILS

Eight priority trails are recommended to increase connectivity and expand options for active transportation and recreation throughout the County.

PRIORITY GREENWAYS & TRAILS

OVERVIEW

The following pages offer descriptions of identified priority projects along with anticipated benefits, potential challenges, and reference maps. These descriptions are accompanied by separate project "cut-sheets" with illustrations, maps, planning-level cost estimates, and key features of each project, provided in Appendix A.

Based upon a combination of the results of the scoring process, community input, and input from Cobb DOT, **eight projects** have been identified as **priorities for implementation** (see Figure 5-3). Identification of priority projects was based upon numerous factors such as willing project partners, public support, potential for improved connectivity, geographic distribution, demand and propensity for walking and biking, opportunities for regional connections, and the potential for trails to become destinations and attract visitors.

Designation as a "priority" means there is support and momentum for these projects and that they should be prioritized in terms of funding for design and construction. They represent strategic priorities because they meet multiple stated plan goals, have support from partner agencies, and will confer significant benefits to the overall trail network and community in general. Potential benefits include:

- Direct and indirect health benefits from increased physical activity and access to greenspace and recreation, in the form of reduced healthcare costs and reduced risk of chronic disease
- More people will have the option to bike or walk instead of drive for day-to-day trips or work commutes, reducing congestion and improving human and environmental health
- Increased potential for short non-automobile trips and longer multimodal trips through connections to existing sidewalks and transit service
- Enhanced access to and development of walkable, vibrant centers
- Access to and preservation of natural areas, wildlife, and greenspace
- Environmental benefits from increased vegetation, which produces oxygen, filters air pollutants, reduces erosion, and filters stormwater runoff
- A more equitable and accessible transportation system with more travel options for people of all ages and abilities, including under-served communities, vulnerable populations, and those who lack access to vehicles
- Improved access to natural and cultural resources, including parks, historic areas, creeks and streams, and the Chattahoochee River, as well as places like schools, workplaces, recreation facilities, and commercial areas
- Expanded opportunities for social gatherings, public art, and better use of underutilized public property

P1 - CHATTAHOOCHEE RIVER TRAIL

MABLETON PARKWAY TO I-285

The Chattahoochee River Trail has the potential to become one of Cobb County's most appealing and most important assets. It would highlight what is arguably one of the County's best kept secrets – the Chattahoochee River. The Trail would provide unprecedented access to the portion of the river south of I-285, giving people the opportunity to see, interact with, and experience nature in a new and unique way. Community members have long advocated for a riverfront trail in this area and it has been discussed and envisioned by groups and organizations including the National Park Service, Chattahoochee NOW, the Trust for Public Land, and Chattahoochee Riverkeeper. In 2017, Cobb County, the Trust for Public Land, and the City of Atlanta were awarded funding to conduct master planning and engineering design of a Chattahoochee River Trail.

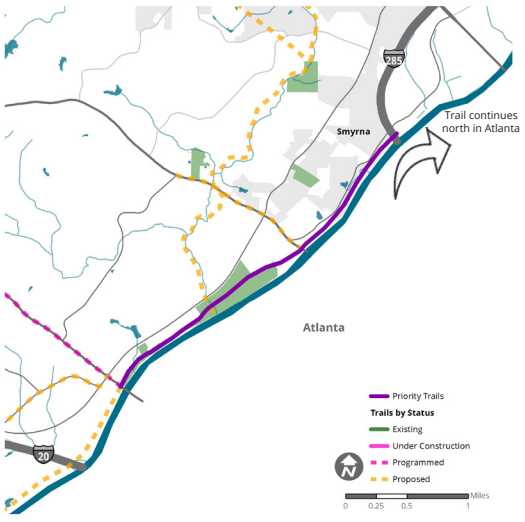
Within Cobb County the trail would stretch for just over three miles, from Mableton Pkwy to near I-285, where the Proctor Creek Greenway is anticipated to meet the Chattahoochee River in the future. From there, the proposed trail would cross the river and continue northward within the City of Atlanta to Peachtree Creek.

Steps have been taken to set the stage for waterfront access and a trail in this area. Cobb County owns nearly 47% of the land needed to accommodate a potential trail along this portion of the river. Furthermore, the Riverview Landing development inside the City of Smyrna has pledged to set aside 12 acres of land for public access along the river. There are some areas of steep terrain and it will be important to carefully design access points to encourage public access and ensure safety. The project will need to conform to the standards set as part of Metropolitan River Protection Act (MRPA). The existing utility easement is relatively flat and well-maintained, potentially accelerating the initial phases of the project.

The proposed trail would support the vision for regional connectivity: it could eventually be connected to the Silver Comet Trail via Floyd Road Trail and the programmed Mableton Parkway Trail or the proposed Fontaine Road Trail, providing much-needed trail access in South Cobb. It could also expand connectivity to the south, crossing into Douglas County. The Chattahoochee River Trail would increase public access to the river, offer scenic views, and enable visitors to catch rare glimpses of the river through the design of pull-offs and resting areas with views of the water. It could also set the stage for transformation of an underutilized resource and provide opportunities for complementary economic development and redevelopment of nearby properties.

The project scored relatively well in terms of demand and public support. It would require close coordination with various agencies and entities who control property along the river, including federal agencies, Cobb County, the City of Smyrna, as well as with likely project partners, the Trust for Public Land, and the City of Atlanta.

CONTEXT MAP



REVEAL THE RIVER

"We know that when corridors like the Chattahoochee River take on ideas designed to improve the lives of people, they become life-affirming social spaces and engines for our culture and economy – they bring us together and make our region stronger."

- Ryan Gravel, originator of the Atlanta BeltLine

(Source: www.rivernow.org)

P2 - SILVER COMET CONNECTOR TRAIL

EAST-WEST CONNECTOR TO CHATTAHOOCHEE RIVER

The project known as "Connect the Comet" is a grassroots effort to connect the existing Silver Comet Trail to the Atlanta BeltLine to provide transportation options and greater connectivity. The Silver Comet Trail is a regionally significant, nationally recognized rail trail, built on abandoned CSX railroad track. There have been ongoing efforts to encourage the State of Georgia and other local entities to coordinate with CSX to obtain a lease or easement for use of the rail corridor to complete the Silver Comet Trail. During the summer of 2017, "Connect the Comet" delivered a petition to Governor Deal with more than 4,000 signatures supporting the project. The existing portions of the trail already see significant volumes of users and with a connection to the Atlanta BeltLine, the trail would become even more of an asset.

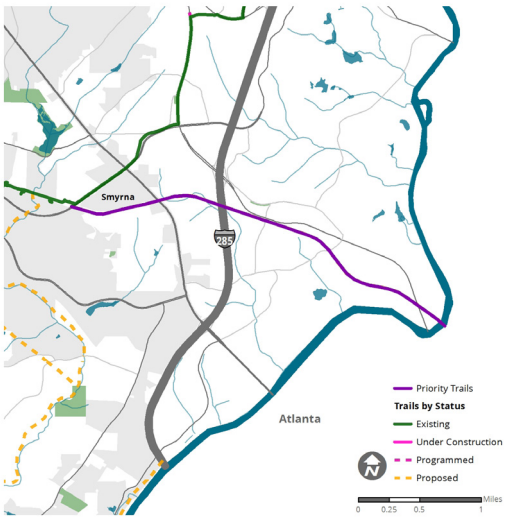
Completing this segment of the Silver Comet Trail would provide regional connectivity and links to proposed future trails, as well as showcase cultural and historic resources like the River Line Historic Area and Trolley Line Park. Furthermore, the trail would enhance access to public transportation, expand the potential for people to walk and bike to work, and generate significant economic benefits. In 2013, it was estimated that the existing Silver Comet Trail generates more than $100 million per year in economic expenditures throughout the region and supports about 750 jobs.[1] Furthermore, the proposed trail would fill a void in an area that is currently underserved by greenways and trails, providing much needed opportunities for active transportation and recreation east of I-285 and south of Cumberland.

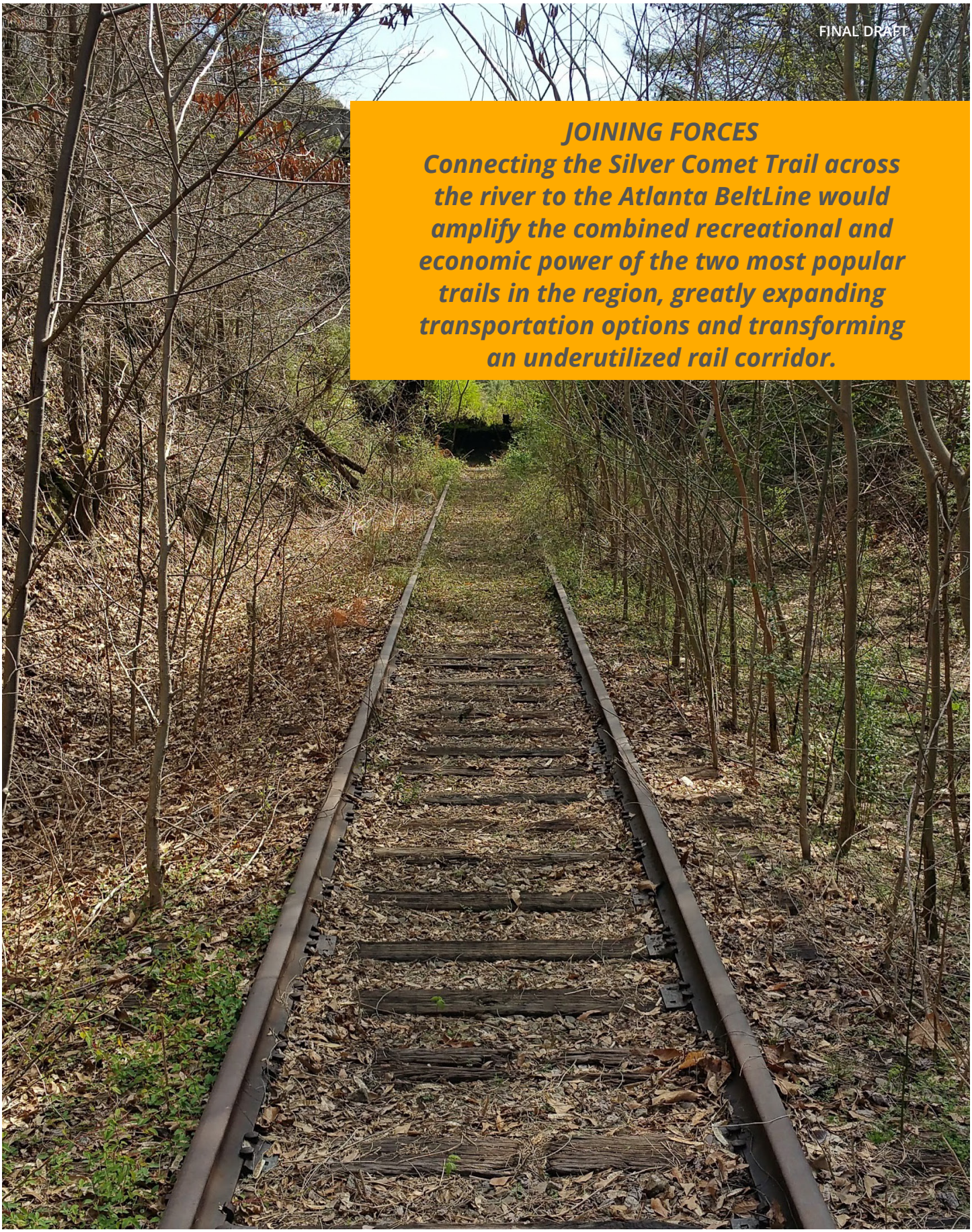
The Silver Comet – Atlanta BeltLine Connector segment within Cobb County is roughly 3.4 miles between East-West Connector and the Chattahoochee River at the Fulton County line. The majority of the trail corridor is CSX railroad property. The width of the railroad ROW ranges from approximately 100 feet to approximately 180 feet in some sections.

Although most of the corridor is relatively flat, there are steeper segments at either end of the corridor. The existing width of the project should be carefully coordinated to involve all potential partner agencies, including, but not limited to the State Legislature, Cobb County, City of Smyrna, City of Atlanta, Georgia DOT, PATH Foundation, utility companies, and CSX, as well as other stakeholders.

This project scored well in terms of demand and connectivity due to the high potential for regional connectivity, proximity to schools, and connections to an existing spine trail. It also has strong community support, though will take considerable coordination with the railroad and other entities to complete the trail.

CONTEXT MAP





JOINING FORCES
Connecting the Silver Comet Trail across the river to the Atlanta BeltLine would amplify the combined recreational and economic power of the two most popular trails in the region, greatly expanding transportation options and transforming an underutilized rail corridor.

P3 - ROTTENWOOD CREEK TRAIL (PHASE I)

ALUMNI DRIVE TO FRANKLIN GATEWAY

The City of Marietta and its various partners have had a vision for the Rottenwood Creek Trail for years and have made significant progress toward design and construction. It was initially identified as part of the MU2LCI (Livable Centers Initiative) study in 2012. Scoping and concept reports were completed in 2015 and 2016 respectively, and the project is currently undergoing preliminary engineering. The vision is to expand the City's multi-use trail network to facilitate connections to the Bob Callan/Rottenwood Creek, Mountain to River, and Silver Comet Trail networks, improving access, connectivity, and providing greater choice in transportation options.

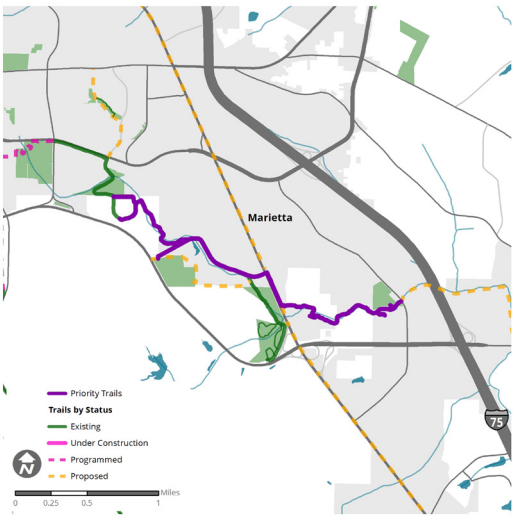
The 3.3-mile first phase of the Rottenwood Creek Trail would generally consist of a 10-foot-wide paved trail along roadways and Rottenwood Creek. Substantial portions of the trail would lie within floodplain, following easements where possible, while others would travel along local and state roads, requiring close coordination with multiple agencies, which has already begun. Pedestrian bridges and trailheads are also proposed as part of the project.

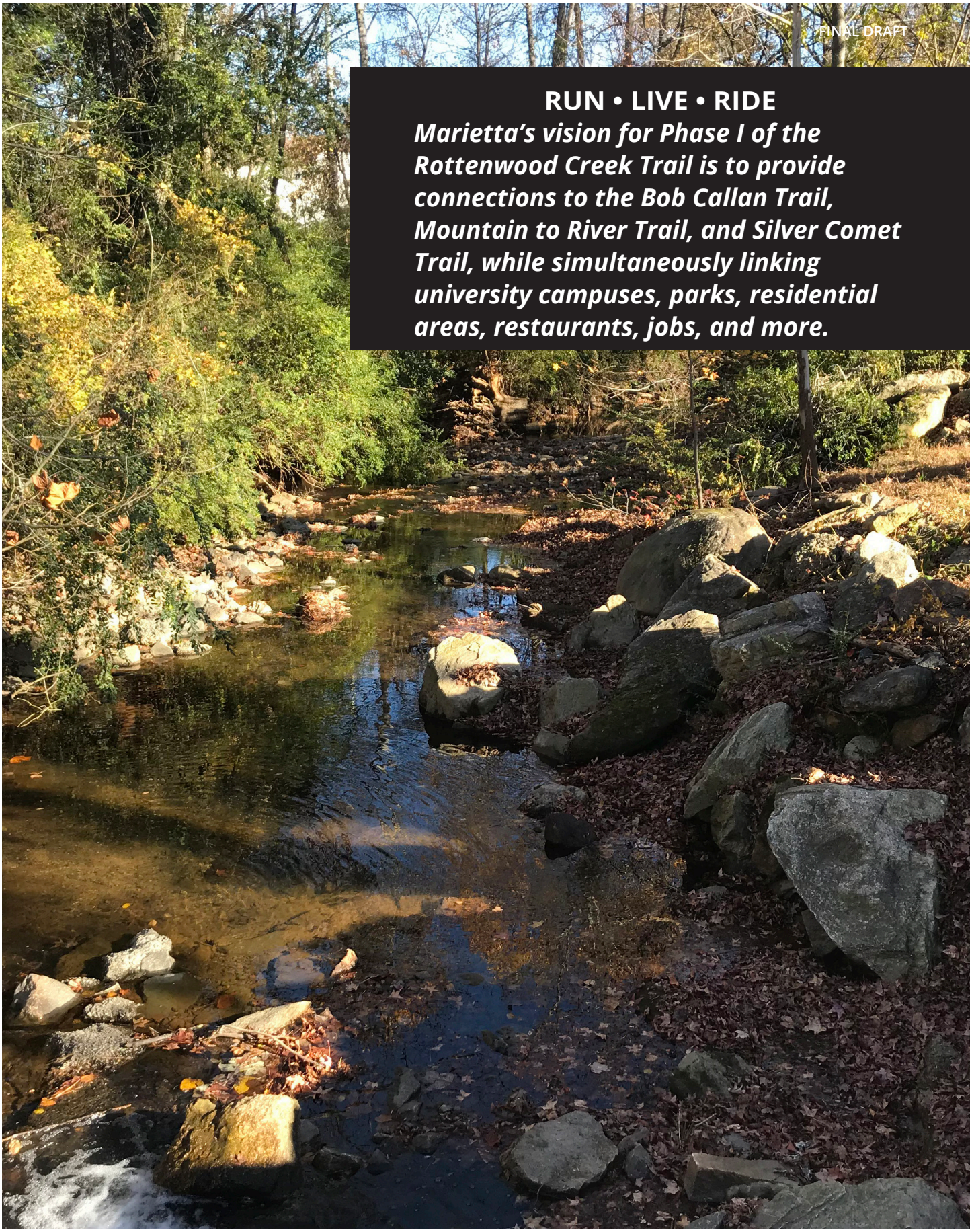
The project enjoys strong interest and support from partners and the community at large. It would connect City of Marietta recreational facilities, two universities – Kennesaw State University and Life University – to retail and residential uses, and the Franklin Gateway Sports Complex. In addition, the trail will connect to the Rottenwood Creek/University Trail (previously known as Aviation Park Connector), which connects to the programmed Mountain to River Gap Trail in the northeast corner of the Larry Bell Complex, ultimately providing a seamless connection from Town Center and Kennesaw Mountain to the Franklin Gateway Sports Complex. It would also serve existing bus routes and is within ¼-mile of the Marietta Transfer Center, improving multi-modal connectivity. The project has the potential to provide alternative transportation options as well as recreational opportunities to thousands of students and other community members in the area.

This City of Marietta project is a high Countywide priority for its tremendous potential benefits in terms of providing increased connectivity and multi-modal transportation options in a large activity center. It would serve many people and provide greater access to other trails in the area.

RUN • LIVE • RIDE
ROTTENWOOD CREEK TRAIL

CONTEXT MAP





RUN • LIVE • RIDE

Marietta's vision for Phase I of the Rottenwood Creek Trail is to provide connections to the Bob Callan Trail, Mountain to River Trail, and Silver Comet Trail, while simultaneously linking university campuses, parks, residential areas, restaurants, jobs, and more.

P4 - AUSTELL POWDER SPRINGS ROAD TRAIL

JOE JERKINS BLVD TO SILVER COMET TRAIL

The Austell Powder Spring Road Trail would be the first formal multi-use trail in the City of Austell. It is proposed to run alongside Austell Powder Springs Rd between Joe Jerkins Blvd and Marietta St/Powder Springs Rd, where it would jog slightly east to connect to the Silver Comet Trail and Linear Park at the end of Lindley Rd in Powder Springs. The trail was first proposed as part of *Envision Austell*, the City's 2017 Comprehensive Plan Update. Although other trails are proposed in the area, this one rose up as a priority due to its ability to connect various parts of the community and provide multimodal transportation options.

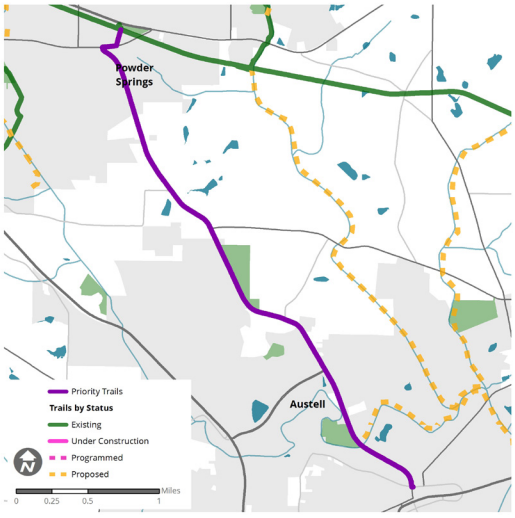
As the first transportation-oriented trail in Austell, it would greatly increase the community's options for non-automobile transportation to and from a variety of destinations. With quality design, the proposed trail would be an opportunity to preserve and enhance the character of the surrounding areas, including the historic district, while providing safe transportation and recreational opportunities.

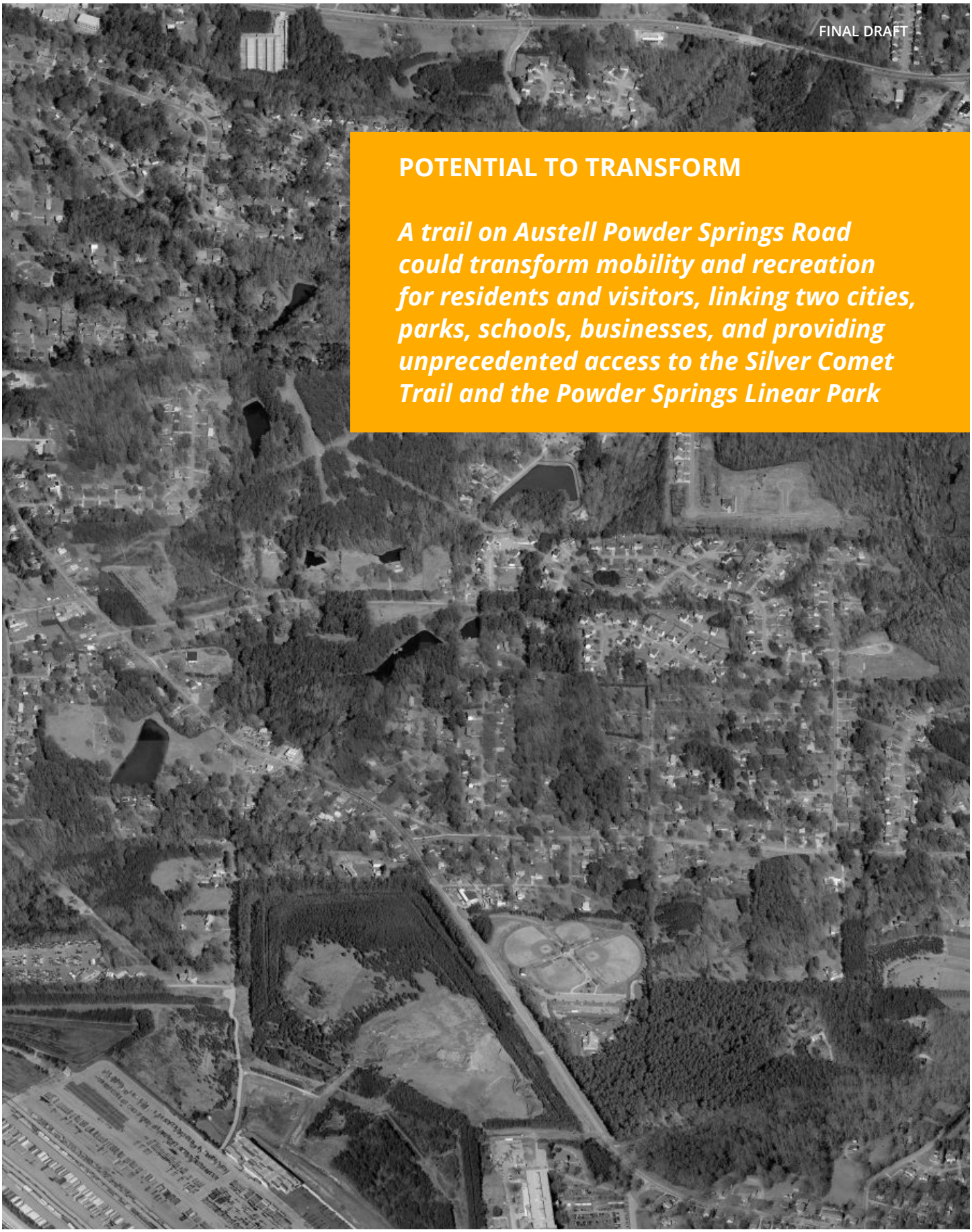
The approximately four-mile trail is proposed as a 12-foot-wide paved sidepath connecting multiple schools, parks, and businesses, and increasing access to the Silver Comet Trail. It also would connect recreational and community facilities with businesses. A bridge structure that can accommodate bicyclists and pedestrians will be needed where the road crosses Sweetwater Creek.

The project will require close coordination between multiple entities, as it crosses jurisdictional boundaries between unincorporated Cobb County, Clarkdale Historic District, the City of Austell, and the City of Powder Springs. The proposed alignment follows a local road, increasing feasibility of construction; however, the presence of the historic district and constrained right-of-way present challenges.

This project scored well in terms of demand, in part due to the its proximity to parks, activity centers, community facilities, as well as for serving areas with lower rates of access to automobiles and moderate biking and walking propensity. It also is supported by potential project partners, including the City of Austell and Cobb County Commissioner who represents the district. Other factors include potential for interagency partnerships and the connection to the Silver Comet Trail.

CONTEXT MAP





POTENTIAL TO TRANSFORM

A trail on Austell Powder Springs Road could transform mobility and recreation for residents and visitors, linking two cities, parks, schools, businesses, and providing unprecedented access to the Silver Comet Trail and the Powder Springs Linear Park

P5 - ALLATOONA CREEK GREENWAY

DUE WEST RD TO ALLATOONA CREEK PARK

This nearly five-mile segment of the Allatoona Creek Greenway is part of a longer proposed trail stretching from Dallas Hwy to Lake Acworth along Allatoona Creek and Mars Hill Rd. It would stretch from Harrison High School on Due West Rd to Allatoona Creek Park – the property leased by Cobb County from the Army Corps of Engineers.

The proposed project enjoys support from community groups such as Friends of Price Park and would provide much needed connectivity in West Cobb. It would improve access to the more than 25 miles of mountain bike and hiking trails in Allatoona Creek Park, as well as hiking paths in Price Park. The greenway would increase access to and provide non-motorized transportation options for students, staff, and visitors at several area schools. It would also improve access to the kayak put-in where Allatoona Creek meets County Line Rd.

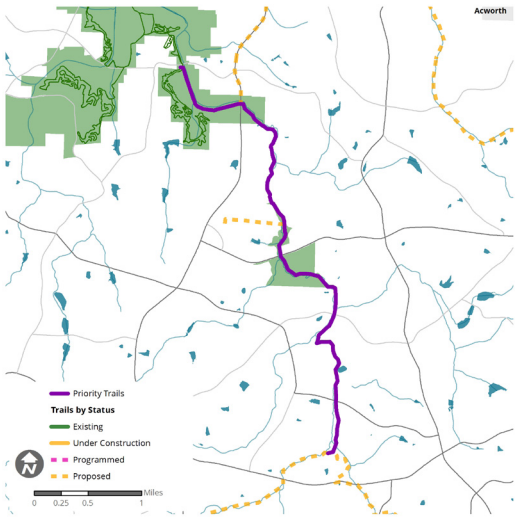
A proposed spur trail would potentially follow power line easements west of Allatoona Creek to provide access to the West Cobb Regional Library, Kroger, and Northwest Family YMCA off of Dennis Kemp Ln, near Stilesboro Rd and Mars Hill Rd. Several opportunities have been identified for trailheads and access points along the proposed alignment.

Substantial portions of the proposed alignment are within floodplain and or wetlands and will require permits and resilient materials. Portions of boardwalk may also be needed in some areas. Recent acquisitions of land by Cobb County mean that more than half of the land needed to build this trail are in public ownership, increasing the feasibility of construction.

The project would involve partners such as the P.A.R.K.S. Department, Friends of Price Park, Cobb County Schools and West Cobb neighborhoods.

Although the project was not in the highest tier of the scored proposed trails, it scored well on some elements of demand, such as proximity to parks and schools and connectivity to existing trails. It has risen to a high countywide priority level because of the need for trails and greenways in this part of the County and because of the momentum behind the initial planning work. It also benefits from community support and was selected as a priority project for its potential to serve a currently underserved area and begin creating new opportunities for access, connectivity, and options for non-automobile transportation in the western part of the County.

CONTEXT MAP



. . . C.O.N.N.E.C.T. . T.H.E. . D.O.T.S. . .

The Allatoona Creek Greenway would connect several schools, a kayak launch, and increase access to more than 20 miles of hiking and mountain biking trails at Allatoona Creek Park, greatly expanding recreational opportunities in western Cobb County and providing new ways to explore the creek.

P6 - NOONDAY CREEK TRAIL

BELLS FERRY TRAILHEAD TO NOONDAY CREEK PARK

The Noonday Creek Trail project is proposed as an extension of the existing Noonday Creek Trail, from the Bells Ferry Road trailhead to the northern end of Noonday Creek Park, near the Cherokee County line. It would connect to the ongoing joint project between Cherokee County and the City of Woodstock to the north, which would construct a 10-foot multi-use path from the north end of Noonday Creek Park at Shallowford Rd to meet the existing section of Noonday Creek Trail in Woodstock. The northern segment of trail that terminates at SR 92 already sees roughly 200,000 users per year. To the south, the existing Noonday Creek Trail connects to other Cobb County and Marietta Trails, including what is known as the Mountain to River Trail. The entire network was recognized by ARC as a trail of regional significance, the Northwest Trail Corridor, in the regional trail plan.

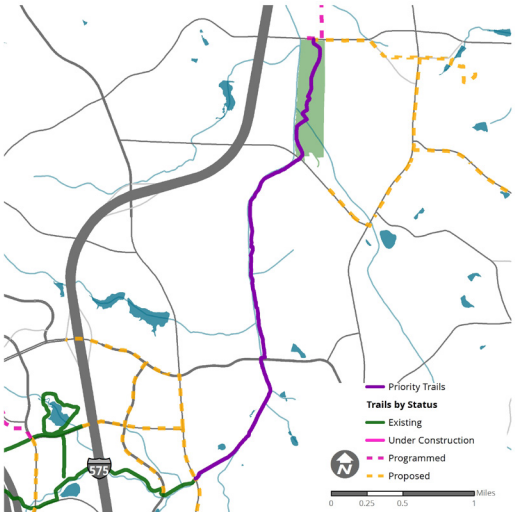
The majority of the priority trail corridor extends across Cobb County-owned land; however, easements will be required at some privately-owned properties. The Noonday Creek Trail is a complex alignment that will require crossing beneath three existing roadways and the installation of boardwalk, depending on the extent of hydric soils along Noonday Creek. While a sewer easement presents some opportunity for a shared public facility, much of the corridor is in floodplain or floodway, which may have permit impacts during trail development.

This three-plus mile trail extension would provide additional recreation and active transportation opportunities to a number of single-family neighborhoods in Cobb County, connecting them to Noonday Creek Park, improving access to area schools and Kennesaw State University, and future connections to the City of Woodstock. It is likely the project would be a collaboration between Cobb DOT and P.A.R.K.S., and would involve the Town Center CID, Cherokee County, neighborhood groups, and the City of Woodstock.

The project is one of the most highly anticipated of the proposed trail projects by the community. During public engagement activities, the project team was frequently asked when this project would be finished so that people could travel from Kennesaw Mountain to Woodstock.

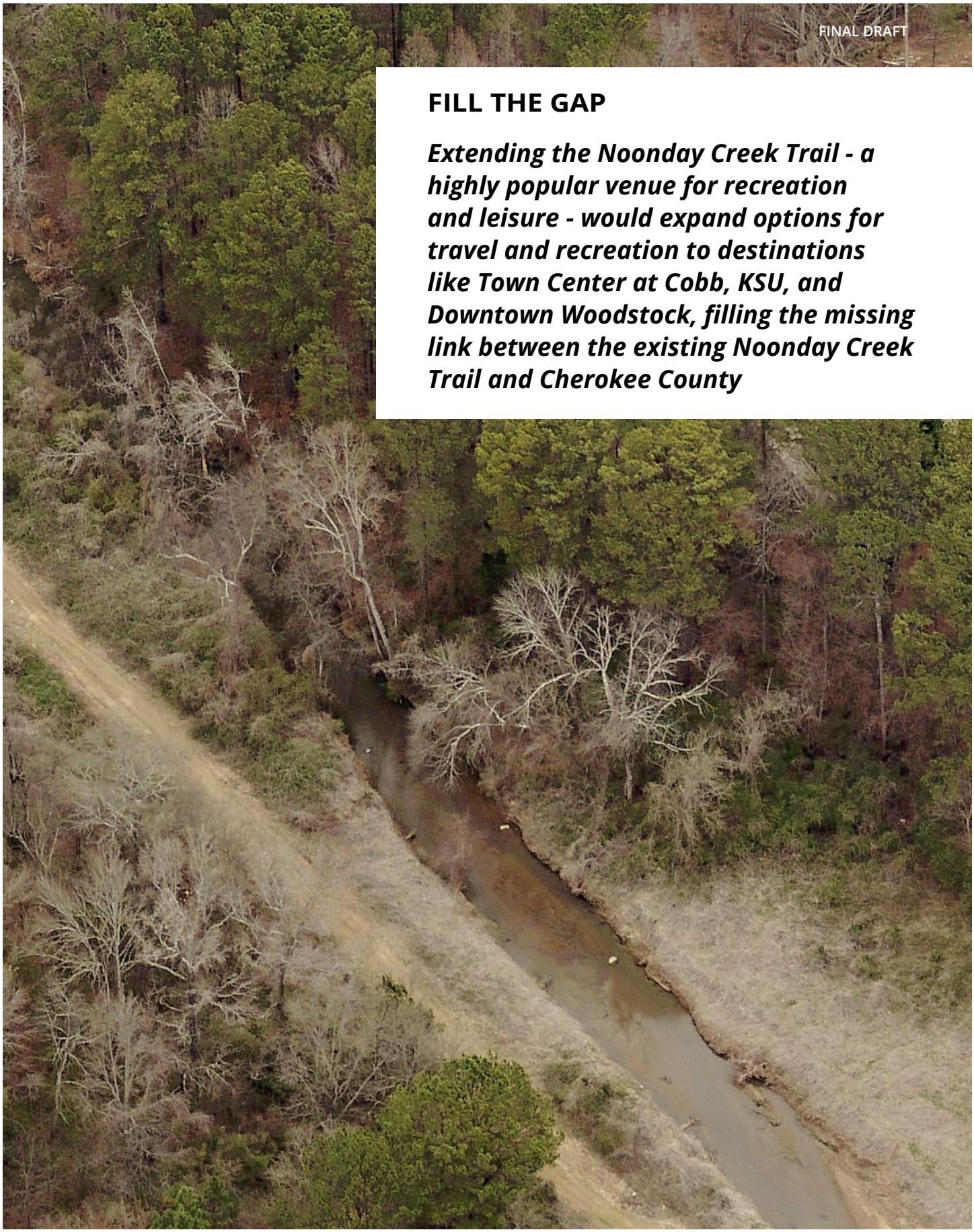
It would enhance and expand access to the existing Zagster bikeshare station operated by the Town Center CID, located at the Bells Ferry trailhead. This project scored well in terms of connectivity because of its role in connecting the existing Noonday Creek Trail to the programmed project in Cherokee County. It also has the benefit of proximity to parks and activity centers, as well as substantial portions of publicly owned land, and the ability to become a destination trail.

CONTEXT MAP



FILL THE GAP

Extending the Noonday Creek Trail - a highly popular venue for recreation and leisure - would expand options for travel and recreation to destinations like Town Center at Cobb, KSU, and Downtown Woodstock, filling the missing link between the existing Noonday Creek Trail and Cherokee County



P7 - NICKAJACK CREEK GREENWAY

CHATTAHOOCHEE RIVER TO BUCKNER RD

This proposed three-mile greenway would begin at the Chattahoochee River and end at Buckner Rd near the Lindley 6th Grade Academy. The trail would largely utilize Cobb County-owned land and follow sewer easements where possible.

The Nickajack Creek Greenway has a relatively long history and core group of supporters. In 1998, Cobb County's Comprehensive Plan identified the trail as a Short-Term Work Program item. The following year, the County's Community Development Planning Division prepared a feasibility study to identify potential opportunities and challenges along Nickajack Creek within a seven-mile study area, beginning at Heritage Park in the Concord Covered Bridge Historic District to the Chattahoochee River.

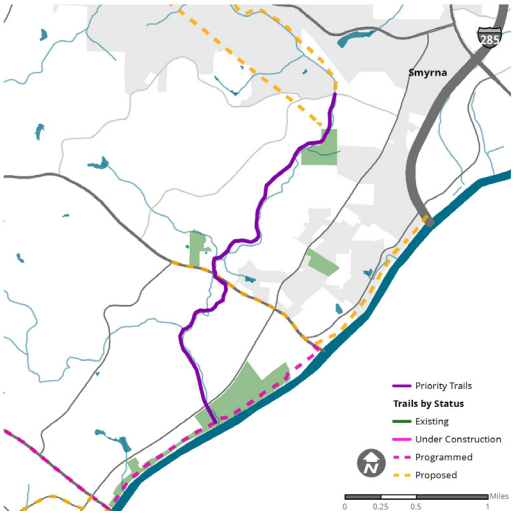
The corridor features several natural and historic resources, which can add to the draw of the greenway, attracting future visitors. Extensive coordination will be needed with federal agencies, the City of Smyrna, Cobb County, and community organizations active in the area. The County owns several large tracts of land along the southern portion of the trail corridor, including nearly contiguous properties from Nickajack Park to the County-owned park at the Chattahoochee River. Potential locations for trailheads have been identified along the proposed alignment, including near the Shoupades in the 100-acre County park property.

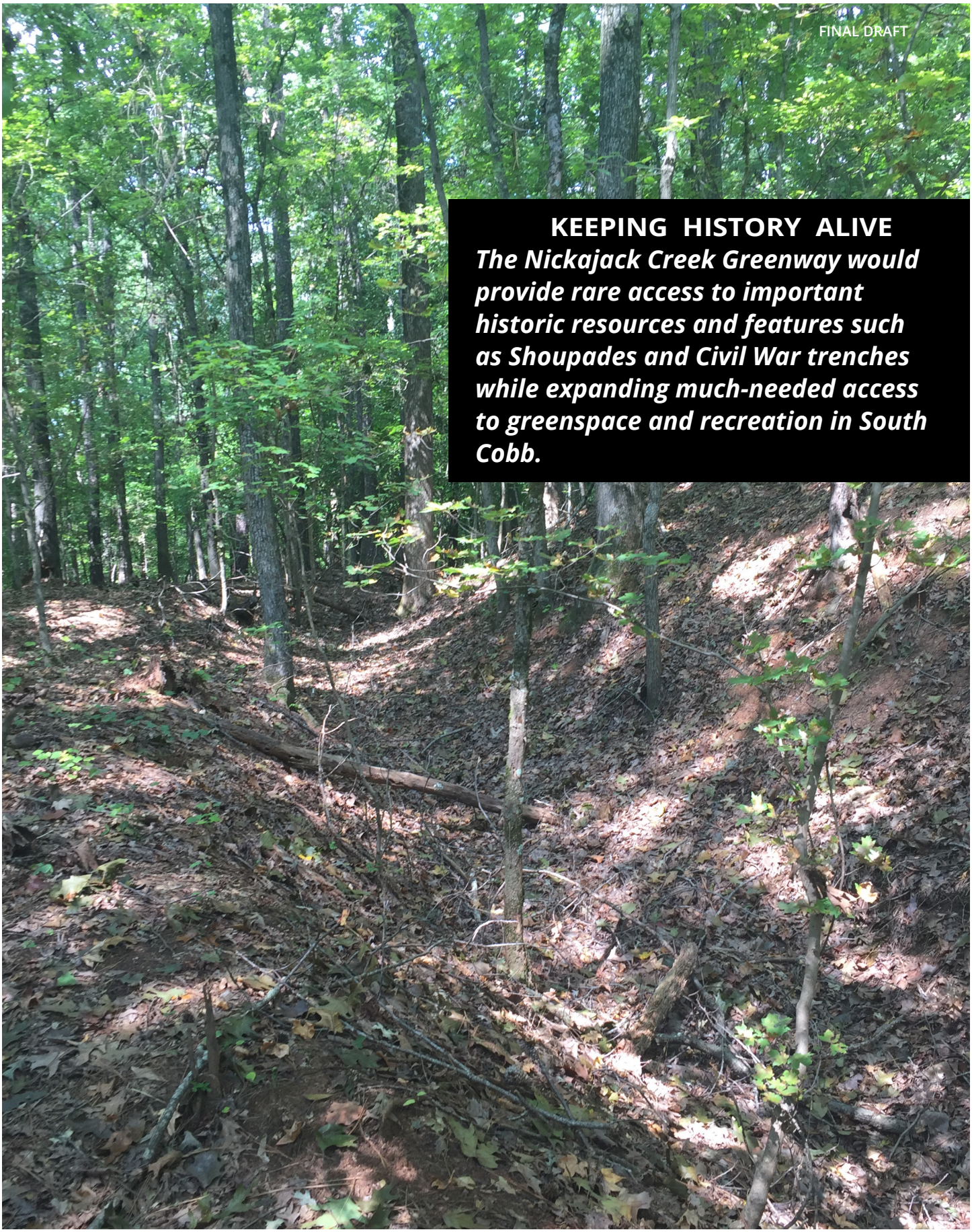
It is likely that the project would be a collaboration between Cobb DOT and the P.A.R.K.S. Department, with involvement from local groups, including but not limited to the River Line Historic Area and Mableton Improvement Coalition.

The area is characterized by the presence of hydric soils and significant floodplain, and the area along Nickajack Creek from the river and north of Discovery Blvd is included in Metropolitan River Protection Act buffer and setback restrictions. All land-disturbing activity in the corridor will need to be reviewed, approved and certified for consistency with Corridor Plan standards.

This priority project would have numerous benefits to the surrounding community, contributing greatly to the natural and historic qualities of this portion of South Cobb and Mableton. The project scored moderately well in terms of demand, due to proximity to parks, schools, and other community facilities. It benefits from substantial public land ownership (more than two-thirds of the length of the trail) and its potential to increase access to the river.

CONTEXT MAP





KEEPING HISTORY ALIVE

The Nickajack Creek Greenway would provide rare access to important historic resources and features such as Shoupades and Civil War trenches while expanding much-needed access to greenspace and recreation in South Cobb.

P8 - HYDE FARM - JOHNSON FERRY TRAIL

LOWER ROSWELL RD TO JOHNSON FERRY RD

The Hyde Farm - Johnson Ferry Trail would leverage existing assets by connecting an existing sidepath with the Chattahoochee River National Recreation Area (CRNRA) through trails on public lands, utilizing utility easements where possible. The proposed 2.7-mile trail would connect the existing Lower Roswell Trail to the Johnson Ferry North trailhead at the Chattahoochee River. It would increase recreation options for residents and visitors in East Cobb and expand access to one of the most treasured and popular attractions in the County - the CRNRA.

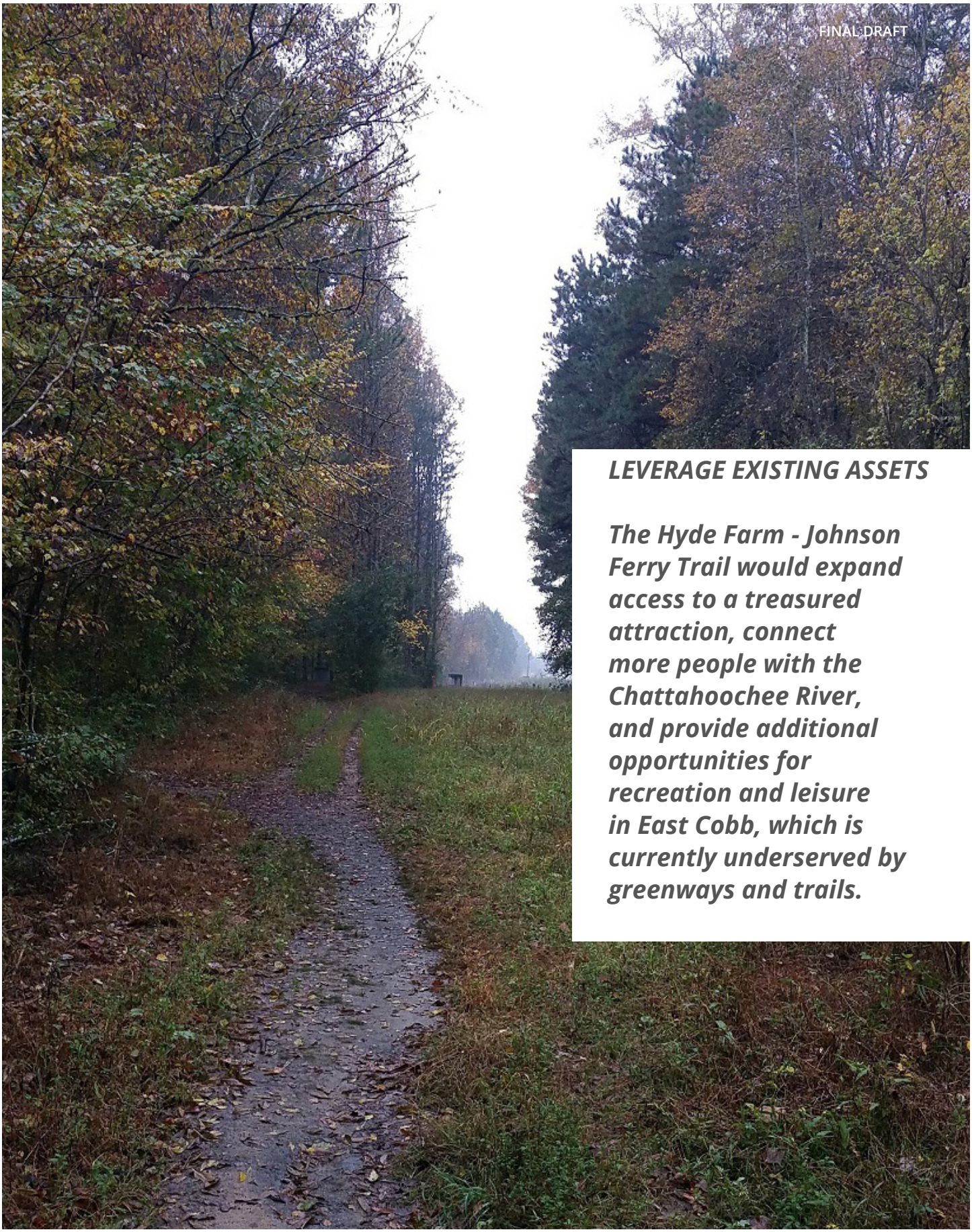
The trail would largely utilize public lands, likely following existing paths already worn by park visitors, as well as utility easements where possible, reducing the need for clearing and grading. Between Lower Roswell Rd and Hyde Rd, the trail would use a power line easement, which could potentially be paved, to ensure access to Hyde Farm for a variety of users. From there, the trail would cross Hyde Rd and head southeast, toward the river. Within NPS property, the trail would follow NPS standards and align with recommendations and policy spelled out in NPS and CRNRA plans. Trail segments within the park would be unpaved, since CRNRA does not allow paved trails.

The topography and character of the areas through which the trail would travel present challenges in terms of slope (some areas as steep as 15%) and trails will need to be carefully designed to conform with current best practices and standards, so as not to exceed maximum desired slopes and to minimize erosion and other potential risks. The trails would also need to meet buffer and setback restrictions associated with the MRPA and all land-disturbing activity in the corridor will need to be reviewed, approved and certified for consistency with Corridor Plan standards.

In addition to expanding hiking opportunities and facilitating travel between, trails through this section of the park may open the door for additional river-side amenities, such as kayak launches and wildlife viewing areas. There may also be opportunities for direct connections to neighborhoods in some areas, via Neighborhood Connector Trails, if desired. It is recommended that Cobb County and CRNRA/NPS consider establishing a wider loop network of trails through the area to establish it as a destination for park visitors, rather than simply a through-route.

This project will require close coordination between multiple agencies, including but not limited to NPS, Cobb County DOT and P.A.R.K.S. Department, Georgia Power, the Trust for Public Land, the Atlanta Regional Commission, and others. It is recommended that an inter-agency agreement be established as the project advances to delineate roles and responsibilities and ensure that all parties are on the same page. The project benefits from public support, both in terms of interest from agencies mentioned above and community members who expressed a desire for more connections to the CRNRA, Chattahoochee River, and for more trails in East Cobb in general.

CONTEXT MAP



LEVERAGE EXISTING ASSETS

The Hyde Farm - Johnson Ferry Trail would expand access to a treasured attraction, connect more people with the Chattahoochee River, and provide additional opportunities for recreation and leisure in East Cobb, which is currently underserved by greenways and trails.

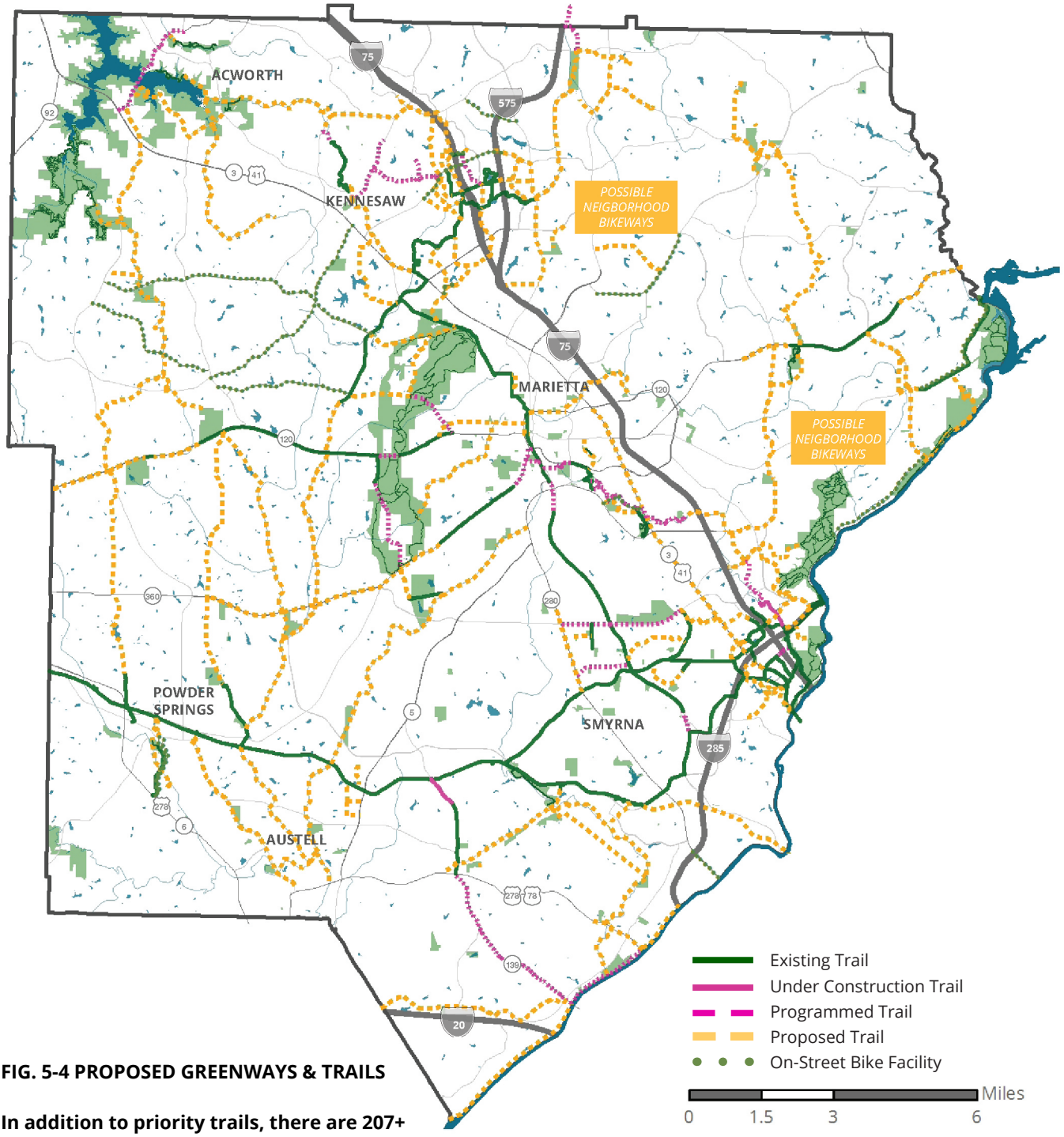


FIG. 5-4 PROPOSED GREENWAYS & TRAILS

In addition to priority trails, there are 207+ miles of proposed sidepaths, greenways, and other trails serving all parts of Cobb County.

FUTURE NETWORK DEVELOPMENT

LOCAL PRIORITIES, NEW TRAILS, AND OTHER RECOMMENDATIONS

The following pages contain brief descriptions of proposed trails at the local level - within each of the six Cities and three CIDs. Following that are summaries of newly proposed trails, other capital project recommendations, and non-capital recommendations that will complement investments in infrastructure and facilities.

Beyond the priority trails prioritized for targeted and focused implementation as part of the next round of SPLOST funding and as other resources become available, this *Plan* includes approximately 207 miles of proposed trails from a variety of sources, including previously approved plans and studies at the County, City, and CID levels, as well as trails that have been proposed as part of this planning process. A table of proposed trails is provided in Appendix D.

Figure 5-4 shows the location of proposed trails and how they relate to the existing network and trails programmed for near-term implementation. The proposed trails shown here include the priority trails described earlier in this chapter, as well as other, conceptual, potential future projects. They reflect a combination of facility types: Greenway Trails, Sidepath Trails, Unpaved Recreational Trails, Neighborhood Connector Trails, and Greenway Connectors.

Local priorities vary by jurisdiction and are largely dependent on available resources, ongoing projects, and other factors, such as previous planning efforts and community support. Local priorities represent the main focus for each jurisdiction, including some signature projects that are being advanced at the time of this plan, as well as more conceptual longer-term projects that likely require further study.

NETWORK DEVELOPMENT: LOCAL PRIORITIES

ACWORTH

The trail network within the City of Acworth is primarily comprised of park trails providing recreational opportunities around Lake Acworth. Trails are present at Logan Farm Park, Cauble Beach, and Kenworth Park/ Acworth Sports Complex.

GDOT has programmed a project along SR 92/Lake Acworth Dr that will include a 10-foot multi-use path alongside the roadway and a new bridge over Lake Acworth. The project will also preserve the existing roadway bridge and convert it to a bicycle/pedestrian facility to provide a safe crossing over the lake. The City's focus is on creating a loop network around Lake Acworth, connecting existing trails at Logan Farm Park to the programmed sidepath on SR 92/Lake Acworth Dr, which will eventually be linked to proposed trails on the south side of the lake through South Short Park and eastward to Acworth Due West Rd, where it will connect to existing sidewalk on Nance Rd. From there the loop would travel north on S. Main St past Kenworth Park. The long-term vision is to connect S. Main St with Cauble Beach, which can be seen in Figure 5-5.

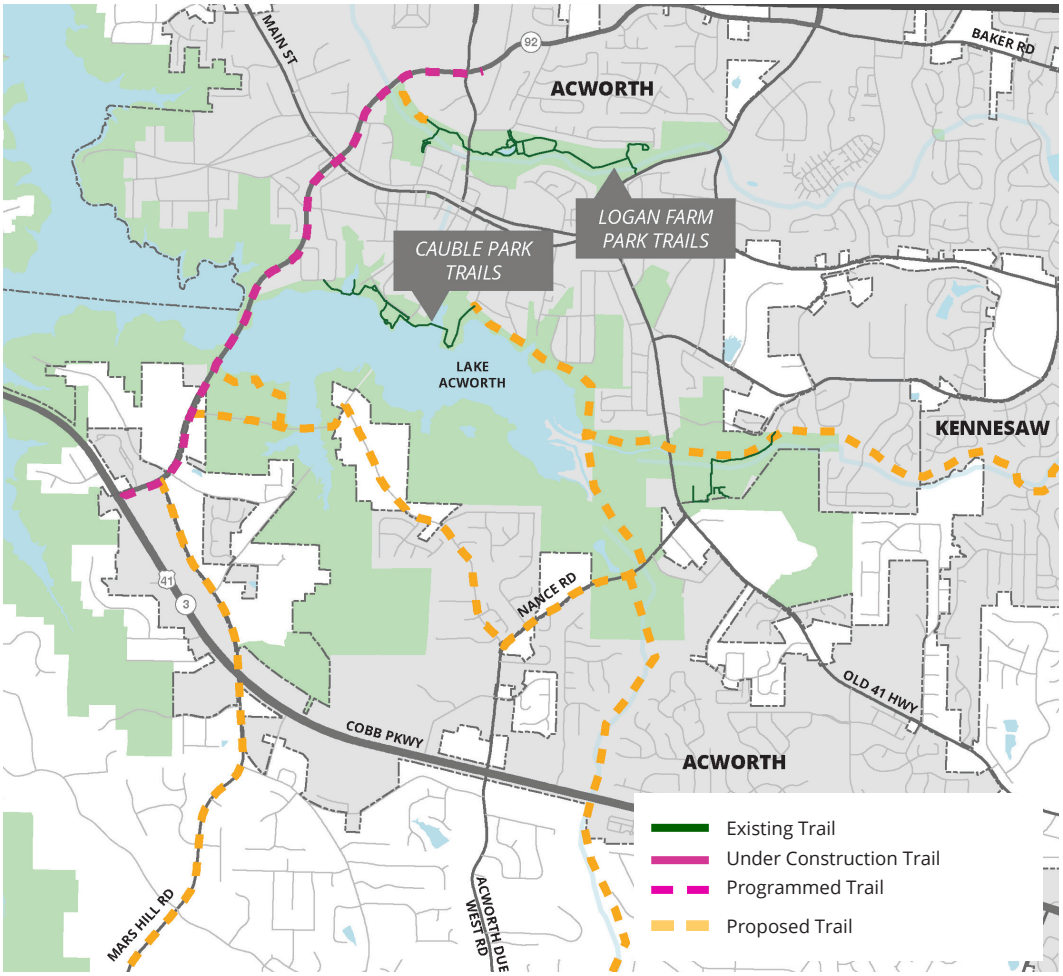


FIG. 5-5 ACWORTH RECOMMENDATIONS

AUSTELL

The City of Austell, in southwest Cobb, currently has a limited system of trails around the Threadmill Complex and the City-owned property near the corner of Austell Powder Springs Rd and Luke Glenn Garrett Jr. Memorial Hwy. While local organizations are helping to blaze and formalize some of these trails, there are not currently any formal trails in the city. Austell is home to more 1,300 acres of wetland and floodplain and one of its priorities is to leverage these resources to create opportunities for recreation and non-motorized transportation.

There are several proposed trails in parts of Austell, including along Austell Powder Springs Rd, along Sweetwater Creek, Olley Creek, and Noses Creek (Figure 5-6). The City's Comprehensive Plan Update recommended a trail along Austell Powder Springs Rd, and this trail was identified as a Priority Project. Olley Creek has strong potential in terms of connectivity; however, this proposed trail presents a number of challenges in terms of wetlands and roadway crossings. The City would also like to eventually establish connectivity to its neighbor, the City of Powder Springs.

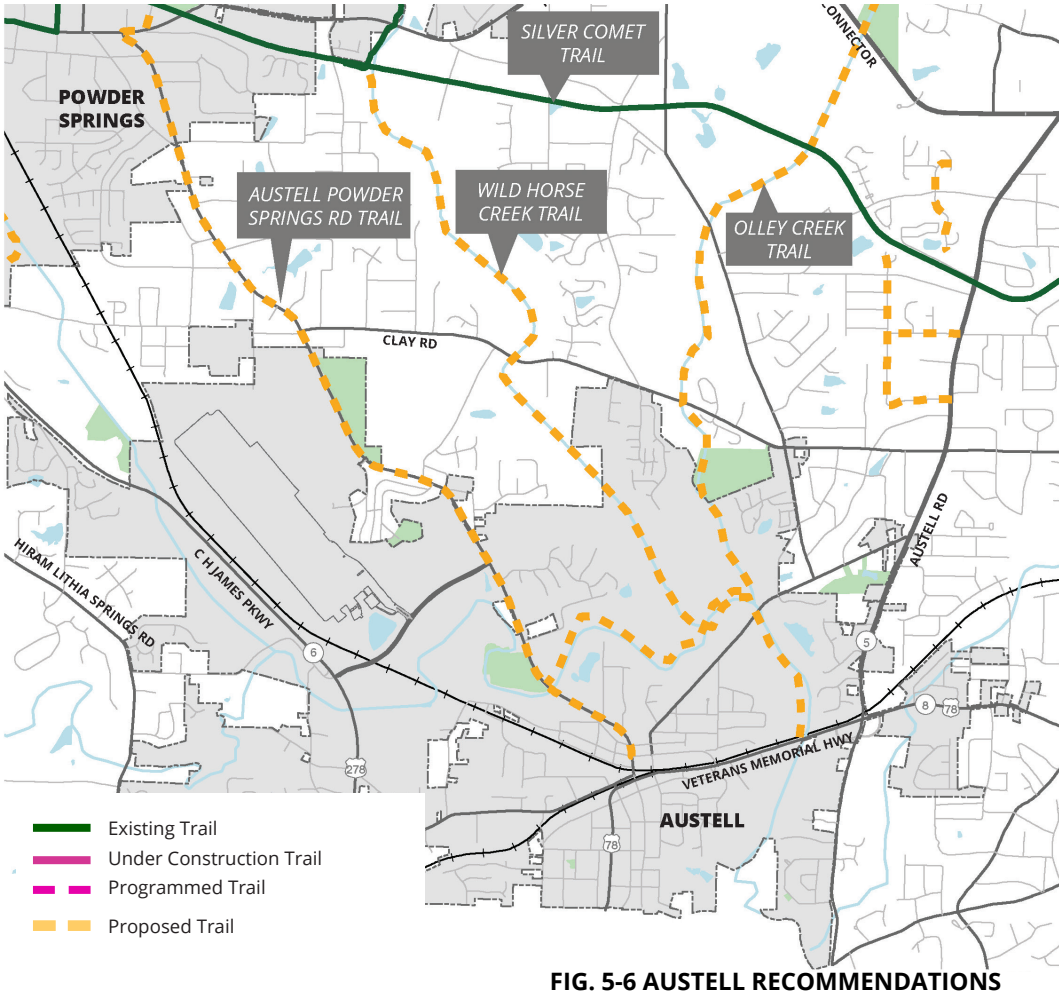


FIG. 5-6 AUSTELL RECOMMENDATIONS

KENNESAW

Planned and proposed projects in the City of Kennesaw are shown in Figure 5-7. Between 2007 and 2013, the City of Kennesaw constructed a system of walking paths north of downtown that follow creeks, utility easements, and public property. A proposed extension of the trail network would connect Winchester Forest Park Trail to Jiles Rd. This project is expected to get underway soon.

Other future projects include a programed SPLOST project along Cherokee St, from Main St to McCollum Pkwy that will include a 10-foot sidepath. Projects are also programmed along Ben King Rd and Big Shanty Rd that would improve connectivity between KSU and downtown Kennesaw.

Longer-term proposed trail projects include a connection from downtown Kennesaw along S. Main St, Old Hwy 41, and Cobb Pkwy where a connection could be made to the Noonday Creek Trail. Another proposed project would connect the Jiles Rd/Shiloh Rd/Cherokee St area to Acworth via a proposed recreational style trail. While there is agreement that a connection between Kennesaw and Acworth is desirable, further study is needed to identify the best way to facilitate that connection.

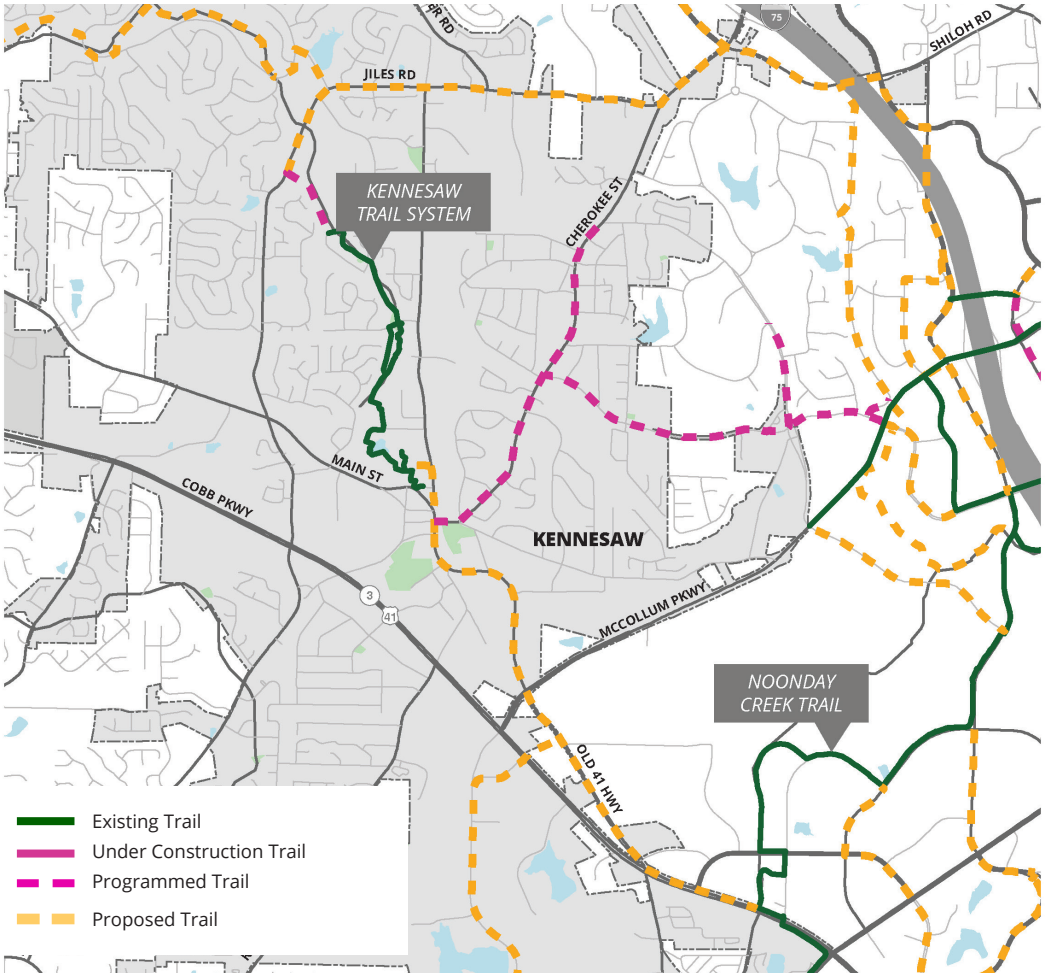


FIG. 5-7 KENNESAW RECOMMENDATIONS

MARIETTA

Marietta is home to several segments of existing trail. Over the past several years, the City has been focused on completing its portions of the Mountain to River Trail, as well as the first phase of the Rottenwood Creek Trail, between Alumni Dr and Franklin Gateway (see Priority Projects earlier in this chapter). Other programmed projects include: an extension of the trail along Powder Springs Rd to the Marietta City Cemetery; connecting the Mountain to River Trail to Fairground St via the via Dixie Ave and the Larry Bell Complex (Mountain to River Gap Trail); and a trail along Fairground St between S. Marietta Pkwy and the Custer Park Sports and Fitness Center.

Proposed projects within Marietta are shown in Figure 5-8. They include Phase II of the Rottenwood Creek Trail, between Franklin Gateway and Terrell Mill Rd, for which the City submitted an application for funding for design and engineering. Other proposed projects include a more conceptual, long-term Sope Creek Greenway and Ward Creek Greenway; a trail along N. Marietta Pkwy connecting the Mountain to River Trail to the programmed Fairground St trail; and a trail along Polk St between Burnt Hickory Rd and N. Marietta Pkwy.

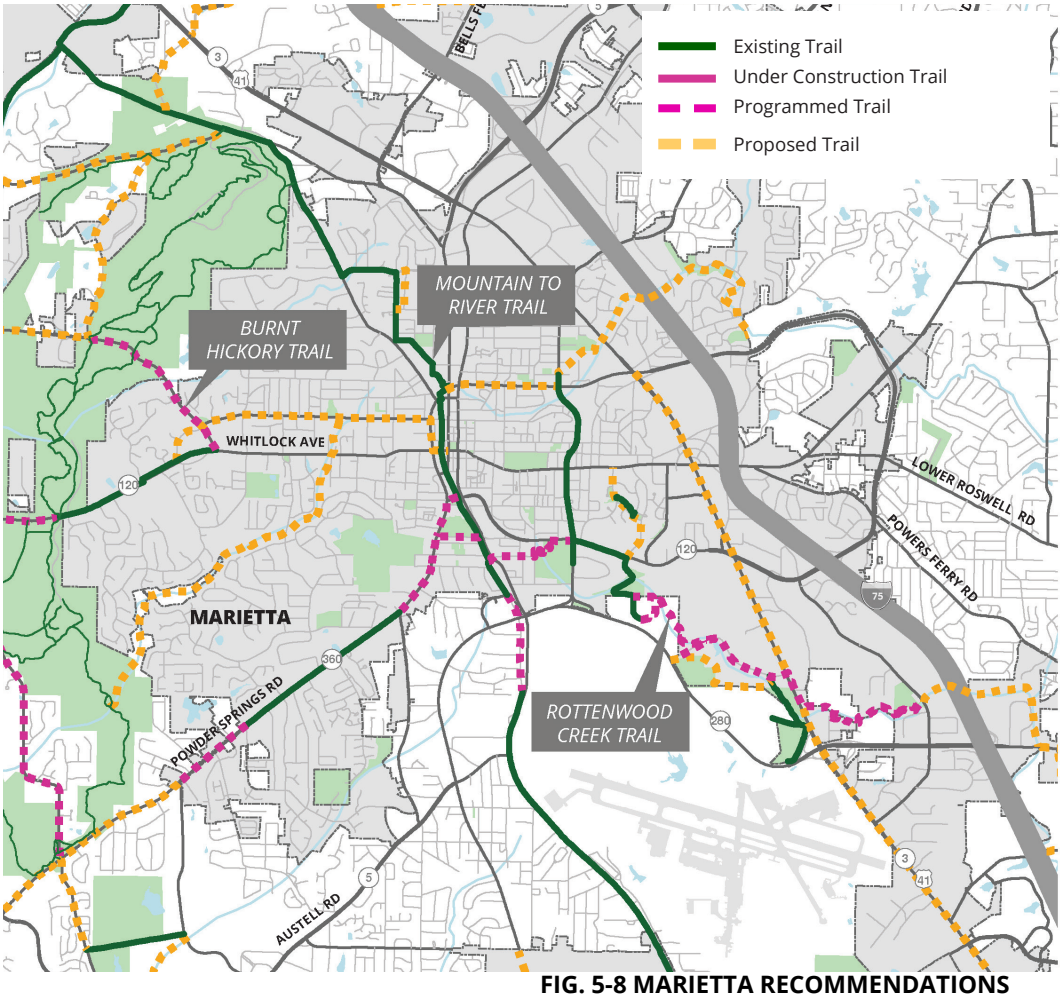


FIG. 5-8 MARIETTA RECOMMENDATIONS

POWDER SPRINGS

The City of Powder Springs has a strong trail network, providing connections to the Silver Comet Trail. The City's current focus is on strengthening connections between existing trails and its downtown. In its recent LCI Plan Update (Springs in Motion, 2016), the City reaffirmed its goal of creating a comprehensive trail system that connects key destinations and the Silver Comet Trail. The plan proposed several trail projects:

- Two new connector trails to the Silver Comet via Jackson Way/Old Lost Mountain Dr or Lynn Dr and floodplain property
- A multi-use trail from Old Lost Mountain Rd at Jackson Way, heading southeast to Pineview Dr
- Pineview Drive Multi-Use Trail - Sidepath along Pineview Trail from Cemetery St to Marietta St
- Brownsville Rd Multi-Use Trail – Concrete trail from edge of Powder Springs Park northeast to Marietta St
- Recreation Trails from Brownsville Rd southward through the floodplain

The northern part of the proposed Priority Trail along Austell Powder Springs Rd would also travel into Powder Springs, where it would connect to the Silver Comet Trail.

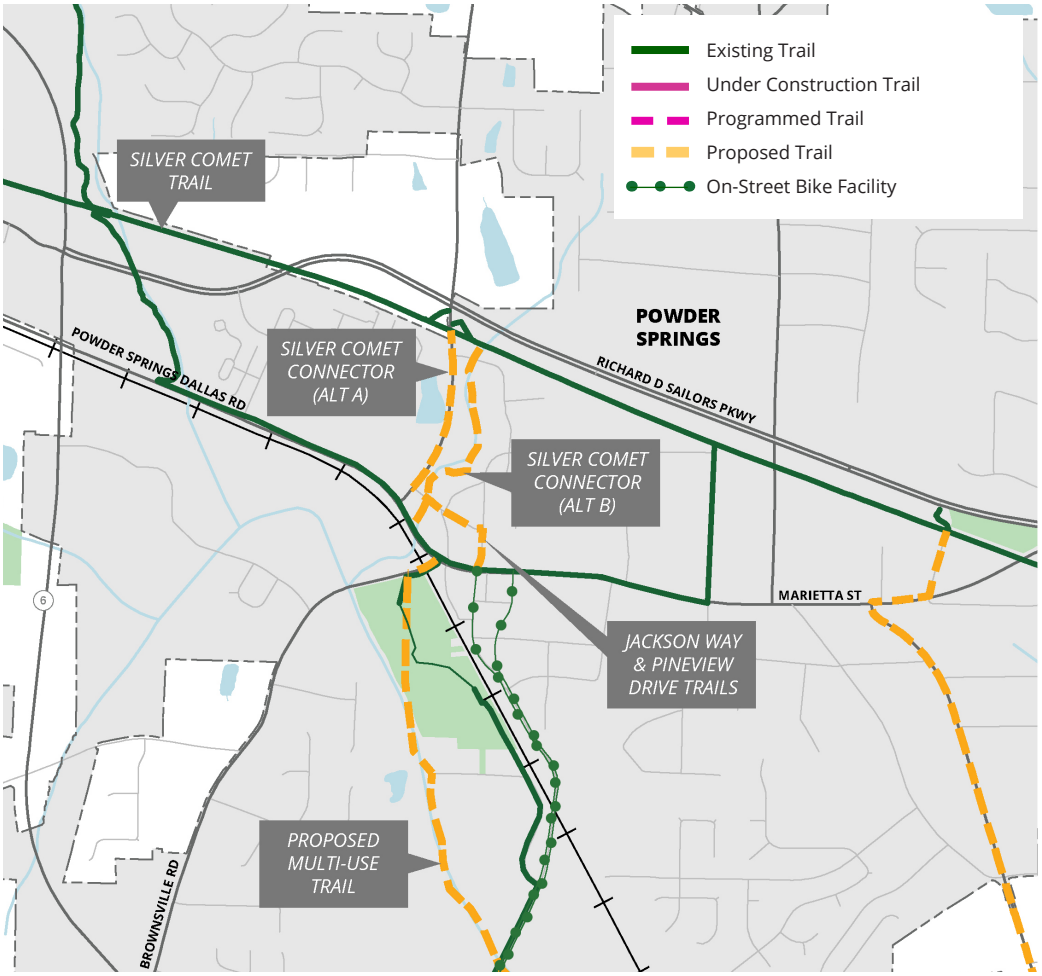


FIG. 5-9 POWDER SPRINGS RECOMMENDATIONS

SMYRNA

The City of Smyrna has several long sections of sidepath trail crisscrossing the City along Spring Rd, Atlanta Rd, Concord Rd, and Village Pkwy. The Silver Comet Trail and Silver Comet Cumberland Connector also travel through Smyrna. Programmed projects will create sidepath trails along Windy Hill Rd between Village Parkway and S. Cobb Drive and on Church St between Atlanta Rd and S. Cobb Dr. The latter will include traffic calming measures as well.

The City is actively pursuing several projects to reconfigure portions of South Cobb Dr between Windy Hill Rd and Concord Rd.

A new pedestrian HAWK signal is programmed to be installed on S. Cobb Dr south of Plaza Dr to reduce pedestrian risk along the corridor. The proposed Windy Hill Blvd project, between S. Cobb Dr and Atlanta Rd, will incorporate bicycle lanes and pedestrian sidepaths. An extension of the Poplar Creek Trail is also proposed, which would extend the existing trail along the creek from Spring Rd south and loop back around to Spring Rd west of Jonquil Dr. Another proposed connection would link commercial development and offices along Cobb Pkwy to Village Pkwy, via Lake Park Dr, parallel to portions of Poplar Creek.

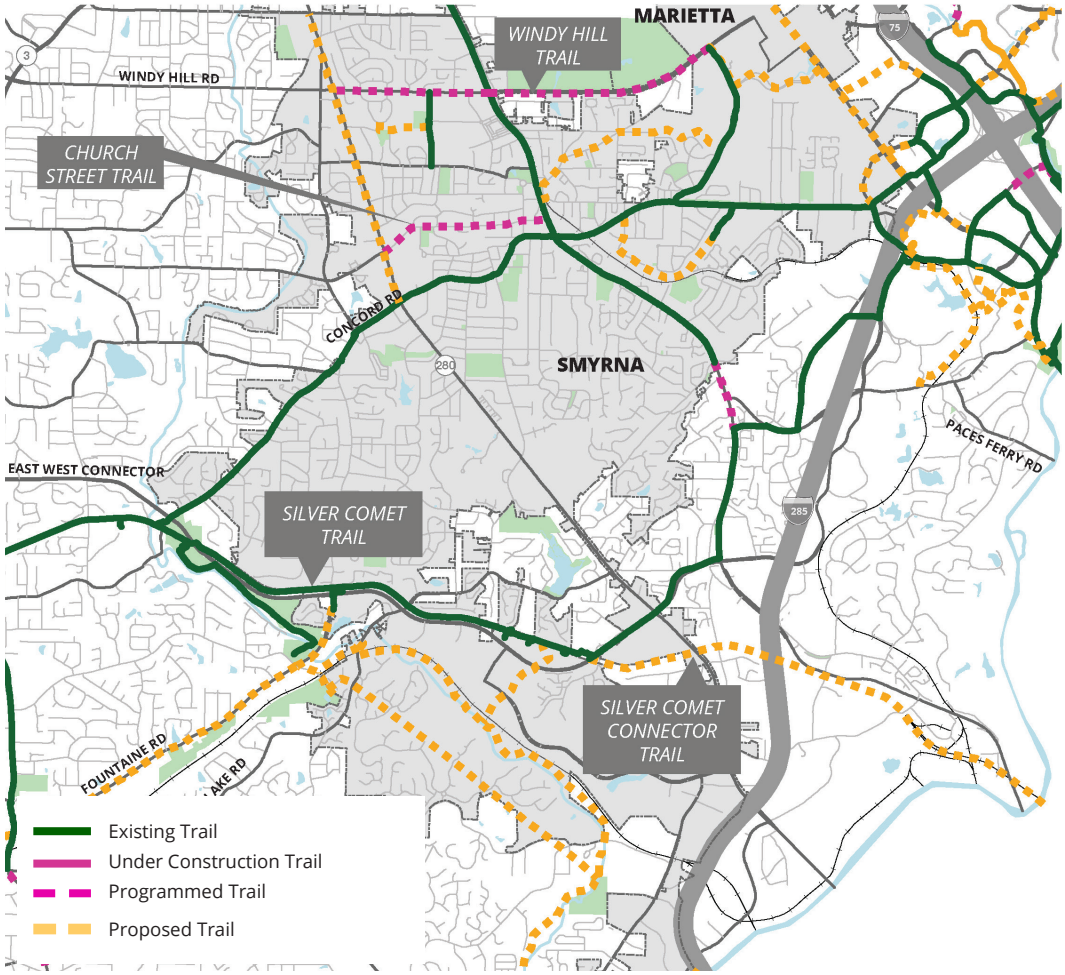


FIG. 5-10 SMYRNA RECOMMENDATIONS

CUMBERLAND COMMUNITY IMPROVEMENT DISTRICT

The Cumberland CID recently completed its Bicycle Connectivity Improvement Plan (2016). The plan includes 22 new miles of greenways and trails proposed by the CID and partners. The emphasis of future projects is identifying sidepath trails as recognizable "trails" to all users through pavement markings, signage and wayfinding, and new trail development. Prioritized future greenway projects include portions of the Bob Callan Trail along Rottenwood Creek; the Stillhouse Trails; Vinings Trail; Camp Bert Adams Lake Trail; and the Circle 75 to Cobb Pkwy Trail, extending the existing trail north and west of Herodian Way.

The plan also includes more than five miles of prioritized urban trails (sidepaths):

- Circle 75 Pkwy Trail
- Akers Mill Rd Trail
- Cumberland Trail from Cobb Galleria Pkwy to Bob Callan
- Terrell Mill – Windy Hill Connector Trail
- Windy Ridge Trail (east segment)
- Interstate North Pkwy Trail
- Cumberland Trail
- Cobb Pkwy Trail
- Windy Hill Rd Trail
- Galleria to Cumberland Trail
- Wildwood Pkwy Trail

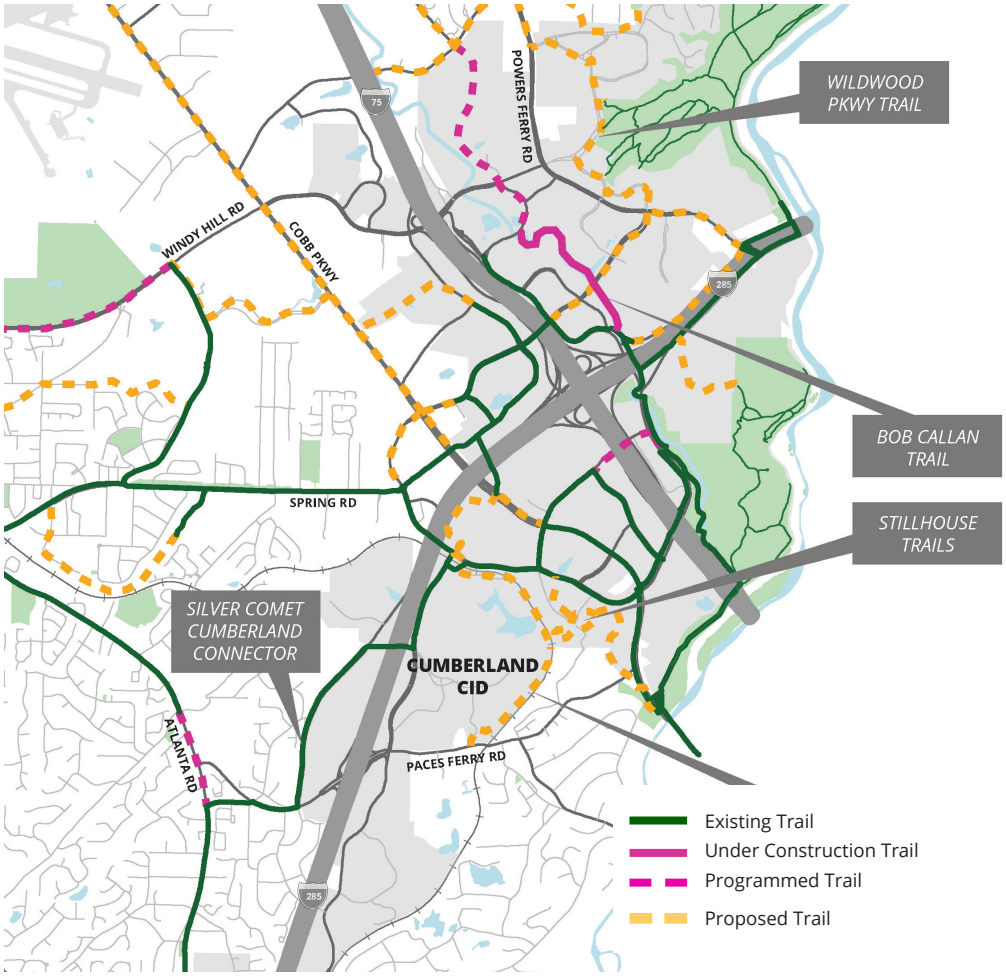


FIG. 5-11 CUMBERLAND CID RECOMMENDATIONS

GATEWAY MARIETTA COMMUNITY IMPROVEMENT DISTRICT

The Gateway Marietta CID is focused on improving streetscape and pedestrian facilities along Franklin Gateway, between S. Marietta Pkwy (SR 120) and Delk Rd (SR 280). A portion of the streetscape project has been completed and the remaining portion, from Twin Brooks Dr to Delk Rd, is proposed. Eventually the widened sidewalk will reach the Rottenwood Creek Trail.

The CID is also an active partner in the City of Marietta's Rottenwood Creek Trail projects, since both Phase I and Phase II pass through a portion of the CID.

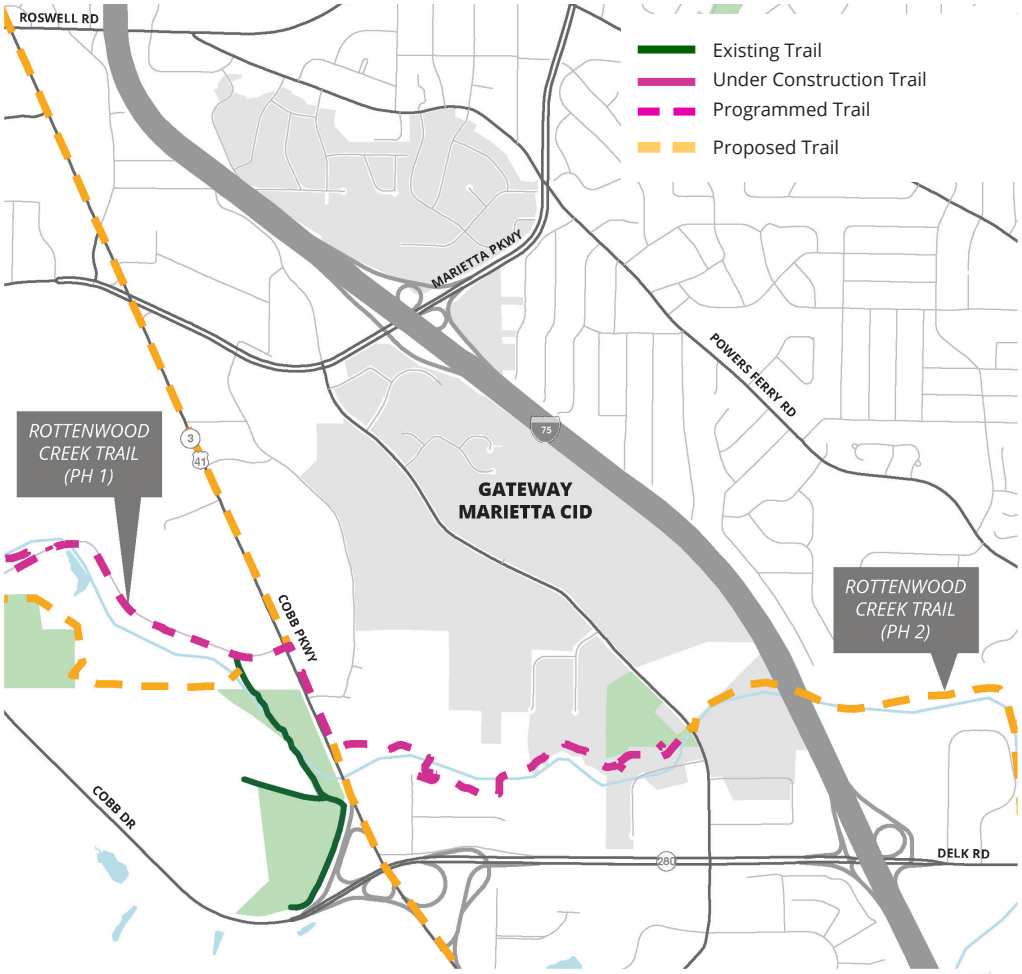


FIG. 5-12 GATEWAY MARIETTA CID RECOMMENDATIONS

TOWN CENTER COMMUNITY IMPROVEMENT DISTRICT

The Town Center CID has recently completed its Master Plan Update, which proposes a number of new bicycle and pedestrian projects. The District is already home to the Noonday Creek Trail and several sidepath trails along Big Shanty Rd, Skip Spann Connector, and bike lanes on Chastain Rd.

The primary focus of proposed improvements is creating a loop network, the Town Center Loop, consisting of roughly seven-miles of existing and future bike lanes, sidewalks, sidepaths, and greenway trails around the Town Center area. The Town Center Loop is shown in Figure 5-13 below.

Other proposed projects include improving connectivity to Kennesaw State University, complete streets on Barrett Lakes Blvd, and establishing better connectivity throughout the south part of the District, including the South Barrett Reliever project.

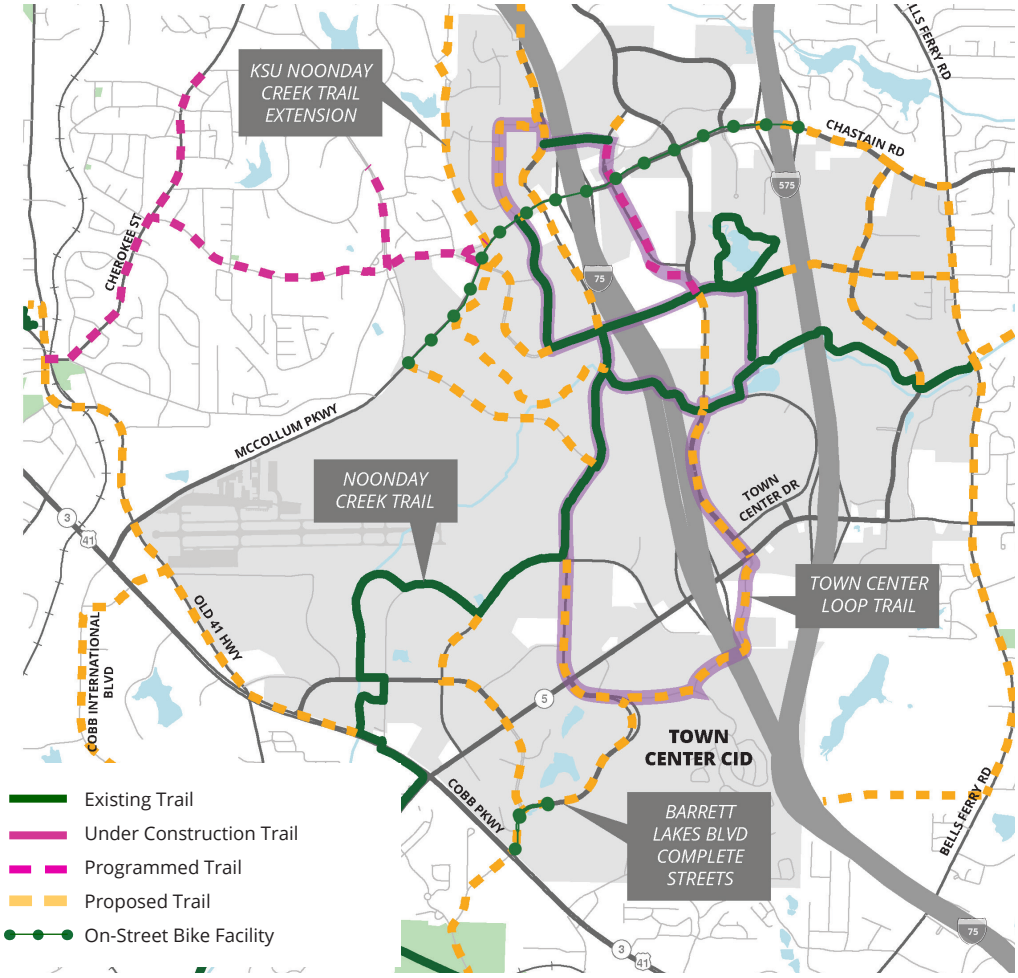


FIG. 5-13 TOWN CENTER CID RECOMMENDATIONS

NEW PROPOSED TRAILS

PROJECT DESCRIPTIONS

Throughout the process of developing this Greenways and Trails Master Plan, several new potential non-priority trail alignments were identified. These are briefly described below and are shown on the proposed trail map (Figure 5-4) and listed in Table 5-1.

AKERS DRIVE/AKERS RIDGE DRIVE TRAIL

This approximately 0.5-mile project would connect Akers Mill Rd to the Chattahoochee River National Recreation Area (CRNRA) at the Akers Mill parking lot. It would largely follow Akers Dr and Akers Ridge Dr, both private roads. Additional study and discussion are needed to determine how best to achieve the desired improvement, given the private nature of the roads. The proposed project would increase access to the CRNRA and provide safer non-motorized transportation options for nearby residents and visitors.

The Chattahoochee Bluffs Homeowners Association is interested in making their currently private road safer for pedestrians. Akers Dr and Akers Ridge Dr are both private streets and have no sidewalks. In addition, the hilly and curved nature of these streets make it difficult to see oncoming pedestrians or cyclists. Akers Ridge Dr is just steps from the Akers Mill Trail in the CRNRA and increasingly, people are using these private roads for access to the trail and parking area, and as a way to get between the trail and SunTrust Park.

BUTLER CREEK TRAIL

The proposed Butler Creek Trail would connect a proposed Lake Acworth Trail along Nance Rd to Mack Dobbs Rd. This 3.8-mile trail is proposed in coordination with the P.A.R.K.S. Department Comprehensive Master Plan Update. Additional study is recommended to determine the extent of floodways, the need for bridges, and other associated improvements.

CANTON ROAD NORTH TRAIL

This proposed trail would connect the south end of Noonday Creek Park to Lake Dr, where there is a proposed connection to Kell High School. The 1.7-mile sidepath trail would parallel the soccer fields along Hawkins Store Rd and travel along the north portion of Canton Rd. It would increase access to parks, schools, and sports fields.

COBB PARKWAY - WINDY HILL CONNECTOR TRAIL

This roughly one-mile sidepath trail would serve as a connector between a proposed trail and existing businesses on Cobb Pkwy and the programmed trail on Windy Hill Rd, in the City of Smyrna. It could follow Lake Park Dr to Village Pkwy where it could cross at the signalized intersection to the west side of Village Pkwy which already has an eight-foot wide shared-use path. Ideally the eight-foot path could be widened to ten or more feet to meet recommended guidance. As an alternative, the Cobb Pkwy-Windy Hill Connector trail could follow the east side of Village Parkway to reach Windy Hill Rd.

COBB INTERNATIONAL BOULEVARD TRAIL

A trail is proposed to connect the Noonday Creek Trail along Barrett Pkwy with Old Hwy 41 via a power line easement and Cobb International Blvd. This 2.25-mile route would create a lower-stress environment as an alternative to a proposed trail along Cobb Pkwy, and would increase biking and walking options for employees of businesses along Cobb International Blvd, as well as for nearby residents. Should they be desired, direct connections could be provided to residential communities and subdivisions, like those near Ellison Lake and off of Barrett Pkwy. Improvements are recommended to improve safety at possible roadway crossings.

EAST COBB PARK – ROBINSON RD CONNECTOR

This proposed trail would consist of formalizing an extension of existing trails in and around East Cobb Park and Fullers Recreation Center. Trails already exist through this area but are in need of additional maintenance and signage. The proposed extension would formalize the roughly 0.75-mile pathway from Sewell Mill Creek at the north of Fullers Fields to the east, where it would meet with Fullers Park driveway at Robinson Rd. Additional improvements should be made to the trail following the creek from East Cobb Park to Robinson Rd, to formalize the connection and increase awareness and use.

HARRISON HIGH - OREGON PARK TRAIL

This 1.3-mile unpaved recreational trail would connect Oregon Park and the Green Meadows Preserve with Harrison High School and the proposed Allatoona Creek Greenway by following the stream from Oregon Park northwest until it reaches Due West Rd. From there, the trail would become a sidepath along the south side of Due West Rd, crossing at the entrance to the High School, where there is a traffic signal. Coordination would be needed with homeowners associations in the area.

As an alternative, the trail could also follow the power line easement that travels north from Oregon Park, but this option would require a longer sidepath on Due West Rd, which would be more expensive and is not the preferred option from a user comfort standpoint. Coordination will be needed with the school district to determine how to traverse school property and arrangements would need to be made to govern access during school hours. Improvements may also be needed to the crossing at the signal at the school driveway.

HERITAGE PARK TO THOMPSON PARK CONNECTOR

Heritage Park on Fontaine Rd and Thompson Park on Nickajack Rd are roughly 0.3 miles apart; however, there is currently no safe way to get between them. As part of future proposed trail projects, or perhaps a small standalone project, it is recommended to build a sidepath along Nickajack Rd connecting the two parks. The project would require constructing a safe railroad crossing and improving crossings at either the signalized intersection of Nickajack Rd at Fontaine Rd or opposite the entrance to Thompson Park. The project would serve to connect and improve access to both parks and is supported by the P.A.R.K.S. Department as well as community members.

THE TRAIL LINKING EAST COBB PARK TO ROBINSON ROAD COULD BENEFIT FROM AMENITIES AND SIGNAGE

LIBERTY HILL AND MORGAN ROAD TRAILS

To increase connectivity and access in this part of North Cobb, in and around the Canton Rd corridor, the *Plan* proposes trails along low-stress roadways between Canton Rd and Sandy Plains Rd. Two trail segments would travel along Liberty Hill Rd and Morgan Rd for approximately 0.8 miles each. The trail on Morgan Rd would connect directly to paved bikeable shoulders on Sandy Plains Rd, increasing bike access in the area. Together these proposed trails would add 1.64 miles of walkable and bikable network.

NICKAJACK CREEK SPUR TRAIL

The assessment of the Nickajack Creek Greenway priority project revealed the possibility of constructing a spur trail along the existing power line easement between the proposed future Nickajack Creek Greenway near Buckner Rd and Thompson Park. This could potentially be an alternative to the northwestern portions of the proposed Nickajack Creek Greenway, which would be a challenging project, due to the constraints of the railroad right-of-way and lack of construction access between the creek itself and the railroad tracks.

The proposed project would likely be an unpaved recreational trail, intended primarily for walking, jogging, or hiking. The easement travels through a residential neighborhood and crosses several neighborhood streets, and access to Thompson Park could potentially be provided via Summerwood Dr or Cooper Lake Rd. Further study is recommended to determine the feasibility of this project. It would require coordination with utilities and homeowner associations.

NOONDAY CREEK PARK - KELL HIGH SCHOOL TRAIL

The aim of this trail is to connect Noonday Creek Park, Kell High School, and the baseball fields in the area. The 1.4-mile trail would follow Shallowford Rd, and make use of existing public right-of-way that leads to Lake Dr and connects to the high school. The trail is proposed to be paved, improving connectivity between regional recreational facilities and increasing opportunities for active transportation.

OPPORTUNITIES TO CONNECT NICKAJACK PARK TO THOMPSON PARK AND HERITAGE PARK AND THOMPSON PARK

OLLEY CREEK TRAIL (EXTENSION)

A trail has been proposed along various segments of Olley Creek for some time. This proposed project would extend the trail from its previous termination point at County Services Pkwy, through Fair Oaks Park, to South Cobb Dr. The 2.27-mile trail would further enhance access to park properties and the County government complex; however, several potential challenges may make this project a lower priority over time. Further study and substantial coordination with County and other agencies is recommended.

SHALLOWFORD ROAD TRAIL

This proposed trail would connect the proposed Canton Road North trail to two Cobb County Schools and increase access for adjacent neighborhoods. The proposed one-mile trail would begin at Canton Rd and follow Shallowford Rd until it reaches Maybreeze Rd, where spurs would provide direct access to both Nicholson Elementary and McClesky Middle Schools. Improvements are recommended at the existing traffic signal to facilitate trail crossing and access to both schools. The trail could be reached from neighborhoods on either side of Shallowford Rd, providing more options for people traveling in the area.

SKIP WELLS PARK TRAIL

In an effort to increase connectivity and access to existing park facilities, in consultation with the Cobb P.A.R.K.S Department, this *Plan* recommends several new connections or minor spur trails to park properties. One such project is a proposed connection between Piedmont Road and "Skip" Wells Park. Development patterns in the area limit direct access to the park from the east and west. The proposed spur trail south of Piedmont Rd would enable residents and visitors to use existing (and likely future) sidewalk to the north for access to the park, which contains sports fields, picnic areas, and tennis courts. The 1/3-mile greenway trail would require close coordination with the P.A.R.K.S. Department and likely would be accompanied by improvements to nearby crosswalks.

OPPORTUNITY TO FORMALIZE TRAILS NEAR WILDWOOD PARKWAY AND CONNECTIONS TO THE CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA

STEINHAUER ROAD TRAIL

The proposed project along Steinhauer Rd would connect Carl Harrison Park and Lassiter High School with Sweat Mountain Park via a 1.5-mile sidepath-style trail. The project would increase connectivity to both parks and schools, facilitating improved access for nearby neighborhoods. It could potentially tie into the existing trail behind Harrison Park and Lassiter High School.

WILDWOOD PARKWAY - COCHRAN SHOALS CONNECTOR TRAIL

This project would consist of a proposed miniature extension of existing trails in the Chattahoochee River National Recreation Area to make the connection to the proposed Wildwood Pkwy Trail on Windy Hill Rd just south of Wildwood Pkwy. It would create an informal, but recognized access point from Windy Hill Rd at Woodwalk Dr to improve connectivity between national park trails and the surrounding community. The project would require coordination with NPS and nearby property owners (Genuine Parts Company). Signage is recommended to announce the access point to potential users. The project would benefit nearby residents, employees, and visitors to the area.

As a component of this project, it is also recommended to establish a formal walk-up access point (trailhead) farther south on Windy Hill Rd where the creek passes under the roadway, north of Windy Ridge Ext. There is already an informal access point in this location and formalizing it would increase access and visibility, giving people more options for walking and biking to existing trails. This could help reduce demand for parking within the park as well as have environmental and health benefits. The proposed trailhead should be given a recognizable name to convey its location and the accessible trails in the area, like 'CRNRA Cochran Shoals – Windy Hill Rd.'

WILDWOOD PARKWAY CONNECTOR TRAIL

This would be a roughly 0.6-mile unpaved recreational trail intended to connect residences and offices along Wildwood Pkwy and nearby areas to hiking and biking trails in the CRNRA. It would begin on Wildwood Pkwy opposite the Hyundai building and follow a creek into the park. There is already an informal path in this area, and it is recommended to formalize the connection through signage to define an access point and direct people to the Cochran Shoals trails. The project would require coordination with NPS and should also involve nearby property owners, including Wildwood Associates.

PARK CONNECTIVITY TRAILS

Simultaneously to this planning process, the Cobb County P.A.R.K.S. Department undertook an update of its Comprehensive Plan. As part of that process, several new trails were identified to offer more and better connections to County parks and County-owned greenspace, outside of park properties. These trails were identified in coordination with the *Greenways and Trails Master Plan* and include a range of potential projects, from short spur trails to longer trail alignments, as well as sidepath trails within roadway right-of-way to greenway trails along creeks, streams, or utility easements. These proposed park connectivity trails are included in the map of proposed trails shown in Figure 5-4 and listed in Table 5-1 on the following page. For details about the P.A.R.K.S. Department Comprehensive Plan Update, please refer to the plan document itself.

TABLE 5-1 NEW PROPOSED NON-PRIORITY GREENWAYS AND TRAILS

Name	From	To	Length
Akers Drive/Akers Ridge Trail	Akers Mill Rd	CRNRA West Palisades	0.48 miles
Bells Ferry Rd Trail	Barrett Pkwy / Piedmont Rd	Rockridge Preserve Trail (proposed)	1.16 miles
Butler Creek Trail	Mack Dobbs Rd	Nance Rd	3.86 miles
Canton Road North Trail	Noonday Creek Park	Nance Rd	1.69 miles
Cobb Parkway - Windy Hill Connector Trail	Cobb Pkwy	Windy Hill Rd	1.03 miles
Cobb International Boulevard Trail	Barrett Pkwy	Old Hwy 41	2.28 miles
East Cobb Park - Robinson Road Connector	East Cobb Park	Robinson Rd	0.75 miles
Harrison High - Oregon Park Connector	Oregon Park	Harrison High School (Due West Rd)	1.30 miles
Harrison Park Connector	Harrison Park	Pete Shaw Rd	0.10 miles
Heritage Park - Thompson Park Connector	Heritage Park	Thompson Park	0.30 miles
Liberty Road Trail	Canton Rd	Morgan Rd	0.86 miles
Lions Park Trail	Ferndale Rd	Lions Park	0.07 miles
Morgan Road Trail	Liberty Hill Rd	Sandy Plains Rd	0.80 miles
Nickajack Creek Spur Trail	Nickajack Park	Thompson Park	2.3 miles
Noonday Creek Park - Kell H.S. Trail	Noonday Creek Park	Kell High School	1.41 miles
Olley Creek Trail (Extension)	County Svcs Pkwy	S. Cobb Dr	2.28 miles
Rockridge Preserve Trail	Bells Ferry Rd	Rockridge Preserve	0.68 miles
Shallowford Road Trail	Canton Rd	Maybreeze Rd	1.07 miles
Skip Wells Park Trail	Piedmont Rd	Skip Wells Park	0.36 miles
Steinhauer Rd Trail	Shallowford Rd	Sweat Mountain Park	1.5 miles
Wildwood Parkway Cochran Shoals Connector	Windy Hill Rd	Cochran Shoals Trail (CRNRA) at Woodwalk Dr	0.04 miles
Wildwood Parkway Connector Trail	Wildwood Pkwy	Trails in Cochran Shoals CRNRA Park Unit	0.60 miles
		TOTAL	**24.92 miles**

OTHER RECOMMENDATIONS

TRAILHEADS

Trailheads serve as places where people can safely and comfortably access trails and greenways. Trailheads can take several forms, ranging from a simple access point to a trail, to a larger facility with parking, restrooms, bike repair stations, and other amenities.

As mentioned in Chapter 3, there are currently at least 40 recognized trail heads in Cobb County. The *Plan* proposes that **19 new trailheads** be added, as shown in Figure 5-14. Most are recommended to accompany priority trail corridors; however, some are recommended to improve or formalize access to underutilized trails and pathways. Three types of trailhead are recommended - major, minor, and walk-up access points:

- **Major Trailheads:** Major trailheads typically have a full range of amenities, including parking, restrooms, bike share and bike repair stations, and often, playgrounds, pavilions, and other recreational facilities. These are often located in existing park properties.

- **Minor Trailheads**: Minor trailheads typically have limited parking, but may not provide restrooms or other facilities for users. These are often located in areas that have constrained land availability, but have been identified as key locations for trail access or natural access points.

- **Walk-up Access Points:** Walk-up access points are generally the smallest trailhead type. These trailheads have neither parking or restrooms, nor other amenities for users. These access points may consist of unpaved paths from an adjacent major roadway or connection from a neighborhood street.

Many of the proposed trailheads are aligned with County and city parks and recreational areas to take advantage of parking lots, restroom facilities, and other amenities that may already exist on-site. Other trailheads, particularly in more industrial areas or unimproved public green spaces, are located on undeveloped land where small parking lots and restroom facilities may be constructed.

Some trails, such as those that follow creeks, do not have readily available points of access due to the presence of steep topography, floodway, or forest areas. For these trails, the *Plan* identifies walk-up access points where the trail alignment abuts existing development, such as the backs of neighborhoods. Some trailheads are identified at or near County parks and it is recommended that both Cobb DOT and P.A.R.K.S. be involved in planning and development of trailheads at these locations.

Some trailheads are also recommended to be sited at County schools – it should be noted that people would generally be permitted to use these trailheads only during evenings and weekends, in order to maintain a secure environment for students. The DOT should coordinate closely with Cobb County Schools as it pursues construction and operation of trailheads on school property.

Proposed trailheads are shown in Figure 5-14 on the following page and listed in Appendix D.

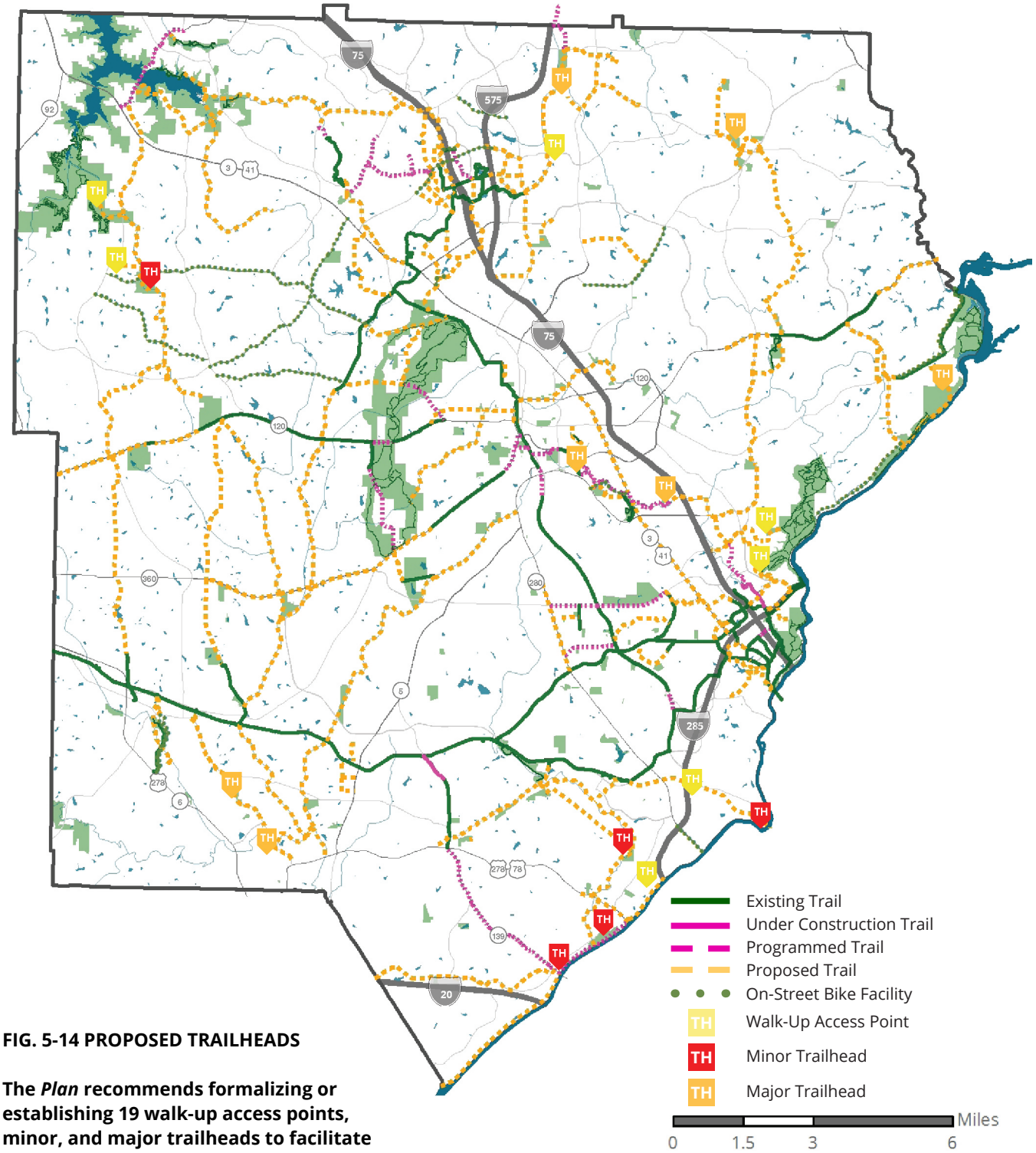


FIG. 5-14 PROPOSED TRAILHEADS

The *Plan* recommends formalizing or establishing 19 walk-up access points, minor, and major trailheads to facilitate access to existing and future priority trails.

OTHER CAPITAL PROJECTS

IMPROVE SIDEPATH CROSSINGS

As part of routine maintenance and intersection improvement projects, sidepath crossings should be improved to provide a consistent user experience, and enhance visibility and safety, where possible. There are places throughout the County where bollards are placed mid-way in the sidepath as they approach driveways but others where they are not. Some driveways have detectable warning strips (also sometimes called truncated domes) approaching driveways and others do not. To the extent possible and reasonable given routine maintenance schedules, intersection improvement projects, and new development projects, it is recommended to standardize sidepath crossings as part of other projects. For details on recommended crossings, see Chapter 4.

ESTABLISH TEMPORARY TRAILS: DIRTWAYS

In an effort to increase access to recreation and expand the trail network in a quick and cost-effective manner, some communities have launched the practice of building rough, unpaved temporary trails while waiting for paved greenways and trails to be planned and built, as described in Chapter 4. Cobb County should consider the use of temporary, unpaved trails as an interim implementation step for appropriate projects. It is recommended to develop one DIRTway as a pilot project.

FORMALIZE COLUMNS DRIVE AS GREENWAY CONNECTOR

It is recommended to use signage to designate Columns Drive as a Greenway Connector Trail between the Johnson Ferry South CRNRA Park Unit and Cochran Shoals CRNRA Park Unit. This route is already used frequently, but during public outreach activities, several people expressed that they were not aware of the full connection or had not thought of it as a trail. By formalizing the connection with signage, more people are likely to use the facility, enhancing connectivity between existing trails and providing more non-automobile options for travel between parts of East Cobb and the Cumberland area.

CREATING MORE INTUITIVE AND SAFER CROSSINGS WILL ENCOURAGE USE OF SIDEPATH TRAILS

NON-CAPITAL PROJECTS

COMPLETE A SIGNAGE AND WAYFINDING PLAN FOR GREENWAYS AND TRAILS

It is recommended to develop and adopt a signage and wayfinding plan to guide design and implementation of future signage on greenways and trails. The signage and wayfinding plan should recognize the individual identity of established greenways and trails, such as Bob Callan Trail, Noonday Creek Trail, Rottenwood Creek Trail, Silver Comet Trail, Lucille Trail, and Wildhorse Creek Trail, and others, while establishing a cohesive identity that lets people know that these trails are part of Cobb County's overall network of greenways and trails. It is suggested that this could be achieved through the use of a logo or symbol for the entire Cobb County network that could be used in conjunction with individual trail branding. Implementation could begin with identification of locations where new signage and wayfinding is needed, starting with connected segments of smaller trails, like the Mountain to River Trail, or with sidepath trails that are not as easily recognized by community members. For guidance on wayfinding and signage, see Chapter 4.

- The signage and wayfinding plan should identify locations for directional signs, mile markers, regulatory signs, interpretive signs, and information kiosks as well as larger branding opportunities, such as mural walls.
- Trails that currently lack branding and signage should be prioritized, beginning with the Mountain to River Trail.
- Cobb County should consider establishing temporary signage for significant programmed trails to raise awareness and generate excitement about projects underway. A prime example of an opportunity to create buzz about a new trail is the Mountain to River Trail – temporary signs could be placed along the stretch of West Atlanta St announcing the forthcoming trail: "Future Mountain to River Trail."

APPLY FOR A GRANT TO SPUR ACTIVATION OF THE MOUNTAIN TO RIVER TRAIL

Much of the Mountain to River Trail corridor (Cumberland, Delk Road TOD, Marietta University District, and Town Center) has participated in the Atlanta Regional Commission's Livable Centers Initiative (LCI) program in the past. These communities would benefit from funding to examine adjacent land uses, programming, and ways to activate the trail to encourage use and establish the Mountain to River Trail as a premier regional trail facility and viable alternative to motorized transportation. Components of the study may include identifying opportunities for temporary or new uses, programming, signage, development of trailheads and public spaces and other activities.

SEEK FUNDING AND PARTNERSHIPS TO INCREASE PROGRAMMING AND ACTIVITIES ON THE SILVER COMET TRAIL

The Silver Comet Trail is incredibly popular: according to a 2013 economic impact analysis, the current trail has an estimated 1.9 million users each year and generates $100 million in annual expenditures throughout the four-counties where it is located.[2] With additional programming and activities, the trail has the potential to be an even stronger economic force and attract more users.

ESTABLISH A COUNTYWIDE STAKEHOLDER ADVISORY GROUP OR COALITION

The group should be comprised of representatives of each of the six cities, three CIDs, and other entities and potential partner groups like the National Park Service, Cobb Travel and Tourism, and others. The group should meet quarterly to coordinate and provide updates on project status, engage elected official and keep them apprised of ongoing projects, assist with mobilization of resources, and collaborate with other outside groups for programming and activities.

ESTABLISH SHARED-USE PARKING AGREEMENTS WITH SCHOOLS AND OTHER COBB COUNTY COMMUNITY FACILITIES

To reduce the demand for new parking facilities and increase access to greenways and trails, establish agreements and memoranda of understanding (MOU) that allow use of parking lots for trail access during non-business hours. Consider also formalizing agreements with commercial establishments, or gain buy-in from property owners to allow the use of parking lots after hours.

WORK WITH PARTNERS TO ESTABLISH AND BRAND ONE OR MORE LOOP NETWORKS OF TRAILS TO INCREASE RECOGNITION

The Town Center CID is currently working on developing and branding the Town Center Loop – a network of on-street and off-road sidepaths, bike lanes, and greenway trails that will improve non-motorized transportation throughout the area. It was suggested that a loop network of trails be established in the Mableton area, using the existing and proposed segments of the Silver Comet Trail, Floyd Road Trail, Mableton Pkwy Trail, Nickajack Creek Greenway, and a proposed extension of the Chattahoochee River Trail. The suggested “Mable Loop” could potentially connect attractions and sites such as schools, the Mable House Arts Center, shopping centers, the South Cobb Regional Library, parks, offices, and residential areas.

NON-CAPITAL PROJECTS (CONTINUED)

COORDINATE WITH THE P.A.R.K.S. DEPARTMENT TO PRODUCE MAPS OF TRAILS WITHIN PARK PROPERTIES

Using the recently updated facilities inventory contained in the P.A.R.K.S. *Comprehensive Master Plan Update,* develop and distribute maps for trail users who are interested in recreational trails within park properties. During public engagement activities, community members expressed interest in knowing where they could find recreational trails throughout the county.

DEVELOP A MOBILE APPLICATION FOR GREENWAYS AND TRAILS

Work with a third-party vendor or host a community contest to develop a mobile phone application (app) that provides information about the location, length and difficulty of various trails throughout the County. For an example, see the app developed by Boulder County: http://www.bouldercounty.org/pages/mobile.aspx. Supportive features and elements like water fountains, restrooms, vehicle and bicycle parking, and key destinations should also be included.

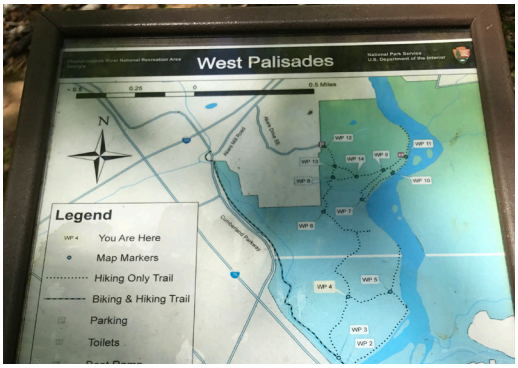
Cobb County may also consider using Cycle Atlanta's open-source data (available on Github) to develop an app that would allow Cobb County to collect cycling data from volunteers in order to better understand where people ride most often.

ENCOURAGE INSTALLATION OF PUBLIC ART ON GREENWAYS AND TRAILS

In addition to branded wayfinding signage, public art can draw attention to greenways and trails and help them stand out to visitors and residents. Government agencies can partner with local entities and businesses to sponsor competitions calling upon local artists to design and install artwork along trails. Artwork such as murals can help disguise less-attractive features or components along trails, like retaining walls or bridges. Other pieces, like sculptures, can mark access points, while other artwork may be able to transform utilitarian structures like light posts, utility cabinets, or drainage structures.

ENCOURAGE AND EXPLORE BIKE SHARE PROGRAMS

In addition to existing systems in Town Center and the City of Smyrna, other local jurisdictions across Cobb County are considering establishing bike share programs. The Cumberland CID is set to launch a bike share program in the near future, using Zagster, the same operator currently used in Town Center and Smyrna. The City of Kennesaw and Kennesaw State University are also exploring the possibility of bike share. To the extent possible, Cobb County should encourage and support these programs. Bike share typically serves as a first- and last- mile connectivity option, providing one way for transit riders to get to and from their origins and destinations, or



for short-distance utilitarian trips; however, it can also serve more recreational needs and increase use of greenways and trails. *(See also Topics for Further Study - Chapter 6.)*

GATHER DATA ON BICYCLIST AND PEDESTRIAN ACTIVITY

Implement a bicycle and pedestrian data collection and count program. Use of infrared sensors, loop detectors, and/or video technology can provide accurate data on use of greenways and trails by all users. This data, in turn, can be used to demonstrate the success of greenways and trails as well as to document demand. In combination with data from fitness tracking mobile applications, such as Strava, Garmin, FitBit and others, this data can tell compelling stories about current usage and make the case for new greenways and trails based on location data.

Cobb County initiated collection of data on pedestrian activity near SunTrust Park in 2017 and is considering expansion of the program to other locations, as resources become available. To assist with expansion of data collection, it should continue to assess and evaluate potential data collection mechanisms and technology, as well as locations for counters. Grant funding may be one way to advance and build upon these initial efforts. *(See also Topics for Further Study - Chapter 6.)*

DESIGNATE ALL TRAILHEADS AS "COMMUNITY FACILITIES" AND INSTALL BICYCLE RACKS AT ALL NEW TRAILHEADS

Consistent with the County's Sustainable Practices Policy, the County should develop an inventory of all existing trailheads and install or request local jurisdictions to install bike racks at those sites that currently have none. Simple U-shaped bike racks are recommended.

LEVERAGE FUNDING FOR INFRASTRUCTURE IMPROVEMENTS TO POPULAR DESTINATIONS

Cobb County and partners should consider ways to leverage public and private sector funding for improvements to infrastructure at key destinations, to ensure they are safe, accessible, and comfortable for bicyclists and pedestrians. Places like downtowns, business districts, Kennesaw Mountain, Lakes Acworth and Allatoona, and the Chattahoochee River are already attractive to people biking and hiking, but additional investment in supporting infrastructure can help them become true destinations. Furthermore, creating direct connections to comfortable biking and walking destinations can be a powerful tool not only for increasing use

CONSTRUCTION OF A PORTION OF THE MOUNTAIN TO RIVER TRAIL IN MARIETTA (2017)

6 IMPLEMENTATION

PLANNING FOR ACTION

The vision for the *Greenways and Trails Master Plan* is to provide a safe, well-connected network of greenways and trails to improve accessibility, safety, economic competitiveness, and well-being of residents and visitors. The end result will be that more people will have viable choices in how they get around for daily trips and more recreational opportunities. In order to achieve this desired outcome, strategic investments are needed to grow and improve upon the network of greenways and trails throughout the County. This chapter provides an overall strategy and guidance for where and how to focus investments in the future.

STRATEGIC APPROACH TO IMPLEMENTATION

OVERVIEW

Through 2021, Cobb County is focused on advancing greenway and trail projects that are part of the current SPLOST. During the subsequent five or so years, the primary focus will be on the eight priority projects identified as part of this *Plan*. Beyond that, as the County seeks to fill in and expand the greenway and trail network and develop project lists for future funding cycles, a focused approach is needed to guide investments and projects that will work towards the vision and goals set forth in this plan – toward improving mobility, accessibility, and connectivity; ensuring comfort and safety; driving economic development; protecting and enhancing the natural environment; fostering healthy choices; increasing awareness of greenways and trails; and maintaining a good state of repair. While there is tremendous interest in greenways and trails throughout most of the County, it makes sense to focus on those projects that will have the biggest impact and will make walking and biking more convenient and attractive for more people.

Planning practice is becoming more performance-based and the use of metrics to guide and prioritize funding, especially at the federal level, has become an important part of the planning process. This *Plan* provides a framework that helps focus resources and identifies areas that can be prioritized for funding. Furthermore, the strategy outlined is in keeping with the policy, programmatic, and infrastructure framework established for local partners in ARC's *Walk.Bike.Thrive!*

The approach articulated below aims to focus attention and resources on projects that blend desired network expansion criteria and principles of walkable, bikeable places, such as improving access to trails in Equitable Target Areas, connecting to activity centers or areas with high biking and walking propensity, as well as improving access to transit, creating local networks, and supporting infrastructure for walking and biking. At the same time, it is important for the County to focus on projects that have the highest potential to get more people biking and walking, not just for recreational and fitness purposes, but as part of daily life. Toward this end, the *Greenways and Trails Master Plan* suggests the following strategies as part of an overall approach to investments in active transportation projects:

- Gap Closure
- Expansion of the Network
- Neighborhood Connectivity
- Travel Sheds
- Countywide Focus Areas
- Trail Enhancements and Support Facilities

By focusing on these strategies, Cobb County will be able to implement projects that meet the stated goals and overall vision of improving accessibility, safety, economic competitiveness, and well-being, resulting in an interconnected network that gets more people biking and walking while working within the regional framework.

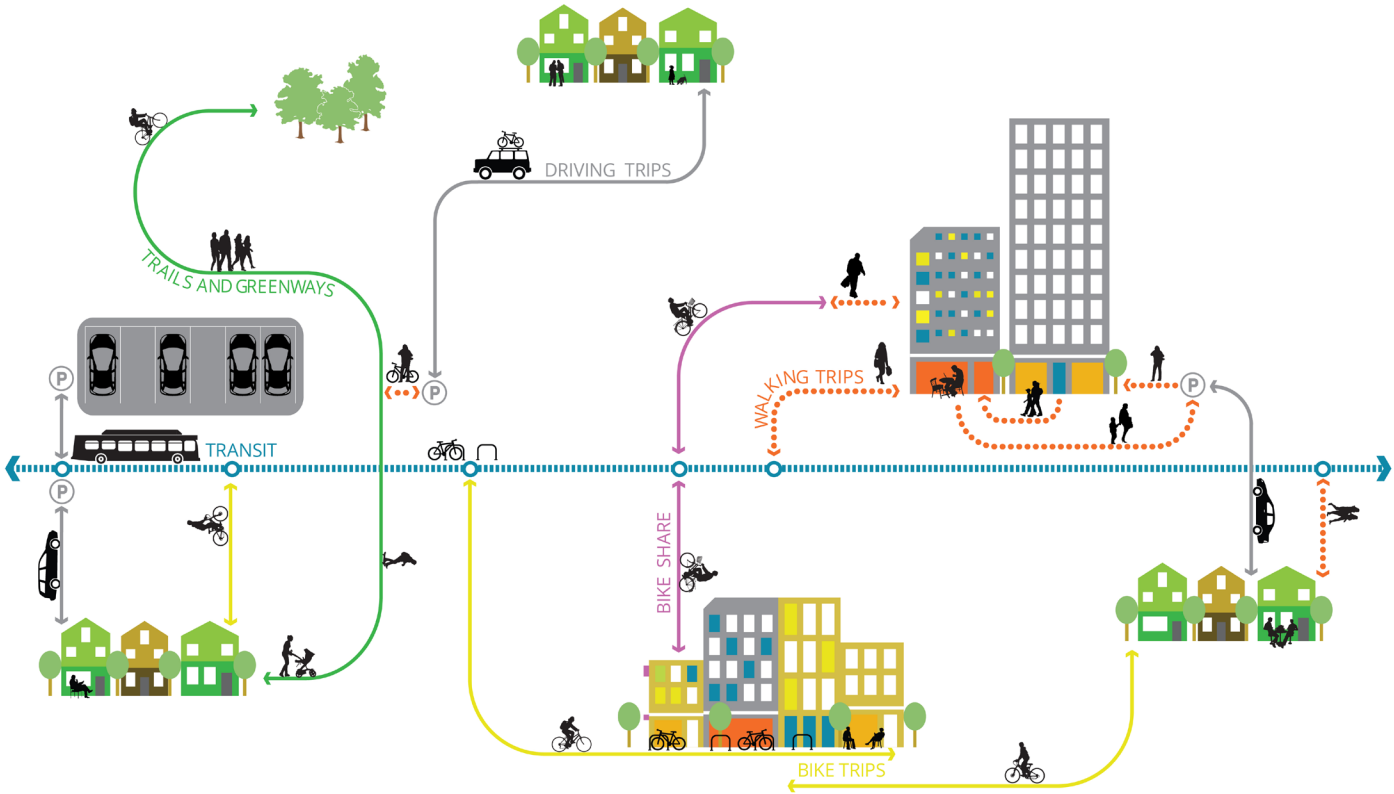


FIG. 6-1 INTERCONNECTED BIKING AND WALKING NETWORK
Credit: Atlanta Regional Commission (2016). Walk. Bike. Thrive!, Part 1, pg. 14

GAP CLOSURE

LEVERAGE EXISTING ASSETS

The current network of trails and greenways in Cobb County has been developed in a primarily opportunistic manner. As interest has grown in walking and biking, greenways and trails have been built all across the County, as implemented by various jurisdictions and entities. In recent years, as the number of trail and greenway projects has increased, a picture of countywide connectivity has begun to emerge, and has created strategic opportunities to link individual trail segments in order to create better connectivity and a more cohesive system.

By focusing first on closing gaps between existing and programmed trail projects, Cobb County can leverage existing infrastructure, knit together segments of trail that get people to more destinations, and make biking and walking more practical for day-to-day trips in areas where trails already exist.

EXPANSION OF THE NETWORK

FOCUSED GROWTH

Expanding the greenway and trail network beyond filling gaps between existing trails will reach more potential users, provide access to new destinations, and create opportunities for linkages between Cobb County and communities outside of the County. Opportunities to expand the network are present throughout the County. Focusing network expansion on key locations and particular types of projects will help ensure that investments are working towards stated goals and maximizing their potential to serve users. In seeking to expand the greenway and trail network, priority should be given to projects that have the potential to create or improve regional connectivity, those that have the potential to become destinations or attractions, those that provide access to public transportation services, and those that create more neighborhood connectivity to greenways and trails.

REGIONAL CONNECTIVITY

Investment in projects that cross county boundaries where trails already exist, or in locations where trails are programmed or proposed, should be prioritized. Cobb County is part of the ten-county Metro Atlanta region. It is connected to surrounding communities on all sides and linked by key natural features such as the Chattahoochee River, Lake Acworth, and Sweetwater Creek. Surging interest in greenways and trails throughout the region has sparked development of numerous trail systems in neighboring counties on nearly all sides of Cobb County, presenting tremendous opportunities to enhance regional connectivity and provide unique cross-region trips, as illustrated in Figure 3-21 (Chapter 3). These include along Noonday Creek across the Cobb-Cherokee County line, across the Chattahoochee River to the Proctor Creek Greenway and BeltLine, and along the proposed extension of the Silver Comet Trail.

TRAILS AS DESTINATIONS

Trails like the Silver Comet, those at Kennesaw Mountain, and in the Chattahoochee River National Recreation

Area are recognized, on a regional level, as destinations. They are places to which people from throughout Cobb County and beyond are willing to travel, attracting visitors from outside the immediate area. As such, they increase the potential that visitors will stay in the area beyond their visit to the trail – to have lunch, for example – generating economic activity and raising visibility of the trail as an attraction and the area as a destination. In an age where people are seeking out highly walkable transit-friendly communities even in suburban areas, well-integrated and carefully designed trail networks can play a substantial role in improving and catalyzing local economic development. Trails that have a high potential to become destinations are likely to have a high return on investment, generating economic activity beyond what most typical trails would generate, and spurring compatible development, such as restaurants, cafes, and retail.

CONNECTIONS TO TRANSIT

Trails that provide access to public transportation service increase the potential for combining modes to complete longer trips, reducing congestion and improving air quality. They also provide more options for people who choose or are unable to drive cars to get around. Trails within close proximity of transit stops will make it easier for transit riders to walk or bike to stops, providing last-mile connectivity, and may attract more people to use public transportation.

NEIGHBORHOOD CONNECTIVITY

It is not possible nor practical to provide full sidepaths or greenway trails to all desired destinations and neighborhoods. It is important to recognize the role that sidewalks, bike lanes, and other types of paths can play in facilitating access to and from neighborhoods. Establishing cut-through paths and direct connections from commercial storefronts and parking lots to sidewalks can go a long way toward improving neighborhood connectivity.

NEIGHBORHOOD CONNECTIVITY

Generally speaking, people will take the shortest or most direct route available. Sometimes, the most direct route is not the typical sidewalk or trail, but is rather a neighborhood connector path, park, or even parking lot. Typical suburban development patterns are often not conducive to direct walking routes, as they are characterized by cul-de-sacs and dead-end streets, forcing travelers to make longer trips and go out of their way.

Cobb County should prioritize efforts to create a high-quality walking network of sidewalks, trails, greenways, and paths that provide direct routes, safe connectivity between destinations, and where appropriate, areas for rest or socializing.

DIRECT ROUTES: Pedestrian facilities should ideally provide direct connections between destinations, minimizing the need to take longer, out-of-the-way routes. In high pedestrian traffic areas, crosswalks should be frequent.

CONNECTIVITY: The pedestrian network should form a connected system of sidewalks, paths, trails, and public spaces that serve key destinations such as schools, shopping centers, transit stops, and neighborhoods.

SAFETY: The walking network should make people feel safe and comfortable through good design. Good design should ensure adequate width based on the context, buffers between pedestrians and roadways, visible and user-friendly crossings, curb ramps, landscaping, and lighting – and should be barrier-free, enabling universal access. It should also take into consideration the interaction between pedestrians, cyclists, vehicular traffic, and the built environment.

GATHERING SPACES: Sidewalks and walkways are for people. They should provide ample room for people to stop and rest, wait for friends, talk to one another, and even sit to encourage socializing, especially in public spaces and commercial districts.

TRAVEL SHEDS

CONSIDERING BIKING AND WALKING DISTANCES

Across the country, roughly half of all trips taken are less than three miles long, yet nearly three-quarters are driven.[1] Many of these trips could be accomplished on foot or bike, if safe, comfortable facilities were available. Research shows that, depending on the setting and type of destination, a good threshold for how far people are willing to walk is one mile and that three miles is a good approximation for how far people would be willing to bike. Regional data supports these estimates: ARC's PLAN 2040 travel demand model indicates that 50% of all walking trips in the region are less than ¾ of a mile and 75% are less than 1.2 miles, while 50% of all bike trips in the region are less than 2.4 miles and more than 75% are less than four miles.[2]

These thresholds are sometimes referred to as "catchment areas" or "travel sheds" - the area or distance from a given point to which a person would be willing to travel (Figure 6-2). Of course, the distance a person is willing travel varies highly based upon who is making the trip, the purpose of the trip, and the surrounding environment. Even still, if approximately half of all trips taken are shorter than three miles, and people are generally willing to walk at least a half-mile and sometimes up to one mile or bike up to three, then there is a good case for investing in improvements that will give people the option to make those trips by bike or on foot. Shifting even a small percentage of short trips to bike or foot, instead of car, would have a positive impact on congestion and environmental, physical, and mental health.

Travel sheds can be measured from any location, but for the purposes of increasing short biking and walking trips, it is important to consider travel sheds around transit stops, downtowns or business districts, and key destinations. It is also important to consider actual distances pedestrians and cyclists must travel using the existing network of sidewalk, greenways, trails, bike lanes, etc. and the barriers they might encounter along the way, such as highway interchanges or railroad crossings.

To begin creating safe opportunities for short daily trips by bike or foot, communities should focus first on making sure the appropriate infrastructure is in place in areas where land use and development patterns already support options for shorter trips, such as mixed use districts, downtowns, and town centers. It is also important to invest in creating safe and convenient access to transit, so that people have the option of combining modes for longer trips. This might entail installing bike racks at offices or retail shops or establishing direct physical connections to transit stops.

For areas where land use patterns may not yet be conducive to biking and walking, communities should encourage those types of development patterns where possible. This may include siting commercial developments near one another, creating longer networks of sidewalk, supplementing greenways and trails with on-street bike facilities, and other approaches. Creating connected street grids, safe crossings, and direct access between businesses, neighborhoods, and sidewalks or trails are also critical.

By focusing investment in areas that allow people to make short trips on foot or bike, Cobb County can increase the likelihood that people will choose these modes more often for daily trips. This would have a significant positive impact on physical and environmental health, as well as local congestion. The Environmental Protection Agency (EPA) estimates that getting out of our cars for even half of one-mile trips could save $575 million in fuel costs and two million metric tons of CO_2 per year – the same effect as taking 400,000 cars off of the road.[3] The health benefits would be felt in terms of improved air quality, more physical activity and reduced risk of chronic disease, and lower healthcare costs.

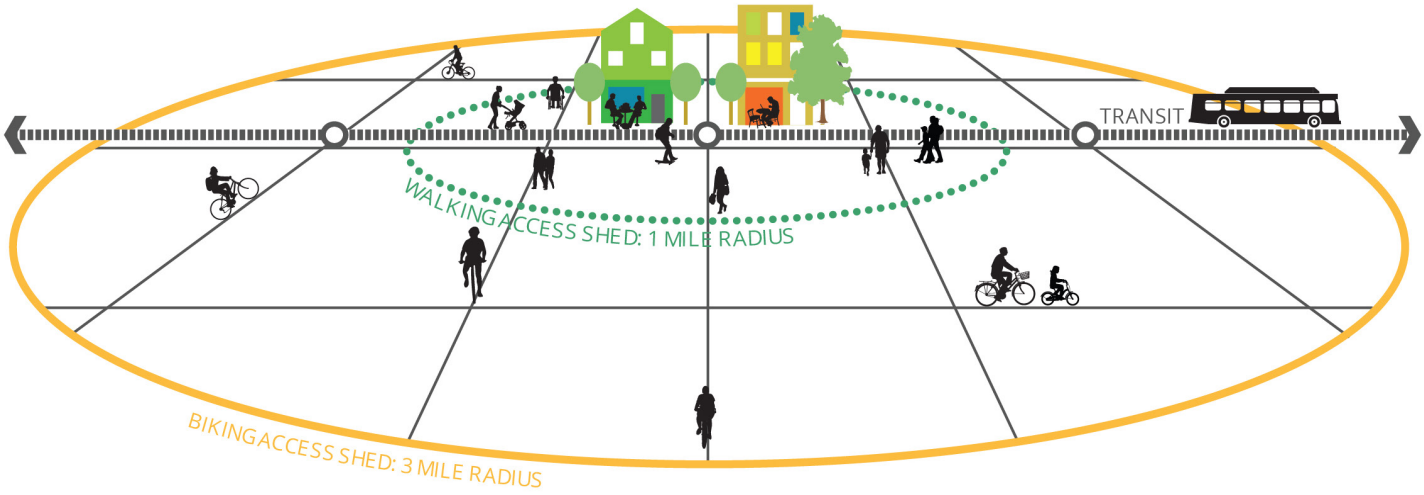


FIG. 6-2 CONCEPTUAL TRAVEL SHED
Credit: Atlanta Regional Commission (2016). Walk. Bike. Thrive!, Part 1, pg. 11

COUNTYWIDE FOCUS AREAS

A LAYERED APPROACH

It is important to identify areas where investment in greenways and trails are likely to have the biggest impact and the highest potential to get more people biking and walking, as well as those areas where trails will connect more people to more activities. The Countywide focus areas shown in Figure 6-3 represent places where trails and greenways are likely sound investments that will serve more people and have a higher return on investment in terms of meeting stated plan goals.

These areas represent the outcome of a layering of GIS data used during the assessment of existing conditions, many of which are described in Chapter 3 – Community Context. Using data on propensity for biking and walking; Equitable Target Areas; designated regional activity centers; county-level activity centers; proximity to schools and to transit stops; and opportunities to fill gaps in the current trail network, the project team has developed a graphic illustration of geographic areas in which to focus future gap-filling and network expansion projects, as shown at right.

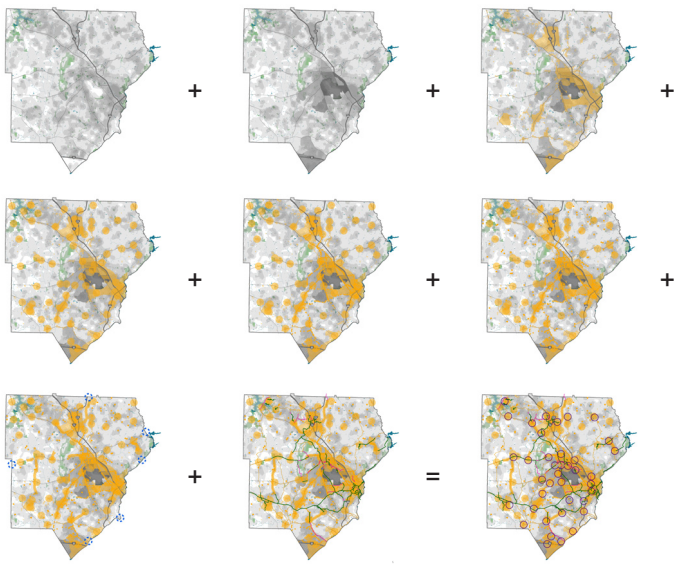
The symbols on the map are not literal boundaries, but represent a one-mile buffer around areas that generally meet the criteria described above. One mile was chosen to reflect the limits of how far and how long most people are willing to walk - a walk-shed - assuming an average speed of 20 minutes per mile (3.5 feet per second)[4]. This is also consistent with the concept of a 20-minute neighborhood, in which a person is able to reach a majority of their travel needs within a 20-minute walk. (For more on 20-minute neighborhoods, see *Walk.Bike.Thrive!* Part 1, page 37.) These focus areas should be considered during the initial screening phases of projects to help identify possible project locations and target investment. (Note: current demographic and GIS data should be used at the time of project planning.)

TRAIL ENHANCEMENTS AND SUPPORT

COMPLEMENTING INFRASTRUCTURE

Safe, comfortable paths such as trails, sidewalks, or greenways are the backbone of a connected network. These are the facilities that serve basic transportation purposes and give people opportunities to travel and recreate. However, to attract a wider audience and encourage greater use of greenways and trails, it is important to provide support facilities and amenities that create a more welcoming environment.

Such amenities as lighting, seating, and signage will help get more people biking and walking. Seating makes it possible for people who may not wish or be able to travel long distances to take advantage of trails. Shade is important to provide respite for travelers in the hot Georgia summers and landscaping can help reinforce the buffer between the roadway and trail users, making the trail feel safer and a more pleasant experience for users. Amenities like drinking fountains and restrooms on greenway trails can also make a facility more attractive to more people, especially those out for longer walks or rides and families with children. Enhancement of the trail network can also take the form of trail-oriented development, attracting businesses that have a natural synergy with active transportation, such as restaurants, cafes, and breweries.



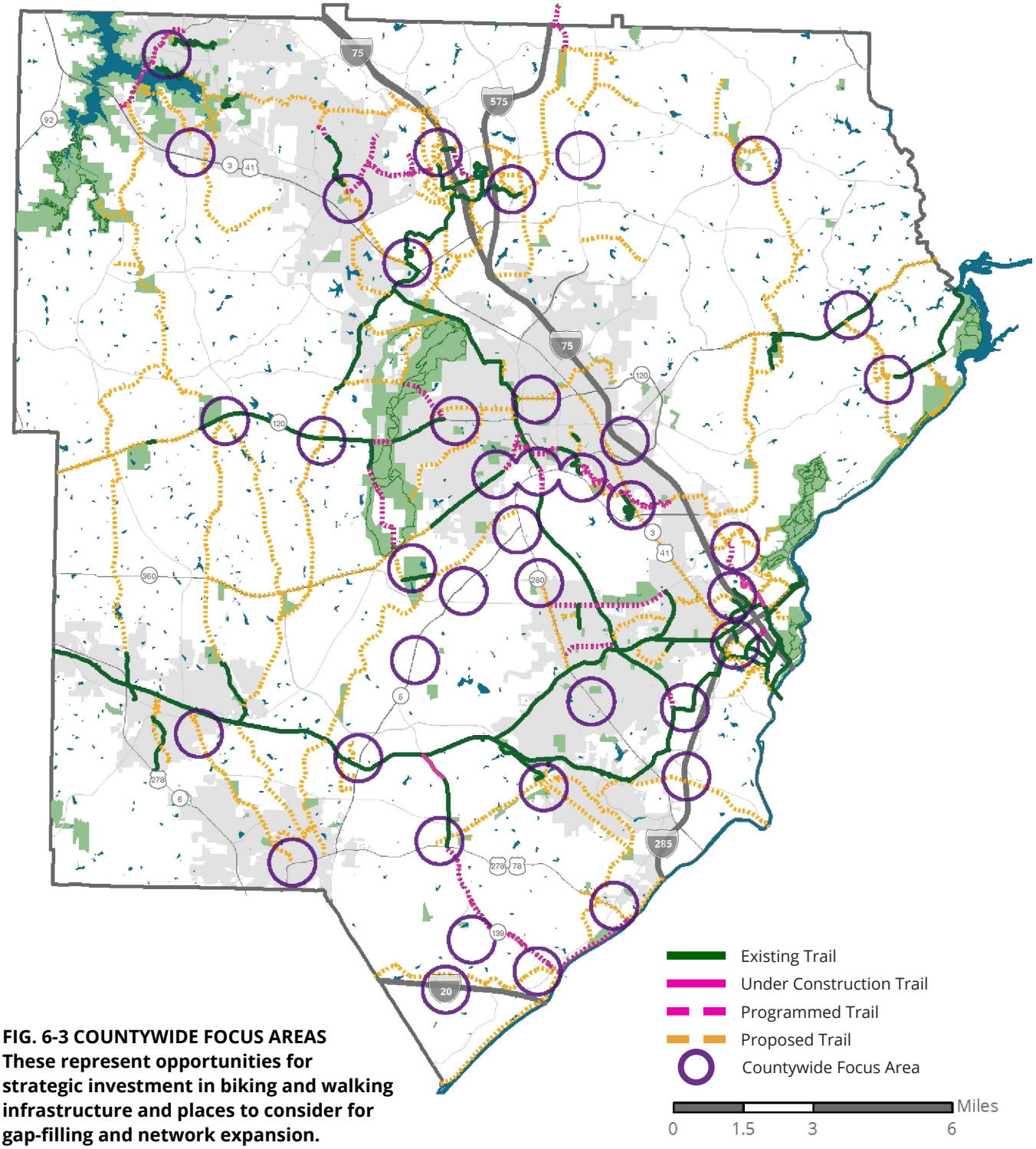


FIG. 6-3 COUNTYWIDE FOCUS AREAS
These represent opportunities for strategic investment in biking and walking infrastructure and places to consider for gap-filling and network expansion.

TRAIL-ORIENTED DEVELOPMENT

KEY COMPONENTS OF TRAIL-ORIENTED DEVELOPMENT:

- ***ENCOURAGE COORDINATION BETWEEN PROPERTY OWNERS***
- ***ENCOURAGE A MIX OF USES IN NODES WITH CONTEXTUAL COMMERCIAL DEVELOPMENTS***
- ***CREATE DESTINATIONS ALONG TRAILS TO ENCOURAGE USE***

Trail-oriented development is gaining popularity as more communities seek to capitalize on their investment in active transportation, interest in healthy and active lifestyles, and the momentum behind increased levels of biking and walking. The Indianapolis Cultural Trail and Atlanta BeltLine are great examples of greenways and trails that have spurred economic activity in the form of mixed use development, programming and activities, new housing, and tourism.

In February 2017, Metro Nashville Planning Commission passed a Trail-Oriented Development community policy covering 269 acres in East Nashville. The policy was applied to the district as a way to provide important public connections in an area that previously lacked public street connectivity. The purpose is to encourage active transportation by requiring buildings within the boundaries to build a publicly accessible multi-use trail and to connect all properties within the area. Other communities have enacted similar policies encouraging development to interface with trails and greenways and encouraging the types of uses that are compatible with active transportation facilities.

SAFETY

OVERVIEW

One of the primary goals of the *Greenways and Trails Master Plan* is to ensure comfort and safety for users of the system. This will be achieved through a combination of smart design, infrastructure improvements, signage, education and awareness. This section provides guidance on considerations for creating a safe environment for all users, particularly with respect to pedestrian, bicycle and vehicular conflicts. Details about trail design, crossing, and signage are found in Chapter 4. Specific safety elements should be addressed during design on a trail-by-trail basis.

ARC's *Walk. Bike. Thrive!* plan calls for the region to "adopt a Vision Zero policy...to eliminate preventable traffic deaths." Vision Zero is a strategy developed in Sweden in the 1990s, setting a goal of working towards eliminating traffic fatalities and serious injuries. The strategy has been implemented across Europe and is catching on across the United States (www.visionzeronetwork.org), and it has now been adopted by the ARC in *Walk. Bike. Thrive!*

The National Complete Streets Coalition believes that a "safe systems approach" that considers crash experience, speed limits, and vulnerability of people walking and bicycling will help produce a comprehensive solution for reducing crashes that benefits everyone — not just those driving. Providing space on our streets for drivers, walkers, and bicyclists makes streets safer for everyone, even those who may never ride a bike. After all, drivers and bicyclists are also pedestrians and bicyclists can also be pedestrians and drivers.

Cobb County should work toward leading the region in promoting a safe trail and greenway network which will incorporate all elements necessary to minimize user injuries and fatalities.

"The reason for bikeways is not what they do for bicyclists, but what they do for the whole community."

Dan Burden,
Walkable and Livable Communities Institute

Safety is one of the most important considerations when planning and designing trails. One way to create a safe environment is to minimize areas of potential vehicular conflict and the severity of any potential collisions. For vehicle-pedestrian collisions, the risk of severe injury and death increases dramatically as vehicle speeds increase. At a vehicular speed of 25 MPH, the risk of pedestrian death from a collision with a motor vehicle is approximately 11%; at 35 MPH, this risk increases to 32%; and, at 45 MPH, the risk becomes 65%[5] (see Figure 6-4).

A wide range of physical elements should be considered while improving existing and developing new trails and greenways to enhance safety and minimize potential vehicular conflicts. Providing adequate separation between trails and the roadway is one way to reduce potential risk. Appropriate lighting, signage, trail and roadway crossings, and other features can also reduce risk and increase safety.

Other features, such as bollards and railings may help provide a barrier between vehicles and/or pedestrians and bicyclists, particularly at crossing locations or locations where vehicular conflict potential exists.

Other safety elements such as personal safety should also be considered when developing the trail and greenway system. Measures can be implemented to enhance personal safety and should be considered on a case-by-case basis during design and construction and will be highly dependent on location and user frequency. Such measures include:

- Trail lighting
- Emergency location markers
- Public safety patrol officers

While the safety measures listed above are worthy of consideration during trail and greenway planning, the list is by no means exhaustive, and a full safety analysis will be necessary during the planning, design and construction phases of a trail or greenway segment.

For design guidance on intersection treatments, crossings, and signage, see Chapter 4.

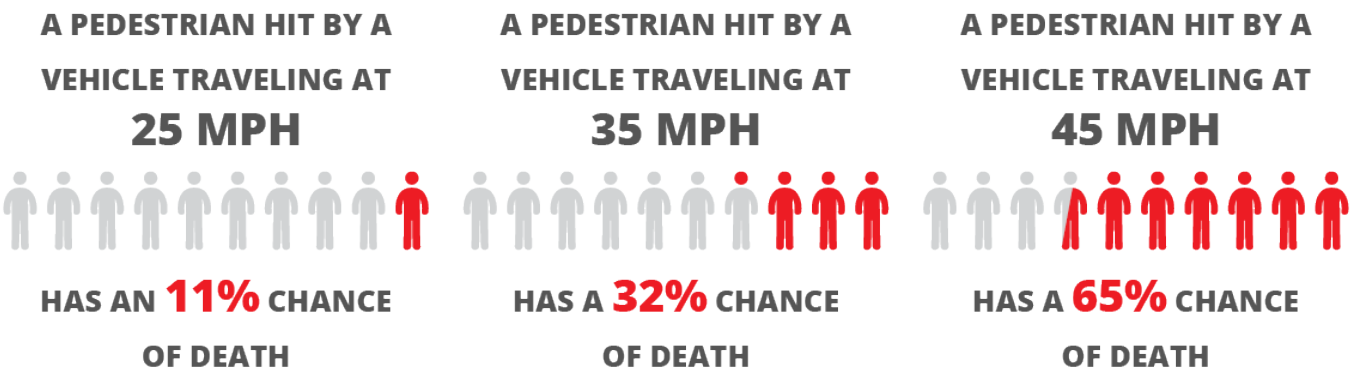


FIG. 6-4 RISKS OF PEDESTRIAN DEATH WHEN STRUCK BY VEHICLES

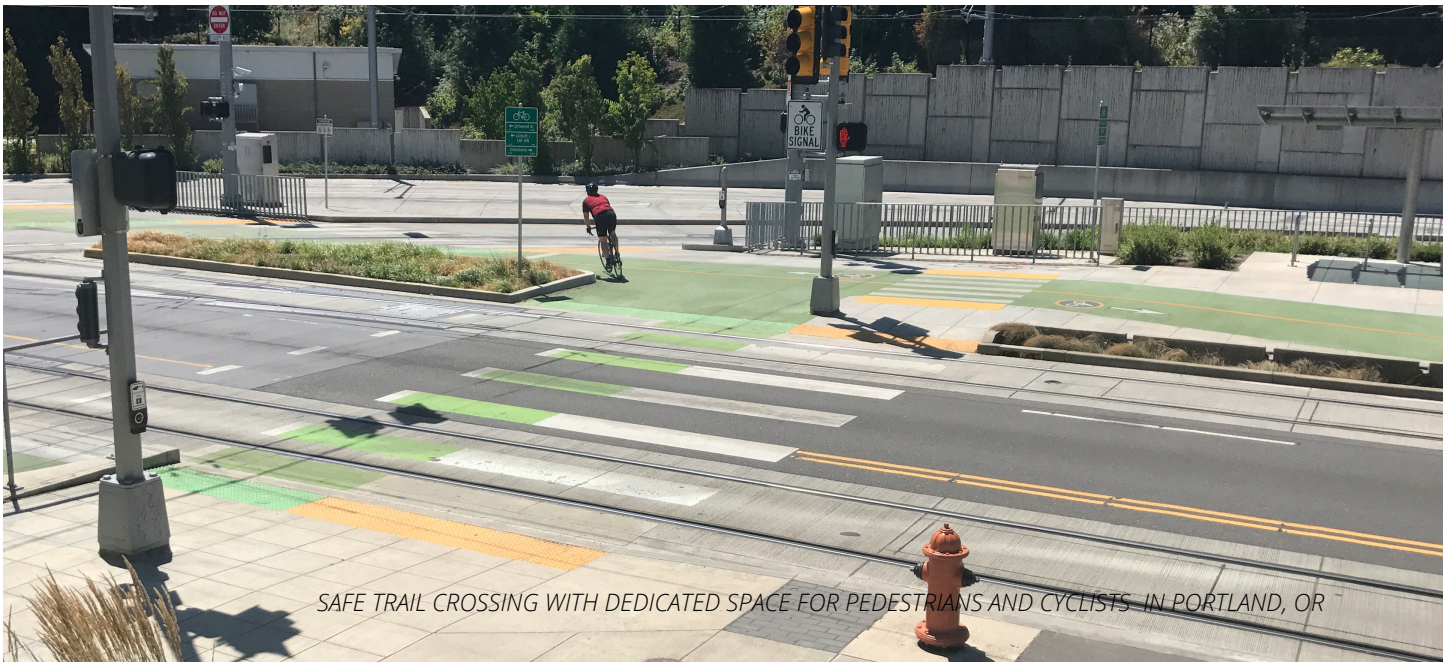
SAFETY PROJECT: EMERGENCY LOCATION MARKERS

Cobb County is undertaking an initiative to improve trail safety by installing **Emergency Location Markers** (ELMs), which are standardized signs designed to assist emergency responders in finding locations in areas that are otherwise hard to describe or find, especially in large parks and on trails.

The County and its contractors will mark locations along trails using the United States National Grid, a national standard that also conforms to national and international display standards. The ELMs will offer residents and visitors an easier way to communicate location information to dispatchers and responders during emergencies.

Signs will be 12 by 12 inches for trail structures and shelters and six by nine inches for hiking, walking, and bicycle trails. County staff will work with contractors to determine locations for individual signs along each trail. An example of an Emergency Location Marker is shown at right.

The County plans to release a request for proposals (RFP) in late 2017 and it is expected that installation will be complete within 12 months of the beginning of the project.



SAFE TRAIL CROSSING WITH DEDICATED SPACE FOR PEDESTRIANS AND CYCLISTS IN PORTLAND, OR

COMPLETE STREETS

INTEGRATING GREENWAYS & TRAILS

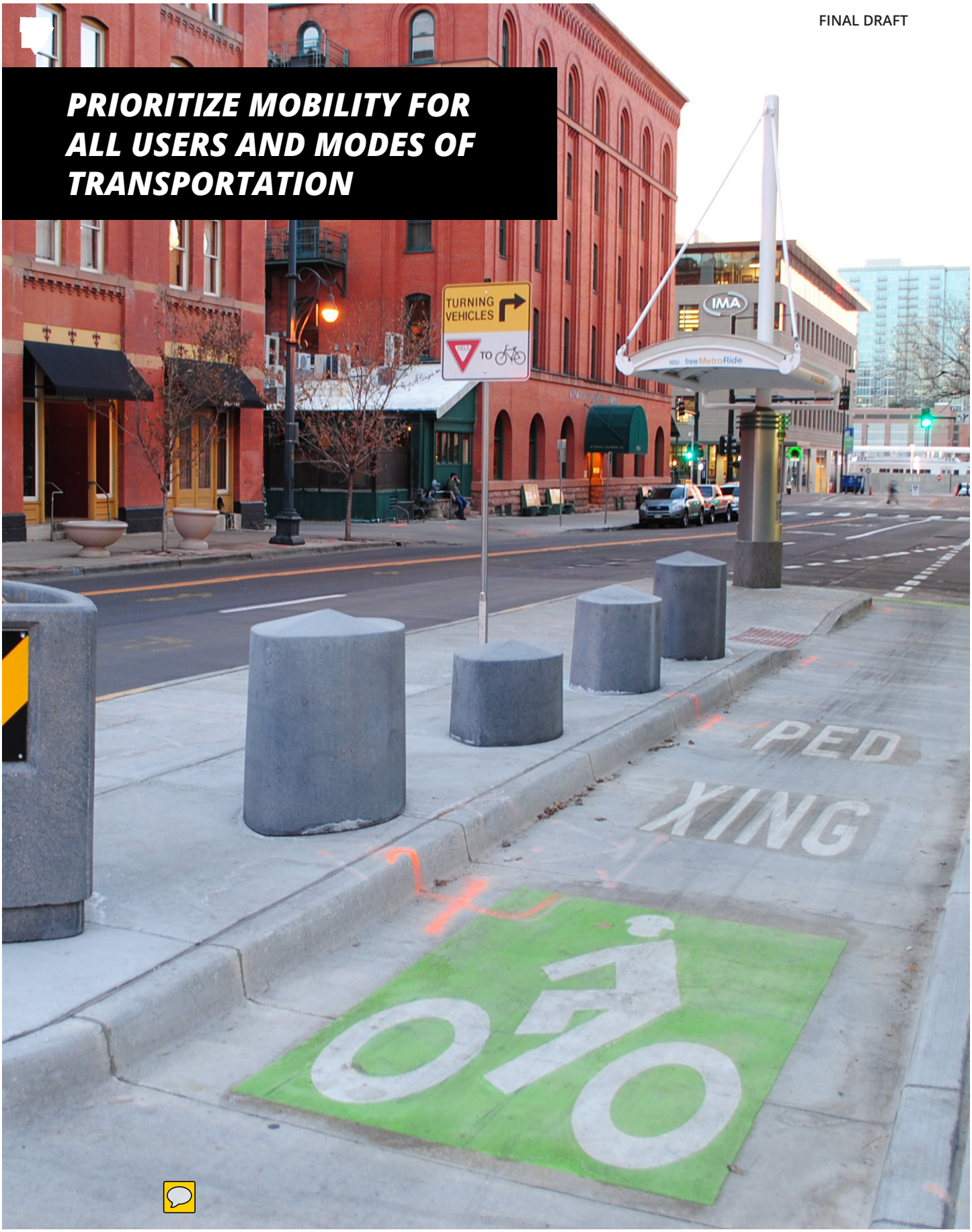
Complete Streets are designed and operated to enable safe access for all users – pedestrians, bicyclists, motorists, and transit riders – of all ages and abilities. Complete Streets are not a defined prescription for roadway design, but rather a policy approach to design and operation of streets that enables safe access for all users. By adopting and embracing a Complete Streets approach to transportation planning and design, agencies commit to making the street network better for everyone as part of each project.

The look, feel, and components of Complete Streets varies based upon the surrounding context of the community in which the street(s) are located. They look different in different communities: some contain sidewalks, bike lanes, and transit lanes, while others may include median refuge islands, narrower travel lanes, and curb extensions. Urban Complete Streets are likely different from small town Complete Streets. The goal is to balance safety, comfort, and convenience of all users.

As discussed elsewhere in this *Plan*, Cobb County has a Complete Streets policy. The County should continue to focus on implementation of this policy through the provision of safe, comfortable facilities for all users with each new project, including greenway and trail projects. To formalize the integration of greenways and trails into the Complete Streets policy, it could be updated to explicitly state this commitment. Broward County, Florida, conducted a *Complete Streets Greenways Integration Study*[6] to encourage consideration of the County's Greenways Master Plan as part of the development of complete streets. The report identified the overlap between complete streets and greenway planning initiatives and sought to identify connectivity and accessibility opportunities, as well as problem areas and deficiencies.

Cobb County should consider updating its Complete Streets Policy to directly address on-street connections where greenway trails and sidepaths meet on-street bike facilities or sidewalks and trail-to-trail crossings. Another option could be to incorporate the *Greenways and Trails Master Plan* by reference into future Complete Streets Policy updates. The goal would be to reinforce Cobb County's commitment to Complete Streets and codify some of the design considerations and recommended treatments.

PRIORITIZE MOBILITY FOR ALL USERS AND MODES OF TRANSPORTATION



ADOPTING AND APPLYING TYPOLOGIES

INTEGRATING GREENWAYS & TRAILS

The typologies and classifications described in Chapter 4 are intended to help guide planning and design of future greenways and trails as components of an overall walking and biking network. The facility types described provide multiple options for knitting together a cohesive, connected system that gives people greater choice in how they get around and improves access to destinations, while setting a standard for creating safe, comfortable facilities. These are intended to be applied as appropriate to future projects, with the understanding that each facility type serves a different purpose.

Sidepath trails are more transportation oriented, whereas greenway trails and unpaved recreational trails are more geared toward recreation and exercise. Neighborhood connector trails serve the express purpose of connecting residential neighborhoods or commercial developments to greenways and trails. Greenway connectors are direct links to greenway and trail facilities using existing sidewalks and/or on-street bicycle facilities. Applying one of these typologies to a proposed trail must take into consideration the surrounding context and purpose of the facility or connection.

From the standpoint of creating safe, comfortable connections, the preferred types are greenway trails and sidepath trails; however, as described elsewhere in this *Plan*, there are times when minor pathways or cut-throughs are needed to provide direct access to residential areas, transit stops, neighborhood destinations, or nearby amenities.

Design guidance included in this plan (Chapter 4) should be adopted as standard practice, recognizing the unique context of individual trail and greenway segments and allowing for flexibility to design to that context as appropriate. As discussed in Chapter 4, Cobb County should develop a trail system "fit and finish guide" tailored to the County's brand and inclusive of more detailed information such as materials, colors, and placement of amenities and signage.

IT IS A PRIORITY TO CREATE A COHESIVE AND INTENTIONAL SYSTEM

POTENTIAL PARTNERSHIPS

INCREASING CAPACITY

There are numerous opportunities for partnering with groups and organizations from both the public and private sector to assist in promoting and funding new trail and greenway initiatives as well as maintaining existing facilities. This section describes the potential partnerships that may be available to the County as it pursues expanding the trail network; specifically, opportunities to partner with local municipalities, Community Improvement Districts (CIDs), civic and advocate groups and other organizations. Through these partnerships, Cobb County can leverage its investments and potentially share operations and maintenance costs of the trail system as it looks to increase active transportation connectivity.

MUNICIPALITIES

The County should work with each of the six municipalities (Acworth, Austell, Kennesaw, Marietta, Powder Springs, and Smyrna) to identify grants and local funding sources within each jurisdiction to advance planning, design and construction of specific trail segments. Additionally, each municipality should identify development opportunities that can incorporate trail and greenway design into infrastructure plans. Agreements and memoranda of understanding should be developed for the operation and maintenance of these trails and greenways as they traverse through the respective jurisdictions.

COMMUNITY IMPROVEMENT DISTRICTS

There are three CIDs within Cobb County (Town Center, Cumberland, and Gateway Marietta). These districts are established by property owners and local businesses that pay fees in order to improve infrastructure and other public services within the district. Cobb County already has established relationships with each of the CIDs and has partnered to support previous projects. Going forward, the County should continue to work with the CIDs to maintain a consistent vision for planning of future trail and greenway segments within and adjacent to the districts. The County and CIDs should establish agreements to guide operations and maintenance of trail segments within each of the districts.

ADVOCACY GROUPS & ORGANIZATIONS

The County may consider discussions with any and all appropriate organizations that advocate active transportation on trails and greenways to explore opportunities for expansion and development. Examples of such organizations include:

PATH FOUNDATION

A non-profit group which supports the development and construction of trails throughout Georgia, with over 260 miles of multi-use trails completed and many more planned. Through donation campaigns, PATH has been able to develop a significant trail network including segments of the Atlanta BeltLine and Silver Comet Trail and has recently

expanded to developing facilities outside of the metro area. Discussions and meetings with PATH staff can foster opportunities for expanding and developing the trail network in Cobb County. (https://pathfoundation.org/)

COBB LAND TRUST (CLT)

An incorporated not-for-profit organization whose mission is to "preserve land that has natural, historic, cultural, recreational, scenic, and educational value." Founded in 1992 to protect natural, scenic, and cultural resources in the face of burgeoning development and growing population, the CLT helps preserve land in Cobb County for the enjoyment of present and future generations. It is actively involved in several projects, including Concord Cemetery, Heritage Park, Kolb Farm, McFarlane Nature Preserve, the Nickajack Watershed, Silver Comet Trail, Wallis Farm, and others. The CLT may be a valuable resource for future greenway and trail projects. (www.cobblandtrust.org)

CONNECT THE COMET

An organization dedicated to connecting the 6.5-mile missing link from the current eastern terminus of the Silver Comet Trail to the planned Westside Trail segment of the Atlanta BeltLine. The group relies on volunteers and partnerships, and hosts forums to educate the public on the increased connectivity and mobility that will arise from the completion of the final trail link. The County should continue working with Connect the Comet to review successes and lessons learned in the trail connection process to-date and look for opportunities to advocate other trail connections along the Silver Comet and other locations across the County. Opportunities may include letters of support, fundraiser events and additional forums to educate and promote increased trail connectivity. (http://www.connectthecomet.org/)

RAILS TO TRAILS CONSERVANCY

An advocacy group that promotes efforts to preserve unused rail corridors for public use, including rails-to-trails conversions such as the Silver Comet Trail. The RTC can be a continuing resource to the County to help identify additional unused rail corridors for the potential for active-use transportation. (https://www.railstotrails.org/)

TRUST FOR PUBLIC LAND

An organization that works with communities to raise funds and assist with planning and land acquisition for parks, recreational areas and trails. Their current slogan, "Everyone deserves a park," gets at the heart of the organization's mission – saving land for people to enjoy. The group has worked extensively in the Atlanta area, including at KMNBP, Atlanta BeltLine, and the Westside Park currently under development in Atlanta. The County is already working with TPL to study the feasibility of a Chattahoochee River Trail and should continue this relationship to explore additional opportunities as identified in this Plan. (https://www.tpl.org)

NATIONAL PARK SERVICE (NPS)

NPS has provided the County with letters of support during past applications for funding from the Federal Lands Access Program (FLAP) through the Federal Highway Administration (FHWA). FLAP funds are used for improving access to federal lands such as KMNBP. As the County seeks to increase access to facilities such as Kennesaw Mountain and the CRNRA, it should continue to build upon the strong foundational relationships established through previous projects. (https://www.nps.gov/)

BUSINESS, TOURISM, AND ECONOMIC DEVELOPMENT ORGANIZATIONS

The economic impacts of trails have been well-documented across the country. World class systems, such as the Silver Comet, are major tourist attractions and, as such, carry with them immense market potential for local businesses including retail areas, restaurants, entertainment venues, hotels, and much more. The County should continue to foster strong relationships with local businesses, tourism organizations, and economic development agencies to leverage the greenway and trail system as community assets.

It takes a high level of planning and coordination to fully leverage the catalytic potential of trails and trail users to realize these positive economic benefits. The critical component of capitalizing on this effort is to make the actual connection between these entities by answering the question, "How do users make choices on which towns they will stay in or where they will eat?" The answer boils down to awareness and physical connectivity. Important factors include the following:

- **Connectivity:** Is your trail/system physically connected to businesses?
- **System Quality:** While there may be a physical connection, is it the type of connection that people feel comfortable using and will encourage users to diverge from the trail?
- **Wayfinding/Signage**: Is information about these opportunities readily available and simple to follow so users can take advantage of these assets?
- **Partnership Coordination**: Are local tourism groups aware of large-scale trail-related events? What is the best way to connect to and leverage those audiences?

The County should work with groups such as the Cobb Chamber of Commerce, Cobb Travel and Tourism, and local business associations and visitors bureaus to ensure that proper and useful branding and wayfinding are provided along the trail system to directs users not only along the trail, but also to nearby attractions and amenities. Other opportunities may exist for these and other groups to tap into or to organize regularly scheduled trail-oriented events on local trails to help capture these temporary, but critical, audiences.

GREENWAYS AND TRAILS CAN BE STRONG DRIVERS OF TOURISM AND ECONOMIC DEVELOPMENT

CYCLING, "FRIENDS OF," AND OTHER GROUPS

There are several cycling groups in Cobb County that actively promote cycling countywide. These groups should be considered as potential partners for future trail-related events and activities. Examples of cycling groups in Cobb County include: BikeCobb; Georgia Interscholastic Cycling League; and Southern Off-Road Bicycle Association.

Within Cobb County, there are numerous "friends of parks" groups that work with local agencies and officials to advocate for parks, green spaces, and trail connections. These organizations play a critical role in assisting with maintenance and upkeep of existing parks and can serve as invaluable resources to help advocate for and maintain trails and greenways that connect to parks and green spaces. Examples of "friends of parks" groups in Cobb County include, but are not limited to: Friends for East Cobb Park; Friends of Mabry Park; Friends of Price Park; Friends of Shoupade Park; and Friends for Tritt Park.

Other local organizations and associations are doing their part to promote and advocate for trails and greenways throughout Cobb County, as well as to engage with County staff and elected officials on behalf of their neighborhoods and communities. Groups such as Kiwanis Clubs and Rotary Clubs can be strong partners in making the case for new trails, trailheads, and other associated improvements, and could sponsor facilities and receive recognition through signage.

One successful mechanism that has been used to promote maintenance and upkeep of trails is the "Adopt-a-Trail" program. While county and local officials hold the primary responsibility for major maintenance activities, organizations such as businesses, community groups, and church groups can participate in more frequent maintenance such as litter removal, brush clearing, and painting. Volunteers can also assist by identifying issues such as downed trees and repairs to pavement, signage and trail amenities. Some municipalities request financial contributions to adopt greenway segments. Contribution guidelines are typically based on the size of an organization (i.e. larger businesses pay more, while small businesses and non-profits pay less). Some municipalities have created a Adopt-a-Trail Handbooks to formalize procedures for trail maintenance and volunteer responsibilities.[7] Cobb County has an established "Adopt-A-Stream" program in which community members volunteer to monitor the health of various aspects of local watersheds, assisting with clean-up and other projects. A Cobb County "Adopt-a-Trail" program could work similarly, in partnership with Cobb DOT and the P.A.R.K.S. Department.

ORGANIZED GROUP RIDES ARE A GREAT WAY TO INVOLVE LOCAL PARTNERS AND BUILD MOMENTUM

FINANCIAL RESOURCES

ESTIMATING COSTS

The cost to plan, design, construct, and maintain trails varies based upon a number of factors, including the length of the greenway or trail, the location and context (e.g., the type of vegetation planted alongside the trails, whether it is next to a stream or creek, or in a neighborhood or commercial setting), the surface material, the amount of land to be acquired, and more. This section provides resources to assist with estimating costs for future greenway and trail projects and potential sources of funding.

Cost estimates are an important component of the planning process for greenways and trails; however, cost estimates are fluid and subject to change based upon many factors, particularly as a project advances through the design and engineering phases of development. Current planning-level estimates for construction of greenways and trails in Metro Atlanta are provided below, along with references and benchmark estimates.

The resources provided in this section are intended as guidance only. More detailed estimates will be needed at each phase of individual greenway or trail projects, and it should be noted that cost estimates are likely to change as more detailed information becomes available during the design and scoping phases of projects.

The methodology for developing cost estimates began with a review of estimates from previous plans and studies, actual costs of recently completed trail projects, and consultation with Cobb County DOT.

Estimates for trail construction around the region vary considerably, based upon context, location, type of trail, and other factors. ARC's *Envisioning a Regional Trail Network* used an estimate of $1,000,700 per mile for trail construction. A review of cost estimates from seven Cobb County-specific trail projects revealed an average per-mile construction cost of just over $2 million. These estimates were derived from a combination of approved GDOT concept reports, post-construction cost for one local trail, and bids for construction of new trails in Cobb County as of November 2017. To obtain this average per-mile construction cost estimate, the project team identified cost estimates from seven planned or proposed projects in Cobb County, including both greenway trails and sidepath trails, and calculated an average per-mile cost for construction only, adjusting for inflation as needed in order to identify costs in 2017 dollars. The reference projects are typically 10-foot asphalt or concrete multi-use paths, ranging from 2/3-mile to nearly seven miles in length.

Recent bids for construction projects in Cobb County (as of November 2017) reflect anticipated greenway and trail construction costs of $1 million to $2.9 million per mile, depending on setting (e.g., sidepath trails along roadways, or greenway trails along creeks or in their own independent alignments). These estimates do not reflect associated costs for preliminary engineering, land acquisition, utility work, environmental coordination, or signing and marking.

While concrete, which is usually used for sidepath trails, is generally more expensive than asphalt, sidepath projects often follow roadway rights-of-way and may require less grading and drainage work than greenway trails in their own independent alignment.

Costs for other phases of greenway and trail projects may be calculated based upon an assumed percentage of construction costs. Reasonable estimates for other phases of projects, as a percentage of construction costs, are as follows: mobilization, 2-3%; scoping and preliminary engineering (PE), 15-20%; utility coordination, 5-10%; and construction administration 10-12%. Right-of-way or land acquisition costs vary considerably, depending upon land value, location, amount of land to be acquired, and other factors. Permitting costs depend upon the level of regulatory compliance, extent of impact to regulated floodways, and amount of mitigation anticipated.

Total per-mile costs of trail projects may be higher or lower depending upon the details of the project; the thickness of the asphalt or concrete used; the amount of land to be acquired; project features such as crossings, bridges, traffic control devices, fences, boardwalk; and the amount of land disturbance, clearing, grading, and utility coordination needed. These estimates may help with project planning and identification of funding for projects.

USING COST ESTIMATES

When planning for future greenway and trail projects, the following should be taken into consideration:

- Estimates reflect planning-level analysis and are provided for planning purposes only. As such, they are provided as a range to reflect likely variations.
- Costs are likely to change and evolve throughout the course of project scoping, preliminary engineering, and other phases, as additional details and more concrete project information becomes available.
- Benchmark per-mile costs for asphalt greenways (alongside creeks) and concrete sidepath trails are based upon construction bids from November 2017 provided by Cobb County.
- Costs are provided in 2017 dollars and rates of inflation should be considered and applied over time.
- Cost estimates provided reflect estimates for greenway and trail construction. They do not reflect costs for land acquisition or other project phases, such as design, preliminary engineering or utility coordination.
- Estimates reflect typical grading and drainage, but do not reflect costs of significant structural elements such as bridges or boardwalk, or features like trailheads or parking, which would likely increase overall project costs.
- Projects that require high levels of coordination with federal agencies and regulatory compliance, such as those in wetlands and regulated floodways, will likely encounter higher costs.
- Maintenance of greenways and trails should also be considered in planning and funding strategies.

Table 6-1 lists a range of typical per-mile costs for construction of 12-foot concrete sidepath trails and asphalt greenway trails, and 10-foot stone and unpaved recreational trails, excluding land acquisition. These costs are reflective of typical grading and drainage, both of which can affect actual costs. These costs do not include estimates for scoping/ preliminary engineering, utilities, permitting, or land acquisition. Actual costs will depend upon specific project details, including right-of-way acquisition, the number of roadway crossings, extent of grading and drainage, signage, permitting, and other project components.

In addition to construction of the trail surfaces themselves, some projects may include or require structures such as bridges or boardwalk, or amenities and additional components like trailheads, sign kiosks, seating and other items. Bicycle and pedestrian bridges vary widely in cost depending upon factors such as span width and length, the type of structure, weight bearing load, and more.

As an example, a recent Cobb County trail project on Floyd Rd included a bicycle and pedestrian bridge, constructed parallel to the existing roadway bridge over the railroad tracks. The bridge is roughly 215 feet long and wide enough to accommodate a 10-foot multi-use trail. According to information received from the County, it cost $608,000 - equivalent to roughly $2,800 per linear foot. Other bridges, such as in a wooded area over a small creek, could cost considerably less, whereas larger spans over major roadways would necessarily cost more.

STRUCTURES SUCH AS BRIDGES ARE ONE OF MANY FACTORS THAT AFFECT THE COST OF GREENWAY AND TRAIL PROJECTS. THIS MINOR BRIDGE IS LOCATED IN KENNESAW MOUNTAIN NATIONAL BATTLEFIELD PARK.

Going rates for boardwalk with composite deck and timber piles in Georgia range from $40 to $65 per square foot, depending upon whether timber or composite handrails are also used. For a 12-foot wide trail, this translates to a cost of $480 to $780 per linear foot, or $3.1 to $4.1 million per mile. Costs for greenway and trail features and amenities depend considerably upon vendors, quantity, materials, and other factors. A few examples are provided below for planning purposes.

- Removable bollard: $2,000-$3,000
- Sign kiosk: $7,000-$21,000
- Mile marker sign (post): $100-$550
- Bike rack: $800-$5,500
- Trash receptacle: $750-$1,500
- Bench: $1,000-$2,000
- Large deciduous tree: $300-$500
- Bike loop counter: $2,000-$5,000

Maintenance of greenways and trails is another factor in the cost of greenway and trail projects and is often overlooked when planning for future projects. Cobb County DOT estimates that the cost to maintain a trail is **$7,680 per mile annually.** It is strongly suggested by the Department that this maintenance cost be taken into consideration as part of the planning process for future greenways and trails.

TABLE 6-1 PLANNING LEVEL TRAIL CONSTRUCTION COST ESTIMATES BY PROJECT TYPE*

Description	Low Estimate	High Estimate	Unit
Greenway Trail *12-ft asphalt multi-use trail off-roadway alignment*	$2,600,000	$2,900,000	Linear Mile
Sidepath Trail *12-ft concrete multi-use sidepath separated from roadway by curb and grass strip*	$1,350,000	$1,500,000	Linear Mile
Unpaved Recreational Trail *10-ft crushed stone hiking trail*	$423,000	$470,000	Linear Mile
Unpaved Recreational Trail *10-ft bare earth trail*	$166,000	$185,000	Linear Mile
Boardwalk *12-ft wide composite deck with timber piles and handrails*	$40	$65	Square Foot

**Notes: Cost estimates are for planning purposes only. They are preliminary and subject to change. Inflation should be considered in costs when using for future planning and implementation.*
Cost estimates for greenway trails and sidepath trails are based on bids for construction of trails in Cobb County, as of November 2017.
Cost estimates for unpaved recreational trails and boardwalks are based on project team calculations in November 2017.
Cost estimates do not include: landowner outreach, traffic impact studies, land acquisition, wetland determination/delineation, excavation, attorney costs, transactional fees, or taxes. They also do not include street crossings, trailheads, landscaping, or lighting.

POTENTIAL SOURCES OF FUNDING

RESOURCES BY TYPE

There are a variety of sources of funding for trail and greenway projects. Historically, Cobb County DOT has used funding from the Special Purpose Local Option Sales Tax, or SPLOST, to design and construct greenways and trails. Project partners such as GDOT and CIDs often contribute funds to these projects. Below is a brief summary of select other potential sources of funding that may be used in planning, design, and construction of trails and greenways. There are many more potential sources available; this list is not exhaustive.

SPECIAL PURPOSE LOCAL OPTION SALES TAX (SPLOST)

In 2014, Cobb County voters approved a referendum for a six-year one-cent special purpose local option sales tax (SPLOST) for specific capital improvements for transportation, facilities, technology, public safety, and public services. The referendum included a project list of approximately $287.3 million in transportation improvements, anticipated for collection through the sales tax over the six-year period, ending in 2021. Pedestrian improvements, including trail segments, are included in the most recent SPLOST project list. As the County prepares for the next SPLOST referendum, Cobb DOT can add priority trail projects for consideration in the overall project list.

BONDS

Bond programs allow local governments to borrow funds for capital projects. The bonds are typically backed by reliable income sources, such as property taxes, and repaid over a specified period of time. The interest income earned from municipal bonds is exempt from federal taxes, making this funding mechanism an attractive option. Bonds are often used for acquisition of parks and open space and could potentially also incorporate trails/greenways.

ASSISTANCE

- **National Recreation Trails (NRT):** NRT is a designation that recognizes exemplary existing trails. Securing this designation can provide access to technical assistance and listing in a database. NRT designation may be taken into consideration by some funding sources.

- **Rivers, Trails and Conservation Assistance Program (RTCA):** Similar to National Recreation Trails, this program is an arm of the National Park Service and can provide access to technical assistance to develop trail and open space plans.

GOVERNMENT GRANTS

- **Community Development Block Grants (CDBG):** CDBG is an annual grant program given to local governments and states for a wide range of planning initiatives. Intended to benefit low-income and moderate-income persons, these funds have been used for trails in the past.

- **Recreational Trails Program (RTP):** The RTP provides funds to States to develop and maintain recreational trails and related facilities through the Department of Transportation's Federal Highway Administration (FHWA). The Fixing America's Surface Transportation (FAST) Act reauthorized the RTP for FY 2016 through 2020 as a set-aside from the

Transportation Alternatives (TA) under the Surface Transportation Block Grant Program (STBG). RTP is managed by the entity that administers trails in each state and is a competitive grant program. RTP funds must be used for specific programs such as maintenance and restoration of existing trails, acquisition of easements, new trails and educational programs.

- **Congestion Mitigation and Air Quality Program (CMAQ):** These funds are jointly administered by the Federal Highway Administration (FHWA) and Federal Transit Authority (FTA). CMAQ funds are granted for projects that improve air quality, including pedestrian facilities and non-recreational bicycle transportation infrastructure that support a reduction in single occupancy vehicles. CMAQ funds are generally channeled through state departments of transportation, metropolitan planning organizations, and transit agencies.

- **Transportation Alternatives (TA):** The latest federal transportation legislation establishes a set-aside of the Surface Transportation Block Grant (STBG) for Transportation Alternatives (TA). TA funds can be used for a variety of transportation projects that expand travel choices and enhance the transportation experience through improvements such as recreational trails, pedestrian and bicycle facilities, and SRTS projects.

- **Federal Lands and Tribal Transportation Program (FLTTP):** These funds are available for projects that improve access within federal lands for which state and local governments are not responsible, including national forests, national recreation areas, and national parks. There is a specific provision for the use of these funds for pedestrian and bicycle projects within these federal lands.

- **Federal Lands Access Program (FLAP):** Similar to FLTTP, FLAP focuses on improving access to federal lands on infrastructure owned by state or local governments. These funds are generally only eligible to Federal Land Management Agencies (FLMAs): National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Army Corps of Engineers, and Bureau of Land Management. Other agencies may receive these funds, but only at the request of one of these FLMAs.

FOUNDATION & COMPANY GRANTS

Organizations such as PeopleForBikes (Bikes Belong Community Grants), National Trails Fund, Kodak (American Greenways Grants), the Conservation Alliance, and many others offer funding for greenway and trail projects.

PERMITTING

OVERVIEW

Compliance with local, state, and federal regulations is an important consideration for any greenway or trail project, particularly those that traverse riparian corridors or are located in close proximity to environmentally sensitive areas. Permits are needed to document compliance with various regulations at multiple levels of government. This section provides a brief overview of local permitting requirements and considerations for compliance with Federal Emergency Management Agency (FEMA) and funding requirements. Specific permitting needs will vary on a project-by-project basis and should be reviewed and assessed as part of the project planning process.

Environmental permitting requirements are often determined based upon proximity to environmentally sensitive areas, such as water bodies, established floodways, and others. Coordination with other agencies is also needed to document compliance with regulations and obtain approvals and/or necessary permits related to minimizing impacts from construction activities, encroachment upon utilities and/or state or national roadways, local government site plan review, and soil erosion, among others.

The following is a list of approvals and permits that are likely needed prior to construction of a greenway or trail:

- Site Plan Review, including Flood Damage Prevention Permit
- Construction Review
- GDOT Utility Facility Encroachment Permit
- National Pollutant Discharge Elimination System (NPDES) General Permits for Common Development, Infrastructure Construction, or Standalone Projects
- NPDES Soil Erosion and Sediment Control Permit
- FEMA Compliance
- Georgia Department of Natural Resources (DNR) Environmental Protection Division (EPD) Stream Buffer Variance Permitting

Other possible permits that may be needed include:

- U.S. Army Corps of Engineers (USACE) Section 401 Water Quality Certification
- USACE Section 404 Permit to Discharge Dredged or Fill Materials in Navigable Waters
- Chattahoochee River Development Certificate (if within 2,000 feet of the River)

SURFACE WATERS

OVERVIEW AND COMPLIANCE GUIDANCE

Cobb County is located in three watersheds – the Upper Chattahoochee, the Middle Chattahoochee-Lake Harding, and the Etowah (Hydrologic Codes 03130001, 0313002, and 03150104, respectively). In Cobb County, the Upper Chattahoochee discharges primarily into Sope Creek, Rottenwood Creek, and Sewell Creek. The Middle-Chattahoochee-Lake Harding flows into Sweetwater Creek, Noses Creek, Nickajack Creek, Powder Springs Creek, and Olley Creek. These two watersheds also discharge into the Chattahoochee River. The Etowah discharges into Noonday Creek and Butler Creek.

The Chattahoochee River is protected by the Metropolitan River Protection Act (MRPA), which created a 2,000-foot buffer along both banks of the river and its impoundments to protect quality of the river. The Chattahoochee is the region's primary source of drinking water, an important National Recreation Area, and the Nation's first National Water Trail. The Chattahoochee River National Water Trail was designated by the National Park Service and offers 48 miles of river trail within the Chattahoochee River National Recreation Area for rafting, canoing, kayaking, and motorboat use.

Greenway and trail projects may intersect established floodways. Any trail development within a floodplain must obtain a permit and go through the FEMA compliance review process. Plus, any changes in water surface elevation, floodway width or location, or floodway water surface elevations due to trail or greenway construction will require FEMA approval through the Conditional Letter of Map Revision/Letter of Map Revision process. This is a very intensive modeling and review process that can take six to nine months to complete.

Building within floodways not only requires coordination with FEMA, but also involves the Floodplain Management Office of the Georgia DNR and Cobb County Stormwater Management. If trail projects can be kept outside of the floodway, and impacts such as fill and structures (like bridges and boardwalks) that may cause blockages in the floodplain can be minimized, it is expected that a No-Rise Certification can be obtained and approved at the local level. It is beneficial for trails to avoid floodways or floodway fringes not only because of permitting and multi-jurisdictional coordination, but also because it is best for the natural and hydrological environment, as well as the resilience of the trail itself.

THE CHATTAHOOCHEE RIVER, SEEN HERE FROM THE WEST PALISADES TRAIL, IS PROTECTED BY THE METROPOLITAN RIVER PROTECTION ACT

THE CHATTAHOOCHEE RIVER WAS THE FIRST NATIONAL WATER TRAIL IN THE US

FUNDING COMPLIANCE

OVERVIEW AND GUIDANCE

LOCAL ADMINISTERED PROJECT CERTIFICATION

When municipal projects receive federal-aid funding, every aspect of the project is required to meet or exceed federal and state laws. Even if the project only receives federal construction funding, the entire project from beginning to end will be required to meet the federal guidelines and will be subject to federal oversight. GDOT determines a local government's qualifications for compliance with Federal and State laws and regulations through the Local Administered Project (LAP) Certification process. Once a project is certified, GDOT then assumes responsibilities and administers federal-aid.

Guidance on the LAP certification process:

- The design and construction will be in compliance with accepted federal details and specifications (in this case GDOT details and specifications).
- The design will be reviewed and approved by GDOT.
- Property acquisition will adhere to procedures and processes of the Right of Way Office, the Acquisition Guide for Local Public Agencies and Sponsors, and the Uniform Act.
- Utility and railroad facilities will meet requirements of GDOT Utilities Accommodation Policy and Standards Manual.
- The project will meet additional requirements related to environmental and natural systems investigation and reporting, including GDOT Environmental Procedures Manual.
- The project will have additional inspection, testing, and oversight requirements during construction.
- Additional federal paperwork and federal audits are required.
- GDOT review and administration charges are applied.
- The local government will keep project records on federal-aid projects for three years after reimbursement to GDOT.

In general, it is anticipated that federalizing a project can increase the total cost of the project from design through construction by 20 to 30%.

In addition to cost, funding type can have an influence on schedule. If trail projects were completed with local funds alone, the local government would not need to wait on the state or federal funding cycles, and could start construction at any time after design and permitting is completed.

LAND ACQUISITION & DEVELOPMENT COORDINATION

OVERVIEW & STRATEGIES

Multiple options exist for property acquisition and mechanisms to manage and regulate trails and greenways. Acquisition strategies differ widely based on the context of each individual trail and existing property. Long-range planning may focus on zoning and regulation based strategies which build in requirements or minimum standards for these facilities to be constructed and easements to be provided as communities grow.

In built-up areas acquisition strategies are focused on variations of purchase of property and easement agreements that provide access. The following paragraphs provide a basic overview of some strategies that can assist with acquisition, assemblage, and management of land to be used for trails and greenways.

COORDINATION WITH DEVELOPMENT IS KEY TO A SUCCESSFUL, CONNECTED TRAIL SYSTEM THAT GETS PEOPLE WHERE THEY WANT TO GO AND CAN STREAMLINE THE DESIGN AND CONSTRUCTION PROCESS

PLANNING & ACQUISITION

ZONING STRATEGIES

OVERLAY ZONING

Overlay zoning is regulatory tool that can be applied on top of an existing zoning category to add additional requirements in order to maintain the character of an area. In the case of trails and greenways, an overlay zone may be applied along a planned trail corridor, and as property is either developed or significantly altered, the property owner is required to allow the agency to construct the specified facility. This sort of control also allows dimension and material standards to be applied such that the trail, no matter when segments are constructed, will have a unified and cohesive design, look and feel.

INCENTIVE ZONING

Incentive zoning focuses on offering development incentives, such as density bonuses, that can be utilized to build trails or provide easements. These sorts of bonuses may work best in tandem with overlay zones. In these situations, a base requirement for an easement may be in place and the incentive is triggered if the developer agrees to construct the greenway or provide other trail-related amenities.

CONSERVATION ZONING

Conservation zoning focuses on protecting a community's most environmentally vulnerable land such as wetlands, stream corridors, and flood plains. While these zones typically prohibit or restrict development, they present opportunities for the construction of trails and greenways within them.

PURCHASING STRATEGIES

FEE SIMPLE PURCHASE

Perhaps the most common method of property purchase, fee simple is the outright purchase of a parcel of land, including the entire bundle of rights associated with it.

EASEMENT PURCHASE

This acquisition is also classified as fee simple, but the full title is not purchased; only access rights associated with the trail/ greenway are purchased. Because of this, the total cost is less than the full property value.

LEASE

Leasing options allow property such as rail corridors to be brought into play where purchase may be untenable. The lease agreements would need to have well-defined terms regarding what is required to break the lease, length of terms, etc.

LAND BANKING

Land banking is a long-term strategy for land purchase in areas where land values are lower. This strategy may pair with the creation of a community land trust. Land banking is often associated with preservation of key agricultural tracts or green belts in more undeveloped parts of communities.

OTHER ACQUISITION STRATEGIES

CONSERVATION EASEMENTS

Conservation easements protect natural resources from disturbance by new development. The easement itself is more of a spatial placeholder that restricts development or other specific uses and may not include construction. These easements can also help protect valuable lands, farmland, waterways, and scenic views.

EXACTIONS AND IMPACT FEES

Exactions require that developers pay a fee or dedicate an easement to the public for open space or recreation. Exactions are typically leveraged during a development plan process or rezoning and are intended to offset infrastructure/public costs of development. The use of impact fees and credits has been successful in many communities as a way of encouraging inclusion of greenways and trails in new developments. The City of Alpharetta, for example, awards credits for parks, trails, and greenspace that can offset the impact fee of approximately $5,000 per housing unit. Where a developer would normally be assessed an impact fee of $5,000 per housing unit, the city allows the use of these fees to be used for construction of trails and greenspace with the development. This results in more public park improvements and has been effective in building out the suburban trail system throughout the city.

LAND TRUSTS

Land trusts are local, regional, or statewide organizations that work to preserve important land resources for public benefit. Often, they conserve and protect parklands, wetlands, farmlands, forests, wildlife habitats, significant residential properties, and other areas that provide value to the surrounding community. Land trusts work cooperatively with landowners to complete real estate transactions, either obtaining conservation easements, acquiring land through donations, or purchasing property interests. Others facilitate conservation and preservation through stewardship of lands or easements.

DEVELOPMENT COORDINATION

SUMMARY & GUIDANCE

Recognizing the purview of local jurisdictions when it comes to land use, subdivision, zoning, and/or unified development ordinances, Cobb County and its municipalities should strive for consistency in their respective policies related to the requirement to set aside and construct greenway trails, in addition to sidewalks. A summary of current County and municipal policies is provided below with recommended guidance for consideration.

COBB COUNTY

The County's open space ordinance (Section 134-198.1) provides for a community overlay district which "encourages the preservation of natural resources within residential development." The intent is to preserve greenspace, natural resources, "promote interconnected greenways and corridors throughout the community [and] promote greenspace as passive recreation." By encouraging greenspace, the ordinance also preserves natural stormwater runoff areas and promotes flexibility in design within environmentally sensitive areas. The overlay district, does not, at this time, require any dedication of easement or construction of connections to greenways or trails.

Guidance:

- County Cobb County should consider including language that incorporates the *Greenways and Trails Master Plan* into its Code of Ordinances. It should be noted that Cobb County regulations would only apply to properties in unincorporated Cobb County and that for areas within incorporated Cities and locations in CIDs, local development standards and regulations would apply.

- Cobb County should consider establishing a policy or protocol that requires that the *Greenways and Trails Master Plan* or the subsequently updated official Trail Planning Map be reviewed as part of the site plan and

development review process. This should be incorporated into review of both residential and commercial properties, within certain districts, as appropriate.

- The County should consider developing a policy that requires greenway or trail right-of-way dedication or access in new development projects. Parcels abutting or intersected by programmed trails or existing trails should be requested to provide access to those trails. Within floodplains and stream buffers, the County should require dedication of easements to provide public access to programmed or priority proposed trails and greenways. Limitations may be set regarding single-family residential parcels in proximity to greenways and trails. The language used by Gwinnett County serves as a good model.

MUNICIPALITIES

Municipalities set their own regulations regarding land use and development and are not bound by recommendations in this *Plan*; however, to the extent possible, all jurisdictions within the County should strive for consistency to set clear expectations for development regarding greenways and trails.

Each city in Cobb County has its own code and ordinances guiding development policy. Most have specific districts or overlay districts that encourage the development of greenways and trails as public amenities, though none require dedications for that specific purpose. Some municipalities have ordinances regarding wetland protection districts that specifically allow nature trails as permissible uses as a right. Marietta has several designated zoning districts that specifically identify the development of interconnected greenways and walking trails as part of their purpose and encourage provision of amenities such as parks, open space, and walking trails. The Marietta and Acworth codes discuss the permissible use of dedication requirements, including for parks, playgrounds, and other public purposes, but do not specifically mention dedications for the purpose of greenway or trails.

The City of Smyrna's conservation subdivision and open space development code (Sec. 718) promotes the construction of landscaped walking trails and bike paths within the subdivision and connected to neighboring communities, businesses, and facilities as a mechanism to reduce reliance on automobiles. The city also requests that during the application process, site plans are reviewed to check for potential connections with existing greenspace and trails (Sec. 718.3). Likewise, Kennesaw's conservation subdivision ordinance (Sec. 4.03) includes similar language and specifically addresses the intent of reducing reliance on automobiles. The city also requires that site plan applications feature potential connections with existing greenspace and trails, as well as proposed trails or greenways identified on the Kennesaw Trail Network Plan (Sec. 4.03.03).

Guidance:

- Municipalities should consider requiring greenway dedication and/or construction as part of standard development practice, particularly if a greenway is proposed through the site of a proposed new development, regardless of type. In addition, municipalities should consider requiring construction of any proposed greenway corridor segments that are part of a local plan or this *Greenways and Trails Master Plan* along with providing high-quality pedestrian/bicyclist connections from the development to the main greenway corridor.

CASE STUDY: GWINNETT COUNTY

Gwinnett County, Georgia has incorporated its *Open Space and Greenway Master Plan* into its Unified Development Ordinance (UDO) (Sec. 360-30) and states that the Plan shall be treated as part of its regulations for the application of minimum standards for design and construction of improvements. In addition to codifying the county's desire for trail expansion, the UDO goes one step further by laying out protocol for access, dedication of easement, and construction requirements for greenway trails (Sec. 360-70.4).

The ordinance states that all properties or assemblages of parcels abutting designated greenways as shown on the greenway network map shall provide at least one multi-use path to a programmed or existing greenway and that the path shall be a minimum of 10-foot wide, constructed with materials approved by the county, and in a location approved by the Department of Community Services. The text of the ordinance is provided below as an example that may be adapted for Cobb County's purposes if desired.

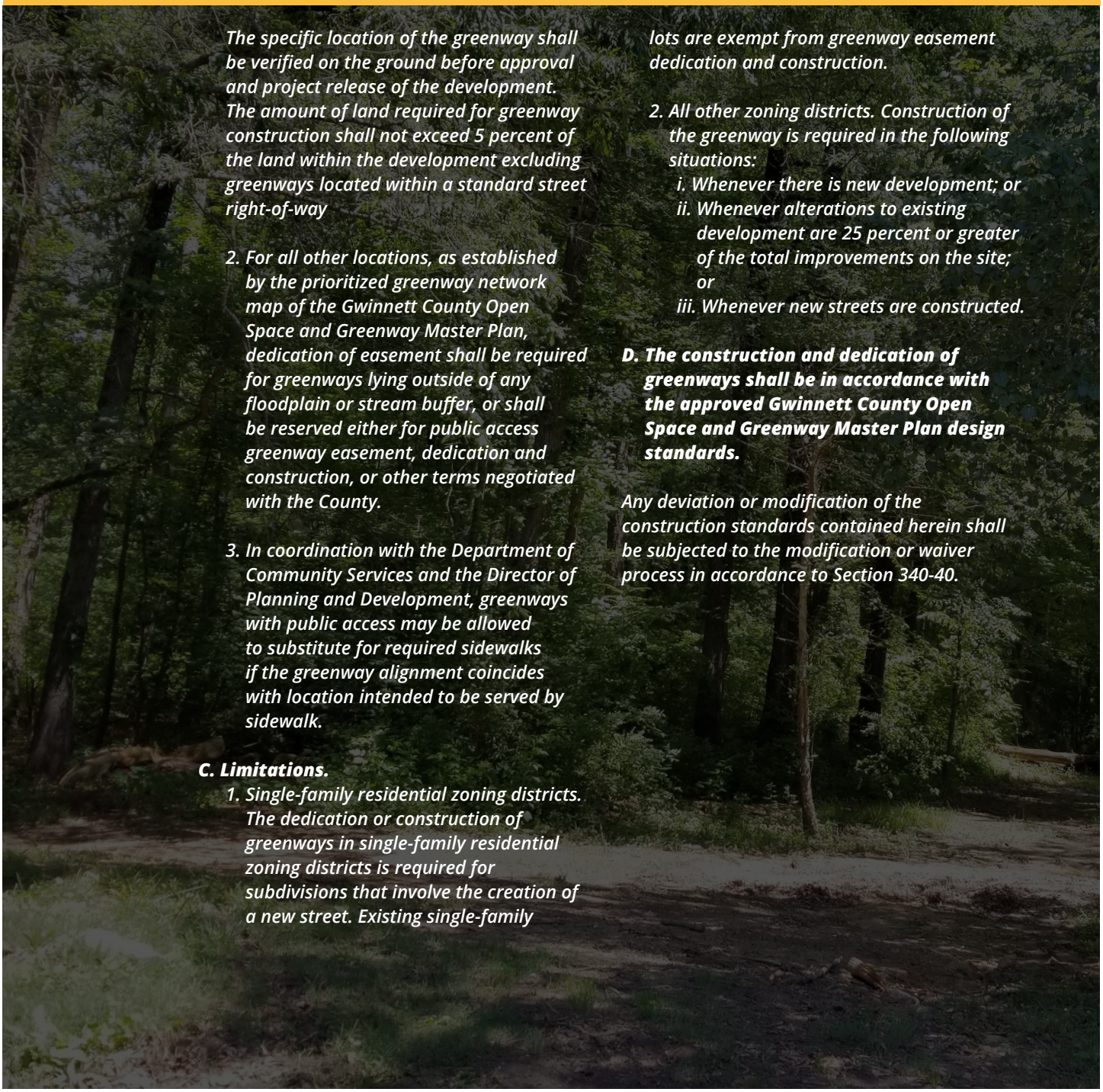
360-70.4 Greenway Access Dedication of Easement and Construction Requirements. Access, dedication of easement and/or construction of greenway trails shall be provided in accordance with the prioritized greenway network map of the most currently approved Gwinnett County Open Space and Greenway Master Plan, as follows:

A. Greenway Access.

All properties or assemblages of parcels abutting designated greenways as shown on the prioritized greenway network map of the Gwinnett County Open Space and Greenway Master Plan shall provide at least one multi-use path to the programmed or existing greenway. The multi-use path shall be paved or constructed with other materials approved by Gwinnett County (Section 900-100), and the route segment shall be a minimum of 10 feet in width. Multi-use path locations to be reviewed and approved by the Department of Community Services.

B. Greenway Construction and Easement Dedication.

1. *Within flood plains and stream buffers, greenway easements shall be dedicated and constructed to provide public access to trails as shown on the prioritized greenway network map of the Gwinnett County Open Space and Greenway Master Plan. Greenways shall be located so that the route is feasible for both construction and long-term maintenance.*



The specific location of the greenway shall be verified on the ground before approval and project release of the development. The amount of land required for greenway construction shall not exceed 5 percent of the land within the development excluding greenways located within a standard street right-of-way

2. For all other locations, as established by the prioritized greenway network map of the Gwinnett County Open Space and Greenway Master Plan, dedication of easement shall be required for greenways lying outside of any floodplain or stream buffer, or shall be reserved either for public access greenway easement, dedication and construction, or other terms negotiated with the County.

3. In coordination with the Department of Community Services and the Director of Planning and Development, greenways with public access may be allowed to substitute for required sidewalks if the greenway alignment coincides with location intended to be served by sidewalk.

C. Limitations.

1. Single-family residential zoning districts. The dedication or construction of greenways in single-family residential zoning districts is required for subdivisions that involve the creation of a new street. Existing single-family lots are exempt from greenway easement dedication and construction.

2. All other zoning districts. Construction of the greenway is required in the following situations:

i. Whenever there is new development; or

ii. Whenever alterations to existing development are 25 percent or greater of the total improvements on the site; or

iii. Whenever new streets are constructed.

D. The construction and dedication of greenways shall be in accordance with the approved Gwinnett County Open Space and Greenway Master Plan design standards.

Any deviation or modification of the construction standards contained herein shall be subjected to the modification or waiver process in accordance to Section 340-40.

UTILITY EASEMENTS CAN MAKE GOOD TRAILS

EASEMENTS & PUBLIC RIGHTS OF WAY

SUMMARY & GUIDANCE

With new development often comes expansion of services such as water, sewer, electrical, and gas. Cobb County and its municipalities should make it standard practice to allow public access (trails) within those right-of-way corridors. It is much easier to build this into future expansion of systems as opposed to retroactively allowing public access to easements.

The County maintains several ordinances on easements, particularly for water and wastewater services and the preservation of open space to promote awareness of, and in some cases, access to natural resources and environmentally sensitive areas.

There are several ordinances which protect the County's ability to access its water and wastewater infrastructure through the use of easements. Ordinance Sec. 122-123 regulates the construction and placement of permanent structures near permanent water and wastewater easements, affecting how and where a trail facility could be constructed in a given area with water and sewer easements. The County may grant variances if construction "will not impede maintenance or installation" of the water or wastewater infrastructure within the easement, making possible development of trails, particularly for passive recreation. The County also has the right to access, inspect, maintain, repair and install new infrastructure within the easement (Sec. 122-155).

Guidance:

- Cobb County should consider a policy that easements needed for priority trails identified in the *Greenways and Trails Master Plan* and future updates to the plan be routinely acquired along with other required easements (such as utility lines or roadway right-of-way) and should establish guidelines for the construction of trails within such easements.

ADDITIONAL DEVELOPMENT AND POLICY CONSIDERATIONS

NATIVE AND LOW-WATER PLANTS

Encourage use of native plants and/or low-water plants in greenway landscaping to minimize maintenance responsibilities and encourage wildlife-friendly landscaping and maintenance techniques.

BIKE-FRIENDLY AMENITIES

Consider encouraging or requiring bicycle/pedestrian friendly features in development projects, such as bike racks, bike lockers, or even encouraging apartment, condominium, or townhome complexes to provide bicycles for resident use.

TRAIL-DEVELOPMENT CONNECTIVITY

Consider establishing a policy that requires developments along or adjacent to existing and/or programmed greenways and trails to provide direct connectivity or street access from the subdivision or property to greenways, trails, and nearby destinations. These may take the form of less formal connections.

ENCOURAGE LOCAL THROUGH-PATHS AND NEIGHBORHOOD GREENWAYS

Encourage development of local trail networks and neighborhood greenways. As described in Chapter 4, local Neighborhood Connector Trails can improve connectivity by providing direct connections between destinations that are not supported by the roadway network or existing trails. Short segments can serve transportation purposes, shortening the walking or biking distance between local destinations like shopping centers and schools. Where possible, they should complement the on-street network and connect to larger trails.

ENCOURAGE NEIGHBORHOOD CONNECTORS

Encourage street connectivity in new developments by minimizing the use of cul-de-sacs providing more direct routes to destinations. Where possible, encourage Neighborhood Connector Trails or cut-through paths between developments or subdivisions to encourage biking and walking.

ENCOURAGE SHARED PARKING

Encourage shared use of existing parking lots at schools and shopping centers by trail users during off hours. This can be especially helpful along sidepath trails, where there may not be dedicated trailheads or entrance points. Many people already use parking lots this way and affirming and promoting the practice, in cooperation with property owners, would go a long way toward making trails more accessible to more people.

FIG. 6-5 NEIGHBORHOOD CONNECTORS PROVIDE MORE DIRECT EFFICIENT ROUTES

Credit: Atlanta Regional Commission (2016). Walk. Bike. Thrive!, Part 1, pg. 39

OPERATIONS & MAINTENANCE

OVERVIEW

Maintenance is essential to the long-term viability and sustainability of regional greenway and trail networks. Construction of greenways and trails cannot take place without a maintenance and priority plan in place. Similar to national roadway maintenance issues that have been well-documented, trails constructed over the past twenty years are in varying states of repair. Monies have poured into new roadways and trails across the United States but maintenance has been a lower priority. This Plan recommends a strong, collaborative approach to maintenance and preserving a state of good repair for greenway trails. Details on Operations and Maintenance can be found in Appendix E.

Recommended greenways and trails in this *Plan* traverse all areas, including six municipalities, three CIDs, and unincorporated Cobb County. Many trail corridors will be off-road, though some portions will be adjacent to the roadway on sidepaths or on-street with bicycle lane/sidewalk combinations. Additionally, the corridors will abut parks, water bodies and utility easements. As such, continued coordination among multiple agencies, representing the State of Georgia, Cobb County, municipalities, community-improvement districts, and other organizations listed in the Potential Partnerships section of this Chapter will be necessary for effective ongoing trail operations and maintenance.

While each jurisdiction has its own operations and maintenance departments, a key to sustainable quality greenways and trails is consistency, cooperation and coordination amongst the communities, and building enduring public and private partnerships. Growing a successful trail system in Cobb County will take capacity building and diversification of skills and resources to meet this challenge in those communities. In order to meet the challenges, an intergovernmental organization and/or intergovernmental agreement for maintaining and operating the Cobb County greenway system is recommended. An organization or agreement would be in place to address not just maintenance, but also funding, enforcement, facilitating cooperation, organizing volunteer groups, adopting/implementing standards, etc.

Agencies to be involved would include appropriate Cobb County departments, municipalities, local CIDs, and GDOT. Generally trails outside of County parks are built by Cobb County DOT, whereas the P.A.R.K.S. Department is responsible for trails within park properties. Standard trail maintenance generally consists of routine tasks, such as mowing. More intensive maintenance is conducted by DOT's Roadway Maintenance Division as needed.

RESPONSIBILITIES & TASKS

SUMMARY

A comprehensive and cooperative maintenance management program should determine the activities, maintenance levels, and maintenance frequency of the trail system based on expected use. The program should identify tasks, operational policies and procedures, standards, and maintenance goals. At a minimum, the program should also identify cost estimates, funding sources, and the party responsible for performing the work on the trails. This will provide the basis for determining annual funding and assignment of personnel and necessary maintenance equipment while providing for necessary adjustments as needs arise. Maintenance plans should, at a minimum, address two primary types of maintenance: routine and remedial.

ROUTINE MAINTENANCE

Routine Maintenance refers to the day-to-day regimen of litter pick-up, debris removal, sweeping, sign repair and replacement, mowing, tree and shrub trimming, and other regularly scheduled activities. It also includes minor repairs and replacements such as fixing cracks and potholes or repairing a broken hand railing. Routine maintenance tasks include, but are not limited to:

- Facility maintenance and basic housekeeping such as trash collection and sweeping
- Tree and shrub trimming
- Mowing of vegetation
- Mulching and edging
- Weed and invasive species control

REMEDIAL MAINTENANCE

Remedial Maintenance refers to correcting significant defects in the network, as well as repairing, replacing or restoring major components that have been destroyed, damaged, or significantly deteriorated from normal wear and tear. Some items (“minor repairs”) may occur on a five- to ten-year cycle such as repainting, seal coating asphalt pavement or replacing signage. Examples of major reconstruction include stabilization of a severely eroded hillside, repaving a trail surface or a street used for biking, or replacing a footbridge. Remedial maintenance should be part of a long-term capital improvement plan. Remedial maintenance tasks include, but are not limited to:

- Replenish gravel, mulch, or other materials
- Repaint/re-stripe/stain
- Repave/seal
- Replace asphalt or concrete
- Remove debris along paved trail/sidewalk edges
- Regrade to prevent or eliminate low spots and drainage issues
- Add culverts, bridges, boardwalks, retaining walls, etc. to prevent or eliminate drainage/erosion issues

ROUTINE MAINTENANCE IS IMPORTANT FOR ENSURING SAFE, WELCOMING TRAILS AND GREENWAYS

TOPICS FOR FURTHER STUDY

FUTURE STUDIES, PLANS AND INITIATIVES

In the interest of creating a fully connected greenway and trail network that truly provides something for everyone, this Plan identifies a number of topics that could be pursued for future study in the future. These would complement the Greenways and Trails Master Plan by identifying even more opportunities to link active transportation corridors, fostering more physical and social activity, and giving people more choice in how they get around. This section provides an overview of recommended topics for future study.

TRAILS ON UTILITY CORRIDORS

Utility corridor trails are bicycle or pedestrian routes that utilize the same space occupied by utilities, such as power lines, water, or sewer pipelines. Utilities are constructed within a designated right-of-way. Rights-of-way limit vegetation and restrict development and most structures, but allow a few types of uses, including trail construction. Power lines and pipelines often run through cities and neighborhoods leaving strips of cleared, unused green space below or above these utilities providing corridors ideal for trail networks.

Cobb County has recently produced a map of sewer and power easements throughout the County. As an outgrowth of the *Greenways and Trails Master Plan*, this map could be used to identify those easements which could potentially be used to make connections to existing and proposed greenways and trails. The Trail Typology and Classification Memo (see Appendix E) suggests low-cost materials that could be used to construct temporary dirt trails along these easements while long-term planning is ongoing. The Utility Corridor Trail Considerations and Guidance Memo in Appendix E also provide guidance on utility trail user needs, design considerations, safety, and maintenance, which can be used to help plan and design future utility corridor trails.

BLUEWAYS/PADDLE TRAILS

Blueways, or paddle trails are designated small boat or paddling routes that facilitate water-based recreation and transportation. Users might include paddle boarders, kayakers, or canoes. A well-designed paddle trail includes thoughtfully designed launch facilities at designated locations. This may include locations for rest, amenities, and access to nearby land-based destinations.

The Chattahoochee River along the eastern border of Cobb County represents a tremendous opportunity to provide access to the waterfront and expand opportunities for exercise and recreation. Some groups already use the Chattahoochee for floating, rowing, and kayaking. Using the guidance and considerations outlined in the Paddle Trail Considerations and Guidance Memo included in Appendix E of this plan document, Cobb County should consider partnering with neighboring jurisdictions and interested agencies to explore implementation of paddle trails along the Chattahoochee River.

BIKING & WALKING MAPS

In the interest of increasing biking and walking and increasing use of trails and greenways throughout Cobb County, it is recommended that the County pursue development of a series of biking and walking maps to help people understand where trails start and end, and how to navigate the overall greenway and trail network. One set of maps could highlight individual trails, providing details about trail heads, parking areas, restrooms, and associated information as applicable.

Another suggestion is to develop an interactive online map that allows users to turn various layers on and off and helps people see how the whole system works together. These maps should highlight features that make it easy to navigate the trail system and call attention to various types of facilities and potentially difficult areas. Good examples are seen in maps from the City of Madison, WI and the City of Portland, OR:

- https://www.cityofmadison.com/bikeMadison/ - Click “Plan Your Trip,” then “Interactive Map”
- https://www.portlandoregon.gov/transportation/article/391729 - Click the link for the interactive digital Portland Bike Map

THE CHATTAHOOCHEE RIVER IS A GREAT OPPORTUNITY FOR PADDLE TRAILS OR BLUEWAYS

NEIGHBORHOOD BIKEWAYS

Connecting Cobb County residents and visitors to an existing greenway network with low-stress, family-friendly, on-street pedestrian and bicycle facilities, retrofit neighborhood connections, traffic calming and route wayfinding is crucial to creating an accessible, safe, and comfortable interconnected greenway and trail system. Gaps in a trail network disrupt the system and discourage continued use except for those comfortable enough to continue on-street without pedestrian connections or low-stress bicycle facilities. Providing a range of bicycle and pedestrian facilities on local, collector, and arterial roads that close the greenway network gaps can encourage and sustain walking and bicycling throughout the community, and provide greater connectivity to get people to greenways and trails and to where they want to go.

In the future, Cobb County should expand upon the preliminary ideas developed for District 2 in East Cobb as part of the *Greenways and Trails Master Plan*, seeking to identify other suitable routes for neighborhood bikeway facilities through a combination of remote or online and field analysis.

For an optimal, well-connected active transportation system to succeed, bikeway treatments on low stress roadways should also provide a parallel or shared pedestrian treatment. Low stress roadways consider the following features:

- Posted speed limit
- Observed median speed
- Annual average daily traffic volume
- Prevalence of heavy vehicles
- Presence of on-street parking
- Crash history
- Roadway and lane width
- Number of lanes
- Sight lines
- Slope
- Potential barriers or pinch points (bridges, tunnels)
- Intersection density
- Complexity/stress of intersections
- Surrounding land uses
- Implementation costs

The following descriptions offer several facility types that may be applicable to various locations throughout Cobb County. As part of the *Greenways and Trails Master Plan*, the project team conducted an assessment of opportunities for potential application of neighborhood greenways and bikeway facilities in East Cobb.

- **Bicycle Boulevard:** Also referred to as Neighborhood Bikeways, these facilities utilize shared-lane markings alongside traffic calming methods and crossing treatments to create a low intensity roadway. This makes riding alongside cars safer and more comfortable. Diverters can also be used to give priority to cyclists at intersections. These facilities are most appropriate on local roadways with speeds up to 25 MPH and volumes below 3,000 ADT, with much lower thresholds preferred.

- **Shared Lane Markings:** Visible markings, spaced every 250 feet on roadways with low traffic volumes and 50 to 100 feet on roadways with higher traffic volumes, in the travel lane indicating bicycles can use the travel lane with cars. Placement in the travel lane should be in the center or far enough away from the "door zone" of parked cars. These facilities are most appropriate on local or collector roadways with speeds under 35 MPH and volumes below 3,000 ADT.

- **Yield Roadway:** Roads with widths of 12 to 20 feet, which requires courtesy yielding when vehicles are passing each other in opposite directions and reduces traveling speeds, and shared roadways with pedestrians and bicyclists. Lane markings are removed to allow for easy passing. Road widths under 15 feet require pull-offs for vehicles passing each other in opposite directions. These facilities are most appropriate on local roadways with speeds up to 30 MPH and volumes below 2,000 ADT. See Resources Cited for references to design guidance and applications of the yield roadway from the STAR Guide.

Numerous suggestions were submitted by community members that may be viable candidates for neighborhood greenways in particular parts of the county, such as North Cobb, West Cobb, and East Cobb; these should be considered as part of future planning for an on-street bike network to complement greenways and trails.

For a summary of neighborhood greenways and bikeways and a map showing possible application of neighborhood greenways to roadways in East Cobb, refer to the Greenway Network Memo in Appendix E.

SHARED LANE MARKINGS ARE ONE WAY TO PROVIDE FOR BIKE TRAVEL ON NEIGHBORHOOD STREETS

ACTIVITIES & PROGRAMMING

Programs can leverage Cobb County's existing resources, leadership, and community spirit to build interest in greenways and trails. Program recommendations represent a range of level of effort and funding needs; many can typically be implemented quickly and with minimal investment. While the County and its agency and jurisdictional partners (namely GDOT, CIDs and cities/towns) are responsible for infrastructure projects and policy development, community programs can and should be supported and championed by outside partners such as nonprofits, advocacy groups, foundations, private sector businesses, and interested citizens.

Successful programmatic efforts are flexible and can be short- or long-term. Research has shown that a comprehensive approach to walk- and bicycle-friendliness is more effective than a singular approach that would address trail development and infrastructure only. This *Plan* recommends a multi-faceted approach based on the following **five 'E's: *Education, Encouragement, Enforcement, Evaluation, and Equity.*** The programmatic recommendations outlined here address and incorporate the education, encouragement, enforcement, evaluation, and equity components of this multi-faceted approach.

Partners that may help spearhead and champion programs and activities include, but are not limited to, Cobb Travel and Tourism, Chambers of Commerce, and neighborhood and civic associations. Additional discussion about potential partners is found earlier in this Chapter. Several activities and programs have already been established throughout Cobb County.

These include, but are not limited to:

- Safe Routes to School
- Safe Kids Cobb County
- Lifelong Mableton
- Keep Cobb Beautiful
- Group rides hosted by various cycling groups and bike stores
- Races such as Cobb Make-a-Wish 5K

ART ON THE TRAIL

Public art along a trail or greenway can bring attention to the network, encourage usage of it, and attract newcomers to bicycling and walking. By combining art and greenway facilities, the community is creating a unique interactive amenity for both residents and visitors. Such programs also attract new partners, promoters, and sponsors of the trail network.

Strategies

- Identify any appropriate partners for this effort, such as a local visual arts group, a college or university arts program, a local art patron, or others
- Establish a committee of community members to develop and oversee the program
- Consider art sponsorship or art auctions as potential sources of funding

'E's Addressed: Encouragement

GROUP WALKS/RIDES

Group walks or bike rides are fun ways to engage community members from a variety of ages and backgrounds. These group activities can range from a guided walking tour of local parks or historic sites to a neighborhood bike ride to the coffee shop or farmers market. The focus is to show that walking and biking are enjoyable, social activities and is an easy way to reach various amenities and destinations.

Strategies

- Organize rides through existing neighborhood social media and develop promotional materials to get the word out, including flyers
- Develop themes for various rides or walks that take advantage of Cobb County's greenways and trails
- Elect walk or ride leaders

'E's Addressed: Encouragement

GUIDED NATURE WALK/RIDES

Naturalists are a significant user group of a trail and greenway network. Unique natural resources, such as the Chattahoochee River, can attract significant eco-tourism opportunities. Guided nature walks and bicycle rides could be led by trained volunteers or interested partners, such as a college extension service.

Strategies

- Identify partners interested in supporting, promoting, and/or guiding educational nature walks and rides
- Determine appropriate target markets for guided nature walks and rides and develop specific events geared toward each target group

'E's Addressed: Encouragement

TRAIL CLEANUP CAMPAIGNS

A trail cleanup and beautification initiative enables people to improve their surroundings and take pride in their community. Organizations can support trail cleanups by providing materials such as trash bags, maps of cleanup routes, and tools to clear weeds and prune overgrown bushes and trees.

Strategies

- Identify a funding strategy for cleanup and beautification, with maintenance included
- Set a date and post flyers alerting residents to the initiative
- Work with neighborhood and organization leaders to distribute cleanup supplies

'E's Addressed: Encouragement

BIKE MONTH ACTIVITIES

Cities and towns across the country participate in National Bike Month annually, during May. The League of American Bicyclists (LAB) hosts a website for event organizers. The website contains information on nationwide and local events, an organizing handbook, and promotional materials.

Strategies

- Organize Bike to Work Day events: morning-commute energizer stations with food, encouragement, information, and sponsored goodies for participants; discounts at local businesses for bicycle commuters
- Initiate a "Pedal with Your Politician" group ride (3 miles or less) with County Council members, City Council members, and Mayors

'E's Addressed: Encouragement, Education

WALKTOBER ACTIVITIES

Similar to Bike Month, the local pedestrian advocacy organization, PEDS, partners with governments in metro Atlanta each October to organize and promote walking events.

Strategies

- Organize Walk to Work Day events with food, encouragement, information, and sponsored goodies for participants; discounts at local businesses for people who arrive on foot
- Initiate group walks on trails (3 miles or less) with County Commissioners, City Council members, and area officials

'E's Addressed: Encouragement, Education

HERITAGE TOURISM MAPS/GUIDES

A series of strategically developed walking and biking guides to heritage tourism can capitalize on and promote Cobb County's rich history. One or more maps could be developed for Cobb County showing safe and enjoyable trail routes to visit cultural and historic sites. The series of maps and guides should recognize the variety of market segments and user groups interested in heritage tourism, such as families seeking a half-day visit with a leisurely educational walk or bike ride, organized groups traveling from town to town by chartered bus, and touring bicyclists who travel 20 or more miles a day by bike making their way across a region.

Strategies

- Partner with local and regional organizations focused on historical resources and tourism, such as the Riverline Historic District and the Kennesaw Mountain Historic Battlefield
- Inventory cultural and historic resources along the existing and proposed recommended trail network and identify safe and enjoyable walking and bicycling routes that connect them
- Groups like Cobb Travel and Tourism could assist in promoting the routes as part of a broader effort for heritage tourism and assist in connecting this program with larger marketing campaigns
- Consider expanding the encouragement beyond historic sites and heritage tourism to include local businesses such as breweries and restaurants near trails that also function as destinations

'E's Addressed: Encouragement, Education

SCHOOL BASED TRAIL ACTIVITIES

In partnership with existing Safe Routes to School efforts, local schools can capitalize on segments of the proposed greenway network that intersects their campus. Activities along the greenway network could include Bike and Walk to School Day routes, outdoor classrooms for science curriculum, educational after-school walks and bike rides, and programs for physical education curriculum.

Strategies

- Establish a partnership with a school that is already engaged in Safe Routes to School and that already has leadership and volunteers (from the principal, PTA, PE teacher, and/or others) supportive of increasing physical activity among children and capitalizing on the bicycle and pedestrian network
- Use this school as a "pilot project" for creating a variety of programs that directly engage children with existing trails

'E's Addressed: Encouragement, Education

YOUTH BIKE SAFETY RODEOS

Bike safety courses can teach kids how to ride a bike and can provide education for adults on responsibilities for both drivers and cyclists. By creating a dedicated, safe space to learn these skills, kids become more confident bicyclists.

Strategies

- Identify potential locations for bike safety rodeos that are accessible, and ideally adjacent to greenways and trails, such as at playgrounds like the Silver Comet Linear Park in Powder Springs, Taylor Brawner Park in Smyrna or others
- Partner with local schools or groups like Safe Kids Cobb to promote the safety rodeos
- Consider dedicating a semi-permanent space for use as a "Bicycle Traffic Garden", where kids can go at any time to practice their bicycling skills

'E's Addressed: Education

CONCERTS, MUSICAL ACTIVITIES

In addition to visual arts, music can draw more people to use the trails through programming and events. Trails can provide excellent opportunities for safe and fun parade routes, as seen through popular local events such as the BeltLine Lantern Parade.

Strategies

- Partner with local arts organizations and event organizers to discuss the potential for starting a new event or building on an existing event
- Find a location adjacent to a trail or a section of trail that would be suitable for large crowds
- Provide easy access for people attending by foot or bike (bike valet, etc)
- Create opportunities throughout the year for people to interact with music and/ or instruments along the trail, such as Atlanta's "Pianos for Peace"

'E's Addressed: Encouragement

INTERPRETIVE SIGNAGE

Interpretive signage along a trail and greenway network serves as an education tool for residents and visitors alike. Information related to the history of an area, its cultural significance, or natural features is provided on a graphically appealing sign.

Strategies

- Engage professionals and experts who have experience in developing interpretive signage or historical markers
- Focus the first installation of interpretive signage along a single corridor (or route), such as a newly established greenway segment or extension
- Create an inventory of noteworthy cultural, historical, and natural features along the corridor and begin the process of developing a signage design, potential signage locations, and content to be used on each sign

'E's Addressed: Encouragement, Education

SAFETY CAMPAIGNS

A high-profile marketing campaign is an effective strategy for highlighting the importance of respect and shared responsibility at trail crossings and on the road between bicyclists, motorists, and pedestrians. This type of campaign is particularly effective when launched in conjunction with other events such as Walk to School Day or National Bike Month.

Strategies

- Expand the existing Cobb County safety campaigns such as "Pete's Street Smarts" to all ages and other modes such as bicyclists
- Consider giving away safety items at community events during that month, such as bike lights, reflective materials, or helmets
- Organize education and enforcement materials for county and local police departments on right-of-way at trail crossings, and how to use push-button activated crossings

'E's Addressed: Enforcement, Education

TRAIL COUNT PROGRAM

Bicycle and pedestrian counts provide data on bike and pedestrian behavior that can enable analysis of biking and walking trends, such as increase/decrease in facility usage, peak travel periods, and high activity locations. Automatic counters may also be used for detection of users, which can trigger signals at major trail crossings.

Cobb County has initiated a pedestrian and bicycle count program to make biking and walking count by counting people walking and biking. The County has partnered with ARC on an application for Smart Cities funding of a pilot program to count bicyclists and pedestrians in key locations, including some locations along trails.

In addition, the County is also monitoring pedestrian activity through the use of mounted cameras in high-volume areas around SunTrust park. If these techniques prove successful, the County could apply them to trail and greenway locations in the future.

Strategies

- Seek funding for a bicycle and pedestrian count pilot program that focuses on before and after counts of one or two priority trail projects (balance a recreational corridor with a transportation-oriented corridor), and assign staff to manage counts program
- Include regular intercept surveys of trail users and track data over time.
- Determine key locations for manual and/or automatic pedestrian and bicycle counts and identify the appropriate count technology

'E's Addressed: Evaluation

ECONOMIC IMPACT ANALYSIS

An economic impact analysis can evaluate the costs and benefits for implementing trails. This can be done either as an estimate before a trail is built, or as an evaluation after a trail has been established for a few years.

Strategies

- Conduct a multi-year analysis of existing trails that reviews economic impacts as well as environmental and health impacts
- Findings from the study may be used to fund trail expansion as well as safety improvements at major trail intersections

'E's Addressed: Evaluation

TRAILS TO HEALTHY FOODS

Many communities are recognizing the role that both physical activity and healthy eating play in improving overall public health and wellness. This important link can be highlighted in a fun and interactive manner through promoting healthy food outlets along the bicycle, pedestrian, and greenway network and partnering with health food providers to identify safe routes for active transportation to their locations.

Strategies

- Identify key outlets for healthy food along the existing bicycle, pedestrian, and trail network (including routes along roads that are already bicycle friendly and existing sidewalks)
- Seek funding from partners in nutrition and healthy food outlets
- Develop a graphically-appealing and user-friendly guide to healthy food outlets with a map showing how residents can access the outlets on foot or bike

'E's Addressed: Equity, Encouragement

BIKE SHARE

The Town Center CID and City of Smyrna have already implemented bike share programs through Zagster (see Chapter 3). In addition, KSU and the Cumberland CID are in the process of identifying potential locations for bike share. Based on feedback from this planning process, there appears to be interest in bike share among community members in Marietta, and there has been talk of possible expansion of existing bike share in Smyrna and Town Center CID.

Currently each Zagster program operates independently: bikes picked up from a docking station must be returned to a location within that system. Cobb County and its partners should explore possibilities for expanding and/or integrating the systems to reach more users throughout the county. A county-wide bike share system can evaluate bike share expansion in tandem with existing and future trail development.

Strategies

- Identify potential locations for bike share expansion on existing and planned Cobb County trails and greenways
- Develop a bike share feasibility study to determine demand and potential bike share vendors/sponsors
- Partner with area municipalities to expand existing bike share programs to better serve trail users

'E's Addressed: Equity, Encouragement

ZAGSTER BIKESHARE STATION IN SMYRNA

ACTION PLAN

SHORT-TERM ACTIONS

The following table lists a recommended course of potential short-term actions to support implementation of the *Greenways and Trails Master Plan*. The order of potential action steps is not intended to be sequential or suggest priorities.

TABLE 6-2 SHORT-TERM ACTION STEPS

#	Action Item	Reference Section
1	Continue advancing programmed projects, such as completing the Mountain to River Trail.	Chapter 3
2	Apply for funding to develop signage and identify programs, activities, and possible amenities or temporary uses along the Mountain to River Trail.	Chapter 5
3	Determine likely funding sources for eight (8) priority projects, including which projects will be included in the next SPLOST project list, as well as other potential sources of funding for priority projects (e.g., grants, etc.). Pursue scoping studies and/or concept reports, as applicable, to identify design and structural alternatives, as well as to identify utility, property, and environmental coordination and/or permits that may be needed.	Chapter 5
4	Establish and convene a Stakeholder Advisory Group or Committee to provide guidance on development of greenways and trails. Representatives from each City and CID should be invited, along with other stakeholders such as Chambers of Commerce, NPS, and Travel and Tourism.	Chapter 6
5	Establish process, policy, or protocol to incorporate review of *Greenways and Trails Master Plan* as part of site plan and development review.	Chapter 6
6	Establish a policy that requires greenway or trail right-of-way dedication and/or construction as part of new development projects in accordance with Tier 1 or other high priority trails.	Chapter 6
7	Develop and implement cohesive Countywide wayfinding and signage plan, in collaboration with Cobb Travel and Tourism, that recognizes and celebrates the individual brands of local trails.	Chapter 4
8	Develop a trail system “fit and finish guide” tailored to the county’s brand and inclusive of more detailed information such as materials, colors, and placement of amenities and signage.	Chapter 4, 6
9	Identify partners to begin implementation of programming and activities for select trails, beginning with the Silver Comet Trail.	Chapter 5
10	Coordinate with P.A.R.K.S. Department to publish a series of maps of trails within all park properties in Cobb County.	Chapter 5
11	Work with County staff to designate trailheads as “Community Facilities” and install bike racks at each trailhead that does not already have one.	Chapter 5
12	Initiate a study of Neighborhood Bikeways, building upon the work begun in Commission District 2 as part of this Plan, and include North Cobb neighborhoods.	Chapter 6
13	Continue implementation of the bicycle and pedestrian count program, to obtain data on bicycle and pedestrian activity along greenways and trails.	Chapter 5, 6
14	Work with Cobb County Schools and other County agencies to explore the possibility of shared-use agreements to allow use of parking lots by greenway and trail users outside of normal hours of operation.	Chapter 6

ACTION PLAN

MID TO LONG-TERM ACTIONS

The following table lists a recommended course of potential mid- to long-term actions to support implementation of the *Greenways and Trails Master Plan*. The order of potential action steps is not intended to be sequential or suggest priorities.

TABLE 6-3 MID- TO LONG- TERM ACTION STEPS

#	Action Item	Reference Section
1	Identify and implement one (1) temporary unpaved trail, or DIRTway, as pilot project, expand to other trails if successful.	Chapter 4, 6
2	Establish MOU or other types of agreements to promote shared use of parking at schools, community facilities, and neighborhood businesses where appropriate to reduce demand for new parking and encourage trail use.	Chapter 5
3	Issue guidance for landscaping of greenways and connections associated with new development or redevelopment projects.	Chapter 4, 6
4	Develop a mobile phone application to assist residents and visitors with locating trails, understanding trail characteristics, and navigating the system.	Chapter 5
5	Begin programming new trail projects for a period of roughly 5 years.	Chapter 5
6	Periodically (roughly every five to seven years) conduct an update of the *Greenways and Trails Master Plan*	N/A
7	Initiate planning studies related to one or more of the "Topics for Further Study" discussed in this plan.	Chapter 6
8	Partner with local organizations to encourage development of an "Art on the Trail" program to place locally-created public art along greenways and trails.	Chapter 5

TRACKING AND UPDATING THE PLAN

The *Greenways and Trails Master Plan* is a document designed to guide Cobb County in the development of trails over the course of several years – at least through the next SPLOST cycle. While the *Plan* cannot fully anticipate how the demographics, availability of funding, and community priorities will change into the future, there are strategies the County can utilize to ensure that the plan is regularly reviewed and tracked, and adapted as needed. These are briefly described below.

PROJECT UPDATES

- Track the status of greenway and trail projects quarterly, updating project status as needed.
- As Cities, CIDs, and universities complete individual trail-related plans, update the project list and incorporate new recommendations as applicable.
- Update the countywide trail planning map a minimum of twice per year, and coordinate with the Cobb County GIS Department to publish the updated map on the County GIS webpage.

FUNDING

- Approximately three months prior to each of the Atlanta Regional Commission's future project solicitations, identify which greenway and trail projects will be pursued for study or infrastructure (capital) funds.
- Near the conclusion of each of the County's SPLOST funding periods, work with County officials to identify projects for the County's next SPLOST project list.

PLAN UPDATES

- Each year, identify a complementary trail planning initiative to undertake. This may include planning for Blueways and Paddle Trails, trails along utility corridors, or Neighborhood Bikeways; development of bicycling and walking maps; or additional new initiatives.
- Conduct a complete update of the *Greenways and Trails Master Plan* roughly every five years, in preparation for new SPLOST funding periods.

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