SECTION II

URBAN

CHAPTER 4
PROCESS & OUTREACH

Overview

Given that the City of Charlottesville and Albemarle County have put notable effort toward the creation of plans for bicycle and pedestrian infrastructure, the focus of this Plan is on regionally-significant corridors and connections. The TJPDC and CA-MPO have the role of creating regional transportation plans and encouraging coordination between the City and County when planning and implementing transportation projects. This plan builds on the *2004 Bicycle and Pedestrian Greenways Plan* and helps Charlottesville and Albemarle meet their goals for better integrated planning. A desire that was expressed during the One Community Planning efforts and reiterated during subsequent strategic planning sessions.

The *One Community Project* (2013) identified a desire for better planning coordination. As part of the One Community planning efforts, Charlottesville, Albemarle and the MPO came together to discuss comprehensive plan updates and better integrated community planning. One of the outputs from the One Community project was a joint Community Vision and goals. The Vision and goals were codified by Albemarle and Charlottesville in their Comprehensive Plans. Of importance to this plan are three transportation goals related to bicycle and pedestrian infrastructure and multimodal connectivity, which included the following:

- Coordinate building the sidewalk network across City-County boundaries and addressing barriers to pedestrian connectivity

- Coordinate to provide and enhance multimodal connections between employment centers and areas of high residential density

- Create dedicated bicycle and pedestrian connections across physical barriers within the community

- Rivanna River
- Route 250 – East and West
- Interstate 64
- Railroad network
- City and VDOT system connection
- Route 29

The 2013 One Community vision and goals were followed up with a 2014 joint strategic planning meeting between Charlottesville and Albemarle elected officials where bicycle and pedestrian connectivity between the jurisdictions was identified as a top priority.

The desire for a more connected and integrated planning approach is reflected in this plan through the planning process, community engagement, and the scale of the recommendations. If implemented the recommendations provided in Chapter 7 would provide significant improvements to the regional multimodal transportation network.

This regional plan includes the aspects listed below, which will be described in detail in the following chapters.

- Identification of existing infrastructure conditions for those walking and bicycling in the region (Chapter 5)

- Compilation and examination of plans that have been created and approved by local governing bodies, including the City of Charlottesville, Albemarle County and the University of Virginia (Chapter 6)

- Determination of corridors that provide regional connectivity for bicycle and pedestrian transportation in the urban area (Chapter 7)

- Prioritization of corridor segments, using the ActiveTrans Priority Tool, followed by adjustments to account for additional costs or benefits associated with each segment (Chapter 7)

- Creation of strategies for implementation, including identification of key locations where the City and County will need to coordinate efforts (Chapter 8)

- Determination of additional next steps that will facilitate and encourage creation of a regional bicycle and pedestrian network (Chapter 8)

Outreach

As with all planning efforts, public outreach is a significant component of the process. Given the unique characteristics of the Charlottesville and Albemarle region, planners identified the need for a robust public engagement process. This led the TJPDC to partner with the Piedmont Environmental Council and to seek grant funding. In the summer of 2017, the TJPDC collaborated with the Piedmont Environmental Council (PEC) to apply for and receive a Strengthening Systems Grant from the Charlottesville Area Community Foundation. This two-year grant made a campaign of intensive community outreach in the region possible. The PEC hired a Community Outreach Coordinator in the Fall of 2017 who led these efforts and worked in close collaboration with the TJPDC staff and rounded out what became known as the planning team.

Although there have been many plans created in the Charlottesville-Albemarle area, there has not been a coordinated plan for a comprehensive regional network. Through numerous interviews and focus groups, it appears that this gap between idea and implementation is primarily attributable to a lack of focus and coordinated mobilization between localities, communities, professional disciplines, and stakeholder groups. This issue was addressed through an outreach program that worked to listen to, understand, and work closely with partners in the community to create a plan that reflects the needs and priorities of all. This also created widespread buy-in and a unified structure through which the public organized advocacy and became active participants.

There are many organizations in the region that have been working towards creating better infrastructure and promoting active recreation and healthy living. The outreach process began with connecting with these organizations, as well as professionals, advocates, and diverse stakeholders with related goals, many of whom do not typically participate in Transportation Planning. For example, the regional Health District's four main program goals, including Active Living and Connected Communities for All and Healthy Foods, are all better served by improved bicycle and pedestrian connectivity. Organizations such as this bring resources and relationships to the process and will be valuable partners going forward. Similar alliances were formed with educators, businesses, housing advocates and providers, heritage centers, environmental stewards and many others.

Conversations with residents of both Charlottesville and Albemarle have indicated broad community support for a more connected community with safe bicycle and pedestrian infrastructure. Residents had many ideas for connections along several corridors, multiple barriers they would like to see transformed into connections, and ideas about how to accomplish this, which all contributed to this Plan.

The outreach effort yielded rich qualitative data and knowledge that informed the Plan and process. Furthermore, the outreach process has developed and organized a robust multimodal advocacy community that has united many previous disjointed sectors and constituencies in both Charlottesville and Albemarle. This resulted in relationships and networks that can drive implementation and will help refine the regional plan on an ongoing basis, and foster participation and buy-in for specific project recommendations. The outreach effort is notable for the number and variety of methods used to get the public involved in the planning process. These methods are summarized below.

Events and Gatherings

Throughout the process, PEC and TJPDC hosted a variety of events. These included public open houses, small meetings, focus groups, special events, community gatherings, and checking in with residents and other stakeholders through ongoing processes.

Public Open Houses
Over the course of the planning process the TJPDC staff hosted four open houses at their Water Street Center meeting facilities. The open houses provided opportunities for members of the public to formally engage in the planning process and indicate opportunities and challenges associated with walking and bicycling in the region.

Small Meetings and Focus Groups
The PEC Community Outreach Coordinator met regularly with individuals, community leaders, and organizations with diverse missions and backgrounds to build relationships, consensus and active support around a unified vision. Between October 2017 and November 2018, over 250 meetings were held with individuals and small groups at locations throughout Charlottesville and Albemarle.

Special Events
In addition to traditional public meetings held in government offices, the planning team organized several special events throughout the year that framed issues of mobility in new ways and vastly expanded what a planning charrette might look like. On November 8, 2017, they hosted a project kickoff with a presentation and discussion with Chuck Flink, of Greenways Inc, and Max Hepp-Buchannan, of Bike-Walk RVA, about national and regional models of successful greenway implementation strategies. More than 150 people attended that gathering, which also included informational displays and a mini-survey. Shortly after, on November 17, 2017, the "Cypherways" community meeting was held, in which local spoken-word artists used Hip-Hop word association techniques to inspire outside-the-box thinking.

More than 70 participants brainstormed potential greenway destinations and barriers and envisioned what a greenways journey might include. The process was especially noteworthy for its ability to unpack and develop complex issues such as greenway users' simultaneous desire for solitude and the company of others and to suggest design implications.

The PEC joined with the Charlottesville Bicycle and Pedestrian Advisory Committee to organize five social bike rides over the course of 2018. These rides promoted cycling for fun and transportation, while increasing its visibility, educating riders, and strengthening civil society. The rides also provided residents with first-hand knowledge of existing infrastructure, revealed shortcomings, and the informal post-ride debriefs were a venue for honest dialog about challenges and desires.


The 2018 event schedule culminated with a visit from nationally-renowned transportation planner Charles Brown, an expert on the intersectionality of race, gender, class, and mobility. He led an evening discussion, entitled "Walking and Biking Toward Equity" on November 28 with more than 150 attendees about ways to make Charlottesville and Albemarle better-connected for all, starting with improved and authentic conversations with residents in their own communities.

The following day, Mr. Brown led a round-table conversation with professionals from the Move2Health Coalition to develop ways to engage with local communities toward just outcomes. This dialogue suggested program opportunities as well as offering more inclusive work strategies.

Gatherings

Outreach was not limited to team-hosted events, but included going where residents already are, where they owned the floor, and where they were most comfortable. The PEC Outreach Coordinator worked with the TJPDC, many volunteers, and community partners to set up tables and mingle at events in order to hear from residents in a casual setting about their thoughts and ideas about a better-connected community. The planning team employed engagement techniques including "dot maps" interviews, and most importantly open-ended conversations with residents about their needs and their vision for a more-connected community.
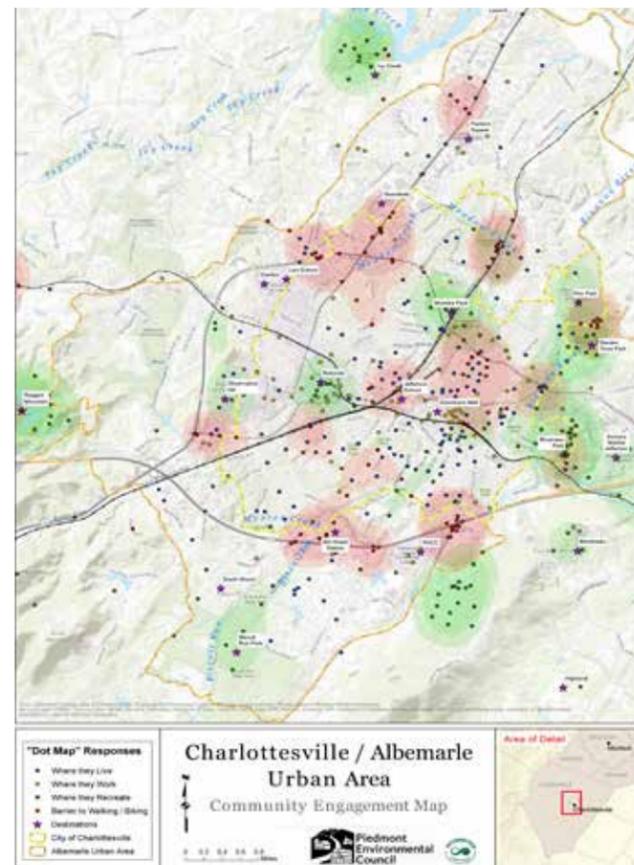
These sessions yielded valuable insights that would not necessarily come out in public meetings. For example, the Outreach Coordinator discovered at gatherings that the only place where many women feel confident to exercise alone is at the gym and that many refugee residents walk or bike several miles to work, in all weather and late at night, because they do not have cars. The Outreach Coordinator also learned about a religious procession that travels along busy streets that do not have complete sidewalks. Data collected from the survey and other communications corroborated much of this information.

Input and Data Collection

The planning team employed a multi-faceted approach to collect input from area residents, businesses interest groups and partner organizations.

Social Media

The project team made significant use of social media platforms, such as Facebook and Twitter, to promote ways in which the public could support and become involved in the planning process. The Charlottesville-Albemarle Greenways Facebook page has over 200 members who help to garner support and spread information.

Wikimap

The TJPDC developed and hosted an online Wikimap which allowed the public to identify various aspects of their rides on an online mapping platform. People indicated desired routes, significant impediments and problem areas. Data from this process was used in corridor identification. The website also provided the ability for users to submit comments and ideas.

In addition to basic information about the project and links to the WikiMap, there was a volunteer page (which pulled in more than 50 volunteers) and a petition that allows visitors to register

support for better bicycle and pedestrian connectivity in Charlottesville and Albemarle. As of December 2018, that petition has 950 signatures.
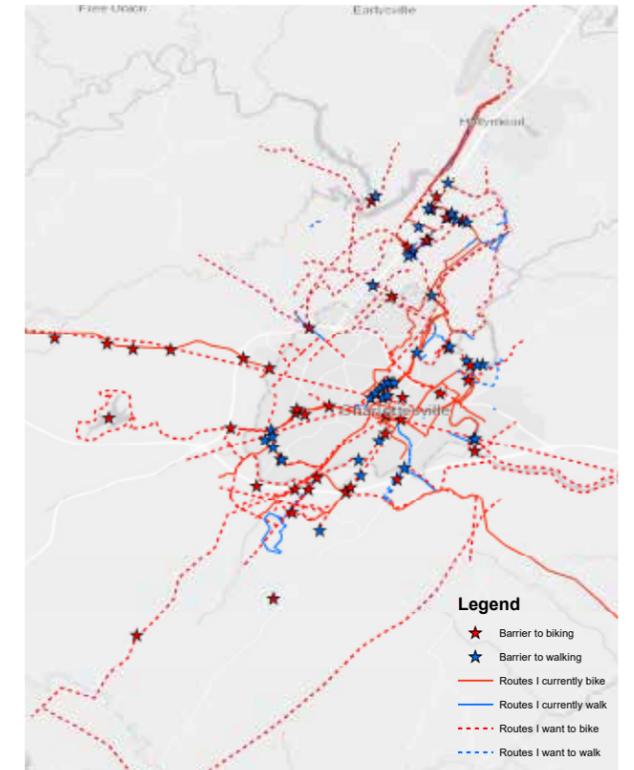
Public Survey

The Outreach Coordinator, with support from advisors and volunteers, developed a survey based on what was learned in focus groups and public interactions. The survey, which ran from May 10 to September 10, 2018, was distributed by email, social media and had a paper version that was part of engagement activities. It was also distributed at two local health clinics. There were 857 responses.

The survey asked respondents about their concerns related to walking and bicycling for transportation and separately for exercise. The purpose of the survey was to dig a little bit deeper into the notion of safety and quality of design and execution. Respondents also had an opportunity to suggest actual bicycle and pedestrian connections they would like to see built, as well as ideas and models they like in other cities.

Among other findings, initial analyses of survey results indicated the following:

- Respondents were primarily concerned with being injured by a car, 72% said it prevents them from bicycling or walking for transportation and 64% said it interferes with their exercise. Whereas insufficient time, for example, ranked fourth at 26%. This indicates that well-protected facilities should be the primary focus

- Only 40% of respondents are comfortable with bike lanes. Respondents are far more enthusiastic about near-street or park-like settings, with 64% of respondents feeling comfortable with near-street infrastructure

- Women were far more concerned about personal security than men, and this difference was consistently expressed. Women do not want to be in the dark or alone and are concerned about being victims of crime

- Men were more interested in a variety of experiences or logistical challenges such as shower facilities at work

These responses signal that residents prefer to be off the road. Half the population has strong preference to be where other people are. That means that facilities that are built away from high-traffic areas must encourage pro-social behaviors and employ Crime Prevention Through Environmental Design (CPTED) principles, while also integrating nature and accommodating a full spectrum of users. The survey also yielded rich qualitative data in the free-response questions. There were ideas about barriers and destinations which, along with other interactions such as the Wikimap, public meetings, and table exercises, helped develop the team's understanding of community desires.

Supporting Current Projects

PEC worked with TJPDC, City, County, and UVA to promote and increase public participation in their existing and ongoing local and regional transportation planning processes. This improved public awareness and investment in local issues. It provided agencies with more data to work with, contextualized local projects within a regional scope, and enlarged their advocacy base. Some of these projects included:

TJPDC
- *Fifth Street Trail Hub*
- *Long-Range Transportation Plan*

City of Charlottesville
- *5th-Ridge-McIntire Multimodal Corridor Study*
- *East High Streetscape*
- *West Main Streetscape*
- *Emmett Streetscape*

Albemarle County
- *Pantops Master Plan*
- *Hydraulic/29 Master Plan*
- *Rio/29 Master Plan*
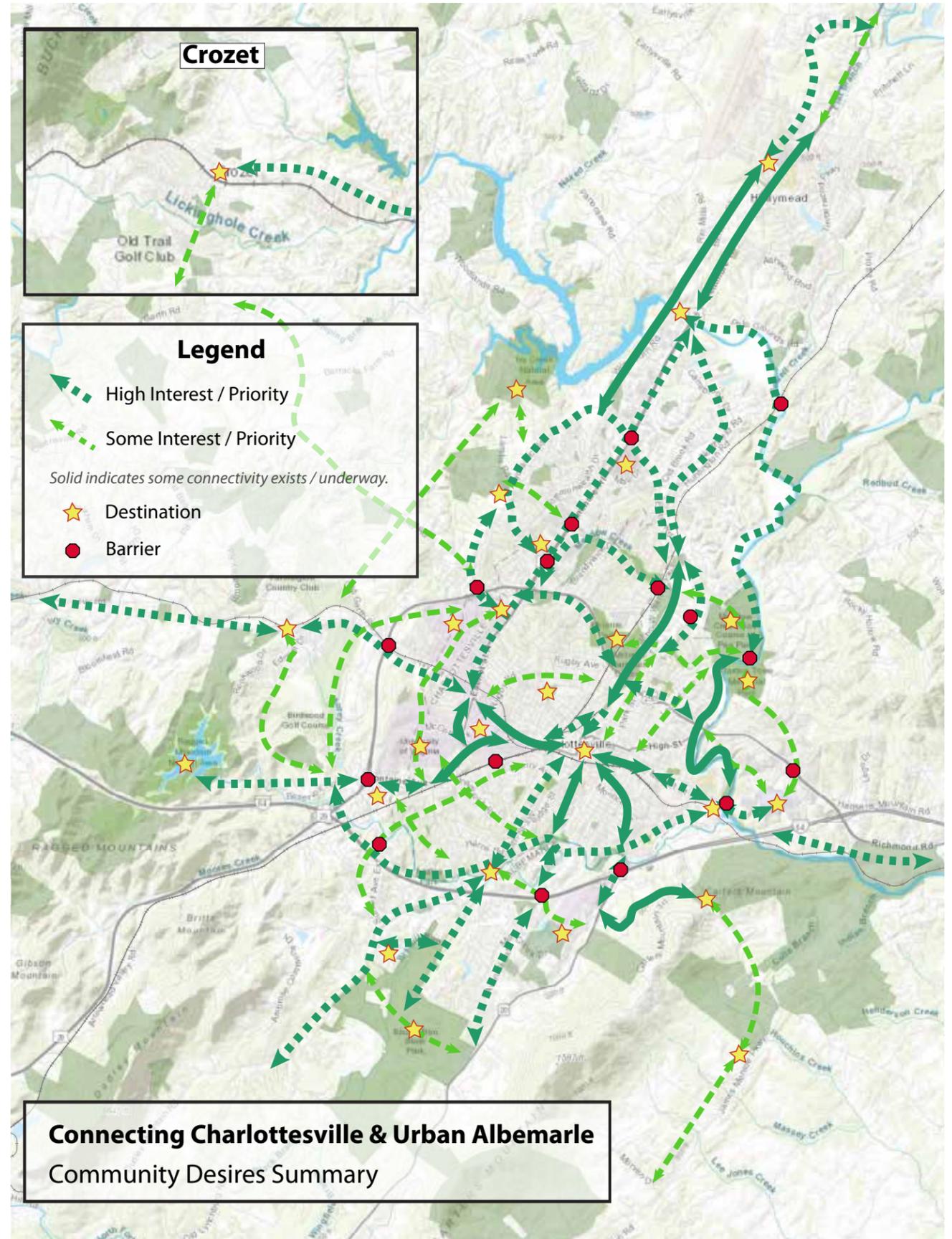- *Biscuit Run Master Plan*

University of Virginia
- *Bicycle Master Plan*

Plan Related Committees

Stakeholder Advisory Group

The PEC and TJPDC jointly empaneled a body of officials including government staff, elected officials, and leaders from local organizations focused on health and active living. These individuals represented some of the organizations already working on multimodal connectivity and whose organizations have resources to contribute toward implementation. They met bi-monthly starting in October 2017 and provided guidance for research methodology as well as contributing directly to the contents of this Plan.

Crozet

Legend

→ High Interest / Priority

→ Some Interest / Priority

Solid indicates some connectivity exists / underway.

☆ Destination

● Barrier

Connecting Charlottesville & Urban Albemarle
Community Desires Summary

Technical Working Group

The bi-monthly gatherings of the Technical Working Group provided a venue for collaboration between localities as well as across disciplines. Subsets of the advisory group gathered periodically to discuss technical issues, such as the interjurisdictional harmonization of spatial data. A modified version of this group will continue to gather regularly after this plan is complete and through implementation.

None of the methods described are individually sufficient but they provide cross-checks and they combine to yield a mosaic view of community priorities. The enhanced community engagement has resulted in a motivated public that is willing to work toward a more connected community. New voices in the conversation will mean new partners, new resources and more opportunities. Engagement opened channels for communication and periodic check-ins going forward. Active community involvement will be essential every step of the way.

Themes and Issues

Themes

The community outreach effort identified several important themes that were incorporated into the planning process and ultimately shaped the recommendations put forward in this plan. These themes include the following:

- A desire for a more connected network of on and off-road bike and pedestrian facilities

- An improved quality of life through recreation and mobility for all residents

- Greater choices in transportation modes that cater to a variety of user types by including a matrix of on-road and off-road, soft and hard surface bike and pedestrian facilities

- Better access to jobs, retail, educational and recreational destinations

- Safer and universally accessible facilities available to all regardless of ability, age, class, gender, or race

Issues

Through many of interactions with the public, interest groups, advocates and elected officials, several important issues rose to the top. These include:

- The current bicycle and pedestrian network is not sufficient for most people to use comfortably. There are few places in the region where everyone can feel safe riding a bicycle. New transportation projects must consider the needs of all users and not create new barriers

- Many walking trails are informally maintained or privately owned and not everyone feels safe or welcome using them

- The shared use paths that exist are too short or too isolated to be useful for transportation. The paths should be extended and connected into a regional network

- There are several well-loved shared use paths such as Riverview Park and the Saunders-Monticello Trail. While these facilities function well, they can be overcrowded at popular times and require many residents drive to trailheads for access

- There are many gaps in bicycle-pedestrian infrastructure. These tend to cluster along the City/County edge and along rivers, creeks, and transportation infrastructure such as railroads and highways. The localities must cooperate more and closing these gaps should be the top priority

- Process is of supreme importance. People are energized around issues of mobility and they want to be involved, but it needs to be easier for them to connect with the process
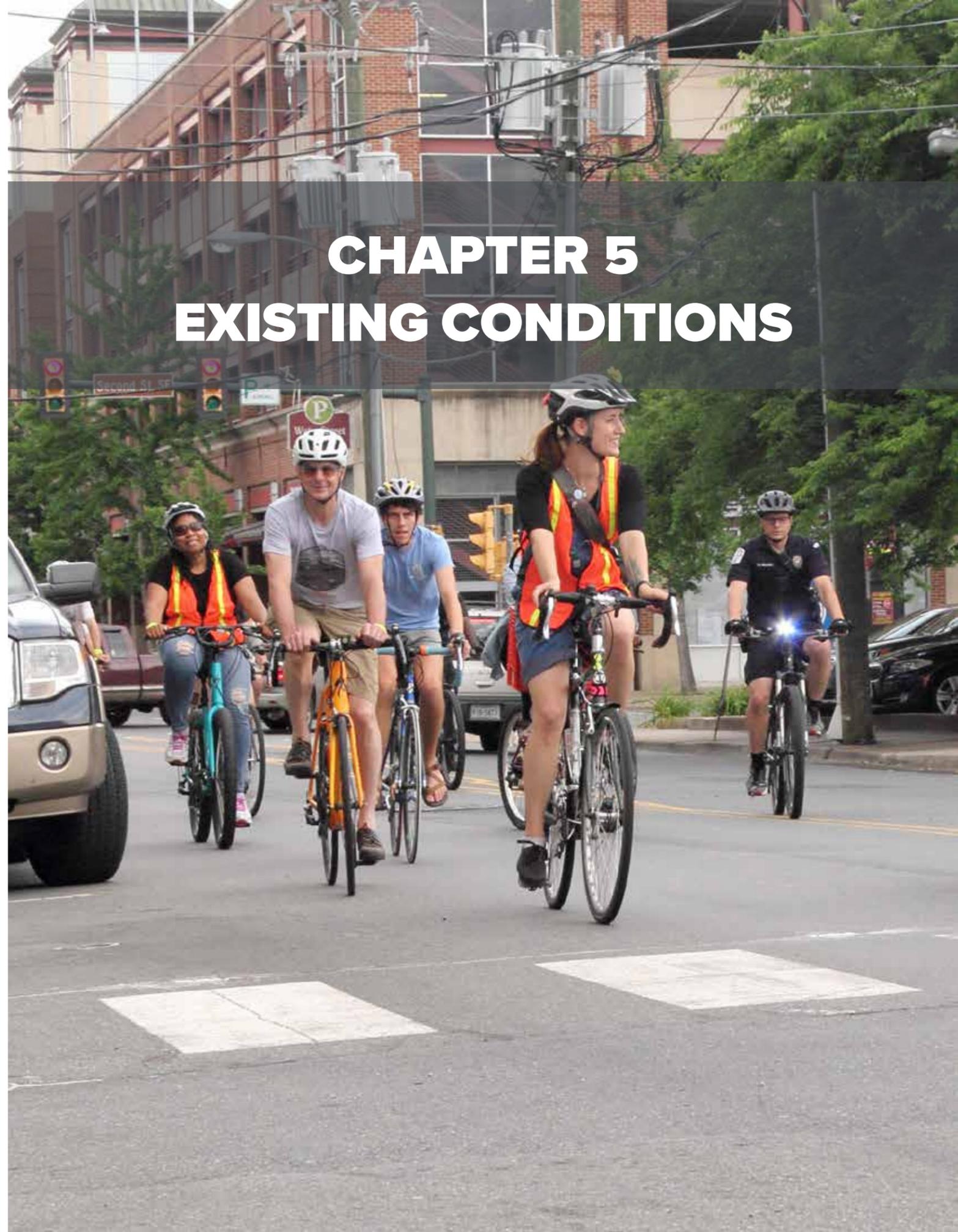
CHAPTER 5
EXISTING CONDITIONS

Existing Infrastructure

This chapter explores the current state of bicycle and pedestrian infrastructure and provides an analysis of important factors affecting the network, including employment and settlement patterns, short auto trips, crashes, destinations. There is an extensive network of existing bicycle and pedestrian facilities within the urban areas of Charlottesville and Albemarle County. The existing network is primarily concentrated in the City of Charlottesville and in some neighborhoods in Albemarle County. Existing bicycle and pedestrian facilities have been developed through three different approaches.

1. **Developer-Built Improvements**
   When a site developer builds new internal and/or external bicycle and pedestrian facilities, as required by zoning, the Comprehensive Plan, or a proffer. An example of these are the facilities built as part of the residential development in the Pantops area of Albemarle County.

2. **Publicly-Constructed Roadway Facilities**
   These are facilities built by either the City or VDOT as part of roadway paving, roadway improvements, or new connections. In some cases, such as the extension of Berkmar Drive, the bicycle and pedestrian facility is a major component of the new project corridor.

3. **Publicly-Constructed Off-Roadway Facilities**
   These are facilities built by Charlottesville or Albemarle County for the specific purpose of providing bicycle and pedestrian connectivity and/or recreation. An example of this type of project is the Rivanna River Trail from Riverview Park to Free Bridge.

The City of Charlottesville owns and maintains its own roadway network. This allows the city to prioritize and construct on-road facilities. Most roadways in Albemarle County are owned and managed by VDOT.

Data in the adjacent Existing Infrastructure map was assembled from existing facility inventories maintained by Albemarle County, VDOT and the City of Charlottesville. This data was supplemented with an inventory performed by TJPDC interns during the summer of 2017. It should be noted that the existing condition data is not complete and is in the process of being updated. One of the action items from The Jefferson Area Bicycle and Pedestrian Plan is for Albemarle, Charlottesville, UVA and the Planning District Commission to develop procedures to maintain and share comprehensive bicycle and pedestrian infrastructure and facility data. This will include an online regional dataset and map of existing and proposed bicycle and pedestrian infrastructure. More information about this ongoing work can be found in Chapter 8, Implementation Strategies.

Existing Bicycle Infrastructure: This includes all bike lanes, shared use paths and shared roadways.

Sidewalk Infrastructure: This includes sidewalks and walkways. The inventory primarily includes sidewalk facilities that are on public roadways or provide access to major businesses like shopping centers.

Bike Route 76: Bike Route 76 is a designated, national, on-road bike route that traverses the region. It is the only designated bike route to pass through the Planning District.

Nature Trails and Recreation Infrastructure: Albemarle and Charlottesville have an extensive park system that provides recreational riding and walking opportunities for users. These trail networks include primitive hiking, mountain biking, and hard surface paths. The urban area also has the Rivanna Trail, a mixed on-road and primitive trail system that encircles the City. The trail is maintained by the non-profit Rivanna Trails Foundation.
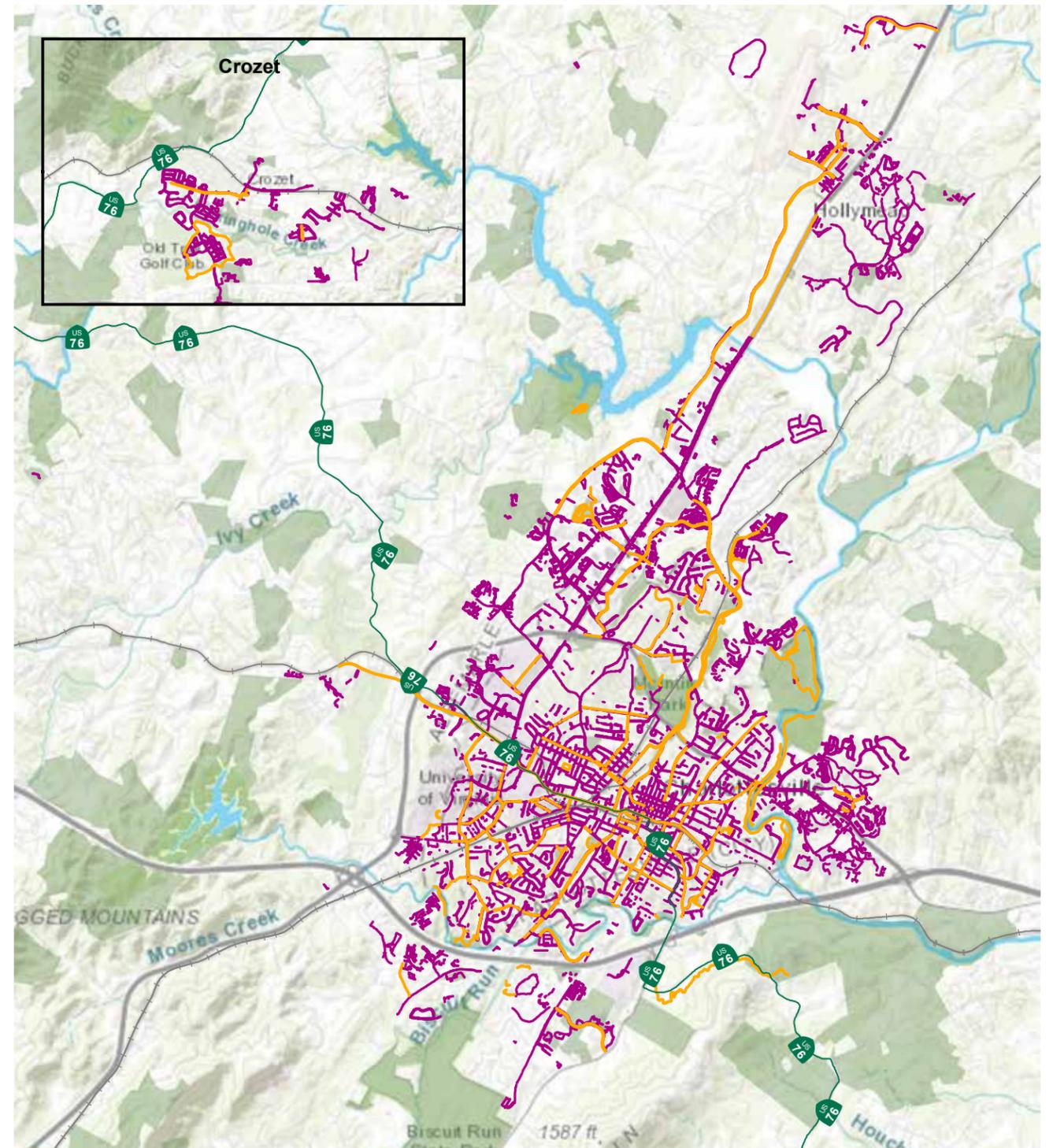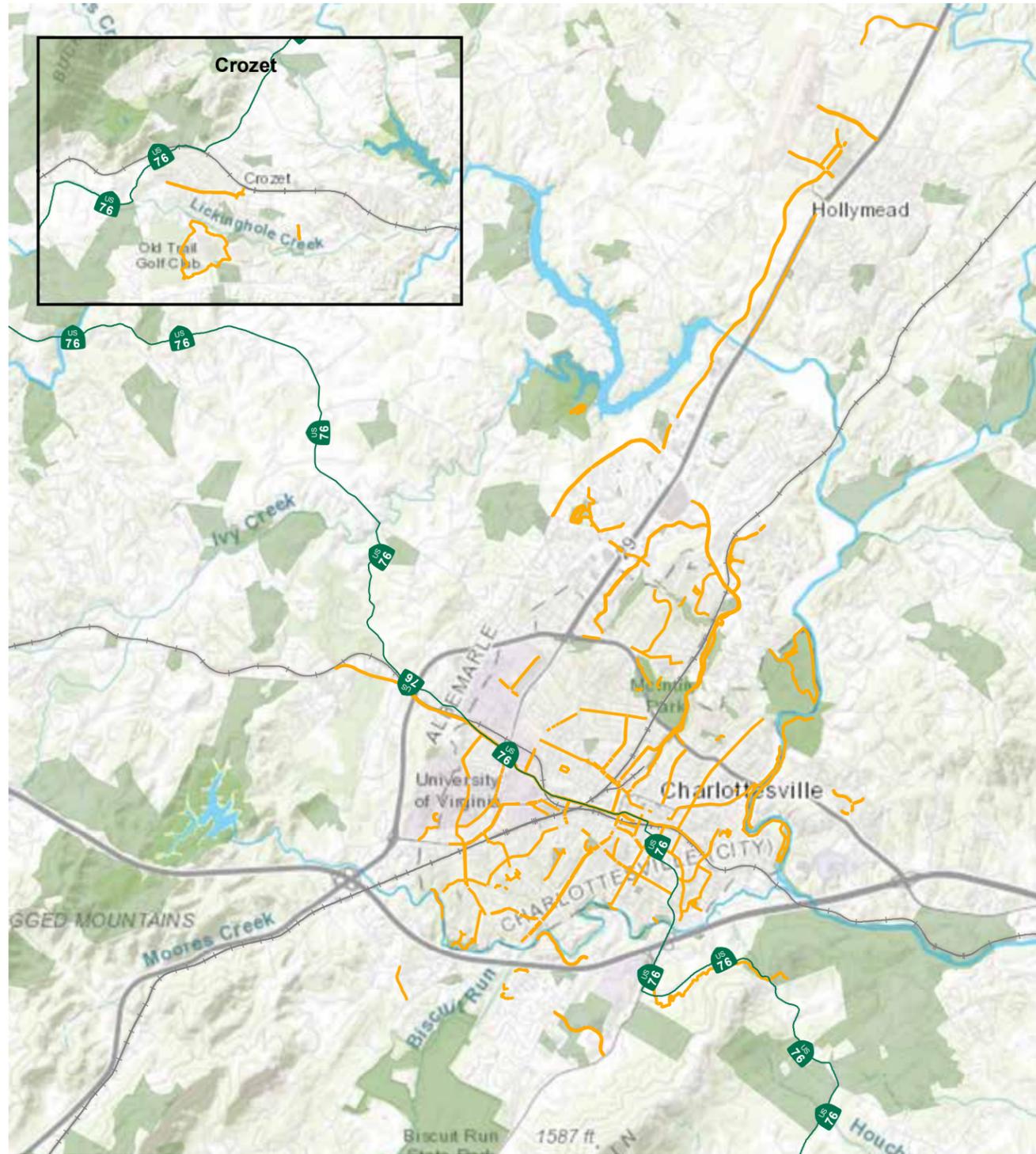

Map 5.1
Existing Infrastructure

1 Mile   N

FEATURES
- Parks and Conservation
- Lakes and Rivers
- Railroads
- Bicycle Infrastructure
- Sidewalk Infrastructure
- Bike Route 76

ABOUT THIS MAP:
This map provides a contextual reference to the City of Charlottesville, the urbanized area of Albemarle County and surrounding area. The map depicts the existing infrastructure currently in place in regards to bicycle and pedestrian facilities.
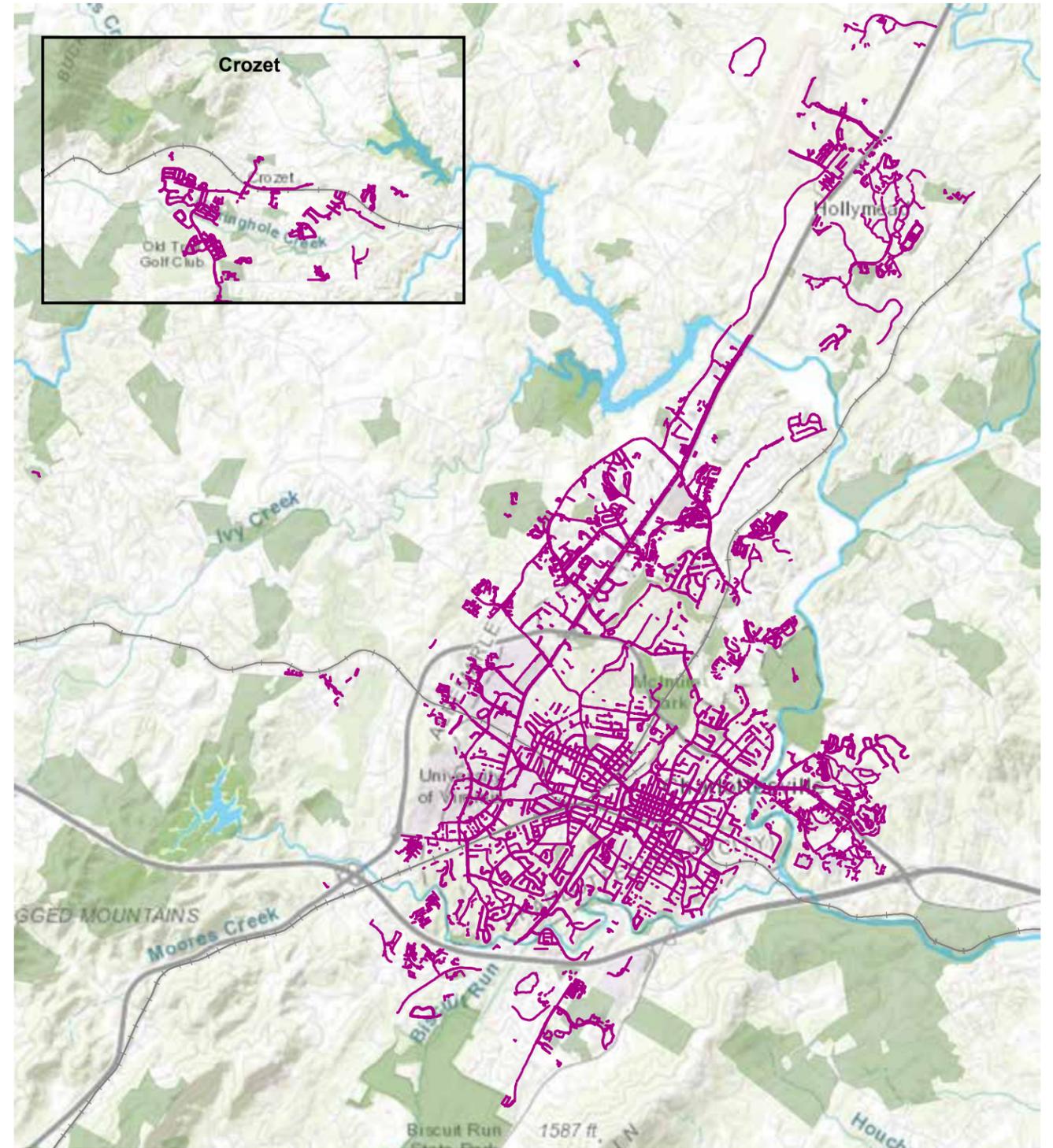
Crozet

Map 5.1.1
Existing Bicycle Infrastructure

ABOUT THIS MAP:
This map provides a contextual reference to the City of Charlottesville, the urbanized area of Albemarle County and surrounding area. The map depicts the existing infrastructure currently in place in regards to bicycle facilities.

FEATURES

1 Mile

N

- Parks and Conservation
- Lakes and Rivers
- Railroads
- Bicycle Infrastructure
- Bike Route 76

**Crozet**

Map 5.1.2
Existing Sidewalk Infrastructure

ABOUT THIS MAP:
This map provides a contextual reference to the City of Charlottesville, the urbanized area of Albemarle County and surrounding area. The map depicts the existing infrastructure currently in place in regards to pedestrian facilities.

FEATURES

1 Mile

N

- Parks and Conservation
- Lakes and Rivers
- Railroads
- Sidewalk Infrastructure

Trips Less Than Two Miles

The maps below and adjacent show the estimated percent of all trips on a road that are less than two miles in length, for selected roads in the urban area. The data is from the StreetLight Insight platform, which uses anonymized location data from cell phone applications to identify trips and travel patterns. The tool does not currently identify the mode of travel but does allow for calculating the proportion of all trips on each roadway that are relatively short. The map shows that many of the roads near UVA and downtown Charlottesville have higher proportions of trips that are less than two miles. Many other roads, mostly neighborhood roads, also have a relatively high proportion of short trips. A similar analysis was done to calculate number of trips that are shorter than five miles as part of the evaluation done using the ActiveTrans Prioritization Tool. This is discussed in more detail in Chapter 7, Corridors & Prioritization.

Many trips are shorter than **2 MILES**

A distance easily traveled by

WALKING
or
BIKING!
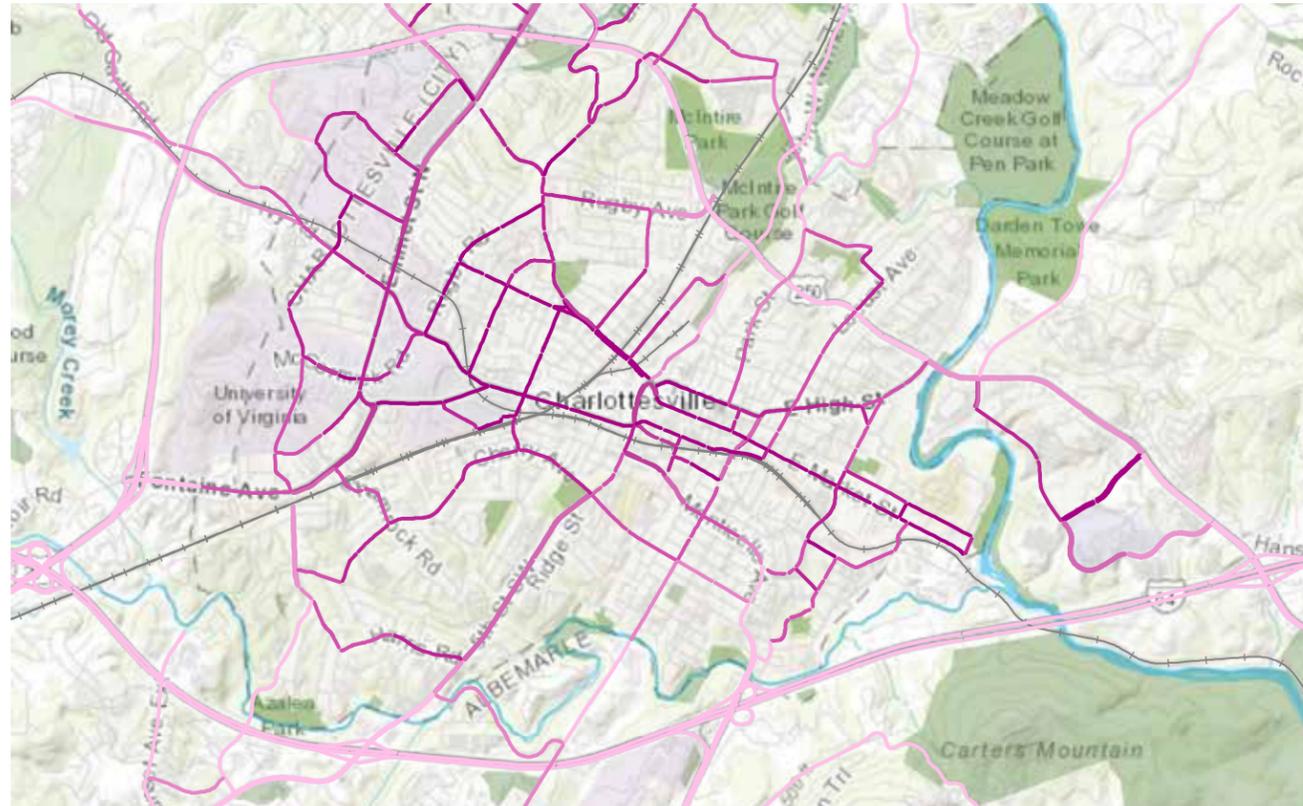
Map 5.2
Trips Less Than Two Miles

.5 Mile

N

ABOUT THIS MAP:
This map shows the estimated percent of trips on selected roads that are less than two miles in length. Roads not shown were not analyzed with this tool.

FEATURES

|		
▮ Parks and Conservation	— 0-5%	— 20.1%-30%
▮ Lakes and Rivers	— 5.1%-10%	— 30.1%-43.6%
⊬ Railroads	— 10.1-20%	
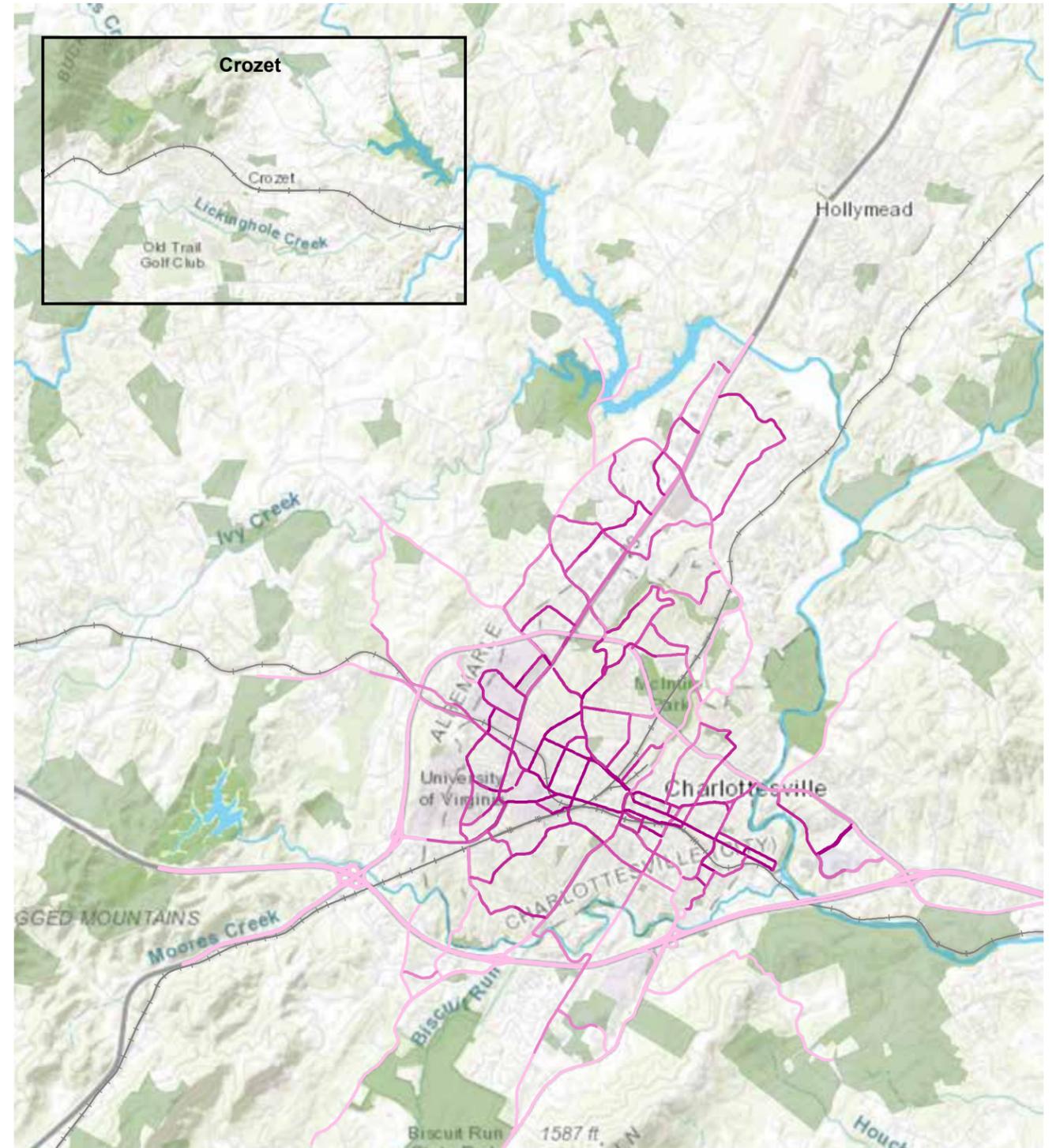
Map 5.2.1
Trips Less Than Two Miles

1 Mile

N

ABOUT THIS MAP:
This map shows the estimated percent of trips on selected roads that are less than two miles in length. Roads not shown were not analyzed with this tool.

FEATURES

▮ Parks and Conservation	— 0-5%	— 20.1%-30%
▮ Lakes and Rivers	— 5.1%-10%	— 30.1%-43.6%
⊬ Railroads	— 10.1-20%	

Population Density

Population density data is derived from the Decennial US Census (2010) at the block level. Blocks are the smallest unit of geography that Census data is reported on. Mapping this data using a dot density map provides an understanding of where people live in the community. This information helps planners understand the demand for bicycle and pedestrian infrastructure. Population density is an important factor for understanding access and is included in the Active Trans Prioritization Tool. The tool is discussed in more detail in Chapter 7.

City of Charlottesville and Albemarle County Population Pyramid

United States Population Pyramid
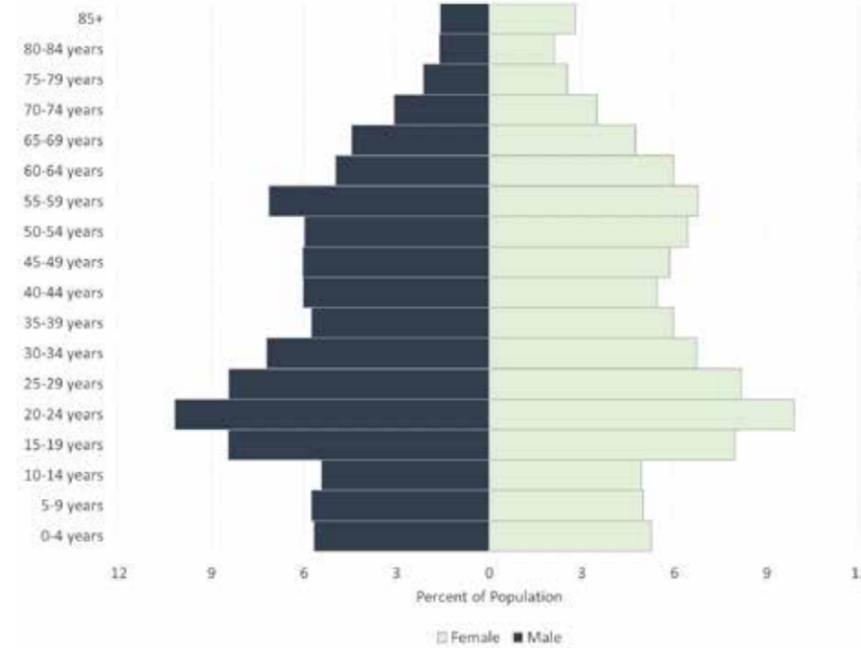
The notable differences between Charlottesville and Albemarle County populations and the those of the United States population are the higher percentage of college age residents, ages 20-24, due to the University of Virginia.
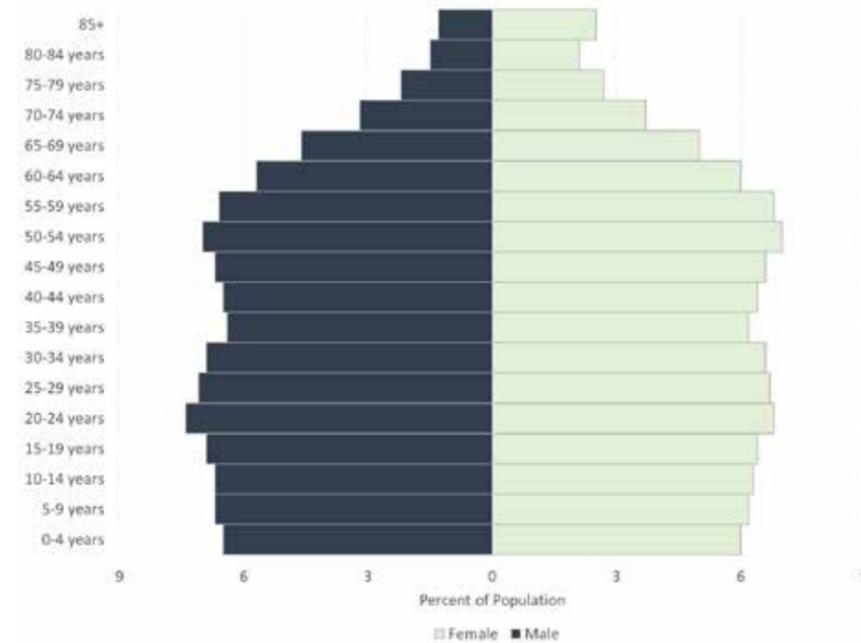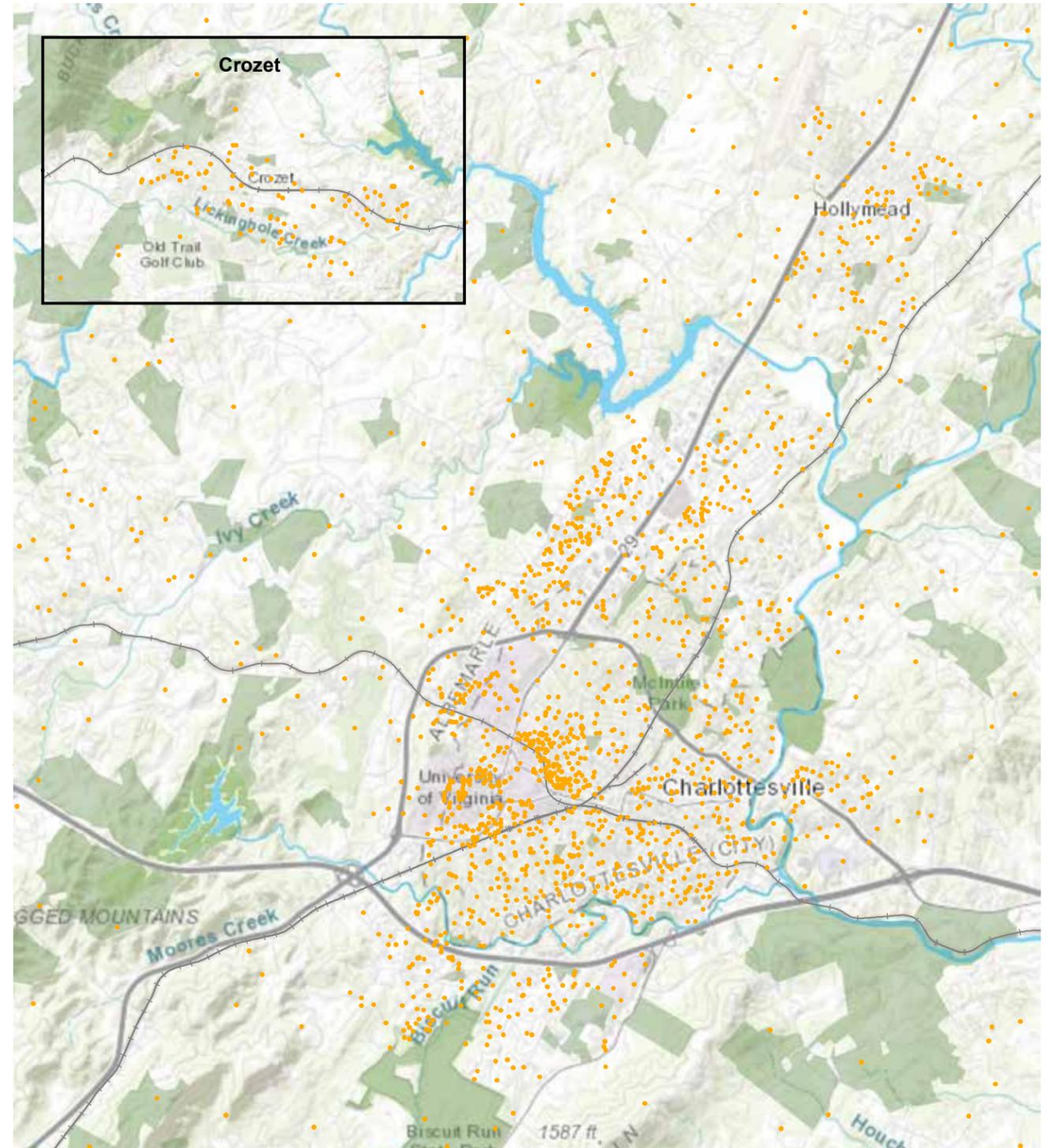
ABOUT THESE CHARTS:
The adjacent charts provide a visual representation of the age-sex distribution for the combined population of the City of Charlottesville and Albemarle County.

Map 5.3
Population Density

1 Mile   N

FEATURES
- Parks and Conservation   • 1 Dot= 75 Persons
- Lakes and Rivers
- ╫ Railroads

ABOUT THIS MAP:
This map illustrates the density of the population, which is largely focused within the US 250 Bypass and is densest near UVA grounds. There is significant density north of Charlottesville near Route 29 in Albemarle County. The data used is derived from the Decennial US Census, 2010, at the block level.
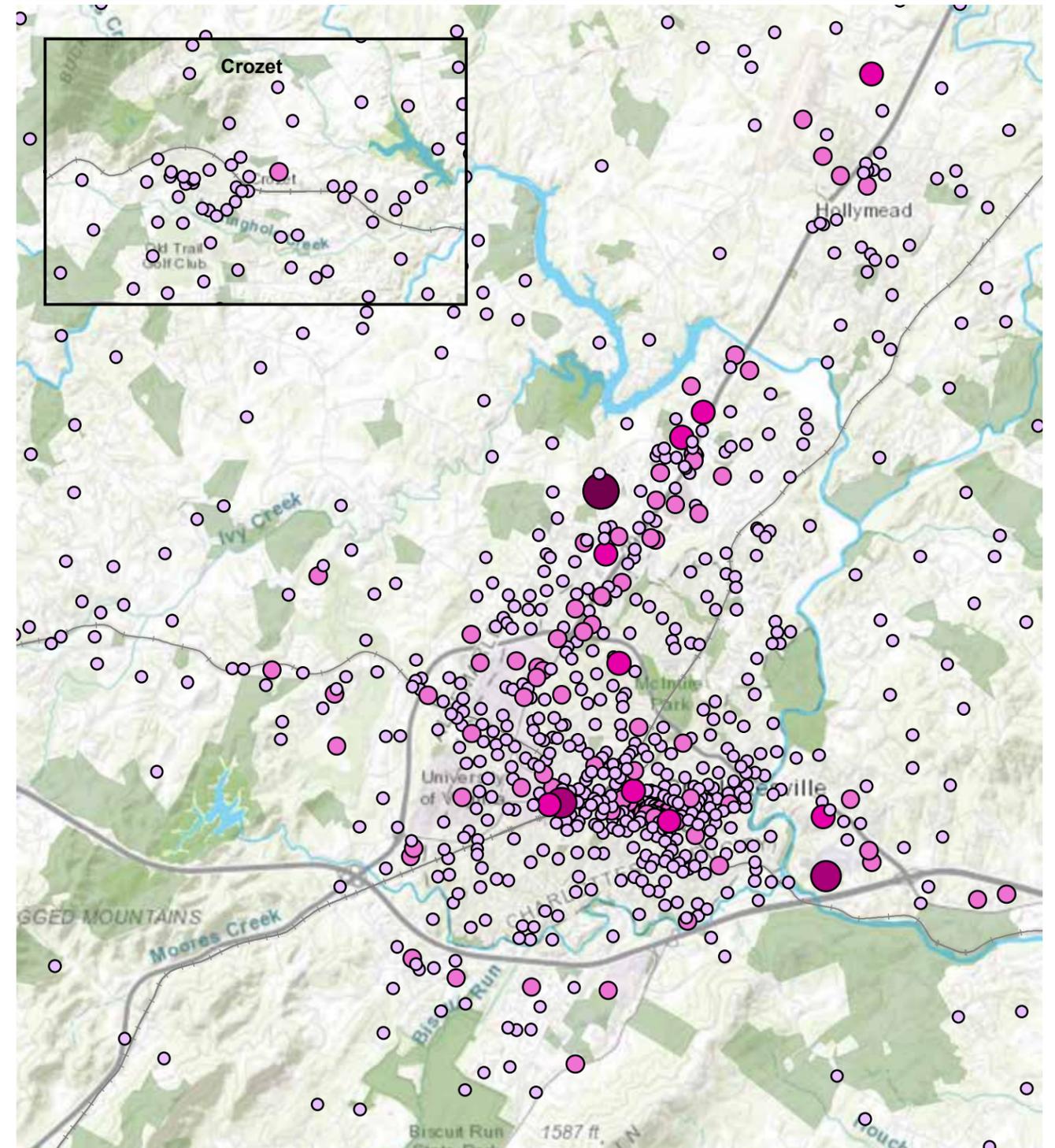
Employment Density

Employment density data is sourced from the US Census Longitudinal Employer-Housing Dynamics (LEHD) dataset, 2015. The dataset provides information on employers and employees. Mapping the available data provides a spatial understanding of employment distribution and job locations, such as population density. These are important factors when planning a transportation system. Population density is highest in the urban neighborhoods surrounding downtown, UVA, and the Hydraulic Road area.

Data included in this map is sourced from business address databases maintained by a third party. Encoding errors exist and may result in locations with higher than expected employment being illustrated.

An example of this type of error is the employment center dot, colored maroon, near the north fork of the Rivanna River. The error appears because that dot represents the center point of a particular zip code.

There are multiple regional employment centers throughout the City of Charlottesville and Albemarle County. These employment centers are based on the number of jobs and can range anywhere from 1 to nearly 12,000 jobs. The top regional employment centers include:

- Pantops
- Downtown Charlottesville
- UVA Central Grounds
- Fontaine Research Park
- North Fork Research Park
- Rivanna Station
- Barracks Road
- Route 29 Corridor

Map 5.4
Employment Density

1 Mile
N

ABOUT THIS MAP:
This map illustrates employment locations and job density. The dataset used is from the 2015 US Census LEHD dataset.

FEATURES

■ Parks and Conservation	○ 1-194 Jobs	● 2,873-6,724 Jobs
■ Lakes and Rivers	● 195-796 Jobs	● 6,725-11,837 Jobs
╫ Railroads	● 797-2,872 Jobs	

Bicycle and Pedestrian Collisions

The Moving Ahead for Progress in the 21st Century (MAP-21) act enacted in 2012 requires Metropolitan Planning Organizations (MPOs) and State Departments of Transportation to adopt performance measures for addressing safety on roadways. Safety measures include a count of non-motorized fatality and serious injury crashes and a per year reduction target. In 2018, the MPO worked with VDOT to adopt an initial target reduction of 4%. Safety Targets are listed in the MPOs Transportation Improvement Program (TIP) and are assessed annually by the MPO. This plan will help address bicycle and pedestrian specific safety issues.

The data in the adjacent map is provided by VDOT and the Virginia State Police and maps non-motorized crashes by severity for 2013-2016. There were 256 collisions involving motor vehicles and pedestrians between 2013-2017. Of those collisions, 13 resulted in the death of a pedestrian. The most common injury classification for pedestrians was minor injury with 179 collisions. For cyclists, there were 99 collisions that resulted in injuries, but no fatalities. The most common injury classification for cyclists was minor injury, with 78 collisions.
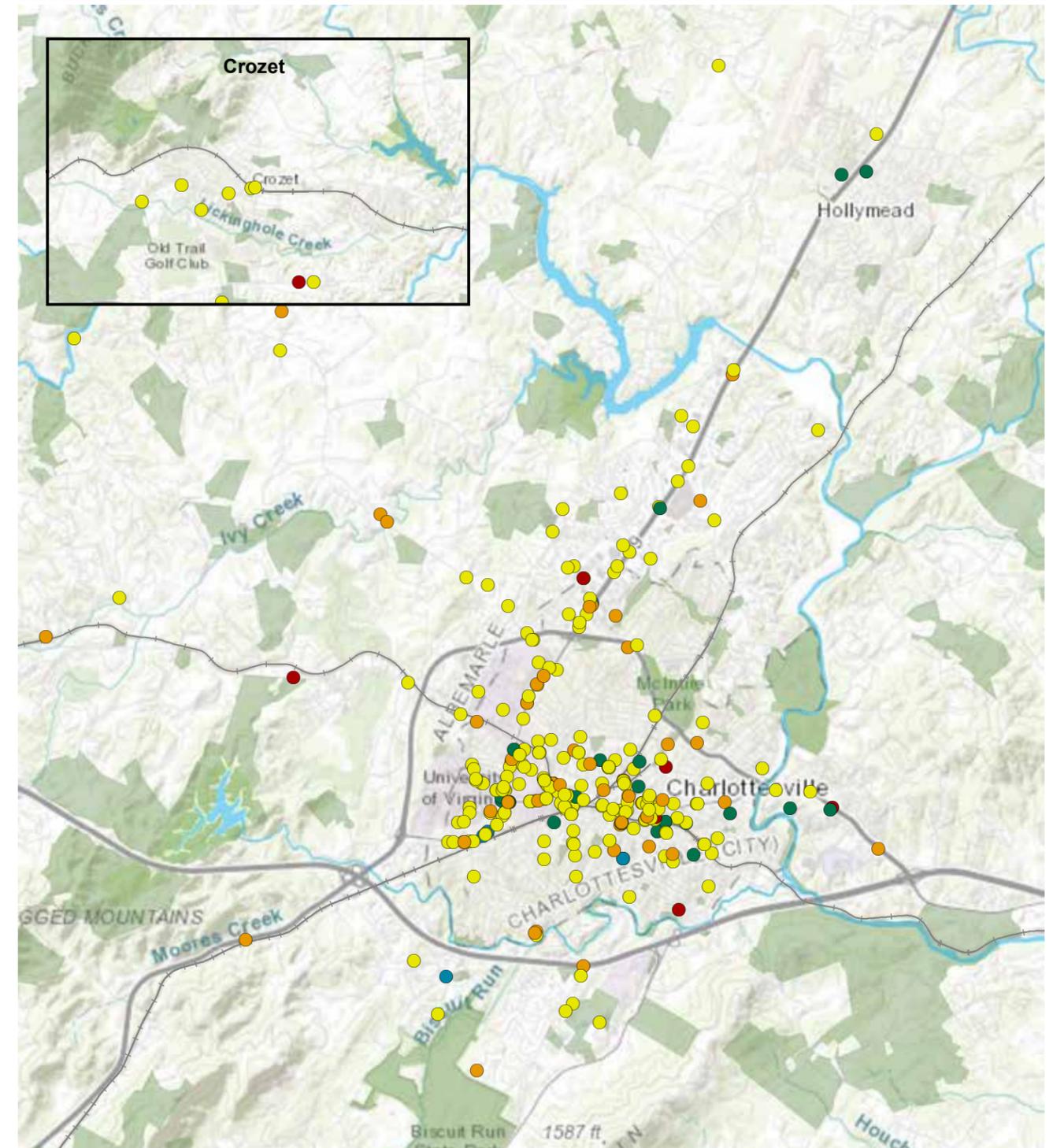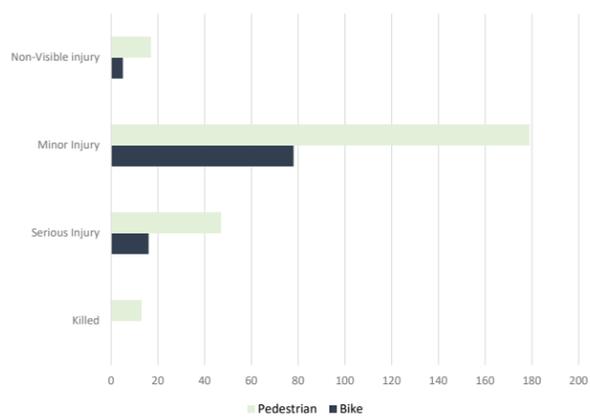
Bicycle Collisions

Collision Severity	Year					Total
	2013	2014	2015	2016	2017	
Killed	0	0	0	0	0	0
Serious Injury	7	3	2	2	2	16
Minor Injury	18	22	16	11	11	78
Non-Visible Injury	3	1	0	0	1	5
Total	28	26	18	13	14	99

Pedestrian Related Collisions

Collision Severity	Year					Total
	2013	2014	2015	2016	2017	
Killed	2	2	3	4	2	13
Serious Injury	9	9	8	12	9	47
Minor Injury	40	36	36	28	39	179
Non-Visible Injury	5	3	2	4	3	17
Total	56	50	49	48	53	256

Bicycle and Pedestrian Collisions by Severity

Non-Visible injury / Minor Injury / Serious Injury / Killed

0 20 40 60 80 100 120 140 160 180 200

■ Pedestrian ■ Bike

13 DEATHS

63 SERIOUS injuries

257 MINOR injuries

22 NON-VISIBLE injuries

355 injuries

Injuries from years 2013-2017

Map 5.5
Bicycle and Pedestrian Collisions

1 Mile   N

FEATURES
■ Parks and Conservation
■ Lakes and Rivers
▦ Railroads
● Fatal Injury
● Ambulatory Injury
● Visible Injury
● Non-Visible Injury
● Other

ABOUT THIS MAP:
This map depicts collision locations and the severity of the collision involving bicyclists and pedestrians. The dataset is provided by VDOT and the Virginia State Police for years 2013-2017.

CHAPTER 6
LOCALITY-APPROVED PLANS

Approved Plans

The existing recommendation maps on the following pages are a compilation of all existing bicycle and pedestrian infrastructure recommendations. These recommendations come from formally adopted plans in the region at the time of this Plan's development. The City of Charlottesville, Albemarle County, and UVA have approved plans for bicycle and pedestrian infrastructure and these efforts were incorporated when developing this regional plan. The urban section of this Plan focuses on the City, UVA, Albemarle County designated development areas, and the connections between them, including the Hydraulic Small Area Plan. Plans for the rural areas can be found in Section III of this document.

Previous Plans Considered
City of Charlottesville:
Bicycle and Pedestrian Master Plan Update

The City of Charlottesville describes the plan as: "Passed by City Council on September 18, the 2015 Bicycle and Pedestrian Master Plan is the vision and guiding document for bicycle, pedestrian, and multi-use trail connections in the City. It is a physical and action-oriented plan that builds upon the 2003 Bicycle and Pedestrian Plan and will complement the Streets that Work Plan that is also taking place [in 2015]."

Albemarle County:
Albemarle County Comprehensive Plan

Albemarle County's Comprehensive Plan divided the county into designated development areas and rural areas. As part of the Comprehensive Plan, master plans have been created for each of the designated development areas with the intent of the areas being more urban in character than suburban. The bicycle and pedestrian aspects of each plan were considered when developing the regional plan. Recommendations come from the Parks & Green System and Future Land Use chapters from each master plan. The urban section of this Plan includes a few corridors in Albemarle's rural areas that are included to connect the designated development areas.

The following are the master plans that are part of the Comprehensive Plan, as well as when each plan was adopted.

- *Crozet Master Plan*
  - Adopted October 13, 2010
- *Pantops Master Plan*
  - Adopted March 17, 2008, an update is currently underway
- *Places29 Master Plan*
  - Adopted February 2, 2011, amended June 10, 2015
- *Southern and Western Urban Neighborhoods Master Plan*
  - Adopted June 10, 2015, amended September 23, 2015
- *Village of Rivanna Master Plan*
  - Adopted May 12, 2010, amended on June 10, 2015

CHARLOTTESVILLE
STREETS
THAT WORK   DESIGN GUIDELINES

University of Virginia:
University of Virginia Bicycle Master Plan

In 2007, the University of Virginia completed a Bicycle Master Plan that included specific recommendations for bicycle infrastructure on UVA Grounds as well as bicycle connections to the surrounding areas that were all considered for the regional plan. The Bicycle Master Plan was also included in UVA's 2007 Transportation Demand Management Plan. In addition, planning for bicycle and pedestrian connectivity is an important consideration in all of UVA's planning efforts ranging from the 2008 Grounds Plan and subsequent Precinct Plans to specific district planning efforts for smaller areas of Grounds. All of these plans promote an environment that is connected to the greater community and facilitate bicycling and walking.

Charlottesville-Albemarle MPO:
The 2040 Long-Range Transportation Plan

The Charlottesville-Albemarle MPO's 2040 Long-Range Transportation Plan looks ahead three decades to assess future transportation projects vital for our region. The plan considers all modes of transportation including highways, roads, bus, rail, bicycle, pedestrian and air.

Figure 6.1
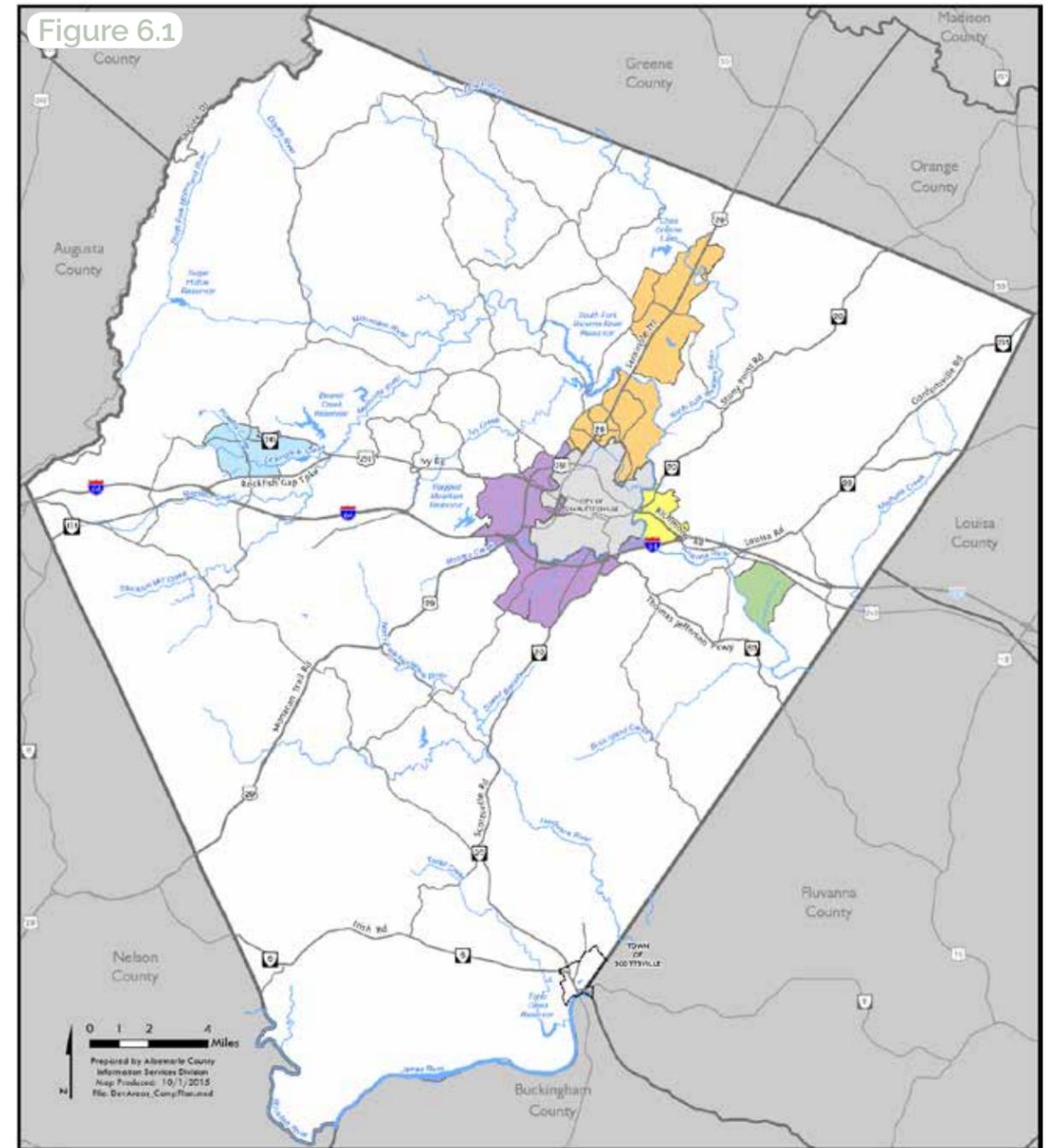
Figure 1: The Development Areas

Legend:
- Places 29
- Pantops
- Village of Rivanna
- Crozet
- Southern and Western Neighborhoods
- Primary Roads
- Secondary Roads
- Major Streams
- Major Water Bodies

8.5

Albemarle Comprehensive Plan ADOPTED June 10, 2015

Source: Albemarle County Comprehensive Plan

Crozet
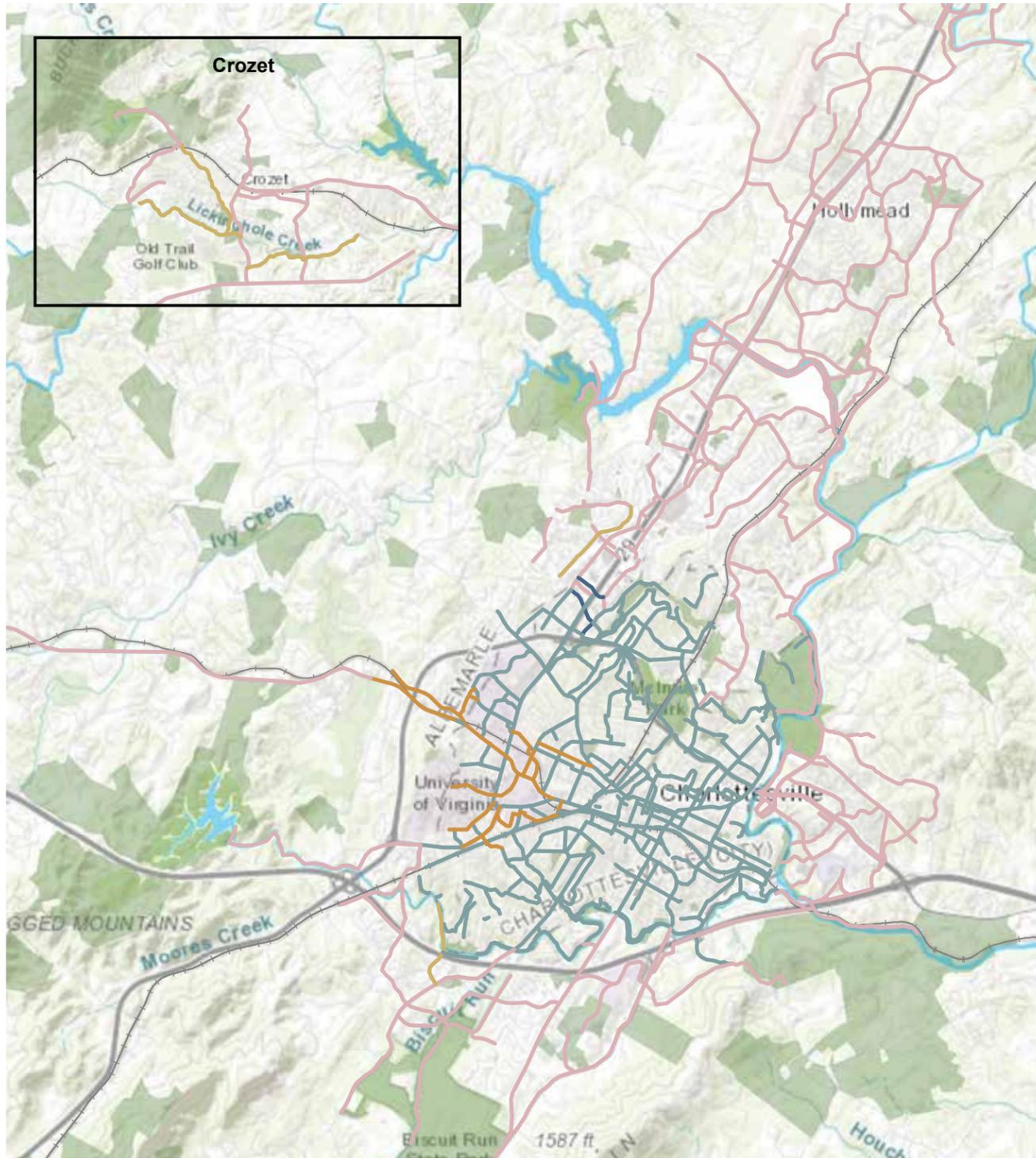
Map 6.1
Plan Recommendations by Source

2 Miles

N

ABOUT THIS MAP:
This map provides the sources of current Plan recommendations from the localities within the TJPDC.

FEATURES

Parks and Conservation

Lakes and Rivers

Railroads

Charlottesville Bicycle and Pedestrian Master Plan

Albemarle County Comprehensive Plan

Hydraulic Small Area Plan

Long-Range Transportation Plan 2040

University of Virginia Bicycle Master Plan

Crozet
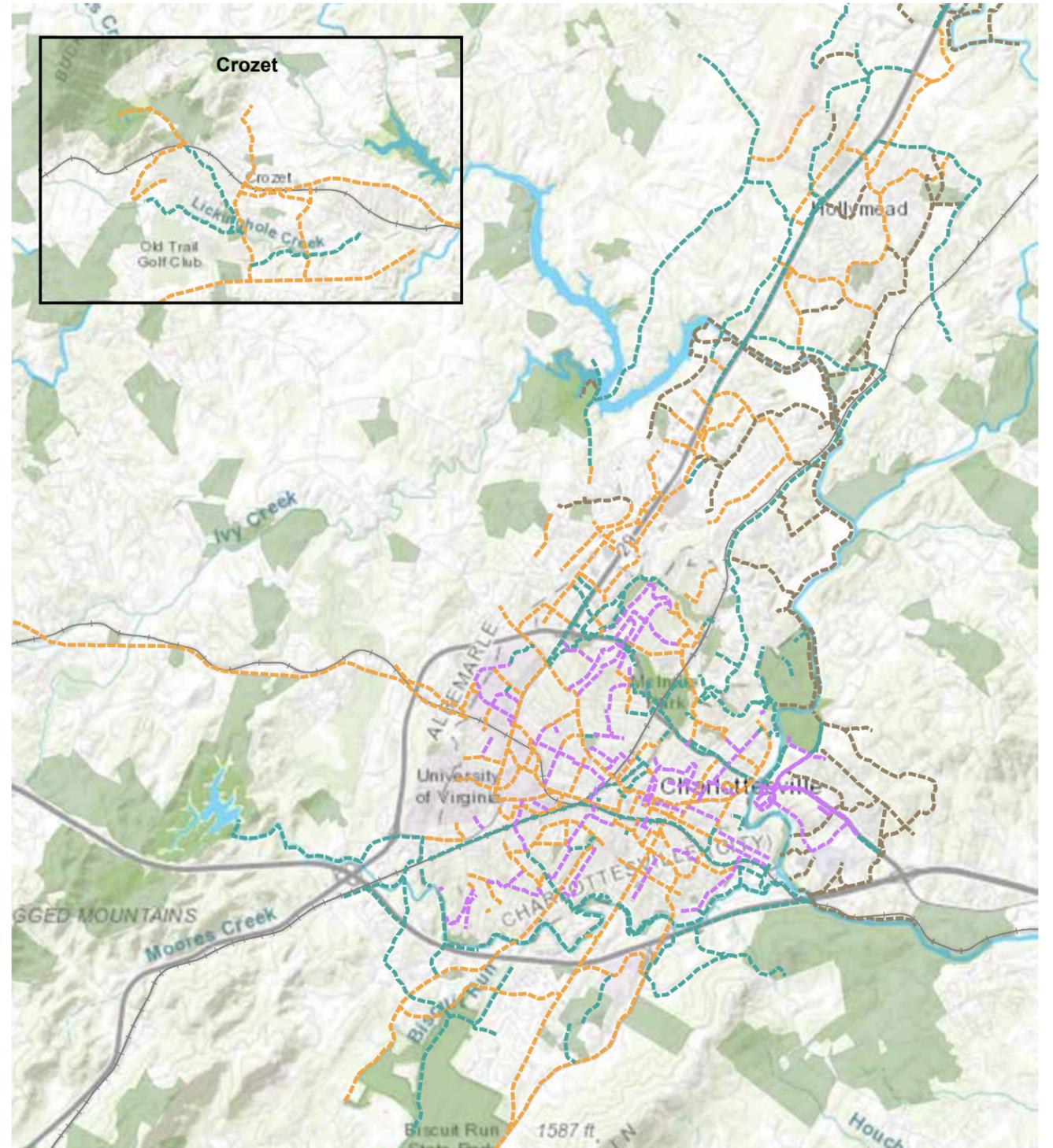
Map 6.2
Plan Recommendations by Type

2 Miles

N

ABOUT THIS MAP:
This map provides the recommendations by type included in current and existing Plan recommendations from the localities within the TJPDC.

FEATURES

Parks and Conservation

Lakes and Rivers

Railroads

Bike Lane or Variation

Shared Use Path

Trail or Variation

Shared Roadway

CHAPTER 7
CORRIDORS & PRIORITIZATION

Overview

This chapter provides an explanation of the determination and prioritization of corridors that provide regional connectivity for bicycle and pedestrian transportation in the urban area. Regional corridors were determined based on the current bicycle and pedestrian plans discussed in Chapter 6 and additional discussions with stakeholders and the public. Once the regional corridors were identified and individual project segments were determined, the projects within the urban area were evaluated using the ActiveTrans Priority Tool to prioritize and rank the project segments. The large number of projects made it important to objectively evaluate projects to indicate the relative need for and benefit of each segment. The initial stage of prioritization used five categories with multiple measurable variables that were evaluated to determine ranking. This ranking was followed by adjustments to account for aspects such as alternate routes, public support, and costs to create a final prioritization.

As described in Chapter 1, the goal of this Plan is to guide and encourage implementation of bicycle and pedestrian infrastructure in the region. Two of the main results of this Plan are the corridors identified in this chapter and the prioritization of these corridors.
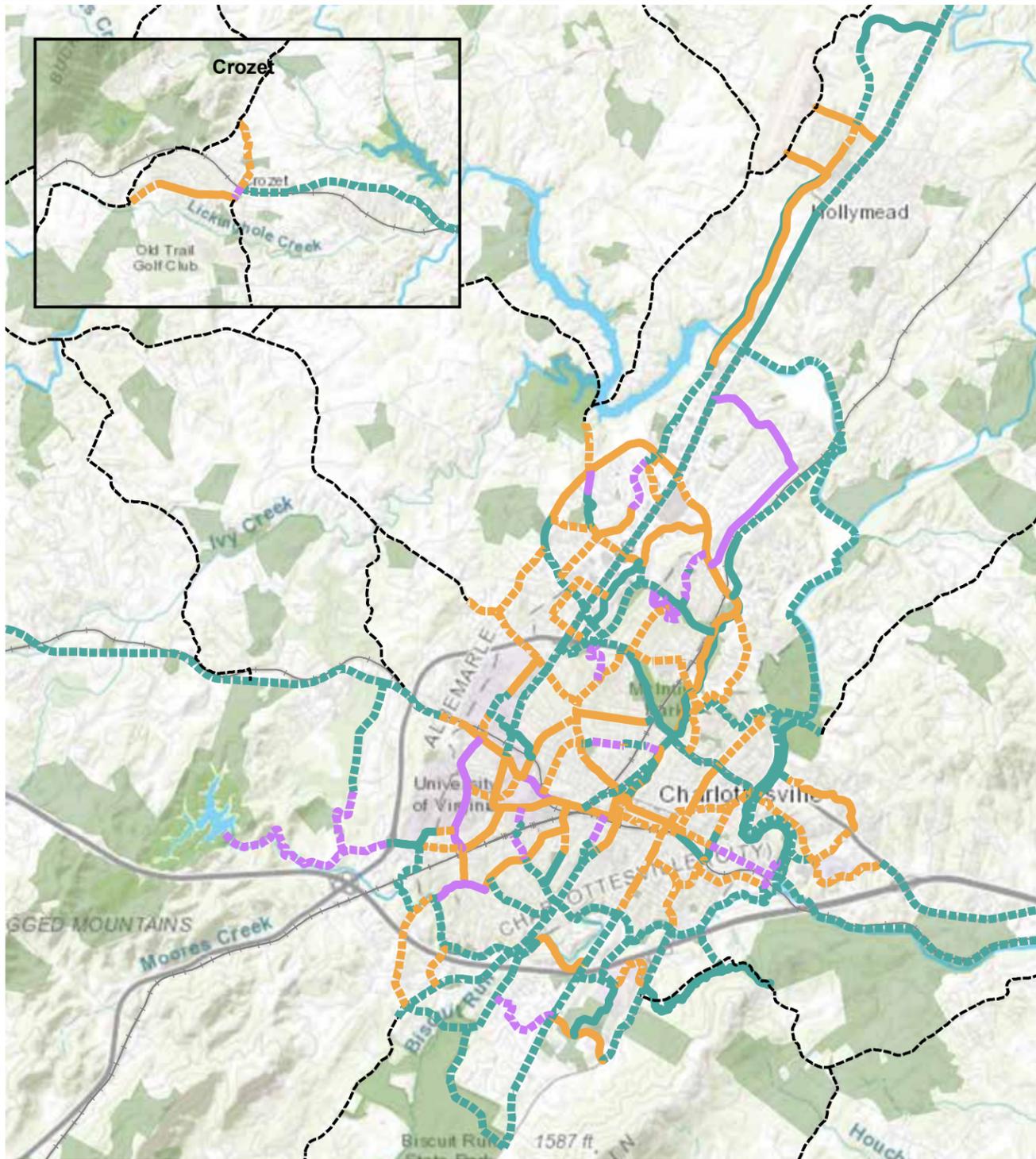
Corridors

Determination of Regional Corridors
Chapter 6 presented the many projects proposed as part of bicycle and pedestrian plans created by the City, County and UVA. As a regional plan, this Plan seeks to encourage creation of a regional bicycle and pedestrian network that is complemented by local bicycle and pedestrian infrastructure in the City and County. As shown by the map on the next page, this regional network includes multiple facility types including shared use paths for bicyclists and pedestrians, sidewalks for pedestrians, and bike lanes and shared roads for bicyclists. The corridors shown on the map were determined through public input and coordination with local government staff and other stakeholders. The facility type for each corridor was generally identified based on the local plan. Corridors in the City are also largely consistent with the Streets That Work design guidelines. The network shown provides interconnected infrastructure that provides route options that would allow for safe and convenient bicycle and pedestrian travel throughout the region. The corridors indicate general areas. They are not meant to indicate exact locations of the proposed infrastructure, but rather to suggest general corridors and connections. A map and table with basic information for each corridor segment is presented in Appendix A.

The next pages show the regional corridors and provide maps to indicate the impact of this bicycle and pedestrian infrastructure on local residents, access to transit stops and destinations in the region. Bicycle and pedestrian infrastructure provides local residents with access to jobs and important destinations. It is essential to ensure that this infrastructure is provided appropriately to all communities. Maps 7.2 and 7.2.1 show information about the race of residents in the region. An understanding of the history and culture of various communities in the region is important for appropriately implementing the corridors shown. Providing adequate connections to regional destinations is essential, with Maps 7.3-7.3.5 showing these destinations. The CAT bus system is shown in Figure 7.1 with bus stops shown in Map 7.4, as the regional bicycle and pedestrian corridors will provide access to the transit system. Park-and-ride lots are also shown, as these are places where someone can park their vehicle and ride a bicycle to their destination. Map 7.5 indicates the connected and comprehensive nature of the proposed network, with many different route options for those bicycling and walking throughout the region. Bicycle and pedestrian infrastructure is an important part of the regional multimodal transportation network.

Crozet

Map 7.1
Regional Corridors

2 Miles

N

FEATURES

- ◼ Parks and Conservation
- ◼ Lakes and Rivers
- ╫ Railroads
- ▬ ▬ Proposed Bike Lane and Sidewalk
- ▬ Existing Bike Lane and Sidewalk
- ▬ ▬ Proposed Shared Road and Sidewalk
- ▬ Existing Shared Road and Sidewalk
- ▬ ▬ Proposed Shared Use Path
- ▬ Existing Shared Use Path
- ▬ ▬ Rural Corridors

Map 7.1.1
Regional Corridors

.5 Mile

N

FEATURES

- ◼ Parks and Conservation
- ◼ Lakes and Rivers
- ╫ Railroads
- ▬ ▬ Proposed Bike Lane and Sidewalk
- ▬ Existing Bike Lane and Sidewalk
- ▬ ▬ Proposed Shared Road and Sidewalk
- ▬ Existing Shared Road and Sidewalk
- ▬ ▬ Proposed Shared Use Path
- ▬ Existing Shared Use Path
- ▬ ▬ Rural Corridors

Crozet

Map 7.2
Regional Demographics

2 Miles

N

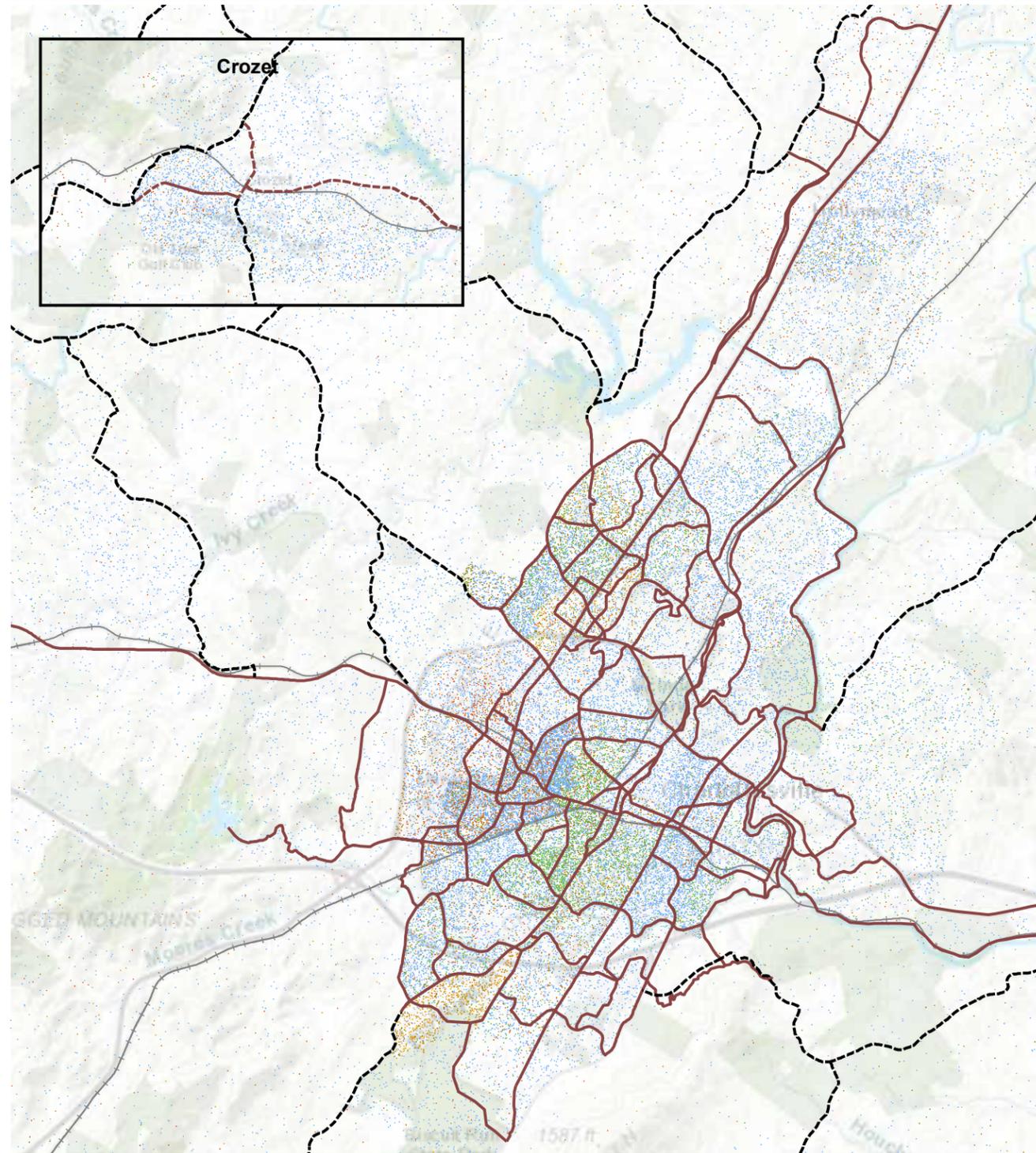**ABOUT THIS MAP:** This map shows the regional bicycle and pedestrian corridors overlayed with race and population density. Data is taken from the American Community Survey. The map is inspired by The Racial Dot Map created by The University of Virginia.

FEATURES

- Parks and Conservation
- Lakes and Rivers
- Railroads
- Urban Corridors
- Rural Corridors
- 1 Dot= 2 Persons
- Black
- Asian
- White
- Hispanic
- Other/ Native American/ Multi-Racial
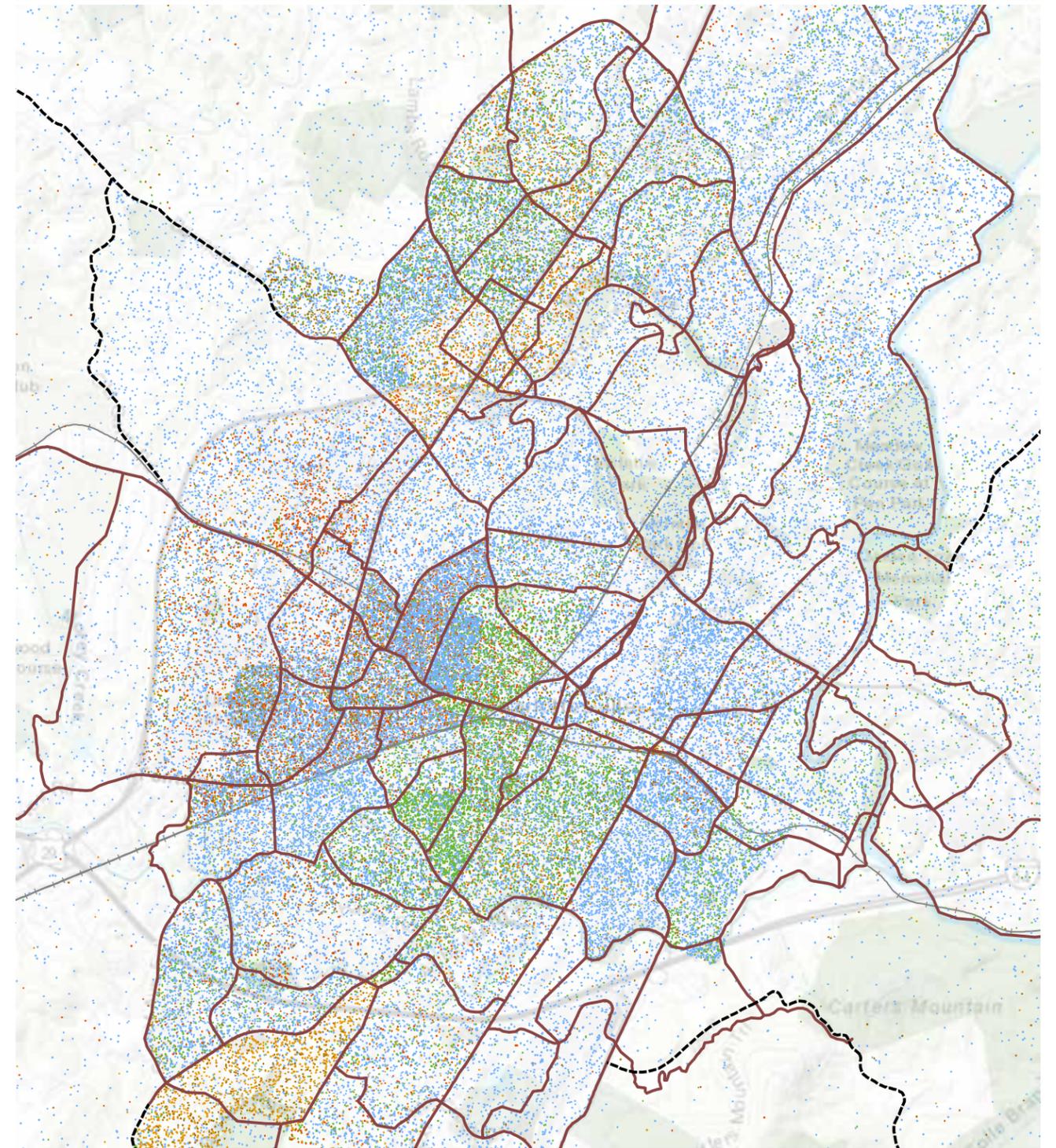
Map 7.2.1
Regional Demographics

.5 Mile

N

ABOUT THIS MAP: This map shows the regional bicycle and pedestrian corridors overlayed with race and population density. Data is taken from the American Community Survey. The map is inspired by The Racial Dot Map created by The University of Virginia.

FEATURES

- Parks and Conservation
- Lakes and Rivers
- Railroads
- Urban Corridors
- Rural Corridors
- 1 Dot= 1 Person
- Black
- Asian
- White
- Hispanic
- Other/ Native American/ Multi-Racial

Crozet

Hollymead

Ivy Creek

Old Trail
Golf Club

Lickinghole Creek

University
of Virginia

Charlottesville
(CITY)

RAGGED MOUNTAINS

Moores Creek

Biscuit Run

1587 ft
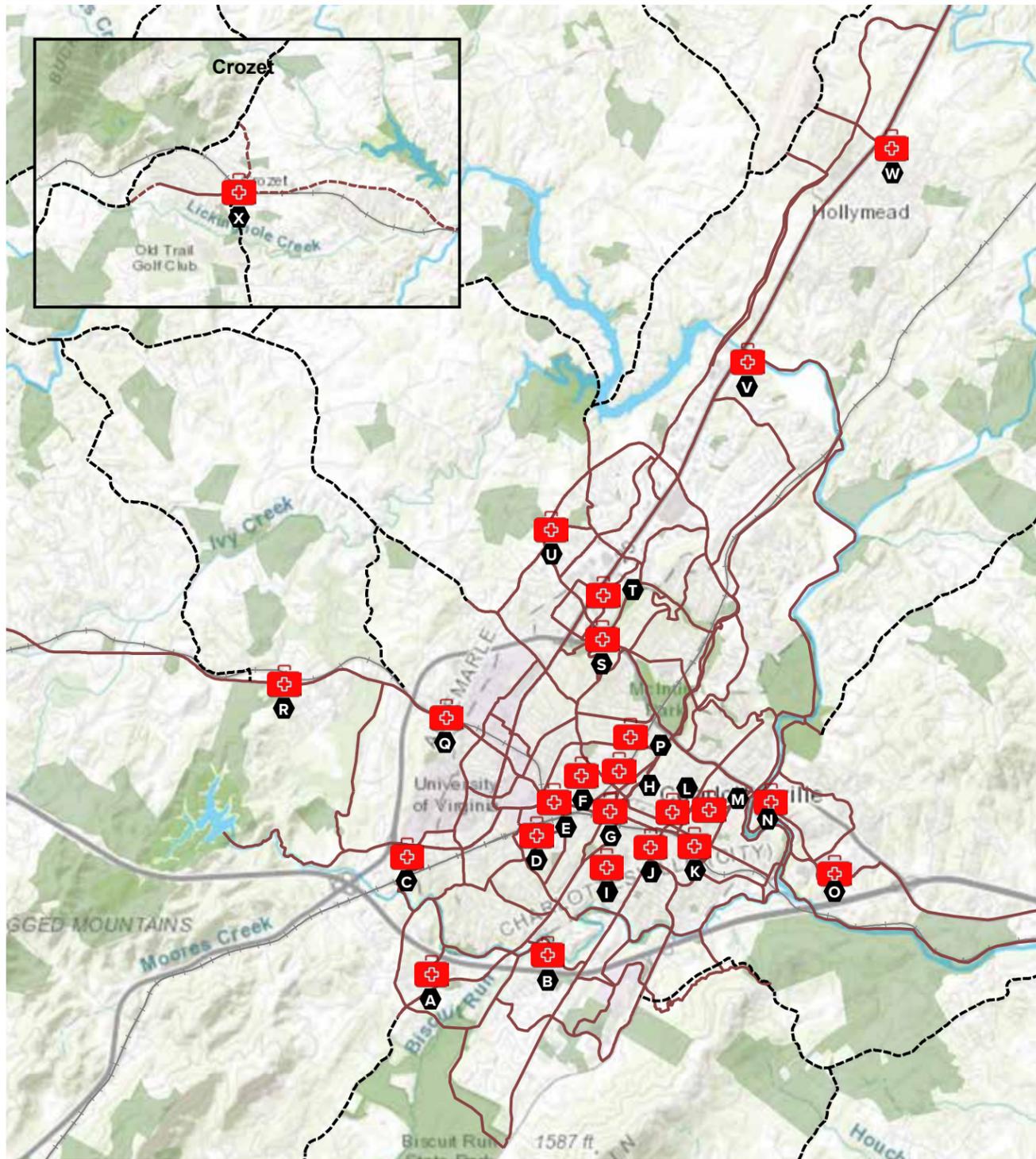
**Map 7.3
Major Destinations**

ABOUT THIS MAP: This map shows health services in the region. A listing of health services in coordination with the letter identifier can be found on page 59.

2 Miles   N

FEATURES

- Parks and Conservation
- Lakes and Rivers
- Railroads
- Urban Corridors
- Rural Corridors
- Health Services

Major Destinations

Health Services

A. Region Ten
B. Sentara Martha Jefferson Family Medicine and Clinic
C. Fontaine Research Park
D. UVA Hospital
E. University Medical Associates
F. Region Ten
G. Sentara Starr Hill Health Center
H. Central Virginia Health Services
I. Region Ten
J. Downtown Family Health Care
K. Region Ten
L. Sentara Martha Jefferson Family Medicine
M. The Women's Initiative
N. MedExpress Urgent Care
O. Sentara Martha Jefferson Hospital
P. Thomas Jefferson Health District Office
Q. Sentara Blue Ridge Internal Medicine
R. UVA Transitional Care Hospital
S. Region Ten
T. MedExpress Urgent Care
U. Community Dental Center
V. UVA Primary Care Riverside
W. Sentara Forest Lakes Family Medicine
X. Region Ten

Welcome to Martha Jefferson Hospital

Crozet

Old Trail
Golf Club

Hollymead

University
of Virginia

Charlottesville

**Map 7.3.1
Major Destinations**

ABOUT THIS MAP: This map shows the major destinations in the region, including: parks, libraries, public and private schools, places of cultural significance, and shopping centers.

2 Miles

N

FEATURES

- Parks and Conservation
- Lakes and Rivers
- Railroads
- Urban Corridors
- Rural Corridors
- Library
- Culture
- Park
- School
- Shopping

Major Destinations

Parks
A. Azalea Park
B. Jordan Park
C. Quarry Park
D. Belmont Park
E. Rives Park
F. Forest Hills Park
G. Tonsler Park
H. Meade Park
I. Riverview Park
J. Booker T. Washington Park
K. Greenleaf Park
L. McIntire Park
M. Darden Towe Park
N. Pen Park
O. Greenbrier Park
P. Charlotte-Yancy-Humphris Park
Q. Ivy Creek Foundation
R. Biscuit Run Park
S. Claudius Crozet Park
T. Beaver Creek reservoir Park

Schools
A. Meriwether Lewis Elementary
B. St. Anne's Belfield (Upper)
C. St. Anne's Belfield (Lower)
D. Venable Elementary
E. Buford Middle School
F. Johnson Elementary
G. Jackson-Via Elementary
H. The Covenant School
I. Paul H. Cale Elementary
J. Tandem Friends School
K. Monticello High School
L. Clark Elementary
M. Burnley-Moran Elementary
N. Mountaintop Montessori Community School
O. Jackson P. Burley Middle School
P. Charlottesville High School
Q. Walker Elementary
R. Charlottesville Catholic School
S. Charlottesville Waldorf School
T. Greenbrier Elementary
U. Albemarle High School
V. Ivy Creek School
W. Jack Jouett Middle School
X. Mary Carr Greer Elementary
Y. Agnor-Hurt Elementary
Z. Woodbrook Elementary
AA. Hollymead Elementary
BB. Mortimer Y. Sutherland Middle School
CC. Baker-Butler Elementary
DD. Western Albemarle High School
EE. Joseph T. Henley Middle School
FF. Brownsville Elementary
GG. Crozet Elementary

Shopping
A. Southside Shopping Center
B. 5th Street Station
C. Cherry Avenue Shopping Center
D. West Main Street
E. Downtown Mall
F. Pantops Shopping Center
G. Preston Plaza
H. The Corner
I. Ivy Square Shopping Center
J. Townside Shopping Center
K. Barracks Road Shopping Center
L. The Shops at Stonefield
M. Seminole Square
N. 29th Place
O. Fashion Square Mall
P. Albemarle Square
Q. Rio Hill Center
R. Hollymead Town Center
S. Crozet Great Valu Foods
T. Blue Ridge Shopping Center

Libraries
A. Jefferson-Madison Regional Library
B. Gordon Avenue Library
C. Northside Library
D. Crozet Library

Culture
AA. The Rotunda
BB. Thomas Jefferson's Monticello
CC. James Monroe's Highland
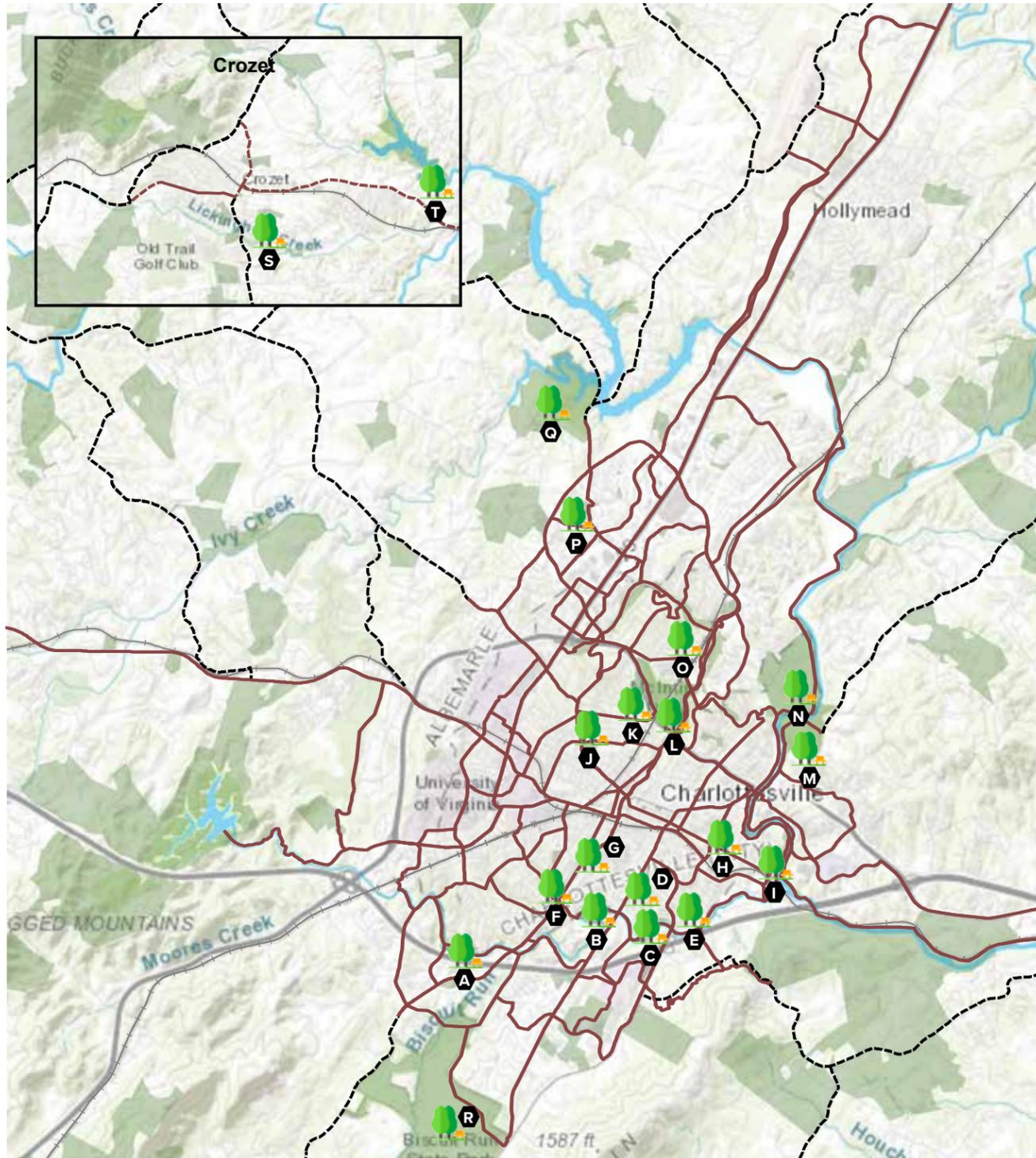
Map 7.3.2
Major Destinations

ABOUT THIS MAP: This map shows the parks in the region. A listing of the parks in coordination with the letter identifier can be found on page 61.

N

2 Miles
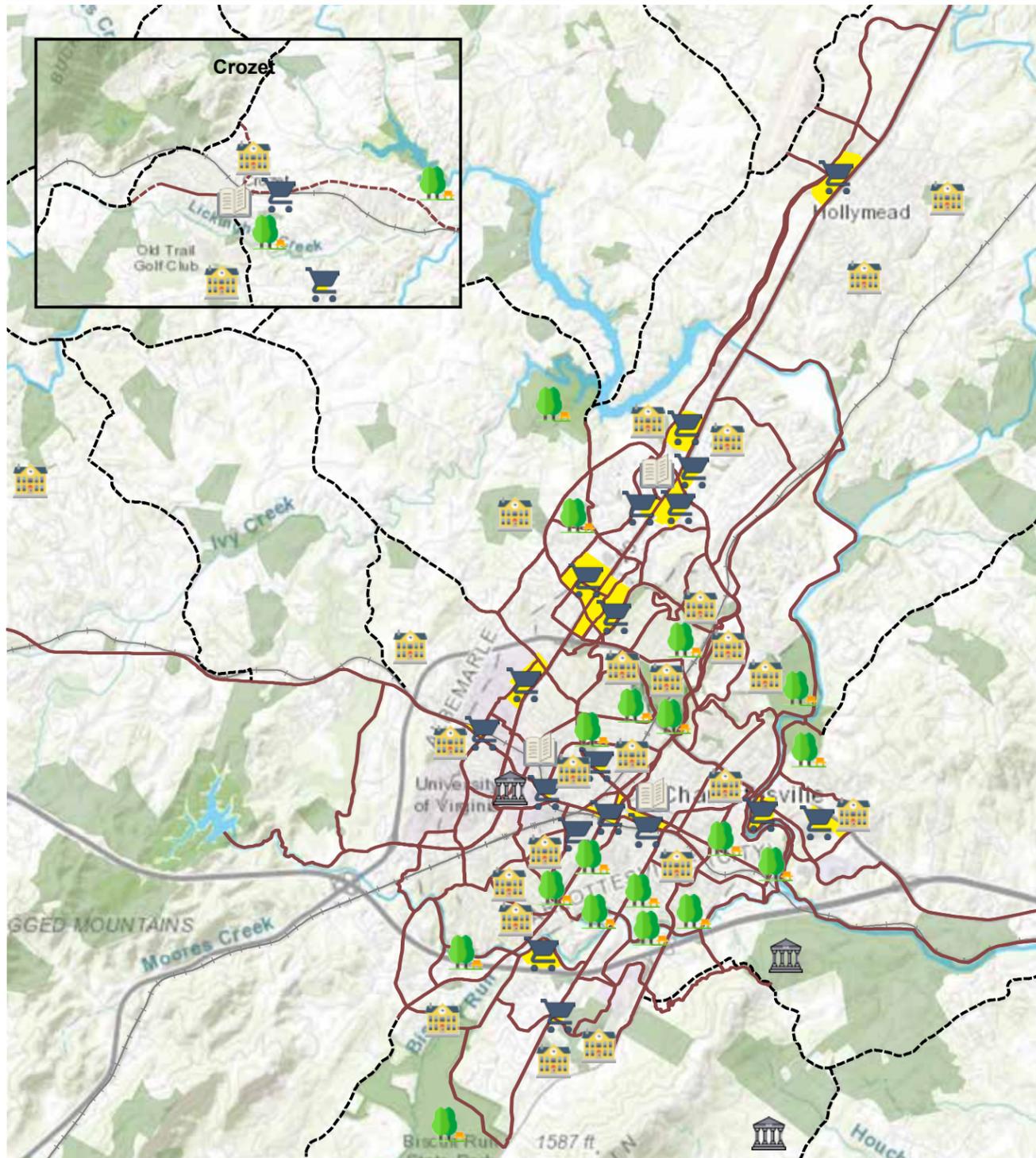
FEATURES

Parks and Conservation — Urban Corridors

Lakes and Rivers --- Rural Corridors

╫╫ Railroads 🌳 Park
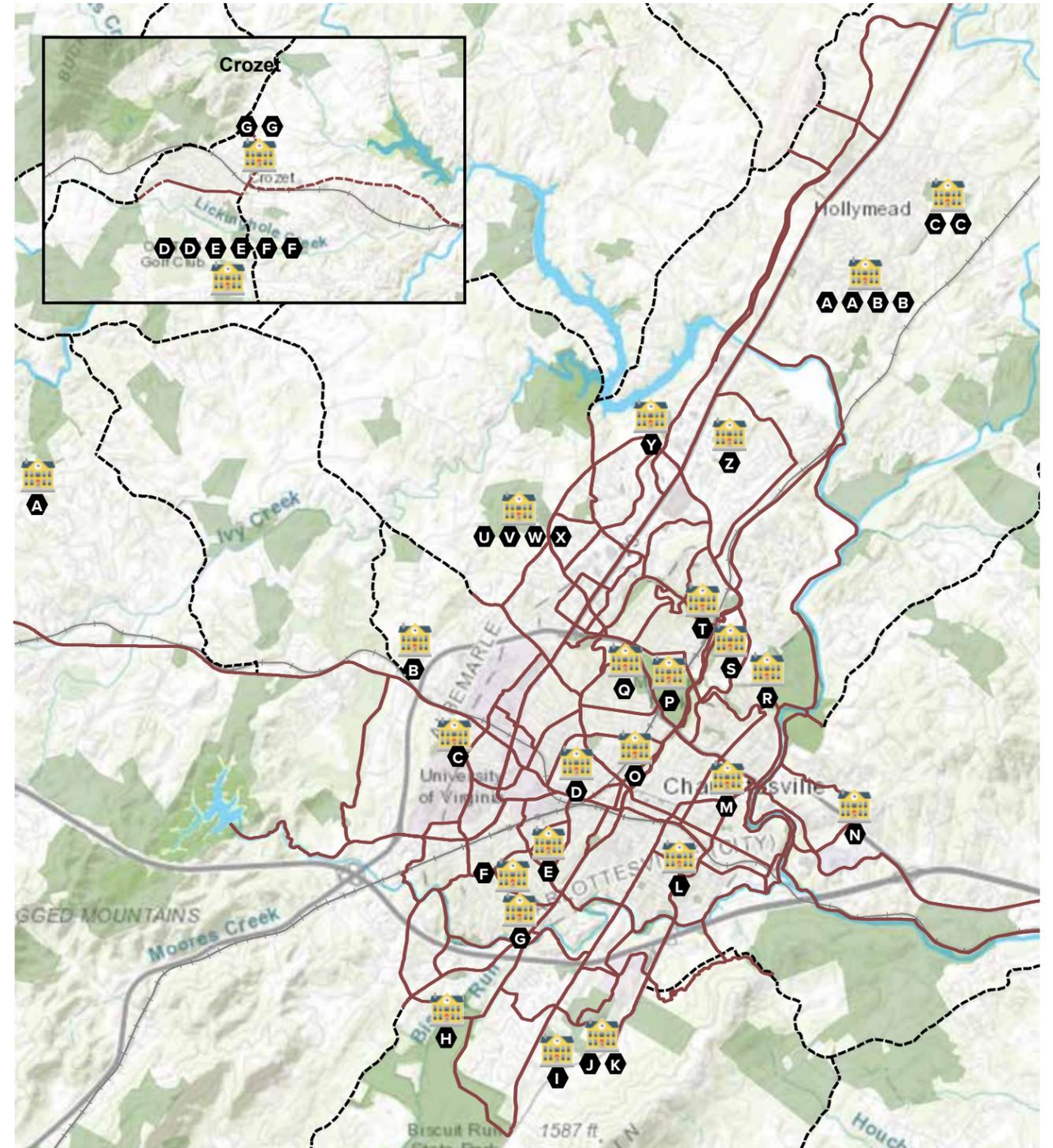
Map 7.3.3
Major Destinations

ABOUT THIS MAP: This map shows public and private schools in the region. A listing of the schools in coordination with the letter identifier can be found on page 61.

N

2 Miles

FEATURES

Parks and Conservation — Urban Corridors

Lakes and Rivers --- Rural Corridors

╫╫ Railroads 🏫 School
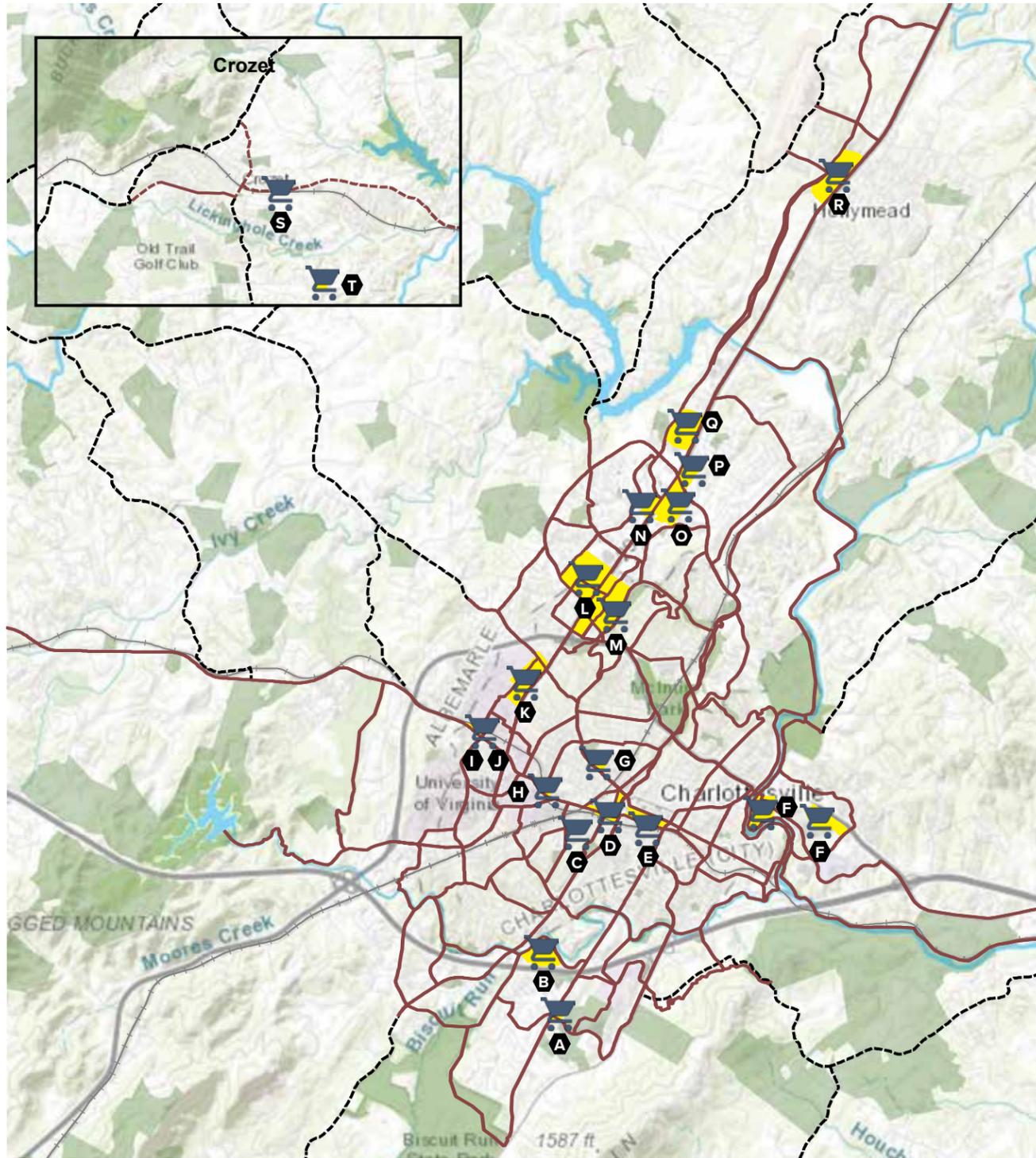
Map 7.3.4
Major Destinations

ABOUT THIS MAP: This map shows the shopping centers in the region. A listing of the shopping centers in coordination with the letter identifier can be found on page 61.

2 Miles

N

FEATURES

- Parks and Conservation
- Lakes and Rivers
- Railroads
- Urban Corridors
- Rural Corridors
- Shopping
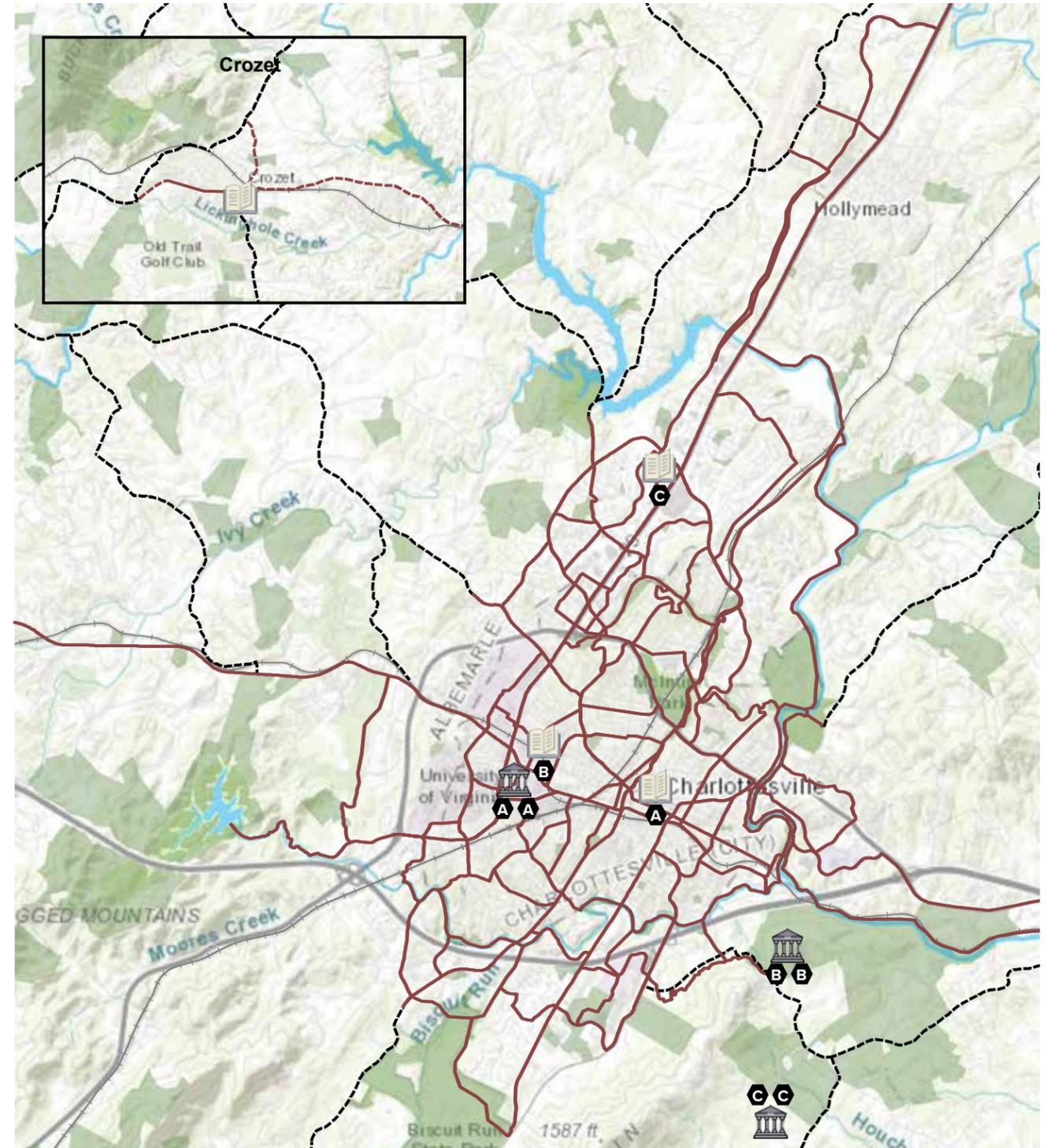
Map 7.3.5
Major Destinations

ABOUT THIS MAP: This map shows the libraries and places of cultural significance in the region. A listing of the libraries and places of cultural significance in coordination with the letter identifier can be found on page 61.

2 Miles

N

FEATURES

- Parks and Conservation
- Lakes and Rivers
- Railroads
- Urban Corridors
- Rural Corridors
- Library
- Culture

Figure 7.1

CAT
charlottesville area transit
www.CatchTheCAT.org

Key

- Downtown Transit Station
- Park
- Shopping Location
- Academic Institution
- 29 64 Major Roadway
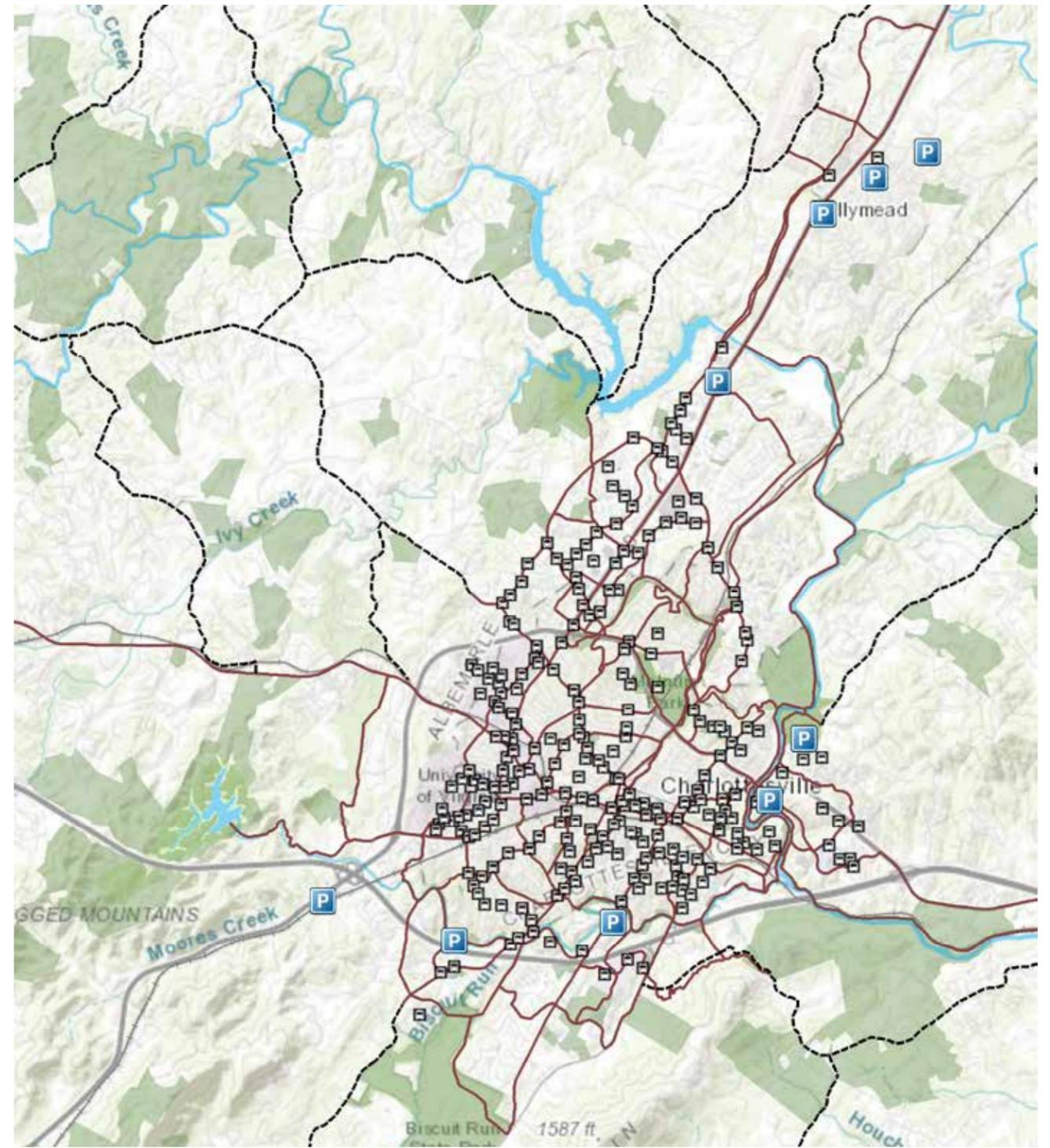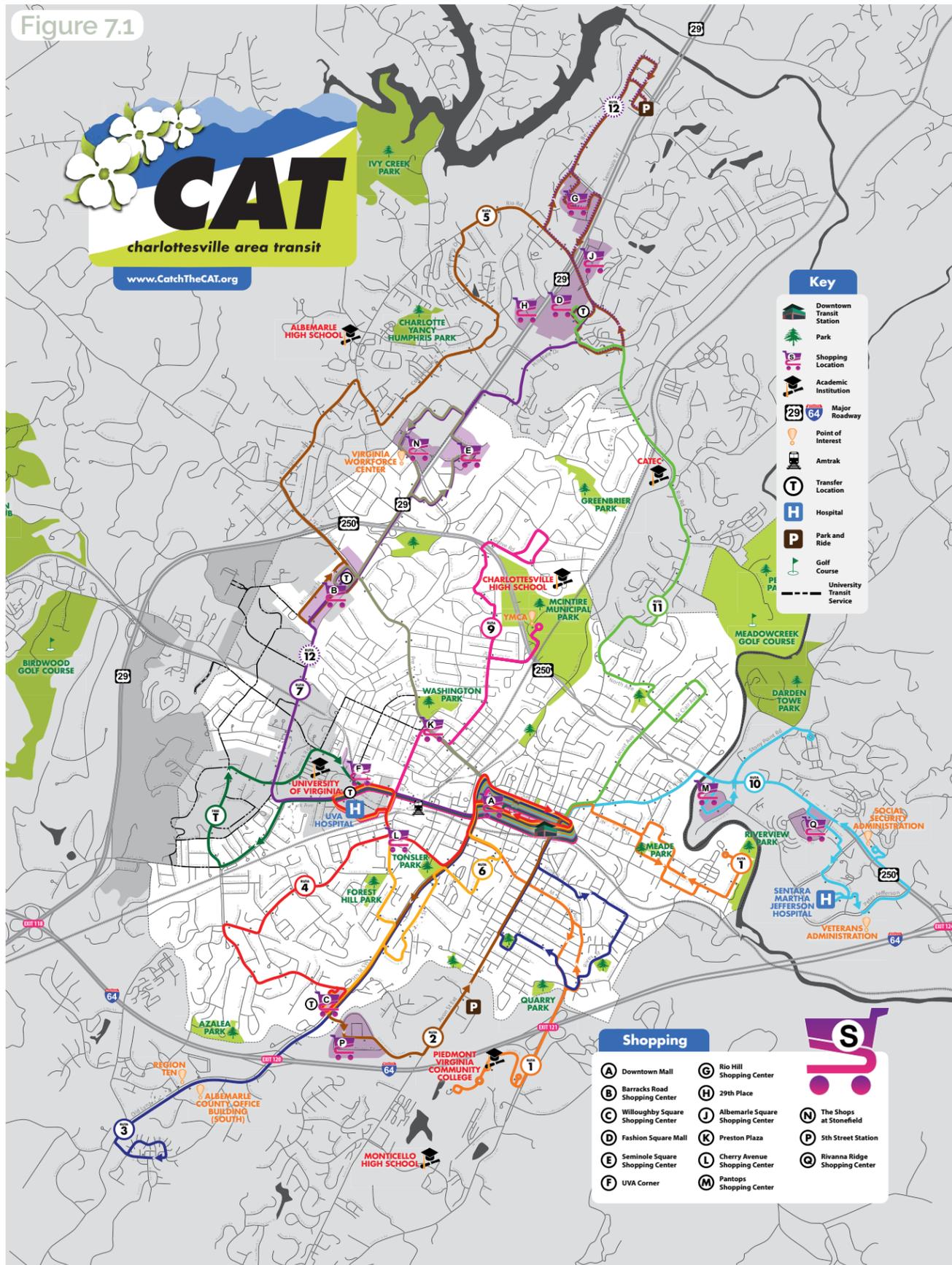- Point of Interest
- Amtrak
- T Transfer Location
- H Hospital
- P Park and Ride
- Golf Course
- --- University Transit Service

Shopping

- A Downtown Mall
- B Barracks Road Shopping Center
- C Willoughby Square Shopping Center
- D Fashion Square Mall
- E Seminole Square Shopping Center
- F UVA Corner
- G Rio Hill Shopping Center
- H 29th Place
- J Albemarle Square Shopping Center
- K Preston Plaza
- L Cherry Avenue Shopping Center
- M Pantops Shopping Center
- N The Shops at Stonefield
- P 5th Street Station
- Q Rivanna Ridge Shopping Center

Labeled map locations: IVY CREEK PARK, ALBEMARLE HIGH SCHOOL, CHARLOTTE YANCY HUMPHRIS PARK, VIRGINIA WORKFORCE CENTER, CATEC, GREENBRIER PARK, BIRDWOOD GOLF COURSE, CHARLOTTESVILLE HIGH SCHOOL, MCINTIRE MUNICIPAL PARK, YMCA, MEADOWCREEK GOLF COURSE, DARDEN TOWE PARK, WASHINGTON PARK, UNIVERSITY OF VIRGINIA, UVA HOSPITAL, TONSLER PARK, MEADE PARK, RIVERVIEW PARK, SOCIAL SECURITY ADMINISTRATION, FOREST HILL PARK, SENTARA MARTHA JEFFERSON HOSPITAL, VETERANS ADMINISTRATION, AZALEA PARK, QUARRY PARK, REGION TEN, ALBEMARLE COUNTY OFFICE BUILDING (SOUTH), PIEDMONT VIRGINIA COMMUNITY COLLEGE, MONTICELLO HIGH SCHOOL

Map labels: Ivy Creek, Moores Creek, Biscuit Run, Houcs, RAGGED MOUNTAINS, ALBEMARLE, University of Virginia, Charlottesville, Hollymead, 1587 ft

Map 7.4
Bus Stops and Park and Ride Lots

ABOUT THIS MAP: This map shows the regional bicycle and pedestrian corridors, Park and Ride lots, and existing transit stops including CAT, UTS, and JAUNT 29 Express.

2 Miles

N

FEATURES

- Parks and Conservation
- Lakes and Rivers
- Railroads
- Urban Corridors
- --- Rural Corridors
- P Park and Ride Lot
- Bus Stop

Map 7.5
Concentric Rings

ABOUT THIS MAP: This map depicts a hub and spoke corridor system in the Charlottesville area. The hubs are depicted as rings, and the spokes represent how users can move across them.

2 Miles   N

FEATURES

▮ Parks and Conservation	▬ Urban Corridors	▬ Blue Ring
▮ Lakes and Rivers	▬ Rural Corridors	▬ Orange Ring
✛✛ Railroads	▬ Gray Ring	▬ Spokes
	▬ Gold Ring	

Prioritization

ActiveTrans Priority Tool

The ActiveTrans Priority Tool (APT) is a step-by-step methodology, developed by the National Cooperative Highway Research Program, designed to prioritize bicycle and pedestrian improvement projects. The tool allows for the flexibility to choose variables that reflect the needs and values of the community. The APT is a spreadsheet tool that incorporates the identified categories and variables, scaling measures, and weights for each category to calculate prioritization scores and ranks. The prioritization criteria are shown below. Additional details about prioritization methodology can be found in Appendix B.

Prioritized Corridors

The results of the ActiveTrans Priority Tool (APT) were presented to the public and other stakeholders, and adjustments were made to create the final prioritization shown on the next page. The adjustments made reflected public input, existing efforts by the City and County, areas with parallel corridors, and major costs or benefits that were not included in the APT evaluation. The corridor segments, and associated prioritization information, can be found in Appendix A.

The resulting corridor prioritization indicates that all corridors are an important part of the regional network and should be pursued as opportunities arise, with the tier 1 corridors being pieces that would have the greatest impact on the regional bicycle and pedestrian network. Both the APT evaluation and additional adjustments were completed primarily by assessing transportation benefits, with the expectation that infrastructure that is used for walking and bicycling for transportation will have other benefits. When making funding decisions the City, County, and other funders of this infrastructure, are likely to take into account additional factors, such as recreational value, economic development, or environmental restoration. The next chapter will discuss how to ensure that future planning and implementation efforts are coordinated to maximize benefit for the region.

PRIORITIZATION CRITERIA

Categories and variables for scoring with ActiveTrans Priority Tool (APT)

DESTINATIONS
- Number of schools, libraries, parks, polling places, and grocery stores (within 0.5 miles of project)
- Projected 2045 population density (within 0.5 miles of project)
- Projected 2045 employment density (within 0.5 miles of project)

EQUITY
- Proportion of residents in Poverty (within 0.5 miles of project)
- Proportion of residents who are Minority (within 0.5 miles of project)
- Proportion of households with zero vehicles (within 0.5 miles of project)

IMPROVEMENT OVER EXISTING CONDITIONS

Points awarded for new infrastructure
- **10 points** – New shared use path, where there is no existing bike/ped infrastructure
- **7 points** – New shared use path, where there is any existing bike/ped infrastructure
- **4 points** – For each new sidewalk or bike lanes
- **1 point** – New shared road

DEMAND
- A measure of relative # of current trips (all modes) shorter than 5 miles in length on the corridor (using an analysis done with the StreetLight Data platform)

CONNECTIVITY
- At City/County boundary (10 points if yes, 2 points if no)
- Addresses major barrier (10 points if yes, 2 points if no)
- Connects to other infrastructure (existing or proposed) at an identified junction/hub (10 points if yes, 2 points if no)
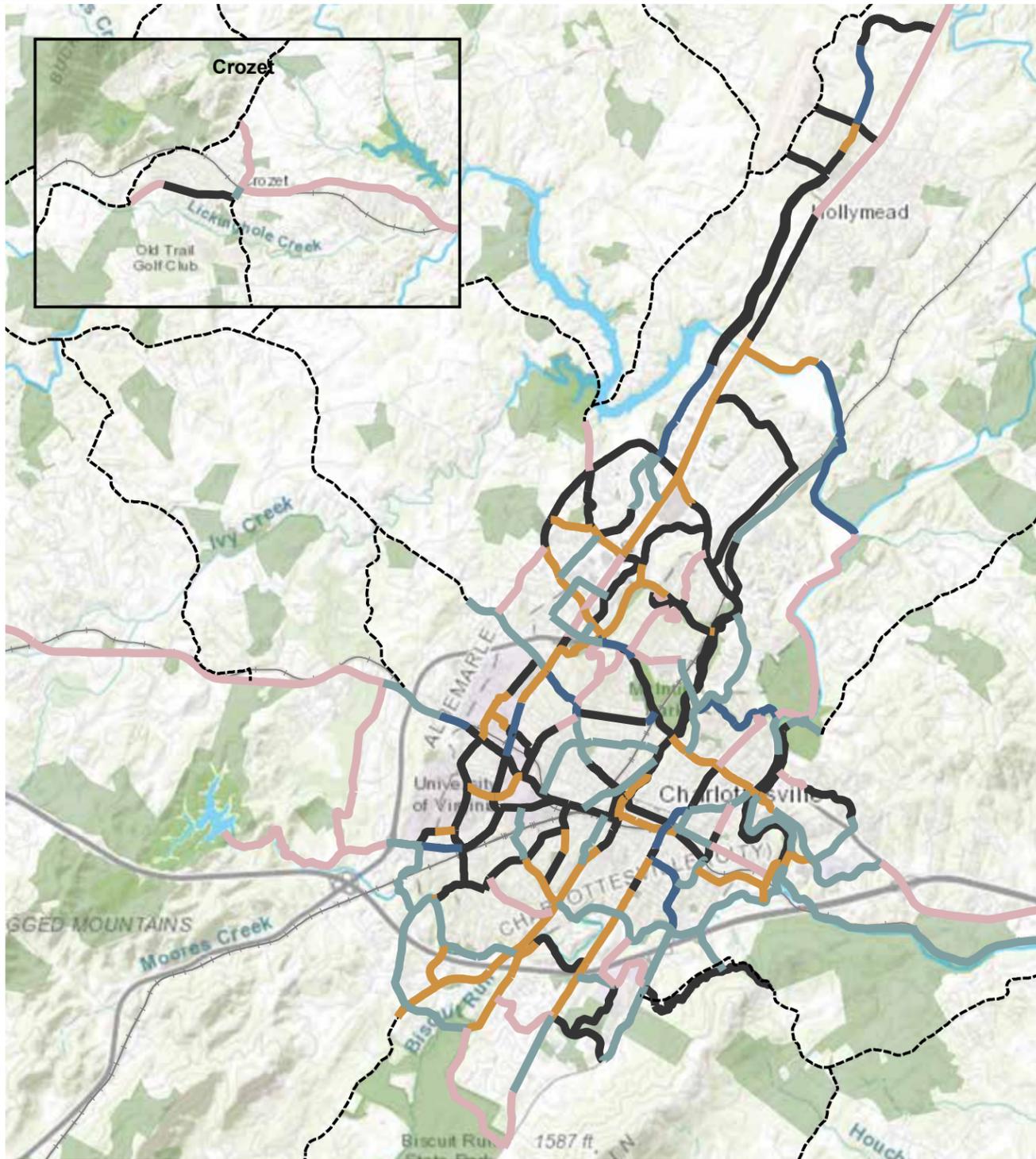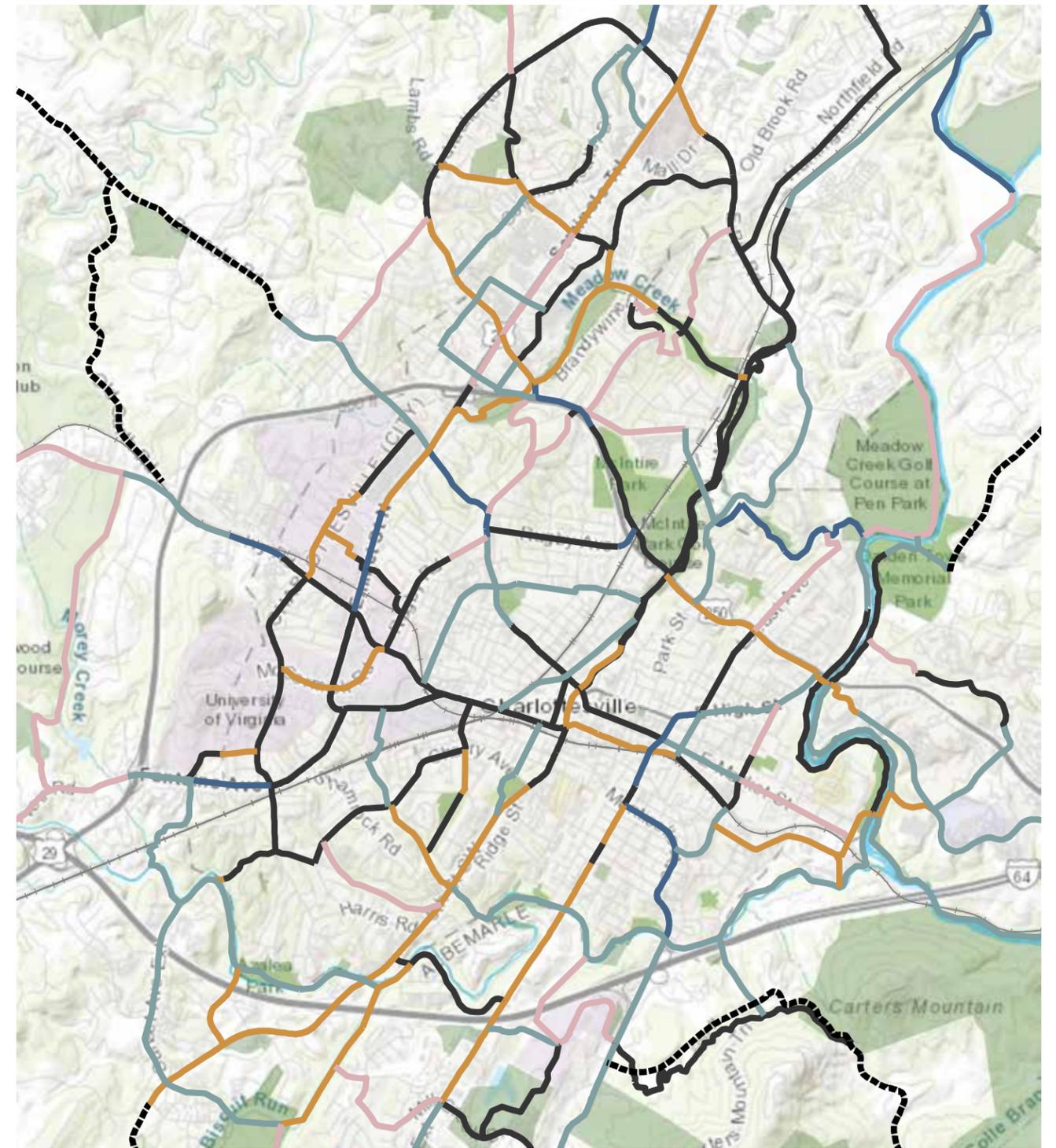
Map 7.6
Corridor Prioritization

ABOUT THIS MAP: This map depicts the prioritization of the regional corridors. Please see Chapter 10 for additional input on the rural corridors.

2 Miles   N

FEATURES

Parks and Conservation	Funded	Existing
Lakes and Rivers	Tier I	Rural
Railroads	Tier II	
	Tier III	

Map 7.6.1
Corridor Prioritization

ABOUT THIS MAP: This map depicts the prioritization of the regional corridors. Please see Chapter 10 for additional input on the rural corridors.

.5 Mile   N

FEATURES

Parks and Conservation	Funded	Existing
Lakes and Rivers	Tier I	Rural
Railroads	Tier II	
	Tier III	

CHAPTER 8
IMPLEMENTATION STRATEGIES

Overview

Building on the corridors and prioritization from Chapter 7, this chapter will provide an overview of work to be done to implement the recommendations of this Plan and construct the regional bicycle and pedestrian network. One key aspect is coordination of implementation efforts between the City of Charlottesville, Albemarle County, the University of Virginia and other governmental and private entities. The first part of this chapter will identify some locations where this coordination is particularly necessary. Strategies for implementation will then be discussed, including both short-term possibilities and potential funding opportunities for larger-scale implementation. Finally, this chapter will present additional next steps to encourage implementation of the regional bicycle and pedestrian network.
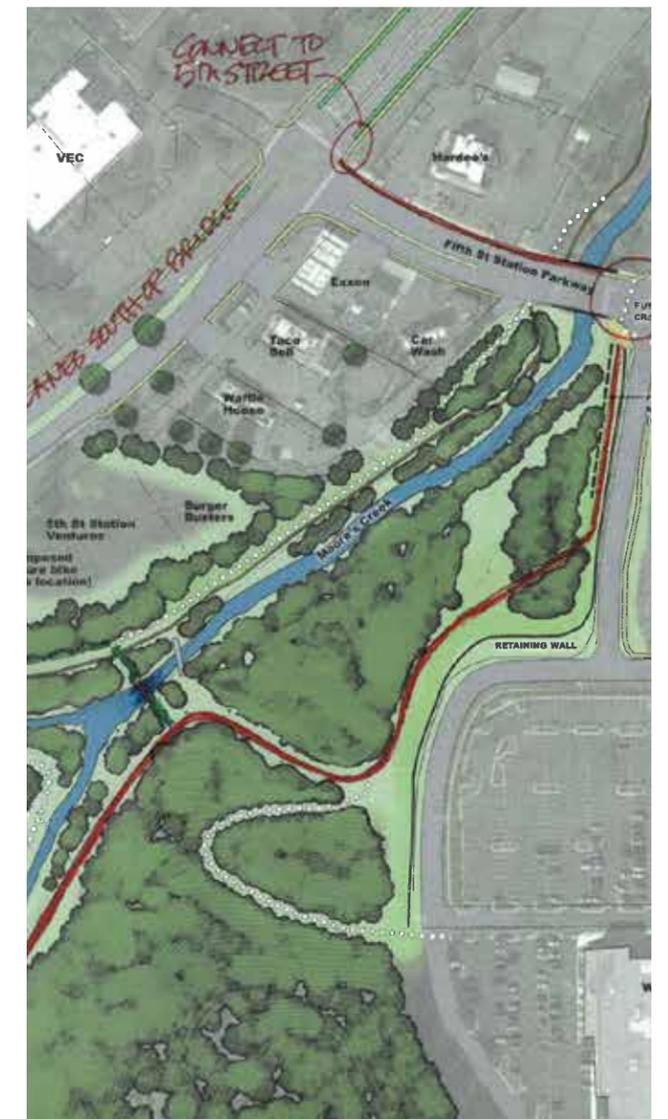
Coordination

Many different jurisdictions and agencies are responsible for planning, construction and maintenance of bicycle and pedestrian infrastructure in the region. These include the City of Charlottesville, Albemarle County, University of Virginia, the Virginia Department of Transportation (VDOT), the Charlottesville-Albemarle Metropolitan Planning Organization (MPO), and a few large private entities. Ensuring coordination between these stakeholders is an essential part of effectively implementing this plan. Locations where this coordination is particularly necessary have been identified.

Multi-Stakeholder Coordination Areas
Fifth Street Hub

- Development of a shared use path and other potential trails in the areas of the City and the County around Biscuit Run, 5th Street, and 5th Street Station Parkway

- TJPDC has coordinated with the City and County, and received state funding to plan and construct the path

- Continued coordination will be necessary to ensure that infrastructure is built that completes the larger corridors that this hub is connected to, including Biscuit Run, 5th Street, and Moores Creek

Hydraulic/29 Area Plan

- VDOT coordinated with the City, County, and MPO to have a study completed to identify preferred alternatives for land use and transportation in the areas of the City and the County around the intersection of Hydraulic Road and US 29

- The creation of Hillsdale Drive added bicycle and pedestrian infrastructure along the US 29 corridor, with an additional connection needed along Hydraulic Road between Hillsdale Drive and the bypass

- The transportation aspect includes multiple grade-separated interchanges or bridges that would build new bicycle and pedestrian infrastructure and improve connections across US 29

- If funding is not obtained through SMART SCALE, stakeholders will need to identify other possible funding opportunities or determine if less expensive or phased solutions can be found to improve bicycle and pedestrian safety and access across US 29

Hydraulic Small Area Plan
Transportation Recommendations Concept

07/23/2018

Concept drawing for illustrative purposes only.
All features shown are approximate pending additional concept development and final design.

Location and configuration of entrances and side-street intersections are subject to changes pending additional concept development and final design.

Michael Baker
INTERNATIONAL

1. Avon Street Corridor

- Avon Street, particularly in the County, has been identified as an area where pedestrian and bicycle improvements are needed to improve safety, with the narrow bridge over I-64 being a particular safety concern

- Improvements made by the County should be coordinated with City plans to build infrastructure in the corridor, which may include a combination of bike lanes on Avon Street, bike lanes on 6th Street, and a path along Moores Creek connecting to a path along Pollocks Branch Creek to Elliot Avenue
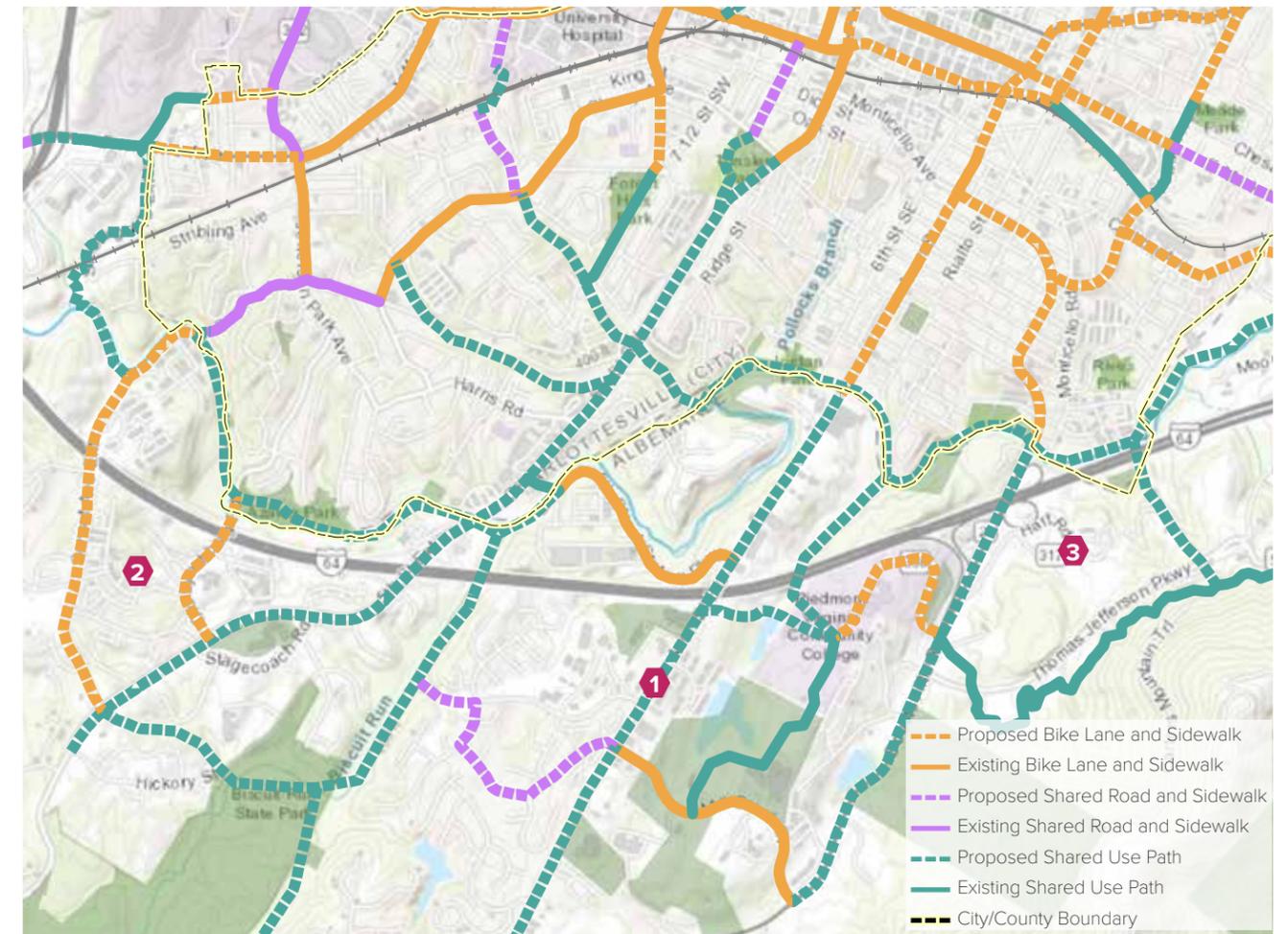
2. Old Lynchburg, Sunset Ave and 5th Street

- Each of these roads do not have bicycle or pedestrian infrastructure when crossing I-64, which is a safety concern and major barrier to bicycle and pedestrian connectivity

- Coordination between the City, County, and VDOT is necessary to create connected bicycle and pedestrian infrastructure along these roads and larger corridors stretching from Southwood toward UVA and downtown Charlottesville

3. Route 20 and underpass connection to Route 53 and Saunders-Monticello Trail

- The Route 20 and I-64 interchange does not include bicycle or pedestrian infrastructure and has many dangerous conflict points for anyone bicycling or walking

- A bicycle and pedestrian path under I-64 has been proposed to connect to Route 53 and the Saunders-Monticello Trail, and the City is planning to study this connection

- - - Proposed Bike Lane and Sidewalk
—— Existing Bike Lane and Sidewalk
- - - Proposed Shared Road and Sidewalk
—— Existing Shared Road and Sidewalk
- - - Proposed Shared Use Path
—— Existing Shared Use Path
- - - City/County Boundary

1. **Carlton Ave, Broadway St, and bridge over Rivanna River**

- This has been identified as a potential key corridor between Pantops and downtown Charlottesville

- Development is occurring on a site at the confluence of Moores Creek and the Rivanna River, in Albemarle County

- The corridor serves a diverse neighborhood in Charlottesville, including a mobile home park and multiple developments that include affordable housing

- Multiple potential locations have been discussed for the bridge over the Rivanna River and connection to Pantops, with a study needed to identify the most appropriate alignment

- Discussions between the City and County regarding coordinated bicycle and pedestrian improvements are in the early stages
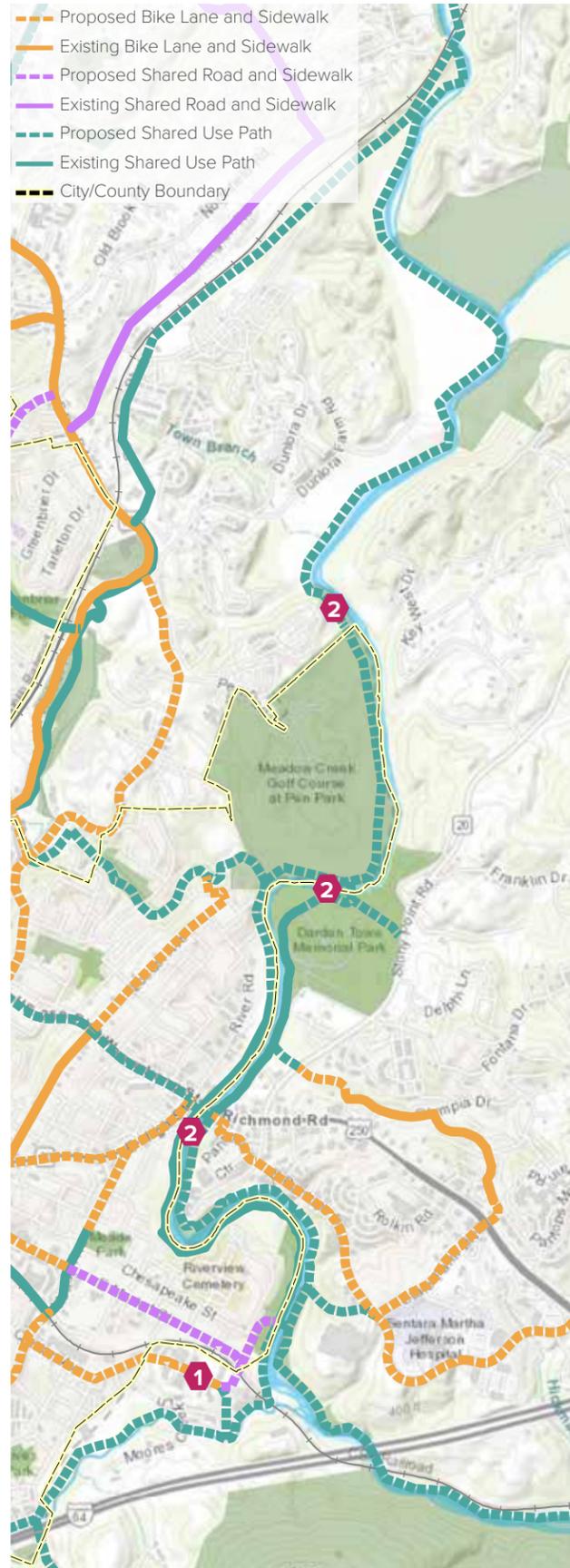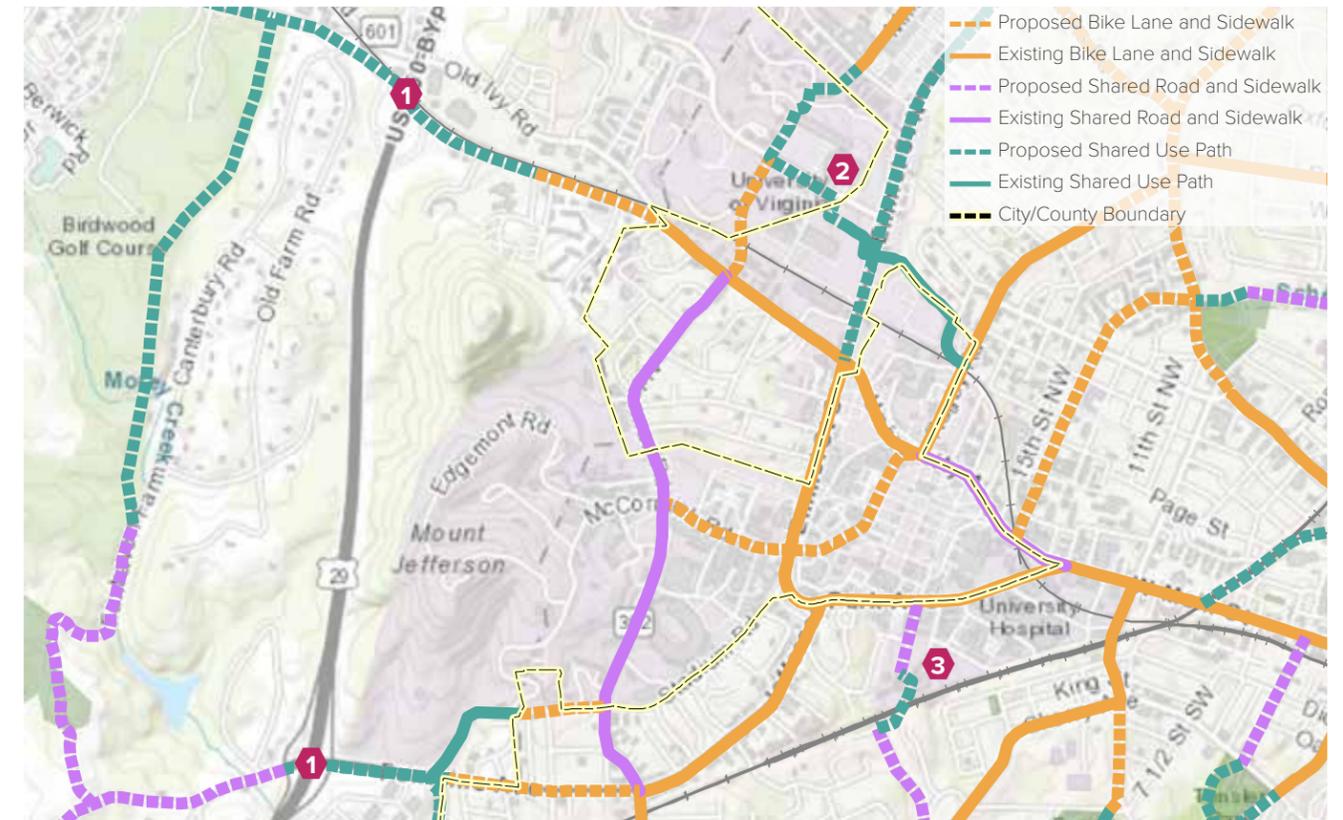
2. **Rivanna River Corridor**

- In addition to a bicycle and pedestrian bridge between Pantops and Woolen Mills, new or improved bicycle and pedestrian connections across the Rivanna River are proposed at Free Bridge and between Darden Towe Park and Pen Park

- Completion of a path through Pen Park and following the River to US 29 will involve continued coordination between the City and County

- Implementation of the path along this corridor should be included in and informed by work being done as part of the Rivanna River Area Plan

- - - Proposed Bike Lane and Sidewalk
—— Existing Bike Lane and Sidewalk
- - - Proposed Shared Road and Sidewalk
—— Existing Shared Road and Sidewalk
- - - Proposed Shared Use Path
—— Existing Shared Use Path
- - - City/County Boundary

1. **Fontaine Ave and Ivy Rd crossings of US 29 Bypass**

- Fontaine Ave and Ivy Rd are both key connections between Charlottesville, UVA, and the Western development areas in Albemarle County

- The MPO submitted an application for SMART SCALE funding to change the Fontaine interchange with US 29 to a diverging diamond interchange, including construction of a shared use path

- If the Fontaine interchange funding is provided, VDOT and the County should ensure that the project extends to the City line where bicycle and pedestrian improvements have been funded

- Planning and constructing bicycle and pedestrian infrastructure on Ivy Road, particularly at the interchange with the bypass, will require coordination between the County and UVA

2. **Near University Hall and John Paul Jones Arena**

The following three projects may require coordination between the City, County, and UVA

- Continuation of the shared use path that crosses Goodwin bridge along Massie Road to Copeley Road

- Creation of a bicycle and pedestrian connection between Copeley Rd or Seymour Road to Arlington Boulevard and Millmont Street

- Addition of bike lanes on Copeley Road between Massie Rd and Ivy Road

3. **Railroad Tunnel**

- UVA has been exploring the feasibility of this connection

- Coordination should continue between UVA and the City regarding the exact location of this project

- - - Proposed Bike Lane and Sidewalk
—— Existing Bike Lane and Sidewalk
- - - Proposed Shared Road and Sidewalk
—— Existing Shared Road and Sidewalk
- - - Proposed Shared Use Path
—— Existing Shared Use Path
- - - City/County Boundary

1. Meadow Creek near Greenbrier Dr
- Creation of this shared use path is a key connection between the City's planned path network and the County, and will require coordination between the City and County

2. Railroad Tunnel
- The City and County will need to coordinate to construct a tunnel that connects the path along Meadow Creek to the path along John Warner Parkway

3. Intersection of Rio Rd, Park St and Melbourne Rd
- The improvements to these roads, along with connection to a proposed shared use path along Meadow Creek, will need continued coordination between the City and County
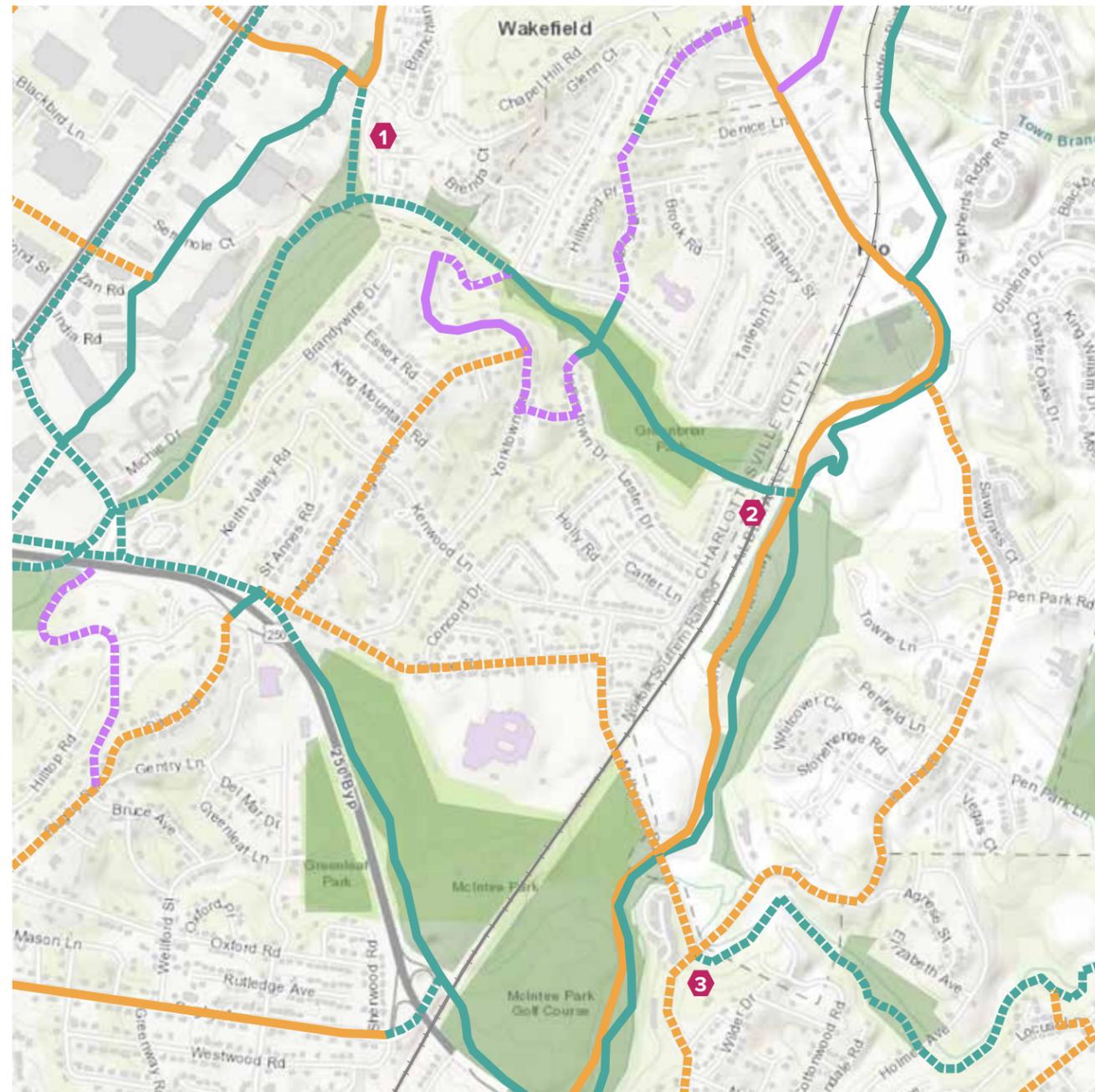
Funding Implementation

Implementation of this Plan and completion of a regional bicycle and pedestrian network is a large-scale and long-term project that will take effort from all stakeholders involved. Below is a table with initial cost estimates for creation of the entire network of regional corridors. The estimates were created with a VDOT planning level cost estimation tool and indicate low and high values for construction costs, using 2020 as the year of construction. These estimates do not account for land and easements already acquired by local governments, and also do not fully account for potential construction challenges. Cost estimation by corridor segment can be found in Appendix A, but more detailed cost estimation will be necessary prior to funding improvements. An important first step of implementation is that the City, County and VDOT are already ensuring that new or upgraded roadways include bicycle and pedestrian infrastructure. The following pages indicate additional strategies for implementation related to both short-term possibilities and potential funding opportunities for addressing challenges and achieving larger-scale implementation.

Cost Estimates (in millions) for Regional Corridors		
	Low	High
Tier I Total	$54	$102
Tier II Total	$80	$164
Tier III Total	$79	$172
Total of All	$213	$438

Short-Term & Low-Cost Strategies
Many bike lanes in the region have been created at relatively low cost by adding the lanes when a road is repaved, although this is only feasible if the road is already wide enough to accommodate the bike lanes. A similar strategy that will be valuable in a few cases is reducing the number of vehicle travel lanes on a road and redesigning the roadway with increased bicycle and pedestrian infrastructure, commonly called a "road diet".

Many cities have used temporary demonstration projects, also known as pop-up infrastructure, as a low-cost test of potential infrastructure projects such as bike lanes[3]. This is particularly helpful in building public support or identifying opposition to potential changes to roads. In 2016, the City of Charlottesville had a day where multiple different bicycle and pedestrian improvements were temporarily installed[4]. Recently, a pop-up bike lane was used to build support for planned bike lanes in Richmond, Virginia[5]. Demonstration projects can be beneficial in almost any situation, but they may be particularly helpful for projects that would impact low-income or minority communities. Along with building support or identifying opposition, demonstrations projects make it easier for communities to have a voice in the improvements being made in their neighborhoods.

Given that acquisition of land or easements is often one of the most significant challenges and costs associated with bicycle and pedestrian projects, any opportunities should be pursued to reduce these challenges and costs. One potential opportunity is to co-locate paths along existing or new utility easements, such as water and sewer lines. Other potential opportunities include working with homeowners associations and other large landowners to identify mutually-beneficial bicycle and pedestrian infrastructure on these properties. These opportunities are in addition to the efforts that the City and County already have in place to ensure that new developments include appropriate bicycle and pedestrian infrastructure.

Construction of the infrastructure network laid out in this Plan will require funding from many sources, including both public and private, and coming from local, state and federal organizations and agencies. The adjacent table lists the primary sources that have been used to fund bicycle and pedestrian infrastructure in the region, with much of the funding coming from VDOT for transportation-oriented improvements. Local funds have been important for planning

5

and creation of bicycle and pedestrian infrastructure in the region. Local funds will continue to be essential, both as matching funds for larger grants and as implementation funds. The funding list below is not comprehensive, as

stakeholders ranging from developers and non-profit organizations to governmental agencies such as health departments are increasingly involved in bicycle and pedestrian work.

Major Public Funding Sources

Program	Funding Agency	Brief Description
Transportation Alternatives Program (TAP)	VDOT	Funds a range of bicycle, pedestrian, and non-motorized transportation projects
HSIP Bicycle and Pedestrian Safety Program	VDOT	Funds bicycle and pedestrian projects with demonstrated safety need, generally funds relatively low-cost projects
Recreational Access Program	VDOT	Funds bicycle projects that provide "access to public recreational or historic areas owned by the Commonwealth of Virginia or a local government"
Recreational Trails Program	DCR	Funds off-road trails and paths
SMART SCALE	VDOT	Competitive state funding for a wide range of transportation projects, including bicycle and pedestrian projects
Open Container Program	VDOT	Funds bicycle and pedestrian projects with demonstrated safety need
BUILD	US DOT	Competitive national funding for a wide range of transportation projects, including bicycle and pedestrian projects
Local Capital Improvement Program (CIP) Funds	Locality	Local government funds that can be used for any purpose, are essential as matching funds for other programs
Revenue Sharing Program	VDOT	Funds a range of transportation projects, including bicycle and pedestrian projects; a local funding match is required

Next Steps

Along with the need for coordination on specific projects, and the work necessary to procure funding for implementation, additional steps can be taken by stakeholders throughout the region to encourage the successful implementation of this Plan.

The City, County and UVA can ensure that future plans created for bicycle and pedestrian infrastructure are consistent with, and build on, this Plan. Given the regional nature of this Plan, it is essential that the City, County and UVA

continue their own planning efforts to identify local needs, opportunities, and priorities. Continuous improvement of infrastructure is also necessary, as some infrastructure identified as existing in this plan may not be appealing to a wide range of users and would benefit from upgrades.

Along with City and County-wide planning efforts, some of the corridors presented in this plan will need additional studies to identify the most appropriate infrastructure and amenities. Based on the outreach completed by planning staff, the enthusiasm of citizens increases when discussing specific connections. Enhanced

outreach will be more essential (and fruitful) on a corridor- or project-level. In addition to in-depth assessments of specific corridors, a regional study of bicycle and pedestrian access to transit could provide detailed recommendations for sidewalks and other infrastructure that improves the multimodal transportation network.

The creation of an online regional dataset and map has already begun and will improve communication regarding existing bicycle and pedestrian infrastructure and the status of planned infrastructure. This map, which will be created by TJPDC using data provided by the City, County and UVA, will allow stakeholders and the public to view all of the region's existing bicycle and pedestrian infrastructure. It will also show planned infrastructure, with the goal of having information about the status of that infrastructure (i.e. funding received or applied for) also available. Once complete, this map will be a valuable asset to those who are planning, funding, or advocating for bicycle and pedestrian infrastructure throughout the region. It will also be valuable for coordination with VDOT regarding existing infrastructure, which VDOT maintains an inventory of, and planned connections. It may also be able to bring together data about maintenance, condition of infrastructure, number of users, or location of facilities such as bicycle racks and fix-it stations. Subsets of this data could potentially be made available to third parties through open data portals.

Meetings of the Greenways Advisory Committee have been important in bringing together many people who value bicycle and pedestrian infrastructure from organizations and agencies with a variety of perspectives. While the role of this group may change over time, gathering this large group will likely continue to be valuable for collaboration discussion of the value of bicycle and pedestrian infrastructure and strategizing how to increase the amount of infrastructure and facilities built.

Engagement and outreach efforts to date have revealed consensus support for a better connected Charlottesville-Albemarle. It is important that these efforts continue throughout Plan implementation, not only to assure the best and most inclusive process, but also because a motivated and involved public will provide an important base of support. Communities that successfully implement comprehensive systems like that envisioned here, do so through collaborative efforts among different government agencies, universities, foundations, advocacy groups, businesses, clubs, and individuals. This collaboration is important for both infrastructure implementation and efforts such as safety and education programs for pedestrians, bicyclists and motorists. The groundwork for such a coalition exists in Charlottesville/Albemarle and building upon this framework will increase the chances of success.

Finally, the MPO will need to continue coordination with the City, County and UVA regarding both implementation and additional regional bicycle and pedestrian planning efforts. The ongoing changes in bicycle and pedestrian planning caused by an increasing numbers of users, new technology such as electric-assist bicycles, and new infrastructure best practices make it important that bicycle and pedestrian plans are frequently re-evaluated. As such, it is expected that a review of this Plan with appropriate updates and revisions will be made approximately five years after adoption.