

# PINEVILLE MOBILITY PLAN



## Acknowledgments

We extend our sincere appreciation and gratitude to the residents, business owners, elected officials, Town staff, and stakeholders who participated in the planning process and guided the development of the Pineville Mobility Plan. Everyone’s time, input, and energy are greatly appreciated.

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# Introduction

# Overview

The Pineville Mobility Plan is a community-driven effort that assesses current bicycle, pedestrian, and transit conditions in Pineville; identifies ongoing needs; and develops recommendations for a multimodal transportation system that is safer and easier for all users. The Pineville Mobility Plan provides the model for creating an accessible, multimodal community for everyone in Pineville.

## Purpose

The Town of Pineville is a growing North Carolina community that has small town charm and, as it is just a short drive from Charlotte, access to amenities that city life offers. With an increasing population and a desire for accessible and connected multimodal transportation options, there is a demand for a more walkable and bikeable community. With those priorities in mind, the Town of Pineville developed the Pineville Mobility Plan to ensure success for future generations by creating more active transportation options for residents, businesses, and visitors.

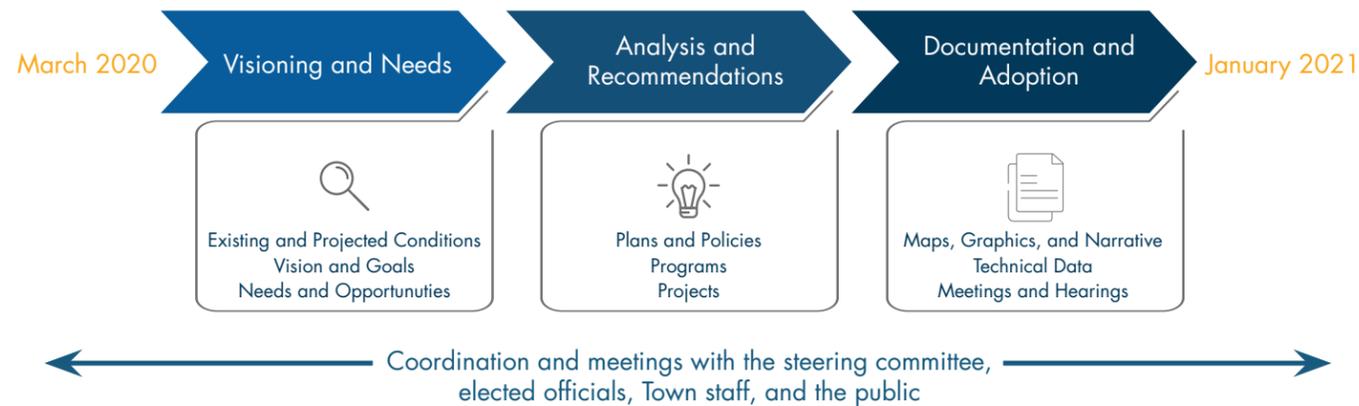
The Pineville Mobility Plan serves as a guide for future decision making and planning efforts related to multimodal transportation in Pineville. The Town should reference the recommendations and prioritization in this document to create a more connected community that provides more transportation options for all users.

## Planning Process

This planning process included three key phases: Visioning and Needs, Analysis and Recommendations, and Documentation and Adoption. The Plan used existing data and public input to help build the foundation for coordinated recommendations. The process for this Plan followed four pillars of planning philosophy:

- Make better places by creating more transportation options
- Value the voices of strategic stakeholders and local citizens
- Use current plans as a starting point for future strategies
- Create solutions customized to fit the needs of our community

### Planning Process and Schedule



# Vision and Priorities

To make the Pineville Mobility Plan successful for the community, it was imperative to develop a vision and set of guiding priorities that are consistent with the needs of Pineville residents. The established vision and guiding priorities permeate throughout the document to ensure that all analysis and recommendations relate back to these critical elements.

## Pineville Mobility Plan Vision Statement

*Identify current and ongoing needs and develop recommendations for a multimodal transportation system that is safer and easier for all users.*

## Guiding Priorities



**Safety** - Limit the number of crashes and provide safe facilities for pedestrians and cyclists



**Pineville Connectivity** - Create a multimodal network within Pineville that connects Downtown, schools, businesses, and parks



**Walkability** - Provide pedestrian facilities that are accessible for all ages and users



**Bikeability** - Provide bicycle facilities that are accessible for all levels and ages of cyclists



**Transit Access** - Increase access to transit stops via active transportation facilities (biking and walking)



**Regional Connectivity** - Create the opportunities for cyclists, pedestrians, and transit users to access neighboring cities and towns



**Existing  
Conditions**

# Demographics

This chapter is intended to provide a snapshot of the current conditions related to the people of Pineville and their mobility around the Town and region. Unless otherwise stated, the data analyzed is foundational to understanding Pineville's community today in order to plan for the needs of the future. The data in this chapter was provided by the Town of Pineville, Mecklenburg County, the North Carolina Department of Transportation (NCDOT), and the 2018 American Community Survey 5-Year Estimate. Data was collected in March and April 2020.

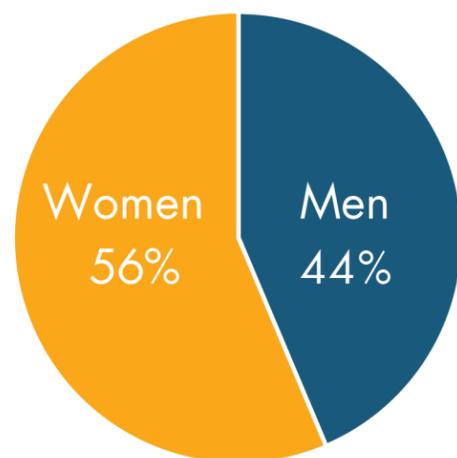
## At a Glance

### Projected Population Growth

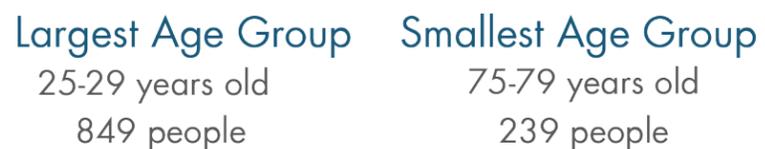


Source: US Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2019 and 2024

### Age and Sex Distribution



### Median Household Income



Source: US Census Bureau, 2018 American Community Survey 5-Year Estimates

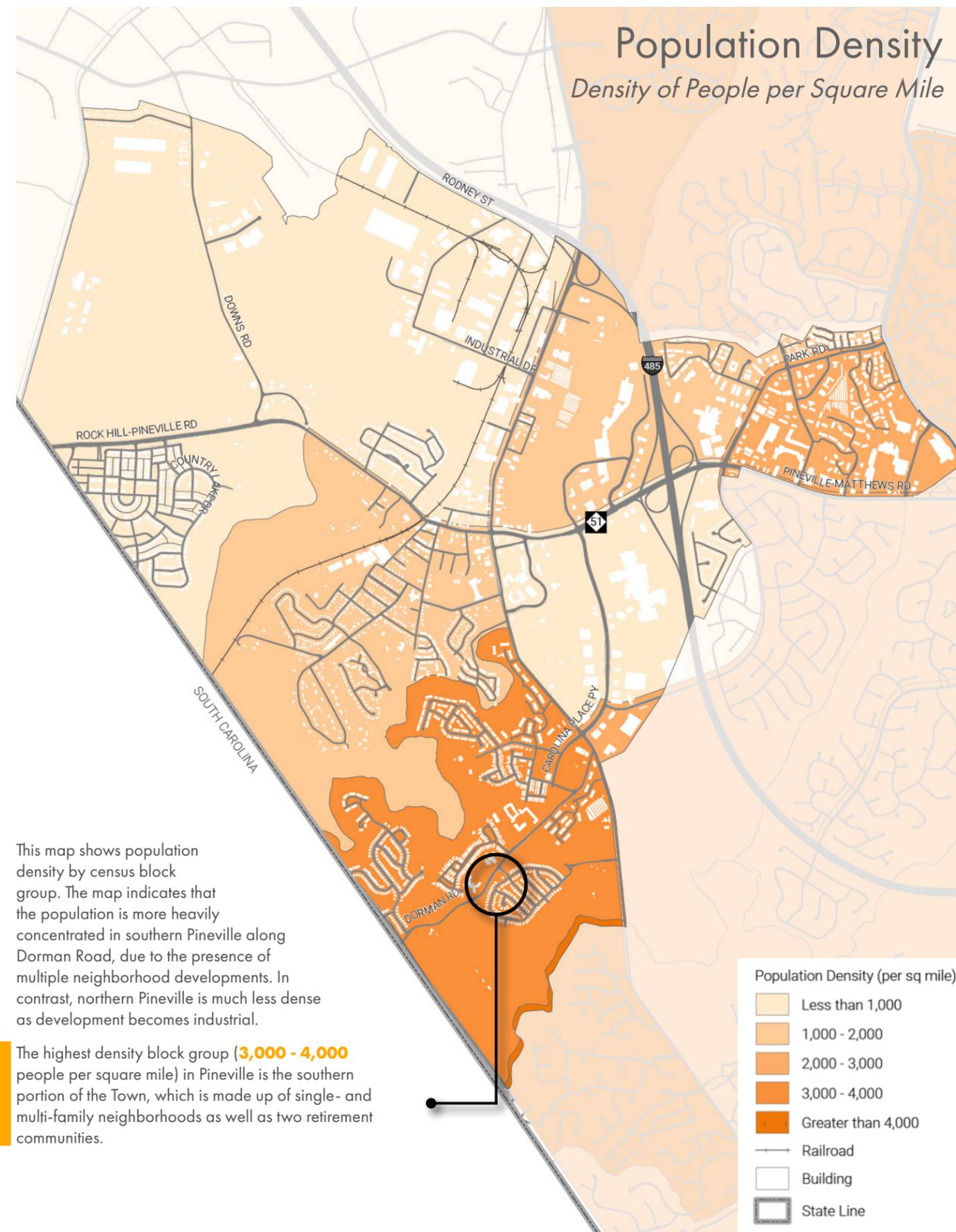
### Top 5 Industries in Pineville

- 37% Retail Trade
- 17% Accommodation and Food Services
- 11% Manufacturing
- 9% Health Care and Social Assistance
- 5% Construction

### Top 5 Industries Pineville Residents Work

- 13% Retail Trade
- 12% Accommodation and Food Services
- 10% Health Care and Social Assistance
- 9% Administration & Support, Waste Management and Remediation
- 8% Professional, Scientific, and Technical Services

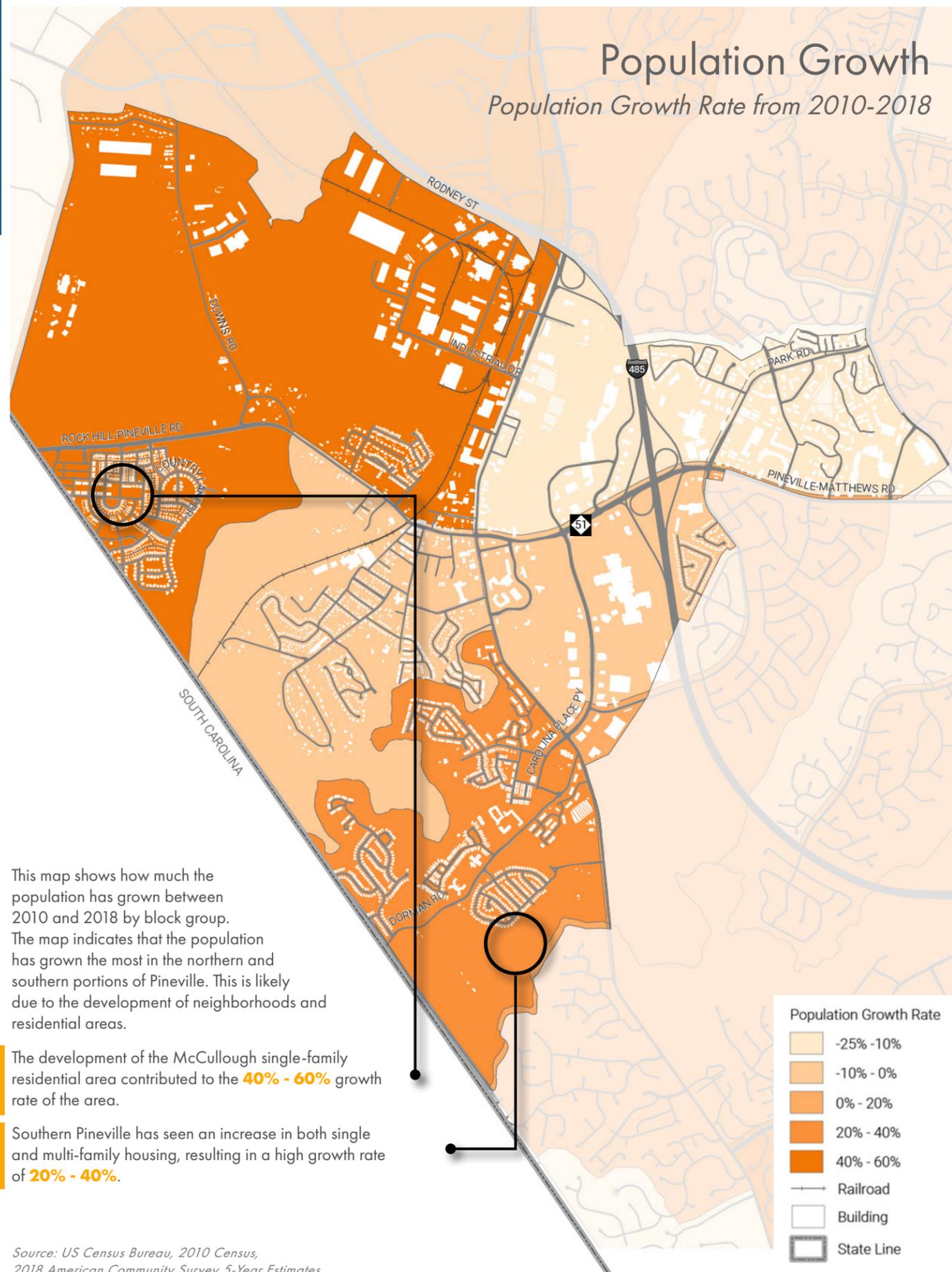
Source: US Census Bureau, 2017 OnTheMap



Source: US Census Bureau, 2018 American Community Survey 5-Year Estimates

## Population Growth

### Population Growth Rate from 2010-2018



This map shows how much the population has grown between 2010 and 2018 by block group. The map indicates that the population has grown the most in the northern and southern portions of Pineville. This is likely due to the development of neighborhoods and residential areas.

The development of the McCullough single-family residential area contributed to the **40% - 60%** growth rate of the area.

Southern Pineville has seen an increase in both single and multi-family housing, resulting in a high growth rate of **20% - 40%**.

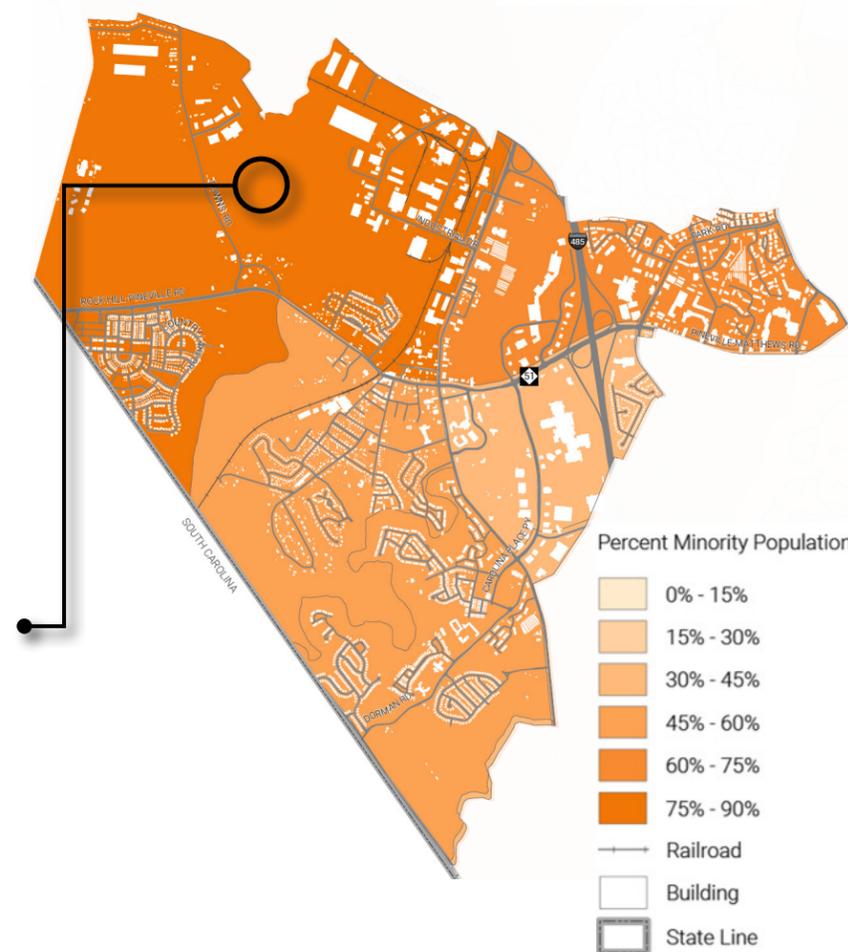
Source: US Census Bureau, 2010 Census, 2018 American Community Survey 5-Year Estimates

## Minority Population

### Percent Minority Population per Block Group

The minority population in the Town of Pineville is approximately 53.0%. The largest minority group are African Americans, who make up approximately 34.6% of the population. Asians make up 5.1% of the total population and 2.1% of the population identifies as two or more races. The total Hispanic population of any race in the town is 11.2%. The total minority population of Pineville is about the same as that for Mecklenburg County, which is approximately 52.7%.

The northernmost block group within Pineville has the highest minority population at about **75% - 90%**. Considering the limited number of housing units in this area of Pineville, this percentage could be due to the large size of the block group, which extends farther north past the Pineville Town limits.

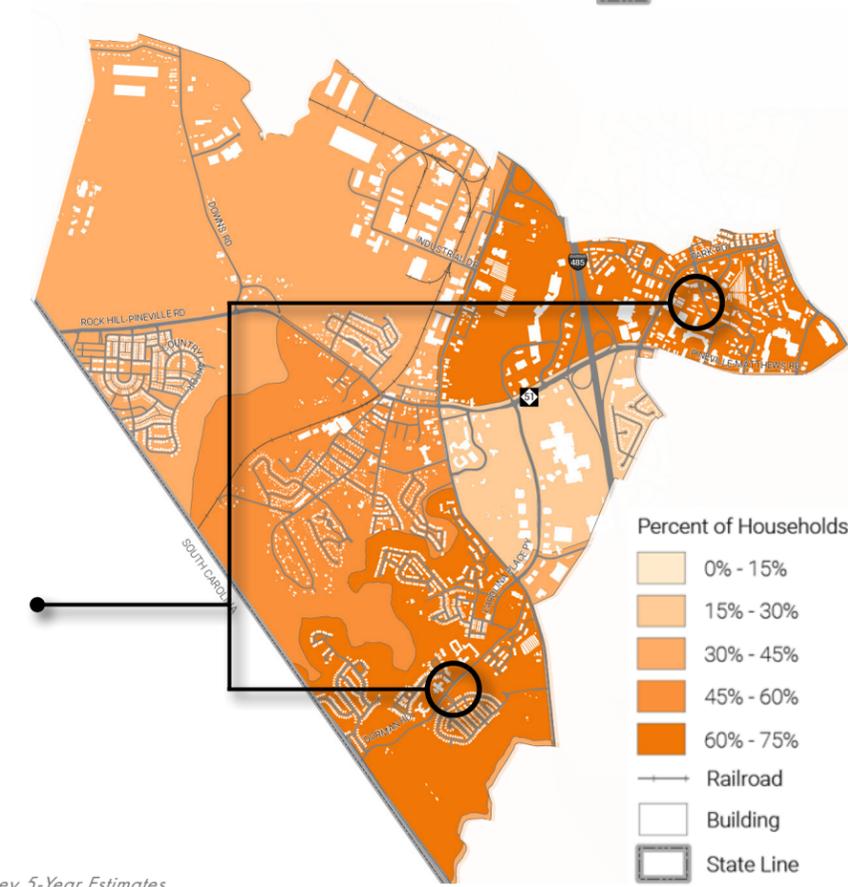


## Car Ownership

### Percent of Households with Zero to One Vehicles

This map shows the percentages of households that have access to zero to one vehicles by census block group. Within Pineville, approximately 14.9% of households do not have access to a vehicle and about 48.4% of households have access to one vehicle.

Within the southern- and easternmost block groups, approximately **60% - 75%** of households have access to zero to one vehicles. This could be an indicator that these areas have sufficient transit routes and active transportation options. Conversely, these areas might be more vulnerable to a lack of mobility.

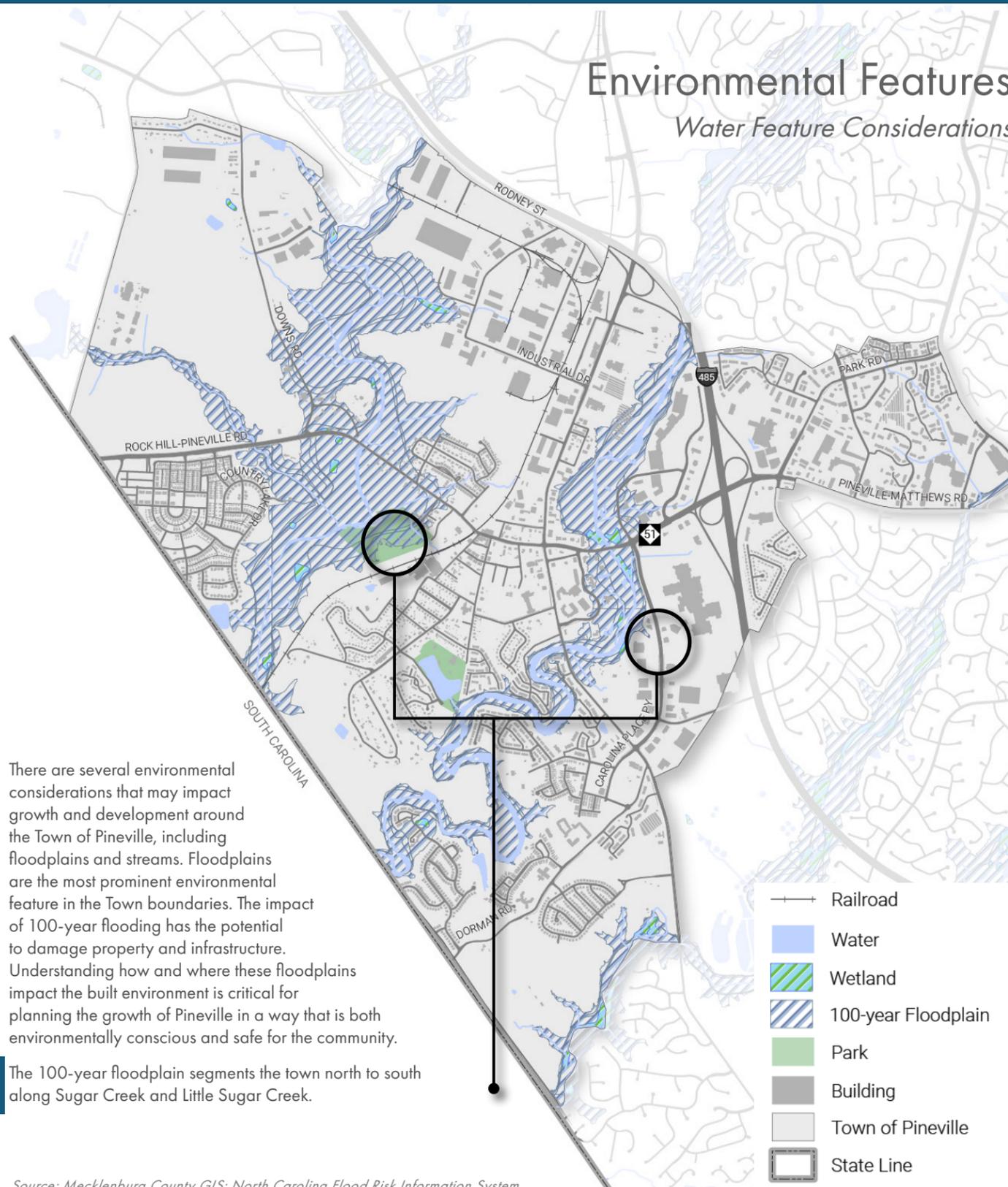


Source: US Census Bureau, 2018 American Community Survey 5-Year Estimates

# Land Use

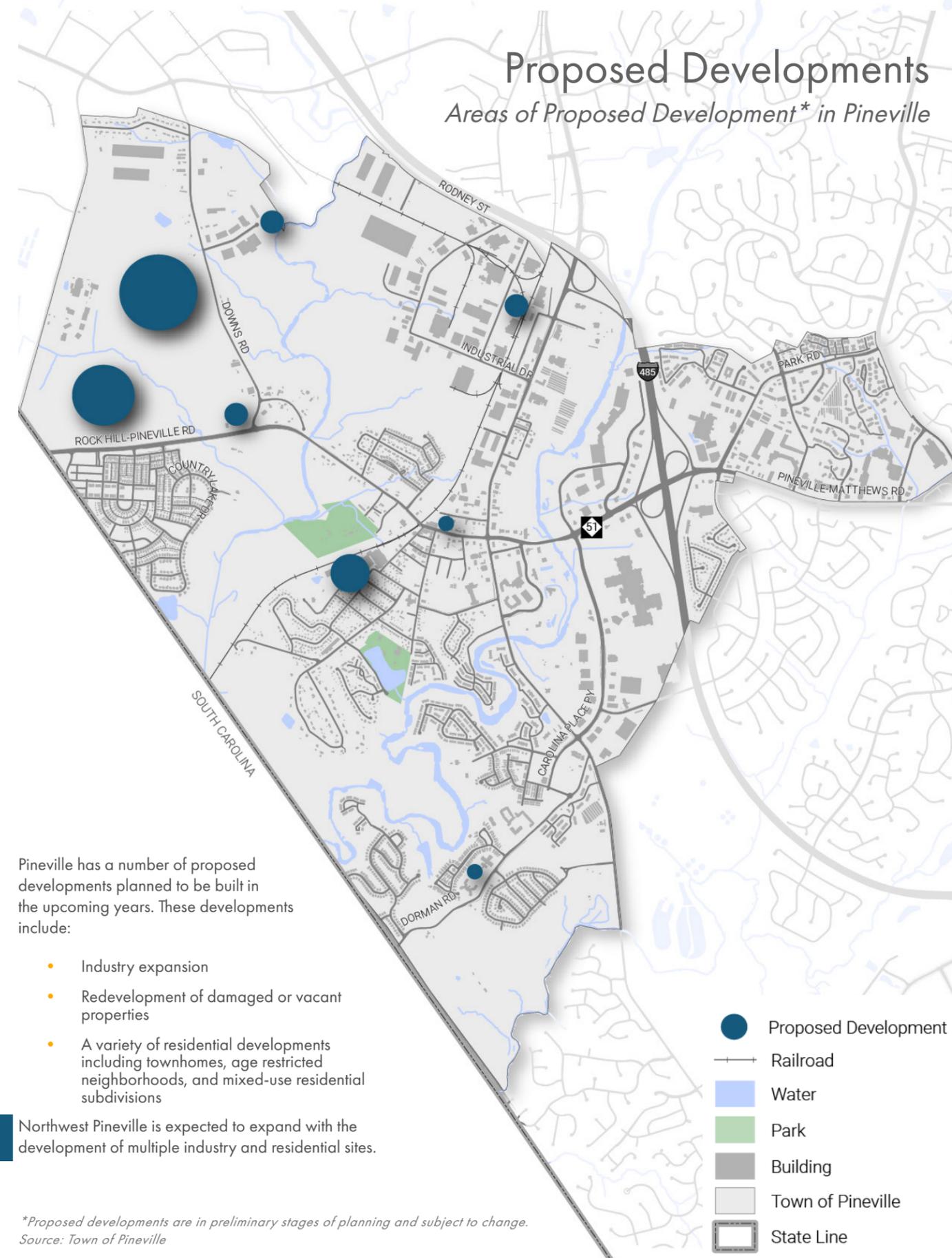
The following section evaluates the land use of Pineville, both existing and proposed, to understand how Pineville looks today and develop recommendations that will serve the Town's future.

## Environmental Features Water Feature Considerations



Source: Mecklenburg County GIS; North Carolina Flood Risk Information System

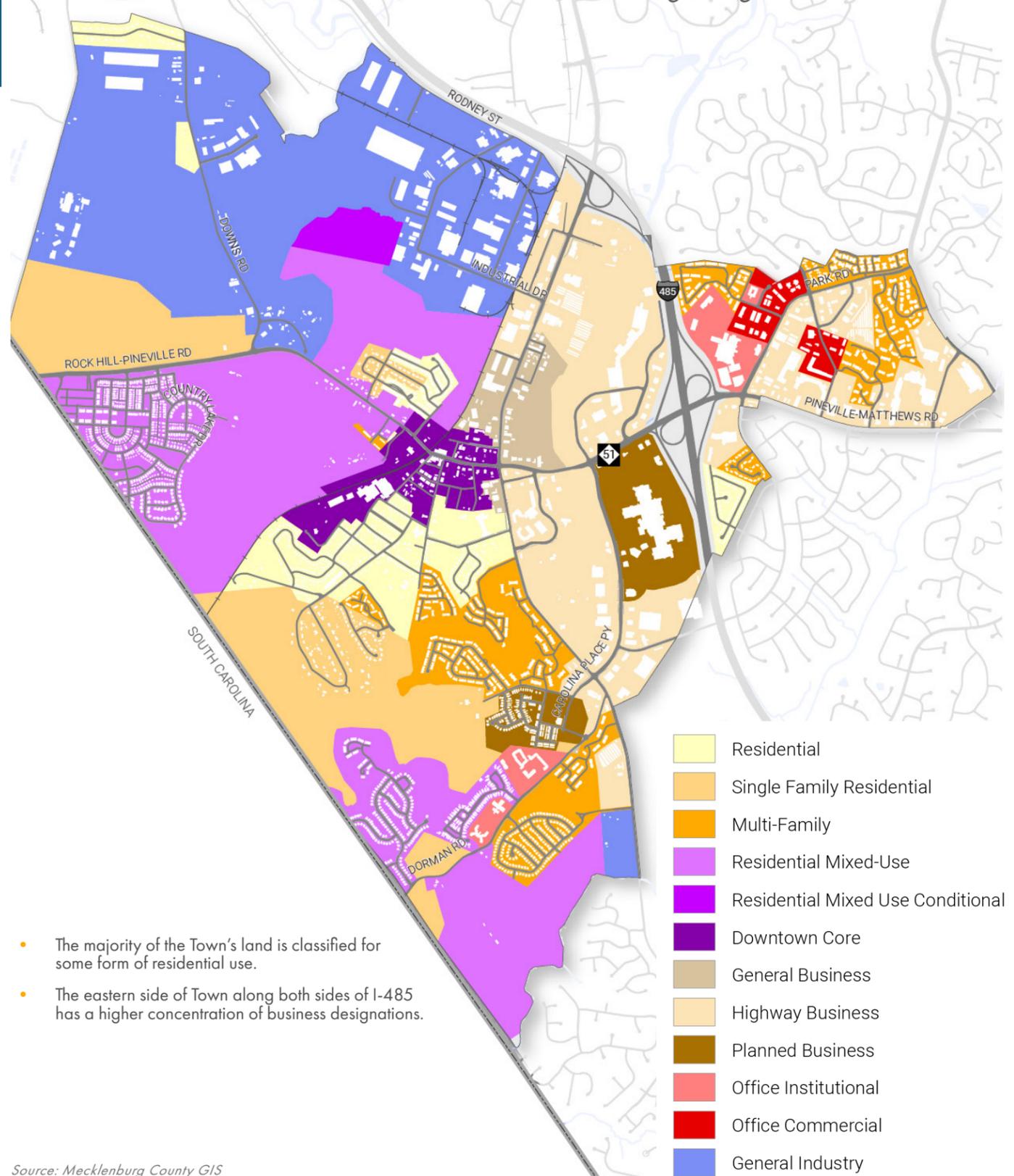
## Proposed Developments Areas of Proposed Development\* in Pineville



\*Proposed developments are in preliminary stages of planning and subject to change.  
Source: Town of Pineville

## Existing Land Use

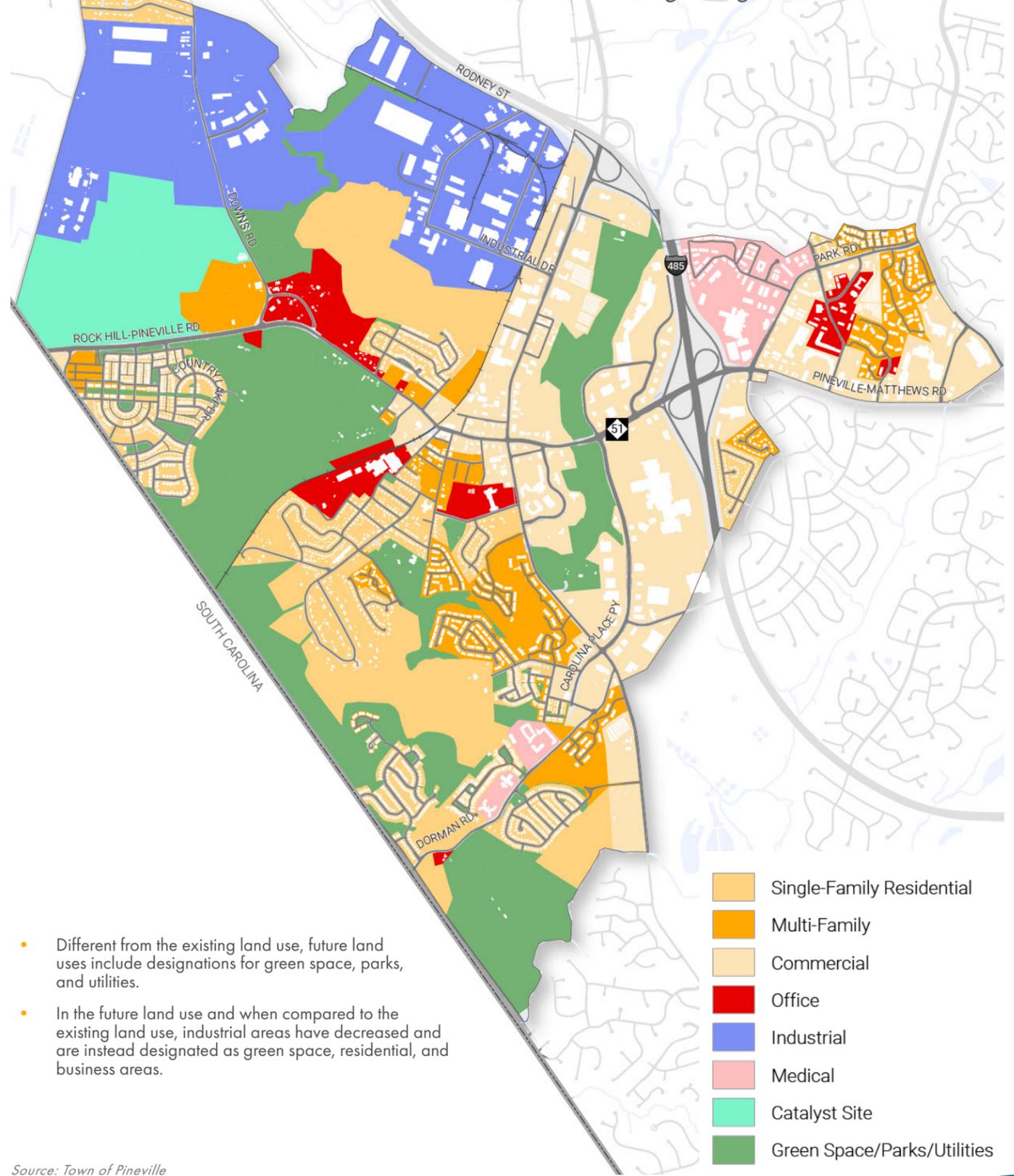
Current Zoning Designations in Pineville



- The majority of the Town's land is classified for some form of residential use.
- The eastern side of Town along both sides of I-485 has a higher concentration of business designations.

## Future Land Use

Future Zoning Designations in Pineville

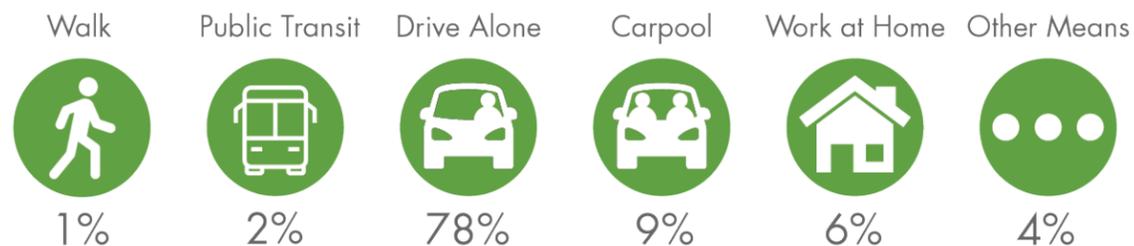


- Different from the existing land use, future land uses include designations for green space, parks, and utilities.
- In the future land use and when compared to the existing land use, industrial areas have decreased and are instead designated as green space, residential, and business areas.

# Mobility Conditions

The following pages display maps and spatial data that are crucial to understanding current pedestrian, bicycle, and transit conditions in Pineville. This data will help create the foundation for future recommendations.

## How people get to work...



## Where people work...



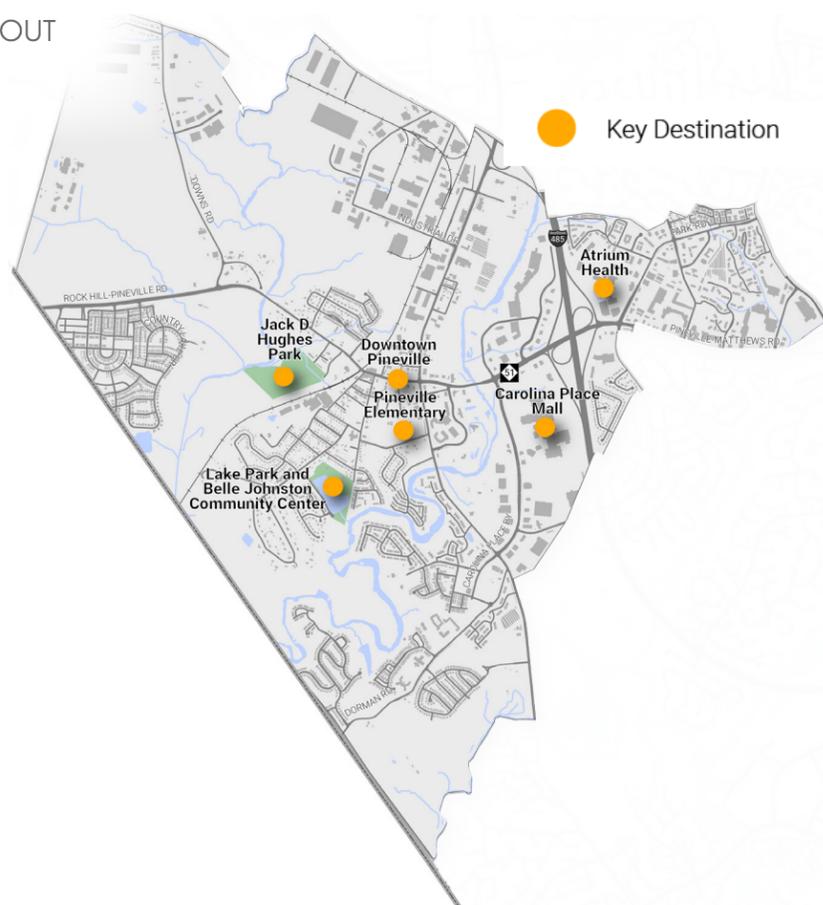
## Key Destinations

Key destinations in the Town of Pineville are the places where community members go to work, play, or recreate. These destinations include schools, parks, and shopping. Noting the connections between the key destinations will help inform the multimodal recommendations in the Pineville Mobility Plan. Providing accessible transit and active transportation options will help pedestrians and cyclists reach their desired destination.

Recreation areas of interest include Jack D. Hughes Park, Lake Park, and the Belle Johnston Community Center.

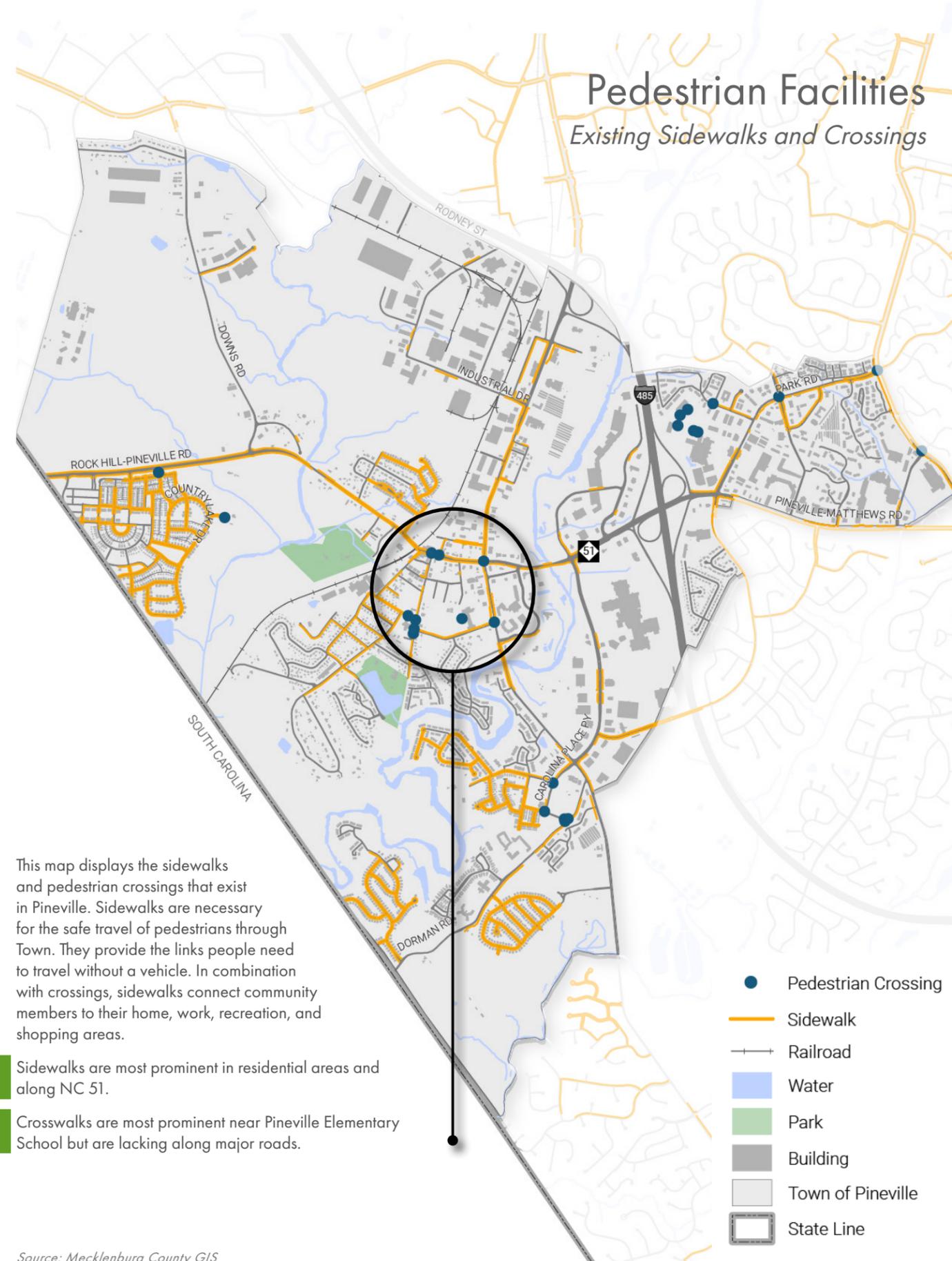
Carolina Place Mall is identified as the major center for shopping and dining in Pineville.

A primary hub for business is located near Atrium Health.



Source: US Census Bureau, 2017 OnTheMap; US Census Bureau, Census 2010 Summary File 1. Esri forecasts for 2019 and 2024

## Pedestrian Facilities Existing Sidewalks and Crossings



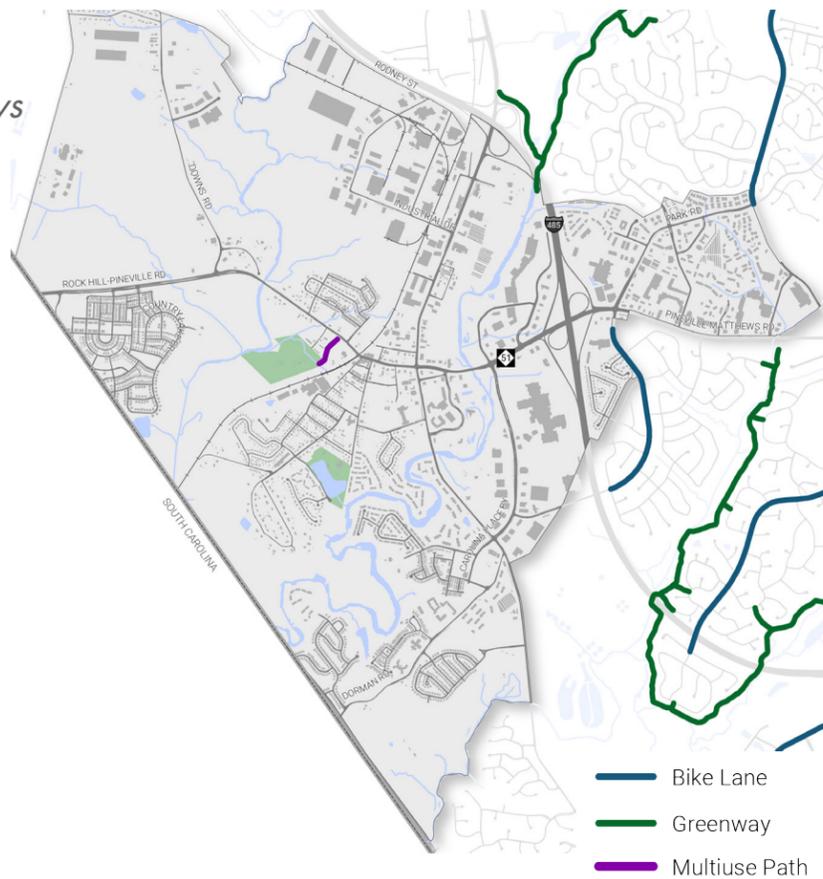
Source: Mecklenburg County GIS

# Bicycle Facilities

## Existing Bike Lanes and Greenways

This map displays the bicycle facilities that exist in Pineville. Facilities include greenways and designated bike routes. Bike facilities give bicyclists a safe method of travel. Roads that are not designed to accommodate bicyclists can create conditions not conducive to riders, resulting in an unsafe environment. Bike facilities benefit a community by providing a connection to key destinations within Town and serving as a method of exercise.

Pineville does not currently have bicycle facilities aside from a bike lane along the Town Line on Park Road and a short, multiuse path leading to Jack D. Hughes Park.



# Greenway System

## Existing and Proposed Greenways and Trails

This map shows the existing and proposed greenways in Pineville. The Mecklenburg County Comprehensive Park and Recreation Master Plan Update (2015) includes the Greenway Master Plan, which proposes the development of four greenways in the Pineville area. The figure also shows the Carolina Thread Trail, a regional network of planned greenways and trails.

Proposed greenways in the Pineville area include:

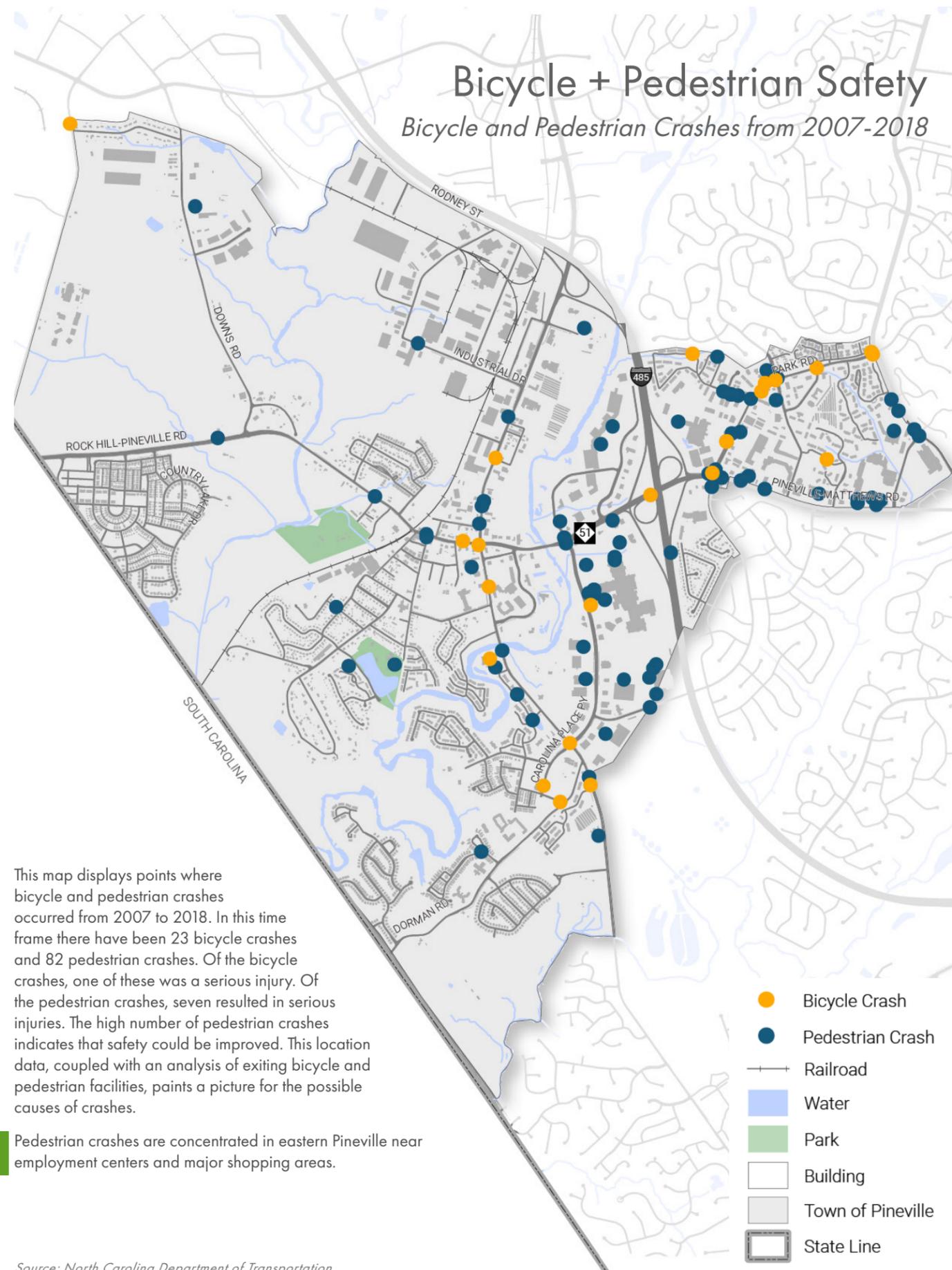
- Sugar Creek Greenway
- Little Sugar Creek Greenway
- McAlpine Creek Greenway
- McMullen Creek Greenway



Source: Mecklenburg County GIS

# Bicycle + Pedestrian Safety

## Bicycle and Pedestrian Crashes from 2007-2018



This map displays points where bicycle and pedestrian crashes occurred from 2007 to 2018. In this time frame there have been 23 bicycle crashes and 82 pedestrian crashes. Of the bicycle crashes, one of these was a serious injury. Of the pedestrian crashes, seven resulted in serious injuries. The high number of pedestrian crashes indicates that safety could be improved. This location data, coupled with an analysis of existing bicycle and pedestrian facilities, paints a picture for the possible causes of crashes.

Pedestrian crashes are concentrated in eastern Pineville near employment centers and major shopping areas.

Source: North Carolina Department of Transportation

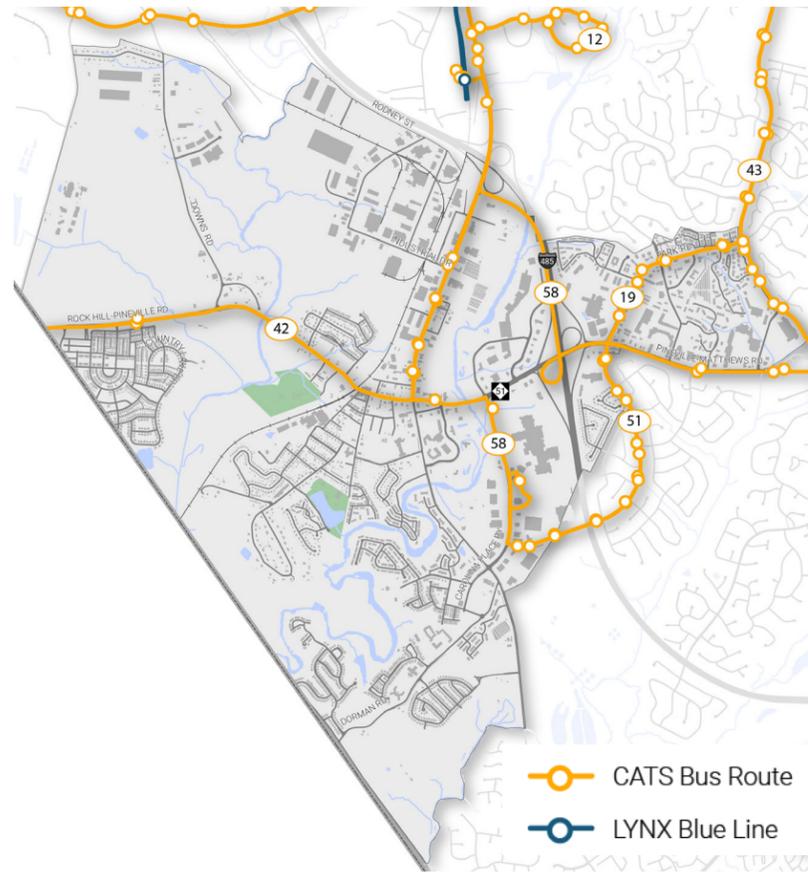
## Transit Routes

### Existing CATS and LYNX Blue Line Routes

The Town of Pineville is serviced by Charlotte Area Transit System (CATS) bus routes that run along NC 51 and serve North Polk Street, Carolina Place Mall, and the shops and businesses in East Pineville. This figure shows where the bus routes and stations are located in Pineville. CATS also provides a light rail service. The LYNX Blue Line ends just north of Pineville at the Sharron Road West Station. The bus and rail systems serve as a connection to the greater Charlotte region.

CATS bus routes that service the Pineville area include 19, 42, 43, 51, and 58.

CATS light rail that service Pineville include the LYNX Blue Line.



CATS Bus Route  
 LYNX Blue Line

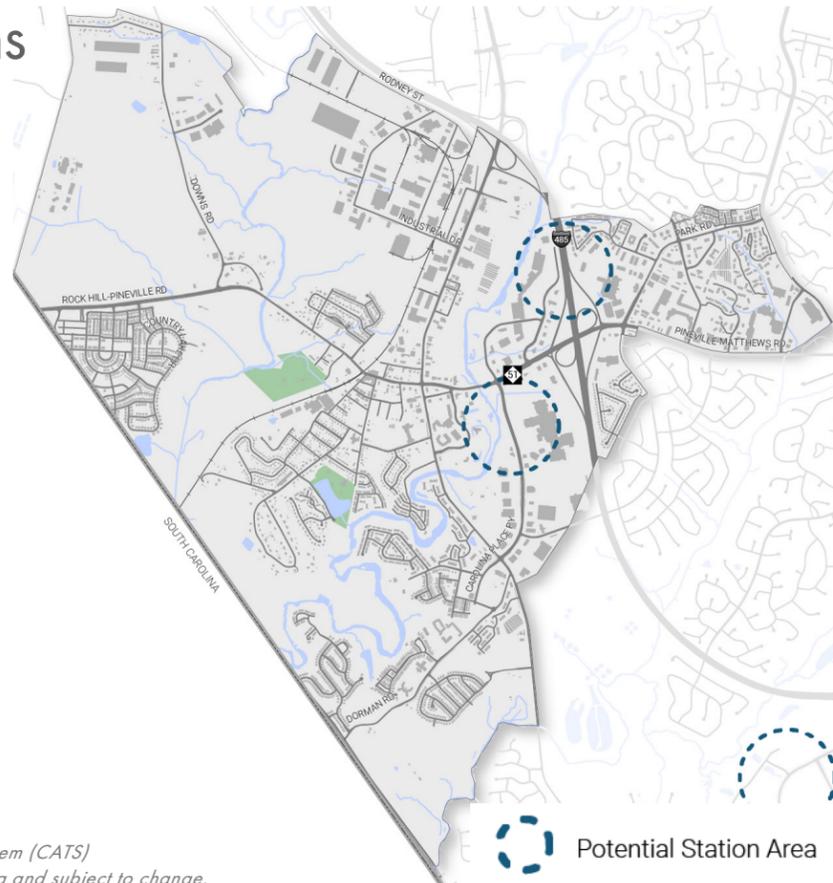
## Potential LYNX Stations

### Areas for Potential LYNX Blue Line Stations

In October 2019, the Town of Pineville passed a Resolution of Support to extend the LYNX Blue Line light rail to Pineville and Ballantyne. The goals of this extension are to:

- Increase access for residents to major employment and commercial centers
- Promote urban and mixed-use development in areas of opportunity
- Increase corridor capacity to address congestion along I-485 and Johnston Road

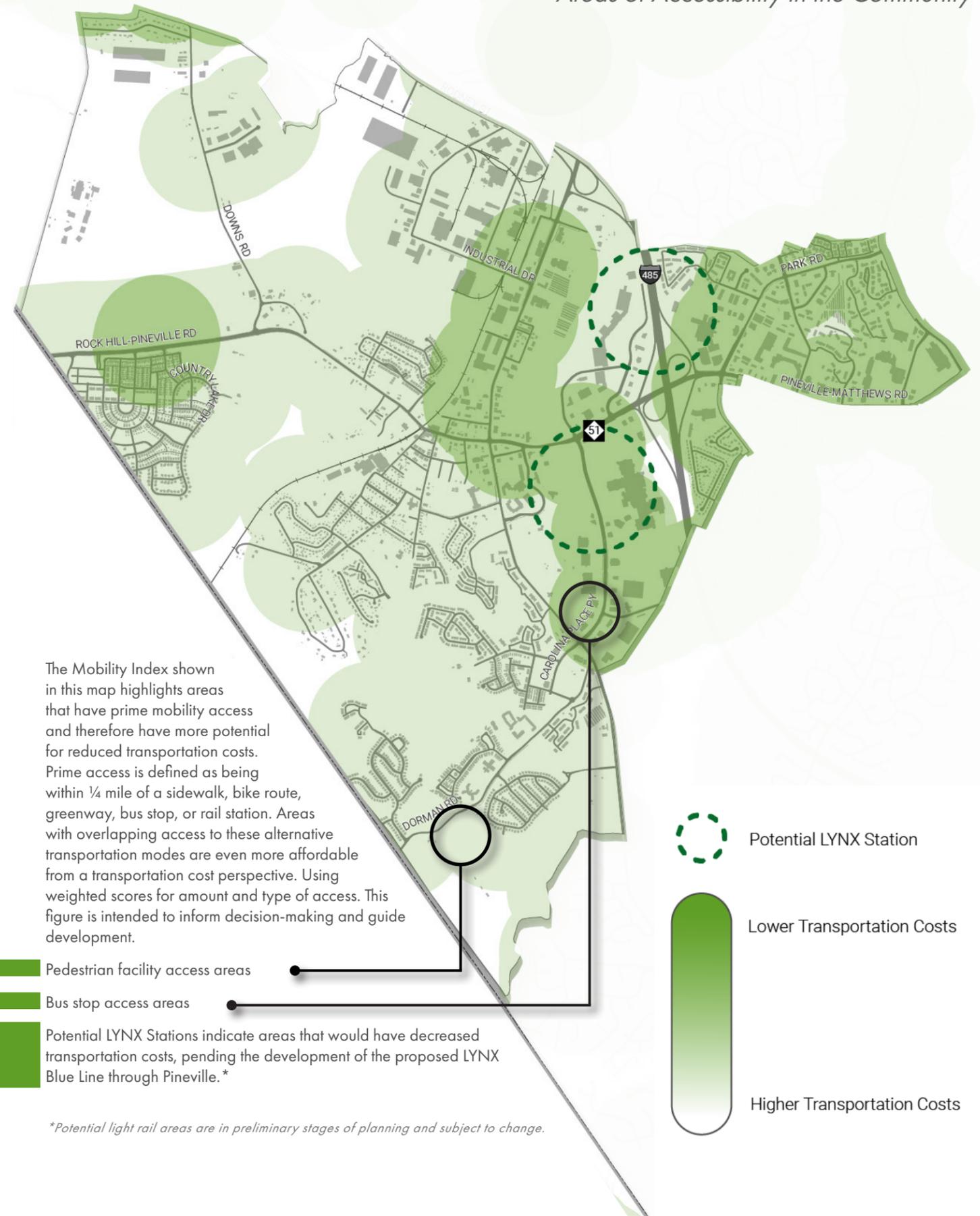
Preliminary areas for the potential stations in Pineville are proposed along I-485, north of the I-485/NC 51 Interchange, and near the Carolina Place Mall.\*



Potential Station Area

## Mobility Index

### Areas of Accessibility in the Community



The Mobility Index shown in this map highlights areas that have prime mobility access and therefore have more potential for reduced transportation costs. Prime access is defined as being within 1/4 mile of a sidewalk, bike route, greenway, bus stop, or rail station. Areas with overlapping access to these alternative transportation modes are even more affordable from a transportation cost perspective. Using weighted scores for amount and type of access. This figure is intended to inform decision-making and guide development.

- Pedestrian facility access areas
- Bus stop access areas
- Potential LYNX Stations indicate areas that would have decreased transportation costs, pending the development of the proposed LYNX Blue Line through Pineville.\*

- Potential LYNX Station
- Lower Transportation Costs
- Higher Transportation Costs

\*Potential light rail areas are in preliminary stages of planning and subject to change.

Source: Mecklenburg County GIS, Charlotte Area Transit System (CATS)  
\*Potential light rail areas are in preliminary stages of planning and subject to change.

# Existing Plans and Policies

It is vital to understand bicycle recommendations that already exist and to leverage work that has already been conducted by planning professionals. This section outlines various planning efforts that contain recommendations relevant to the development of the Pineville Mobility Plan. All recommendations listed are summarized from their respective documents.

## 2045 Metropolitan Transportation Plan

### Overview

The 2045 Metropolitan Transportation Plan (MTP) is a long-range vision for the Charlotte region that focuses on current and future transportation needs.

### Key Projects

**Little Sugar Creek Greenway** — Extend greenway along Little Sugar Creek to Pineville

**Pineville-Matthews Road** — Improve Pineville-Matthews Road from Park Road to Carmel Road by implementing access management solutions and bicycle and pedestrian facilities

**Park Road** — Widen Park Road from Johnston Road to Pineville-Matthews Road from two to four lanes with a median, bike lanes, and sidewalks

**CONNECT Our Future Recommended Transit Network** — Identify projects that expand the transit network in Pineville



## Pineville PARC Plan

### Overview

Pineville developed the PARC Plan in 2020 to plan the future of the Parks and Recreation department. **PARC stands for Parks, Art, Recreation, and Culture.** Pineville is committed to serving its citizens in these four categories by providing quality parks, fun recreation opportunities, and classes and events to bring the community together.

### Goals

- Provide more sports facilities, including baseball, tennis, and basketball courts
- Provide two miles of trails, including accessible connections to the proposed Little Sugar Creek Greenway extension
- Expand Belle Johnston Community center to provide more space for staff and activities
- Provide a neighborhood park for the neighborhoods of East Pineville
- Help the department function smoothly as parks and trails are built by hiring staff and increasing maintenance office space

### Key Projects

- Lake Park expansion
- Jack D. Hughes Park expansion
- Belle Johnston Community Center Expansion
- Goodsell Park



## Pineville Zoning Ordinance

### Overview

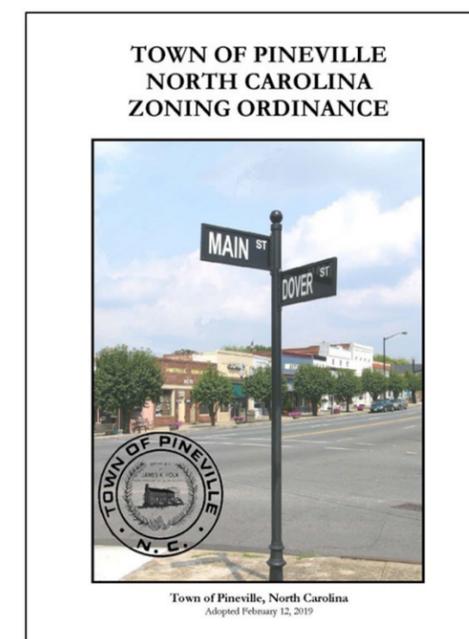
The Town of Pineville zoning regulations are key to guiding the Town's growth and development to promote the health and welfare of its citizens while retaining the Town's sense of community.

### Key Ordinances

**6.1.15 Downtown Overlay District** — Emphasizes the importance of pedestrian movement and facilities in the Downtown

**6.1.17 The Corridor Overlay District** — Highlights the significance of streetscape features, such as trees, seating, bicycle lanes, and wide sidewalks on primary transportation corridors

**7.27 Pedestrian Walkway and Sidewalk Connections** — Requires new commercial development in business, office, or industrial zoning districts; multi-family development; and non-residential uses in residential zoning districts to provide safe and adequate sidewalk facilities to promote and encourage pedestrian circulation





**Destinations and Barriers to Bike & Walk**  
Stickers to let us know where you would like to bike/walk and where there are barriers to bike/walk

**DESTINATIONS** ● where you would like to bike/walk

**BARRIERS** ● where there are barriers to bike/walk

**Engagement**

# Engagement

Public input is vital to any planning process and the Pineville Mobility Plan was a community-driven effort. This plan is designed to provide the residents of Pineville with the pedestrian and bicycle infrastructure that fits their needs. The approach to gathering community input included two major outreach events: a combined survey and public workshop to identify needs and an interact digital survey to solicit feedback on recommendations and prioritization.

## Public Workshop

In March 2020, the Pineville Mobility Plan was introduced to the public at a workshop-style public meeting. The event featured a wide variety of information and activity stations designed to educate attendees on the mobility planning process, engage them via interactive activities, and gather meaningful feedback that would guide the Plan's recommendations. Key takeaways from the workshop are discussed here and a full summary of the results can be found in Appendix A.



Walking and biking in Pineville today...

Ideal vision for walking and biking in Pineville...



### Key Takeaways

- Most attendees lived in central Pineville and their favorite destinations included Pineville Lake Park, Jack D. Hughes Park, and Main Street.
- The most popular pedestrian and bicycle facilities in the Visual Preference Survey were greenways and multiuse paths.
- Participants ranked the guiding priorities, identifying safety as their #1 priority. The graphic to right is representative of average response scores.
- The most commonly identified barriers to pedestrians and bicyclists were along Main Street. Participants also noted the lack of connections to Jack D. Hughes Park and between the McCullough neighborhood and Main Street.



## Public Survey

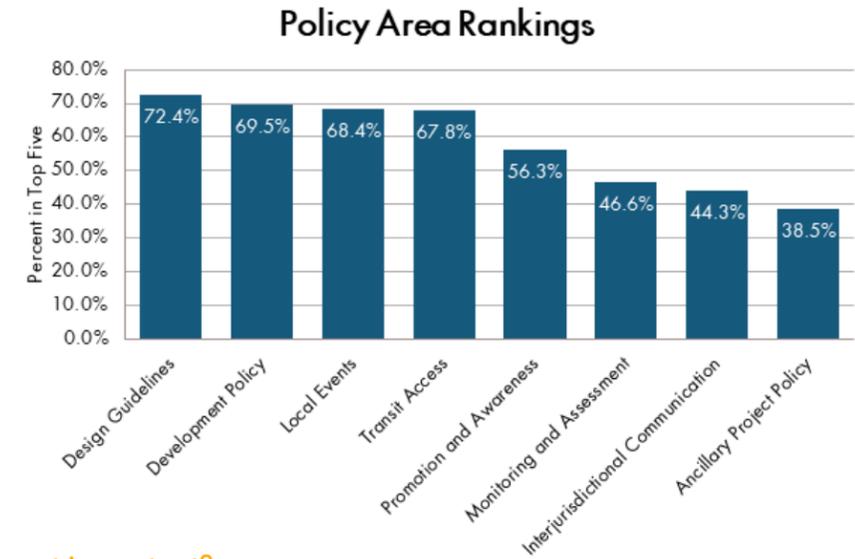
The online Pineville Mobility Plan survey was open for more than a month and was widely distributed by the Town of Pineville to its residents. The survey solicited feedback on which policy areas, physical areas, and specific mobility improvement projects were most important to residents. Highlights from the survey are shown below and a full survey summary can be found in Appendix B.



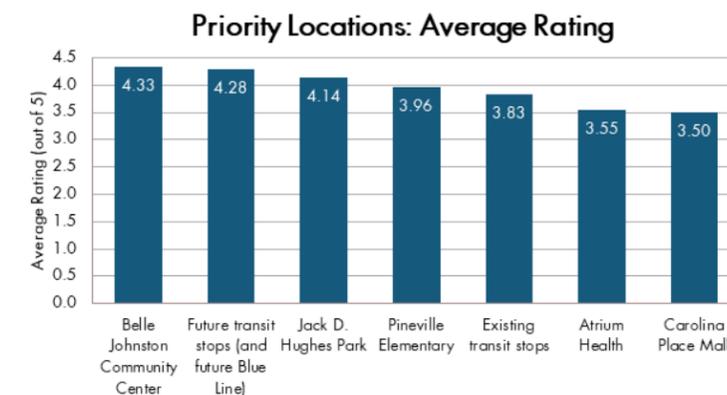
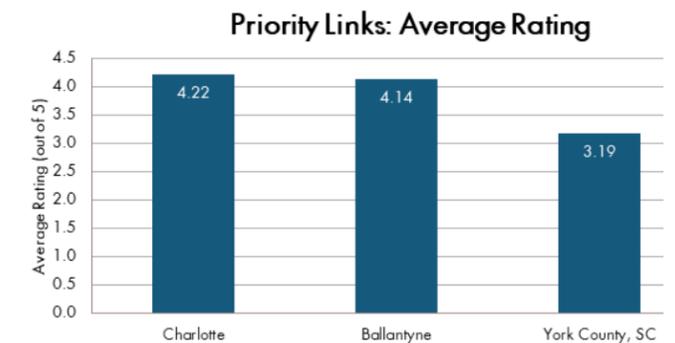
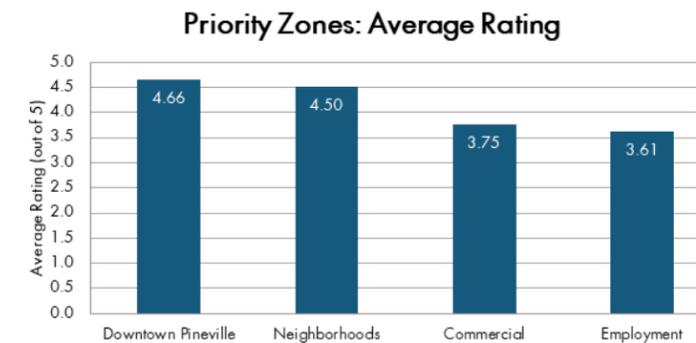
**Start Date:** September 1st, 2020

**End Date:** October 5th, 2020

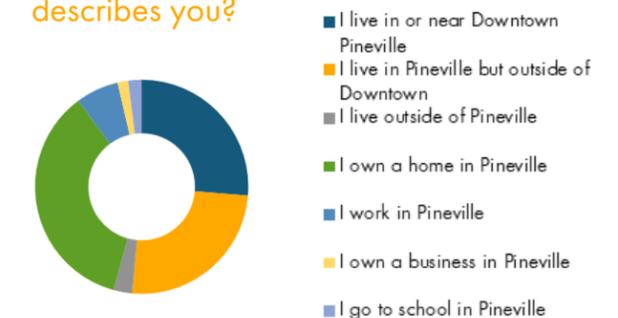
What policy areas are most important?



Where is mobility most important?



Which of the following best describes you?





319

TAILORED.  
Salon

**Facility**

**Recommendations**

# Recommendations

This chapter highlights the recommended physical improvement projects, including corridor facilities, intersection-level improvements, and transit stop improvements. Draft recommendations were formed and the public survey participants provided feedback. The recommendations discussed in this chapter represent the culmination of these outreach efforts as well as input from Town Staff and the Steering Committee.

## Needs Identification Process

The pedestrian, bicycle, and transit network recommendations were developed by layering existing condition data with the needs, input, and feedback of the outreach efforts. This process was essentially a formula where the appropriate data points, analysis, and input were entered and the results were the plans' recommendations. The process outlined here was critical to understanding how the recommendations were developed. The remainder of this chapter focuses on facility recommendations but it's important to note that this process applies to other plan recommendations as well, such as prioritization, policies, and programs.



## Bicycle and Pedestrian Facilities

The recommended pedestrian and bicycle facilities for Pineville consist of five different facility types, outlined below. These facility types work together to create a more connected transportation network that provides access and safety for pedestrians and bicyclists while considering the vital role of the automobile.



### Multiuse Paths/Greenways

A multiuse path is a facility that may be used by bicyclists, pedestrians, and other non-motorized users. They are separated from the roadway by an open space or physical barrier. A greenway serves the same function but, instead of running along a road, they are located in more natural or forested areas.

- This facility is buffered and therefore offers the most safety from vehicles



### Bicycle Lanes

A bicycle lane is a marked travel lane along a portion of the roadway that has been designated for preferential or exclusive use for bicyclists.

- Dedicated space for bicyclists delineated by painted lines
- May be incorporated in conjunction with road diet projects
- Buffered or protected bicycle lanes should be considered where possible during the design phase



### Shared Lane Markings (Sharrow)

A shared lane marking is a street marking installed to indicate where cyclists may use the entire lane with vehicles.

- These painted lane markings are often accompanied by signage
- Sharrow markings do not require additional right-of-way acquisition



### Paved Shoulders

A paved shoulder is a part of the highway. It is directly adjacent to the regularly traveled portion of the highway and more safely accommodates bicycles. Paved shoulders are specifically designed for vehicles to have safe places to pull off from the road, but as an auxiliary function also provide space for cyclists.

- Provide additional space at the edge of the roadway for cyclists
- Completed in conjunction with all types of roadway improvements



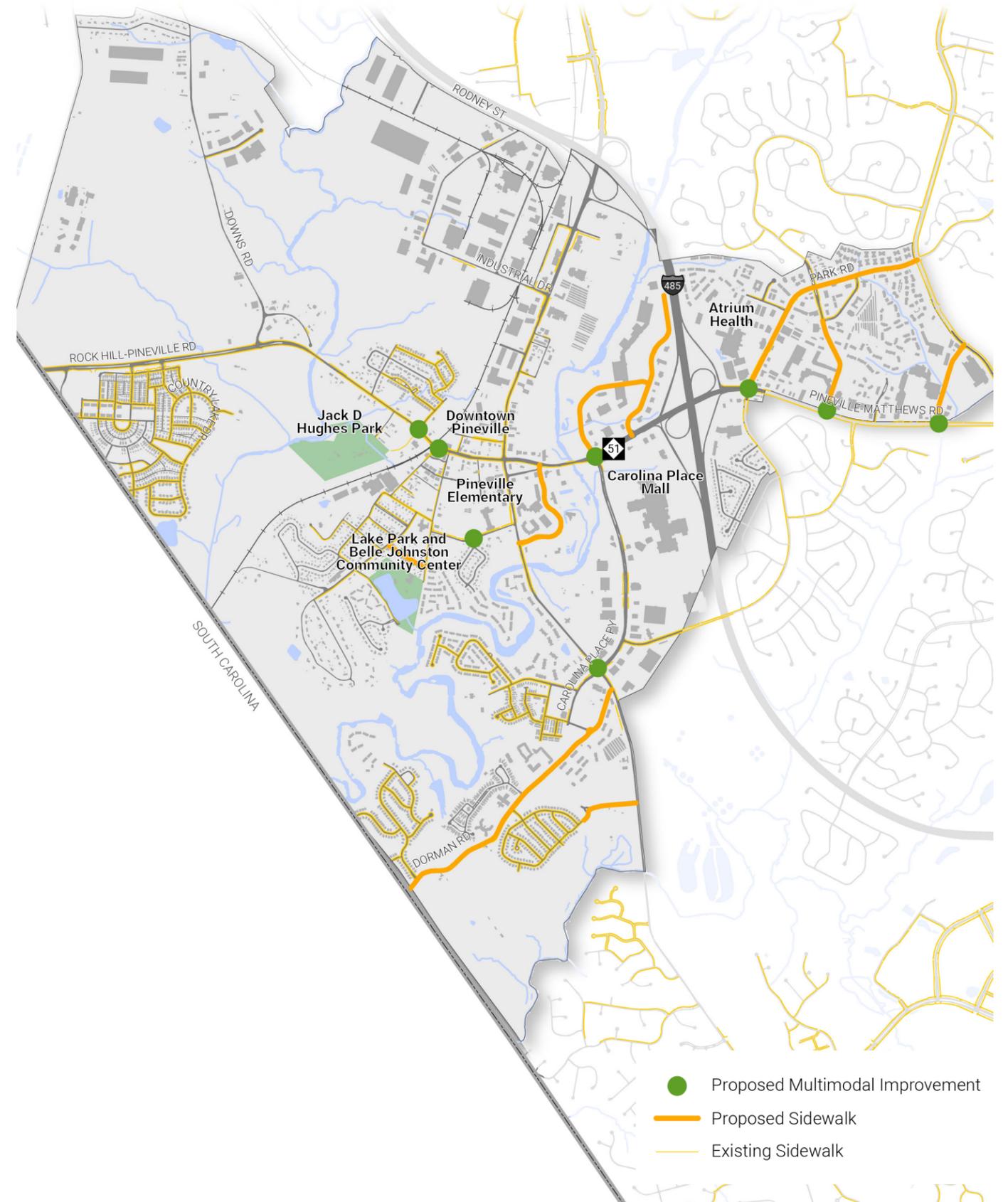
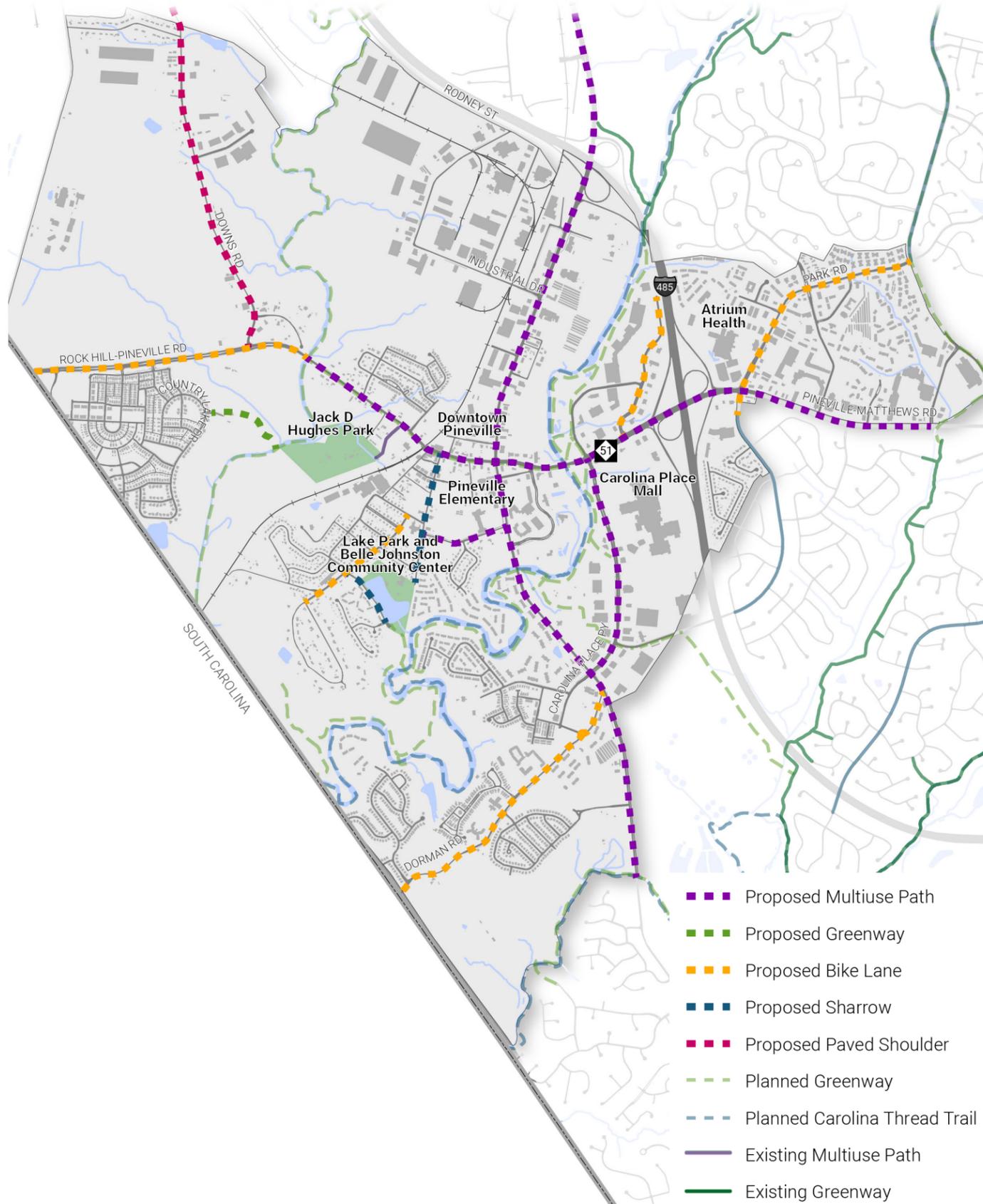
### Sidewalks

A sidewalk is a paved pathway for pedestrians, typically on both sides of a road.

- Filling gaps will provide connectivity to and between neighborhoods and activity centers
- Create continuous pathways at both sides of intersections
- Recommended connections on one or both sides of existing roadways

# Bicycle Recommendations

# Pedestrian Recommendations



# Multimodal Intersection Improvements

To complement the bicycle and pedestrian corridor recommendations, multimodal improvements are proposed at eight intersections throughout the Town (shown in the Pedestrian Recommendations map on the previous page). These intersection improvements would provide points of access between the proposed bicycle and pedestrian recommendations to support connectivity in Pineville. The multimodal recommendations include:



## Pedestrian Crossing Installation

Installing a pedestrian crossing would not only provide a connection, but also make sure the intersection improves pedestrian safety, visibility, and accessibility by including shorter crossing distances, pedestrian refuge islands, ADA ramps, and high-visibility crosswalks.



## Signal Improvements

At signalized intersections, pedestrian pushbuttons, leading pedestrian phases, and pedestrian countdowns can be applied to enhance safety of crossings within crosswalks.



## Bicycle Crossing Installation

Bicycle crossings should create a safe environment for bicyclists to cross an intersection by including some variation of bike boxes, bike-friendly signals, forward stop bars, traffic islands, and setback bicycle crossings.



## Pedestrian Beacon

These beacons can be applied at non-signalized intersections to enhance the visibility of pedestrians and bicyclists crossing mid-block or at marked intersections.



## Safe Railroad Crossing

There are a variety of treatments to provide accessible surfaces, increased safety, and comfortable crossings.

The following matrix identifies the intersections and their recommended improvements.

Recommendations Matrix	Pedestrian Crossing Inst.	Bicycle Crossing Inst.	Safe Railroad Crossings	Signal Improvements	Pedestrian Beacon
NC 51 and Cranford Dr					
NC 51 and Dover St/Railroad					
NC 51 and Leitner Dr/Carolina Place Pkwy					
NC 51 and Park Rd					
NC 51 and Park Cedar Dr					
NC 51 and McMullen Creek Pkwy					
Lowry St and Marine Dr					
Lancaster Hwy and Carolina Place Pkwy					

# Transit Improvements

In addition to the bicycle and pedestrian improvements, this Plan also recommends enhancing multiple bus stops in the Town. Many of the bus stops in Pineville are lacking basic amenities, such as seating and lighting. These amenities are vital to the accessibility, comfort, and safety of transit. Five bus stops have been identified as priority stops where improvements are most vital. These priority stops are dispersed throughout the Town and, combined, they serve all five routes that run in Pineville. An amenities inventory of these priority stops is displayed in the matrix below. An inventory of all 26 stops within Pineville is included in Appendix C.

## Priority Bus Stop Existing Inventory

Transit Stop Location	Stop ID	Shelter	Seating	Trash Can	Lighting	Map/Info.	Sidewalk Access	Bike Access
Johnston Rd & McMullen Creek Pkwy	13310							
Park Rd & Willow Ridge Rd	21345							
Park Rd at Sam's Club	21426							
Polk St at 400	37080							
Hwy 51 & Marfield Ln	49339							

## Recommended Improvements

The recommendations for the priority bus stops are detailed below. Since all bus stops are owned and maintained by CATS, collaboration between the Town and the transit agency is necessary to implement these changes.

### Johnston Rd & McMullen Creek Pkwy

This bus stop currently only has sidewalk access and lighting provided by a streetlight. To improve this stop, a shelter with seating, a trash can, and system information should be installed. Additionally, the stop should be given bike access once the planned greenway is constructed.

### Park Rd & Willow Ridge Rd

This bus stop currently only has lighting provided by a streetlight. To improve this stop, sidewalk and bike access should be given to the stop with the implementation of the bike lane and sidewalk that are proposed in this plan. This stop should also have a shelter with seating, a trash can, and system information.

### Park Rd at Sam's Club

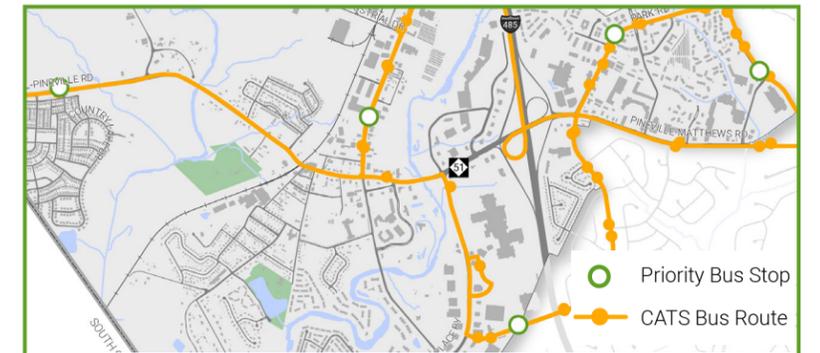
This bus stop currently only has sidewalk access. To improve this stop, a shelter with seating, a trash can, and system information should be installed. Lighting would improve the safety of the stop. Additionally, the stop should be given bike access once the planned greenway is constructed.

### Polk St at 400

This bus stop currently only has sidewalk access and lighting provided by a streetlight. To improve this stop, a shelter with seating, a trash can, and system information should be installed. Additionally, bike access should be given to the stop with the implementation of the multiuse path proposed in this Plan.

### Hwy 51 & Marfield Ln

This bus stop currently only has sidewalk access and an ADA ramp. To improve this stop, a shelter with seating, a trash can, and system information should be installed. Lighting should be installed as well to improve the safety of the stop.



# Demonstration Projects

The second public survey asked participants to pick the top five projects they want implemented. The project team then ranked the projects based on the combined community feedback. The ten top-ranked project segments were combined to create five demonstration projects that are highlighted in this chapter with a greater level of detail. Of the overall list of recommended multimodal projects, these demonstration projects are most likely to garner public support and are critical to the future vision of Pineville.

## Project Characteristics

The demonstration projects and their planning-level cost estimates are shown on the following pages. Each demonstration project page details the project characteristics and highlights the guiding priorities (presented in Chapter 1) the project would address. A description of these characteristics are highlighted below.

### 1. Recommendation

A brief description of the project and its extents provided for context.

### 2. Length

The length of the project segment.

### 3. Facility Cost Estimate

High-level cost estimates developed utilizing the 2019 NCDOT Bicycle-Pedestrian Cost Estimation Tool. This tool assesses a wide variety of factors and characteristics of a project to generate a cost estimate that includes design, right-of-way acquisition, utilities work, and construction.

### 4. Facility Type

The type of facility that is recommended.

### 5. Constraints and Other Costs

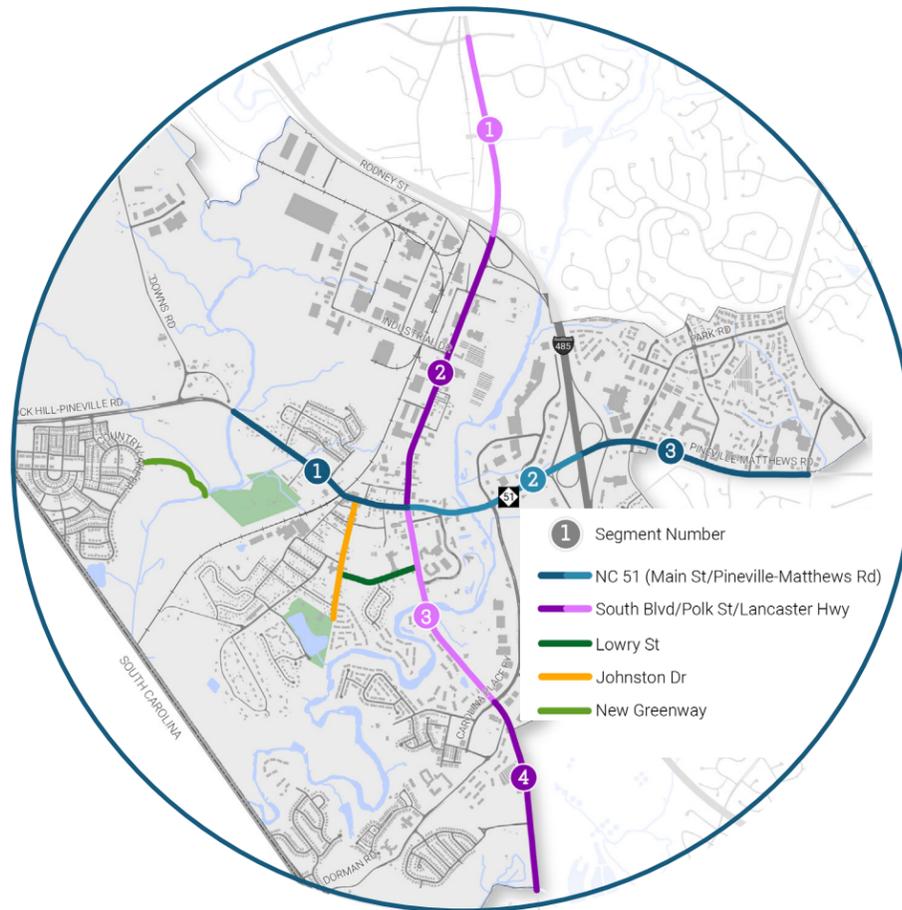
Other constraints and factors that may affect the cost and/or implementation of the project.

### 6. Guiding Priorities

Priorities addressed by the project are shown in full color, while unaddressed priorities are dimmed.

### 7. Illustrative Street Cross-Section

An illustrative representation of the potential street cross section.



# NC 51 (Main Street/Pineville-Matthews Road)

Sugar Creek to McMullen Creek Parkway

## RECOMMENDATION

These projects would create a multiuse path for pedestrians and cyclists along both sides of NC 51/Main Street/Pineville-Matthews Road. This path would connect Downtown Pineville to Jack D. Hughes Memorial Park and the surrounding neighborhoods as well as to areas east of I-485, including Atrium Health. The 2.55-mile path is broken into three segments, which can be seen on the map on the previous page.

**Length (Miles)**

**Segment 1: 0.83**

**Segment 2: 0.76**

**Segment 3: 0.96**

**Facility Cost Estimate**

**Segment 1: \$6,980,000**

**Segment 2: \$6,520,000**

**Segment 3: \$6,760,000**

**Facility Type**

**Multiuse Path**

### Constraints and Other Costs

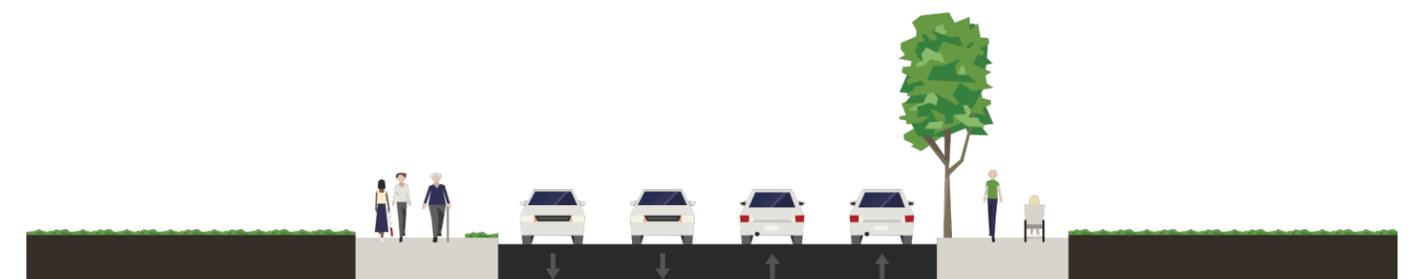
Pineville Commercial Historic District, the railroad tracks, and I-485 may be challenges to road improvement. Right-of-way will need to be acquired. Expanding the bridge across Little Sugar Creek may require an assessment of environmental impact.

## GUIDING PRIORITIES

(Goals that are met with this project are shown in full color.)



## ILLUSTRATIVE STREET CROSS-SECTION



# South Boulevard/Polk Street/Lancaster Highway

Westinghouse Boulevard to McAlpine Creek

## RECOMMENDATION

These projects would create a multiuse path for pedestrians and cyclists along both sides of South Boulevard/Polk Street/Lancaster Highway. This path would provide a valuable north-south connection to some of Pineville’s main commercial areas. The facility would connect to other recommended bike paths at Main Street (NC 51), Lowry Street, Carolina Place Parkway, and Dorman Road. The 3.66-mile facility, to be constructed in four segments, would connect to South Charlotte, many existing transit stops, and Pineville Elementary. These segments can be seen on the map on page 37.

**Length (Miles)**

- Segment 1: 0.81
- Segment 2: 1.17
- Segment 3: 0.89
- Segment 4: 0.79

**Facility Cost Estimate**

- Segment 1: \$8,595,000
- Segment 2: \$10,950,000
- Segment 3: \$7,005,000
- Segment 4: \$4,350,000

**Facility Type**

**Multiuse Path**

**Constraints and Other Costs**

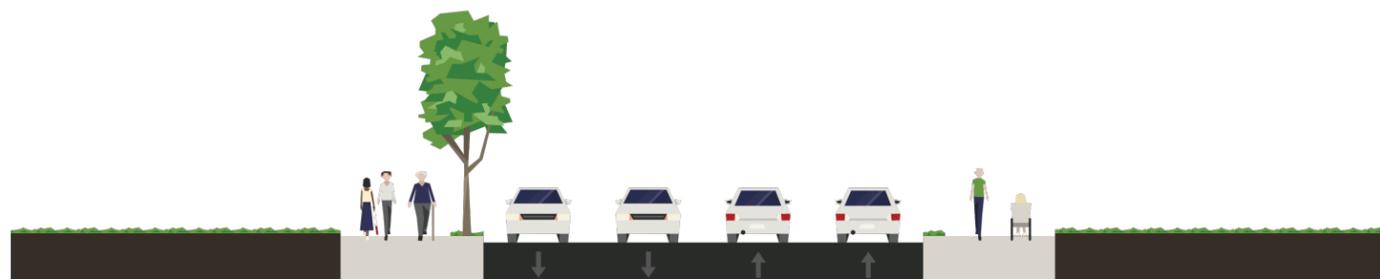
Expanding the I-485 overpass bridge may present a barrier to implementation and expanding the bridge across Little Sugar Creek may require an assessment of environmental impact. Right-of-way will need to be acquired.

## GUIDING PRIORITIES

(Goals that are met with this project are shown in full color.)



## ILLUSTRATIVE STREET CROSS-SECTION



# Lowry Street

Johnston Drive to South Polk Street

## RECOMMENDATION

This project would create a multiuse path on the south side of Lowry Street between Johnston Drive and South Polk Street. This path would provide convenient bicycle and pedestrian access to Pineville Elementary as well as nearby churches and neighborhoods. The facility would also connect recommended bike facilities on Johnston Drive and South Polk Street. A map of the facility is on page 37.

**Length (Miles)**

**0.33**

**Facility Cost Estimate**

**\$1,110,000**

**Facility Type**

**Multiuse Path**

**Constraints and Other Costs**

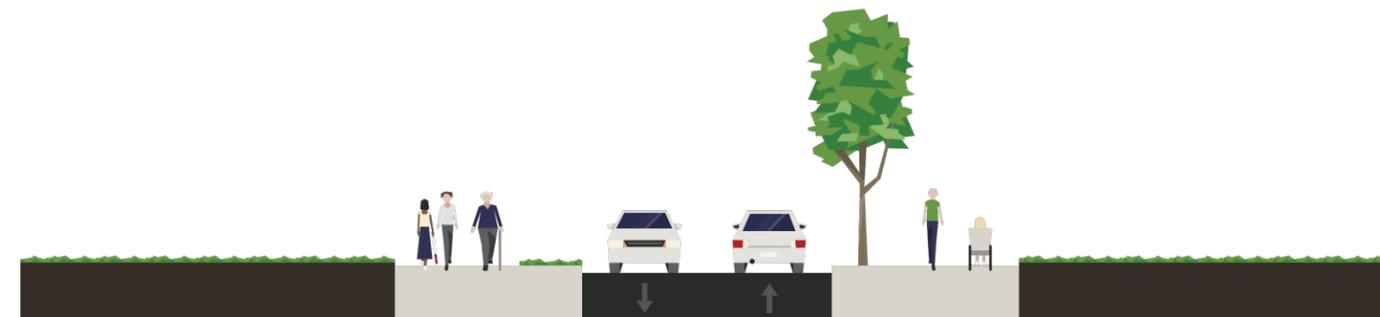
Right-of-way will need to be acquired, including at the Pineville City Cemetery, which could be a challenge. A potential conflict with school buses may arise near Pineville Elementary during construction.

## GUIDING PRIORITIES

(Goals that are met with this project are shown in full color.)



## ILLUSTRATIVE STREET CROSS-SECTION



# Johnston Drive

NC 51 (Main Street) to Belle Johnston Community Center

## RECOMMENDATION

This project would add a sharrow (shared-lane marking) along the entire length of Johnston Drive to provide an important connection from Downtown Pineville to Belle Johnson Community Center and other future bike facilities. This facility would be neighborhood friendly and welcoming for all riders. A map of the facility is on page 37.

Length (Miles)  
**0.49**

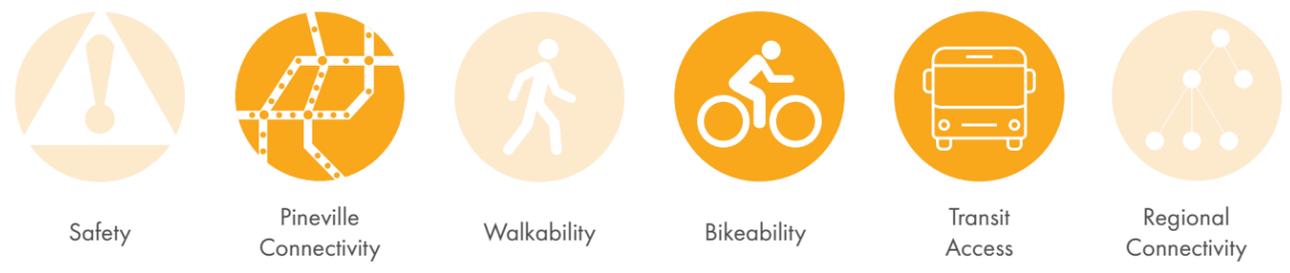
Facility Cost Estimate  
**\$20,000**

Facility Type  
**Sharrow**

Constraints and Other Costs  
None are predicted.

## GUIDING PRIORITIES

(Goals that are met with this project are shown in full color.)



## ILLUSTRATIVE STREET CROSS-SECTION



# New Greenway

Miller Glen Court to Sugar Creek

## RECOMMENDATION

This project would provide a connection from the McCullough neighborhood to a greenway proposed in the Mecklenburg County Comprehensive Park and Recreation Master Plan Update (2015). The implementation of the greenway network would provide a critical link for the McCullough neighborhood, which currently has little bicycle and pedestrian access to the rest of Pineville. A map of the facility is on page 37.

Length (Miles)  
**0.31**

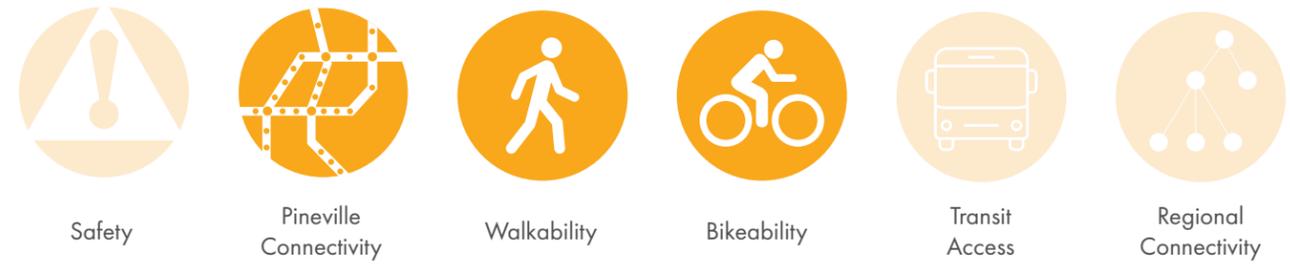
Facility Cost Estimate  
**\$910,000**

Facility Type  
**Greenway**

Constraints and Other Costs  
Right-of-way will need to be acquired, and environmental impact on Sugar Creek will need to be assessed.

## GUIDING PRIORITIES

(Goals that are met with this project are shown in full color.)



## ILLUSTRATIVE STREET CROSS-SECTION





YIELD TO PEDESTRIANS

Slicers

# Implementation Plan

# Prioritization

In addition to the foundational analysis (existing conditions, engagement) that helped to develop the facility recommendations, a quantitative process was created to help prioritize the identified projects. It included a detailed scoring process to assess each project on a wide variety of criteria derived in part by the responses from the interactive digital survey. The goal of the prioritization is to provide the Town with a guide and timeline for implementing the projects.

## Methodology

Using a quantitative methodology, projects were sorted into three prioritization tiers (short-term, mid-term, and long-term). In general, short-term projects are intended to be completed (or initiated) prior to mid-term and long-term projects. However, prioritization should be flexible to changes in available time, resources, and the Town's interests. The prioritization process consisted of assessing each project in three major categories. Each category was then broken down into different sub categories that were assessed individually for each project. Each category was applied a score and then weighted based on feedback from the public collected during the public survey to yield an overall weighted score for each project.

### Priority Zones

Priority zones were identified as general areas within the community that are desirable for enhancing connectivity to and within. Projects were assessed for whether or not they connected to or passed through one of the following zones:

- Commercial Areas
- Employment Areas
- Neighborhoods
- Downtown Pineville

### Priority Links

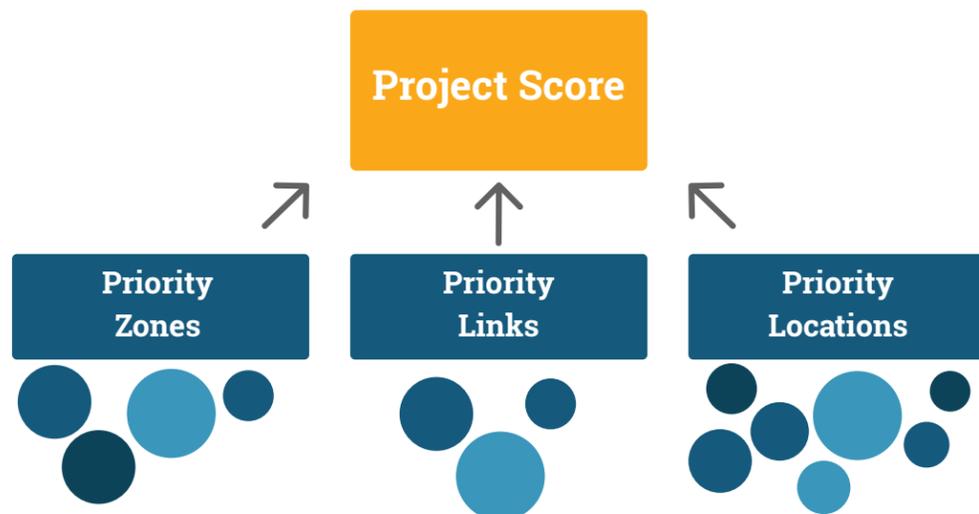
Priority links represent regional links that were identified as important destinations outside of Pineville. Projects were assessed for whether or not they provided direct or indirect connections to one of these three regional areas:

- Charlotte, NC
- Ballantyne (Area in Charlotte)
- York County, SC

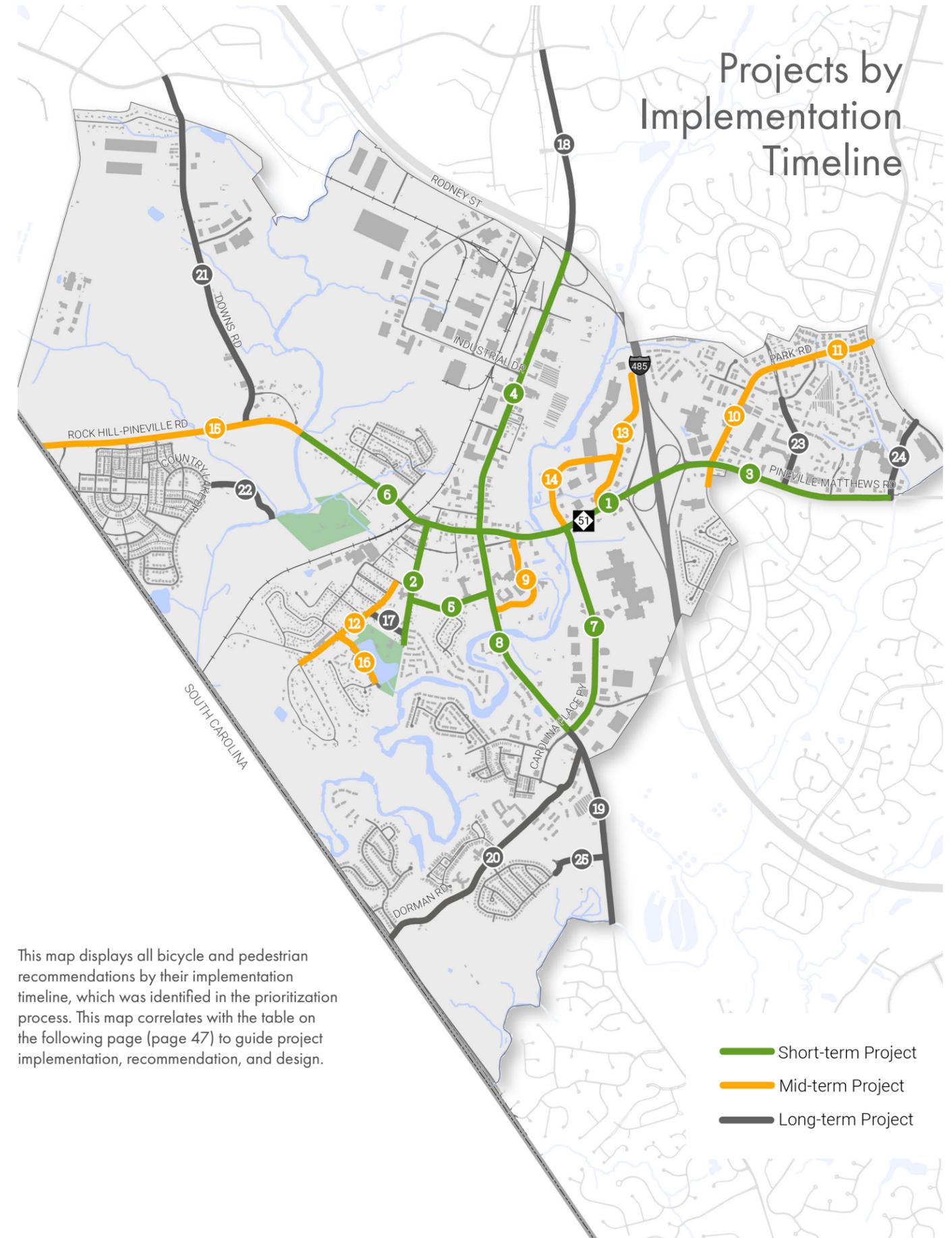
### Priority Locations

Priority locations were identified as community features that are destinations for Pineville residents in their daily lives. Projects were assessed for whether or not they provided connection to one of these key locations:

- Atrium Health
- Belle Johnston Community Center
- Carolina Place Mall
- Existing Transit Stops
- Future Transit Stops
- Jack D. Hughes Park
- Pineville Elementary



Public feedback determined the importance of each zone, link, and location



This map displays all bicycle and pedestrian recommendations by their implementation timeline, which was identified in the prioritization process. This map correlates with the table on the following page (page 47) to guide project implementation, recommendation, and design.

- Short-term Project
- Mid-term Project
- Long-term Project

# Prioritized Projects

The table below shows all bicycle and pedestrian corridor recommendations. The table details the results of prioritization by documenting the weighted scores for each priority zone, priority link, and priority location. The weights applied to each zone, link, and location were assigned based on feedback from the community collected in the public survey. The combination of these scores resulted in the final weighted score to help determine which implementation tier each project was sorted into. This list is meant to provide guidance for investment, if new information develops or if the community's and Council's priorities change, the projects' implementation timelines can shift.

<b>Short-term Within 10 Years</b>	<b>Mid-term Within 15 Years</b>	<b>Long-term Within 20 Years</b>
---------------------------------------	-------------------------------------	--------------------------------------

ID	Facility Name	Extents	Length (Miles)	Facility Type	Facility Name	Priority Zone Weighted Score	Priority Link Weighted Score	Priority Location Weighted Score	Final Weighted Score
1	NC 51 (Pineville-Matthews Road)	Polk Street and I-485	0.76	Multiuse Path	NC 51 (Pineville-Matthews Road)	3.5	4	7	5.21
2	Johnston Drive	NC 51 (Main Street) to End of Road	0.49	Sharrow	Johnston Drive	5.5	0	5	4.52
3	NC 51 (Pineville-Matthews Road)	I-485 and McMullen Creek Parkway	0.96	Multiuse Path	NC 51 (Pineville-Matthews Road)	5	4	3.5	4.16
4	South Boulevard/North Polk Street	I-485 and NC 51 (Main Street)	1.17	Multiuse Path	South Boulevard/North Polk Street	3.5	5.5	4	4.00
5	Lowry Street	Johnston Drive and South Polk Street	0.33	Multiuse Path	Lowry Street	3	0	6	4.00
6	NC 51 (Main Street)	Sugar Creek and Polk Street	0.83	Multiuse Path	NC 51 (Main Street)	4	0	5	3.93
7	Carolina Place Parkway	NC 51 and Lancaster Highway	0.86	Multiuse Path	Carolina Place Parkway	2	6	4.5	3.71
8	South Polk Street	NC 51 (Main Street) and Carolina Place Parkway	0.89	Multiuse Path	South Polk Street	4	0	4.5	3.69
9	Towne Centre Boulevard	NC 51 (Pineville-Matthews Road) to South Polk Street	0.44	Sidewalk	Towne Centre Boulevard	2	0	5.5	3.37
10	Park Road	Hunter Ridge Road and Park Cedar Drive	0.56	Bike Lane and Sidewalk	Park Road	2	6	3.5	3.24
11	Park Road	Park Cedar Drive and Johnston Road	0.40	Bike Lane and Sidewalk	Park Road	4	6	1.5	3.10
12	Lakeview Drive	Cone Avenue and Lynnwood Lane	0.51	Bike Lane	Lakeview Drive	3	0	4	3.06
13	Centrum Parkway	NC 51 (Pineville-Matthews Road) to End of Road	0.58	Bike Lane and Sidewalk	Centrum Parkway	2	0	4.5	2.90
14	Leitner Drive	NC 51 (Pineville-Matthews Road) to Centrum Parkway	0.50	Sidewalk	Leitner Drive	2	0	4.5	2.90
15	NC 51 (Rock Hill-Pineville Road)	Town Boundary and Sugar Creek	1.09	Bike Lane	NC 51 (Rock Hill-Pineville Road)	2.5	7	2	2.87
16	Lake Drive	Lakeview Drive and Parklake Drive	0.25	Sharrow	Lake Drive	3	0	3.5	2.83
17	Olive Street	Johnston Drive to Lakeview Drive	0.16	Sidewalk	Olive Street	3	0	2.5	2.36
18	South Boulevard	Westinghouse Boulevard and I-485	0.81	Multiuse Path	South Boulevard	2	7.5	1	2.27
19	Lancaster Highway	Carolina Place Parkway and McAlpine Creek	0.79	Multiuse Path	Lancaster Highway	2.5	4	1	2.00
20	Dorman Road	Lancaster Highway and Town Boundary	1.16	Bike Lane and Sidewalk	Dorman Road	3	3	0.5	1.83
21	Downs Road	NC 51 (Rock Hill-Pineville Road) and Westinghouse Boulevard	1.45	Paved Shoulder	Downs Road	1	3.5	2	1.81
22	New Greenway	Miller Glen Court to Sugar Creek	0.31	Greenway	New Greenway	1.5	0	2.5	1.77
23	Park Cedar Drive	NC 51 (Pineville-Matthews Road) to Feldfarm Lane	0.37	Sidewalk	Park Cedar Drive	2	0	1.5	1.50
24	McMullen Creek Parkway	NC 51 (Pineville-Matthews Road) to Johnston Road	0.32	Sidewalk	McMullen Creek Parkway	2	0	1	1.26
25	Green Birch Drive	Lancaster Highway to Green Birch Drive	0.22	Sidewalk	Green Birch Drive	1.5	0	0	0.60

*This list is meant to provide guidance for investment, if new information develops or if the community's and Council's priorities change, the projects' implementation timelines can shift.*

## Construction Impacts

An important part of project planning and development is understanding the impacts to traffic and mobility a project might have during construction. The tables at the bottom of this page list the projects in order from least to most anticipated impact during construction. Anticipated construction impacts are based on the recommended improvement type, the length of the project, and the expected type/level of traffic on each road. The impact level is a preliminary estimate and subject to change.

### Anticipated Construction Impact

Anticipated Construction Impact: **Low**

ID	Facility Name
2	Johnston Drive
16	Lake Drive
22	New Greenway
17	Olive Street
25	Green Birch Drive
9	Towne Centre Boulevard
14	Leitner Drive
23	Park Cedar Drive
24	McMullen Creek Parkway

Anticipated Construction Impact: **Medium**

ID	Facility Name
5	Lowry Street
12	Lakeview Drive
21	Downs Road
7	Carolina Place Parkway
11	Park Road
13	Centrum Parkway

Anticipated Construction Impact: **High**

ID	Facility Name
1	NC 51 (Pineville-Matthews Road)
3	NC 51 (Pineville-Matthews Road)
6	NC 51 (Main Street)
8	South Polk Street
10	Park Road
15	NC 51 (Rock Hill-Pineville Road)
18	South Boulevard
19	Lancaster Highway
20	Dorman Road
4	South Boulevard/North Polk Street

# Funding Options

Implementation requires taking advantage of federal, state, local, and private funding opportunities. As a municipality in a North Carolina metropolitan planning organization (MPO), the Town of Pineville can use federal and state funding that has been allocated to NCDOT Division 10 or to the Charlotte Regional Transportation Planning Organization (CRTPO). The Town's capital improvement program and private entities are other sources that can be used to implement the recommendations of the Pineville Mobility Plan. Some of these funding sources are summarized in the sections below.

## Fixing America's Surface Transportation (FAST ACT)

The most recent surface transportation legislation, Fixing America's Surface Transportation (FAST) Act, was passed in December 2015. It restructured several of the funding programs that were active in the previous legislation, Moving Ahead for Progress in the 21st Century (MAP-21). For the programs described below, the Town of Pineville would apply to the CRTPO for funding and provide a 20% local match.

### Surface Transportation Block Grant Program

MAP-21's Surface Transportation Program-Direct Attributable (STPDA) was changed to the Surface Transportation Block Grant Program (STBG) in the FAST Act. Municipalities within MPO study areas can submit projects for STBG funding through the MPO. Eligible projects include roadways, transit (operations excluded), bike facilities, pedestrian facilities, truck parking areas, and intelligent transportation systems (ITS) improvements.

### Transportation Alternatives

What was once the Transportation Alternatives Program (TAP) is now a set-aside under STBG called Transportation Alternatives (TA). Eligible projects include pedestrian and bicycle facilities, recreational trails, and Safe Routes to School (SRTS) projects. Municipalities can apply for Transportation Alternatives funding in the same way they would apply for STBG funding.

### Metropolitan Planning

The FAST Act maintains MAP-21's metropolitan planning funding program. Jurisdictions that are members of an MPO can apply for this funding for planning studies. Localities must provide a 20% local match and can only use the funding on planning studies.

### BUILD Discretionary Funds

Started in 2018 to replace the Transportation Investment Generating Economic Recovery (TIGER) grant program, the Better Utilizing Investments to Leverage Development (BUILD) grant program is a highly competitive program that aids in funding multimodal, multi-jurisdictional projects that are often difficult to fund with traditional funding strategies. BUILD grants can be used for capital projects that generate economic development and improve access to safe and affordable transportation alternatives.

## NCDOT Strategic Mobility Formula

NCDOT receives and allocates federal funding using their Strategic Mobility Formula, established by the Strategic Transportation Investments law passed in 2013. The Strategic Mobility Formula is a data-driven and performance-based process of prioritizing projects for federal and state funding and it updates NCDOT's 10-year State Transportation Improvement Program (STIP) every two years. Projects in the first five years of the STIP have been committed for funding and construction, while projects in the last five years of the STIP are reevaluated every two years using the Strategic Mobility Formula. Within the Strategic Mobility Formula, transportation projects are grouped into three separate funding categories: division needs, regional impact, and statewide mobility. All bicycle projects are considered division needs and are only eligible for funding that has been allocated for division needs projects. The Town of Pineville can coordinate with CRTPO to submit bicycle facility projects for prioritization for funding. Projects identified in this Mobility Plan would be eligible for Strategic Mobility Formula Funding.

### Powell Bill Funds

North Carolina's state street-aid program, also known as the Powell Bill program, provides funding for eligible municipalities based on population and mileage of locally-maintained roadways. The primary function of the Powell Bill program is to assist municipalities in funding local street resurfacing, but the funds may also be used for planning, constructing, and maintaining bikeways, greenways, and sidewalks. Powell Bill funds could be pursued as a match for future updates of this Plan. In the Fiscal Year 2020, the Town of Pineville received approximately \$180,000 in Powell Bill Funding.

### Capital Improvement Program

In future fiscal years, the Town should consider including projects from this plan to be allocated funds from the Capital Improvements Program.

### Transportation Bonds

Transportation bonds generate revenue from a tax increase on property values. In North Carolina, bond referendums must be approved by the local council and then included on the ballot to be voted on by residents. Transportation bonds can include roadway, bicycle facility, and sidewalk projects.

### Private Developments

The Town's zoning and subdivision ordinances require private developers to include pedestrian infrastructure in their site plans. Adding a requirement for bicycle infrastructure will help the Town build out the this Plan's facility recommendations. Pedestrian and bicycle infrastructure requirements can include on- and off-street facilities as well as bicycle parking or pedestrian benches.

### Non-Profit Organizations

Non-profit organizations, such as many healthcare organizations, bicycle advocacy organizations, and community funds, are potential sources of funding for bicycle facilities. PeopleForBikes awards grants through their Community Grant Program. Grant amounts can be up to \$10,000 per project, can't be more than 50% of the project cost, and can be awarded to local governments or non-profit organizations. This has been used successfully in some communities for projects that implement bike paths, lanes, trails, bridges, and bike racks.

### NCDOT Highway Maintenance Improvement Program

The state's Highway Maintenance Improvement Program (HMIP) details a five-year maintenance plan that covers pavement rehabilitation and resurfacing. Roads scheduled to be improved under this plan are excellent candidates for coordinated bicycle improvements, especially bike lanes and shared lane markings that require no change to existing right-of-way. Pineville should monitor the HMIP and coordinate with local NCDOT representatives to discuss coordinated improvements.



# Policies and Programs

# Recommendations

The Pineville Mobility Plan includes a variety of on- and off-street recommendations. Beyond those facilities, the Town and its local and regional partners can undertake programmatic efforts to improve conditions for walking and bicycling. These efforts include creating programs or organizing events to promote and encourage walking and bicycling; educating motorists, pedestrians, and bicyclists about how to safely and legally navigate the Town together; and creating policies that ensure bicycling, walking, and public transportation are recognized as valid modes of transportation and as contributors to the Town’s economic engine.

## Categories

The policies and programs recommended in this plan fit under six categories. These categories were developed based on feedback from the public collected during the second online survey.

Multimodal Policy

Design Guidelines

Promotion and Awareness

Local Events

Transit Access

Monitoring & Assessment

## Characteristics

Different actions require various levels of resource allocation (i.e., cost, time). Likewise, some actions will have a greater impact on bicycling and walking in Pineville than others. These three characteristics—cost, time, and impact—are presented for each policy or program on a “low-to-high” scale of 1 to 5. For instance, a policy with a cost score of 1 and an impact score of 5 indicates a low-cost policy with high impact.



## Guiding Priorities

In addition to the characteristics, each guiding priority that the policy or program addresses is identified in the following tables.



# Policies

## Multimodal Policy

Blend bicycle, pedestrian, and transit considerations into the development process, Traffic Impact Assessment process, and roadway improvement process to ensure future development projects include appropriate facility improvements.

Policy	Cost	Time	Impact						
Ensure future roadway improvements include suitable bicycle and pedestrian facilities in accordance with the Pineville Mobility Plan.	1	2	5						
Blend bicycle and pedestrian considerations into the Traffic Impact Assessment process.	1	2	4						
Schedule coordination meetings between the Planning & Zoning and other Town departments.	1	2	4						
Adopt a local Complete Streets and Traffic Calming Policy.	2	3	5						

## Design Guidelines

Update street design guidelines and traffic calming policies to accommodate a safe and convenient multimodal system.

Policy	Cost	Time	Impact						
Establish guidelines for the installation of bicycle parking, sharrows, and signage that create safer spaces for cyclists and pedestrians.	1	1	3						
Update UDO requirements and street design guidelines and other policies to accommodate a safe and convenient bicycle and pedestrian system.	2	2	4						
Coordinate street design beyond the Town’s boundary to ensure consistency in design and facility type for all users.	1	2	3						

## Promotion and Awareness

Seek opportunities to identify funding sources and market Pineville as a multimodal-friendly community (e.g., education in schools, Safe Routes to Schools, League of American Bicyclists, mobility-friendly business program).

Policy	Cost	Time	Impact						
Publicize, promote, and present the Pineville Mobility Plan to the public.	1	1	4						
Establish a page on the Town's website that can be used by the community as a resource for understanding where current bicycle and pedestrian facilities are and where future facilities may be.	2	3	5						
Utilize social media to promote local events as being accessible via biking, walking, and transit.	1	1	3						
Identify regional, state, and federal funding opportunities to implement multimodal improvements.	1	2	5						

## Local Events

Infuse bicycling, walking, and transit promotion into local events such as festivals, races, open streets, etc.

Policy	Cost	Time	Impact						
Create events to promote National Bike Month, Bike to Work Day, and host pedestrian and bicycle safety events.	2	4	3						
Plan and execute Open Streets events.	3	5	3						
Establish a Safe Routes to Schools (SRTS) task force.	1	5	4						

## Transit Access

Use policy to promote developments and transportation projects that provide safe and equitable access to transit options via all travel modes.

Policy	Cost	Time	Impact						
Prioritize development of projects that fill in biking and walking gaps in access to transit stops.	1	1	5						
Use the transit analysis within the Pineville Mobility Plan to create an action plan to improve existing transit stop amenities.	2	3	5						
Continue to collaborate with the CATS to encourage improvements of key stops.	1	2	4						
Prioritize first/last mile connections to future LYNX Blue Line stations.	2	3	5						

## Monitoring & Assessment

Use performance metrics, such as bicycle and pedestrian counts, bicycle parking utilization, and transit ridership, to monitor the use of the system over time.

Policy	Cost	Time	Impact						
Use performance metrics, such as counts for biking and walking, crash frequencies, bicycle parking utilization, and transit ridership to monitor the use of the system over time.	2	4	4						
Develop an action plan to create and maintain a list of opportunities to locate, design (incorporating local art where possible), and fund bicycle parking.	1	3	4						
Continue to monitor changes in project prioritization at the regional and state levels.	1	1	3						



In completing this Plan, the Town of Pineville is recognizing the importance of providing safe and comfortable pedestrian and bicycle facilities throughout Town. The recommendations detailed in this Plan provide Pineville residents connections to their local community within Town and access to destinations through the region. Multimodal travel contributes to a community's vibrancy by improving the Town's safety, health, economy, environment, and livability. The Pineville Mobility Plan provides the foundation and action plan to achieve this goal. Through the hard work and dedication of Town officials, community advocates, and planners and with this Plan as a guide and a tool for advocacy, Pineville is well on the way to providing a safe, healthy, and comfortable mobility system for residents of all ages and abilities.

# Conclusion