



# TOWN OF LAUREL PARK PEDESTRIAN AND BICYCLE PLAN

PREPARED FOR:



PREPARED BY:

**Kimley»Horn**

MAY 2018 | FINAL

# ACKNOWLEDGMENTS

The Town of Laurel Park Pedestrian and Bicycle Plan is the direct result of a collaborative effort between the North Carolina Department of Transportation, Town of Laurel Park, and Blue Ridge Bicycle Club. We extend our sincere appreciation to the residents, business owners, elected officials, and stakeholders who participated in the planning process and guided the development of this plan. Everyone's time, input, and energy are greatly appreciated. A special thank you is extended to those who participated on the Steering Committee, listed below.

## STEERING COMMITTEE

The Steering Committee is made up of local residents, Town staff, community leaders, and advocates for multimodal transportation.

Alison Alexander	Town of Laurel Park, Town Manager
Catherine McCarthy Banta	Resident
George Banta	Town of Laurel Park, Town Council
Steve Cannon	NCDOT Division 14
Brion Dixon	Resident
Robyn Dixon	Resident
Andrew Griffin	Town of Laurel Park, Public Works Director
Daniel Heyman	City of Hendersonville
Mary Highberger	Resident
E.K. Morley	Resident
Carey O'Cain	Town of Laurel Park, Mayor
Roy Riley	Resident
Joe Sanders	Blue Ridge Bicycle Club, Vice President
Nick Scheuer	NCDOT Division of Bicycle and Pedestrian Transportation
Tim Towner	Town of Laurel Park, Parks and Greenways Board
Tristan Winkler	French Broad River Metropolitan Planning Organization
Alfred Zalys	Resident



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This project was made possible through NCDOT Bicycle and Pedestrian Transportation Division's Planning Grant Initiative and local match from the Blue Ridge Bicycle Club.

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# EXECUTIVE SUMMARY

Promoting and encouraging multimodal travel has become a major priority for the Town of Laurel Park and for communities across the region, the state, and the country. Recognizing that walking and bicycling—both as a form of transportation and as a recreational activity—can benefit the Town’s mobility, safety, health, economy, environment, and quality of life, the Town of Laurel Park applied for a grant through the North Carolina Department of Transportation Division of Bicycle and Pedestrian Transportation (NCDOT-DBPT) Planning Grant Initiative. The planning grant along with a match from the Blue Ridge Bicycle Club funded the development of this plan.

The development of the Pedestrian and Bicycle Plan was spearheaded by a project team consisting of planners, engineers, bicycling advocates, citizens, and Town staff. A 17-person steering committee met four times over the course of the Plan’s development, setting and refining the Plan’s direction to reflect the needs and desires of the community. Public input was a critical element of the planning process, and public engagement strategies included two public workshops, two online surveys, and a public hearing. Ultimately the overarching and aspirational vision of the Town of Laurel Park Pedestrian and Bicycle Plan is that:



**In the Town of Laurel Park, residents and visitors will have the option to walk or ride a bicycle for transportation, recreation, and exercise. Bicycling and walking in the Town will be safe and convenient for everyone.**

The Town of Laurel Park Pedestrian and Bicycle Plan consists of five major elements, followed by an Appendix. The Pedestrian and Bicycle Plan begins with an introduction of Laurel Park and the impetus behind the creation of the Plan, followed by a look at the demographic, operational, and administrative characteristics of the Town. The Outreach chapter presents a synthesis of the input contributed by those who participated in the Plan’s public outreach activities. The Recommendations chapter details the facility, policy, and program recommendations to accomplish the Pedestrian and Bicycle Plan’s vision, and the Call to Action chapter provides a framework that describes a timeline of strategies and highlights the parties who will be responsible for implementing those strategies. Summaries of each chapter are shown on the following page.

## INTRODUCTION

The Introduction chapter of the *Town of Laurel Park Pedestrian and Bicycle Plan* presents the timeline of the planning process, starting with the project kick-off in October 2016 and ending with adoption of the Plan by the Town Council. This chapter also introduces the Plan's vision statement and goal statements, and describes how the vision of a more bicycle friendly Laurel Park would benefit residents, business owners, and visitors alike.

## EXISTING CONDITIONS

The Existing Conditions chapter defines the starting point for the Pedestrian and Bicycle Plan. The chapter begins with a look at the demographic and commuting characteristics of Laurel Park's residents. The chapter then transitions to an exploration of Laurel Park's transportation network in both driving and multimodal contexts. The chapter concludes with a recognition of existing policies and programs impacting biking and walking in Laurel Park today and an inventory of previous planning efforts that set the stage for the Pedestrian and Bicycle Plan.

In the Town of Laurel Park today, residents are very active both walking and biking around Town. Laurel Park is largely composed of retirement aged individuals (median age of 59) and those cycling and walking are doing so primarily for recreation or exercise. While the Town doesn't boast extensive infrastructure for bicycling and walking, low traffic volumes and travel speeds allow most residents to feel safe walking in the roadways. Additionally, the Town's commitment to supplying bicycle and pedestrian amenities such as benches and bicycle racks helps encourage residents to walk and bike.

## OUTREACH

The Outreach chapter describes the Pedestrian and Bicycle Plan's public engagement process and highlights key findings. The Plan's public engagement included four meetings with the steering committee, two online surveys, two public workshops that emphasized issues identification and project prioritization, and a public hearing.

Over the course of the planning process the project team interacted with 73 individuals at two public workshops and received 121 online survey responses.

## RECOMMENDATIONS

The Recommendations chapter comprises three sections: an overview of the bicycle facility planning process, project profiles for four projects, and a compilation of program and policy recommendations. The project profiles include information about planning level cost estimates, outreach rank, key connections, and challenges and opportunities associated with each project. The program and policy recommendations consist of encouragement, educational, and administrative improvements to enhance the Town's pedestrian and bicycle friendliness. The map to the right displays the facility recommendations from this plan.

As a part of the outreach element, the project team heard from Town residents that mapping and wayfinding signs were the most desirable improvements. As a result, maps were created as a part of this plan outlining bicycle routes and walking paths throughout the Town. The maps also highlight the historical markers, parks, and parking facilities.

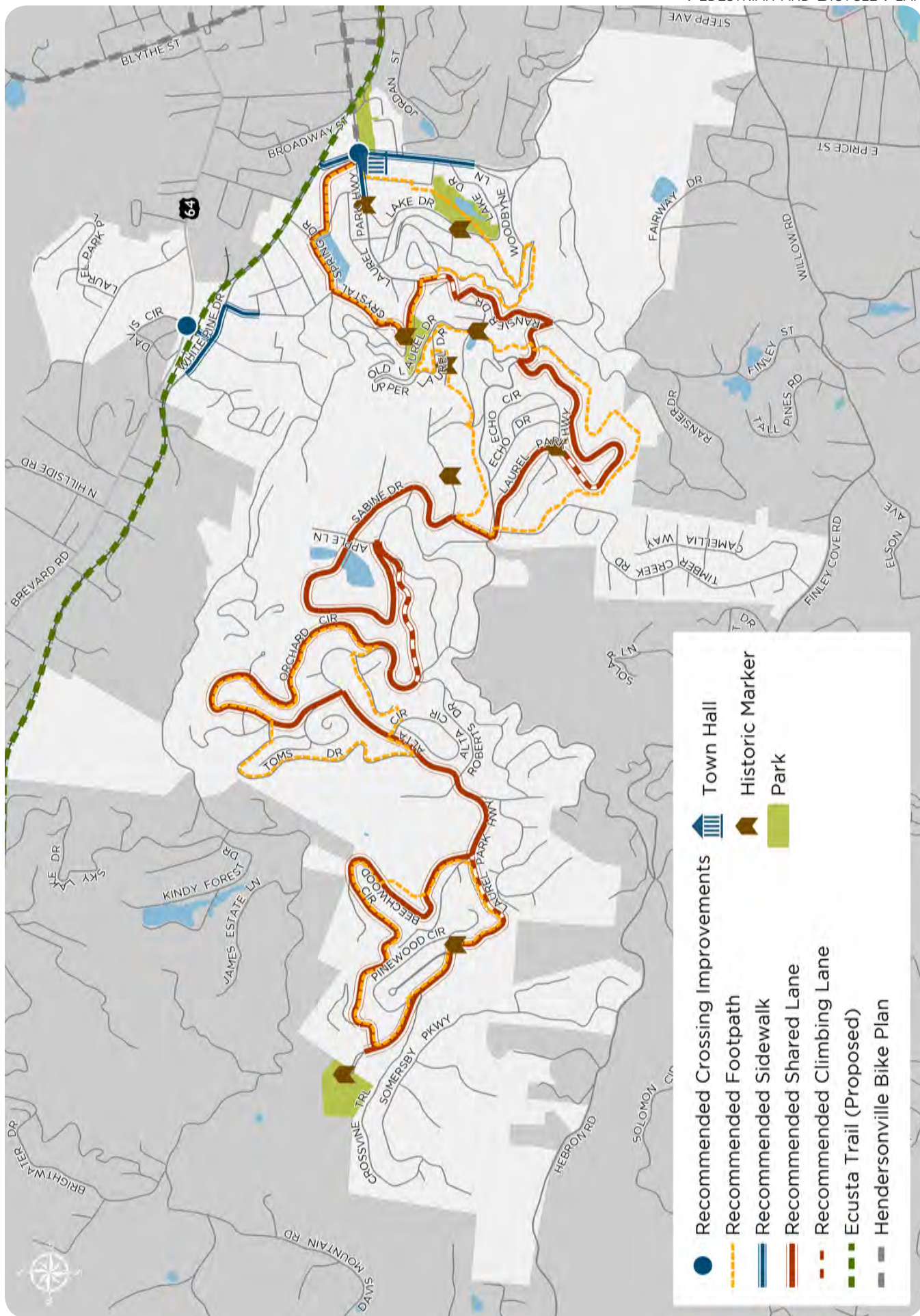


## CALL TO ACTION

The Call to Action chapter defines actionable steps for the Town of Laurel Park and its partners in the short-, mid-, and long-term to accomplish the Pedestrian and Bicycle Plan's vision. This action plan is supported by an organizational framework that indicates how the Town's partners will be involved; information regarding local, state, federal, and private funding sources; suggestions for ways to measure the performance of the Plan or its individual facility recommendations; and a listing of guidance documents for the planning and design of bicycle facilities.



Facility Recommendations



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# INTRODUCTION



*Numerous studies have documented the benefits of walking and biking. As a society we've sought to reclaim the nostalgia of places that are both accessible and convenient to walk or bike to and from and yet most people find themselves dependent on cars for the majority of their mobility. This is one of the reasons people gravitate towards communities like Laurel Park. Its small-town charm and human scale are attractive and comfortable. Laurel Park, like many communities, understands this benefit and is taking measures to ensure that the experience of living in this place continues to reflect the character of its values.*

## BACKGROUND

In the quest for an improved quality of life, towns now strive to provide livable communities that balance travel between modes. A common theme of any livable community is how well it accommodates pedestrians and cyclists. Taking trips by bike or on foot improves the environment, promotes good health, saves money, eases the burden on roadways, and enhances the livability of a community.

The *Town of Laurel Park 2016-2026 Comprehensive Plan* has two primary transportation goals, each of which include action items that support prioritizing both pedestrian and bicycle facilities and connectivity:

**Goal 6-1:** Laurel Park has a well-maintained and safe roadway network for all users.

**Goal 6-2:** Laurel Park residents have multi-modal transportation choices.

The *Town of Laurel Park Pedestrian and Bicycle Plan* aims to address these goals as well as several travel challenges expressed in the *Comprehensive Plan*. This plan takes the concerns and strategies outlined in the *Comprehensive Plan* a step further and helps set the stage for improving walking and bicycling conditions in the Town by providing practical facility and program recommendations.

The development of the *Town of Laurel Park Pedestrian and Bicycle Plan* was funded through a grant awarded by the North Carolina Department of Transportation Division of Bicycle and Pedestrian Transportation (NCDOT-DBPT) through its Planning Grant Initiative and a local match provided by the Town of Laurel Park and the Blue Ridge Bicycle Club. Through the Planning Grant Initiative, NCDOT-DBPT encourages the development of bicycle and pedestrian plans at the municipal level by offering planning grants, totaling nearly \$4.6 million across 186 municipalities since 2004.

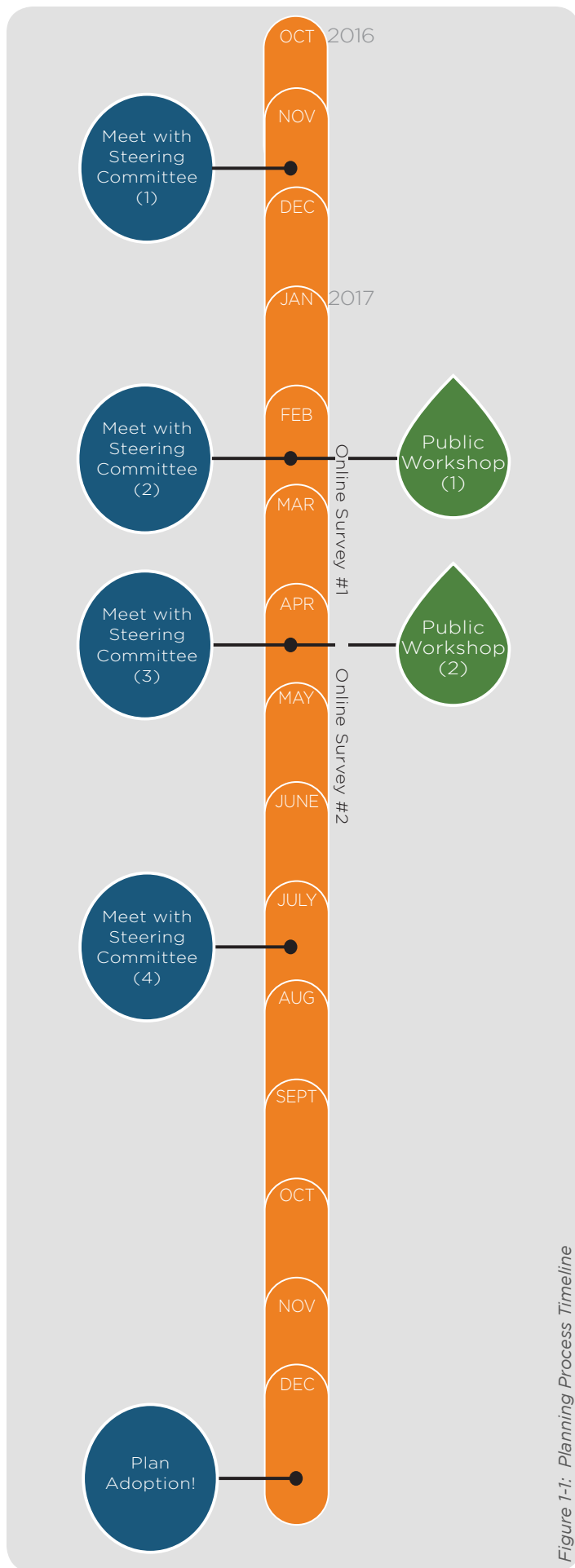


Figure 1-1: Planning Process Timeline



## PLANNING PROCESS

The planning process began in October 2016 with an exploration of existing conditions and a multi-faceted outreach campaign. The approach was simple: to create a plan with practical recommendations that respond to the needs of the Town. The underlying philosophy was based on the belief that planning should be done by community leaders, citizens, and stakeholders. Participants should value the process and support the outcome, but also have a clear understanding of what it takes to execute and achieve the desired plan.

The Town of Laurel Park and the Village of Flat Rock planning processes were occurring concurrently and on the heels of the *Hendersonville Bicycle Plan*. This offered the three municipalities the unique opportunity to ensure that the plans aligned and helped create a regional network of bicycle and pedestrian facilities.

## VISION STATEMENT

In the Town of Laurel Park, residents and visitors will have the option to walk or ride a bicycle for transportation, recreation, and exercise. Bicycling and walking in the Town will be safe and convenient for everyone.

## GOAL STATEMENTS

The Town of Laurel Park will strive to

- leverage existing walking trails and historic markers to increase awareness of pedestrians.
- increase roadway safety with well-designed and strategically placed climbing lanes.
- enhance the Town's wayfinding with maps and signage.



*Laurel Park residents enjoy a walk around the walking path in Laurel Green Park.*



*Cyclists traveling on Laurel Park Highway to the popular Jump Off Rock.*

## BENEFITS OF WALKING AND BIKING

Walking and biking as a means of both transportation and recreation can benefit the Town of Laurel Park's mobility, safety, health, economy, environment, and quality of life. These benefits are describe in the following pages.

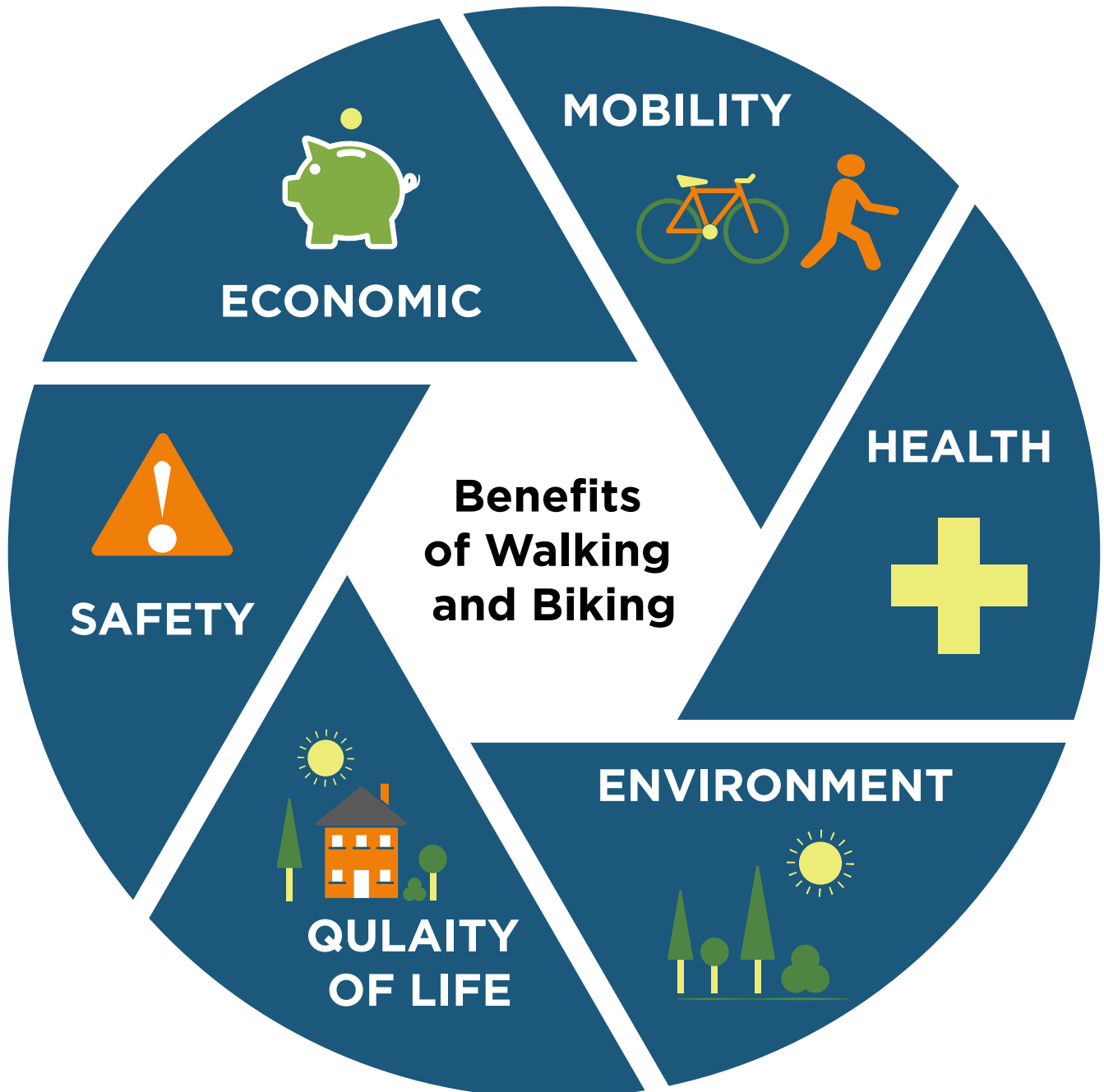


Figure 1-2: Benefits of Walking and Biking



## MOBILITY

Mobility is the equitable availability of transportation options for everyone. By providing the appropriate facilities, communities allow people to choose how they want to travel. For those who do not have the option to drive, such as adolescents, elderly, those unable to afford a car, and people with certain disabilities, this lack of choice in transportation creates an inconvenient and socially unjust barrier to mobility.

In 2012, the Alliance for Biking and Walking reported that an estimated 40% of all trips, both commute and noncommute, taken by Americans are less than two miles, equivalent to a 10-minute bike ride or 30-minute walk; however, just 13% of all trips are made by walking or bicycling nationwide<sup>1</sup>.

## SAFETY

Safe travel conditions result from effective design, enforcement, and education. While several Laurel Park residents reported feeling relatively safe walking and biking in Town even given the limited infrastructure, steps can still be taken to further improve safety. In 2015 the National Highway Traffic Safety Administration (NHTSA) reported 5,376 pedestrian fatalities on U.S. Roadways<sup>2</sup>. This count is a 10% jump from the total number of pedestrian deaths in 2014.

Officials at the national and state levels are taking great strides to improve bicycle and pedestrian safety. At the 2015 Summit for Safer People, Safer Streets, the United States Department of Transportation (USDOT) launched the Mayor's Challenge for Safer People, Safer Streets. The Mayor's Challenge can be undertaken by any municipality regardless of size, and involves local elected officials to take three simple steps: issue a public statement about the importance of biking and walking, form a local advocacy team, and take action on one of the seven shared challenges<sup>3</sup>. Challenges range from complete streets design to encouragement and enforcement of rules of the road.

The North Carolina Department of Transportation (NCDOT) is also making great strides in increasing awareness of pedestrian and bicycle safety with the Watch For Me NC program. Watch for Me NC aims to use education, community engagement, and high visibility enforcement to reduce the occurrence of pedestrian and bicycle injuries and fatalities<sup>4</sup>. Communities must apply to become a Partner Community, but once selected receive additional support and training from NCDOT.

## ECONOMIC

Walking and cycling are affordable modes of transportation. Car ownership is expensive, and consumes a major portion of many family incomes. When safe facilities are provided for pedestrians and cyclists, people can walk more and spend less on transportation, meaning they have more money to spend on other things. Additionally, the growth of bicycle tourism offers Laurel Park the opportunity to attract bicyclists and in turn increase the sales revenue of local businesses.<sup>5</sup>

The Political Economy Research Institute at the University of Massachusetts reports that investments in bicycle and pedestrian infrastructure yield higher levels of job creation than improvements to roadway infrastructure alone<sup>6</sup>. The graphic below shares the number of jobs created per \$1 million spent on the project.

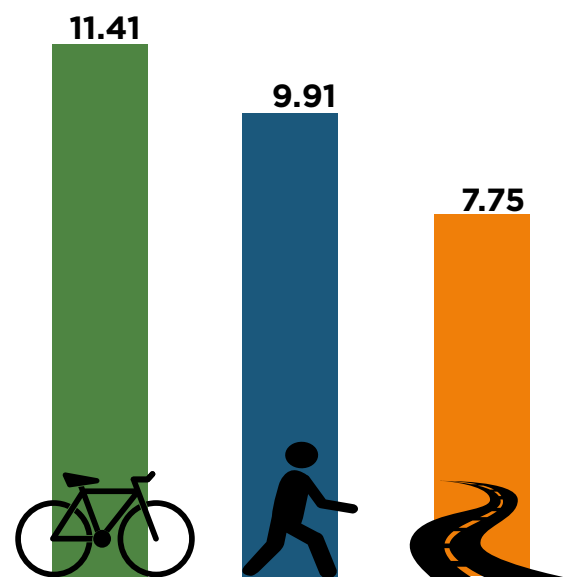


Figure 1-3: Jobs created per \$1 million spent on projects

## HEALTH

Walking and bicycling are forms of physical activity that can be accomplished by most citizens. Regular physical activity helps prevent or reduce the risk of heart disease, obesity, high blood pressure, type 2 diabetes, osteoporosis, and mental health problems such as depression.

In 2015, the Center for Disease Control (CDC) reported that 30.1% of North Carolina adults were obese. Additionally, in 2012 North Carolina medical costs related to physical inactivity accounted for \$3.67 billion<sup>7</sup>. However, investment in bicycle and pedestrian facilities can reduce the amount spent on medical costs. A 2005 study completed by CDC researchers in Atlanta, Georgia found there was an average \$2.94 medical savings return for every \$1 spent on bicycle and pedestrian infrastructure<sup>8</sup>.

## ENVIRONMENT

Environmental stewardship holds the community accountable in protecting natural resources. More people walking and riding bikes can result in lower levels of motor vehicle emissions, cleaner air, and stronger preservation of streams and natural spaces. In addition to air pollution, more individuals opting to bike and walk can reduce noise pollution. A research article in the Journal of the American Planning Association found a 5% increase in walkability to be associated with a 32.1% increase in active travel (biking or walking), 6.5% fewer vehicle miles traveled, 5.6% fewer grams of oxides of nitrogen emitted, and 5.5% fewer grams of volatile organic compounds emitted per capita<sup>9</sup>.

## QUALITY OF LIFE

The walkability and bikeability of a community is an indicator of its livability. This factor has profound impact on attracting businesses and workers as well as tourism. In cities and towns where people can regularly be seen out walking and biking, there is a sense that these areas are safe and friendly places to live and visit. By providing appropriate bicycle and pedestrian facilities, communities enable the interaction between neighbors and other citizens that can strengthen relationships and contribute to a healthy sense of identity and place.



# EXISTING CONDITIONS



*Early in the planning process an effort was made to observe, identify, and inventory existing conditions. The project team focused on information relevant to walkability and bikability with an emphasis on demographics, physical features, local attractions, and barriers. Existing conditions are summarized on the following pages.*

## DEMOGRAPHICS AT A GLANCE

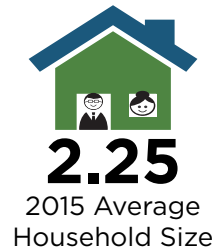
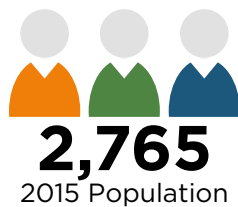
### POPULATION

The population estimate for Laurel Park in 2016 was 2,765 according to the U.S. Census 2015 American Community Survey. The median age of Laurel Park residents is 59. The median age for the Town is significantly higher than that of Henderson County (46) and North Carolina (36).

### INCOME

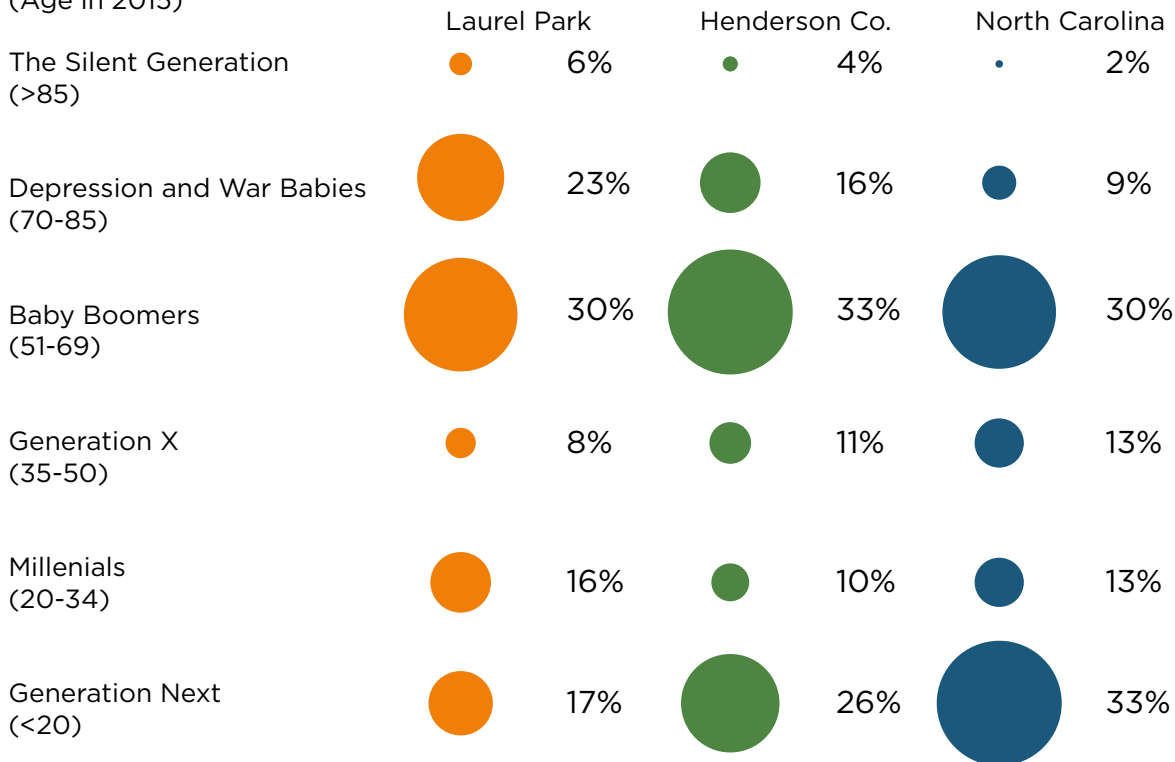
The median household income in the Town of Laurel Park is approximately \$57,000, which is higher than both the median household incomes of Henderson County (\$46,448) and North Carolina (\$46,868). Additionally, only 5.6% of households in Laurel Park are below the federal poverty line, in comparison to 13.8% and 17.4% in Henderson County and North Carolina, respectively.

## Population & Household Characteristics



### Age Cohorts

(Age in 2015)



## Income & Education Characteristics

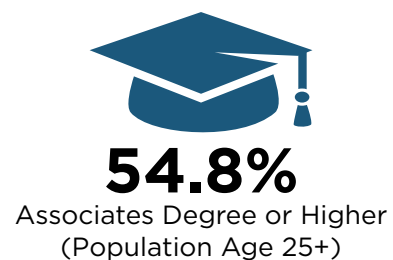
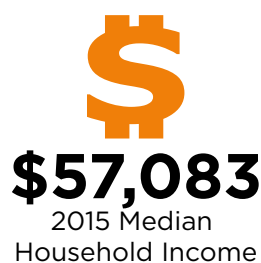


Figure 2-1: Population and Household Characteristics





## COMMUTING AT A GLANCE

Commuting to work or school is a major consideration for transportation planners, as commute trips generally occur when streets are the most congested. While commute data captured by the American Community Survey is fairly limited and does not effectively reflect commuters who use different modes throughout the week, throughout the day, or even within the same trip, the information still provides insight into commuters' primary mode of transportation.

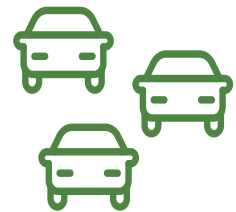
## TRAVEL TO WORK

Of the working population in Laurel Park (34%), many commute to other parts of Henderson County and Western North Carolina. The low working population in Laurel Park is reflective of the high quantity of retired residents.

# Commute Characteristics



**21.8 min.**  
Mean Commute Time to Work



**0%**  
Zero-Vehicle Households

**19.7%**  
Single-Vehicle Households

**80.3%**  
Two or More Vehicle Households

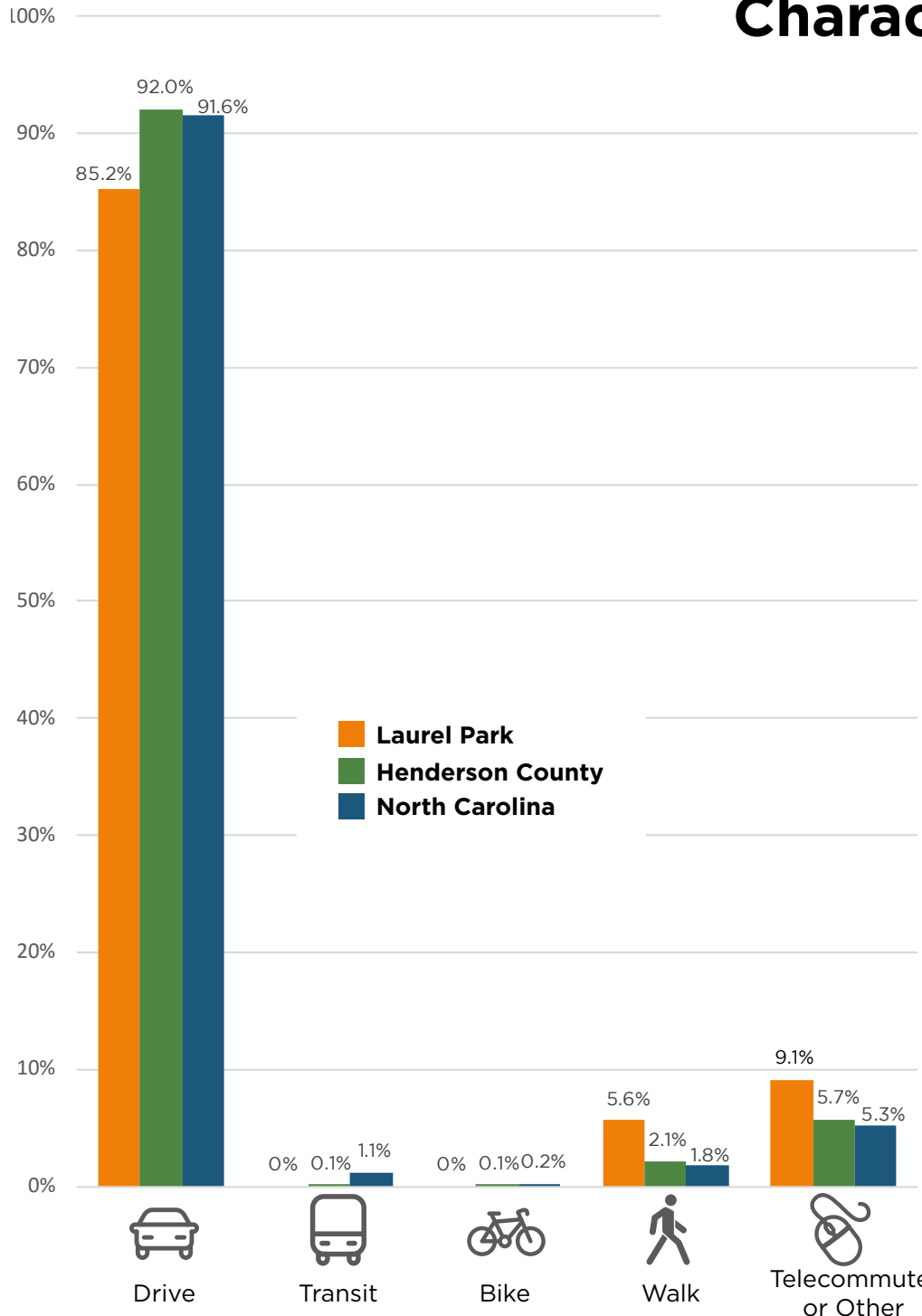


Figure 2-2: Commute Characteristics

## EXISTING FACILITIES

### STREET NETWORK

Laurel Park contains nearly 33 miles of paved two-lane mountain roads. Of the 33 miles, only 3 miles are state-maintained by the North Carolina Department of Transportation (NCDOT). With the exception of US 64 (Brevard Road), all roads within Laurel Park are signed at or below 35 mph.



*Sidewalk in front of Laurel Green Park*

### CRASH STATISTICS

NCDOT documents and makes available crashes reported along state-maintained roadways. While this dataset doesn't include crashes that occur on local streets and does not reflect the frequency of close calls or near misses, it still provides insight into the state-maintained road network. Between September 2013 and August 2016, 10 vehicle crashes occurred on state-maintained roadways.

### SIDEWALK NETWORK

There are very limited sidewalk facilities currently constructed in Laurel Park. These sidewalks are located on the southern side of Laurel Park Highway/5th Avenue leading into the City of Hendersonville, as well as within the Laurel Park Place Subdivision. While the amount of available sidewalk is limited, this does not hinder residents from getting out and walking around Town. Many residents shared that with the exception of a few roads, they are comfortable walking in the travel ways.

### BICYCLE NETWORK

While Laurel Park is a popular destination for bicyclists, no exclusive on-street facilities exist. Henderson County Route 3, the 14 mile West-East Connector travels through Laurel Park along Davis Mountain Road, Crystal Spring Drive, and Canal Drive before heading into Hendersonville via 5th Avenue.

### SIGNED WALKING PATHS

The Laurel Park Civic Association in partnership with the Parks and Greenways Board has developed and began signing 4 walking paths that use existing low-traffic, low-speed roadways. Additionally, Jump Off Rock is home to 3 natural surface hiking trails.

The Town of Laurel Park has roughly 1.7 miles of Town-maintained gravel roads that comprise sections of the walking routes.



*Walking Path Marker*

### TRANSIT SERVICE

The Town of Laurel Park has access to transit service provided by Apple Country Transit. Apple Country Transit Route 1 provides access to activity centers such as Downtown Hendersonville, Pardee Memorial Hospital, and Highlands Square Shopping Center. Transit stops accessible from Laurel Park are located at the Laurel Park Shopping Center (Ingles) and Miller's Laundry & Cleaners.

#### READ MORE:

<http://www.hendersoncountync.org/planning/actransit/mapsandschedules.html>



## BICYCLE AND PEDESTRIAN AMENITIES

The Town of Laurel Park has successfully provided several bicycle and pedestrian amenities for use by residents and visitors. The Town has installed two bicycle racks, one at Jump Off Rock and one at Laurel Green Park. Plans are in place for additional bike racks to be installed in Rhododendron Lake Nature Park and at Town Hall. Additionally, the Laurel Park Civic Association has placed nearly 25 benches around Town to provide pedestrians the opportunity to rest.

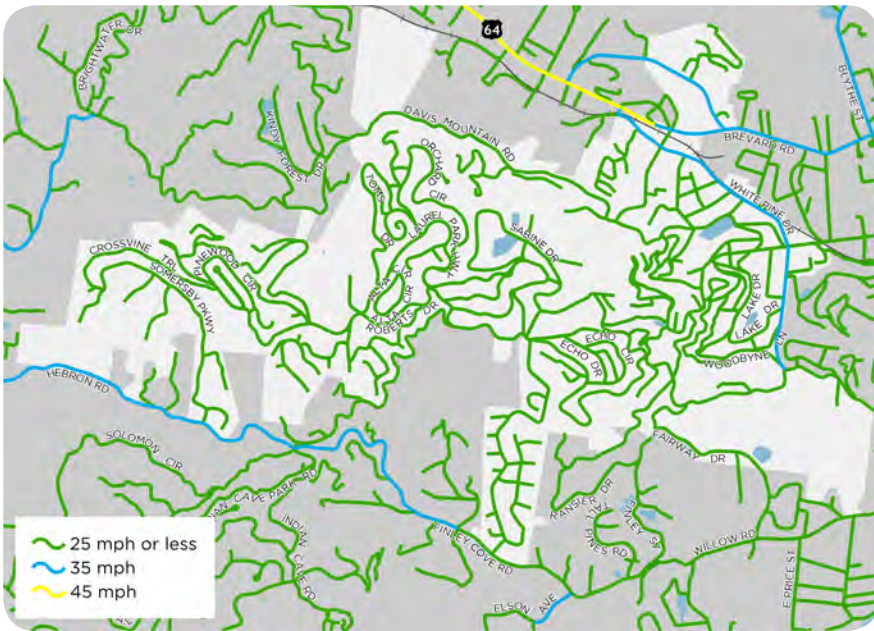


Bench at Jump Off Rock



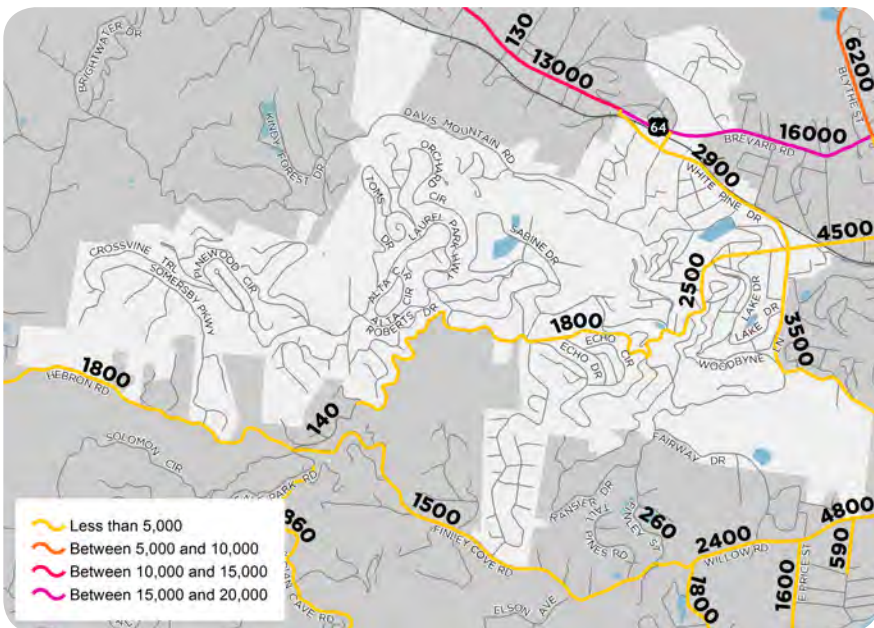
Bicycle Rack at Jump Off Rock





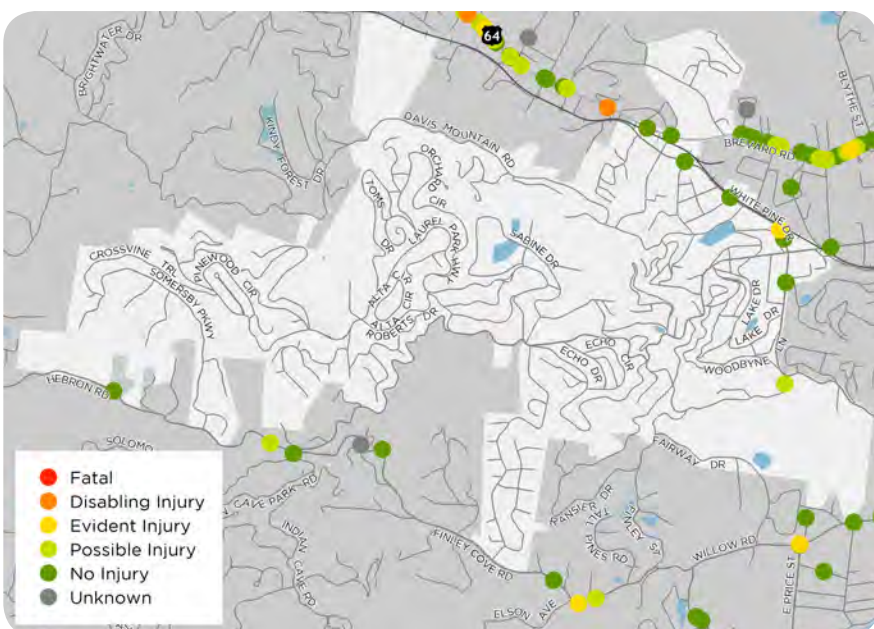
Map 2-1: Posted Speed Limits

While posted speed limits aren't exactly indicative of actual travel speeds, they do provide general information about the prevailing travel speeds. In 2014 The University of North Carolina Highway Safety Research Center published data about the relationship between pedestrian fatalities and speed limits. The report shared that 1% of pedestrians struck on roads with speed limits of 25 mph or lower were killed and 4% on 30-35 mph roads. The likelihood of a pedestrian being killed rose to 12%, 21%, and 36% on roads with speed limits of 40-45 mph, 50-55 mph, and 60-75 mph, respectively<sup>10</sup>.



Map 2-2: Traffic Volumes on State-Maintained Roadways

The highest traffic volumes in Laurel Park occur along US 64 and White Pine Drive. Traveling along major corridors such as these can subject pedestrians and bicyclists to high levels of stress since the routes have little to no dedicated pedestrian and bicycle infrastructure, higher traffic volumes, and higher travel speeds. The majority of roads in Laurel Park are neighborhood streets and have very low traffic volumes.



Map 2-3: Crash History (Sept 2013 - Aug 2016)

The North Carolina Department of Transportation (NCDOT) documents and makes available crashes reported along state-maintained roadways. While this dataset doesn't include crashes that occur on local streets and does not reflect the frequency of close calls or near misses, it still provides insight in highlighting key corridors and intersections for improvement. In addition to the NCDOT documented crashes, the Town of Laurel Park has local record of one bicyclist accident on Laurel Park Highway that resulted in hospitalization.



## UNIQUE CHALLENGES

Often referred to as the “Town on the Mountain,” Laurel Park has a unique set of obstacles to overcome when planning bicycle and pedestrian facilities. Like many other mountain towns, Laurel Park is no stranger to challenging terrain and limited rights-of-way. Laurel Park Highway gains more than 1000-feet in elevation over the four-mile stretch between Town Hall and Jump Off Rock, and does so in a limited 40-feet of right-of-way. Due to the limited rights-of-way and steep conditions most roads in Laurel Park have little to no shoulder.

In addition to steep and curvy mountain roads, Laurel Park only has 3.3 miles of NCDOT maintained roadways and roughly 30 miles of Town maintained roadways. This adds an extra layer of complexity to providing bicycle and pedestrian facilities, as nearly 90% of all roadways require solely Town funding. Due to limited rights-of-way, constrained funding, and challenging terrain, the planning of bicycle and pedestrian facilities in Laurel Park is not aligned with standard solutions and facility types, but provides options for Laurel Park that are distinctive and nonstandard.



*Convex mirror provided to allow motorists to see around the curve*

*Bicyclists riding along Laurel Park Highway*



## LOCAL ATTRACTIONS AND DESTINATIONS

Developing a community wide plan for improving walkability and bikeability requires the consideration of accessibility and connectivity to key destinations. The project team worked with the Steering Committee and public to identify the key destinations and attractions for Laurel Park residents and visitors. The map below identifies local attractions and destinations.

### HISTORICAL MARKERS

The Town of Laurel Park has a unique history that can be followed through a series of nine historical markers erected around town by the Laurel Park Civic Association. Linking the Laurel Park historical markers with planned bicycle and pedestrian routes played a significant role in the development of the Plan. The existing historical markers are shown in Map 2-4 on the following page. The Town eventually intends to have nearly 25 total historical markers.

### JUMP OFF ROCK

Jump Off Rock, a scenic overlook atop Echo Mountain, sits at an elevation of 3100 feet and is a popular attraction in the Town of Laurel Park. In addition to providing visitors panoramic views of the Blue Ridge Mountains, Jump Off Rock is home to three hiking trails of varying lengths and difficulties.

### LAUREL GREEN PARK

Laurel Green Park is a 4-acre site that contains a gazebo, pond, playground, and walking paths and serves as a gateway to the Town.

### RHODODENDRON LAKE NATURE PARK

Since 2013, Rhododendron Lake Nature Park has undergone significant revitalization. Efforts returned the natural area to its former state as a community recreational center. The final phase, including walking trails, parking, and a picnic area was complete in fall 2017.

### OTHER ATTRACTIONS

Laurel Park is also home to Crystal Spring Park and two pocket parks at Lake Drive and Roberts Drive. Additionally, Laurel Park residents shop and dine at the shopping center north of US 64.



*Laurel Park Village Shopping Center*



*Laurel Park Town Hall*



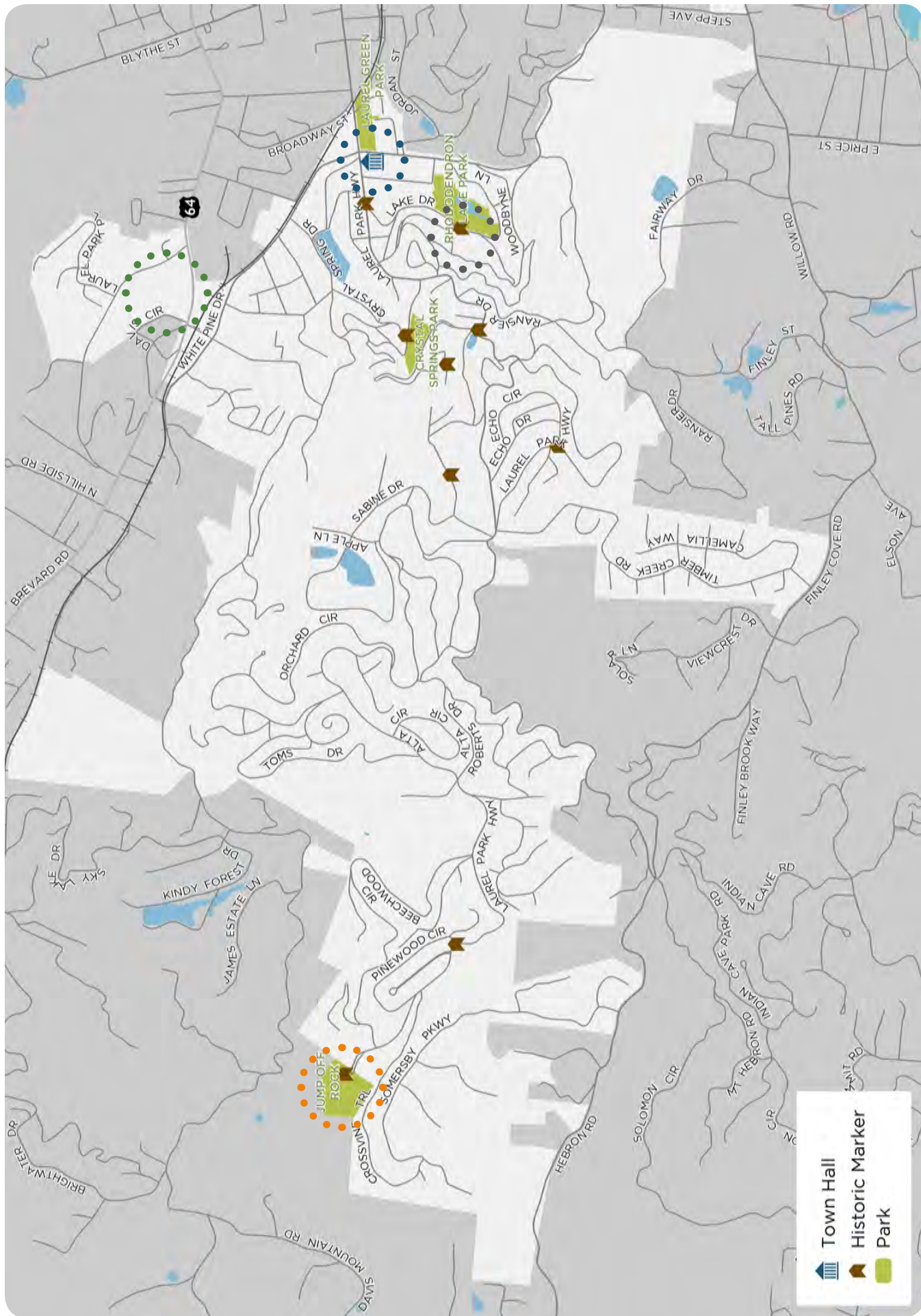
*Rhododendron Lake Historical Marker*



*Jump Off Rock*



Map 2-4: Local Destinations and Attractions



-  Town Hall
-  Historic Marker
-  Park



## PLANNED ROADWAY PROJECTS

There are currently two planned roadway projects that will have a direct impact on the Town of Laurel Park's bicycle and pedestrian facilities. A brief description of these projects can be found on this page.

### US 64 WIDENING

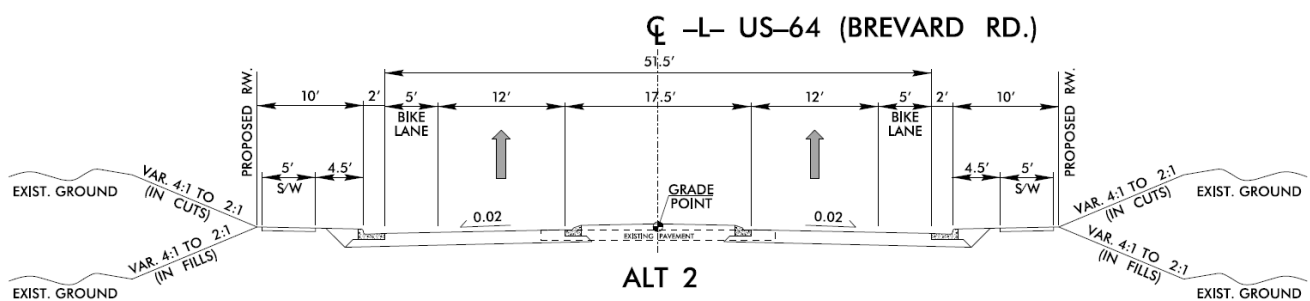
NCDOT project U-5783 proposes widening US 64 from Blythe Street (SR 1180) to White Pine Drive (SR 1173). While final design has not been released, NCDOT shared two possible alternative designs at a public meeting on Thursday, November 10, 2016. NCDOT is proceeding with Alternative 2, which includes sidewalks and bike lanes along US 64 for the length of the project and enhanced pedestrian crossing opportunities at Daniel Drive. These recommended improvements will greatly improve pedestrian access from the Town of Laurel Park to the Laurel Park Shopping Center and other local businesses. The Alternative 2 cross-section is shown below.

### WHITE PINE DRIVE UPGRADES

Building on the momentum of the US 64 improvements, the Town of Laurel Park and the French Broad River MPO have submitted a project to be considered for funding by NCDOT. The project includes improvements on White Pine Drive between US 64 and Hebron Road (SR 1171) including standard travel lane widths, sidewalks, and wide shoulders. Improvements along this segment of White Pine Drive would provide the facilities necessary to connect residents to the bicycle and pedestrian infrastructure being provided on US 64 and ultimately the Laurel Park Village shopping center.

## LAUREL PARK HIGHWAY SIDEWALKS

During the planning process, sidewalks were installed on the south side of Laurel Park Highway from White Pine Drive to Primrose Lane. The image below shows the new sidewalk.





## BUILDING ON PREVIOUS SUCCESS

An early stage of the planning process involved understanding the work that had come before. The Town of Laurel Park has made so much progress in recent years based on the hard work of many in the community locally and regionally. It was important that this plan build on that base. Some of the planning work that preceded this effort:

Table 2-1: Previous Planning Efforts

LOCAL PLANNING EFFORTS	
Document Name and Description	Key Findings and Recommendations
<p><b>JULY 2017</b></p> <p><u><a href="#">US HIGHWAY 64 CORRIDOR STUDY</a></u></p> <p><i>The US-64 Corridor Study developed a market analysis and design concepts for the US-64 corridor to intentionally integrate land use and transportation infrastructure.</i></p>	<p>The US-64 Corridor Study shares concepts for the development of two new land use categories: Town Center District and Mountainside Mixed-Use District. Both districts look to increase the amount of commercial uses in the Town of Laurel Park. The US-64 Corridor Study recommends continual support of the Ecusta Trail to allow Laurel Park to attract tourists to the Town.</p>
<p><b>JULY 2016</b></p> <p><u><a href="#">TOWN ON THE MOUNTAIN: TOWN OF LAUREL PARK 2016-2026 COMPREHENSIVE PLAN</a></u></p> <p><i>The Town of Laurel Park's comprehensive plan sets the direction for land use, transportation, public facilities, natural resources, and recreational resources in the Town for the next ten years.</i></p>	<p>The plan's transportation chapter recommends the implementation of strategies to "improve the comfort and safety for all roadway users, including vehicle drivers, pedestrians, and bicyclists." Strategies to reduce bicyclist and pedestrian conflicts with drivers include speed enforcement, signage, street markings, crosswalks, and road user education. The plan also recommends the creation of a "signed/branded walking and bicycle network along streets with low traffic volume."</p>
<p><b>DECEMBER 2016</b></p> <p><u><a href="#">2016 PARKS AND GREENWAYS COMPREHENSIVE LONG TERM PLAN</a></u></p> <p><i>The Laurel Park Town Council established the Parks and Greenways Board in 2007 which led the effort behind creating the Parks and Greenways Comprehensive Long Term Plan. The plan includes recommendations to pursue future opportunities for parks and open space.</i></p>	<p>The plan recommends the creation of a walking trail system, which have since been established with trail markers and maps. The plan also recommends exploring the potential to convert the unused rail line to a walking and bicycling trail. This recommendation underwent detailed study in the Ecusta Rail Trail Planning Study and Economic Impact Analysis.</p>
<p><u><a href="#">TOWN OF LAUREL PARK CODE OF ORDINANCES</a></u></p> <p><i>Chapter 5, Article 1 of the Town's code of ordinances describes the rules and regulations for the Town's streets and sidewalks.</i></p>	<p>"No person shall engage in sports or recreational activities on any public street or sidewalk in the Town of Laurel Park except for the following recreational activities: walking, jogging, and bicycling as defined in North Carolina State Statute (sic) 20-4.01(49)."</p> <p>The Town allows for the private closure of streets provided permits are obtained, the event lasts no longer than one day, and the event does not take place on a through street that would impede traffic flow.</p>



REGIONAL PLANNING EFFORTS

Document Name and Description		Key Findings and Recommendations
DECEMBER 2013	<p><a href="#">BLUE RIDGE BIKE PLAN</a></p> <p><i>Developed by the Land of Sky Regional Council, the Blue Ridge Bicycle Plan (BRBP) is a regional bicycle plan study for seven counties in Western North Carolina, including Henderson County. The plan provides the vision and goals for regional bicycle infrastructure, analysis of current conditions, a map of prioritized regional corridors for bicycle improvements in the future, and a list of policy recommendations.</i></p>	<p>Regional Priority Corridor 1a: Bike lanes and paved shoulders on NC 225/US 25 from Fletcher to Flat Rock</p> <p>Regional Priority Corridor 3: Paved shoulders on Kanuga Road in Flat Rock to Old US 64 in Brevard</p>
MARCH 2012	<p><a href="#">ECUSTA RAIL TRAIL PLANNING STUDY AND ECONOMIC IMPACT ANALYSIS</a></p> <p><i>This study identifies alignment recommendations, railroad structural improvements, trailheads, scenic overlooks, and estimated costs for the proposed Ecusta Rail Trail, a rails-to-trail conversion project.</i></p>	<p>The study recommends shared use trailheads at the existing railroad crossing on 5th Avenue on the eastern boundary of Laurel Park and at the Dixie Diner on Brevard Road near Daniel Drive. Phase 1 extends from 5th Avenue eastward through Hendersonville. Phase 3 extends from 5th Avenue westward toward Laurel Park town limits.</p>
SEPTEMBER 2015	<p><a href="#">FRENCH BROAD RIVER METROPOLITAN PLANNING ORGANIZATION METROPOLITAN TRANSPORTATION PLAN 2040</a></p> <p><i>The French Broad River Metropolitan Planning Organization's (FBRMPO) Metropolitan Transportation Plan 2040 is a federally-mandated document that forecasts regional transportation conditions and recommends improvements for all modes of travel. The MTP also prioritizes projects and identifies potential sources of funding.</i></p>	<p>The MTP does not include any transportation projects in or near the Town of Laurel Park.</p>



STATEWIDE PLANNING EFFORTS		
	Document Name and Description	Key Findings and Recommendations
JULY 2009	<p><a href="#">NCDOT COMPLETE STREETS POLICY</a></p> <p><i>NCDOT's Complete Streets Policy, approved by the North Carolina Board of Transportation, requires that all NCDOT staff involved in planning and designing transportation infrastructure consider and incorporate multimodal alternatives that accommodate walking, biking, and transit opportunities.</i></p>	<p>All transportation facility improvements that are funded by NCDOT or are on state-maintained roadways must adhere to the NCDOT Complete Streets Policy. The policy charges NCDOT to coordinate and collaborate with communities in implementing Complete Streets.</p>
JULY 2012	<p><a href="#">NORTH CAROLINA COMPLETE STREETS PLANNING AND DESIGN GUIDELINES</a></p> <p><i>The guidelines describe how Complete Streets are to be planned and designed for projects funded by NCDOT and/or on state-maintained roadways.</i></p>	<p>Facility planning and design for bicycle, pedestrian, and transit infrastructure should respond to the land use context and operational characteristics of the corridor. The document includes illustrative street cross-sections of different types of Complete Streets designs.</p>
OCTOBER 2013	<p><a href="#">WALKBIKE NC – NORTH CAROLINA STATEWIDE PEDESTRIAN AND BICYCLE PLAN</a></p> <p><i>WalkBikeNC is North Carolina's statewide pedestrian and bicycle plan. It offers high-level recommendations for improving infrastructure, programs, and policies across the state, design guidance, and steps to implementation.</i></p>	<p>The plan's five pillars are Mobility, Safety, Health, Economics, and Environment. Pedestrian recommendations include the continued analysis of crash data and leveraging funding sources such as the Small Town Economic Prosperity Program, the Community Transformation Grant program, and the North Carolina Parks and Recreation Trust Fund. Bicycle recommendations include maintaining state bicycle routes and exploring rail-trail projects.</p>

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# OUTREACH



*Public outreach – whether through direct engagement or by input of community proxies – is an important part of a successful transportation plan. The objective of engagement for the Town of Laurel Park Bicycle and Pedestrian Plan was to offer a grassroots, community-focused process that offered a variety of methods for input. The following pages provide a brief insight to the public outreach element of the Plan.*

## OUTREACH AT A GLANCE



**2**

PUBLIC WORKSHOPS

**73**

PARTICIPANTS



**2**

ONLINE SURVEYS

**121**

RESPONSES



**59**

WRITTEN COMMENTS

**44**

MAP MARKERS

**35**



MAILING LIST  
MEMBERS FOR EVENT  
REMINDERS

**11**

STEERING COMMITTEE  
MEMBERS

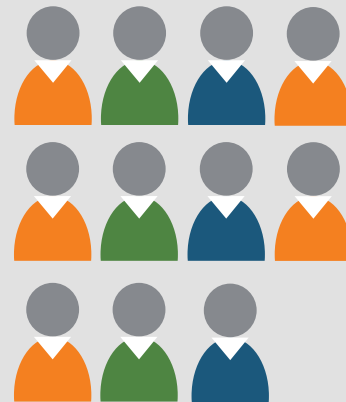


Figure 3-1: Outreach Summary



*“Teamwork is the ability to work together toward a common vision. The ability to direct individual accomplishments toward organizational objectives. It is the fuel that allows common people to attain uncommon results.”*

*-Andrew Carnegie*



## STEERING COMMITTEE

The Steering Committee for the development of the Plan involved a diverse group of individuals, including representatives from the Town Council, NCDOT, Parks and Greenway Board, Blue Ridge Bicycle Club, and Town residents all sharing a passion for bicycling and walking. The Steering Committee convened a total of four times to weigh in on major milestones, refine concepts, and confirm direction toward final recommendations.

## MEETING OVERVIEWS NOVEMBER 7, 2016

Steering Committee members and the Project Team kicked off the first meeting with an overview of the planning process and project schedule. After developing a base understanding of what the next several months of plan development would entail, the Steering Committee worked with the Project Team to identify a Vision Statement and supporting Goal Statements.

## FEBRUARY 23, 2017

At the second Steering Committee meeting, members participated in a work session to help

identify existing issues and trouble spots, as well as potential solutions. Members divided into two groups and gathered around maps for discussion about potential projects. Once each group had prepared a map with their recommended pedestrian and bicycle network, a member from each team presented their network and answered the following questions:

- What is the purpose of the project?
- Which goals does it address?
- What opportunities does it provide?
- What constraints may have to be overcome?
- Why is it a priority?

## APRIL 5, 2017

The Steering Committee met in April to review the consolidated facility recommendations from their February work session and to provide input to the project team about prioritization. The Steering Committee also reviewed and discussed the draft program and policy recommendations.

## JULY 19, 2017

The Steering Committee convened a final time in July to review the draft plan and provide comments to the Project Team.

## PUBLIC WORKSHOPS

### WORKSHOP #1 - FEBRUARY 22, 2017

The first workshop allowed resident planners to document existing concerns and helped to capture the Town's desired vision for the future. The workshop contained two primary components: an information wall and an issues identification mapping exercise. There was also a station set up with computers for individuals wishing to complete the online survey. Over 30 people participated in the first public workshop, as well as several members of the Steering Committee and Town Staff.

### WORKSHOP #2 - APRIL 4, 2017

The second public workshop allowed interested participants to learn more about the Plan's recommendations and provide feedback on what projects were most important to them. Over 40 people participated in the second public workshop.

## ONLINE SURVEYS

### VISIONING AND ISSUES IDENTIFICATION

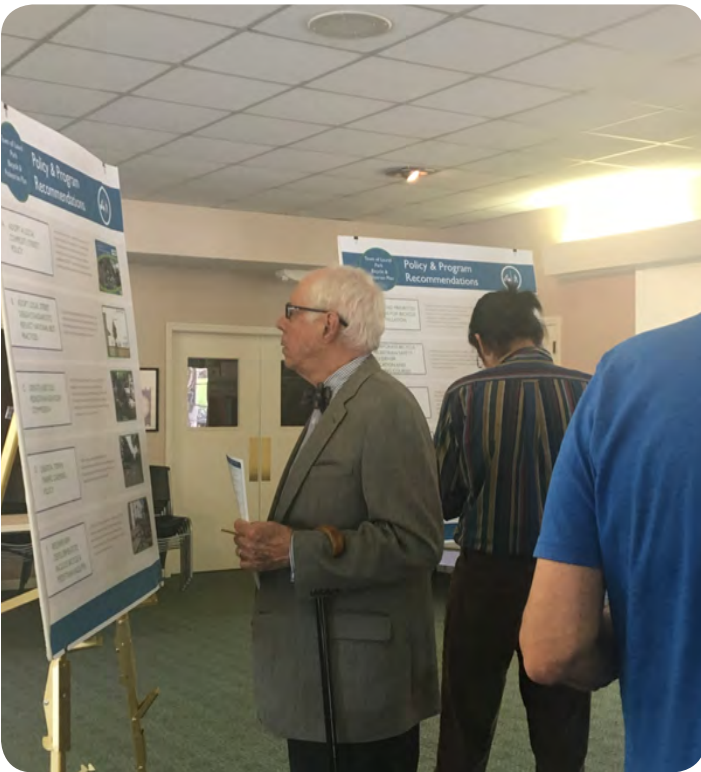
To broaden the range of perspectives, an interactive web-based questionnaire was launched at the onset of the planning process and nearly 63 individuals participated between February and April. The customized survey yielded a robust dataset of Town preferences, opinions, and issues that ultimately contributed to the development of the recommendations. Participants were asked to use an interactive web-based map to share common destinations, existing issues, and needed improvements. Nearly 30 markers were placed on the map by the 63 participants. Each data point shared by participants was considered in the creation of recommendations and is shown on a map on the next page.

### PROJECT PRIORITIZATION

After months of working with the Steering Committee, stakeholders, and the public to identify recommendations, a second survey was created to allow participants the opportunity to weigh in on prioritization. A total of 58 participants ranked their most important facility recommendations, as well as their most important program and policy recommendations. These responses were rolled into the final project prioritization.



*Attendees at the first public workshop learning about existing conditions and identifying issues*



*Attendees at the second public workshop helping the project team prioritize facility, program, and policy recommendations*

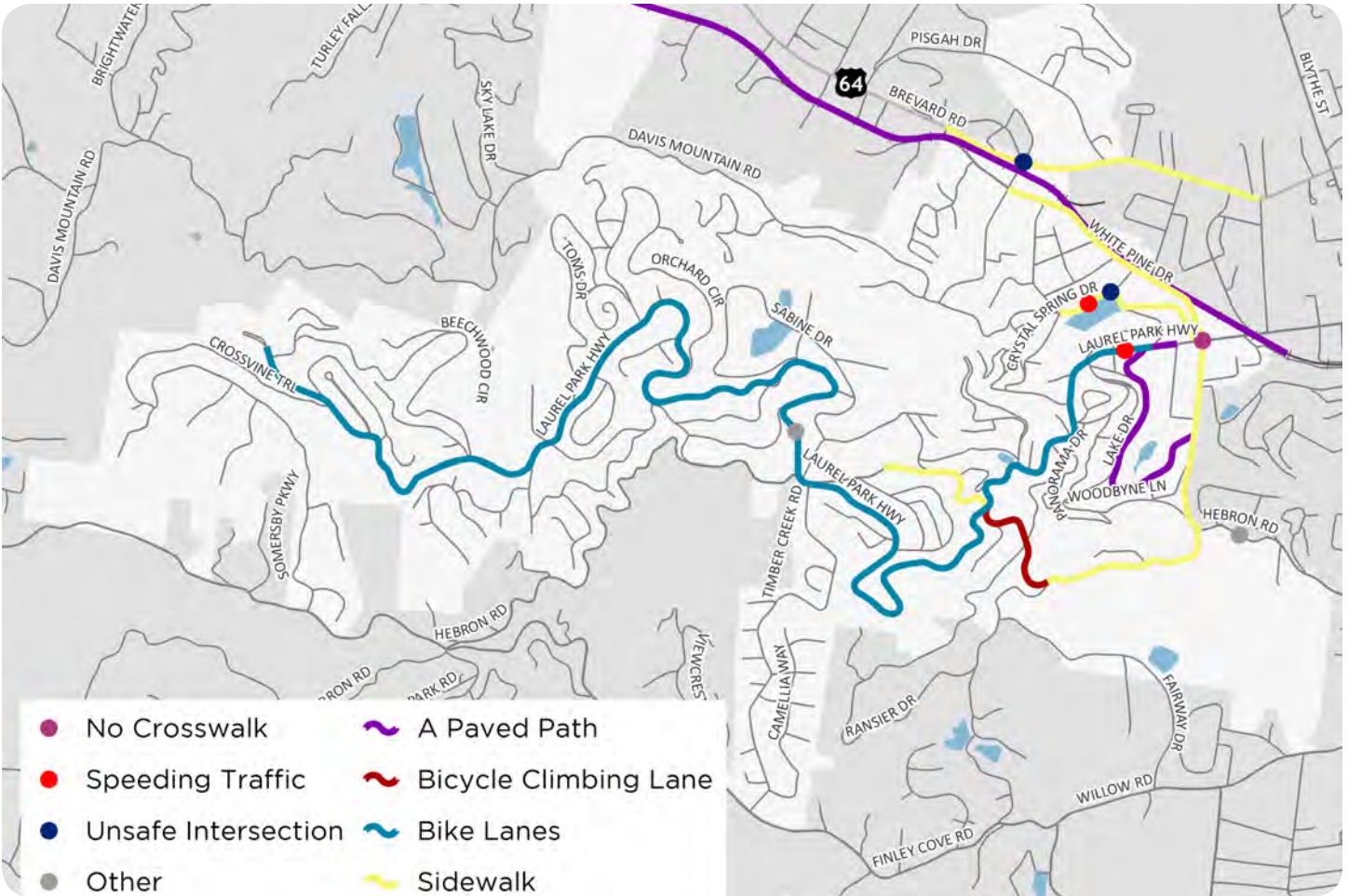






NEARLY 40% OF SURVEY PARTICIPANTS REPORT WALKING EVERY DAY IN LAUREL PARK!

35% OF SURVEY PARTICIPANTS REPORT BIKING ONCE A WEEK OR MORE!



Map 3-1: Public Input Map

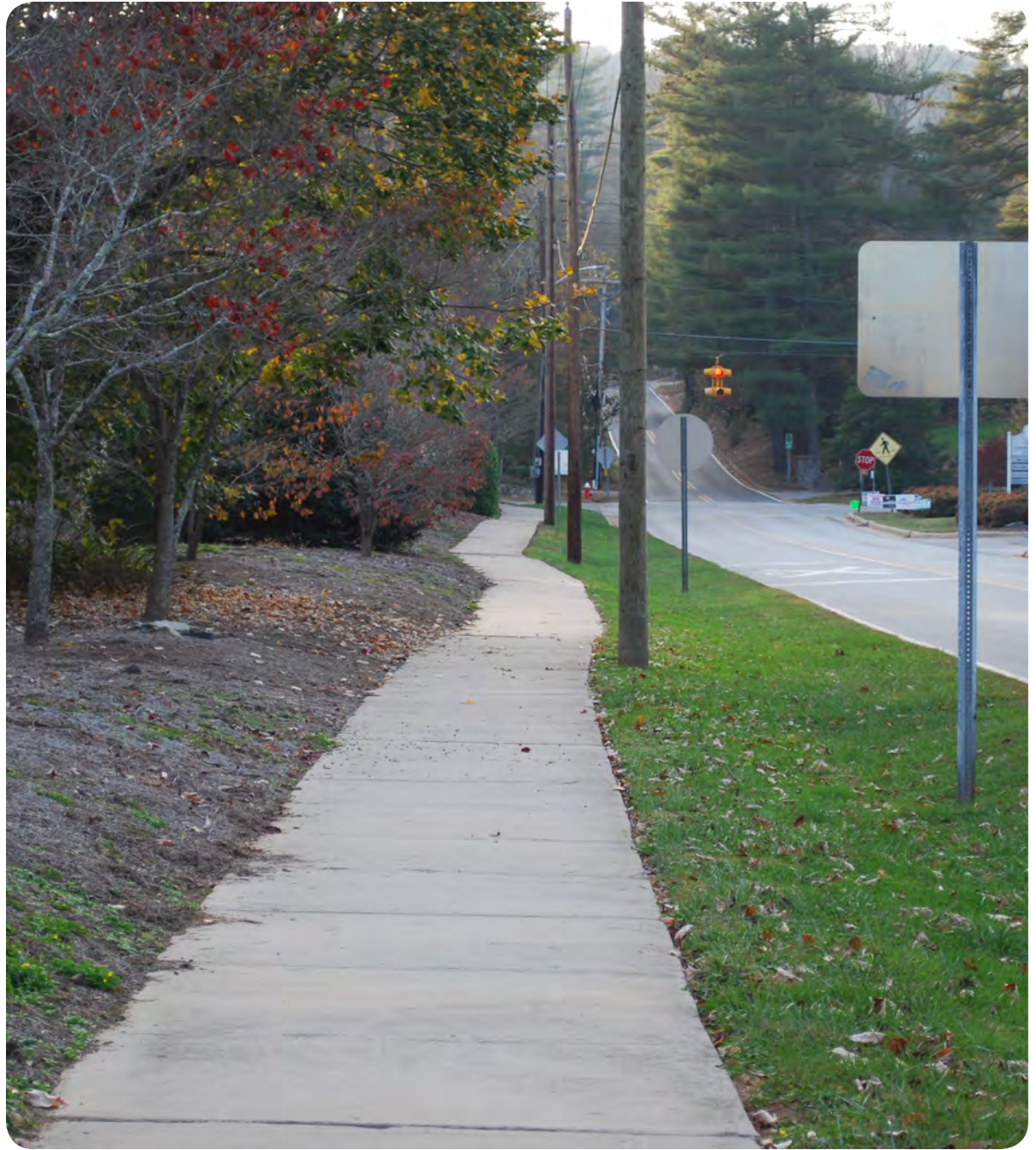
When asked, “How would you describe bicycling and walking in Laurel Park,” one respondent said,

“I walk or run in Laurel [P]ark everyday. In fact, we bought our home in lower Laurel Park, because it was right in the middle of our favorite place in the area for walking, running, etc with our family. The biggest deficiency I see is the lack of sidewalks on Laurel Park Hwy and White Pine Dr. You have to walk on one of these high traffic roads to connect any of the great neighborhoods and walking routes to the wonderful park and playground at Laurel Green. Walking on these roads without sidewalks with children, strollers, and pets can be dangerous. Sidewalks from Laurel Green up to Lake Dr on Laurel Park Hwy and White Pine [Dr] would tremendously improve the walkability of our great Town.”

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# RECOMMENDATIONS



*In order to achieve a well-rounded pedestrian and bicycle system, it is important to evaluate the performance of existing and proposed infrastructure, guidance, and supporting facilities and programs. The needs of pedestrians and bicyclists are best served when all of these elements complement each other. The recommendations for the Town of Laurel Park seek to achieve this balance.*

## INTRODUCTION

This chapter includes a discussion of physical improvement projects, including on and off-road facilities as well as intersection-level improvements. Policies and guidelines currently in place have been reevaluated in an effort to strengthen demand. Education, encouragement, and enforcement measures are also discussed.

The *Town of Laurel Park Bicycle and Pedestrian Plan* was developed based on feedback from the Steering Committee, Town Staff, NCDOT, and Laurel Park residents. Draft recommendations were formed and presented at a public workshop where participants were asked to provide their feedback and comments related to the draft project recommendations, guidelines, and policy measures. The recommendations discussed in this chapter represent the culmination of these outreach efforts.

## BICYCLE AND PEDESTRIAN FACILITY RECOMMENDATIONS

Bicycle and pedestrian facility recommendations were developed based on field review, collaboration with existing planning efforts and ongoing multimodal improvements, public input, and validations by Town staff and NCDOT. The vision for the plan was referenced throughout this process for establishing these recommendations.

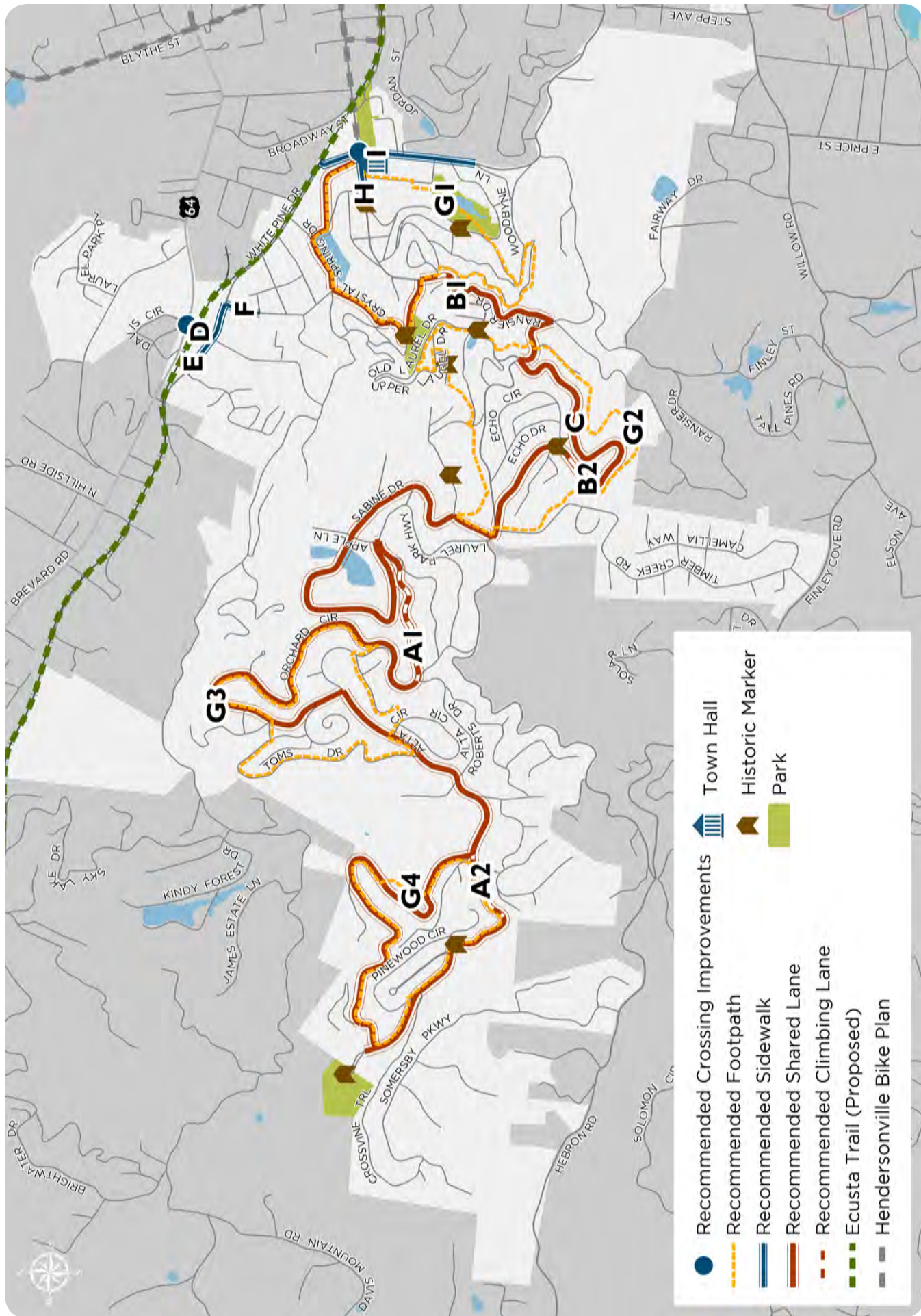
The Steering Committee and the public helped the project team identify destinations that people are already biking and walking to along with those destinations that people would like to bike and walk to. This exercise yielded a mostly blank “connect the dots” map - the dots represent the destinations and the lines represent the existing and recommended facilities. The Steering Committee and the public were responsible for the preliminary connecting of the dots, making decisions about which locations have the greatest potential for improvement considering the context of safety, comfort, connectivity, and equity. This step included superficial considerations of the operational and geometric characteristics of Laurel Park’s streets and opportunities to construct off-street facilities such as shared use paths.

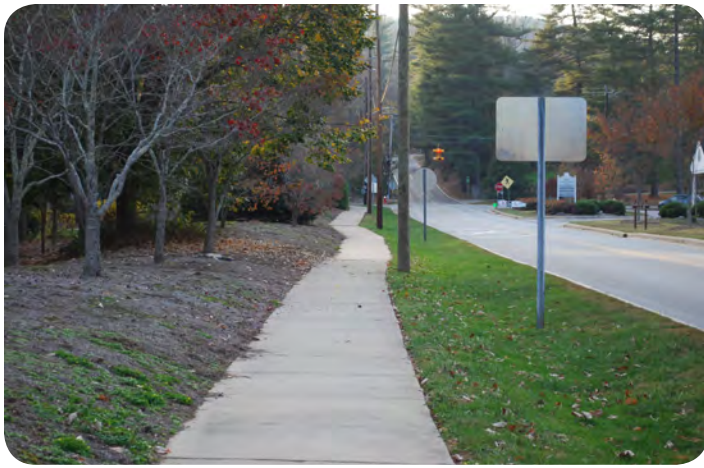
The project team then reviewed the preliminary bicycle and pedestrian facility map to fill in network gaps, augment the network with additional recommendations, and make determinations about what facility type would characterize each recommendation.

Facility recommendations have been developed for the following areas: sidewalks, climbing lanes, intersection improvements, and on-street bicycle facilities. It is important for these recommendations to function as a cohesive system. The map on the next page documents all of the bicycle and pedestrian facility recommendations. This map clearly indicates how the different recommendation types will interface with each other. This map also includes an inventory of the major attractors and destination points within the Town, as well as the facilities recommended for improvement in the *Hendersonville Bicycle Plan*.



Map 4-1: Facility Recommendations





## FACILITY TOOLKIT

The facilities listed below are all items considered in the Pedestrian and Bicycle Plan. Cost estimates for sidewalk, shared use paths, and marked crosswalks were obtained from the Bicycle and Pedestrian Facility Cost Tool - Report published in 2016.

### READ MORE:

<https://connect.ncdot.gov/projects/BikePed/Documents/Bicycle%20and%20Pedestrian%20Facility%20Cost%20Tool%20-%20Report.pdf>



## SIDEWALK

Dedicated space within right-of-way for pedestrians, and should include a landscaped buffer from roadway

- Typical width: 5' preferred
- Target User: Pedestrians
- Estimated Cost: \$90,000 per 0.25 mile



## SHARED USE PATH

Separated from traffic and located in open space or along rivers or streams

- Typical width: 10' preferred
- Target user: Cyclists, Pedestrians
- Estimated Cost: \$70,000 per 0.25 mile\*

\*Construction costs can increase in areas with significant environmental constraints



## BICYCLE CLIMBING LANE & SHARED LANE

Bike lane provided on uphill and shared lane marking on downhill

- Typical width: 5' preferred
- Target user: Cyclists
- Estimated Cost: \$270 - 380 per linear foot

## ROUTE MAPPING & WAYFINDING SIGNS

Wayfinding and route mapping provides information about destinations, attractions, and directions

- Typical width: n/a
- Target user: Cyclists, Pedestrians
- Estimated Cost: Varies

## MARKED CROSSWALKS

Pavement markings to provide safe and accessible street crossing for pedestrians

- Typical width: 6' - 10'
- Target user: Pedestrians
- Estimated Cost: \$2,000-\$3,000 each



## PRIORITIZATION

Identifying facility needs and improvement types is only one part of the recommendations development process. Given the existing and anticipated funding sources available for bicycle and pedestrian projects in the region, there is a possibility that all of the projects recommended here may not be built within the next 30 years. The improvements in this plan were further analyzed using both quantitative and qualitative measures. A range of criteria were considered in the further analysis of the bicycle and pedestrian network, and the Steering Committee was consulted in the development of this approach. A summary of this process is shown below.

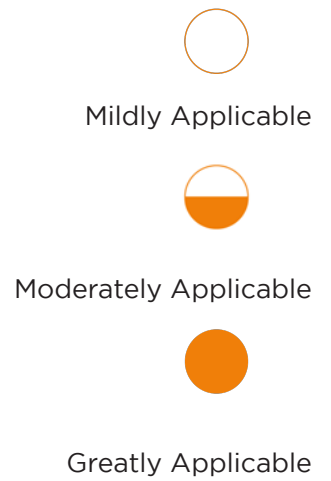


Figure 4-1: Prioritization Matrix

		Connections to Existing & Proposed Facilities	Key Destinations	State Funding	Private Funding	Feasibility of Construction	Outreach Rank
A1 A2	Laurel Park Highway Climbing Lanes	Moderately Applicable	Moderately Applicable	Mildly Applicable	Moderately Applicable	Mildly Applicable	6
B1 B2	Laurel Park Highway Climbing Lanes	Moderately Applicable	Moderately Applicable	Mildly Applicable	Moderately Applicable	Moderately Applicable	7
C	Town Hall to Jump Off Rock Signed Bike Route	Greatly Applicable	Greatly Applicable	Mildly Applicable	Greatly Applicable	Greatly Applicable	4
D	Daniel Drive Sidewalk & Crossing Improvements	Greatly Applicable	Greatly Applicable	Greatly Applicable	Mildly Applicable	Moderately Applicable	9
E	White Pine Drive Sidewalk (Shaws Creek to Silver Pine)	Moderately Applicable	Moderately Applicable	Greatly Applicable	Mildly Applicable	Moderately Applicable	5
F	Silver Pine Drive Sidewalk	Moderately Applicable	Moderately Applicable	Moderately Applicable	Mildly Applicable	Moderately Applicable	10
G	Walking Paths Mapping and Wayfinding	Greatly Applicable	Greatly Applicable	Mildly Applicable	Greatly Applicable	Greatly Applicable	2
H	Laurel Park Highway Sidewalks (Primrose Lane to Lake Drive)	Greatly Applicable	Greatly Applicable	Mildly Applicable	Greatly Applicable	Moderately Applicable	1
I	White Pine Drive Sidewalk (Town Hall to Future Ecusta Trail)	Greatly Applicable	Greatly Applicable	Greatly Applicable	Mildly Applicable	Moderately Applicable	3
J	Crystal Springs Park Shared Use Path	Greatly Applicable	Greatly Applicable	Mildly Applicable	Greatly Applicable	Mildly Applicable	8

# LAUREL PARK HIGHWAY SIDEWALKS – PRIMROSE LN TO LAKE DR (SOUTH)

## PROJECT DESCRIPTION

This project recommends sidewalk construction along the south side of Laurel Park Highway between Primrose Lane and Lake Drive and serves as a continuation of the recently constructed sidewalk extending from Town Hall to Primrose Lane. Consideration should be given to consider a high-visibility crosswalk across Laurel Park Highway to provide safe access to the northern leg of Lake Drive.

## KEY CONNECTIONS

- Town Hall
- Laurel Green Park
- Canal Historic Marker
- Rhododendron Lake Nature Park

## CHALLENGES & OPPORTUNITIES

The right-of-way along Laurel Park Highway is only 40-feet and is not a state-maintained route. Funding for this sidewalk section will likely need to be funded in whole by the Town of Laurel Park.

## OUTREACH RANK

1

## PROJECT LENGTH

410 FEET

## MODE(S) SERVED



## PROJECT COST

\$100,000 TO \$170,000



Existing Laurel Park Highway Sidewalks



\* Project costs are generated using NCDOT's Bicycle and Pedestrian Facility Cost Tool. The lower end is the average cost, while the upper value is the 90th percentile cost.





## WHITE PINE DRIVE SIDEWALKS – WOODBYNE LN TO FUTURE ECUSTA TRAIL

### PROJECT DESCRIPTION

This project recommends sidewalk construction along both sides of White Pine Drive between Woodbyne Lane and the future Ecusta Trail as well as wide shoulders. This section of sidewalk would tie into the existing sidewalks along Laurel Park Highway in Laurel Park and 5th Avenue in Hendersonville. In addition to sidewalks and wide shoulders, this project will include updated crosswalks and curb ramps at the intersection of White Pine Drive and Laurel Park Highway.

### KEY CONNECTIONS

- Town Hall
- Laurel Green Park
- Rhododendron Lake Park
- First Congregational Church
- Future Ecusta Trail

### CHALLENGES & OPPORTUNITIES

The sidewalks along White Pine Drive is part of a project that the MPO and Town have submitted for consideration in the SPOT process. If the project moves forward, it would allow the Town to partner with NCDOT for funding on one of the few state-maintained streets in Laurel Park.

### OUTREACH RANK

3

### MODE(S) SERVED



### PROJECT LENGTH

0.42 MILES

### PROJECT COST

\$1,690,000 TO  
\$2,860,000



White Pine Drive - Existing



White Pine Drive - Proposed



\* Project costs are generated using NCDOT's Bicycle and Pedestrian Facility Cost Tool. The lower end is the average cost, while the upper value is the 90th percentile cost.



## LAUREL PARK HIGHWAY CLIMBING LANES AND PEDESTRIAN REFUGE AREA



### PROJECT DESCRIPTION

A common theme at public outreach events was the desire to see bicycle climbing lanes along Laurel Park Highway. The project team worked with the steering committee, local cyclists, and the public to identify four locations for potential climbing lanes near: Ransier Drive, Echo Circle, Roberts Drive, and Beechwood Circle. These locations are approximate, and the Town should consider a study that surveys terrain and exact extents for the climbing lanes. The necessary earthwork and potential retaining walls will require a more in depth study than what was completed in this Plan.

### KEY CONNECTIONS

- Jump Off Rock
- Town Hall
- Various Historical Markers

### CHALLENGES & OPPORTUNITIES

Bicycle climbing lanes along Laurel Park Highway will not only allow bicyclists a safe place to travel on steep climbs, but also provide extra space to serve as pedestrian refuge areas.

The steep terrain and limited right-of-way will likely lead to costly construction. The Town will need to perform detailed surveys and design. Construction of the climbing lanes will likely include substantial clearing and grading of adjacent slopes to accommodate extra pavement width.

MODE(S) SERVED



OUTREACH RANK

6 & 7

PROJECT LENGTH

VARIES

PROJECT COST

TBD



Laurel Park Highway near Ransier Drive - Existing



Laurel Park Highway near Ransier Drive - Proposed



## WHITE PINE DRIVE SIDEWALKS – SILVER PINE DR TO SHAWS CREEK FARM RD

### PROJECT DESCRIPTION

This project recommends sidewalk construction along both sides of White Pine Drive between Silver Pine Drive and Shaws Creek Farm Road. This will eventually tie into the proposed Ecusta Trail and NCDOT improvements along US 64.

### KEY CONNECTIONS

- US 64 commercial area (via Daniel Drive)
- Future Ecusta Trail

### OUTREACH RANK

5

### PROJECT LENGTH

0.21 MILES

### MODE(S) SERVED



### PROJECT COST

\$870,000 TO  
\$1,470,000



### CHALLENGES & OPPORTUNITIES

The sidewalks along White Pine Drive is part of a project that the MPO and Town have submitted for consideration in the SPOT process. If the project moves forward, it would allow the Town to partner with NCDOT for funding on one of the few state-maintained streets in Laurel Park.

While construction of this section of sidewalk will serve several residential areas and eventually tie into the Ecusta Trail, access to US 64 via foot is still limited by the lack of sidewalks along Daniel Drive. The majority of Daniel Drive could be bypassed upon completion of the Ecusta Trail, but until then the Town of Laurel Park should be in continual communication with regional partners about the best order for project completion.

Right-of-way along White Pine Drive is limited, and often greatly impacted by the presence of utility poles. The constrained space will be a challenge to constructing sidewalks to ADA standards. While costly, consideration can be given to burying the utilities to allow adequate and unimpeded sidewalk width.

White Pine Drive - Existing



White Pine Drive - Proposed



\* Project costs are generated using NCDOT's Bicycle and Pedestrian Facility Cost Tool. The lower end is the average cost, while the upper value is the 90th percentile cost.



## PROGRAMS & POLICIES

Beyond the facility recommendations included in the previous pages, the Town of Laurel Park and other local groups can undertake programmatic efforts to improve conditions for biking and walking. These efforts can include creating programs or putting on events to promote and encourage biking and walking; educating motorists, pedestrians, and bicyclists about how to safely navigate the Town together; and creating policies that ensure biking and walking is treated as a valid mode of transportation. The project team in coordination with Town of Laurel Park staff created a series of program and policy recommendations and presented them at the third steering committee meeting as well as the second public workshop. The project team worked to educate the public about each program or policy and allowed participants to rank the various items in order of importance to them. This information was used to gauge public sentiment and acceptance of each program or policy. The Town's continual support and advocacy of the Ecusta Trail was the item that resonated most with members of the public. The pages that follow detail each of these recommendations.

### ADOPT A LOCAL COMPLETE STREETS POLICY AND TRAFFIC CALMING POLICY

Complete Streets policies establish a process which requires planning and designing for all roadway users including pedestrians, bicyclists, transit users, and motorists. A local Complete Streets policy would supplement NCDOT's Complete Streets policy and would be specifically applicable to Town-owned streets.



#### READ MORE:

<https://connect.ncdot.gov/projects/BikePed/Pages/Complete-Streets.aspx>

Traffic calming policies enable jurisdictions to retrofit streets with physical and visual features that reduce travel speeds and make streets safer and more comfortable for pedestrians and bicyclists. Coupling both traffic calming and Complete Streets would allow the Town the opportunity to encourage non-vehicular travel by ensuring streets are designed for all users.



#### READ MORE:

<https://connect.ncdot.gov/projects/BikePed/http://www.ite.org/traffic/tcdevices.asp>

### CREATE A PEDESTRIAN-BICYCLE ADVISORY COMMISSION

A Pedestrian-Bicycle Advisory Commission consists of volunteers who provide guidance and leadership concerning pedestrian and bicycle issues to Town staff. The Pedestrian-Bicycle Advisory Commission would meet regularly to discuss strategies to improve bicycling and walking conditions in Laurel Park. This commission could begin as an extension of the steering committee who participated in the planning process, or be folded in with the existing Parks and Greenways Board.

In addition to a local advisory commission, the steering committee members involved in the planning process expressed great interest in a regional advisory commission. This effort would include local, county, and state agencies coordinating planning efforts to ensure that the pedestrian and bicycle network is continuous and free of critical gaps. This could be an opportunity for the Blue Ridge Bicycle Club to help facilitate conversations between the key stakeholders, including Hendersonville, Laurel Park, Flat Rock, Henderson County, and NCDOT, while still a primarily agency based group would have strong support from local advocates. The regional advisory commission would continually advocate for inter-jurisdictional connections, wayfinding, and partnerships.



## REQUIRE NEW DEVELOPMENTS TO INCLUDE PEDESTRIAN AND BICYCLE FACILITIES

Laurel Park’s zoning and subdivision ordinances currently include no sidewalk or bicycle facility requirements for new developments. Adding these requirements will leverage the opportunity of new development to expand the Town’s multimodal network. Construction of pedestrian and bicycle infrastructure is more cost-effective on the front end of site development than retrofitting streets to include the facilities later.

## INCORPORATE BICYCLE AND PEDESTRIAN SAFETY INTO DRIVER EDUCATION AND TRAINING COURSES

While the Town of Laurel Park does not have any schools within the Town limits, educational efforts led by the Pedestrian-Bicycle Advisory Commission can still be beneficial. These courses will help to increase motorist awareness about laws pertaining to bicyclists and pedestrians and teach motorists how to drive safely around them. NCDOT has created a series of short educational videos that share tips for how cyclists and motorists can work together to ensure safety for all road users.

### READ MORE:

PART 1

<https://www.youtube.com/watch?v=xb01eN8tRiM>

PART 2

<https://www.youtube.com/watch?v=Uj-6h0tItSE>

PART 3

<https://www.youtube.com/watch?v=hWGZIBs2EFg>

## BECOME A WATCH FOR ME NC PARTNER COMMUNITY

Watch for Me NC, a collaborative effort between NCDOT and local communities, endeavors to reduce the number of bicyclists and pedestrians injured in crashes with vehicles through public education and police enforcement. Partner communities receive additional support and training from NCDOT. Example educational materials provided by NCDOT are shown to the right.

### READ MORE:

<http://www.watchformenc.org/about/>



## PLAN AND EXECUTE AN OPEN STREETS EVENT

Open Streets events temporarily close streets to motor vehicular traffic, allowing the streets to be used for a variety of pedestrian, bicyclist, and recreation activities. These events build community while celebrating the use of non-motorized transportation. The Alliance for Biking and Walking published The Open Streets Guide in February 2012 detailing benefits, case studies, and best practices for hosting an open streets event. The benefits of open street events align closely with those of biking and walking: public health, environmental, economic, and social. Laurel Park Highway between Lake Drive and White Pine Drive, near Town Hall, would be a great street to hold an Open Streets Event.



*“People traffic replaces car traffic, and the streets become ‘paved parks’ where people of all ages, abilities, and social, economic, or ethnic backgrounds can come out and improve their mental, physical, and emotional health.”*

*-Gill Penalosa,  
Executive Director of 8-80 Cities*

### READ MORE:

<http://openstreetsproject.org/>

<http://www.bikewalkalliance.org/resources/reports/open-streets-guide>

## IDENTIFY AND PRIORITIZE LOCATIONS FOR BICYCLE RACK INSTALLATION

Properly installed and well-located bicycle racks encourage bicyclists to park their bicycles in secure and convenient locations. Adequate bicycle parking also reduces the likelihood of damage that may result from locking bicycles to trees, sign posts, or other objects. The identification and prioritization of bicycle rack installation is already a current initiative of the Town that should be continued.



## INTEGRATE “UNOPENED” ROADS INTO THE BICYCLE AND PEDESTRIAN NETWORK

The Town of Laurel Park contains several “unopened” platted roads. The Town should pursue a more in depth study to identify ownership and exact location of these roads for potential inclusion in the pedestrian and bicycle network. The “unopened” roads could provide routes exclusive to bicyclists and pedestrians and provide key links to existing walking paths in Laurel Park.



## CONTINUE TO SUPPORT THE ECUSTA TRAIL

The Town of Laurel Park adopted a resolution in support of the Ecusta Trail in 2009, and helped fund the Ecusta Study. Additionally, the Town also has two council members who serve on the Ecusta Trail Advisory Board. The Town should continue this high level of support and as the *Town of Laurel Park 2016-2026 Comprehensive Plan* states “Become a well-known Ecusta Trail Town - plan like it’s going to happen.” Planning as if the trail is going to happen will require continual regional cooperation with Hendersonville, Henderson County, FBRMPO, and NCDOT. The Ecusta Trail will provide both recreational and economic enhancements for the Town and will see the most success when fully embraced and supported by local communities.



### READ MORE:

<http://www.ecustatrail.org/>

## DEVELOP A TOWN-WIDE SYSTEM OF WAYFINDING SIGNS

The development of a Town-wide wayfinding system will encourage Laurel Park residents and visitors to walk and bicycle, while also enhancing the unique character and brand of Laurel Park. Successful wayfinding signs should be clear and consistent, while providing information about both destinations and attractions. A great low-cost tool for starting the wayfinding conversation and potentially kick-starting a wayfinding pilot project is WALK [YOUR CITY]. WALK [YOUR CITY] provides an easy to use platform and template for creating low cost wayfinding signage. The Town could use this for special events or as an interim solution to a more robust and permanent system of wayfinding.



### READ MORE:

<https://nacto.org/publication/urban-bikeway-design-guide/bikeway-signing-marking/bike-route-wayfinding-signage-and-markings-system/>

<https://walkyourcity.org/>

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# CALL TO ACTION



*The Call to Action provides a framework of actionable steps for achieving the vision of the Town of Laurel Park Pedestrian and Bicycle Plan. Action items are categorized by short-term, mid-term, and long-term strategies and indicates who will be responsible for championing them. This chapter also offers guidance for securing funding, establishing design standards, and evaluating performance measures.*

## ORGANIZATIONAL FRAMEWORK


The organizational framework represents the roles and responsibilities of local, regional, and statewide organizations in implementing the recommendations of the Town of Laurel Park Pedestrian and Bicycle Plan. From setting policy to constructing facilities, from coordinating with other governmental agencies to partnering with pedestrian and bicycle advocacy groups, the Town of Laurel Park will need external support and resources to become a more pedestrian and bicycle-friendly Town.



**POLICY SETTING**  
Town Council




**POLICY IMPLEMENTATION**  
Town Manager




**CONSTRUCTION & MAINTENANCE**  
Public Works  
NCDOT Division 14  
Private Land Developers




**PLANNING & EVALUATION**  
Planning Board



**EDUCATION & SAFETY**  
Police Department  
Henderson County Public Schools  
Active Routes to School  
Region 2



**REGIONAL COORDINATION**  
Town of Laurel Park  
Village of Flat Rock  
City of Hendersonville  
Henderson County Planning  
French Broad River MPO  
NCDOT Division of Bicycle and Pedestrian Transportation



**ADVOCACY**  
Friends of the Ecusta Trail  
BikeWalk NC  
Blue Ridge Bicycle Club



**OTHER PARTNERS**  
Pedestrian Bicycle Advisory Commission  
Fire Department  
Apple Country Transit  
Henderson County Department of Public Health  
Local Residents  
Local Property and Business Owners



## IMPLEMENTATION PLAN

The success of the Town of Laurel Park Pedestrian and Bicycle Plan will hinge on the effective collaboration of local, regional, and state officials to implement its projects and policies in a meaningful way. The recommendations in the plan build upon several historic and ongoing efforts by the Town to improve the multimodal transportation network through facility improvements and Town policies. The implementation plan below lays out a simple set of recommendations to help local staff continue to focus their efforts and seek strategic opportunities to expedite the implementation of this plan.

SHORT-TERM		
Action & Description	Lead Organization	Partners
<p><b>1</b> Present the Pedestrian and Bicycle Plan for Town Council adoption.</p> <p><i>Following NCDOT-DBPT approval, the project team will present the Pedestrian and Bicycle Plan to the Town Council for their adoption. Adoption of the Pedestrian and Bicycle Plan will communicate to all Town departments and partner agencies that the Town of Laurel Park supports the recommendations of the Plan. Having an adopted Pedestrian and Bicycle Plan clarifies expectations for pedestrian and bicycle facilities on the streets in Laurel Park and aids in securing funding.</i></p>	Project Team	Steering Committee
<p><b>2</b> Create a Pedestrian and Bicycle Advisory Board (PBAB).</p> <p><i>Pedestrian and Bicycle Advisory Boards consist of members of the community who volunteer their time to be formal citizen liaisons to Town staff. Meeting once a month with Town staff, Pedestrian and Bicycle Advisory Boards create committees, task forces, and programs to address bicycling issues and serve as a review board for local projects and initiatives. This could become a sub-committee of the existing Parks &amp; Greenways Advisory Board.</i></p>	Town Council	Steering Committee  Parks & Greenways Advisory Board
<p><b>3</b> Coordinate to create a collaborative Regional Pedestrian and Bicycle Advisory Commission.</p> <p><i>Work with bicycle and pedestrian advocacy groups from neighboring jurisdictions to support shared regional priorities.</i></p>	Planning Board	Blue Ridge Bicycle Club  NCDOT Div. 14  FBRMPO  Henderson Co. Parks & Recreation Dept.

SHORT-TERM CONTINUED		
Action & Description	Lead Organization	Partners
<p>4 Publicize, promote, and present the Pedestrian and Bicycle Plan.</p> <p><i>The Pedestrian and Bicycle Plan should be made available online and publicized using the Town's website and social media outlets. Additionally, the Pedestrian and Bicycle Plan and its recommendations should be presented to partner agencies including the French Broad River MPO and NCDOT Division 14.</i></p>	PBAB	Blue Ridge Bicycle Club  FBRMPO  NCDOT
<p>5 Schedule quarterly coordination meetings between the Planning Board, Parks and Greenways Advisory Board Commission, Public Works, NCDOT, FBRMPO, and PBAB.</p> <p><i>Ongoing coordination between Town departments and commissions will streamline the construction of facility recommendations and implementation of programs and policies. Quarterly meetings will provide the opportunity for Town groups to calibrate their respective efforts</i></p>	Town Manager	PBAB  Town Boards  FBRMPO  NCDOT
<p>6 Create and adopt a local Complete Streets and Traffic Calming Policy.</p> <p><i>Complete Streets policies require that all street projects provide safe accommodations for all modes, including bicycling, walking, taking transit, and driving. To supplement NCDOT's Complete Streets policy which only covers state-maintained roadways, the Town of Laurel Park should consider creating and adopting a local Complete Streets policy.</i></p>	PBAB	Town Council
<p>7 Update zoning and subdivision ordinances to require provisions for pedestrians and bicyclist amenities. (i.e. parking, benches, etc.)</p> <p><i>Language should be added to the zoning and subdivision ordinances specifying the type, location, and amount of pedestrian and bicycle ancillary infrastructure for new developments.</i></p>	Town Council	Private Developers
<p>8 Become a Watch for Me NC partner community.</p> <p><i>Watch for Me NC is a statewide bicycle and pedestrian safety campaign. Partner communities are provided with materials including bumper stickers, promotional posters, and informational brochures. The Town of Laurel Park can take advantage of existing resources to improve bicycle safety by applying to become a Watch for Me NC partner community.</i></p>	PBAB	Police Dept.  Regional PBAC  Blue Ridge Bicycle Club
<p>9 Provide bicycling and pedestrian law and safety in driver education courses.</p> <p><i>There are several driver education providers serving western North Carolina that could enhance their curriculum by educating both new and experienced motorists on how to safely navigate the streets with bicyclists. This effort will require the creation of curriculum and reaching out to driver education providers.</i></p>	Regional PBAC	BikeWalk NC



SHORT-TERM CONTINUED		
Action & Description	Lead Organization	Partners
<p>10 Initiate a study to further the planning and prioritization of bicycle climbing lanes.</p> <p><i>The Town should initiate a study to better understand and prioritize the locations of potential climbing lanes along Laurel Park Highway. The study should consider design elements such as pavement widths, grades, and necessary earthwork.</i></p>	PBAB	<p>FBRMPO</p> <p>Blue Ridge Bicycle Club</p> <p>Town Council</p>
<p>11 Plan and install a bicycle or pedestrian improvement pilot project.</p> <p><i>Bike and pedestrian facility pilot projects are temporary installations of amenities such as wayfinding, sharrows, or traffic-calming measures to demonstrate their efficiency in improving comfort, mobility, and safety. Pilot projects can be implemented quickly because of their temporary nature, and may be installed in isolation or as part of a larger community event. Successful pilot projects are often converted to permanent facilities.</i></p>	PBAB	FBRMPO
<p>12 Design and install two of the recommended projects.</p> <p><i>Based on feasibility of construction, available funding, and public support, the Town of Laurel Park should identify two of the recommended projects to progress into design and installation. Successfully implementing two of the recommendations in the short term will validate the Pedestrian and Bicycle Plan and its recommendations.</i></p>	Town Manager	<p>PBAB</p> <p>Town Boards</p> <p>FBRMPO</p> <p>NCDOT</p>
MID-TERM		
Action & Description	Lead Organization	Partners
<p>13 Identify regional projects to submit to FBRMPO for prioritization for state funding.</p> <p><i>The French Broad River MPO submits projects to NCDOT for prioritization for state funding representing the MPO's transportation priorities for the region. The Town of Laurel Park should coordinate with FBRMPO to identify which of the Pedestrian and Bicycle Plan's facility recommendations have the greatest likelihood of success in securing state funding.</i></p>	<p>PBAB</p> <p>Town Council</p>	<p>FBRMPO</p> <p>NCDOT</p> <p>Regional PBAC</p>
<p>14 Initiate a study of the "unopened" roads.</p> <p><i>The study should inventory the exact locations and ownership of the "unopened" roads in Laurel Park, as well as their suitability for inclusion in the pedestrian and bicycle network.</i></p>	PBAB	Town Council
<p>15 Create an ancillary bicycle and pedestrian facility installation prioritization program.</p> <p><i>The identification of potential locations for bike rack and bench installation should be formalized to consider potential demand, space availability, and maintenance. In partnership with property and business owners, Town staff should inventory and evaluate these locations to determine where bike racks or benches should be installed first.</i></p>	Town Council	<p>Business Owners</p> <p>Laurel Park Civic Association</p>



MID-TERM CONTINUED		
Action & Description	Lead Organization	Partners
16 Pursue funding to construct a public restroom near Laurel Green Park  <i>With the expansion of the biking and walking network, the need arises for public rest facilities. This could be located on park or town hall property.</i>	PBAB	Town Council
17 Complete additional priority projects.  <i>Beyond installation of two priority projects in the short-term, the Town of Laurel Park should aim to complete three or more additional priority projects in the mid-term. The top five projects detailed in the Recommendations chapter should be given heavy consideration, since they perform well both quantitatively and qualitatively.</i>	PBAB  Town Council	PBAB  Town Boards  FBRMPO  NCDOT
18 Apply to become a Bicycle Friendly Community.  <i>The League of American Bicyclists awards the designation of Bicycle Friendly Community to municipalities that have demonstrated success in making their communities more bicycle friendly. Following the completion of the short-term and mid-term actions of the implementation plan, the Town of Laurel Park should be in a prime position to apply for and be awarded a Bicycle Friendly Community designation.</i>	PBAB	Blue Ridge Bicycle Club
LONG-TERM		
Action & Description	Lead Organization	Partners
19 Coordinate land acquisition for off-street shared use paths.  <i>As the Town of Laurel Park continues support and participates in the expansion of the regional greenway network, consideration should be given to long-term land acquisition.</i>	Town Council	Henderson County  Property Owners
20 Update Pedestrian and Bicycle Plan.  <i>Successful implementation of the Pedestrian and Bicycle Plan will necessitate an update in five to ten years. The Pedestrian and Bicycle Plan's recommendations will need to be revisited, revised, and augmented to keep pace with Laurel Park's progress toward a more pedestrian and bicycle friendly community. Municipalities with pedestrian and bicycle plans that are older than five years are eligible to apply for NCDOT Division of Bicycle and Pedestrian planning grants.</i>	PBAB	Town Council and Staff



## FUNDING OPPORTUNITIES

Implementation requires taking advantage of federal, state, local, and private funding opportunities. As a municipality in a metropolitan planning organization area in North Carolina, the Town of Laurel Park can use federal and state funding that has been allocated to NCDOT Division 14 or to the French Broad River Metropolitan Planning Organization (FBRMPO). The Town's capital improvement program and private entities are other sources that can be used to implement the recommendations of the Pedestrian and Bicycle Plan. 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 or 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 or MAP-21. For the programs described below, the Town of Laurel Park would apply to the French Broad River Metropolitan Planning Organization 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 metropolitan planning organization (MPO) study areas, e.g., the French Broad River Metropolitan Planning Organization area, 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.

#### **READ MORE:**

<https://www.fhwa.dot.gov/fastact/>

#### *TRANSPORTATION ALTERNATIVES*

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 metropolitan planning organization (MPO) study areas, e.g.,

the French Broad River Metropolitan Planning Organization area, 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.

#### **READ MORE:**

<https://www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm>

#### *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 projects. Municipalities can apply for Transportation Alternatives funding in the same way they would apply for STBG funding.

#### **READ MORE:**

<https://www.fhwa.dot.gov/fastact/factsheets/transportationalternativesfs.cfm>

#### *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.

#### **READ MORE:**

<https://www.fhwa.dot.gov/fastact/factsheets/metropolitanplanningfs.cfm>

### TIGER DISCRETIONARY GRANTS

Transportation Investment Generating Economic Recovery (TIGER) 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. TIGER grants can be used for capital projects that generate economic development and improve access to safe and affordable transportation alternatives.

#### **READ MORE:**

<https://www.transportation.gov/tiger>



## 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. In 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 Laurel Park can coordinate with FBRMPO to submit bicycle facility projects for prioritization for funding. Projects identified in this Pedestrian and Bicycle Plan would be eligible for Strategic Mobility Formula Funding.

### READ MORE:

<https://www.ncdot.gov/strategictransportationinvestments/>

## 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 resurfacing local streets, 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 fiscal year 2015, the Town of Laurel Park received \$99,000.

### READ MORE:

<https://connect.ncdot.gov/municipalities/State-Street-Aid/Pages/default.aspx>

## CAPITAL IMPROVEMENT PROGRAM

The Town of Laurel Park's annual budget for 2018 includes \$235,000 for roadway paving work. There is not a set amount each year for pedestrian and

bicycle facilities; however, projects from this plan can be included as a separate allocation in future years.

### READ MORE:

<http://www.laurelpark.org/budget>

## 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.

### READ MORE:

[City of Wilmington 2014 Transportation Bond](#)  
[City of Raleigh 2017 Transportation Bond](#)

## PRIVATE DEVELOPMENTS

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

## NON-PROFIT ORGANIZATIONS

Non-profit organizations, such as the Blue Ridge Bicycle Club and PeopleForBikes, 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.

In addition to non-profit organizations, the Town can leverage fundraising and private donations similar to the methods being used for the construction of Rhododendron Lake Nature Park.

### READ MORE:

<http://www.blueridgebicycleclub.org>  
<http://www.peopleforbikes.org/pages/community-grants>


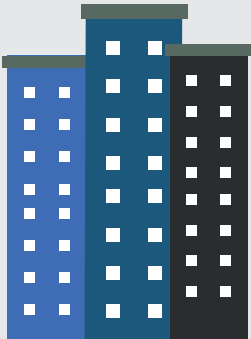







## PERFORMANCE MEASURES

Beyond completing the action steps in the implementation plan, the Town of Laurel Park should consider evaluating its progress in achieving the vision of the Bicycle and Pedestrian Plan. Some of the ways to track this progress are listed below:

Figure 5-2: Suggested Performance Measures

	<b>USAGE</b>	<ul style="list-style-type: none"> <li>• Pedestrian and bicyclist counts</li> <li>• Event/program participation</li> </ul>
	<b>INFRASTRUCTURE</b>	<ul style="list-style-type: none"> <li>• Percent of projects implemented</li> <li>• Percent of policies and programs implemented</li> <li>• Mileage of sidewalks</li> <li>• Mileage of shared use paths</li> <li>• Mileage of shared lane markings</li> <li>• Number of benches</li> <li>• Number of bike racks</li> <li>• Funding allocated to multmodal facilities</li> </ul>
	<b>SAFETY</b>	<ul style="list-style-type: none"> <li>• Frequency of bicycle and pedestrian crashes</li> <li>• Severity of bicycle and pedestrian crashes</li> </ul>
	<b>EDUCATION</b>	<ul style="list-style-type: none"> <li>• Number of drive education events held</li> <li>• Frequency of bicycle and pedestrian information distributed to residents</li> </ul>
	<b>ECONOMY</b>	<ul style="list-style-type: none"> <li>• Property values</li> <li>• Sales revenue</li> </ul>

## DESIGN GUIDELINES

Several guidance documents exist for the planning and design of pedestrian and bicycle facilities. Updated versions of the Manual on Uniform Traffic Control Devices (MUTCD) and Guide for the Development of Bicycle Facilities are expected to be published in 2018. The guidance documents that the Town of Laurel Park should reference when implementing the facility recommendations of the Plan are summarized below.

Table 5-2: Design Guidance References

NATIONAL GUIDELINES		
Resource	Author	Date
<i>Guide for the Development of Bicycle Facilities, 4th Edition</i>	AASHTO	2012
<i>Guide for the Planning, Design, and Operation of Pedestrian Facilities, 1st Edition</i>	AASHTO	2004
<i>Manual on Uniform Traffic Control Devices</i>	FHWA	2012
<i>Separated Bike Lane Planning and Design Guidance</i>	FHWA	2015
<i>Achieving Multimodal Networks</i>	FHWA	2016
<i>Small Town and Rural Multimodal Networks</i>	FHWA	2016
<i>Urban Bikeway Design Guide, 2nd Edition</i>	NACTO	2014
<i>Urban Street Design Guide</i>	NACTO	2013
<i>ADA and ABA Accessibility Guidelines</i>	US Access Board	2004
STATE GUIDELINES		
<i>2009 NC Supplement to MUTCD</i>	NCDOT	2009
<i>Statewide Pedestrian and Bicycle Plan</i>	NCDOT	2013
<i>NCDOT Complete Streets</i>	NCDOT	2012
<i>Evaluating Temporary Accommodations for Pedestrians</i>	NCDOT	N/A
<i>NC Local Programs Management Handbook</i>	NCDOT	2009
<i>Traditional Neighborhood Development Guidelines</i>	NCDOT	2000

### READ MORE:

<https://www.ncdot.gov/bikeped/walkbikenc/pictures/designtoolbox.pdf>

<https://connect.ncdot.gov/projects/BikePed/Pages/Guidance.aspx>



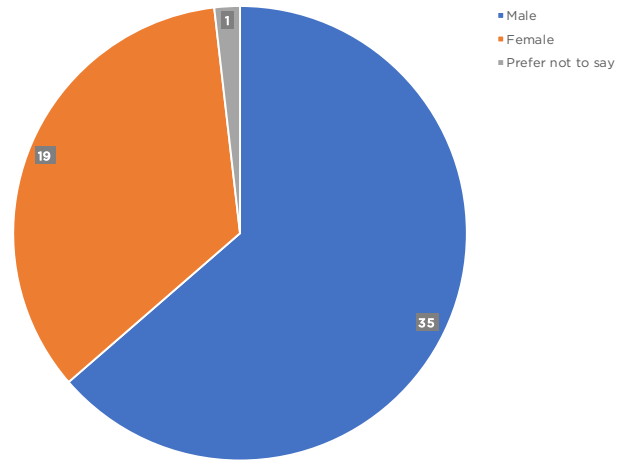
## ENDNOTES

1. Biking and Walking in the United States: 2012 benchmarking report, Alliance for Biking and Walking, 2012
2. <https://www.nhtsa.gov/road-safety/pedestrian-safety>
3. <https://www.transportation.gov/mayors-challenge-background>
4. <http://www.watchformenc.org/about/>
5. [http://www.pedbikeinfo.org/data/factsheet\\_economic.cfm](http://www.pedbikeinfo.org/data/factsheet_economic.cfm)
6. "Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts," Political Economy Research Institute, University of Massachusetts, Amherst, 2011
7. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition, Physical Activity, and Obesity. Data, Trend and Maps, <https://www.cdc.gov/nccdphp/dnpao/data-trends-maps/index.html>
8. "A Cost-Benefit Analysis of Physical Activity Using Bike/Pedestrian Trails," Health Promotion Practice, Volume 6, Issue 2, pp. 174 - 179, 2005
9. Many Pathways from Land Use to Health: Associations between Neighborhood Walkability and Active Transportation, Body Mass Index, and Air Quality, Journal of the American Planning Association, Volume 72, Issue 2, 2006
10. North Carolina Pedestrian Crash Facts 2008 - 2012, UNC Highway Research Center, 2014

# ONLINE SURVEY #1 RESULTS

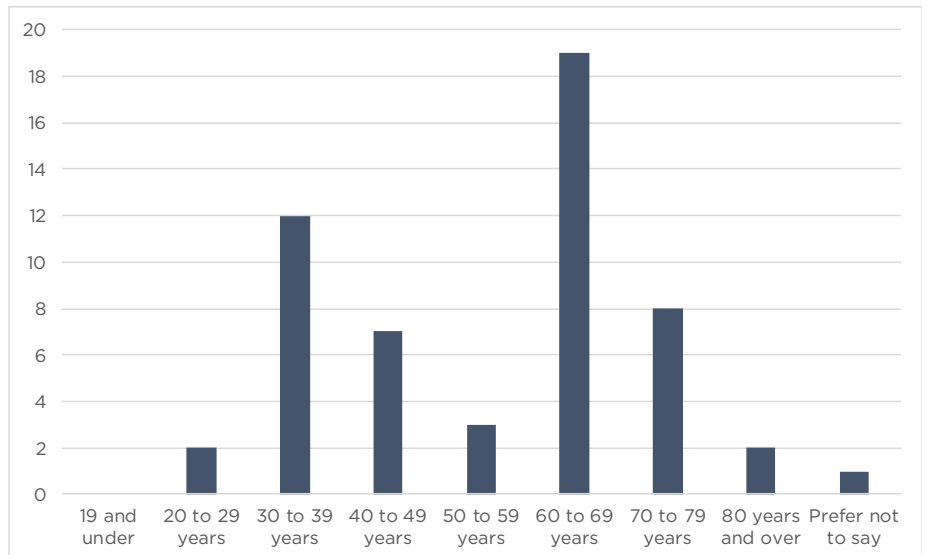
What is your gender?

- Female
- Male
- Prefer not to say



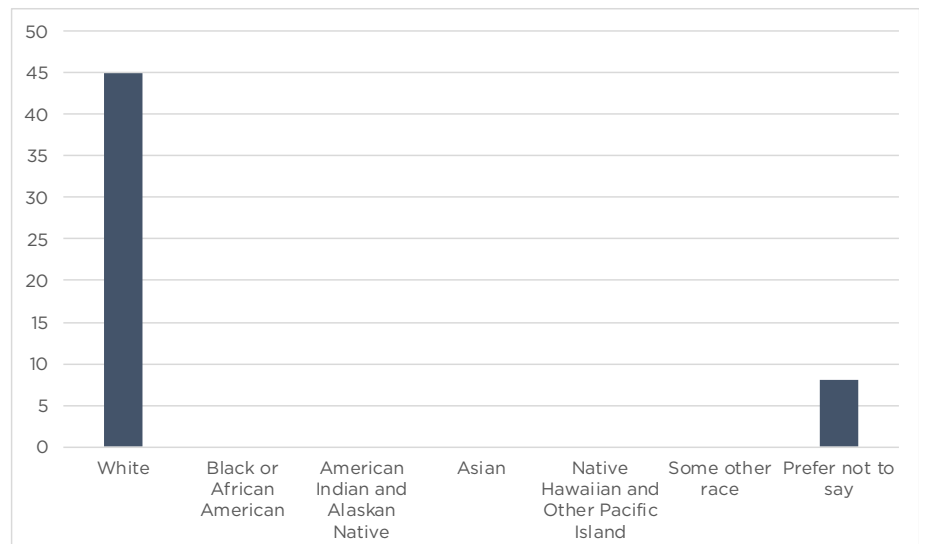
What is your age group?

- 19 and under
- 20 to 29 years
- 30 to 39 years
- 40 to 49 years
- 50 to 59 years
- 60 to 69 years
- 70 to 79 years
- 80 years and over
- Prefer not to say



What is your race?

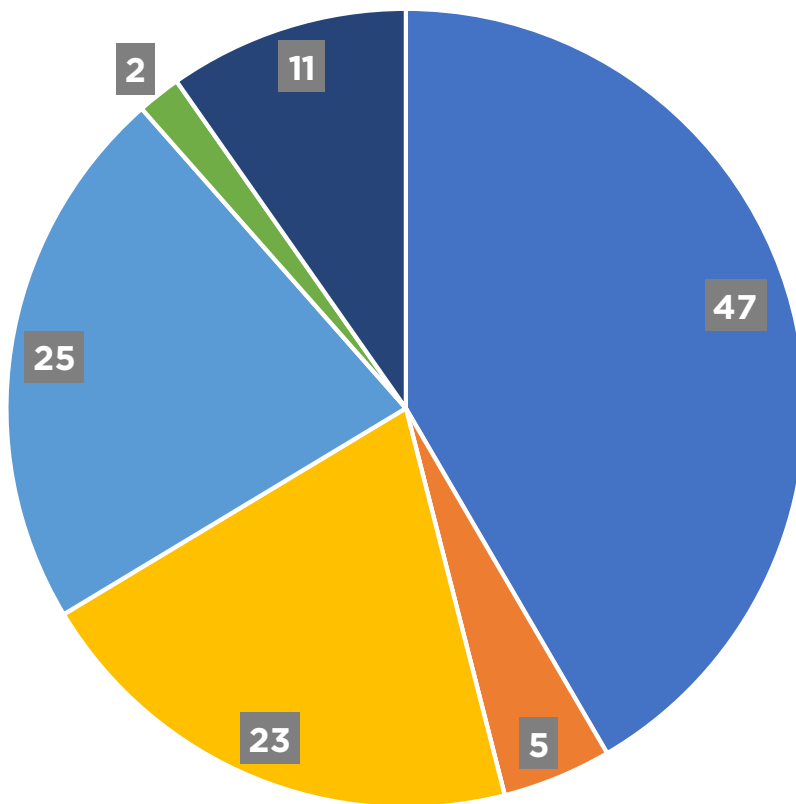
- White
- Black or African American
- American Indian and Alaskan Native
- Asian
- Native Hawaiian and Other Pacific Island
- Some other race
- Prefer not to say



## ONLINE SURVEY #1 RESULTS

What is your relationship to Laurel Park? [check all that apply]

- I live here
- I work here
- I go to school here
- I shop/dine here
- I recreate here
- I vacation here
- I travel through

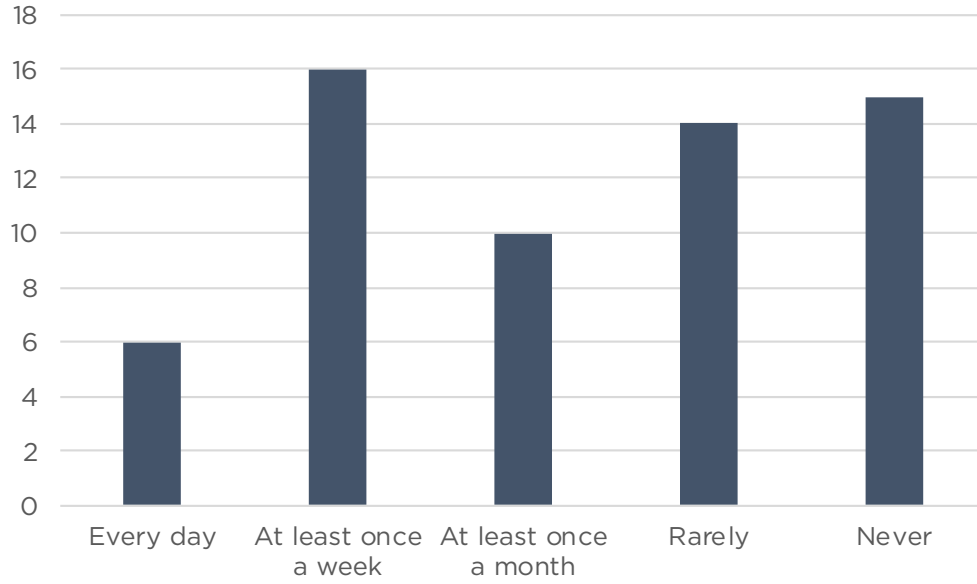


- I live here
- I work here
- I go to school here
- I shop/dine here
- I recreate here
- I vacation here
- I travel through

# ONLINE SURVEY #1 RESULTS

## How often do you bike in Laurel Park?

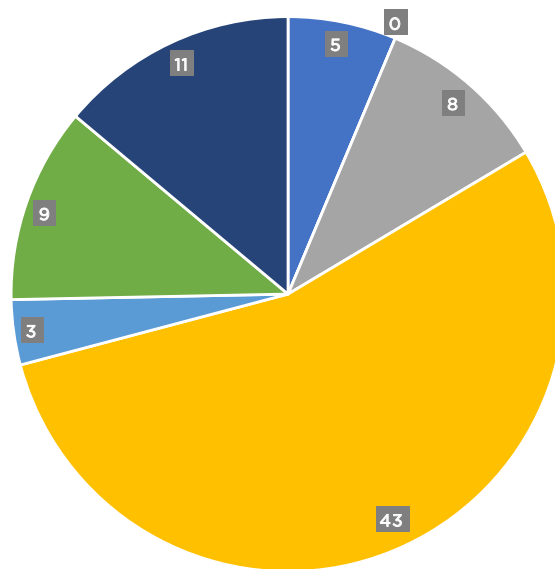
- Every day
- At least once a week
- At least once a month
- Rarely
- Never



## ONLINE SURVEY #1 RESULTS

### What are your primary reasons for riding a bike in Laurel Park? [check all that apply]

- To get to work
- To get to school
- To get to restaurants or shops
- For recreation and exercise
- To run errands
- To visit friends and family
- I don't bike



- To get to work
- To get to school
- To get to restaurants or shops
- For recreation and exercise
- To run errands
- To visit friends and family
- I don't bike

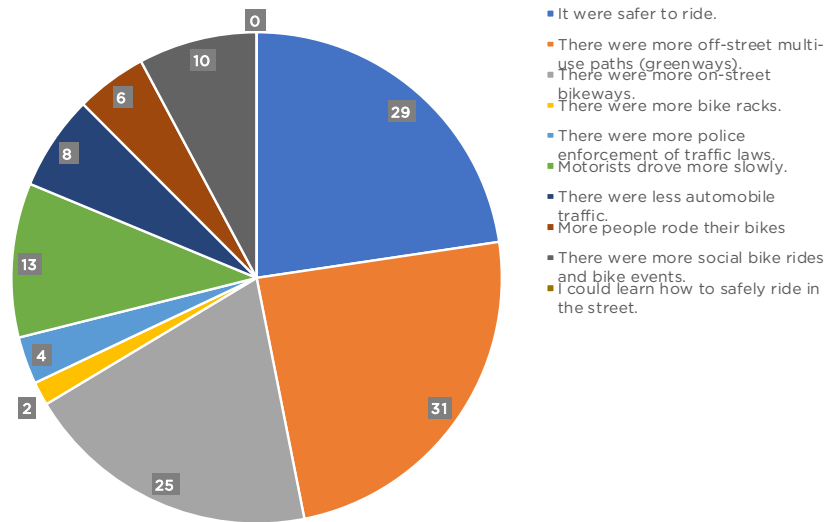
### For what other reasons do you bike in Laurel Park?

- Beautiful scenery
- Our children bike on the roads between houses on a daily basis.
- Only when time doesn't allow me to get to a safe bike path.
- I would love to bike, but the roads are not conducive to riding right now.
- I don't bike because it is unsafe to cross USA-64 and the town provides no way to do so.
- Annual mileage objective
- Enjoy the beauty of Laurel Park and the mountains. To be with friends who ride.
- Exercise
- Recreation

# ONLINE SURVEY #1 RESULTS

## “I would bike more if...” [check all that apply]

- It were safer to ride.
- There were more off-street multi-use paths (greenways).
- There were more on-street bikeways.
- There were more bike racks.
- There were more police enforcement of traffic laws.
- Motorists drove more slowly.
- There were less automobile traffic
- More people rode their bikes.
- There were more social bike rides and bike events.
- I could learn how to safely ride in the street.



## What else would encourage you to bike more?

- Had more free time!
- There was less hilly place to ride
- Dedicated bike lanes or corridors; paved roadside bike “pull-off passing areas
- A bike rack at Jump Off Rock.
- More days in the week!
- I am satisfied with the biking environment and do not think improvements are needed.
- Raising my amount of bike time would depend on items outside of Laurel Park’s control (weather, appropriate work clothes at the office, etc.)
- Drivers were less hostile towards cyclists
- Transport outside Laural Park to a more appropriate location for biking
- I do not support bicycles on roadways, it is dangerous and inconvenient for cars, dangerous for bikes.

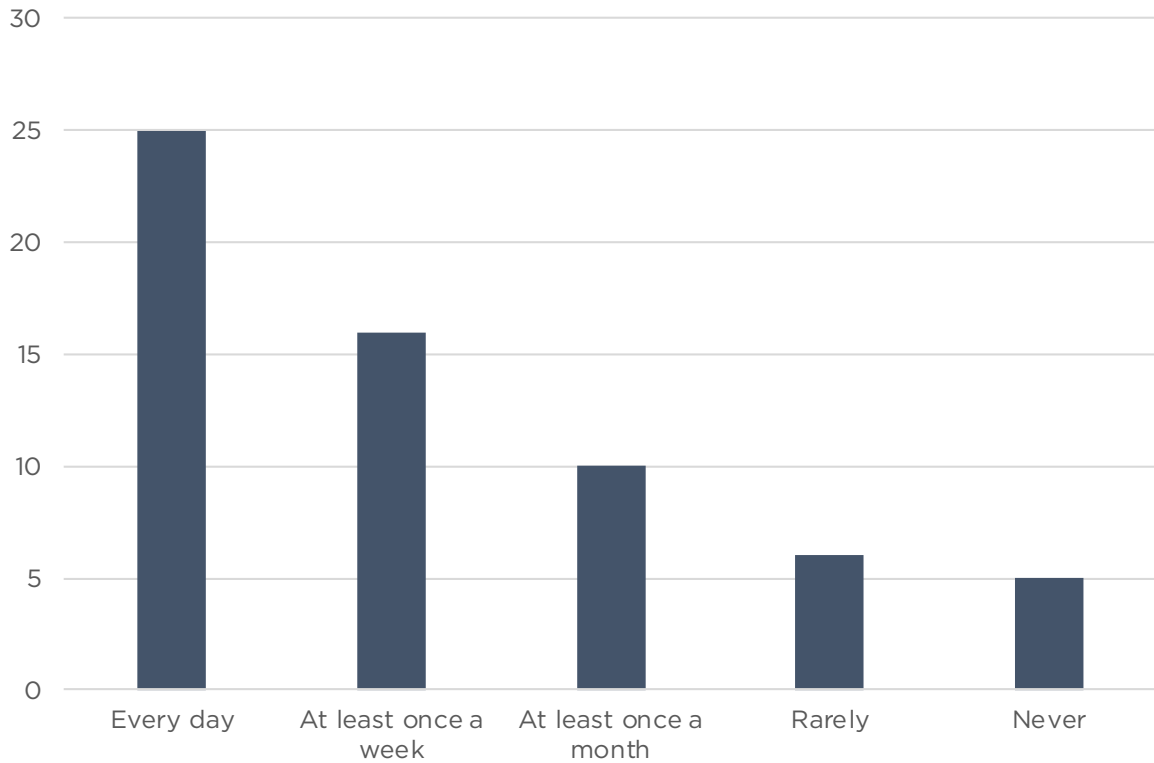




## ONLINE SURVEY #1 RESULTS

### How often do you walk in Laurel Park?

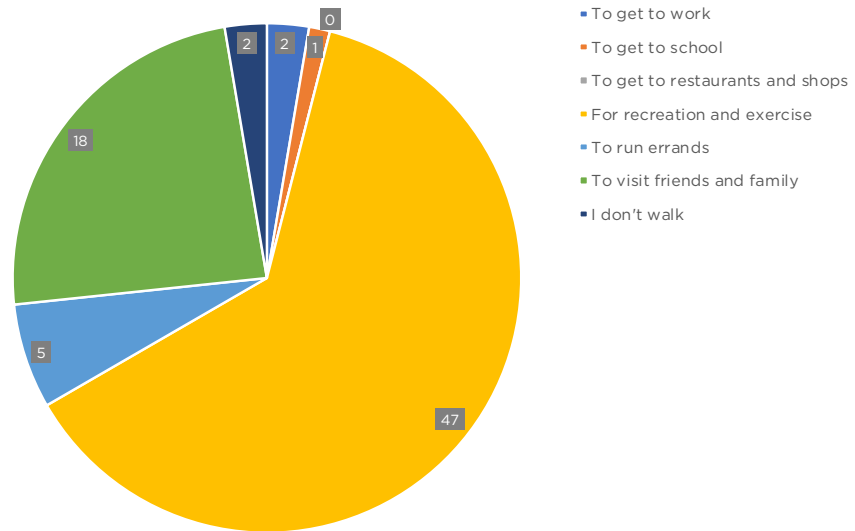
- Every day
- At least once a week
- At least once a month
- Rarely
- Never



# ONLINE SURVEY #1 RESULTS

## What are your primary reasons for walking? [check all that apply]

- To get to work
- To get to school
- To get to restaurants and shops
- For recreation and exercise
- To run errands
- To visit friends and family
- I don't walk



## For what other reasons do you walk in Laurel Park?

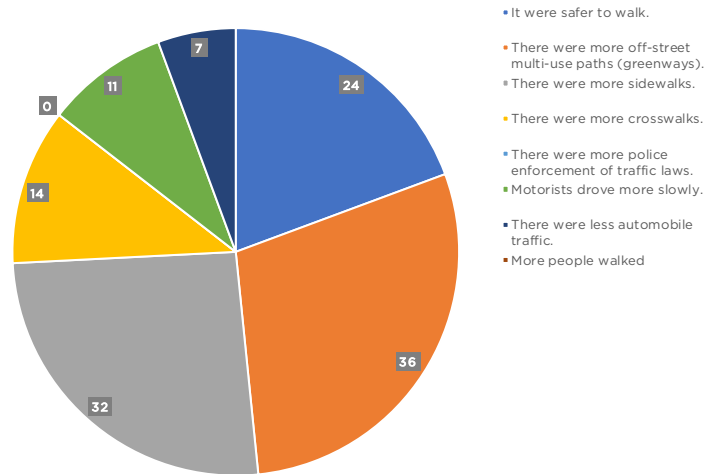
- To get to the park/playground
- Walk the dog
- Prefer cycling
- Exercise
- To walk my dogs
- Walk dog
- Walking the dog and keeping myself in shape
- Walk the dog
- Health



## ONLINE SURVEY #1 RESULTS

### “I would walk more if...” [check all that apply]

- It were safer to walk.
- There were more off-street multi-use paths (greenways).
- There were more sidewalks.
- There were more crosswalks.
- There were more police enforcement of traffic laws
- Motorists drove more slowly
- There were less automobile traffic.
- More people walked.



### What else would encourage you to walk more?

- Sidewalks!!! On Laurel Park Hwy and White Pine up to Lake Dr on both of these roads.
- Sidewalks in key areas where vehicular traffic makes it uncomfortable and dangerous to, particularly with a stroller.
- Roadside benches; adequate enforcement of “dangerous dog” laws
- Dangerous dogs are a problem on some streets
- I could not bicycle!
- N/A
- If there were streetlights and wider streets. You often have to jump off the road to let cars pass.
- Lake Drive is a 25 mph zone..... lots of luck finding someone that actually does it.
- Trail guides available on the website

## ONLINE SURVEY #1 RESULTS

### How would you describe bicycling and walking in Laurel Park?

- Dangerous. These are primarily narrow mountain roads. Drivers don't expect to see walkers in the road, and cyclists ride very fast down the mountain.
  - There are great roads, so the opportunities for fun and exercise are fantastic.
  - I love it. Great place to get a workout and fabulous views at Jump Off.
  - Beautiful and scenic and the car drivers are reasonably friendly to cycling. Love cycling up to Jump Off Rock.
  - Somewhat dangerous due to blind curves and speeding motorists.
  - Always beautiful but depending on the street can be dangerous. We live on the White Pine end of Crystal Spring and people drive entirely too fast through here.
  - I walk or run in Laurel park everyday. In fact, we bought our home in lower Laurel park because it was right in the middle of our favorite place in the area for walking, running, etc with our family. The biggest deficiency I see is the lack of sidewalks on Laurel park Hwy and white pine dr. You have to walk on one of these high traffic roads to connect any of the great neighborhoods and walking routes to the wonderful park and playground at Laurel green. Walking on these roads without sidewalks with children, strollers, and pets can be dangerous. Sidewalks from Laurel green up to lake dr on Laurel park hwy and white pine would tremendously improve the walkability of our great town.
  - I live in wildwood estates and there is not much traffic up there. I have no problems walking and biking around laurel park due to the lack of traffic.
  - Dangerous on our winding roads. The lack of shoulders makes it unsafe to walk or ride.
  - I think that Laurel Park is lovely and has potential for walkability, but the narrow roads and lack of sidewalks or greenways make it very difficult and dangerous to walk or bike.
  - We live part time in Atlanta and part time in LP. LP is a lot safer and more enjoyable for cycling and walking. That said, converting the old railroad line to a rails-to-trails multiuser path would be a TREMENDOUS asset for the community, even if it is only in Henderson County.
  - Very difficult to many steep hills
  - Difficult.
  - Bicycling from our home is not reasonable because we cannot safely reach the main part of Laurel Park. Similarly, walking anywhere but in our small area is not possible because there are no sidewalks on nor
- no close crossings of US 64 to reach the more level areas of Laurel Park or any of the parks.
  - It is a lovely area to do both with a couple of locations that need safety improvements to tie together larger routes, provide wider access to existing and future parks and to provide access onto the sidewalks of the City of Hendersonville.
  - Needs to expand
  - Laurel Park is a great place to walk and to bike already. Key links of sidewalks and greenways between parks would be very welcome. The Ecusta Trail and other greenways would allow more opportunities for walking and biking.
  - Would be nice if there was a sidewalk from Laurel Green Park to the Park on Lake Drive. It can be difficult as a driver in Laurel Park when pedestrians do not share the road with automobiles.
  - Currently great!
  - Very nice except that it can be dangerous with blind curves sometime cars are not aware of pedestrians. Also some dogs are allowed to get out of their yards and have been known to attack walkers and even sometimes cyclists.
  - Cycling is good here. We need to educate the cyclists, of which I am one, to be more respectful of motorists. And we need motorists to give cyclists a bit more space and some courtesy. And Please work to make the Ecusta Trail a reality!!!! This would be a tremendous asset to our community.
  - It's not very conducive to walking as there are so few off road trails.
  - LP up to Jump-Off Rock is simply a wonderful ride for me @ age 72!
  - Riding my bike up to Jump off Rock is great. A bike lane or perhaps a route that avoided the main traffic routes would also be good.
  - Terrifying
  - "Bicycling in Laurel Park is safe and improvements are not needed. Education and outreach to the residents regarding NC laws applicable to bicycling would be helpful to reduce contention with drivers. Walking would be improved with more sidewalks but not sure the investment would be worth the benefits.
  - Thank you for developing the plan
  - Laurel Park is a beautiful neighborhood for us to walk and bike in but I don't always feel safe due to driver's speed and curvy roads



- The topography of LP makes the riding great but challenging. The issue that seems to be most prevalent deals with cars overtaking a cyclist going uphill. Even, I assume, being one if the younger residents (and I'd mention tax payer AND property owner) and a competitive cyclist, it's the rare time that I'm able to do the speed limit on the way home. (15 minutes uphill) and while for the most part the others sharing the road are quite courteous, occasionally someone, typically not a fellow resident, will drive amazingly aggressively or recklessly. Having a "climbing lane" on the highly used (Laurel Park Hwy, Hebron, Esowah and Roberts) roads would make things much easier on everyone, cars and cyclists alike.
- "My children bike, but only go a few blocks away to friends houses. However, the streets around Silver Pine are so narrow and you can't see if cars are approaching at the intersections. Cars drive too fast along these narrow side roads especially during "rush hour" 8-9 am and 4-6 pm
- As far as walking for exercise... we need sidewalks and street lights. Evening walks are great especially during the heat of the summer, but it's so dark with no streetlights. We at least need sidewalks up Laurel Park Hwy to Lake Drive and along White Pine. White Pine toward 64 is very narrow even for cars (which never are able to stay in their lane), so if there are walkers it's hazardous. Not everyone wants to walk on the Rail road tracks unless they're made into trails which would be awesome!
- It's a beautiful place to bike, run, or walk. One of the greatest advantageous of engaging these activities in Laurel Park is the scenario coupled with little traffic. As the traffic patterns become busier, as they seem to be doing, there will be an even greater need for more alternative pathways, greenways, sidewalks, etc., to ensure this unique aspect of the town isn't lost. I would also like to see the town really pursue advocating for the Ecusta Trail project as this would be an overwhelmingly positive addition to our town.
- Awesome, I love it. The drivers are almost always courteous, the scenery is beautiful, the traffic is light. It really doesn't get much better. I think it was just yesterday that George Hincappe and Lance Armstrong rode up to Jump off rock! The only thing I could think of to make it better is some signs to share the road, and some way to display a welcoming attitude towards cyclists and walkers. And promote that attitude towards City Employees.
- Bicycling should be restricted to appropriate topography and line of sight areas, not in Laurel Park in general. When automobile traffic is eliminated in favor of bicycles, our elevation changes and curves in streets still would be unsafe for the bikers and the walkers. Bikers would run over the walkers in the "shared" traffic zone. . I.E., take the bikes to a safe biking area. Someone should get realistic about this issue.
- Best in the County!
- Laurel Park has a lot to offer the walker with it's scenery, hills and some very nice quiet streets. The issue is on walking on the main connecting streets, Hebron, Laurel Park Pkwy and White where the traffic is heavy, moving fairly fast and there are no sidewalks and limited shoulders in some areas. Also, it would be nice to have connections designated like the cut through Bent Tree condominiums to Panoramic, or from Crestwood Dr. to Smith St. or walking up the power line from Westwood to Echo Lake. Longer trails around Jump Off would also be great.
- I walk more than I bicycle: mostly, it's a pleasant experience. But I will say that I sometimes notice that there is little attention paid to pedestrians, and that could be a cultural problem that can only be solved with more emphasis on thoughtfulness toward some rules: hugging the right side of the road AND slowing down when turning a curve (drivers), and trying to walk on the left side of the road (which is an unspoken rule internationally.)
- Riding to Jump Off Rock is great! There should be more cycling focused routes in Laurel Park.
- Relatively nonexistent or in its infancy (crawling not standing yet - much less biking)
- Pretty good, but we often experience motorists passing us in blind curves as we bicycle. Laurel Park is an ideal place to bicycle for folks wanting to get in quality exercise. Plus, the scenery and history is wonderful.
- All of the roads in our area (near Jump Off Rock) are very narrow with no shoulder. I think people are foolish to bike in our area, dangerous for them and very annoying for cars. I think such a thankfully small number of people use bicycles here, the main focus should be walking, possible walking paths or sidewalks, but I would support cutting any trees to make way for paths or sidewalks. I think the focus of planning should be better roads, such as widening 64, a better connector between 5th street / Laurel Park Highway and 64, such as improving Westbrook?

## PUBLIC RECOMMENDATION RANK

### INFRASTRUCTURE

Project	Rank
Laurel Park Highway Sidewalk	1
Town Hall Walking Paths	2
White Pine Dive Sidewalk	3
Town Hall to Jump Off Rock Signed Bike Route	4
White Pine Drive Sidewalk	5
Laurel Park Highway Climbing Lanes A1 & A2	6
Laurel Park Highway Climbing Lanes B1 & B2	7
Crystal Springs Park Shared Use Path	8
Daniel Drive Sidewalk & Crossing Improvements	9
Silver Pine Drive Sidewalk	10

### PROGRAM AND POLICY

Project	Rank
Continue to support the Ecusta Trail.	1
Adopt local street design standards to reflect national best practices.	2
Require new developments to include bicycle and pedestrian facilities.	3
Adopt a local Complete Streets policy.	4
Create a Bicycle Pedestrian Advisory Commission.	5
Create a Town traffic calming policy.	6
Incorporate bicycle and pedestrian safety into driver education and training courses.	7
Identify and prioritize locations for bicycle rack installation.	8
Establish a local Safe Routes to School program.	9
Develop a Town-wide system of wayfinding signs.	10
Become a Watch for Me NC partner community.	11
Integrate "unopened" roads into the bicycle and pedestrian network.	12
Plan and execute an Open Streets event.	13
Become a League of American Bicyclists Bicycle Friendly Community.	14
Participate in Walk and Bike to School Events.	15
Create a local Bicycle Benefits program.	16
Create events to promote National Bike Month and Bike to Work Day.	17
Distribute bike lights, helmets, and bells.	18



LAUREL PARK STREETS AND ROADS (July 1, 2014)									
STREET NAME	PAVED	GRAVEL	DIRT	DOT	PRIVATE	R/O/W	REMARKS		
Alta Circle	2265					40			
Apple Lane	780					40/30			
Arbutus Lane	1060					30			
Arrowroot Place	367					40			
Azalea Ridge Road	762					25			
Azalea Ridge Road		304				25			
Beechwood Circle	5755					40			
Ben Hogan Drive					210	45			
Bent Tree Drive					983	40			
Birchwood Drive	695					40			
Blackberry Place	135					40			
Breckinridge Court	230					30			
Briarcliff Drive	900					30			
Camellia Way	2674					40			
Canal Drive	1220					30			
Cedar Terrace	240					30			
Cedarbrook Drive	870					30			
Central Drive	1667					40			
Choctaw Circle	320					30			
Choctaw Circle		328	519			30			
Cliff Drive	893					40			
Coldwater Lane	331					45			
Country Ridge Road	2126					40			
Crepe Myrtle Glen	195					40			
Crossvine Trail					2950	50			
Crystal Spring Drive	3384					30			
Daniel Drive				1940					
Davis Mountain Road	4910					40/60			
Deerwood Lane	1448					40			



STREET NAME	PAVED	GRAVEL	DIRT	DOT	PRIVATE	R/O/W	REMARKS
East Park Place	435						
East Ramp	250					40	
Echo Circle	2101					30	
Echo Drive	1394					30	
Echo Lane	862					20/30	
Elm Lane	250					30	
Essowah Drive	995					40	
Fairway Drive	3515					40	
Fawn Turn	170					40	
Fern Lane	265					30	
Fifth Avenue				601		50	
Fire Azela Lane					157	45	
Flameleaf Lane					778	45	
Fleetwood Plaza Road					1058	40	
Foxglove Road	510					40	
Golf Course Drive					1316		
Graying Lane	315					20	
Hazel Street		404				25	
Headwater Drive	425					45	
Hebron Road to Ransier				5332		40	
Hebron Road	9136					40	
Hemlock Trail	1226					40	
Hwy 64 (Bevard Road)				1825		60	
Hyacinth Lane	308					40	
Hydrangea Drive	480					25	
Indian Woods Trail	1611					40	
Indigo Way	550					40	
Ives Street	400					30	
Ives Street		117				30	
Ivywood Lane					838	45	





STREET NAME	PAVED	GRAVEL	DIRT	DOT	PRIVATE	R/O/W	REMARKS
Jasmine Place	700					40	
Kermit Edney Drive	780					30	
Ladys Fern Trail					1035	45	
Lake Drive	4641					30	
Las Brisas Lane	418					30	
Laurel Park Highway	25010					40	
Laurel Park Place	2230						
Linden Turn	202					40	
Mayapple Court	180					40	
McCarson Drive	484					40	
Mimosa Way	760					40	
Mulberry Court	253					40	
Nandina Lane	198					40	
Nimbus Lane	866					20	
Norfolk Lane		220				20	
North Park Place	457					40	
Old Creek Lane	317					45	
Old Laurel Drive	1940					30	
Old Orchard Drive	906					25	
Old Pasture Way	905					45	
Old Village Road					352	40	
Olds Lane	594					20	
Orchard Circle	6109					40	
Panorama Drive	1250					40	
Panorama Drive		1375				40	
Park Drive	1585					40	
Pinewood Circle	2220					40	



STREET NAME	PAVED	GRAVEL	DIRT	DOT	PRIVATE	R/O/W	REMARKS
Pinnacle Circle	705					30	
Pinnacle Drive	325					30	
Pisgah Drive				2112		60/30	
Poplar Spring Trail	389					30	
Primrose Lane	1270					30	
Railroad Drive		375				30	
Rainbow Lake Drive	790					30	
Ransier Drive	1600			1300		30	
Reisha Lane	430						
Rhododendron Drive	858					30	
Roberts Drive	1937					40	
Robinson Lane	2122					30	
Rocky Top Court					496		
Rork Drive		350				30	
Rowland Drive	2312					40	
Royal Drive	594					20	
Rustic Drive	417					30	
Sabine Drive	5636					40	
Shaws Creek Farm Road	2037					45	
Silk Tree Road	460					40	
Silver Pine Drive	1231			350		30	First 350' from White Pine (DOT)
Silver Spring Drive		780				30	
Sky Village Lane	336					20	
Skyway Drive	1152					30	
Smith Drive	516					20	
Somersby Parkway					6610	50	
South Drive	710					30	
South Park Place	576					40	
Spring Path	149					40	
Spruce Pine Lane	620					30	
Stayman Lane	876					30	
Sugar Maple Road	579					40	
Sunnyridge Road	1251					40	

STREET NAME	PAVED	GRAVEL	DIRT	DOT	PRIVATE	R/O/W	REMARKS
Sweetgum Trail	1491					40	
Terrace Mountain Drive	672					25	
Thistlewind Trail					1065	50	
Timbercreek Road	5608					40	
Toms Drive	1624					40	
Toms Drive		2407				40	
Tower Circle	1804					40	
Tower Circle		200				40	
Trellis Drive	1160					30	
Upper Laurel Drive	1640					30	
Wake Robin Place	360					40	
Walnut Lane	135					30	
Walnut Loop	2053					30	
West Ramp	172					30	
Westwood Drive	1365					30	
White Pine Drive				5033		40/30	
Winter Holly Lane	803					40	
Woodbridge Drive	621					30	
Woodbyne Avenue	1578					30	
Woodbyne Lane	1345					30	
Woodbyne Lane		1983				30	
Woodland Trail	894					25	
feet =	164633	8843	519	18493	17848		
miles =	31.18	1.67	0.10	3.50	3.38		
POWELL BILL TOTAL =	32.95			OVERALL	39.84		





# TOWN OF LAUREL PARK **PEDESTRIAN AND BICYCLE PLAN**

PREPARED FOR THE TOWN OF LAUREL PARK & NCDOT

PREPARED BY KIMLEY-HORN