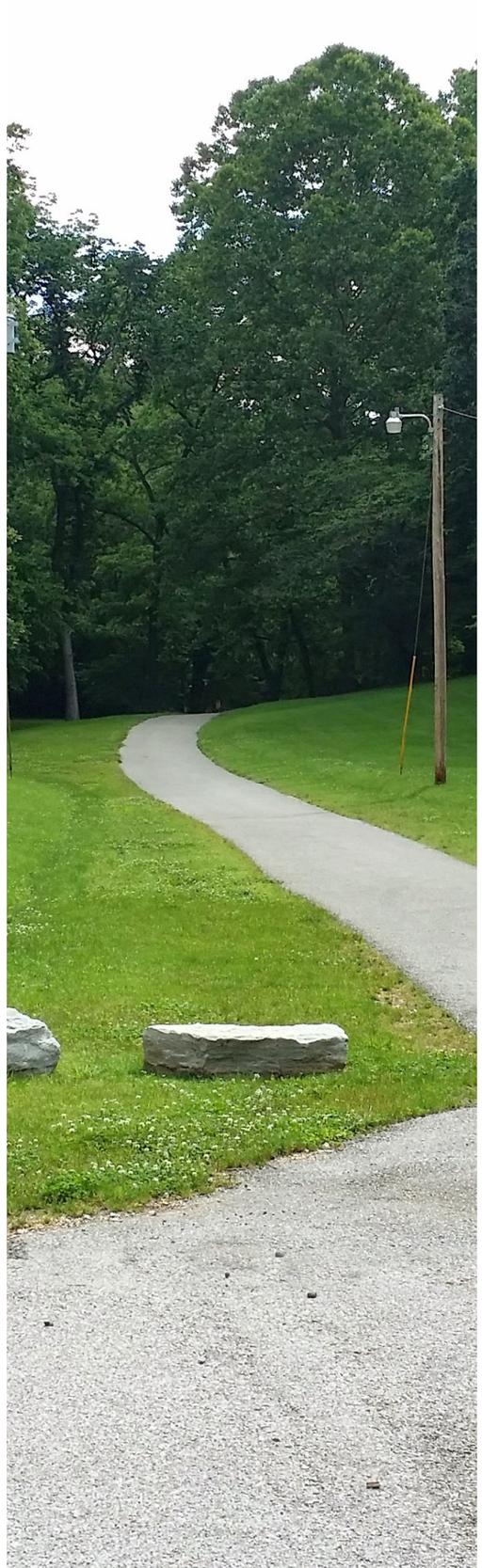

BELLA VISTA TRAIL AND GREENWAY MASTER PLAN

4/6/2015

alta PLANNING + DESIGN

ACKNOWLEDGEMENTS

PUBLIC PARTICIPANTS

Thank you to all of the people who participated in this planning process through public comment forms, the online survey, interviews and meetings. Thanks also to the many individuals of the press and those engaged in social media throughout the process.

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Council Member Larry E. Wilson

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http://www.cityofbellavista.com/

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Example of a typical paved multi-use trail.

Table of Contents

Example of a typical natural, soft surface trail.

Razorback Greenway group bike rides offer a sense of community.

CHAPTER 1 INTRODUCTION

Chapter Contents:

Project Background

WHY DO WE NEED A MASTER TRAILS AND GREENWAYS PLAN FOR THE BELLA VISTA COMMUNITY?

In the 1950s and 1960s when Bella Vista was conceived and planned for development, trails and greenways were not a priority for recreation or transportation. In addition, the terrain did not lend itself well to the development of trails, particularly after the platting of residential and commercial lots, roadways, and residual establishment of common areas was complete. Some areas within the community that have been developed more recently have provided sidewalks and some space for walking, but the majority of the community still remains without walking/biking trails. Other nearby communities in Northwest Arkansas have used walking and bicycling facilities like sidewalks, bike lanes and trails as community assets in order to attract new residents and businesses, offer diverse outlets for recreation, and support healthy and active lifestyles for their residents and visitors. While Bella Vista has a myriad of amenities and resources, the community suffers from a lack of interconnected trails to support walking, hiking, and bicycling.

The population of Bella Vista has expressed a strong desire for walking and biking trails within the last few years in response to two statistically valid surveys. The community demographics have changed over the last decade. Younger families and empty nesters comprise a larger portion of the population. These demographic groups desire and expect opportunities for recreation and healthy activities such as walking, jogging and biking for themselves and for their families.

There has been some trail development within Bella Vista over time. Notable examples include Tanyard Creek, Loch Lomond Park, and Blowing Springs, developed in cooperation with Cooper Communities, the Bentonville-Bella Vista Trailblazers, and in the latter case the Walton Family Foundation with charitable grants. However, most of the community residents still live a considerable distance from these trails, and there is not any connection to allow extended walks or rides throughout the community. Fortunately, the Northwest Arkansas area has already installed numerous trails, some of which provide the opportunities for interface with Bella Vista trails as they are developed.

The proposed Master Trails and Greenways Plan will cover the entire community and will include input from the public as the Plan is developed over a one year period. The Plan will facilitate the prioritization of trail development by the Property Owners Association, the City and any other participants based on need, availability of space, ease of development, and will be flexible for upgrades when there are changes in demographics and/or when geographical opportunities are presented. It will provide consistent standards and specifications for all trails. The Master Trails and Greenways Plan will be jointly owned by the POA and the City as a partnership in support of the quality of life in the community. The Plan is a prerequisite to the request for federal and private funding for the ultimate trail development and installation.

Definitions of Trails and Greenways (Trail Typologies)

In this plan, the terms 'trails' and 'greenways' are used interchangeably. Typically, trails are the means of transportation within a greenway. Listed below are the definitions of each.

Definition of Trails

There is no universal legal definition of a trail in the United States. One of the best, used for national recreation trails, is: *... a travel way established either through construction or use which is passable by at least one or more of the following, including but not limited to: foot traffic, watercraft, bicycles, in-line skates, wheelchairs, cross-country skis, off-road recreation vehicles such as motorcycles, snowmobiles, ATVs, and 4-wheel drive vehicles.*

Definition of Greenways

Greenways are corridors of land recognized for their ability to connect people, their natural environment and places together. Most greenways contain walking and bicycling trails. They are called blueways when they feature canoeing and kayaking. Both enhance opportunities for multi-modal transportation and recreation.

Greenways are located within linear corridors that are either natural, such as rivers and streams, or man-made, such as railroad corridors and utility corridors. As vegetated buffers, greenways also protect natural habitats, improve water quality and reduce the impacts of flooding in floodplain areas. Altogether, the many functions that greenways serve will benefit all involved: from residents to visitors, and from local businesses to the natural environment, an expanded and interconnected system of greenways will improve overall quality of life.

Left: Greenway along the Arkansas River

Right: Kids are one of the many user groups to directly benefit from the development of a trail system in Bella Vista

Trail Typologies

A variety of trail facilities are recommended due to 1) the range of skill and comfort levels involved in bicycling and walking, and 2) the range of conditions for bicycling and walking in different types of environments.

The proposed trail network is made up several core types of trails. While greenways are the focus of this Plan, there are some bicycle and pedestrian connections that must be made using on-road facilities, such as bicycle lanes, paved shoulders, signed bicycle routes, shared-lane markings, and improved crossings. Water trails, or 'blueways' as they are sometimes called, are also described below as a potential trail type.

Wide Shared-Use Trail (Adjacent to Roadway)

Permitted Uses:

Description:

Paved surface primary trail adjacent to roadways, and provides arterial connectivity

Materials:

Trail: Asphalt or concrete paving

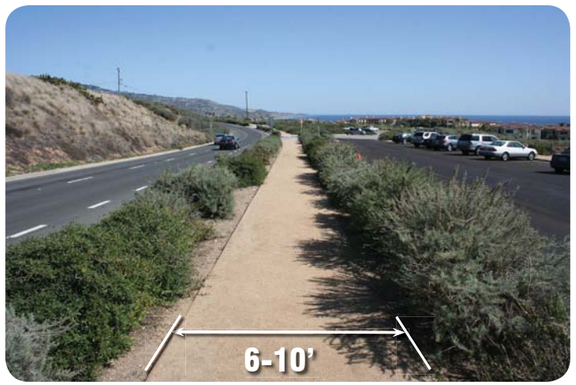
Shoulder: Decomposed granite or similar permeable material

Narrow Shared-Use Trail (Adjacent to Roadway)

Permitted Uses:

Description:
Non-hardened surface trail adjacent to roadways, typically used along roads with constrained right-of-way or topographical challenges

Materials:
Trail: Decomposed granite or similar permeable material



Left: Example of a narrow shared-use trail, adjacent to a roadway

Wide Shared-Use Trail (Off-road)

Permitted Uses:

Description:
Paved surface trail in gently sloping areas, utility easements, and some POA lands

Materials:
Trail: Asphalt or concrete paving

Shoulder: Decomposed granite or similar permeable material

Left: Example of a wide shared-use trail, off-road

Narrow Shared-Use Trail (Off-road)

Permitted Uses:

Description:
Narrow natural surface trail typically found in drainage areas, areas with steep topography, and where environmentally sensitive areas are present

Materials:
Native surface, such as bare earth or pine needles

Right: Example of a narrow shared-use trail, off-road

Hiking Trail (Off-road)

Permitted Uses:

Description:
Narrow natural surface trail typically found in any type of off-road condition but restricted to pedestrian uses

Materials:
Native surface, such as bare earth or pine needles

Right: Example of a Hiking Trail

Mountain Bike Trail (Off-road)

Permitted Uses:

Description:

Narrow natural surface trail typically found in any type of off-road condition but restricted to mountain biking, typically one-way

Materials:

Native surface, such as bare earth or pine needles

Left: Example of a mountain bike trail

Blueway

Permitted Uses:

Description:

Water trail for canoes, rafts, kayaks or other non-motorized watercraft

Materials:

Natural waterways and constructed access points

Left: Example of a blueway

Bike Skills Park (Beginner - Expert)

Permitted Uses:

Description:

Bike skills parks are great places to hone or develop bike handling skills. They provide a safe, fun environment to ride in and are suitable for all ages, skill levels and all types of bikes. A well designed park allows riders to progress through a variety of features from beginner to advanced levels within a dynamic self-taught environment.

Materials:

Often a mix of compacted dirt or other hardened surfaces, native surfaces, concrete, lumber, and metal

Right: Example of a bike skills park

Flow Trails

Permitted Uses:

Description:

Flow trails take mountain biker users on a terrain-induced roller coaster experience, with little pedaling and braking necessary. This style of trail typically contains features like banked turns, rolling terrain, various types of jumps, and consistent and predictable surfaces.

Materials:

Trails, Berms, Jumps: typically compacted dirt but may feature areas of native surfaces and structures made of natural and man-made materials, such as logs, lumber, and concrete

Right: Example of a flow trail

Pump Track

Permitted Uses:

Description:

A pump track is a continuous loop of dirt berms and "rollers" (smooth dirt mounds) that you ride without pedaling. The name "pump track" comes from the pumping motion used by the rider's upper and lower body as they ride around the track.

Materials:

Usually dirt but can be made of wood

Left: Example of a pump track

Disc Golf Course

Permitted Uses:

Description:

A game in which frisbees or "discs" are thrown at metal baskets and follows similar rules as golf

Materials:

Can feature all types of materials: native surfaces

Left: Example of a disc golf course

Right: One of the many benefits of having a trail and greenway system is the ability to provide access to areas of nature typically "untouched" by the general public

Benefits of Trails and Greenways

Given the hard work involved in the planning, design, and development of a comprehensive trails system, it is important for all those involved in this effort to periodically remind themselves, and others, of the meaning behind this work and the tremendous value it brings to the broader community. Communities across the U.S. and throughout the world are investing in trails as a factor of overall livability. They do this because of their obligation to promote health, safety, and welfare, and also because of the growing awareness of the many benefits of having a connected system of trails and greenways, which include social, ecologic, and economic benefits.

Greenways Create Value + Generate Economic Activity

The economic benefits of trails are generated from several sources and accrue to many different local groups, including residents, businesses, and government agencies. First, trails increase adjacent property values, which benefits property owners as well as local government agencies that see increased property tax revenues. Second, trails attract both businesses and tourists, spurring economic development that benefits all residents. Third, improved bicycle and pedestrian access near businesses, through trails or other means, has been shown to increase sales while reducing the need for expensive parking. Finally, trails are less expensive to construct than roadways and allow residents to travel by bike or foot, saving money on gas and car maintenance.

Greenways Increase Real Property Values

There are many examples, both nationally and locally, that affirm the positive connection between trails, walkability, and property values. Residential properties will realize a greater gain in value the closer they are located to trails and greenspace. In a survey of home buyers by the National Association of Realtors and the National Association of Home Builders, trails ranked as the second most important community amenity out of a list of 18 choices (highway access was number one). Similarly, the 2009 report "Walking the Walk" by CEO's for Cities, which looked at 94,000 real estate transactions in 15 markets, found that in 13 of those markets, higher

levels of "walkability" were directly linked to higher home values. For example, in Apex, North Carolina, the Shepard's Vineyard housing development added $5,000 to the price of each of the 40 homes adjacent to the regional greenway – and those homes were still the first to sell. The report, 'Walking the Walk' looked at 94,000 real-estate transactions in 15 markets. In 13 of those markets, higher levels of "walkability" were directly linked to higher home values.

Real Property value examples include:

- Apex, NC: The Shepard's Vineyard housing development added $5,000 to the price of each of the 40 homes adjacent to the regional greenway – and those homes were still the first to sell
- Dayton, OH: Five percent of the selling price of homes near the Cox Arboretum and park was attributable to the proximity of that open space.
- Salem, OR: land adjacent to a greenbelt was found to be worth about $1,200 an acre more than land only 1000 feet away.
- Oakland, CA: A three-mile greenbelt around Lake Merritt, near the city center, was found to add $41 million to surrounding property values.
- Seattle, WA: Homes bordering the 12-mile Burke-Gilman trail sold for 6% more than other houses of comparable size.
- "The real estate market consistently demonstrates that many people are willing to pay a larger amount for a property located close to parks and open space areas ..." Professor John L. Crompton, Texas A&M University

Greenways Spur Economic Growth

In addition to real estate values, trails also create positive economic impacts from tourism and recreation-related revenue. Trails and greenways create opportunities in construction and maintenance, recreation rentals (such as bicycles, kayaks, and canoes), recreation services (such as shuttle buses, ferry services, and guided tours), historic preservation, restaurants, and lodging. The industry rule of thumb is that for every one dollar of investment, there is a three dollar return on that investment, if not more. One of the most relevant tourism examples that saw an even higher return on investment is from the North Carolina coast. In the Outer Banks, bicycling is estimated to have an annual economic impact of $60 million, and 1,407 jobs are supported by the 40,800 visitors for whom bicycling was an important reason for choosing to vacation in the area. The annual return on bicycle facility development in the Outer Banks is approximately nine times higher than the initial investment. Another study in Kansas City found an even higher return of $11.80 for every $1 invested.

Left: Trails and greenways offer pedestrians another viable option for transportation and promote trail users to spend their money at places other than the gas pump.

Right: Bicycle skills and safety courses can become community events and encourage an active lifestyle for people of all ages

Recreational facilities also attract businesses seeking a place to locate with a high quality of life for their employees. In Morgantown, West Virginia, the 45-mile Mon River trail system is credited by the Convention and Visitors Bureau for revitalizing an entire district of the city, with a reported $200 million in private investment as a direct result of the trail. Similarly, Chicago's Millennium Park is credited with one-quarter of all new retail, commercial, and residential development that has taken place in the East Loop since the park's creation. At the street scale, pedestrian and bicycle access have been shown to increase retail sales. High quality walking and cycling conditions tend to attract retail customers. Further, consumers report a willingness to pay approximately 11 percent more for goods in landscaped business districts than in non-landscaped districts. They are willing to pay as much as 50 percent more in these districts for convenience goods. One of the goals of the greenway system in Wilmington and New Hanover County will be to link commercial and residential areas, in order to reap these benefits for local businesses.

Greenways Offer Transportation Cost Savings

When looking at the returns on investment noted in the previous section, it is also important to put into perspective the massive differences in costs inherent in the transportation decisions we make, both as individuals and as a region. Consider the individual costs associated with various forms of transportation. Walking is virtually free and the cost of operating a bicycle is far less than operating a car. A study cited by the Victoria Transport Policy Institute found that households in automobile-dependent communities devote 50 percent more of their income to transportation (more than $8,500 annually) than households in communities with more accessible land use and more multi-modal transportation systems (less than $5,500 annually).

On a broader scale, consider the regional costs of our transportation infrastructure investments. According to the Federal Highway Administration, the basic cost of a single mile of urban, four-

lane highway is between $20 million and $80 million. In urban bottlenecks where congestion is the worst, common restrictions such as the high costs of right of ways and the need to control high traffic volumes can boost that figure to $290 million or more. By contrast, the costs of bicycle and pedestrian facilities range anywhere from a few thousand dollars per mile to rarely more than $1 million, with great variability between types of infrastructure and local circumstances.

Bicycling and walking are affordable forms of transportation, and with the relatively low cost and high return on investment for trails, it is hard to argue against developing a regional system that creates value and generates economic activity.

"...bike commuters save an average of $1,825 annually in auto-related costs, reduce their carbon emissions by 128 pounds, conserve 145 gallons of gasoline and spare themselves 50 hours of gridlock."

- Rep. Earl Blumenauer, D-Ore. Founder, Congressional Bike Caucus

Greenways Enhance Bicycle and Pedestrian Transportation Options

Communities that invest in trail systems will be better prepared to accommodate shifting modes of travel, especially as driving becomes more expensive. Provided there are viable alternatives to driving, Americans are willing to change their travel habits, as shown during the dramatic increases in gas prices in 2008. According to the Rails to Trails Conservancy and the Bikes Belong Coalition, "*Every day, more commuters switch to public transportation, bicycling and walking in places where prior infrastructure investments have made these options safe and convenient*".

Choosing to bike or walk rather than to drive, however, is often made difficult by the way our cities and towns have developed. The sprawling nature of many land development patterns often leaves residents and visitors with little choice but to drive, even for short trips. In fact, nearly two-thirds (62.7 percent) of all driving trips we make are for a distance of five miles or less.

Left: Trails and greenways provide an economic boost to a community, which could promote a revival of golf course usage.

Right: Trails and greenways offer transportation options to anyone, from young children to suit and tie-clad professionals.

Surveys by the Federal Highway Administration show that Americans are willing to walk as far as two miles to a destination and bicycle as far as five miles. A complete system of trails in Bella Vista, combined with other bicycle and pedestrian infrastructure, will offer viable opportunities for walking and biking to homes, workplaces, schools, parks, downtowns, and cultural attractions.

Greenways Improve Health Through Active Living

Land and water trails throughout Bella Vista will contribute to the overall health of residents by offering people attractive, safe, and accessible places to bike, walk, hike, jog, skate, canoe, and kayak. In short, regional trails will create better opportunities for active lifestyles. The design of our communities—including towns, subdivisions, transportation systems, parks, trails, and other public recreational facilities—affects people's ability to reach the recommended 30 minutes each day of moderately intense physical activity (60 minutes for youth). According to the Centers for Disease Control and Prevention (CDC), *"Physical inactivity causes numerous physical and mental health problems, is responsible for an estimated 200,000 deaths per year, and contributes to the obesity epidemic"*.

In identifying a solution, the CDC determined that by creating and improving places in our communities to be physically active, there could be a 25 percent increase in the percentage of people who exercise at least three times a week. This is significant considering that for people who are inactive, even small increases in physical activity can bring measurable health benefits. In a December 2010 article published by the Mayo Clinic, it is suggested that:

"Walking, like other exercise, can help you achieve a number of important health benefits such as:

- *Lowered low-density lipoprotein (LDL) cholesterol (the "bad" cholesterol),*
- *Elevated high-density lipoprotein (HDL) cholesterol (the "good" cholesterol),*
- *Lowered blood pressure,*
- *Reduced risk of or managed type 2 diabetes,*
- *Improved mood, and*
- *Increased feelings of strength and fitness."*

Many public agencies are teaming up with foundations, universities, and private companies to launch a new kind of health campaign that focuses on improving people's options instead of reforming their behavior. A 2005 Newsweek Magazine feature, "Designing Heart-Healthy Communities," cites the goals of such programs: *"The goals range from updating restaurant menus to restoring mass transit, but the most visible efforts focus on making the built environment more conducive to walking and cycling."* Clearly, the connection between health and greenways is becoming common knowledge. The Rails-to-Trails Conservancy puts it simply: *"Individuals must choose to exercise, but communities can make that choice easier."*

Greenways Support Clear Skies, Clean Rivers, and Wildlife

There are a multitude of environmental benefits from trails, greenways, and open spaces that help to protect the essential functions performed by natural ecosystems. Greenways protect and link fragmented habitats and provide opportunities for protecting plant and animal species. Trails and greenways reduce air pollution by two significant means: first, they provide enjoyable and safe alternatives to the automobile, which reduces the burning of fossil fuels; second, they protect large areas of plants that create oxygen and filter air pollutants, such as ozone, sulfur dioxide, carbon monoxide, and airborne particles of heavy metal. Greenways improve water quality by creating a natural buffer zone that protects streams, rivers, and lakes, preventing soil erosion and filtering pollution caused by agricultural and road runoff.

As an educational tool, trail signage can be designed to inform trail users about water quality issues particular to each watershed. Such signs could also include tips on how to improve water quality. Similarly, a greenway can serve as a hands-on environmental classroom for people of all ages to experience natural landscapes, furthering environmental awareness.

Left: Trails and greenways give undevelopable lands along waterways a purpose.

Right: Trails and greenways promote active lifestyles, bring members of a community together, and support sustainable initiatives.

Greenways Protect People and Property from Flood Damage

The protection of open spaces associated with greenway development can also protect natural floodplains along rivers and streams. According to the Federal Emergency Management Agency (FEMA), the implementation of floodplain ordinances is estimated to prevent $1.1 billion in flood damages annually. By restoring developed floodplains to their natural state and protecting them as greenways, many riverside communities are preventing potential flood damages and related costs.

Greenways Enhance Cultural Awareness and Community Identity

Trails, greenways, and open space can serve as connections to local heritage by preserving historic places and by providing access to them. They provide a sense of place and an understanding of past events by drawing greater public attention to historic and cultural locations and events. Trails often provide access to historic sites such as battlegrounds, bridges, buildings, and canals that otherwise would be difficult to access or interpret. Each community or region has its own unique history, its own features and destinations, and its own landscapes. For example, in Bella Vista, some unique features could include the Veteran's Wall of Honor, Mildred B. Cooper Memorial Chapel, Bella Vista Museum, or the Wonderland Cave. Cultural and historic groups like the Bella Vista Historic Society could help identify the most relevant events for different sites. By recognizing, honoring, and connecting these features, the combined results serve to enhance cultural awareness and community identity, potentially attracting tourism. Being aware of the historical and cultural context when naming parks and trails and designing features will further enhance the overall trail and park user experience. Finally, greenways and trails provide opportunities for people to interact with one another outside of work and their immediate neighborhood. Positive interaction (such as through exercising, strolling, or even just saying 'hello') among people from a wider community helps to build trust and awareness of others, which strengthens the overall sense of community.

Guiding Principles

The following are guiding principles for this plan:

The Walking and Bicycling Environment Should Be Safe.

All bicycling and walking routes should be physically safe and perceived as safe by all users. Safe means minimal conflicts with external factors, such as noise, vehicular traffic and protruding architectural elements. Safe also means routes are clear and well marked with appropriate pavement markings and directional signage.

The Pedestrian and Bicycle Network Should Be Accessible.

Sidewalks, shared-use paths, bike routes and crosswalks should permit the mobility of residents of all ages and abilities. The pedestrian and bicycle network should employ principles of universal design. Bicyclists have a range of skill levels, and facilities should be designed with a goal of providing for inexperienced/recreational bicyclists (especially children and seniors) to the greatest extent possible.

The Pedestrian and Bicycle Improvements Should Be Economical.

Pedestrian and bicycle improvements should achieve the maximum benefit for their cost, including initial cost and maintenance cost, as well as a reduced reliance on more expensive modes of transportation. Where possible, improvements in the right-of-way should stimulate, reinforce and connect with adjacent private improvements.

The Pedestrian and Bicycle Network Should Connect to Places People Want to Go.

The pedestrian and bicycle network should provide continuous direct routes and convenient connections between destinations such as homes, schools, shopping areas, public services, recreational opportunities and transit. A complete network of on-street bicycling facilities should connect seamlessly to existing and proposed multi-use trails to complete recreational and commuting routes.

Left: Trails and greenways that connect to places of interest give users a sense of satisfaction and appreciation as these users take a stance of personal ownership for the places they love.

Right: Trails and greenways will develop clear and legible wayfinding that promote easy-to-navigate experiences.

The Walking and Bicycling Environment Should Be Clear and Easy to Use.

Shared-use paths and crossings should allow all people to easily find a direct route to a destination with minimal delays, regardless of whether these persons have mobility, sensory, or cognitive disability impairments. All roads are legal for the use of pedestrians and bicyclists (except freeways, from which each is prohibited unless a separate facility on that right of way is provided). This means that most streets are bicycle facilities and should be designed, marked and maintained accordingly.

The Walking and Bicycling Environment Should Be Attractive and Enhance Community Livability.

The walking and bicycling facilities should be compatible with the nature, history and character of the environment. Context and scale should be given thoughtful consideration. Good design should integrate with and support the development of complementary uses and should encourage preservation and construction of art, landscaping and other items that add value to communities. These components might include open spaces such as plazas, courtyards and squares, and amenities like street furniture, banners, art, plantings and special paving. These along with historical elements and cultural references, should promote a sense of place. Public activities should be encouraged and the municipal code should permit commercial activities such as dining, vending and advertising when they do not interfere with safety and accessibility.

Design Guidelines are Flexible and Should Be Applied Using Professional Judgment.

This document references specific national guidelines for bicycle and pedestrian facility design, as well as a number of design treatments not specifically covered under current guidelines. Statutory and regulatory guidance may change. For this reason, the guidance and recommendations in this document function to complement other resources considered during a design process, and in all cases sound engineering judgment should be used.

Plan Vision and Goals

Plan Vision: Bella Vista wants to create a trail network that will establish safe, continuous corridors throughout the community that promote outdoor recreation, facilitate non-motorized transportation and highlight the natural and cultural resources of the community. The trail network will compliment Bella Vista's existing outdoor recreation facilities and serve to make Bella Vista an even greater place to live.

Through this plan, the goal is to increase pedestrian and bicyclist opportunities for transportation and recreation, enhance safety, foster better access to community destinations, and create unique opportunities for active and healthy lifestyles in Bella Vista.

Plan Goals: The goals of this plan were developed based on input received from public comment forms, the project Steering Committee, and stakeholder interviews.

1. Develop new trails that complement and expand upon existing trails.
2. Create safe connections for bicycling and walking between existing and planned parks, schools, commercial and employment centers, and neighborhoods.
3. Establish new connections to the many natural features and recreation amenities that define the landscape of Bella Vista.
4. Develop a marketing / promotional plan for local trails.
5. Establish an alternative form of transportation.

The Planning Process

Project Kick-Off

The planning process began with a Kick-Off Meeting on June 2, 2014 and continued through early 2015. The Kick-Off meeting was the first of four project Steering Committee meetings. The Steering Committee was made up of a combination of community representatives and stakeholders that is working to create a vision that will guide the planning process, and identify high priority trail and greenway corridors.

Left: Local youth looking for a proposed trail near his residence at the Cooper Elementary Fall Carnival

Right: Residents and trail advocates look through the existing conditions boards at the first community open house meeting

Opportunities and Constraints

From June through September 2014, project consultants began researching existing conditions by drawing upon input received during the kick-off events and public outreach efforts. They accomplished this by analyzing geographic information system (GIS) data, reviewing locally adopted plans, and by reviewing existing conditions throughout the study area in an on-the-ground field review. *Please refer to Chapter 2 of this plan for more on this topic.*

Public Workshops / Meetings

Cooper Elementary Fall Carnival- Fall 2014

The project team attended the school's fall festival to seek out youth and family input and their suggestions. This feedback was used to solicite input from a younger audience and more family-oriented user group.

Bella Vista Hay Days Fall Festival - September 20, 2014 at event grounds on corner of Rogers Drive and Forest Hills Boulevard

The project team attended the Bella Vista Hay Days Fall Festival to discuss draft project ideas and receive public input.

Community Open House Events - Summer / Fall 2014

The planning process included two sets of open houses to receive feedback and input from the community. Each event featured a presentation of progress, public input maps and forms for comments/questions. The first open house event was on the evening of June 24, 2014 while the second open house was on November 13, 2014, and both were held at Riordan Hall.

Draft Trail and Greenway Plan - Fall/Winter 2014

Public input, stakeholder interviews, committee direction, and the findings of the opportunities and constraints analysis were all used to form the recommendations of the draft plan. A prioritization assessment was also conducted to inform the plan and planning process.

Final Plan, Presentation, & Adoption - Spring 2015

This section will be updated following completion of the plan.

Cooper Elementary School Fall Carnival - October 23, 2014

Bella Vista Hay Days Fall Festival - September 20, 2014 at event grounds on corner of Rogers Drive and Forest Hills Boulevard

Left top and bottom: Gathering community input from local families and youth at community events.

Right: Gathering public input from locals residents and trail enthusiasts at the Community Open House Event held on June 24, 2014

Community Open House Events - Summer / Fall 2014

Public Input

In addition to the public workshops mentioned in the previous section, a communications plan was also launched early in the planning process, including but not limited to: a project website, online and hardcopy public comment forms, an online public input map, stakeholder interviews, and presentations.

Project Website (www.BVTrailsandGreenways.com)

The website features information about the plan, schedule, background documents, maps, information regarding the community open house and other events, a comment form, a general comment/question form and a public input map. This website was linked to the City of Bella Vista website, the Bella Vista Village POA website, and the Bella Vista Foundation website. As of November 2014, the project website had more than 6,300 visits and more than 4,000 unique visitors ('unique visitors' are the number of visitors to a website counted only once).

Public Comment Form

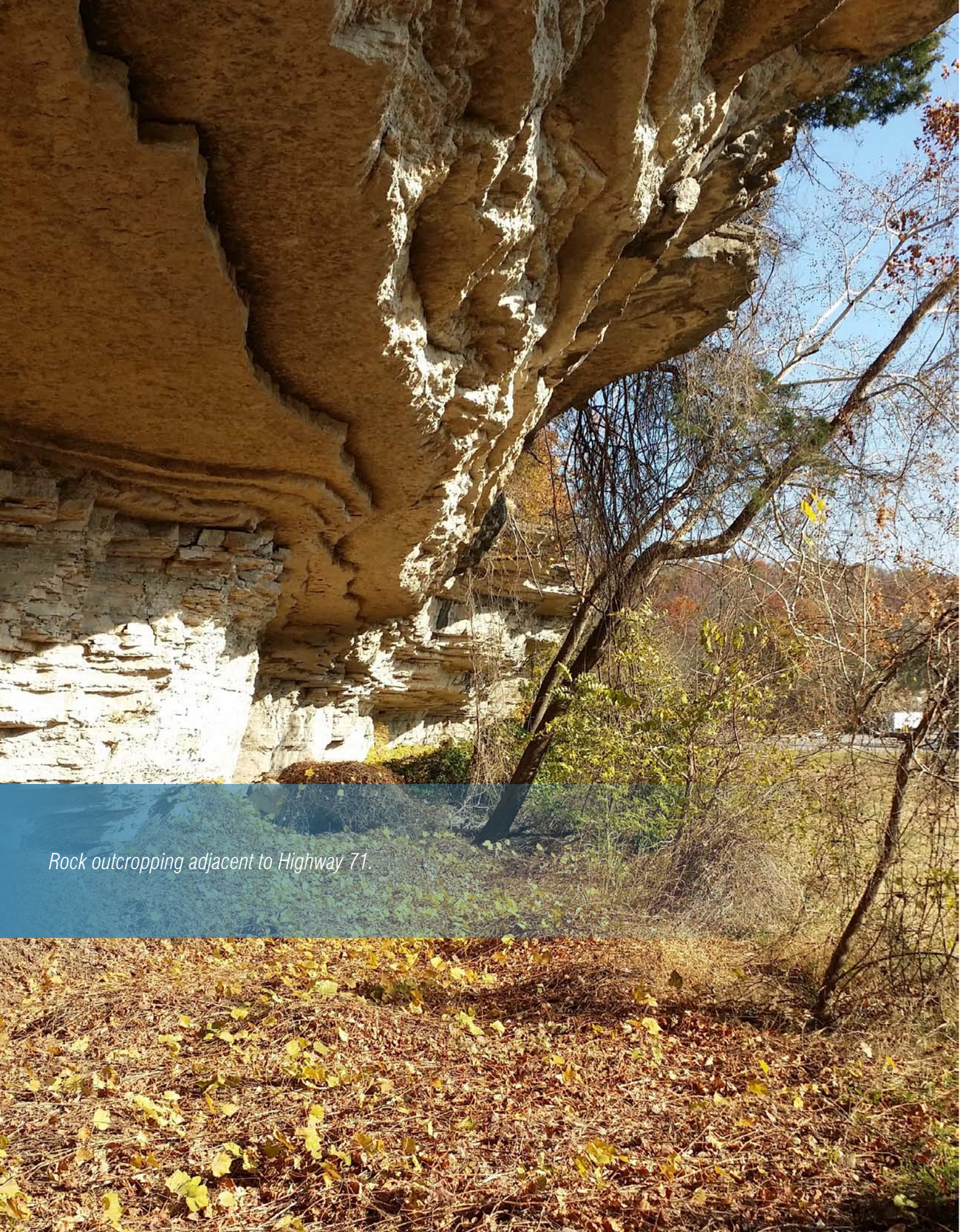
The public comment form sought input to build a better understanding of needs and priorities for this plan. It covered current bicycle and pedestrian travel behavior and preferences, and asked what factors discourage and encourage people to use trails and greenways.

Public Presentation and Interviews

The following community organizations and public agencies provided input and learned about the plan during special presentations and interview sessions:

- Bella Vista Foundation
- Bella Vista Historic Society
- Bella Vista Sunrise Rotary Project Committee
- Bella Vista Village Property Owners Association
- Benton County
- Bentonville / Bella Vista Trailblazers
- City of Bella Vista
- Cooper Communities, Inc.
- Cooper Elementary
- International Mountain Biking Association
- Little Sugar Creek Water Trail Steering Committee
- Northwest Arkansas Council
- Northwest Arkansas Regional Planning Commission
- Progressive Trail Design

View of the front of Mildred B. Cooper Chapel, one of many destinations in Bella Vista.



Rock outcropping adjacent to Highway 71.

CHAPTER 2 EXISTING CONDITIONS

Chapter Contents:

Overview

As Bella Vista continues on the path to make bicycling and walking valued recreation activities and viable modes of transportation, a thorough assessment of the current environment for non-motorized transportation and recreation can influence future investments in trails, greenways, and supporting programs and activities. This chapter describes existing conditions for walking and bicycling in Bella Vista, including land use and development patterns, the transportation network, environmental characteristics, and existing parks, open spaces and trails. The opportunities and constraints for future trail development identified at the end of this chapter are grounded in an inventory of these existing conditions and can provide a foundation for the development of a community-wide network of trails and greenways.

Study Area Context

The City of Bella Vista is a community located in Benton County, Northwestern Arkansas of more than 26,000 residents with approximately 20,000 property owners who are non-residents. Situated between the City of Bentonville and the Arkansas/Missouri border, Bella Vista encompasses more than 45 square miles of steep rises, beautiful valleys, and scenic creeks and lakes. These physical features were the basis for the community's initial growth and development as a summer recreational and health resort village in the 1910's. Following William and Mary Baker's initial development, which included a swimming lake and surrounding summer cottages, successive owners expanded the resort's recreational and residential offerings. The Linebarger Brothers Realty Company purchased the resort in the late 1910's and added a lodge, a lakeside pavilion, a 9-hole golf course, and the 65-room Sunset Hotel. The brothers even converted a nearby cave into Wonderland, a nightclub and entertainment venue. In the 1950's, Elzy Keith purchased the property and re-branded the resort as a family-friendly vacation destination, adding roller-skating, a restaurant, grocery store, and motel.

Its proximity to Bentonville, Rogers and Springdale, and the abundance of attractive residential lots, soon began drawing permanent residents from nearby cities. In the 1960's, John Cooper Sr. began purchasing, platting, and developing Bella Vista Village as a planned retirement community, laying the foundation for nearly all residential growth that has occurred in the last fifty years. From 1980 to 2010, the population increased more than tenfold, from 2,589 to 26,461. It was during this period of significant growth that community members voted for the incorporation of Bella Vista as a first class city in December of 2006.

Photographic Summary of Existing Conditions

Area between southern extent of Kingsdale Golf Course and Allen's Discount Foods/Shopping Center. Opportunity to extend Razorback Greenway north through Bella Vista.

Wide shoulder along Hampstead Rd. near Winters Dr. provides adequate width and grade for a shared use trail.

POA lands east of Ulverston Dr.

Trails will include access to recreational areas of Bella Vista, such as the Lake Ann boat ramp

Kingswood Golf Course (near the Trafalgar Rd. intersection with US 71)

Topography will be a significant challenge for shared use trails in Bella Vista, such as Highlands Blvd. between Kirkcaldy Dr. and Queesnferry Dr.

Utility easements are good candidates for trails, such as this easement off Perth Dr., near Dirleton Dr.

Existing paved trail in Bella Vista, parallel to Forest Hills Blvd.

POA lands north of Scotsdale Dr adjacent to Ardwell Rd.

In some areas, trails are not feasible, such as this steep ravine off Riordan Rd. near Kenton Ln.

Topography is very steep within power easements across Bella Vista. The best types of trails for these corridors are mountain bike trails or narrow natural surface hiking trails.

POA lands parallel to Tudor Dr.

POA lands that are heavily wooded with varied terrain are most suitable for narrow natural surface hiking trails.

Sugar Creek is a valuable natural resource. Shared use trail access through or along the golf courses will be challenging.

Looking east at Lancashire Rd. land bridge where steep cross slopes will be challenging for trail development.

Land Use and Development

Development patterns in Bella Vista have a significant impact on the development of a trail and greenway system. In many cases, rapid population growth and development can be a constraint to the growth of a young trail system. However, Bella Vista has done well to preserve open space and undeveloped land that may be suitable for the establishment of hiking, bicycling, and walking trails.

Residential

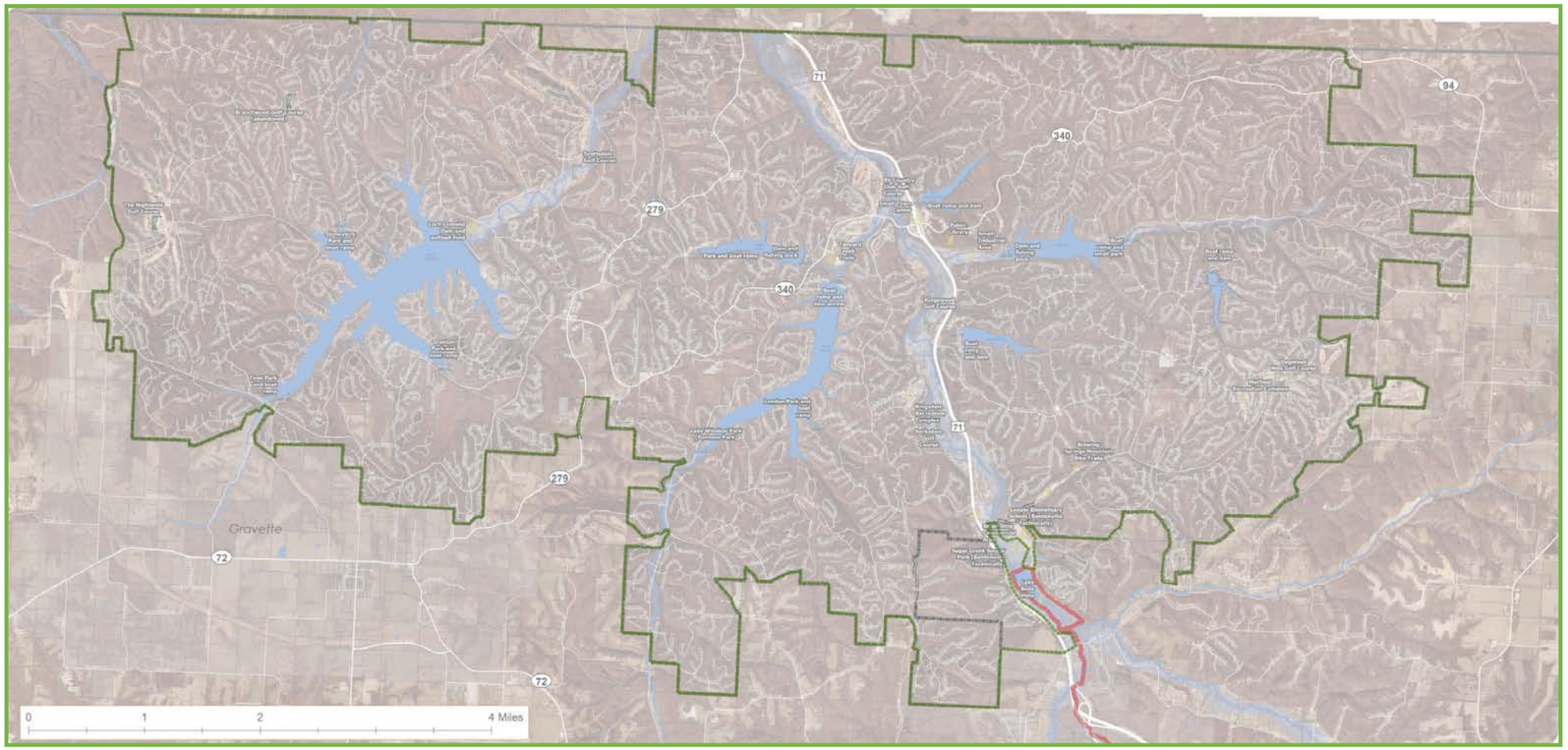
Bella Vista is primarily residential in nature with more than 20,900 acres (32.7 square miles) of residential parcels, roughly 70% of all land within the City. However, of the 38,144 parcels designated for residential use, only 12,971 (34%) currently have residential structures. While the vast majority of land in Bella Vista slated for residential development has already been platted and sold to individual buyers and investors, most existing homes are located closer to US 71, the seven lakes, the golf courses, and other activity centers within the community. Many platted streets and subdivisions in more remote areas of Bella Vista remain relatively undeveloped.

Commercial

Commercial activity in the City is grouped into four clusters, three of which are located on US 71, and one surrounding the intersection of Forest Hills Blvd and W Lancashire Blvd. Residents also access commercial destinations outside the city, particularly in Bentonville to the south and Jane, Missouri to the north.

Recreation, Parks and Open Space

Since its humble beginnings in the early 1900's as a summer resort for nearby residents seeking fresh air and clear waters, Bella Vista has been planned and developed with recreation and exercise in mind. The diversity of recreational opportunities currently available to residents and visitors is a reflection of both the intentions of the early visionaries who laid the foundations for Bella Vista's future, and of the current values of the community. The City is home to seven lakes, seven golf courses, three swimming pools, two recreation centers, multiple parks, and more than 10 miles of trails for walking, hiking, and mountain biking. While many of these recreational activities are open only to residents and members of the property owners association, all trails within the community are open to the general public.



Above: Map of Bella Vista

Right: Bella Vista was once home to a resort village and summer homes, and was well ahead of its time. Courtesy of http://www.encyclopediaofarkansas.net/.

The table below provides a complete inventory of recreational facilities offered by the Bella Vista Village Property Owners Association:

Lakeside Parks/Destinations	Amenities
Loch Lomond Marina	Bait shop, covered fishing dock with fish cleaning station, fuel, guide service, slip rentals, and boat and kayak rentals.
Loch Lomond Recreation Complex	Softball field, walking trail, dog park, covered pavilion, 10 tables, a grill, and restrooms.
Granton Park (Loch Lomond)	Boat ramp with courtesy dock, fishing pier, shoreline fishing, tables, grills, and restrooms.
Stoneykirk Park (Loch Lomond)	Boat ramp with courtesy dock, shoreline fishing, 2 tables, grill, and restrooms.
Tiree Park (Loch Lomond)	Boat ramp with courtesy dock, shoreline fishing, covered pavilion, grill, 3 tables, horseshoe pit, shuffleboard, playground, electricity, lights, and restrooms.
Lake Avalon Dam	Multi-use dock, enclosed, heated fishing dock, 3 fishing piers, fish cleaning station, and restrooms.
Lake Avalon Park	Shoreline fishing, boat ramp, multi-use dock, covered pavilion, 10 tables, 4 grills, electricity, lights, restrooms, and horseshoe pits.
Lake Windsor Dam	Boat ramp with courtesy dock, two fishing piers, shoreline fishing and a restroom.
Lake Windsor Park	Fishing pier, shoreline fishing, tables, grills, and restrooms

Left: Fishing is a popular activity at the Bella Vista's seven lakes

Right: With access from Loch Lomond Recreation Complex, the Loch Lomond Dam is a popular location for walkers and hikers

Lakeside Parks/Destinations	Amenities
London Park (Lake Windsor)	Boat ramp with courtesy dock, fish cleaning station, covered pavilion, 5 tables, grill, electricity, lights, and restrooms.
Lake Rayburn Dam	Boat ramp with courtesy dock, 2 multi-use docks, fish cleaning station, table, and a grill.
Lake Ann Dam	Fishing-only dock, multi-use dock, fish cleaning station, restrooms, and lights.
Lake Ann Park	Boat ramp, shoreline fishing, fish cleaning station, covered pavilion, 5 tables, grill, and restrooms.
Lake Norwood Dam	Boat ramp with courtesy dock, 2 multi-use docks, fish cleaning station, table, and grill.
Lake Brittany Dam	Boat ramp with courtesy dock, shoreline fishing, 2 multi-use docks, fish cleaning station, and restrooms.
Lake Bella Vista (outside city limits)	1.8-mile paved shared use path, covered pavilion, 3 tables, play structure, disc golf course, Veterans Wall of Honor, fishing, and kayaking (park owned and maintained by City of Bentonville).

Golf Course/Clubhouses	Amenities
Bella Vista Country Club and Clubhouse	18-hole, par 72 golf course, golf shop, putting practice green, restaurant.
Berksdale Golf Course	18-hole, par 72 course (Adjacent to Kingsdale Clubhouse).
Brittany Golf Course	9-hole, par 31 course, adjacent to Dogwood Hills Golf Course and Metfield Clubhouse
Dogwood Hills Golf Course	18-hole, par 71 course, adjacent to Brittany Golf Course and Metfield Clubhouse.
Highlands Golf Course and Clubhouse	18-hole, par 72 course, driving range, practice green, golf shop, restaurant.
Kingsdale Clubhouse	Golf shop, full-service grill.
Kingswood Golf Course	18-hole, par 71 course, adjacent to Berksdale Golf Course and Kingsdale Clubhouse.
Metfield Clubhouse	Golf shop, putting green, adjacent to Brittany Golf Course and Dogwood Hills Golf Course.
Scotsdale Golf Course	18-hole, par 72 course and golf shop.
Tanyard Creek Golf Practice Center	Practice areas for putting and chipping, 28 covered and uncovered hard surface stations and a grass tee surface, golf shop, private lessons.
Branchwood Recreation Center	Indoor swimming pool, hot tub, fitness equipment, locker rooms, pool table, 2 tennis courts, racquetball courts, basketball court, playground, picnic tables, golf shop.

Left: Hole #18 at Metfield/Dogwood Hills golf course in eastern Bella Vista

Right: Branchwood Recreation Center

Recreation Centers	Amenities
Kingsdale Recreation Complex	Activity pool, adult pool, wading pool, playground, basketball court, covered pavilion, 4 grills, 18 tables, miniature golf, 8 lighted tennis courts, tennis pro shop, and Riordan Hall, which features 5 meeting rooms, pool and snooker tables, fitness equipment, locker rooms, hot tub, kitchen, and auditorium.
Metfield Recreation Complex	Outdoor activity pool with slide, wading pool, miniature golf, playground, shuffleboard, basketball, pickleball and tennis courts, horseshoe pit, 2 covered pavilions, 4 grills, eight tables, lights, electricity, and restrooms.
Other Parks and Recreation Areas	**Amenities**
Blowing Springs Park	Covered pavilion, tables, grills, restrooms, electricity, lights, bandstand, and 6+ miles of hiking and biking trails with eight bridges and 15 benches.
RV Park	64 RV hookups, dump station, covered pavilion, tables, grills, and restrooms.
Tanyard Creek Nature Trail	2-mile trail featuring waterfall, suspension bridge, fauna identification, covered pavilion, 4 grills, 12 tables, electricity, lights, and restrooms.

Property Owners Association and Developer Lands

More than 16,000 acres (25 square miles) of property in the City is owned by either the Bella Vista Village Property Owners Association or by Cooper Communities, Inc. While this does include the lakes, golf courses, and other community amenities, the majority of this land consists of undevelopable common ground and larger parcels reserved for future development. Much of the POA land, while unsuitable for residential or commercial development, offers promising potential for future trail alignments.

Environmental Features

Bella Vista's environmental characteristics present both challenges and opportunities to the development of a trail and greenway network. The City's topography, with its steep hills, narrow ravines, winding creeks, and hardwood forests, is representative of the Springfield Plateau of the Ozark Mountains, which covers portions of northwest Arkansas, northeast Oklahoma, and southwest Missouri.

Many of the dozens of small creeks and streams throughout Bella Vista drain into Little Sugar Creek, which enters the City from the southeast and parallels US Highway 71 as it flows northward and continues into Missouri. Only a few other creeks are named, such as Browning Creek, Tanyard Creek, Brush Creek, and Mill Creek. Most of the smaller, unnamed creeks and tributaries remain dry, except during significant rain events. Each of the seven lakes in the City is man-made, with each dam draining back into the network of local streams.

Utility Corridors

Water, sewer, electric, gas and other utilities often run along POA corridors or through easements acquired from private property owners. These utility corridors can provide opportunities for trail development. While each easement may have unique challenges, such as topographical constraints, minimal widths, or even use limitations, these corridors should be explored for the potential to provide valuable transportation and recreation facilities.

Left: Transmission lines and other utilities like gas traverse the City, primarily on POA lands

Right: Major Intersections, like the one shown at Highway 71 and Riordan Rd., pose difficulties for pedestrians and bicyclists.

Transportation Network

More than 525 miles of roadways traverse Bella Vista, including residential roads, collectors, arterials, and highways. This road network provides a balance of accessibility and connectivity for automobile travel; however, there is a critical lack of bicycle and pedestrian accommodations to facilitate non-motorized transportation.

US Highway 71 is the spine of the roadway network in Bella Vista, functioning as the major north-south thoroughfare connecting Northwest Arkansas to Missouri. Traffic volumes on US 71 reflect its importance as a regional thoroughfare for both Bella Vista residents and other regional travelers. In 2013, estimated average daily traffic volumes ranged from 20,000 vehicles per day near the Arkansas-Missouri border to 35,000 vehicles per day near the intersection of Riordan Rd. The considerable difference between these two count locations indicates that nearly 15,000 vehicles traveling on US 71 enter or exit the highway in Bella Vista. Posted speed limits along US 71 vary from 45 mph to 55 mph. Despite the presence of paved shoulders along US 71, high traffic speeds and volumes deter bicycle and pedestrian travel along the corridor.

In addition to US Highway 71, two state highways function as major arterials in the City: Arkansas Highway 279 and Arkansas Highway 340. Highway 279 (Forest Hills Blvd) enters Bella Vista from the Arkansas-Missouri border just west of US 71 and runs south between Loch Lomond and Lake Avalon before exiting the City and continuing further south to Arkansas Highway 72 in Gravette and beyond. While Hwy 279 only carries an estimated 3,900 vehicles per day, it does provide a vital connection for residents of western Bella Vista to Gravette, Centerton and Bentonville via Hwy 72. Highway 340 (Lancashire Blvd) is located entirely within Bella Vista, beginning at Hwy 279 and heading eastward across US 71 before terminating at the northeastern corner of the City at Arkansas Highway 94. Other major arterials and collectors Bella Vista include Trafalgar Rd, Euston Rd, Commonwealth Rd, Spanker Rd, Hampstead Rd, Chelsea Rd, Cooper Rd, Highlands Rd, Highlands Blvd, Glasgow Rd, and Scotsdale Dr. Many of these major roadways are situated along ridgelines, in valleys, or along hillsides, therefore reducing blind spots.

Local residential roads throughout the City provide access from arterials and collectors to individual lots and parcels. These local roads consist of a mixture of small loops and cul-de-sacs. There are also a number of unpaved gravel roads that provide access to undeveloped residential lots. These roads will be paved in conjunction with future development.

Bicycle and pedestrian accommodations on local and state roads in the City of Bella Vista are minimal. Only a handful of sidewalks and sidepaths can be found throughout the entire City, a reflection of the value placed on walking and bicycling for transportation purposes during the 1960's and 1970's.

Future Improvements

The planned Interstate 49 completion from its southern terminus in Arkansas, just south of Bella Vista, to its northern terminus south of Pineville, Missouri, will have a significant impact on travel patterns in the City, particularly along US 71. The remaining 19-mile segment of I-49, commonly referred to as the Bella Vista Bypass, will divert interstate travel around Bella Vista to the west, easing pressure and reducing traffic volumes on the strained US 71 through the city.

Trails, Walkways and Bikeways

Bella Vista currently offers more than ten miles of paved and natural surface trails for walking and bicycling. These trails celebrate the scenic beauty that Bella Vista offers its residents and visitors as they wind through old growth forests, wrap around clear blue lakes, and pass by caverns, springs, and other geologic landmarks. Each trail offers a unique experience, and walkers, hikers and bicyclists of all skill levels will find a trail that suits their needs.

Left: Loch Lomond Walking Trail

Right: Lake Bella Vista promotes a variety of recreational opportunities, including the trail loop which encourages walkers and joggers.

Loch Lomond Walking Trail

The shortest of the four trails in the City, Loch Lomond Walking Trail is situated at the base of the Loch Lomond Dam near the intersection of Glasgow Rd and Scotsdale Dr. The flat, paved surface is ideal for people of all ages and abilities and is accessible to individuals with limited mobility and individuals with mobility assistance devices. An additional connection takes trail users up to the Loch Lomond dam and provides a scenic view of the lake and nearby marina. Another amenity featured around at the Loch Lomond Walking Trail is access to the only dog park in Bella Vista.

Tanyard Creek Nature Trail

The Tanyard Creek Nature Trail is located at the base of Lake Windsor Dam, with parking available at the intersection of W Lancashire Blvd and Nature Trail Ln. The trail consists of multiple loops that connect users to Tanyard Creek, the cascading Tanyard Creek Falls, sulfur springs, and up to the Lake Windsor Dam. Interpretive signs along the trail describe the fauna, flora, geology, and history of the area. Two sections of the trail are paved and accessible to individuals with limited mobility and individuals with mobility assistance devices: the 0.3-mile loop closest to the parking lot and park amenities, and the 0.5-mile loop along Lake Windsor Dam, which can be accessed by automobile via Cannock Lane, just a short distance west of Nature Trail Ln on W Lancashire Blvd.

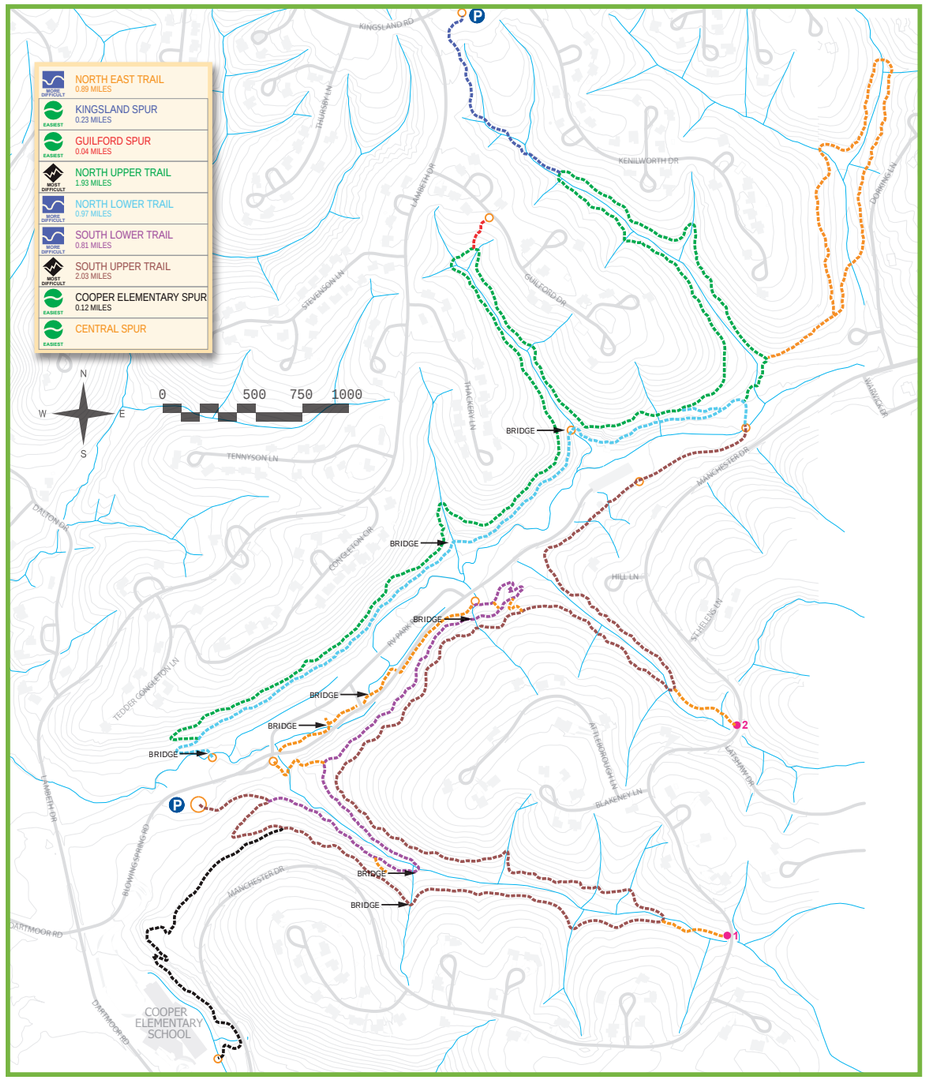
Lake Bella Vista Walking Trail

Lake Bella Vista, though technically located in the City of Bentonville, includes a 1.75-mile paved trail loop that circles the lake. This popular trail comprises the northern-most completed section of the Razorback Greenway, Northwest Arkansas's regional shared use trail that, when completed, will stretch 36 miles and connect six communities from Bentonville to Fayetteville. The section of the Razorback Greenway between Lake Bella Vista and Bentonville is complete (Wishing Springs Trail and North Bentonville Trail), providing a continuous, off-road, paved

trail that connects riders to great destinations along the way, including the Slaughter Pen Trails, Crystal Bridges Museum, and Downtown Bentonville.

Blowing Springs Multi-Use Trail System

Situated off Blowing Springs Rd, northeast of Cooper Elementary School, the Blowing Springs Multi-Use Trail System consists of more than six miles of natural surface trails for running, hiking, and mountain biking. The four trails and numerous trail spurs showcase Bella Vista's hilly, rugged terrain, towering bluffs, and cool caves and springs. Blowing Springs' close proximity to the Lake Bella Vista trail and the Razorback Greenway make it a popular destination for hikers and mountain bikers throughout the region.



Left: Blowing Springs Multi-Use Trails feature some of the best mountain biking/hiking in close proximity to the City of Bella Vista.

The four trails and numerous trail spurs showcase Bella Vista's hilly, rugged terrain, towering bluffs, and cool caves and springs. Blowing Springs' close proximity to the Lake Bella Vista Trail and the Razorback Regional Greenway make it a popular destination for hikers and mountain bikers throughout the region.

Trail	Length	Surface	Intended User
Loch Lomond Walking Trail	0.63 mi	Paved	Pedestrians, Bicyclists
Tanyard Creek Nature Trail	2 mi	Paved and natural	Pedestrians
Lake Bella Vista Walking Trail	1.75 mi	Paved	Pedestrians, Bicyclists
Blowing Springs Walking and Biking Trails	6.3 mi	Natural	Pedestrians, Bicyclists

While each existing trail in Bella Vista provides a unique, memorable experience, they all share a common trait: each of the four trails listed above is recreation-oriented and consists of one or more loops that bring trail users back to their starting point. Besides lake Bella Vista and the Razorback Greenway, these trails have little transportation benefit, as they do not provide a path for bicyclists and pedestrians to get from one place to another. As Bella Vista continues to expand its trail network, the inclusion of linear trails that connect one destination to another can create opportunities for both recreation- and transportation-oriented bicycling and walking trips.

Existing Plans Related to Bicycle, Pedestrian and Greenway Development

Bella Vista and its regional partners have a strong history of trail development and productive partnerships to foster an environment that supports walking and bicycling. This can be seen in the numerous plans and policies that have been developed throughout the region, a number of which may have a direct impact on the development of this plan. The following plans and documents encapsulate the values of the community and provide a policy framework for the development of trails and greenways.

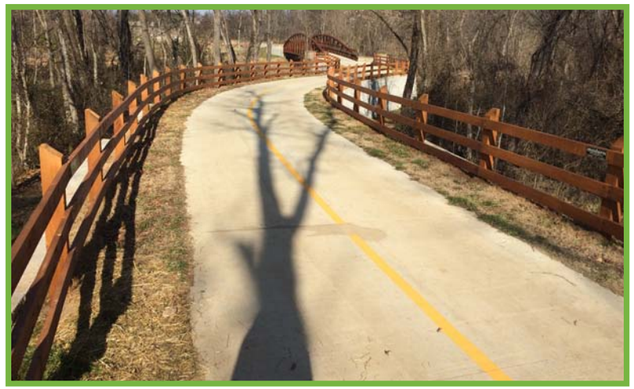
Razorback Regional Greenway

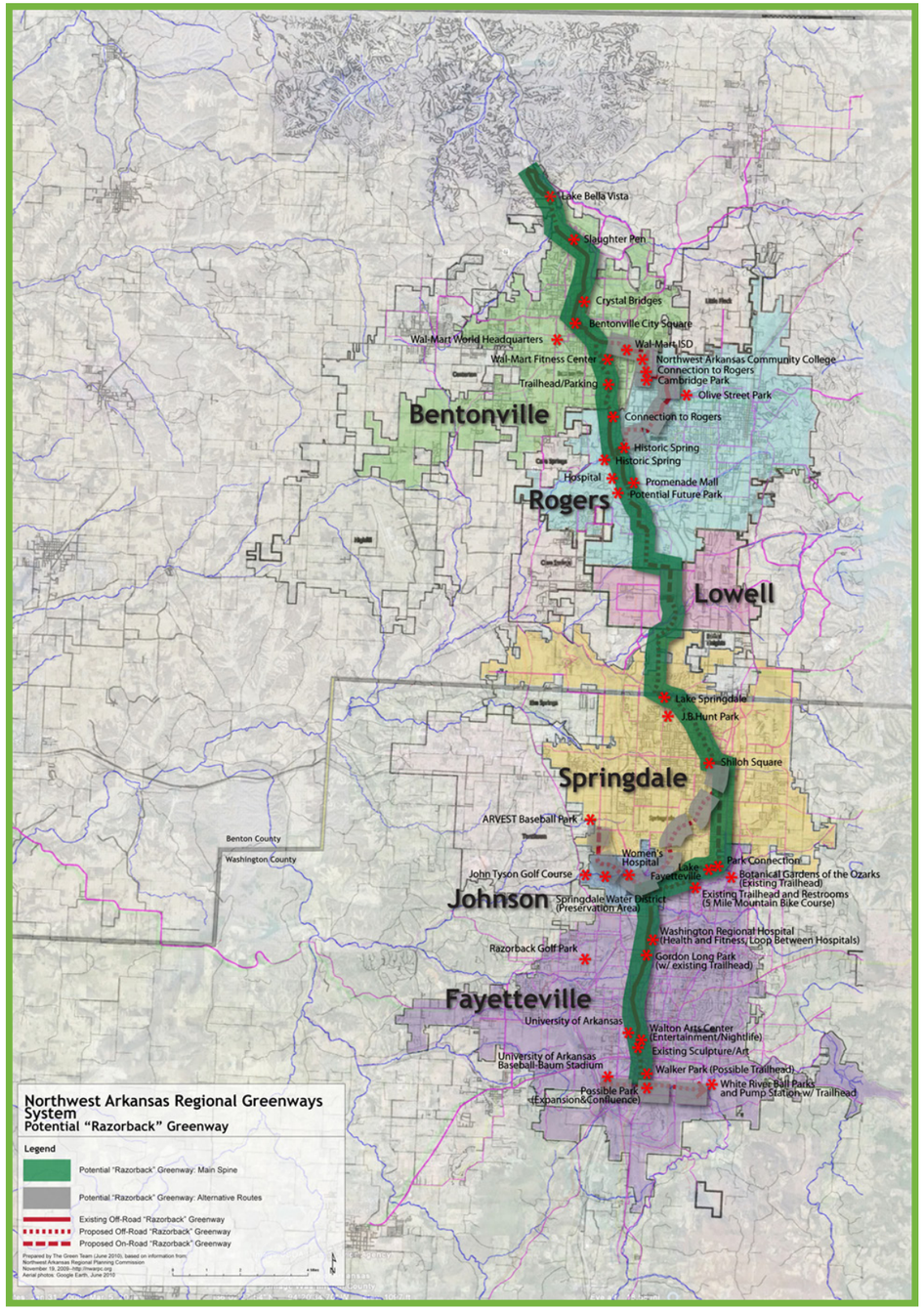
The Razorback Regional Greenway serves as the backbone of the region's rapidly growing bicycle and pedestrian network and represents decades of dedication and persistence by local communities to transform Northwest Arkansas into a premier destination for healthy living and recreational tourism. In 2000, the Northwest Arkansas Regional Planning Commission (NWARPC) began a long-range planning process that included regional trails as a key component. A task force consisting of regional leaders and key stakeholders formed by the NWARPC helped to implement this vision for a regional greenway.

The Razorback Regional Greenway links together dozens of popular community destinations, including:

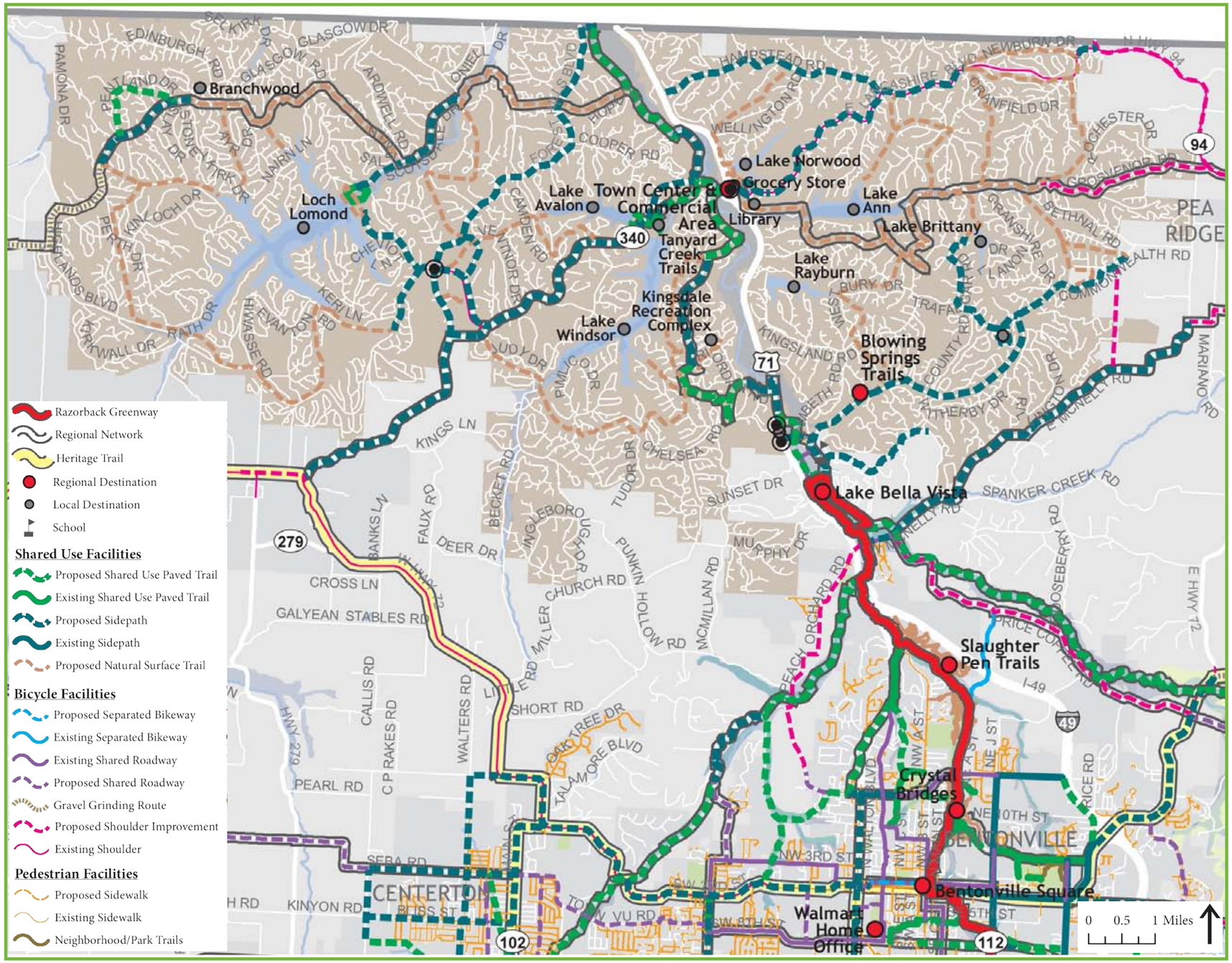
- 6 downtowns
- 3 hospitals
- 23 schools
- The University of Arkansas campus
- Corporate headquarters of Walmart, JB Hunt Transport Services and Tyson Foods
- Arts and entertainment venues
- Historic sites
- Parks and playgrounds
- Residential communities
- Shopping areas

While the plan is regional in scope and scale, there are unique action plans for the 25 Northwest Arkansas communities with a population of 1,000 or more. These individual community action plans identify existing facilities, recommend new trails, sidewalks, and on-street bike facilities, and provide policy and programming recommendations for each community. The highest priority project for Bella Vista as identified in this plan is to extend the Razorback Regional Greenway from Lake Bella Vista 8.5 miles north through the city to the Missouri border. Recognizing the importance of Blowing Springs, Tanyard Creek Park, multiple recreation complexes, and the city's seven lakes, the plan also calls for east-west connections from US 71 and the Razorback Regional Greenway extension to local and regional destinations within Bella Vista. Due to the unique topography, these connections will likely be in the form of shared use paths rather than sidewalks and on-street bikeways.





Northwest Arkansas: Razorback Regional Greenway (Fayetteville to Bella Vista)



Northwest Arkansas Regional Bicycle and Pedestrian Master Plan

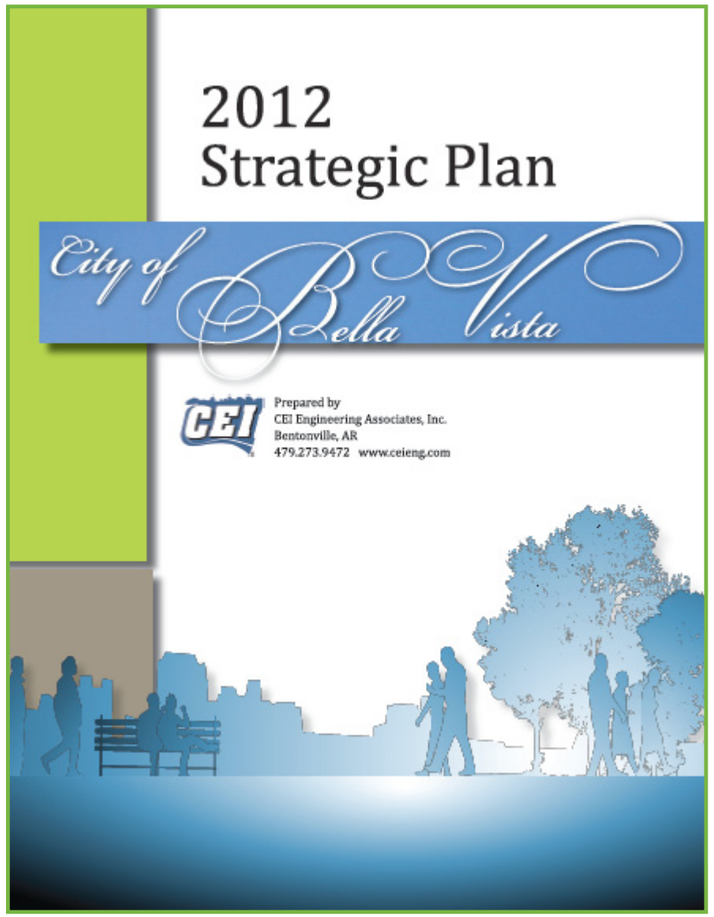
The Northwest Arkansas Regional Planning Commission (NWARPC) is in the process of developing a regional bicycle and pedestrian master plan to build upon previous planning and development efforts throughout the region and set a clear path to link communities and regional destinations with a world-class transportation network. The plan's vision is aimed to foster an environment in which the regional trail and roadway system will "comfortably, safely, and efficiently accommodate bicycle and pedestrian transportation." The linking of local and regional attractions will make the area a world-class bicycle and pedestrian destination. Walking and bicycling will become a common, enjoyable, and viable transportation and recreation choice that promotes active living and a high quality of life in Northwest Arkansas.

Northwest Arkansas Regional Bicycle and Pedestrian Master Plan

City of Bella Vista Strategic Plan (2012)

The City's Strategic Plan provides a vision and supporting actions to guide capital, operational, and fiscal decision-making in a manner that ensures Bella Vista's financial viability while protecting the quality of life for its residents. The Plan's vision seeks to build on the strengths and values of the community while establishing general principles for future growth and development:

"THE CITY OF BELLA VISTA WILL CONTINUE TO BE A UNIQUE AND DIVERSE COMMUNITY OF ACTIVE, INVOLVED RESIDENTS WHO VALUE THE NATURAL SETTING OF WOODED HILLSIDES AND LAKES, THE RECREATIONAL AMENITIES AND RESPECT THE COMMUNITY'S ROOTS AND RURAL, SMALL TOWN ATMOSPHERE. THE CITY WILL CONTINUE TO GROW AND PROSPER BY PROVIDING QUALITY PUBLIC SERVICES, CREATING A STABLE TAX BASE BY ENCOURAGING QUALITY COMMERCIAL AND RESIDENTIAL DEVELOPMENT, PROMOTING BELLA VISTA AS A TOURIST DESTINATION, AND PROMOTING COOPERATION AMONG THE ORGANIZATIONS IN THE COMMUNITY."



A series of mission statements in the Strategic Plan further elaborates on the principles established in the vision by creating more specific focus areas for future investment and action. Given the diverse impact a trail and greenway system can have on a community, from recreation and community health to transportation and economic development, there are multiple mission statements that will be supported by a strategic and coordinated trail network. Four mission statements in particular relate closely to this Plan and will benefit from future efforts to integrate trails and greenways into the community fabric:

CONTINUE TO IMPROVE A SOUND, STABLE INFRASTRUCTURE THAT MEETS THE NEEDS OF CITIZENS AND BUSINESSES.

CONTINUE TO GROW OUR DIVERSE POPULATION AND BE A PLACE THAT CHILDREN TO RETIREES ARE PROUD TO CALL HOME, IN GREAT PART, BECAUSE OF OUR SMALL-TOWN VALUES AND CITIZEN INVOLVEMENT.

PROMOTE THE CITY OF BELLA VISTA AS A DESIRABLE TOURIST DESTINATION OFFERING A WIDE VARIETY OF RECREATIONAL AMENITIES, CULTURAL OFFERINGS, LODGING, DINING, SHOPPING, AND OTHER ATTRACTIONS.

ENCOURAGE THE DEVELOPMENT OF A CITY OF BELLA VISTA "TOWN SQUARE" TO CREATE A UNIQUE AND IDENTIFIABLE SENSE OF PLACE FOR THE CITY.

The action plan calls for a number of new and updated plans and policies to guide growth and development, including design guidelines, an updated land use plan, updates to the zoning ordinance and subdivision regulations, a comprehensive transportation plan, an economic development plan, a 5-year capital improvement plan, and sub-area plans. Each of these new documents will provide the City with opportunities to formalize trails, greenways, and other infrastructure for bicycling and walking as valued community assets to be incorporated into future public and private developments.

Bella Vista Property Owners Association Comprehensive Amenities Needs Assessment and Action Plan (2013)

In 2013, the Bella Vista Village POA undertook a comprehensive assessment of recreation amenities in order to address the changing recreation needs of Bella Vista residents, property owners and visitors. The study examined national and local trends in recreation and outdoor activity and gathered considerable input from Bella Vista residents in order to develop recommendations for future investment in recreation amenities.

Bella Vista's changing recreation needs parallel national shifts in both population changes and the interests of the largest age cohorts (age group, such as 45-54). Although the median age of the population has been decreasing, baby boomers continue to grow as a percentage of the population. The 55-74 age group represented 30% of the population in 2010. Many baby boomers are entering retirement and looking for opportunities in fitness, sports, outdoor activities, arts, and culture, as well as recreational activities to enjoy with their grandchildren. Participation in golf, one of the most significant amenities, has declined at the local and national levels, generating interest in possible reuse of one of the POA's golf courses – Branchwood Golf Course.

Resident feedback, gathered through a random survey and an online survey, indicated a strong desire for trails and greenways. More than 58% of residents that responded to the surveys indicated that they already use nearby state parks and natural areas, many of which have trails for walking and bicycling. Forty-one percent of survey respondents stated that building new natural areas, trails and recreation facilities is receiving too little attention. Residents also expressed their desire for better signage and maps to amenities, trails and natural areas.

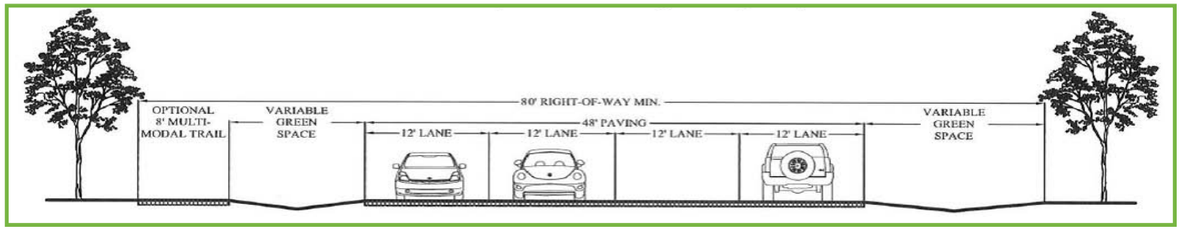
The Plan's recommendations call for a diverse array of actions, including the continuation of ongoing plan implementation activities, expanding marketing and communication efforts, constructing a new recreation and aquatic center, and developing a master plan for Branchwood Golf Course and Recreation Complex. These recommendations, which range from capital projects to organizational restructuring to marketing and communications, afford numerous opportunities to expand the trail offerings and establish Bella Vista as the premier community in Northwest Arkansas for trails and greenways.

City of Bella Vista Master Street Plan (2008)

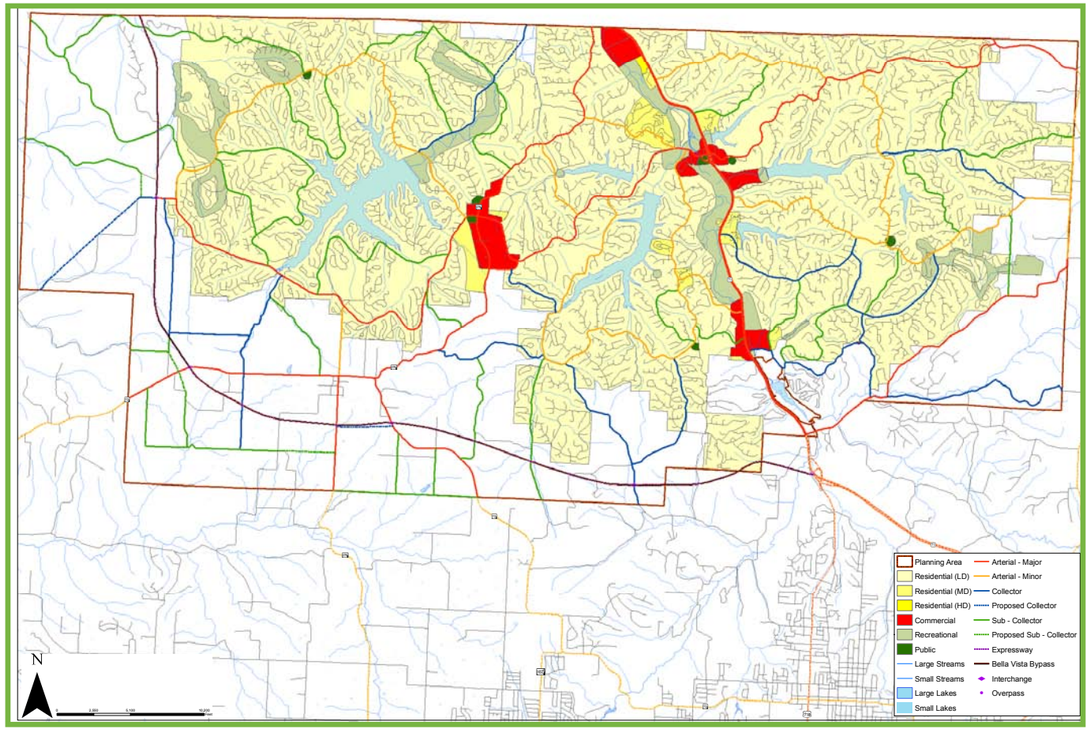
In conjunction with the Bella Vista Land Use Plan (2007), this document provides a twenty-year vision for the improvement of transportation infrastructure specifically addressing traffic congestion, a growing population, shifting demographics, and anticipated development through the provision of a design framework for future and existing roadways. In addition, the primary goal of the plan is to ensure that the scenic and peaceful community appeal of Bella Vista persists while promoting health, safety and livability.

While the plan stresses vehicular needs and the necessity of traffic calming measures, it also states that a multimodal transportation network would help achieve the goal of creating a livable community by alleviating congestion on motorways, and suggests the inclusion of non-automotive forms of transportation such as bicycling and walking be implemented. It recommends that the city generate a Master Trail Plan to develop a comprehensive system of pedestrian and bicycle facilities with the potential of connecting residential areas to recreational amenities, schools, shopping centers, and local business districts.

Traffic counts dating from 2006 and provided by the Arkansas State Highway and Transportation Department were utilized to develop a classification system of seven existing and proposed streetscape design proposals promoting the goals of the plan. However, none of these design schemes explicitly require the inclusion of multimodal features, and only three (collector streets, minor arterials, and major arterials) list an optional multimodal element within their descriptions. In each of these three cases, this multi-modal element consists of an eight-foot-wide multi-modal trail, with "placement contingent upon adopted connectivity goals." This width does not meet recommended standards as described in the AASHTO Guide for the Development of Bicycle Facilities, 4th Ed. (2012), which states that the minimum paved width for a two-directional shared use path is 10 feet. Eight feet should only be considered in rare circumstances, such as low bicycle traffic, minimal pedestrian use, or where frequent, well-designed passing and resting opportunities are included.



Left: A typical cross section for a minor arterial, which includes an optional 8' multi-modal trail



Right: The 2007 City of Bella Vista Land Use Plan Map emphasizes residential the character of the community

City of Bella Vista Land Use Plan (2007)

Adopted just one year after Bella Vista's incorporation, the Land Use Plan provides a 20-year framework for growth and development, considering important issues such as land use, housing, utilities, transportation, economic development, community facilities, parks and open space, historical and cultural resources, agricultural and natural resources, and intergovernmental cooperation. The plan's open space, recreation, and circulation components provide a foundation for trail development from diverse perspectives. The plan's open space policies focus on protecting natural resources and environments from encroaching development while providing opportunities for education, recreation, and community enjoyment. The recreation policies highlight the need to distribute and diversify recreational opportunities throughout the community. Trails and greenways can serve as both connectors to recreation destinations and also as destinations in and of themselves. The plan's circulation policies acknowledge the need for sidewalks and paths along major streets and within commercial developments to ensure safe and efficient pedestrian movement.

Bella Vista Multi-Use Trails Team's Trail Proposal (2010)

Developed by the Bella Vista Multi-Use Trails Team (MUTT), a subcommittee of the Bella Vista Village Property Owners Association Recreation Joint Advisory Committee, the Trail Proposal provides the basis for the City's initial consideration for the development of a city-wide natural-surface trail network. The proposed network would be free and open to the public, funded to the greatest extent possible by outside sources, and built and maintained by volunteers (with assistance from developers and consultants where possible). MUTT identified a single trail to be developed in the POA properties surrounding Blowing Springs Park, with additional trails to be proposed to the POA Board for their review and approval. The Blowing Springs Multi-Use Trail System was completed in 2012 and has become a regional destination for hikers and mountain bikers.

The proposal also provides detailed consideration for trail standards, facility design, and a signage hierarchy, all of which support the proposal's mission to provide a high-quality, sustainable multi-use trail system that minimizes user conflict, preserves the integrity of the natural environment, respects the interests of property owners, provides off-road recreation for a diversity of users, and creates a durable, high-value asset for generations of users.

Bella Villa Master Trail Plan (2011)

As a result of the MUTT Trail Proposal, a city-wide Master Trail Plan was developed in August of 2011. More than 95 miles of recommended multi-use trails are identified in the plan, connecting residential neighborhoods with commercial, civic, and recreational destinations throughout the community. While the majority of recommended trails utilize POA land, some trails are located within the rights-of-way of arterial and collector roadways where no off-street connections can be made. Facility type, surface type, and other design guidelines are not included in the plan.

Bella Vista Village Property Owners Association Recreation Joint Advisory Committee Branchwood Golf Course Land Recommendation (2009)

Noting the changing demographics of the community and the lack of usage of the Branchwood Golf Course, the POA Recreation Joint Advisory Committee deemed it necessary to determine a course of action to best maximize the benefits provided to POA members who use the Branchwood Recreation Facility and Golf Course. The recommendations resulting from the study were to keep the golf course open as a 9-hole, reduced maintenance golf course from March through October, and to incorporate additional recreational amenities at the Branchwood Recreational Facility, including pavilions and grills, a sand volleyball court, lawn games like Bocci Ball, and improved horseshoe pits. Other recreational amenities that could coexist with the golf course were identified for further consideration, including disc golf and golf course trail use by bicyclists, walkers, and joggers. The Branchwood Golf Course is currently closed until further notice, and no additional decisions have been made with regard to future use.

Bella Vista Village Property Owners Association Recreation Joint Advisory Committee Waterline Trail Recommendation (2010)

In early 2009, the POA Recreation Joint Advisory Committee determined it necessary to evaluate options for increasing multi-use trail amenities. Options evaluated included a trail loop around Metfield Park, natural surface trails on POA lands around Blowing Springs Park, the development of a city-wide master trails plan, and a paved trail connecting Metfield Park to Lake Bella Vista. This final trail alignment from Metfield Park to Lake Bella Vista was selected as the final recommendation of the Recreation Joint Advisory Committee, in large part due to the potential to utilize a water easement for which considerable funding had already been allocated. It was noted in the recommendation that the success of this trail project would highlight Bella Vista's commitment to providing outstanding recreational amenities and could garner support for a future master trails plan.

Arkansas State Bicycle and Pedestrian Plan (in progress)

In the fall of 2013, the State of Arkansas began developing a bicycle and pedestrian plan to address state policies related to bicycling and walking, and to identify future trails, sidewalks, and bike facilities that will serve the needs of bicyclists and pedestrians. The plan is a collaboration between the Arkansas Highway and Transportation Department, the Arkansas Department of

Right: The Arkansas State Bicycle and Pedestrian Plan was the cover story in the July 2014 Arkansas Highways Magazine

Parks and Tourism, the Arkansas Department of Health, and the Arkansas State Police, all of whom have important roles and responsibilities with regard to the provision, promotion, and maintenance of bicycling and walking facilities throughout the state. The planning process includes significant collection of data, public outreach, coordination with local and regional governments, the development of a preliminary statewide bicycling network, training for transportation engineering staff, and design guidelines for bicycle and pedestrian facilities. The final plan will be presented to the Governor's Bicycle Advisory Group and the public in early 2015.

Current Bicycle, Pedestrian and Greenway Organizations and Resources

The organizations and resources listed below represent the current core capacity for managing greenway and trail related programs in Bella Vista and Northwest Arkansas.

State Organizations and Resources

- Bike/Walk Arkansas
- Arkansas State Highway and Transportation Department
- Arkansas Bicycle Club
- Arkansas Trails Council
- Mountain Bike Arkansas

Regional Organizations and Resources

- Bicycle Coalition of the Ozarks
- Boston Mountain Cycling
- International Mountain Biking Association
- Progressive Trail Design
- Alta Planning + Design

Left: Group rides and events are common after the development of a trail system.

Right: Developing a trail network throughout a city can invite all types of people to come together under one cause, passion for an active lifestyle.

Local Organizations and Resources

- Walmart Home Office Bike Leadership Committee
- Bentonville/Bella Vista Trailblazers Association, Inc.
- Friends at Slaughter Pen Trails (FAST)
- Bella Vista Bike Club
- Hill 'N Dale Hikers
- Ozark Hill Hikers
- Tanyard Creek Nature Trail Volunteers

Bicycle, Pedestrian and Greenway Programs and Projects

Listed below are the most well-known programs available in Bella Vista and Northwest Arkansas that relate to bicycling, walking, and trails and greenways. These are either existing today or recently active.

Regional Programs/Projects

- Northwest Arkansas Razorback Regional Greenway
- Safe Routes to School (SRTS)
- Adopt-a-Trail Program
- Share the Road Campaign

Local Programs/Projects

- Get Out and Ride
- Slaughter Pen Jam
- Bike Blast
- Bike Rodeos
- Bicycle Maintenance and Safety Workshops
- Bentonville Group Rides

Opportunities and Constraints

Bella Vista's growth and development over the last fifty years have changed the character of the community, both physically and socially. As the community continues to evolve, new amenities like trails and greenways can play an important role in attracting and retaining new residents who value the City's diverse recreational offerings and the opportunities to live a healthy and active lifestyle. Based on an analysis of the existing conditions in the City of Bella Vista, including transportation, land use, parks and open space, and existing trails, a number of opportunities and constraints have been identified that will shape future trail and greenway development. These opportunities and constraints are listed below and depicted in a series of maps on the following pages.

Opportunities

Land Use and Development

- Existing auto parking and amenities at Lake Lomond, Tanyard Creek Park, and lake access points can serve as trailheads for the future trail and greenway network.
- The former Branchwood Golf Course, which has not been watered in 2014, can be repurposed for alternative recreational use, with its existing paved path converted to a multi-use trail.
- Recreation destinations are abundant throughout the City. These destinations can function as both trailheads and popular destinations within an interconnected trail and greenway system.
- POA, City and Cooper Communities, Inc. property is available for the development of recreational amenities.

Environmental Characteristics

- Numerous hillsides, ravines and valleys provide ideal terrain for hiking and mountain biking trails. The Blowing Springs Trail System and the "Epic Ride" route, both located east of US 71, exemplify these types of trails.
- The unique natural features and landmarks, like Blowing Springs and Tanyard Creek Falls, already serve as attractive recreational destinations that can complement and enhance a trail network.

Utility Corridors

- The linear orientation and ample width of most utility corridors throughout Bella Vista, particularly transmission lines, offer attractive locations for the development of linear trails and greenways.
- Existing utility easements adjacent to roadways may provide opportunities for trail development. One such example is the utility easement parallel to Rogers Drive between Forest Hills Blvd and W Lancashire Blvd.
- The existing gas line easement from Highlands Blvd east of McGrath Dr to the intersection of Glasgow Rd and Kinross Dr is cleared and flat, providing feasible conditions for a paved shared use trail.
- The existing water line on the north and east side of Euston from Blowing Springs to Metfield Clubhouse.

Left: Utility corridors provide excellent opportunities for trails and greenways

Right: Crossing under US 71 will link the proposed east and west trail networks in Bella Vista

Roadways and Intersections

- Several roadways throughout the City, such as Trafalgar Rd, Euston Rd, and parts of Lancashire Blvd, possess the adequate right-of-way to accommodate small paved multi-use trails or soft surface trails
- Quiet, residential streets such as Devizis Dr and Wellington Rd can enhance trail and greenway system connectivity and provide adequate routes where off-street trails may be infeasible.
- A number of gravel streets and ATV trails, such as Bollington Dr, Ventnor Dr, and Tudor Dr, connect with forested areas and riparian corridors. These corridors offer opportunities for shared use trails.

Undeveloped Land

- Most POA lands are natural wooded areas and are suitable for natural surface trails and, where topography permits, paved trails as well.
- Large patches of varied topography on undeveloped POA land and CCI property serve as excellent opportunities for hiking and mountain biking trails.
- Ravine corridors in POA land can also provide connections between neighborhoods and main roads, serving as extensions of hiking and mountain biking trail systems.

Trails

- Existing trails and bikeways in areas like Tanyard Creek Park and Blowing Springs Park provide a diverse mix of recreation opportunities and can function as the foundation for an expanding trail and greenway network.
- A connection to the Razorback Regional Greenway, Cooper Elementary, and the Lightning Soccer Complex is currently being developed in southern Bella Vista.
- The valley in which Little Sugar Creek, US 71, adjacent golf courses, and commercial activity are located offers an ideal and logical location for the northern extension of the Razorback Regional Greenway.

Constraints

Land Use and Development

- Euclidian zoning and the separation of land uses have created significant distances between commercial activity and residential neighborhoods. As a result, most commercial activities, most notably grocery stores, pharmacies, and other frequented commercial destinations, are out of walking distance for the great majority of residents in Bella Vista.
- The emphasis of residential development in Bella Vista, coupled with existing recreational uses along US 71 in the form of golf courses, has left minimal opportunities for commercial development. In turn, many Bella Vista residents leave the City and travel to neighboring communities for basic goods and services.
- Wide US 71 right-of-way, multiple golf courses, and other developed and active parcels along the Little Sugar Creek Valley pose challenges to the siting of a continuation of the Razorback Regional Greenway from Lake Bella Vista northward through the City.

Environmental Characteristics

- The steep terrain and numerous streams and creeks create numerous challenges for trail development, particularly for paved, ADA-accessible trails.

Utility Corridors

- Some utility corridors, like the north-south corridor between Lake Windsor and Chelsea Rd, traverse steep hills with 60- to 100-foot drops, and will be limited to only narrow, natural surface trails.
- While utility corridors can provide ideal locations for linear trails, they often cross roadways in locations not well suited for trail crossings, including areas with steep grades and poor sight lines. Considerable traffic control measures would be necessary to provide a safe trail crossing for both motorists and trail users.

Left: Many commercial nodes along US 71 lack safe and convenient access for bicyclists and pedestrians

Right: The land bridge on W Lancashire Boulevard east of Forest Hills Blvd leaves no room for a parallel trail

Roadways and Intersections

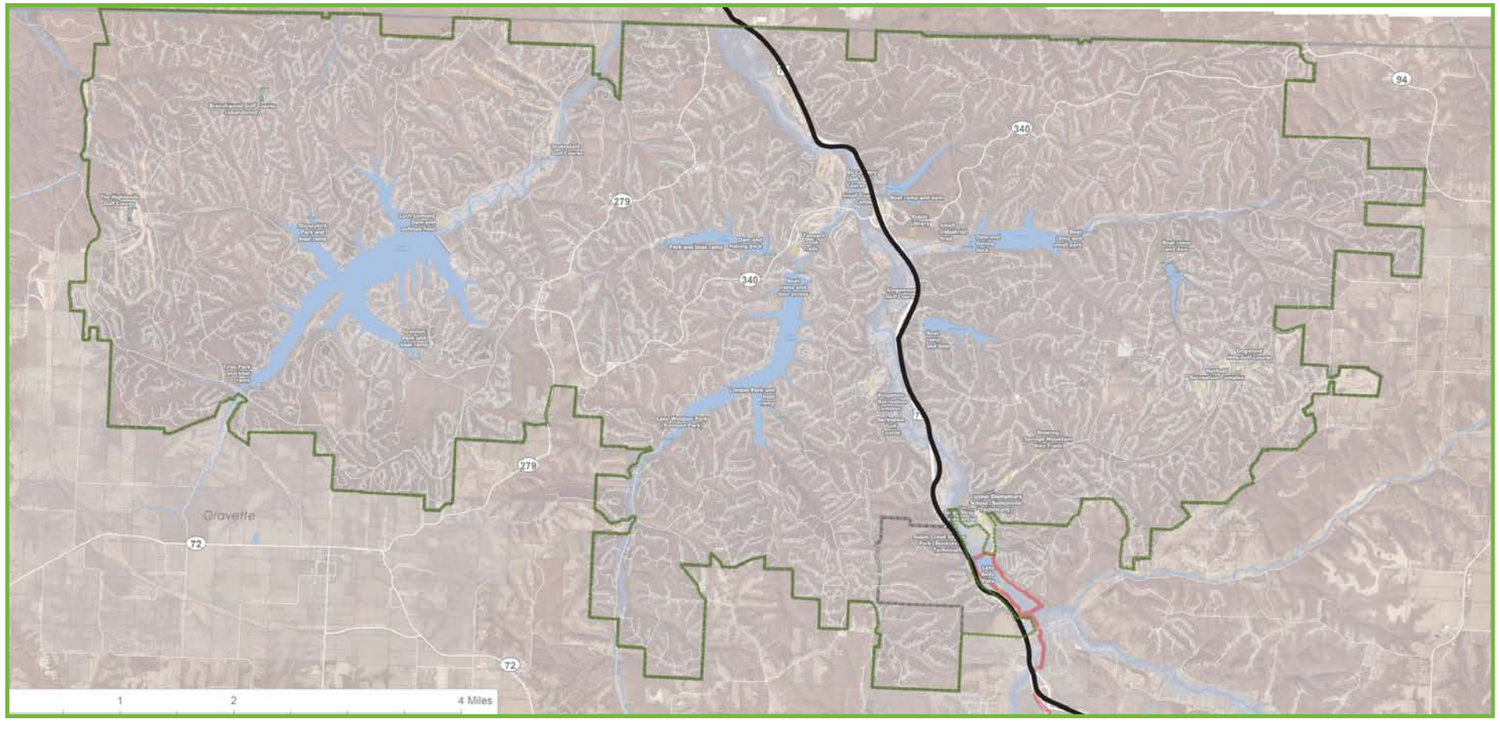
- US 71 presents a significant barrier for bicyclists and pedestrians. Heavy traffic volumes, high vehicle speeds, and frequent ingress and egress points discourage bicycle and pedestrian use of available shoulder space. Crossing US 71 can be difficult as well. Not only are there limited opportunities to cross US 71 on bike and foot (just three signalized intersections and one grade-separated intersection within the city limits),
- The lack of bicycle and pedestrian facilities along almost all roadways in the City presents a challenge to developing non-motorized connections between destinations. Roadway grades, sight lines, and intersections present challenges for the routing and alignment of roadside multi-use trails.
- Narrow rights-of-way, as well as the often shifting position of roadways within the right-of-way, limit availability of continuous adjacent space for trail development.
- The lack of shoulders and presence of steeper grades along many roads will require trails to be benched into a lower elevation along the roadway or a structure will be required to help suspend the tread along the steep drop.
- Existing land bridges, where earth has been brought in to reduce roadway grades and create a “bridge” over steeper terrain, pose significant obstacles to roadside multi-use trail development, as steep side slopes along the bridges will not permit a trail to be benched in to the grade. In such cases, like the land bridges on W Lancashire Blvd. east of Forest Hills Blvd, an additional structure will be necessary to accommodate a trail, or alternative routes traversing away from the right-of-way may be considered.

Undeveloped Land

- While POA land is abundant throughout the City, narrow widths and steep terrain may pose challenges to the utilization of some POA parcels for trail development, particularly for paved, ADA-accessible multi-use trails.

Trails

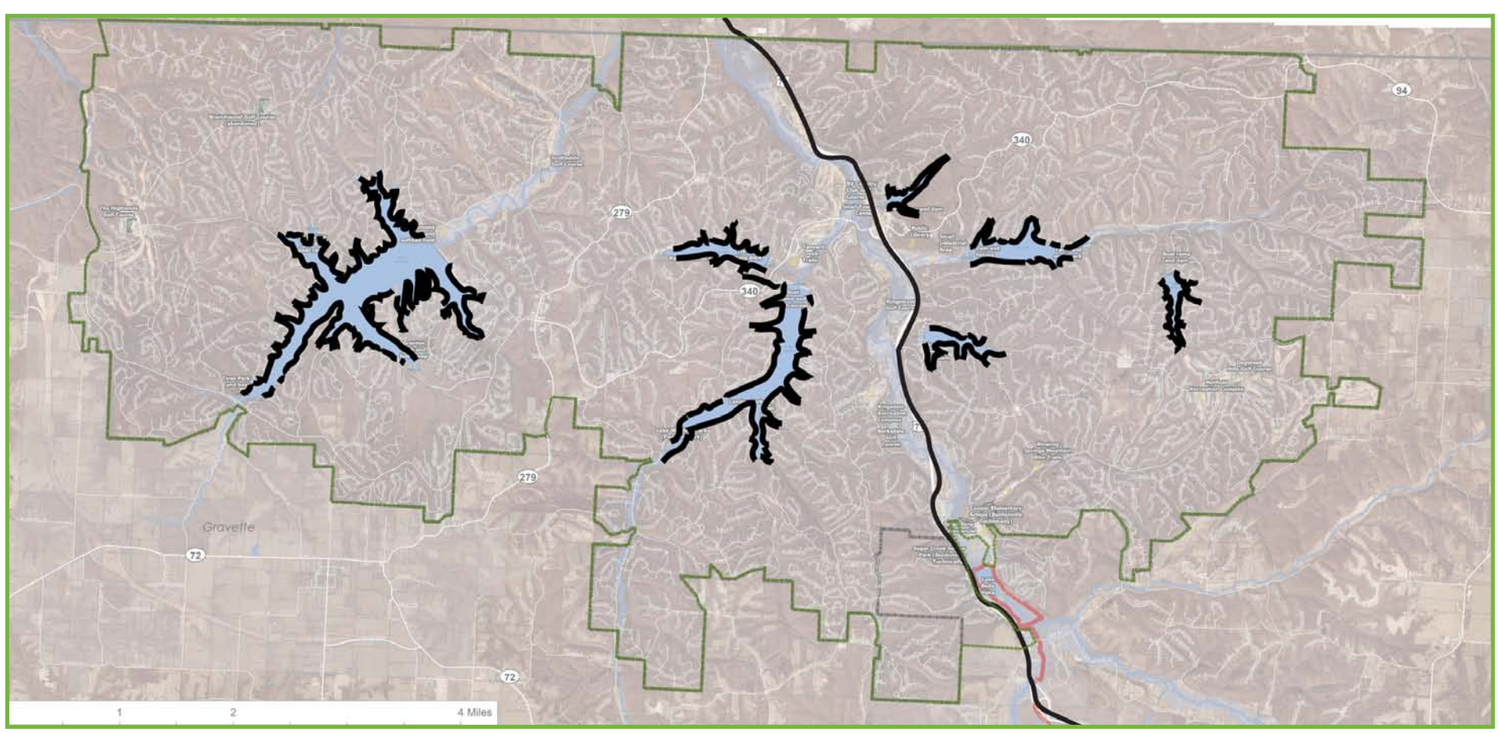
- The lack of destination-oriented and linear trails limits opportunities for bicycling and walking for transportation-oriented trips.



US Highway 71 as a Constraint

US Highway 71 acts as the biggest constraint to developing an interconnect trail network as it divides the City of Bella Vista into two halves, east and west. In order to create a complete and connected trail network, pedestrian/bicycle crossings will have to either go under the highway, such as the opportunity to go underneath the bridge just north of Riordan Rd.; or, the trail network will have to connect across the existing road infrastructure using seperated bike/walking facilities, which will be the case for a possible second connection by means of Lancashire Blvd/AR-340.

Left: US 71 is highlighted in black.



Limited Access to the Lakes as a Constraint

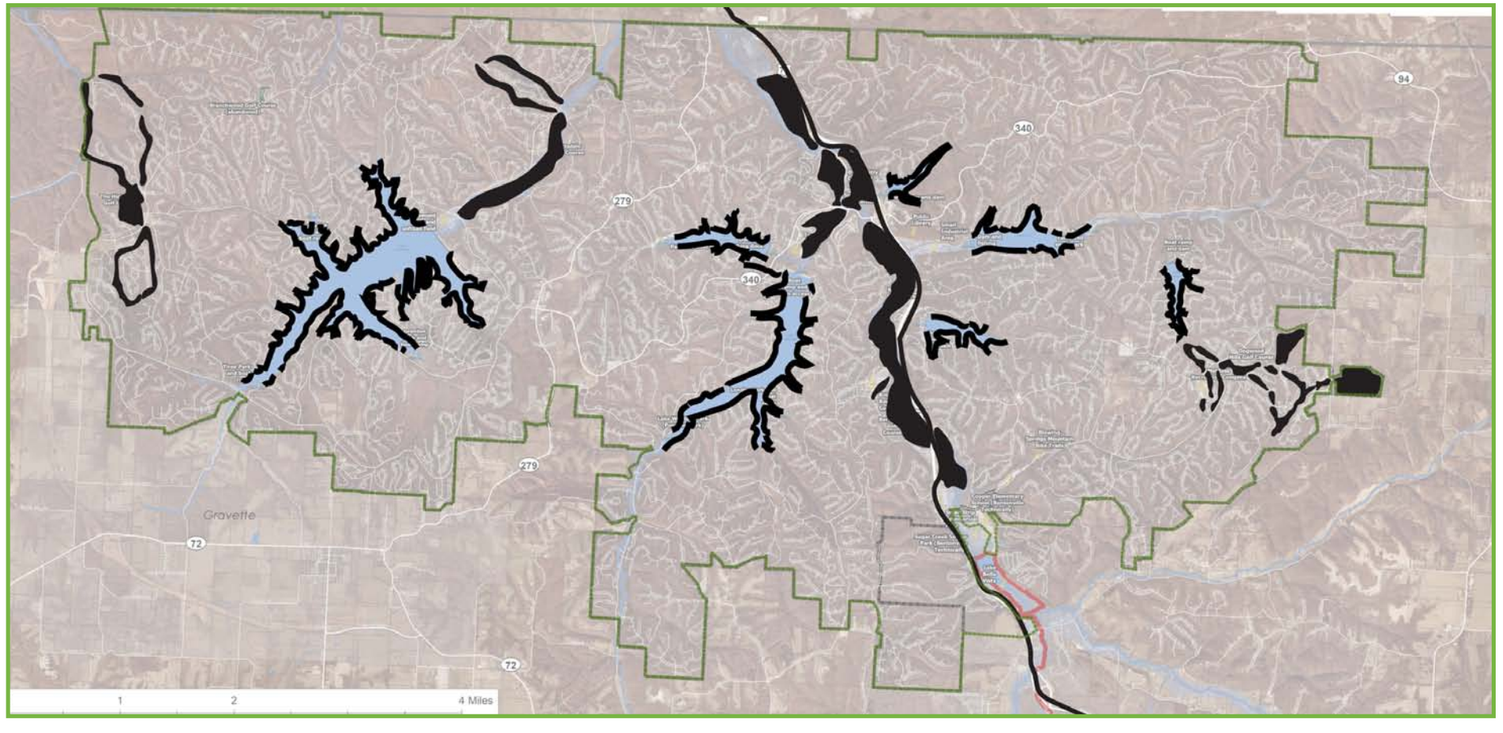
Due to Property Owners Association (POA) membership regulations, the lake front property can only be accessed by these members. Figuring out connections to these amenities while maintaining regulation is an essential part to this trail network development process. Although access to the lakes would be ideal, there are many natural features that can be found throughout Bella Vista and can serve as points of interest for the trail network.

Left: Residential lots adjacent to the lakes limit locations and opportunities for recreational lake access.

Golf Course Ownership as a Constraint

With prime real estate between US Highway 71 and Little Sugar Creek, this natural river corridor could have been an ideal location for a greenway, but this land has been devoted to golf courses. The ability to co-located trail along golf course is limited due to safety considerations.

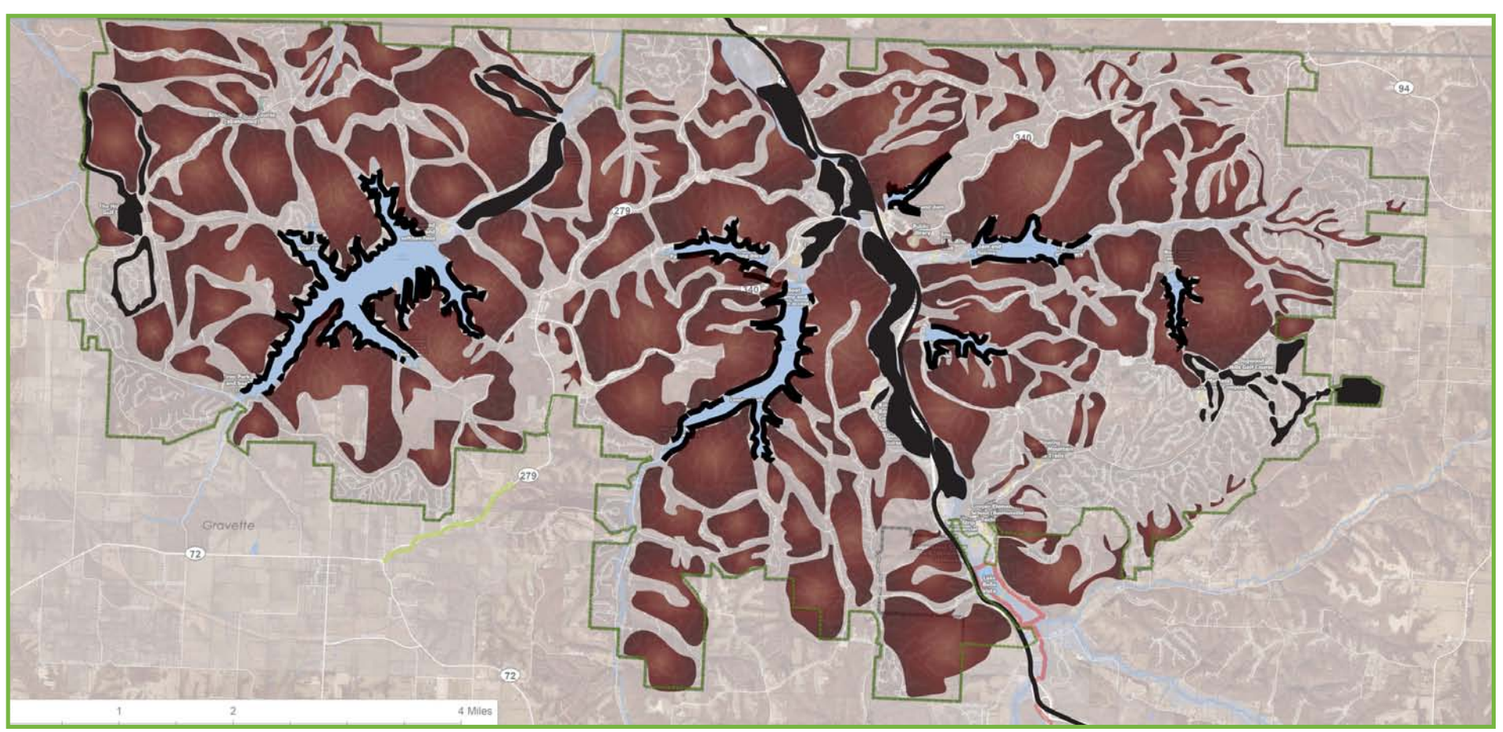
Right: Golf course along US 71 present one of the biggest constraints to trail development in the Sugar Creek Valley. Other golf courses are highlighted in black.

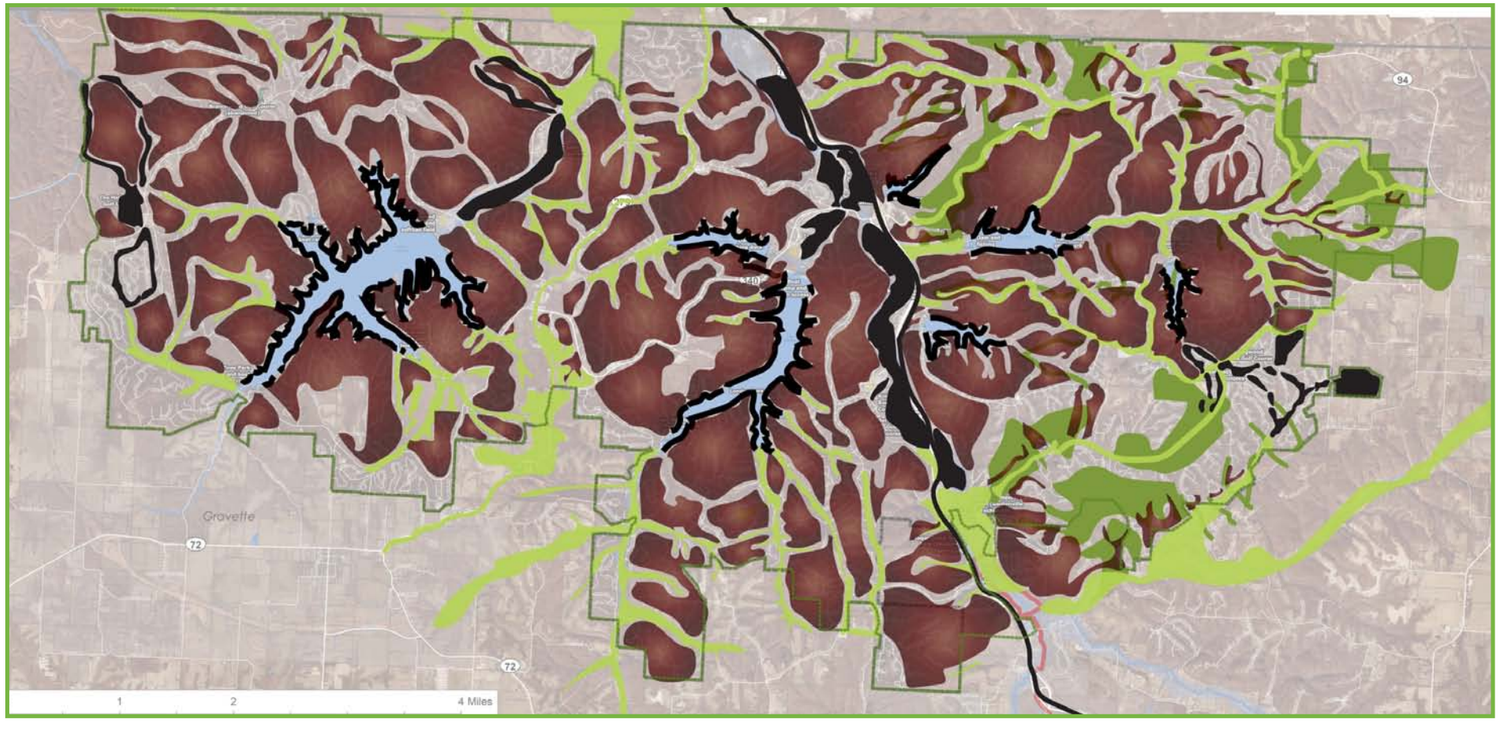


Steep Topography as a Constraint

Steep topography throughout the City of Bella Vista is the biggest natural constraint to the development of a trail network, therefore natural surface trails act as the most viable and sustainable option for trail surfacing.

Right: Steep topography is highlighted by the areas of red. As shown, topography is a major constraint and will eliminate large areas of land for certain types of trail development.





Moderate to Gentle Topography as a Constraint

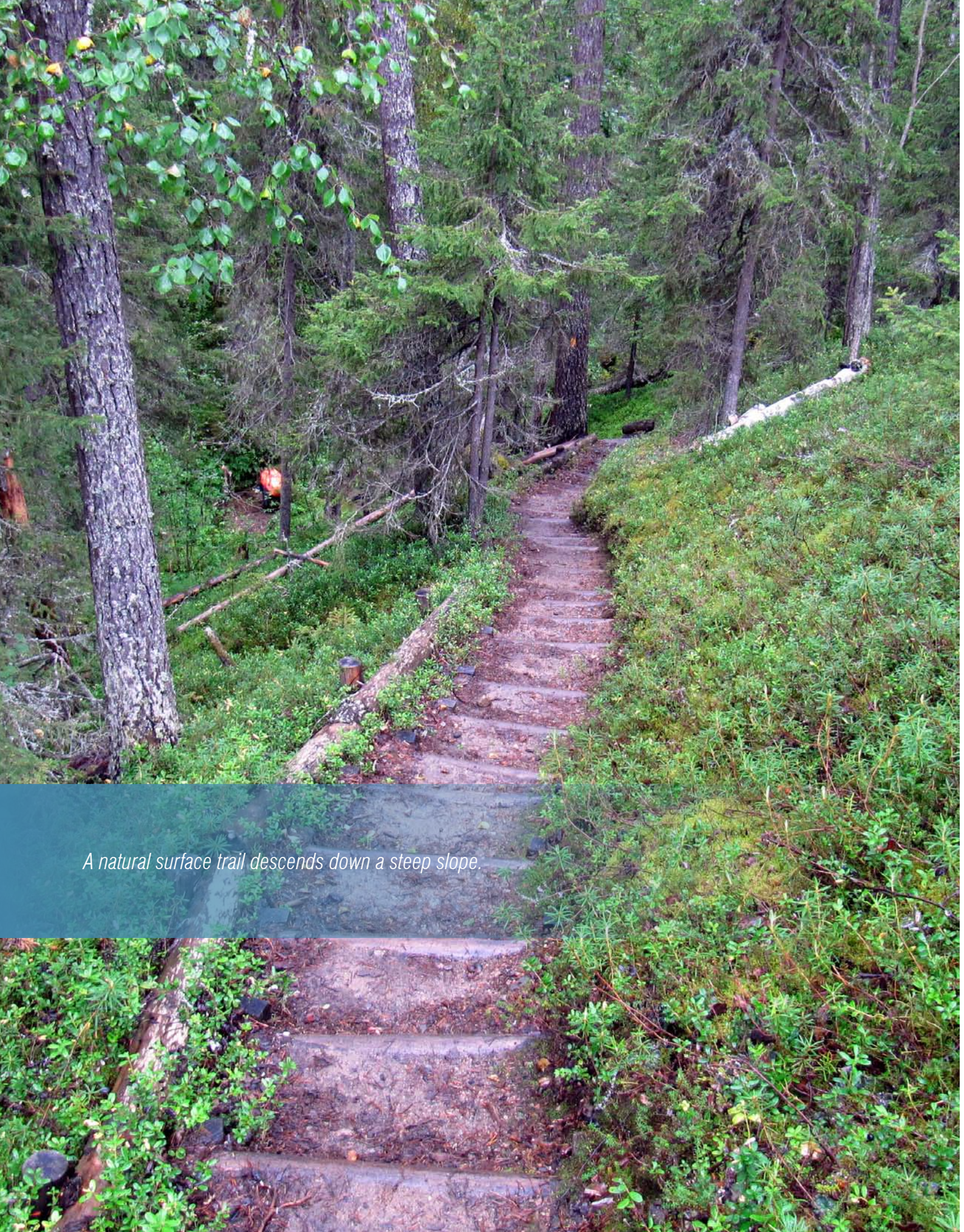
This land is still not ideal for trail and greenway development. Although it is possible to align trails through these areas, natural surface trails act as the most viable and ecologically-sensitive option for trails.

Left: Darker green areas highlight moderate topography, while light green areas symbolize gentle topography.

Right: 2011 Bella Vista Trail & Greenway Map

BELLA VISTA TRAIL & GREENWAY MASTER PLAN

1. At the Branchwood Golf Course, irrigation is no longer occurring and as a result the course is being considered for alternative recreational use.
2. The existing gas line easement is cleared and flat, which are feasible conditions for a paved shared use trail.
3. Loch Lamond park and walking trails include restrooms, parking, and picnic areas. This existing infrastructure could serve a dual use as a trailhead.
4. Most POA lands are natural wooded areas and are suitable for natural surface, or in some areas, paved trail where topography permits.
5. Existing parking area at Cullen Hills Dr. is an ideal dual use opportunity for a trailhead.
6. Where paved trails are proposed adjacent to roadways, grade, site lines, and roadway intersections will be a challenge for routing and alignment, such as this bend in Cullen Hills Dr. where a trail may cross.
7. Two existing land bridge structures along Lancashire Blvd. present significant routing challenges for a paved trail. Steep side slopes along the bridges will not permit the trail to be benched into the grade and an additional structure will be necessary to accommodate trail.
8. Some POA lands are open and flat enough for paved trails, such as this corridor between Camden Rd. and Lancashire Blvd.
9. Existing park facilities provide boat access to the lakes and many include docks, picnic areas, and parking.
10. Tanyard Creek Park provides an opportunity to connect with existing trails and can provide a shared trailhead for future Bella Vista trails.
11. Some roadways, such as this section on Highlands Blvd., provide little to no shoulder. The trail will need to be benched into a lower elevation along the roadway or a structure will be required help suspend the tread along the steep drop.
12. As the network extends south toward Gravette City limits, the land use becomes more agricultural. At some parcels, an easement may be required to provide adequate space for a shared use trail.
13. Paved trails can share utility easements along roadways where space allows, such as the north side of Rogers Rd.
14. Several areas of POA land include existing dirt roads or ATV trails that connect with forested areas along creeks. These are opportunities for shared use trails.
15. Where topography is constrained, only narrow native surface trails can be accommodated, such as this corridor between Chelsea Rd.
16. If a trail is developed along this power line easement, natural surface trails are recommended. The topography is very steep, with 60-100 foot drops.
17. Several roadways along Bella Vista exist with sufficient space for paved trails. On the east side, key corridors include Trafalgar Rd., Euston Rd., and Lancashire Rd.
18. Mountain biking and hiking trail opportunities are pervasive through ravines, varied topography and extensive swaths of POA land. The Blowing Springs trail system and 'Epic' ride route exemplify opportunities on Bella Vista's east side.
19. Large patches of varied topography on undeveloped POA land serve as excellent opportunities for hiking and mountain biking trails. POA land to the southeast of Lake Norwood is an example.
20. Ravine corridors in POA land provide connections between neighborhoods and main roads. These can serve as extensions of hiking and moutain biking trail systems. Part of the 'Epic' ride follows one such corridor between Blowing Springs and Kingsland Rd.
21. Trail system destinations include Lake Ann and the Metfield Recreation Complex (in addition to Lakes Norwood, Rayburn, and Brittany), extend to recreation opportunities such as swimming, fishing, boating, paddling, tennis, and other activities.
22. A connection to the Razorback Regional Greenway, Cooper Elementary School, and the Lightning Soccer Complex is currently being developed in southern Bella Vista.
23. Two small commercial centers with grocery stores exist in the Bella Vista town center (local government offices) and along US 71 in south Bella Vista.
24. Utility lines such as those along and intersecting Grosvenor Rd., are extensive, providing additional corridors for trail links through Bella Vista.
25. Trail spurs through quiet residential streets such as Dennis Dr. and Wellington Rd. can enhance trail and greenway system connectivity.
26. US 71 provides a major barrier for the east side of Bella Vista in connecting to the future northern extension of the Razorback Regional Greenway and west side destinations. No crossing facilities currently exist for pedestrians or bicyclists.
27. Steep terrain limits trail opportunities along certain roadways such as parts of Machester Rd. east of Cooper Elementary School.
28. Some trail crossings of Bella Vista roadways will be constrained by limited site lines. A trail crossing of Trafalgar Rd. east of Lake Ann will need to take into consideration the sharp turn to the south on Trafalgar Rd.



A natural surface trail descends down a steep slope.

CHAPTER

3

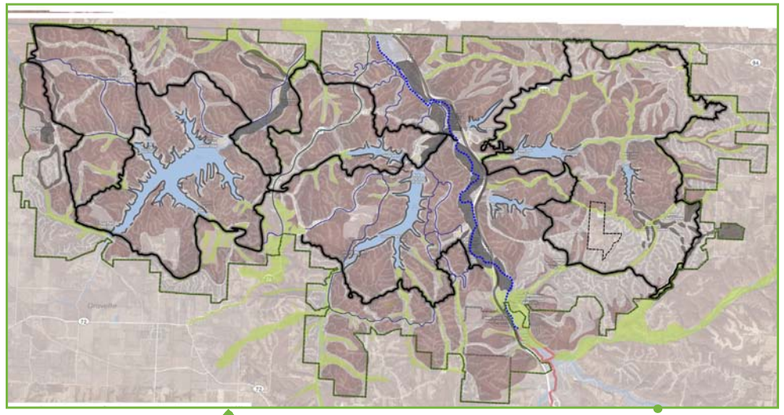
Chapter Contents:

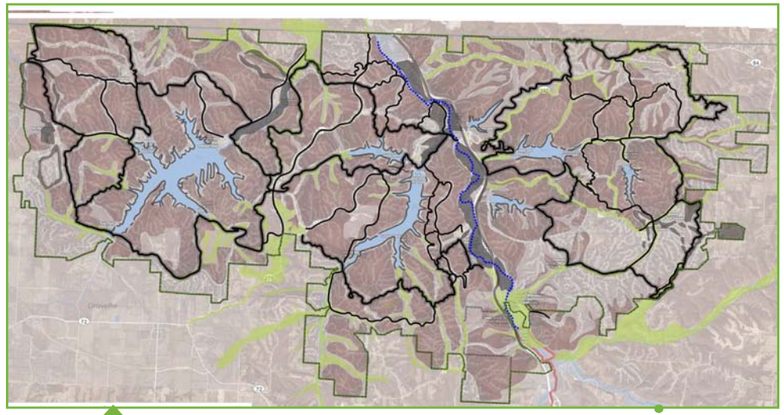
TRAIL & GREENWAY RECOMMENDATIONS

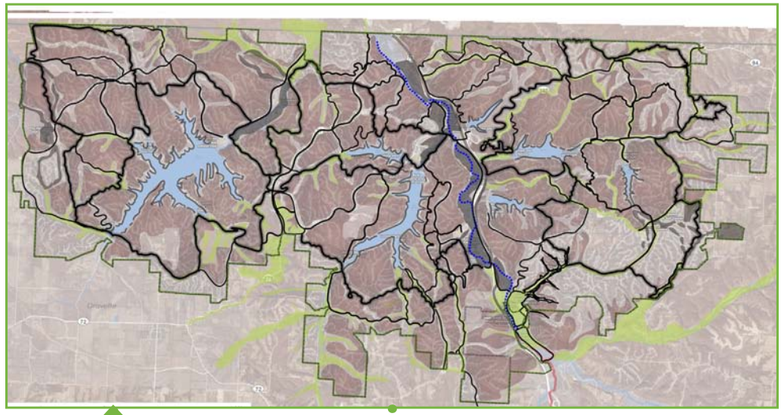
Overview

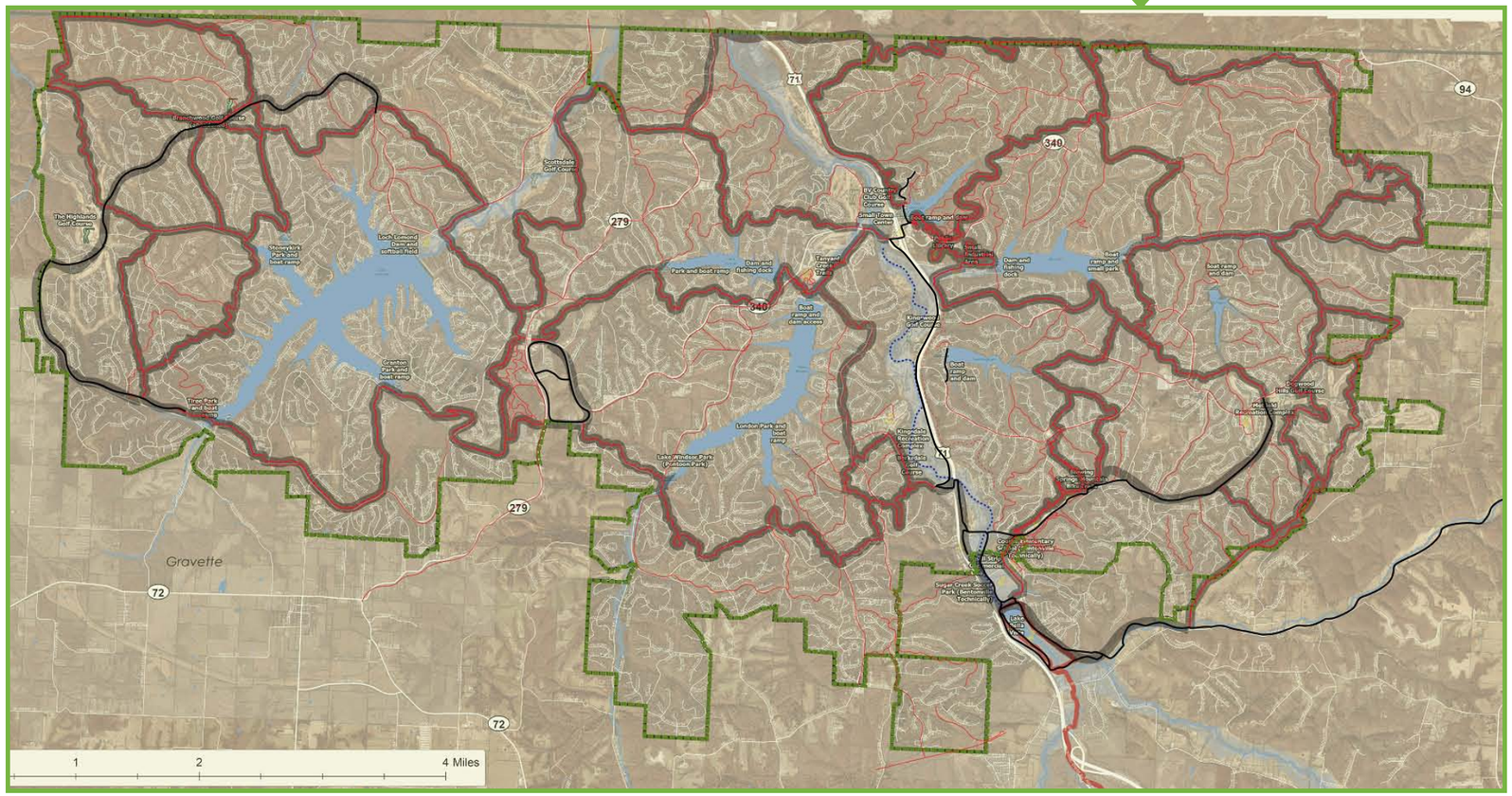
The proposed greenway network outlined in this chapter was developed through input obtained from the public via online surveys, public input sessions, meetings with key stakeholders, intensive field work, consideration of previous planning efforts, and thorough analysis of the opportunities and constraints within Bella Vista. The predominant ridge and valley physiography of Bella Vista has dictated the pattern of development through the years, and is one of the predominant factors that has shaped the proposed trail and greenway network proposed in this plan. The mountainous terrain has provided both opportunities and constraints but does limit the trail typologies that are suitable for the plan. Through these processes and available opportunities, a cohesive and connected network of trails and greenways have been identified and strategically prioritized for step-by-step implementation.

In the plan, each facility segment is numbered and listed in a trail matrix that specifies a trail typology, total length of the trail and planning-level costs associated with implementation. Each corridor and connectors associated with that main “highway” is color coded. All figures are recorded in a legend. Each trail is categorized and designated as a Primary, Connector, or Ancillary Trail.









Preliminary Trail & Greenway Opportunities

Description to follow.

Preliminary Trail Hierarchy Established

Trail Typologies Suitable for Bella Vista

As described in Chapter 1, there are a variety of trail typologies and all were considered in the planning process of the proposed trail network. Every effort was made to include each type of these typologies but many were excluded in the vetting process due to a variety of constraints. Although there are some areas that will accommodate paved trails they are predominately short in length and would not provide a large benefit to the community and would not be a substantial contribution to an overall connected network of trails and greenways. Although there are many large right-of-ways along major road corridors, providing paved trails along these corridors would not be financially feasible and would create hazardous safety conditions for users and would ultimately be a liability to the City. An overarching goal of this trail master plan is to provide a safe, equitable, feasible, and connected trail system that caters to a variety of user groups.

Paved vs. Soft Surface Trails

The open and linear nature of trails prevents most ways of successfully enforcing restricted uses or users from utilizing the facilities. Providing paved trails in terrain-challenged corridors of Bella Vista would not preclude children from using these facilities. The steep nature of the topography could prove unmanageable to unexperienced users and could potentially cause them to lose control of a bicycle or skateboard resulting in potentially serious injuries. Additionally, the engineering for providing wide-paved surfaces could prove detrimental to the natural beauty and serene setting of Bella Vista. Massive grading and tree removal would be necessary to provide these facilities making it costly and environmentally destructive. Providing narrower soft surface trails along select roadway corridors would provide a safer and more appropriate solution. These trails can restrict user types, cost less, be applied in areas where paved trails are not suitable, are less intrusive and noticeable, and are more environmentally sensitive. For these reasons, paved trails are only recommended for suitable areas for these types of trail facilities.

Above: Steep slopes within the right-of-way are common and prevent cost efficent, as well as safe, trail building.

Proposed Trail Typologies

The following diagrams illustrate the recommened trail typologies for the Bella Vista Trail & Greenway Master Plan.

PAVED ON-STREET TRAIL

Permitted uses

Description

Paved surface trail sharing a roadway with vehicles or immediately adjacent to roadways with a buffer provided.

Materials

Trail: Asphalt or concrete paving

Examples

PAVED GREENWAY TRAIL

Permitted uses

Description

Paved surface trail in gently sloping areas, utility easements, road right-of-ways, and some POA lands

Materials

Trail: Asphalt or concrete paving
Shoulder: Decomposed granite or similar permeable material

Examples

NARROW SOFT SURFACE SIDE PATH

Permitted uses

Description

Non-hardened surface trail adjacent to roadways, typically used along roads with constrained right-of-way or topographical challenges

Materials

Trail: Decomposed granite or similar permeable material

Examples

WIDE SOFT SURFACE TRAIL

Permitted uses

Description

Non-hardened surface trail in gently sloping areas, utility easements, road right-of-ways and POA lands

Materials

Trail: Decomposed granite or similar permeable material

Examples

Permitted uses

Description

Narrow natural surface trail typically found in drainage areas, areas with steep topography, and where environmentally sensitive areas are present

Materials

Decomposed granite or native surface, such as bare earth or pine needles

Examples

Permitted uses

Description

Narrow natural surface trail typically found in any type of offroad condition but restricted to pedestrian uses

Materials

Native surface, such as bare earth or pine needles

Examples

Permitted uses

Description

Narrow natural surface trail typically found in any type of offroad condition but restricted to mountain biking, typically one-way

Materials

Native surface, such as bare earth or pine needles

Examples

Permitted uses

Description

Water trail for canoes, rafts, kayaks or other non-motorized watercraft

Examples

Trail Categories

In developing the trail and greenway networks, individual trails were ranked on several criteria in order to identify high priority projects that will guide the City of Bella Vista in focusing their resources on impactful trail and greenway projects. These high priority projects have a significant value to the community and a larger impact to the overall network than simply developing an isolated trail or pathway. Once the conceptual trail network was established, the trails were ranked on the following criteria, identified, and organized into an implementable action plan for the immediate (0-5 years), near-term (5-10 years), and long-term horizons (10+ years).

Trail category and prioritization criteria:

- **Public Input** - The project was identified by the public during an open house, in the survey, previous or related study, or other forms of communication.
- **Connectivity to Existing Trail or Greenway Facilities** - The project will help build the overall network.
- **Connectivity to Proposed Facilities** - The project will ultimately impact and connect to the overall network.
- **Network Gaps** - The project fills an existing gap in the network.
- **Connections to Activity Centers or Points of Interest** - The project will make it easier to access important destinations.
- **Recreational Need** – The project provides a needed recreational facility in a populated area, neighborhood, or community.
- **Ease of Implementation** - Bella Vista currently has available right-of-way Cooper Communities, Inc. and/or POA lands to implement the project.

Primary Trails and Bikeways (0 – 5 year Horizon)

Within the master plan, trails categorized as Primary trails feature a variety of trail typologies and were identified through detailed analysis and community input and then categorized and prioritized based on the criteria above. Primary trails are the most feasible and critical to community needs and establish the base line for a connected trail and greenway network for Bella Vista. These trails have been labeled as high-priority projects for immediate implementation. They will provide the community with a host of benefits and will satisfy current trail demands.

Connector Trails (5 – 10 year Horizon)

Trails categorized as Connector trails are a very important part of the long-term establishment of the trail and greenway network for Bella Vista. As the population and trail usership grows, these trails will be essential in providing additional facilities to accommodate increasing demands, increasing the trail network's reach to additional points of interest, further connecting the community, providing more trail choices, and establishing a web-like trail network whereas Primary trails focused on more linear routes and continuous facilities.

Ancillary Trails (10 + year Horizon)

According to Merriam-Webster Dictionary, the word 'ancillary' is defined as "providing something additional to a main part or function'. These trails fit this description in the fact they are not crucial to the trail network but do provide supplementary benefits to the Primary and Connector trail networks. These are slated for long-term implementation and their viability largely depends on demand based on population growth in Bella Vista and increased user demands.

Community-Driven Trail Priorities

Based on community input, a general list of top priorities for the BVMP was developed and incorporated into the master plan trail network. These priorities are listed below:

1. Northern Extension of the Razorback Regional Greenway

Extending the Razorback Regional Greenway north into the City of Bella Vista is the top priority. This greenway extension not only adds to the current 36-mile greenway, but broadens the benefits of the greenway system into another community by making connections to retail and pedestrian centers and by serving as an economic engine to the community of Bella Vista.

2. Soft Surface Trails in the Eastern Portion of Bella Vista

Soft surface, shared-use trails in the eastern portion of Bella Vista serve as the second priority on this list due to the fact that creating a network of these types of trails is a cost-effective use of funding. Also, with considerations to where the majority of the population is currently located, the eastern portion of Bella Vista has the greatest need for trail networking and connecting.

3. Euston Greenway Extension

The Euston Greenway is located in the eastern portion of Bella Vista and features a terrain suitable for a portion of paved trail. With the addition of a soft surface trail network in East Bella Vista, making this connection allows for a complete and connected network of trails.

4. Soft Surface Trails in the Western Portion of Bella Vista

Again, soft surface, shared-use trails are a cost-effective use of funding. Future development in Bella Vista will generally be in the western portion of Bella Vista, and as the city continues to grow, the population will begin to balance in both the eastern and western portions of the city.

5. Highlands Trail Loop

The Highlands Trail Loop is another top priority because of the location of this trail loop being situated next to a retirement community. Having this loop reaches out to another projected audience in Bella Vista and promotes a healthy, active lifestyle for members of the Bella Vista community in the age group of 65 and older.

6. West Bella Vista Hard Surface Trail

Finally, last on the top priority list is the proposed hard surface trail in Western Bella Vista, along Highlands Blvd. / US 21/472/473 connecting the southwest Loch Lomond Trailhead to the Branchwood Recreation Center. This paved portion will serve as a connector trail in the western soft surface trail network and will provide a well-connected and complete network of trails throughout the entire community of Bella Vista.

Right: Typical soft surface hiking or mountain bike trail will encourage multiple uses and a variety of user groups.

Opposite Page: Proposed trail typologies recommended for the Trail and Greenway Master Plan

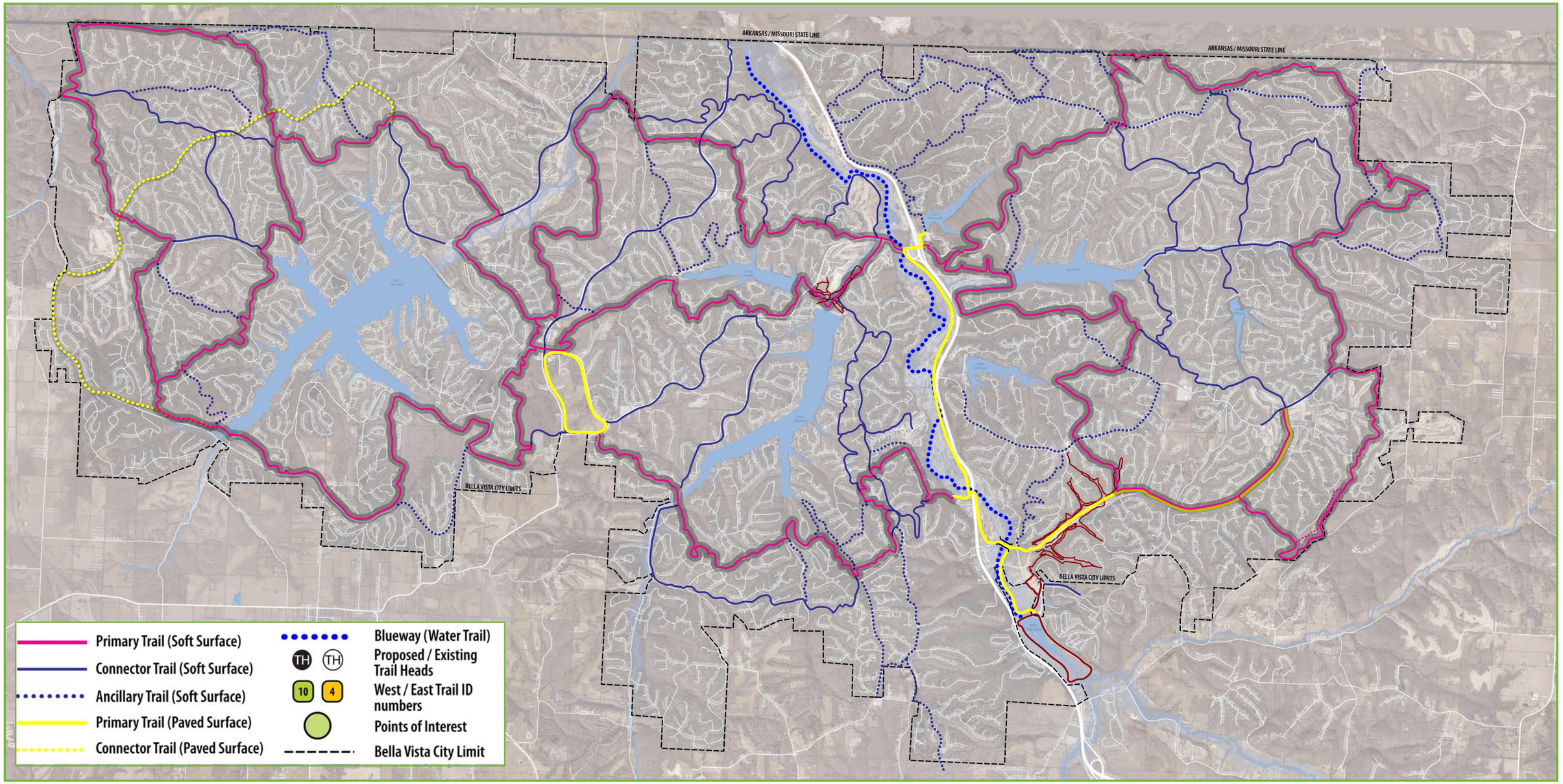
An existing narrow path traverses the steep hillside down to Lake Norwood from a residential community that lies above.

Bella Vista Trail & Greenway Master Plan

The three categories of trails along with a designated blueway trail along Sugar Creek, are the main components of the Bella Vista Trail and Greenway Master Plan. This trail network plans for the incorporation of new recreational facilities and future points of interest, and identifies potential trailhead locations for trail accessibility. The following maps highlight the various trail categories, connections to existing and future points of interest, and identify optimal trailhead locations. For legibility purposes and since US 71 divides Bella Vista nearly in half, the master plan is partitioned into two sections: Bella Vista East and Bella Vista West.

Note: The proposed trail alignments depicted in the master plan are for general planning purposes only and are subject to change during actual design phases for specific trails. Exact trail alignment, feasiblity, and typology are to be further evaluated in the design process for each trail.

Bella Vista Trail & Greenway Master Plan Network



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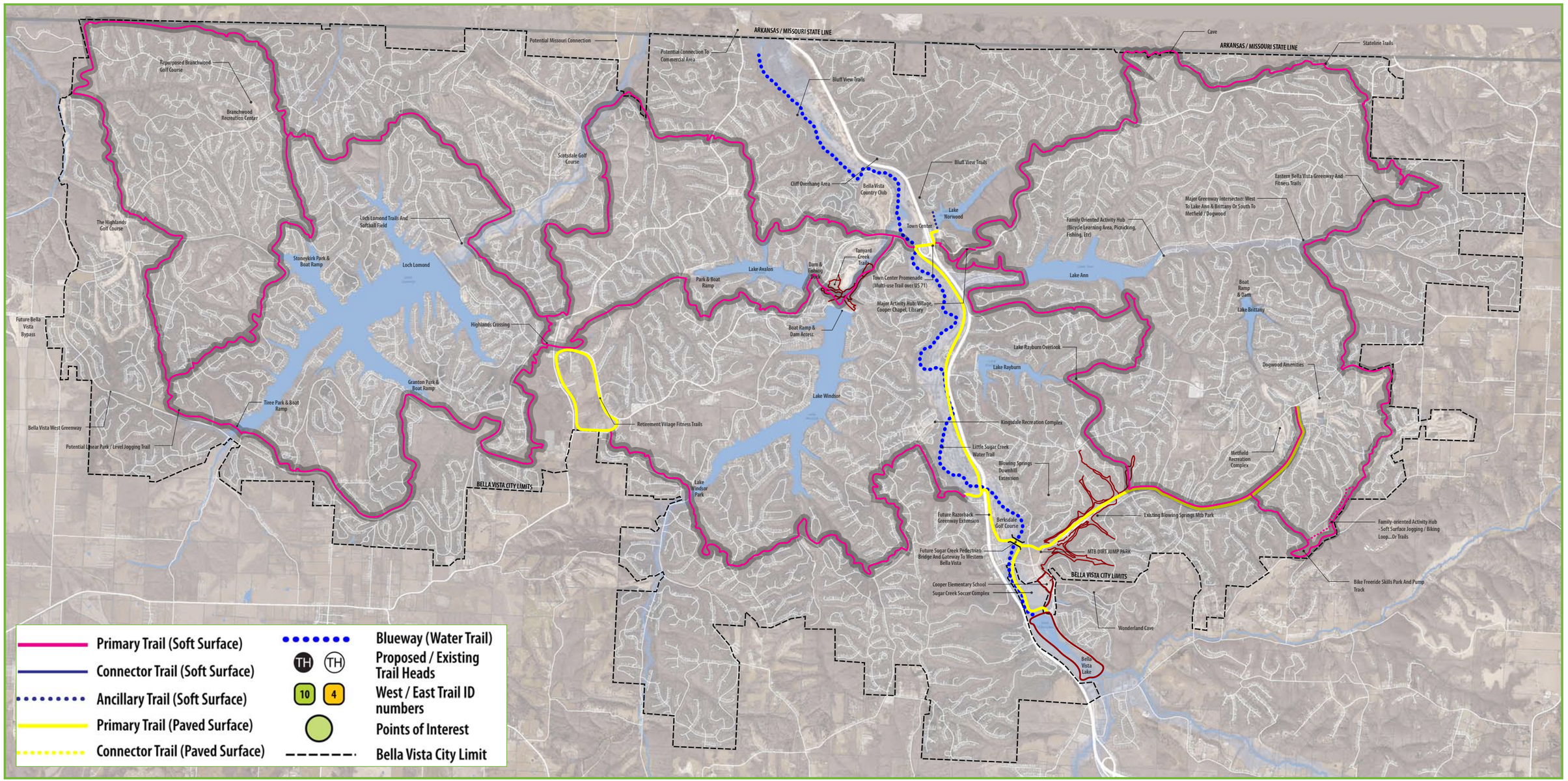

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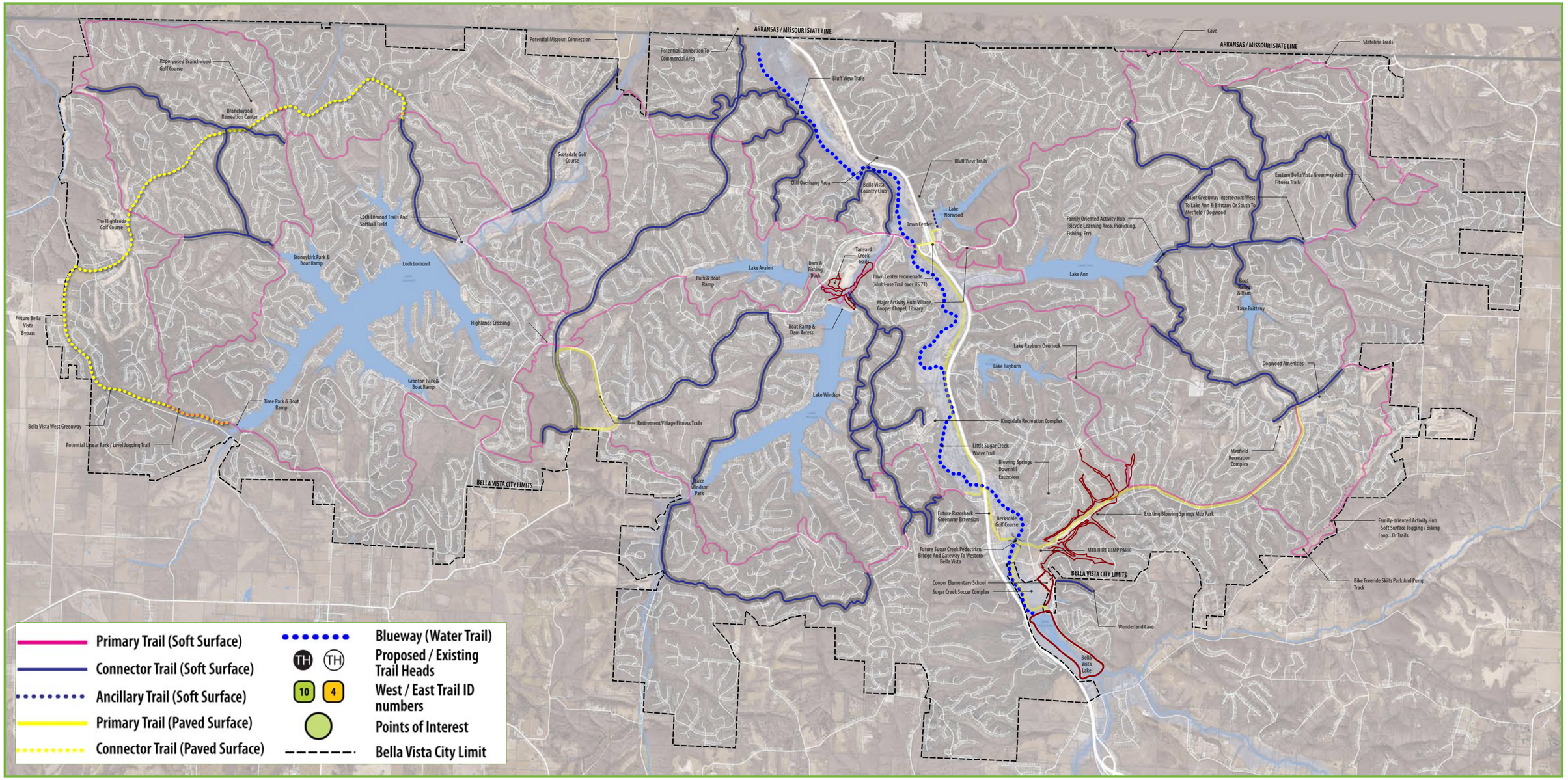
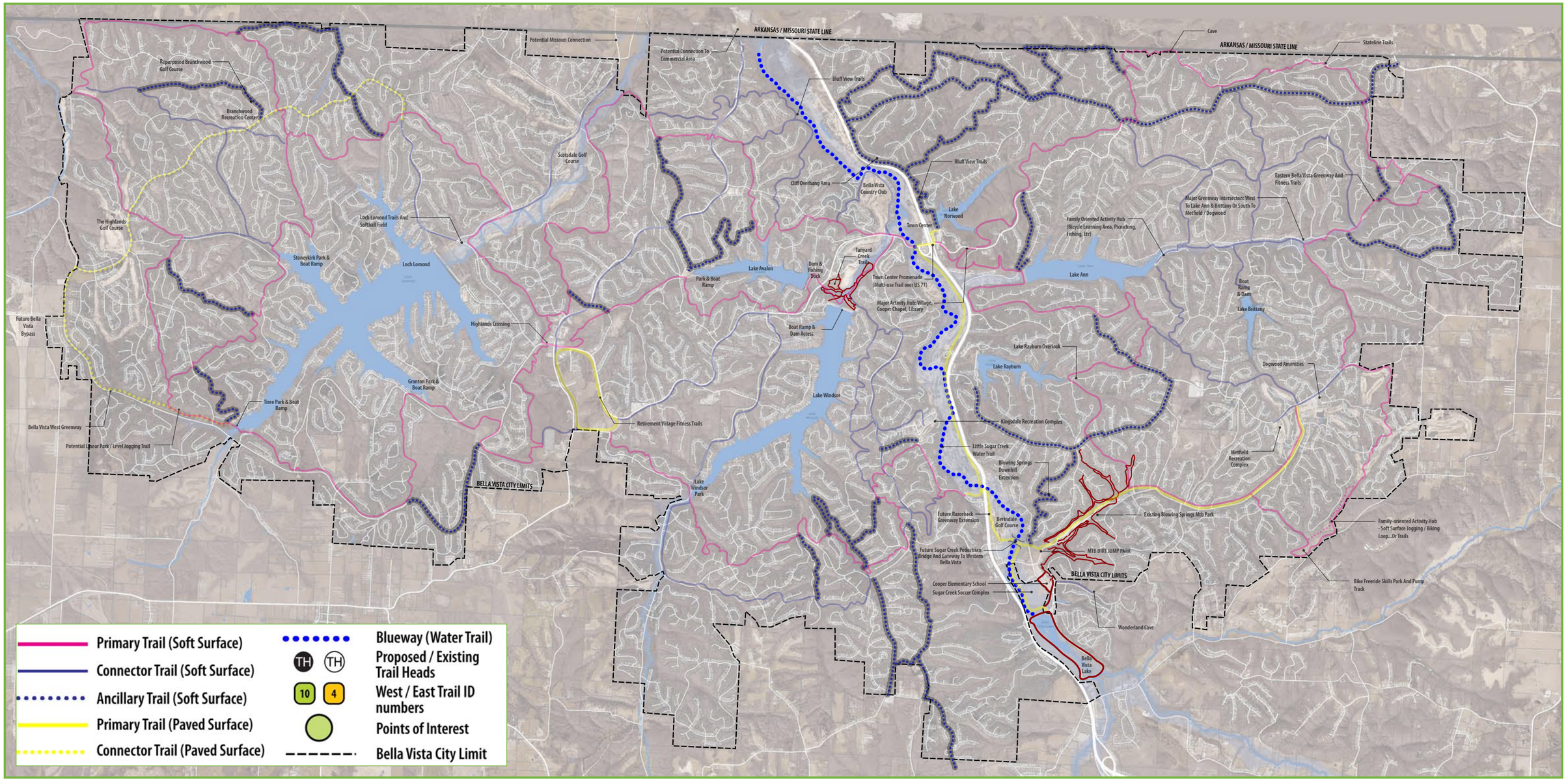
Primary Trail Network



Connector Trail Network

Note: The proposed trail alignments depicted in the master plan are for general planning purposes only and are subject to change during actual design phases for specific trails. Exact trail alignment, feasiblity, and typology are to be further evaluated in the design process for each trail.



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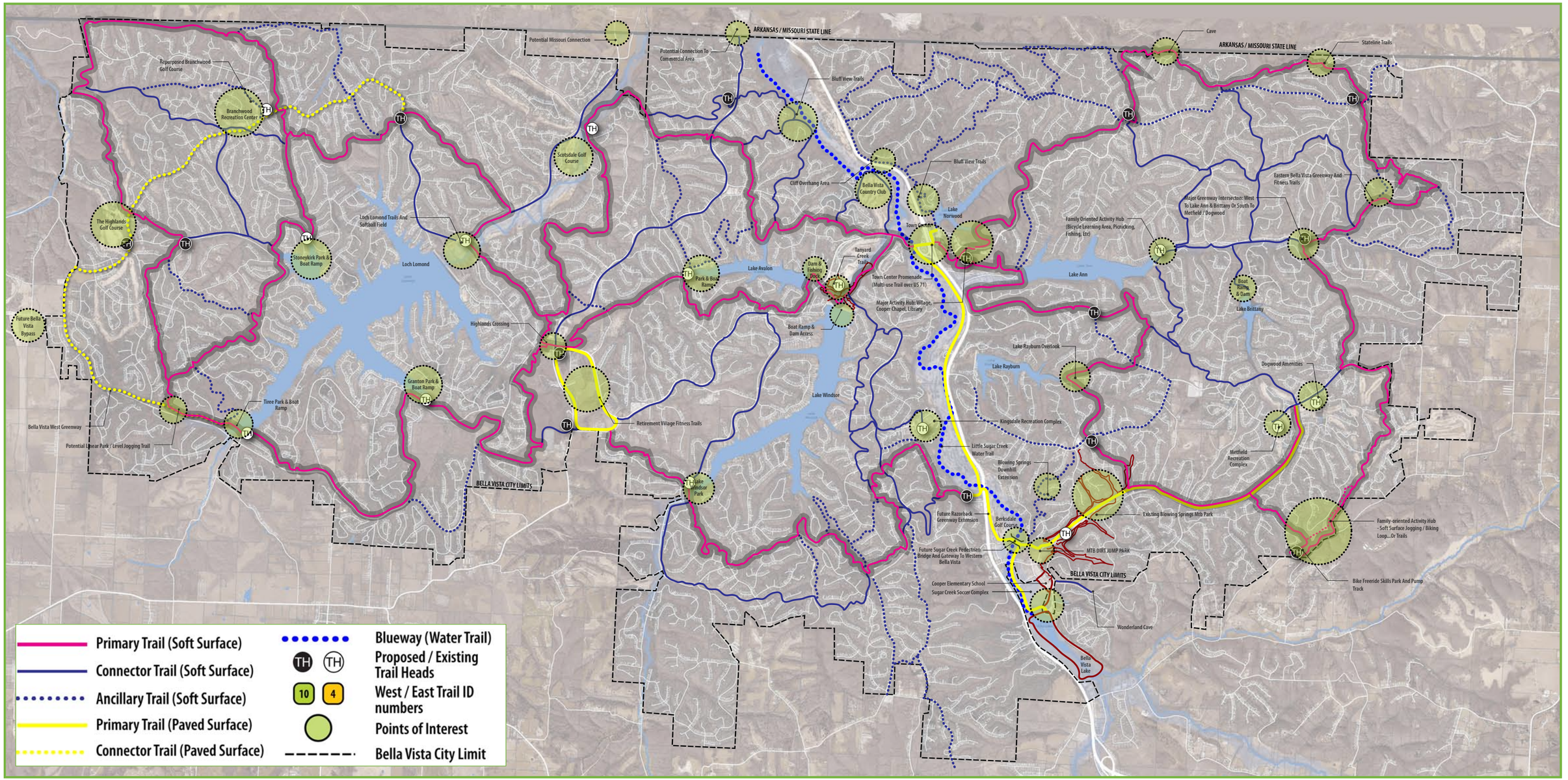
Ancillary Trail Network



Connecting Points of Interest

Note: The proposed trail alignments depicted in the master plan are for general planning purposes only and are subject to change during actual design phases for specific trails. Exact trail alignment, feasiblity, and typology are to be further evaluated in the design process for each trail.

Bella Vista East Trail Network

Total Length of All Trails= 57.5 miles

Total Length of all Primary Trails= 25.8 miles

Total Length of all Connector Trails= 12.2 miles

PRIMARY TRAILS
0 - 5 Year Horizon

Trail ID # & Priority	Trail Description	Trail Typology	Length in Miles	*Opinion of Probable Cost*
1	Lake Norwood Dam to Bethnal Rd.	Soft Surface	6.2	$441,000
2	Bethnal Rd. to McNelly	Soft Surface	7.0	*$538,200*
3	McNelly to Library	Soft Surface	8.2	*$546,000*
	Total Primary Soft Surface Trails		**21.4**	**$1,525,200**
4	BV Razorback Regional Greenway Extension (Lake Bella Vista to Riordan)	Paved Surface	1.3	*$2,639,400*
6	Euston Greenway	Paved Surface	3.0	*$4,350,000*
	Total Primary Paved Trails		**4.3**	**$6,989,400**
	Total all primary trails		**25.8**	**$8,514,600**

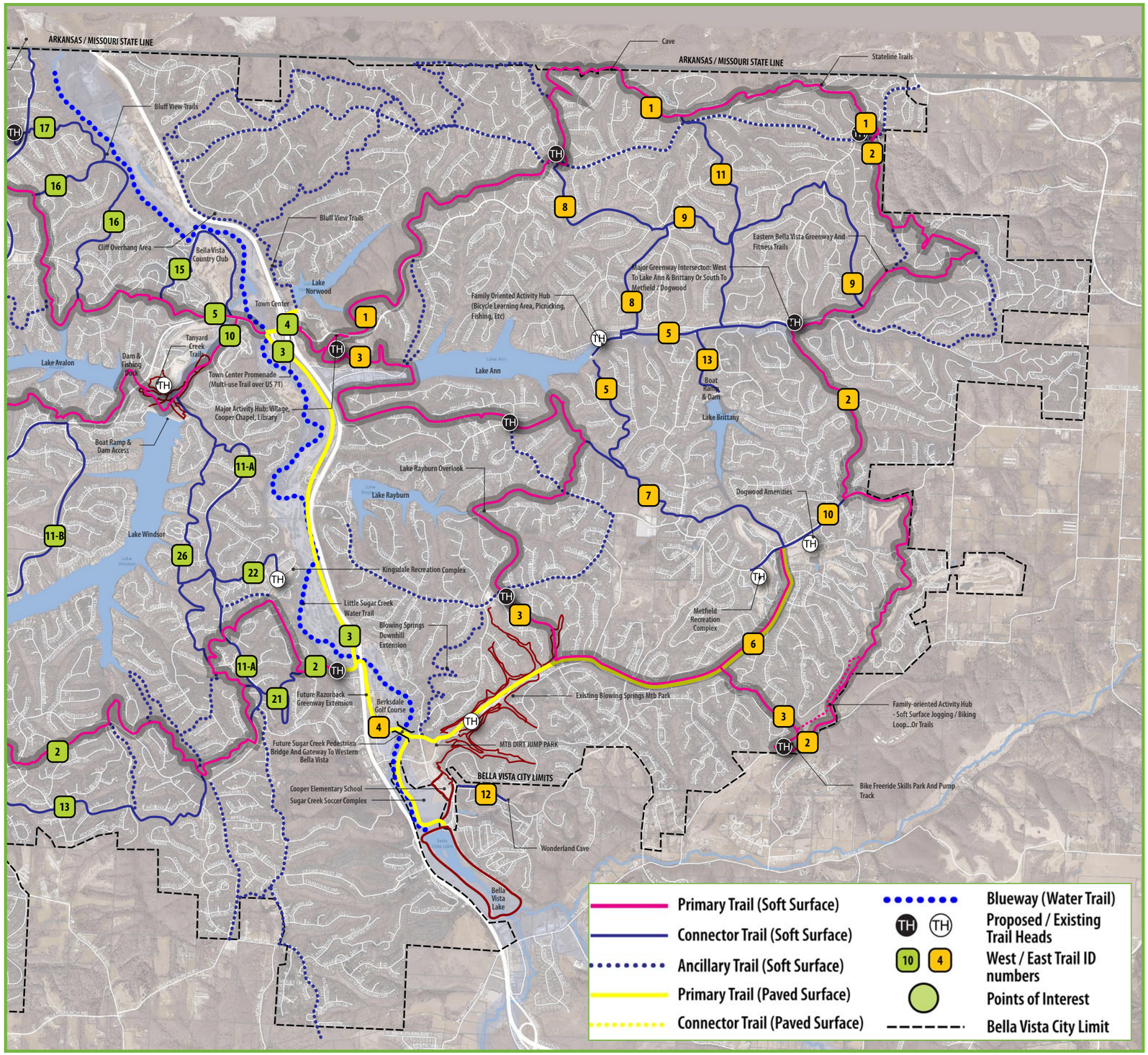
CONNECTOR TRAILS
5 - 10 Year Horizon

Trail ID # & Priority	Trail Description	Trail Typology	Length in Miles	*Opinion of Probable Cost*
5	Lake Ann Greenway	Soft Surface	2.7	$247,800
7	Commonwealth towards Lake Ann	Soft Surface	1.4	*$193,800*
8	340 to Lake Ann	Soft Surface	2.4	*$189,600*
9	Trafalgar to Aldershot	Soft Surface	2.3	*$160,800*
10	Metfield to Morganshire Dr.	Soft Surface	*0.8*	*$63,600*
11	340 to Lake Ann Greenway	Soft Surface	*1.8*	*$196,800*
12	Wonderland Cave Trail	Soft Surface	*0.3*	*$71,100*
13	Lake Brittany Spur	Soft Surface	*0.5*	*$139,200*
	Total all connector trails		**12.2**	**$1,262,700**

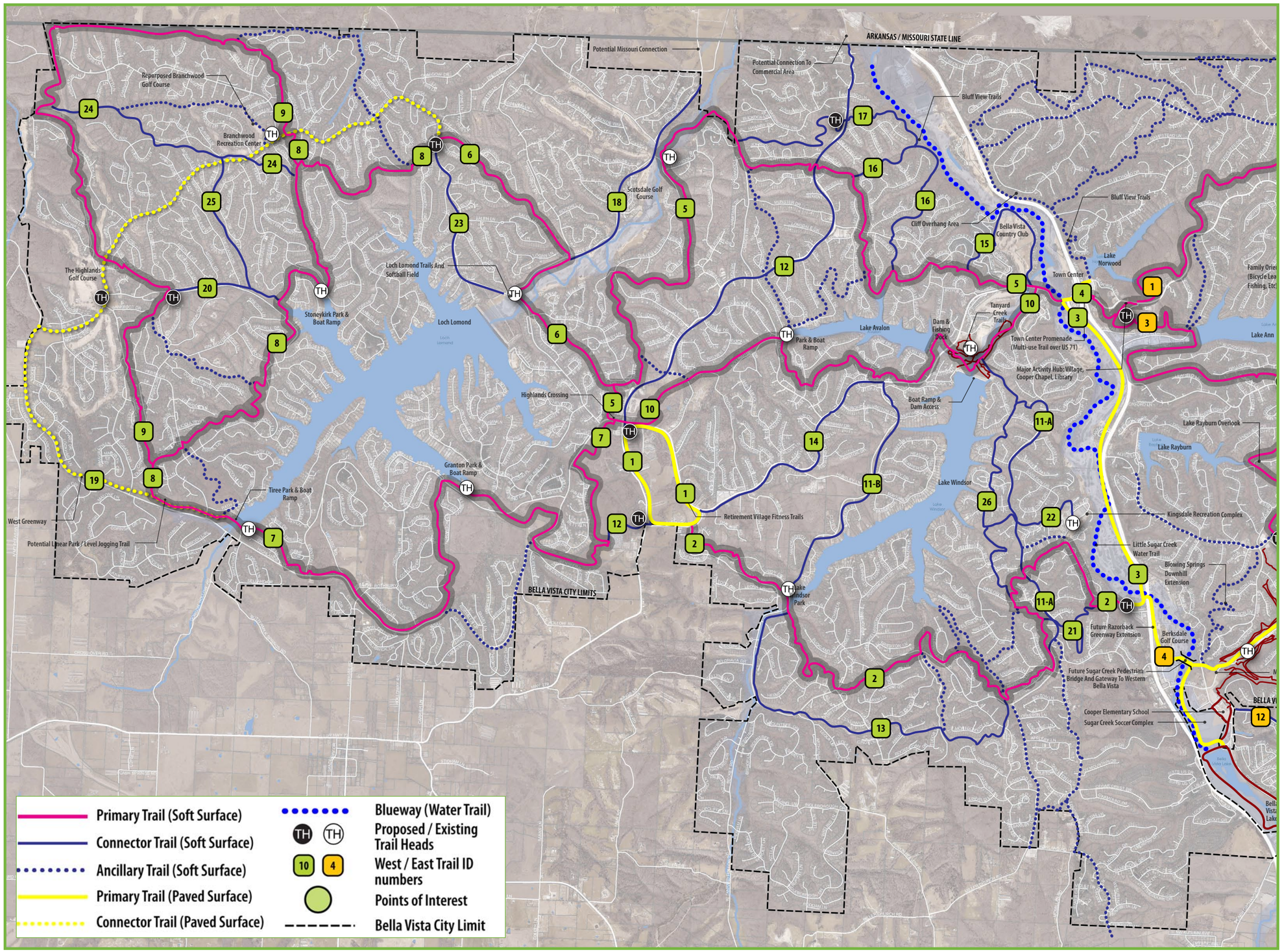
ANCILLARY TRAILS
10+ Year Horizon

Trail Description	Trail Typology	Length in Miles
US 71 to 94	Soft Surface	5.1
Lake Norwood to Bishampton	Soft Surface	5.5
71/Wellington to Winters Dr.	Soft Surface	1.0
Cross path along Primary Path-340 to McNelly	Soft Surface	0.4
Extension off Primary Path-340 to McNelly	Soft Surface	*1.5*
Bluff View Trail	Soft Surface	*1.2*
Lancashire to Primary Path-Library to McNelly	Soft Surface	*0.7*
Kingsland Dr. to Trafalgar Rd.	Soft Surface	*3.0*
Lambeth to Blowing Springs	Soft Surface	*1.3*
Total all ancillary trails		**19.6**

Bella Vista East Trail Network



BELLA VISTA WEST TRAIL NETWORK



Bella Vista West Trail Network

Total Length of All Trails= 95.6 miles

Total Length of all Primary Trails= 37.1 miles

Total Length of all Connector Trails= 39.3 miles

PRIMARY TRAILS
0 - 5 Year Horizon

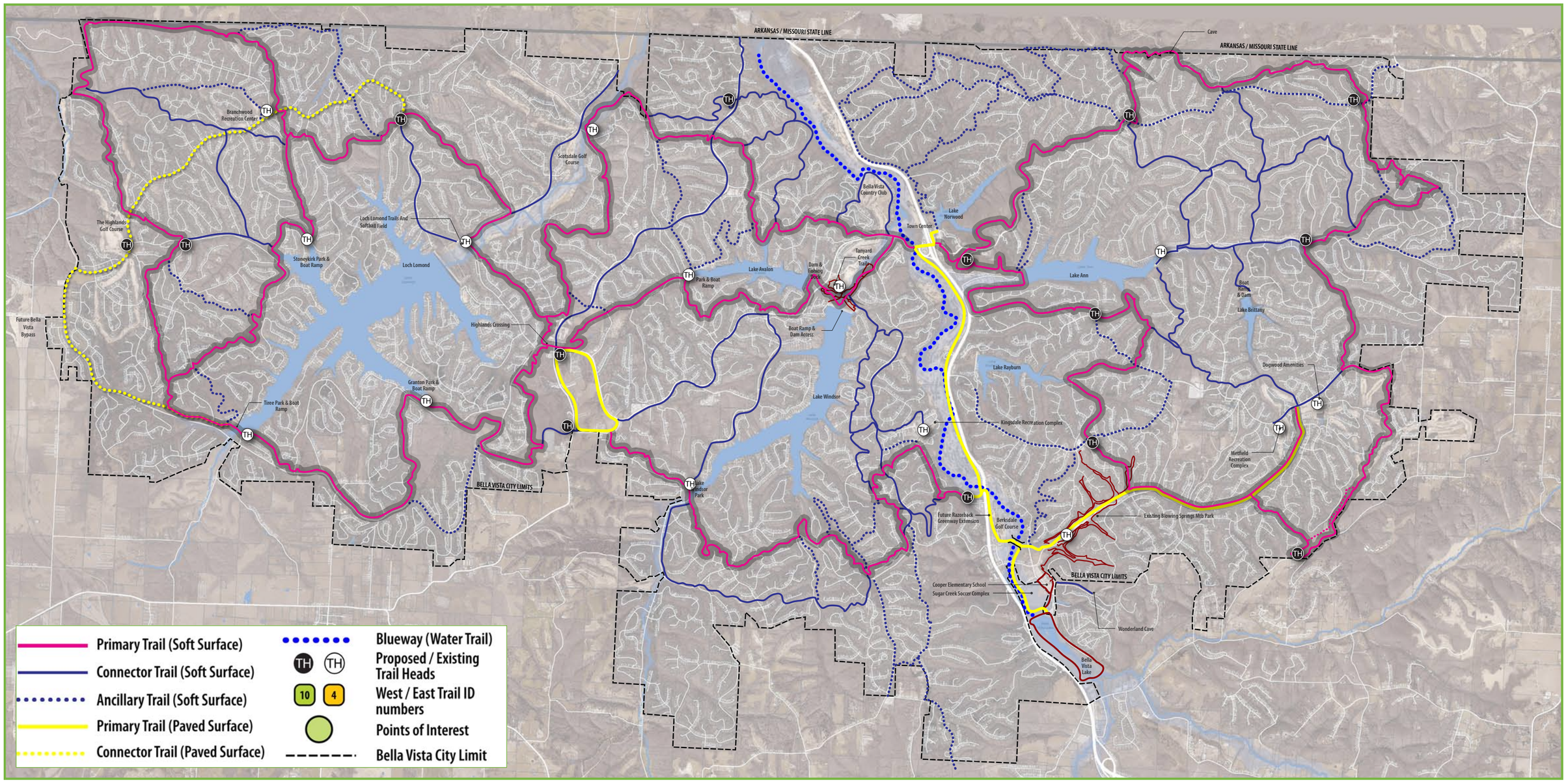
Trail ID # & Priority	Trail Description	Trail Typology	Length in Miles	*Opinion of Probable Cost*
2	Riordan to Highlands Loop	Soft Surface	6.5	$441,000
5	Highlands Crossing to Town Center Promenade	Soft Surface	7.1	$526,292
6	Highlands Crossing to Bonnyrigg Dr.	Soft Surface	2.7	$276,946
7	Loch Lomond Trailhead to Highlands Crossing	Soft Surface	5.9	$439,756
8	Bonnyrigg Dr. to Southwest Loch Lomond Trailhead	Soft Surface	5.2	$325,358
9	Southwest Loch Lomond to Branchwood	Soft Surface	6.0	$461,099
10	Highlands Crossing to Tanyard Creek	Soft Surface	4.4	$403,535
	Total Primary Soft Surface Trails		**37.7**	**$2,873,984**
1	Highlands Paved Loop	Paved Surface	2.3	$2,904,000
3	Bella Vista Razorback Regional Greenway Extension (Riordan - Town Center)	Paved Surface	2.2	$3,906,000
4	Town Center Promenade	Paved Surface	0.4	$498,000
	Total Primary Paved Trails		**4.9**	**$7,308,000**
	Total all primary trails		**42.6**	**$10,181,984**

CONNECTOR TRAILS
5 - 10 Year Horizon

Trail ID # & Priority	Trail Description	Trail Typology	Length in Miles	*Opinion of Probable Cost*
11-A	East Chelsea Greenway	Soft Surface	2.7	$372,018
11-B	West Chelsea Greenway	Soft Surface	1.9	$113,101
12	Forest Hills Greenway	Soft Surface	4.7	$211,260
13	Chelsea to Lake Windsor Spur	Soft Surface	3.0	$287,629
14	Lancashire Greenway	Soft Surface	1.8	$473,003
15	Dogwood Spur	Soft Surface	1.2	$206,681
16	Stringer to Gore	Soft Surface	1.8	$172,091
17	Cambria to Camden	Soft Surface	1.9	$335,231
18	Scotsdale Greenway	Soft Surface	1.6	$435,245
20	Kinross Greenway	Soft Surface	0.8	$65,700
21	Chelsea to Main Trail-Riordan	Soft Surface	0.8	$103,966
22	Country Club Trail	Soft Surface	0.8	$102,756
23	Loch Lomond Trailhead to Glasgow	Soft Surface	4.0	$89,405
24	Lockerbie to West Bella Vista	Soft Surface	1.9	$162,275
25	Kinross to 472/Glasgow Rd.	Soft Surface	1.0	$117,551
26	Harlow to Churchill	Soft Surface	1.7	$141,600
	Total Connector Soft Surface Trails		**31.3**	**$3,389,512**
19	Bella Vista West Greenway	Paved Surface	5.8	*$3,906,000*
	Total Connector Paved Trails		**5.8**	**$3,906,000**
	Total all connector trails		**37.1**	**$7,295,512**

ANCILLARY TRAILS
10+ Year Horizon

Trail Description	Trail Typology	Length in Miles
Main Trail-Glasgow to Selkirk	Soft Surface	2.1
472 to Davington	Soft Surface	1.2
Kinross to Dirleton	Soft Surface	1.0
Buckstone to Main Trail - Lanchashire	Soft Surface	0.4
Lake Avalon to Camden	Soft Surface	*1.4*
Lake Avalon to Eaton	Soft Surface	*1.3*
Tudor Greenway	Soft Surface	*0.6*
Main Trail - Riordan Spur	Soft Surface	*1.1*
London Connector	Soft Surface	*0.5*
Prescott Greenway	Soft Surface	*1.0*
Prescott to Longridge	Soft Surface	*0.3*
Cunningham Greenway	Soft Surface	*2.2*
Riordan Greenway	Soft Surface	*0.3*
472 to Kinross Connector	Soft Surface	*1.0*
Highlands Greenway	Soft Surface	*1.6*
Total all ancillary trails		**15.9**



Potential Trailheads

Trail Access (Trailheads)

Trailheads function as entry points to the trail and greenway network. While the physical elements of a trailhead are largely dependent on the number of anticipated users, the type of trail, and the surrounding land use context, there are a number of elements common to most trailheads, including motor vehicle parking, wayfinding guidance or maps, and trail usage regulations and etiquette.

Major trailheads function best when established near commercial developments and transportation nodes, making them highly accessible to the surrounding communities. Minor trailheads should be simple pedestrian and bicycle entrances at local known spots, such as parks and residential developments.

A minor trailhead could include facilities such as parking, drinking fountains, benches, a bicycle rack, trash receptacles, and an information kiosk and/or signage. Major trailheads could include all of the above plus additional facilities, such as rest rooms, shelters, picnic areas, a fitness course, bike repair stations, and a larger parking area.

Right: Shown is a local example of a trailhead. This particular example is taken from the Blowing Springs parking lot.

Right: Providing space and amenities at trailheads invites trail users to congregate and prepare for their trail experience.

Right: Trailheads can be seperated by a natural or man-made amenity. Providing access to the trail network is essential .

Key Features and Potential Amenities of the Trail Network

While trails and greenways are important, attractive destinations for many residents in Bella Vista and neighboring communities, coupling trails with additional amenities can increase usage and create unique recreation opportunities that set Bella Vista apart as a premier biking, hiking, and recreation community in Northwest Arkansas. Amenities like bike skills parks, mountain bike parks, and historic buildings, bridges and sites can enhance the value of the trail and greenway system and draw additional users from both inside Bella Vista and out.

Little Sugar Creek Water Trail

The primary goal of the Little Sugar Creek Water Trail is to reach a consensus from community participants on a vision for establishing Little Sugar Creek as an Arkansas designated water trail. Inclusion to this blueway are water trail access, navigation, safety education, conservation education, boating techniques, seasonal boating and respecting private property information.

The National Park Service's Rivers, Trails, and Conservation Assistance (RTCA) program has helped a steering committee identify and convene key stakeholders and property owners in order to gather support for a water trail, to present information on the benefits of water trail amenities, and facilitate public meetings for proposed project input. A working group must be established to develop cooperation with land owners, Arkansas Game and Fish, and other partners.

Town Center Promenade

Utilizes the extensive width of Lancashire, the Sugar Creek bridge on the west side, and the US 71 overpass. This promenade is extremely important as it would provide one of the few safe connections for bicycles and pedestrians to cross US 71 from the eastern or western portion of Bella Vista. It also provides the western residents of Bella Vista an option to walk or ride to Bella Vista Town Center, Lake Norwood, Cooper Memorial Chapel, and the Bella Vista Library.

Alternative Option:

A less expensive solution could be an on-street multi-use path that utilizes the existing pavement and would be separated by a painted buffer, flexible bollards, or even semi-permanent planters for a more attractive treatment. This would provide for a less protected bicycle / pedestrian and would not provide the user comfort level that the raised promenade would but it could still be a viable and satisfactory alternative.

Right: Little Sugar Creek meanders through the City of Bella Vista, flowing along the many golf courses and US Highway 71.

Below: This image dipicts the current conditions of the intersection found near the Bella Vista Towncenter at the US 71 exit ramp and W Lancashire Blvd.

Right: Making trail connections to Little Sugar Creek Blueway provides another natural point of interest to an already growing list.


BELLA VISTA WAY
71
LITTLE SUGAR CREEK
Green thermoplastic markings are used to warn vehicular traffic of potential conflict areas with pedestrians.
Trail transitions from raised multi-use path to soft surface trail.
340 LANCASHIRE BLVD.
340 LANCASHIRE BLVD.
340 LANCASHIRE BLVD.
BELLA VISTA WAY
71

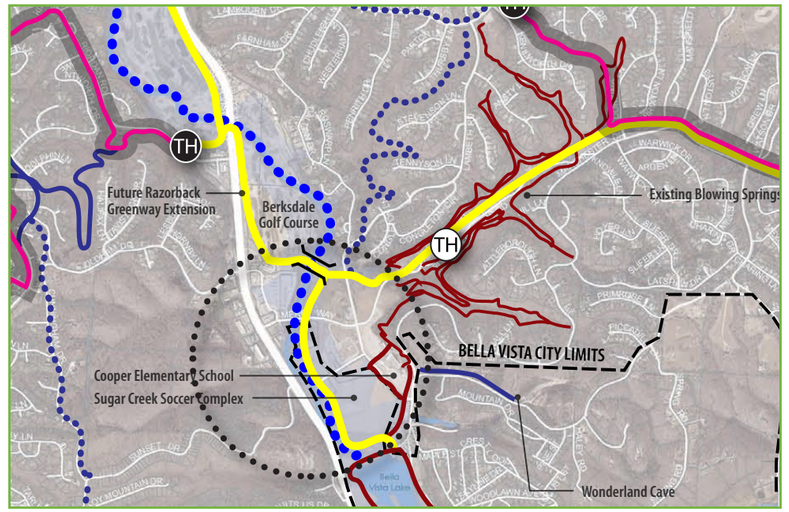

Green thermoplastic markings are used to warn vehicular traffic of potential conflict areas with pedestrians.
BELLA VISTA WAY
71
340 LANCHASHIRE BLVD.
340
10'
3'
11'
48'
10'
11'
3'
BELLA VISTA WAY
71

Left: An example of a one-way cycle track is shown. The proposed Towncenter Promenade could feature a striped buffer and bollards as one alternative.

Left: This is an example of a raised multi-use path that features a vegetation buffer. This accomodates both cyclists and pedestrians as there is just this two-way facility.

Sugar Creek Pedestrian Bridge

Although Little Sugar Creek varies in width throughout the study area, this area designated for a proposed pedestrian bridge is ideal due to the conditions surrounding the stream at this particular section. On both the east and west, the floodplain flattens out before transitioning into a steep grade making these flat shelves a viable option for bridge placement.



Below: Shown in the two images are the existing conditions of Little Sugar Creek.

Below: This image displays how the proposed pedestrian bridge could pass over Little Sugar Creek.

Lake Ann Active Recreation Park

This area is ideal for a family-oriented recreation area adjacent to Lake Ann. There are existing facilities there and paved parking. There is a large linear area adjacent to the lake that could be home to an Active Recreation Park.

Potential amenities could include:

Bicycle Learning Course and Skills Park

Fitness Stations

Lakeside walking trail

Restrooms

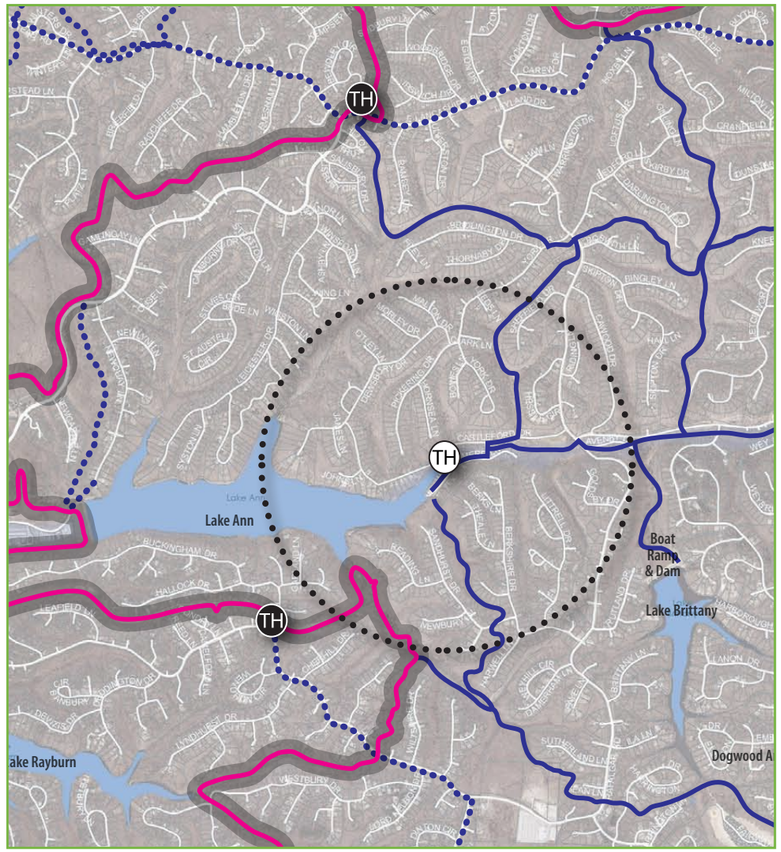
Childrens Exploration Play Area

Putting Green

Disc Golf Course

Beginner BMX Track

Trailhead improvements



McNelly Active Recreation Park

On the northern side of McNelly Road, a large flat, field-like POA property (identified by the red outline) is a prime location for a family-oriented recreation area and trailhead. Potential amenities could include:

Soft-surface Walking and Jogging Trail

Beginner Bicycle Skills Park

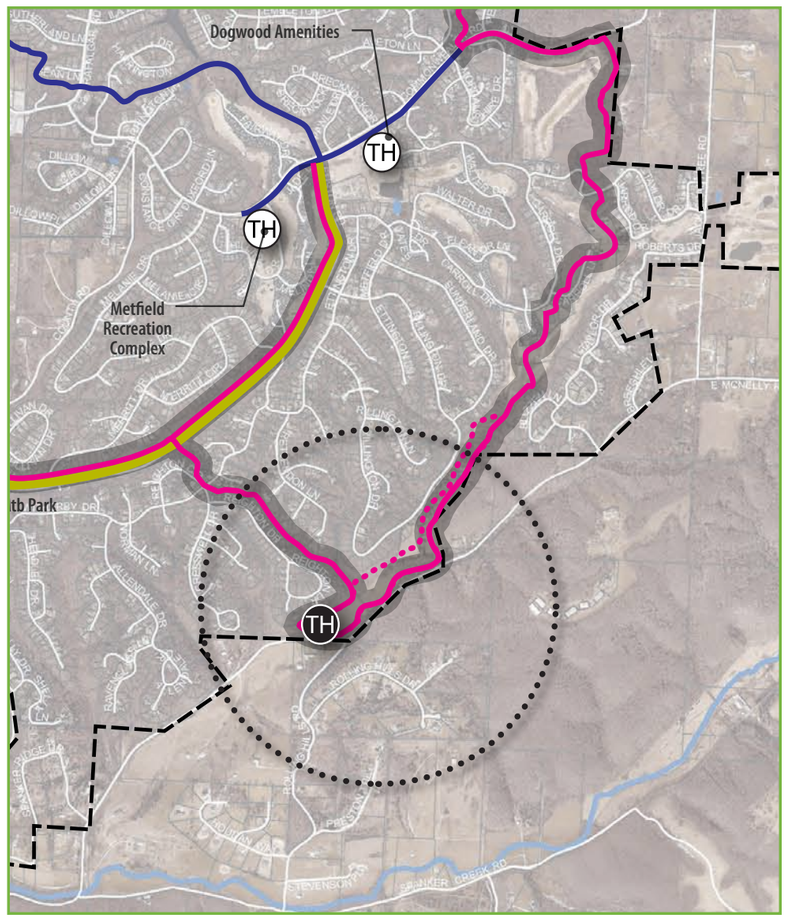
Childrens Exploration Play Area

Fitness Stations

Picnic Areas

Restrooms

Trailhead



Multi-use trail running through a natural area.

CHAPTER 4 IMPLEMENTATION

Chapter Contents:

Overview

This chapter defines the structure for managing the implementation of the Bella Vista trails and greenways program. Implementing the recommendations contained in this plan will require steadfast leadership and dedication to trail development on the part of the City of Bella Vista and the POA. Equally critical, and perhaps more challenging, will be meeting the need for a recurring source of revenue. State and local resources for trails and greenways have grown scarce and more competitive. Communities can better position themselves to compete for these and other funding sources by developing long-range plans like this, partnering with regional agencies and organizations, and utilizing local funding as leverage or match. Cooper Communities, Inc. will be a partner considering their significant property ownership of undeveloped land in the community.

In addition to investment in physical infrastructure, there are still important actions the community can take to increase trail usage and establish Bella Vista as the premier destination for trails and greenways in Northwestern Arkansas. Organizational and procedural steps, education and safety programs, outreach and marketing efforts, and strategic lower-cost trail projects can maintain momentum and support from the community while larger, more time-consuming trail and greenway projects are funded, designed and constructed.

Key Action Steps described in this implementation chapter fall into three categories: policies, programs, and infrastructure. More detailed action steps tied to each of these categories are found in the table at the end of this chapter along with the responsible agency and expected time frame for completion.

Policy Actions Steps

Several policy steps are critical to the successful implementation of the recommendations in this plan. These steps will solidify the plan recommendations and enable the right-of-way acquisition necessary to carry out those recommendations.

Adopt the Plan

Adoption of this plan by the City of Bella Vista and the Property Owners Association to legitimize the plan as an official policy document. The City Planning Commission and POA administration should review and recommend the plan to their governing body, respectfully, which in turn must consider and officially incorporate the recommended trails of this plan into their land-use plans. Adoption of this plan also establishes the design guidelines provided in Chapter 5 as the official trail standards for Bella Vista. This will ensure consistent trail design throughout Bella Vista.

Form Trail Advisory Commission

Leadership from individuals in Bella Vista during the adoption and implementation campaign is essential to move the trail and greenway system from concept to reality. These individuals, as representatives of key stakeholder agencies or groups, or as passionate, committed individuals, will help advocate for the plan and seek opportunities to develop synergies with other projects, individuals and organizations in order to maintain momentum and support for trails and greenways in Bella Vista.

This trail advisory commission should consist of City of Bella Vista staff, POA staff, and representatives of key community groups and other stakeholders including Cooper Communities, Inc. The role of the commission would be to:

- Champion the implementation of the Trails and Greenways Master Plan
- Serve as a conduit to the community, responding to community questions and concerns and promoting trails and greenways as a valuable community asset

Left: Plan adoption is critical to implementation success

Right: bicycle parking at trailheads and other destinations can help to encourage bicycle activity

- Facilitate cooperation among jurisdictions to support regional connections
- Define and recommend sources of funding
- Ensure uniform standards for trail and greenway facilities

Establish Trails Coordinator Position

While the implementation of this Plan will require coordinated participation and effort from a variety of agencies, organizations and individuals, a single person should serve as trails coordinator. This position, which should be assigned to an existing staff person at the POA or City with intimate knowledge of and involvement in previous trail development efforts, will serve as the point person for coordinating agencies and the community at large for all trail-related projects, programs and policies in Bella Vista.

Develop and Adopt Bicycle Parking Policy

The presence and availability of bicycle parking can be a significant determinant for individuals as they choose how to travel about their communities. Plentiful bicycle parking at important destinations throughout Bella Vista serve as a symbol to residents and visitors that the City actively encourages people to travel by bicycle. Bicycle parking should be incorporated into the city code to ensure that future development incorporates adequate parking facilities for bicycles.

Program Action Steps

The program action steps and recommendations included in this section of the Plan are essential to building necessary community support for trails and greenways, fostering a community culture that values walking, hiking and bicycling for transportation and recreation, and establishing Bella Vista's reputation as a regional destination for hiking, biking, and outdoor recreation.

Develop and Execute a Strategic Marketing Program

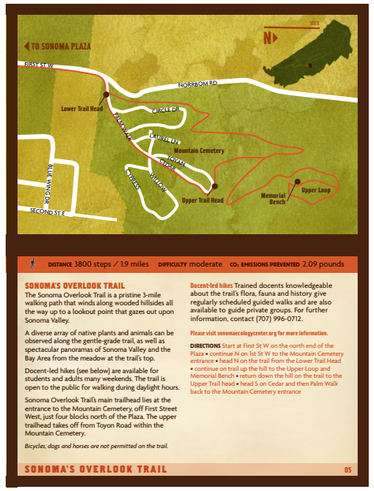
The growth of Bella Vista's trail network over time will allow Bella Vista to position itself as a regional destination for hiking, bicycling, mountain biking, and trail-related activities. In order to capitalize on this significant community asset, Bella Vista should develop a comprehensive marketing program to draw both local residents and visitors from across and beyond the region to use trails and greenways. The creation of promotional materials like online and print trail maps and informational brochures about Bella Vista's trail network and supporting amenities and attractions can attract new trail users and encourage participation in trail and greenway recreation.

Create and Carry Out a Comprehensive Education Program

Promoting the safe and responsible use of Bella Vista's growing trail and greenway system will require a concerted effort on behalf of the community partners. Educational content like trail etiquette, rules and responsibilities, and personal safety precautions can be incorporated into community trail maps and provided at trailheads, community recreation centers, City Hall, schools, and other popular destinations throughout Bella Vista.

Hosting bicycle skills, safety, and maintenance classes for youth, adults and even families can provide a positive environment to teach bicycling basics to area residents. These educational lessons can also be incorporated into group rides, providing a fun environment for learning. Similar classes can also be incorporated into elementary and middle school curricula, ensuring that Bella Vista youth have the skills to utilize the trails and greenways in the community.

Right: volunteers work to clear an overgrown trail



Left: Sonoma Valley, CA promotes recreational tourism with its hike and bike guide

Host Frequent Biking, Walking and Hiking Events

From weekly walking groups to large-scale events like 5K/10K trail runs and mountain bike races, organized walking, hiking, and biking events can draw residents and visitors onto the trail system and highlight Bella Vista's trails as a valuable community amenity. While some of these activities can be incorporated into the POA's recreational offerings, others will require additional support and coordination with relevant community stakeholders and groups to develop and host larger events.

Trail Stewardship Program

The growing Bella Vista trail network is an amenity provided by the POA and the City for the enjoyment of residents and visitors. While maintenance responsibilities typically fall to these agencies, trail users can play an active role in preserving these trails for others. A Trail Stewardship program should be created in order to increase community ownership of the trail system and encourage residents to actively participate in the maintenance and preservation of these trails.

Trail Enforcement

In order to ensure that the trails remain safe and welcoming amenities for all members of the community, the Bella Vista Police Department should maintain an active presence on the trail system in order to reduce user conflicts and collisions and foster an environment of personal responsibility and courtesy towards other trail users.

Infrastructure Action Steps

In addition to the policy and program action steps already described, agencies should move forward on infrastructure development by proceeding with the design and construction of priority projects. They should also work to identify funding for longer-term, higher-cost projects.

Complete Priority Trail Projects

By moving forward quickly on priority trail projects, the City, the POA and its implementation partners will demonstrate their commitment to carrying out this plan and will better sustain the momentum generated during the public outreach stages of the planning process. These priority trail projects are discussed in greater detail in Chapter 3.

Left: typical trail development process

Right: work crews use light-impact equipment to avoid damage to the environment

Design, Construct and Maintain Trails

The design, construction and maintenance of trails follows a linear pattern from conception to realization. The diagram to the left provides an overview of the typical steps of the trail development process. For this plan, many trail segments may not require design or construction documents. It will be essential for POA and City staff with the help from the recommended Trails Advisory Commission to verify the intended uses of a particular segment and to design and construct with those uses in mind. Intended uses of a trail will dictate the ideal trail surface and will have a direct bearing on the construction and maintenance costs. This Plan designates a trail type for each recommended trail segment and provides design guidance that can help to determine the applicability and necessity of design and construction documents.

Preliminary design plans should be reviewed by multiple stakeholders, including emergency service personnel, so they can offer suggestions and have their voices heard from the very beginning. There is sometimes a disconnect between the designer and operating staff. Designs that are pleasing to the eye are not always conducive to good and inexpensive maintenance. Therefore, it is imperative that cost savings should be a part of any design, with a thorough review of the plans while they are still in a preliminary stage.

Security starts in the design phase as well. There is much that can be done in designing a trail system that greatly reduces the risk of crime. Local police departments should be consulted early on in order to seek their advice and to alert them that the trail will be built and that they need to plan for it as well. Security tips and procedures can be conveyed on bulletin boards, on brochures, and in informal gatherings led by park staff along the trail.

Annual operations and maintenance costs vary, depending upon the facility to be maintained, level of use, location, and standard of maintenance. Operations and maintenance budgets should take into account routine and remedial maintenance over the life cycle of the improvements and on-going administrative costs for the operations and maintenance program.

Administrative Structure

Multiple agencies and organizations will be responsible for the implementation of this Plan. The following are suggested roles for the core stakeholders and potential partners involved in implementation. Actual roles will likely vary depending on how this Plan is implemented over time, as well as the continued level of interest and involvement by specific stakeholders.

Bella Vista Village Property Owners Association

The Bella Vista Village Property Owners Association will play a very active role in the implementation process. Because most of the recommended trails and greenways will utilize POA property, the association will have an important role in trail development and subsequent maintenance, ensuring the trails remain fully functional and safe for the variety of designated users. In addition, the association provides recreational programming to POA members and the Bella Vista community at large. The programmatic offerings should be expanded to utilize the expanding trail and greenway network through organized hiking, biking, and walking events, bicycle skills classes for youth and adults, and other activities and events to encourage participation in trail-related recreation.

City of Bella Vista

The City of Bella Vista will be responsible for the development and maintenance of recommended trails within public rights-of-way and other city-owned property. The City will also provide police, fire, and emergency response for trail users, supporting a safe user experience.

Non-Profits

Non-profit organizations can serve a variety of purposes to build support for and increase usage of trails and greenways in Bella Vista. Specific tasks undertaken by non-profits should include:

- Raise interest and awareness in trails
- Advocate, promote, encourage development of greenways
- Host, sponsor, or co-sponsor events and activities that utilize and highlight Bella Vista

Left: Ribbon cuttings and grand openings help publicize new trails

Right: organized rides like the Bentonville's Slaughter Pen Jam draw large crowds to the area

Trails

- Educate citizens as to benefits of greenways
- Assist the City and POA in raising money for implementation
- Help to organize volunteers to assist with implementation, maintenance and management

Bella Vista Foundation

The mission of the Bella Vista Foundation is to provide support, financial and otherwise, to enhance the community through quality amenities, facilities, recreation activities, community events, and programs. By providing financial support for this Plan, the foundation has expressed its commitment to trails and greenways as a vital amenity to the quality of life in Bella Vista. Continued support from the foundation will be essential to realizing a fully connected trail and greenway system in the community.

Bentonville/Bella Vista Trailblazers Association

Formed in 1996 by community leaders dedicated to connecting and enhancing these two communities through recreational trails, the Bentonville/Bella Vista Trailblazers Association will play an active role in supporting Bella Vista throughout the implementation process. The association is responsible for the development of numerous trails in the area, including the Blowing Springs Trails in Bella Vista. Their continued support will be indispensable as both a trail builder and as a community-based organization promoting the economic, social, and recreational benefits of trails and greenways.

Northwest Arkansas Council

The Northwest Arkansas Council works to promote the region as a great place to live, work and play. One of their initiatives is the NWA Trails website, an online tool to draw residents, tourists, and other visitors to the area's growing trail system. Whether it's road bicycling, mountain bicycling, running, walking, hiking, or other outdoor activities, NWA Trails provides valuable resources and information to help inform trail users. Their initiatives to promote area trails can provide an outlet for Bella Vista to publicize their growing trail network and bring people into the community.

Funding Sources

Funding for trail and greenway projects often comes from a variety of sources, including matching grants, sales tax or other taxes, bond measures, or public/private partnerships. This section of the Plan identifies federal, state, and non-profit foundation sources of funding for planning, design, implementation and maintenance of trails and greenways in Arkansas. The descriptions are intended to provide an overview of available options and do not represent a comprehensive list. It should be noted that information provided below reflects the funding available at the time of writing. The funding amounts, fund cycles, and even the programs themselves are susceptible to change without notice. In addition, not all funding sources apply to all trail typologies and recommended projects. For example, some funding sources are applicable only for trail projects that provide a transportation component/benefit and comply with ADA/PROWAG standards for accessibility.

Federal Funding Sources

Federal transportation funding is typically directed through state agencies to local governments either in the form of grants or direct appropriations, independent from state budgets. Federal funding typically requires a local match of 20 percent, although there are sometimes exceptions, such as the 2009 American Recovery and Reinvestment Act stimulus funds, which did not require a match.

The Arkansas Highway and Transportation Department (AHTD) and metropolitan planning organizations (MPOs), including the Northwest Arkansas Regional Planning Commission (NWARPC), administer most federal monies. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system. Most, but not all, of these programs are oriented toward transportation versus recreation.

The following is a list of Federal funding sources that could be used to support construction of many pedestrian and bicycle improvements. Most of these are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. However, it should be noted that, in addition to stand alone projects, the Federal Highway Administration (FHWA) encourages the construction of pedestrian and bicycle facilities as an incidental element of larger ongoing projects, consistent with its 2010 policy statement on bicycle and pedestrian accommodation. Examples include providing paved shoulders on new and reconstructed roads, or building sidewalks, on-street bikeways, trails and marked crosswalks as part of new highways.

Federal Aid Highway Program

The largest source of federal funding for bicycle and pedestrian projects is the United States Department of Transportation's (US DOT) Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141. The Act replaces the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012.

MAP-21 authorizes funding for federal surface transportation programs including highways and transit until September 2014. There are a number of programs identified within MAP-21 that are applicable to bicycle and pedestrian projects. These programs are discussed below. More information: http://www.fhwa.dot.gov/map21/summaryinfo.cfm

Transportation Alternatives¬ (TAP)

Transportation Alternatives (TAP) is a new funding source under MAP-21 that consolidates three former SAFETEA-LU programs: Transportation Enhancements (TE), Safe Routes to School (SRTS), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and streetscape projects including sidewalks, bikeways, multi-use paths, school safety, and rail-trails. TAP funds may also be used for selected education and encouragement programming such as Safe Routes to School.

Transportation Alternatives as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and pedestrian infrastructure including "on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990." Infrastructure projects and systems that provide "Safe Routes for Non-Drivers" is a new eligible activity. For the complete list of eligible activities, visit: http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

Unless the Governor of a given state chooses to opt out of Recreational Trails Program funds, $85 million in dedicated funds for recreational trails continues to be provided nationally as a subset of TAP. Governor Mike Bebee chose to opt in, which means that Arkansas receives $1,493,969 in RTP funds per year through FY2014.

The types of projects that are eligible for TAP funding include:

Recreational Trails. TAP funds may be used to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.

Recreational Trails Program funds may be used for:

- Maintenance and restoration of existing trails
- Purchase and lease of trail construction and maintenance equipment
- Construction of new trails, including unpaved trails
- Acquisition or easements of property for trails
- State administrative costs related to this program (limited to seven percent of a State's funds)
- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds)

Safe Routes to School. Safe Routes to School activities are eligible for the Transportation Alternatives Program. Both infrastructure and non-infrastructure projects are eligible, and the program elements described in SAFETEA-LU are still in effect. The purpose of the Safe Routes to Schools eligibility is to promote safe, healthy alternatives to riding the bus or being driven

to school. All projects must be within two miles of primary or middle schools (K-8). Eligible projects may include:

- Engineering improvements. These physical improvements are designed to reduce potential bicycle and pedestrian conflicts with motor vehicles. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, and secure bicycle parking facilities.
- Education and Encouragement Efforts. These programs are designed to teach children safe bicycling and walking skills while educating them about the health benefits and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based field trips; interactive bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, walking school buses).
- Enforcement Efforts. These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program, enforcement equipment, photo enforcement, and pedestrian targeted enforcement operations.
- Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways.

Average annual funds available through TAP over the life of MAP-21 equal $814 million nationally, which is based on a two percent set-aside of total MAP-21 authorizations. Projected apportionments for Arkansas total $10,984,845 for FY 2014. However, because MAP-21 allows state DOTs to transfer up to fifty percent of a given highway program's funds to other highway programs, the final amount of TAP funding available in Arkansas may be more or less than the projected apportionments developed by FHWA.As of June 2014, AHTD does not plan to shift TAP funding to other highway programs, nor does it plan to supplement TAP with monies from other highway funding programs.

Surface Transportation Program (STP)
The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. Bicycle and pedestrian improvements are eligible, including on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded bicycle and pedestrian facilities may be located on local and collector roads that are not part of the Federal-aid Highway System. Fifty percent of each state's STP funds are sub-allocated geographically by population; the remaining fifty percent may be spent in any area of the state.

Highway Safety Improvement Program (HSIP)
MAP-21 doubled the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides $2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 requires each state to formulate a state safety plan, produced in consultation with non-motorized transportation representatives, in order to receive HSIP funds. Eligible projects will be evaluated on anticipated cost-effectiveness of reducing serious injuries and fatalities.

MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural roads set-aside unless safety statistics demonstrate that fatalities are increasing on these roads. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for non-motorized users in school zones are eligible for these funds. AHTD estimates that it will receive an average of $3.5 million annually for this program through the lifetime of MAP-21.

New Freedom Initiative
MAP-21 continues a formula grant program that provides capital and operating costs to provide transportation services and facility improvements that exceed those required by the Americans with Disabilities Act. Examples of pedestrian/accessibility projects funded in other communities through the New Freedom Initiative include installing Accessible Pedestrian Signals (APS), enhancing transit stops to improve accessibility, and establishing a mobility coordinator position.

Community Development Block Grants
The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may use the funds for real property, public facility improvements, and planning. Pedestrian and Bicycle Master Plan projects that enhance accessibility are a good fit for this funding source. CDBG funds could also be used to write an ADA Transition Plan for the city or support design and construction of projects.

Community Transformation Grants
Community Transformation Grants administered through the Center for Disease Control support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure projects and programs that promote healthy lifestyles are a good fit for this program, particularly if the benefits of such improvements accrue to population groups experiencing the greatest burden of chronic disease.

Land and Water Conservation Fund
The Land and Water Conservation Fund (LWCF) provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. Funds can be used for right-of-way acquisition and construction. The program is administered by the Wisconsin Department of Natural Resources as a grant program. Any Pedestrian and Bicycle Master Plan projects located in future parks could benefit from planning and land acquisition funding through the LWCF. Trail corridor acquisition can be funded with LWCF grants as well.

Rivers, Trails, and Conservation Assistance Program
The Rivers, Trails, and Conservation Assistance Program (RTCA) is a National Parks Service (NPS) program providing technical assistance via direct NPS staff involvement to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance—there are no implementation monies available. Projects are prioritized for assistance based on criteria including conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation, and focusing on lasting accomplishments. This program may benefit trail development throughout the region indirectly through technical assistance, particularly for community organizations, but should not be considered a future capital funding source.

Additional Federal Funding
The landscape of federal funding opportunities for bicycle and pedestrian programs and projects is always changing. A number of Federal agencies, including the Bureau of Land Management, the Department of Health and Human Services, the Department of Energy, and the Environmental Protection Agency have offered grant programs amenable to bicycle and pedestrian planning and implementation, and may do so again in the future. For up-to-date information about grant programs through all federal agencies, see http://www.grants.gov/.

State Funding

There are a variety of state funding sources that can be used to fund active transportation projects. State gasoline taxes and Arkansas Natural and Cultural Resources Council Grant and Trust Funds have been used in the past. Advocacy for use of other state funds is encouraged.

Arkansas Natural and Cultural Resources Council Grant and Trust Funds
Arkansas Natural and Cultural Resources Council grant funds can be used to develop bicycle and pedestrian facilities for outdoor recreation purposes. These funds are available through a grant program administered by the Arkansas Department of Parks and Tourism. These funds must be matched at the rate of 50% state to 50% applicant.

Conservation Sales Tax
A conservation sales tax that went into effect July 1, 1997 designates 1/8th of 1 percent of the state's general sales tax for Arkansas Game and Fish Commission (45 percent), Arkansas State Parks (45 percent), Arkansas Heritage Commission (9 percent) and Keep Arkansas Beautiful Commission (1 percent). Revenue from this tax has been used to implement a wide range of projects, including nature centers, fisheries, purchase of land for public use, enforcement efforts, creation of habitat for threatened and endangered species, conservation education, as well as barrier-free and multi-use trails.

Local Funding

Many communities use locally generated funds to support active transportation. NWA communities should consider tapping into existing revenue streams and proposing new fees. For example, Fayetteville's Scull Creek Trail was partially funded through sales taxes.

Development Impact Fees
In 2003, the State of Arkansas adopted an Impact Fee Enabling Act (Arkansas Code, § 14-56-103). This law empowers municipalities to collect one-time fees from developers to help cover the cost of growth-related public infrastructure needs, including roads and sidewalks. Local governments in NWA that do not currently have a development impact fees in place to support active transportation should consider instituting such a fee or negotiating public improvements as part of the land development process.

Sales Taxes
Local sales tax increases to fund active transportation improvements have a history of success in NWA. In 2006, Fayetteville's residents approved a 1% sales tax increase that was used, in part, to construct the Scull Creek Trail. The ballot measure specifically related to trails (a sewer plant and roadway improvements were also parts of the proposed increase) passed by the widest margin, and provided $2.1 million in dedicated trail construction funding.

Property Taxes
Property taxes are one of the most common local sources of bicycle and pedestrian infrastructure since they are typically the largest source of local revenue.

Business Improvement District Funds
Business improvement districts are a type of public-private partnership that leverage public and private funds to increase the attractiveness of defined geographic areas to existing and potential customers. These entities often see value in making streetscape improvements that make walking and biking to the area safer and more comfortable. In Atlanta, the Midtown Community Improvement District is funding bikeway improvements after a survey revealed that over three quarters of commercial property owners in the district indicated a desire for the area to become more bikeable.

Bond Measures
Denver, Chicago, Nashville, and San Francisco have all recently used money from local bond measures to fund bikeway projects. They can be an effective tool to get quick results when a particular project is needed in the short term.

Private Foundations

Private foundations are an increasingly important source of funds for bicycle and pedestrian planning and implementation. The Walton Family Foundation has been the most important supporter of funding for greenway, trail, bicycle and pedestrian programs and projects in NW Arkansas. The Foundation has also worked with other partners, including Endeavor Foundation and Care Foundation to support initiatives such as Safe Routes to School and Energize NW Arkansas, which promote safe outdoor activities and transportation for children. For more information on private foundations, including an extensive list of national foundations visit: http://www.foundationcenter.org/

Foot bridge over the Lake Norwood spillway.

CHAPTER 5 DESIGN GUIDELINES

Chapter Contents:

Introduction

The following chapter pulls together best practices by facility type from public agencies and municipalities nationwide. Existing standards are referenced throughout and should be the first source of information when seeking to implement any of the treatments featured here. These design guidelines are flexible and should be applied using professional judgment. The guidelines are not, however, a substitute for a more thorough evaluation by a landscape architect or engineer upon implementation of facility improvements. This document references specific national guidelines for bicycle and pedestrian facility design, as well as a number of design treatments not specifically covered under current guidelines. Some improvements may also require cooperation with the Arkansas State Highway and Transportation Department for specific design solutions. The following standards and guidelines are referred to in this guide:

- The Federal Highway Administration's **Manual on Uniform Traffic Control Devices** (MUTCD) is the primary source for guidance on lane striping requirements, signal warrants, and recommended signage and pavement markings.
- American Association of State Highway and Transportation Officials (AASHTO) **Guide for the Development of Bicycle Facilities**, updated in June 2012 provides guidance on dimensions, use, and layout of specific bicycle facilities.
- The National Association of City Transportation Officials' (NACTO) 2012 **Urban Bikeway Design Guide** is the newest publication of nationally recognized bicycle-specific design standards, and offers guidance on the current state of the practice designs. Most NACTO treatments are compatible within AASHTO/MUTCD guidance, though some NACTO endorsed designs may not be permitted on state roads at this time.
- Offering similar guidance for pedestrian design, the 2004 AASHTO **Guide for the Planning, Design and Operation of Pedestrian Facilities** provides comprehensive guidance on planning and designing for people on foot.
- Meeting the requirements of the Americans with Disabilities Act (ADA) is an important part of any bicycle facility project. The United States Access Board's proposed Public Rights-of-Way Accessibility Guidelines (PROWAG) and the 2010 ADA Standards for Accessible Design (2010 Standards) contain standards and guidance for the construction of accessible facilities.
- Trail Solutions is IMBA's premier trailbuilding resource. This book combines cutting-edge trailbuilding techniques with proven fundamentals in a colorful, easy-to-read format. **Trail Solutions: IMBA's Guide to Building Sweet Singletrack** is complimented by **Managing Mountain Biking: IMBA's Guide to Providing Great Riding**, a 256-page resource that focuses on solutions to mountain biking management issues. Together, the two documents provide a complete resource for better mountain bike trail recreation.

Should the national standards be revised in the future and result in discrepancies with this chapter, the national standards should prevail for all design decisions. A qualified engineer or landscape architect should be consulted for the most up to date and accurate cost estimates.

Nationally recognized bikeway standards such as NACTO, AASHTO, the MUTCD, and IMBA's Trail Solutions along with guidance from the State of Arkansas have all informed the content of this chapter.

Trail Guidelines

Multi-Use Paths

Description:

Shared-use paths can provide a desirable facility, particularly for recreation, and users of all skill levels preferring separation from traffic. Bicycle paths should generally provide directional travel opportunities not provided by existing roadways.

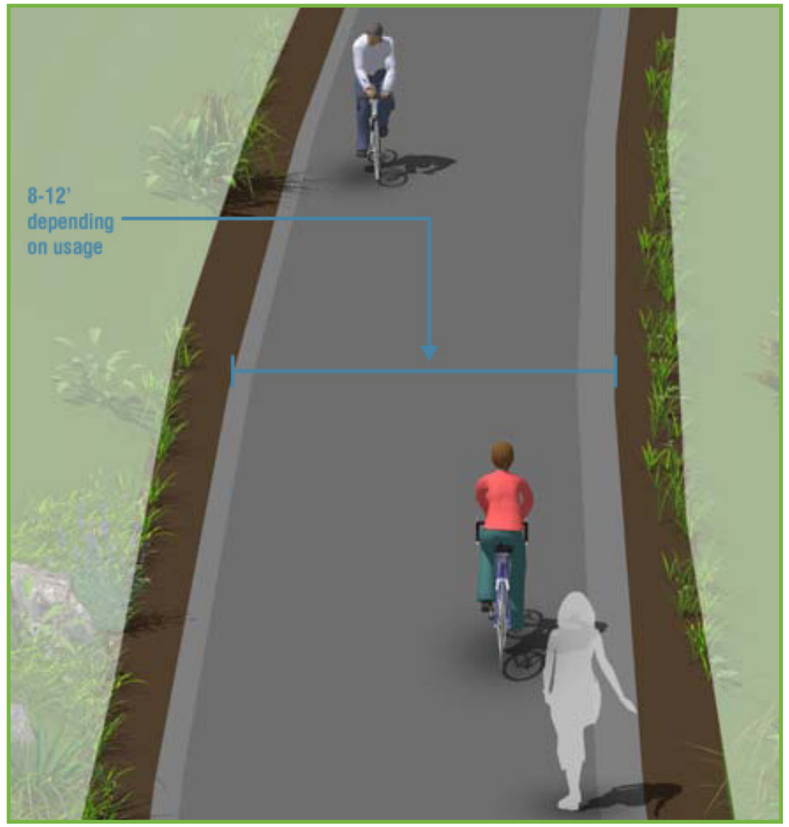
Guidelines:

Width

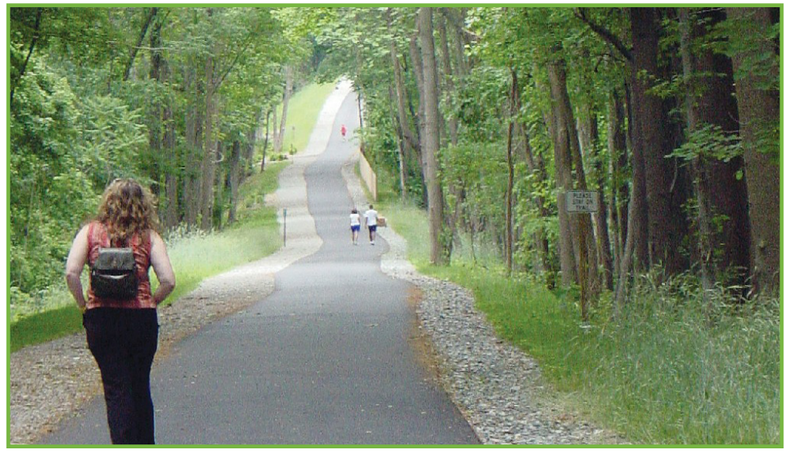
- 8 feet is the minimum allowed for a two-way bicycle path and is only recommended for low traffic situations.
- 10 feet is recommended in most situations and will be adequate for moderate to heavy use.
- 12 feet is recommended for heavy use situations with high concentrations of multiple users. A separate track (5' minimum) can be provided for pedestrian use.

Lateral Clearance

- A 2 foot or greater shoulder on both sides of the path should be provided. An additional foot of lateral clearance (total of 3') is required by the MUTCD for the installation of signage or other furnishings.
- If bollards are used at intersections and access points, they should be colored brightly and/or supplemented with reflective materials to be visible at night.



Left: Breakdown for a typical multi-use path. For the purposes of this Trails and Greenways Master Plan, multi-use paths will typically be 10-12' wide.



Right: Shared-use trails can be made of concrete or ashpalt, and for the purposes of the Bella Vista Trails and Greenways Master Plan, these trails will range from 10' -12'

Overhead Clearance

- Clearance to overhead obstructions should be 8 feet minimum, with 10 feet recommended.

Striping

- When striping is required, use a 4 inch dashed yellow centerline stripe with 4 inch solid white edge lines.
- Solid centerlines can be provided on tight or blind corners, and on the approaches to roadway crossings.

Additional Considerations:

Terminate the path where it is easily accessible to and from the street system, preferably at a controlled intersection or at the beginning of a dead-end street.

Additional References and Guidelines:

AASHTO. (2012). Guide for the Development of Bicycle Facilities.

FHWA. (2009). Manual on Uniform Traffic Control Devices.

Flink, C. (1993). Greenways: A Guide To Planning Design And Development.

Materials and Maintenance:

Asphalt is the most common surface for bicycle paths. The use of concrete for paths has proven to be more durable over the long term. Saw cut concrete joints rather than troweled improve the experience of path users.

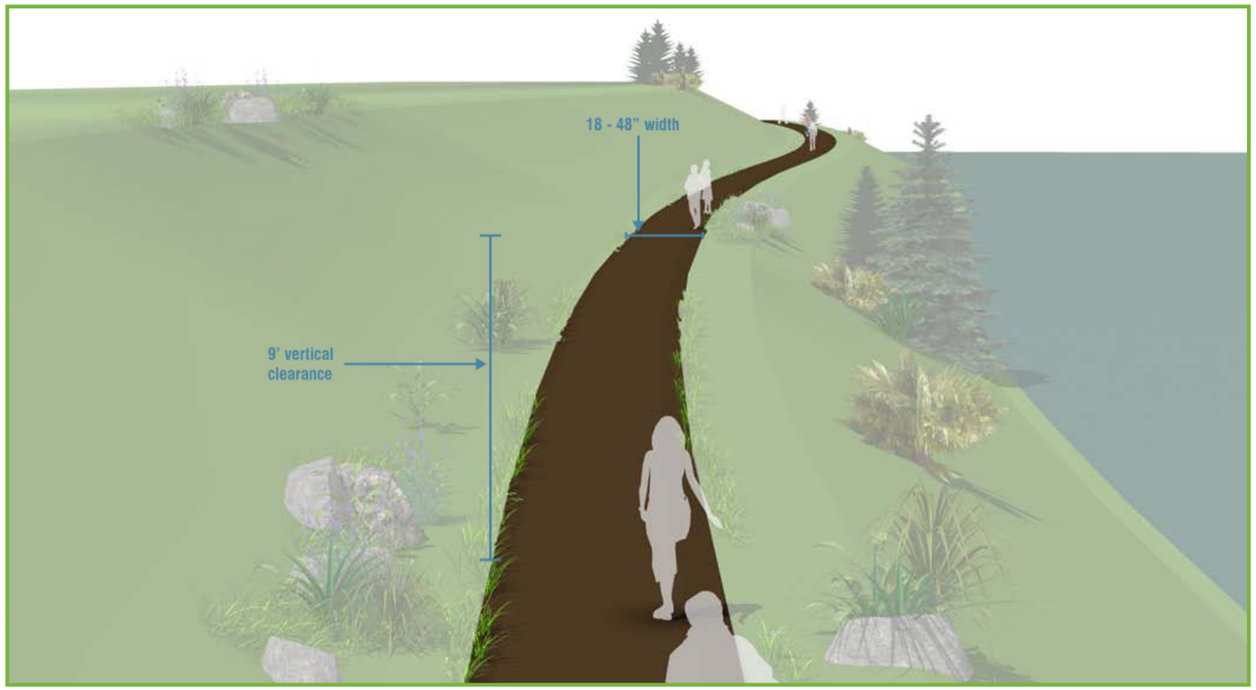
Natural Surface Trails

Description:

Sometimes referred to as footpaths or hiking trails, the natural surface trail is ideal for environmentally sensitive areas that require minimum disturbance along rivers and creeks. Low impact development with the absence of heavy equipment and the preservation of existing wooded areas or meadows prevent erosion harmful to waterways. The natural surface allows for absorption of stormwater and minimized runoff. Existing vegetation is preserved with low impact development and thus protects wildlife habitat with seasonal interest for trail users and water quality.

Unpaved Trail Types:
Type 1 – Shared Non-Motorized

- Tread narrow – up to 48”
- Allowance for passing
- Native materials
- Obstacles occasionally present
- Blockages cleared to define route and protect resources
- Grade to 10%
- Clearances and turning radius to accommodate all users



Left: Breakdown of guidelines for natural surface trails

Right: Natural surface trails provide options in areas that are environmentally sensitive or where initial construction funding is limited.

Type 2 – Preferred Hiking

- Tread narrow – less than 36”
- Minimal allowance for passing
- Native materials
- Overhead obstacles may be present
- Grades may occasionally be steeper than 10%, including stair steps
- Obstacles and challenges to be expected
- Turns will be switchbacks
- May not be suitable or enjoyable for horses or bikes

Guidelines:

- Trails can vary in width from 18 inches to 3 feet or greater; vertical clearance should be maintained at nine-feet above grade.
- Base preparation varies from machine-worked surfaces to those worn only by usage.
- Trail surface can be made of dirt, rock, soil, forest litter, or other native materials. Some trails use crushed stone (a.k.a. “crush and run”) that contains about 4% fines by weight, and compacts with use.
- Provide positive drainage for trail tread without extensive removal of existing vegetation; maximum slope is five percent (typical).

Additional Considerations:

Terminate the path where it is easily accessible to and from the street system, preferably at a controlled intersection or at the beginning of a dead-end street.

Additional References and Guidelines:

Flink, C. (1993). Greenways: A Guide To Planning Design And Development.

Materials and Maintenance:

Consider implications for accessibility when weighing options for surface treatments.

Two-Way Cycle Tracks

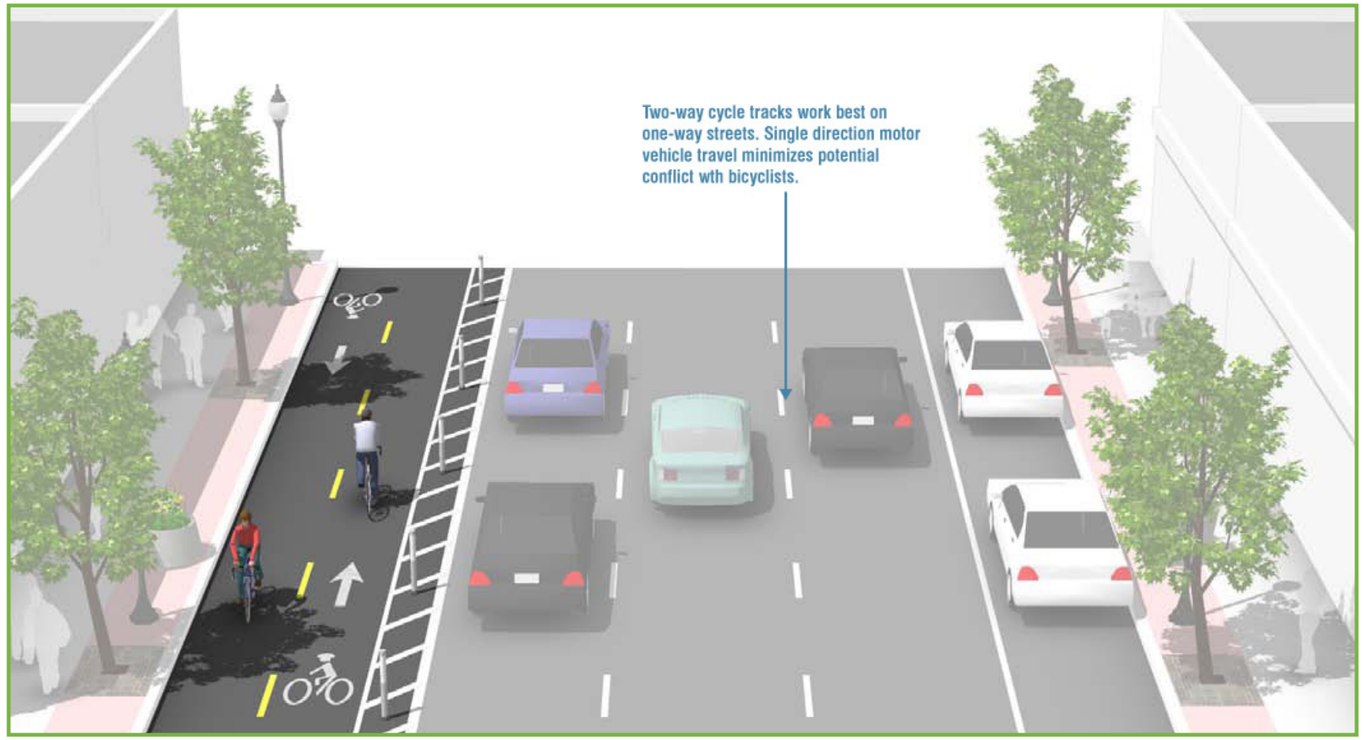
Description:

Two-way cycle tracks are physically separated cycle tracks that allow bicycle movement in both directions on one side of the road. Two-way cycle tracks share some of the same design characteristics as one-way cycle tracks, but may require additional considerations at driveway and side-street crossings.

A two-way cycle track may be configured as a protected cycle track at street level with a parking lane or other barrier between the cycle track and the motor vehicle travel lane and/or as a raised cycle track to provide vertical separation from the adjacent motor vehicle lane.

Guidelines:

- 12 foot recommended minimum for two-way facility
- 8 foot minimum in constrained locations
- When placed adjacent to parking, the parking buffer should be three feet wide to allow for passenger loading and to prevent door collisions.



Left: Breakdown of guidelines for two-way cycle track

Right: Urban cycle track with larger buffer between bicyclists and vehicular traffic

Bottom Right: Less buffer room, but wider cycle track lanes

Additional Considerations:

Two-way cycle tracks require a higher level of control at intersections to allow for a variety of turning movements. These movements should be guided by separated signals for bicycles and motor vehicles. Transitions into and out of two-way cycle tracks should be simple and easy to use to deter bicyclists from continuing to ride against the flow of traffic.

At driveways and minor intersections, bicyclists riding against roadway traffic in two-way cycle tracks may surprise pedestrians and drivers not expecting bidirectional travel. Appropriate signage is recommended.

Additional References and Guidelines:

NACTO. (2012). Urban Bikeway Design Guide.

Materials and Maintenance:

In cities with winter climates barrier, separated and raised cycle tracks may require special equipment for snow removal.

Intersections

Cycle Track - Driveways and Minor Street Crossings

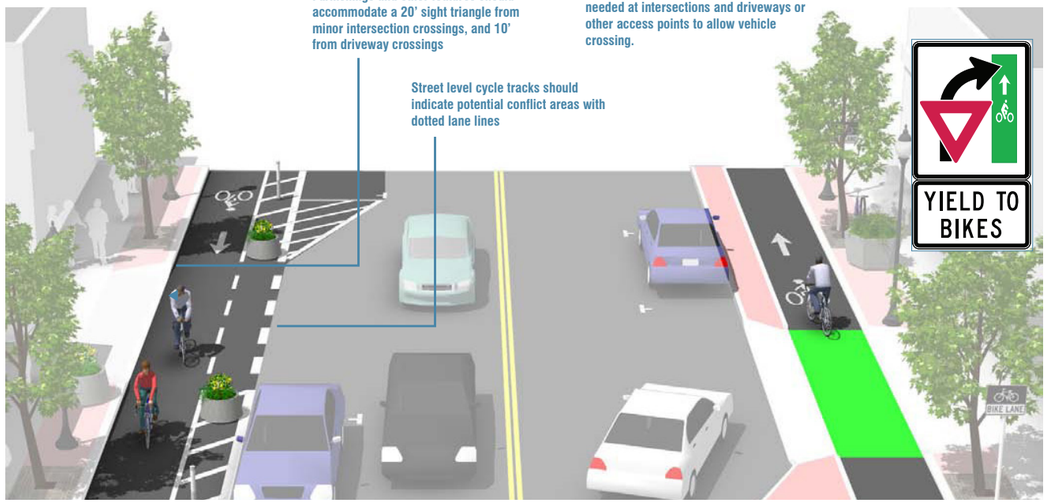
Description:
The added separation provided by cycle tracks creates additional considerations at intersections that should be addressed. At driveways and crossings of minor streets a smaller fraction of automobiles will cross the cycle track. Bicyclists should not be expected to stop at these minor intersections if the major street does not stop.

Guidelines:
- If raised, maintain the height of the cycle track through the crossing, requiring automobiles to cross over.
- Remove parking 30 feet prior the intersection.
- Use colored pavement markings and/or shared lane markings through the conflict area.
- Place warning signage to identify the crossing.

Additional Considerations:
At these locations, bicyclist visibility is important, as a buffer of parked cars or vegetation can reduce the visibility of a bicyclist traveling in the cycle track. Markings and signage should be present that make it easy to understand where bicyclists and pedestrians should be travelling. Access management should be used to reduce the number of crossings of driveways on a cycle track. Driveway consolidations and restrictions on motorized traffic movements reduce the potential for conflict.

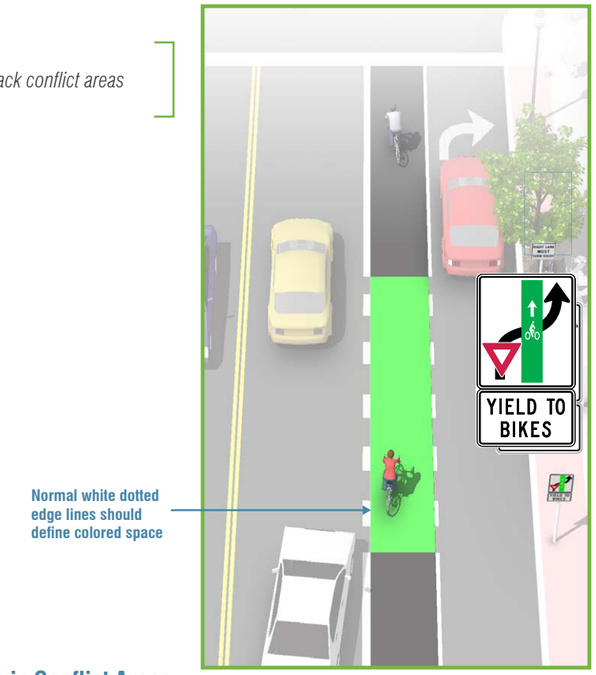
Additional References and Guidelines:
NACTO. (2012). *Urban Bikeway Design Guide*.

Materials and Maintenance:
In cities with winter climates, barrier separated and raised cycle tracks may require special equipment for snow removal.



Left: Breakdown of guidelines for cycle track minor intersections

Right: Breakdown of guidelines for cycle track conflict areas



Colored Bike Lanes in Conflict Areas

Description:
Colored pavement within a bicycle lane increases the visibility of the facility and reinforces priority of bicyclists in conflict areas.

Guidelines:
- Green colored pavement was given interim approval by the Federal Highways Administration in March 2011. See interim approval for specific color standards.
- The colored surface should be skid resistant and retro-reflective.
- A “Yield to Bikes” sign should be used at intersections or driveway crossings to reinforce that bicyclists have the right-of-way in colored bike lane areas.

Additional Considerations:
Evaluations performed in Portland, OR, St. Petersburg, FL and Austin, TX found that significantly more motorists yielded to bicyclists and slowed or stopped before entering the conflict area after the application of the colored pavement when compared with an uncolored treatment.

Additional References and Guidelines:
FHWA. (2011). Interim Approval (IA-14) has been granted. Requests to use green colored pavement need to comply with the provisions of Paragraphs 14 through 22 of Section 1A.10 NACTO. (2012). *Urban Bikeway Design Guide*.

Materials and Maintenance:
Because the effectiveness of markings depends entirely on their visibility, maintaining markings should be a high priority.

Path/Roadway Crossings

Marked/Unsignalized Crossings

Description:

A marked/unsignalized crossing typically consists of a marked crossing area, signage and other markings to slow or stop traffic. The approach to designing crossings at mid-block locations depends on an evaluation of vehicular traffic, line of sight, pathway traffic, use patterns, vehicle speed, road type, road width, and other safety issues such as proximity to major attractions.

When space is available, using a median refuge island can improve user safety by providing pedestrians and bicyclists space to perform the safe crossing of one side of the street at a time.

Guidelines:

Maximum traffic volumes

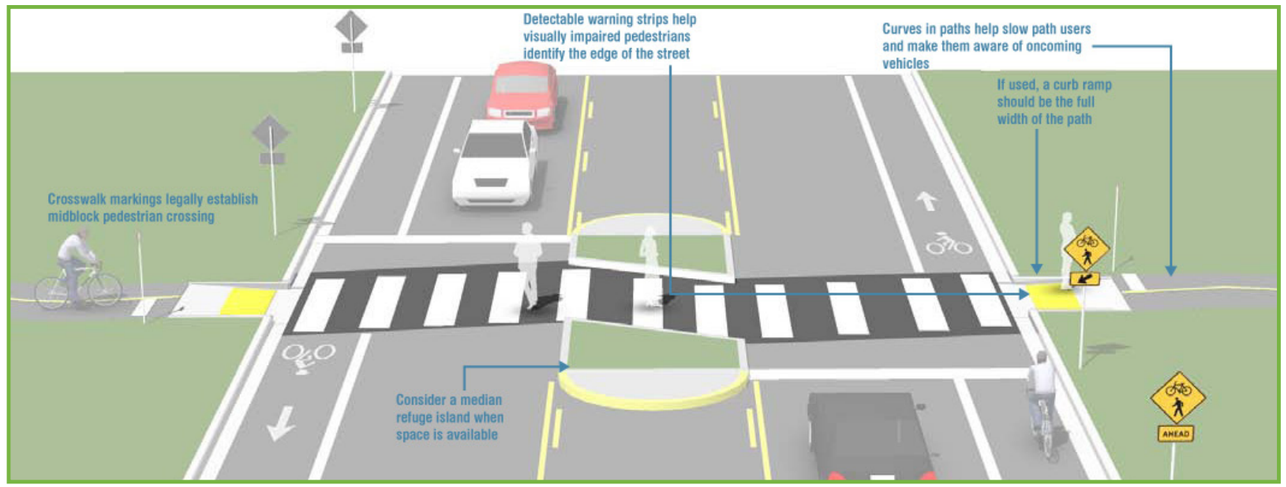
- ≤9,000-12,000 Average Daily Traffic (ADT) volume
- Up to 15,000 ADT on two-lane roads, preferably with a median
- Up to 12,000 ADT on four-lane roads with median

Maximum travel speed

- 35 MPH

Minimum line of sight

- 25 MPH zone: 155 feet
- 35 MPH zone: 250 feet
- 45 MPH zone: 360 feet



Left: Breakdown of guidelines for marked/unsignalized crossings

Right: Crosswalks tend the be the same width as the trail

Additional Considerations:

Unsignalized crossings of multi-lane arterials over 15,000 ADT may be possible with features such as sufficient crossing gaps (more than 60 per hour), median refuges, and/or active warning devices like rectangular rapid flash beacons or in-pavement flashers, and excellent sight distance. For more information see the discussion of active warning beacons.

On roadways with low to moderate traffic volumes (<12,000 ADT) and a need to control traffic speeds, a raised crosswalk may be the most appropriate crossing design to improve pedestrian visibility and safety.

Additional References and Guidelines:

AASHTO. (2012). Guide for the Development of Bicycle Facilities.

FHWA. (2009). Manual on Uniform Traffic Control Devices.

Materials and Maintenance:

Locate markings out of wheel tread when possible to minimize wear and maintenance costs.

Undercrossings

Description:

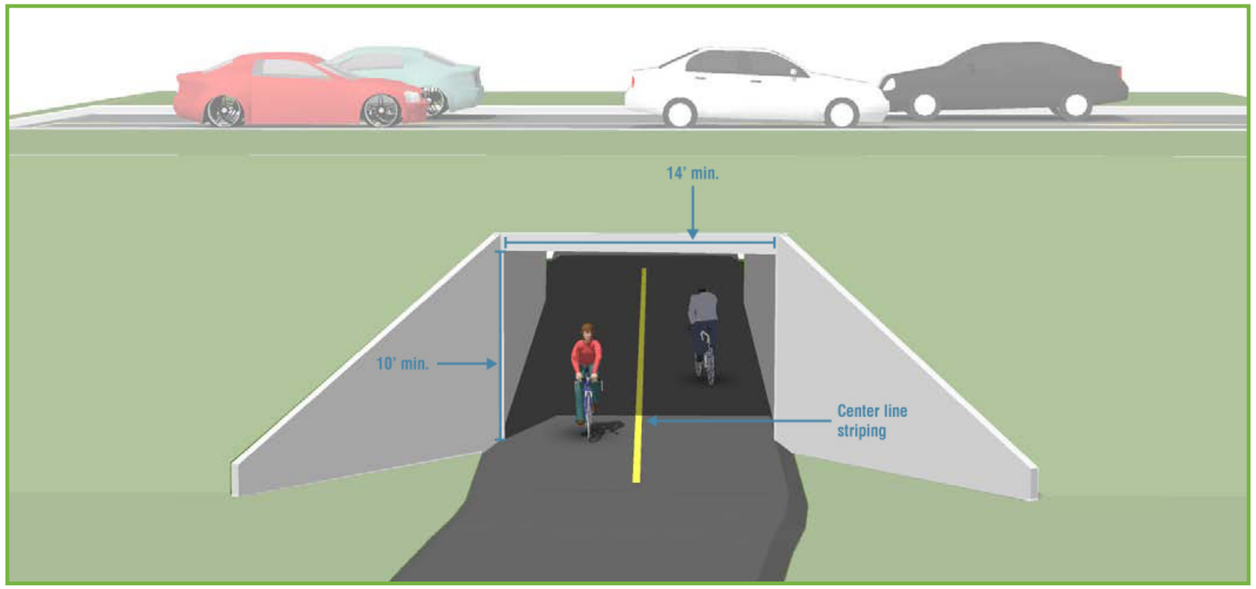
Bicycle/pedestrian undercrossings provide critical non-motorized system links by joining areas separated by barriers such as railroads and highway corridors. In most cases, these structures are built in response to user demand for safe crossings where they previously did not exist.

There are no minimum roadway characteristics for considering grade separation. Depending on the type of facility or the desired user group grade separation may be considered in many types of projects.

Guidelines:

- 14 foot minimum width, greater widths preferred for lengths over 60 feet.
- 10 foot minimum height.
- The undercrossing should have a centerline stripe even if the rest of the path does not have one.
- Lighting should be considered during the design process for any undercrossing with high anticipated use or in culverts and tunnels.

Right: Undercrossings are the safest crossing, and can be the most decorative



Breakdown of guidelines for undercrossings

Additional Considerations:

Safety is a major concern with undercrossings. Shared-use path users may be temporarily out of sight from public view and may experience poor visibility themselves. To mitigate safety concerns, an undercrossing should be designed to be spacious, well-lit, equipped with emergency cell phones at each end and completely visible for its entire length from end to end.

Additional References and Guidelines:

AASHTO. (2012). Guide for the Development of Bicycle Facilities.

AASHTO. (2004). Guide for the Planning, Design, and Operation of Pedestrian Facilities.

Materials and Maintenance:

14 foot width allows for maintenance vehicle access.

Potential problems include conflicts with utilities, drainage, flood control and vandalism.

Crossing Beacons and Signals

Active Warning Beacons

Description:

Enhanced marked crossings are unsignalized crossings with additional treatments designed to increase motor vehicle yielding compliance on multi-lane or high volume roadways.

These enhancements include pathway user or sensor actuated warning beacons, Rectangular Rapid Flash Beacons (RRFB) shown below, or in-roadway warning lights.

Rectangular rapid flash beacons show the most increased compliance of all the warning beacon enhancement options.

Guidelines:

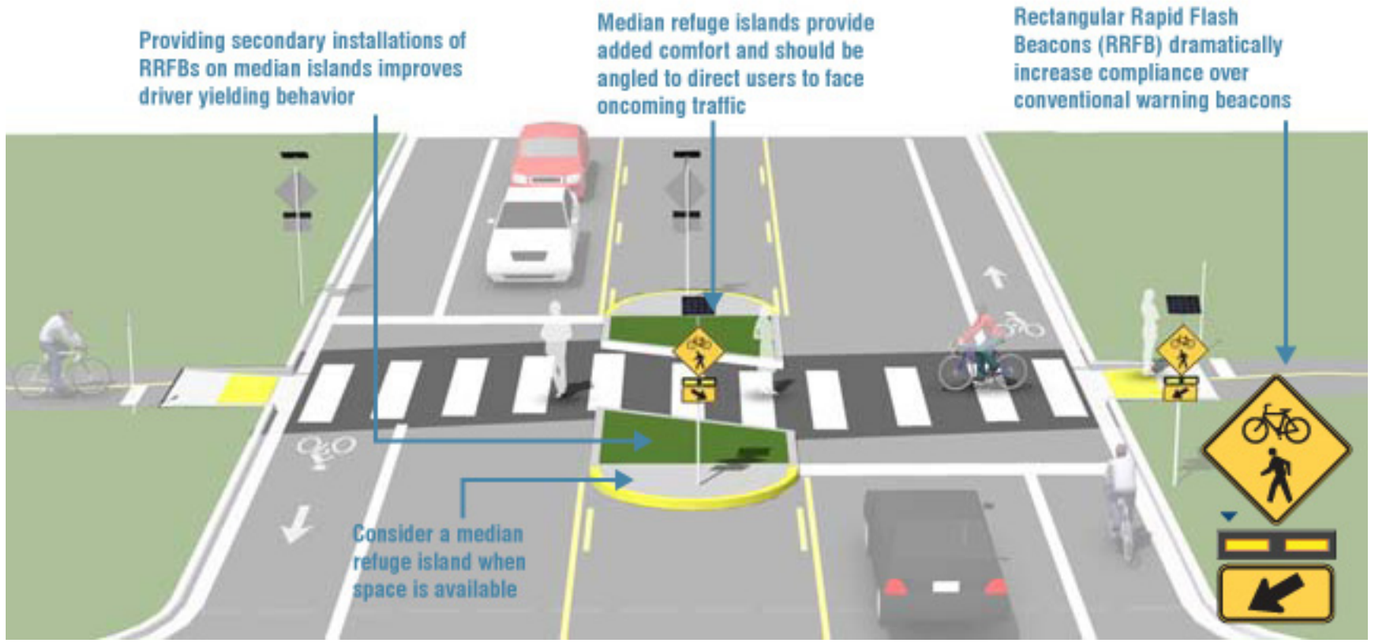
Guidance for marked/unsignalized crossings applies.

- Warning beacons shall not be used at crosswalks controlled by YIELD signs, STOP signs, or traffic control signals.
- Warning beacons shall initiate operation based on user actuation and shall cease operation at a predetermined time after the user actuation or, with passive detection, after the user clears the crosswalk.

Right: This is an excellent crossing for lower traffic volumes roads

Additional Considerations:

An FHWA report presented study results showing of the effectiveness of going from a no-beacon arrangement to a two-beacon RRFB installation increased yielding from 18 percent to 81 percent. A four-beacon arrangement raised compliance to 88%. Additional studies of long term installations show little to no decrease in yielding behavior over time. Additional studies in Oregon reported compliance rates as high as 99% when actuated.



Left: Breakdown of guidelines for active warning

Additional References and Guidelines:

FHWA. (2009). Manual on Uniform Traffic Control Devices.

FHWA. (2008). MUTCD - Interim Approval for Optional Use of Rectangular Rapid Flashing Beacons (IA-11).

FHWA. (2010). Effects of Yellow Rectangular Rapid-Flashing Beacons on Yielding at Multilane Uncontrolled Crosswalks.

Alhajri, F., Carlso, K., Foster, N., Georde, D. (2013). A Study on Driver's Compliance to Rectangular Rapid Flashing Beacons.

Materials and Maintenance:

Locate markings out of wheel tread when possible to minimize wear and maintenance costs. Signing and striping need to be maintained to help users understand any unfamiliar traffic control.

Route Users to Signalized Crossing

Description:
Path crossings within approximately 400 feet of an existing signalized intersection with pedestrian crosswalks are typically diverted to the signalized intersection to avoid traffic operation problems when located so close to an existing signal. For this restriction to be effective, barriers and signing may be needed to direct path users to the signalized crossing. If no pedestrian crossing exists at the signal, modifications should be made.

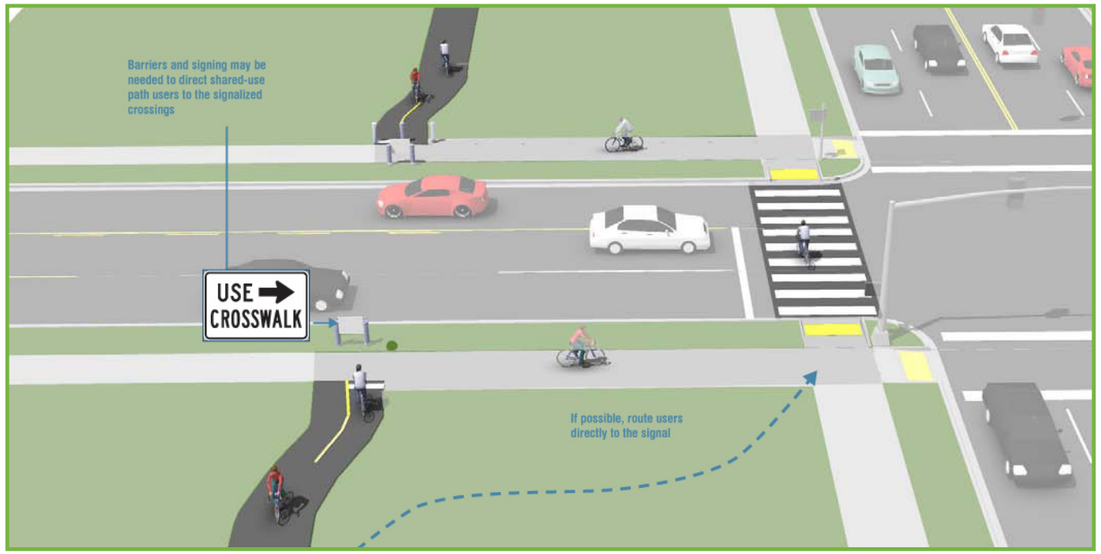
Guidelines:
- Path crossings should not be provided within approximately 400 feet of an existing signalized intersection. If possible, route path directly to the signal.

Additional Considerations:
In the US, the minimum distance a marked crossing can be from an existing signalized intersection varies from approximately 250 to 660 feet. Engineering judgment and the context of the location should be taken into account when choosing the appropriate allowable setback. Pedestrians are particularly sensitive to out of direction travel and jaywalking may become prevalent if the distance is too great.

Additional References and Guidelines:
AASHTO. (2012). *Guide for the Development of Bicycle Facilities*.

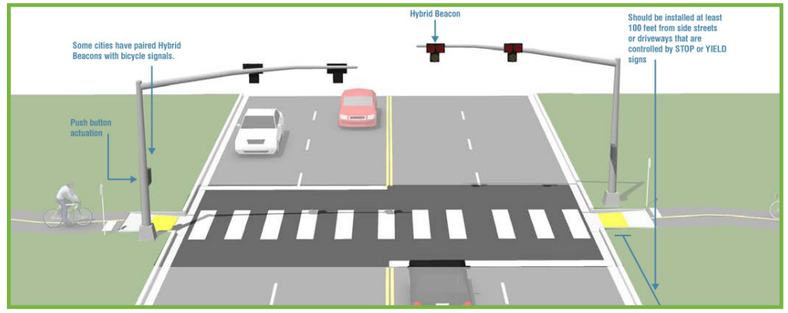
AASHTO. (2004). *Guide for the Planning, Design, and Operation of Pedestrian Facilities*.

Materials and Maintenance:
If a sidewalk is used for crossing access, it should be kept clear of snow and debris and the surface should be level for wheeled users.



Left: Breakdown of guidelines for directing route users to signalized crossings

Right: Breakdown of guidelines forpedestrian hybrid beacons



Pedestrian Hybrid Beacon Crossings

Description:
Pedestrian hybrid beacons provide a high level of comfort for crossing users through the use of a red-signal indication to stop conflicting motor vehicle traffic.

Hybrid beacon installation faces only cross motor vehicle traffic, stays dark when inactive, and uses a unique 'wigwag' signal phase to indicate activation. Vehicles have the option to proceed after stopping during the final flashing red phase, which can reduce motor vehicle delay when compared to a full signal installation.

Guidelines:
- Hybrid beacons (illustrated here) may be installed without meeting traffic signal control warrants if roadway speed and volumes are excessive for comfortable path crossings.
- FHWA does not allow bicycle signals to be used with Hybrid beacons, though some cities have done so successfully.
- To maximize safety when used for bicycle crossings, the flashing 'wig-wag' phase should be very short and occur after the pedestrian signal head has changed to a solid "DON'T WALK" indication as bicyclists can enter an intersection quickly.

Additional Considerations:
Shared-use path signals are normally activated by push buttons but may also be triggered by embedded loop, infrared, microwave or video detectors. The maximum delay for activation of the signal should be two minutes, with minimum crossing times determined by the width of the street.

Each crossing, regardless of traffic speed or volume, requires additional review by a registered engineer to identify sight lines, potential impacts on traffic progression, timing with adjacent signals, capacity and safety.

Additional References and Guidelines:
FHWA. (2009). *Manual on Uniform Traffic Control Devices*.

NACTO. (2012). *Urban Bikeway Design Guide*.

Materials and Maintenance:
Hybrid beacons are subject to the same maintenance needs and requirements as standard traffic signals. Signing and striping need to be maintained to help users understand any unfamiliar traffic control.

Full Traffic Signals Crossings

Description:
Signalized crossings provide the most protection for crossing path users through the use of a red-signal indication to stop conflicting motor vehicle traffic.

A full traffic signal installation treats the path crossing as a conventional 4-way intersection and provides standard red-yellow-green traffic signal heads for all legs of the intersection.

Guidelines:
Full traffic signal installations must meet MUTCD pedestrian, school or modified warrants. Additional guidance for signalized crossings:

- Located more than 300 feet from an existing signalized intersection
- Roadway travel speeds of 40 MPH and above
- Roadway ADT exceeds 15,000 vehicles

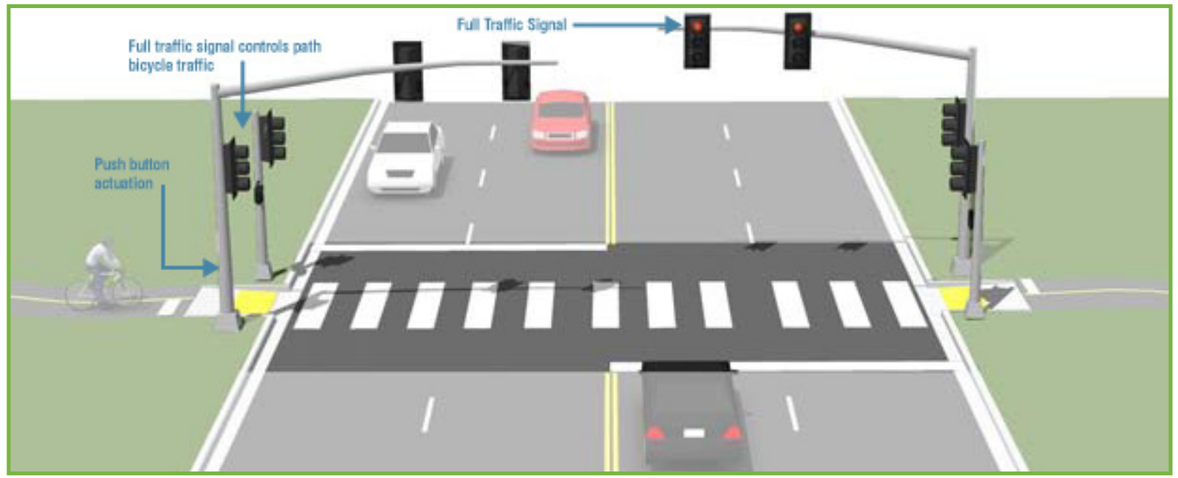
Additional Considerations:
Shared-use path signals are normally activated by push buttons but may also be triggered by embedded loop, infrared, microwave or video detectors. The maximum delay for activation of the signal should be two minutes, with minimum crossing times determined by the width of the street.

Each crossing, regardless of traffic speed or volume, requires additional review by a registered engineer to identify sight lines, potential impacts on traffic progression, timing with adjacent signals, capacity and safety.

Additional References and Guidelines:
FHWA. (2009). *Manual on Uniform Traffic Control Devices*.

NACTO. (2012). *Urban Bikeway Design Guide*.

Materials and Maintenance:
Traffic signals require routine maintenance. Signing and striping need to be maintained to help users understand any unfamiliar traffic control.



Left: Breakdown of guidelines for full traffic signal crossings

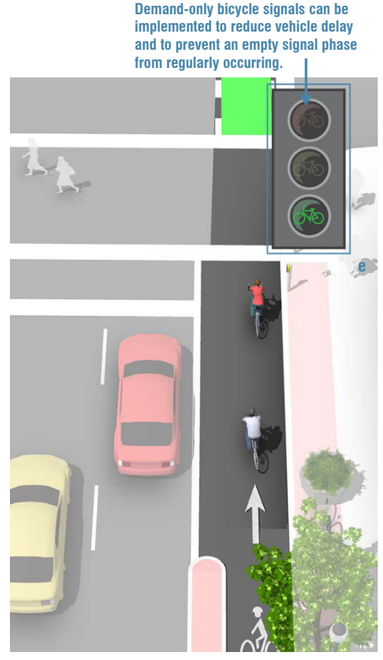
Right: Breakdown of guidelines for major street crossings on a cycle track

Cycle Track - Major Street Crossings

Description:
Cycle tracks approaching major intersections must minimize and mitigate potential conflicts and provide connections to intersecting facility types.

Cycle track crossings of signalized intersections can also be accomplished through the use of a bicycle signal phase which reduces conflicts with motor vehicles by separating bicycle movements from any conflicting motor vehicle movements.

Guidelines:
- Drop cycle track buffer and transition to bike lane 16’ in advance of the intersection.
- Remove parking 16’ -50’ in advance of the buffer termination.
- Use a bike box or advanced stop line treatment to place bicyclists in front of traffic.
- Use colored pavement markings through the conflict area.
- Provide for left-turning movements with two-stage turn boxes.
- Consider using a protected phase bicycle signal to isolate conflicts between bicyclists and motor vehicle traffic.
- In constrained conditions with right turn only lanes, consider transitioning to a shared bike lane/turn lane.



Additional Considerations:
Signalization utilizing a bicycle signal head can also be set to provide cycle track users a green phase in advance of vehicle phases. The length of the signal phase will depend on the width of the intersection.

The same conflicts exist at non-signalized intersections. Warning signs, special markings and the removal of on-street parking in advance of the intersection can raise visibility and awareness of bicyclists.

Additional References and Guidelines:
AASHTO. (1999). *Guide for the Development of Bicycle Facilities*.

FHWA. (2009). *Manual on Uniform Traffic Control Devices*.

NACTO. (2012). *Urban Bikeway Design Guide*.

Trail Support Facilities

Trailheads

Description:
Major access points should be established near commercial developments and transportation nodes, making them highly accessible to the surrounding communities. Minor trailheads should be simple pedestrian and bicycle entrances at locally known spots, such as parks and residential developments.

Partnerships could also be sought with owners of existing parking lots near trails. Benefits are three fold: Business benefit from trail-user patronage; trail owners benefit from not having to buy more land and construct a parking facility; and the environment benefits from less development in the watershed.

Guidelines:
Minor Trailheads:

- Parking
- Drinking fountains
- Benches
- Bicycle rack
- Trash receptacles
- Information kiosk and/or signage

Major Trailheads could include all of the above, plus additional facilities, such as those listed below:

- Restrooms
- Shelters
- Picnic areas
- Fitness course
- Larger parking area

Left: A water fountain and pet-water fountain and trailhead near Crystal Bridges in Bentonville, AR.

Right: It is important to include facilities for trail users to congregate and sit, as well as provide opportunities for users to dispose of pet waste.

Benches / Seating

Description:
Seating areas along trails provide a place to rest, congregate, or contemplate for the user. There are a wide variety of options to choose from in terms of style and materials. Selections should be based on the desired trail theme as well as cost.

Guidelines:

- Locate seating a minimum of 3-feet from the edge of the trail.
- Locate benches in areas that provide interesting views, shade or shelter from seasonal winds, as well as those that are close to educational or cultural elements.
- Drainage should slope away from the trail.
- Benches should be securely anchored to the ground, and located at appropriate intervals along the trail.
- Seating depth should be 18-20-inches and the length should vary between 60-90-inches.
- Provide benches with back rests and arm rests on either side.

Trash-Free Greenway

Description:
Pack it In, Pack it Out (variably "Carry in, Carry out") is a waste management philosophy that states, "What you bring into a natural area must be taken out of the area when you leave." It may be formulated in other slogans like "Leave No Trace", "Leave Only Footprints." The idea is to remove all forms of litter and biodegradable waste from the area for proper disposal so that the materials will cause no harm to the resources of the ecosystem. Trail facilities still often used with this method are pet waste receptacles and signage.

Guidelines:

- Locate pet waste receptacles at trail heads and occasionally along trail; set back a minimum of 3-feet from the edge of the trail.
- Example signage language: "Trash Free Greenway – Trash cans are not provided on this trail. Please take your trash home when you leave."
- Removal of trash by user maintains the cleanliness of the trail while increasing the operational (manpower/equipment) costs of maintaining the trail, thus allowing that savings to be utilized elsewhere.

Bicycle Racks / Bicycle Parking

Description:

Provide bicycle parking at trail heads, major trail access points, shopping areas, and bus route intersections.

Guidelines:

- Recommended bicycle parking are simple racks or hitch posts
- Custom bicycle racks or conventional options are available, depending on greenway theming and budget.
- Provide bicycle parking that supports the bicycle upright by its frame at two points of contact
- Allow for multiple bicycles to be parked at once

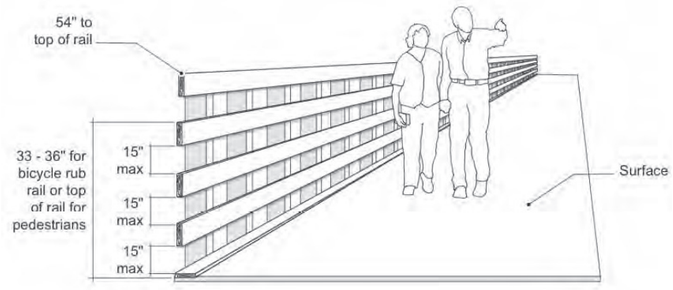
Right: Railing and fencing can help set a tone for a trail user and provide property owners with a sense of safety.

Public Art

Description:

Explore opportunities to include public art within the overall design of the trail system. According to American Trails, "Art is one of the best ways to strengthen the connection between people and trails. Across America and elsewhere, artists are employing a remarkably wide range of creative strategies to support all phases of trail activities, from design and development to stewardship and interpretation. In particular, art can be an effective tool for telling a trail's story compellingly and memorably."

Left: Public art can really bring life to a trail



Railings and Fencing

Description:

Railing and fences are important features on bridges, some boardwalks, or in areas where there may be a hazardous drop-off or hazardous adjacent land uses (such as active rail lines).

Guidelines:

- At a minimum, railings and fences should consist of a vertical top, bottom, and middle rail. Picket style fencing should be avoided as it presents a safety hazard for bicyclists.
- A pedestrian railing should be 42-inches above the surface.
- A bicyclist railing should be 48-inches above the surface.
- The middle railing functions as a "rub rail" for bicyclists and should be located 33 to 36 inches above the surface.
- Local, state, and/or federal regulations and building codes should be consulted to determine when it is appropriate to install a railing.

Wayfinding

Description:

The signage/informational system includes: safety and regulatory signage; and interpretive elements including signs, displays, artifacts and artistic elements that address historic, ecological, cultural and other items of interest and understanding. A number of informational, educational, interpretive and way-finding devices are recommended for the trail corridor. These include:

Safety Signs—These signs address trail user and bicycle safety. For ease of understanding, these signs should follow standard formats for traffic control devices (See Manual of Uniform Traffic Control Devices). Signs address both bicycle and automobile traffic signage. The following sign types exist within the safety category:

Traffic control—include stop, yield, and curve in trail. These address safety issues.

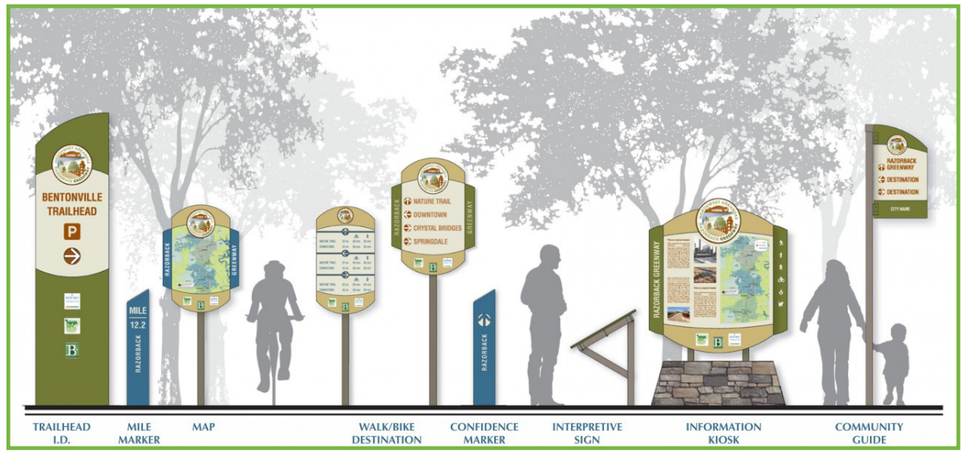
Warning signs—include, but may not be limited to: "slippery when wet", "bicycles slow to walking speed", "icy conditions may exist", and hazard panels for possible trail obstructions or dangerous objects within the trail right of way. Surface texture may be another way to promote bicycle speed control in busy area.

Miscellaneous safety signs—these include specialty safety signs such as hazard markers and signs near water features.

On-Street bicycle signs and pavement markings—including bike route signs, share the road caution signs, bike lane and bike turn lane marking and other necessary traffic control devices that integrate bicycle and motorist traffic. On-street signs and graphics must conform to the Manual of Uniform Traffic Control Devices (MUTCD) standards.

Information Signs—These signs provide travel information to trail users. The following signs are considered in the information sign category:

Left: Wayfinding signage can define a trail



Right: Example of regional signage

Wayfinding/Directional signs—includes signs and markers, some with maps showing trail users how to reach their destinations, distance from a destination, and location signs such as mile markers, and street signs placed on bridges to identify cross streets.

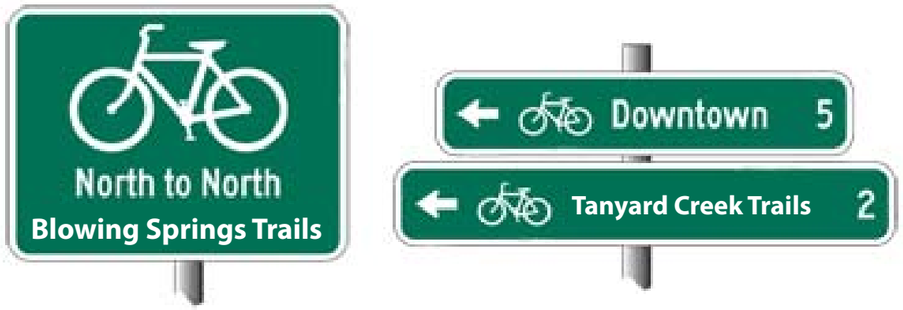
System signs are used at major entry points of the particular trail and/or trail system. They address comprehensive issues such as system-wide trail maps, location of rest areas, degree of difficulty, accessibility and system trails rules and regulations. Due to the amount and importance of the information conveyed on system signs, it is best to place them in locations where users are encouraged to safely stop and review the information represented.

Credit signs—that provide information about those who contributed to the development of the trail and/or amenities along the trail.

Educational/Interpretive signs and displays—provides trail users with information about the greenway, native flora and fauna, history and culture, and significance of elements along the trail. There is a wide variety of interpretive signage styles and the amount/type of information they provide. Consider the character of the trail and surrounding elements when designing educational signage. Locate interpretive signage 3-feet from the edge of the trail.

Guidelines:

- The signage and way-finding system should have an attractive, distinct, uniform system of signs including displays and possibly artistic elements that guides and informs both local and out of town users with respect to the trail corridor and other amenities.
- Wherever possible, minimize signage to avoid "signage clutter" by consolidating signs, minimizing posting of rules and avoiding tight curves and other conditions that warrant signs.
- Use international symbols that are easily understood by most users.
- Bicycle and traffic signage should conform to the Federal Manual of Uniform Traffic Control Devices (MUTCD) guidelines.



- A consistent style and information system should be engaged along the entire length of the greenway.

- Key gateway signs should be provided at major entry points that include: a map of the system, accessibility information, estimated travel time, user safety guidelines, emergency contact and user feedback telephone numbers/Web sites, leave no trace information, code of conduct, and other pertinent information.

Additional Considerations:

There is no standard color for bicycle wayfinding signage. Section 1A.12 of the MUTCD establishes the general meaning for signage colors. Green is the color used for directional guidance and is the most common color of bicycle wayfinding signage in the US, including those in the MUTCD.

It can be useful to classify a list of destinations for inclusion on the signs based on their relative importance to users throughout the area. A particular destination's ranking in the hierarchy can be used to determine the physical distance from which the locations are signed. For example, primary destinations (such as the downtown area) may be included on signage up to 5 miles away. Secondary destinations (such as a transit station) may be included on signage up to two miles away. Tertiary destinations (such as a park) may be included on signage up to one mile away.

Additional References and Guidelines:

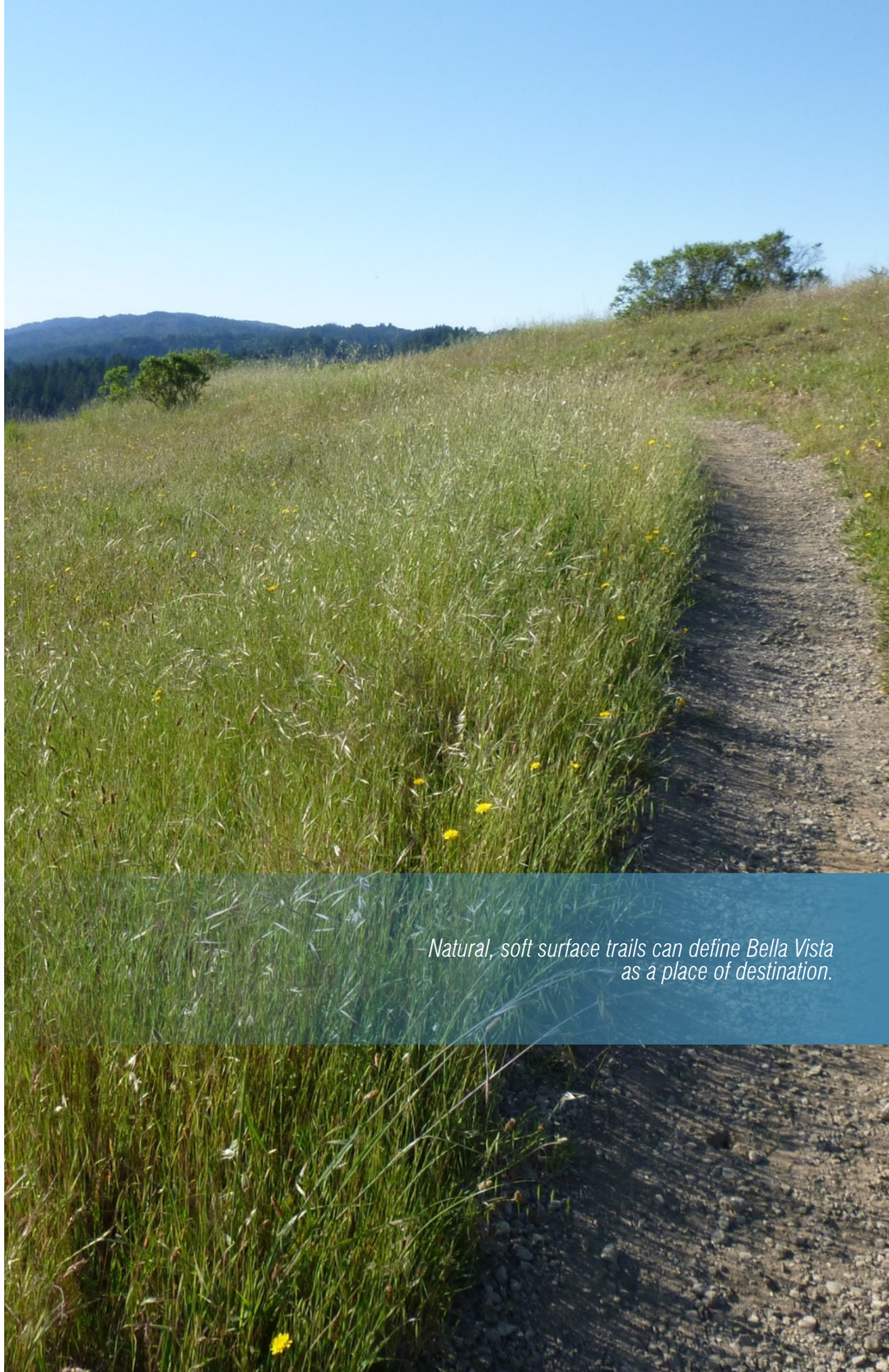
FHWA. (2009). *Manual on Uniform Traffic Control Devices*.

NACTO. (2012). *Urban Bikeway Design Guide*.

AASHTO. (2012). *Guide for the Development of Bicycle Facilities*.

Materials and Maintenance:

Maintenance needs for bicycle wayfinding signs are similar to other signs and will need periodic replacement due to wear.



Natural, soft surface trails can define Bella Vista as a place of destination.

Appendices Contents:

APPENDICES

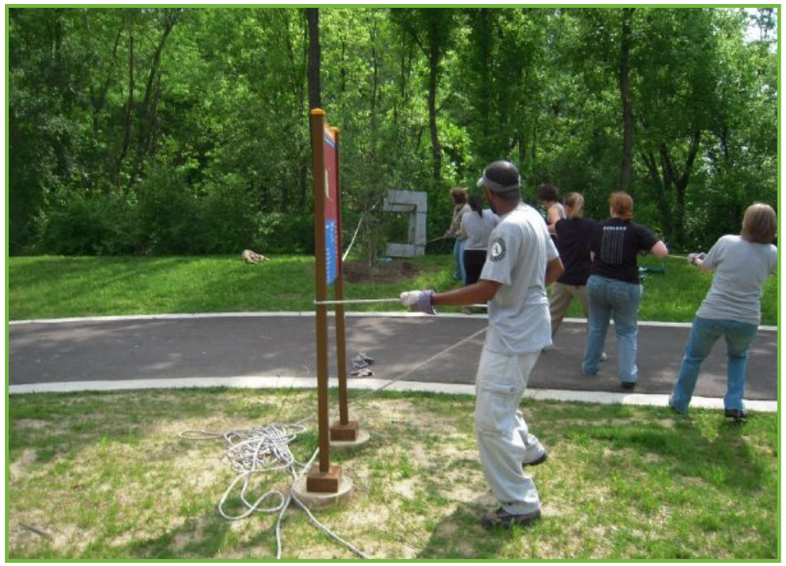
Appendix Item 1: Trail Operations and Maintenance

Introduction

As the Bella Vista trail and greenway network continues to grow, it will be imperative that the City, the POA, and their community partners develop a clear, measurable, and achievable program for the ongoing operation and maintenance of the trail and greenway system. These tasks will be essential to the public's continued enjoyment of this recreation and transportation asset. An operations and maintenance plan supports these preservation and maintenance activities by defining maintenance tasks, assigning responsibilities to relevant agencies and groups, developing procedures and policies to identify and respond to maintenance issues and safety and security risks, and laying the foundation for long-term stewardship activities that protect the trail and greenway system's benefit for future generations.

The Bella Vista trail and greenway network is and will continue to be a valuable public resource, serving local residents, regional visitors, and tourists for years to come. The following guiding principles for an effective operations and maintenance program will help assure the preservation of a first class trail system:

- Good maintenance begins with sound planning and design.
- Foremost, protect life, property, and the environment.
- Promote and maintain a quality transportation and recreation experience.
- Develop a management plan that is reviewed and updated annually with tasks, operational policies, standards, and routine and remedial maintenance goals.
- Maintain quality control and conduct regular inspections.
- Include field crews, police, and fire/rescue personnel in both the design review and ongoing maintenance process.



Right: AmeriCorps volunteers help with greenway clean up activities in St. Louis, Missouri

- Maintain an effective, responsive public feedback system and promote public participation.
- Maintain the appropriate budget for implementing the maintenance plan.

These principles can guide the development of a maintenance and operations plan that incorporates user safety, routine and remedial maintenance, and long-term stewardship of the greenway as a unique, valued and high quality community resource.

User Safety and Risk Management

While user safety and risk management begin with the planning and design of trails and greenways, the City of Bella Vista, the POA, and its regional partners have experience through previous trail projects with operational activities to provide users with a safe and secure trail experience. We expect these activities will include the following, many of which have been applied to other trail projects in the area, in future agreements between partners:

- Development and implementation of an emergency response protocol with law enforcement and first responders.
- The creation and use of a database management system to track accidents, crime and risks and to identify solutions that mitigate those risks.
- Routine inspection for safety hazards.
- Definition and protection of the intended use for each trail.
- Promotion of proper trail usage and etiquette.
- Creation of a user feedback system to address user-identified issues or activities.

Left: While many natural surface trails look the same, they are often designed for a specific user in mind, and proper precautions are neccesary to reduce conflict between different trail users

Maintenance

The quality and condition of trails, greenways and on-street bicycle facilities like bike lanes and cycle tracks is essential to the long-term success of the trail system and will require continual maintenance and care. Trail and greenway maintenance can be separated into two categories: routine maintenance and remedial maintenance. Routine maintenance refers to the regularly scheduled and day-to-day activities to keep the trail in a functional and orderly condition. These activities, which can be incorporated in normal routine maintenance by operations staff and volunteer organizations (like Friends of Arkansas Singletrack, or *FAST*), include trash and debris removal, landscaping, weed and dust control, trail sweeping, snow removal, shoulder mowing, and tree and shrub trimming. For paved trails, pot maintenance such as sealing cracks and filling potholes also fall under this category. Remedial maintenance refers to the correcting of significant trail defects and the repairing, replacing and restoring of major trail components. Remedial maintenance activities include periodic repairs like seal coating asphalt pavement, repainting, replacement of trail amenities and furnishings (benches, bike racks, lighting, etc.), as well as more substantial projects like hillside stabilization, bridge replacement, and trail surface repaving. Minor remedial maintenance can be completed on a five to ten-year cycle, while larger projects should be budgeted on an as-needed or anticipated basis.

Required maintenance will vary considerably depending on trail type and context. For example, a paved trail may need less annual surface maintenance, yet may require landscaping, mowing, and considerable remedial maintenance costs. Natural surface trails are more succeptible to degradation and erosion over time, as both heavy use and significant weather events can have a significant impact on trail quality and user experience. However, construction and maintenance costs for natural surface trails are usually considerably less. In order to ensure continued maintenance of the trail network over time, the City of Bella Vista and the POA should develop an operations and maintenance plan, as mentioned above. This plan will create clear expectations for roles, responsibilities, and contributions to the long-term success of the trail network.

Resource Stewardship and Enhancement

Stewardship is the long-term care and oversight of the greenway as a resource that adds value to the community and enhances the quality of life for citizens of the region. The Bella Vista trail and greenway network will require active stewardship by those who operate the facility, as well as those who benefit from it, to ensure this valuable piece of recreation and transportation infrastructure can provide a high level of service and a quality user experience for generations to come. This will require coordination among all agencies involved in the care and maintenance of the greenway and its surroundings, protection of the resource from external factors that may reduce its value and utility, and encouragement of community participation in the upkeep and enhancement of the greenway as a valuable community asset. The City of Bella Vista, the POA, and their community partners should identify stewardship activities and develop a timeframe or schedule for completion. Such activities may include identifying and managing trail steward volunteers to remove trash or monitor activities on the trail, annual trail cleanup events, coordinating the use of the trails for educational activities, and increasing public awareness of the trail system as a resource to diverse members of the community.

Appendix Item 2: Online Public Survey Results and Analysis

Memorandum

To: Members of the Steering Committee

From: Dennis Blind, Alta Planning + Design

Date: November 13, 2014

Re: Final Online Survey Results

1 Introduction

Online surveys provide a quick, accessible platform for interested community members to share their input and ideas for bicycling, walking, and trails. For this planning process, an online survey was developed to better understand residents' and visitors' current walking and bicycling activity, potential trail locations and types, and other important factors that can help inform the final plan. Between June 18, 2014 and November 11, 2014, 156 individuals have completed the 19-question survey. This memorandum summarizes these survey responses in order to identify common needs and desires for new trail development, locate areas in need of improvement, and develop plan recommendations that are responsive to the ideas and concerns of Bella Vista residents. Responses to each question are summarized below. To differentiate between the needs and preferences of Bella Vista residents and those who live outside of Bella Vista (yet still have an interest in trails and trail development in the City), responses have been further analyzed to isolate these potential user groups and ensure the needs and preferences of Bella Vista residents are properly identified and addressed.

2 Respondent Demographics

Four of the 19 survey questions relate to respondent demographics. Responses to these questions help identify characteristics of potential trail users and provide an understanding of the community residents interested in trail development in Bella Vista and in the planning process itself.

2.1 Gender

More males responded to the survey than females. Fifty-eight percent of all respondents identified as male, while only 42% identified as female. The gender gap was smaller for Bella Vista residents (53% male to 47% female), but significantly larger for non-Bella Vista residents (89% male to 11% female).

2.2 Age

Nearly two in every three survey respondents were over the age of 40. Young adults between the age of 18 and 30 represented just 5% of responses all, while no individuals under the age of 18 completed the online survey. These results can be seen clearly in Figure 1 below.

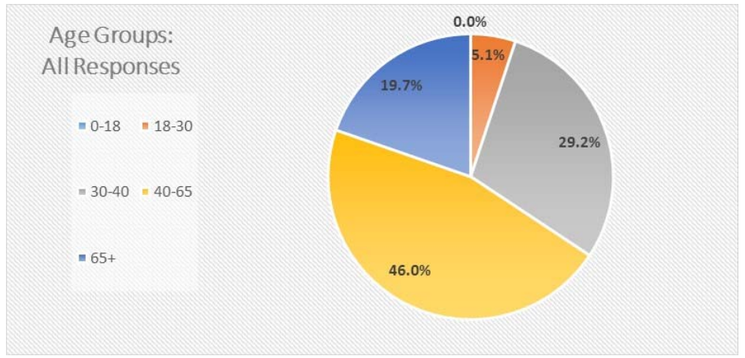


Figure 1: Age Groups - All Responses

When residents and non-residents are separated, a number of unique demographic trends emerge. Figure 2 on the following page highlights these differences. For instance, residents age 65 and older comprise a larger portion of resident survey respondents (23%) compared to total survey respondents (just 19%). Among non-residents, on the other hand, not a single individual age 65 or older completed the survey. Among non-resident survey respondents, individuals between the ages of 40-65 account for 72% of responses, while this age group only accounts for 41% of resident survey respondents.

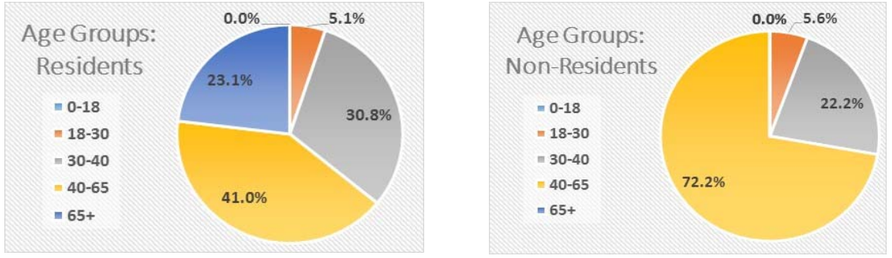


Figure 2: Age Groups - Residents and Non-Residents

2.3 Place of Residence

Eighty-seven percent of survey respondents live in the City of Bella Vista, while only 13% of respondents reside elsewhere. The participation of individuals residing in neighboring communities, albeit small, suggests an interest in trails and greenways within the City of Bella Vista, hinting at the city's potential to be a destination for hiking, bicycling, and trail-oriented activity.

2.4 Place of Employment

When survey respondents were asked where they work, 84 of the 122 survey respondents answered the question, perhaps an indication that some respondents do not work in one of the communities listed, are currently not employed, or would prefer not to disclose such information. While "retired" was not listed as an option, 19% of individuals identified themselves as retired in the "Other" comment field. Of those respondents who are employed, 39% work in neighboring Bentonville, 20% in Bella Vista, 12% in Rogers, and a total of 10% that work in Springdale, Fayetteville, Missouri, Little Rock, Pea Ridge or Gentry. Figure 3 below displays the place of employment for all survey respondents.

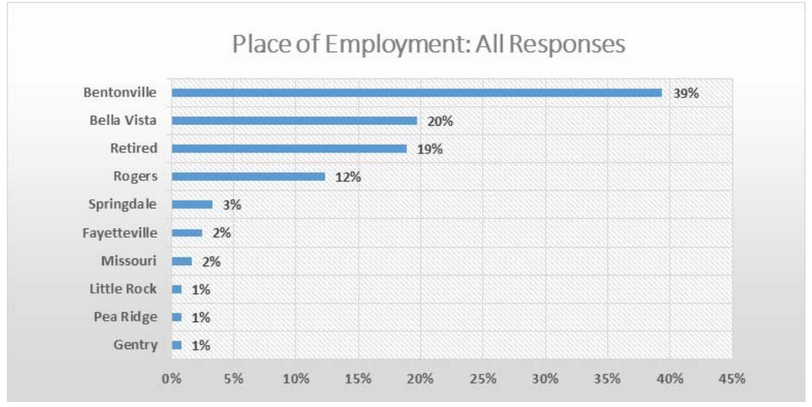


Figure 3: Place of Employment - All Responses

An analysis of survey respondents' employment location by place of residence corroborate earlier-discussed age group data. Twenty three percent of survey respondents living in Bella Vista are over the age of 65, and 22% of survey respondents living in Bella Vista are retired. Place of employment is fairly similar, with the majority of both resident and non-resident respondents working in Bella Vista and Bentonville. The majority of Bella Vista residents travel outside of Bella Vista for work.

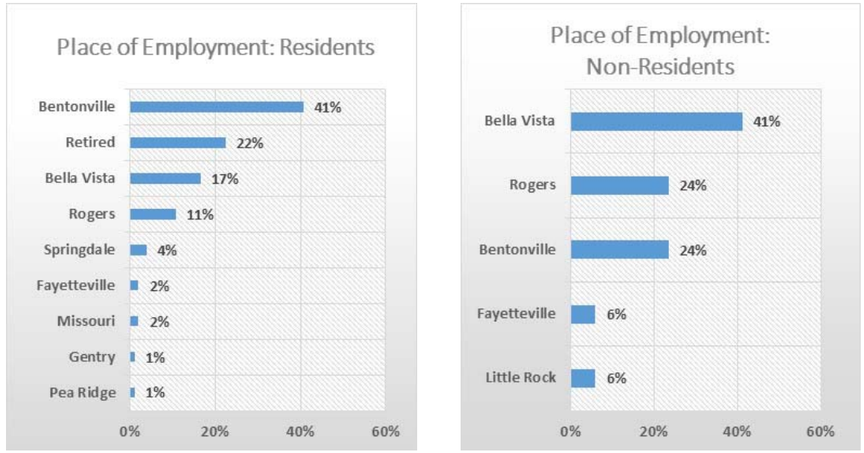


Figure 4: Place of Employment - Residents and Non-Residents

3 Importance of Trails and Greenways in Bella Vista

Bella Vista residents and other survey respondents feel strongly about the importance of trails and greenways as a means of community improvement. Eighty-nine percent of respondents feel that the goal of creating trails and greenways in Bella Vista is *very important*, while an additional 10% feel it is *somewhat important*. Only 2 respondents (roughly 1%) feel that creating trails and greenways is not important. Of the 18 non-residents that answered this question, 17 individuals feel that the goal of creating trails and greenways in Bella Vista is *very important*.

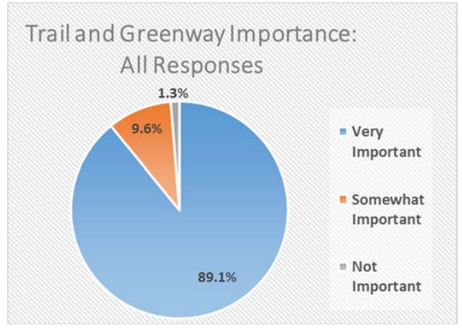


Figure 5: Importance of Trails and Greenways – All Responses

When asked about the benefits of trails and greenways, survey respondents acknowledged the diverse advantages that a trail and greenway network can bring to the community. Figure 6 below indicates that survey respondents believe the exercise and recreation benefits of a trail system to be the most valuable for the community. Other important benefits include connectivity throughout the community (58%), transportation (42%), and economic stimulation and tourism (38%).

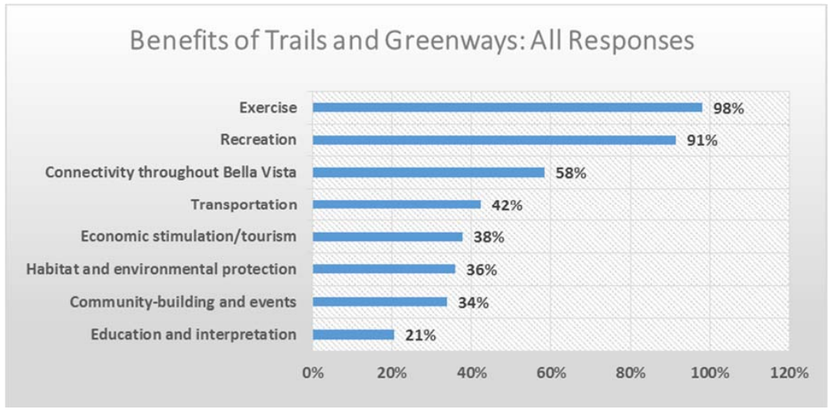


Figure 6: Benefits of Trails and Greenways - All Responses

Looking more closely at Bella Vista residents, there are some minor differences in desired benefits. While residents still believe that trails and greenways provide important exercise and recreation benefits, there is a stronger emphasis on connectivity. More than 60% of residents responding to the survey have identified connectivity throughout Bella Vista as an important benefit that trails and greenways can provide.

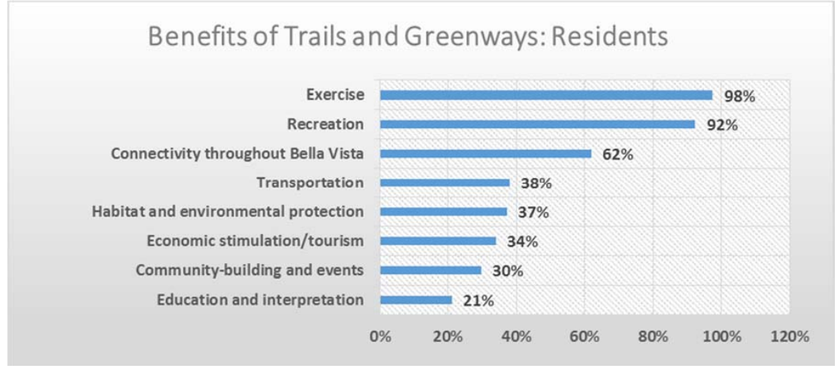


Figure 7: Benefits of Trails and Greenways - Residents

Figure 8 below displays non-residents' opinions with regard to the benefits of trails and greenways. Non-residents see trails and greenways in the same light as Bella Vista residents, both groups valuing exercise and recreation over all other benefits. However, non-residents focus more on trails and greenways as catalysts for

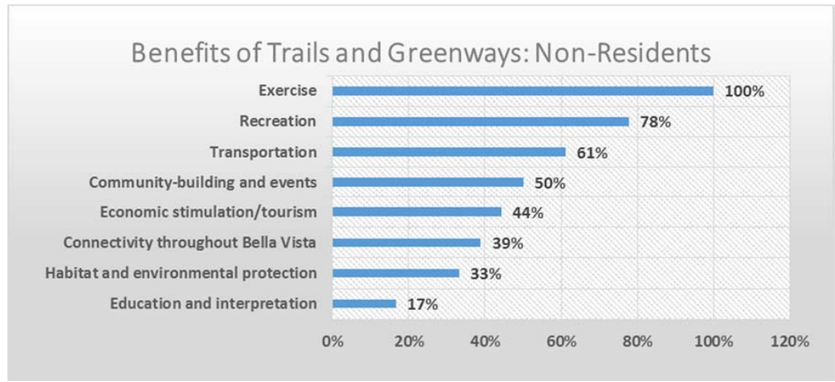


Figure 8: Benefits of Trails and Greenways - Non-Residents

community-building and events (50%), place greater emphasis on trails and greenways for transportation (51%), and feel more strongly about the economic development and tourism potential of trails and greenways (44%).

4 Trail and Greenway Activity

The use of trails and greenways is often closely aligned with the community's perception of the benefits derived from the presence of an interconnected trail system. For example, if recreation and exercise are important trail-related benefits, it should come as no surprise that the many residents will use the trail system for exercise and recreation purposes. When asked for what purposes respondents use (or would like to use) trails and greenways, survey respondents' answers reflected their desire for healthy lifestyles, outdoor activities, and connecting with nature. Seventy-eight percent of all respondents identified *fitness and recreation* as the highest priority. The second greatest reason survey respondents use (or would like to use) trails and greenways is to get outside and enjoy nature. Hiking, bicycling, and other trail-related activities as a social activity or for transportation purposes received the lowest rankings. There was minimal difference in responses provided from residents and non-residents.

4.1 Frequency of Trail and Greenway Use

The frequency with which survey respondents use trails and greenways again indicates Bella Vista as an outdoor recreation community. As displayed in Figure 9 below, 44% of all respondents use trails and greenways several times a week, and nearly 40% use trails and greenways a few times a month. Only three survey respondents replied that they do not use trails and greenways at all.

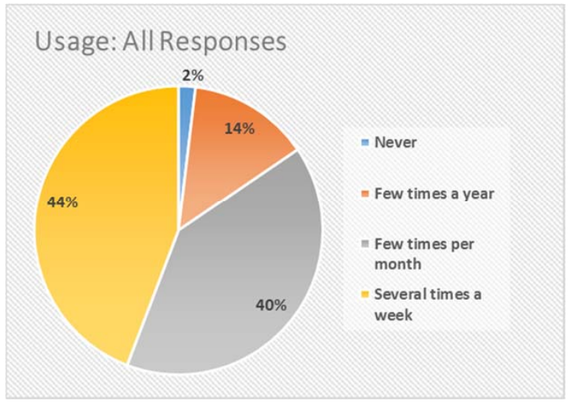


Figure 9: Trail and Greenway Usage - All Responses

Figure 10 on the following page displays the frequency of trail and greenway usage by residents and non-residents. As expected, non-residents interested in the Bella Vista's trail and greenway planning process use trails and greenways at slightly higher rates than Bella Vista survey respondents, who are more representative of the community at large. Just over 80% of

residents use trails and greenways on a weekly or monthly basis, compared to almost 90% of non-residents. While 3 Bella Vista residents responded that they never use trails and greenways, all non-resident survey respondents use trails and greenways at least a few times a year.

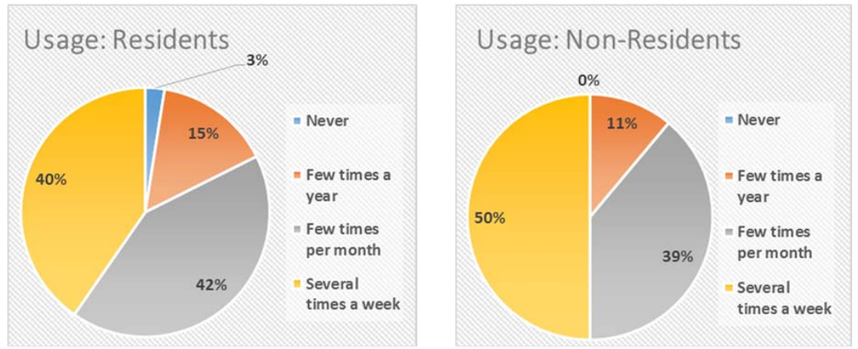


Figure 10: Trail and Greenway Usage - Residents and Non-Residents

While trail usage by survey respondents is relatively high, an increase in trails and greenways within the City of Bella Vista could have a significant impact on bicycling, walking, hiking, and other trail activities. Over 97% of survey respondents indicated that they would use trails and greenways more often if they were in closer proximity. Only four survey respondents suggested that they would not use trails more often if they were located closer to the community. Residents and non-residents did not differ in their responses to this question.

4.2 Trail and Greenway Activities

Trails and greenways offer a variety of recreation and non-motorized transportation activities to the communities they serve. Walking, hiking, bicycling, mountain biking, running, inline skating and skateboarding are all popular trail-related activities. The diversity of trails in Bella Vista and the surrounding communities provide opportunities for all of these activities and more. When survey respondents were asked to identify all activities for which they use trails and greenways, walking/hiking (90%) and bicycling (62%) topped the list, followed by mountain biking (45%) and running (39%). Figure 11 displays each activity type asked in the question and the number of responses each received. Additional write-in responses include activities such as wildlife sighting, geocaching, and dog walking (added to Figure 11).

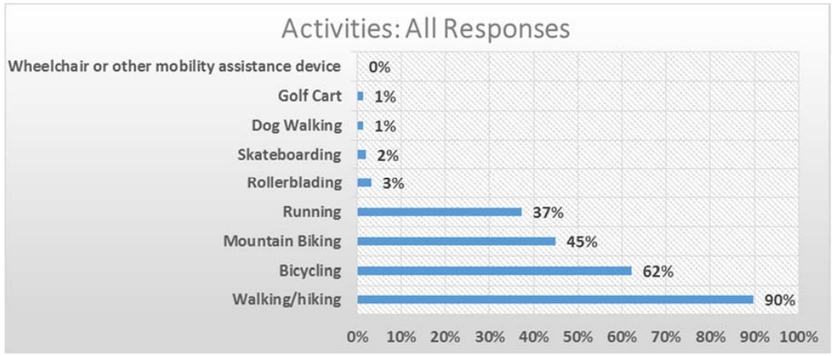


Figure 11: Trail and Greenway Activity Types - All Responses

Figure 12 below looks more closely at the activities for which Bella Vista residents use trails and greenways. Walking/hiking and bicycling remain the top two activities, but more Bella Vista residents prefer running to mountain biking.

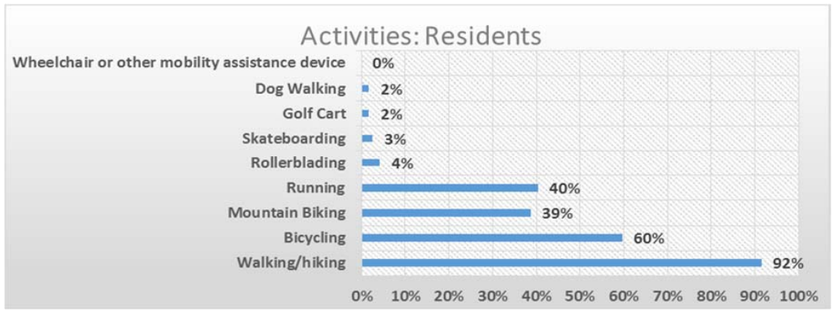


Figure 12: Trail and Greenway Activities - Residents

As Figure 13 shows on the following page shows, non-Bella Vista residents place different value on different trail-related activities. While walking/hiking remains the most common activity among both residents and non-residents, mountain biking is the second most common trail-related activity among non-residents, with a participation rate at 72%. Bicycling, which is the second most-common activity among Bella Vista residents at 60%, is still below the rate of participation for non-residents at 67%. One significant difference is that the range of activity types for non-residents (four unique activities) is significantly lower than non-residents, who also undertake activities like golf cart driving, rollerblading, skateboarding, and dog walking.

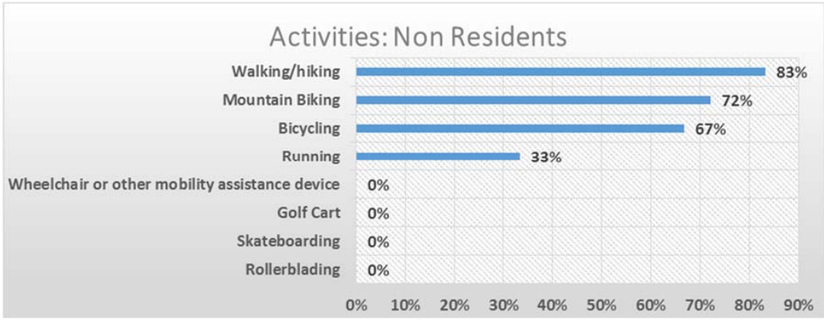


Figure 13: Trail and Greenway Activities - Non-Residents

5 Desired Trail and Greenway Improvements

The City of Bella Vista and neighboring municipalities currently offer a variety of trail and greenway facilities, from regional greenways like the Razorback Regional Greenway to natural surface trails like the Tanyard Creek Nature Trail and the Blowing Springs Biking and Walking Trails. While these trails do provide some recreational and exercise outlets for the community, survey respondents and community members have expressed their desires for an expanded, more robust and more connected system of trails. To better understand how this expanded trail network can meet the needs and desires of the community, the survey included a number of questions regarding the types of trails desired, locations that residents and visitors would like to access via a connected trail system, and what types of amenities can support and enhance existing and future trails.

5.1 Trail Types

Trails and greenways vary in surface type, width, character, intended users, and many other qualities. When asked which trail types survey respondents would most like to see in Bella Vista, shared use paths and paved trails received the most support, as seen in Figure 14 on the following page, which displays support for each facility type as a percentage of total respondents. Shared use paths received support from 69% of all respondents, while paved trails received support from 60% of respondents. Single-use trails for walking and hiking received support from 46% of all respondents, and unpaved trails for hiking and bicycling received support from 45%.

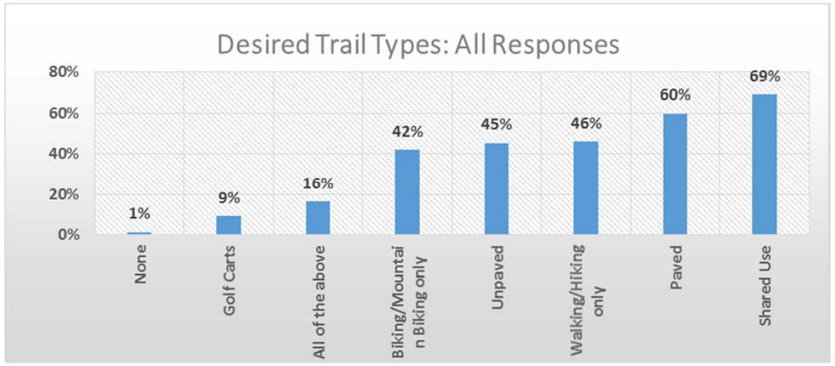


Figure 14: Desired Trail Types - All Responses

Some survey respondents expressed their desire to see golf carts accommodated in the trail system, a reflection of the community's strong connection to its seven golf courses. A separate question asked survey respondents about their feelings toward accommodating golf carts on a trail and greenway network. While only 7% expressed unconditional support, an additional 51% expressed their support for golf carts utilizing the trail and greenway system, but only in certain locations.

Figure 15 below isolates desired trail types by Bella Vista residents only. Residents have a stronger desire for shared use paths, paved trails, and golf carts than non-residents.

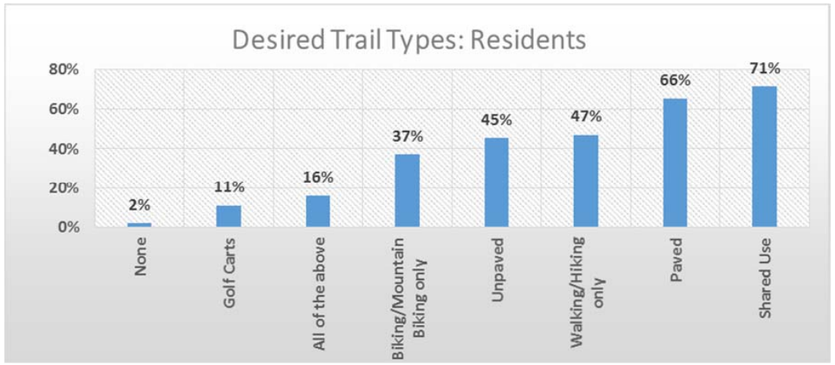


Figure 15: Desired Trail Types - Residents

Figure 16 shows non-Bella Vista residents' desired trail types. As is evident below, non-residents have a different set of preferences and desires for future trail types in Bella Vista. Sixty-seven percent of non-residents would like to see more single-use trails for biking and mountain biking, more than any other trail type. An additional 50% desire more shared use paths, while 44% would prefer to see more single-use trails for walking and hiking.

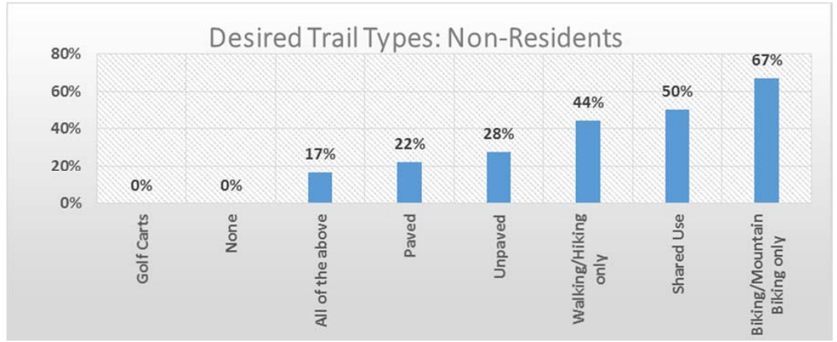


Figure 16: Desired Trail Types - Non-Residents

5.2 Trail Placement and Location

The placement of trails and greenways is dependent upon many conditions, including available land and right-of-way, topographical and soil conditions, and adjacent land uses. Survey respondents were asked where trails should be located within the City of Bella Vista to help determine future trail alignments. Their responses are shown in Figure 17 below. Placement of trails along property owner association (POA) property received the

Figure 17: Trail Placement and Location - All Responses

greatest support (73% of respondents), followed by roadway rights-of-way (64%), along utility corridors (48%), and within drainage areas (38%). Most trail systems incorporate facilities within all of these possible locations in order to enhance connectivity and accessibility while also providing a diversity of user experiences. Additional write-in comments pointed to the need for mountain bike and nature trails in the hilly, wooded POA land, as well as the potential for trails along utility corridors to reduce the presence of unauthorized vehicles like four wheelers and trucks that "disrupt the solitude of our community and erode the environment." Residents and non-residents did not differ significantly in their responses to this question.

An additional question pertaining to trail location asked survey respondents if the Razorback Regional Greenway, which currently ends at Lake Bella Vista, should be extended north through the City of Bella Vista. Ninety-five percent of respondents expressed their support for extending the greenway into Bella Vista, a sign of the community's desire to increase regional connectivity for non-motorized transportation and recreational opportunities. Ninety-five percent of Bella Vista residents that responded to the survey were in favor of an extension to the Razorback Regional Greenway, while only 89% of non-residents are in favor of an extension.

5.3 Trail Amenities

Trail amenities like benches, maps, kiosks, drinking fountains, restrooms, and bicycle racks add to the character and quality of a trail or greenway and support a positive and enjoyable user experience. When survey respondents were asked which amenities should be incorporated into the design of future trail projects, directional signs (73%), restrooms (62%), maps and kiosks (61%) and benches (50%) received support from at least half of all respondents, as displayed below in Figure 18 below. While these amenities are

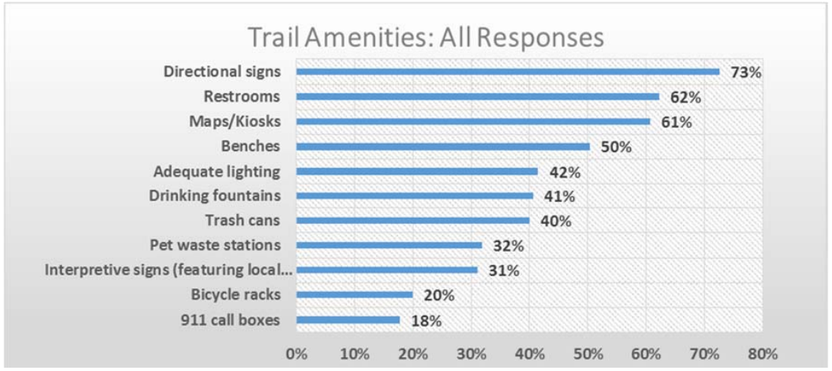


Figure 18: Trail Amenities - All Responses

not mutually exclusive, the incorporation of these additional design elements can impact project cost and therefore must be carefully considered in future trail projects.

When isolating Bella Vista residents from non-residents in Figure 19 below, we can see that Bella Vista residents' responses are very similar to those of the entire pool of responses shown in Figure 17. Directional signs, restrooms, maps and kiosks, and benches are the amenities that receive that most support, and in the same order as above. Non-residents, on the other hand, display a preference for maps and kiosks, restrooms and directional signs, as well as drinking fountains.

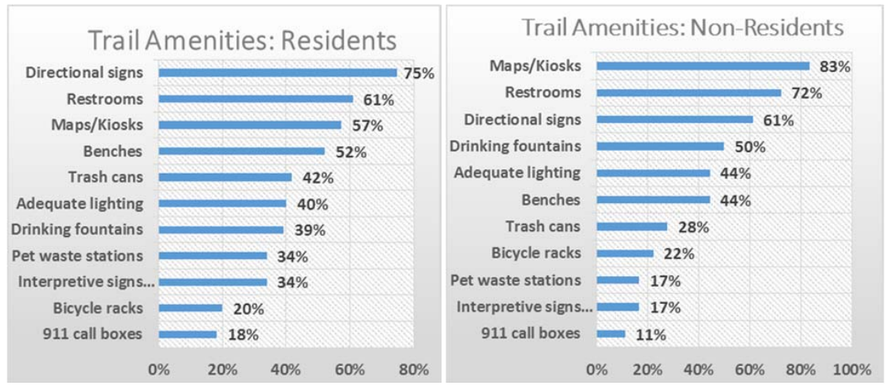


Figure 19: Trail Amenities - Residents and Non-Residents

5.4 Trail and Greenway Destinations

While some park trails, nature trails, and loop trails maybe located within a park or similar contained area, other trails are linear in nature, which means they can connect multiple destinations and provide both recreation and transportation benefits to the community. Survey respondents were asked to rank their top three destinations that they'd like to access by trails and greenways. Local parks and lakes and the Razorback Regional Greenway received the greatest support. Eighty-one percent of respondents chose parks and lakes as one of their top three choices, and 67% chose the Razorback Regional Greenway. The Metfield and Kingsdale Recreation Complexes (32%), grocery stores and commercial areas (29%), and families, friends and neighbors (28%) received substantial support as well.

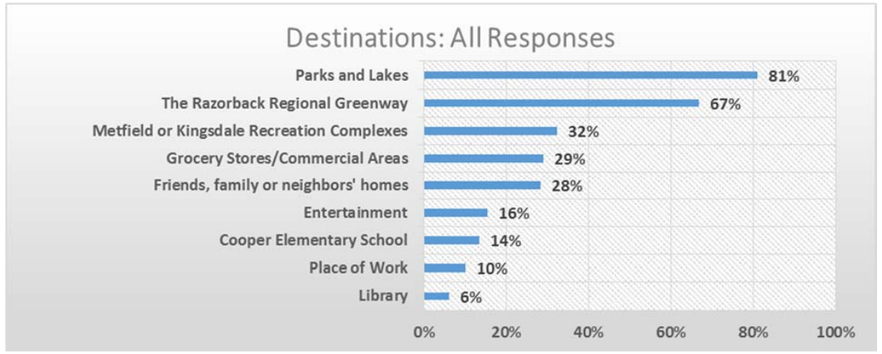


Figure 20: Destinations - All Responses

Because Bella Vista residents comprise the overwhelming majority of all survey respondents, their responses pertaining to desired destinations to access via trails and greenways, as shown in Figure 21 below, are very similar to those in the figure above. The differences in these two figures are minor, and the order in which destinations are listed is exactly the same.

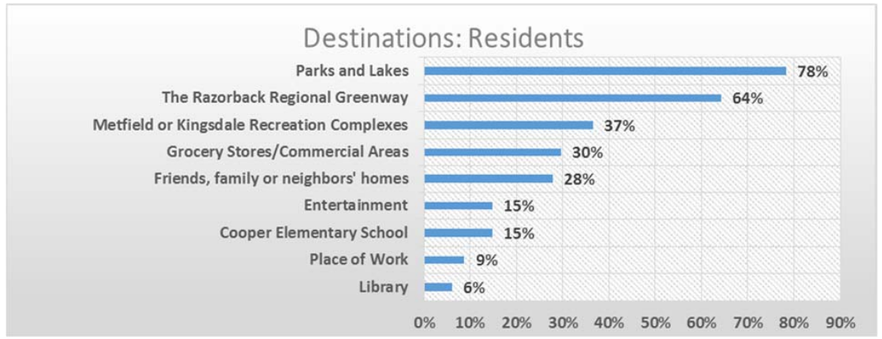


Figure 21: Destinations - Residents

When responses from non-residents are compared to all responses, or even those of Bella Vista residents, some minor differences appear. Figure 22 shows non-resident respondents' preferences for destinations to be accessed by trails and greenways. There is a stronger emphasis on accessing parks and lakes, as well as the Razorback Regional Greenway. In addition, non-residents have a greater interest in accessing friends, family, and neighbors that live throughout the city. There is less of an interest in accessing the Metfield and Kingsdale Recreation Complexes, which are amenities only available to property owners and their guests.

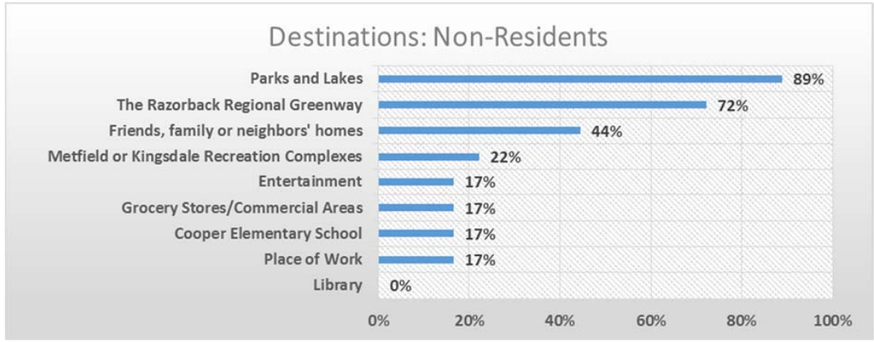


Figure 22: Destinations - Non-Residents

6 Barriers to Trail and Greenway Use in Bella Vista

Barriers to trail and greenway use can come in a variety of forms, from natural barriers like physical terrain and inclement weather, to physical barriers like unsafe street crossings or a lack of nearby trails, to personal barriers like a lack of time or interest. Survey respondents were asked to identify the three barriers that they consider most discouraging to trail and greenway use. Figure 23 on the following page shows the responses for all survey respondents with regard to the barriers that discourage them from using trails and greenways. The three responses selected the most were motor vehicle traffic and narrow roads (63% of all respondents), lack of safe connections (50%), and lack of information about existing trails and greenways (49%). It is important to note that the two potential barriers to trail and greenway usage that received the lowest scores are lack of interest and lack of time. Only 16% of all survey respondents felt that a lack of interest prevented them from using trails and greenways in Bella Vista.

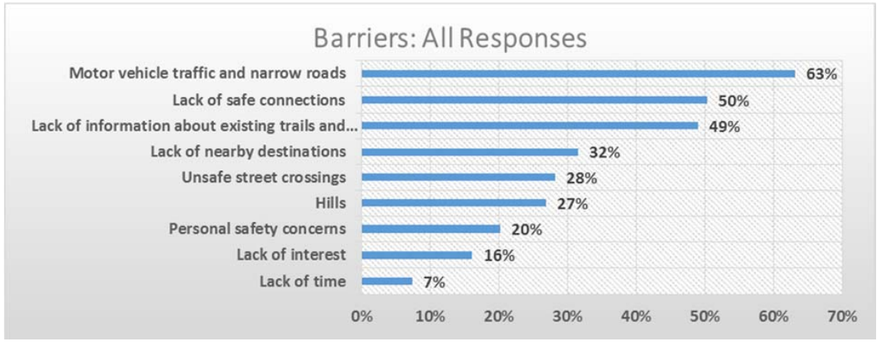


Figure 23: Barriers to Trail and Greenway Use - All Responses

The responses of Bella Vista residents closely mirror the responses of all users. Again, this is primarily because Bella Vista residents comprise the overwhelming majority of all survey respondents. Figure 24 shows the responses of Bella Vista residents only. When compared to all survey responses, the Bella Vista responses retain the same order, except for two items: unsafe street crossings and hills. Residents believe the hills to be a bigger barrier than non-residents.

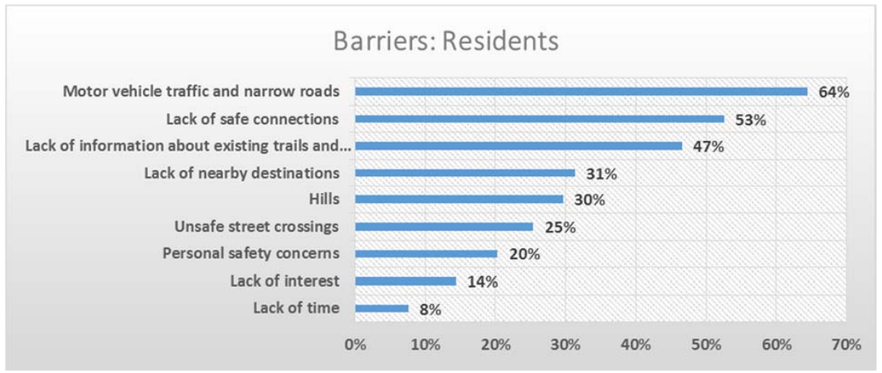


Figure 24: Barriers to Trail and Greenway Use - Residents

The barriers that prevent non-residents from utilizing trails and greenways in Bella Vista are different from those affecting community residents, as seen in Figure 25 on the following page. While both groups feel that motor vehicle traffic, narrow roads, and a lack of safe connections discourage trail and greenway usage, non-residents feel more strongly about the lack of information about existing trails and a lack of destinations,

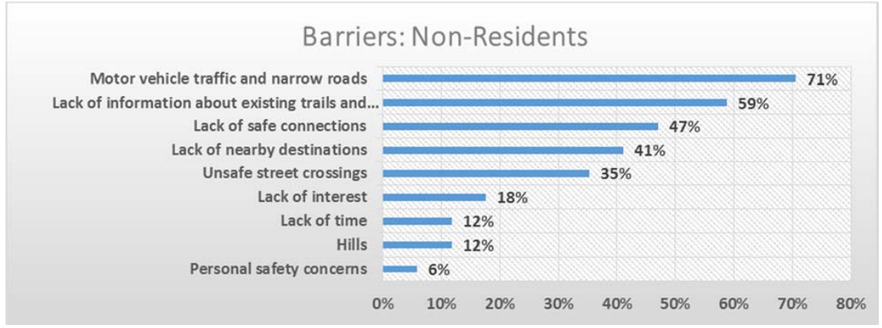


Figure 25: Barriers - Non-Residents

which might also have to do with a lack of an intimate knowledge of the community and its amenities. Hills are less of a barrier to non-residents, a greater percentage of whom are bicyclists and ride more frequently than Bella Vista residents.

While some barriers like lack of interest and lack of time can be difficult, if not impossible, to address, other barriers limiting trail and greenway use can be reduced or even eliminated. Design solutions and safety countermeasures can be incorporated into future trail and greenway design in order to mitigate many of the barriers that prevent individuals from accessing and utilizing trails and greenways in Bella Vista. Other barriers, such as a lack of information or personal safety concerns, can be addressed through programs that educate and encourage community members to get out and use the trails.

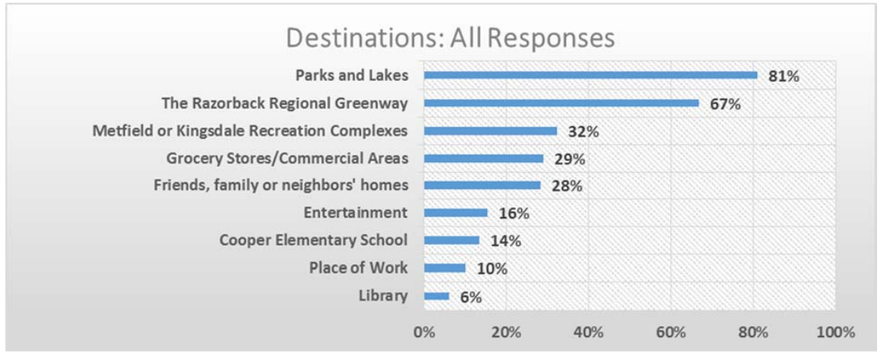


Figure 20: Destinations - All Responses

Because Bella Vista residents comprise the overwhelming majority of all survey respondents, their responses pertaining to desired destinations to access via trails and greenways, as shown in Figure 21 below, are very similar to those in the figure above. The differences in these two figures are minor, and the order in which destinations are listed is exactly the same.

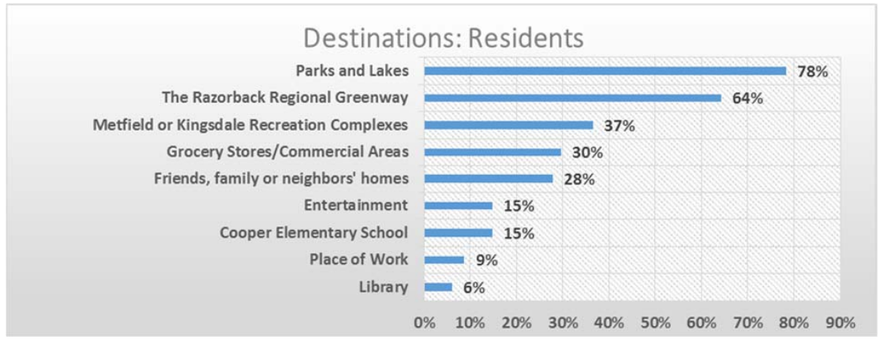


Figure 21: Destinations - Residents

When responses from non-residents are compared to all responses, or even those of Bella Vista residents, some minor differences appear. Figure 22 shows non-resident respondents' preferences for destinations to be accessed by trails and greenways. There is a stronger emphasis on accessing parks and lakes, as well as the Razorback Regional Greenway. In addition, non-residents have a greater interest in accessing friends, family, and neighbors that live throughout the city. There is less of an interest in accessing the Metfield and Kingsdale Recreation Complexes, which are amenities only available to property owners and their guests.

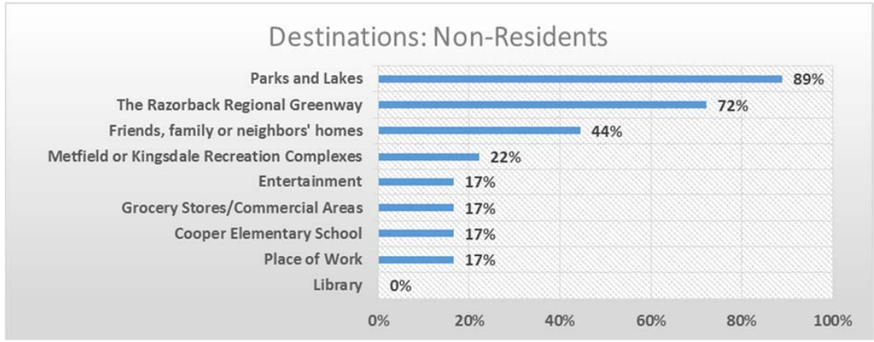


Figure 22: Destinations - Non-Residents

6 Barriers to Trail and Greenway Use in Bella Vista

Barriers to trail and greenway use can come in a variety of forms, from natural barriers like physical terrain and inclement weather, to physical barriers like unsafe street crossings or a lack of nearby trails, to personal barriers like a lack of time or interest. Survey respondents were asked to identify the three barriers that they consider most discouraging to trail and greenway use. Figure 23 on the following page shows the responses for all survey respondents with regard to the barriers that discourage them from using trails and greenways. The three responses selected the most were motor vehicle traffic and narrow roads (63% of all respondents), lack of safe connections (50%), and lack of information about existing trails and greenways (49%). It is important to note that the two potential barriers to trail and greenway usage that received the lowest scores are lack of interest and lack of time. Only 16% of all survey respondents felt that a lack of interest prevented them from using trails and greenways in Bella Vista.

Appendix Item 3: Walk Bike Northwest Arkansas - Bella Vista Community Plan

WALK BIKE NORTHWEST ARKANSAS

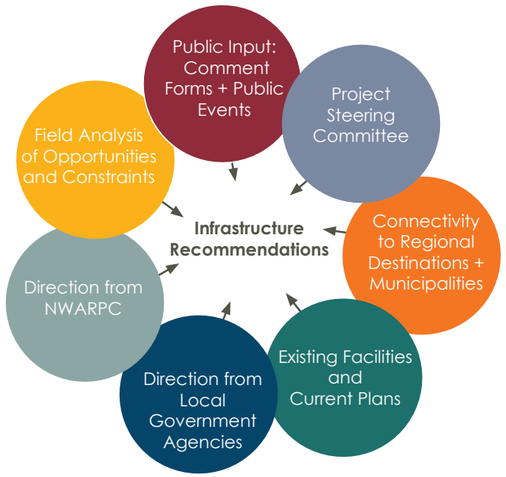
Chapter Contents:

COMMUNITY PLANS OVERVIEW

This section details existing and proposed bicycle and pedestrian transportation and recreation facilities for the 25 NWA communities with a population of 1,000 or more. The network includes on-road and off-road facilities such as shared use paved trails, separated bikeways, sidewalks, and shared roadways. This section also covers the methodology for developing the network, descriptions of the facility types, and maps and descriptions by community.

Methodology

The recommended bicycle and pedestrian network was designed by assembling all existing recommendations and information from current plans and studies. A thorough analysis with geographic information systems and fieldwork was conducted to examine the region for recommendations. These components combined with public input from local officials and community members were essential building blocks for these plans. A summary of inputs is shown below.



BELLA VISTA WALK/BIKE ACTION PLAN

OVERVIEW

Bella Vista is a suburban community in northern Benton County whose city limits border Bentonville, Gravette, Pea Ridge, and Missouri. Bella Vista has a population of approximately 27,000 throughout 46 square miles of the Ozark Mountains. Strong opportunities for bicycle and pedestrian improvements include extending the Razorback Regional Greenway north to the Missouri border, and developing east-west links to this future extension. A 2010 Draft Trail Master Plan identified opportunities to link destinations throughout Bella Vista, including to the existing natural surface mountain biking/hiking trails at Blowing Springs. A 2014 Trail Master Plan effort is underway to continue planning and development of the trail network.

Regional Destinations

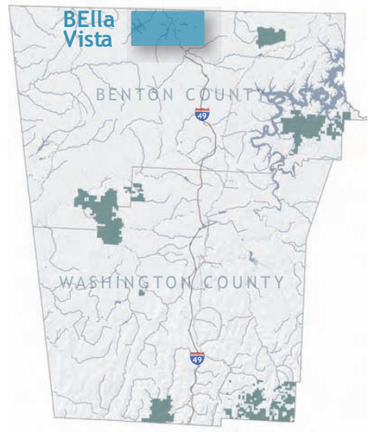
- Blowing Springs Trails
- Town Center

Other Key Destinations

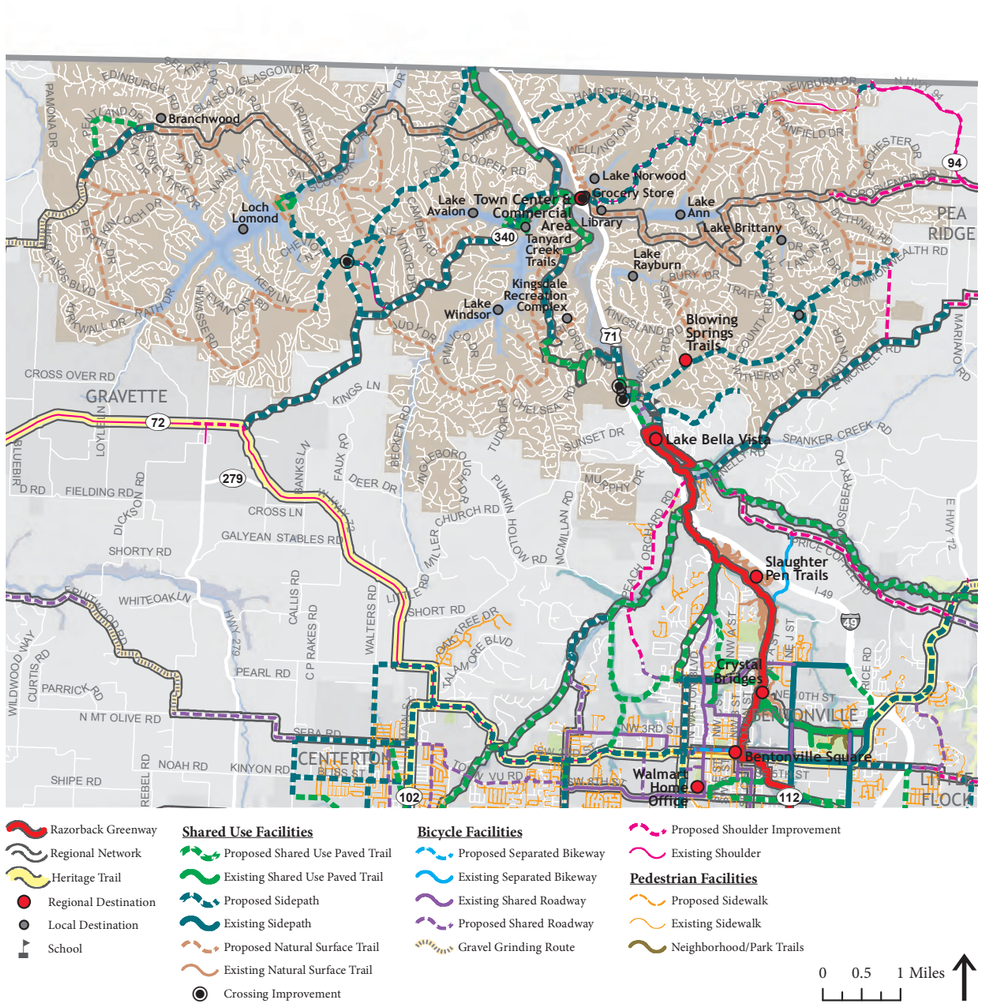
- Recreation Complexes - Kingsdale and Metfield
- Seven Lakes (Ann, Avalon, Brittany, Lomond, Norwood, Rayburn, Windsor)
- Grocery store – Allen's
- Library
- Tanyard Creek Trails
- Commercial areas
- Branchwood Recreation Area

Clockwise from upper left: Sidepath opportunities along roadway corridors; Blowing Springs Trails; Trail opportunities along POA lands, valleys, and creeks

REGIONAL LOCATION MAP



MAP 6.1 BELLA VISTA COMMUNITY PLAN



Key Needs & Recommendations for Bella Vista

Topic	Key Needs & Notes
Regional Needs	» Extend Razorback Regional Greenway north from Lake Bella Vista to the Missouri border » Develop links to Blowing Springs trails » Develop links to Bella Vista's town center » Connect to Pea Ridge, Gravette, Centerton, and Bentonville
Other Key Needs	» Develop links to seven lakes and access areas » Connect to Branchwood and develop trail system » Link residential areas to central north/south corridor » Link to grocery store and local library » Develop links to Recreation Complexes » Build upon Draft 2010 Master Trail Plan
Facility Recommendation	**Recommendation Detail**
Sidewalks	» Bella Vista does not currently have a sidewalk network. Develop sidewalks as needed, likely to be minimal due to opportunities for shared use paved trail development.
Intersections	» US 71 Crossings: US 71 is a high speed, high traffic volume roadway barrier north/south through Bella Vista. Crossing opportunities at signalized intersections, over-crossings, and under-crossings of the highway should be explored.
On-Street Bike Facilities	» On-street bike facilities will be minimal in Bella Vista due to its unique geography, POA lands, and its physical layout.
Shared Use Facilities	» Shared Use Paved Trails and Sidepaths: Geography, existing pattern of development, roadway configurations, and POA property are factors that have created possibilities for an extensive shared use paved trail and sidepath network. A 2010 Draft Master Trail Plan shows a network of trails utilizing roadway corridors and POA land to connect destinations throughout Bella Vista. Master Planning efforts are underway in 2014 to solidify this network and next steps for trail network development. Key components of this network include: » Razorback Regional Greenway to Missouri border: This extension will link Lake Bella Vista to the Missouri border, generally along Little Sugar Creek and the US 71 corridor. » East/West Connections: Similar to the watershed and roadway network, east/west bicycle and pedestrian opportunities should funnel toward a future northern extension of the Razorback Regional Greenway, weaving throughout destinations and neighborhoods.
Other Topics	**Notes**
Multi-Modal Connections	» Bella Vista is not directly connected by public transit. Ozark Regional Transit serves the urban NWA corridor.
Heritage Trail	» The NWA Heritage Trail does not connect through Bella Vista.

Appendix Item 4: Walk Bike Northwest Arkansas - Bella Vista Community Plan

WALK BIKE NORTHWEST ARKANSAS

Program & Policy Recommendations

The table below presents a summary of recommendations organized by category which identifies the recommended program, time-frame for implementation, and lead entity. The table identifies Bronze (short-term), Silver (mid-term) and Gold (long-term) actions that can help achieve recognition as a Walk and Bicycle Friendly Community.

For many of these actions, there is an opportunity for the communities of the region to share resources, with individual communities participating in regional programs, attending trainings or meetings convened at the regional scale, or implementing regionally developed programs at the local level. Recommendations specific to the Six E's (Engineering, Education, Encouragement, Enforcement, and Evaluation (with Equity considered broadly through all)) are found below. Economy is included as an additional category to help demonstrate the benefits of implementing all of the E's. Refer to Appendix D for detailed guidance on implementing each item, including a description of recommended actions, regional and local roles, as well as sample programs.

Program	Term	Lead Entity
Engineering		
Complete Streets Policy	Medium	City of Bella Vista
ADA Transition Plans	Medium	City of Bella Vista
Non-Motorized Transportation Training for Engineers and Planners	Short	NWARPC, City of Bella Vista
Bicycle Parking	Medium	NWARPC, Northwest Arkansas Council, City of Bella Vista, POA
Enhanced Funding for Bike and Pedestrian Projects	Medium	NWARPC, City of Bella Vista, POA
Bike/Pedestrian Facility Inclusion in Engineering Documents, Plans, and Drawings	Short	NWARPC, City of Bella Vista
Education		
Network with existing capacity in NWA	Medium	City of Bella Vista, POA, City of Fayetteville, City of Bentonville, City of Rogers, Bike Bentonville, BCO, IMBA, FAST
Encouragement		
Walking and Biking Promotion Activities	Short	City of Bella Vista, POA, Bella Vista Bike Club
Equity Oriented Programs	Short	NWARPC, Northwest Arkansas Council, City of Bella Vista, POA
Bike and Walk Month	Medium	City of Bella Vista, POA, Bella Vista Bike Club
Mountain Bike Trail Network Development	Medium	City of Bella Vista, POA, FAST, IMBA
Enforcement		
Targeted Bicycle and Pedestrian Enforcement	Short	City of Bella Vista Law Enforcement
Trainings for Law Enforcement Officers	Short	NWARPC, City of Bella Vista Law Enforcement
Bike and Foot Patrol Units	Medium	City of Bella Vista Law Enforcement
Annual Meeting with Police, Planners and Engineers to Evaluate Collision Trends, Infrastructure Needs and Areas for Targeted Enforcement	Medium	NWARPC, City of Bella Vista
Evaluation		
Active Transportation Committee	Short	NWARPC, City of Bella Vista, POA
Evolve with/from Recreation Committee		
Bicycle, Pedestrian, and Trail Count Program	Short	City of Bella Vista, POA
Walking, Bicycling and Trails Report Card	Medium	City of Bella Vista, POA
Economy		
Bicycle and Walking Tourism Strategy	Medium	Northwest Arkansas Council, City of Bella Vista, POA