



# BICYCLE & PEDESTRIAN MASTER PLAN

THE CITY OF ROCK HILL, MISSOURI

*adopted by resolution of the*  
**CITY OF ROCK HILL BOARD OF ALDERMAN**

**APRIL 17, 2012**



## **Acknowledgements**

### **Steering Committee**

Lisa Hilpert, Hudson Elementary School Principal  
John Simpson, Webster Groves School District  
Assistant Superintendent  
Carey Bundy, Great Rivers Greenway  
Diane Lamboley, Webster Groves/Shrewsbury Area  
Chamber of Commerce  
Cynthia Cantrell, Trailnet School Specialist  
Tobi Moriarity, Saint Louis County Department of  
Highways & Traffic  
Karen Yeomans, Missouri Department of Transportation  
Al Hayden, City of Rock Hill Director of Parks and Recreation  
Jennifer Yackley, City of Rock Hill Assistant to the  
City Administrator/City Clerk  
The Honorable Daniel DiPlacido, Mayor  
Matthew Reardon, Parks and Recreation Commission President  
David Lancaster, Planning and Zoning Commission Chair

### **Stakeholder Interviewees**

Ms. Stephanie Stuppy  
Ms. Julie Morgan  
Mr. Daniel DiPlacido  
Mr. David Lancaster  
Mr. Robert Weider  
Ms. Leon-Marie Benner  
Ms. Diane Lamboley  
Mr. Don Bene

### **Elected Officials**

The Honorable Daniel DiPlacido, Mayor  
Alderman Mr. Phillip Scherry, Ward 1  
Alderman Mr. Ed Johnson, Ward 1  
Alderman Mr. Edward Mahan, Ward 2  
Alderman Mr. Chris Graber, Ward 2  
Alderman Ms. Mary Wofford, Ward 3  
Alderman Mr. Robert Weider, Ward 3

### **City of Rock Hill Administrators**

George Liyeos, City Administrator  
Ron Meyer, Director of Public Works  
Al Hayden, Director of Parks and Recreation  
Chief Paul Arnett, Chief of Police  
Chief Kevin Halloran, Fire Chief  
Ann Robertson, Assistant City Administrator/Finance Director  
Jennifer Yackley, Assistant to the City Administrator/City Clerk

### **Technical Advisory Committee**

Al Hayden, City of Rock Hill Director of Parks and Recreation  
Jennifer Yackley, City of Rock Hill Assistant to the  
City Administrator/City Clerk

### **Planning Commission**

Mr. David Lancaster, Chair  
Mr. Art Korte, Secretary  
Mr. Harlem Anderson  
Mr. Arthur Mitchell  
Mr. Tim Norton  
Mr. Jeffrey Pounds  
Mr. Clint Heath  
Mr. Brian Schenck  
Mr. Robert Weider, Board Liaison

### **Planning Consultants**

Ann Rivers Mack, Trailnet; Executive Director  
Cindy Mense, Trailnet; Chief Operating Officer  
Kevin Neill, Trailnet; Community Planning Manager  
John T. Hoal, Ph.D., AICP, H3 Studio; Founding Principal  
Timothy Breihan, A.AIA, H3 Studio; Project Manager  
Laura L. Lyon, CNU, H3 Studio; Vice President/Senior Planner  
Margaret Van Bakergam, H3 Studio; Public Health Policy Intern



# Table of Contents

Introduction.....	4
Planning Process.....	5
Existing Conditions.....	7
Plan Goals, Vision & Objectives.....	10
Bicycle & Pedestrian Master Plan Facility Networks.....	14
Implementation Guide.....	20
Bicycle & Pedestrian Policies, Operations & Maintenance.....	30
Opinion of Probable Cost.....	32
Funding Sources.....	38
Appendix.....	50





## Introduction

Located at the historic crossroads of Old State Road (Manchester Road) and Military Road (Rock Hill Road) overlooking Deer Creek, the City of Rock Hill is one of the oldest settlements in St. Louis County. Rock Hill has a rich historical legacy that is reflected in many of the city's current assets and amenities. Rock Hill possesses numerous quiet, residential neighborhoods accented by historic homes, walk-able neighborhood parks and schools, and bustling central business district along Manchester Road. However, Rock Hill's existing infrastructure, geography, and the difficulties typical of car-centric commercial development and cul-de-sac streets result in a number of issues and challenges to increasing bike-ability and walk-ability throughout the City.

The Bicycle and Pedestrian Master Plan builds upon Rock Hill's significant regional connectivity and location, existing and proposed recreational amenities, and reputation as a quiet and secure residential community. The Plan focuses on improving existing commercial districts and neighborhoods, supporting the creation of new walk-able and bike-able developments, and connecting neighborhoods to parks and schools through new pedestrian and bicycle infrastructure. Through the integration of public health and urban design, the Bicycle and Pedestrian Master Plan provides viable transportation options for all residents.

The Bicycle and Pedestrian Master Plan is a partnership between The City of Rock Hill and Trailnet, a non-profit working throughout the St. Louis Metropolitan Area to foster healthy and active communities through innovative programs, planning, and policies that promote walking and bicycling. The Bicycle and Pedestrian Master Plan is funded through a grant from the Missouri Department of Transportation (MoDOT) *Surface Transportation Program (STP)* for the development of Walk-able Bike-able Communities (Phase 3.) The Plan is orchestrated to achieve the consensus vision of Rock Hill's residents by developing a walk-able and bike-able community through the creation of new pedestrian and bicycle facility and streetscape improvements, programming, operations, and maintenance initiatives throughout the City of Rock Hill.

## Planning Process

The Planning Process for the Bicycle and Pedestrian Master Plan is divided into a Pre-Planning stage and four Phases covering each of the project tasks and work products. These Phases are: **Phase A: Analysis of Existing Data & Conditions**; **Phase B: Plan Goals, Vision & Objectives**; **Phase C: Bicycle & Pedestrian Plan (including Design Options)**; and **Phase D: Implementation & Funding Strategy**. This process took place over the course of fourteen months and included regular meetings with the Bicycle and Pedestrian Master Plan Steering Committee, Stakeholder Interviews, two Public Workshops, and special workshops with City staff, Commissioners, and elected officials.

### BICYCLE & PEDESTRIAN PLAN STEERING COMMITTEE

The Steering Committee consisted of representatives from the City of Rock Hill, Great Rivers Greenway, Saint Louis County Highways and Traffic, MoDOT, elected officials, and Rock Hill residents and business owners. The Steering Committee served as a representative, decision-making body to guide the planning process, lead public outreach efforts and spread the word about the Plan, and provide feedback and critique on the various phases of the Plan. The Steering Committee met four times throughout the process, at the conclusion of each project phase.

### STAKEHOLDER INTERVIEWS

The City of Rock Hill and the Steering Committee identified fourteen Stakeholders to be interviewed as part of the Planning Process. Stakeholders included Rock Hill residents, business and property owners, merchants, institutions, and other interested parties. These *Stakeholder Interviews*, along with a professional analysis of bike-able and walk-able conditions in Rock Hill, resulted in a list of *Consensus Issues* that were developed and revised through a process of public review and feedback.



## **BICYCLE & PEDESTRIAN MASTER PLAN PUBLIC ENGAGEMENT SCHEDULE**

### **STAKEHOLDER INTERVIEWS**

*August 26-27, 2010*

### **STEERING COMMITTEE MEETING 01 - Analysis of Existing Data & Conditions**

*September 23, 2010*

### **PUBLIC WORKSHOP 01 - Analysis of Existing Data & Conditions**

*November 15, 2010*

### **STEERING COMMITTEE MEETING 02 - Vision, Goals & Principles**

*February 10, 2011*

### **CITY STAFF JOINT WORK SESSION - Vision, Goals & Principles**

*February 15, 2011*

### **STEERING COMMITTEE MEETING 03 - Master Plan Design Options**

*March 22, 2011*

### **PUBLIC WORKSHOP 02 - Master Plan Design Options**

*April 26, 2011*

### **PLANNING & ZONING COMMISSION PRESENTATION - Master Plan**

*May 17, 2011*

### **BOARD OF ALDERMAN PRESENTATION - Master Plan**

*May 17, 2011*

### **ADOPTION OF BICYCLE & PEDESTRIAN MASTER PLAN BY BOARD OF ALDERMAN RESOLUTION**

*April 17, 2012*

## **DEVELOPMENT OF THE PLAN**

The *Consensus Issues* and summary of the site analysis conducted in Phase A were presented to the Steering Committee at their first meeting and to the Rock Hill community in the first Public Workshop. Following this Workshop, the Steering Committee approved the draft *Plan Goals, Vision, and Objectives* for the Bicycle and Pedestrian Master Plan. The *Plan Goals, Vision, and Objectives* represent the consensus values of the Rock Hill community for bike- and walk-ability and serve as the foundation for the Bicycle and Pedestrian Master Plan.

Next, a draft *Bicycle and Pedestrian Facility Network* was developed. This included particular routes and alignments for proposed facility types—including on-street bike lanes, off-street paths, streetscape improvements, greenways, and trails—and design options for each facility type. These design options were presented to the Steering Committee at their third meeting and to the Rock Hill community in the second Public Workshop for review and feedback.

Utilizing the public input gathered at the second Public Workshop in coordination with the Rock Hill Board of Alderman and the Planning and Zoning Commission, the City developed the final Bicycle and Pedestrian Master Plan. The Plan includes the final *Bicycle and Pedestrian Facility Network*, an *Implementation Guide* outlining specific *Projects*, an *Opinion of Probable Cost*, and a description of possible *Funding Sources*. The Bicycle and Pedestrian Master Plan was endorsed by the Planning and Zoning Commission and adopted by the City of Rock Hill Board of Alderman.

This comprehensive sequence of public engagement, summarized in detail to the left, has resulted in a Plan and implementation strategy developed with absolute transparency and supported by a broad base of public consensus among neighborhood residents. These are the hallmarks of a successful public planning process.



## Existing Conditions

The City of Rock Hill is located in the heart of Saint Louis County's central corridor at the intersection of Manchester Road and Rock Hill Road/South McKnight Road. The 1.1 square-mile city, incorporated in 1929, straddles Deer Creek and is situated on the historic settlement and homestead of James Collier Marshall. Marshall built historic Fairfax House and the Rock Hill Presbyterian Church—on a promontory overlooking Deer Creek—from which the City of Rock Hill takes its name.

Rock Hill is known as a quiet bedroom community in the Saint Louis region. Census data from 2010 shows that, among the City's 2,064 households, approximately 42 percent are married couples and 25 percent have children under the age of 18. Median age is 37 years, with an even distribution of age ranges. Rock Hill is also relatively diverse, with non-caucasians making up about 30 percent of population. Median household income is relatively high for the region at \$65,438 annually.

### ISSUES & CHALLENGES

Rock Hill is divided into quadrants by the major arterial corridors of Manchester Road and Rock Hill/S. McKnight Road. These arterials are the only continuous roads through the City; alternative routes to these arterials do not exist. Pedestrians and cyclists are therefore forced to use or cross these arterials, with negative perceptions of safety and comfort due to the volume and speed of traffic. Additionally, these arterials are under the jurisdiction of the St. Louis County or MoDOT. Proposed plans or improvements to these roads must therefore be approved by their governing agencies.

Most of Rock Hill's existing residential neighborhoods—particularly west of Rock Hill Road—were built following World War II. As a result, they are laid out in a curvilinear pattern with poor visibility, dead-end cul-de-sacs, and a lack of sidewalks and pedestrian amenities. Combined with areas of steep topography, this lack of connectivity and infrastructure makes walking and biking in Rock Hill challenging. Finally, neighborhoods to the east of Rock Hill Road and the Rock Hill Industrial Court in the City's First Aldermanic Ward are perceived as both physically and symbolically disconnected from the rest of the City; these neighborhoods often self-identify with the neighboring communities of Webster Groves and Brentwood more than with Rock Hill.





SIDEWALK CONDITIONS ON MANCHESTER ROAD



HENSLEY PARK

This phenomenon is indicative of one of the key challenges that faces the City; Rock Hill does not have a strong sense of self-identity or a consensus vision of the City's future. This perception is compounded by the fact that Rock Hill's central business district developed not as a pedestrian oriented downtown but as an auto-centric strip along Manchester Road. As a result, Rock Hill does not possess the identifiable "main street" or that nearby communities like Webster Groves, Maplewood, and Kirkwood have been able to successfully market over the past decade or more. This lack of self-identity has been a stumbling block to coordinated community development efforts in Rock Hill. The comprehensive list of *Consensus Issues* and an illustrative map are presented on the following page.

## ASSETS, OPPORTUNITIES & SUCCESSES

Despite these challenges, the City of Rock Hill has demonstrated its enthusiasm and capacity to plan for its future in a sustainable way. The City has recently completed large and successful commercial developments at the crossroads of Manchester Road and Rock Hill Road, and is currently undertaking major street and sidewalk reconstruction of Rock Hill Road to improve walk- and bike-ability and traffic safety. Rock Hill has also been successful in attracting and retaining locally- and regionally-significant businesses, including Schiller's Camera and Video, The Book House, RSI Kitchen and Bath, Farotto's Restaurant, the Train Wreck Saloon, and Hacienda Mexican Restuarent. These businesses are regional institutions and contribute to the local flavor of Rock Hill's business district.

Rock Hill is also part of the locally-renowned Webster Groves School District, which draws many residents of neighboring communities to Steger Sixth Grade Center and Hudson Elementary School. Furthermore, Rock Hill is located along Deer Creek less than an eighth-mile from the Great Rivers Greenway Deer Creek and Shady Creek Greenway trailhead. This provides a significant opportunity for Rock Hill residents to access the regional connections and amenities of the GRG River Ring greenway network, as well as for greenway users to access Rock Hill's business district. Finally, Rock Hill is recognized as a quiet and desirable residential community that is nevertheless well-connected to major regional commercial and employment centers in surrounding Brentwood, Clayton, and Richmond Heights. This sense of being "far away but close to it all" was the most common reason given by residents for why they choose to live in Rock Hill. The Bicycle and Pedestrian Master Plan is intended to unify these assets and opportunities under the consensus vision of a bike-able and walk-able community supported by vibrant commercial districts, great streets, and public spaces.



## CONSENSUS ISSUES

1. Manchester Road is perceived as unsafe for bikes & pedestrians.
2. Rock Hill Road and McKnight Road lack sufficient pedestrian amenities, including sidewalks and traffic buffers.
3. Rock Hill Road is perceived as unsafe to cyclists because of its narrow width and volume of traffic.
4. McKnight Road feels unsafe to cyclists because of traffic speed and volume.
5. There are fundamental issues of topography and flooding due to Rock Hill's location in the Deer Creek drainage basin.
6. Cul-de-sac streets limit vehicular circulation; cul-de-sac street system is supported by a pedestrian & bike-only network.
7. Neighborhoods east of Rock Hill Road are perceived as isolated from the rest of the city.
8. Parks are not well-located to serve users; they are located on periphery of the city and many are located behind homes and businesses. School grounds do not operate as public park space.
9. Limited right-of-way width and lot depth along Manchester Road creates tension between auto-dependent and walk-able, main street development.
10. The City of Rock Hill is perceived as lacking a clear sense of self-identity and identity within the St. Louis region to help guide decisions in development and marketing.
11. Manchester Road is a State Highway which implies the City cannot implement improvements without the consent and approval of MoDOT.
12. South McKnight Road is a County highway and not under the jurisdiction of Rock Hill; the City cannot plan, make recommendations for, or implement bike and pedestrian improvements without the consent and approval of St. Louis County Highways & Traffic.



# Vision

*“Establish a new identity for the City of Rock Hill as a premier walk-able, bike-able, and sustainable community in Saint Louis County by encouraging environmental stewardship, strengthening social capital, and facilitating economic development through the creation and support of authentic places framed by great streets and the public realm.”*

## Plan Goals, Vision & Objectives

The City of Rock Hill recognizes the unique opportunities presented by its central and accessible location, the characteristic landscape of Deer Creek, and residents who are committed to the development of a safe, bike-able, and walk-able community. In order to capitalize on these opportunities and make Rock Hill a premier walk-able and bike-able community, the Bicycle and Pedestrian Master Plan intends to fulfill the following *Goals*:

- 1) **Establish the City of Rock Hill as “the Green Ring” at the end of the Great Rivers Greenway Deer Creek & Shady Creek Greenway** to provide an identity to Rock Hill as a walk-able and bike-able community regionally-connected to greenways, recreational amenities, commercial districts, and employment centers.
- 2) **Recreate the Manchester Road corridor** as a vibrant, walk-able, bike-able, and regionally-identifiable City Center for the City of Rock Hill.
- 3) **Create an “equity of mobility” within Rock Hill by providing universally-accessible transportation alternatives**, including biking, walking, and transit for all residents on a daily basis, including children, the elderly, the disabled, and the disadvantaged.
- 4) **Encourage walking and cycling as a legitimate modes of transportation and to promote public health and healthy and active lifestyles** through facility and infrastructure improvements; programming; special events and activities; public outreach; data collection; and safety education and enforcement.

The Bicycle and Pedestrian Master Plan *Vision* unifies these Goals and outlines the consensus values and desires of the Rock Hill community. The Bicycle and Pedestrian Master Plan *Objectives*, presented on the following pages, outline specific strategies to achieve these Goals and fulfill the project *Vision*.



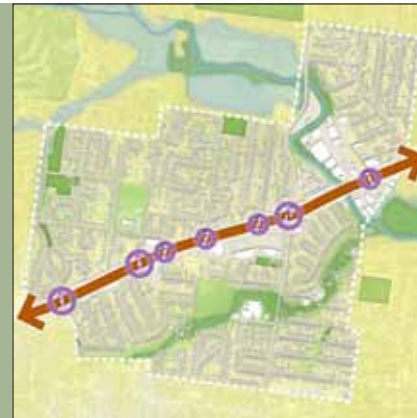
## Objective #1

**Improve the safety of Manchester Road for pedestrians and cyclists** through the implementation of continuous raised curbs, sidewalks, traffic buffers, and enhanced street lighting and public realm amenities.



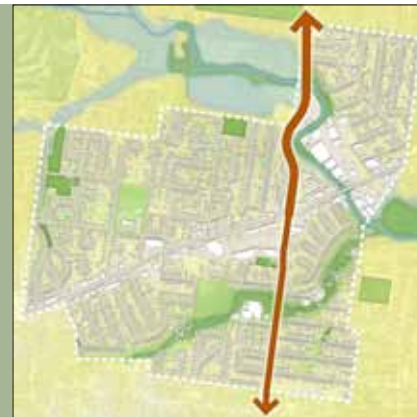
## Objective #2

**Improve local connectivity, particularly for school children, across Manchester Road** through the implementation of enhanced safe crosswalks, traffic-calming measures, safety enforcement, and programming.



## Objective #3

**Enhance the bike-ability and walk-ability of Rock Hill Road and McKnight Road** by improving perceived and actual pedestrian and bike safety through the implementation of continuous sidewalks, traffic-calming measures, safe crossings, signage, and safety enforcement.



## Objective #4

**Create a true downtown or city center for Rock Hill** by improving accessibility for all modes of transit along the Manchester Road corridor and supporting the creation and retention of businesses that attract regional visitors while supporting local residents.



## Objective #5

**Increase the grain and frequency of connections within and between neighborhoods** by utilizing existing paths and developing new paths and right-of-ways to provide pedestrian linkages connecting cul-de-sacs and dead-end streets; implement a wayfinding programs that includes branding, iconographic signage, and a web-based shared mapping program.



## Objective #6

**Increase connectivity with neighboring municipalities and amenities** with a loop trail network of interconnected parks, trails, paths, and recreational areas by utilizing existing creeks, waterways, floodplains, and right-of-ways to connect to the proposed Deer Creek & Shady Creek Greenway.





## Objective #7

**Promote an increase in walking and cycling through the use of Complete Streets principles and the creation of great streetscapes:**

develop sustainable landscapes; improve the condition and accessibility of existing sidewalks and facilities; construct new sidewalks where possible; develop traffic-calming design, signage, programming, and enforcement; and implement of ongoing operations and maintenance.



## Objective #8

**Develop and implement a Form-Based Code for the Rock Hill Central Business District/Manchester Road Corridor** to help ensure that future redevelopment along Manchester Road supports Complete Streets standards and contributes to the development of Manchester Road as a walk-able and bike-able district.



## Objective #9

**Encourage continued increases in daily walking and cycling** by establishing achievable benchmarks and time lines and implementing an ongoing, scheduled data-collection program to establish baseline pedestrian and cycling data and to quantify improvements in walking and biking throughout the implementation of the Bicycle & Pedestrian Master Plan.



# Bicycle & Pedestrian Master Plan Facility Networks

The Bicycle and Pedestrian Master Plan consists of three primary *Facility Networks*. These *Facility Networks* are designed to support the needs and desires of the Rock Hill community that were identified in the public engagement process. These *Facility Networks* are:

**GREENWAY RING:** The Greenway Ring is an extension of the planned Great Rivers Greenway Deer Creek & Shady Creek Greenway that will terminate at a trailhead in Brentwood Park. The Greenway Ring consists of **multi-use, off-street trails**, existing **park pathways**, and **on-street, dedicated and shared bicycle facilities** that encircles the City of Rock Hill and the Manchester Road commercial corridor and connects Rock Hill's parks and schools. The Greenway Ring provides bicycle and pedestrian connections between Rock Hill and **regional destinations and amenities**.

**CITY CENTER:** Bicycle and pedestrian improvements to Rock Hill's major arterial streets—**Manchester Road, Rock Hill Road, and South McKnight Road**—transform the Manchester commercial corridor into a true walk-able and bike-able City Center for Rock Hill. Public space and infrastructure improvements frame policies and regulations that support **new, walk-able development** along Manchester Road to attract businesses and strengthen the local economy.

**PARK & SCHOOL LOOPS/LOCAL CONNECTOR STREETS:** Park and School Loops/Local Connector Streets consist of a combination of **off-street paths; on-street, dedicated and shared bicycle facilities; streetscape, sidewalk, and pedestrian-amenity improvements**, and **dedicated wayfinding signage**. Park and School Loops connect all of Rock Hill's parks and schools and are located on secondary- and neighborhood streets, away from higher volumes of vehicular traffic. Park and School Loops primarily serve **families, kids, and casual users** who walk and bike to local Rock Hill destinations and amenities.

The Bicycle and Pedestrian Master Plan *Facility Networks* are presented in detail on the facing page.



NEW SIDEWALK AND CURB IMPROVEMENTS ON  
ROCK HILL ROAD AT DES PERES AVENUE



## BICYCLE & PEDESTRIAN FACILITY NETWORK COMPONENTS

### GREENWAY RING

- A. Greenway Ring, South Branch
- B. Greenway Ring, North Branch
- C. Greenwood Park Spur
- D. Deer Creek Connector
- E. Oak Park Trail

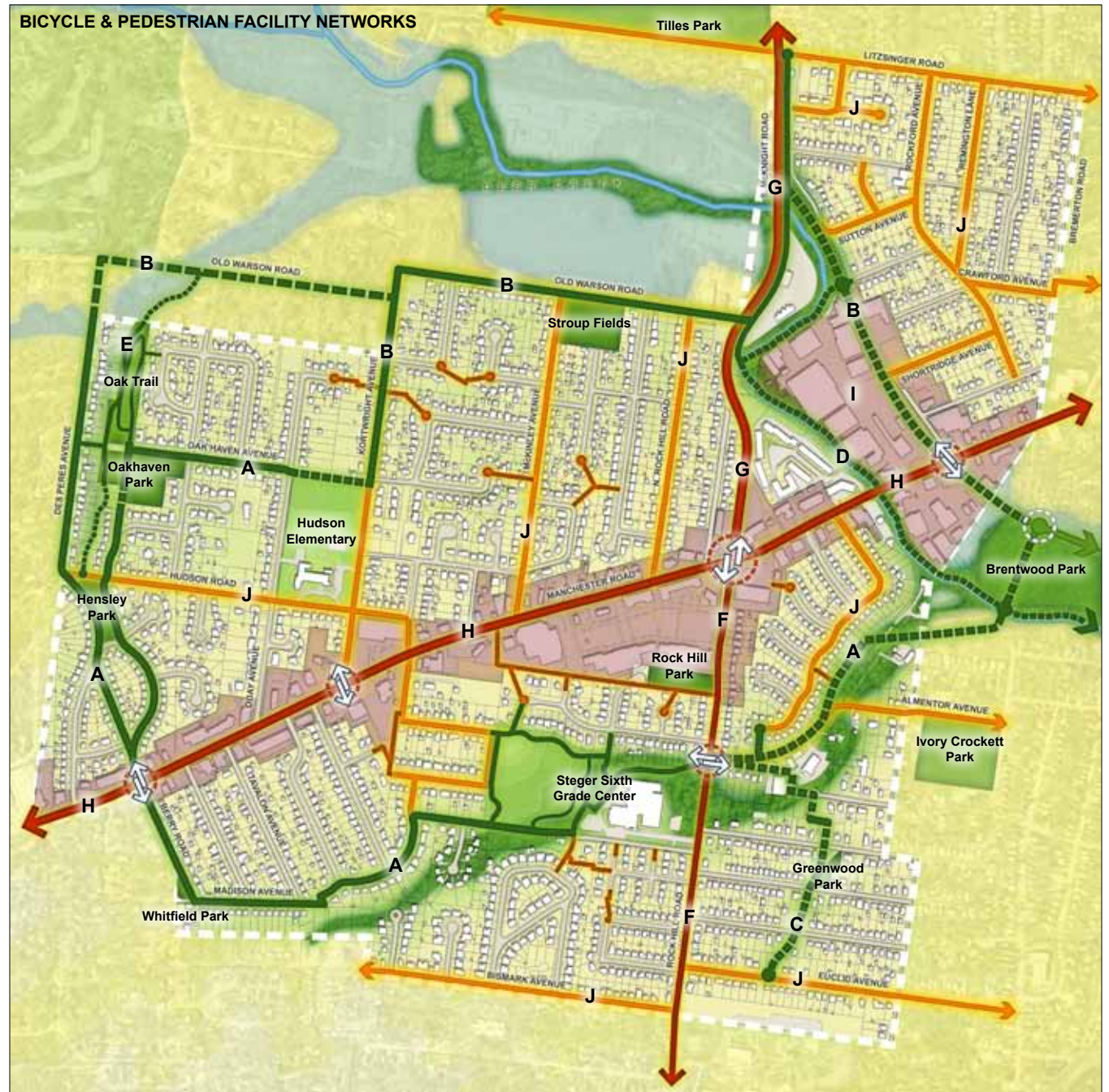
### CITY CENTER

- F. Rock Hill Road
- G. South McKnight Road
- H. Manchester Road
- I. Rock Hill Industrial Park

### PARK & SCHOOL LOOPS/LOCAL CONNECTOR STREETS

- A. Greenway Ring, South Branch
- B. Greenway Ring, North Branch
- C. Greenwood Park Spur
- D. Deer Creek Connector
- E. Oak Park Trail
- J. Neighborhood Streets

### PROJECT SECRET PATH





## Project Secret Path

Rock Hill is a small city of cul-de-sac streets and busy thoroughfares. This necessarily limits vehicular connectivity—particularly within residential neighborhoods—but facilitates pedestrian- and bike-only connectivity networks. Project Secret Path is focused toward providing safe alternative routes to major streets for schoolchildren, neighborhood kids, and residents.

Project Secret Path has authentic origins in the Bicycle and Pedestrian Master Plan public engagement process; at Public Meeting 01, children from Steger Sixth Grade center presented a school project that addressed their need to find a quick, safe, and fun path through their neighborhood to school. Project Secret Path has opened the possibilities for others to navigate the closed-off streets of Rock Hill. Using pictogram and iconographic signage representing: safe passage; good/bad neighbor; good/bad dog; welcome cut thru/do not enter; safe place; phone; play area this way; no bikes; and others, Project Secret Path formalizes existing informal cut-through connections. Implementation of three scopes, as outlined below:

**BASIC IMPLEMENTATION:** Basic implementation consists of special wayfinding signage at existing public right-of-ways, basic web-based mapping (utilizing map websites like <http://www.mapmyrun.com/> or shared route features in Google Earth/Google Maps) and/or social media groups, and safety programming, monitoring & enforcement of designated routes by the Rock Hill Police and Fire Departments and the Webster Groves School District.

**ENHANCED IMPLEMENTATION:** Enhanced implementation consists of public outreach and education programs through the neighborhood associations, scout troops, schools, and the City of Rock Hill. These programs aim to improve safety and increase participation by children and parents.

**COMPREHENSIVE IMPLEMENTATION:** Comprehensive implementation includes dedicated social media & web-based mapping with restricted, “invitation only” access, duplication as a web, iPhone, and Android mobile application, and the construction of off-street, footpath connectors between cul-de-sacs, dead-end streets, and from adjacent neighborhoods to parks and schools utilizing existing right-of-ways and negotiated right-of-ways along property lines.



EXISTING PEDESTRIAN CUT-THROUGH BETWEEN  
PLAINFIELD DRIVE AND DES PERES AVENUE



**PROJECT SECRET PATH  
TRAILS & FOOTPATHS**



## City Center Form-Based Code (FBC)

A Form-Based Code for Rock Hill's City Center can help ensure that new development along Manchester Road and in the Rock Hill Industrial Court will achieve the consensus vision of the Rock Hill community to create a bike-able, walk-able, and vibrant business district and regional identity to the city of Rock Hill. A Form-Based Code establishes massing, use, parking, and architectural standards for Rock Hill's City Center and codifies these standards into Rock Hill's municipal code and ordinances to allow walk-able, mixed-use development by right and not by special variance. The Form-Based Code is typically comprised of the following components:

The **Regulatory Plan** locates the zones of particular desired building character (Building Envelope Standards) in the Form-Based Code district.

**Building Envelope Standards** define the overall massing and character of buildings and may include Building Placement, Building Type, Allowable Encroachments, Allowable Use, Off-Street Parking Requirements, and other building massing requirements applicable to the *Building Envelope Standard Types*.

**Building Development Standards** define design guidelines for buildings and may include Access Requirements, Open Space Requirements, Materials, Architectural Standards, Massing and Articulation, and Frontage Types. Building Development Standards also direct the property developer/owner to included subsections such as *Architectural Standards* and *Frontage Types* for further details.

**Thoroughfare Standards** describe improvements to streets and public rights-of-way. This may include Street Configuration, Street Parking, Sidewalks, Medians, Bike Lanes, Tree Lawns, and others.

**Use Tables** indicate the conversion of existing St. Louis County Land Uses into more basic Land Use Descriptions as indicated in the Form-Based Code.

Creation of the Form-Based Code for the Rock Hill City Center should occur as part of the implementation of the Bicycle and Pedestrian Master Plan.



NEW COMMERCIAL DEVELOPMENT ALONG  
MANCHESTER AVENUE



**CITY CENTER FORM-BASED  
CODE DISTRICT**



# Implementation Guide

The *Implementation Guide* is the “how-to” of the Bicycle and Pedestrian Master Plan. The Plan encompasses over 5.5 miles of on-street bicycle and pedestrian facilities, streetscape enhancements, and 3.25 miles of off-street paths. Supported by programming and regulatory tools to facilitate new walk-able and mixed-use development, the Plan is an ambitious vision. The *Implementation Guide* organizes and prioritizes the various projects, as specified by the City of Rock Hill and the Plan Steering Committee.

The following tables are a detailed *Project List* and actions that the community intends to complete or consider in order to implement the Bicycle and Pedestrian Master Plan. These projects and actions consist of *Stages* with corresponding *Priority Levels* and time frames. Projects are categorized by the following *Priority Levels*:

<b>PRIORITY LEVEL 1</b> ( <i>SHORT-TERM; 1-5 Years</i> )
<b>PRIORITY LEVEL 2</b> ( <i>MEDIUM-TERM; 5-15 Years</i> )
<b>PRIORITY LEVEL 3</b> ( <i>LONG-TERM; 10-20 Years</i> )

This *Implementation Guide* is structured to support and facilitate existing and ongoing initiatives, prioritize projects with a high value-to-cost ratio in order to build momentum for the implementation of the Bicycle and Pedestrian Master Plan, and coordinate development to leverage each investment for maximum long-term impact. It does not prohibit existing or future projects from occurring outside the priority recommendations.

Following the *Project List*, the *Implementation Guide* contains descriptions of each project illustrating its components and *Stages*.



UTILITY REPAIRS ALONG HUDSON AVENUE



## PROJECT LIST

### ONGOING PROJECTS

<b>Rock Hill Road</b>	<b>Pedestrian Improvements</b>	Complete the ongoing reconstruction of Rock Hill Road, including new vertical curbs, sidewalks, and removal of raised parking shoulders.	<b>Priority Level 1</b>
	<b>Bicycle Improvements</b>	Implement enhanced Share-the-Road markings ("Sharrows") and signage; safety programming; and traffic and safety enforcement.	<b>Priority Level 2</b>
	<b>General Enhancements</b>	Address all intersections and crosswalks for universal accessibility, safety, and pedestrian comfort & walk-ability.	<b>Priority Level 1</b>
<b>Neighborhood Streets</b>	<b>Bicycle Improvements</b>	Implement streetscape improvements with sidewalks, vertical curbs, and tree lawns; enhanced Share-the-Road markings ("Sharrows") and signage; safety programming; traffic and safety enforcement; and right-of-way clearing and enforcement.	<b>Priority Level 1</b>
	<b>Pedestrian Improvements</b>	Implement enhanced streetscape improvements with street trees; signature street lighting; and OPTIONAL underground utilities.	<b>Priority Level 2</b>
	<b>General Enhancements</b>	Address all intersections and crosswalks for universal accessibility, safety, and pedestrian comfort & walk-ability.	<b>Priority Level 1</b>

### BICYCLE & PEDESTRIAN PLAN PROJECTS

<b>Project Secret Path</b>	<b>Basic Implementation</b>	Develop and implement route identification and special way-finding signage through community-based design charrettes; safety programming; safety monitoring; and enforcement.	<b>Priority Level 1</b>
	<b>Enhanced Implementation</b>	Develop and implement outreach programs through Rock Hill neighborhood associations, scout troops, schools, the police and fire departments, and the City of Rock Hill to encourage the participation of childrens and adults.	<b>Priority Level 2</b>
	<b>Comprehensive Implementation</b>	Develop and implement social media- and web-based mapping with restricted, invitation-only or registration-based access; duplicate mapping as a web, iOS, and Android mobile app.	<b>Priority Level 2</b>
	<b>General Enhancements</b>	Implement pedestrian pathway repairs, improvements, and right-of-way clearance and enforcement. Address all intersections and crosswalks for universal accessibility, safety, and pedestrian comfort & walk-ability.	<b>Priority Level 1</b>

<b>PRIORITY LEVEL 1 (SHORT-TERM; 1-5 Years)</b>
<b>PRIORITY LEVEL 2 (MEDIUM-TERM; 5-15 Years)</b>
<b>PRIORITY LEVEL 3 (LONG-TERM; 10-20 Years)</b>

## PROJECT LIST

<b>Greenway Ring</b>	<b>South Branch</b>	Plan and implement the South Branch of the Greenway Ring from the planned Deer Creek & Shady Creek Greenway to Hudson Elementary School via Steger Sixth Grade Center/Computer School and Berry Road as shown.	<b>Priority Level 1</b>
	<b>North Branch</b>	Plan and implement the North Branch of the Greenway Ring from Hudson Elementary School to Rock Hill Industrial Court via Old Warson Road and OPTIONAL Sebago Creek connectors as shown.	<b>Priority Level 2</b>
	<b>General Enhancements</b>	Implement pedestrian infrastructure repairs, improvements, and right-of-way clearance and enforcement. Address all intersections and crosswalks for universal accessibility, safety, and pedestrian comfort & walk-ability.	<b>Priority Level 1</b>
<b>Manchester Road</b>	<b>Safety Programming</b>	Implement a Pedestrian and Traffic Safety Enforcement Zone from McKinley Avenue west to Berry Road; conduct traffic safety enforcement, speed limit enforcement, red light and crosswalk enforcement, and pedestrian right-of-way enforcement.	<b>Priority Level 1</b>
	<b>Bicycle Improvements</b>	Implement shared-use outside lanes and Share-the-Road signage, safety programming, traffic and safety enforcement; streetscape improvements with vertical curbs, new sidewalks, and dedicated tree lawns/planting strips.	<b>Priority Level 3</b>
	<b>Pedestrian Improvements</b>	Implement enhanced "Sharrows," safety programming, and traffic and safety enforcement; enhanced streetscape improvements with street trees, signature street lighting, and OPTIONAL underground utilities.	<b>Priority Level 3</b>
	<b>General Enhancements</b>	Address all intersections and crosswalks for universal accessibility, safety, and pedestrian comfort & walk-ability.	<b>Priority Level 1</b>
<b>City Center Form-Based Code</b>		Develop a Form-Based Code for the Rock Hill Central Business District; adopt the Form-Based Code and Local Enabling Legislation as part of Rock Hill's municipal code and ordinances.	<b>Priority Level 2</b>

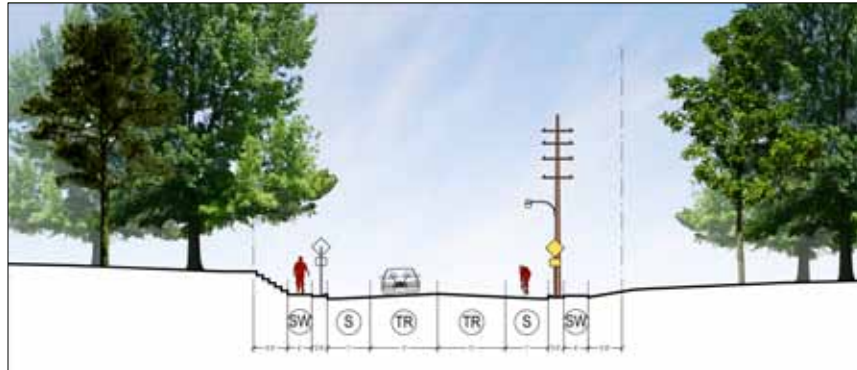
<b>PRIORITY LEVEL 1 (SHORT-TERM; 1-5 Years)</b>
<b>PRIORITY LEVEL 2 (MEDIUM-TERM; 5-15 Years)</b>
<b>PRIORITY LEVEL 3 (LONG-TERM; 10-20 Years)</b>



## PROJECT LIST

<b>South McKnight Road</b>	<b>Bicycle Improvements</b>	Implement shared-use outside lanes and Share-the-Road signage; safety programming; traffic and safety enforcement.	<b>Priority Level 2</b>
	<b>Off-Street Path</b>	<b>FROM 2736 S. McKNIGHT ROAD NORTH:</b> Plan and implement a new, multi-use, 2-way, off-street trail along the east side of South McKnight Road; implement on private property outside the McKnight Road right-of-way (R.O.W.), leaving the R.O.W. as-is.	<b>Priority Level 3</b>
	<b>Pedestrian Improvements</b>	Implement streetscape improvements with vertical curbs ;new sidewalks; landscape strips; signature street lighting; and OPTIONAL underground utilities.	<b>Priority Level 3</b>
	<b>General Enhancements</b>	Address all intersections and crosswalks for universal accessibility, safety, and pedestrian comfort & walk-ability.	<b>Priority Level 2</b>
<b>Rock Hill Industrial Court</b>	<b>Stage 1</b>	Develop a long-term vision for the Rock Hill Industrial Court to: identify desires for future uses; develop strategies for development and redevelopment; and address issues of recreation, connectivity, infrastructure, flood mitigation, and water quality and ecological preservation.	<b>Priority Level 2</b>
	<b>Stage 2</b>	Develop and implement policies, incentives, and partnerships to achieve the long-term vision for the Rock Hill Industrial Court.	<b>Priority Level 3</b>
	<b>Stage 3</b>	Engage in ongoing, incremental implementation of the long-term vision for the Rock Hill Industrial Court.	<b>Priority Level 3</b>

<b>PRIORITY LEVEL 1 (SHORT-TERM; 1-5 Years)</b>
<b>PRIORITY LEVEL 2 (MEDIUM-TERM; 5-15 Years)</b>
<b>PRIORITY LEVEL 3 (LONG-TERM; 10-20 Years)</b>

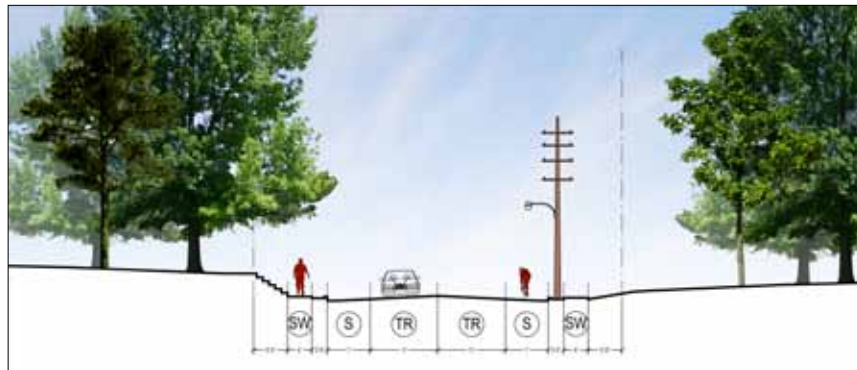


## BICYCLE IMPROVEMENTS

- Enhanced Share-the-Road markings ("Sharrows")
- Share-the-Road signage
- Safety programming
- Traffic and safety enforcement



KEY MAP



## PEDESTRIAN IMPROVEMENTS

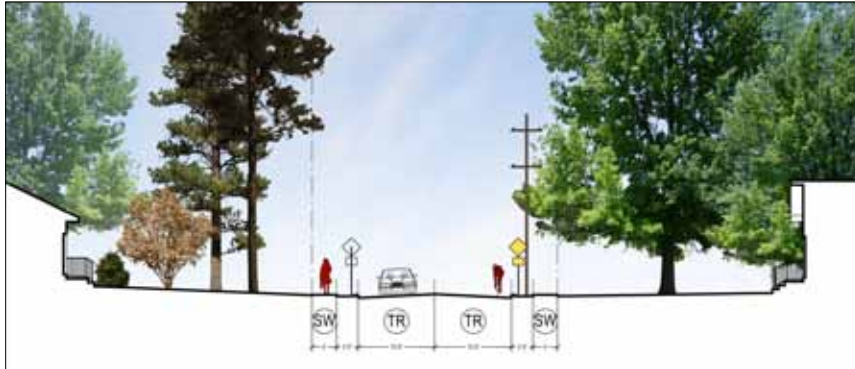
- Vertical curbs
- Sidewalks
- Removal of raised parking shoulders



PROJECTS

# Neighborhood Streets

Park & School Loops ■

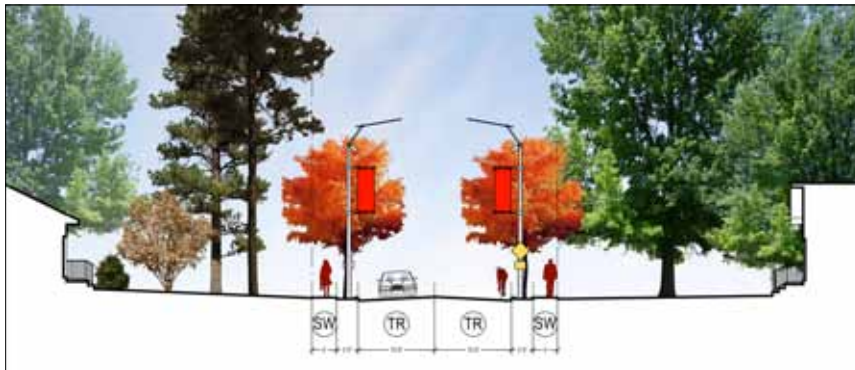


## BICYCLE IMPROVEMENTS

- Enhanced Share-the-Road markings (“Sharrows”) & signage
- Traffic and safety enforcement
- Right-of-way clearing and enforcement



KEY MAP



## PEDESTRIAN IMPROVEMENTS

- Sidewalks
- Vertical curbs
- Tree lawns
- Street trees
- Decorative street lighting
- Underground utilities (OPTIONAL)

**BASIC IMPLEMENTATION**

- Community-based route identification
- Wayfinding signage
- Safety programming
- Safety monitoring and enforcement

**ENHANCED IMPLEMENTATION**

- Public, private, and non-governmental outreach programs

**COMPREHENSIVE  
IMPLEMENTATION**

- Social media- and web-based mapping with restricted invitation-only or registration-based access
- Web, iOS, and Android mobile app



PROJECTS

# Greenway Ring

Greenway Ring ■  
Park & School Loops ■



## SOUTH BRANCH

- Plan and implement the South Branch of the Greenway Ring from the planned Deer Creek & Shady Creek Greenway to Hudson Elementary School via Steger Sixth Grade Center/Computer School and Berry Road.



KEY MAP

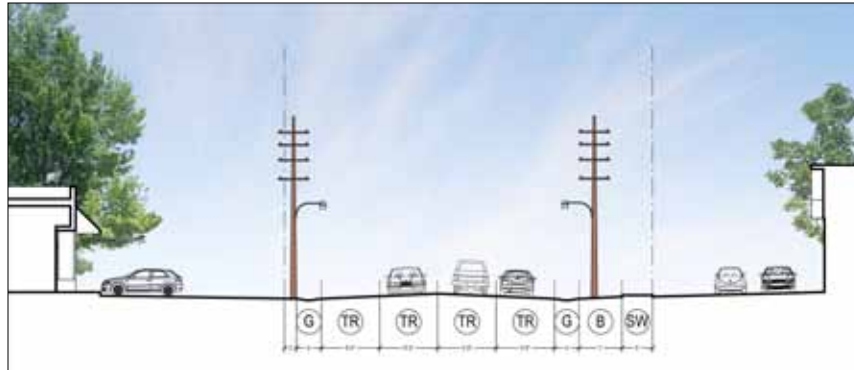


## NORTH BRANCH

- Plan and implement the North Branch of the Greenway Ring from Hudson Elementary School to Rock Hill Industrial Court via Old Warson Road and OPTIONAL Sebago Creek connectors.

# PROJECTS Manchester Road

City Center

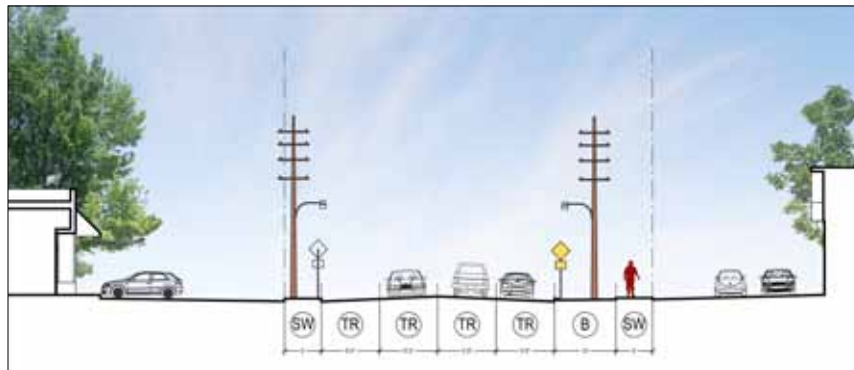


## SAFETY ENHANCEMENTS

- Pedestrian & Traffic Safety Enforcement Zone (McKinley Avenue west to Berry Road)
- Traffic safety enforcement
- Speed limit enforcement
- Red light and crosswalk enforcement

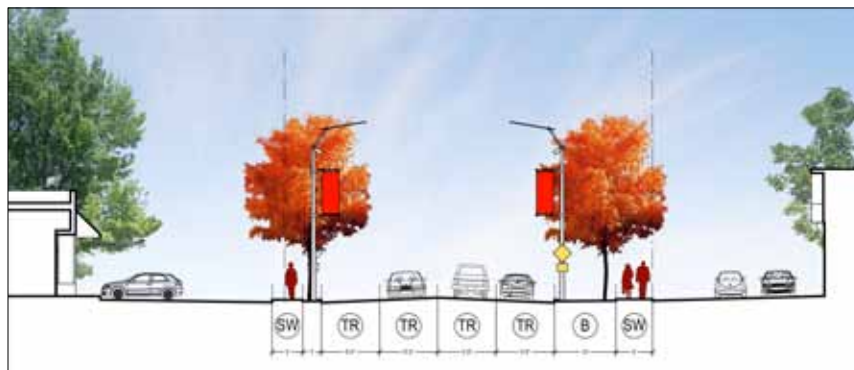


KEY MAP



## BICYCLE ENHANCEMENTS

- Shared-use outside lanes & signage
- Traffic and safety enforcement
- Vertical curbs
- Sidewalks
- Tree lawns/planting strips



## PEDESTRIAN ENHANCEMENTS

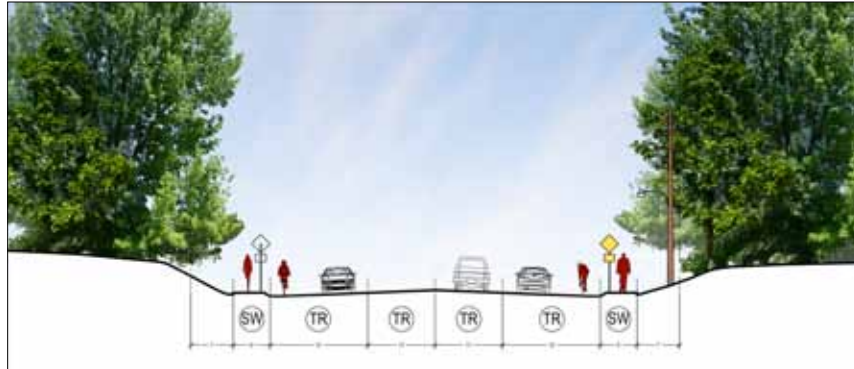
- Enhanced Share-the-Road markings ("Sharrows") & signage
- Street trees
- Decorative street lighting
- Underground Utilities (OPTIONAL)



# PROJECTS

## South McKnight Road

City Center

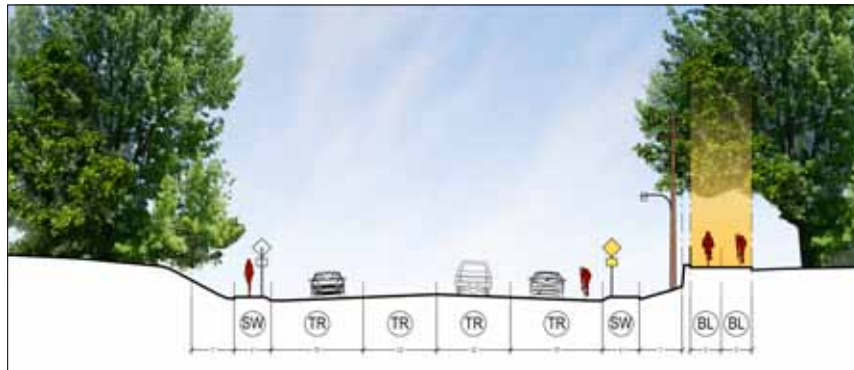


### BICYCLE ENHANCEMENTS

- Shared-use outside lanes & signage
- Traffic and safety enforcement

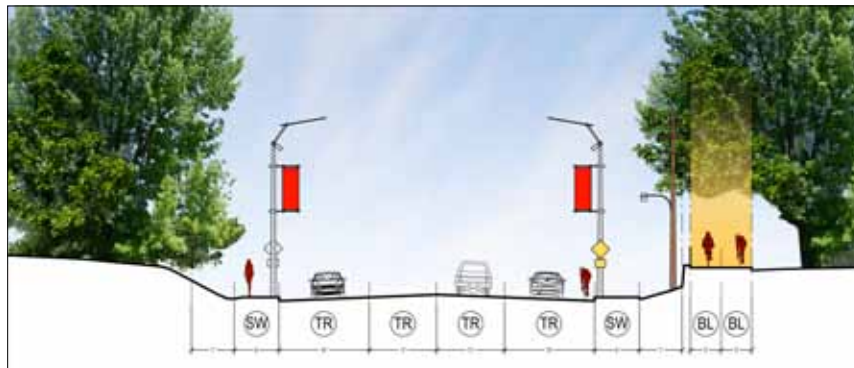


KEY MAP



### OFF-STREET PATH

- 2-way, off-street, multi-use trail along the east side of South McKnight Road outside of the public right-of-way (R.O.W.)



### PEDESTRIAN ENHANCEMENTS

- Vertical curbs
- Sidewalks
- Landscape strips
- Decorative street lighting
- Underground Utilities (OPTIONAL)

## Policies, Operations & Maintenance

In addition to the *Projects* previously listed, the Bicycle and Pedestrian Master Plan includes several policy, operations, and maintenance recommendations. These City-wide initiatives include enhancing universal accessibility; Complete Streets enhancements; and programming and operations for enforcement, education, and data-collection.

### COMPLETE STREETS

In May 2011, the State of Missouri adopted HCR 23, a House/Senate concurrent resolution expressing the Missouri General Assembly's support for Complete Streets policies at all levels of government. HCR 23 expresses support for Complete Streets and urges MoDOT, cities, counties, metropolitan planning organizations, and regional planning councils to follow Complete Streets principles and adopt Complete Streets policies. To date, eight St. Louis area communities have adopted Complete Streets policies, including De Soto, Festus, Ferguson, Clayton, and the City of Saint Louis.

Bicycle and pedestrian facilities proposed in the Rock Hill Bicycle and Pedestrian Master Plan have been designed to achieve the Complete Streets criteria. In addition, the Plan recommends that Rock Hill adopt a Complete Streets policy or ordinance to ensure that future capital investments in streets, sidewalks, and infrastructure support biking and walking in the Rock Hill community.

### UNIVERSAL ACCESSIBILITY

Through the planning process, Rock Hill learned that, while many streets throughout the city may be A.D.A.-accessible, they do not necessarily provide a high level of service to users with disabilities. The Bicycle and Pedestrian Master Plan recommends a City-wide program to provide enhanced universal accessibility through intersection, sidewalk, crosswalk, and signal design, including:

- 1) **Curb cuts oriented perpendicular to the street;**
- 2) **Tactile surface changes at curb cuts and crosswalks;**
- 3) **Traffic and walk signals countdown timers, audible signals, and protected crossing modes where necessary;**
- 5) **Repair or replacement of rough or damaged sidewalk pavement.**



SIDEWALK AND STREETScape ON BLOSSOM LANE



## PROGRAMMING & OPERATIONS

The Bicycle and Pedestrian Master Plan recommends continued recreational, education, and public outreach activities and events. In addition, the Plan recommends specific programming and operational initiatives to help fulfill the goals of the Plan and provide ongoing management, including:

**CREATION OF A BICYCLE AND PEDESTRIAN PROGRAM MANAGER:** In order to maintain long-term momentum and accountability for the Plan and to provide a clearing house for all bicycle- and pedestrian-oriented improvements, the Plan recommends the creation of a bicycle and pedestrian Program Manager within the City of Rock Hill Department of Parks to serve as a cheerleader and single point of contact for implementation of the Bicycle and Pedestrian Master Plan and other bicycle and pedestrian amenities and enhancements.

**SAFETY OUTREACH, PROGRAMMING, AND ENFORCEMENT:** The Plan recommends safety education and outreach programming. These programs can be coordinated through the City of Rock Hill Police and Fire Departments and should utilize public safety professionals and local experts. These programs can be implemented through Rock Hill schools, City events, and community groups including Scout troops, churches, and civic organizations. In addition, the Plan recommends a comprehensive, city-wide speed-limit, traffic signal, and pedestrian safety enforcement programs.

**DATA COLLECTION, BENCHMARKING, AND MEASUREMENT:** In order to establish achievable goals and evaluate the success of the Plan, it is recommended that an ongoing data collection and measurement program be implemented. This program would consist of initial data collection to establish baseline conditions for increasing safety, awareness, and daily instances of walking and biking. An annual data collection program to measure actual increases in safety, awareness, and daily instances of walking and biking should be conducted for a recommended minimum of five years.

Additional programming opportunities are described in detail in the Appendix of this document.



# Opinion Of Probable Cost

An *Opinion of Probable Cost* has been assembled for each project in the Bicycle and Pedestrian Master Plan. Based on similar projects in the St. Louis Region and on national figures, this *Opinion* will assist the City of Rock Hill in developing capital improvements programming, departmental budgeting, grant writing, and fund-raising for bicycle and pedestrian projects. Cost *Opinions* provided in this section include options that may not be necessary for all projects, and as such, actual costs may be lower than the averages used here. The *Opinion of Probable Cost* is presented in the tables on the following pages.

## DISCLAIMERS

The *Opinion of Probable Cost* contained within this document has been prepared by the City of Rock Hill and represents a good-faith effort by the City of Rock Hill that is supported by the most current information (as available on the date of this document) that has been provided to the City of Rock Hill or is publicly available. All proposals contained herein are understood by the City of Rock Hill to: 1) be representative of public consensus from the Bicycle and Pedestrian Master Plan, and; 2) have the expressed approval of the City of Rock Hill.

This *Opinion of Probable Cost* is limited only to the conditions and factors expressly enumerated herein. All other conditions and factors that have not been expressly enumerated herein are excluded from this *Opinion of Probable Cost*, including but not limited to:

### **PLANNING, DESIGN & ENGINEERING**

No required planning, design, and engineering is included in this *Opinion of Probable Cost*.

### **LAND ACQUISITION**

Unless otherwise noted, all potential costs associated with land acquisition are deemed to be indeterminate and are not included in this *Opinion of Probable Cost*.

**DEMOLITION**

Unless otherwise noted, all potential costs associated with demolition of existing buildings, roads, sidewalks, and infrastructure, are deemed to be indeterminate and are not included in this *Opinion of Probable Cost*.

**ENVIRONMENTAL REMEDIATION**

Unless otherwise noted, all potential costs associated with environmental remediation are deemed to be indeterminate and are not included in this *Opinion of Probable Cost*.

**SITE PREPARATION**

Unless otherwise noted, all potential costs associated with site preparation are deemed to be indeterminate and are not included in this *Opinion of Probable Cost*.

**UTILITIES & PUBLIC INFRASTRUCTURE**

Unless otherwise noted, all potential costs associated with the installation, repair, upgrade, or augmentation of utilities and infrastructure within public right-of-ways (excluding Street, Streetscape, and Bicycle & Pedestrian Improvements as enumerated herein) are deemed to be indeterminate and are not included in this *Opinion of Probable Cost*.

This *Opinion of Probable Cost* is completely and totally non-binding and is provided for purposes of comparison only. It is not intended or authorized to serve as a cost estimate for the purpose of contracts, construction cost determinations, or soliciting bids. All lengths, areas, quantities, facility types, and projects provided for in this *Opinion of Probable Cost* are based upon the Bicycle and Pedestrian Master Plan with the expressed approval of the City of Rock Hill.

The figures presented in the *Opinion of Probable Cost* are expressed in 2011 U.S. dollars and do not account for future inflation.



## CONDITIONS OF USE

This *Opinion of Probable Cost* is recognized and acknowledged to be a non-binding document. The City of Rock Hill offers no guarantee or warranty, expressed or implied, for the information contained herein. Any individual or entity using this *Opinion of Probable Cost* for any purpose agrees to save and hold harmless the City of Rock Hill, Local Agency Trailnet, and Design Sub-consultant H3 Studio, Inc. from any and all costs or damages, direct or otherwise, that may arise subsequent from said use of this *Opinion of Probable Cost*.

# **BICYCLE & PEDESTRIAN MASTER PLAN** **OPINION OF PROBABLE COST**

Facility	Length (ft)	Length (mi)	Cost Per Mile	Total Cost
<b>ROCK HILL ROAD</b>				
Pedestrian Facilities	2548	0.48	\$604,032.00	<b>\$291,491.20</b>
Bicycle Facilities	2548	0.48	\$20,800.00	<b>\$10,037.58</b>
<b>NEIGHBORHOOD STREETS (ONGOING)</b>				
<b>Hudson Avenue</b>	2756	0.52		
Pedestrian Facilities	2756	0.52	\$1,438,008.00	<b>\$750,596.60</b>
Bicycle Facilities	2756	0.52	\$27,300.00	<b>\$14,249.77</b>
<b>Bismark Avenue</b>	2154	0.41		
Pedestrian Facilities	2154	0.41	\$1,438,008.00	<b>\$586,641.90</b>
Bicycle Facilities	2154	0.41	\$27,300.00	<b>\$11,137.16</b>
<b>Litzsinger Avenue</b>	2095	0.40		
Pedestrian Facilities	2095	0.40	\$1,438,008.00	<b>\$570,573.25</b>
Bicycle Facilities	2095	0.40	\$27,300.00	<b>\$10,832.10</b>
<b>Rockford Avenue</b>	2294	0.43		
Pedestrian Facilities	2294	0.43	\$1,438,008.00	<b>\$624,770.90</b>
Bicycle Facilities	2294	0.43	\$27,300.00	<b>\$11,861.02</b>
<b>Mueck Terrace</b>	1303	0.25		
Pedestrian Facilities	1303	0.25	\$1,438,008.00	<b>\$354,872.05</b>
Bicycle Facilities	1303	0.25	\$27,300.00	<b>\$6,737.10</b>
<b>Euclid Avenue</b>	1505	0.29		
Pedestrian Facilities	1505	0.29	\$1,438,008.00	<b>\$409,886.75</b>
Bicycle Facilities	1505	0.29	\$27,300.00	<b>\$7,781.53</b>
<b>Remington Lane</b>	1325	0.25		
Pedestrian Facilities	1325	0.25	\$1,438,008.00	<b>\$360,863.75</b>
Bicycle Facilities	1325	0.25	\$27,300.00	<b>\$6,850.85</b>
<b>Sutton Avenue</b>	743	0.14		
Pedestrian Facilities	743	0.14	\$1,438,008.00	<b>\$202,356.05</b>
Bicycle Facilities	743	0.14	\$27,300.00	<b>\$3,841.65</b>
<b>Mentor Place</b>	371	0.07		
Pedestrian Facilities	371	0.07	\$1,438,008.00	<b>\$101,041.85</b>
Bicycle Facilities	371	0.07	\$27,300.00	<b>\$1,918.24</b>
<b>Frederic Court</b>	1263	0.24		
Pedestrian Facilities	1263	0.24	\$1,438,008.00	<b>\$343,978.05</b>
Bicycle Facilities	1263	0.24	\$27,300.00	<b>\$6,530.28</b>

## BICYCLE & PEDESTRIAN MASTER PLAN

### OPINION OF PROBABLE COST

Facility	Length (ft)	Length (mi)	Cost Per Mile	Total Cost
<b>NEIGHBORHOOD STREETS (PROPOSED)</b>				
<b>Kortwright Avenue (Whitestone Terrace South)</b>	1350	0.26		
Pedestrian Facilities	1350	0.26	\$1,438,008.00	<b>\$367,672.50</b>
Bicycle Facilities	1350	0.26	\$27,300.00	<b>\$6,980.11</b>
<b>McKinley Avenue</b>	2236	0.42		
Pedestrian Facilities	2236	0.42	\$1,438,008.00	<b>\$608,974.60</b>
Bicycle Facilities	2236	0.42	\$27,300.00	<b>\$11,561.14</b>
<b>N. Rock Hill Road</b>	1836	0.35		
Pedestrian Facilities	1836	0.35	\$1,438,008.00	<b>\$500,034.60</b>
Bicycle Facilities	1836	0.35	\$27,300.00	<b>\$9,492.95</b>
<b>Crawford Avenue (Rockford Avenue East)</b>	600	0.11		
Pedestrian Facilities	600	0.11	\$1,438,008.00	<b>\$163,410.00</b>
Bicycle Facilities	600	0.11	\$27,300.00	<b>\$3,102.27</b>
<b>Almentor Avenue</b>	624	0.12		
Pedestrian Facilities	624	0.12	\$1,438,008.00	<b>\$169,946.40</b>
Bicycle Facilities	624	0.12	\$27,300.00	<b>\$3,226.36</b>
<b>Greenwood Terrace</b>	664	0.13		
Pedestrian Facilities	664	0.13	\$1,438,008.00	<b>\$180,840.40</b>
Bicycle Facilities	664	0.13	\$27,300.00	<b>\$3,433.18</b>
<b>Leonard Avenue</b>	281	0.05		
Pedestrian Facilities	281	0.05	\$1,438,008.00	<b>\$76,530.35</b>
Bicycle Facilities	281	0.05	\$27,300.00	<b>\$1,452.90</b>
<b>GREENWAY RING</b>				
<b>South Branch</b>				
On-Street	7891	1.49	\$1,491,308.00	<b>\$2,228,771.10</b> Assume custom, Super-Sharrow size lane markings & signage
Off-Street	9272	1.76	\$989,875.00	<b>\$1,738,280.49</b> Assume 10' multi-use two-way paved path
<b>North Branch</b>				
On-Street	3909	0.74	\$1,491,308.00	<b>\$1,104,076.32</b> Assume custom, Super-Sharrow size lane markings & signage
Off-Street	5773	1.09	\$989,875.00	<b>\$1,082,300.83</b> Assume 10' multi-use two-way paved path
<b>MANCHESTER ROAD</b>				
Pedestrian Facilities	7445	1.41	\$1,520,376.00	<b>\$2,143,787.75</b>
Bicycle Facilities	7445	1.41	\$34,408.00	<b>\$48,516.58</b>
<b>SOUTH McKNIGHT ROAD</b>				
Bicycle Improvements	3460	0.66	\$1,300.00	<b>\$851.89</b>
Pedestrian Improvements	3460	0.66	\$1,482,624.00	<b>\$971,568.00</b>
Off-Street Paths	2086	0.40	\$989,875.00	<b>\$391,075.62</b> Assume 10' multi-use two-way paved path



**THIS PAGE INTENTIONALLY  
LEFT BLANK**

# Funding Sources

Creative *Funding Sources*, both internal and external, are necessary for the development of a bicycle- and pedestrian-friendly community. Funding programs for bicycle and pedestrian improvements vary significantly with regard to type of improvement, total allowable project cost, required local match, competitiveness, and other important characteristics. The City of Rock Hill should seek to draw from the diverse range of federal, local, and private-sector funding programs available to fund both infrastructure improvements and programs. Local funds should be leveraged as match for external funding in order to maximize the City's investment. When possible, the City should integrate bicycle and pedestrian improvements with planned and scheduled capital improvement projects.

The extensive list of *Funding Sources* presented below should be referenced throughout implementation of the Bicycle and Pedestrian Master Plan.

## FEDERAL FUNDING SOURCES

It is important to note that a number of federal programs are tied to the current federal transportation bill, the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU). Originally set to expire in 2009, a series of short-term Surface Transportation Extension Acts have kept SAFETEA-LU and its many programs funded through March 31, 2012. The Surface Transportation, Transportation Enhancements, Highway Safety Improvement, Section 402, and Safe Routes to School, Job Access Reverse Commute, and New Freedom Programs are all funded through SAFETEA-LU. The future of these programs is largely dependent on the priorities, scope and funding amounts set forth in the next federal transportation bill.

- **Surface Transportation Program (STP)**

The *Surface Transportation Program* provides flexible funding that may be used by States and localities for projects on any Federal-aid Highway, including the NHS, bridge projects on any public road, transit capital projects, and intra-city and intercity bus terminals and facilities. On-street bicycle facilities, off-street trails, ADA-compliant sidewalks, crosswalks, bicycle and pedestrian signals, and bicycle parking facilities are eligible for funding. While the program is

intended only for Federal-aid Highways, bicycle and pedestrian projects may be located on local roadways. In addition to physical improvements, STP funds may support coordinator positions, encouragement programs, and bicycle and/or pedestrian maps. The STP is administered by MoDOT through the East West Gateway Council of Governments on an annual basis.

More information:

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

<http://www.fhwa.dot.gov/safetealu/factsheets/stp.htm>

- **Highway Safety Improvement Program (HSIP)**

Developed to reduce traffic fatalities and serious injuries on all public roads, the HSIP provides a funding source for local entities to improve bicyclist and pedestrian safety. Eligible projects include safety improvements for cyclists and pedestrians both on-road and on publicly owned bicycle and pedestrian pathways or trails.

More information:

<http://safety.fhwa.dot.gov/hsip/>

<http://www.fhwa.dot.gov/safetealu/factsheets/hsip.htm>

- **Transportation Enhancements Program (TE)**

A significant portion of Missouri's Surface Transportation Program funds is required to be set aside for projects that increase transportation options, enhance the transportation experience, and provide a sense of place. TE projects must meet at least one of the twelve eligible categories, including trail and greenway development, landscaping and beautification, provision of safety and education programs for pedestrians and bicyclists, and historic preservation. A local match of 20 percent is required. The program is administered by Missouri Department of Transportation (MoDOT) in cooperation with East-West Gateway Council of Governments.

More information:

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

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

<http://www.fhwa.dot.gov/environment/te/>



- **Congestion Mitigation and Air Quality Program (CMAQ)**

The *CMAQ Program* funds projects and programs that improve air quality by reducing automobile emissions. Potential projects include bicycle and pedestrian facilities, encouragement and education programs, traffic flow improvements, diesel engine retrofits, and shared ride services.

More information:

[http://www.fhwa.dot.gov/environment/air\\_quality/cmaq/](http://www.fhwa.dot.gov/environment/air_quality/cmaq/)

- **State and Community Highway Safety Grant Program (Section 402)**

*Section 402 Highway Safety Funds* can be used to develop and support programs that aim to reduce traffic crashes and increase pedestrian safety. While these funds are more commonly used to increase law enforcement activities and develop statewide data systems, they can be utilized to develop safety education programs and community-wide pedestrian safety campaigns.

More information:

<http://safety.fhwa.dot.gov/policy/section402/>

<http://www.bikeleague.org/resources/reports/section402.php>

- **Safe Routes to School (SR2S)**

Funding is available annually through the Missouri Department of Transportation through federal highway safety funds to provide for safe biking and walking infrastructure and behavior programs for children in grades K-8, including children with disabilities.

More information:

<http://www.modot.mo.gov/safety/SafeRoutestoSchool.htm>

<http://safety.fhwa.dot.gov/saferoutes/>

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

- **Transportation, Community and System Preservation Program (TCSP)**

The Federal Highway Administration's TCSP program provides funding for planning grants, implementation grants, and research that investigates the links between transportation, community, and system preservation. The implementation grants have been used to fund pedestrian

improvements, bike paths, multi-use paths, complete streets implementation, and other non-motorized transportation initiatives.

More information:

<http://www.fhwa.dot.gov/tcsp/projects.html>

- **Job Access Reverse Commute Program (JARC)**

The *JARC Program* was developed to improve transportation facilities and operations to assist low income persons with access job to opportunities and employment destinations. While most funds have been allocated to extend transit services and operations, there have been a number of bicycle-related projects funded through JARC. In Portland Oregon, the Community Cycling Center's Create A Commuter Program uses JARC funds to teach low-income residents on-road bicycle training and provide participants with fully equipped commuter bicycles. Since 2001, the program has supported over 1,500 area residents in accessing job opportunities.

More information:

[http://www.fta.dot.gov/funding/grants/grants\\_financing\\_3550.html](http://www.fta.dot.gov/funding/grants/grants_financing_3550.html)

[http://www.communitycyclingcenter.org/?page\\_id=11](http://www.communitycyclingcenter.org/?page_id=11)

- **New Freedom Program (NFP)**

The *New Freedom Program* was developed to address barriers that prevent Americans with disabilities from integrating into the workforce and fully participating in society. The program provides financial assistance for capital and operating expenses for public transportation services beyond those required by the Americans with Disabilities Act of 1990 (ADA). The program can be used to fund pedestrian improvements like sidewalks, curb ramps and accessible pedestrian signals.

More information:

[http://www.fta.dot.gov/funding/grants/grants\\_financing\\_3549.html](http://www.fta.dot.gov/funding/grants/grants_financing_3549.html)

- **Recreational Trails Program**

Grants are available for motorized and non-motorized trail development, renovation, and preservation for cities, counties, schools, and all business types. Projects require a 20% minimum match. The application period ends in August and is administered by the Missouri Department of Natural Resources-Division of State Parks. The funding is provided through the Federal Highway Administration.

More information:

<http://www.mostateparks.com/grantinfo.htm>

<http://www.fhwa.dot.gov/environment/rectrails/>

- **Rivers, Trails and Conservation Assistance Program (RTCA)**

Administered by the National Parks Service, the RTCA works nationwide to assist community-led natural resource conservation and outdoor recreation projects. While the RTCA does not provide direct funding for projects, they do provide valuable technical assistance for conceptual planning, capacity building, and organizational development.

More information:

<http://www.nps.gov/ncrc/programs/rtca/>

- **Land & Water Conservation Fund**

Grants are available to cities, counties and school districts for outdoor recreation facilities, including trails. Projects require a 55% match. Funded facilities must remain for the purpose of public outdoor recreation in perpetuity. LWCF grants are funded by the US Department of Interior, National Park Service and administered by the Missouri Department of Natural Resources-Division of State Parks.

More information:

<http://www.mostateparks.com/grantinfo.htm>

<http://www.nps.gov/lwcf/>



- **Community Development Block Grant (CDBG) Program**

Funded by the Department of Housing and Urban Development and administered by the St. Louis County Office of Community Development, CDBG funds are provided to entitlement communities to address a variety of community development issues, including property acquisition, residential and non-residential property rehabilitation, historic preservation, and construction of public facilities. Sidewalks, streets, parks and park improvements are all eligible activities under the CDBG Program.

More information:

<http://www.hud.gov/offices/cpd/communitydevelopment/programs/>

<http://ww5.stlouisco.com/plan/ocd.html>

## LOCAL FUNDING SOURCES

Local funding sources play a vital role in developing a bicycle and pedestrian network. While external funds are available for many projects, most require a local match of 20 to 50 percent. A number of different options should be explored to create a dedicated stream of funding for bicycle and pedestrian infrastructure and programming, including local option sales taxes, impact fees, and capital improvements set-asides.

- **Local Option Sales Taxes**

In 1995, the Missouri State Legislature approved enabling legislation that allowed cities to levy a sales tax for park improvements and/or stormwater control purposes. Since 1995, over 100 municipalities in the state have voted to levy such a tax. These funds can be used to develop new bicycle and pedestrian facilities or enhance and maintain existing facilities. Additionally, capital improvement sales tax can be directed towards bicycle and pedestrian facilities.

- **System Development Charges/Developer Impact Fees**

As new development occurs, the municipality may charge developers to fund the additional service capacity required by the development. These development charges, or impact fees, can be used to construct transportation infrastructure, including roads, transit stations or stops, and bicycle and pedestrian facilities.

More information:

<http://www.impactfees.com/index.php>

<http://www.mdt.mt.gov/research/toolkit/m1/ftools/dei/if.shtml>

- **Community Improvement Districts (CIDs)**

A CID is a defined area in which property owners pay an additional tax or fee to finance capital improvements, additional security, or marketing the district as a commercial destination. Potential capital improvements include sidewalks, street lighting, benches, trash receptacles, information kiosks, public art projects, and other pedestrian-oriented features.

More information:

<http://www.moga.mo.gov/const/a03038c.htm>

[http://www.stlrcga.org/Documents/Incentives/MO\\_CID%20Detail.pdf](http://www.stlrcga.org/Documents/Incentives/MO_CID%20Detail.pdf)

<http://www.missouridevelopment.org/community%20services/Local%20Finance%20Initiatives/Community%20Improvement%20District.html>

- **Neighborhood Improvement Districts (NIDs)**

Similar to Community Improvement Districts, NID's are created to finance public-use improvements through special tax assessments to property owners in which the improvements are made. Typical improvements in NID's include sidewalk and crosswalk improvements, street lighting systems, parks and recreational facilities, pedestrian bridges, overpasses or tunnels, and landscaping enhancements.

More information:

<http://www.moga.mo.gov/statutes/C000-099/0670000453.HTM>

<http://www.missouridevelopment.org/community%20services/Local%20Finance%20Initiatives/Neighborhood%20Improvement%20District.html>

- **Capital Improvement Budget Set-Asides**

Amending the capital improvement budget to require a set-aside for bicycle and pedestrian projects can ensure a constant annual funding stream for plan implementation. A set aside can be allocated as a percent of the total budget, or as a fixed dollar amount. These bicycle and pedestrian funds can be used to fully finance projects or can be leveraged as local match to secure external funding.

- **Special Issue Bonds**

Local governments use bonds as a means of financing infrastructure needs, which include, but are not limited to, streets, schools, highways, bridges, sewer and water systems, parks, and trails. In many cases, municipalities and other local agencies will set allocate a specific amount of the bond for bicycle and pedestrian projects. In King County, Washington, for example, \$33 million of a \$100 million bond to protect open space in urban areas was set aside for trail development. In most cases, like that in King County, bicycle and pedestrian projects are part of a larger bond issue, most often a component of transportation or parks bonds.

## REGIONAL FUNDING SOURCES

There are at least two funding sources in the St. Louis region dedicated to parks and greenways.

- **St Louis County Municipal Park Grant**

This program provides roughly \$3 million annually for the 91 municipalities throughout St. Louis County to fund regional and local parks initiatives. The Funds are administered through the St. Louis County Municipal League.

More information:

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



- **Great Rivers Greenway District (GRG)**

GRG, the local parks and recreation tax district for City of St. Louis, St. Louis County, and St. Charles County, has partnered with municipalities and counties in the St. Louis Metropolitan Area to develop an interconnected system of trails and greenways. While GRG does not directly provide funds to local municipalities, GRG collaborates frequently with local government agencies to develop construction and maintenance agreements.

More information:

<http://www.greatrivers.info/>

## **PRIVATE SECTOR FUNDING SOURCES**

- **The Kodak American Greenways Program**

Funded by The Conservation Fund, Eastman Kodak Company, and the National Geographic Society, the program provides “seed” grants for the planning and design of greenways and other open space systems. Since 1989, the program has granted over \$800,000 to nearly 700 organizations across the country.

More information:

[http://www.conservationfund.org/kodak\\_awards](http://www.conservationfund.org/kodak_awards)

- **Bikes Belong Grant Program**

*Bikes Belong* is a national organization dedicated to putting more people on bikes more often. The organization funds multi-use trails, BMX facilities, mountain bike trails, and advocacy efforts, with a strong desire to leverage federal funding. Bikes Belong has awarded over 200 grants since 1999, investing \$1.7 million and leveraging close to \$650 million in federal, state, and private funding.

More information:

<http://www.bikesbelong.org/grants/>

- **Missouri Foundation for Health's Healthy and Active Communities Program**

MFH, the state's largest healthcare foundation, works to improve health in the communities it serves. Through the H&AC program, MFH funds organizations to combat obesity through changes in policy, environment, and social networks. Funded projects include community-wide intervention strategies, bike-to-school programs, increasing multi-use trail accessibility, efforts to adopt complete streets policies, bike check-out programs, and other innovative programs and infrastructure improvements to increase physical activity.

More information:

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

- **Robert Wood Johnson Foundation**

The Robert Wood Johnson Foundation (RWJF) is offers a wide range of funding opportunities dealing with healthy and active living. Anyone is eligible to apply, but check the website to make sure that you meet requirements per grant. For more information, check the website periodically for new calls for proposals.

More information:

<http://www.rwjf.org/applications/solicited/cfplist.jsp>

## OTHER FUNDING SOURCES

- **Adopt a Bikeway/Sidewalk/Trail Program**

Local organizations, businesses and community groups often engage in civic projects, including Adopt-A-Highway programs and other landscaping and beautification projects. The City could develop an "Adopt-A-Trail" or "Adopt-A-Sidewalk" program to assist in the routine maintenance or landscaping of the City's bicycle and pedestrian network.

- **Community Fundraising**

While community fundraising cannot and should not be looked to to fund all bicycle and pedestrian projects, it can be an innovative way to raise projects funds while also building community

awareness and support for bicycle and pedestrian transportation and recreation. Fundraising events, “buy-a-brick” programs for sidewalk projects, and other creative funding strategies have been utilized in other communities in the United States with great success.

- **Corporate Partnerships**

Corporate donations and partnerships can provide an unconventional source of funds for bicycle and pedestrian projects. Many businesses understand the value of bicycle and pedestrian infrastructure, parks and open space, and opportunities for healthy and active living as contributing factors to both economic development and quality of life for employees. As such, corporations and local businesses alike have funded trail and greenway projects across the nation. The City should seek out opportunities to partner with the business community to aid in the implementation of this plan.

## BICYCLE & PEDESTRIAN MASTER PLAN FUNDING SOURCES MATRIX

	Federal Funding Sources	STP	HSIP	TE	CMAQ	Section 402	SRTS	TCSP	JARC	New Freedom
Almentor Avenue			X	X	X		X	X		
Bismark Avenue		X	X	X	X		X	X		
Crawford Avenue			X	X	X		X	X		
Euclid Avenue			X	X	X		X	X		
Frederic Court			X	X	X		X	X		
Greenway Ring			X	X	X		X	X		
Greenwood Terrace			X	X	X		X	X		
Hudson Avenue			X	X	X		X	X		
Kortwright Avenue		X	X	X	X		X	X		
Leonard Avenue			X	X	X		X	X		
Litzsinger Avenue		X	X	X	X		X	X		
Manchester Road		X	X	X	X	X	X	X		
McKinley Avenue			X	X	X		X	X		
Mentor Place			X	X	X		X	X		
Mueck Terrace			X	X	X		X	X		
North Rock Hill Road		X	X	X	X		X	X		
Project Secret Path			X	X	X		X	X		
Remington Lane			X	X	X		X	X		
Rock Hill Road			X	X	X		X	X		
Rockford Avenue			X	X	X		X	X		
South McKnight Road		X	X	X	X		X	X		
Sutton Avenue			X	X	X		X	X		
EDUCATION PROGRAMS			X	X	X	X	X	X		
ENFORCEMENT PROGRAMS			X	X	X	X	X	X		
ENCOURAGEMENT PROGRAMS			X	X	X		X	X	X	X
EVALUATION/PLANNING			X	X	X		X	X		



RTP		LWCF	CDBG	Local Funding Sources				Regional Funding Sources				Private Sector Funding Sources					
				Local Option Sales Tax	System Development Charges/Developer Impact Fees	CID	N/D	CIP Set Asides	Special Issue Bonds	St Louis County Grant	Municipal Parks	Kodak American Greenways	Bikes Belong Grant Program	RWJF	Adopt-A-Trail/Adopt-A-Sidewalk	Community Fundraising	Corporate Partnerships
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
X	X	X		X	X	X	X	X	X		X		X	X	X	X	X
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X	X	X	X	X				X		X	X	
		X		X	X</												



## APPENDIX

# Case Studies

---

### BICYCLE PLAN 2030

Portland, Oregon

#### CASE STUDY OVERVIEW

##### OBJECTIVES

- Equity Analysis: Residents within ¼ mile of a bikeway
- Bicycle Network: ~400 miles of developed bicycle trails and boulevards
- Support local economy

##### DESIGN ELEMENT

- **Bicycle Boulevards**

##### OUTCOMES

- More than 50% of residents within ¼ mile of a bikeway after build-out
- Nearly 300 miles of bike network developed
- 2007: Bicycle network contributed \$90 million to local economy and employed 1,150 people

#### IMPLEMENTATION TOOLS

##### JARC Program (Federal Program)

- “Job Access and Reverse Commute”
- Portland’s “Create a Commuter”
  - Bicycle availability
  - Bicycle infrastructure
  - 10% of funds used for planning
- Eligible Recipients: states and public bodies, private non-profit organizations, and local governments.

##### CMAQ (Federal Program)

- “Congestion Mitigation /Air Quality” Improvement Program
- Funds bicycle/pedestrian paths and facilities to reduce MV dependence

#### CITY OF ROCK HILL FEASIBILITY

##### JARC Program (Federal/State)

- Match funding from U.S. Department of Labor Workforce Investment Act
- Creates opportunities for residents to safely get to work
- Example: Southeastern Missouri’s “Missouri Goes to Work” program
- Use funds to connect eligible areas to MetroBus & MetroLink

##### MFH (State)

- “Missouri Foundation for Health”
- **Example: PedNet Coalition recipient of a \$300,000 grant to construct accessible bicycle paths and improve existing conditions**



## BICYCLE TRANSPORTATION PLAN 2000

*Madison, Wisconsin*

### CASE STUDY OVERVIEW

#### OBJECTIVES

- Increase bicycle storage and parking
- The “5 E’s”
- Bicycle-friendly development and street design

#### DESIGN ELEMENT

- **Bicycle parking/storage facilities**

#### OUTCOMES

- Bicycle parking and storage for both trip origin and destination points now included in Transportation Master Plans (TMPs)
- Comprehensive design criteria successfully implemented
- 7.6% increase in new bicycle commuters
- Decrease in annual bike crashes

### IMPLEMENTATION TOOLS

#### WisDOT SMIP (State)

- “Statewide Multi-Modal Improvement Program”
- Funds allocated to bicycle and pedestrian paths and maintenance

#### STP (Federal)

- “Surface Transportation Program”
- Used for:
- bicycle/pedestrian facilities
- planning
- education programs

### CITY OF ROCK HILL FEASIBILITY

#### MO STIP (State)

- “Missouri Statewide Transportation Improvement Program”
- Funding for non-motorized transportation

#### MARC STP (State)

- “Mid-America Regional Council’s Surface Transportation Program”
- ***Example: Vivion Road Enhancement (U.S. 69), Riverside, MO: Connecting residential areas to nearby parks***
- Includes bicycle and pedestrian paths and wide medians

## APPENDIX

**Case Studies****TRANSPORTATION MASTER PLAN***Boulder, Colorado***CASE STUDY OVERVIEW****OBJECTIVES**

- Complete Streets implementation
- Safe Routes to School initiative
- Inviting and safe urban design

**DESIGN ELEMENTS**

- **Complete Street design**

**OUTCOMES**

- 23% of commuters bicycle to work
- 32 miles new sidewalks
- SOV decrease 19.2%
- 12 public and 4 private schools participate in Safe Routes To School (SRTS)
  - Award for involving 70% of students in biking and walking activities

**IMPLEMENTATION TOOLS****CDOT (State)**

- “Colorado Department Transportation”

**SAFETEA-LU (Federal)**

- “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users”

**CITY OF ROCK HILL FEASIBILITY****MoDOT (State)**

- Contribute funds to Complete Streets

**MFH (State)**

- Missouri Foundation for Health
- ***Example: Jefferson County Health Department awarded \$159,661 to fund Complete Streets***

**Grants (National)**

- ***Example: Active Living by Design developed “Walking School Buses” in Columbia, MO***

## Programming Opportunities

---

Programs, activities and events that support walking and cycling will play a key role in transforming Rock Hill into a bicycle- and pedestrian-friendly community. These programming opportunities can complement physical improvements recommended in the Plan and help to foster a social environment that supports walking and cycling as core community values. The City of Rock Hill should seek to develop and deliver unique education, encouragement, and enforcement programs and events that build broad-based community acceptance of and support for walking and cycling. Creative partnerships with local and regional organizations and institutions will be instrumental in the development of successful programs and events. Entities such as the Webster Groves School District, the Webster Groves Chamber of Commerce, Trailnet, Great Rivers Greenway District, the Missouri Department of Conservation, the Missouri Department of Natural Resources, and others have worked with communities throughout the region, including neighboring and nearby Brentwood, Clayton, Maplewood, and Richmond Heights, to develop programs, provide technical assistance, and share resources to support community efforts.

The City of Rock Hill's Parks Department has a strong history of hosting successful programs and events that bring together members of the community and showcase the City's numerous parks and open spaces. Annual events like the Rock Hill Movie Night and the Rock Hill Fall Festival and Parade bring residents of all ages out to Stroup Field for family-oriented activities. While most of the City's programs and events are not focused directly on increasing bicycle and pedestrian activity or safety, they do encourage residents to take advantage of the City's park facilities, many of which are within walking and bicycling distances to neighborhoods in the City. Through the development of new programs and through the incorporation of walking and bicycling elements into existing programs, the City of Rock Hill and its partners can create meaningful opportunities for residents of all ages and abilities to incorporate walking and bicycling into their daily routines for both transportation and recreation purposes.

One local effort that has had a significant impact in Rock Hill is the Safe Routes to School Program, the result of a partnership between the Webster Groves School District and Trailnet, a non-profit working throughout the St. Louis Region to foster healthy and active communities. Since 2007, Trailnet and Hudson Elementary have been hosting Walk to School Days, Bike Rodeos, and other events that encourage children and families to walk and bike to school. High levels of parent involvement and a strong social network built around Hudson Elementary have been instrumental in sustaining this program for more than six years. Rock Hill's involvement in the Safe Routes to School Program has helped increase awareness for the program throughout the community.

## APPENDIX

# Programming Opportunities

---

## PROGRAMMING OPPORTUNITIES

During the planning process, community members shared their preferences regarding education, encouragement, and enforcement programs, and their potential to make Rock Hill a better place to walk and bike. Respondents were most interested in programs that encourage and support children walking and bicycling to school, programs that encourage residents to walk and bicycle to local businesses, and programs designed to improve motorist awareness of cyclists, pedestrians, and other road users. The programs listed below represent a sample of potential programming opportunities for consideration by Rock Hill and its partners to create a more healthy and active community.

- **SAFE ROUTES TO SCHOOL ACTIVITIES:** In 1969, 42 percent of all students from grades 1 through 12 walked or biked to school, and 49 percent of all elementary school students walked or biked.<sup>1</sup> By 2001, less than 15 percent of all trips to school were made on foot or bike, with more than half of all students arriving at school in a private automobile (up from 16 percent in 1969).<sup>2</sup> In an effort to reverse this trend, the Federal Highway Administration initiated the Safe Routes to School Program (SR2S) in 2005. The objective of SR2S is twofold, focusing on infrastructure improvements in school areas and on behavioral programs to increase the number of children walking and biking to school.

As mentioned above, the SR2S program at Hudson Elementary is an important component of the current efforts in Rock Hill to encourage walking and cycling. With organizational and technical support from Trailnet, Hudson Elementary's SR2S program has become a mainstay in Rock Hill. Similar efforts should be considered for Steger Sixth Grade Center and for the Elementary Computer School. Challenges may arise due to the fact that enrollment at each of these schools draws from the entire district, but residents in Rock Hill and in north Webster are still within walking distance from these schools.

---

<sup>1</sup> "Transportation Characteristics of School Children," Report No. 4, Nationwide Personal Transportation Study, Federal Highway Administration, Washington, DC, July, 1972.

<sup>2</sup> Federal Highway Administration, National Household Travel Survey, 2001.



## Programming Opportunities

---

- **SHOP BY BIKE/SHOP BY FOOT PROGRAM:** Shop by Bike and Shop by Foot programs encourage residents to walk and/or bike to local businesses for short daily trips. Forty percent of all travel trips in the United States are two miles or less, a distance that can be comfortably covered on foot or bicycle, yet 74 percent of these trips are made by automobile.<sup>3</sup> Shop by Bike and Shop by Foot programs can help to reduce automobile congestion, lower carbon emissions, improve individual health, and support local businesses. The City of Rock Hill should work with area businesses and the Webster Groves Chamber of Commerce to develop a program that encourages residents of Rock Hill and surrounding communities to walk and bike to local businesses. Successful programs have focused on the provision of incentives to customers who arrive on bike or foot, such as a free item, a discount, or a similar offer.
- **BICYCLE FRIENDLY BUSINESSES PROGRAM:** Creating a bicycle-friendly community is not limited to actions of local government, residents and advocacy groups. Local businesses can take a number of steps to cater to and improve access for cyclists; however, most businesses are unaware of the resources available to increase conditions for cyclists. In addition to participating in a Shop by Foot/Shop By Bike Program, local businesses may benefit from a Bicycle Friendly Businesses Program. Such a program would generally function in two important ways; first, by providing the resources, information, best practices, and, in some cases, incentives, to help local businesses create an environment that supports cycling. This can be done by providing safe and secure bicycle parking for customers and employees, developing incentive programs to encourage employees to bike to work, and distributing commuter education materials to employees. By improving conditions in and around their businesses and incentivizing bicycle ridership, local businesses are creating opportunities for a greater diversity of customers and increasing cycling throughout the community.

In the St. Louis Region, Trailnet works with businesses and community groups through TravelGreen, a program designed to encourage commuter cycling and help local businesses develop policies, environments, and social networks that embrace alternative transportation. This growing program incorporates Bike To Work Day events, Breakfast for Bikers events, and the Shift Your Commute website ([www.shiftyourcommute.com](http://www.shiftyourcommute.com)) to support businesses and employees seeking to incorporate bicycle commuting into their daily routines.

---

<sup>1</sup> Federal Highway Administration, National Household Travel Survey, 2001.

## APPENDIX

## Programming Opportunities

---

- **BICYCLE AND PEDESTRIAN AWARENESS CAMPAIGN:** Safety, both real and perceived, is a significant factor that contributes to walking and bicycling activity. Many residents in Rock Hill would like to walk and bike more frequently, but vehicle speeds and volumes along arterial and collector roads, particularly Manchester Avenue (Highway 100), are too high. Other local roads present issues for residents, particularly school children, when attempting to access local parks and school. Many residents have expressed interest in the development of a campaign to promote driver awareness of bicycles and pedestrians. Through the creation of literature and promotional materials, the strategic distribution of these materials throughout the community, and other efforts to publicize the campaign, the City can raise motorist awareness of bicycle and pedestrian safety issues and in turn affect driver behavior. Successful awareness campaigns in other cities throughout the United States have targeted school zones, downtowns, main streets, dangerous intersections, and significant crash sites. Awareness campaigns can also have a significant impact when coordinated with roadway improvements for cyclists and pedestrians. For example, the development of on-street bikeways, such as shared travel lanes or dedicated bicycle lanes, should be accompanied by an awareness campaign targeting adjacent neighborhoods, nearby businesses, and other affected community members. Such a campaign could provide information on the benefits of the improvements, the importance of transportation options for all residents, and the proper driving behavior for safely sharing the roadway with cyclists.
- **NEIGHBORHOOD WALKING GROUPS:** Social networks and support groups play an important role in increasing participation in physical activity and encouraging community members to lead a more healthy and active lifestyle. Walking groups, which are often formed at the neighborhood level, can be an effective type of social network for increasing physical activity, particularly for seniors. While most walking groups choose recreational routes, there is also the potential for these walking groups to reach community destinations, such as the grocery store, pharmacy, library, or local restaurants. While neighborhoods associations, PTO groups, or senior centers may often be the catalyst for the creation of walking groups, the City of Rock Hill can encourage and support the formation of such groups by providing messaging, branding, or promotional materials like pedometers or t-shirts.

## Programming Opportunities

---

- **NEIGHBORHOOD PACE CAR PROGRAM:** A growing number of cities across the country have taken a unique approach to traffic calming: the neighborhood pace car program. Through this program, residents that have pledged to act as pace cars drive slowly and safely, give way to pedestrians and cyclists, and set a standard of respect and behavior for other automobile drivers to follow. Neighborhood pace car programs, most often administered by the local government agency, consist primarily of informational brochures, a dedicated webpage to provide information and updates, and bumper stickers to be adorned by participating pace cars. Links to sample neighborhood pace car programs are provided at the end of this section of the plan.
- **PROJECT OUTREACH:** As new bicycle facilities are constructed, it is important to reach out to adjacent residents, business owners, and other important stakeholders to impart the benefits of active transportation infrastructure, to provide educational material, and to encourage facility usage. Shared lane markings, dedicated bicycle lanes, and other bicycle facility elements will bring changes to the transportation network that few have seen or experienced first hand. Outreach efforts will be an integral component of any new bike facility project and can positively influence the community's perception and usage of these new facilities. The City should consider the use of pamphlets, direct mailings, and door hangers to provide information about new projects and encourage residents to walk and bike for local trips.

## APPENDIX

## Programming Opportunities

---

### GENERAL RESOURCES

Pedestrian and Bicycle Information Center (PBIC)

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

PBIC's Case Study Compendium

[http://www.walkinginfo.org/case\\_studies/](http://www.walkinginfo.org/case_studies/)

Federal Highway Administration's Bicycle and Pedestrian Program

<http://www.fhwa.dot.gov/environment/bikeped/>

Federal Highway Administration's Safety Program

<http://safety.fhwa.dot.gov/>

Trailnet, Inc

<http://trailnet.org/>

Missouri Bicycle and Pedestrian Federation

<http://www.mobikefed.org>

Missouri Department of Transportation's Bicycle and Pedestrian Program:

<http://www.modot.mo.gov/othertransportation/bicyclepedestriangeneralinformation.htm>

America Walks

<http://americawalks.org/>



## Programming Opportunities

---

### NEIGHBORHOOD PACE CAR PROGRAM

Washington, D.C.

[http://www.waba.org/education/about\\_pace\\_car.php](http://www.waba.org/education/about_pace_car.php)

Springfield, MO

<http://www.springfieldmo.gov/traffic/pacecar.html>

Davis, CA

<http://cityofdavis.org/police/pacecar/>

### SAFE ROUTES TO SCHOOL

National Center for Safe Routes to School

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

Safe Routes to School National Partnership

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

PBIC's Safe Routes to School Guide

<http://guide.saferoutesinfo.org/>

FHWA Safety Program – Safe Routes to School

<http://safety.fhwa.dot.gov/saferoutes/>

## APPENDIX

**Programming Opportunities**

---

**SENIOR BIKING AND WALKING PROGRAM**

New York, NY

<http://www.transalt.org/campaigns/pedestrian/safeseniors>

Portland, OR

<http://www.portlandonline.com/TRANSPORTATION/index.cfm?c=eafeg>

<http://www.streetfilms.org/archives/portland-or-older-adults-bike-program/> (video)

**YOUTH AND ADULT BICYCLE EDUCATION**

Bicycle Safety Education Resource Center

<http://www.bicyclinginfo.org/education/resource/fhwa.html>

Trailnet's Bike Smart Program

<http://www.trailnet.org/our-work/travelgreen>

PBIC's SRTS Guide – Bike Education Section

<http://guide.saferoutesinfo.org/education/resources.cfm>

League of American Bicyclists

<http://www.bikeleague.org/programs/education/index.php>

Safe Routes to School National Partnership's Bicycle and Pedestrian Curricula Guide: Making the Case for Bicycle and Pedestrian Youth Education

<http://www.saferoutespartnership.org/publications/CurriculaGuide>



Incorporated 1929

