MAPLE CITY

GREENWAY

Maple City Greenways Master Plan ~ 2010

Goshen, Indiana

LEHMAN & LEHMAN

Transforming Horizons

Maple City Greenways Master Plan ~ 2010

Goshen, Indiana

This report document was prepared under
Contract for the **Goshen Parks and Recreation Dept** by:

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Preface

Acknowledgements

This plan was prepared with the assistance, direction, and cooperation of the City of Goshen Parks and Recreation Board, the Goshen Pathways Committee, and the citizens of the City of Goshen.

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Executive Summary

Maple City Greenway Statistics

The proposed routes and pathway segments of the Maple City Greenway will cover 89.49 miles throughout Goshen, with 30.50 miles currently in place. The Shared Use Trail is planned to have 48.96 miles of trail, with 19.72 miles currently in place. Bike Lane routes will cover 29.60 miles, with 2.53 miles currently in place, and the Blueway will traverse 10.93 miles having 8.25 miles already established.

What Are Pathways and Greenways?

Pathways and greenways are corridors of protected open space managed for conservation, recreation and alternative transportation purposes. Greenways often follow natural land or water features, and link nature reserves, parks, cultural features and historic sites with each other and with populated areas. Greenways can be publicly or privately owned, and some are the result of public/private partnerships.

Pathways are trails used for walking, bicycling, horseback riding or other forms of recreation. Some greenways include pathways, while others do not. Some appeal exclusively to people, while others attract wildlife. From the hills of inland America to the beaches and barrier islands of the coast, greenways provide a vast network linking America's special places.

Why Establish Pathways and Greenways?

Pathways and greenways positively impact individuals and improve communities by providing recreation and transportation opportunities and also by influencing economic and community development. Some of the many pathways and greenways benefits include:

- making communities better places to live by preserving and creating open spaces;
- encouraging physical fitness and healthy lifestyles;
- creating new opportunities for outdoor recreation and non-motorized transportation;
- strengthening local economies;
- protecting the environment; and
- preserving culturally and historically valuable areas.

The City of Goshen, lead by the Park Department, is undertaking an important step toward meeting both the current and future alternative transportation needs of its citizens. The *Maple City Greenways Master Plan* provides a "greenprint" for the City to use as a guide in forming a pathway network through existing developments and into future expansions of the community.

> ***"Today we wouldn't consider building a home or an office without a blueprint, just as we should not continue to grow and develop our communities without a greenprint. The Maple City Greenways Master Plan will provide the greenprint (infrastructure) for the future growth of the Goshen community."***
>
> ***–Chuck Lehman, ASLA***
> ***President, Lehman & Lehman, Inc.***

The *Maple City Greenways Master Plan* reaches the goals of the City of Goshen's Maple City Greenways' Mission by providing safe, non-motorized transportation pathways to the Goshen community. The implementation of the *Maple City Greenways Master Plan* will continue to meet the Goshen Pathways Vision by improving the health, fitness, and quality of life of Goshen residents and providing safe and attractive alternative options for movement and circulation through the community.

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The *Maple City Greenways Master Plan* represents a commitment by the City to design, construct, and maintain a network of safe, convenient, and attractive bicycle and pedestrian facilities for commuting and recreational use throughout the Goshen community and connectivity to other communities and destinations in Elkhart County. One of the goals and benefits of an alternative transportation system is to minimize the use of cars, especially for short, frequent trips. As the City of Goshen continues to grow, more and more vehicles will congest city streets, especially if no easy alternative transportation routes exist for use when traveling short distances. Increased traffic equates to increased road maintenance costs, the need for new and wider streets, traffic congestion, driver / bicyclist / pedestrian frustration, additional safety concerns and an image of a non-pedestrian friendly community.

The *Maple City Greenways Master Plan* will form a network of multiuse alternative transportation options including walkers, runners, cyclists, skaters, all resulting in many benefits to the City of Goshen. These include:

- Connecting the neighborhoods with neighborhoods, the community to adjacent communities and outward to the region;
- Further enhancing the community image / pride and visitors' impressions;
- Promoting the healthier lifestyles through exercise and leisure recreation;
- Expanding the tourism opportunities, related commerce and local economy;
- Being accessible to persons with disabilities;
- Increase the self-reliance for non-drivers;
- Providing "linear parks and parkways" throughout the community;
- Connecting neighborhoods to schools, parks and other community destination points;
- Promoting quality of life issues to current and future residents of Goshen;
- Improving and stabilizing natural environments and natural areas;
- Safe Routes to Schools; and
- Complete Streets – Policy and implementation

Mission

"The Goshen Park and Recreation Department shall provide high quality and effective recreation programs and special events, facilities and parks which benefit area residents and contribute to the economy, environment, wellness and sense of community in Goshen."

Vision

"We are a superior parks and recreation department linking the Goshen Community to its historical, cultural, natural and human resources in order to enhance the quality of life through the preservation of open space, provision of recreation activities, stewardship of resources, development of trails, parks and facilities and maintenance of these community resources."

Master Plan Document

The *Maple City Greenways Master Plan* document is composed of three sections. These include Planning Approach and Plan Development, Design Guidelines, Implementation Strategies.

The *Planning Approach and Plan Development* section reviews the planning approach and process in the formation of the master plan. In this section the benefits of alternative transportation and greenways development as well as the vision, goals, and objectives for the Plan will be described.

The *Design Guidelines* section sets pathway and trail standards to ensure uniformity of bicycle and pedestrian facilities throughout the Goshen community.

The *Implementation Strategies* section discusses the development and implementation of the overall pathway and greenway network system. In this section key project areas will be addressed as well as funding strategies.

The *Appendix* includes:

- Definitions
- Reference Sources
- Goshen Districts Maps
- Sample Trail Head Signage
- Indianapolis Cultural Trail System Graphic
- 2006 Indiana Trails, Greenways and Bikeways Plan (Chapter 3) – Value Added Features of Trails
- American Canoe Association – 2005-06 ACA Recommended Water Trails

The *Maple City Greenways Master Plan* should not be viewed as static, never-to-be-changed set of ideas or projects. It must be seen and used as a dynamic plan. For effectiveness in its implementation, the plan must be reviewed, evaluated on a regular basis, and, when necessary, updated to reflect changing growth trends and attitudes of the community. In doing so, the City of Goshen can always be on the "front end" of the master plan.

Besides the physical component of the master plan, there needs to be an educational element of the citizens in promoting and usage of an alternative transportation system.

The realization of the *Maple City Greenways Master Plan* will require a cooperative effort among public agencies, private and nonprofit organizations within the City of Goshen. To strengthen this public/private cooperation, the City of Goshen has established the Maple City Bicycle Advisory Committee to address issues covering recreation, commerce, transportation, parking and safety. In lieu of establishing a separate Greenways Advisory Committee, the *Maple City*

Greenways Master Plan recommends that a pedestrian subcommittee be added to the current Maple City Bicycle Advisory Committee. Together, this group will support other greenway interest groups such as the Friends of the Pumpkinvine or Goshen Bikes while continuing to be a resource to all City Departments in the promotion of the *Maple City Greenways*, coordinating projects and priorities, assistance in obtaining funding and sponsorships, and education of the community on the benefits of this community asset.

Usage of the Master Plan Document

The *Maple City Greenways Master Plan* is intended to be adopted and used in daily and long-term decision making by elected and appointed officials and City staff. These individuals, as well as the general public, should become familiar with the goals and objectives of the plan and implement them to the greatest extent possible. The concepts, goals, and objectives discussed in this Plan should complement and be a part of the City's Comprehensive Plan, Thoroughfare Plan, Parks Master Plan, etc.

The *Maple City Greenways Master Plan* reflects the current and anticipated alternative transportation needs of Goshen. However, as a dynamic plan it must respond, evolve and expand, as does the City. The plan's effectiveness will be measured through periodic reviews and refinements. A master plan update should occur every five to ten years to reflect changing trends, growth, and desires of the community. Using the plan as a guide, while periodically updating/refining it, will be an act of positive stewardship in maintaining and promoting the "greenprint" infrastructure of the Goshen Community.

Recommendations

There are several recommendations that have been concluded as a result of this planning effort. They are listed below:

1. Adoption of the *Maple City Greenways Master Plan* as the City's alternative transportation and "greenprint" plan.
2. Adoption of the plan by the Park Board as an amendment to their 5-Year master plan.
3. Adoption by the Plan Commission and Common Council as an amendment to the City's thoroughfare plan, comprehensive plan and any other applicable plans.
4. Adoption of a Complete Streets Policy by the Plan Commission and Common Council.
5. Modification of existing subdivision and development ordinances incorporating the pathway and greenway standards.
6. Establishment of cost estimates and a priority action plan for phased implementation of the trail segments.
7. Establishment of a pedestrian subcommittee to the current Maple City Bicycle Advisory Committee. This Advisory Committee would serve as a volunteer resource group to the City and its various departments. Assistance can be in the areas of educating the community on the benefits of the system, support for other greenway interest groups identification of need and priority, funding and sponsorships, marketing and promotion of the greenways and pathways system, organizing community functions and festivals utilizing the greenway system.

8. Commitment to annually review the *Maple City Greenways Master Plan* and make refinements and adjustments in response to trends, community need and development growth.
9. Commitment to seek out connectivity outside of the Goshen planning limits expanding the system to adjacent communities. The City becomes an active partner and catalyst in the Goshen area in the promotion and connections of trails, pathways for the betterment of the communities and region.
10. Establish trails and greenways as a standard part of the community level of service.
11. Commitment to seek out funding options. Study the application of special funding resources such as TE grants, etc.
12. Identification of priority trail segments (a highly visible segment that maximizes achievement of the implementation criteria and serves as a demonstration of the master plan components for the community) and commitment to fund these priority trail segments.

Plan Directions

The directions of the plan established at the threshold of the planning startup were identified as follows:

- Establish a vision for the community alternative transportation, pathways and greenways network,
- Identify key destinations and potential linkages within the Goshen community and that of Elkhart County,
- Develop a conceptual design routing plan for alternative transportation, pathways and greenways route segments,
- Identify goals and objectives to guide future decision making, and
- Coordinate this plan with Goshen's Comprehensive Plan and Thoroughfare Plan, the City's implications to the subdivision ordinances, and the Parks and Recreation 5-Year Master Plan.

Overview of the Planning Process

The Goshen Park Board selected Lehman & Lehman, Inc., landscape architects and planners from Mishawaka, IN to assist in the planning and development of this *Maple City Greenways Master Plan*.

Over the years various plans suggested alternative choices for commuting and mobility throughout the Goshen community. Therefore, a coordinated plan was necessary and it was essential that a long-range vision be established for alternative transportation in Goshen.

This visioning process has become an on-going effort with first stage of the Maple City Greenway opening in the mid-1990s. With the continual growth of the Goshen community the *Maple City Greenways Master Plan* will result in being part of the "green infrastructure" so vital to direct current and future growth.

Resolution of Adoption

Below is a Resolution of Adoption of the Maple City Greenways Master Plan 2010 as the City of Goshen's Alternative Transportation, Pathways and Greenways System Master Plan.

Resolution Adopting the Maple City Greenways Master Plan

WHEREAS, The City of Goshen Parks and Recreation Board is focused on providing a quality parks and recreation system for the citizens of Goshen, Indiana as defined by its Mission Statement and its Vision Statement; and,

WHEREAS, in doing so the City of Goshen Parks and Recreation Board has sought opinions and input from the officials and citizens of City of Goshen in developing the *Maple City Greenways Master Plan*; and,

WHEREAS, the City of Goshen Parks and Recreation Board is committed, with the assistance of the City of Goshen, to the implementation of the *Maple City Greenways Master Plan* by establishing standards, defining priorities, targeting development schedules and seeking funding sources; and,

WHEREAS, the City of Goshen Parks and Recreation Board desires to make the *Maple City Greenways Master Plan* a part of its current 5-Year Parks and Recreation Master Plan by addendum; and,

WHEREAS, the City of Goshen Parks and Recreation Board desires to make itself eligible to meet certain requirements for participation in grant programs; and,

WHEREAS, on _____, the City of Goshen Parks and Recreation Board received the final document of the proposed *Maple City Greenways Master Plan*, prepared by Lehman & Lehman, Inc. of Mishawaka, Indiana.

NOW THEREFORE, BE IT RESOLVED that the City of Goshen Parks and Recreation Board hereby accepts and adopts the final document of the *Maple City Greenways Master Plan* presented on _____, as its official Alternative Transportation, Pathways and Greenways System Master Plan.

Dated this ____ day of _____, 201__

B.

Planning Approach and Plan Development

History of Maple City Greenway Trail

The Goshen trail system (Maple City Greenway) incorporates existing trails, abandoned railroad corridors, existing parks, utility easements and city streets. Opened in 1996, the system links together a majority of Goshen's schools, parks, and natural, historic, and cultural resources; it also ties into other trails being developed within Elkhart County, most notably the Pumpkinvine Trail. When completed, over 15 miles of trail will link all areas of the Goshen community. At the heart of the Greenway is the meandering Elkhart River and the historic Mill Race hydraulic canal, built in the late 1860's to provide energy for local industry. As the trail parallels the canal, it passes through some of the most scenic natural areas and wildlife habitat in Elkhart County, including Shoup-Parsons Woods where Goshen College biologists have catalogued 174 species of birds, the most found in any single Indiana area. The trail passes through the city's historic industrial core and alongside neighborhoods and parks accessed by several bridges that cross the canal. The system also includes a three-mile trail that meanders along Rock Run Creek, crossing the creek on a new footbridge and two rehabilitated railroad bridges, and connects to the Pumpkinvine regional trail. (*Adapted from the Indiana Trails Study, December 2001 by the Eppley Institute for Parks & Public Land.)*

Benefits of Alternative Transportation

The *Maple City Greenways Master Plan* is designed to address and resolve community issues that affect the current and future environmental and economic health of the Goshen metropolitan area.

Greenways have been implemented by communities throughout the United States in order to provide recreation and alternative transportation, control flooding, improve water quality, protect wetlands, conserve habitat for wildlife and buffer adjacent land uses. Greenways typically incorporate varying types and intensities of human use, including pathways for recreation and travel and passive and active park facilities, including open playing fields. Greenways increase the value of adjacent private properties as an amenity to residential and commercial developments. These and other benefits of the Maple City Greenways network are described in the following pages. *(Adapted from the Kansas City MetroGreen Plan)*

Transportation Benefits

In past years, American communities have grown in a sprawling, suburban form as a result of dependence upon the automobile as the sole means of transportation. As automobile use has increased, traditional forms of transportation (such as passenger train service) have become less available and communities have been slow to offer alternatives such as bicycle and pedestrian networks, bus systems and local rail service. In order to provide relief from automobile congestion on the streets and highways in metro areas, future transportation planning and development must be concentrated on providing residents with choices in modes of travel. These choices should be appealing and should offer the same benefits currently provided by the automobile: efficiency, safety, comfort, reliability and flexibility.

Goshen's greenways corridors must be designed to serve as extensions of road networks, offering realistic and viable connections between origins and destinations such as work, schools, libraries, parks, shopping areas, historical and cultural sites and tourist attractions. Greenway-based bikeways and walkways are most

effective for certain travel distances. National surveys by the Federal Highway Administration have shown that Americans are willing to walk as far as two miles to a destination and bike as far as five miles. Destinations can be linked to multiple origins throughout the Goshen area with a combination of off-road trails and on-road bicycle and pedestrian facilities.

Economic Benefits

> *"Green infrastructure is our nation's natural life support system—an interconnected network of waterways, wetlands, woodlands, wildlife habitats, and other natural areas; greenways, parks and other conservation lands; working farms, ranches and forest; and wilderness and other open spaces that support native species, maintain natural ecological processes, sustain air and water resources, and contribute to the health and quality of life for America's communities and people. Green infrastructure is smart conservation that address the ecological, social, economic impacts of sprawl and the accelerated consumption and fragmentation of land."*
>
> *—Definitions of green infrastructure are found in a report titled Green Infrastructure: Smart Conservation for the 21st Century, by Mark Benedict and Ed McMahon of the Conservation Fund, February 2002.*

Maple City Greenways offer numerous economic benefits, including higher real estate property values, increased tourism and recreation-related revenues, and cost savings for public services. Greenways have been shown to raise the value of adjacent properties by as much as five to 20 percent. For example, in a residential development in Raleigh, North Carolina, new lots situated on a greenway were priced $5,000 higher than comparable lots off the greenway. Many homebuyers and corporations are looking for real estate that provides direct access to public and private greenway systems.

Greenways are viewed as amenities by residential, commercial and office park developers who realize higher rental values and profits from when they locate next to greenways. Additionally, greenways can save local tax dollars by utilizing resource-based strategies for hazard mitigation and managing community storm water, thus placing into productive use landscapes that would not normally be considered for conventional development.

Greenways enhance the role tourism plays in the economy. Tourism is ranked as the number one economic force in the world. In several states, regional areas and localities throughout the nation, greenways have been specifically created to capture the tourism potential of a regional landscape or cultural destination. The State of Missouri, for example, spent $6 million to create the 200-mile KATY Trail, which, in its first full-year of operation, generated travel and tourism expenditures of more than $6 million.

Health and Recreation Benefits

Studies show that as little as 30 minutes a day of moderate-intensity exercise (such as bicycling, walking, in-line skating or cross-country skiing) can significantly improve mental and physical health and prevent certain diseases. Greenways contribute to public health by encouraging more people to walk or bike to short-distance destinations. Providing opportunities for participation in these outdoor activities, close to where people live and work is an important component of promoting healthy lifestyles.

The President's Commission on Americans Outdoors released a report several years ago that profiled the modern pursuit of leisure and defined the quality of life for many Americans. Limited access to outdoor resources was cited as a growing problem throughout the nation. The

commission recommended that a national system of greenways could provide all Americans with access to linear open space resources.

The *Maple City Greenways Master Plan* will complement the community's existing parks and open-space system, and serve as a primary recreation and fitness resource.

Cultural Benefits

The City of Indianapolis' newest trail system, The Indianapolis Cultural Trail, is a world class urban bike and pedestrian path that will connect all six Indianapolis cultural districts and bring users to the front door of nearly every arts, cultural, heritage, sport and entertainment venue in the downtown. Through the public/private partnership the 7.5-mile trail will serve as the downtown hub for the central Indiana greenway system, not only providing an inspiring and safe way to travel and exercise throughout Indianapolis, but also exposing users to downtown dynamic arts amenities and the city's rich heritage.

The Indianapolis Cultural Trail will boost tourism, quality of place and quality of life in central Indiana. It will increase downtown residential development and inspire new businesses. It is forecasted to position Indianapolis as a dynamic city, which is essential for attracting and retaining talented professionals, which is the key to succeeding in a global economy.

With the growing epidemic of obesity in Indiana, the Cultural Trail, as well as other trails throughout the state, will provide a safe and free form of exercise that supports both state and city initiatives, INShape and FitCity.

> ***"Increased access to open space has been linked to better physical fitness leading to decreased public health care costs, reduced social service and police / justice costs; as well as reduced self-destructive and anti-social behavior."***
>
> — *U. S. National Park Service, "The Economic Benefits of Protecting Rivers, Trails and Greenway Corridors"*

Greenway systems like *Maple City Greenways* enhance the culture of their regions and protect historic resources in metropolitan areas. Successful greenway projects across the United States have served as new "main streets," where neighbors meet, children play and community groups gather to celebrate. For cities and towns large and small, greenways have become cultural assets and focal points for community activities. Some communities sponsor "greenway days" to celebrate the outdoors and local traditions. Various walking and running events are held on greenways to support charity events or extend traditional sporting events. Many civic groups adopt segments of greenways for cleanup, litter removal and environmental awareness programs. Some greenways, like San Antonio's Riverwalk, are the focal point not only for community activities, but also for economic development.

Locally or nationally significant historic sites and districts represent the richness and diversity of area historic and cultural resources. The interpretation of historic and archeological sites along greenways can serve to increase the awareness and appreciation of the area's rich history. Greenways can also serve as vehicles to provide controlled public access to important cultural sites in a manner that promotes preservation and enhances interpretive opportunities.

Security and Safety Benefits

Most Americans are concerned about crime. Safe neighborhoods are of prime concern and priority to metro area residents. Some of the most successful deterrents to criminal activity involve increasing neighborhood awareness by citizens and participation in community watch programs. Greenways have proven to be an effective tool to encourage local residents to participate in neighborhood programs. Some greenways have been developed as part of efforts to deter criminal activity in a neighborhood. Crime statistics and reports

from law enforcement officials have shown that parks and greenways are typically land uses with the lowest incidence of reported criminal activity.

In 1969, about half of all students nationally, walked or bicycled to school. Today, fewer than 15 percent of all school trips are made by walking or bicycling. Over half of all school children arrive at school in private autos.

This decline in walking and bicycling has had an adverse effect on traffic congestion and air quality, as well as affecting the health of children. Studies show that children that lead sedentary lifestyles are at risk for obesity, diabetes, and cardiovascular disease. Parents often cite safety concerns such as traffic dangers as a reason for their children not walking or bicycling to school.

As a recreation resource, alternative transportation corridor or area where fitness activities take place, most greenways provide a safer and much more user-friendly resource than other linear corridors, such as local roads. Greenways typically attract local residents who use the facilities frequently, creating an environment that is virtually self-policing. Additionally, greenways, whether publicly or privately owned, are dedicated for multiple uses and are designed to meet federal, state and local standards for public safety and use.

Water Quality and Water Quantity Benefits

Greenways preserve wooded open spaces along creeks and streams that absorb flood waters and filter pollutants from storm water. In some cases buildings and other land uses have encroached into flood-prone areas. By designating floodplains as greenways, encroachments can be managed, and sometimes replaced with linear open space, an amenity to residents and businesses occupying adjacent property.

As a flood-control measure, Maple City Greenways corridors serve as primary storage zones during periods of heavy rainfall. The protected floodplain can also be used during non-flood periods for recreation and alternative transportation. In conjunction with existing storm water management policies and programs in the region, greenway lands can be set aside as development occurs. Greenway corridors also serve to improve the surface water quality of local rivers and creeks. The floodplain forests and wetlands contained within greenway corridors filter pollutants from storm water. These pollutants are not removed if storm water is collected in pipes and discharged directly into local streams and rivers. Improving surface water quality in streams benefits both local residents and numerous forms of wildlife that depend on streams for their habitat.

As a water supply protection measure, Maple City Greenways corridors can buffer streams and lakes with vegetation to absorb pollution from runoff.

Air Quality Benefits

Greenways as alternative transportation corridors serve to reduce traffic congestion, thus helping to improve air quality. Since the majority of automobile trips are less than two miles in length, offering alternative

transportation choices through greenways would encourage residents to bicycle or walk these short distances more often, thereby reducing traffic congestion and automobile emissions.

Plant and Animal Habitat Benefits

Maple City Greenways corridors can serve as viable habitat for many species of plants and wildlife. Greenway corridors provide essential food sources and, most importantly, access to water that is required by all wildlife. Greenways in the Goshen area could become primary migratory routes for terrestrial wildlife, serving to help maintain the integrity of many plant and animal gene pools. Some wildlife biologists have extolled greenways as future "gene-ways" because these migration routes are essential to maintaining healthy wildlife populations.

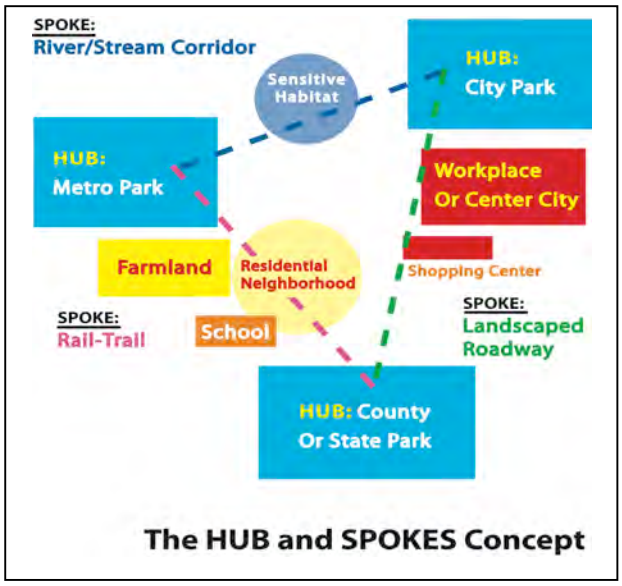
Greenways can also serve as "gene-ways" for plant species that migrate with changes in climate and habitat. These "gene-ways" often follow river and stream corridors that have long served as transportation routes for animals and humans. Maple City Greenways promote local programs to protect valuable existing forested and wetland areas and to reclaim and restore streams to support higher quality habitat.

Connecting People through "Hubs and Spokes"

Connections are the most tangible product of pathways and greenways plans. The physical framework of the *Maple City Greenways Master Plan* is based on a popular concept known as "Hubs and Spokes." Under this concept, residential, commercial and business landscapes (hubs) are linked to parks, preserves and open spaces via greenway and physical corridors (spokes). For residents this means improved access to the outdoors for recreation, auto-alternative transportation, and participation in activities that can improve health, fitness and quality of life.

The strategy for implementation will be in applying the following elements:

- Start with the Greenways Master Plan (general routes and destinations) and the findings of the master planning study
- Work with all stakeholders (citizens, government officials, businesses, etc.)
- Recognize that "users" (walkers, runners, cyclists, families, etc.) have differing needs
- Route around, not through, private property except where that access is offered voluntarily
- Choose first to construct those trails that are simplest to accomplish in terms of land, funding, etc. Easy, early successes provide project momentum and fastest benefits to citizens.



The HUB and SPOKES Concept

Hubs: Destination Points in the Community

One of the primary reasons for developing a pathway and greenway system is to provide access to a destination. While the pathway system evolves it will connect neighborhoods on its way to other destinations. Many possible destinations in the Goshen community have been identified.

- Recreational—Golf, Parks, Swimming Pool
- Services—Banks, Medical
- Commercial—Restaurants, Shopping, Arcades
- Civic—Schools, Churches, Parks, Library, City Buildings
- Residential—Houses, Apartments, Retirement Communities, Hotels/Motels

Identified Benefits

S	1.	Increased safety for those currently biking, running, walking, pushing strollers (etc.) along our sidewalk-less and shoulder-less roads.
Q, S	2.	Transportation routes for wheelchairs where none existed before.
S, T	3.	Safe routes for children to parks, schools and other places they frequent.
Q, S	4.	Parents can send kids on trails with confidence (no traffic permits).
Q, T	5.	Parents can encourage children's self-reliance (in getting themselves where they want to go).
C	6.	Increased sense of community—of something that is "ours" to share.
C	7.	Increased sense of community among frequent users as community members get to know each other.
S	8.	Increased sense of community promotes increased safety—watching out for one another.
E, H, T	9.	Every person that chooses to walk (or wheel) to a destination avoids one car trip—decreased traffic; decreased pollutants.
H, Q	10.	Studies show that people will use trails once they exist—increased activity brings health benefits community-wide.
S	11.	Crime goes down when trails go through—increased activity and surveillance deter negative activity.
Q, T	12.	Employees who live in Goshen can more readily choose to walk or bike to work—even if only occasionally.
Q, T	13.	Employees, whether they live in Goshen or not, can choose to walk to lunch locations.
S, $	14.	Hotel guests in our city can safely walk to nearby restaurants and shops.
S, $	15.	Many hotel guests look for safe and convenient running routes while in town on business—more likely to use that hotel next time.

Identified Benefits Key

C = Community
E = Environmental
H = Health
Q = Quality of Life
R = Recreation
S = Safety
T = Transportation
$ = Business & Tourism

Identified Uses

Foot

Walking
Running

Wheeled

Wheelchairs
Baby strollers
Bicycling
Skating
Scooters
Skateboards

T, $ 16. Business guests in our hotels may find that they can walk each day to the facility they are in town to visit.

$ 17. We will draw trail users from nearby communities that do not have such systems – they will spend money while they are here in our restaurants and shops.

Q, $ 18. Nationwide, there is evidence that nearby trails raise property values—for trail adjacent properties; but also for the community at large, which becomes a more desirable place.

E, Q 19. Areas set aside for trails through greenways preserve that greenspace permanently creating a more livable community.

E 20. Greenspaces preserve animal habitats, plant habitats and wetlands, all contributing to a healthy ecosystem.

Complete Streets

Complete streets serve everyone – pedestrians, bicyclists, transit riders, and drivers – and they take into account the needs of people with disabilities, older people, and children. The complete streets movement seeks to change the way transportation agencies and communities approach every street project and ensure safety, convenience, and accessibility for all.

The complete streets movement initially arose within the bicycle advocacy community as a response to the absence of space for bicyclists and pedestrians along too many roads. But a sidewalk without curb ramps is useless to someone who uses a wheelchair (and is difficult to use for parents with strollers and travelers with suitcases). An awkwardly placed bus stop that does not provide a safe and convenient way to cross the street can endanger transit riders. A true complete streets policy does not simply call for the addition of bicycle and pedestrian facilities but rather inspires a careful consideration of the needs of all travelers.

At the heart of the complete streets movement are important political, policy, and procedural changes. The following explores what communities across the country have learned when implementing their complete streets visions.

Policy Components

The National Complete Streets Coalition has identified 10 elements that should appear in a comprehensive complete streets policy document. A good complete streets policy:

- Includes a vision for how and why the community wants to complete its streets.
- Specifies that "all users" includes pedestrians, bicyclists, and transit passengers of all ages and abilities, as well as automobile drivers and transit-vehicle operators.
- Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes.
- Is adoptable by all relevant agencies to cover all roads.
- Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right-of-way.
- Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.
- Directs the use of the latest and best design standards while recognizing the need for flexibility in balancing user needs.
- Directs that complete streets solutions will complement the context of the community.
- Establishes performance standards with measurable outcomes.
- Includes specific next steps for implementing the policy.

Handling Costs

Paying for transportation projects is always a challenge, regardless of jurisdiction or project design. Most often, successful implementation of complete streets policies is achieved by integrating multimodal facilities into general project design. This folds the costs for these facilities into the costs for the overall project.

Principles of Complete Streets

Two principles are critical to achieving the primary goal of complete streets: reducing street width and managing vehicle speeds. These two principles work together to improve the roadway for all users.

Reducing street width

Wide roads make it more difficult to provide for the needs of the walkers, bicyclists, and transit users traveling along the road, crossing the street, or navigating complex intersections. They consume much of the right-of-way, leaving less space for these modes, and make crossing the street more difficult. Reducing the width or number of travel lanes ("road diets") has safety and operational benefits for drivers, too, and should be one of the first options considered when balancing the needs of all travelers.

Vehicle speed management

Speed management is an overarching concern for complete streets design. Lower traffic speeds make roads safer in two ways: Drivers are more able to avoid a crash, and in the case of a crash the resulting injuries are less serious. Slower vehicle speeds make the street safer and more pleasant for non-motorized users.

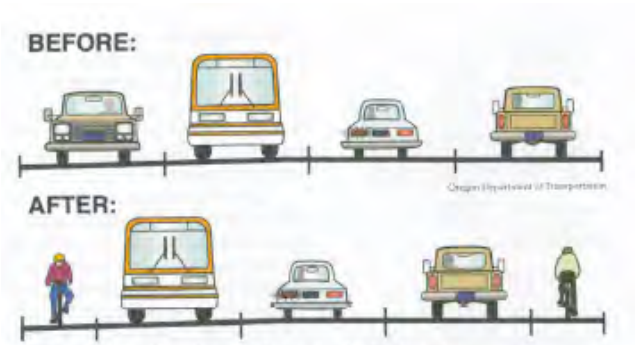
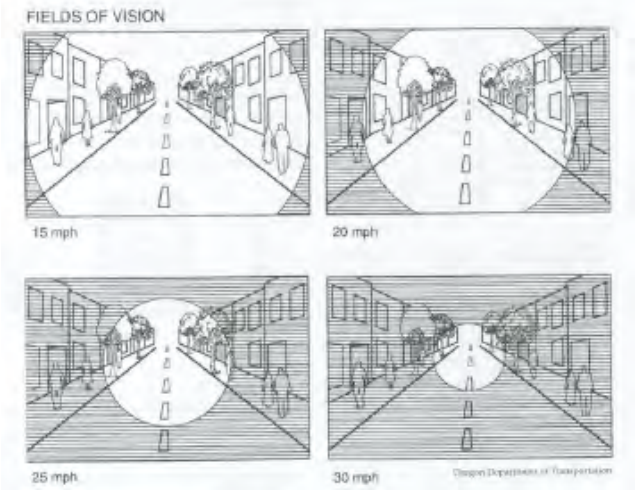


Figure 7.6. This road diet shows four lanes reduced to two lanes, a center turn lane, and two bike lanes.



Another advantage of lower speeds is that most design manuals require higher design standards for high-speed roadways, which are incompatible with pedestrian, bicyclist, and transit use. A lower design speed allows designs that are more favorable to non-motorized users. This creates a virtuous cycle because the design features that are allowed at lower speeds actually encourage lower operating speeds. Virtually all of the elements of good complete streets design help slow traffic; narrow travel lanes, medians and pedestrian islands, on-street parking, sidewalks, and street trees.

Green Streets

This term commonly refers to streets designed to minimize environmental impacts through reducing impervious surfaces. Most of the time, the goals for green streets and complete streets are mutually compatible, and features such as planting strips can promote the needs of both. Other features, such as bioswales and pervious surfaces, can work well on a complete street if pedestrian and bicyclist access and safety are carefully considered. However, eliminating bikeways or walkways to reduce the overall width of impervious surfaces is contrary to complete streets goals. Reducing the width of the motor vehicle way is a better approach.

Lessons Learned

1) Complete streets policies are valuable tools in changing transportation priorities, establishing a new ideal for street function, and communicating with the public.
2) Complete streets policies are most often one part of a broader move to change transportation and land-use planning.
3) The policy development process should include a wide variety of stakeholders to ensure that all needs are addressed.
4) Linking achievement of complete streets to funding eligibility helps institutionalize complete streets practices.
5) Successful policies affect the practices of all the entities responsible for road building in the jurisdiction.
6) Policies work best when they exist across all governmental levels.
7) Successful implementation reaches beyond the initial policy document to include changes to zoning codes, plans, standards, manuals, and procedures.
8) Advocates inside the agency can make or break policy implementation, especially during early stages.
9) Successful implementation at the local level is often marked by empowering planners and engineers to approach each project creatively, continually collecting data, and evaluating progress to confirm success.
10) Early consideration of the needs of all road users helps avoid potential implementation problems, saves money, and encourages a paradigm shift in thinking about street design.
11) Using every opportunity to improve multimodal accommodation speeds creation of a complete network and saves money.
12) The first projects are often the hardest.

(Reference: *Complete Streets: Best Policy and Implementation Practices*, Barbara McCann and Suzanne Rynne, Editors; American Planning Association Planning Advisory Service Report # 559)

Position Statement

Cities nationwide are realizing the benefits of establishing trail systems. They are taking action and seeing the positive results. The current Maple City Greenways System, the Pumpkinvine Nature Trails, and The Maplehart Trail are local examples.

Trail systems serve many purposes, including recreation, which may take the form of exercise, or simply the enjoyment of an evening stroll. Trail systems, if properly designed, also provide a network of paths that connect desirable destinations. They enable a mode of transportation to the places people want to go. Imagine a city in which one is not forced by dangerous

conditions to drive to a destination only three blocks away. Imagine a city in which children, seniors, and non-drivers can walk safely to a park, a grocery store or a library.

Such a network should include multi-use trails, footpaths, bike lanes and exiting and/or improved sidewalks. It is equally important that it include well-identified "connectors" that enable users to depart for a destination with the confidence that the trail system is contiguous. Finally, the network should ultimately include walkable connections between residential areas that are otherwise isolated from one another.

Additional Studies Having Influence to this Study

There were several previous studies that were referenced as a resource throughout the *Maple City Greenways Master Plan* planning process.

Goshen Parks and Recreation Five-Year Master Plan Update 2009–2013

The Park Department's Five Year Master Plan was also used as a resource in this planning study. Many of the identified goals of the Five Year Master Plan were considered as a foundation to this pathways study. The following are highlights from this planning document:

Trails and Greenways

"The Goshen Park and Recreation Department shall continue to pursue and develop trail connections to regional park areas outside the Goshen community to include areas as OxBow Park and River Preserve County Park, and any additional regional park areas acquired in the future. Trail links with other communities within Elkhart County as well as regional greenway connections are encouraged.

The following recommendations are suggested:

1. *Continue working on the implementation of the Maple City Greenway.*
2. *Continue searching and suggesting funding opportunities for trails and greenway development.*
3. *An important trail connection identified in the public input is the development of a trail connecting Goshen Middle School and Rieth Interpretative Center.*
4. *Complete the update of the Maple City Greenway Master Plan. In cooperation with Redevelopment Commission, Engineering Dept., Planning Dept. and Park Dept. Conduct annual reviews to adjust for changes and opportunities.*

Water Corridor Development

As another recreational experience, the canoeing program down the Elkhart River from Goshen Dam Pond to OxBox County Park provides a unique journey for its participants. The Goshen Park and Recreation Department provides a canoe return service. This waterway corridor should be improved to provide various corridor amenities such as signage/graphics, dockages and portages along its route."

Planning Approach for the Maple City Greenways Master Plan

The planning approach of the Consultant was as follows:

1. Form a Planning Team made up of various members of City Administration, City Departments, including the Park Department, Streets Department & City of Goshen Planning Department, as well as interested parties of the community.
2. Meet with the Planning Team to provide an orientation overview, define goals and values to incorporate into the plan, address known priorities, outline the next steps and assignments.
3. Prepare a base map of the study area indicating streets, key landmarks, etc., utilizing the existing CAD information provided by the City.
4. Delineate an initial routing layout looking at destination points, priorities, "coat-tail" projects, etc.
5. Expand on the initial routing layout plan identifying priorities, trail and greenway types, land ownerships, incorporate the City's Comprehensive Growth Plan, locate and identify proposed new subdivisions, etc.
6. Provide a written Progress Report and share the conceptual design and the benefits of the plan with various service clubs, public groups, and various city departments (streets, utilities, etc.) and to discuss impact of the proposed *Maple City Greenways Master Plan*.
7. Finalize the *Maple City Greenways Master Plan*.
8. Present the *Maple City Greenways Master Plan* to the Park Board and other agencies (i.e. Plan Commission, Common Council, etc.)
9. Inclusion of *Maple City Greenways Master Plan* with the City's Comprehensive and Thoroughfare Plans and Subdivision Standards.

Project Goals

By the end of this project the project team will have:

1. Provided a recommended routes map that has taken into consideration:
   a. Anticipated uses and development vision
   b. Destinations
   c. Access and easements
2. Presented a concluding policy statement that includes:
   a. A vision for the final trail system
   b. A list of anticipated uses, destinations, and benefits
3. Recommendations for the next steps

Planning Worksessions

There were various meetings with the City during the course of this study. The meetings included a review of the goals and values of the study as well as an open discussion regarding the routes of the system, documented current inadequacies and problems, surveyed goals for the trails system and designed a master plan to meet the goals.

Several assignments were given to complete for each meeting. Some of the assignments included on-site assessment activities. Activities included the following:

1. Identify key destination points in the community that should be connected with a greenway route.
2. Study areas of the community that carried concerns of safety, security, poor visibility, high maintenance, neighborhood acceptance, etc.
3. Develop thoughts regarding how best to communicate the applications of the Greenway System to the community.

Other planning ideas and concerns that this Master Plan addressed include the following:

1. The plan should address the connections of the existing sidewalks ... connecting the open segments.
2. Parks, schools, and churches may all serve as parking and trail heads for the greenway system.
3. Bikes should be used on streets or expanded pathways and not on existing sidewalks.
4. The minimum width of the sidewalk/pathway should be 8-10 feet when following existing streets.
5. The plan should develop design standards for the various trail/pathway/greenway types.
6. Trails in remote areas may want to provide a width to accommodate emergency vehicle access.
7. As the Master Plan evolves we may want to involve existing homeowners associations for input.

In identifying the routings of the greenway master plan and their priority for implementation the City identified several values to be considered as criteria:

1. Maximum length of the trail segment
2. Minimum expense in trail development
3. The practicality of the trail segment (whom it will serve)
4. Connections of the trail segments to community destinations
5. Safety factors of the trail segment (i.e. visibility of the trails)
6. Minimum stops or hesitations of the trail segment
7. The availability of water and other trail amenities
8. The circuit routes of the trail segment
9. The diversity of the trail segment
10. Ownership of the land (i.e. is there need to acquire, easements, etc.)

> *"To make a greenway is to make a community."*
>
> *—Charles Little, Author, Greenways for America*

Priority Strategies

The implementation of a greenway system as large and complex as the *Maple City Greenways Master Plan* cannot be accomplished immediately. The system will take years to build, giving full consideration to the way each segment is designed, surveying the miles and securing adequate funding. As this Action Plan was formulated, segments of the overall system will need to be prioritized into four distinct phases.

Prioritization of Segments suggested to be of prime importance for implementation was identified based on a set of criteria suggested to seek out the best applied loop segments of the overall system. This information is based on the following criteria:

- Connections of links to destination points
- Number of persons served by link
- Costs and funding sources for link
- Link's potential for multi-users
- Link's relation with other projects ("coat tails")
- Partnerships: public and/or private
- Link's proximity to identified loop or existing link
- Community / Neighborhood need requests
- Property availability
- Follows the overall alternative transportation plan
- How link applies to standards and pending impact fee strategies

Trail / Greenway Development Checklist

(Adapted from the *2010 Ped and Pedal Plan Draft, NIRPC*)

The items noted below are the primary steps that need to be taken in order to get a trail to become a reality in the shortest amount of time. These are relatively simple steps, but ones that are not always undertaken in a formal, well thought out fashion. By abiding by these steps, a project will be able to anticipate and hurdle the common obstacles in developing trails.

a. Formally determine who will own the trail.
b. Formally determine who will build the trail.
c. Establish a preliminary timetable.
d. Produce preliminary trail designs.
e. Determine how much the project will cost.
f. Determine sources of funding. (Apply for funds)
g. Hire legal counsel.

h. Establish a legal entity that can accept funding, make offers and eventually purchase the right-of-way.
i. Identify all parcel owners.
j. Determine conflicted or disputed ownership of parcels.
k. Contact all property owners by certified mail, return receipt requested.
l. Conduct community interest survey of your entire community.
m. Have the individual parcels which you want to buy surveyed.
n. Have the individual parcels appraised.
o. Depending on your location in Indiana, have a sub-class of property owners made separate from any class action lawsuits that might be involved with your parcel.
p. Determine who will be the land negotiator/buyer. Keep a journal of all dates on which you or your committee takes any action pertaining to the establishment of your trail.
q. Determine who will maintain the facility once completed.

Funding Resources

The following is a partial list of possible funding opportunities and resources for the City of Goshen to further explore. It includes Local Funding, State Funding, Federal Funding, Grant Programs, Foundations, and Corporate Sponsorship.

Local Funding Sources and Resources

1. City Council—May supply direct funding and local matching of funds for state and federal grants. May adopt regulatory measures for setbacks, open space requirements, and trail easements. May provide political support.
2. City Departments—Parks and Recreation, Public Works, Traffic/Streets, Utilities, Planning, and Engineering Departments. May coordinate the planning, land acquisition, implementation, and maintenance efforts among individual departments, which will lessen the financial burden of trail development on one department. Includes alternative transportation efforts in each department.
3. Tourism Agency—May provide funds or services for promotion and publishing information regarding trails, routes, destinations, etc.
4. School Districts—Funding for land for use as outdoor classrooms/labs and greenways.
5. Special Interest Groups—May collaborate funding with organizations with compatible interests.
6. Recreation Impact Fees—Alternative funding mechanism for infrastructure improvements in fast growing areas. *(Currently, the City of Goshen does not have a recreation impact fee ordinance.)*

State Funding Sources and Resources

(Taken from *Hoosiers on the Move, The Indiana State Trails, Greenways and Bikeways Plan,* July 2006)

Indiana Department of Transportation (INDOT) administers multiple programs on behalf of the Federal Highway Administration (FHWA) that relate directly to trail/greenway development. Safe Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users **(SAFETEA-LU)** is the current highway bill in which these programs are funded. All projects funded through this federal money must be programmed in the State's **Transportation Improvement Program (TIP)** and those in urbanized areas must also be in their respective Metropolitan Planning Organizations (MPOs) TIP.

Transportation Enhancement (TE): Is a provision of the Inter-modal Surface Transportation Efficiency Act of 1991 (ISTEA) that requires states to set aside 10 percent of their share of Surface Transportation Program (STP) funds for projects that enhance the existing transportation system. States have the flexibility to design a program to best suit their needs within the limits of the law. This program was continued and somewhat expanded under TEA-21 (Transportation Equity Act for the 21st Century) and under the current transportation bill. This program is an 80/20% matching fund. There are 12 eligible categories within TE that relate to surface transportation and 4 of those relate specifically to bicycle/pedestrian activities. Those categories are:

1. Pedestrian and bicycle facilities
2. Pedestrian and bicycle safety and education
3. Preservation of abandoned railroad corridors
4. Historic transportation building, structures, and facilities (places historic bridges on bike/ped systems).

Indiana's TE program funds transportation projects that expand beyond the traditional accommodations for cars, trucks, buses and transit. This fund is Indiana's largest funding source for trails/greenways projects. TE funding is a cost reimbursement program and not a grant. The sponsor must pay at least 20 percent of a project's cost to show commitment by the local group or community. Applicants may receive reimbursement for eligible costs as work is completed. TE strengthens the cultural, aesthetic, and environmental aspects of the nation's intermodal transportation system.

Congestion Mitigation & Air Quality (CMAQ): an 80/20 federal funding program is only available in urbanized areas (areas exceeding population of 50.000) designated by the US EPA as NOT meeting current air quality standards for various pollutants. Six areas in Indiana currently qualify. Key considerations for projects funded with this source are improving air quality and being able to document that positive impact. The MPOs evaluate all sorts of projects that help air quality. As a result transit projects, ride-sharing projects, certain signal upgrade projects, ozone alert projects, etc., provide competition for limited funds. Candidate projects are annually submitted to and evaluated by INDOT in a statewide application process.

Safe Routes to School (SRTS): A new federal funding source that was created specifically to encourage and improve the safety of children walking and bicycling to and from school. There are limitations on the use of these funds. They target only elementary and middle schools (K-8), not high schools. Improvements need to be located within two miles of the intended schools. Schools can be public or private.

There is no match requirement for these funds. There should be a demonstrable positive effect on the numbers of children biking or walking to school. Most of the available funds (70% - 90%) would be directed toward construction projects, while a smaller amount (10% - 30%) is required to be directed toward

education, encouragement and enforcement efforts (non-construction projects). These projects can have secondary beneficiaries, such as area residents, employees or adults walking and biking in the vicinity of the school, but the primary targets are schoolchildren. Secondary impacts on school children are insufficient to justify a project.

Transit Enhancement Funds: This is a general category of funds administered by the Federal Transit Administration; it is not a specific program. Transit funds in general improve or promote better access to public transportation (e.g. bus or rail). Near transit stops or along corridors used frequently by transit vehicles there may be opportunities to improve transit use that would, at the same time, make it easier or safer to walk or bike. For example, sidewalk improvements near transit stops will improve access for transit users but also enable people who are not catching the bus to walk more safely. Transit funds can be used to purchase bike racks for buses or to install bicycle racks and bike lockers at transit centers. The objective is to make it more convenient to use transit and that remains the primary purpose of transit funds. Pedestrians and bicyclists would be secondary beneficiaries.

National Scenic Byway (NBS): this discretionary grant program makes federal funding available for 8 project types that directly benefit designated byways. Among eligible uses are projects that improve bicycle and pedestrian safety and access along the byways and to important byway-related resources in the corridor. The 80/20 federal funds in this program are required to contribute directly to the byway and the experience of byway travelers and not simply in an incidental way. Indiana has two nationally designated byways and one state-designated byway. These funds are not available outside the byway corridors. Once a year NSB applications are submitted to the state DOT, thoroughly reviewed and forwarded to FHWA for consideration under a national merit-based program. Walkways, curb ramps, crosswalk treatments, bicycle racks, trail facilities, and rest stops that are readily available and intended for by-way travelers are examples of improvements benefiting cyclists and pedestrians.

Indiana Recreational Trails Program (RTP): This 80/20 matching program is intended to develop and maintain non-motorized and motorized recreational trails. Originally called the National Recreation Trails Trust Fund Program, this money comes from federal motor fuel excise taxes paid by users of motorized off-highway vehicles. In Indiana, this fund is administered by the Indiana Department of Natural Resources. By legislation, at least thirty percent of the funds are to be used for non-motorized trails, and at least thirty percent of the funds are to be used for motorized trails. The remaining forty percent is discretionary for diversified trail uses and education.

To date, RTP has provided more than $4.9 million for trail projects including Indiana's first publicly owned motorized vehicle riding area, Redbird State Riding Area. Since its inception in 1995, RTP has put over 100 miles of trail on the ground, helping to create safer, more livable communities through the development of walking, hiking, equestrian, mountain bicycling, bicycling, off-road motorized, and water trails.

Land and Water Conservation Fund (LWCF): This is a 50/50 matching program administered by the IDNR through the National Park Service, Department of Interior. The program is for the acquisition and development of outdoor recreation areas. Trails are one priority of this program in Indiana.

Indiana Heritage Trust (IHT): This state land acquisition program was established to preserve land and among the priorities is greenways acquisition. Matching requirements vary with the program. Funds come from the sale of the environmental license plate and sometimes from legislative appropriations.

Federal Funding Sources and Resources

1. Department of the Interior
    a. National Park Service—Funds are currently available for land acquisition and trail development through the "Land & Water Conservation Fund" and "Rivers, Trails and Conservation Assistance Program."
    b. U.S. Fish and Wildlife—Funds are currently available for wildlife habitat conservation along greenways.
    c. Bureau of Land Management—Funds are available for forest restoration, wildlife habitat studies, riparian habitat restoration and other programs benefiting public land.
2. Department of Transportation—Funds for bicycle and pedestrian trails are currently available through the Transportation Equity Act (TEA-21) including "Recreational Trails Program," "Bicycle Transportation and Pedestrian Walkways" and "Scenic Byways Program".
3. Environmental Protection Agency—Funding is currently available for planning, public information, and wetland projects related to greenways.
4. Department of Defense—U.S. Army Corps of Engineers have funds available for recreation and conservation projects in conjunction with flood control improvements.
5. Department of Housing and Urban Development—Community Development Block Grants are funds available to projects that benefit low and moderate-income people.
6. Department of Commerce
    a. Economic Development Administration—Supports projects that promote long-term economic development and private sector job creation especially in areas in severe economic distress.
    b. Small Business Administration—Funds are currently available for tree planting programs.
7. Federal Emergency Management Agency—Funds available through local flood insurance programs.
8. Department of Energy—Funds are currently available to assist communities cleanup contaminated sites.
9. National Endowment for the Arts and Humanities—Funds are currently available for including art along trails and greenways.

Grant Programs

1. **American Greenways Kodak Awards Program**—Grants of $500 to $2,500 are currently available through The Conservation Fund to local greenways projects including planning, design, or development. Contact American Greenways Program at The Conservation Fund, 1800 North Kent Street, Suite 1120, Arlington, VA, 22209
2. **Recreational Equipment Incorporated (REI)**—Seed grants of $200 to $2,000 are available to state and local conservation groups for river protection projects. Contact National Rivers Coalition, American Rivers, Inc., 801 Pennsylvania Ave., SE, Washington DC, 20013.

3. **The Global Relief Heritage Forest Program**, American Forestry Association—Grants are available (unspecified amount) for tree planting on public lands. Contact American Forestry Association, P.O. Box 2000, Washington DC, 20013
4. **The Design Arts Program of the National Endowment for the Arts**—Grants are also available (unspecified amount) to promote excellence in urban design, historic preservation, planning, architecture, and landscape architecture. Contact National Endowment for the Arts, Room 625, Nancy Hawks Center, 1100 Pennsylvania Ave., NW, Washington DC, 20506

Foundations

National, regional and local foundations may be able to fund trail development. The National Foundation Center (ww.fdncenter.org) maintains a database of foundations.

Corporate Sponsorship

Corporate donations may be used to build boardwalks, interpretive signage, trail furniture, and provide funds for annual awards programs.

Organizations and Resources

The following is a partial listing of alternative transportation and greenways organizations that may provide valuable policy, planning, design, and technical information to the City of Goshen.

Alternative Transportation

1. **American Association of State Highway and Transportation Officials (AASHTO)**. A national organization representing highway transportation departments, published "Guide for the Development of Bicycle Facilities" in 1999. Contact AASHTO, 444 North Capital St., NW, Washington, DC 20001 or www.aashto.org
2. **National Bicycle Greenway**. A national organization dedicated to creating and maintaining a coast-to-coast network of multi-use transportation and recreational bicycle trails. Public education information available. Contact www.bikeroute.com
3. **Association of Pedestrian and Bicycle Professionals**. A national organization dedicated to promoting better conditions for bicycling and walking. Contact www.apbp.org
4. **National Center for Bicycling & Walking**. A national organization promoting the increased safe use of bicycles and walking in transportation planning. Contact National Center for Bicycling & Walking, 1506 21st St., NW, Suite 200, Washington, DC 20036 or www.bikewalk.org
5. **League of American Bicyclists**. A national organization devoted to increased bicycle use for commuting and recreation. Contact League of American Bicyclists, 1612 K St., NW, Suite 401, Washington, DC 20006 or www.bikeleague.org
6. **Surface Transportation Policy Project**. A national organization lobbying for alternative transportation and instrumental in passage of ISTEA. Contact Surface Transportation Policy Project, 1100 17th St., NW, 10th Floor, Washington, DC 20036 or www.transact.org
7. **Transportation Access Project**. A national organization dedicated to integrating alternative transportation into communities. Contact Transportation Access Project, 503 W. 4th Ave., Olympia, WA 98501.

8. **Pedestrian & Bicycle Information Center**. A national organization dedicated to providing sound policy, design, and research information regarding alternative transportation. Contact www.bicyclinginfo.org

Greenways

1. **The American Greenways Program**. A national organization dedicated to establishing a network of public and private open space corridors. Information and technical assistance is available on all aspects of greenways planning and development. Contact The Conservation Fund, 1800 N. Kent St., Suite 1120, Arlington, VA 22209 or www.conservationfund.org
2. **American Farmland Trust**. A national organization charged with protecting agricultural land. Technical information is available regarding land preservation strategies. Contact American Farmland Trust, 1920 N. St., NW, Suite 400, Washington DC 20036 or www.farmland.org
3. **American Hiking Society**. A national organization dedicated to protecting the interests of hikers and preserving footpaths and the natural environment. Information about volunteer recruitment, trail building and maintenance is available. Contact The American Hiking Society, 1422 Fenwich Lane, Silver Spring, MD, 20910 or www.americanhiking.org
4. **American Rivers**. A national organization leading the charge of preserving the nation's outstanding rivers and their landscape. Contact American Rivers, 1025 Vermont Avenue, Suite #720, Washington, DC 20005 or www.amrivers.org
5. **Land Trust Alliance**. A national organization of land trusts. Expertise in establishing land trusts is available. Contact Land Trust Alliance, 1319 F St., NW, Suite 501, Washington DC 20004 or www.lta.org
6. **National Wildlife Federation**. A national organization dedicated to the protection of wildlife, wild places, and the environment. Sponsors a program called The Community Wildlife Habitat Program/Wild City Initiative. www.nwf.org
7. **Rails-to-Trails Conservancy**. A national organization dedicated to assist local governments and nonprofits convert abandoned railroad right-of-ways into public recreational trails. Contact Rails-to-Trails Conservancy, 1100 17th St., NW, 10th Floor, Washington, DC 20036 or www.railstotrails.org
8. **Scenic America**. A national organization devoted to preserving America's scenic beauty. Information and technical assistance is available to assist identifying, designating, and protecting scenic roads in urban and rural settings. Contact Scenic America, 801 Pennsylvania Ave., SE, Suite 300, Washington, DC 20003 or www.scenic.org
9. **Trust for Public Land**. A national organization formed to help public agencies acquire land of significant recreation, cultural, and ecological value. Contact Trust for Public Land, 116 New Montgomery St., 3rd Floor, San Francisco, CA 94105 or www.tpl.org
10. **Trails and Greenways Clearinghouse**. A national organization dedicated to promoting greenway development. Technical assistance and information is available. Contact Trails and Greenways Clearinghouse, 1100 17th St., NW, 10th Floor, Washington, DC 20036, or www.trailsandgreenways.org

C.
Design Guidelines

Design Guidelines

The intent of the *Maple City Greenways Master Plan* is a planned network of bicycle and pedestrian routes and facilities for residents and visitors of all ages. This network will allow its users to walk or bike to their destinations in lieu of taking their car.

The *Maple City Greenways Master Plan* fulfills the goals identified in the previous studies. It provides opportunities to improve the health, fitness, and quality of life of Goshen's residents. However, motivating individuals to walk or bike will require developing safe, convenient, and attractive facilities.

The *Maple City Greenways Master Plan* will require the establishment of design guidelines in order to successfully implement the vision, goals, and objectives of this Master Plan. The guidelines will assist the City Administration and Departments along with the proposed Maple City Greenways Advisory Committee in the development of bicycle and pedestrian facilities that are safe, convenient, and attractive as well as ensure uniformity of the design, layout, and construction of these facilities throughout the Goshen community.

The Development Guidelines should be used in conjunction with the standards developed by the City of Goshen Public Works Department, the Indiana Department of Transportation (INDOT), and American Association of State Highway and Transportation Officials (AASHTO).

Identified Users

The users of Maple City Greenways Master Plan, including bicycle and pedestrian users, will vary in age, experience, mobility, as well as confidence in traveling with, or crossing, vehicular, bicycle and people traffic.

Users will wish to experience the multi-use trails and pathways, greenways in nature areas and parks, and bike lanes as part of the city streets. Trails, pathways and sidewalks will need to accommodate walkers, bikers, runners, roller bladers, persons in wheelchairs, as well as accommodations for large groups.

Experienced users will bike or walk with vehicular traffic even if designated facilities do not exist. However, average users prefer to bike or walk on less busy neighborhood streets and on designated bicycle and pedestrian facilities.

The Maple City Greenways Master Plan attempts to improve the routes and connectivity for experienced users as well as create safe, convenient and attractive facilities to attract average users. Providing accessibility for users of varying experience, mobility and confidence requires careful attention to the visibility of users, width and surface condition of routes, and design speed of bicycle and pedestrian facilities.

Facility Components

The Maple City Greenways Master Plan system will comprise many different facility components. These will include the trail or pathway itself, supporting infrastructure such as trailheads, signage, etc. Also, the design and applications of the use of landscape plantings, fencing, lighting, emergency phones, design and details

of intersections and crossings, etc. will enhance the trail system. Trail signage and kiosks are also a vital component of the trail system. Standardization of the graphics/logos is recommended as well as the use of such signage to provide directions and information.

The locations of trailheads and their related elements would best be placed in common areas such as parks, schools, churches, etc. They should have ample visibility and necessary infrastructure elements such as utilities, lighting, parking, etc.

Other on-trail components (i.e. landscape plantings, fencing, lighting, etc.) should be designed and used for best compatibility with the adjacent land uses and neighbors.

A sample of conceptual design for typical trailhead signage for in the Maple City Greenways can be found in the Appendix of this document.

Design for Special Areas

The Maple City Greenways system routing plan calls for several areas that will require special design considerations. There are segment routes that in lieu of crossing busy streets and highways may potentially need to be routed under the highway using existing drainage way bridges, etc.

There are other areas of the city where such bridge under crossings will not be possible. Where these occur the route segments have been located at major street intersections that are signaled. These intersections may need to be enhanced to provide this access and accessibility to the users.

Besides the Pumpkinvine Nature Trail, there are no abandoned railroads within the City while active rail lines cross through the city limits. Potential exists for possible utilization of the railroad right of way. This has been done successfully in other Indiana communities on active rail lines. The City and the railroad company should explore this trail option further.

Trail segments have been noted occurring in areas of drainage ways and easements. These trail segments can have two trail type applications. As a nature type trail the trail composition may be an earthen trail surface. If utility vehicles will use the segment it is recommended that the trail be multiuse and be 12’ in width and be asphalt surface designed to handle traffic loads.

Where feasible the City should continue the inclusion of “bike lanes” as part of the City Thoroughfare Plan. The design standards used for these applications should comply with both INDOT and AASHTO guidelines and requirements.

Maintenance Guidelines

The *Maple City Greenways* system will require both maintenance and management policy for its usage and operation. The City should establish maintenance policy and guidelines that would define responsibility and be used in the overall system. Generally, the trail segment in the parks and open spaces will be the responsibility of the Parks Department (or jointly with the Utility Departments, where applicable). Segments where the trails are within street right of ways will be part of the maintenance responsibilities of the Public Works Department. Regular maintenance may include:

- Inspecting and replacing bicycle and pedestrian routes and roadway signs,

- Repairing cracks and holes in bicycle and pedestrian routes surface,
- Sweeping routes to remove loose gravel, sand, garbage, leaves, etc.
- Removing dead or dangerous tree limbs and regular pruning of vegetation along the bicycle and pedestrian routes,
- Removing snow and ice,
- Assuring that there is positive drainage off of and away from the trail segment, and
- Documenting regular inspection to limit risk and liability.

The City may wish to consider promoting an "adopt a trail" program where the adjacent property owners or businesses would become "partners" with the City in the maintenance of trail segments.

Logo and Signage

The *Maple City Greenways* system will best become known by its users through its usage. *Trail Signage Graphic Standards* will be used in identifying trail segments and the overall system. Such logo design will be used to identify the Maple City Greenways system in Goshen. The logo is a form of identity and marketing for the system.

The logo (to the right) and signage will serve various functions including identifying trailheads, providing direction and safety information, identifying segment names, and communicating unique information such as historic or interpretive uses.

While the Maple City Greenways system should have its own identity in its graphics and logos, etc., common regional logos and graphics should apply where the system extends to the adjacent communities and trail systems.

Proposed Trails and Pathways Design Standards

The *Maple City Greenways Master Plan* calls for four (4) trail/pathway applications. They are as follows:

A. Shared / Multi-Use Trails
B. Improved Sidewalks
C. Bike Lane
D. Blueway Pathways (Waterways)

Where applicable the Consultant recommends the inclusion of conduits within the trailway. Such conduits can serve the City now and in the future in running fiber optics and other similar utility lines. With the construction of the trails and pathways such a piece of "utility infrastructure" should be seen as an asset.

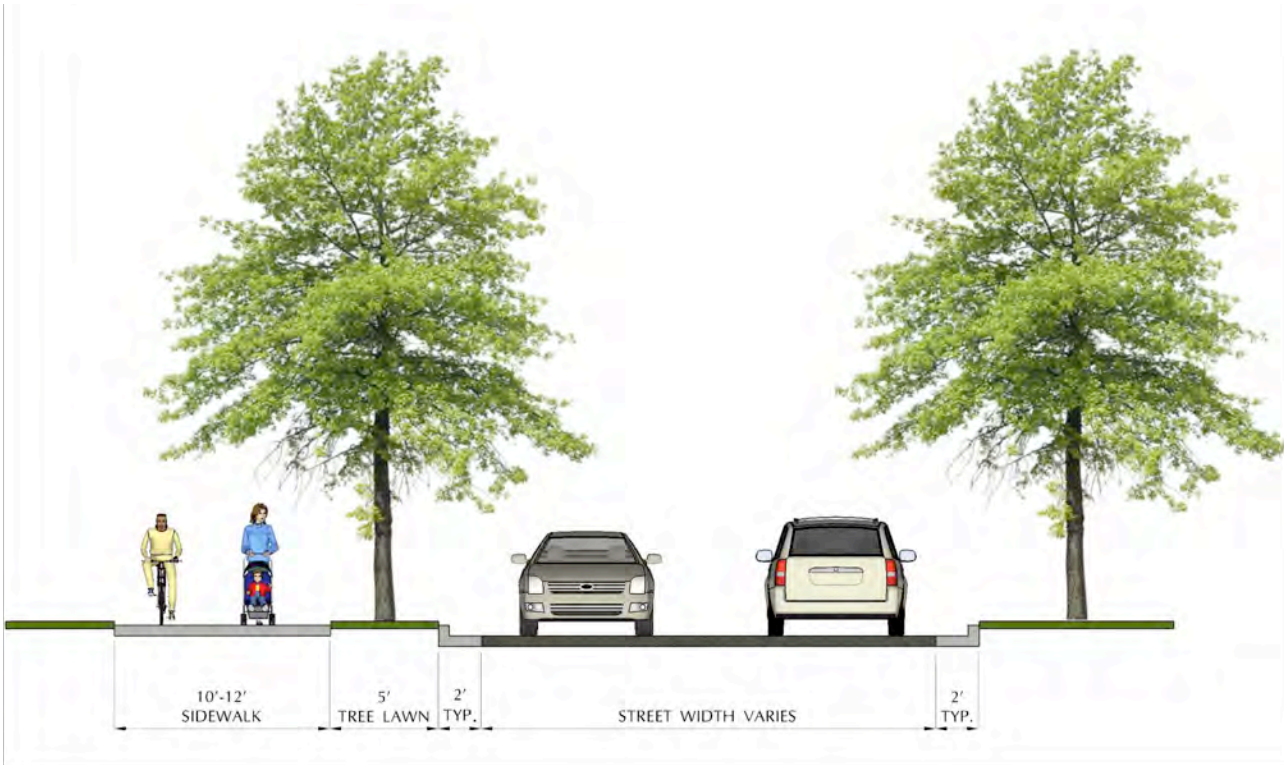
As stated previously, it is not the intention of the *Maple City Greenways Master Plan* to acquire land for such development unless it is donated or negotiated with the City and the Property Owner.

A – Shared / Multi-Use Trails

The most predominant and preferred greenway type is the shared / multi-use trail. This trail type serves both recreational and transit-type uses and is generally located in unobstructed right-of-ways, easements, or parks. These greenway segments serve as major connection corridors of the greenway network and are typically 10 to 12 feet wide with a 2′ shoulder on each side. Shared-use paths are historically constructed of a 4″ thick asphalt surface over a minimum 4″ aggregate base sufficient enough to support maintenance and emergency vehicles. AASHTO standards are required for all trail development and INDOT design standards are required for those projects that are state or federally funded.

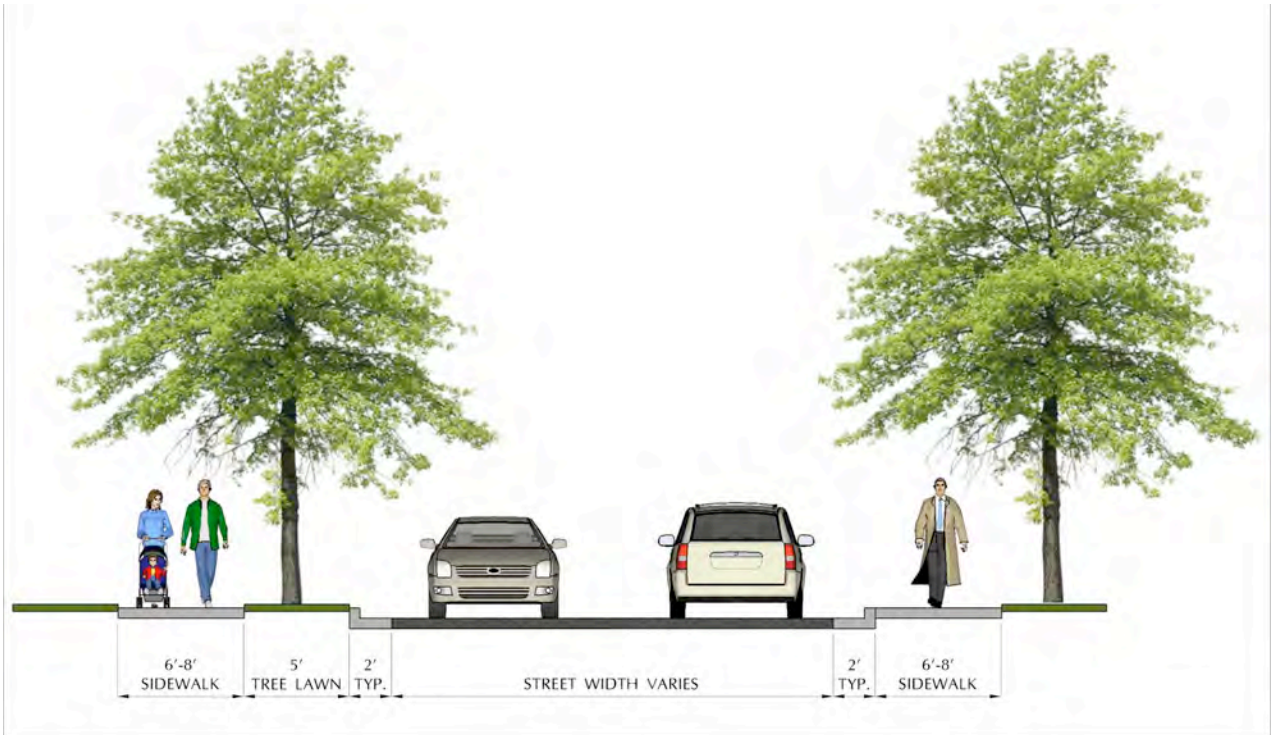
- **Shared / Multi-Use Easement or Park Development**

- **Shared / Multi-Use Trails Right of Way Development**



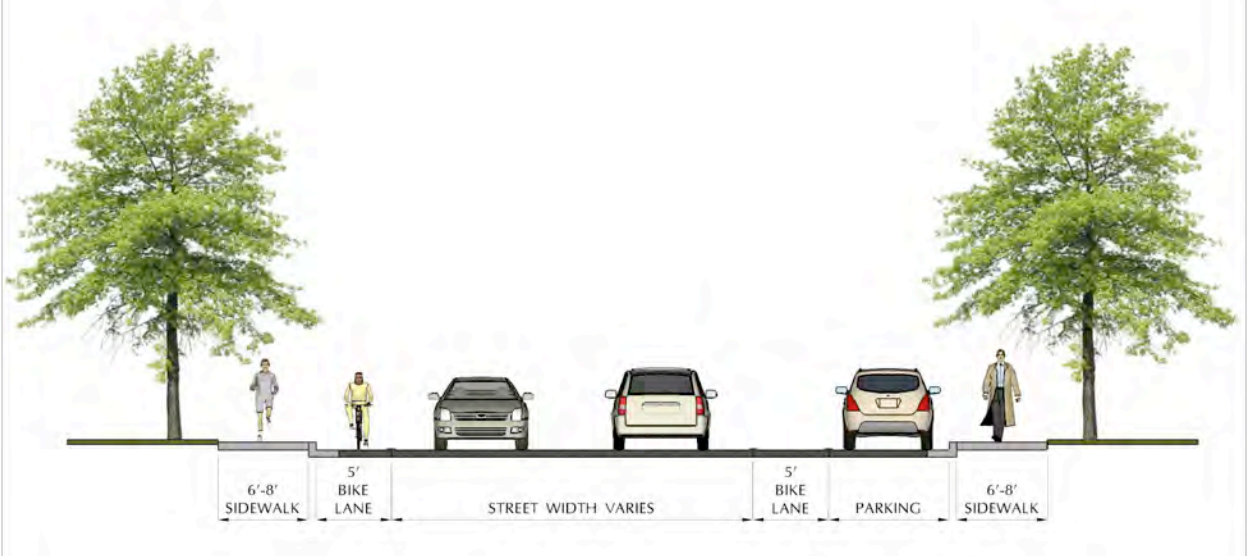
B – Improved Sidewalks

Many of the greenway segments outlined in the master plan are located within existing neighborhoods and serve as connection routes to the community. Improving these connection corridors is not only important to the greenway users, but also to the quality of life already established within the neighborhoods. Developing full-width shared-use paths would adversely affect much of the private property in these areas, thus making them problematic. In an effort to maintain the connectivity provided by these designated corridors, it is recommended that these segments be developed into improved sidewalks, with widths of 6 to 9 feet and located within the City right-of-way. These "extra wide" sidewalks are essentially sidewalk improvements but are wider than the City standard sidewalk and have the ability to accommodate a greater number of users. Constructed out of 4" thick concrete or asphalt over a compacted aggregate base, these sidewalks must meet the requirements of the Americans with Disabilities Act (ADA). The City of Goshen design standards must be followed for all improved sidewalk located on local streets and INDOT design standards for those improvements federally funded or within a designated state highway corridor.



C – Bike Lane

Where off-street trails are not feasible, bicycle-friendly streets should have designated bicycle lanes. These routes help preserve overall connectivity by providing trail users and local residents safe routes to various destination points throughout the city. Bicycle lanes must be designed to comply with AASHTO and INDOT standards and all markings and signage must meet the Traffic Control for Bicycle Facilities requirements set forth in the *Manual on Uniform Traffic Control Devices*. Located on the right outer, most edge of the pavement, bicycle lanes are typically 5' wide and follow the same direction as vehicular traffic. Designated with striping, signage and pavement markings, bicycle lanes are part of the roadway for the exclusive use of bicyclists. Experienced bicyclists prefer bicycle lanes. They have been proposed as part of the greenway master plan as a result of need and the site constraints in many of the traffic corridors and the difficulties with developing designated separated multi-use pathways.



D – Blueway Water Trails

What is a Water Trail?

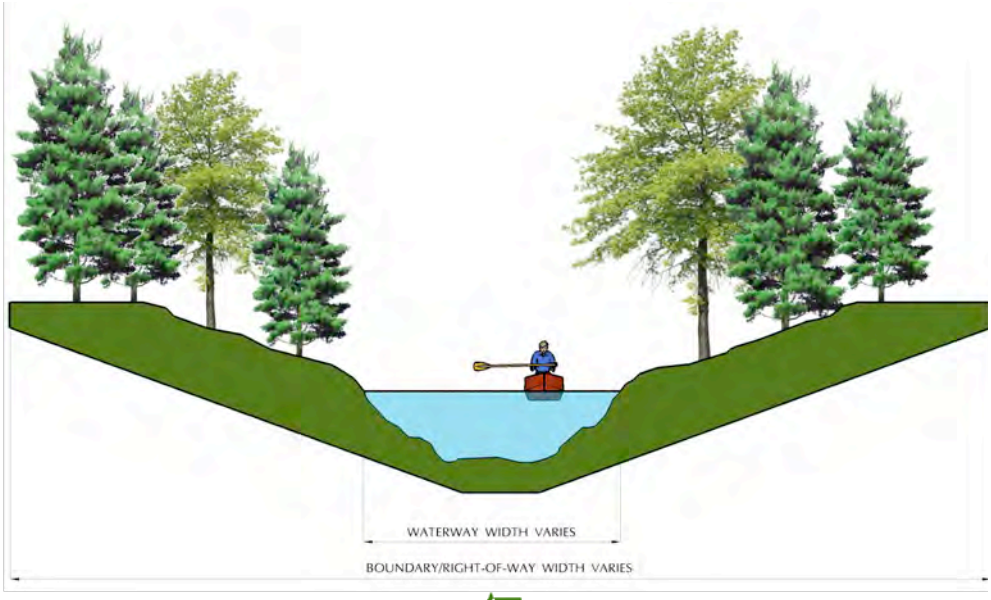
Water trails embody the nexus between rivers and trails. They provide recreational boating opportunities along a river, lake, canal or coastline; most water trails are managed in public-private partnership with the philosophies of environmental stewardship, environmental education, and accessibility for all users.

By definition, a water trail, also known as a blueway, is a route along a river or across other bodies of water, such as a lake or salt water, for people using small beachable boats like kayaks, canoes, day-sailers or rowboats. Water trails are most often identified by the land facilities that support water travel. These include launch and landing sites (trailheads), campsites, rest areas, and other points of interest. On land, trails have distinct surfaces or walkways, while on water the entire water surface is constantly changing with flow, current, boat wakes and wind.

Blueway water trails should have public access points with related parking and support facilities and meet the American Canoe Association guidelines.

American Canoe Association (ACA) – Recommended Water Trails meet a set of basic criteria and stand out as particular good destinations for paddlers. To be eligible, a trail must meet the following requirements:

- The trail must be a contiguous or semi-contiguous waterway or series of waterways that is open to recreational use by paddlers;
- The trail must have public access points for paddlers;
- The trail must be covered by a map, guide, signage or a web site that is of reasonable quality and detail and available to the public.
- Published or printed materials for the trail (e.g. guidebook, map, signs, website) must communicate low-impact ethics to trail users; and
- The trail must be supported and/or managed by one or more organizations.



Trail Surface Types

The following table reflects various trail/pathway surfacing options. Advantages and disadvantages of each surface type are noted. (Source: *Trails for the Twenty-First Century: Planning, Design, and Management Manual for Multi-Use Trails*, by Charles A. Flink, Kristine Olka, Robert M. Searns. Second Edition 2001.)

Surface Material (cost per mile) (longevity)	***Advantages***	***Disadvantages***
Soil cement, $60,000-$100,000, medium	Uses natural materials, more durable than native soils, smoother surface, low cost, accommodates multiple use.	Surface wears unevenly, not a stable all-weather surface, erodes, difficult to achieve correct mix.
Granular stone, $80,000-120,000, Medium-long (7-10 yrs)	Soft but firm surface, natural material, moderate cost, accommodates multiple use.	Surface can rut or erode with heavy rainfall, regular maintenance needed to keep consistent surface, replenishing stones may be a long-term expense, not for areas prone to flooding or steep slopes.
Asphalt, $200,000-$300,000, medium-long (7-15 yrs)	Hard surface, supports most types of use, all-weather, accommodates most users simultaneously, smooth surface to comply with ADA guidelines, low maintenance.	High installation cost, costly to repair, not a natural surface, freeze/thaw can crack surface, heavy construction vehicles need access.
Concrete, $300,000-$500,000, long-term (20 yrs plus)	Hardest surface, easy to form to site conditions, supports multiple use, lowest maintenance, resists freeze/thaw, best cold weather surface, most resistant to flooding.	High installation cost, costly to repair, not a natural-looking surface, construction vehicles will need access to the trail corridor.
Boardwalk, $1.5-$2 million, medium-long	Necessary in wet or ecologically sensitive areas, natural-looking surface, low maintenance, supports multiple use.	High installation cost, costly to repair, can be slippery when wet.
Resin-stabilized cost varies depending on type of application, medium-long depending on type of application	Aesthetics, and less environmental impact, possible cost savings if soil used, can be applied by volunteers.	Need to determine site suitability and durability, may be more costly in some cases.
Native soil, $50,000-$70,000, short to long depending on local use and conditions	Natural material, lowest cost, low maintenance, can be altered for future improvements, easiest for volunteers to build and maintain.	Dusty, ruts when wet, not an all-weather surface, can be uneven and bumpy, limited use, possibly not accessible.
Wood chips, $65,000-$85,000, short term (1-3 yrs)	Soft, spongy surface good for walking, moderate cost, natural material.	Decomposes under high temperature and moisture, requires constant replenishment, not typically accessible, limited availability, not appropriate for floodprone areas.
Recycled materials, cost and life vary	Good use of recyclable materials, surface can vary depending on materials.	Design appropriateness and availability vary.

D.

Implementation Strategies

Maple City Greenways Master Plan

The early planning steps engaged the Advisory Committee in defining the destination points in the Goshen community. This formed the framework for the overall *Maple City Greenways Master Plan*.

The development of the overall system has taken considerable time in formation, verification and consensus of thought. Organizing, adopting, defining priorities, funding, etc. will become the next steps.

This master plan should be used as a guide in the implementation of the plan. It is meant to be dynamic allowing for change and refinement to take place when needed.

The following pages represent the overall *Maple City Greenways Master Plan* and its various routes. The organization of the routing plan consists of segments of trail/pathway loops that make up the whole. Breaking down the overall system of pathways into segments becomes a useful tool. It allows for segments to be phased for implementation and funding. Segments can be named establishing a "sense of place" in a neighborhood. Segments can become known as routes towards various destinations. Segments can also describe the type of trail or pathway that it is. As it relates to the dynamic nature of the plan and as the plan evolves and expands, new segments can be added to the system.

Planning Maps

The *Maple City Greenways Master Plan* should be incorporated into the City's Comprehensive Plan and Thoroughfare Plan. The design details and standards should be incorporated into the Public Works/Street Right-of-Way standards. Also the green infrastructure should be an update to the Park and Recreation Master Plan. While this document studied the pathways and trails within the study area, the results of this study truly formed an "alternative transportation plan" that can be used by the City for marketing and grant funding, etc.

The *Maple City Greenways Master Plan* development resulted in various planning maps. These maps can be found on the following pages and in the Appendix of this document. Key elements of the community have been identified on these maps including schools, parks, and other community destination points. *(Note: Larger versions of these maps are available at the Goshen Park Department office.)*

Overall Map of Maple City Greenways

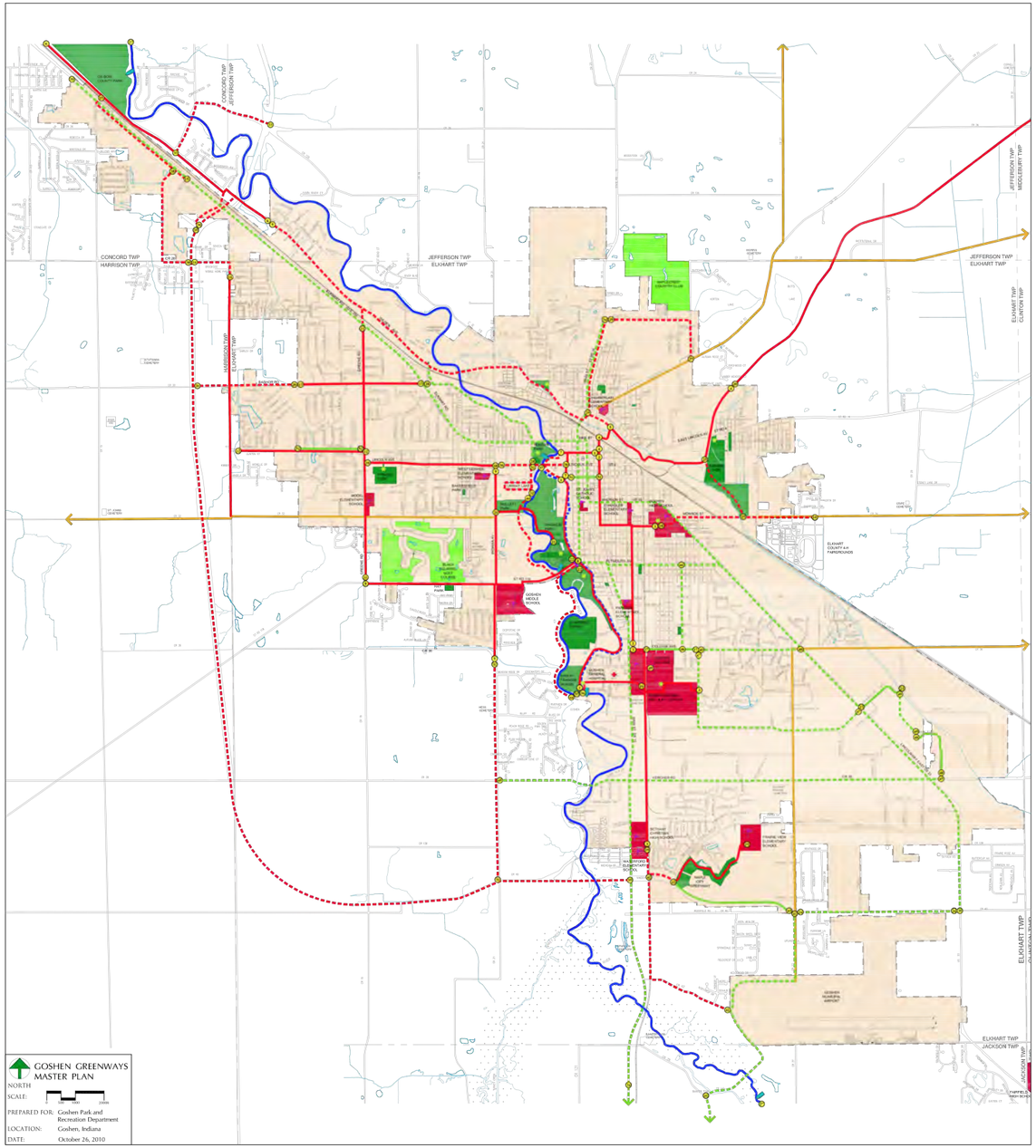
This map illustrates the overall Greenways system. Trail segments have been identified along with their color code reference.

TRAIL LEGEND

- HOSPITAL
- SCHOOL
- TRAIL HEAD
- BOAT LAUNCH
- PROPOSED BIKE LANE
- EXISTING BIKE LANE
- PROPOSED SHARED TRAIL
- EXISTING SHARED TRAIL
- EXISTING BLUEWAY TRAILS *(PER CHARRETTE)*
- EXISTING MACOG TRAILS
- EXISTING PARKS
- EXISTING GOLF COURSE
- EXISTING SCHOOL
- PROPOSED PARK
- CITY CORPORATE LIMITS

BASE MAP DISCLAIMER:

Base map information (GIS, mapping, etc.) were prepared by the City of Goshen and provided to Lehman & Lehman for use on this project. Lehman & Lehman, Inc. assumes no liability for the accuracy of this information.



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Transforming Horizons

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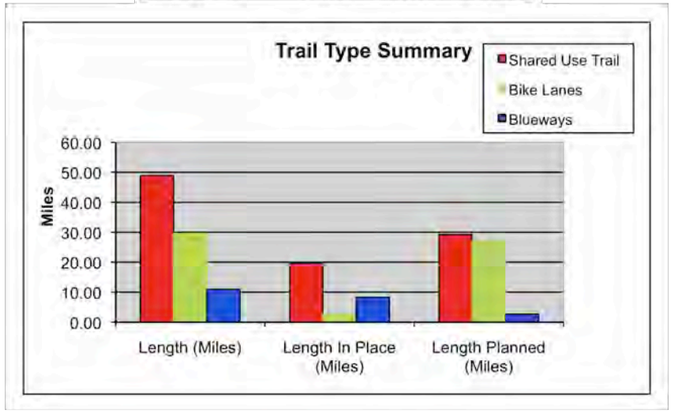
Maple City Greenways Inventory Forecast

The *Maple City Greenways Master Plan* identified proposed routes and pathway segments based on identified trail types. The following table represents the inventory of the proposed plan broken down by trail types:

Trail Type Summary:	Length (Miles)	Length In Place (Miles)	Length Planned (Miles)
Shared Use	48.96	19.72	29.24
Bike Lane	29.60	2.53	27.07
Blueway	10.93	8.25	2.68
TOTALS	**89.49**	**30.50**	**58.99**



ID	SEGMENT NAME	TYPE	LENGTH (Miles)	AMOUNT IN PLACE	AMOUNT PLANNED	PRIORITY	PROJECTED IMPLEMENTATION	FUNDING SOURCE	NOTES
1	Millrace Trail	Shared Use	2.46	2.46	0.00		Existing		
2	Central City Trail	Shared Use	2.45	2.45	0.00		Existing		
3	Winona Trail	Shared Use	1.60	1.60	0.00		Existing		
4	Pumpkinvine Trail	Shared Use	1.73	1.73	0.00		Existing		
5	Wilden Avenue Trail (Proposed)	Shared Use	3.26	0.00	3.26	Funded	2010/2011	TE, CMAQ, Local	
6	Millrace Extension	Shared Use	0.00	0.00	0.00		Existing		
7	Plymouth Avenue Extension (Proposed)	Shared Use	0.38	0.00	0.38		TBD		Applied for SRTS Federal Funds
8	Plymouth Avenue Trail	Shared Use	1.70	1.70	0.00		Existing		
9	Indiana Avenue Pathway	Shared Use	1.46	1.46	0.00		Existing		
10	Lincoln Avenue Pathway	Shared Use	1.00	1.00	0.00		Existing		
11	Green Road Pathway	Shared Use	1.93	1.93	0.00		Existing		
12	Clinton Street Pathway	Shared Use	0.94	0.94	0.00		Existing		
13	Bahsor Road Trail (Proposed)	Shared Use	0.95	0.00	0.95	Funded	2011	TIF	
14	Brookside Connection (Proposed)	Shared Use	0.40	0.00	0.40	Funded	2011	TIF	
15	Elkhart Road Trail (Proposed)	Shared Use	0.94	0.00	0.94	Funded	2011	TIF	
16	Westwood Trail	Shared Use	0.54	0.54	0.00		Existing		
17	College Ave Bike Lanes	Bike Lane	0.40	0.40	0.00		Existing		
18	Monroe Street Trail (Proposed)	Shared Use	1.23	0.00	1.23	Funded	2012/2013	TE, CMAQ, Local	
19	Educational Greenway @ Waterford Commons (Proposed)	Shared Use	1.28	0.00	1.28	Funded	2010	TIF	
20	Pumpkinvine Trail	Shared Use	3.28	3.28	0.00		Existing		Outside City Limits
21	Shanklin Park Trail	Shared Use	0.63	0.63	0.00		Existing		
22	Plymouth Ave Pedestrian Tunnel	Shared Use	0.02	0.00	0.02	Funded	Existing		
23	Eisenhower Drive Bike Lane	Bike Lane	0.39	0.39	0.00		Existing		
24	County Road 40 Bike Lanes (Proposed)	Bike Lane	1.25	0.00	1.25		TBD		
25	Abshire Park Trail (Proposed)	Bike Lane	0.54	0.00	0.54	Funded	2012	Local	
26	County Road 30 Trail (Proposed)	Shared Use	0.76	0.00	0.76		2011/2012		
27	Elkhart River Blueway	Blueway	8.25	8.25	0.00		Existing		
28	Chicago Avenue Bike Lane (Proposed)	Bike Lane	1.95	0.00	1.95		TBD		
29	Main Street Loop (Proposed)	Shared Use	1.70	0.00	1.70		TBD		
30	County Road 17 (Proposed)	Shared Use	1.92	0.00	1.92		TBD		
31	County Road 21 Pathway (Proposed)	Shared Use	1.65	0.00	1.65		2011/2012 (Partial)		
32	Linway Lake Trail (Proposed)	Shared Use	0.81	0.00	0.81		TBD		
33	County Road 126 Trail (Proposed)	Shared Use	1.00	0.00	1.00		TBD		
34	State Road 15 Bike Lane (Proposed)	Bike Lane	4.38	0.00	4.38		TBD		
35	County Road 17 Trail Extension (Proposed)	Shared Use	7.83	0.00	7.83		TBD		
36	Lincoln Avenue Pathway Extension (Proposed)	Shared Use	0.55	0.00	0.55		TBD		
37	Mill Race Canal Loop Blueway	Blueway	2.68	0.00	2.68		Existing		
38	County Road 28 Trail (Proposed)	Shared Use	0.97	0.00	0.97	Funded	2011/2012 (Partial)	TIF	
39	US 33 Bike Lane (Proposed)	Bike Lane	10.00	0.00	10.00		TBD		
40	College Ave Bike Lane Extension (Proposed)	Bike Lane	0.80	0.00	0.80		TBD		
41	County Road 27 Bike Lane (Proposed)	Bike Lane	1.30	0.00	1.30		TBD		
42	County Road 42 Trail (Proposed)	Shared Use	1.41	0.00	1.41		TBD		
43	Waterford Mills Parkway Bike Lane	Bike Lane	1.00	1.00	0.00		Existing		
44	Linway Lake to Dam Trail (Proposed)	Shared Use	2.15	0.00	2.15		TBD		
45	Kercher Road Bike Lane (Proposed)	Bike Lane	3.40	0.00	3.40		TBD		
46	13th Street Bike Lane (Proposed)	Bike Lane	0.65	0.00	0.65		TBD		
47	Industrial Park Pathway (Proposed)	Bike Lane	1.90	0.00	1.90		TBD		
48	Amish Road Buggy Lane	Bike Lane	0.50	0.00	0.50		Existing		
49	Amish Road Connection (Proposed)	Bike Lane	0.40	0.00	0.40		TBD		
50	Goshen College Pedestrian Tunnel (Proposed)	Shared Use	0.03	0.00	0.03	Funded	2011	CMAQ	
51	Washington Street Bike Lanes	Bike Lane	0.25	0.25	0.00		Existing		
52	Clinton Street Bike Lane	Bike Lane	0.49	0.49	0.00		Existing		
	TOTAL (IN MILES)		**89.49**	**30.50**	**58.99**				

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Maple City Greenways Master Plan System Standards

The total mileage of the *Maple City Greenways Master Plan* represents the forecasted "build out" of the City with its expansion into the townships over the future decades. This plan should be viewed as the Green Infrastructure Master Plan.

The use of standards should be established and applied to *Maple City Greenways Master Plan*. Such standards can be used as a gauge in maintaining the *Maple City Greenways Master Plan* implementation, keeping pace with the community growth.

The current population of Goshen is 31,882 *(source: Goshen Chamber of Commerce)*. As of the date of this study there are 30.50 miles of trails in place. The identified trail segments of the plan call for over 89 miles of trail. This planned trail system will need to be monitored annually with the build-out population of the City of Goshen over the next several decades.

Implementation Strategies and Priorities

Policy Development

- Take action in support of the *Maple City Greenways Master Plan* Action Plan.
- Designate a lead agency/department to work with the proposed Maple City Greenways Advisory Committee to implement the Action Plan.
- Integrate the *Maple City Greenways Master Plan* and any local trails and greenways plans into the community's parks and open space, land use and transportation plans.
- Adopt a stream buffer ordinance that protects stream corridors.
- Adopt a park/open space dedication requirement to support the acquisition of land and development of Maple City Greenways.
- Incorporate *Maple City Greenways Master Plan* objectives into the development of the community's parks and open space, land use and transportation plans.

Planning

- Conduct a Natural Resources Inventory as part of the City's comprehensive or land-use planning process to identify important resources to protect and preserve and to determine appropriate stream setback provisions.
- Identify land ownership for each Maple City Greenways segment within each neighborhood, and determine how acquisition or access will be accomplished if it is required.
- Determine the facility type for each Maple City Greenways segment.
- Identify partners from the public and private sectors that can help implement Maple City Greenways segments.
- Continue to assist Municipalities and Counties in building a regional GIS inventory of natural resources including open space, parks and trails.

Programming

- Refine priorities for the *Maple City Greenways Master Plan* on a periodic basis.
- Identify and program local funding sources for the highest priority Maple City Greenways segments and seek grants and other funds to supplement local resources.
- Evaluate how new funding sources could support the development of Maple City Greenways trail segments. In particular, Goshen should research new programs such as Recreation Impact Fees, etc. which could be a major support base of the implementation of *Maple City Greenways Master Plan*.

Operation/Maintenance

- Adopt the *Maple City Greenways Master Plan* design guidelines for Maple City Greenways.
- Adopt the Maple City Greenways logo into the City's signage for its trail system.
- Determine how and by whom each segment of Maple City Greenways will be operated and maintained.
- Develop maintenance standards for Maple City Greenways.

Implementation Schedule and Costs

As previously mentioned, a greater inventory of each of the trail segments needs to be completed. This inventory will identify the improvement needs, consistency of trail flow and safety issues. Consideration should be given to the ease of making route segments accessible as part of the plan.

Associated Costs for Development

A planning component for the implementation of the *Maple City Greenways Master Plan* is cost. It is recommended by the Consultant that average construction costs be developed for each of the trail types. Generally, construction costs per running foot of trail is the typical costing unit that would apply. This information should be updated periodically and be used in evaluating phasing and priorities of trail segments. This applies to both new trail construction as well as upgrading improvements to existing trails and sidewalks. The Public Works and Engineering Departments should keep these costs updated.

The Streets and Parks Departments should also establish a maintenance cost per trail segment. This will be useful in defining annual maintenance and operation budgets.

Maple City Bicycle Advisory Committee

Next Steps Recommended

The *Maple City Greenways Master Plan* should be considered a dynamic document and updated periodically. City officials and its various government entities will continue to need ongoing citizen input in order to make informed decisions with respect to a developing trail system. With the formation of the Maple City Bicycle Advisory Committee and their mission to address bicycle related issues covering recreation, commerce, transportation, parking and safety, the Consultant proposes that the Committee establish a pedestrian subcommittee. This pedestrian subcommittee would focus on the non-bicycle greenway issues (walkers, runners, blueway users, etc.). This group would continue to be led by a both private citizens and city officials who have interest and knowledge related to greenway and pathway development.

Advisory Committee Strategy

An overall strategy to advise city officials and citizens, and to develop trail policy and plans, would include the following elements:

- Accept and start with *Maple City Greenways Master Plan's* findings and Position Statement.
- Recommend further detail that must be added to the plan—trail type, exact routes.
- Work with all stakeholders—citizens, government officials and businesses.
- Recognize that "users" have differing needs—walkers, runners, cyclists, etc.
- Route around, not through, private property—except where that access is offered voluntarily.
- Use all practical means to solicit input.
- Use all practical means to disseminate and communicate information about plans & about trail system progress & successes—education, presentations, and publicity.
- Organize trail-use events to publicize opened trails and familiarize citizens with them.
- Assist the City in documenting infrastructure conditions and issues by soliciting volunteer survey/inspection crews.
- Advise the City in developing creative financing arrangements that facilitate trail funding.
- Advise the City in developing creative financing arrangements that create access for trails.
- Advise the City with respect to trail-type needs.
- Enlist a group of interested citizens, with skills and interests in the needed areas, to serve on the Advisory Committee.
- Meet regularly; run the Advisory Committee effectively with clear responsibilities, assignments & goals.

Inclusions and Updates

One of the recommended outcomes of the *Maple City Greenways Master Plan* is the inclusion of the system plan into the existing planning documents, ordinances and guidelines of the City.

The Park and Recreation Advisory Committee is advised to include the *Maple City Greenways Master Plan* in their current five-year master plan, adopting the overall development strategies as well as the trail standards affecting both current and future populations in this recreation amenity.

The Common Council and Plan Commission are advised, similarly, to include the *Maple City Greenways Master Plan* as part of the City's Comprehensive Plan and the Thoroughfare Plan, adopting the overall development strategies as well as the trail standards affecting both current and future populations in this recreation amenity. The City's subdivision ordinance and related development standards are also recommended to be updated to include the trail standards set forth in the *Maple City Greenways Master Plan*.

Once these plans and guidelines have been adopted, the City, with the assistance of the Advisory Committee, can establish priorities for implementing as well as seek grants and other funding sources for development projects. The City can budget annually for matching grants using local resources and funding mechanisms.

Continual inclusion in the existing operations policies (maintenance and upkeep) as well as marketing and promotion, etc. should be carried out.

On a regional scale, the City of Goshen should be an active "partner" with surrounding greenways and trails providers allowing the inclusion of the *Maple City Greenways Master Plan* to become part of a larger, regional system.

The Consultant feels it is critical to conduct annual review of progress and accomplishments and to report to the City such findings.

Potential Developing Partners

Throughout the implementation of the *Maple City Greenways Master Plan* the City will benefit by forming partnerships with various organizations. Some potential partners identified as part of this study are as follows:

- City of Goshen Parks Department
- City of Goshen Public Works Department
- City of Goshen Chamber of Commerce
- Commercial/Residential developers
- Businesses and Corporations including Downtown Business Association
- Elkhart County Highway Department
- Elkhart County Park Agencies
- Elkhart County 4-H Fair
- The Pumpkinvine Nature Trail
- The MapleHart Trail

E.
Appendix

Appendix Index

The following Appendix items served as part of this study:

- Definitions
- Reference Sources
- Sample Trail Head Signage
- Indianapolis Cultural Trail System
- Goshen Districts Maps
- The 2006 Indiana Trails, Greenways and Bikeways Plan (Chapter 3) Value Added Features of Trails
- American Canoe Association – 2005-06 ACA Recommended Water Trails
- Sample Resolution Setting Forth The City of Goshen's Commitment to Complete Streets
- Sample Ordinance Providing Complete Streets and Amending The City of Goshen Municipal Code

Definitions

- **Bicycle** – Every vehicle propelled solely by human power upon which any person may ride, having two tandem wheels, except scooters and similar devices. The term "bicycle" for this publication also includes three and four-wheeled human-powered vehicles, but not tricycles for children.
- **Bicycle Facilities** – A general term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling, including parking and storage facilities, shared roadways not specifically designated for bicycle use.
- **Bicycle Land or Bike Land** – A portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.
- **Bicycle Path or Bike Path** – See Shared Use Path
- **Bicycle Route System** – A system of bikeways designated by the jurisdiction having authority with appropriate directional and informational route markers, with or without specific bicycle route numbers. Bike routes should establish a continuous routing, but may be a combination of any and all types of bikeways.
- **Bikeway** – A generic term for any road, street, path or way which in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.
- **Highway** – A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.
- **Rail-Trail** – A shared use path, either paved or unpaved, built within the right-of-way of an existing or former railroad.

- **Right-of-Way** – A general term denoting land, property or interest therein, usually in a strip, acquired for or devoted to transportation purposes.
- **Right of Way** – The right of one vehicle or pedestrian to proceed in a lawful manner in preference to another vehicle or pedestrian.
- **Roadway** – The portion of the highway, including shoulders, intended for vehicular use.
- **Rumble Strips** – A textured or grooved pavement sometimes used on or along shoulders of highways to alert motorists who stray onto the shoulder.
- **Shared Roadway** – A roadway which is open to both bicycle and motor vehicle travel. This may be an exiting roadway, street with wide curb lanes, or road with paved shoulders.
- **Shared Use Path** – A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users.
- **Shoulder** – A portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of sub-base, base and surface courses.
- **Sidewalk** – The portion of a street or highway right-of-way designed for preferential or exclusive use by pedestrians.
- **Signed Shared Roadway (Signed Bike Route)** – A shared roadway which has been designated by signing as a preferred route for bicycle use.
- **Traveled Way** – The portion of the roadway for the movement of vehicles, exclusive of shoulders.
- **Unpaved Path** – Paths not surfaced with asphalt or Portland cement concrete.

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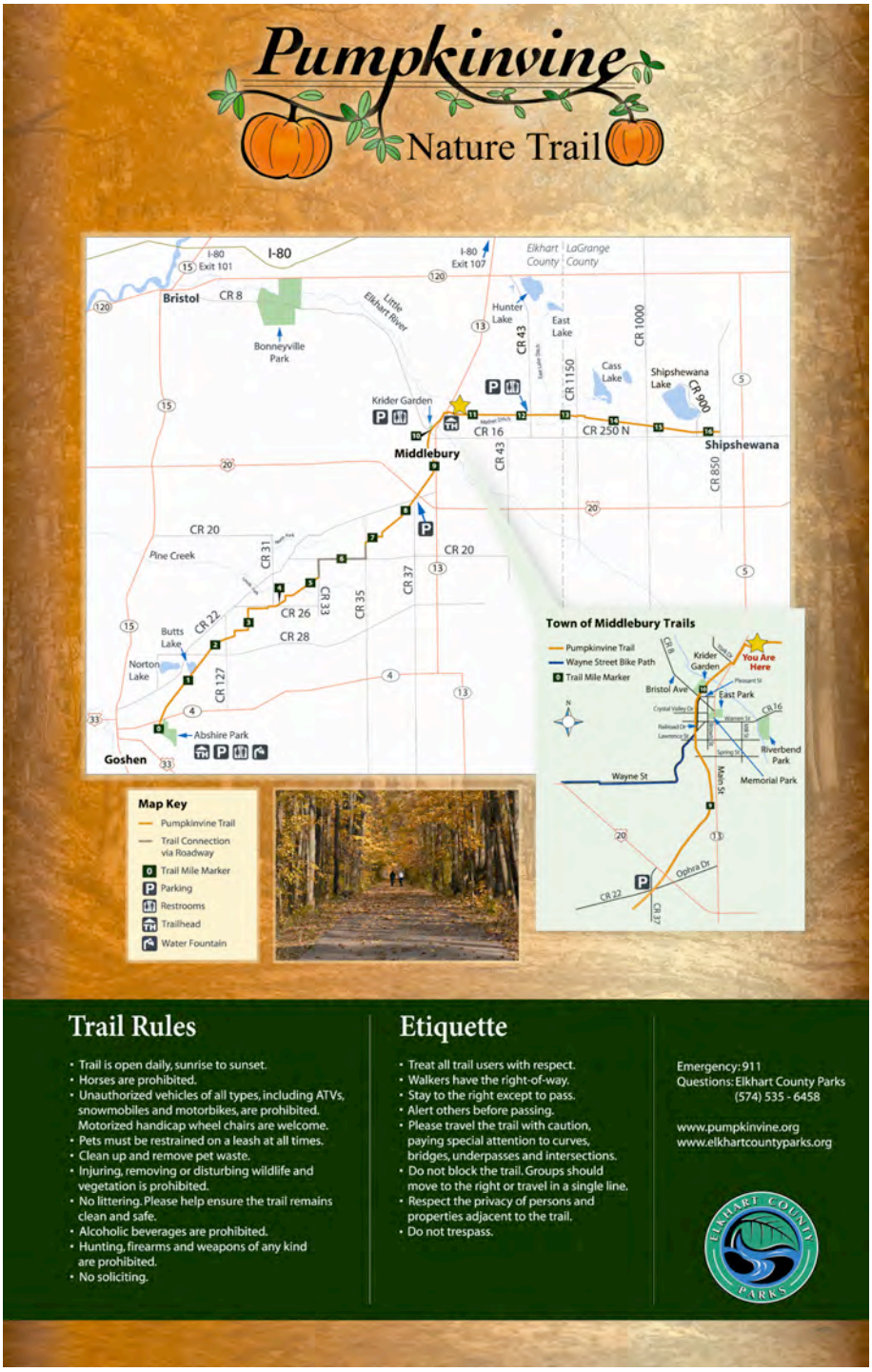
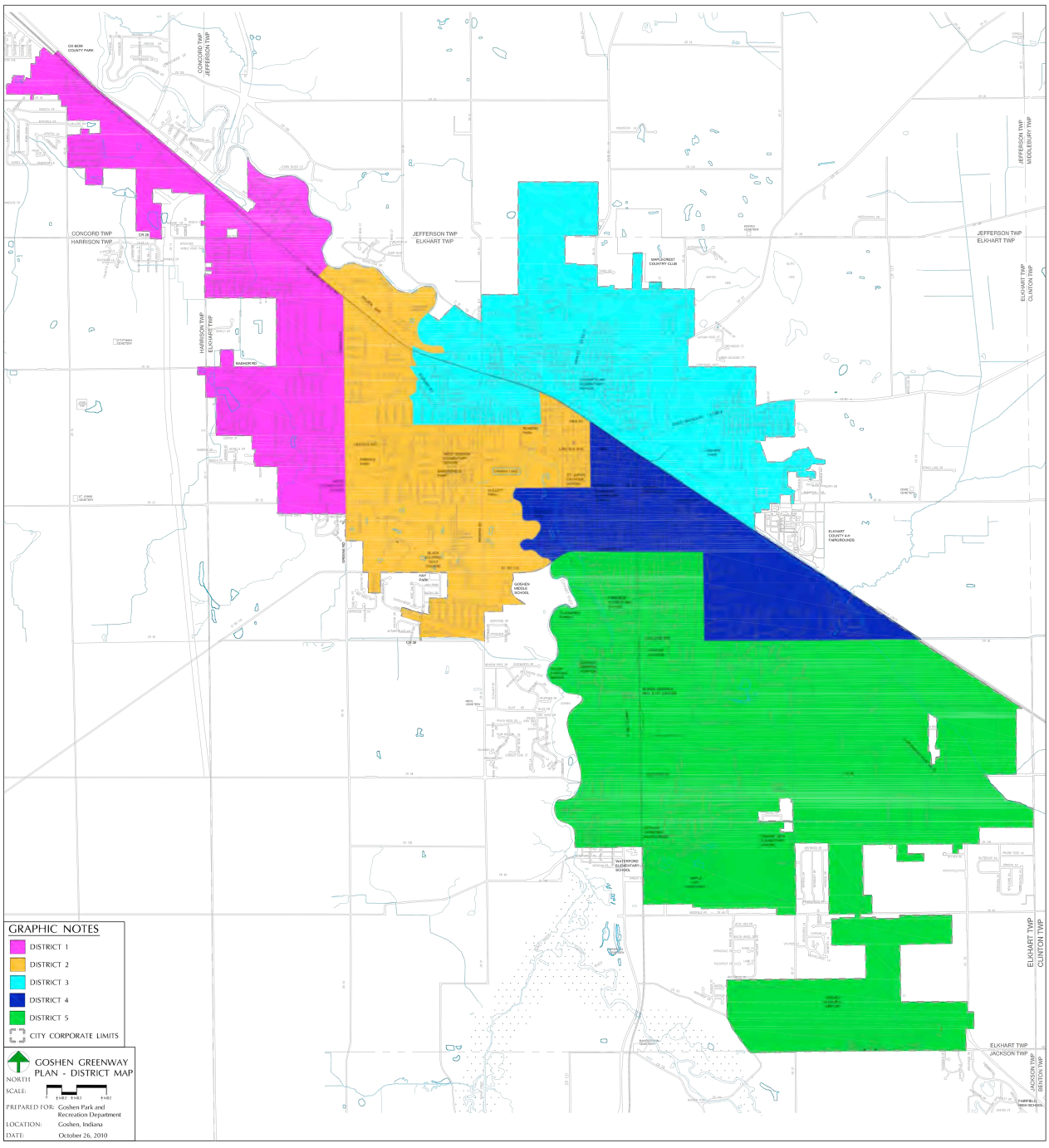
Sample Trail Head Signage…

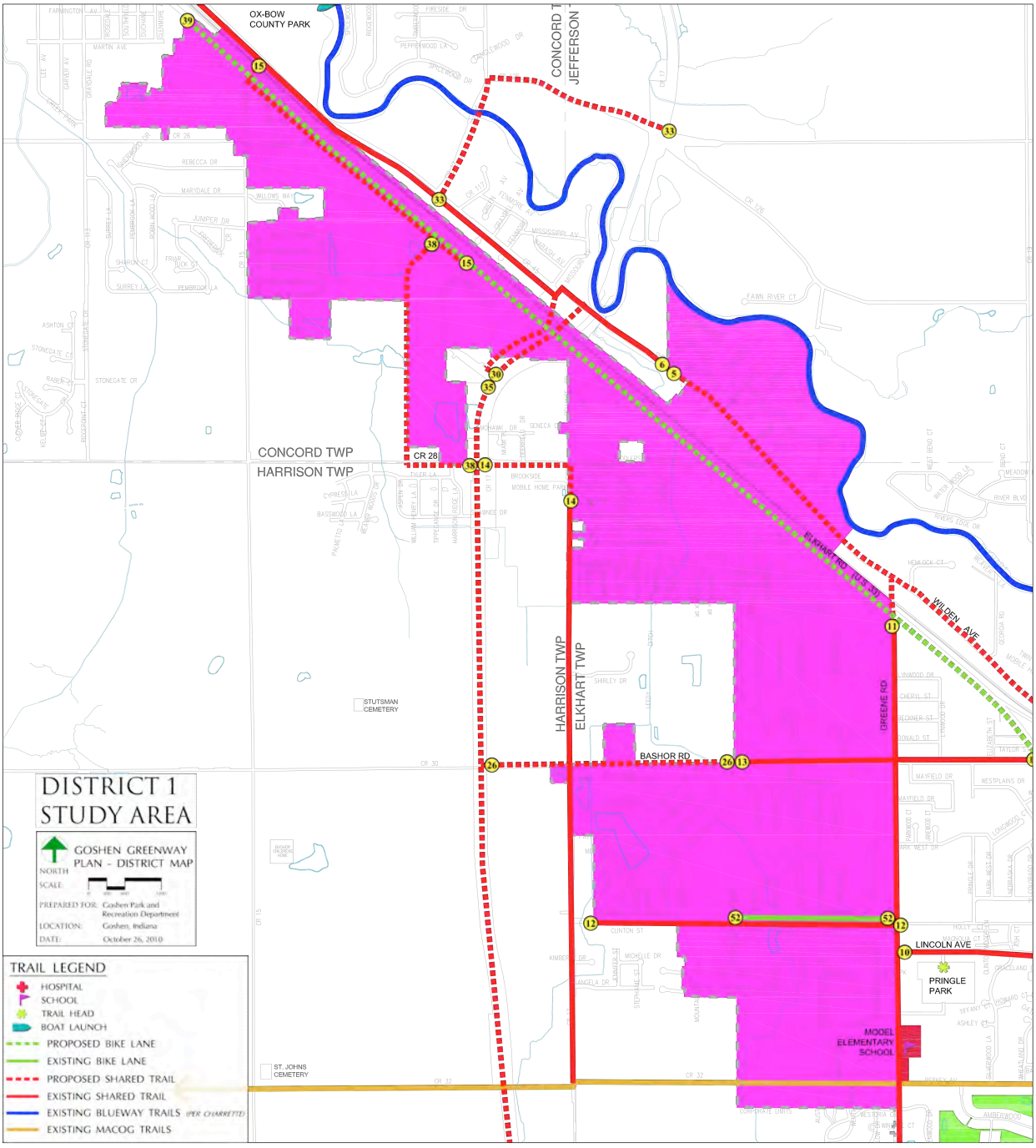


Sample Trail Head Signage…

The Indianapolis Cultural Trail System Graphic

Planning Districts Map

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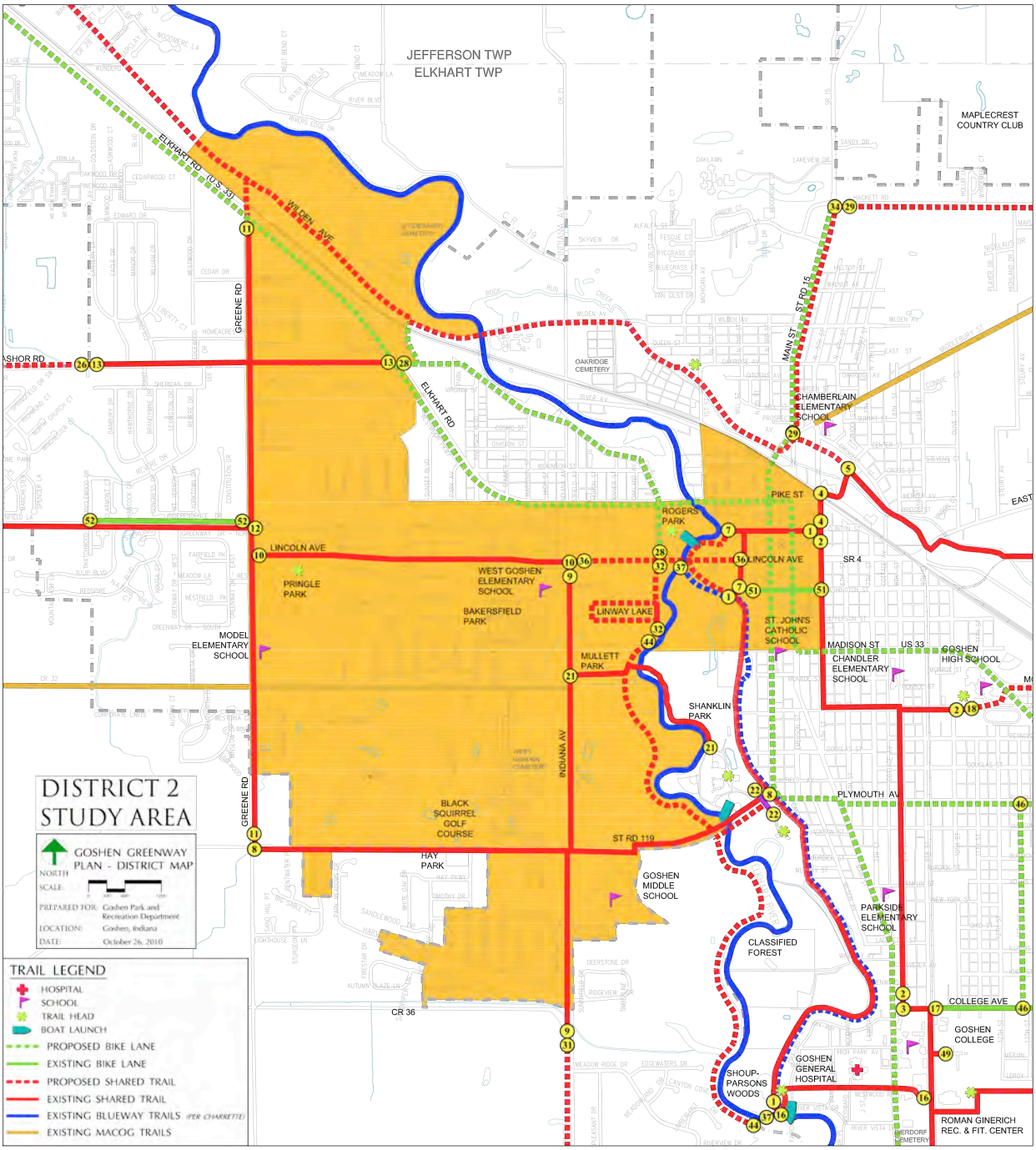
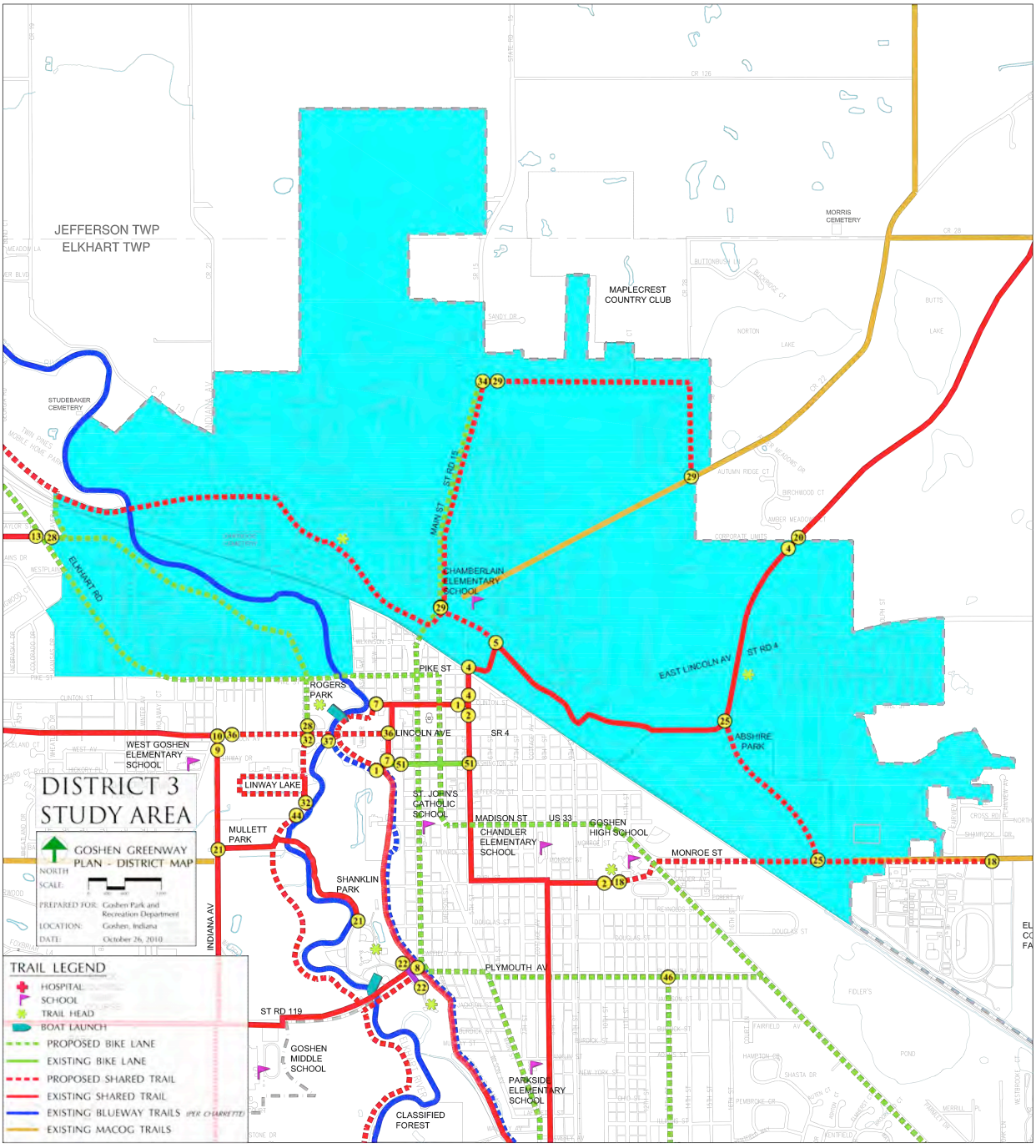
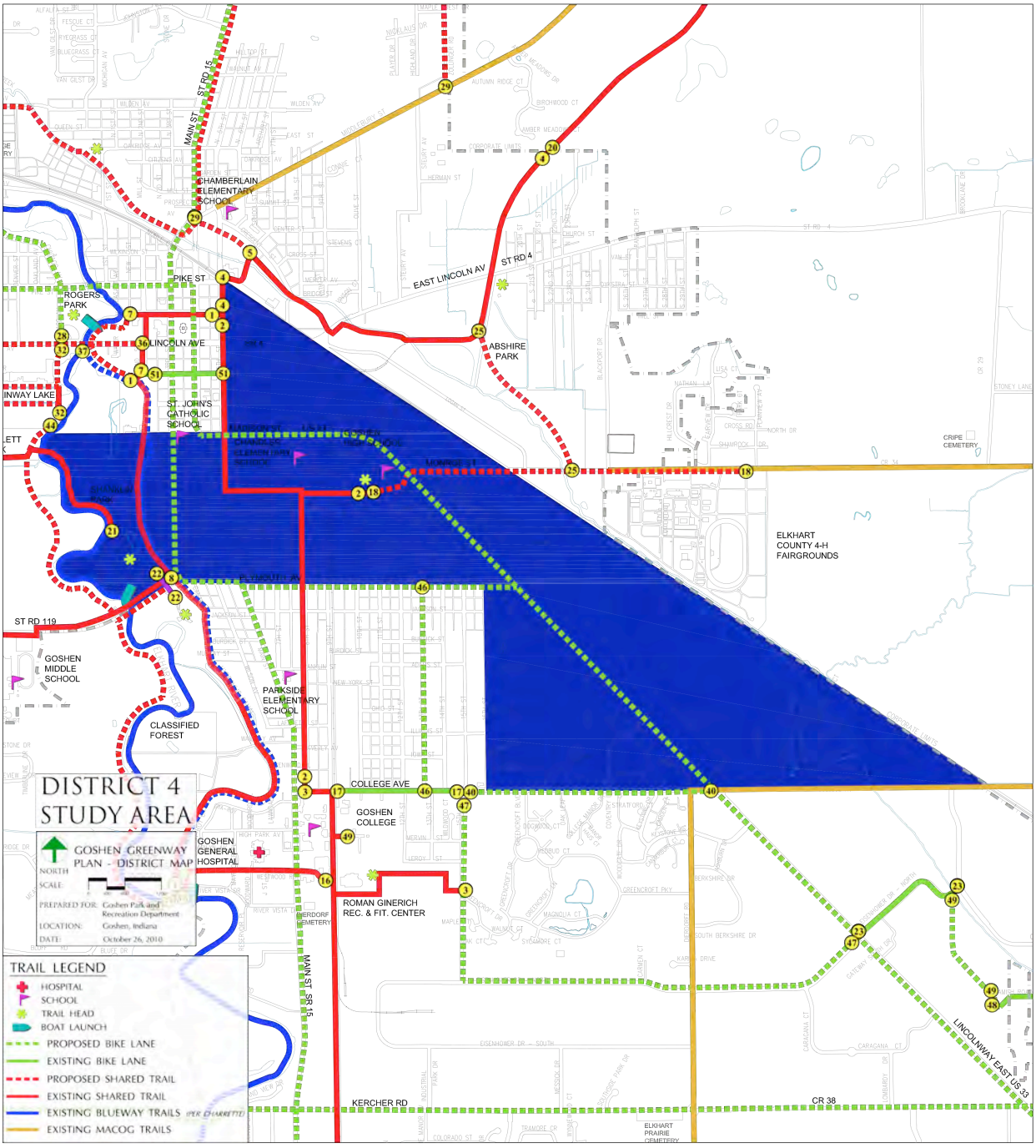
COUNTY PARK
CONCORD TWP
HARRISON TWP
CR 28
CONCORD T
JEFFERSON
HARRISON TWP
ELKHART TWP
BASHOR RD
GREENE RD
WILDEN AVE
LINCOLN AVE
PRINGLE
PARK
MODEL
ELEMENTARY
SCHOOL
STUTSMAN
CEMETERY
ST. JOHNS
CEMETERY
DISTRICT 1
STUDY AREA
GOSHEN GREENWAY
PLAN - DISTRICT MAP
NORTH
SCALE:
PREPARED FOR: Goshen Park and Recreation Department
LOCATION: Goshen, Indiana
DATE: October 26, 2010
TRAIL LEGEND
HOSPITAL
SCHOOL
TRAIL HEAD
BOAT LAUNCH
PROPOSED BIKE LANE
EXISTING BIKE LANE
PROPOSED SHARED TRAIL
EXISTING SHARED TRAIL
EXISTING BLUEWAY TRAILS (PER CHARRETTE)
EXISTING MACOG TRAILS

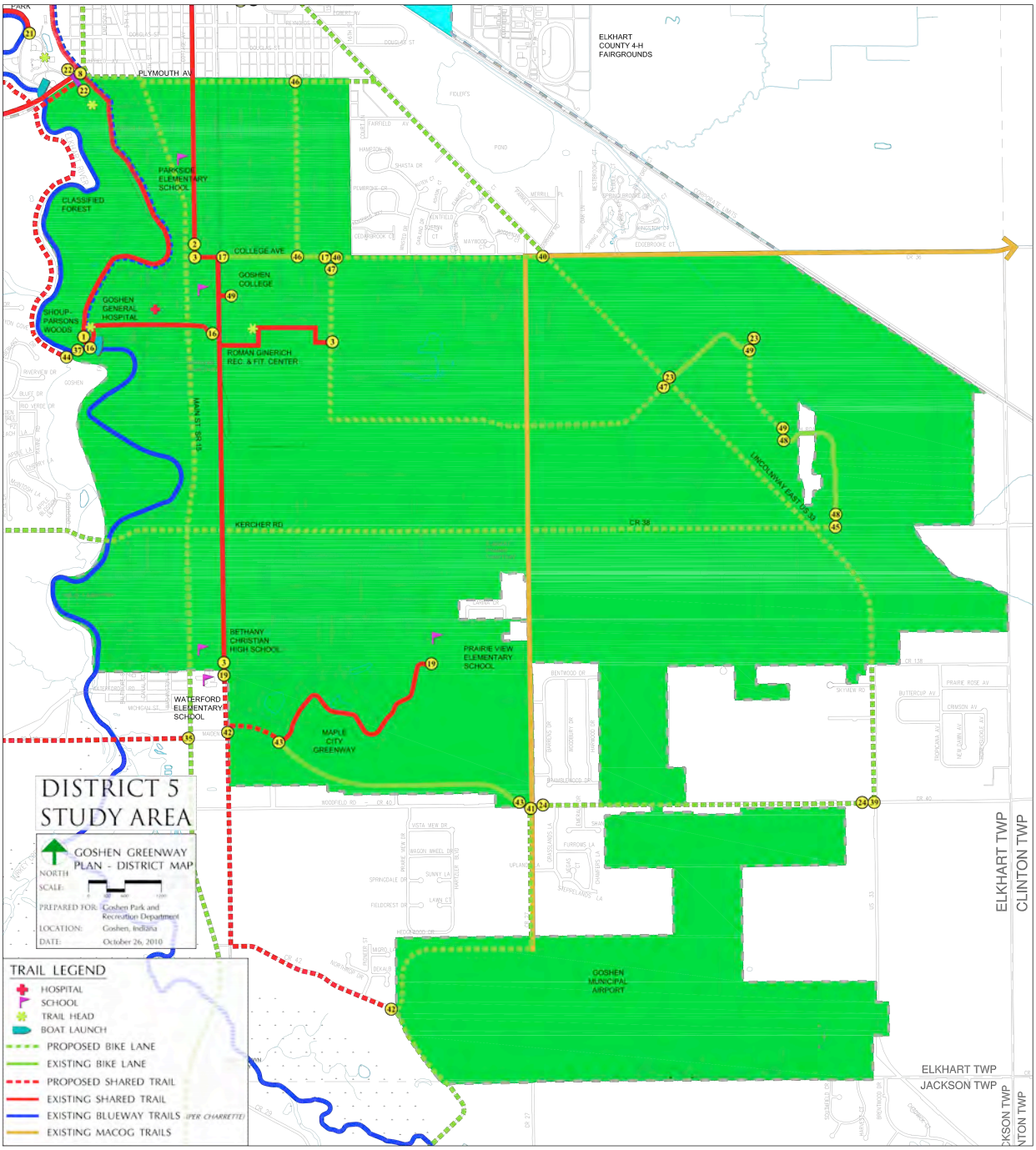
Appendix – E•12




JEFFERSON TWP
ELKHART TWP
MORRIS CEMETERY
MAPLECREST COUNTRY CLUB
STUDEBAKER CEMETERY
CHAMBERLAIN ELEMENTARY SCHOOL
MAIN ST
ST RD 15
ELKHART RD
EAST LINCOLN AV
ST RD 4
PIKE ST
ROGERS PARK
LINCOLN AVE
SR 4
ABSHIRE PARK
WEST GOSHEN ELEMENTARY SCHOOL
LINWAY LAKE
ST. JOHN'S CATHOLIC SCHOOL
MADISON ST
US 33
CHANDLER ELEMENTARY SCHOOL
GOSHEN HIGH SCHOOL
MONROE ST
MULLETT PARK
SHANKLIN PARK
INDIANA AV
PLYMOUTH AV
ST RD 119
GOSHEN MIDDLE SCHOOL
PARKSIDE ELEMENTARY SCHOOL
CLASSIFIED FOREST
DISTRICT 3 STUDY AREA
GOSHEN GREENWAY PLAN - DISTRICT MAP
NORTH
SCALE:
PREPARED FOR: Goshen Park and Recreation Department
LOCATION: Goshen, Indiana
DATE: October 26, 2010
TRAIL LEGEND
HOSPITAL
SCHOOL
TRAIL HEAD
BOAT LAUNCH
PROPOSED BIKE LANE
EXISTING BIKE LANE
PROPOSED SHARED TRAIL
EXISTING SHARED TRAIL
EXISTING BLUEWAY TRAILS (PK CHARETTE)
EXISTING MACOG TRAILS

Appendix – E•14




ELKHART COUNTY 4-H FAIRGROUNDS
PLYMOUTH AV
PARKSIDE ELEMENTARY SCHOOL
CLASSIFIED FOREST
COLLEGE AVE
GOSHEN COLLEGE
GOSHEN GENERAL HOSPITAL
SHOUP-PARSONS WOODS
ROMAN GINERICH REC. & FIT. CENTER
MAIN ST
KERCHER RD
CR 38
LINCOLNWAY EAST (US 33)
BETHANY CHRISTIAN HIGH SCHOOL
WATERFORD ELEMENTARY SCHOOL
PRAIRIE VIEW ELEMENTARY SCHOOL
MAPLE CITY GREENWAY
GOSHEN MUNICIPAL AIRPORT
ELKHART TWP
CLINTON TWP
JACKSON TWP
DISTRICT 5 STUDY AREA
GOSHEN GREENWAY PLAN - DISTRICT MAP
NORTH
SCALE:
PREPARED FOR: Goshen Park and Recreation Department
LOCATION: Goshen, Indiana
DATE: October 26, 2010
TRAIL LEGEND
HOSPITAL
SCHOOL
TRAIL HEAD
BOAT LAUNCH
PROPOSED BIKE LANE
EXISTING BIKE LANE
PROPOSED SHARED TRAIL
EXISTING SHARED TRAIL
EXISTING BLUEWAY TRAILS (PER CHARRETTE)
EXISTING MACOG TRAILS

CHAPTER 3

VALUE ADDED FEATURES OF TRAILS

In the late 1980s the value of trails in the United States was beginning to be recognized on a national level. As early as 1985, President Ronald Reagan appointed a bipartisan commission to look ahead for a generation and determine how to meet the nation's needs for outdoor activities. That commission's report, Americans and the Outdoors (President's Commission on Americans Outdoors, 1987), recognized the increased problems and pressures on the outdoors. As a solution, the commission offered the following recommendation.

"Our communities can create a network of greenways across the USA… We can tie this country together with threads of green that everywhere grant us access to the natural world. Rivers and streams are the most obvious corridors, offering trails on the shores and boating at mid-channel. They could link open areas already existing as national and state parks, grasslands, forests, lakes, and reservoirs, the entire network winding through both rural and urban populations. Thousands of miles of abandoned rail lines should become hiking, biking and bridle paths. Utility rights-of-way could share their open space not only with hikers and cyclists but also with wildlife. Citizens and landowners, both individual and corporate, can look for opportunities to establish and maintain volunteer labor. Imagine every person in the US being within easy walking distance of a greenway that could lead around the entire nation. It can be done if we act soon."

Fewer things in the 21st century development industry make better sense than combining community infrastructure with quality of life amenities, especially those that accommodate pedestrian and bikeway needs of citizens demanding better health and fitness opportunities in their communities. Entrepreneurs and housing developments located along a network of linear green space corridors invite, entertain and engage citizens in an atmosphere that establishes a quality of life that will make Indiana a leader on the American landscape.

"Green Infrastructure" was coined to describe our nation's natural life support system - an interconnected network of protected land and water that supports native species, maintains natural ecological processes, sustains air and water resources and contributes to the health and quality of life for America's communities and people. Trails are a perfect example of green infrastructure that adds both quantifiable and non-quantifiable value to a community. Combining green infrastructure with built infrastructure under and over the ground creates a corridor system that provides countless benefits for those who live close to a trail, those who travel to use and enjoy trails and those who derive an economic benefit from a trail.

On the surface these corridors serve as greenway or bikeway trails emphasizing the human component tied directly to the health of local populations. Functionally, these corridors can also serve as emergency utility access roads. Utilizing existing, though no longer used, corridors can re-create opportunities for energy, information and opportunity to travel and flow to every town and city along these corridors. Consequently, valuable transit and utility corridors are not lost. They just evolve into a trail system that could have, just a few feet below the user's feet, an infrastructure of pipes and cables that will accommodate the flow of resources, such as wastewater and fresh water, and commerce.

This statewide trails planning effort should address

the needs and create a venue for citizens to become more active. As people grow more accustomed to having access to a developed trail network they will continue to recognize the value that such systems add locally and throughout Indiana.

TRAILS AND ECONOMIC DEVELOPMENT

Trails and greenways provide multiple benefits. Their primary value, of course, is the enjoyment they bring to people who use them. But they have many other advantages.

Because trails may attract people to rural or remote parts of the state, they have significant potential to serve as engines of economic development. Even new trails in an already developed area may heighten economic activity in the vicinity of the trail.

Here are some of the ways in which trails may spur economic development:

- They may increase property values near the trails.
- They may lead to greater tourism along the routes people take to get to the trails or in the region where the trails are.
- They may lead to new restaurants, grocery stores, bike shops, motels, camping areas, and suppliers/renters/repairers of recreation equipment, or they may increase the traffic these businesses get.

Trails almost always have a positive economic influence. In 1992, the National Park Service studied three multi-purpose trails in California, Florida, and Iowa. The annual combined economic impact of these three trails was found to be $1.5 million.

Others have gauged the economic effects of trails and have come up with dramatic results.

- In early 1996, the Company of Pilgrims surveyed 6,000 households represented at the Indianapolis Home Show. One question, directed to those considering buying or building a house in the near future, asked people about recreation. The results: 55% wanted nearby playgrounds, 73% wanted nearby basketball or tennis courts, and 83% wanted nearby hiking or biking trails.
- In 2001, PriceWaterhouseCoopers determined that a 201-mile section of a proposed trans-Canada trail system would create 170 jobs and increase the income in that province permanently by $7 million U.S.
- The Little Miami Scenic Trail in Ohio has 150,000 trail users each year who spend an average of about $15 per visit on food, beverages, and transportation to the trail.
- New trails have led to the economic revitalization of communities as diverse as Leadville, Colorado; Rockmart, Georgia; and Milford, Delaware.
- In 2002, the National Association of Realtors and the National Association of Home Buyers conducted a joint survey. In a list of eighteen community amenities, trails were chosen as the second most important.
- Home lots next to trails sell faster and at a 9 percent premium than homes farther away.

Increasingly, communities are realizing the economic aspects of quality-of-life issues. The ability of residents and visitors alike to "escape" to a trail for hiking, biking, jogging, etc. is no longer seen as a luxury but as a vital component of what makes a particular location attractive and livable.

Trails are rarely created to increase a region's economic vitality. But they almost always have that result.

- In 2004, the Indiana Chamber of Commerce named Muncie Indiana Community of the Year because of the city's development around its downtown – including $12 million (mostly in federal dollars) devoted to hiking and biking trails accessible near the downtown.
- A 2001 study of the Rivergreenway Trail in Fort Wayne revealed that the average user of that trail spent $1,350 a year in connection with using that trail. The same study showed that half of those who used the trail fell into two categories: industry/tech-

nology/trades and business/clerical/management.

- Bloomington, Indiana recently acquired a rail line that the city will convert into a paved urban trail in order to revitalize the arts district and, with it, create a more vibrant downtown.
- In February 2006, a software manufacturer from Muncie announced that it was moving its operations to Yorktown. Even before the move, the company had drawn up plans to provide scenic amenities that it knew would be of value to its employees: a park and a walking trail.
- The Monon Greenways Trail that stretches sixteen miles from Indianapolis to Carmel is a model combination of the rails-to-trails concept with economic development. Bike shops and cafes line parts of the trail. The trail goes through the artsy community of Broad Ripple through open country into the sophisticated environs of Carmel with easy access to parks, a shopping center, and a farmers market. As a local television station reported, "There was a time that the trail met with some resistance from people who lived nearby. They thought it would lower their property value. Now a lot of them are using it as an attribute in their real estate listings."

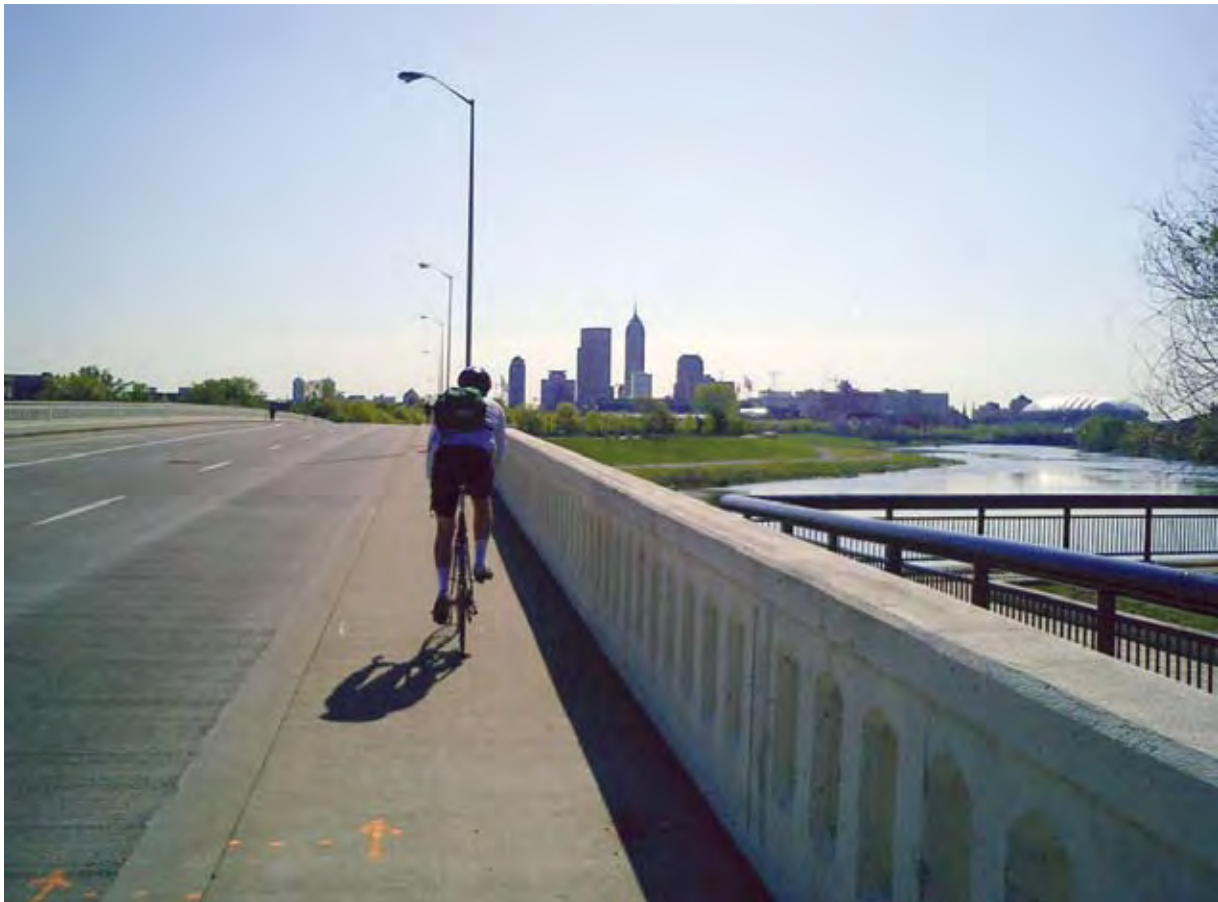
In June 2006, the Monon Trail celebrated its 10th anniversary. The trail, with 1.2 million visits a year, is so popular that developers are building thousands of high-end condominiums and townhouses along or near the trail. Above the northernmost point of the trail, two housing subdivisions totaling 1,000 homes are planning to make the trail part of their developments. Town planner Kevin Buchheit explained, "Everyone wants to be on the Monon."

Two shopkeepers near a new Indianapolis trail summed it up. Over 4,000 people now use this trail every day, and at peak hours more than 700 walk on one three-mile stretch. A deli owner near the trail observed, "A lot of people are coming in here that have never been here before." The owner of a local store likewise commented, "The trail has helped to put our name at the front of people's minds."

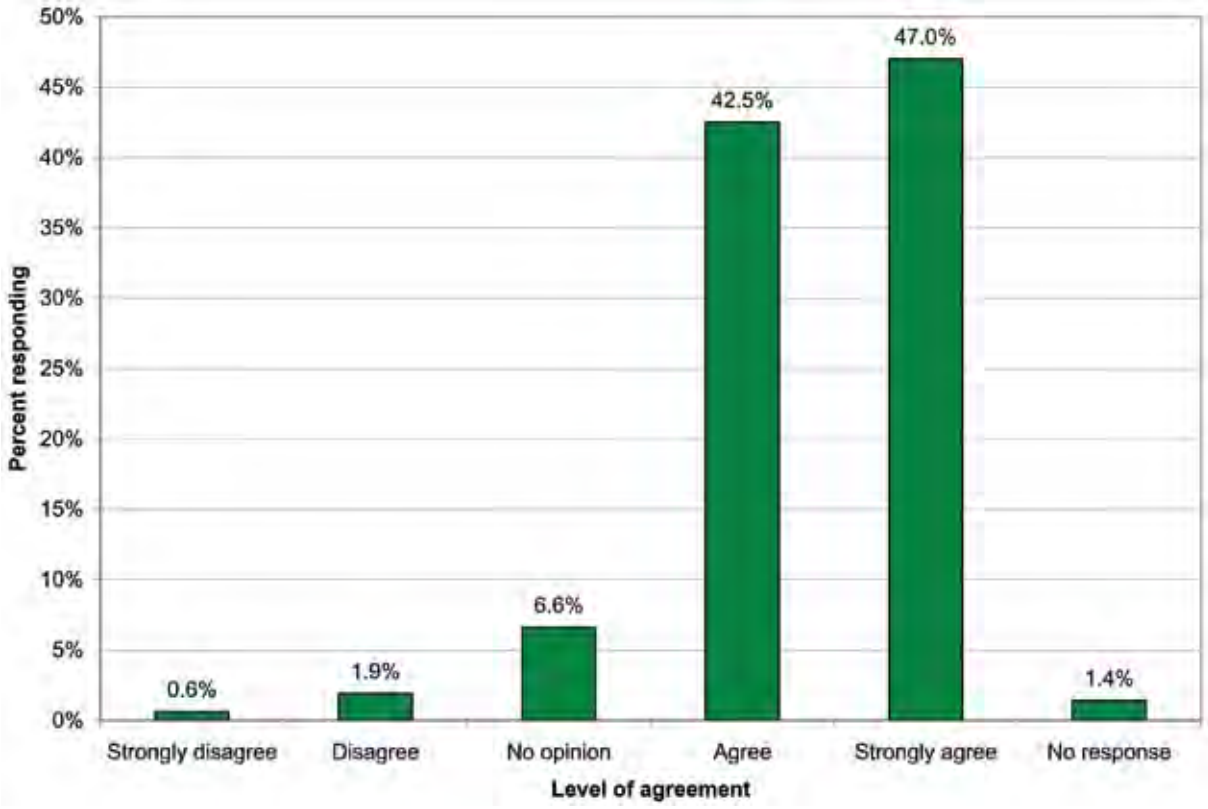
TRAILS AS ALTERNATIVE TRANSPORTATION

Providing alternative transportation is often touted as one of many trail benefits. Before looking at the role trails can play in providing alternative transportation, it may be helpful to note how bicycle and pedestrian commuting has typically been measured in the past. Commuting is often mistakenly thought of as simply the journey to work. The latest Journey to Work Survey by the U.S. Census Bureau in 2000 found 3.3% of workers rode bicycles or walked to work. However, the National Household Travel Survey in 2001 reported that journey to work trips only comprise 15% of all trips. In other words, 85% of all travel is trips other than to and from work. Accordingly, it makes sense to consider all types of trips when assessing the level of commuting done via trail.

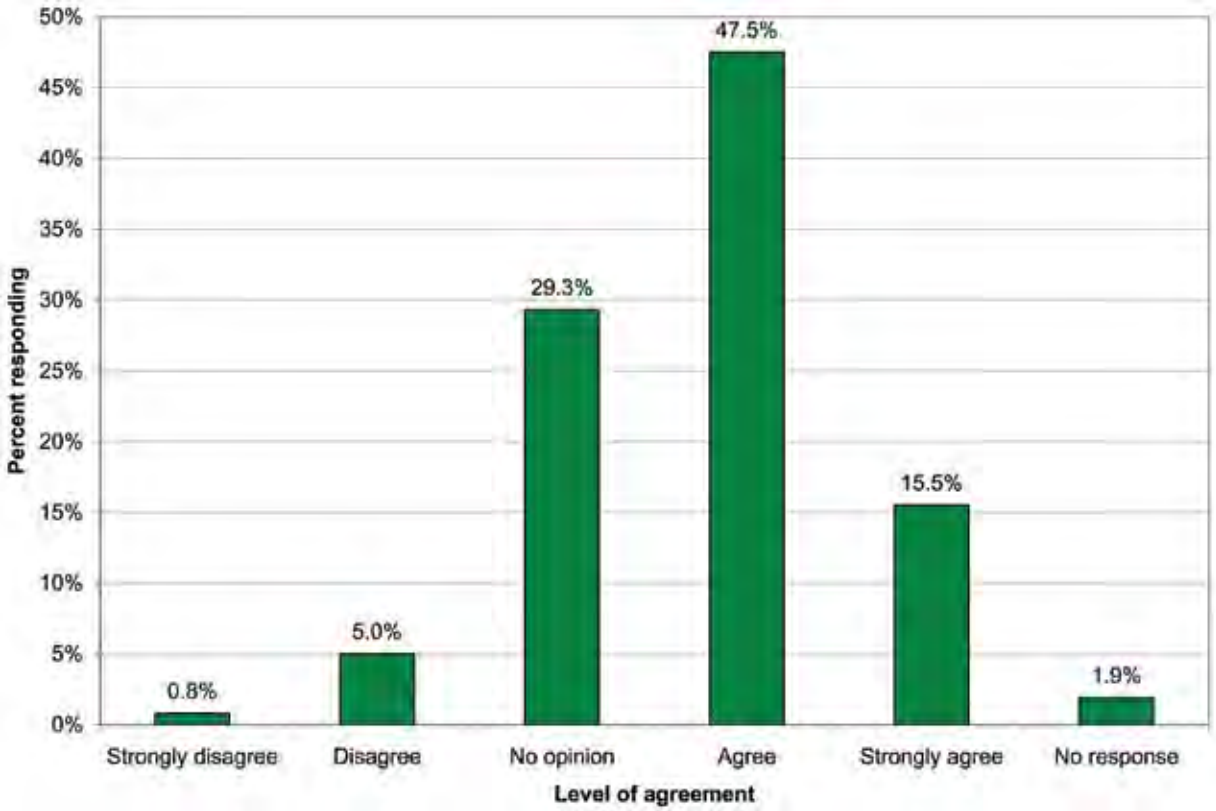
Although further research is necessary, initial studies show significant use of Indiana trails for alternative transportation. In January 2002, The Indiana Department of Transportation (INDOT) released the Indiana Trails Study, the most comprehensive evaluation of trails in the state to date. A summary of the study is available on INDOT's Web site at http://www.state.in.us/dot/projects/trails/index.html. This study of six Indiana trails found that 5% of visits to the Monon Trail in Indianapolis were for the main purpose of commuting. Another 15% of visits were for a secondary purpose of commuting or running errands. In other words, approximately 20% of trips resulted in some type of commuting. With a monthly visit count of 25,000 on the Monon Trail in Indianapolis, this would translate to 5000 commuting trips per month. Since 2002, the Monon Trail has been extended five miles to the north through Carmel and 3



Roadway improvements that incorporate bicycle/pedestrian facilities are important for trail expansion and providing modes of alternative transportation.



There needs to be a coordinated effort between trail development and public transit services to provide viable transportation alternatives.



miles to the south near downtown Indianapolis. Also, the Fall Creek Trail has since been connected. These extensions and connections have greatly increased the potential for commuting on the Monon Trail.

There are several factors that could influence the level of commuting done via trails. Provision of sidewalks, bike lanes and other street related amenities is important for bicyclists and pedestrians who are trying to safely access a trail. Trail connections to transit and bike racks on buses and trains could encourage use of trails to access the transit stop or station. Destination amenities such as "bikeports", bicycle parking and shower/locker facilities also make it easier to choose bicycling and walking to work. In addition, incentives for alternative transportation commuters and disincentives for auto commuters could encourage more commuters to hit the trail. Conversely, limiting speed or allowing only daylight use on trails could reduce the level of trail commuting.

INDOT became increasingly attuned to the needs of cyclists and pedestrians in the mid-1990s, adding the Indiana Bicycle and Pedestrian Facility Planning and Development Plan to the statewide multimodal transportation plan. Now more and more INDOT projects feature improvements unheard of ten years ago. INDOT incorporates sidewalks, separated multi-use paths, concrete pedestrian underpasses and widened shoulders in many of its projects to accommodate pedestrians and bicyclists. Secure and convenient bicycle parking allows employees and visitors to state offices to exercise travel options. In 2003 INDOT and the Department of Administration purchased and installed bicycle parking racks at the Indiana Government Center.

Nationwide, initiatives supporting sustainable development, smart growth and livable communities are fueling interest in bicycle and pedestrian travel. A renewed emphasis on walking and the need for physical activity makes sidewalks mandatory in many new residential developments. More bridges in urban areas are designed with walkways to facilitate pedestrians. Cantilevered walkways can be added when bridges are reconstructed. Curb ramps in cities and small towns improve access for people with disabilities and the elderly, wheelchairs and baby strollers. Pedestrian overpasses will soon permit safer crossing of major roads in communities like Bloomington, Fort Wayne and Evansville. With the growth in bicycling, the need for bike racks on buses has also grown. Hammond, Fort Wayne, Lafayette, Bloomington, Columbus, Evansville, Muncie, Indianapolis and

Trails supporting the Indiana strategic initiative in biofuel and agriculture

the Louisville area transit systems mount bike racks on their buses. Tunnels provide grade-separated access for pedestrian and bicycle use in Columbus, Schererville, Merrillville, Carmel, Delphi, Portage and Indianapolis. When new highway bridges were built across the Wabash River in Lafayette and the White River in Indianapolis, the old bridges were converted to accommodate pedestrians.

Improvements that encourage bicycle and pedestrian commuting are supported by the 2003 Surface Transportation Policy Project. The Project makes note of a finding by the National Household Travel Survey in 2001 that 61% of trips under a half mile distance are made in a vehicle. On the other hand, the Surface Transportation Policy Project reports that a national poll in 2003 found 66% of Americans chose public transportation and walkable communities, rather than new roads, as the best long term solution to traffic congestion. The Project also found that 74% of Americans want their children to be able to walk to school safely. So, from an alternative transportation perspective, it appears there is strong public support to continue to invest in trails and related facilities.

TRAILS AND TOURISM

Tourism in Indiana is big business. Annually, the tourism industry brings in approximately $8.9 billion in spending from 59 million leisure visitors—people who travel at least 50 miles to reach one of Indiana's many destinations (this figure does not include the hundreds of thousands of people who travel as part of conventions or on business). Tourism contributes to a diversified economic base, and visitor spending creates nearly 200,000 tourism-related jobs each year. The effects of visitor spending within local economies reach not only traditional tourism entities, but other businesses including gas stations, restaurants and grocery stores. Over the past several years, Indiana's leisure market has grown at a rate higher than the national average.

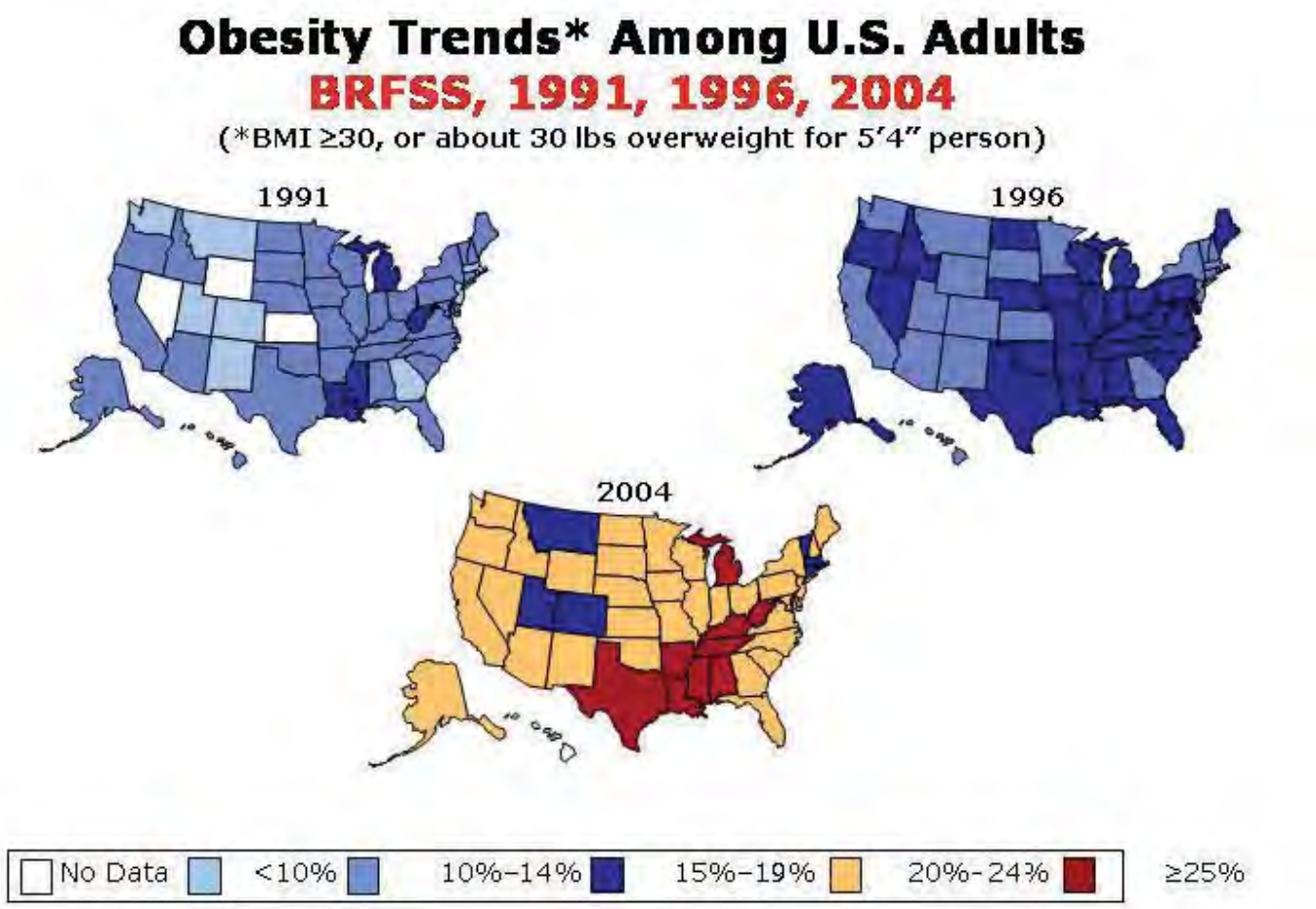
Outdoor recreation is one of Indiana's major forms of tourist attraction. Brown County State Park is the nation's most visited state park. Sites like the Indiana Dunes National Lakeshore are well known tourist attractions. According to Strategic Marketing & Research, 54.9 percent of leisure travelers to the state enjoy scenic beauty while visiting. Tourists visit lakes, rivers and other natural features 40.7 percent of the time. Nationally, top leisure activities include outdoor walking at 12 percent (3rd highest), rural sightseeing at 11 percent (4th highest) and visiting a national/state park at 8 percent.

Trails are an increasingly important aspect of the outdoor recreation industry. In 2004, the Office of Tourism awarded $75,000 to the National Road Heritage Trail (NRHT), Inc. and Indiana Trails Fund to help create a trail development guide. The resulting 9-volume NRHT Development Guide is an important resource for the state, 8 counties, 30 communities and countless citizens' groups along the proposed route of the 150-mile National Road Heritage Trail. The guide provides background information and context with which to launch or modify greenways development plans in order to create a continuous, interconnected network of bicycle and pedestrian facilities across the width of the state, including equestrian facilities for much of the route. Other examples of the evolving connection between tourism and trails include recent winter hikes in Brown County State Park organized and promoted by the local Convention and Visitors Bureau and the feature article on the American Discovery Trail in the 2006 Indiana Travel Guide.

The value of tourism goes beyond jobs it creates and dollars visitors spend staying in Indiana hotels, dining in restaurants and visiting attractions. Tourism has a direct impact on the quality of life for Hoosiers by creating stronger communities and offering unique experiences. The driving motivators influencing visitor travel are often the same factors considered by Indiana residents and potential residents when choosing where to live.

TRAILS AS CO-LOCATED INFRASTRUCTURE

Another opportunity exists which future trail developers could utilize to implement trail networks on a statewide level. Co-locating trails and infrastructure in the same corridor could serve a dual purpose. Combining utility corridors with trails. This concept could be expanded to connect towns throughout rural Indiana for sharing services such as waste water treatment. A facility located in one community could serve several other cities and towns in the region by developing a collector



system of infrastructures under old rail beds and road right-of-ways.

Many towns were founded originally along rail lines that could be used to revitalize smaller communities throughout Indiana. Waste water facilities in one community and fresh water facilities in another could support an entire region at a fraction of the cost communities now spend developing and maintaining their own facilities.

Reducing inefficiencies associated with communities duplicating services could be a significant cost-saving measure at the local level. Reconnecting municipal infrastructures through a corridor along old rail or other utility corridors could set the tone for Indiana communities to attract new business developments. Easy access to fresh water supply, sanitary disposal, fuel, high speed data connections and other resources would be augmented by a higher quality of life for prospective employees.

For example, in 1989, a lift station on the north side of Marion County failed, dumping millions of gallons of raw sewage into Williams Creek and the White River resulting in a massive fish kill. That incident prompted the Environmental Protection Agency to require a new interceptor sewer system be built to serve the entire north & central regions of Marion County. This needed project had been postponed for years but there were no funds to build it.

Concurrently, the Indianapolis Department of Metropolitan Development was negotiating for 10.5 miles of the old Monon rail corridor that ran through the north central center of Marion County. Within days of the corridor being secured by the city, a quick engineering study was completed. A 48-inch sewer main was co-located under the old Monon rail bed in record time and for a fraction of the cost of locating it under high traffic streets. The list of other co-located utilities along old rail corridors and greenways has grown throughout Indiana and includes fiber optic cable, cable TV, sewer lines, water, gas lines, high speed Internet, power lines and live steam from the solid waste recycling burn facility.

As manufacturing alternative fuels expands in Indiana, there are growing opportunities to utilize this network of facilities to further develop trails. Trail systems could be built over and alongside an infrastructure of pipes and cables that accommodate the flow of resources and commerce. Pumping corn slurry from grain elevators and Indiana farms to ethanol refineries and on to waiting markets will require expanding the network of existing utility corridors beyond those currently available. Additional above and below ground space for trails and infrastructure could be created based on the model of the railroads 150 years ago that launched Indiana and the

United States into world leadership as it towered over the 20th century.

With all of these utility corridor opportunities availing themselves to the development of trails, careful planning is necessary to make sure the trails developed will serve their respective populations effectively. Building trails for the sake of trails is ideal. However in these days of reduced government spending and concern for government waste, building trails near populations that will utilize the networks to their fullest extent will provide the biggest return for trail dollars spent.

INDIANA HEALTH BY THE NUMBERS

In recent decades the Centers for Disease Control and Prevention (CDC) have reported dramatic increases in the number of Americans who are overweight or obese. Both adults and children across the country and in the State of Indiana have recorded drastic negative changes in health indicators that contribute to a host of preventable chronic illnesses. Those illnesses have a profound effect on quality and length of life and cost individuals, businesses, and the state billions of dollars each year in health care expenditures. Those often preventable conditions, positively impacted by physical activity are:

- Hypertension
- Dyslipidemia (for example, high total cholesterol or high levels of triglycerides)
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Osteoarthritis
- Sleep apnea and respiratory problems
- Some cancers (endometrial, breast and colon)

According to the U.S. Department of Health and Human Services report Physical Activity Fundamental to Preventing Disease,

"Encouraging more activity can be as simple as establishing walking programs at schools, work sites and in the community. Some communities have an existing infrastructure that supports physical activity, such as sidewalks and bicycle trails, and worksites, schools, and shopping areas in close proximity to residential areas. In many other areas, such community amenities need to be developed to foster walking, cycling, and other types of exercise as a regular part of daily activity."

U.S. Department of Health and Human Services. Physical activity fundamental to preventing disease 2002 June 20. Available from URL: http://aspe.hhs.gov/health/reports/physicalactivity/

The Role of Recreation and Trails in Maintaining a Healthy Lifestyle

Adapted from an essay contributed by: Helen Steussy, M.D. Chairman, Healthy Communities of Henry County, swww.hchcin.org.

OVERWEIGHT & OBESITY TRENDS

The incidences of people being overweight and obese has drastically increased both in the United States and in Indiana. Using Body Mass Index (or BMI, a number based solely on a formula using height and weight), the prevalence of people overweight (those with a BMI of 25.0-29.9) or obese (those with a BMI over 30), has grown significantly.

In 2002, 37.0 percent of Americans and 37.2 percent of Hoosiers were considered overweight while 22.1 percent of Americans and 24.1 percent of Hoosiers were considered obese. Over 60 percent of Hoosiers are considered overweight or obese, a significant increase from 46 percent in 1990. For children, between 2003 and 2005 the percentage of overweight students in Indiana rose from 11.5 percent to 15.0 percent.

PHYSICAL ACTIVITY

Physical activity directly impacts the incidence of obesity and related conditions that affect health and quality of life. Simply engaging in 30 minutes of moderate physical activity at least five days each week is sufficient to result in health benefits. Moderate physical activity includes walking, hiking and other activities easily accessible in park and recreation areas statewide.

In 2004, 22.8 percent of Americans and 25.3 percent of Hoosiers reported no physical activity in the past month. Only 46 percent of Hoosiers engage in a sufficient amount of physical activity. The statistics for children are also alarming. In addition to startling overweight numbers, only 28.2 percent of ninth graders in Indiana take part in daily physical education instruction, which affects lifelong health habits.

The CDC's Guide to Community Preventive Services recommends creating or improving access to trails and other venues as a way to address this problem. These assets, combined with effective community educational outreach efforts inspire increasing physical activity in the population. CDC studies have shown that this strategy can increase the number of individuals who engage in the recommended amount of physical activity by 25 percent.

FINANCIAL IMPACT OF HEALTH

The financial impact of physical inactivity is staggering. Recent data from Active Living Leadership, at San Diego State University, estimates the total cost of physical inactivity in the State of Indiana to be almost $7 billion annually, with most of this burden coming in the form of lost productivity. It is also estimated that if five percent of the Indiana population became physically ac-

tive, the cost of this burden would be reduced by over $300 million each year. If Indiana improves access to trails for its citizens, Hoosiers could save hundreds of millions of dollars annually. Additionally, trails are great places for daily contact with other people. This enhances the mental health of the population, further boosting the health related bottom line.

The below essay was adapted from as essay contributed by Helen Steussy, M.D. Chairman, Healthy Communities of Henry County, www.hchcin.org.

WE NEED TO RE-CREATE INDIANA WITH RECREATION

Over the years, Indiana's population has become more sedentary. Food portions have become supersized and we have seen the health of Indiana citizens plummet. Indiana is one of the top states for obesity and related diseases which include diabetes, heart disease, stroke, cancer and arthritis. What can we do about it? Recreate! Where can we recreate? Trails!

Public health physicians have noted it is easier to motivate people to exercise than get them to stop smoking or change eating habits. Wagging fingers and "don't eat this" or "don't smoke" gives a grim image. But when promoting walking, running, hiking, biking and more, it's easy to extol the joy of a healthy lifestyle.

SO HOW DO WE ENCOURAGE INDIANA CITIZENS TO GET INSHAPE?

One factor is infrastructure. One of the best exercises, especially for a previously sedentary person is simple walking. Studies have shown that when persuading people to walk there are three requirements–they need a place that is safe, convenient and attractive. Such are our state parks, state and local lands and public trails.

Walking on a broken sidewalk past parking lots and traffic does not encourage citizens to get out and exercise. But when spring peeks around the window, migrating birds start to sing and ephemeral wildflowers color the ground, people want an opportunity to visit the natural lands of Indiana and celebrate the cycle of the seasons. They want an opportunity to get outside.

Too many children are more familiar with the World Wide Web but have not experienced the sparkle of a spider's web covered with dew on a summer morning. How can we expect the next generation to protect the land or even care about Indiana if all they know is the inside of a fast food restaurant and the entertainment on a screen? Children need to know the natural environment of the Hoosier state so they will choose to live here and care for the land of Indiana.

The benefits from exercise on our public lands goes beyond physical health. Nature has a calming effect on many symptoms of an increasingly crowded world. Neighborhoods with trees have less vandalism and graffiti. Surgical patients who look out on trees and nature heal faster. Long distance athletes get renewal by running through woodlands where the oxygen concentration is higher.

Trails also promote economic health. In today's information economy everything is connected. People and businesses can locate wherever they choose. And the draw to entrepreneurs who drive the economy is the quality of life in a state and town. When studies are done to determine the most livable towns of America they always look at much the same things: clean air, clean water, good parks and good schools, Indiana state parks, from the sands of the Indiana Dunes to the waters of Clifty Falls, are a major selling point for bringing people to Indiana. Thriving state and local park systems can attract entrepreneurs, retirees and families looking for a place to live and raise kids. All these people may appreciate the sound of a thrush in the woodlands or the sight of a Monarch butterfly hovering over a field of wildflowers. Trails can be the thread that ties it all together.

Trails also create opportunities for public art on places such as on the back side of warehouse buildings. Murals depicting local cultural and historic events add educational benefit. Including venues for local artists, youth groups and schools allows them to communicate ideas of nature and community.

Trails and greenways protect our environmental health. Clean air and water are essential to a healthy life. Forests and grasslands help clean the rainfall and return it to the underlying aquifers and streams. Greenery produces photosynthesis that clears the air of toxins and produces fresh, clean oxygen.

And don't forget social health. In today's fast paced society we need time and a place for social interactions. There is a need for third spaces in our world - places that are not work and not home where people can gather away from the noise and frantic pace of the city. When we in New Castle built a community playground, partly as an effort to battle childhood obesity, our goal was not for children to go to their own backyards and swing alone. We envisioned a place where children of all ages and backgrounds could gather and enjoy the thrill of active play in a vibrant setting.

The Indiana trail network can be an integral part of improving the health of Hoosiers from physical to mental, economic, environmental and social health. If we want to get InShape Indiana, our trail networks and parks are essential to the process. Our activities can recreate Indiana and lead the way to a healthy, dynamic place for Hoosiers to live and cherish.

IN SHAPE INDIANA
Governor Mitch Daniels

In 2005 Gov. Mitch Daniels launched the INShape Indiana initiative in response to growing health concerns related to the lifestyles of Hoosiers. Physical inactivity, poor nutrition and tobacco use are the three primary factors leading to a host of chronic diseases that affect the health, quality of life and financial stability of individuals, organizations and the State of Indiana.

The INShape Indiana initiative aims to encourage all Hoosiers to move more, eat better and give up smoking. The spirit of INShape Indiana is being implemented across each agency of state government and is joined in partnership by organizations, facilities and events with similar goals statewide.

Indiana ranks at or near the bottom in every negative health indicator, including physical inactivity. An effective trails system is vital to Gov. Daniels' vision for a healthier Indiana. Regular physical activity comes naturally while using a trail for walking or bicycling. Ease of access to recreational infrastructure such as parks and trail systems in the State of Indiana is a large component to the activity level of citizens.

A plan for the statewide development of trails helps to improve access to trails across the state by encouraging connections across varied communities. Americans who live or work near well developed trails systems tend to be healthier and lead a higher quality of life. Therefore, expanding and connecting existing trails will serve to increase opportunities to become more active, thereby improving health and quality of life in Indiana.

American Canoe Association
2005-06 ACA-Recommended Water Trails

The American Canoe Association is proud to announce the ACA-Recommended Water Trails! ACA-Recommended Water Trails meet a set of basic criteria and stand out as particular good destinations for paddlers. To be eligible, a trail must meet the following requirements:

- The trail must be a contiguous or semi-contiguous waterway or series of waterways that is open to recreational use by paddlers;
- The trail must have public access points for paddlers;
- The trail must be covered by a map, guide, signage or a web site that is of reasonable quality and detail and available to the public.
- Published or printed materials for the trail (*e.g.* guidebook, map, signs, website) must communicate low-impact ethics to trail users; and
- The trail must be supported and/or managed by one or more organizations.

ACA-Recommended Water Trails earn the right to use a special ACA logo, shown above, in maps, signs and other printed material related to the trail. The ACA will name a new group of recommended trails each year. To find out about water trails in your area, visit the ACA's website at www.americancanoe.org. There, you will find information on 400 water trails around the United States and Canada.

The 2005-06 ACA-Recommended Water Trails are:

Apalachicola Paddling Trail System - A extensive network of trails in the creeks and sloughs of Apalachicola Bay, in the Florida panhandle. The Apalachicola Paddling Trail System was established by the Florida Fish and Wildlife Conservation Commission with support from the Florida Department of Environmental Protection. For more information, contact:

Florida Fish and Wildlife Conservation Commission
620 S. Meridian St.
Tallahassee, FL 32399-1600
Phone: 850-488-5520
Trail website: http://myfwc.com/recreation/apalachicola_river/recreation.asp
Organization website: http://myfwc.com/

Bartram Canoe Trails - An interlocking network of trails and camping platforms in the cypress-tupelo swamps of the Mobile-Tensaw River Delta in Southern Alabama. The Bartram Canoe Trails were established by the Alabama Department of Conservation and Natural Resources. For more information, contact:

Alabama Department of Conservation and Natural Resources
64 N. Union Street
Montgomery, AL 36130
(334) 242-3151
www.outdooralabama.com/outdoor-adventures/bartram.cfm

Big Bend Saltwater Paddling Trail - A 105-mile trail through remote saltmarshes and wetlands along Florida's gulf coast. The Big Bend Saltwater Paddling Trail was established by the Florida Fish and Wildlife Conservation Commission. For more information, contact:

Wildlife Foundation of Florida
Big Bend Paddling Trail
P.O. Box 6181
Tallahassee, FL 32314-6181
(850) 488-5520
www.myfwc.com/recreation/big_bend/paddling_trail.asp
bbpaddling@fwc.state.fl.us

Blackwater National Wildlife Refuge Paddling Trails - A network of trails through spectacular wildlife habitat on Maryland's Eastern Shore. The Blackwater National Wildlife Refuge Paddling Trails were established by the Friends of Blackwater National Wildlife Refuge and the U.S. Fish and Wildlife Service. For more information, contact:

Friends of Blackwater National Wildlife Refuge
P. O. Box 1231
Cambridge, MD 21313
Phone: 410-228-2677
Trail website: http://www.friendsofblackwater.org/paddling.html
Organization website: http://www.friendsofblackwater.org/index.html

Cascadia Marine Trail - A spectacular open water paddling trail providing access to dozens of campsites along 2000 miles of shoreline in Washington's Puget Sound. The Cascadia Marine Trail was established by the Washington Water Trail Association. For more information, contact:

Washington Water Trails Association
4649 Sunnyside Ave N #305
Seattle, WA 98103
(206) 545-9161
www.wwta.org
wwta@wwta.org

Conodoguinet Creek Water Trail - A 40-mile water trail on a historic creek in Southern Pennsylvania. The Conodoguinet Creek Water Trail was established by the Cumberland County Planning Commission and the Pennsylvania Fish & Boat Commission. For more information, contact:

Cumberland County Planning Commission
18 North Hanover Street, Suite 102
Carlisle, PA 17013
Phone: 717-240-6100
Trail website: http://www.ccpa.net/cumberland/cwp/view.asp?A=1725&Q=483549
Organization website: http://www.ccpa.net/cumberland/site/default.asp

French Broad River Blueway - A 102 mile trail on the French Broad River through the mountains of southeastern Tennessee. The French Broad River Blueway was established by the Parks and Recreation Department of Knox County, Tennessee and its partners. For more information, contact:

Knox County Parks & Recreation
2447 Sutherland Ave.
Knoxville, TN 37919
(865) 215-2090
www.knoxcounty.org/openspace/frenchbroad/pdf/fbrbguide.pdf

Hudson River Water Trail - An extended trail of 158 miles through the wild and urban sections of New York's Hudson River Valley. The Hudson River Water Trail was established by the Hudson River Watertrail Association. For more information, contact:

Hudson River Watertrail Association
118 Old Ox Road
Ghent, NY 12075
Phone: 518-392-5771
Trail website: http://www.hrwa.org/
Organization website: http://www.hrwa.org/

Janes Island Water Trail - Thirty miles of trails through the marshes and crystal blue waters of the lower Chesapeake Bay. The Janes Island Water Trail was established by the Maryland Department of Natural Resources. For more information, contact:

Maryland Department of Natural Resources
580 Taylor Avenue
Tawes State Office Building
Annapolis, MD 21401
(877) 620-8367
www.dnr.state.md.us/outdooradventures/watertrail.html
customerservice@dnr.state.md.us

Janes Island State Park
26280 Alfred Lawson Drive
Crisfield, MD 21817
(410) 968-1565

Lake Superior Water Trail - A 150-mile trail along Minnesota's Lake Superior coastline, part of a broader effort to ring the lake with paddling trails. The Lake Superior Water Trail was established by Lake Superior Water Trail Association of Minnesota and the Minnesota Department of Natural Resources. For more information, contact:

Lake Superior Water Trail
Waters of Superior
395 S. Lake Ave.
Duluth, MN 55802
(612) 729-9591
www.lswta.org/main.html

Minnesota Department of Natural Resources
DNR Information Center
500 Lafayette Road
St. Paul, MN 55155-4040
(888) 646-6367
www.dnr.state.mn.us/kayaking/lswt/index.html

Lake Tahoe Water Trail - A unique trail along the perimeter of Lake Tahoe on the California-Nevada border. The Lake Tahoe Water Trail was established by the Action Team of Tahoe Tomorrow, an all-volunteer non-profit organization supporting conservation and community development in the Lake Tahoe area. For more information, contact:

Lake Tahoe Water Trail Committee
P.O. Box 612234
South Lake Tahoe, CA 96152
(530) 542-5651
www.laketahoewatertrail.org/
info@Laketahoewatertrail.org

Lower Mattaponi and Pamunkey Rivers Canoe Trail - Connected trails on two tributaries of Virginia's York River, featuring some of the last pristine fresh water paddling on the Atlantic seaboard. The Lower Mattaponi and Pamunkey Rivers Canoe Trail was established by the Mattaponi & Pamunkey Rivers Association. For more information, contact:

Mattaponi & Pamunkey Rivers Association
P.O. Box 157
Walkerton, VA 23177
Trail website: http://www.mpra.org/
Organization website: http://www.mpra.org/

Maine Island Trail - A 325-mile trail along Maine's coast from Casco to Machias Bay. The Maine Island Trail was established by the Maine Island Trail Association, the State of Maine, and numerous private landowners. For more information, contact:

Maine Island Trail Association
58 Fore St. Bldg 30 3rd Floor
Portland, ME 04101
207-761-8225
www.mita.org
info@mita.org

Middle Allegheny River Water Trail - A 107-mile trail on the Allegheny River, a federally-designated Wild and Scenic River in Northwest Pennsylvania. The Middle Allegheny River Water Trail was established by the Pennsylvania Fish & Boat Commission and the U.S. Forest Service. For more information, contact:

Pennsylvania Fish & Boat Commission
1601 Elmerton Avenue
Harrisburg, PA 17106-7000
Phone: 717-705-7800
Trail website: http://sites.state.pa.us/PA_Exec/Fish_Boat/watertrails/alleg/trailguide.htm
Organization website: http://sites.state.pa.us/PA_Exec/Fish_Boat/mpag1.htm

Milwaukee Urban Water Trail - Twenty-five miles of urban paddling on three rivers in the heart of Milwaukee, Wisconsin. The Milwaukee Urban Water Trail was established by the Friends of Milwaukee's Rivers. For more information, contact:

Friends of Milwaukee's Rivers
1845 N. Farwell Ave., Suite 100
Milwaukee, WI 53202
Phone: 414-287-0207
Trail website: http://www.mkeriverkeeper.org/watertrail/home.htm
Organization website: http://www.mkeriverkeeper.org/index.html

Muskingum River Water Trail - A 112-mile water trail on the Muskingum River, a historic transportation corridor in southeast Ohio. The Muskingum River Water Trail was established by the Ohio Department of Natural Resources. For more information, contact:

Ohio Department of Natural Resources
2045 Morse Road, Bldg. A-2
Columbus, OH 43229-6693
Phone: 614-265-6672
Trail website: http://ohiodnr.com/watercraft/watertrails/ohiotrails.shtm
Organization website: http://ohiodnr.com/default.htm

Northern Forest Canoe Trail - The longest inland water trail in the the Northeast, NFCT features 740 miles of trail that follows historic Native American travel routes through New York, Vermont, New Hampshire, Maine and Quebec. The Northern Forest Canoe Trail was established by the Northern Forest Canoe Trail organization, which coordinates the work of twelve sectional trail management organizations. For more information, contact:

Northern Forest Canoe Trail
P.O. Box 565
Waitsfield, VT 05673
(802) 496-2285
www.northernforestcanoetrail.org/index.html
info@northernforestcanoetrail.org

Ohio River Water Trail - Markland Pool Section - A 75-mile water trail on the Ohio River near Cincinnati, the first segment of planned trail that will extend from Pittsburgh, PA to Cairo, IL. The Markland Pool Section of the Ohio River Water Trail was established by Ohio River Way. For more information, contact:

Ohio River Way
2055 Reading Road
Cincinnati, OH 45202
Phone: 513.588.6936
Trail website: http://ohioriverway.org/paddlefest/
Organization website: http://ohioriverway.org/paddlefest/

Potomac River Water Trail - History-rich paddling on one of America's heritage rivers, from the Allegheny mountains to the Chesapeake Bay. The Potomac River Water Trail was established by the Maryland Dept. of Natural Resources, the West Virginia Division of Natural Resources, the Virginia Dept. of Conservation and Recreation, the National Park Service and the Interstate Commission on the Potomac River Basin. For more information, contact:

Maryland Dept. of Natural Resources
Maryland Greenways and Water Trails Program
580 Taylor Avenue, E-3
Annapolis, MD 21401
Phone: 800-830-3974
Trail website: http://www.dnr.state.md.us/greenways/trailsbyregion.html#WM
Organization website: http://www.dnr.state.md.us/sw_index_flash.asp

Virginia Department of Conservation and Recreation
Division of Planning and Recreation Resources
203 Governor Street, Suite 326
Richmond, Virginia 23219
Phone: (804) 786-5046
Organization website: http://www.state.va.us/dcr/

Schuylkill River Water Trail - A Federally designated National Recreation Trail along 148 miles of the Schuylkill River in Eastern Pennsylvania. The Schuylkill River Water Trail was established by the Schuylkill River Heritage Area, the State of Pennsylvania and the Delaware River Basin Commission. For more information, contact:

Schuylkill River Heritage Area
140 College Drive
Pottstown, PA 19464
(484) 945-0200
info@schuylkillriver.org
www.schuylkillriver.org/maps/water_trails.asp

Pennsylvania Fish & Boat Commission
1601 Elmerton Avenue
Harrisburg, PA 17110
717-705-7800
http://sites.state.pa.us/PA_Exec/Fish_Boat/watertrails/trailindex.htm

Delaware River Basin Commission
P. O. Box 7360
West Trenton, NJ 08628-0360
(609) 883-9500
www.state.nj.us/drbc/schuylkillmaps.htm

Susquehanna Water Trail - A 440-mile trail on the West Branch, North Branch and main stem of the Susquehanna River in New York, Pennsylvania and Maryland. The Susquehanna Water Trail was established by a broad coalition of organizations that includes the Lumber Heritage Region of Pennsylvania, the Susquehanna Greenways Partnership, the Susquehanna River Trail Association, the Lancaster - York Heritage Region, the Pennsylvania Fish and Boat Commission, and the Pennsylvania Department of Conservation and Recreation. For more information, contact:

Lower Section:
Lancaster – York Heritage Region / Susquehanna Water Trail
c/o Lancaster County Planning Commission
P.O. Box 83480
Lancaster, PA 17608-3480
(717) 299-8333
www.lyhr.org/susriver_watertrail.htm

Middle Section:
Susquehanna River Trail Association
P.O. Box 62023
Harrisburg, PA 17106
(717) 737-8622
http://cgis.hbg.psu.edu/SRTA/index.htm

West Branch:
Lumber Heritage Region of Pennsylvania
Cameron County Courthouse
20 East Fifth Street
Emporium, PA 15834
(814) 486-0213
www.lumberheritage.org/
info@lumberheritage.org

Thousand Islands Water Trail - A trail through the scenic Thousand Islands region on the St. Lawrence River in Ontario, Canada. The Thousand Islands Water Trail was established by the Thousand Islands Water Trail Project Team, Parks Canada, and the Biosphere Network. For more information, contact:

Thousand Islands Water Trail
c/o Thousand Islands - Frontenac Arch Biosphere Reserve
19 Reynolds Road
Lansdowne, ON K0E 1L0
(613) 659-4824
www.paddle1000.com/index.htm
info@biospherenetwork.com

Tilghman Island Water Trail - Spectacular paddling around Tilghman Island in the Central Chesapeake Bay, where the land and water intertwine. The Tilghman Island Water Trail was established by the Maryland Department of Natural Resources and the Talbot County Office of Tourism. For more information, contact:

Maryland Department of Natural Resources
Maryland Park Service
580 Taylor Avenue, E-3
Annapolis, MD 21401
Phone: 800-830-3974
Trail website: http://www.dnr.state.md.us/publiclands/eastern/tilghmantrail.html
Organization website: http://www.dnr.state.md.us/sw_index_flash.asp

Willamette River Water Trail - 132 miles of urban and rural paddling on one of the great rivers of the Pacific Northwest. The Willamette River Water Trail was established by the Willamette Riverkeeper and the Mid-Willamette River Connections Group. For more information, contact:

Willamette Riverkeeper
49 SE Clay
Portland, OR 97214
Phone: 503-223-6418
Trail website: http://www.willamettewatertrail.org/
Organization website: http://willamette-riverkeeper.org

SAMPLE

RESOLUTION SETTING FORTH THE CITY OF GOSHEN'S COMMITMENT TO COMPLETE STREETS

PREAMBLE/WHEREAS CLAUSES

A draft resolution based on this model should include a preamble that contains "findings" of fact ("whereas" clauses) that support the need for the municipality to pass the resolution. The preamble contains factual information supporting the need for the resolution – in this case, documenting the need for complete streets. A list of findings supporting this model resolution appears is Section 5. Findings from that list may be inserted here, along with additional findings addressing the need for the resolution in the City of Goshen.

THE RESOLUTION: INTRODUCTORY VERSION

The introductory version of the model local complete streets resolution provides a substantive but streamlined approach for jurisdictions that are ready to take initial steps toward implementing complete streets. The introductory version recognizes the importance of complete streets, requires that complete streets practices be integrated into the daily work of local agencies, provides for training of personnel and evaluation of efforts, and establishes a committee to explore further steps to implement complete streets in the community.

NOW, THEREFORE, LET IT BE RESOLVED that the City of Goshen *(adopting body)* hereby recognizes the importance of creating complete streets that enable safe travel by all users, including pedestrians, bicyclists, public transportation riders and drivers, motor-vehicle drivers and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities.

BE IT FURTHER RESOLVED that the City of Goshen Department of Public Works / Engineering should make complete streets practices a routine part of everyday operations, should approach every transportation project and program as an opportunity to improve public streets and the transportation network for all users, and should work in coordination with other departments, agencies, and jurisdictions to achieve complete streets.

BE IT FURTHER RESOLVED that the City of Goshen Department of Public Works / Engineering should evaluate how well the streets and transportation network of The City of Goshen are serving each category of users.

Comment: Municipalities should look at collision statistics, bicycle and pedestrian injuries and fatalities, existing levels of service for different modes of transport and users, latent demand, and so on. Such evaluations can be very thorough or more succinct.

BE IT FURTHER RESOLVED that trainings in how to integrate, accommodate, and balance the needs of all users should be provided for planners, civil and traffic engineers, project managers, plan reviewers, inspectors, and other personnel responsible for the design and construction of streets, bridges, and other portions of the transportation network.

Comment: Such trainings may cover a range of topics: a basic introduction to the concept of complete streets, and exploration of advanced implementation questions, or an overview of how to apply new systems, policies, and requirements put in place by the jurisdiction to implement complete streets.

BE IT FURTHER RESOLVED that the head of each affected agency or department should report back to the City of Goshen *(adopting body)* [*annually / within one year of the date of passage of*

this resolution] regarding: the steps taken to implement this Resolution; additional steps planned; and any desired actions that would need to be taken by the City of Goshen (*adopting body*) or other agencies or departments to implement the steps taken or planned.

BE IT FURTHER RESOLVED that a committee is hereby created, to be composed of *[insert desired committee composition]* and appointed by the Mayor of the City of Goshen, to recommend short-term and long-term steps, planning, and policy adoption necessary to create a comprehensive and integrated transportation network serving the needs of all users; to assess potential obstacles to implementing complete streets in Goshen; and to develop proposed revisions to all appropriate plans, zoning and subdivision codes, laws, procedures, rules, regulations, guidelines, programs, templates, and design manuals, including [insert name of Goshen's comprehensive plan equivalent as well as all other key documents by name], to integrate, accommodate, and balance the needs of all users in all projects.

Comment: While local considerations will dictate committee composition, consideration should be given to including representatives of key departments or agencies, such as the transit agency, public works department, planning department, public health department, and others, as well as the city manager, advocacy groups, and a representative from the school district.

BE IT FURTHER RESOLVED that the committee should consider requiring incorporation of complete streets modifications and infrastructure in the planning, design, approval, alteration, or repair of streets, bridges, or other portions of the transportation network; enacting performance standards with measurable benchmarks reflecting the ability of users to travel in safety and comfort; and requiring all initial planning and design studies, health impact assessments, environmental reviews, and other project reviews for projects requiring funding or approval by the City of Goshen to: (1) evaluate the effect of the proposed project on safe travel by all users and (2) identify measures to mitigate any adverse impacts on such travel that are identified.

BE IT FURTHER RESOLVED that the committee should report on the matters within its purview to the City of Goshen *(adopting body)* within one year following the date of adoption of this Resolution, and upon receipt of this report the City of Goshen *(adopting body)* will hold a hearing to determine further implementation steps.

(Reference: *Complete Streets: Best Policy and Implementation Practices*, Barbara McCann and Suzanne Rynne, Editors; American Planning Association Planning Advisory Service Report # 559)

SAMPLE

RESOLUTION SETTING FORTH THE CITY OF GOSHEN'S COMMITMENT TO COMPLETE STREETS

THE RESOLUTION: ADVANCED VERSION

The advanced version of the model local complete streets resolution enables a local jurisdiction to take the necessary steps to integrate complete streets practices into the transportation network. It includes the provisions in the introductory version and also calls for regularly incorporating the needs of all users into street repair and construction projects, sets out more detailed performance standards, and requires that initial studies, health impact assessments, and environmental reviews consider impacts on safe travel by all users.

NOW, THEREFORE, LET IT BE RESOLVED that the City of Goshen *(adopting body)* hereby recognizes the importance of creating complete streets that enable safe travel by all users, including pedestrians, bicyclists, public transportation riders and drivers, motor-vehicle drivers and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities.

BE IT FURTHER RESOLVED that The City of Goshen *(adopting body)* affirms that complete streets infrastructure addressing the needs of all users should be incorporated into all planning, design, approval, and implementation processes for any construction, reconstruction, retrofit, maintenance, alteration, or repair of streets, bridges, or other portions of the transportation network, including pavement resurfacing, restriping, and signalization operations if the safety and convenience of users can be improved within the scope of the work; provided, however, that such infrastructure may be excluded upon written approval by *[insert head of appropriate agency]*, where documentation and data indicate that:

Comment: This provision, which requires that street projects on new or existing streets create complete streets, is a fundamental component of a commitment to complete streets. This clause provides crucial accountability in the exceptions process by requiring documentation, a transparent decision-making process, and written approval by a specified official.

(1) Use by non-motorized users is prohibited by law;

(2) The cost would be excessively disproportionate to the need or probable future use over the long term;

(3) There is an absence of current or future need; or

Comment: Data showing an absence of future need might include projections demonstrating low likelihood of pedestrian or bicycling activity in an area.

(4) Inclusion of such infrastructure would be unreasonable or inappropriate in light of the scope of the project.

Comment: By including this fourth exception, a jurisdiction gains considerable flexibility, but at the cost of potentially implementing complete streets practices less thoroughly. Jurisdictions should consider this trade-off in determining whether to include this exception. Other exceptions can also be included in this list, for example: "Significant adverse environmental impacts outweigh the positive effects of the infrastructure."

BE IT FURTHER RESOLVED that *(insert appropriate agency)* should evaluate how well the streets and transportation network of the City of Goshen are serving each category of users, and *(insert appropriate agencies*) should establish performance standards with measurable benchmarks reflecting the ability of users to travel in safety and comfort.

Comment: To evaluate service, municipalities may wish to look at collision statistics, bicycle and pedestrian injuries and fatalities, existing levels of service for different modes of transport and users, latent demand, and so on.

Specific performance standards, with clear benchmarks and timeframes, greatly increase accountability and the ability to assess progress toward a goal. Communities that are just beginning to move toward complete streets may wish to establish limited benchmarks, whereas those seeking rapid and substantial impact will want to specify detailed performance standards. In establishing performance standards, municipalities should look at areas such as transportation mode shift, miles of new bicycle lanes and sidewalks, percentage of streets with tree canopy and low design speeds, public participation rates, and so on.

BE IT FURTHER RESOLVED that *(insert appropriate agencies, such as Department of Transportation, Department of Public Works, Department of Planning*) should review and either revise or develop proposed revisions to all appropriate plans, zoning and subdivision codes, laws, procedures, rules, regulations, guidelines, programs, templates, and design manuals, including *(insert name of Goshen's comprehensive plan equivalent as well as all other key documents by name),* to integrate accommodate, and balance the needs of all users in all projects.

BE IT FURTHER RESOLVED that *(insert appropriate agencies, such as Department of Transportation, Department of Public Works, Department of Planning*) should make complete streets practices a routine part of everyday operations, should approach every transportation project and program as an opportunity to improve public streets and the transportation network for all users, and should work in coordination with other departments, agencies, and jurisdictions to achieve complete streets.

BE IT FURTHER RESOLVED that trainings in how to integrate, accommodate, and balance the needs of all users should be provided for planners, civil and traffic engineers, project managers, plan reviewers, inspectors, and other personnel responsible for the design and construction of streets, bridges, and other portions of the transportation network.

Comment: Such trainings may cover a range of topics: a basic introduction to the concept of complete streets, and exploration of advanced implementation questions, or an overview of how to apply new systems, policies, and requirements put in place by the jurisdiction to implement complete streets.

BE IT FURTHER RESOLVED that procedures should be established to allow increased public participation in policy decisions and transparency in individual determinations concerning the design and use of streets.

Comment: The City of Goshen may exclude this provision if existing law provides for a high level of public participation and transparency in such determinations.

BE IT FURTHER RESOLVED that all initial planning and design studies, health impact assessments, environmental reviews, and other project reviews for projects requiring funding or approval by the City of Goshen should: (1) evaluate the effect of the proposed project on safe travel by all users, and (2) identify measures to mitigate any adverse impacts on such travel that are identified.

Comment: This clause provides for public accountability and improved outcomes by enabling written evaluation of the effects of certain projects on safe travel as a routine consideration factoring into decision-making processes. However, some communities may need to build momentum prior to adopting this provision. Such communities may omit this provision.

BE IT FURTHER RESOLVED that the head of each affected agency or department should report back to the City of Goshen (adopting body) [*annually / within one year of the date of passage of this resolution*] regarding: the steps taken to implement this Resolution; additional steps planned; and any desired actions that would need to be taken by the City of Goshen (*adopting body*) or other agencies or departments to implement the steps taken or planned.

Comment: The City of Goshen is encouraged to tailor this clause to direct agencies to carry out additional specific implementation tasks as appropriate.

BE IT FURTHER RESOLVED that a committee is hereby created, to be composed of *[insert desired committee composition]* and appointed by the Mayor of the City of Goshen, to recommend short-term and long-term steps, planning, and policy adoption necessary to create a comprehensive and integrated transportation network serving the needs of all users; to assess potential obstacles to implementing complete streets in Goshen; and to suggest revisions to the *(insert name of City of Goshen comprehensive plan equivalent)*, zoning code, subdivision code, and other applicable law.

Comment: While local considerations will dictate committee composition, consideration should be given to including representatives of key departments or agencies, such as the transit agency, public works department, planning department, public health department, and others, as well as the city manager, advocacy groups, and a representative from the school district.

BE IT FURTHER RESOLVED that the committee should report on the matters within its purview to the City of Goshen *(adopting body)* within one year following the date of adoption of this Resolution, and upon receipt of this report the City of Goshen *(adopting body)* will hold a hearing to determine further implementation steps.

(Reference: *Complete Streets: Best Policy and Implementation Practices*, Barbara McCann and Suzanne Rynne, Editors; American Planning Association Planning Advisory Service Report # 559)

A *SAMPLE* ORDINANCE OF THE CITY OF GOSHEN
PROVIDING FOR COMPLETE STREETS
AND AMENDING THE CITY OF GOSHEN MUNICIPAL CODE

The *(Adopting body)* does ordain as follows:

SECTION I. FINDINGS. The *(Adopting body)* hereby finds and declares as follows:

See Finding section, below

A draft ordinance based on this model should include "finding" of fact ("whereas" clauses) that support the need for the City of Goshen to adopt the ordinance. The findings section is part of the ordinance, but it usually does not become codified in the local government code. The findings contain factual information supporting the need for the law – in this case, documenting the need for complete streets.

NOW THEREFORE, it is the intent of the City of Goshen (*Adopting body e.g., city council)* in enacting this ordinance to encourage healthy, active living, reduce traffic congestion and fossil fuel sue, and improve the safety and quality of life of residents of Goshen by providing safe, convenient, and comfortable routes for walking, bicycling, and public transportation.

SECTION II. *[article/chapter]* of the City of Goshen Municipal Code is hereby amended to read as follows:

Sec [____(*1)]. PURPOSE. The purpose of this *[article/chapter]* is to enable the streets of the City of Goshen to provide safe, convenient, and comfortable routes for walking, bicycling, and public transportation that encourage increased use of these modes of transportation, enable convenient travel as part of daily activities, improve the public welfare by addressing a wide array of health and environmental problems, and meet the needs of all users of the streets, including children, older adults, and people with disabilities.

Comment: The City of Goshen may add additional reasons to this purpose clause as appropriate or desired.

Sec.[____(*2)]. DEFINITIONS. The following words and phrases, whenever used in this *[article/chapter],* shall have the meanings defined in this section unless the context clearly requires otherwise.

Comment: Municipal codes contain many definitions; the City of Goshen should ensure that the definitions from this ordinance appear in the correct section and that modifications occur as needed.

(a) "Complete streets infrastructure" means design features that contribute to a safe, convenient, or comfortable travel experience for users, including but not limited t features such as sidewalks; shared-use paths; bicycle lanes; automobile lanes; paved shoulders; street trees and landscaping; planting strips; curbs; accessible curb ramps; bulbouts; crosswalks; refuge islands; pedestrian and traffic signals; including countdown and accessible signals; signage; street furniture; bicycle parking facilities; public transportation stops and facilities; transit priority signalization; traffic-calming devices such as rotary circles, traffic bumps, and

surface treatments such as paving blocks, textured asphalt, and concrete; narrow vehicle lanes; raised medians; and dedicated transit lanes [*insert other accommodations if desired]*.

Comment: although features such as street trees and landscaping have traditionally not been included in transportation infrastructure, these features are crucial for pedestrian comfort and safety. They are incorporated into this definition to ensure that complete streets infrastructure addresses the needs of all users.

(b) "Street" means any right-of-way, public or private, including arterials, connectors, alleys, ways, lanes, and roadways by any other designation, as well as bridges, tunnels, and any other portions of the transportation network.

Comment: This definition of "street" includes both public and private streets and is broader than similar definitions contained in most municipal codes. The effect is to make many provisions of this ordinance applicable or potentially applicable to private streets.

(c) "Street project" means the construction, reconstruction, retrofit, maintenance, alteration, or repair of any street, including the planning, design, approval, and implementation processes *[except that "street project" does not include minor routine upkeep such as cleaning, sweeping, mowing, spot repair, or interim measures on detour routes] [and does not included projects with a total cost of less than $(____)]*.

Comment: In defining "street project", a municipality can use the following clause to reference and include the terms and definitions that are used to describe local street projects (e.g., capital project, major maintenance project, annual maintenance projects): "as well as *[insert local project terms]."*

(d) "Users" means individuals that use streets, including pedestrians, bicyclists, motor-vehicle drivers, public transportation riders and drivers, *[insert other significant local users if desired, e.g., drivers of agricultural vehicles, emergency vehicles, or freight]* and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities.

Sec. [____(*3)]. REQUIREMENT OF INFRASTRUCTURE ENSURING SAFE TRAVEL

(a) *[Insert appropriate agencies, such as Department of Transportation, Department of Public Works, Department of Planning]* shall make complete streets practices a routine part of everyday operations, shall approach every transportation project and program as an opportunity to improve public *[and private]* streets and the transportation network for all users and shall work in coordination with other departments, agencies, and jurisdictions to achieve complete streets.

Comment: This provision, like many other following provisions, allows municipalities to choose whether to apply the requirement to private streets in addition to public streets. Generally, it will expand the effectiveness of the ordinance to apply it to private streets. However, such a requirement may be more practical in certain jurisdictions than in others. For example, the requirement might be very important in a jurisdiction where there are many private streets in central locations.

(b) Every street project on public [or private] streets shall incorporate complete streets infrastructure sufficient to enable reasonably safe travel along and across the right-or-way for each category of users; provided, however, that such infrastructure may

be excluded upon written approval by *[insert head of appropriate agency*], where documentation and data indicate that:

Comment: This provision, which requires that street projects on new or existing streets create complete streets, is a fundamental component of a commitment to complete streets. This clause provides crucial accountability in the exceptions process by requiring documentation, a transparent decision-making process, and written approval by a specified official.

(1) Use by non-motorized users is prohibited by law.
(2) The cost would be excessively disproportionate to the need or probable future use over the long term;
(3) There is an absence of current or future need; or

Comment: Data showing an absence of future need might include projections demonstrating low likelihood of pedestrian or bicycling activity in an area. Such projections should be based on demographic, school, employment, and public transportation route date, not on extrapolations from current low mode use.

(4) Inclusion of such infrastructure would be unreasonable or inappropriate in light of the scope of the project.

Comment: By including this fourth exception, a municipality gains considerable flexibility, but at the cost of potentially implementing complete streets practices less thoroughly. Municipalities should consider this trade-off in determining whether to include this exception. Other exceptions can also be included in this list, for example: "Significant adverse environmental impacts outweigh the positive effects of the infrastructure."

(c) As feasible, the City of Goshen shall incorporate complete streets infrastructure into existing public *[and private]* streets to improve the safety and convenience of users, construct and enhance the transportation network for each category o fusers and create employment.

Comment: This provision sets forth the municipality's desire and intent to retrofit existing streets to increase safety for all users, but the words "as feasible" leave the municipality great flexibility to do only what it determines to be a priority.

(d) If the safety and convenience of users can be improved within the scope of pavement resurfacing, restriping, or signalization operations on public *[or private]* streets, such projects shall implement complete streets infrastructure to increase safety for users.

Comment: This provision is intended to encourage new bicycle lanes and reduction in the number of vehicle lanes where feasible, as part of the restriping of pavement lines and markings during resurfacing, and to encourage improvements for pedestrians, particularly people with disabilities and older adults, as part of signalization projects.

(e) [*Insert appropriate agencies, such as Department of Transportation, Department of Public Works, Department of Planning*] shall review and either revise or develop proposed revisions to all appropriate plans, zoning and subdivision codes, laws, procedures, rules, regulations, guidelines, programs, templates, and design manuals, including [*insert name of Goshen's comprehensive plan equivalent as well as all other key documents by name*], to integrate, accommodate, and balance the needs of all users in all street projects on public [*and private*] streets.

(f) In design guidelines, [*insert appropriate agencies*] shall coordinate templates with street classifications and revise them to include complete streets infrastructure, such as bicycle lanes, sidewalks, street crossings, and planting strips.

(g) Trainings in how to integrate, accommodate, and balance the needs of each category of users shall be provided for planners, civil and traffic engineers, project managers, plan reviewers, inspectors, and other personnel responsible for the design and construction of streets.

Comment: Such trainings may cover a range of topics; a basic introduction to the concept of complete streets, an exploration of advanced implementation questions, or an overview of how to apply new systems, policies, and requirements put in place by the jurisdiction to implement complete streets.

Sec. [____(*4)]. DATA COLLECTION, STANDARDS, AND PUBLIC INPUT

(a) *[Insert appropriate agency or agencies]* shall collect data measuring how well the streets of Goshen are serving each category of users.

Comment: Municipalities should look at latent demand, existing levels of service for different modes of transport and users, collision statistics, bicycle and pedestrian injuries and fatalities, and so on.

(b) *[Insert appropriate agency or agencies]* shall put into place performance standards with measurable benchmarks reflecting the ability of users to travel in safety and comfort.

Comment: Specific performance standards with clear benchmarks and timeframes greatly increase accountability and the ability to assess progress toward a goal. Communities that are just beginning to move toward complete streets may wish to establish limited benchmarks, whereas those seeking rapid and substantial impact will want to specify detailed performance standards. In establishing performance standards, municipalities should look at areas such as transportation mode shift, miles of new bicycle lanes and sidewalks, percentage of streets with tree canopy and low design speeds, public participation rates, and so on.

(c) *[Insert appropriate agency or agencies]* shall establish procedures to allow full public participation in policy decisions and transparency in individual determinations concerning the design and use of streets.

Comment: A municipality may exclude this provision if existing law provides for a high level of public participation and transparency in such determinations.

(d) *[Insert appropriate agency or agencies]* shall implement, administer, and enforce this [*article/chapter*]. [*Agency*] is hereby authorized to issue all rules and regulations consistent with this [*article/chapter*] and shall have all necessary powers to carry out the purpose of and enforce this [*article/chapter*].

Comment: This provision designates an agency or official to implement this ordinance and also bestows rule-making and other posers on the agency. If existing law in a municipality provides such rule-making authority, this provision or she second sentence of the provision may be omitted.

(e) All initial planning and design studies, health impact assessments, environmental reviews, and other project reviews for projects requiring funding or approval by the

City of Goshen shall: (1) evaluate the effect of the proposed project on safe travel by all users and (2) identify measures to mitigate any adverse impacts on such travel that are identified.

Comment: This clause provides for public accountability and improved outcomes by enabling written evaluation of the effects of certain projects of safe travel as a routine consideration factoring into decision-making processes. However, some communities may need to build momentum prior to adopting this provision. Such communities may omit this provision and substitute the alternative provision available in subsection [5(c)].

Sec. [____(*5)]. FURTHER STEPS.

(a) The head of each affected agency or department shall report back to the *[Adopting body][annually / within one year of the date of passage of this Ordinance]* regarding: the steps taken to implement this Ordinance; additional steps planned; and any desired actions that would need to be taken by *[Adopting body]* or other agencies or departments to implement the steps taken or planned.

Comment: Municipalities are encouraged to tailor this clause to direct agencies to carry out additional specific implementation tasks as appropriate.

(b) A committee is hereby created, to be composed of [*insert desired committee composition*] and appointed by *[the mayor / president of adopting body/ other]*, to forward the City of Goshen's implementation of complete streets practices by: (1) addressing short-term and long-term steps and planning necessary to create a comprehensive and integrated transportation network serving the needs of all users; (2) assessing potential obstacles to implementing complete streets practices in the City of Goshen; (3) if useful, recommending adoption of an *[ordinance / internal policy / other document]* containing additional steps; and (4) proposing revisions to the City of Goshen's *[insert name of comprehensive plan or equivalent*], zoning and subdivision codes, and other applicable law to integrate, accommodate, and balance the needs of all users in all street projects. The committee shall report on the matters within its purview to the *[Adopting body]* within one year following the date of passage of this Ordinance.

Comment: Establishing a committee is one option for implementing a local complete streets law; however, just as with other provisions of this ordinance, a jurisdiction can omit this provision if it is not desirable. While local considerations will dictate committee composition, municipalities should consider including representatives of key departments or agencies, such as the transit agency, public works department, planning department, public health department, and others, as well as the city manager, advocacy groups and a representative from the school district.

[(c) The committee shall also consider requiring incorporation of complete streets modifications and complete streets infrastructure in street projects, as well as requiring all initial planning and design studies, health impact assessments, environmental reviews, and other project reviews for infrastructure projects requiring funding or approval by the City of Goshen to: (1) evaluate the effect of the proposed project on safe travel by all users, and (2) identify measures t mitigate any adverse impacts on such travel that are identified.]

Comment: For communities that are just beginning this process, a more exploratory approach to complete streets would involve inserting this subsection and deleting subsections [3(b) and 4(e)].

SECTION III. STATUTORY CONSTRUCTION AND SEVERABILITY.

(a) This Ordinance shall be construed so as not to conflict with applicable federal or state laws, rules, or regulations. Nothing in this Ordinance authorizes any city agency to impose any duties or obligations in conflict with limitations on municipal authority established by federal or state law at the time such agency action is taken.

In the event that a court or agency of competent jurisdiction holds that a federal or state law, rule or regulation invalidates any clause, sentence, paragraph, or section of this Ordinance or the application thereof to any person or circumstances, it is the intent of the Ordinance that the court or agency sever such clause, sentence, paragraph, or section so that the remainder of this Ordinance remains in effect.

(b) In undertaking the enforcement of this Ordinance, the City of Goshen is assuming only an undertaking to promote the general welfare. It is not assuming, nor is it imposing on its officers and employees, an obligation through which it might incur liability in monetary damages to any person who claims that a breach proximately caused injury.

Comment: This provision provides that no new basis for tort liability is established by the enactment of this ordinance. Municipal attorneys in a given jurisdiction can assess whether this language provides adequate protection under state law and substitute alternative language if desirable.