NORTHWEST INDIANA REGIONAL PEDESTRIAN AND BICYCLE TRANSPORTATION PLAN OF 2010

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NORTHWEST INDIANA PEDESTRIAN & BICYCLE TRANSPORTATION PLAN OF 2010

Prepared by

NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION

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RESOLUTION 11-01

A RESOLUTION OF THE NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION TO ADOPT THE *2010 PED & PEDAL REGIONAL PEDESTRIAN AND BICYCLE TRANSPORTATION PLAN*

WHEREAS, the citizens of Northwest Indiana require a safe, efficient and effective, resource-conserving regional transportation system to attain and maintain socially, economically and environmentally sound living conditions towards an improved quality of life; and

WHEREAS, the Northwestern Indiana Regional Planning Commission, hereafter referred to as "The Commission", being designated the Metropolitan Planning Organization for the Lake, Porter and LaPorte County Region, has established a regional, cooperative and comprehensive planning program to develop the unified planning work program, long-range transportation plan and transportation improvement program; to annually endorse the plans and programs; to facilitate federal transportation funding for the Indiana Department of Transportation, regional communities and transit operators, and to provide technical assistance and expertise to regional transportation interests; and

WHEREAS, the Commission performs the above mentioned activities to satisfy regional requirements under the Federal-Aid Highway Acts of 1962, 1970, 1973 and 1976, the Surface Transportation Assistance Acts of 1978, 1982 and 1987, the Urban Mass Transportation Act of 1964 as amended in 1970, 1974 and 1982, the Rail Reorganization Act of 1973, the Clean Air Act of 1970 as amended in 1977 and 1990, the Intermodal Surface Transportation Efficiency Act of 1991, the Transportation Equity Act of the 21st Century (1998), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005) as well as other federal, state and local legislation mandating cooperative, comprehensive and continuing regional transportation planning activities; and

WHEREAS, Lake and Porter Counties are classified as severe non-attainment for ozone precurors and must follow the guidelines established in the Clean Air Act Ammendments of 1990 (CAAA), including the reduction of single occupant automobile trips; and

WHEREAS, walking, jogging, rollerblading and bicycle riding represent a healthly form of commuting and recreation, and has been identified in the CAAA as a transportation control measure (TCM) to reduce the number of single occupant vehicles (SOV's); and

WHEREAS, Northwest Indiana has currently developed 80 miles of off-road trails, nearly 600 miles of signed, shared bike routes, with approximately 500 miles of planned off-road trails; and

WHEREAS, an abundance of available rights-of-way still remain suitable for the development of additional trail systems, and

WHEREAS, local emphasis on pedestrian access and safety needs to take a more prominent role in land use decision-making, and

WHEREAS, the Commission adopted their *Complete Streets Guidelines* in 2010 to address accomodations for bicycles and pedestrians on all regional roadways; and

WHEREAS, the Commission has solicited public comment on the draft *2010 Ped and Pedal* Plan, reviewed and considered the comments received and recommended modifications to be effected to the draft *2010 Ped and Pedal* Plan.

NOW, THEREFORE, BE IT RESOLVED that the Commission endorses and adopts the *2010 Ped and Pedal* Regional Pedestrian and Bicycle Transportation Plan, as modified in response to the public comments received, to identify and prioritze regional trail corridors and encourgage improved facilities for pedestrian and bicycle movements. This plan is subject to amendment, and will be incorporated into the 2040 Comprehensive Regional Plan.

Duly adopted by the Northwestern Indiana Regional Planning Commission on this twenty-seventh day of January, two thousand and eleven.

Chairperson

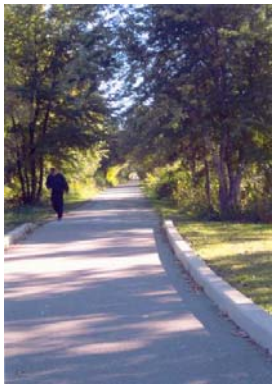
ATTEST:

Secretary

CHAPTER 1
INTRODUCTION

PURPOSE AND SCOPE OF PLAN

Northwest Indiana is in the midst of becoming a premiere location in the development of routes that accommodate bicycle and pedestrian traffic. In the form of off- and on-road facilities, the region continues to work to connect communities within its borders. We are on the cusp of linking to several adjacent locations, especially in Illinois and Michigan. This, along with the passage of Complete Streets Guidelines by the Northwestern Indiana Regional Planning Commission (NIRPC), amply demonstrates that the region thoroughly recognizes the value of creating opportunities for bicycle and pedestrian transportation.



As part of these efforts to promote and expand the opportunities available to bicyclists and pedestrians, NIRPC is proud to publish the ***2010 Ped & Pedal Plan***. This plan update builds upon the work that was previously done in the *2005 Ped & Pedal Plan* and the *1994 Regional Bikeways Plan*. The 1994 plan was significant because it represented the first in-depth analysis on developing a vast network of bicycle-friendly trails and roadways in Northwest Indiana. The 2005 plan carried the work done in that plan even further and expanded upon it by adding a pedestrian element.

Ped & Pedal also seeks to educate on the many benefits of non-motorized facility development in a community, which include the following:

a) *Traffic Reduction:* With more travelers opting to use trails, this directly leads to fewer automobiles on the road, aiding the flow of traffic.
b) *Air Quality:* Fewer cars equate to less pollution from auto exhausts and less idling at traffic signals or avoiding traffic jams.
c) *Health:* Where more people opt to travel by bike or foot, this lends significantly to better health, helping to stem the current obesity epidemic that our country faces.
d) *Economic Development:* Trails have proven to be a highly desirable amenity to any community, usually spearheading new business of all varieties along their route. Proximity to trails also been shown to increase property value.
e) *Quality of Life:* With all the above mentioned, a greater quality of life is the end result, making a community more livable, and thus able to retain residents and businesses – and attract new ones.

1. Transportation Enhancement Committee

In response to the growing number of applications for new trail starts, NIRPC brought together a committee whose mandate was to review all applications submitted to INDOT, and develop a ranking methodology to aid in the state's final selection for projects in the NIRPC region. This group, which came to be called the Transportation Enhancement (TE) Committee, was formed in 1999, and created the first NIRPC application package for projects submitted for TE funding in FY 2001 (more on the federal TE program in Chapter 3). The package included detailed ranking criteria for all new applications, with separate forms being created for all eligible projects for TE funding including pedestrian and bicycle activities, historic sites/activities, and scenic/commerce/other activities.

Apart from their charge to rank new projects, another major activity by the committee regarded the establishment of regional priority trails and study corridors in the NIRPC region. From their discussions, five major corridors emerged which included:

1) The Erie Lackawanna/Conrail Trail Corridor from Hammond to Hebron.
2) The Oak Savannah/Prairie Duneland Trail Corridor from Griffith to Chesterton.
3) The Grand Calumet River/Marquette Trail Corridor from Hammond to Porter.
4) The Little Calumet River Trail Corridor from Hammond/Highland to Porter.
5) The Calumet Trail Corridor from Porter to Michigan City.

2. New Plan Development

In 2010 it was decided that the time had come to update the *2005 Ped & Pedal Plan* in accordance with its first plan implementation policy. The policy reads: "Updating the *Ped & Pedal Plan* to reflect past successes in trail development, plan for future facilities, and provide added focus on pedestrian-related travel, broadening the spectrum of non-motorized travel options."

To help aid in the updating process, five subcommittees were formed in order to discuss different subject areas relevant to the plan update. These committees covered the topic

areas of Goals, Objectives, and Policies; Priority Corridor Routes; Best Practices/Issues; Financial Strategies; and Implementation. Each of these subcommittees addressed certain issues and concerns encountered either with previous or current bicycle and pedestrian planning efforts. The 2010 plan, which is the final product of these subcommittee meetings, not only updates the 2005 plan, but also seeks to further refine what NIRPC hopes to accomplish in continuing to build Northwest Indiana's non-motorized infrastructure.

PREVIOUS STUDIES

Over the years, several efforts have been made at increasing the amount of non-motorized facilities in Northwest Indiana, as well as highlighting their positive impacts on communities around the state. The following section outlines the most significant initiatives.

1. NIRPC Efforts

The last major planning effort focusing on bicycle and pedestrian issues in this region was the *Northwest Indiana Regional Pedestrian & Bicycle Plan of 2005*. Not only did this plan expand upon the bicycle elements first called for in 1994, but it added a pedestrian element as well. This gave Northwest Indiana a more comprehensive plan focused solely on multiple forms of non-motorized transportation.

The 2005 plan brought some focus to the *benefits* of non-motorized transportation infrastructure. Instead of just focusing on connectivity, the plan also provided information on the health and environmental benefits of walking and biking. This provided a more well-rounded background for what Northwest Indiana stands to gain from a regional focus on non-motorized transportation infrastructure.

The predecessor to both the 2005 and 2010 plans, however, was the *1994 Regional Bikeways Plan for Northwest Indiana*. Before 1994, any efforts at trails planning had been less comprehensive in nature. The 1974 *NIRPC Bikeways Map* was just a concept of where bike routes could and should have been developed. Intermodalism was not a consideration at the time, and it remained largely unimplemented. The 1990 *Trail Opportunities Plan* was a joint venture between

NIRPC, IDNR, and the National Parks Service. Its goal was to produce a comprehensive, multi-faceted regional trail plan for Northwestern Indiana that went beyond just bicycling facilities. The 1994 plan, however, represented the most comprehensive review to date on potential routes in Northwest Indiana.

The connectivity between points of interest was the primary consideration during the development of the *Regional Bikeways Plan*. Destinations within the region that could potentially be accessed by bicycle or foot instead of by automobile were catalogued. These destinations included major employment centers, educational facilities, recreational areas, transit services, and municipal or institutional buildings. Utilizing a consultative process, a network of proposed bicycle routes was defined to interconnect the points of interest.

The determination of proposed bicycle routes reflected consideration of property potentially available for route development. Abandoned railroad corridors, highway rights-of-way, river levees, waterways and utility easements each provided opportunities for bicycle and pedestrian facility development. The *Regional Bikeways Plan* defined a network of bicycle facilities extending over 1,200 miles throughout the region and utilizing all forms of available property. In the end, 27 routes were identified and ranked as priority routes in the NIRPC region.

In 1995, the *NIRPC Origin Destination Study* attempted to examine the mode choice for all trips by Northwest Indiana residents aged 14 years or older. The survey determined that 13,143 bicycle trips and 11,836 pedestrian trips occurred daily in the region representing 5.2% of all trips. The majority of these non-motorized trips (over 63%) were “home based other” trips, including school, personal business, and recreational trips to or from home. Approximately 18% of non-motorized trips were “non home based” involving travel between work, school, shopping, and recreational activities. Almost 10% of all non-motorized trips constituted travel between home and retail facilities (“home based shopping” trips) while less than 9% of all non-motorized trips were between home and a place of employment (“home based work” trips).

2. State & Local Planning

In 2006, the Indiana Department of Natural Resources (DNR) released their *Statewide Comprehensive Outdoor Recreation Plan* (SCORP). This 5 year plan is aimed at improving recreation opportunities while protecting natural resources in Indiana by establishing priorities and recommendations for decision-makers. The SCORP showed that between 1979 and 2005 hiking/walking/jogging and bicycling have consistently ranked within the top ten recreational activities in Indiana each of the five times the survey has been done. In the most recent survey, hiking/walking/jogging ranked number one with 84.9% of respondent participating. Bicycling was done by 43.7% of respondents.

SCORP took an in-depth look at trail development and user preferences throughout the state. Through its analysis, walking/running were identified as the number one activity on trails at 72.7%. Hiking/backpacking followed at 33.3%, with touring bicycling ranking third with 19.8%. In terms of water trail recreation, canoeing/kayaking was done by 14.1% of trail users. The plan also made various recommendations, including providing trails that "accommodate people of various abilities," by bringing trails closer to communities, linking existing trails, and connecting communities to destinations.

The Indiana Trails, Greenways, and Bikeways Plan was produced in July, 2006 by the Indiana Department of Natural Resources in cooperation with the Indiana Department of Transportation, the Governor's Council for Physical Fitness & Sports, the Indiana Department of Tourism, and the Indiana Economic Development Corporation. The goal of the plan is to develop a statewide system of trails for both recreation and transportation that puts every Hoosier within 15 minutes, or 7.5 miles, of a trail. A map within the plan shows the bulk of the region's population is already within this goal distance. The plan is meant to be a tool for the improvement of existing trails as well as development of new ones. It focuses not only on trails for bicycle and pedestrian use, but for many other types of uses such as equestrian trails and areas for off-road driving.

DEMOGRAPHICS

As with any major planning effort, a snapshot of the existing demographics needs to be outlined. In this section, there will be a discussion on those existing land use features that may be able to facilitate future trail development.

1. Regional Population

Population trends for the three county NIRPC region provided the control data for the *2040 Comprehensive Regional Plan*. The same population forecasts will be used for the *2010 Ped & Pedal Plan*.

From 1990 to 2000, Northwest Indiana experienced positive demographic and economic changes. Growth in the region during this decade reversed the overall population declines which began after 1970 and were accelerated by the negative trends from 1980 to 1990 due primarily to the rapid restructuring of the region's steel industry. Population in the Lake, Porter, and LaPorte County region increased from 711,592 in 1990 to 741,468 in 2000, reflecting a growth of 29,876 persons or 4.2%.

Between 2000 and 2008 this trend of an increasing population continued, with the population of the three-county area rising to 766,869 by 2008. This reflects a growth of 25,401 persons or 3.4%. By county from 2000 to 2008, Lake increased 1.9% to 493,800, Porter increased 10.5% to 161,181, and LaPorte increased .7% to 110,888. Of the 25,401 person increase, 36% was in Lake, 61% was in Porter, and 3% was in LaPorte.

During the same period of time between 2000 and 2008, the region experienced the continued aging of the population. The median age of the population increased from 35.9 in 2000 to 37.5 in 2008 in Lake, from 36.3 to 37.9 in Porter, and from 37.1 to 38.6 in LaPorte. This poses a serious problem when issues of elderly and disabled mobility are addressed. This would include the development of proper facilities for safe, non-motorized movements of these highly dependent populations.

2. Pedestrian & Bicycle Travel in the Region

A. Bicycle Usage

Bicycle usage in Northwest Indiana is currently not monitored by local public agencies, park departments, or planning departments. The only available bicycle usage data for the three county region is taken from the decennial Census (2000 and earlier), and now the American Community Survey, question on journey to work daily travel asked of workers 16 years of age and older who worked during a reference week prior to the completion of the questionnaire. The data specific to bicycles is derived from the means of transportation to work, which asked the mode of travel to work during the reference week. Modes of travel to the worksite include drive alone, carpool, bus, trolley, subway, railroad, ferry, taxi, motorcycle, bicycle, walk, other and work at home. In 2000, 331,519 workers from the three county region made a work trip. By 2008, work trips by workers in the region totaled 342,801, an increase of 11,282 trips or 3.4%. Bicycle trips to work increased from 607 in 2000 to 672 in 2008, or 10.7%. In 2008, just 0.2% of all work trips by workers in the three-county region were by bicycle. **Chapter 2** explains in detail many factors behind such low mode usage.

In Lake County in 2000, there were 208,957 persons making a trip to work. By 2008, 215,162 were making a work trip from Lake County, an increase of 3% or 6,205 workers. Of the work trips made by Lake County workers in 2008, 292 people chose a bicycle as their travel mode, representing 0.1% of all the work trips made from Lake County. From 2000 to 2008 the number of workers from Lake County using a bicycle as the primary mode of travel to the work site increased by 5% or 14 workers.

The number of bicycle work trips increased in LaPorte and Porter counties from 2000 to 2008, furthering the rise in bicycle work trips experienced from 1990 to 2000. From 2000 to 2008 the number of persons from LaPorte County making a work trip decreased from 50,121 to 49,506, a decrease of 615 or 1.2%. Persons using a bicycle as their means of travel to work increased from 177 in 2000 to 245 in 2008. The number of work trips from Porter County rose from 72,441 in 2000 to 78,133 in 2008, or 7.9%. In 2000, workers us-

ing a bicycle for work trips totaled 152. By 2008, 135 people identified the bicycle as their means of traveling to work, or 0.2% of all modes. From 2000 to 2008, the number of people from Porter County using a bicycle to arrive at work decreased by 11.2%, reversing the increase of 1.5% experienced from 1990 to 2000.

B. Walking Trips to Work

As with bicycle usage, an available source of data in Northwest Indiana on walking trips is the Census and/or American Community Survey journey to work question on daily travel by mode. In 2000, of the 331,519 workers traveling from the three county region, 6,695 or 2% walked to work. By 2008, walking trips to work had decreased to 6,142 and accounted for 1.8% of the 342,801 work trips made. In the preceding decade of 1990 to 2000, workers walking to work decreased by 20% while the total number of work trips actually increased 7.8%.

In 2000, 2%, or 4,136 workers from Lake County making a work trip walked to work. By 2008, 1.2%, or 4,085 walked to work. From 2000 to 2008 the number of workers from Lake County using the walking to work mode decreased by 1.2% as total work trips from Lake County increased 3%. From 2000 to 2008 the number of workers walking to work from LaPorte County decreased from 1,006 to 981, or 2.5%. Persons walking to work in 2000 accounted for 2% of work trips. This percentage held steady for 2008. Work trips from Porter County, which rose 7.9% from 72,441 to 78,133 between 2000 and 2008, included a decrease of 30.7% in the number of people walking to work. In 2000, 1,553 workers from Porter County chose walking to work as their mode of travel. Walking to work accounted for 2.1% of total work trips from Porter County in 2000. By 2008, 1,076, or 1.4%, of work trips were workers walking to work.

3. Existing Physical Inventory

A. Abandoned Rail Corridors

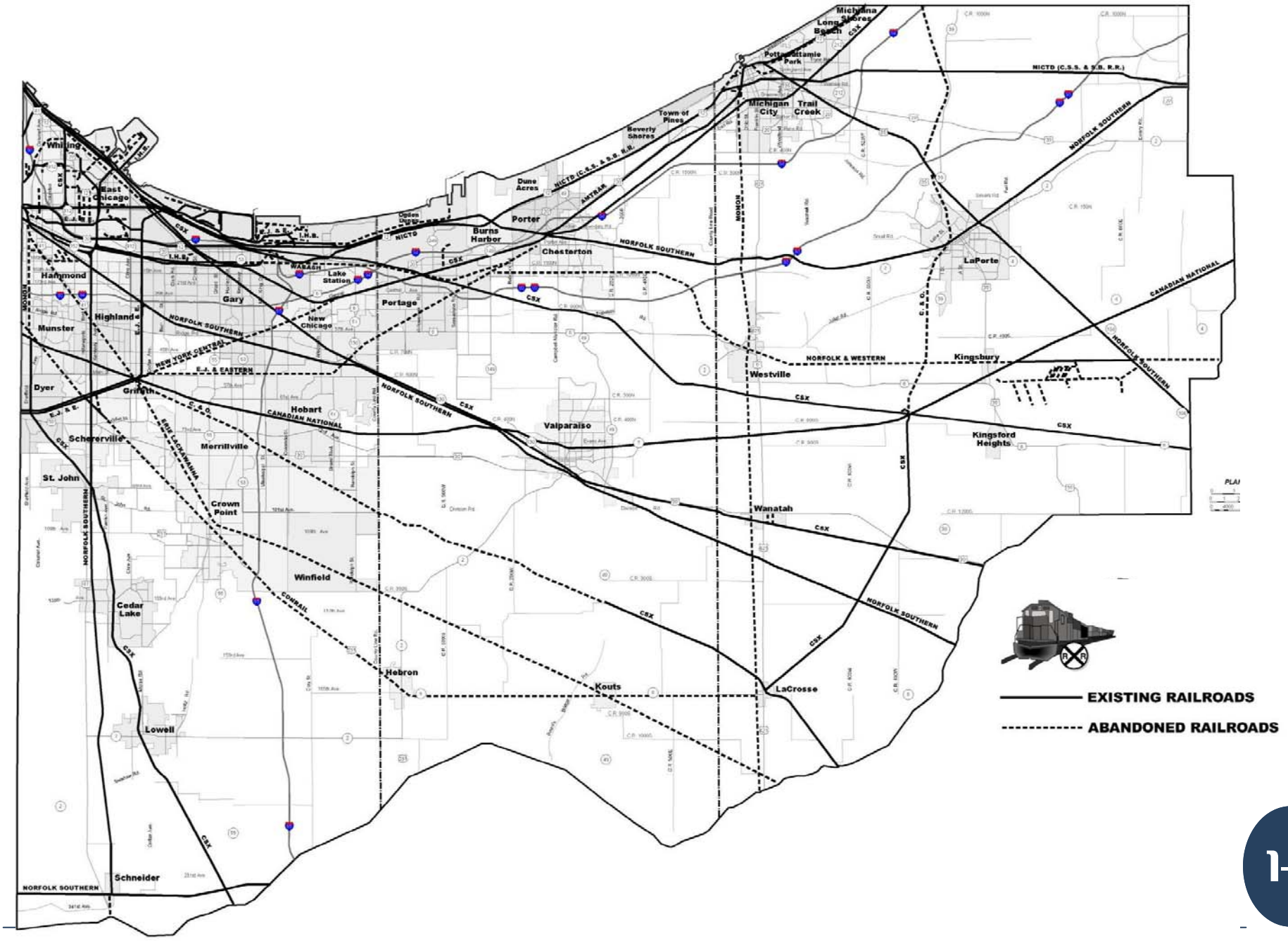
There are several advantages of using railroad rights-of-way for bikeway development. Since railroads are interregional, abandoned railroad rights-of-way stretch through an entire region, connecting several municipalities, the bikeway networks in those municipalities, other regional bikeways, and bikeways from outside the region. For this reason, abandoned railroad rights-of-way should be used to form the backbone of a regional trail network.

In Northwest Indiana, the massive abandonment of secondary railroad lines in the early 1980s has provided the area with an opportunity to develop a large backbone of regional routes. Altogether, six main lines and all or parts of three branch lines were abandoned in the region between 1980 and 1986; virtually all of these rights-of-way are still intact. A map of existing and abandoned rail lines is shown in ***Figure 1-1***.

There are, however, a number of problems associated with the development of these abandoned rights-of-way as trails. The first has to do with who actually owns the rights-of-way. Most railroads, at the time they were built in the mid to late 1800s, attempted to purchase as much of the property needed for their rights-of-way as they could. However, a railroad could not acquire all the property they needed. In these cases, the railroad would arrange with a property owner to grant the railroad an easement wide enough to run a railroad on, under the condition that the property would revert back to the control of the original property (or his heirs) should the rail line be abandoned and the tracks be pulled up.

This situation has caused the development of a controversy now that many of these lines have been abandoned. Many landowners whose properties adjoin abandoned railroad rights-of-way have claimed “reversionary property rights,” claiming that the rights-of-way should revert to them now that it is no longer used as a railroad. Some of these adjoining property owners have shown that they are rightful heirs to easement rights granted a cen-

Figure 1-1: Existing & Abandoned Railroads



tury ago, but many others have no such proof. On several occasions, groups of reversionary landowners and claimants have sought to have laws passed in the Indiana General Assembly which would grant railroad rights-of-way to adjoining landowners if 1) the landowners sought possession of the land and 2) if the abandoning railroad could not prove within a short time that it had clear title to the land in question. Such laws have since been invalidated by court judgments in various areas, but it is clear that the chaotic state of the title status associated with each individual parcel of land used for a railroad rights-of-way has caused a situation where the future use of a railroad right-of-way as a multi-use trail can be threatened.

Another problem that faces trail developers is environmental. Over a century or more of use, most railroads sprayed defoliants on their track and surrounding properties to keep weeds from deteriorating the track bed and to keep sight lines clear. Residues of there defoliants, which were made up of a number of known and unknown compounds over the years, still remain on rights-of-way, along with residual chemicals and compounds spilled from railroad freight cars in derailments or other accidents. This environmental issue is a major one, both from the point of view of bikeway development and from the perspective of developers and farmers who want this land for reuse. This problem has held up redevelopment of abandoned railroad rights-of-way, although it has probably worked more to the advantage of trail advocates than to reversionary landowners simply due to the nature of the desired reuse.

A third problem facing developers of abandoned rights-of-way as trails is continuity. Many rights-of-way that carried rail lines abandoned in the 1970s have seen many parcels of their rights-of-way sold, and later built across, making them unavailable for trail development today at anything but prohibitive cost. In other case, bridges carrying the now abandoned rail line over highways and waterways were removed and will have to be replaced. Another threat to bikeway development, however, is posed by the removal of aging bridges that carried major highways over the now abandoned railroad right-of-way. Removal of these old bridges, for safety or other purposes, results in a situation in which any trail built on the rail rights-of-way must now cross the highway at grade. If the highway is a busy

one, and especially if the highway is a limited access highway, this leads to a complete blockage of the trail at that point. Such a blockage will render most trails useless.

One method of preserving rail corridors as they become abandoned is a process called railbanking. Railbanking is a method by which lines proposed for abandonment can be preserved through interim conversion to trail use. Some railroad rights-of-way contain easements that revert back to adjacent landowners when abandonment takes place. However, if a line is railbanked, the corridor is treated as if it had not been abandoned, meaning all reversions that could break it up into smaller pieces are prevented. A railbanking petition must be filed with the Surface Transportation Board is a public of qualified private entity desires to preserve the corridor. This will insure, at the very least, a six-month delay in the sale of the property while the railroad negotiates with the petitioners.

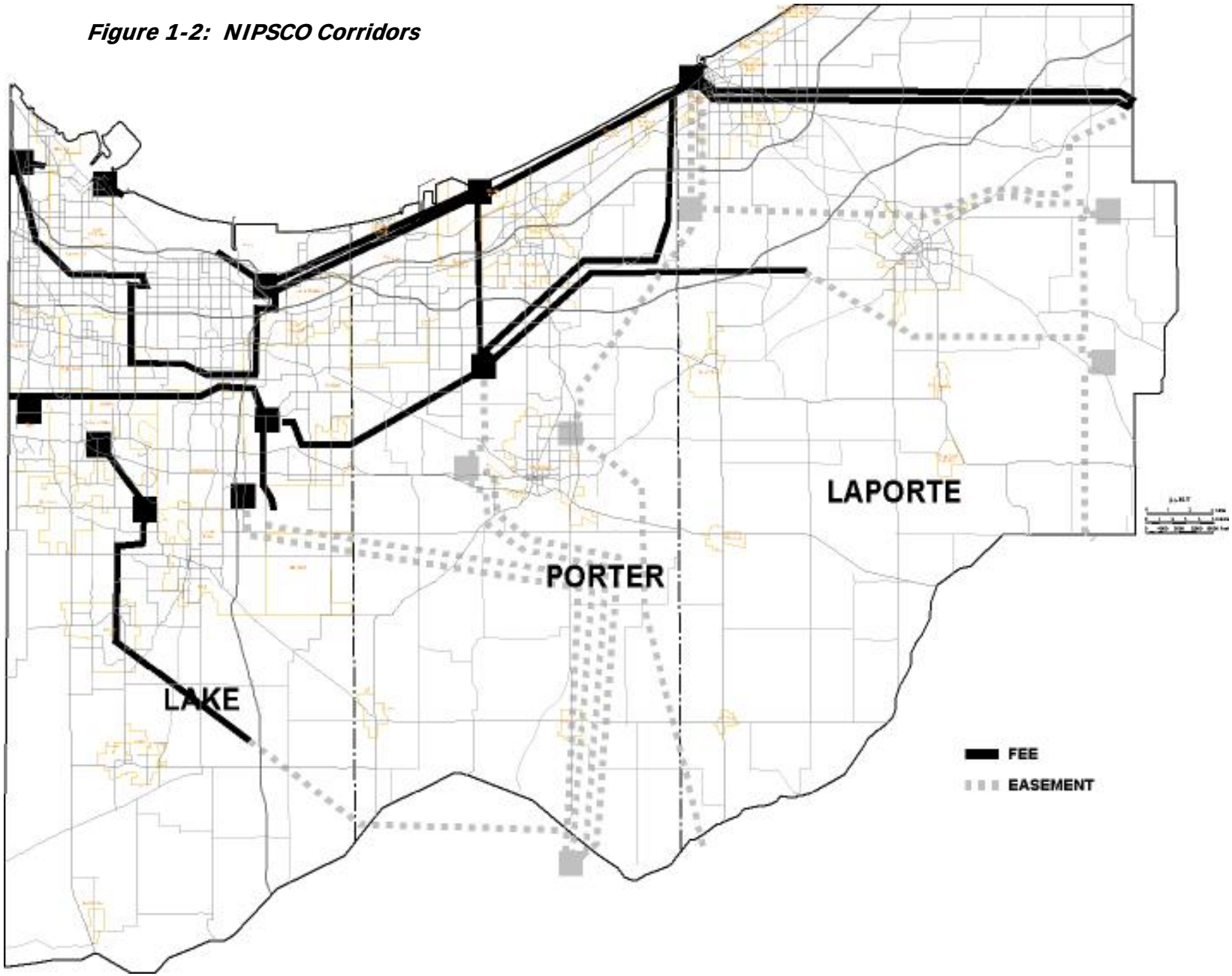
B. Utility Corridors

In addition to the great advantages of converting trail corridors to multi-use trails, another concept centers on developing existing utility corridors. Like rail corridors, utility corridors, whether they provide for underground or above-ground facilities, provide a linear, mostly unobstructed and undeveloped corridor for trail development.

In the NIRPC region, the Northern Indiana Public Service Company, or NIPSCO, has been instrumental towards the development of new multi-use trails. In fact, as of 2010, more miles of off-road trails exist on property owned by NIPSCO than any other property. For starters, the entire length of the Erie-Lackawanna and Calumet Trails are within NIPSCO landholdings. In addition, future trails in Michigan City, Hammond, Griffith, Merrillville, and Hobart plan to utilize NIPSCO corridors.

Over the years, NIPSCO has refined their policy regarding trail development upon their corridors. This policy has emerged to give all potential trail managers consistent guidelines for use of a NIPSCO corridor. In order to secure a License Agreement for development of a trail, the local agency must agree to the following conditions:

Figure 1-2: NIPSCO Corridors



1) Assume all costs associated with utility inspections (replace trail).
2) Trail must be ten feet from all poles, towers, and anchor guy wires.
3) The maximum width of trail will be twelve feet.
4) Local agency must maintain and mow corridor where trail exists.
5) No parking areas to be permitted within corridor.
6) Acknowledgement of NIPSCO participation in trail development.

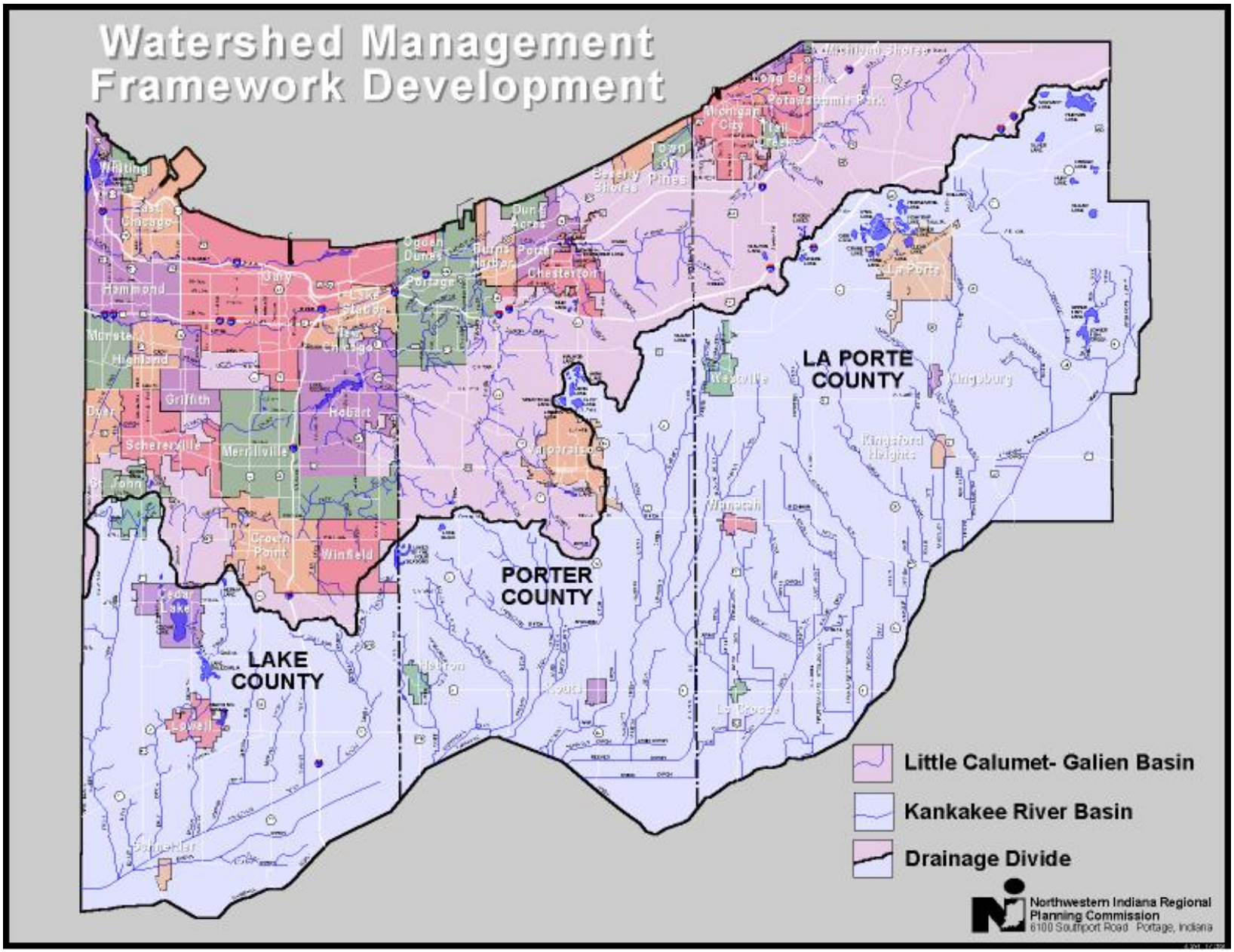
In comparison with the costs associated with obtaining a corridor through direct purchase, there conditions set by NIPSCO should be favorable to all local entities looking to develop a linear trail system. ***Figure 1-2*** shows the existing NIPSCO-owned or leased corridors in the NIRPC region.

NIPSCO is not the only utility company with corridor landholdings in Northwest Indiana. There are several other companies that maintain other electrical facilities and pipelines that could also serve as a prime corridor for trail development. However, NIPSCO has been by far the most proactive in terms of allowing trails on their property. To date, no other trails exist on utility corridors not owned by NIPSCO, but local entities should be aware of how these corridors bisect their community, and work with the utility companies on maintaining a free and clear right-of-way for future trail development.

C. Natural Features

Another built-in corridor that could prove beneficial in establishing contiguous trail networks are those adjacent to natural features in the landscape. Specifically, waterways which are highly prevalent throughout the NIRPC region offer an excellent opportunity for fos-

Figure 1-3


Watershed Management
Framework Development
LA PORTE COUNTY
PORTER COUNTY
LAKE COUNTY
Little Calumet- Galien Basin
Kankakee River Basin
Drainage Divide
Northwestern Indiana Regional Planning Commission
6100 Southport Road Portage, Indiana

tering greenways and providing a linear amenity for all visitors to enjoy and cherish. Other features such as wetlands and woodlots should be carefully inventoried by all communities for their connective value. Once planned correctly, these features can be incorporated into a land use plan that preserves their integrity amongst oncoming growth pressures. Furthermore, they can provide a community a significant cost savings by requiring the developer to donate the property to the city, which avoids acquisition costs. Of prime note are two significant river basin projects on the Kankakee and Little Calumet Rivers that plan to have an impact on the regional trail network. A general overview of the existing major waterways are shown in ***Figure 1-3***. Please note that these are only the major hydraulic features, and are not exhaustive regarding all waterways in the region.

i. Kankakee Wide Levee Project

The Kankakee Wide Levee Project encompasses the section of the Kankakee River in Indiana from the Illinois State Line to St. Joseph County near South Bend. The Kankakee River Basin Commission (KRBC) was created in 1977 in response to flooding along the river and the mandate of the Indiana Flood Control Act. The KRBC has a master plan that was developed in 1989. The plan identifies alternatives for solving problems associated with flooding, drainage, and land use concerns within the floodplain of the river. The Master Plan proposes the development of wide levees on both the north and south side of the Kankakee River. The levees would begin near U.S. 30 at the LaPorte/Starke County Line and continue to the Illinois State Line. The levees will vary in height from two to eleven feet high. The planned benefits include the opportunities for expanded and new recreational facilities. A regional trail system is a major recreational component of the Master Plan and deserves serious consideration. A network of trails will provide easy access to points of interest along the river and link population centers with recreational areas in the vicinity of the Kankakee River. As a part of the Master Plan, three types of trail developments were identified. Trails

within the study area are proposed along existing roadways, abandoned railroad rights-of-way, and on top of the proposed wide levees. The tops of the levees that parallel either side of the river provide an excellent opportunity for the placement of walking, biking, or jogging trails. The recommendations from the Kankakee River Master Plan regarding trail/bikeways development include the following:

- Coordinate with county and state agencies to implement the recreation proposals within this plan.
- Acquire land for public recreation facility expansion as proposed in this Master Plan through easements, leases, right of first refusal, or fee simple acquisition.
- Assist and support private recreational development as outlined in this plan.
- Acquire easements and/or acquisition of right-of-way or regional trail system proposed in this plan.
- Coordinate final trail system location, funding, and acquisition with regional plan commissions, county park and recreational boards, Hoosier Trails Alliance, IDNR, and the Northwest Indiana Trails Alliance (NITA).
- Assist county and state agencies in pursuit of funding resources and applications for funding the acquisition, development, maintenance, and management of recreational facilities.
- Promote a new or expanded management plan for state recreational facilities within the project area.
- Promote and coordinate “prototype” projects eligible for Land and Water Conservation Funds with county and state agencies for environmentally-based recreation development.

ii. Little Calumet River Flood Control Project

The Little Calumet River Flood Control Project is a product of the Army Corps of Engineers. The purpose of the project is to provide flood damage reduction and enhanced recreation opportunities along the Little Calumet River from the Illinois State Line to Interstate 65 in the City of Gary. The project’s efforts consist of re-

placing existing spoil banks with new levees, floodwalls, closure structures, and drainage structures. Of note is that the project calls for a recreational trail as a part of the levee system. The levee width is planned to be ten feet to accommodate vehicular traffic as well as bicycle and pedestrian traffic.

The project is currently in the construction phase. Approximately 90% of the total project is complete. The project is divided into two sections. The East Reach, which is mainly in Gary, Indiana, extends from Cline Avenue to I-65. The West Reach covers the area from the Illinois/Indiana State Line to Cline Avenue. The construction of the project is divided into eight geographical stages, totaling over 27 construction contracts. As of the summer of 2010, the project was approximately 90% complete, with final completion scheduled for December 31, 2010. This timetable, however, reflects the completion of the flood control features. The missing recreational features will be completed as a follow-up project to the main task of completing the flood control infrastructure.

CHAPTER 2
PED & BIKE ISSUES

PEDESTRIAN AND BICYCLE ISSUES

Unlike many countries worldwide, the United States is heavily dependent upon automobile transport to a vast majority of destinations. Inevitably, pedestrian and bicycle usage has dropped significantly as primary methods of travel. For example, since 1960, the number of pedestrian and bicycle trips by children has decreased by 40%. In another example, a 1999 study found nearly 90% of Americans using the automobile as their primary mode, with walking at 6%, and bicycle use a meager 1%. In stark contrast, in the Netherlands (as a European example) only 45% of the population utilizes the car, while 18% walk, and a significant portion – 28% – bicycle as their primary mode of travel.

There are a number of reasons behind these statistics in the U.S. - primarily poor development patterns and disconnected communities where walking or biking a mile to a destination can be a dangerous proposition. The side effects have been nothing short of staggering with an epidemic of obesity sweeping the nation stemming from a sedentary lifestyle.

This chapter aims to put in perspective the major issues behind trails, from their rejuvenation due to federal funding set-asides, to their positive impacts on a community's quality of life. Much education is still needed to relay the message that trails offer strong positive impacts to localities on a number of issues, both directly and indirectly.

I. Federal, State, & Local Initiatives

In 2005, when the original *Ped & Pedal Plan* was written, Northwest Indiana (specifically Lake and Porter Counties) was one of five ozone non-attainment areas within the State of Indiana and actual ly the worst of the five with a designation of "severe." Of the five levels of non-attainment classifica tion, ranging from "marginal" to "extreme," "severe" ranks as the second worst. The classification is assigned based upon the degree to which an area exceeds the ozone standard. At the time of writ ing, Northwest Indiana has been designated an ozone attainment area. With this change, Northwest Indiana is now considered to be in "maintenance" status. Having become an attainment area, the region must now work to maintain that status. Essentially this means that Northwest Indiana must continue to remain vigilant in its efforts to continually improve the region's air quality.

Because ground level ozone is regarded as the number one concern in large urban areas across the country, a major segment of the Clean Air Act Amendments (CAAA) of 1990 is devoted to addressing the problem. States having ozone non-attainment areas within their boundaries are mandated by the CAAA to develop and implement programs by specific dates, under the direction of the EPA that will reduce ozone-causing pollutants from all sources.

The permissible programs for reducing the ozone emissions in non-attainment areas are included in the CAAA. These programs are known as transportation control measures (TCMs). Some of the TCMs in the CAAA identify alternative modes of transportation to the single occupant vehicle as a means of reducing the ozone emissions. These transportation alternatives include carpooling, ridesharing, public transportation, bicycling, and walking. These measures can and will continue to be used to maintain attainment.

a. The Legacy of ISTEA

In 1991, Congress passed the landmark Intermodal Surface Transportation Efficiency Act (ISTEA), which recognized the increasingly important role of bicycling and walking in creating a balanced, intermodal transportation system. ISTEA established funding programs such as Transportation Enhancements (TE), the Recreational Trail Program (RTP), and the Congestion Mitigation and Air Quality Improvement Program (CMAQ) to provide a significant amount of their funding to the development of non-motorized transportation projects. Because of these developments, non-motorized transportation projects were competitive against highway projects for the first time.

In 1998, ISTEA was reauthorized by Congress as the Transportation Equity Act for the 21st Century, or TEA-21, which further increased funding levels to said programs, including the addition of more non-motorized funding avenues. One of these included the Transportation and Community and System Preservation (TCSP) program.

The successor to TEA-21 came in 2005 in the form of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation. The bill contained two major components that were targeted specifically at pedestrians

and bicyclists. It introduced the Safe Routes to School (SRTS) program in order to provide a safer and more appealing environment for schoolchildren to get to school. Secondly, the bill appropriated $370 million for the development and maintenance of recreational trails for a variety of users, including pedestrians and bicyclists.

The "TEA" legislations have been responsible for over 12,000 miles of off-road trails being constructed in the United States. In Northwest Indiana alone, nearly 80 miles of off-road trail have been constructed, with another 60 miles either funded or planned. The legislation has provided the funding, planning, and program authorizations necessary to create more walkable and bicycle-friendly communities. A detailed description of the TEA programs mentioned above will be discussed in **Chapter 3**.

b. State & Local Roles

Through the "TEA" legislations, the Indiana Department of Transportation (INDOT) set aside 10% of its federal apportionment to projects for the Transportation Enhancement (TE) program. In 2009, INDOT distributed about $20 million statewide for projects eligible under the TE program. Since ISTEA, INDOT has awarded entities in the NIRPC region over $29 million, for an average of $1.6 million per year. In addition, the Indiana Department of Natural Resources manages the Recreation Trail Program (RTP). In 2010, the DNR distributed $1.4 million in RTP funds statewide.

At the NIRPC level, the Ped, Pedal, and Paddle Committee (3PC) has been charged with reviewing and ranking all bicycle and pedestrian projects eligible for TE funding. The TE Committee further reviews DNR-funded proposals for regional significance, although the DNR does not require such MPO review.

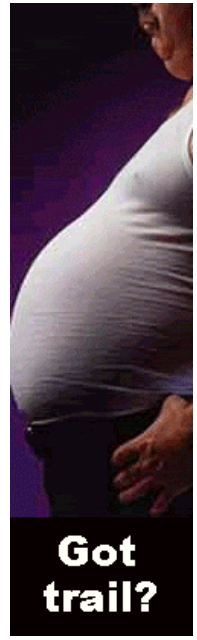
In a far more direct fashion, the 3PC also solicits and ranks projects for NIRPC's Transportation Improvement Program, or TIP, which doles out approximately $19 million per year of allocated Surface Transportation Program (STP) monies. Of this money, no less than 3% is guaranteed to non-motorized projects, with more funding eligible based on roadway-related

submissions. NIRPC internally selects those projects, and funds them at their own discretion without any further approvals from INDOT.

II. Need for Active Living

America is rapidly becoming a nation under siege to unhealthy eating habits, poor lifestyle choices, and shortsighted land use planning. If any greater argument can be fostered for the inclusion of better walking and bicycling facilities in a community, it would stand to reason that increasing overall health and wellness would take a pri mary focus.

a. An Obesity Epidemic



America continues to grow…fatter. Physical activity rates in the United States are dangerously low, and continue to deteriorate since 2005. According to the Centers for Disease Control (CDC), as of 2008, Colorado stood as the only state that had a prevalence of obesity of less than 20%. Thirty-two states had prevalence equal to or greater than 25%, with six of those having rates equal to or greater than 30%. As of 2007, all three of the counties in the NIRPC region have over 25% of their adult population considered obese, with one having a rate of over 30%. Porter County's adult obesity rate, according to the CDC, is 28.1% (the lowest of the three), and LaPorte County's rate is 29.2%. Lake County's adult obesity rate is 32.1%, the highest both in the region and the state. A map outlining the increase in our obese population is shown in ***Figure 2-1.***

The damage is not only restricted to our waistlines, but also bleeds into our pocketbooks. The CDC estimated that in 2000, direct and indirect health costs related to obesity amounted to $117 billion. In Indiana alone, it was estimated that adult obesity-attributable expenditures cost over $1.6 billion.

The reasons for our deplorable health status are many. Of prime note is simply eating way too many calories while not getting enough physical activity. It is estimated that more than 60% of Americans do not get enough physical activity to provide

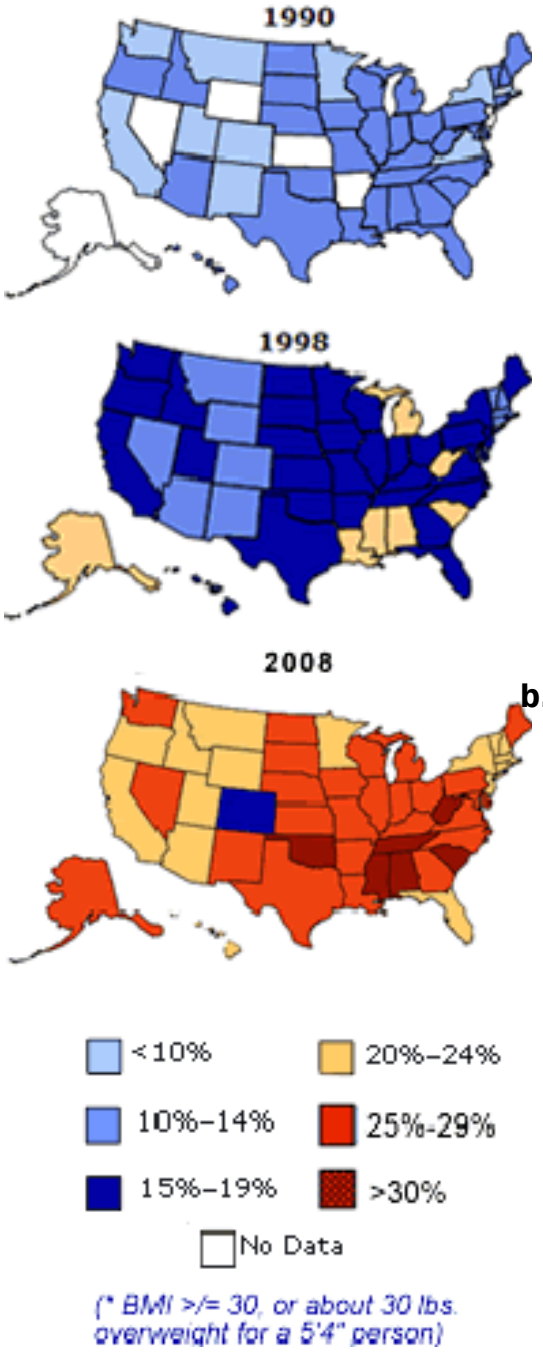


Figure 2-1: Percentage of Obese Populations per State

even basic health benefits. The CDC defines this as 30 minutes of moderate activity five days a week, or 20 minutes of vigorous activity for 3 days a week. As for nutrition, the CDC found that we are weaning our younger generation on horrible eating habits – with 60% of young people eating too much fat, and less than 20% consuming the recommended servings of fruits and vegetables each day.

Beyond just bad eating, we are also enjoying a very sedentary lifestyle buoyed by modern technology. The internet, DVDs, video games, and the lure of hundreds of channels to mindlessly surf through on the television has turned our focus from outside the home to inside it. Very little inspiration remains to get outside and take a walk or ride a bike, but then again, where is there to go?

b. Poor Quality Development

Many creative names have been attributed to poor land use development patterns in the United States over the last 50 years. These include “leapfrog” and “greenfield” development, but the most commonly used term has been to simply call it “sprawl.” In short, sprawl tidily sums up the rampant pace of new construction further and further outside established city centers. This in turn has produced a number of dilemmas over the years, which include population flight from cities and older “ring” suburbs, and the increased pressures on once pastoral communities now grappling with serving their new residents and businesses with essential municipal services.

Northwest Indiana has hardly been immune to sprawl. U.S. Census Bureau figures show that the NIRPC region of Lake,

Porter, and LaPorte Counties experienced a 3.4% growth in population between 2000 and 2008, with a 9.2% growth in new housing units. Using the estimate in NIRPC's *Connections 2030 Plan* that 33% of new housing units were constructed in the unincorporated areas of Lake, Porter, and LaPorte Counties, it quickly becomes apparent the region has issues with poor land use development patterns away from established municipal infrastructures and essential services.

What these patterns have also established is a culture severely dependent upon the automobile as the sole transportation mode. With new development pushed farther away from common destinations (shopping, schools, etc.), it has made pedestrian and bicycle travel not only infeasible, but hazardous as well. In addition, an increasing number of new subdivisions are being planned without sidewalks along the collector or arterial roads that feed into them. Furthermore, municipalities are not being proactive in setting aside greenways and open space for permanent off-road, communitywide connections. The end result has left a vast majority of our population disconnected, and thus stuck in their homes with very little inspiration or desire to leave.

III. The Benefits of a Pedestrian and Bicycle-Friendly Culture

Into this muddled chasm of poor development, bad health habits, and sedentary life styles has emerged a new philosophy on the benefits of non-motorized travel. Com munities around the country are re-discovering the many positive attributes that are brought about by catering to a culture of connectivity.

a. Making the Connections & Completing Our Streets

In a poorly designed community of scattershot subdivisions and land uses, what emerges as the most negative aspect is the lack of being able to connect to another part either by foot or bike. It is estimated that a person can comfortably walk one mile in fifteen minutes and by bike in five. However, the way many communities have developed, traversing these distances in any other form than by automobile is risking one's life at times.

With connected sidewalks, greenways, and trails incorporated into the growing development scheme (or retrofitted for that matter), communitywide links are assured, as well as a positive quality of life. There are numerous destinations that would benefit including schools, parks, civic facilities (libraries), retail centers, and other areas of employment. A growing number of communities are beginning to recognize that their constituents demand better quality of life choices, and facilities that improve their health and wellness.

To help accomplish this goal, NIRPC adopted *Complete Streets Guidelines* in May of 2010. Complete Streets is a concept that encourages the development of a transportation network that considers *all* modes of transportation, not just driving, bicycling, and/or walking. Often, this means the placement of elements that create a safer environment for bicyclists and pedestrians. These elements vary, and can include things such as sidewalks, crosswalks, and bike lanes. It also encourages greater intermodal connectivity. Complete Streets will help encourage greater energy and fiscal efficiency, provide alternative regional connections, and, most importantly, improve the safety of the walking and bicycling public. The full text of the Complete Streets Guidelines can be found in ***Appendix D.***

To this end, and as mentioned earlier in this report, the primary reason people use trails in for improving their health – far ahead of recreational purposes. A safe, maintained and planned non-motorized network represents a tremendous attraction for new residents, and for that matter, businesses alike who desire to locate where a healthy workforce resides. A 1991 Harris Poll found that 46% of the 1,250 adults surveyed said they would bike to work if designated trails were built.

Trail activities such as walking, jogging or running, in-line skating, cross-country skiing, and bicycling are well documented as ways to improve health and fitness when done on a regular basis. Physical activity need not be unduly strenuous for an individual to reap significant health benefits. This benefit accrues to the individual and, in the form of reduced health-care costs, to society as well.

For example, the Trek Bicycle Store in Schererville encourages its employees to ride their bikes to work as often as possible. As an incentive, the employees that ride are given $5 extra for each day. On-site shower and changing areas, important elements of bicycle-friendly workplaces, are provided. The business's owner has said that this system has ultimately saved the company money because it encourages employees to lead a healthier, more active lifestyle. As a result, fewer sick days and medical expenses need to be paid for, offsetting the cost of the financial incentive.

Land use decisions by local governing boards can have a positive impact on the development of the region's non-motorized transportation network. At one time, it was commonplace for schools, especially elementary schools, to be placed within the neighborhoods they were meant to serve. This gave students, faculty, staff, parents, and other residents easy pedestrian and bicycle access from their homes. The general trend, however, has been moving away from this.

According to the Bikes Belong Coalition, the average size of schools has been increasing. Additionally, a policy bias exists toward building new schools rather than renovating or expanding existing ones. Many places have guidelines and regulations that favor new construction, while some states even limit the amount that can be spent on a renovation project relative to the cost of building new. Finally, minimum acreage standards are often imposed on new school construction projects as well. These types of policies often result in existing schools being left behind and new schools being constructed on the edge of town, away from the very populations they are meant to serve. This is especially a problem for elementary school students, who cannot get themselves to school without non-motorized means. When elementary schools are located far from the served population, often on dangerously busy roads, there are often no sidewalks or paths to facilitate safe and easy access. This problem is only growing. In 1969, 50% of elementary school students lived within two miles of their school, a number which declined to only 33% by 2001.

Several groups and states are beginning to realize, however, that schools must be easily accessible in order to fulfill their role as a center for both students and the community as a whole. Since 2003, South Carolina, Rhode Island, and Maine have all eliminated their minimum acreage standards for schools. While this is progress, many states still have this and other policies that do not allow the smart placement of schools within the communities that they serve.

Local school boards should be encouraged by NIRPC and its members to revisit and reconsider their school siting procedures and policies in order to favor sites with good access both on foot and by bicycle. Additionally, such policies would encourage site design with these elements included as well. The Nashville Area Metropolitan Planning Organization in Tennessee has made a similar recommendation. As an example, the Nashville MPO suggests "that new elementary schools be located on neighborhood streets with low traffic volumes and speeds, and within walking distance of a large proportion of students' homes." Additionally, NIRPC will assist and encourage efforts to change or eliminate any other policies at a variety of levels that restrict the safe and smart placement of schools.

The Bicycle Friendly America Program, which is run by the League of American Bicyclists, seeks to encourage the creation of bicycle friendly states, communities, and businesses. To do this, they offer designations of platinum, gold, silver, and bronze in each of these areas. As of 2010, there is a diverse membership of four bicycle friendly states (Indiana ranks number 24 on the program's list without designation), 124 bicycle friendly communities, and 82 bicycle friendly businesses nationwide. These are located in many different areas of the country, with many different climates.

As part of the program, Bicycle Friendly America staff provides support and assistance in helping places achieve their bicycle-friendly goals. This is done through direct assistance as well as other activities such as workshops and application reviews. Another part of their mission has been to make it easier for states, communities, and businesses to measure themselves through the development of an evaluation scorecard. The scorecard helps interested parties determine how bicycle friendly they are and whether or not they are ready to apply for bicycle friendly status.

The Bicycle Friendly Community scorecard is divided into five categories: engineering, education, encouragement, enforcement, and evaluation. All bicycle friendly communities excel in at least one or two of the categories, with the top communities managing to excel in all of them. The Bicycle Friendly Business scorecard does not contain an enforcement section, but does allow for a notes section. These cards can help set the stage for what work needs to be done by defining weaknesses and helping with prioritization of work to be done.

The Bicycle Friendly America Program is free. The program's staff is able to provide assistance from the self-evaluation phase through the application process and beyond. Once a community or business is named as a bicycle friendly community, it can continue its work to improve and attempt to reach a higher level of recognition. The counties, communities, and businesses in the NIRPC region will be encouraged to implement bicycle-friendly improvements with an eye toward a "Bicycle Friendly" designation under the Bicycle Friendly America Program. NIRPC will assist in these activities and work with staff from the program as necessary to assist in designation. For further information on the program, a link to the Bicycle Friendly America Programs can be found in ***Appendix E***.

b. Just "Common Cents"

A growing library of empirical data has clearly shown the positive effects of trail development on a local economy. From a homeownership perspective alone, trail location has been associated with higher property values and attraction from homebuyers.

- A 2003 study by the Center for Urban Policy and the Environment at Indiana University-Purdue University Indianapolis determined that homes near the many greenways in Indianapolis sold for 10% higher than the average for all homes within the larger districts.

- A survey conducted by the National Association of Home Builders found that recent homebuyers ranked trails as the second most important community amenity out of a list of 18 choices. Only freeway access ranked higher.
- The Silver Comet Trail, which stretches across three counties in Georgia, is an example of how popular trails are when it comes to residential development. A community of 322 homes was developed adjacent to the trail in Dallas, Georgia. As part of the plan, the developer built a community trail that connects to the Silver Comet Trail.

In addition to positive home ownership attributes, trails and greenways bring job growth in construction maintenance as well as tourism-related opportunities like bike rentals, restaurants, and lodging. In addition, they also attract new businesses to an area, and thus serve as a vital economic development tool.

- The National Trails Training Partnership has found that, generally speaking, a trail through a community can bring at least $1 million into a community annually. This is dependent, of course, on how strongly the community embraces the trail.
- The town of Lanesboro, Minnesota, located on the Root River Trail, has seen something of an economic boom with the trail. The town has 12 B&Bs with waiting lists, restaurants, an art gallery, and a community theater. A locally-owned bike shop in the town sold 60 tandem bicycles in a year, beating the largest multi-store bicycle retailer in the Twin Cities that same year.
- The City of Pueblo, Colorado attributes the investment in trails and parks along the Arkansas River and Fountain Creek as one of the most important components in the economic revitalization of this industrial city.
- In the State of Wisconsin, it is estimated that bicycle tourism generates $278 million annually.

These figures bode well for Northwest Indiana since many of the existing and planned trail systems traverse through established downtown districts. Many of these same trail networks also link up to large retail centers, allowing another mode of transportation for utilitarian and employment trips.

c. Protecting Our Environment

As trail development provides many positive attributes, there also exists solid reasoning for their incorporation in aiding our environment. For one, trail corridors provide linear greenbelts that preserve and protect plant species and open spaces that facilitate wildlife habitats and their migrations. Furthermore, the preservation of trail corridors improves water quality and mitigates flood damage. They do this by providing natural buffer zones to protect stream, rivers, and lakes from pollution run-off caused by fertilizer and pesticide use on yards and farms. Thy also can serve as flood plains that absorb excess water and mitigate damage caused by floods. Such conservation efforts make good sense, because they save communities money in the long run.

IV. Overcoming Opposition

Even with such superlatives associated with pedestrian and bicycle facility develop ment, there still remains a number of people and organizations which strongly op pose their creation – especially trails. Their reasoning comes in many flavors which have been debunked in virtually every case, and include the following issues below.

a. Crime

Despite numerous studies that have concluded trails do not generate crime, concerns persist and fear of the unknown continues to provide fertile ground for trail opponents. Trail opponents with only a handful of newspaper headlines rather than empirical research perpetuate stories of trails attracting drug dealers, murderers, thieves, and rapists. The truth is, local residents and police departments both have agreed that with limited automobile access to trails, criminal activity had not increased, and could in fact decrease due to the extra patrols and activity by law-abiding citizens.

- A study of Omaha, Nebraska's trails from 2000 showed that, of the 149 property owners surveyed, only 4% reported having property stolen by a trail user, and only 4.7% reported having their property vandalized by trails users. The report goes on to note that most of these incidents were of a relatively minor

nature. Only one respondent of the 149 wanted to see the trail along their property closed.

- In 1998, the Rails-to-Trails Conservancy reported findings from their survey of 373 trail systems in the U.S. which found that only 3% of respondents reported any type of major crime (rape, murder) associated with trails in 1995 and 1996. In addition, only one-fourth of the respondents reported minor crimes occurring (littering, graffiti, petty theft).

b. Privacy

Of all concerns raised by those who will be directly affected by the placement of a trail facility, privacy issues hold the most weight. In this case, trail design concepts become critically important towards facilitating approval from neighboring properties. Natural screening such as large shrubs, planted berms, or manmade fences can effectively serve to preserve a homeowner's sense of privacy. However, and as previously mentioned, trails positively impact the value of neighboring properties and enhance the overall quality of life.

c. Liability

The specter of a tort claim against a local entity regarding pedestrian and bicycle travel is a legitimate fear. Our society has developed a hair-trigger response to any perceived violation of rights, especially when they feel that their own government isn't doing enough to protect them. Major non-motorized liability can be divided into three separate modes:

1. **Trails:** Along with the fear of increased crime rates and privacy, fear of becoming threatened with a lawsuit is a common concern among landowners adjacent to a proposed rail corridor. Likewise, potential trail owners and managers are sometimes leery of undertaking a trail project because of the liability exposure. However, the laws that protect adjacent landowners as well as trail managers, coupled with strategies for designing and managing a trail, should provide ample protection for managers and adjacent landowners alike from a successful lawsuit. The three legal precepts that define, and in many cases limit, liability are Duty of care, Recreation Use Statutes, and liability insurance as a final line of defense.

2. **Shared Routes:** For many bikers, sharing an existing roadway with automobile traffic is the only way to travel. However, this poses an increased risk of liability due to passing motorists either hitting or throwing debris at them, which unfortunately is all too commonplace. However, in Indiana, as in other states, bicyclists have as much of a right to ride on the road as automobiles do. To this end, they are allowed by state statute to travel as deep as two abreast, and can take over the left hand turn lane if proceeding in that direction. Of prime concern to local municipalities and counties are their signed routes, and how well they are maintained. It goes to reason that signing a dangerously fast and pothole-festooned route would provide for an ample amount of evidence for a tort claim. Providing a reasonable amount of maintenance is all that is needed to stem any further actions.

3. **Sidewalks:** Many municipalities are faced with a lawsuit now and then from those who have tripped or fallen due to sidewalks in disrepair. Since budgets are simply too tight to undertake an all-out reconstruction of all poor sidewalks, a logical alternative is creating a five-year maintenance plan to demonstrate, at the very least, a community's efforts to improve the walking environment. Also, communities should be very cognizant of laws pertaining to the Americans with Disabilities Act (ADA), which requires wheelchair ramps at all corners and driveway entrances. In short, liability at this level is murky at best since many communities claim that the landowners are responsible for the maintenance and care of their sidewalk. This remains an issue of considerable debate.

Simply stated, properly planned operations and design can provide all the effective measures necessary to appease adjacent landowners who, for the most part, are acting out on what they don't know. It is up to the municipal or county officials to provide the education and patience necessary to win over a majority of people. It shouldn't be expected that everyone will go along with a trail project, but enough support should be generated to quell their opposition.

V. Education

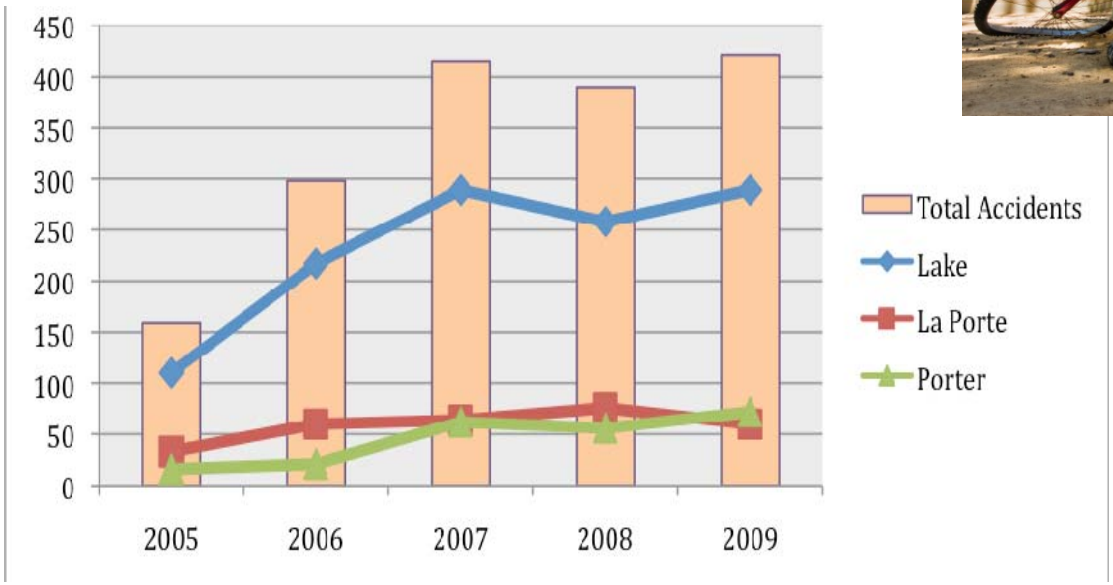
Education is important because many bicyclists, pedestrians, and motorists are unaware of what the rules of the road affords each user. Enforcement and education historically overlap one another and will dominate policy recommendation. Too often the simple and proactive initiative of encouragement of riding a bicycle or walking to a nearby destination is lost.

Much of the need for education revolves around safety. Both pedestrians and bicyclists must practice proper safety at all times. The need for improved safety is demonstrated in the number of accidents involving non-motorized transportation. Nationally, 12.9% of traffic fatalities are bicyclists and pedestrians. Between 2005 and 2009, the number of accidents in Lake, Porter, and LaPorte Counties rose 165% from 159 accidents in 2005 to 421 in 2009. The ***Table 2-1*** and ***Figure 2-2*** below give a more detailed view of the numbers for each of the three counties as well as the region as a whole.

Table 2-1:

Accidents in Lake, Porter, and LaPorte Counties Involving Non-Motorized Transportation: 2005-2009	2005	2006	2007	2008	2009
Lake	110	217	289	258	289
La Porte	33	60	64	76	60
Porter	16	21	62	56	72
Totals	**159**	**298**	**415**	**390**	**421**

Figure 2-2: Accidents in Lake, Porter & LaPorte Counties Involving Non-motorized Transportation: 2005-2009



a. Bicycles

Educating the adult bicycle rider is more difficult than educating a child. Adults often ride illegally, against traffic for example, because of the prevailing attitude that the bicycle is a recreational object. It is difficult to educate an adult because they are not always receptive to safety training. The only sure way of reaching adults is for a police officer to issue a citation. Motorists often do not understand the bicyclist on the road. This group must also be educated as to the rights and concerns of the bicycling community.

However, educating the child rider remains a very difficult task. Traditionally the bicycle is seen as a toy to the child. This attitude encourages unsafe bicycle rid-

ing. Instead, bicycles are the form of transportation children depend on. Children hear too little about the importance of bicycle safety or lose the safety lesson while learning technique. Often, safety instructors rely on memorizing the "Rules of the Road," which many children fail to remember in actual practice.

b. Pedestrians

It should not be discounted that the cheapest and healthiest form of transportation for a vast majority of people is their very own feet. As already mentioned in this chapter, however, pedestrian travel is becoming increasingly difficult due to spread-out development patterns and crumbling or incomplete sidewalk infrastructure. In addition, many intersections where automobiles and pedestrians interact are devoid of vital safety measures, such as adequately timed signals and crosswalks, to guide people safely across streets.

Education, however, does not completely escape the pedestrians themselves. Many individuals would be well advised by following common sense practices to help avoid dangerous situations. For example, crossing the street at the appropriate location, and not jaywalking, would greatly aid in safety of movement. Another would include walking or jogging on a roadway against traffic if a sidewalk is not present. Since everyone is a pedestrian at some point of every trip, it would stand to reason that providing for safe travel should be a priority for every community.

c. Safe Routes to School

In light of growing concern over bicycle and pedestrian safety, a movement that has gained significant momentum over the last five years is the Safe Routes to School (SRTS) program. Originally conceived in Denmark in the 1970s, the SRTS program seeks to reduce the number of child pedestrian accidents through a series of initiatives launched with the support of multiple constituencies. The SRTS vision engages the following ideals:

1. Locating schools in close proximity to the children who attend them;
2. Providing good facilities for walking and biking to school;

3. Reducing the threats to health and safety posed by motor vehicles, pollution, and crime;
4. Fostering a cultural shift that accords high value and broad responsibility for the realization of this goal.

These are goals that can be attained through pro-active planning at the front-end involving *all* forms of land development. Statistics in 2001 showed that nearly 9 out of 10 children between 5 and 10 years old were driven to school by parent or bus, which in turn increases traffic and creates a negative environment around schools. Through the SRTS program, our desire to recapture that cherished and independent expression of our childhoods – walking or biking to school – can once again be attained.

Indiana's SRTS program is administered by INDOT. The funding for this program comes from the federal government via the SAFETEA-LU legislation, which was passed in 2005. The state funds non-infrastructure projects of up to $75,000 and infrastructure projects of up to $250,000. The funds are disbursed on a reimbursement basis, but no local match is required. However, any projects that are located within an urban area of 50,000 people or more are required to have the endorsement of their local MPO. Since 2006, the state has provided $1,249,453 for SRTS projects in Northwest Indiana.

CHAPTER 3
FACILITY DEVELOPMENT

FACILITY DEVELOPMENT

I. Facility Design/Best Practices

The *1994 Regional Bikeways Plan* devoted a considerable amount of text towards detailed design standards for bikeway development. For the 2005 *Ped and Pedal Plan*, it was decided to approach these important issues more in terms of a general overview of the subject matter. For the 2010 update, the subcommittee focused not only on best practices from other areas, but on the best practices in presenting the plan itself as well. This chapter intends to be as comprehensive on best design practices without delving into detailed specifics on their construction. NIRPC encourages local officials to contact their planning and engineering departments for further details on their issues, and how they can be specifically applied to a community. In addition to a detailed trail cost analysis presented in ***Appendix C***, there are four references to consult for the following information in this chapter:

a) AASHTO's 1999 Guide for the Development of Bicycle Facilities
b) AASHTO's 2004 Guide for the Planning, Design, & Operation of Pedestrian Facilities
c) The Indiana Manual on Uniform Traffic Control Devices
d) The National Manual on Uniform Traffic Control Devices

A. Off Road Trails

Off road trails funded with Transportation Enhancement funds must meet ADA requirements for grades, surfaces, etc. Note that a properly designed limestone trail is considered to meet ADA requirements. Loose surfaces such as pea gravel or bark chips are not considered to meet the ADA requirements.

B. Mid-Block Crossings

1. At Grade vs. Grade Separated

   Mid-block crossings at low volume roadways may function properly when the crossing is adequately marked and signed. At higher volumes the designer should investigate alternatives to the mid-block location. If there is a public road crossing within a short distance, the trail should be routed to the public road crossing. If there are two nearby road crossings and one is signalized, it is preferred that the trail be routed to the sig-

nalized crossing. Grade separations for mid-block crossings are an alternative to routing the trail to a nearby road crossing.

Figure 3-1: Mid-Block Crossing Treatment

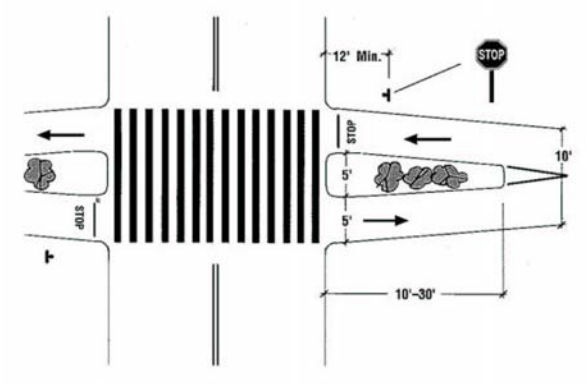
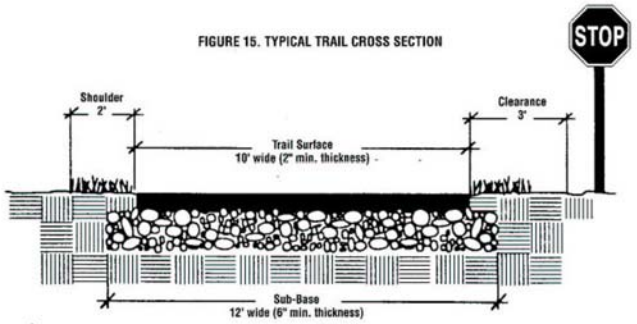


Figure 3-2: Typical Trail Cross Section



2. Type of Grade Separation

   A grade separation can take the form of an underpass or an overpass. Underpasses can be accomplished with less grade change as compared to an overpass, but can be more problematic to drain. For personal security and safety reasons, underpass locations should be designed to assure the trail user can see the complete underpass area well in advance of actually entering the underpass. Lighting may be needed for long underpasses or if evening/morning use is anticipated. Because of their expense and natural impediment to use, overpasses should be the last alternative considered.

3. Markings and Signing

   Markings and signing of mid-block crossing are very important to provide motorists ample warning of these types of crossings.

If possible, mid-block crossing should be made perpendicular to the roadway rather than skewed. It is also helpful if some feature is incorporated in the trail design to force the cyclists to slow substantially or even to physically stop at this point. This is especially important at high volume or high-speed roadways.

It is also very helpful to provide signage on the bike trail identifying the crossing public street. This is especially helpful to those less frequent users in orienting them along their ride.

C. Trail Width and Surface Type

There are a number of surface types to select from for a trail. Generally speaking, a hard surface such as asphalt or concrete works best for multi-purpose trails. Compacted crushed stone with fine aggregates will provide a suitable trail for cyclists and is an economical alternative, especially for longer trails. Stone trails will require more periodic maintenance than asphalt or concrete. Loose stone, bark chips, etc. are not suitable surfaces for cyclists.

The recommended trail cross-section is ten feet in width with two foot-wide shoulders (earth or paved). If heavy use of the trail is anticipated, the width may be increased to 12-14 feet. Three feet or more of clearance is recommended from the edge of the trail (i.e. the ten foot width) to fixed objects such as trees or poles. The minimum trail width is eight feet.

D. Intersection Crossings

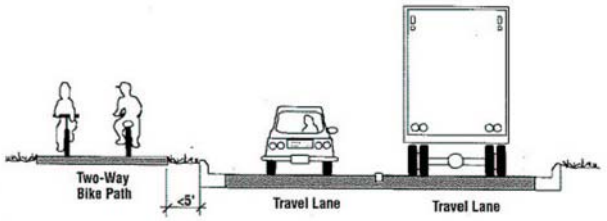
If a trail crosses a roadway at an intersection that is signalized, pedestrian signals should be provided to insure the users have adequate time to cross the street.

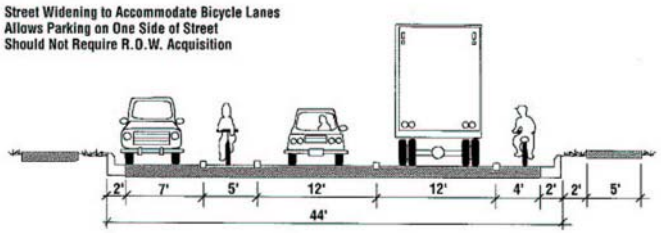
Proper signing and marking of these crossings at any intersection is important for the safety of both vehicular traffic and trail users.

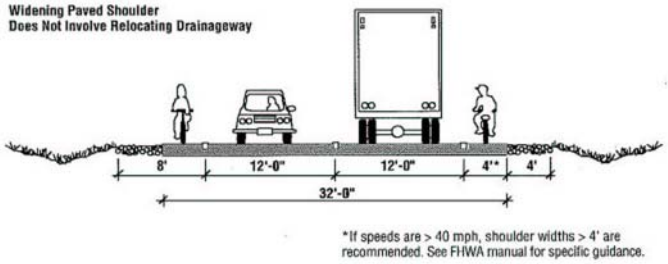
E. Bike Lanes (Adjacent to Traffic)

If bicycle lanes are provided, it is extremely important that they be adequately marked and signed. Care should be taken at signalized intersections to detect bicyclists (if the signal is

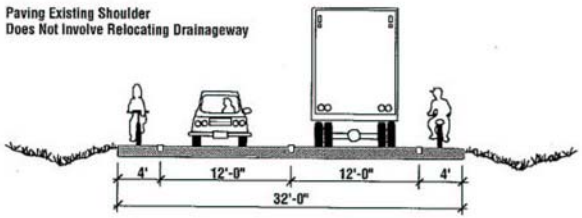
Figure 3-3: Various Cross-Sections

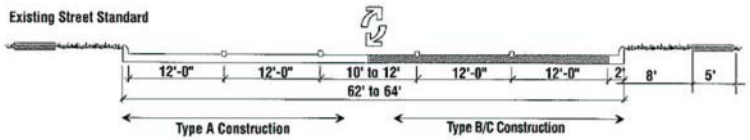


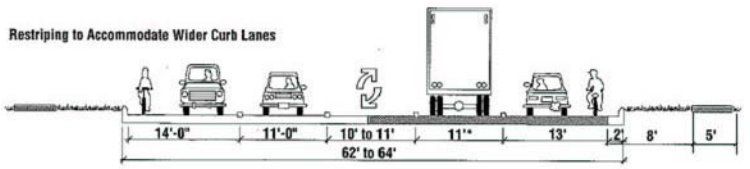




*If speeds are > 40 mph, shoulder widths > 4' are recommended. See FHWA manual for specific guidance.







traffic actuated) and to insure that the clearance interval (yellow) is adequate for the bicyclist.

The recommended width of the bike lane is five feet, with four feet as the minimum. Providing a bike lane where parking is permitted, especially parallel parking is very problematic. Alternative routes should be considered prior to choosing a route with parking for bike lane facilities. Care should also be taken to eliminate obstacles such as drainage structure castings with slots oriented in the direction of travel.

F. Trail Facility Designs

When considering a trail network for a community, a number of auxiliary facilities must be considered to ensure a pedestrian and bicycle-friendly environment. These include:

1. Bicycle Parking: In many communities, secure bicycle parking is recognized as one of the first and most important facility improvements necessary to improve the viability of bicycle transportation. The implementation of bicycle parking is not only the responsibility of the local government, but business, schools, and commercial establishments. Local governments can and should adopt regulations for the provision of bicycle parking, just as requirements for automobile parking are adopted. See Table 3-1 for a sample of space requirements.

   There are many useful types of facilities on the market, which fall generally into three categories which are generally recognized:

   - Class I for high-security protection against theft and weather, typically provided by lockers or enclosed, locked, or guarded storage areas;
   - Class II for racks that secure a frame and both wheels with a user-supplied padlock; and
   - Class III for parking racks requiring user-supplied fastening devices, such as cables for high performance U-locks.

It is highly discouraged to install the traditional "school" rack designs since they generally support only the front wheel, and frequently fall over. Unfortunately, these designs are in abundance, and need to be removed to allow for the new-generation products as mentioned above.

Figure 3-4: Bicycle Parking Options

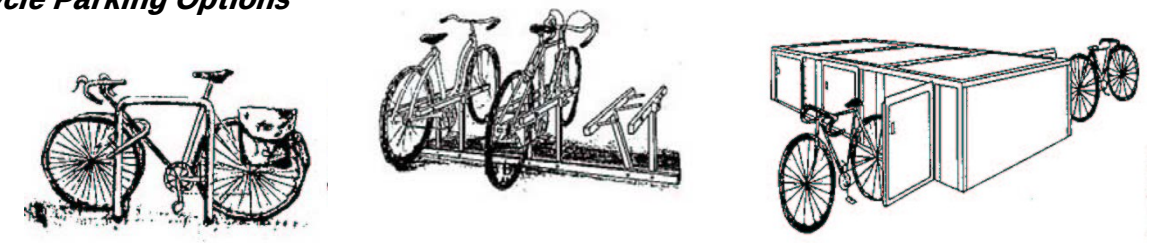


Table 3-1: Bicycle Parking Space Requirements

Type of Establishment	Minimum Number of Bicycle Parking Spaces
Primary or Secondary School	10% of the number of students, plus 3% of the number of employees
College or University Classrooms	6% of the number of students, plus 3% of the number of employees
Dorms, Fraternities and Sororities	1 space per 3 students
Shopping Mall	5% of the number of automobile spaces
Commercial Street	1 space per 3,000 sq. ft. of commercial space
Sport and Recreation Center	12% of the number of automobile spaces
Office Building	10% of the number of automobile spaces
Government Building	10% of the number of automobile spaces
Movie Theater or Restaurant	5-10% of the number of automobile spaces
Manufacturing Plant	4% of the number of automobile spaces
Multi-Unit Housing	1 space per 2 apartments
Public Transit Station	20 spaces minimum
Other Land Uses	5-10% of the number of automobile spaces

2. Site Furniture: Along the trail or network, users will desire to rest and refresh. Facilities such as benches, shelters, and water fountains make for an attractive rest stop. Communities should investigate where they can employ these products to the greatest benefit to the traveling public.

3. Automobile Parking: Since many off-road trails are too far to access for many residents, even within the same community where they are located, providing adequate automobile parking is crucial. Although the best scenario remains creating non-motorized linkages to the larger trail systems, reality dictates otherwise. In addition, many trail users come in from out of the region to "test drive" a particular trail.

4. Trailheads: Adequate property should be sought for inclusion of trailheads along the route, primarily in high-density locations in urban areas. A typical trailhead incorporates all the facility elements mentioned above, plus other amenities such as informational kiosks, lighting, and restrooms.

G. Maintenance

While there is usually much excitement about the construction of a new trail, trail maintenance is also important. Periodic inspection of the surface and associated features (i.e. landscaping, signs, etc.) are necessary to maintain the trail in its originally intended condition.

When maintaining multi-use trails, tasks should include the following:

- Patching or re-grading the trail surface on a regular basis;
- Inspecting and repairing/replacing signs, traffic markings, bollards, gates, etc.;
- Mowing shoulders and other areas;
- Trimming vegetation to meet sight-distance requirements;
- Removing fallen trees, limbs, and debris;
- Repairing any damage from seasonal washouts;
- Cleaning culverts, catch basins, and other drainage structures;
- Sweeping the trail to keep it free from debris;

- Removing snow and ice – when not being used for winter activities (cross-country skiing, etc.);
- Keeping lights clean and replacing fixtures as required;
- Maintaining unique features such as bridges and tunnels;
- Inspecting trail-related structures to ensure they are in good condition;
- Picking up litter and emptying trashcans.

When maintaining on-road facilities, tasks should include:

- Sweeping after major winter storms;
- Sweeping in autumn for leaves and in spring for sand;
- Keeping drains in operating condition;
- Cutting back vegetation to provide adequate clearances and sight distances;
- Cutting back intrusive tree roots;
- Replacing and repairing signs;
- Inspecting and replacing roadway striping and graphics;
- Filling potholes and pavement cracks;
- Inspecting pavement patches after underground utility work and other excavation activities that disrupt road and sidewalk surfaces;
- Modifying or replacing non-standard drainage grates with bicycle-friendly grates.

Developing a budget towards proper maintenance is not an exact science, and costs can vary considerably between two identical facilities. To help aid with preparing a budget that adequately covers all maintenance and expenses, keep the following in mind:

- Obtain the current per-mile cost for maintaining a similar existing trail in a similar community;
- Find out how the managing agency assigns charges to various maintenance activities;
- Make a prioritized checklist of all possible maintenance activities and their frequency;
- Develop a tracking system that ensures the timely and systematic completion of all maintenance activities.

H. Trail Landscaping

Care should be taken when designing the landscaping treatment of the areas of the trail outside the trail surface. Grass is probably the most widely used treatment. However, it requires weekly maintenance, which may become quite expensive for the longer trails.

Alternatively, the trail designer should consider native plant communities along the trailside areas. This is especially applicable to the longer rails-to-trails corridor. These native plant communities can provide habitat for birds and other wildlife, provide historical opportunities for interpretation and education, cost less to maintain, and help with stormwater management. Additional information can be found in the Chicago Wilderness Biodiversity Recovery Plan, adopted by NIRPC on March 16, 2000.

I. Traffic Calming

A wide range of measures is available to local jurisdictions for controlling traffic movements and reducing motor vehicle speeds on local streets while providing safe and more pleasant conditions for pedestrians and bicyclists. Cities and towns throughout the United States have employed programs that manage traffic to improve neighborhood quality of life and safety.

The major objectives of traffic calming include:

- Promoting safe and pleasant conditions for motorists, cyclists, pedestrians, and residents on neighborhood streets;
- Mitigating the impacts of vehicular traffic, including air pollution, accidents, and noise;
- Offering more equal status to all road users; and
- Increased landscaping/aesthetic opportunities and play space on public rights of way.

Figure 3.5 graphically portrays a number of traffic calming techniques that can be employed. Local entities should strive not only to retrofit these, but mandate them on the front-end of all new development planning, whether it be residential, commercial, or industrial land uses.

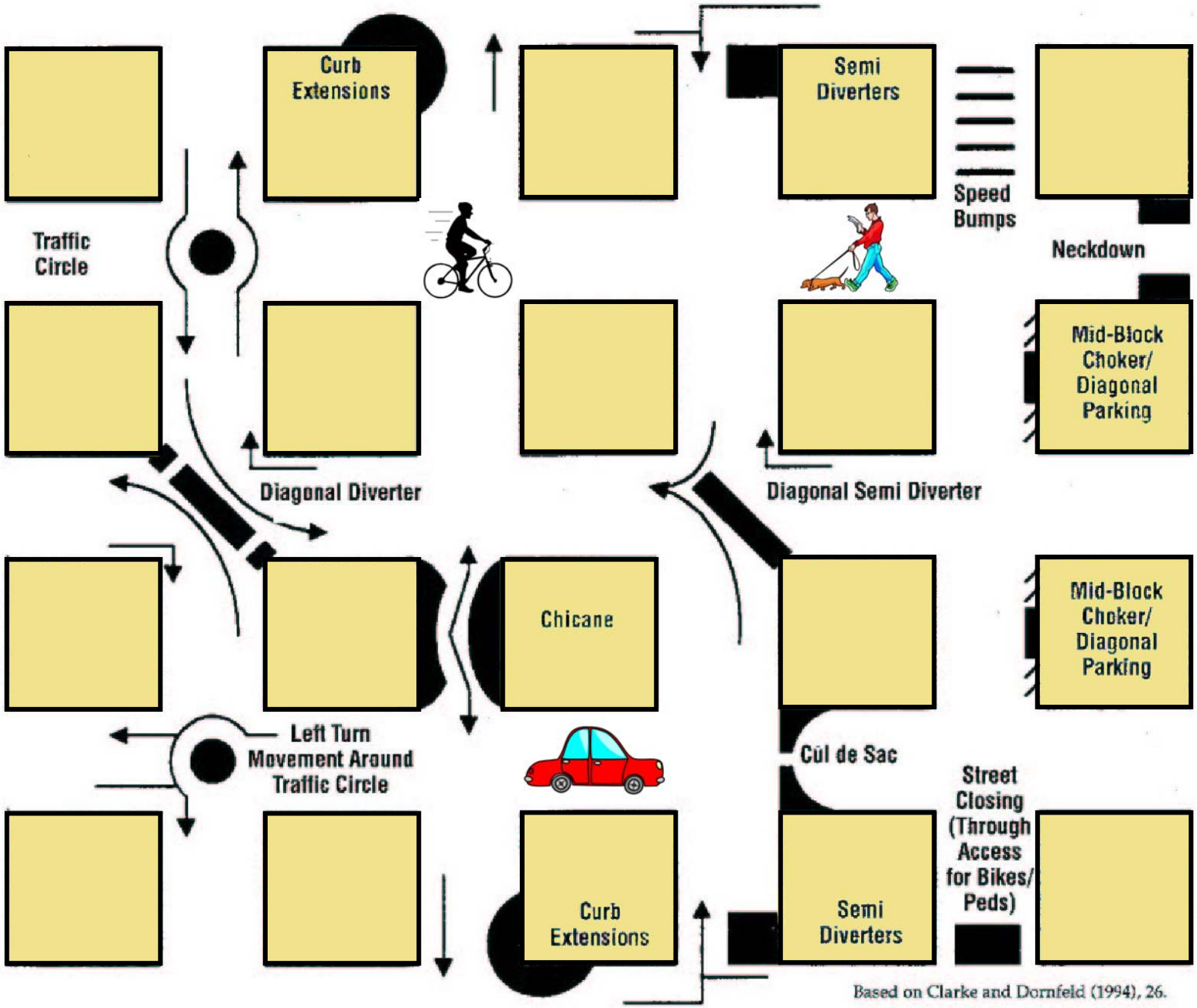


Figure 3-5: Traffic Calming Techniques

J. Rails-with-Trails

A growing movement which has gained acceptance by trail planners and the railroad industry is the concept of shared use trails located adjacent to active rail lines, or rails-with-trails (RWT's). Most RWT's are situated next to low-traffic or low-speed rail lines. Many lessons learned throughout the U.S. found a high correlation between RWT projects and reduced trespassing, dumping, and vandalism, particularly in areas with a history of such problems. This is because people who used to walk along the tracks now chose to walk on the trail, and be channeled to safe crossings. In the NIRPC region, an example of a successful RWT project is the Calumet Trail running parallel with the South Shore Line.

K. Way-finding

As important as directional signage is on roadways, equal consideration must be afforded regarding the placement of signage, or way-finding, on trails throughout the region. Current ly, there are very few examples that exist on the region's many miles of trails, leading to what could be described as an "identity crisis" for users. Directional signage represents an important element that requires careful thought to help ensure a comfortable experience for the trail and non-motorized network user.

Way-finding signage can achieve public objectives, such as promotion of community at trac-tions, education, mile marking, and directional guidance. A good way-finding system functions to achieve the following purposes:

- Help people find destinations from all travel modes (such as driving, Metra trains, Pace buses, walking, and biking).
- Establish clear pathways through the use of signs, maps and other landmarks to direct the user from one point to another.
- Carry messages that are user-friendly and understandable, such as safety messages, welcoming people to a location, identifying nearby services, and measuring distances.

If signs are poorly designed, users may get lost.

Way-finding strategies should be formulated based on location priorities along a route. ***Table 3-2*** outlines a number of these options.

Table 3-2: Types of Way-finding

Sign Type	Brief Description	Idea Application / Location
Primary Map /Directional Graphics	Large display to orient user through maps and location information.	At trailheads or near major destinations.
Primary Route Directional	Guide users. Destination information - name, distance & direction	At decision points or intersections.
Secondary Route Directional	Identify bike routes and warn motorists of presence of bicyclists on streets	On-street routes to regional paths.
Welcome signs	Introduce destination and describe amenities with symbols.	Trail heads, parks, & recreational facilities.
Interpretive Kiosks	Educational information. Guidance information.	High visibility areas & destinations.
Cautionary & Regulatory Sign	Warn of hazards; describe trail conditions, rules of trail.	Intersections & trailheads.

The Manual on Uniform Traffic Control Devices (MUTCD) is recognized as the guideline for the placement of signage for both roadways and trails. MUTCD details rules for bikeway signage setbacks from roadways and trails, horizontal clearance, and sign posting heights.

L. Pedestrian Facility Focus

Everyone is a pedestrian at some point during a trip, whether it is from home to a parking lot, to a work site, or for an entire trip. It is not always easy being a pedestrian. Obstacles posed by facilities designed primarily for the automobile and sprawling land use development often act as hazardous barriers to safe walking. These barriers can severely limit the lives of those dependent on walking because they are cut off from large sections of their community. All pedestrians are extremely vulnerable to traffic, especially the elderly, children, and people with disabilities.

Local governments should address pedestrian-specific needs in their comprehensive land use plans. Local community planning criteria include:

- Encouraging compact and mixed use development that facilitates walking;
- Promoting school and residential siting so as to accommodate walking as the primary mode; and
- Providing for continuous sidewalk connectivity.

This last point is of urgent nature due to the increasing of siting new development far from established community centers and destinations (parks, schools, etc.), and plan commission approvals for waiving sidewalk requirements along major collector or arterial routes. This has left many growing communities with disconnected neighborhoods, which in turn encourages unhealthy sedentary lifestyles.

As for specific measures that can greatly improve a community's standing as truly pedestrian -friendly, the following should be considered:

- Filling in existing "gaps" where sidewalks, for no apparent reason, stop. Numerous examples can be seen most prevalently at street corners;
- Conducting a "sidewalk survey" of all existing walks, detailing their condition, and formulating a multi-year improvement plan to restore the most seriously damaged sidewalks immediately;
- Making sure ramps exist *everywhere* sidewalks meet either intersections or commercial driveway entrances. Although this is a requirement of all new sidewalks per ADA regulations, in most communities sidewalks are very old and extremely hazardous where they end. A prime fiscal tool to help conform older sidewalks is the federally administered Community Development Block Grant (CDBG) program. CDBG guidelines allow communities to use their yearly proportion of funds to install ADA-conforming ramps anywhere a need exists, which bypass standard guidelines.
- Providing crosswalks at all high-traffic intersections, and near popular destinations, as an important safety guide for automobile traffic.
- Testing existing crossing signals for adequate timing, and replacing those in higher-volume areas with pedestrian countdown signals.

a. Sidewalks 1-2-3: When considering installation or rehabilitation of sidewalks, there are several standards to keep in mind in order to ensure a safe and comfortable walking experience. The following represent basic strategies when planning for new and existing sidewalks:

- Sidewalk width should be at least five feet in residential districts, eight to twelve feet in school and commercial districts, and between twenty and thirty feet in downtown districts.
- Planted buffers of four to six feet should be required to provide for street trees, shrubbery or fencing. This also provides a physiological barrier between pedestrians and motorists.
- Treat sidewalks as you would streets. Establish a regular maintenance schedule for snow removal and repairs, such as resettling of heaved slabs due to tree roots.
- Retrofit older sidewalks with curb ramps yearly.

M. ADA Accessibility

As part of complying with the Americans with Disabilities Act (ADA) of 1990 and the ADA Amendments Act of 2008, local public agencies (LPAs) are required to have in place an approved ADA Transition Plan that is in compliance with ADA requirements. Without this plan, the LPA may not be able to get a project authorized through the Federal Highway Administration (FHWA).

When designing sidewalks for users with disabilities, several factors must be considered. These include slopes, the placement and design of facilities and elements, and a variety of indicators that allow all users to be able to safely use the sidewalk. This includes everything from detectable warning systems to audible signals, to properly placed and separated ramps. Every effort must also be made to provide sidewalks that allow enough room to pass along them safely without being forced too close or even into traffic. This means not only wide enough sidewalks, but also placing street furni-

ture in such a way that it is accessible while not interfering with the ability to easily move down the sidewalk.

Sidewalks should also have slopes and cross slopes that allow safe and controlled movement along the street. When a sidewalk must cross and ramps must be installed, they must meet the road and cross at a point that is perpendicular to the road to prevent accidents caused by wheelchairs being forced to negotiate an uneven surface, increasing the danger of wheels leaving the ground. Finally, all signal buttons must be easily accessible and close to the crossing point, even if it means the placement of a separate post for the buttons. The United States Access Board's website, which can be found in the links section, provides more detailed guidelines on proper accessible sidewalk design.

II. Financial Strategies

The Financial Strategies subcommittee was formed to help bring some understanding to the vast array of funding opportunities for government and private entities alike towards the development of trails. The committee at the onset of their work established three major areas of focus:

1. Identify and provide information on all pertinent funding sources, with lists of contact persons, required documentation, and application schedules.
2. Calculate costs for implementation across the entire three-county planning area.
3. Provide assistance provisions to municipalities for preparing applications to funding sources.

The following represents an exhaustive overview of the funding strategies that address the three main focuses of the subcommittee. This section represents the bulk of the updated plan and provides for the user a valuable resource in understanding the funding dynamics behind the design and construction of a bike trail.

A. Funding and Other Resources

Your planning efforts are constrained by limited implementation resources; a "grand plan" can become your tool for attracting them. For example, in competitive project selection processes, projects included in comprehensive plans often have an edge over stand-alone pro-

jects. A strategy of combining funding and other resources can be used to enlarge the pool of available resources. Whether you are trying to implement a comprehensive multi-year bicycle plan or complete a specific project, the strategies and programs described below can help you secure the resources you need.

1. **Piggybacking**
   It is more cost effective to include bicycle and pedestrian accommodations into a larger scale transportation project than it is to retrofit. Seek out opportunities to get involved in the early planning stages. Refer to the policies and bikeway network in your bicycle plan to help justify the accommodation of cyclists in local road projects. If a road is being resurfaced, work with the implementation agency to restripe it to include bike lanes or wide curb lanes. If a bridge is being reconstructed, make sure cyclists and pedestrians have a way to safely and comfortably get across it. If a train station is being built, make sure pedestrians and cyclists have a way to easily access it. These processes don't necessarily require special money for County DOTs and local public works departments. Participating in the early design stages of a project is highly recommended.

   Another no-cost implementation strategy is to pass ordinances that require new developments to be designed in accordance with bicycle and pedestrian plans. For example, ordinances and zoning can mandate standards including sidewalks, providing bicycle parking, designing streets that discourage speeding, and building car parking facilities that minimize pedestrian conflicts at entrance and exit points.

. **Local Funds**
   Work with your city council or town board to allocate resources for planning, engineering studies, and specific projects. Outside agencies are often more willing to fund projects that have already begun. Another source might include Tax Incremental Financing, or TIF districts, where

revenues can be used to improve conditions for walkers and cyclists as part of larger development projects. Arlington Heights, Illinois used TIF money to help pay for the reconstruction of its pedestrian and bicycle friendly Metra station.

B. State and Regional Resources

The Indiana Department of Natural Resources (IDNR) administers Outdoor Recreation Grants-in-Aid programs. The ones most relevant for bicycle and pedestrian planning include:

- *Bicycle Path Programs* – Helps with the acquisition, construction, and rehabilitation of public, non-motorized bicycle paths and directly related support facilities. Applications are accepted between January 1 and March 1 of the calendar year.
- *Recreational Trails Program* – Provides up to 80% funding assistance for acquisition, development, rehabilitation, and maintenance of motorized and non-motorized recreation trails. Applications are due March 1.
- *Open Land Trust Grant Program* – Provides grants to eligible local governments to protect open space and provide enhanced outdoor recreational opportunities. Land acquired from the program must be maintained in perpetuity for public open space and natural resource recreational purposes. The deadline for submitting applications is publicly announced each year.
- *Open Space Lands Acquisition and Development* – Assists local government agencies in the acquisition and development of land for public parks and open space. Applications are accepted between May 1st and July 1st of the calendar year. Another state source would include Member Initiative Money. State legislators have discretionary funds that can be used for projects of their choice. They can be powerful allies for pulling together and providing resources for projects that span municipalities.

C. Federal Funds and Programs

TEA-21 included policies and funding categories that made it easier to plan and build for non-motorized users of roadways. The following policies are from TEA-21 and still currently in effect:

- *Local and State Programmed Surface Transportation (STP) Funds* – At the NIRPC level, this source of funding has been used for pedestrian and bicycle projects from time to time. The average is about one to two projects per fiscal year.

- *Congestion Mitigation and Air Quality Improvement Program (CMAQ)* – This program funds projects designed to reduce congestion and air quality problems in the region and is administered at NIRPC. Projects have included bottleneck reductions, transit station improvements, bicycle racks, bicycle lanes, pedestrian overpasses, and promotion programs.

- *Transportation Enhancements (TE)* – Ten percent of a state's STP program is set aside for transportation projects that enhance and preserve communities. These funds can be used for bicycle and pedestrian projects. The NIRPC TE Committee oversees the yearly applications for the program, which allocates up to $3 million per year to Northwest Indiana projects. From 1993 to 2009, the NIRPC region has been awarded $37.5 million for TE projects. It remains by far the best federal or state funding source for non-motorized facilities in the country.

- *Hazard Elimination Program* – Another 10% of the state's STP program is set aside for projects designed to address safety problem areas. TEA-21 made bicycle and pedestrian projects eligible for these funds, and California has passed a bill setting aside 25% of its hazard elimination funds to improve safety around schools.

- *Transportation and Community and System Preservation Pilot Program (TCSP)* – The TCSP Program is a comprehensive initiative of research and grants to investigate the relationships between transportation, community, system preservation, and private-sector based initiatives. States, local governments, and metropolitan planning organizations are eligible for discretionary grants to plan and

implement strategies that improve the efficiency of the transportation system and reduce environmental impacts of transportation. Further information on this unique program can be obtained from the NIRPC staff.

SAFETEA-LU featured new programs and policies that further expanded upon TEA-21, including:

- *Safe Routes to School* – SAFETEA-LU provides federal funding for this program for the first time.
- *Provisions for bicycle and pedestrian safety* – As part of provisions aimed at improving safety, SAFETEA-LU specifies addressing bicycle and pedestrian safety.
- *Recreational Trails funding* – SAFETEA-LU provided funding for the development and maintenance of trails for a variety of users, including pedestrians, bicyclists, and horseback riders.

NIRPC staff can work with your community to help you identify these and other federal funding opportunities.

D. Partnerships

The following highlights other avenues to help with the funding and planning of non-motorized facilities:

1. Chambers of commerce and tourism can promote shopping and visiting by foot and bike. County Convention and Visitors Bureaus can also play an instrumental role towards the development of materials educating the public on trails.
2. Law enforcement officials can promote bicycle safety as part of their school outreach efforts. Safe Routes to School is a program that emphasizes this relationship.
3. Healthcare providers can promote walking and biking as ways to avoid a physically inactive lifestyle and help to stem the current obesity epidemic. The Indiana State Department of Health is promoting the value of walking and biking for purposeful trips, like errands and work commutes.

4. Employers can create incentives for employees to walk or cycle by providing showers, bike parking, a guaranteed ride home in an emergency, flex time, transit subsidies, and the cash equivalent of free parking benefits. Visit http://www.mwcog.org/commuter2 (a resource in Washington, DC with good advice for employers on promoting bike commuting).
5. Schools can promote the benefits of cycling and walking.
6. Community groups can contribute time and labor to the planning and construction of facilities.
7. Cycling and walking groups are a source of vocal and knowledgeable advocates willing to assist in planning and lobbying for improvements. Bicycle Indiana (formerly the Indiana Bicycle Coalition) maintains a list of local bicycle clubs. The Active Transportation Alliance is also a solid resource.
8. Advocacy organizations can provide lobbying support, technical assistance, and funding. The chief advocacy group in the NIRPC region is Calumet Citizens for Connecting Communities (C4).
9. The media can help promote your facilities and programs.
10. The private sector can donate money, land, and other resources
11. Social media holds great potential for getting information out about events and projects. Websites like Facebook and Twitter are free, easy, and widely-known.

III. Bicycle & Pedestrian Program Links

The advent of the internet has created a wealth of information regarding planning and funding avenues for bike and pedestrian networks. Great trails usually require a great amount of research to help get the project moving. ***Appendix E*** represents a list of websites that can aid in this endeavor. Although not exhaustive by any means, these sites do represent a solid start for those interested in creating a bike-friendly atmosphere in their communities. It must be noted that any documents referencing websites run the risk of printing "dead links," or pages that have expired. As of this plan's publication, these sites have been shown to be fully operational, but this constitutes no guarantee.

IV. Local Planning Direction

The standards and strategies presented in this chapter can only be achieved with help from local planning and engineering departments, and their review boards. To this end, the following table is provided as a checklist for local officials when deciding upon integrating pedestrian and bicycle facility development into their broad decision-making processes.

Planning	Strategies	Implementer
Local Bicycle Plan	Make bicycle plan an interdepartmental effort; establish mechanism to ensure coordination.	Local government: multiple departments
	Basic plan elements include: needs assessment; facility projects and a hazard removal program; education and enforcement programs; and a funding and implementation strategy.	
	Refer to the AASHTO Guide for Development for Bicycle Facilities for approach and standards, or to equivalent state guidelines.	

Planning	Strategies	Implementer
Interlocal Agreements	Develop interjurisdictional agreements as needed for acquisition, development and maintenance.	Local Government
Master/ Comprehensive Plans	Incorporate affirmative policies for bicycle use.	Local government: planning department
	Adopt a local bicycle plan or element, including policies and programmed projects.	
	Modify local street standard to accommodate shared bicycle/ motor vehicle use.	
	Include ordinances that encourage; mixed use; cluster zoning combined with more open space; dedication of rights-of-way for trails; and interconnected street patterns.	
Transportation/ Highway Plans	Identify roads in local jurisdiction for preferential development of bicycle facilities.	Local government: public works department
	Adopt policy to make all roads safer for shared use.	
	Tie in bicycle improvements with highway or city street capital improvement plan.	
	Review all proposed road maintenance and improvement plans or opportunities to incorporate bicycle-friendly design.	
	Develop uniform signage to identify bicycle facilities and educate motorists of potential bicycle use on road.	
Parks, Open Space, and Recreation Plans	Incorporate trails and greenway plans as part of Master Plan.	Local government: parks and recreation departments.
	Encourage and use alternative methods of open space, greenway acquisition, including nonprofit purchase and financing options, conservation easements, transfer of title options.	

Planning	Strategies	Implementer
	Consider using payments in lieu of parkland dedication for bicycle facilities.	
	Adopt a corridor/greenway element that includes bicycle access.	
	Work with adjoining parks and recreation agencies and communities to plan coordinated facilities.	
Zoning	Zone for cluster development, mixed use and open space preservation.	Local government: planning department
	For strip development, consolidate road access but encourage interconnections between developments to encourage pedestrian and bicycle access.	
	Develop a bicycle parking ordinance.	
	Examine roadway standards and change to allow traffic calming and interconnected, narrower, slower roads and paths.	
	Review ordinances that ban bicycles from roadway or shoulder areas – most are not warranted.	

Planning	Strategies	Implementer
Site Design Review	Establish a method to amend site designs to improve non-motorized access to between sites.	Local government: planning department
	Consider traffic-free zones as well as bicycle boulevards and other preferential treatments.	
	Establish a hazard reporting system for bicyclists and pedestrians.	
	Establish a regular maintenance program for bicycle facilities and shoulders used by bicycles.	
	Allow bicycle access to shopping centers.	
School Access Plans	Ensure safe routes for bicycle and pedestrians.	Local government: planning department; school officials and parents.
	Provide adequate bicycle parking.	
	Provide bicycle safety education.	
Private Development	Consider bicycle access incentives such as showers and lockers at employment locations.	Development companies; private businesses.
	Provide bicycle access and parking.	
	Provide public access to bicycle facilities whenever possible.	
	Connect bicycle facilities to adjacent developments.	

CHAPTER 4
REGIONAL INVENTORY

EXISTING REGIONAL INVENTORY

I. NIRPC Routes

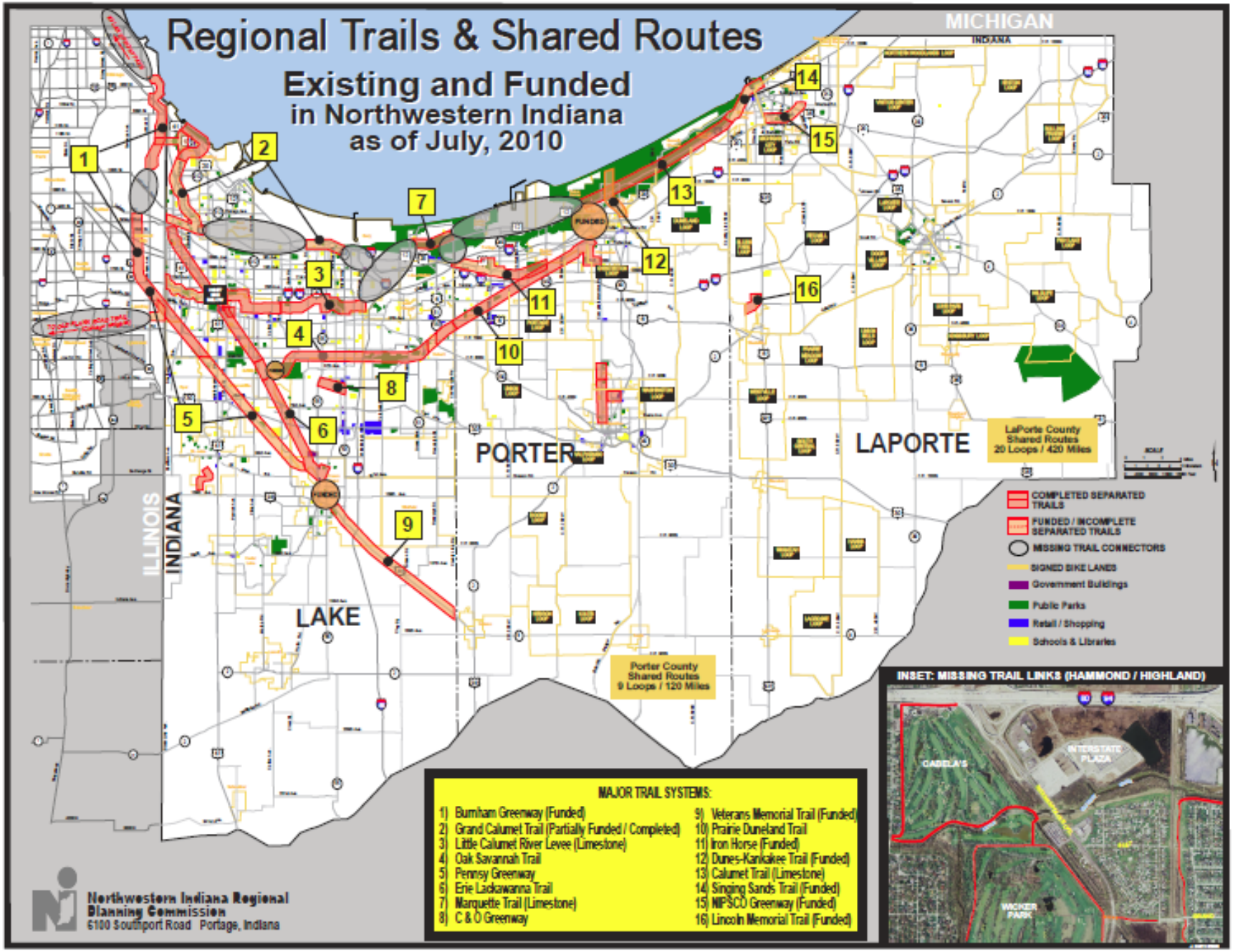
The NIRPC region provides for non-motorized trips through a network of off (Class I) and on-road (Class II & III) facilities, typically confined to municipal systems, but showing great progress to wards the completion of an interconnected regional bikeway system as funding permits. As of the summer of 2010, the regional bikeways system comprises approximately 80 miles of off-road trails located in segments, primarily across northern Lake and Porter counties. In addition, there are approximately 50 miles of bike trails that have already secured funding, either through federal enhancement dollars, or state and local revenues. The existing off-road, Class I network of trails generally follows a combination of abandoned railroad corridors, utility easements and flood control levees.

A. Off Road Routes

There are 15 principle regional trails that have been completed in whole or in part. These are as follows:

1. The *Calumet Trail* extending from Mineral Springs Road to the LaPorte County Line, parallel to the South Shore Line and U.S. 12 along a NIPSCO power line easement. 9 miles (all limestone)
2 The *Erie Lackawanna Trail* between Hammond and Crown Point. 17 miles
3. The *Little Calumet River Flood Control and Recreation Levee Trail* from Martin Luther King Drive in Gary to Wicker Park in Highland. 9.7 miles (5.8 limestone)
4. The *Marquette Trail* in the Miller section of Gary. 2 miles
5. The *Prairie Duneland Trail* (E.J. & E. Railroad Corridor) between Portage and Chesterton. 8 miles
6. The *Oak Savannah Trail* (E.J. & E. Railroad Corridor) from Griffith (Oak Ridge Prairie) to Hobart (Linda Street). 8 miles
7. The *Valparaiso Pathways* network of off-road trails. 9.2 miles
8. The *Munster Bikeways Network*, utilizing a series of abandoned rail right-of-ways, utility corridors, expanded sidewalks and painted bike lanes. 11.6 miles

Figure 4-1


Regional Trails & Shared Routes
Existing and Funded
in Northwestern Indiana
as of July, 2010
MICHIGAN
INDIANA
ILLINOIS
INDIANA
PORTER
LAPORTE
LAKE
LaPorte County
Shared Routes
20 Loops / 420 Miles
Porter County
Shared Routes
9 Loops / 120 Miles
COMPLETED SEPARATED TRAILS
FUNDED / INCOMPLETE SEPARATED TRAILS
MISSING TRAIL CONNECTORS
SIGNED BIKE LANES
Government Buildings
Public Parks
Retail / Shopping
Schools & Libraries
INSET: MISSING TRAIL LINKS (HAMMOND / HIGHLAND)
CABELA'S
INTERSTATE PLAZA
WICKER PARK
MAJOR TRAIL SYSTEMS:
1) Burnham Greenway (Funded)
2) Grand Calumet Trail (Partially Funded / Completed)
3) Little Calumet River Levee (Limestone)
4) Oak Savannah Trail
5) Pennsy Greenway
6) Erie Lackawanna Trail
7) Marquette Trail (Limestone)
8) C & O Greenway
9) Veterans Memorial Trail (Funded)
10) Prairie Duneland Trail
11) Iron Horse (Funded)
12) Dunes-Kankakee Trail (Funded)
13) Calumet Trail (Limestone)
14) Singing Sands Trail (Funded)
15) NIPSCO Greenway (Funded)
16) Lincoln Memorial Trail (Funded)
Northwestern Indiana Regional Planning Commission
6100 Southport Road Portage, Indiana

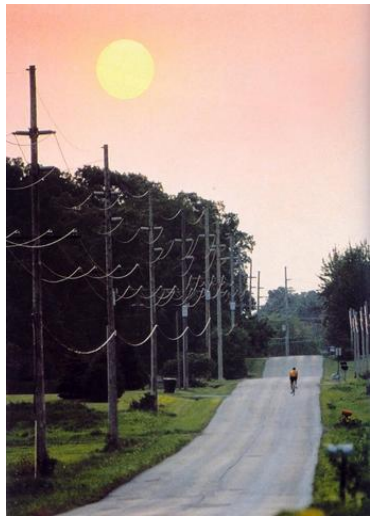
9. The *Wolf Lake/George Lake Trails* in Hammond. 1.7 miles
10. The *Iron Horse Heritage Trail* in Portage. 2.3 miles
11. The *St. John Trail* which links a neighborhood to their baseball fields and recreation center. 2 miles
12. The *C&O Greenway* in Merrillville from State Road 53 (Broadway) west to 500ft east of State Road 55 (Taft Street). 1.3 miles
13. The *Lincoln Memorial Trail - Bluhm County Park Connection* north of Westville in LaPorte County. 2.2 miles
14. The *Pennsy Greenway* in Munster from Main Street to the Illinois State Line. 2 miles
15. The *Westchester-Liberty Trail* in Chesterton. 1.1 miles
16. The *Whiting Lakefront Trail* from Whiting Park to the George Lake Trail in Hammond. 2 miles

In addition, there are another ten principle regional trails that have been funded, and cur rently under development which include:

1. The *Little Calumet River Trail* from Wicker Park to Munster. 2.5 miles
2. The *Veterans Memorial Trail* extending along the abandoned Pennsylvania Railroad corridor on US 231 from Crown Point to Hebron. 9 miles
3. The *Oak Savannah Trail* extension to the Prairie Duneland trail through Hobart. .25 miles
4. The *Gary Greenlink* from Broadway to Bridge Street. 2.2 miles
5. The *Grand Calumet Trail* in Hammond from George Lake to East Chicago at the Indiana Toll Road. 3.8 miles
6. The *Iron Horse Heritage Trail* from Hamstrom Rd. in Portage to Woodland Park. 1 mile
7. The *Porter Brickyard Trail* from the northeast terminus of the Prairie Duneland Trail in Chesterton to the Calumet Trail. 3.5 miles
8. The *Singing Sands/Lighthouse Trail* from the eastern termini of the Calumet Trail on U.S. 12 to Washington Park in Michigan City. 3 miles
9. The *Pennsy Greenway* in Schererville from Joliet Street to Rorhman Park. 2 miles
10. The *Dunes-Kankakee Trail* from Indiana Dunes State Park to Oak Hill Road in Porter. 2.1 miles

B. Shared (On-Road) Routes

Apart from the growing off-road trail network developing in the NIRPC region, a significant regional network of on-road, or shared routes, have emerged. The on-road routes are broken down into Class II routes, which include painted, or marked lanes and direction signs designated for bike traffic, and Class III routes, which are directionally signed only. The largest of the Class III systems include the 142-mile Porter County Bikeways System, and the expansive 420-mile LaPorte County Bikeways System, which comprises 20 loop rides throughout the county. Currently, NIRPC is working with county and municipal officials, including bicycle advocates, to develop a similar system in Lake County. The Northwest Indiana Bike Map, released in 2008, highlights a broad network of on-street routes in Lake County, but to date these have yet to be signed.



A detailed inventory of all off and on-road routes that currently exist in the NIRPC region, and those in nearby Illinois, can be located in ***Appendix A.***

C. Significant Local Systems

Flowing down from the regional perspective are those communities which have already developed an internal bicycle network, or have been funded for development. Significant local networks & planning efforts include:

1. *Munster*: First developed in the late 1970's, the Munster Bike Network received some much needed improvements and connections in the late 1990's. Currently the Munster Bike Network is an 11-mile system that is present in all parts of the town. The network is equally divided among shared and non-shared paths, and takes advantage of abandoned rail corridors, NIPSCO utility easements, widened sidewalks, and special bike only (painted) lanes on roadways. Throughout the bike network there are a number of parks and parking lots that serve as trailhead and rest areas. The largest trailhead and parking area can be found in Community Park on Calumet Avenue. Plans are currently underway to connect this bike network to various regional and na-

tional trails via the Pennsy Greenway, which is planned to open in late 2010, along Centennial Park and from the Fisher Street Trail into Lansing, Illinois.

2. *Gary*: In 2004, the City of Gary adopted their Gary Green Link Master Plan, a pro ject to help guide the development of a natural resources greenway and recreation corridor. This corridor, the Gary Green Link, would ring the city connecting the Grand Calumet River, Little Calumet River and the Lake Michigan Shoreline. This ambitious project sets out to accomplish a number of objectives which include:

   - Identifying, protecting and restoring globally significant natural resources;
   - Connecting the people of Gary to one another and to their environment;
   - Creating recreational opportunities through the development of multi-use trails;
   - Promoting economic development;
   - Interpreting Gary's industrial & cultural history; and
   - Establishing connections to adjacent communities.

In 2010, the city released the Marquette Park Lakefront East Master Plan which identifies improvements that will enhance access to and circulation within the park, preserve and strengthen the park's natural features, provide new recreational and educational amenities, and restore the park's signature historic facilities. The pro- posal outlines the inclusion of several trail routes through the park, and a link south into the Marquette Greenway corridor.

3. *Crown Point*: In 2001, the City of Crown Point adopted their Bike Network Plan that would set out to encompass 21 miles of routes utilizing both off and on-road facili ties. The city enjoys its standing as the "Hub of Lake County", which is further em phasized by the location of two abandoned rail corridors which criss-cross into the city. These corridors offer the city a unique opportunity to connect to all parts of the county, and beyond. In 2007 the city adopted their first Bikeways Plan which outlines a bold vision to connect all parts of the city together via off and on-road

trails, and painted bike lanes. The plan also strategizes new way-finding signage placement and the connections via four major regional trails into the city.

4. *Michigan City*: In 2004, Michigan City adopted a master plan for a multi-use trail system encompassing approximately 27 miles. The plan calls for seven multi-use trails connecting to one another making a loop trail around the city while connecting many neighborhoods to everyday destination points utilizing community connection trails to schools, parks, the YMCA, library and other landmarks. Five spur trails help to connect Michigan City into existing and future regional trails. Some of its regional connections are the State of Michigan, City of South Bend, Porter County, and the City of LaPorte. In 2009, the city opened up the Peanut Trail, a 0.3 mile segment along Trail Creek.

5. *Hobart*: The City of Hobart has received outside funding for completing their link between the Oak Savannah Trail to the west, and the Prairie Duneland Trail to the northeast. Within the city, plans call for a connection to Lake George and their downtown.

6. *Valparaiso:* The City of Valparaiso, lead by their Parks Department, is undertaking an important step toward meeting both the current and future alternative transportation needs of its citizens. The 2005 Valparaiso Pathways and 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. The physical framework of the Pathways Network 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). As of 2010, 9.2 miles of off-road trails and one mile of painted bike lanes have been installed in the city.

VALPARAISO Pathways

Beyond these, other systems of note are planned in Highland, Hammond, St. John, Portage, LaPorte, and Dyer.

D. Planned Expansions

Apart from local plans to expand routes for non-motorized transportation, there exists three significant projects of note that will require careful planning and perseverance to become reality.

1. *Pennsy Greenway:* In 2002, the communities of Munster, Schererville, Crown Point, the Lake County Parks Department and the Village of Lansing, IL met to strategize the conversion of the abandoned Pennsylvania Railroad into a trail system. The project entitled the Pennsy Greenway, would run approximately 15 miles from Crown Point to the Little Calumet River in Lansing, IL. At this point, the project would meet up with the Burnham Greenway and eventually the Chicago Lakefront Trail – for a grand total of 50 off-road miles from end-to-end. The Town of Munster will finish their segment by the end of 2010 into Lansing - representing the first off-road link between Northern Indiana and Illinois. The Town of Schererville plans to commence with their first phase from Joliet Street to Rohrman Park later in 2010.

2. *C & O Greenway*: In 2004, Purdue's Landscape Architecture Dept. researched trail conversion opportunities on the long-abandoned C & O Rail corridor from Griffith running southeast to just north of Winfield. As with the Pennsy Greenway, this too would be a multi-jurisdictional effort which would directly involve Griffith, Lake County Parks, Merrillville and Hobart. Of prime significance would be corridors intersecting with the Southlake Mall area on U.S. 30. The Purdue plan calls for a trailhead to the north of the retail area, with two non-motorized routes. One route would circumvent the area, while the other would channel trail users safely through the maze of businesses in the district. The corridor would take advantage of an existing box culvert underneath I-65. It would also serve as the off-road link between the Erie-Lackawanna and Oak Savannah Trails in Griffith. In 2010, the Town of Merrrillville opened the first 1.3 mile segment of the C & O Greenway from Broadway, to just 500 feet east of Taft Street.

3. *Marquette Greenway*: It has been the desire of many in the South Shore region of utilizing an uninterrupted trail connecting the three states and providing access to

numerous points of interest along the lakefront. The cities of Chicago, Hammond, East Chicago, Gary, Portage, and Michigan City, including the counties of Porter and LaPorte, and the National Park Service, have been working individually for years on developing their local segments of this overall vision. During this period of development, many of these trail segments were approved for federal funding, with several more proposed. With these initiatives underway, coupled with the need to establish a true east-west connection along the Lakefront, NIRPC has begun to bring all of these visions to the forefront as a unified piece known as the *Marquette Greenway*.

In the process of developing this vision, there was a significant "missing link" in the western Porter County vicinity. This gap was scouted by both NIRPC and National Park Service staff in order to delineate the best route for an off-road trail, while taking full advantage of the environmental beauty of the area. The result will involve a route that will share US 12 and a future road from Ogden Dunes to SR 249 at the Portage Amerplex facility. From here, the route will proceed east across Salt Creek and then proceed north of Burns Harbor to the funded Brickyard Trail in Porter. Nearly the entire proposed stretch is contained within National Park Service landholdings.

Other significant gaps include a route from Calumet Park in Chicago east to the existing Whihala Beach Trail in Whiting, an undefined segment of trail route in East Chicago, and a defined route from Michigan City east to New Buffalo.

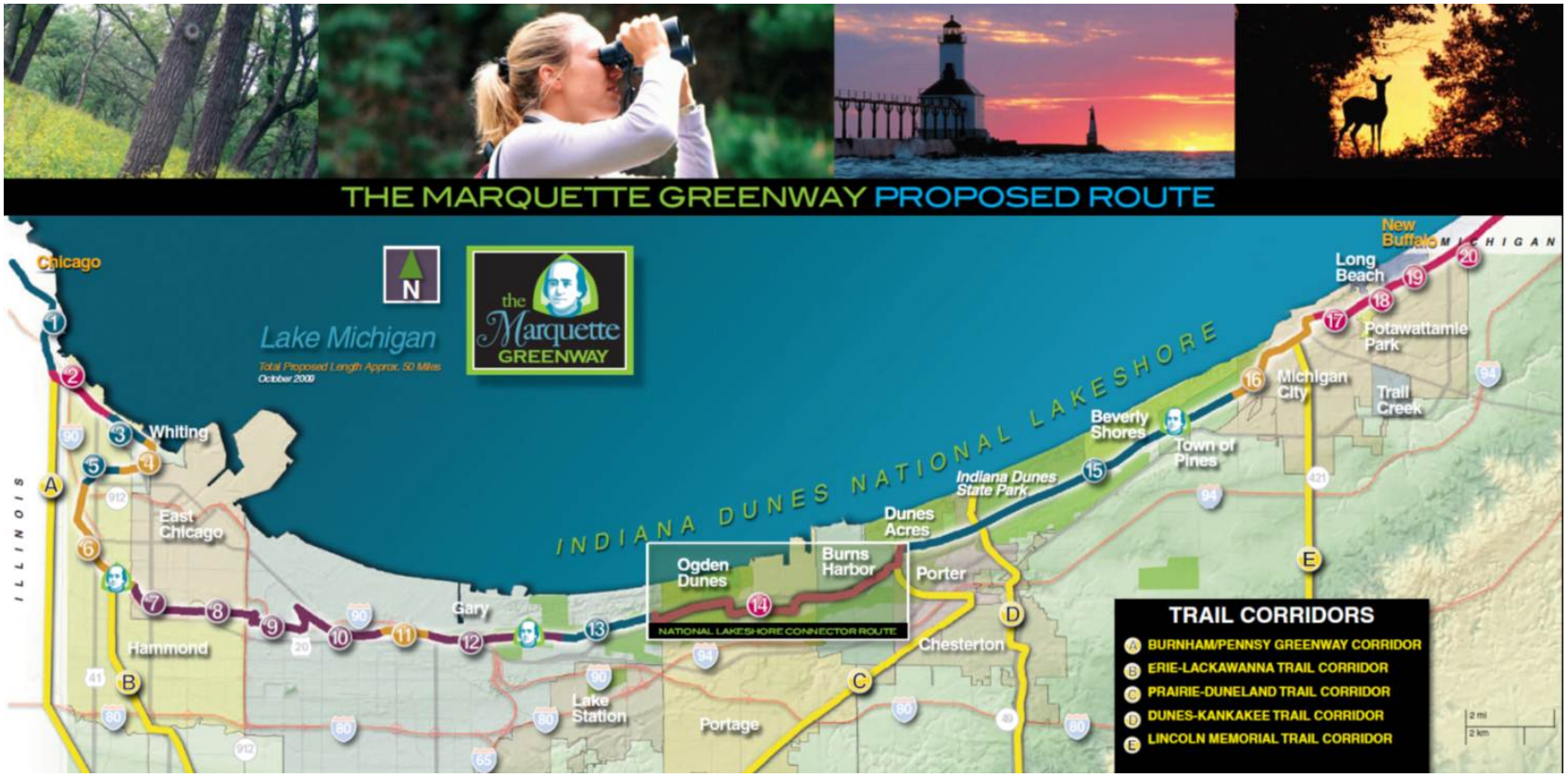
In all, the route will traverse through 15 communities for approximately 50 miles from Calumet Park in Chicago, to the heart of New Buffalo, Michigan, directly touching a population of 120,000 people, but connecting to millions more. In between, roughly 20 individual trail segments will be unified under this route.

NIRPC is working directly with all communities along the proposed route including stakeholders directly adjacent in Illinois and Michigan. The main push at present involves securing the necessary funding for each entity to

complete their segment. To this end, the soon-to-be approved Indiana State Trails Plan will identify the Marquette Greenway route as a major priority for immediate funding. How much money and how fast it will be allocated remains to be seen, but when coupled with Congressman Visclosky's determined efforts to fund strategies from the Marquette Plan, the outlook becomes very positive.

In October, 2009, NIRPC, along with the Burnham Centennial and the Indiana Planning Association – Indiana Chapter, released The Marquette Greenway - National Lakeshore Connector Route Proposal poster plan. This document outlines the proposed route of the entire corridor, as well as specifically details the gap at the National Lakeshore. A copy of the map from the Proposal is shown in ***Figure 4-2.***

Figure 4-2: Marquette Greenway Proposed Route



4. *Dunes-Kankakee Trail:* There exists a glaring need where there are no trails connecting the northern half of Porter County to the county seat—Valparaiso—or the southern reaches of Porter County—Kouts, Hebron, and the Kankakee River. With no vacant north-south corridors (such as a retired rail line or utility corridor) and no municipalities bordering Valparaiso on any side, the only viable option is to construct a parallel trail within the right-of-way (ROW) of a motorized thoroughfare: SR 49. In 2009, a broad-based committee of municipal and civic stakeholders spearheaded by Indiana Dunes Tourism (Porter County), created the Dunes-Kankakee Trail Plan to provide guidance on the creation of the trail corridor. Much success has been witnessed since the plan's release with funding secured from both Congressman Visclosky and the Regional Development Authority to construct the first segment of the trail from the Indiana Dunes State Park to Oak Hill Road. INDOT plans to install a new bike lane on their rebuilt bridges over US 12 and 20.

II. Interregional Facilities

Beyond the NIRPC region exists a vast array of non-motorized routes. From Northeast Illi nois, to Southwest Michigan, St. Joseph County and all parts south, an impressive network is beginning to take shape positioning Northwest Indiana as a premiere destination for hik ing and biking in the Midwest.

A. Northeastern Illinois

Due to the proximity to one of the largest cities in the world, Northeastern Illinois has enjoyed a number of off and on-road facility developments over a number of years. This section highlights those most directly related to Northwest Indiana.

Although many trail systems have developed over much of the Chicagoland region, the South Suburban area still remains largely disconnected. However, this is rapidly changing. In 2000, the Illinois Department of Natural Resources officially opened the Grand Illinois Trail (GIT), a 475-mile loop trail connecting the Chicago lakefront to the Mississippi River. The GIT consists of existing off-road trail managed by

CALUMET-SAG TRAIL

state and local agencies as well as non-profit organizations and connecting on-road bike routes. Of significant note to Northwestern Indiana was the push to link the GIT route through the South Suburbs via two already established facilities: the *Old Plank Road Trail* and *Burnham Greenway*.

The Old Plank Road Trail (OPRT) runs 21-miles from Chicago Matteson west to New Lenox. The OPRT developed along the abandoned Penn Central line, and started construction in 1997. The Burnham Greenway runs 11 miles from the Chicago Skyway to the Little Calumet River between Lansing and Calumet City. The Burnham also took advantage of an abandoned rail corridor. In 2007, the Village of Lansing extended the Burnham Greenway south and called it the Pennsy Greenway to the Indiana state line at Munster. At this point, Munster will continue the route southeast as the Pennsy Greenway.

Due to the Illinois DNR's heavy concentration on developing the GIT, much attention has been given to closing "critical gaps" in the GIT network - most especially those in the South Suburbs. Of prime note are the 12-mile gap from the Thorn Creek Forest Preserve in Lansing to Chicago Heights, and the gap from the Chicago Skyway to the Lakefront Trail. The Cook County Forest Preserve District is working with the Illinois DNR on connecting the GIT from the Burnham to the OPRT via existing District landholdings.

Motivated by the centennial of the Burnham Plan of 1909, Friends of the Parks proposes completing the last four miles of Chicago's existing 26 mile public lakeshore park system. This includes the nearly 2-mile gap from Rainbow Beach to Calumet Park. The vision also aims to complete another 2-mile gap on the northern reaches of the city up to Evanston.

The Active Transportation Alliance has helped spearhead the vision for the Cal-Sag Trail, a multi-use path built almost entirely along the banks of the Calumet-Sag Channel and Calumet River. Along 26 miles of waterway from Lemont in the west to Burnham in the east, the Calumet-Sag Trail will stitch together more than 185,000 people in fourteen communities. It will connect them to regional trails, transit systems, retail areas, parks, forest preserves, marinas, nature centers, and the legacies of Big Steel, immigrant communities and the Underground Railroad. The Cal-Sag's easternmost terminus is planned to connect directly into the Burnham Greenway.

B. MACOG / South Bend Regional Routes

Directly east of the NIRPC region are the three counties encompassed under their MPO - the Michiana Area Council of Governments (MACOG). MACOG provides planning oversight in St. Joseph, Marshall and Elkhart counties. In 2001, they released their *Regional Bicycle Facilities Map* which outlined all off and on-road bike routes in the MACOG region, including major recreational sites. Routes which were planned to remain unsigned were also identified. Larger communities such as Elkhart and South Bend were detailed on inset maps. The overall document serves as an excellent resource for those looking to connect to many points east, and into SW Michigan.

C. Southwestern Michigan

The adjacent region to the northeast of NIRPC consists primarily of three counties - Berrien, Van Buren and Cass. In 2001, the Michigan Dept. of Transportation (MDOT) generated a report, the Southwest Michigan Non-Motorized Improvement Plan, which detailed opportunities for increasing non-motorized facilities in the region. The plan put forward suggestions for a Great Lakes Trail to be a signed and shared route along the Red Arrow Highway from the state line north to St. Joseph. Another suggestion was a route along U.S. 12 from New Buffalo to Niles, to meet up with a planned route emulating from St. Joseph County to the south.

At this time, there are very few off-road routes of regional significance in SW Michigan. The only one of note is the Kal-Haven Trail from South Haven east to Kalamazoo. This 33-mile, crushed stone route offers its users a breathtaking ride through small towns and historical sites. Shared routes have been identified, and maps can be accessed through the League of Michigan Bicyclists or MDOT.

In 2009, The Harbor Country Hike & Bike Plan was released as a comprehensive non-motorized transportation plan for the townships of New Buffalo, Chikaming and Three Oaks, Michigan. Their goal is to provide a foundation for future implementation and construction of routes for cyclists, pedestrians, equestrians. One of the major links recommended is a connection to the Marquette Greenway along US 12.

D. The American Discovery Trail

On a national scale, the development of the American Discovery Trail (ADT), a 6,800-mile route stretching across 15 states from Delaware to California, continues to build momentum. The ADT splits into northern and southern routes in Cincinnati, OH, coming back together again in Denver, CO. The northern route of the ADT has been planned to pass directly through the Northwest Indiana area, and coordination has begun to secure this route along the planned Veterans Memorial Trail, into Illinois via the proposed (but not funded) Pennsy Greenway from Crown Point to Lansing, IL. The ADT is currently as close to the NIRPC region as North Judson, Indiana. ***Figure 4-3*** shows the planned nationwide route of the ADT.

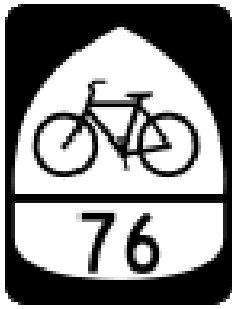
In 2006, NIRPC hosted three ADT "Congresses" to bring together Indiana's northern route stakeholders to identify a new route into the NIRPC region, assuring the trail would connect to a Great Lake. Two routes were proposed, one that would take the trail directly north of Rochester to South Bend, and over to Michigan City, and another which would continue through to North Judson, then into southern LaPorte County, along SR 8 to Hebron, then along the abandoned Pennsylvania RR into Lansing, IL. This latter route was eventually selected as the preferred route by the Congress, and at this time officials of the ADT Society are reviewing the re-route. An official decision is expected in early 2011.

E. United States Bicycle Route System

The United States Bicycle Route System (USBRS) is a proposed national network of bicycle routes. Two bicycle routes, Bike Route 1 and Bike Route 76, were designated in 1982. Soon after, however, the program stagnated until 2003, when the American Association of State Highway and Transportation Officials (AASHTO) formed their Task Force on U.S. Bicycle Routes. By 2005, the Adventure Bicycling Association was providing staff support to develop a National Corridor Plan. This process involved getting a picture of what was already on the ground, and moving forward from there in developing a system of corridors that would house new numbered bike routes across the country. The group was ready to implement the plan by May of 2009.

The USBRS will connect urban, suburban, and rural areas to each other. Each route must be nominated for numbered designation by state departments of transportation (DOTs).

Figure 4-3:
American Discovery Trail Route



This work is already being done by the DOTs as well as volunteers. Several states are already working hard on assembling applications to begin to implement their parts of the proposed system. Applications for the designation of new corridors are accepted twice per year. AASHTO then catalogues each route through the Special Committee on U.S. Route Numbering, which is the same committee that assigns numbers to highways and interstates.

The National Corridor Plan shows two corridors slated for the NIRPC region. Bike Route 35, a north-south route, will come through LaPorte County on its way from Sault Ste. Marie, Michigan to its confluence with Bike Route 45 in Mississippi. Bike Route 45 ultimately terminates in New Orleans, Louisiana. Bike Route 36 is an east-west route that goes west from Detroit, Michigan to the Illinois/Iowa state line. While relatively short, it provides connections to other, farther-reaching bike routes that travel both east-west and north-south. The full corridor map is shown in ***Figure 4-3***.

The regional bicycle system must be developed in a way that is mindful of the USBRS as the plans for the corridors through Northwest Indiana are developed. Whenever possible, NIRPC must be prepared to help the corridor planning process along in order to help implement this nationwide system. This will require working with the Adventure Cycling Association, INDOT, AASHTO, neighboring states, and other stakeholder groups. Bike Routes 35 and 36, along with the American Discovery Trail, will provide an opportunity for the regional bike system to connections to areas outside of Northwest Indiana and across the country. As with other modes of transportation, Northwest Indiana's location puts it in an important position of providing key links in the larger national transportation system.

Figure 4-3:
United States Bicycle Route System

CHAPTER 5
MOVING FORWARD

MOVING FORWARD

I. Priority Corridor Selection

The regional pedestrian and bikeway network is a series of corridors which interconnect major population areas and major scenic areas. In some areas, the corridors follow waterways. In other cases, they utilize existing utility or abandoned rail corridors. In a few cases, the corridors are conceptual corridors with no specific route intended which are meant to connect population centers or scenic areas.

In 1994, 27 routes were identified and ranked based on a number of criteria established by the committee working on the plan. For this update, the TE Committee took another look at the priority routes, and scaled down the number to reflect those routes which influence on a regional perspective, instead of those that serve primarily local populations. This would also aid those proposed projects that aimed to establish connections in corridors that are regional in scope.

The costs to construct the corridors shown in the network exceed the anticipated funding available for this work. In addition to the corridors, linkage trails/bike lanes are envisioned to serve as feeder facilities to the corridors. As these projects will come from a variety of agencies, a prioritization of the corridors is necessary to guide the funding of these projects in the Transportation Improvement Program (TIP) developed by NIRPC as well as the Transportation Enhancement Activities (TE) funded through INDOT. In the *2005 Ped & Pedal Plan*, 29 corridors were ranked as High, Medium, and Low Priority as explained in ***Table 5-1.*** These criteria were carried over towards the update in the 2010 plan.

Each corridor was reviewed in a qualitative manner against the following criteria. It was scored as 3-2-1 for whether it was ranked High, Medium or Low according to the individual criteria.

	High	Medium	Low
POPULATION DENSITY	VERY HIGH	MODERATE DENSITY	MOSTLY RURAL
CONNECTS TO TRAILS OUTSIDE THE REGION	YES	ADJACENT TRAIL CONNECTS OUTSIDE REGION	NO
EJ POPULATION	YES, FULL LENGTH	PARTIAL	NO
CONSTRUCTABILITY	HIGH PROBABILITY NO GAPS	GAPS, BUT HAS DIRECT ON-STREET CONNECTION POSSIBLE	MANY GAPS NO DIRECT ON-STREET CONNECTION
EMPLOYMENT	HIGH CONCENTRATION	SOME EMPLOYMENT ADJACENT	LOW OR NO EMPLOYMENT ADJACENT

Table 5.1 - Criteria for Priority Route Selection

The points were determined for each corridor. The corridors were then divided with the highest one-third assigned to the High Priority. The middle one-third were assigned to the Medium Priority and the bottom one-third to the Low Priority.

Two corridors were singled out for special consideration regarding their status as "Visionary Corridors" in the *Indiana State Trails & Greenways Plan*, which was released to the public in July of 2006. These corridors include the Marquette Greenway along Lake Michigan, and the American Discovery Trail along the southern half of the region. Each of these trails touch all three NIRPC counties, and have been given added weight during the ranking process for NIRPC-attributable federal funds.

A subcommittee of the Ped, Pedal and Paddle Committee convened to update the Priority Corridor map. This involved assigning new priorities and adding new corridors based on current demands and interest. In the end 33 corridors were identified as either High, Medium or Low Priority. The two Visionary Trail Corridors have absorbed several formal corridors. The final version is shown in ***Figure 5-1***. An accounting of total corridor miles is found in ***Table 5-2.***

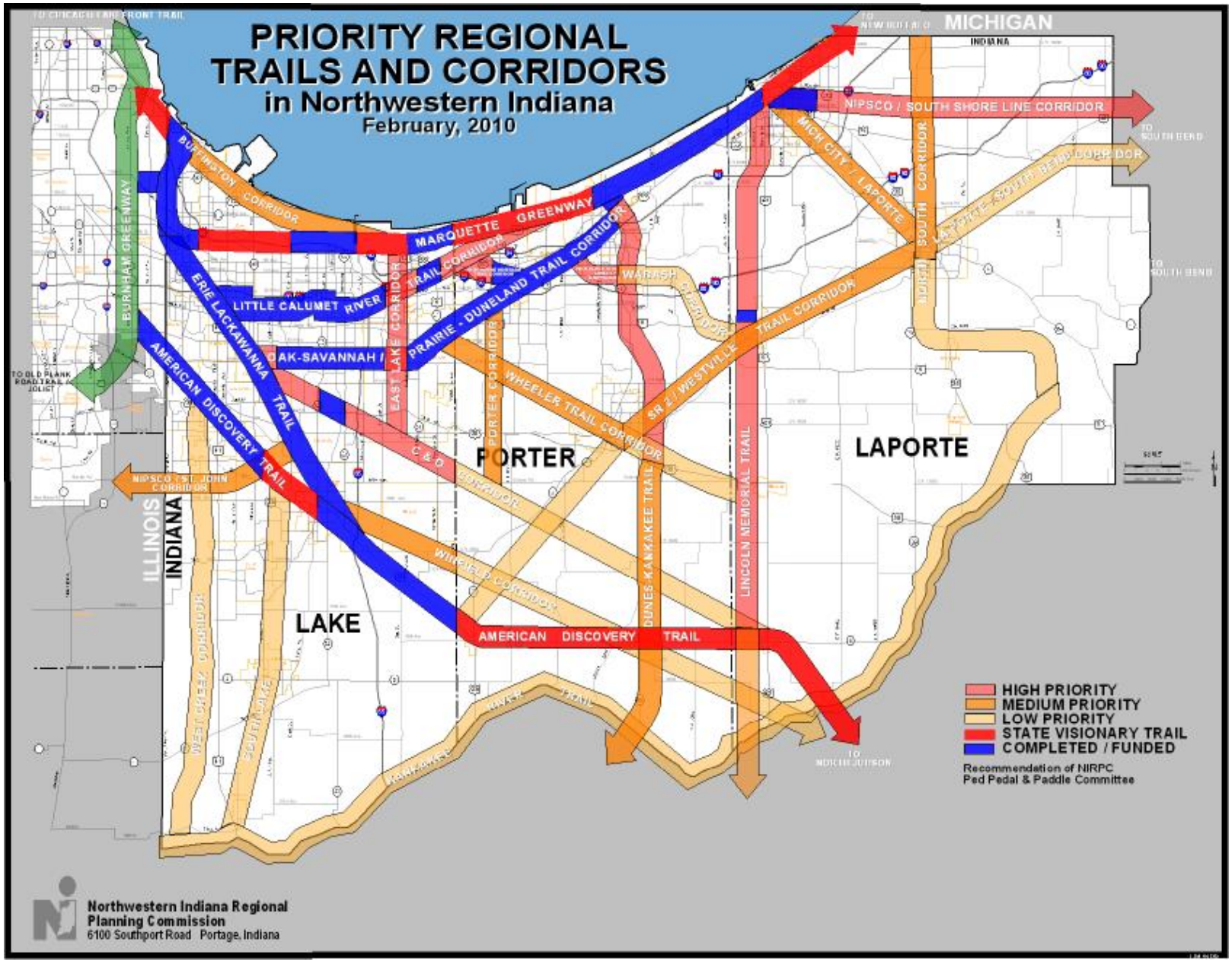


Figure 5-1: Priority Regional Trails & Corridors

Priority Corridor	Miles
Visionary (2)	58
High (11)	163
Medium (10)	103
Low (10)	198
TOTAL (33)	**522**

1. State Visionary Trails (2):

a. *American Discovery Trail Corridor - 21 miles:*
Mimics the route selected by the TE Committee as the official route of the ADT once the national trail crosses into Indiana. This includes the Pennsy Greenway and the Veterans Memorial Trail. More about the ADT can be found in the previous chapter.

b. *Marquette Greenway – 37 miles:*
This corridor combines the former Grand Calumet River/Marquette Trail, Calumet Trail, and Singing Sands Corridors. The corridor extends from the Illinois state line to the Michigan state line. A section of trail is in place around Wolf Lake and Lake George in Hammond. Two miles of the old Indiana Harbor Belt Railway have been converted to a crushed limestone trail in the Miller section of Gary. The former Calumet Trail Corridor is a crushed limestone path from Mineral Springs Road to the Porter/LaPorte County Line and is completely owned by NIPSCO. Finally, the former Singing Sands Corridor contains a segment in Michigan City's Washington Park.

2. High Priority Corridors (11)

a. *Little Calumet Trail Corridor – 16 miles:*
Runs along the Little Calumet River from the Erie-Lackawanna Trail Corridor in Hammond to the Port of Indiana. This project was done in coordination with the effort of

the Little Calumet River Basin Commission. The Commission has been charged with constructing a flood control levee from Gary west to the state line. A trail has been installed on one of the levees as they have progressed. The project is expected to be completed in December, 2010.

b. *Erie-Lackawanna Trail Corridor – 30 miles:*
The most developed corridor to date in the region. Exists from downtown Hammond at Sibley Blvd. south to Crown Point at Summit Street. Funded segments include the Veterans Trail from southeast Crown Point to Hebron along US 231. A northern link from downtown Hammond to the Wolf Lake vicinity has also been funded, and parallels the Marquette Greenway route. A vast majority of the Erie-Lackawanna Trail corridor is owned by NIPSCO.

c. *Oak Savannah Trail Corridor – 9 miles:*
From Oak Ridge Prairie Park in Griffith east to the Porter County Line. All segments of the corridor are either completed or funded. A minor gap in the corridor is in the City of Hobart, which plans on connecting this gap from Linda Street to SR 51 by 2011.

d. *Prairie-Duneland Trail Corridor – 18 miles:*
Existing rail/trail from the Porter County line east to Chesterton, with a connection to the Marquette Greenway in Porter. All segments of the corridor are either complete or funded.

e. *Iron Horse Heritage Trail Corridor – 2 miles:*
Local rail/trail from Prairie Duneland in Chesterton west to Porter County line.

h. *East Lake Corridor — 10 miles:*
An identified NIPSCO-owned corridor from Deep River to Miller that connects across four other trail corridors.

f. Pennsy Greenway Corridor – 15 miles:
Communities of Munster, Schererville, and Crown Point are collaborating to pave the abandoned Pennsylvania Railroad corridor into a trail facility which would link up several downtowns and provide the only off-road connection with Illinois. Lansing, Illinois has already completed their segment on the Pennsy ROW, with Munster slated to be completed with their section by the end of 2010. Schererville's segment is partially funded through the center of town.

g. C&O Trail Corridor – 11 miles:
From Broad Street in Griffith east to Porter County line. This planned route would help to establish non-motorized travel options to the retail center at US 30 and I-65. It would also serve as a critical link between the Erie-Lackawanna and Oak Savannah trails. The Town of Merrillville has already completed a short section of trail between Broadway (SR 53) to just short of Taft Street (SR 55).

h. NIPSCO/South Shore Line Corridor – 18 miles:
Effort by Michigan City to push for a trail connecting their city with South Bend in St. Joseph County by utilizing an existing NIPSCO right-of-way and the South Shore Railroad. The trail would exist with the live rail. Michigan City has already funded a short section of this route.

i. Dunes Kankakee Trail Corridor – 15 miles:
Northern segment connecting Valparaiso and Chesterton and the Prairie Duneland Trail Corridor. A segment from the Indiana Dunes State Park to I-94 has been funded for construction in 2011.

j. Lincoln Memorial Trail - 26 miles:
Segment between La Crosse and the north side of Michigan City. Part of an abandoned corridor along the old Monon rail line from Starke County to the north side of Michigan City. A section has been completed in the Bluhm County Park area in the Westville vicinity.

k. *Westchester Liberty Trail Corridor - 3 miles:*
A local corridor through Chesterton that provides an important connection between the Dunes Kankakee and Prairie Duneland Trails.

3. Medium Priority Corridors (10)

a. *Buffington Corridor – 12 miles:*
This corridor will provide a lakefront connection in the cities of Gary, East Chicago, Whiting, and Hammond. Numerous difficulties abound with existing industry and heavy truck use curtailing non-motorized transportation options.

b. *Wheeler Corridor – 10 miles:*
Western segment from Hobart to Valparaiso utilizing SR 130. Project would have to be planned as a live rail and trail effort.

c. *Winfield Corridor - 7 miles:*
Western segment from Crown Point to the Porter County line. Follows the Erie-Lackawanna Corridor from Crown Point east out of the region. Beyond the Crown Point city limits, funding and population centers dry up.

d. *Lincoln Memorial Trail - 4 miles:*
Segment south from La Crosse to the Kankakee River Trail and beyond south. Follows the same Monon rail line ROW as above.

e. *Dunes Kankakee Trail – 14 miles:*
Southern segment from Valparaiso through Kouts to the Kankakee River Trail and beyond.

f. *SR 2/Westville Trail Corridor - 18 miles:*
Eastern segment from Valparaiso east to LaPorte. Follows SR 2.

g. *Michigan City/LaPorte Corridor – 11 miles:*
Corridor to connect both cities in LaPorte County. Route follows abandoned rail corridor.

h. *North/South Corridor - 10 miles:*
Northern segment from the City of LaPorte north to the State of Michigan. Utilizes abandoned rail right-of-way.

i. *Porter Corridor – 10 miles*
Provides a north-south connection between the Prairie Duneland, Wheeler, and C&O Trail Corridors.

j. *NIPSCO/St. John Corridor - 7 miles*
Connects the Erie-Lackawanna, Pennsy Greenway/ADS, and West Creek Corridors to St. John's local trail system and the State of Illinois.

4. Low Priority Corridors (10)

a. *West Creek Corridor – 23 miles:*
A corridor proposed to connect a series of planned Lake County parks along West Creek in west Lake County.

b. *Southlake Corridor – 18 miles:*
Proposed corridor to run through Lowell and Cedar Lake, and terminate north at SR 2. Most of the corridor is planned in existing NIPSCO properties.

c. *Kankakee River Trail – 60 miles:*
Proposed trail along the largest river in the region. Most adjacent property is privately owned, but many parcels have been purchased for increased environmental use, including trail development, along its levees. Could provide a possible connection to Illinois via an eastward extension of the Kankakee River Trail in Bradley, Illinois.

d. *C&O Corridor – 18 miles:*
East of Porter/Lake County line. No clear land title evident, and many homes are already built on the abandoned corridor.

e. SR 2/Westville Corridor - 11 miles:
West section of corridor mentioned above. Proposed to run along SR 2 to Hebron from Valparaiso.

f. North/South Corridor – 15 miles:
Southern segment between the City of LaPorte and the Kankakee River Trail.

g. Wabash Corridor – 13 miles:
From the east end of the Iron Horse Trail to Westville along the abandoned Wabash rail corridor.

h. LaPorte/South Bend Corridor – 11 miles:
From LaPorte to South Bend via abandoned rail corridor.

i. Winfield Corridor - 20 miles:
East from the Lake/Porter County line, through Kouts, into southwestern LaPorte County to the Kankakee River Trail and beyond.

j. Wheeler Trail Corridor - 9 miles:
East from Valparaiso, connecting the SR 2/Westville, Dunes Kankakee, and Lincoln Memorial Trails.

II. Goals, Objectives & Strategies

The Goals, Objectives and Policies subcommittee convened to review goals and objectives from the *2005 Ped & Pedal Plan*, and worked in conjunction with the 3PC and the NIRPC staff on the development of a comprehensive set of strategies aimed at improving trail development and use in northwest Indiana. The subcommittee recommended the goals remain to consistent, but offered a more tangible set of strategies to connect objectives to measurable outcomes. The result as outlined in this section aimed to directly link stated goals to those specific actions that will bring them about within a five-year timetable. Also offered are best practices and funding elements to further assist the implementation process. The goals presented herein will go towards

establishing a framework for decision makers in evaluating and designing trail facilities in their communities, and helping them incorporate policies in their existing codes for the inclusion of trails in their broader planning efforts. The culminations of the subcommittee's efforts are listed below under the five major goal categories as originally outlined in the 2005 plan.

GOAL 1: Encourage and promote regional coordination, partnership, and planning.

OBJECTIVE 1: Accommodate Complete Streets policies and practices in NIRPC-based transportation and development decisions.

- **STRATEGY 1:** Consider the specific needs of bicyclists and pedestrians in arterial and collector project planning, especially on those routes that provide unique access to destinations or access across barriers.
  - **PERFORMANCE MEASURE:** Use NIRPC's Complete Streets Guidelines for all eligible projects.
- **STRATEGY 2:** Follow, where possible, nationally accepted or recommended design standards when designing or improving bicycle facilities to assure connectivity, consistency, and safety across jurisdictions.
  - **PERFORMANCE MEASURE:** Adopt standards from AASHTO, MUCTD, FHWA, INDOT, etc.

- **STRATEGY 3:** Track progress on NIRPC-attributable funding projects.
  - **PERFORMANCE MEASURE:** Bi-annually update Project Milestone List of all non-motorized projects programmed by NIRPC.
- **STRATEGY 4:** Develop policies which ensure timely development of funded projects.
  - **PERFORMANCE MEASURES:** Expand "penalties" for local sponsors who have not demonstrated progress; reward sponsors for seeking alternative funding sources to offset federal-funding requests; partner with INDOT to keep project scopes intact, on-time and within budget.

- **STRATEGY 5:** Strongly encourage non-motorized facility maintenance planning in all applications seeking NIRPC-attributable funds.
  - **PERFORMANCE MEASURE:** Strengthen criteria within NIRPC's TE Application methodology and encourage in other funding programs such as STP and CMAQ.

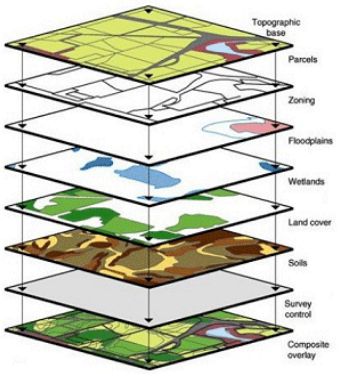
BEST PRACTICES: ***BLOOMINGTON/MONROE COUNTY COUNCIL OF GOVERNMENTS (INDIANA)***

OBJECTIVE 2: Inventory and evaluate potential trail corridors in Northwest Indiana.

- **STRATEGY 1:** Identify existing abandoned railroads, utility corridors, creeks, and other environmentally sensitive areas.
  - **PERFORMANCE MEASURE:** Update "Regional Priority Trails and Corridors Map" on a yearly basis.

BEST PRACTICES: ***NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION; KANE COUNTY COUNCIL OF MAYORS (ILLINOIS)***

OBJECTIVE 3: Incorporate consideration of bicycle and pedestrian accommodations into local and regional development review procedures.



- **STRATEGY 1:** Encourage multi-use, clustered land use development that results in increased bicycle and pedestrian travel.
  - **PERFORMANCE MEASURES:** Highlight standards in NIRPC Comprehensive Regional Plan 2040, specifically opportunities to link to the Congestion Management Process.
- **STRATEGY 2:** Educate and promote non-motorized concepts and policies within vision and regulation documents.
  - **PERFORMANCE MEASURE:** Aid entities in including non-motorized language and maps in Master Plan reports and promote new ordinances that preserve trail rights-of-way and mandate bicycle parking at new developments (in both commercial and residential zones).

- **STRATEGY 3:** Encourage consideration of long-range maintenance plans for non-motorized facilities.
  - **PERFORMANCE MEASURE:** Educate NIRPC membership on value of sound maintenance policy, and incorporating into local capital improvement programs, and other funding avenues.

BEST PRACTICES: ***CHAPEL HILL, NORTH CAROLINA BICYCLE & PEDESTRIAN ADVISORY BOARD***

OBJECTIVE 4: Reach out and involve "non-traditional" partners.

- **STRATEGY 1:** Involve healthcare providers, chambers of commerce, and other business associations in local bicycle and pedestrian groups or events.
  - **PERFORMANCE MEASURES:** Secure the involvement, membership, or sponsorship of at least two of the above stated types of groups; include contacts on e-mail listserv for upcoming NIRPC events.
- **STRATEGY 2:** Cooperative forums with local bicycle users to develop routes that are the most serviceable to points of interest.
  - **PERFORMANCE MEASURE:** Hold at least one cooperative forum per county per year; coordinate with local advocacy groups (C4) for maximum participation potential.

BEST PRACTICES: ***FRIENDS OF THE PUMPKINVINE NATURE TRAIL (INDIANA); KENNEBEC MESSALONSKEE TRAILS (MAINE)***

OBJECTIVE 5: Coordinate bicycle and pedestrian planning at all levels of government, particularly in the same geographic area.

- **STRATEGY 1:** Work with entities, such as the Little Calumet River Basin Development Commission, Kankakee River Basin Commission, Lake Michigan Marina Development Commission, Indiana Dunes National Lakeshore, and Indiana Dunes State Park.
  - **PERFORMANCE MEASURE:** For each trail project, create a list of governmental entities whose areas of jurisdiction will be impacted by the project,

and involve all of them to the most practicable extent, including encouraging greater cooperation between municipalities.

- **STRATEGY 2:** Pursue legislative initiatives for preservation and acquisition of rail lines by the local planning agencies.
  - **PERFORMANCE MEASURE:** Encourage language in Master Plan and local ordinances mandating preservation of corridors in new developments.
- **STRATEGY 3:** Seek creative funding strategies to provide for planning and infrastructure improvements to the non-motorized network.
  - **PERFORMANCE MEASURE:** Continue and plan to expand funding under NIRPC's "Rack em' Up!" bike rack and locker subsidy program, and seek funding for signing roads and trails.
- **STRATEGY 4:** Encourage and help coordinate the design and installation of wayfinding systems that are consistent along the entire length of the trail for which they are intended.
  - **PERFORMANCE MEASURE:** Each trail with wayfinding systems has a consistent design for those systems along its entire length.

BEST PRACTICES: ***KATY TRAIL (DALLAS, TEXAS)***

POSSIBLE FUNDING: **TE, STP Group 1 & 2, CMAQ, DNR Recreational Trails Program, DNR Coastal Program, RDA, "Rack 'em Up!" program**

GOAL 2: Improve connections between sub-regional networks

OBJECTIVE 1: Complete trails within "Regional Priority Trails and Corridors Map" and provide connections to the network.

- **STRATEGY 1:** Research and identify existing and/or previous bikeway planning performed on a regional, county, or local level.
  - **PERFORMANCE MEASURE:** Ensure their inclusion in any trail planning work.

- **STRATEGY 2:** Establish a process for identifying, prioritizing, and developing short local links to improve the continuity of the local street system, including the sidewalk network, to facilitate bicycle and pedestrian travel.
  - **PERFORMANCE MEASURES:** Promote development of local sidewalk and trail plans; identify future INDOT projects for Complete Streets compliance; research bike and pedestrian crash data and highlight these areas for immediate remediation.

BEST PRACTICES: ***NORTHWESTERN INDIANA REGIONAL PLANNNING COMMISSION***

OBJECTIVE 2: Complete links to major trip generators.

- **STRATEGY 1:** Link to employment centers, retail centers, public transit stations, and parks.
  - **PERFORMANCE MEASURE:** Research existing plans to ensure connections are thought through on the local level.
- **STRATEGY 2:** Make links accessible by bicycle within three miles and pedestrians within a half-mile.
  - **PERFORMANCE MEASURE:** Create a "Critical Connections" map with the assistance of local entities and advocates.
- **STRATEGY 3:** Identify and map the points of interest (i.e. employment sites, parks, schools, municipal buildings, libraries, and post offices) within the three county area that are/could be linked via a regional bikeway network.
  - **PERFORMANCE MEASURE:** Create and maintain a "points of interest" map, or incorporate as part of "Critical Connections" document.
- **STRATEGY 4:** Identify and map points of interest for tourists and recreational users to be used by those from outside of the region or even the state.
  - **PERFORMANCE MEASURE:** Create and maintain a "points of interest" map geared toward tourists and recreational users.

BEST PRACTICES: ***CITY OF CHICAGO'S BIKE 2015 PLAN***

POSSIBLE FUNDING: **CMAQ, NIRPC Staff, C4 volunteers, Convention and Visitors Bureaus**

GOAL 3: Encourage and increase bicycle and pedestrian access to and from all transit and intermodal facilities.

OBJECTIVE 1: Promote safe and convenient bike and pedestrian access.

- **STRATEGY 1:** Identify potential park-and-ride facilities that could be developed along and/or near the regional bikeway network.
  - **PERFORMANCE MEASURE:** Create a map or document showing these potential sites and integrate them into the non-motorized planning process where feasible.
- **STRATEGY 2:** Consideration of parking, signs, sidewalks, lighting and maintenance.
  - **PERFORMANCE MEASURE:** Work with transit entities to participate in "Rack em' Up!" program; seek additional funding from private sources.
- **STRATEGY 3:** Research and encourage the development of bike sharing programs at stations and centers of commerce.
  - **PERFORMANCE MEASURE:** Educate and fund programs to aid in creation of bike sharing ports using eligible funds.

BEST PRACTICES: ***CITY OF CHICAGO'S BIKE 2015 PLAN***

OBJECTIVE 2: Identify transit operators and routes that have multi-modal capabilities.

- **STRATEGY 1:** Collaborate with bus transportation agencies and others such as NICTD (South Shore Line).
  - **PERFORMANCE MEASURE:** Produce an assessment of the current multi-modal capabilities of each transit system and how these abilities can be improved.
- **STRATEGY 2:** Expand current transit systems to provide stops along trail corridors, and plan trailheads at existing transit stations/stops.
  - **PERFORMANCE MEASURE:** Make connections to transit a standard part of the trails planning process, and make connections to trails a standard part of transit planning projects.

BEST PRACTICES: ***CHICAGO TRANSIT AUTHORITY (CTA); ATLANTA BELTLINE (GEORGIA)***

OBJECTIVE 3: Accommodate bicycles on transit vehicles, where feasible.

- **STRATEGY 1:** Bike racks retro-fitted onto existing busses.
  - **PERFORMANCE MEASURE:** Have all busses under the jurisdiction of the Regional Bus Authority fitted with bike racks.
- **STRATEGY 2:** Collaboration with South Shore Line trains to allow for the convenient transport of bicycles.
  - **PERFORMANCE MEASURE:** Non-foldable bikes are allowed on South Shore Line trains.

BEST PRACTICES: ***METRA; CHICAGO TRANSIT AUTHORITY (CTA)***

POSSIBLE FUNDING: **TE, STP, CMAQ, Rack 'em Up! Program**

GOAL 4: Increase the promotion of benefits, of bicycle and pedestrian systems.

OBJECTIVE 1: Publish the Regional Bikeways Plan Update – *Ped & Pedal 2010*

- **STRATEGY 1:** Distribute via all potential mediums to address the recreational needs and transportation alternatives of and for Northwest Indiana residents and visitors.
  - **PERFORMANCE MEASURE:** Publish plan on website and provide copies at libraries regionwide.
- **STRATEGY 2:** Distribute to Cities, Towns, and all other governmental agencies.
  - **PERFORMANCE MEASURE:** Create link to plan from entities website.

BEST PRACTICES: ***2005 PED & PEDAL PLAN***

OBJECTIVE 2: Maintain and update *Northwest Indiana Bike Map*.

- **STRATEGY 1:** Collaborate with chambers of commerce and convention and visitor bureaus to increase distribution.

- § **PERFORMANCE MEASURE:** Distribute maps to all municipalities, visitor centers and libraries within the three counties.

- o **STRATEGY 2:** Seek sponsorships to develop and print map document.
  - § **PERFORMANCE MEASURE:** Contact and secure funding from various private sources including bicycle retail stores, NIPSCO, CVB's, hospitals and others.

- o **STRATEGY 3:** Identify all current routes, both on and off-road, with interim connections highlighted.
  - § **PERFORMANCE MEASURE:** Design the *Northwest Indiana Bike Map* in such a way that the different types of routes can be easily identified.

- o **STRATEGY 4:** Regularly update map.
  - § **PERFORMANCE MEASURE:** Bring together subcommittee of 3PC to review and update map every two to three years starting in 2011.

BEST PRACTICES: ***NORTHWEST INDIANA BIKE MAP***

OBJECTIVE 3: Create and/or expand public awareness and education programs, with particular focus on safety.

- o **STRATEGY 1:** Focus on extolling the increase in health benefits, environmental, economic (both personally and regionally), and other quality of life issues stemming from bike riding, walking, etc.
  - § **PERFORMANCE MEASURE:** Host at least one event focusing on the benefits of non-motorized transportation and have it be part of at least one event hosted by another entity (i.e. Quality of Life Council).

- o **STRATEGY 2:** Coordinate efforts with existing public awareness programs such as "Safe Routes to School" and "Bike to Work."
  - § **PERFORMANCE MEASURE:** Work with local school corporations on promoting "Walk to School" days along with strategies to encourage children to regularly walk and bike to school; contact local entities on promoting events to encourage "Bike to Work" day; coordinate with C4 and other volunteers to promote these and other related events.

- **STRATEGY 3:** Develop a system of bikeways and bicycling programs that promote bicycling as a transportation alternative for work trips thereby increasing bicycle work trips and overall bicycle usage.
  - § **PERFORMANCE MEASURE:** Distribute *Northwest Indiana Bike Map*; promote programs that reward employees to bicycle or walk to work.

- **STRATEGY 4:** Host forums, seminars, and conferences to promote the regional non-motorized network.
  - § **PERFORMANCE MEASURE:** Invite recognized leaders in non-motorized planning to 3PC meetings, regularly update 3PC on regional non-motorized network progress, continue yearly update of progress during "Cornucopia" event at 3PC meeting.

CORNUCOPIA

- **STRATEGY 5:** Work to expand and encourage better safety education for bicyclists, pedestrians, and drivers.
  - § **PERFORMANCE MEASURE:** Work with both public and private entities (public schools, driver's education schools, etc.) to incorporate better non-motorized safety education on the part of both motorized and non-motorized transportation operators.

BEST PRACTICES: ***ACTIVE TRANSPORTATION ALLIANCE (CHICAGO); SAN FRANCISCO BICYCLE COALITION***

OBJECTIVE 4: **Establish NIRPC as a resource for technical assistance to the local planning agencies as the local network connects to the regional bikeway system.**

- **STRATEGY 1:** Update "Regional Priority Trails and Corridors Map" for both on and off road routes.
  - § **PERFORMANCE MEASURE:** Make updated inventory available both on NIRPC's website and in paper form.
- **STRATEGY 2:** Keep website up-to-date regarding new developments.
  - § **PERFORMANCE MEASURE:** Designate a responsible party at NIRPC to keep the website current.

- **STRATEGY 3:** Continue to facilitate Ped, Pedal and Paddle Committee (3PC) meetings.
  - **PERFORMANCE MEASURE:** Conduct monthly meetings, maintain updated list of e-mail addresses and notify accordingly.

BEST PRACTICES: ***NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION***

POSSIBLE FUNDING: **NIRPC Staff time**

GOAL 5: Develop a set of funding priorities which encourages local monies to be leveraged by non-local monies (grants, etc.) to allow for greater progress and development

OBJECTIVE 1: **Encourage participation from eligible entities regarding Transportation Enhancement funding for regionally significant routes.**

- **STRATEGY 1:** Encourage active participation in Ped, Pedal and Paddle Committee meetings at NIRPC.
  - **PERFORMANCE MEASURE:** Continue policy of awarding bonus points for TE applications based on monthly attendance

BEST PRACTICES: ***NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION; GREAT ALLEGHENY PASSAGE (PENNSYLVANIA)***

OBJECTIVE 2: **Identify additional categories of funding to implement and develop non-motorized transportation networks.**

- **STRATEGY 1:** Research all potential private and public funding sources outside traditional non-motorized avenues.
  - **PERFORMANCE MEASURE:** Create matrix of potential funding sources and update regularly.

BEST PRACTICES: ***NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION***

OBJECTIVE 3: Promote the implementation of the *Ped and Pedal Plan* by assisting local communities in securing funds from both Federal and State governments.

- **STRATEGY 1:** Conduct workshops highlighting eligible funding programs.
  - **PERFORMANCE MEASURE:** Schedule yearly workshops, or conduct informational sessions at monthly 3PC meetings.

BEST PRACTICES: *NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION*

APPENDIX A
TRAIL INVENTORY

NIRPC - Off-Road Trails & Shared Route Inventory - Summer, 2010

The following tables represent the existing regional trails system in Northwest Indiana. Both signed shared and off-road facilities are mentioned herein. Special thanks to Bob Huffman for compiling this data.

Index - Off Road Segments	2005 Miles	2010 Miles	Community OR Trail
1	3.17	**3.84**	Chesterton
2	1.00	**4.50**	Crown Point
3	N/A	**1.35**	Dyer
4	3.64	3.64	Gary
5	2.44	2.44	Griffith
6	6.80	**9.68**	Hammond
7	6.47	6.47	Highland
8	0.66	**2.48**	Hobart
9	4.70	4.70	Lake County Parks - Erie Lackawanna
10	N/A	**0.69**	Lake Station-Fairview Walkway
11	6.47	**9.67**	Little Calumet River Trail
12	N/A	**3.07**	Merrillville
13	N/A	**3.07**	Michigan City
14	11.15	**13.13**	Munster
15	6.84	6.84	Oak Savannah - Oak Ridge to Wisconsin Street
16	5.76	**8.16**	Portage
17	N/A	**0.99**	Schererville
18	N/A	**2.04**	St. John
19	1.50	**8.25**	Valparaiso Pathways Network
20	N/A	**1.76**	Whiting
21	N/A	**2.15**	Bluhm Park - Lincoln Memorial Trail
22	9.10	9.10	Calumet Trail
23	3.86	3.86	Chicago - South Side
24	2.48	2.48	Calumet City, IL - Burnham Greenway
25	N/A	**3.01**	Lansing, IL - Pennsy Greenway
	69.70	**108.02**	Indiana Sub-Total
	76.04	**117.37**	Indiana and Nearby Illinois

1	Chesterton			
	Distance Meters	Distance Miles	Description	Remarks
	5081	3.17	Prairie Duneland Trail	Off-Road, Paved
	1095	0.68	Westchester-Liberty Trail	Wide Sidewalk
	6167	**3.84**	**Total**	

2	Crown Point			
	Distance Meters	Distance Miles	Description	Remarks
	2423	1.51	Merrillville Rd., 97th to Goldsborough	Wide Sidewalk
	3062	1.74	Erie-Lackawanna Trail: 93rd to Summit	Off-Road, Paved
	2200	1.25	93 Avenue Sidepath	Wide Sidewalk
	7685	**4.50**	**Total**	

3	Dyer			
	Distance Meters	Distance Miles	Description	Remarks
	2376	1.35	Various Loop Route in Parks	Off-Road, Paved

4	Gary			
	Distance Meters	Distance Miles	Description	Remarks
	2587	1.61	Gleason Park	Off-Road, paved
	3272	2.03	Marquette Greenway: Grand Ave. to County Ln Rd	Limestone Fines
	5859	3.64	**Total**	

5 Griffith			
Distance Meters	Distance Miles	Description	Remarks
2364	1.47	Erie-Lackawanna Trail: 45th to Broad	Off-Road, paved
1313	0.82	Erie-Lackawanna Trail: Ave B to Colfax	Off-Road, paved
3677	2.29	**Total**	

6 Hammond			
Distance Meters	Distance Miles	Description	Remarks
6814	3.80	Erie Lackawanna Trail (North of 80/94)	Off-Road, paved
981	0.61	Erie-Lackawanna Trail (@ Cabela's)	Off-Road, paved
1408	0.88	Lake George	Off-Road, paved
1270	0.79	Wolf Lake to Forsythe Park	Off-Road, paved
1442	0.90	Whihala Beach County Park	Off-Road, paved
1229	0.76	MLK Park, Columbia & Highland	Off-Road, paved
994	0.62	Pulaski Park, 139th & Sheffield	Off-Road, paved
1422	0.88	119th St. to Lever Bros.	Off-Road, paved
708	0.44	Bird Sanctuary Trail	Off-Road, paved
16268.49	9.68	**Total**	

7 Highland			
Distance Meters	Distance Miles	Description	Remarks
3467	2.15	Wicker Park Loop	Off-Road, paved
4267	2.65	Erie Lackawanna Trail	Off-Road, paved
236	0.15	Grand Avenue	Off-Road, paved
405	0.25	Jewett	Off-Road, paved
2042	1.27	LaPorte	Off-Road, paved
10417	**6.47**	**Total**	

8	Hobart			
	Distance Meters	Distance Miles	Description	Remarks
	1062	0.66	Oak Savannah Trail: Indiana 51 to County Line	Off-Road, Paved
	772.32	0.48	OS Trail: Lake Park Ave. to City Ball Park	Off-Road, Paved
	804.5	0.50	OS Trail: Wisconsin to Lake Park	Off-Road, Paved
	112.63	0.07	OS Trail: Water to Lake	Off-Road, Paved
	370.07	0.23	OS Trail: 7th to Linda	Off-Road, Paved
	868.86	0.54	Lake George Path	Off-Road, Paved
	3990.38	**2.48**	**Total**	

9	Lake County Erie Lackawanna			
	Distance Meters	Distance Miles	Description	Remarks
	7560	4.70	Erie Lackawanna Colfax to 91st	Off-Road, paved

10	Lake Station Fairview Walkway			
	Distance Meters	Distance Miles	Description	Remarks
	1114	0.69	Fayette to Grand Blvd.	Off-Raod, Paved

11	Little Calumet River Trail			
	Distance Meters	Distance Miles	Description	Remarks
	1990	1.24	MLK to Broadway	Limestone Fines
	1122	0.70	Broadway to Harrison	Limestone Fines
	331	0.21	Harrison to Observation Deck	Asphalt
	598	0.37	Observation Deck to Grant	Limestone Fines
	2189	1.36	Grant to Chase—Parking Lot at Chase	Limestone Fines
	747	0.46	East Side of Chase	Asphalt
	1840	1.14	Chase to Clark	Limestone Fines
	799	0.50	Clark to Burr	Limestone Fines
	791	0.49	Colfax to EJ&E RR	Limestone Fines
	3572	2.22	Kennedy to Cline	Limestone Fines
	422	0.26	Highland Bike Trail to Kennedy	Limestone Fines
	1155	0.72	Northcote to Wicker Park	Limestone Fines
	15555.98	**9.67**	**Total**	
	9329	5.80	*Limestone Fines*	
	1078	0.67	*Asphalt*	

12	Merrillville			
	Distance Meters	Distance Miles	Description	Remarks
	344	0.21	Pine Island to Erie Lackawanna	Off-Road, Paved
	2202	1.37	93rd Street	Wide Sidewalk
	2396	1.49	C&O Greenway - Broadway to near Taft	Off-Road, Paved
	4942	**3.07**	**Total**	

13	Michigan City			
	Distance Meters	Distance Miles	Description	Remarks
	1286	0.30	Trail Creek Trail	Off-Road, Paved

14 Munster			
Distance Meters	Distance Miles	Description	Remarks
2640	1.50	Pennsy Greenway (Main St to Calumet Ave)	Off-Road, paved
2392	1.49	Along Monon Tracks (Manor Ave)	Off-Road, paved
3151	1.96	Fisher Street and NIIPSCO ROW to Hart Ditch	Off-Road, paved
1072	0.67	Calumet (Fisher to 45th)	Off-Road, paved
369	0.23	Calumet to Lakewood Park (North)	Off-Road, paved
123	0.08	Calumet to Lakewood Park (South)	Off-Road, paved
360	0.22	Old White Oak Avenue	Off-Road, paved
576	0.36	Main	Off-Road, paved
552	0.34	New White Oak Avenue	Off-Road, paved
1226	0.76	White Oak Avenue	Wide Sidewalk
1916	1.19	45th Avenue	Wide Sidewalk
1622	1.01	Columbia	Wide Sidewalk
682	0.42	Tapper (Town Hall)	Wide Sidewalk
301	0.19	45th Sidewalk	Wide Sidewalk
482	0.30	Superior Sidewalk	Wide Sidewalk
2389	1.48	Pennsy Greenway	Off-Road, paved
19853	**13.13**	**Total**	
14445	6.85	Total	Off-Road, paved
5446	3.38	Total	Wide Sidewalk

15	Oak Savannah - ORPCP to Wisconsin		
Distance Meters	Distance Miles	Description	Remarks
877	0.55	ORPCP Parking Lot to Main	Off-Road, paved
4555	2.83	Main to Broadway	Off-Road, paved
2413	1.50	Broadway to Liverpool	Off-Road, paved
3153	1.96	Liverpool to Wisconsin	Off-Road, paved
10998	**6.84**	**Total**	

16	Portage		
Distance Meters	Distance Miles	Description	Remarks
9393	5.84	Prairie Duneland Trail	Off-Road, Paved
3733	2.32	Iron Horse Heritage Trail	Off-Road, Paved
13126	**8.16**	**Total**	

17	Schererville		
Distance Meters	Distance Miles	Description	Remarks
1597	0.99	Rohrman Park Perimeter	Off-Road, Paved

18	St. John		
Distance Meters	Distance Miles	Description	Remarks
3286	2.04	St. John Bike Path	Off-Road, Paved

19	Valparaiso Pathways Network			
	Distance Meters	Distance Miles	Description	Remarks
	4453	2.53	Lakewood Park/Campbell Street	Paved Sidepath
	5210	2.96	Cumberland Loop	Paved Sidepath
	1426	0.81	Old Fairgrounds Loop	Off-Road, Paved
	3432	1.95	Various Neighborhood Connector Routes	Mix - Paved
	14521	**8.25**	**Total**	

20	Whiting			
	Distance Meters	Distance Miles	Description	Remarks
	127	0.08	Front Street	Off-Road, Paved
	1725	0.98	Lakefront Trail - Marquette Greenway	Off-Road, Paved / Sidepath
	1232	0.70	Whting Park	Off-Road, Paved
	3084	**1.76**	**Total**	

21	Bluhm County Park—Lincoln Trail, Near Westville			
	Distance Meters	Distance Miles	Description	Remarks
		1.16	Bluhm County Park Trails	Off-Road, Paved
		0.99	Lincoln Memorial Trail	Off-Road, Paved
		2.15	**Total**	

22	Calumet Trail			
	Distance Meters	Distance Miles	Description	Remarks
	14727	9.15	Calumet Trail Mineral Springs Road - US 12	Limestone Fines

23	Chicago			
	Distance Meters	Distance Miles	Description	Remarks
	4213	2.62	Burnham Greenway - Indy to Avenue O	Off-Road, paved
	939	0.58	Burnham Greenway—Ewing to Indy	Off-Road, Paved
	1993	1.24	126th Street Powers Conservation to Torrence	Off-Road, paved
		4.44	**Total**	

24	Calumet City,IL			
	Distance Meters	Distance Miles	Description	Remarks
	3997	2.48	Brunham Greenway: Colton Rd to Little Cal River	Off-Road, paved

25	Lansing, IL			
	Distance Meters	Distance Miles	Description	Remarks
	5298	3.01	Pennsy Greenway: IN State Line to Little Cal River	Off-Road, paved

Index - Major On Road (Shared) Systems		
	Miles	Description
1	170	Porter County Bikeways - 9 loop routes
2	420	LaPorte County Bikeways - 20 loop routes

Index - Painted Bike Lanes		
	Miles	Description
1	2.43	Munster
2	0.16	Griffith
3	1.0	Valparaiso

APPENDIX B

TRAIL COST ANALYSIS

TRAIL COST ANALYSIS

Trail construction costs can vary due to a variety of factors, including local conditions, trail type (use mode), and support services that will be included. This cost analysis, therefore, is a general guideline for the purpose of preliminary estimation of trail costs. More detailed cost estimation should be performed at other points in the trail implementation process, particularly at the time of application for funding, during preliminary design, and prior to bidding for construction.

Because this cost analysis is a general guideline that applies to a wide variety of trails, certain assumptions must be made. These assumptions define what has been considered as part of the cost analysis, and articulate the limitations of this type of exercise.

- All dollar amounts are in Year 2009 dollars, and have been adjusted for inflation from the original Year 2000 dollars from the Iowa DOT. A discussion on the effects of inflation is included after the unit costs.
- Clearing and grubbing of trees and brush includes the width of the trail and associated clear zones. Granular subbase extends one foot beyond the edge of the trail on each side.
- Grading costs assume moderately flat or partially prepared (railroad grade) surfaces. Trails in new corridors in hilly areas may incur higher grading costs.
- None of the costs for trail grading take into account adverse soil conditions, such as contamination or severely wet soils. Such situations will require additional grading and/or excavation and will increase project cost.
- Granular subbase refers to Iowa DOT-approved aggregate placed under a hard surface trail to a depth of four inches.
- Granular surfacing refers to crushed limestone paving (or similar) at a depth of four inches.
- Asphalt surfacing has a depth of four inches.
- Concrete surfacing has a depth of four inches.
- Wood chip surfacing has a depth of two inches.
- Seeding/mulching includes broadcast seeded turn grass with straw laid down to prevent erosion. Additional erosion control on steep slopes is not included.
- Additional costs refer to typical drainage consideration, such as swales, culverts, or waterbars; and support services, including rest areas, signage, and pavement markings. These are based on a typical percentage of trail cost.

- Contingencies are included in all trail costs to account for localized increases in material costs, increases in labor cost due to time of year and contractor availability, and other unforeseen cost increases.
- Costs by trail type (tables 5-3 through 5-12) are for construction only and do not reflect planning, design, administration, or subsequent operations and maintenance.
- Some numbers are rounded for ease of calculation.

Table 1 shows general costs for elements typically included in trail projects. These unit costs are used to develop overall costs for each type of trail.

TABLE 1: UNIT COSTS FOR TRAIL ELEMENTS (INSTALLED)

Trail Element	Unit	Price per unit (year 2009 Construction)
Clearing and grubbing	Acre	$2,550.00
Grading for hard-surfaced trails	Mile	$3,800.00
Grading for natural-surfaced trails	Mile	$3,200.00
Granular surfacing	Sq. ft.	$.50
Granular subbase	Sq. ft.	$.50
Asphalt surfacing	Sq. ft.	$1.30
Concrete	Sq. ft.	$3.00
Wood chips	Sq. ft.	$.50
Seeding/mulching	Acre	$2,040.00
Other costs (drainage, signage, and support services)	Mile	10% of trail cost
Planning	Mile	2% of trail cost
Preliminary design	Mile	2% of trail cost
Construction documents	Mile	5% of trail cost
Construction services	Mile	5% of trail cost
Administration	Mile	5% of trail cost

1. Plan Review

Most trail projects will require review by a variety of state and regional agencies. This review, in many cases is required by law. Trail implementers should consider that, while these reviews may not increase the actual project cost, they will require time, which may affect project schedule or result in additional fees for consultants. Many trail projects will have to be reviewed for existing polluted sites, existing cultural/ archaeological resource impacts, potential wetland or floodplain impacts, and acceptability of roadway crossings.

2. Right-of-Way Acquisition

In general, representative costs for the purchase of right-of-way will vary drastically from region to region. Local or regional governments will most likely be best equipped to estimate costs for property acquisition in their particular area. The DOT makes right-of-way purchases based on fair market value for the particular county where land is being purchased. In rural counties, fair market value is currently approximately $2,000 acre. Ranges in price will occur depending on the agricultural potential of the land. In urban areas, acquisition costs will vary more significantly than elsewhere. Statewide, the approximate cost for land in urban areas may range from $12,000 to $15,000 per acre. In some cases, however, urban land may be registered on a square foot basis, with costs being even higher than the above figures.

When estimating the cost of land acquisition, local governments should speak with a local real estate appraiser to gain an understanding of actual costs for land in the general area and in specific locations to be acquired for trail use. Many grants require such an appraisal.

3. Inflation Costs

The most recent dollar standard currently available is for 1999. Differences, however, between 1999 dollars and 2000 dollars are minor enough that inflation effects may be estimated based on the 2000 dollar figures included in Table 1.

The “Consumer Price Index (CPI) Conversion Factor to Convert 1999 Dollars” is located at www.orst.edu/ Dept/pol_sci/fac/sahr/cv99.pdf and is a useful tool for protecting inflation effects. The chart shown on that website offers projected conversion factors based on 1999 dollars.

4. Bridges

The actual cost for bridges will vary depending on existing conditions. As a trail moves into the development stage, the trail developer should consult with a structural engineer to determine a final estimated cost. The following estimated costs for bridges will be applicable in many cases.

- Estimated cost for new pedestrian/bicycle bridges: $100/square foot.
- Estimated cost for re-decking of existing bridges to accommodate surfaced trails (does not include trail surfacing or fencing): $50/Square foot.
- Estimated cost for wetland boardwalks: $50/square foot.

5. Trail Costs

Tables 3 through 10 show estimated costs for each type of trail mode considered in *Iowa Trails 2000*. These trail costs are designed to serve as a guide for trail planning and initial cost estimation, and should not be considered a detailed cost analysis.

TABLE 3: ESTIMATED COST FOR NATURAL SURFACE TRAILS: 5-FOOT WIDTH

Trail Element	Unit	Price Per Unit	Element Width	Units Per Mile	Trail Cost Per Mile
Clearing and Grubbing	Acre	$2,550	9 feet	1	$2,550
Grading	Mile	$3,200		1	$3,200
Seed/mulch	Acre	$2,040	4 feet	.5	$1,020
Subtotal					**$6,770**
Other Costs	10% of trail cost				$ 677
Contingency	15% of trail cost				$1,015
TOTAL COST PER MILE					**$8,462**

TABLE 4: ESTIMATED COST FOR WOOD CHIP HIKIING TRAILS: 5-FOOT WIDTH

Trail Element	Unit	Price Per Unit	Element Width	Units Per Mile	Trail Cost Per Mile
Clearing and Grubbing	Acre	$2,550	9 feet	1	$ 2,550
Grading	Mile	$3,200		1	$ 3,200
Wood chips	Sq. ft.	$.50	5 feet	26,400	$13,200
Seed/mulch	Acre	$2,040	4 feet	.5	$ 1,020
Subtotal					**$19,970**
Other Costs	10% of trail cost				$ 1,997
Contingency	15% of trail cost				$ 2,995
TOTAL COST PER MILE					**$24,962**

TABLE 5: ESTIMATED COST FOR GRANULAR HIKING TRAILS: 5-FOOT WIDTH

Trail Element	Unit	Price Per Unit	Element Width	Units Per Mile	Trail Cost Per Mile
Clearing and Grubbing	Acre	$2,550	9 feet	1	$ 2,550
Grading	Mile	$3,800		1	$ 3,800
Granular subbase	Sq. ft.	$.50	7 feet	36,960	$18,480
Granular surfacing	Sq. ft.	$.50	5 feet	26,400	$13,200
Seed/mulch	Acre	$2,040	4 feet	.5	$ 1,020
Subtotal					**$39,050**
Other Costs	10% of trail cost				$ 3,905
Contingency	15% of trail cost				$ 5,857
TOTAL COST PER MILE					**$48,812**

TABLE 6: ESTIMATED COST FOR PEDESTRIAN TRAILS: ASPHALT SURFACE: 6-FOOT WIDTH

Trail Element	Unit	Price Per Unit	Element Width	Units Per Mile	Trail Cost Per Mile
Clearing and Grubbing	Acre	$2,550	10 feet	1.25	$ 3,187
Grading	Mile	$3,800		1	$ 3,800
Granular subbase	Sq. ft.	$.50	8 feet	42,240	$21,120
Asphalt	Sq. ft.	$1.30	6 feet	31,680	$41,184
Seed/mulch	Acre	$2,040	4 feet	.5	$ 1,020
Subtotal					**$70,311**
Other Costs	10% of trail cost				$ 7,031
Contingency	15% of trail cost				$10,547
TOTAL COST PER MILE					**$87,889**

TABLE 7: ESTIMATED COST FOR PEDESTRIAN TRAILS: CONCRETE SURFACE: 5-FOOT WIDTH

Trail Element	Unit	Price Per Unit	Element Width	Units Per Mile	Trail Cost Per Mile
Clearing and Grubbing	Acre	$2,550	9 feet	1	$ 2,550
Grading	Mile	$3,800		1	$ 3,800
Granular subbase	Sq. ft.	$.50	7 feet	36,960	$18,480
Concrete	Sq. ft.	$3.00	5 feet	26,400	$79,200
Seed/mulch	Acre	$2040	4 feet	.5	$ 1,020
Subtotal					**$105,050**
Other Costs	10% of trail cost				$ 10,505
Contingency	15% of trail cost				$ 15,757
TOTAL COST PER MILE					**$131,312**

TABLE 8: ESTIMATED COST FOR NON-MOTORIZED MULTI-USE TRAILS (SINGLE TREADWAY): GRANULAR SURFACE, 10-FOOT WIDTH

Trail Element	Unit	Price Per Unit	Element Width	Units Per Mile	Trail Cost Per Mile
Clearing and Grubbing	Acre	$2,550	14 feet	1.7	$ 4,335
Grading	Mile	$3,800		1	$ 3,800
Granular subbase	Sq. ft.	$.50	12 feet	63,360	$31,680
Granular surfacing	Sq. ft.	$.50	10 feet	52,800	$26,400
Seeding/mulch	Acre	$2,040	4 feet	.5	$ 1,020
Subtotal					**$67,415**
Other Costs	10% of trail cost				$ 6,741
Contingency	15% of trail cost				$ 10,112
TOTAL COST PER MILE					**$84,268**

TABLE 9: ESTIMATED COST FOR NON-MOTORIZED MULTI-USE TRAILS (SINGLE TREADWAY) ASPHALT SURFACE, 10-FOOT WIDTH

Trail Element	Unit	Price Per Unit	Element Width	Units Per Mile	Trail Cost Per Mile
Clearing and Grubbing	Acre	$2,550	14 feet	1.7	$ 4,335
Grading	Mile	$3,800		1	$ 3,800
Granular subbase	Sq. ft.	$.50	12 feet	63,360	$31,680
Asphalt	Sq. ft.	$1.30	10 feet	52,800	$68,640
Seed/mulch	Acre	$2,040	4 feet	.5	$ 1,020
Subtotal					**$109,475**
Other Costs	10% of trail cost				$10,947
Contingency	15% of trail cost				$16,421
TOTAL COST PER MILE					**$136,843**

TABLE 10: ESTIMATED COST FOR NON-MOTORIZED MULTI-USE TRAILS (SINGLE TREADWAY): CONCRETE SURFACE, 10-FOOT WIDTH

Trail Element	Unit	Price Per Unit	Element Width	Units Per Mile	Trail Cost Per Mile
Clearing and Grubbing	Acre	$2,550	14 feet	1.7	$ 4,250
Grading	Mile	$3,800		1	$ 3,800
Granular subbase	Sq. ft.	$.50	12 feet	63,360	$ 31,680
Concrete	Sq. ft.	$3.00	10 feet	52,800	$158,400
Seed/mulch	Acre	$2,040	4 feet	.5	$ 1,020
Subtotal					**$199,150**
Other costs	10% of trail cost				$ 19,915
Contingency	15% of trail cost				$ 29,872
TOTAL COST PER MILE					**$248,937**

It is important to note that the per-mile costs listed above may vary drastically, depending on the trail's location, the construction schedule, and many other unforeseen issues. Trail cost estimates throughout the project should always be reviewed by a qualified engineer or other design professional. It is not unusual for actual trail costs to exceed initial estimates.

The following items are commonly found in trail projects. Because of their variability of types and, therefore, cost, specific unit cost numbers are not included. Trail implementers should determine to what extent these items will be included in the trail project, and estimate them accordingly.

- Fencing, either for safety or ornamental reasons (or both)
- Walls
- Special drainage considerations, such as fabrics and soil supplements in wet areas
- Interpretive facilities
- Associated parks, trailheads, or other amenities besides basic access points and rest areas
- Other custom design elements, such as bridges, walls, signage, bollards, benches, trash cans, or bicycle racks.

6. Trail Development Checklist

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. This list was put together by Ron Carter and Randy Auler of the City of Carmel, Indiana and it is applicable to both public and private entities.

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 - see Chapter 3)
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.

INDOT has also provided the following costs per mile for both existing and new facilities. These tables, while not as detailed as the Iowa tables, can still be a good general source of information. They break down seven different types of trail projects into the three major phases: Project Development Costs (PE), Right-of-Way Acquisition Costs (RW), and Construction Costs (CN).

Please refer to INDOT's notes for further clarification and explanation of the numbers.

Cost Per Mile (Jan. '10$) (see notes below)	Existing Facility (preservation or non-routine maintenance required)						
	Separate-Alignment Shared-Use Path	Rail-Trail (RR to path conversion)	Shared-Use Paths (both sides of street)	Sidewalks (both sides of street)	Shoulders (both sides of roadway)	On-Street Bike Lanes (both sides of street)	Wide Curb Lanes (both sides of street)
PE (Project Development Costs)	$5,000	$5,000	$10,000	$5,000	$5,000	$5,000	$5,000
RW (Right-of-Way Acquisition Costs)	$0	$0	$0	$0	$0	$0	$0
CN (Construction Costs)	$110,000	$110,000	$170,000	$70,000	$140,000	$80,000	$40,000
Total Cost	$115,000	$115,000	$180,000	$75,000	$145,000	$85,000	$45,000

Cost Per Mile (Jan. '10$) (see notes below)	New/Proposed Facility (construction or reconstruction required)						
	Separate-Alignment Shared-Use Path	Rail-Trail (RR to path conversion)	Shared-Use Paths (both sides of street)	Sidewalks (both sides of street)	Shoulders (both sides of roadway)	On-Street Bike Lanes (both sides of street)	Wide Curb Lanes (both sides of street)
PE (Project Development Costs)	$55,000	$55,000	$85,000	$60,000	$70,000	$40,000	$20,000
RW (Right-of-Way Acquisition Costs)	$160,000	$80,000	$250,000	$100,000	$130,000	$120,000	$70,000
CN (Construction Costs)	$540,000	$540,000	$850,000	$600,000	$720,000	$380,000	$190,000
Total Cost	$755,000	$675,000	$1,185,000	$760,000	$920,000	$540,000	$280,000

Notes:

- Costs are merely illustrative. Site-specific conditions may significantly affect actual costs.
- Existing Facility includes all work that utilizes the existing footprint such as pavement marking, sidewalk repairs, general maintenance, etc.
- New/Proposed Facility includes all new facilities, reconstruction of existing facilities and widening of existing facilities
- PE costs include all facets of project development such as, environmental, design, etc.
- Assumes one bridge or major small structure every 1.5 miles.
- Assumed these facility widths: trails 12' asphalt paved; shared-use paths 8 ft asphalt paved/side; concrete sidewalks 5 ft/side; paved shoulder widening from 2' to 7'; bike lanes 4 ft/side; wide curb lanes 2 ft/side.
- Assumes PE 10 percent of CN for construction/reconstruction, 5% of CN for preservation or non-routine maintenance.
- PE costs rounded to $5,000. RW and CN costs rounded to $10,000.
- RW costs are to be used as a starting point for the estimate due to the wide range of project locations and land costs. Accurate costs should be estimated when project has been designed and the specific amounts of land to be acquired has been calculated.

APPENDIX C
INTERNET LINKS

INTERNET LINKS

Bicycle & Pedestrian Program Links

The advent of the internet has created a wealth of information regarding planning and funding avenues for bike and pedestrian networks. Great trails usually require a great amount of research to help get the project moving. The following represents a list of websites that can aid in this endeavor. Although not exhaustive by any means, these sites do represent a solid start for those interested in creating a bike-friendly atmosphere in their communities. It must be noted that any documents referencing web sites run the risk of printing "dead links," or pages that have expired. As of this plan's publication, these sites have been shown to be fully operational, but this constitutes no guarantee.

1. *Federal Agency Links*

a) U.S. Department of Transportation

- U.S. Department of Transportation Accessibility Website – The Department is committed to building a transportation system that provides access for all Americans. www.dot.gov/accessibility/
- FHWA Pedestrian and Bicycle Safety – includes pedestrian and bicycle safety resources. For further information, contact Tamara Redmon at 202-366-4077 or Dick Schafer at 202-366-2176. http://safety/fhwa.dot.gov/programs/ped_bike.htm
- FHWA Pedestrian and Bicycle Safety Research – provides information on issues and research related to improving pedestrian and bicyclist safety. www.tfhrc.gov/safety/pedbike/pedbike.htm
- FHWA Congestion Mitigation and Air Quality Improvement Program – funds transportation projects that reduce emissions in air quality non-attainment and maintenance areas. www.fhwa.dot.gov/environment/cmaqpgs/
- FHWA Federal Lands Highway Program – provides transportation engineering services for planning, design, construction, and rehabilitation of the highways and bridges providing access to federally owned lands. http://flh.fhwa.dot.gov
- FHWA National Scenic Byways Program – includes information about America's Byways, program history, contacts, logos, grants, and nominations. www.byways.org
- FHWA Recreational Trails Program – provides information on recreational trails and trail funding. www.fhwa.dot.gov/environment/rectrails/index.htm
- FHWA Rumble Strips – provides information

on FHWA's rumble strips community of practice. http://safety.fhwa.dot.gov/roadway_dept/pavement/rumble_strips

- FHWA Traffic Calming – provides information and links related to traffic calming. http://safety.fhwa.dot.gov/speedmgmt/traffic_calm.cfm
- FHWA Transportation Enhancement Program – provides information on a major potential funding source for pedestrian and bicycle facilities. www.fhwa.dot.gov/environment/te/index.htm
- Federal Railroad Administration, Highway-Rail Crossing and Trespasser Division – provides information on safety near railroads, www.fra.dot.gov/Pages/338.shtml
- National Highway Traffic Safety Administration Main Website – provides general highway safety information. www.nhtsa.dot.gov
- National Highway Traffic Safety Administration Pedestrian and Bicycle Safety Programs – educational outreach, enforcement, and legislation programs to reduce pedestrian and bicycle injuries and fatalities. www.nhtsa.dot.gov/people/injury/pedbimot/ped/pedbike.html
- Bicycle and Pedestrian Data: sources, Needs, and Gaps (BTS, 2000) [295kb PDF file] – www.bts.gov/transtu/bikeped/report.pdf
- Railbanking Information. www.stb.dot.gov/stb/public/resources_railtrails.html
- Find other trail related links at www.fhwa.dot.gov/environment/rectrails/links.htm

b) Other Federal Agencies

- U.S. Architectural and Transportation Barriers Compliance Board (Access Board) – develops guidelines and standards under the Americans with Disabilities Act and the Architectural Barriers Act. www.access-board.gov
- Centers for Disease Control and Prevention – promoting health through physical activity. www.cdc.gov/physicalactivity/everyone/guidelines/index.html
- National Park Service Rivers, Trails and Conservation Assistance Program – provides technical assistance from the National Park Service, and has links to NPS funding programs. www.nps.gov/rtca/

2. *Other Bicycle and Pedestrian Organization Links*

- The pedestrian and Bicycle Information Center – provides information on a wide variety of engineering, encouragement, education, and

enforcement topics. Established with funding from the US Department of Transportation and operated by the University of North Carolina Highway Safety Research Center, www.hsrc.unc.edu in cooperation with the Association of Pedestrian and Bicycle Professionals, www.apbp.org.
    - Pedestrian information: www.walkinginfo.org www.americawalks.org
    - Bicycle information: www.bicyclinginfo.org
- Active Living by Design – a program to establish and evaluate innovative approaches to increase physical activity through community design, public policies, and communications strategies. www.activelivingbydesign.org
- Adventure Cycling Association – a not-for-profit organization dedicated to bicycle travel, offering programs for cyclists, including a national network of bicycle touring routes and organized trips. www.adventurecycling.org
- Association of Pedestrian and Bicycle Professionals (APBP) – promotes excellence in the professional discipline of pedestrian and bicycle transportation, including engineering, planning, landscape architecture, safety, and promotion. www.apbp.org
- Bicycle Friendly America Program — A program for designating bicycle friendly states, communities, and businesses. www.bikeleague.org/programs/bicyclefriendlyamerica/
- International Mountain Bicycling Association – creates, enhances, and preserves trail opportunities for mountain bikers worldwide. www.imba.com
- League of American Bicyclists (LAB) – promotes bicycling for fun, fitness and transportation and works through advocacy and education for a bicycle-friendly America. www.bikeleague.org
- National Center for Bicycling and Walking (NCBW) – offers information support, training, consultation services, and resources to public agencies, non-governmental organizations, and advocates; maintains the Internet Support Center; and organizes the biennial ProWalk/ProBike Conference and other special meetings. www.bikewalk.org
- National Transportation Enhancements Clearinghouse (NTEC) – provides information

on FHWA's Transportation Enhancement Program. www.enhancements.org

- Trails and Greenways Clearinghouse – provides technical assistance and information resources on all aspects of trail and greenway advocacy, acquisition, development, and management. The Clearinghouse is a joint project of the Rails-to-Trails Conservancy, www.railstotrails.org, and The Conservation Fund's American Greenways Program. www.conservationfund.org/kodak_awards
- University of North Carolina Highway Safety Research Center, www.hsrc.unc.edu, - operates the Pedestrian and Bicycle Information Center, www.walkinginfo.org.
- Walk Our Children to School Day – promotes events aimed at encouraging a more walkable America. www.walktoschool-usa.org
- An extremely informative site which offers an exhaustive overview of creative financing techniques for trails can be researched at www.americantrails.org/resources/funding/TipsFund.html.

3. *State of Indiana Trail Links*

Aboite Trails, Fort Wayne
http://www.aboitenewtrails.org/
American Discovery Trail in Indiana
http://www.discovertrail.org/states/indiana/index.html
Calumet Citizens for Connecting Communities
http://www.cc4cc.org
Calumet Crank Club
http://www.bicycling.org
Cardinal Greenway
http://www.cardinalgreenway.org/
Carroll County & Wabash Erie Canal
http://www.wabashanderiecanal.org/
Fort Wayne River Greenway
http://www.fortwayneparks.org/index.php?option=com_content&view=article&id=151&Itemid=34
France Park, Logansport
http://www.francepark.com/trails.htm
Heritage Trail of Madison
http://www.heritagetrailofmadison.org/
Hoosier Rails to Trails Council
http://www.indianatrails.org/
Indiana Bicycle Coalition
http://www.bicycleindiana.org/
Indiana Department of Natural Resources Trail Inventory
http://www.in.gov/dnr/outdoor/trails/
Indy Greenways
http://www.indygreenways.org/
LaPorte County Bikeways
http://members.csinet.net/lambc/

LaSalle Trail
http://www.sjcparks.org/lasalle.html
Little River Wetland Project
http://www.lrwp.org/
Monon Trail
http://www.indygreenways.org/monon/monon/htm
Pigeon Creek Greenway Passage
http://Evansville.org/Index.aspx?page=589
Pumpkinvine Nature Trail
http://www.pumpkinvine.org/
Steuben County Trails
http://www.steubentrails.org/
Sugar Creek Trail
http://www.crawfordsvilleparkandrec.com/PF_scTrail.html
Whitewater Gorge Park
http://waynet.org/nonprofit/gorge.htm

4. *Other State and Regional Trail Links*

Allegheny Trail Alliance
http://www.atatrail.org/ath-home.htm
Atlanta Metroparks (Georgia)
http://www.pathfoundation.org/
Broad River Greenway (North Carolina)
http://www.broadrivergreenway.com/
Burke-Gilman Trail, Seattle
http://www.burkegilmantrail.org/index.html
East Coast Greenway
http://www.greenway.org/
Elroy-Sparta State Trail, Wisconsin
http://www.elroy-sparta-trail.com
Illinois Prairie Path
http://www.ipp.org/
Katy Trail (Missouri)
http://katytrail.showmestate.com/
Kentucky Rails to Trails Council
http://www.kyrailtrail.org/
Miami Valley Rail Trail (Ohio)
Www.miamivalleytrails.org
Mon River Trails Conservancy
http://www.montrails.org/
Nebraska Trails Council
http://www.nebraskatrails.org/
North Chickamuga Creek Conservancy, Chattanooga
http://www.northchick.org
Ohio Greenways
http://www.ohiogreenways.net
Ohio River Corridor Initiative
http://daap.uc.edu/planning/sites/river
Ohio River Greenway
http://www.ohiorivergreenway.org/
PATC – over 400 links to outdoors people
http://www.potomacappalachian.org
Pinellas Trail, St. Petersburg, Florida
http://www.pinellascounty.org/trailgd/default.htm
Portland Trails

http://www.trails.org/
Potomac Appalachian Trail Club
http://www.potomacappalachian.org
Prairie Spirit Rail-Trail
http://www.prairiespirittrail.org
Roanoke Valley Greenway
http://www.greenways.org/
South Carolina State Trails
http://www.sctrails.net/trails/
Trailmonkey-Hiking and MountainBiking Maps and Trails
http:www.trailmonkey.com/
Trailnet, St. Louis
http://www.trailnet.org/
Virginia Creeper Trail
http://ww.vacreepertrail.com
West Virginia Rails-to-Trails Council
http://www.wvrtc.org/

5. ***International Trail Links***
National Trails in England
http://www.nationaltrail.co.uk/
West Highland Way, Scotland
http://www.west-highland-way.co.uk/

APPENDIX D

MODEL ORDINANCES

MODEL BICYCLE ORDINANCES

For any community to effectually create an atmosphere which caters to bicycle traffic, the prime mover towards this goal would revolve around the implementation of bicycle-specific ordinances in their municipal codes. To this end, what follows below are experts from the City of West Lafayette and Crown Point's code outlining numerous policies protecting those on bicycles in their community, as well as educating riders on proper use of their bikes. Being an Indiana-specific set of guidelines, each of these ordinances can be adopted in communities throughout the NIRPC region.

West Lafayette Bicycle Ordinances

Sec. 20.08. Ordinance violations bureau fines.
A violation of any offense stated below shall result in the following fines:
(a) Parking violations:
(8) If payment for a parking violation fine is not postmarked or received by the city clerk-treasurer's office within 14 days, the fine shall be double the amount set forth above.
(b) Bicycle related violations as defined by § 40.06 of the West Lafayette City Code: Twenty-five dollars.

Chapter 46. Bicycles
Sec. 46.01. Violations of chapter.
It is an infraction for any person to do any act forbidden or fail to perform any act required in this chapter. (Code 1960, § 16-77, Ord No. 16-01(Amended), § 1.)

Sec. 46.02. License.
In order to deter theft and aid in recovery of stolen bicycles, the City of West Lafayette will issue bicycle licenses to be affixed to bicycles upon the terms and conditions set forth in this chapter. (Code 1960, § 16-78, Ord. No. 16-01(Amended), § 2.)

Sec. 46.03. License application; fee.
Application for a bicycle license and license number shall be made upon a form provided by the city and shall be made to the police department. A permanent license fee of one dollar shall be paid to the city before such license is granted. (Code 1960, § 16-79, Ord. No. 16-01(Amended), § 3.)

Sec. 46.04. License issuance; records.
(a) The police department, upon receiving proper application therefore, is authorized to issue a bicycle license which shall be a permanent license.
(b) The police department shall not issue a license for any bicycle if it determines that the applicant is not the owner of or entitled to the possession of such bicycle.
(c) The police department shall keep a record of the number of each license, the date issued, the name and address of the person to whom issued and the number on the frame of the bicycle for which issued, and a record of all bicycle license fees collected.
(d) The police department may authorize local bicycle shops to sell bicycle licenses, according to the same requirements of this chapter. The license fee shall be payable monthly from each such bicycle shop. The bicycle shop shall use such forms and documentation as required by the

police department. (Code 1960, § 16-80, Ord. No. 16-01(Amended), § 4)

Sec. 46.05. Replacement licenses.
If a license or license number is lost or destroyed, another number may be issued upon proper application and payment of an additional fee of fifty cents. (Code 1960, § 16-83, Ord. No. 16-01(Amended), § 5.)

Sec. 46.06. Attachment of license number.
(a) The police department upon issuing a bicycle license shall also issue a license number sticker bearing the license number assigned to the bicycle, and the name of the city.

(b) The police department shall cause such license number to be firmly attached to the rear of the frame of the bicycle for which issued in such position as to be plainly visible from the rear.

(c) No person shall remove a license number from a bicycle during the period for which issued except upon a transfer of ownership or in the event the bicycle is dismantled and no longer operated on any street within the city. (Code 1960, § 16-81, Ord. No. 16-01(Amended), § 6.)

Sec. 46.07. Inspection of bicycles.
The police department shall inspect each bicycle before licensing the same and shall refuse a license for any bicycle determined to be in unsafe mechanical condition. This requirement shall not apply to licenses issued under section 46.04(d). (Code 1960, § 16-82, Ord. No. 16-01(Amended), § 7.)

Sec. 46.08. Transfer of ownership.
Upon the sale or other transfer of a licensed bicycle the licensee shall remove the license number from the bicycle. The new owner shall then apply for a license number to be registered in the owner's name. (Code 1960, § 16-84.)

Sec. 46.09. Parking.
No person shall park a bicycle upon a street other than upon the roadway against the curb or on the sidewalk in a rack to support the bicycle or against a building or at the curb, in such manner as to afford the least obstruction to pedestrian traffic. (Code 1960, § 16-94, Ord. No. 16-01(Amended), §§ 8-9.)

Sec. 46.10. Riding on sidewalks.
(a) No person shall ride a bicycle upon a sidewalk within a business district.

(b) No person sixteen or more years of age shall ride a bicycle upon any sidewalk in any district.

(c) Whenever any person is riding a bicycle upon a sidewalk, such person shall yield the right-of-way to any pedestrian and shall give audible signal before overtaking and passing such pedestrian. (Code 1960, § 16-95, Ord. No. 16-01(Amended), § 10.)

Sec. 46.11. Bicycle (and multi-use) paths.
Every person upon a path shall stay to the right-hand side, exercising due care when passing other path users.

Every person using a path shall remain on the path, unless signs expressly permit leaving the path.

Persons riding bicycles, inline skating or using any other device upon a path shall remain in single file.

Bicyclists shall yield the right of way to all other path users.

Users of inline skates or other devices shall yield the right of way to pedestrians using the path.

Persons riding bicycles upon a path shall maintain a safe speed, compatible with other users.

Whenever any person is riding a bicycle upon a path, such person shall yield the right-of-way to any pedestrian and shall give audible signal before overtaking and passing such a pedestrian.

Any person using the path shall obey the instructions of official traffic-control signals, signs (including those specifying types of users or hours of use) and other control devices applicable to all path users, unless otherwise directed by a police officer.

All dogs must be on a leash and the person with any such dog must observe the requirements of West Lafayette City Code section 61.12.

(j) After dusk, all persons upon a bicycle shall use lights and reflectors on any path. (Ord. No. 16-01(Amended), § 12.)

Crown Point Bicycle Parking Ordinance

150.325 Bicycle Parking Requirements

(A) Bicycle parking spaces shall be provided in accordance with the specifications in this section.

USE	***PARKING SPACES REQUIRED***
Multi-family	1 p.s./3 units (preferably covered - only if garages/unit are not present)
Commercial/Retail/Office Space	5% of motor vehicle req. (min. 4 p.s./max. 40 p.s.)
Recreational	(Community Parks Minimum of 4 spaces - with more as or Recreational Facilities) required by city based on the approximate use of the facility (if the facility qualifies for motor vehicle req. - 30% of motor vehicle requirement)
Educational	1 p.s./20 students K-5 1 p.s./30 students 6-8 1 p.s./50 students 9-12
Hotels/Motels	5% of motor vehicle requirement if the mainentrance is within 1,500 feet of a designated bike/ pedestrian path
Exemptions	Single- and two-family dwellings; warehousing and distribution; mortuaries; auto service; day care centers; car washes; drive-up establishments and airports.

(B) Location and design elements.

(1) The racks shall be of the inverted U-structure design.

(2) The racks shall accommodate U-locks/chains and support bicycles at two locations on the rack.
(3) The racks shall have a thermoplastic powder coating and must be anchored securely to ground per the manufacturer's specifications.

(4) Bicycle parking should be reasonably and safely separated from vehicle parking (e.g. grade differences, landscaping, poles, etc.)

(5) Rack spaces shall be two feet by six feet per bicycle with a five foot wide access aisle from behind. Sidewalk adjacent may serve as access site.

(6) Parking spaces shall be within 50 feet of a main entrance to the business or residential establishment which it serves and be safely and conveniently located upon the premises (including lightning if appropriate for safety).

(7) Parking areas may be shared by and serve two separate venues if within 50 feet of one another.

(8) Parking areas should be easily accessible from bicycle trails, sidewalks and other non-motorized modes of transportation.

(Ord. 2007-12-42, passed 12-3-07)

NIRPC COMPLETE STREETS POLICY

In May of 2010, the NIPRC Executive Committee unanimously adopted Complete Streets Guidelines for all NIRPC-attributable transportation funds. This policy establishes that all transportation projects submitted to NIRPC for federal funding adhere to rudimentary Complete Streets design standards. These include bike lanes, ped-countdown signals, refuge islands and sidewalks. The following represents the resolution which established the guidelines as regional policy, and the said guidelines.

RESOLUTION 10-05

A RESOLUTION IMPLEMENTING COMPLETE STREETS GUIDELINES FOR NIRPC-PROGRAMMED TRANSPORTATION PROJECTS

WHEREAS, the Northwestern Indiana Regional Planning Commission (NIRPC) promotes an effective multimodal, regional land use/ transportation system that is safe, energy and fiscally efficient, maximizes regional connectivity, serves the mobility needs of all citizens, and is environmentally sensitive; and

WHEREAS, NIRPC promotes transportation improvements that encourage walking, bicycling and transit use while promoting safe operations for all users; and

WHEREAS, "Complete Streets" are roadways that accommodate safe and efficient access for all users by law including pedestrians, bicyclists, motorists and transit riders of all ages and abilities; and

WHEREAS, Complete Streets are achieved when transportation agencies routinely plan, design, construct, re-construct, operate, and maintain the transportation network to improve travel conditions for all users of the roadway in a manner consistent with, and supportive of, the surrounding community; and

WHEREAS, Complete Streets principles have been, and continue to be, adopted nationwide at state, regional, and municipal levels in the interest of adherence to federal regulations that promote multimodal transportation options and accessibility for all users; and

WHEREAS, development of pedestrian, bicycle, and transit infrastructure offers long term cost savings and opportunities to create safe and convenient non-motorized travel; and

WHEREAS, increasing active transportation (e.g., walking, bicycling and using public transportation) offers the potential for improved public health, economic development, a cleaner environment, reduced transportation costs, enhanced community connections, social equity, and more livable communities; and
WHEREAS, Complete Streets improvements include, but are not limited to marked bicycle lanes on the roadway, paved shoulders, wide outside lanes, signed bike routes, safe access to bus stops, shared use paths, sidewalks, bicycle parking facilities, marked or raised street crossings (including over- and under-passes), and pedestrian signals and signs; and

WHEREAS, providing access for people with disabilities is a civil rights mandate that is not subject to limitation by project costs, levels of use, or "exceptional circumstances" where the Americans with Disabilities Act requires pedestrian facilities that, when newly constructed or altered, be accessible; and

WHEREAS, NIRPC is responsible for planning and programming transportation projects that utilize federal grants which adhere to goals and objectives from previously adopted documents such as the *Connections 2030 Regional Transportation Plan* and the *Regional Pedestrian & Bicycle Plan of 2005 (Ped & Pedal Plan)*; and other applicable documents; and

WHEREAS, it is NIRPC's vision to undertake bold planning initiatives that positively impact Northwest Indiana's future to create a strong, accessible, safe, clean and high-quality environment in which to live, work and play.

NOW, THEREFORE, BE IT RESOLVED that NIRPC supports the concept of Complete Streets, and hereby establish the attached Guidelines to incorporate Complete Streets facilities to the most practicable extent as proposed by the project

sponsor in all transportation projects using NIRPC-attributable federal funds;

BE IT FURTHER RESOLVED that Complete Streets Guidelines are hereby established wherein project sponsors need to provide in the written request for federal funding documentation providing for the inclusion of Complete Streets facilities in the proposed project seeking NIRPC-attributable funds and application materials must include a description of the facilities;

BE IT FURTHER RESOLVED that sponsors using other local, state, or non-NIRPC-attributable federal funds be encouraged to accommodate practicable Complete Streets facilities, in the planning and design of all proposed transportation projects;

BE IT FURTHER RESOLVED that NIRPC-based stakeholder committees responsible for various funding priorities utilize these Complete Street Guidelines and review proposed project descriptions to account for Complete Streets adherence, and providing exemptions to projects where deemed appropriate.

Duly adopted by the Northwestern Indiana Regional Planning Commission on this 20th day of May, two thousand and ten.

NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION

Complete Streets Planning & Design Guidelines

Below are planning and design guidelines to assist project sponsors in the accommodation of all users (bicycles, pedestrians, transit, motorists and people with disabilities, hereafter referred to as "Complete Streets" facilities). Project sponsors shall use these guidelines in planning for and designing their projects. The Guidelines will be used by NIRPC staff and relevant committees as the proposed project is processed through project selection and planning review.

1. Complete Streets facilities shall be established on rehabilitation, restoration, and resurfacing (3R), partial 3R, and new construction and reconstruction (4R) projects unless one or more of the following conditions are met:
   - A. Where non-motorized users are prohibited by law from using the roadway. In this instance, the applicant should accommodate Complete Streets facilities as practicable within the right of way or within the same transportation corridor.
   - B. The cost of establishing Complete Streets facilities that meet applicable standards would exceed 10% of the cost of the larger transportation project. Eligible costs may include additional right-of-way acquisition, utility relocation, and construction costs with the establishment of said facilities.
   - C. Where the project consists of minor maintenance or repair (reconstruction is not included).

D. Where the project consists primarily of the installation of traffic control or safety devices and little or no additional right-of-way is to be acquired.
E. There are topographic or natural resource constraints.
F. Where factors indicate an absence of need.
G. Where existing Complete Streets facilities currently exists or are scheduled for construction within or near the corridor.

2. On proposed 3R and 4R projects that do not increase vehicular capacity, Complete Streets facilities shall be incorporated where applicable and as proposed by the project sponsor included in the following ways:

A. Resurfacing including striping for additional shoulder width and/or crosswalks, as well as bike lanes where feasible in urban settings.
B. Signalization including installation of pedestrian activated signals, and/or review proper operation and timing of pedestrian phase.
C. Restriping sufficiently wide pavements and bridge decks for additional shoulder width in accordance with applicable federal guidelines.
D. Bridge deck replacement with extension of bridge deck (or other means) to accommodate all users.
E. In cases where an adopted regional or local plan proposes a bikeway or pedestrian way that would pass under or over a bridge that is to be reconstructed, the bridge shall be reconstructed to accommodate non-motorized users. Intersection upgrades including crosswalks and pedestrian actuated signals.
F. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate.

3. The design and development of the transportation infrastructure shall improve conditions for all users by:

A. **Planning projects for the long-term**. The design and construction of new transportation facilities should presume demand for all users, and not preclude the provision of future improvements. In particular, where development is projected to change the character of an area from rural to suburban to urban over the long-term, it is encouraged that adequate right-of-way and infrastructure be established as part of a near-term project to accommodate future facilities where applicable. Every project should be planned and designed with the ultimate, long-term goal of creating, over time, Complete Streets facilities.

B. **Connecting Complete Streets facilities across jurisdictional boundaries.** As the metropolitan planning organization, NIRPC has vantage point from which to recommend to the jurisdictions the connection and continuity of facilities for all users for the purpose of qualifying for federal funding. One way which NIRPC does this is through the *Ped & Pedal Plan* which is updated every five years.

C. **Designing context-appropriate facilities to the best currently available standards and guidelines.** The design of said facilities shall be in accordance with applicable federal guidelines.

D. **Addressing the need for bicyclists and pedestrians to cross corridors as well as travel along them.** Even where bicyclists and pedestrians may not commonly travel along a corridor that is being improved or constructed, they will likely need to be able to cross that corridor safely and conveniently. For instance, a roadway project that does not contain a bike facility (interstate highway) should address bridge crossings that are hostile for bicycles and pedestrians. Therefore, the design of intersections and interchanges shall accommodate cyclists and pedestrians in a manner that is safe, accessible and convenient.

APPENDIX E
REFERENCES

PED & PEDAL PLAN 2010 REFERENCES

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Rails-to-Trails Conservancy; Railbanking: What, Where, Why, When and How; Fact Sheet.

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PED, PEDAL & PADDLE COMMITTEE

Jan Dick - Valparaiso Pathways, Chairman
Tim Morgan - LaPorte County Parks, Vice-Chairman

Paula Armor - Duneland Group
Taghi Arshami - The ARSH Group
Alex Brown - Town of Highland Parks
Steve Buchtel - Active Transportation Alliance
AJ Bytner - City of Hobart Planning
June Calen - Merrillville Resident
Gregg Calpino - JJR
Joe Csikos - City of Portage
Dennis Cobb - First Group Engineering
Carrie Crisan - City of Valparaiso Parks
Jake Dammarell - Butler, Fairman & Seufert
Eric Ehn - Indiana Dunes National Lakeshore
Brad Enslen - Town of Burns Harbor
Mark Heintz - Town of Dyer Parks
Dean Heise - City of LaPorte Parks
Bob Huffman - Calumet Citizens for Connecting Communities (C4)
Marty Jakubowski - City of Whiting Parks
Clarke Johnson - City of Portage Parks
Matt Kaiser - Town of Porter
Christopher Meyers - City of Gary Planning
Susan Mihalo - Town of Ogden Dunes
AJ Monroe - SEH
Mark O'Dell - Town of Chesterton
Don Parker - C4
Dan Plath - NWI Paddling Association (NWIPA)
John Novacich - Town of Schererville Parks
Rory Robinson - National Park Service, RTCA
Jerry Rosko - Town of Munster
John Seibert - City of Valparaiso Parks
Erik Sprenne - C4/NWIPA
Bob Thompson - Porter County Plan Commission
Jon Voelz - Beverly Shores
Craig Williams - Alta Planning + Design
Craig Zandstra - Lake County Parks

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Ped Pedal & Paddle